

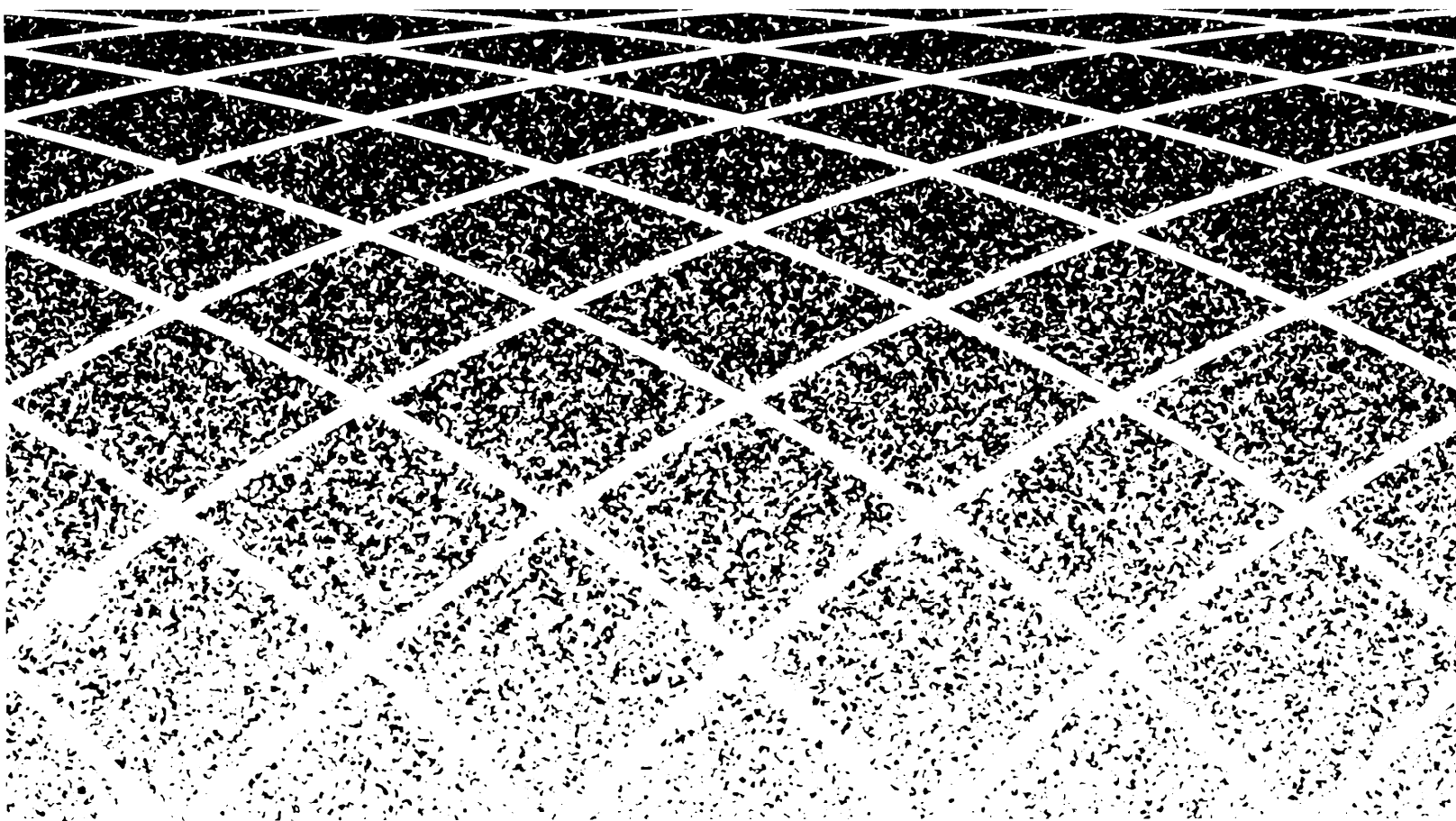


AT&T 555-620-111

Issue 1

October, 1992

MERLIN LEGEND™
Communications System
Release 2.0
System Programming



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AT&T 555-620-111
Issue 1
October 1992

Notice

Every effort was made to ensure that the information in this book was complete and accurate at the time of printing. However, information is subject to change.

Federal Communications Commission (FCC) **Electromagnetic Interference Information**

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

Canadian Department of Communications (DOC) **Interference Information**

This digital apparatus does not exceed the Class A limits for radio noise emissions set out in the radio interference regulations of the Canadian Department of Communications.

Le Présent Appareil Numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la class A prescrites dans le Règlement sur le brouillage radioélectrique édicté par le ministère des Communications du Canada.

Trademarks

5ESS, ACCUNET, CONVERSANT, Magic On Hold, MEGACOM, MERLIN, and MultQuest are registered trademarks and AUDIX Voice Power, FAX Attendant System, MERLIN LEGEND, MERLIN MAIL, MLX- 10, MLX-10D, MLX-20L, and MLX-28D, are trademarks of AT&T in the U.S. and other countries.

MS-DOS is a registered trademark of Microsoft Corporation.

UNIX is a registered trademark of UNIX System Laboratories, Inc.

Support Telephone Number

AT&T provides a toll-free customer Helpline (1-800-628-2888) 24 hours a day (U.S.A. only). Call the Helpline, or your authorized dealer, if you need assistance when installing, programming, or using the system.

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The exclamation point in an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

IMPORTANT SAFETY INSTRUCTIONS

When installing telephone equipment, always follow basic safety precautions to reduce the risk of fire, electrical shock, and injury to persons, including:

- Read and understand all instructions.
- Follow all warnings and instructions marked on or packed with the product.
- Never install telephone wiring during a lightning storm.
- Never install a telephone jack in a wet location unless the jack is specifically designed for wet locations.
- Never touch uninsulated telephone wires or terminals unless the telephone wiring has been disconnected at the network interface.
- Use caution when installing or modifying telephone lines.
- Use only AT&T-manufactured MERLIN LEGEND™ Communications System circuit modules, carrier assemblies, and power units in the MERLIN LEGEND Communications System (511A) control unit.
- Use only AT&T-recommended/approved MERLIN LEGEND Communications System accessories.
- If equipment connected to the analog station modules (008, 408, 408 GS/LS) or to the MLX telephone modules (008 MLX, 408 GS/LS-MLX) is to be used for in-range out-of-building (IROB) applications, IROB protectors are required.
- Do not install this product near water, for example, in a wet basement location.
- Do not overload wall outlets, as this can result in the risk of fire or electrical shock.
- The MERLIN LEGEND Communications System is equipped with a three-wire grounding-type plug with a third (grounding) pin. This plug will fit only into a grounding-type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact an electrician to replace the obsolete outlet. Do not defeat the safety purpose of the grounding plug.
- The MERLIN LEGEND Communications System requires a supplementary ground.

-
- Do not attach the power supply cord to building surfaces. Do not allow anything to rest on the power cord. Do not locate this product where the cord will be abused by persons walking on it.
 - Slots and openings in the module housings are provided for ventilation. To protect this equipment from overheating, do not block these openings.
 - Never push objects of any kind into this product through module openings or expansion slots, as they may touch dangerous voltage points or short out parts, which could result in a risk of fire or electrical shock. Never spill liquid of any kind on this product.
 - Unplug the product from the wall outlet before cleaning. Use a damp cloth for cleaning. Do not use cleaners or aerosol cleaners.
 - Auxiliary equipment includes answering machines, alerts, modems, and fax machines. To connect one of these devices, you must first have a **Multi-Function Module (MFM)**.

 WARNING:

- *For your personal safety, DO NOT install an MFM yourself.*
- *ONLY an authorized technician or dealer representative shall install, set options, or repair an MFM.*
- *To eliminate the risk of personal injury due to electrical shock, DO NOT attempt to install or remove an MFM from your MLX telephone. Opening or removing the module cover of your telephone may expose you to dangerous voltages.*

SAVE THESE INSTRUCTIONS

Customer Support Information

Support Telephone Number

In the U.S.A. only, AT&T provides a toll-free customer Helpline (1-800-628-2888) 24 hours a day. Call the Helpline, or your authorized dealer, if you need assistance when installing, programming, or using your system.

Outside the U. S. A., if you need assistance when installing, programming, or using your system, contact your authorized AT&T dealer.

Federal Communications Commission (FCC) Electromagnetic Interference Information

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

Canadian Department of Communications (DOC) Interference Information

This digital apparatus does not exceed the Class A limits for radio noise emissions set out in the radio interference regulations of the Canadian Department of Communications.

Le Présent Appareil Numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la class A prescrites dans le règlement sur le brouillage radioélectrique édicté par le ministère des Communications du Canada.

FCC Notification and Repair Information

This equipment is registered with the FCC in accordance with Part 68 of its rules. In compliance with those rules, you are advised of the following:

- Means of Connection. Connection of this equipment to the telephone network shall be through a standard network interface jack: USOC RJ11C, RJ14C, RJ21X. Connection to E&M tie trunks requires a USOC RJ2GX. Connection to off-premises stations requires a USOC RJ11C or RJ14C. Connection to 1.544-Mbps digital facilities must be through a USOC RJ48C or RJ48X. Connection to DID requires a USOC RJ11C, RJ14C, or RJ21X. These USOCs must be ordered from your telephone company.

This equipment may not be used with party lines or coin telephone lines.

- Notification to the Telephone Companies. Before connecting this equipment, you or your equipment supplier must notify your local telephone company's business office of the following:
 - The telephone number(s) you will be using with this equipment.
 - The appropriate registration number and ringer equivalence number (REN), which can be found on the back or bottom of the control unit, as follows:
 - If this equipment is to be used as Key System, report the number AS593M-72914-KF-E.
 - If the system provides both manual and automatic selection of incoming/outgoing access to the network, report the number AS593M-72682-MF-E.
 - If there are no directly terminated trunks, or if the only directly terminated facilities are personal lines, report the number AS5USA-65646-PF-E.
 - The REN for all three systems is 1.5A.
 - For tie line connection, the facility interface code (FIC) is TL31M and the service order code (SOC) is 9.0F.
 - For connection to off-premises stations, the FIC is OL13C and the SOC is 9.0F.
 - For equipment to be connected to 1.544-Mbps digital service, the FIC is 04DU9-B for D4 framing format or 04DU9-C for extended framing format, and the SOC is 6.0P.
 - For equipment to be connected to DID facilities, the FIC is 02RV2-T and the SOC is 9.0F.
 - The quantities and USOC numbers of the jacks required.
 - For each jack, the sequence in which lines are to be connected: the line types, the FIC, and the REN by position when applicable.

You must also notify your local telephone company if and when this equipment is permanently disconnected from the line(s).

The REN is used to determine the number of devices that may be connected to the telephone line. Excessive RENs on the line may result in the devices not ringing in response to an incoming call. In most, but not all, areas the sum of the RENs should not exceed five (5.0). To be certain of the number of devices that may be connected to the line, as determined by the total RENs, contact the telephone company to determine the maximum REN for the calling area.

Installation and Operational Procedures

The manuals for your system contain information about installation and operational procedures.

- **Repair Instructions.** If you experience trouble because your equipment is malfunctioning, the FCC requires that the equipment not be used and that it be disconnected from the network until the problem has been corrected. Repairs to this equipment can be made only by the manufacturers, their authorized agents, or others who may be authorized by the FCC. In the event repairs are needed on this equipment, contact your authorized AT&T dealer or, **in the U.S.A. only**, contact the National Service Assistance Center (NSAC) at 1-800-628-2888.

- **Rights of the Local Telephone Company.** If this equipment causes harm to the telephone network, the local telephone company may discontinue your service temporarily. If possible, they will notify you in advance. But if advance notice is not practical, you will be notified as soon as possible. You will also be informed of your right to file a complaint with the FCC.

Your local telephone company may make changes in its facilities, equipment, operations, or procedures that affect the proper functioning of this equipment. If they do, you will be notified in advance to give you an opportunity to maintain uninterrupted telephone service.

- **Hearing Aid Compatibility.** The custom telephone sets for this system are compatible with inductively coupled hearing aids as prescribed by the FCC.

- **Automatic Dialers.** WHEN PROGRAMMING EMERGENCY NUMBERS AND/OR MAKING TEST CALLS TO EMERGENCY NUMBERS:
 - Remain on the line and briefly explain to the dispatcher the reason for the call.
 - Perform such activities in off-peak hours, such as early morning or late evening.

- **Direct Inward Dialing (DID).**

- a. This equipment returns answer supervision signals to the Public Switched Telephone Network when:
 - (1) answered by the called station
 - (2) answered by the attendant
 - (3) routed to a recorded announcement that can be administered by the customer premises equipment user
 - (4) routed to a dial prompt
- b. This equipment returns answer supervision on all DID calls forwarded back to the Public Switched Telephone Network. Permissible exceptions are when:
 - (1) a call is unanswered
 - (2) a busy tone is received
 - (3) a reorder tone is received

Allowing this equipment to be operated in such a manner as not to provide proper answer supervision signaling is in violation of Part 68 rules.

DOC Notification and Repair Information

NOTICE: The Canadian Department of Communications (DOC) label identifies certified equipment. This certification means that the equipment meets certain telecommunications network protective, operational, and safety requirements. The DOC does not guarantee the equipment will operate to the user's satisfaction.

Before installing this equipment, users should ensure that it is permissible to connect it to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection. In some cases, the company's inside wiring for single-line individual service may be extended by means of a certified connector assembly (telephone extension cord). The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations.

Repairs to certified equipment should be made by an authorized Canadian maintenance facility designated by the supplier. Any repairs or alterations made by the user to this equipment, or any equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment.

Users should ensure for their own protection that the electrical ground connections of the power utility, telephone lines, and internal metallic water pipe system, if present, are connected. This precaution may be particularly important in rural areas.

CAUTION: Users should not attempt to make such connections themselves, but should contact the appropriate electrical inspection authority or electrician, as appropriate.

To prevent overloading, the Load Number (LN) assigned to each terminal device denotes the percentage of the total load to be connected to a telephone loop used by the device. The termination on a loop may consist of any combination of devices subject only to the requirement that the total of the Load Numbers of all the devices does not exceed 100.

DOC Certification No. 230 4095A
CSA Certification No. LR 56260
Load No. 6

Renseignements sur la notification du ministère des Communications du Canada et la réparation

AVIS: L'étiquette du ministère des Communications du Canada identifie le matériel homologué. Cette étiquette certifie que le matériel est conforme à certaines normes de protection, d'exploitation et de sécurité des réseaux de télécommunications. Le Ministère n'assure toutefois pas que le matériel fonctionnera à la satisfaction de l'utilisateur.

Avant d'installer ce matériel, l'utilisateur doit s'assurer qu'il est permis de le raccorder aux installations de l'entreprise locale de télécommunication. Le

matériel doit également être installé en suivant une méthode acceptée de raccordement. Dans certains cas, les fils intérieurs de l'entreprise utilisés pour un service individuel à ligne unique peuvent être prolongés au moyen d'un dispositif homologué de raccordement (cordon prolongateur téléphonique interne). L'abonné ne doit pas oublier qu'il est possible que la conformité aux conditions énoncées ci-dessus n'empêchent pas la dégradation du service dans certaines situations. Actuellement, les entreprises de télécommunication ne permettent pas que l'on raccorde leur matériel à des jacks d'abonné, sauf dans les cas précis prévus par les tarifs particuliers de ces entreprises.

Les réparations de matériel homologué doivent être effectuées par un centre d'entretien canadien autorisé désigné par le fournisseur. La compagnie de télécommunications peut demander à l'utilisateur de débrancher un appareil à la suite de réparations ou de modifications effectuées par l'utilisateur ou à cause de mauvais fonctionnement.

Pour sa propre protection, l'utilisateur doit s'assurer que tous les fils de mise à la terre de la source d'énergie électrique, des lignes téléphoniques et des canalisations d'eau métalliques, s'il y en a, sont raccordés ensemble. Cette précaution est particulièrement importante dans les régions rurales.

AVERTISSEMENT: L'utilisateur ne doit pas tenter de faire ces raccordements lui-même; il doit avoir recours à un service d'inspection des installations électriques, ou à un electricien, selon le cas.

L'indice de charge (IC) assigné à chaque dispositif terminal indique, pour éviter toute surcharge, le pourcentage de la charge totale qui peut être raccordée à un circuit téléphonique bouclé utilisé par ce dispositif. La terminaison du circuit bouclé peut être constituée de n'importe quelle combinaison de dispositifs, pourvu que la somme des indices de charge de l'ensemble des dispositifs ne dépasse pas 100.

No d'homologation: 230 4095A
Node certification: CSA LR 56260
L'indice de charge: 6

**MERLIN LEGEND D.O.C.
Location Label Placement**

**Ministère des Communications
du Canada emplacement de
l'étiquette**

AT&T

MERLIN LEGEND

Model 511A Control Unit


**LISTED
538E**


**TELEPHONE
EQUIPMENT**

LR 56260
®

MADE IN U.S.A.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Complies with Part 68, FCC Rules. See the System Reference Manual for proper FCC Classification.
 FCC Reg. Nos. MF: AS593M-72682-MF-E
 KF: AS593M-72914-KF-E
 PF: AS5USA-65646-PF-E
 REN: 1.5A

Use only AT&T manufactured MERLIN LEGEND circuit modules, carrier assemblies, and power units, as specified in the Installation Manual, in this product. There are no user serviceable parts inside. Contact your authorized agent for service and repair.

This digital apparatus does not exceed the Class A limits for radio noise emissions set out in the radio interference regulations of the Canadian Department of Communications.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la classe A prescrites dans le Règlement sur le brouillage radioélectrique édicté par le ministère des Communications du Canada.

CANADA

DR ID

WARNING: If equipment is used for out-of-building applications, approved secondary protectors are required. See Installation Manual.

AVERTISSEMENT: Si l'équipement est utilisé pour des applications extérieures, l'installation d'un protecteur secondaire est requise. Voir le manuel d'installation.

Security of Your System—Preventing Toll Fraud

As a customer of a new telephone system, you should be aware that there exists an increasing problem of telephone toll fraud. Telephone toll fraud can occur in many forms, despite the numerous efforts of telephone companies and telephone equipment manufacturers to control it. Some individuals use electronic devices to prevent or falsify records of these calls. Others charge calls to someone else's number by illegally using lost or stolen calling cards, billing innocent parties, clipping on to someone else's line, and breaking into someone else's telephone equipment physically or electronically. In certain instances, unauthorized individuals make connections to the telephone network through the use of remote access features.

The Remote Access feature of your system, if you choose to use it, permits off-premises callers to access the system from a remote telephone by using an 800 number or a 7- or 10-digit telephone number. The system returns an acknowledgement signaling the user to key in his or her authorization code, which is selected and administered by the system manager. After the authorization code is accepted, the system returns dial tone to the user. If you do not program specific egress restrictions, the user will be able to place any call normally dialed from a telephone associated with the system. Such an off-premises network call is originated at, and will be billed from the system location.

The Remote Access feature, as designed, helps the customer, through proper administration, to minimize the ability of unauthorized persons to gain access to the network. Most commonly, phone numbers and codes are compromised when overheard in a public location, through theft of a wallet or purse containing access information, or through carelessness (writing codes on a piece of paper and improperly discarding it). Additionally, hackers may use a computer to dial an access code and then publish the information to other hackers. Enormous charges can be run up quickly. It is the customer's responsibility to take the appropriate steps to properly implement the features, evaluate and administer the various restriction levels, protect access codes, and distribute access codes only to individuals who have been fully advised of the sensitive nature of the access information.

Common carriers are required by law to collect their tariffed charges. While these charges are fraudulent charges made by persons with criminal intent, applicable tariffs state that the customer of record is responsible for payment of all long-distance or other network charges. AT&T cannot be responsible for such charges and will not make any allowance or give any credit for charges that result from unauthorized access.

To minimize the risk of unauthorized access to your communications system:

- Use a nonpublished Remote Access number.
- Assign authorization codes randomly to users on a need-to-have basis, keeping a log of ALL authorized users and assigning one code to one person.

- Use random sequence authorization codes, which are less likely to be easily broken.
- Deactivate all unassigned codes promptly.
- Ensure that Remote Access users are aware of their responsibility to keep the telephone number and any authorization codes secure.
- When possible, restrict the off-network capability of off-premises callers, via use of Call Restrictions and Disallowed List capabilities.
- When possible, block out-of-hours calling.
- Frequently monitor system call detail reports for quicker detection of any unauthorized or abnormal calling patterns.
- Limit Remote Call Forward to persons on a need-to-have basis.

Limited Warranty and Limitation of Liability

AT&T warrants to you, the customer, that your MERLIN LEGEND Communications System will be in good working order on the date AT&T or its authorized reseller delivers or installs the system, whichever is later ("Warranty Date"). If you notify AT&T or its authorized reseller within one year of the Warranty Date that your system is not in good working order, AT&T will without charge to you repair or replace, at its option, the system components that are not in good working order. Repair or replacement parts may be new or refurbished and will be provided on an exchange basis. If AT&T determines that your system cannot be repaired or replaced, AT&T will remove the system and, at your option, refund the purchase price of your system, or apply the purchase price towards the purchase of another AT&T system.

If you purchased your system directly from AT&T, AT&T will perform warranty repair in accordance with the terms and conditions of the specific type of AT&T maintenance coverage you selected. If you purchased your system from an AT&T-authorized reseller, contact your reseller for the details of the maintenance plan applicable to your system.

This AT&T limited warranty covers damage to the system caused by power surges, including power surges due to lightning.

The following will not be deemed to impair the good working order of the system, and AT&T will not be responsible under the limited warranty for damages resulting from

- failure to follow AT&T's installation, operation, or maintenance instructions
- unauthorized system modification, movement, or alteration
- unauthorized use of common carrier communication services accessed through the system
- abuse, misuse, or negligent acts or omissions of the customer and persons under the customer's control
- acts of third parties and acts of God

AT&T'S OBLIGATION TO REPAIR, REPLACE, OR REFUND AS SET FORTH ABOVE IS YOUR EXCLUSIVE REMEDY.

EXCEPT AS SPECIFICALLY SET FORTH ABOVE, AT&T, ITS AFFILIATES, SUPPLIERS, AND AUTHORIZED RESELLERS MAKE NO WARRANTIES, EXPRESS OR IMPLIED, AND SPECIFICALLY DISCLAIM ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

Limitation of Liability

EXCEPT FOR PERSONAL INJURY, DIRECT DAMAGES TO TANGIBLE PERSONAL PROPERTY PROXIMATELY CAUSED BY AT&T, AND LIABILITY OTHERWISE EXPRESSLY ASSUMED IN A WRITTEN AGREEMENT SIGNED BY AT&T, THE LIABILITY OF AT&T, ITS AFFILIATES, SUPPLIERS, AND AUTHORIZED RESELLERS FOR ANY CLAIMS, LOSSES, DAMAGES, OR EXPENSES FROM ANY CAUSE WHATSOEVER (INCLUDING ACTS OR OMISSIONS OF THIRD PARTIES), REGARDLESS OF THE FORM OF ACTION, WHETHER IN CONTRACT, TORT OR OTHERWISE, SHALL NOT EXCEED AN AMOUNT EQUAL TO THE LESSER OF THE DIRECT DAMAGES PROVEN OR THE PURCHASE PRICE OF THE SYSTEM. IN NO EVENT SHALL AT&T OR ITS AFFILIATES, SUPPLIERS, OR AUTHORIZED RESELLERS BE LIABLE FOR INCIDENTAL, RELIANCE, CONSEQUENTLY, OR ANY OTHER INDIRECT LOSS OR DAMAGE (INCLUDING LOST PROFITS OR REVENUES) INCURRED IN CONNECTION WITH THE SYSTEM. THIS LIMITATION OF LIABILITY SHALL SURVIVE FAILURE OF THE EXCLUSIVE REMEDY SET FORTH IN THE LIMITED WARRANTY ABOVE.

Voice Mail Systems

Your Voice Mail system permits callers to leave verbal messages for system users or gain access to the back-up position in an emergency as well as create and distribute voice messages among system users.

The Voice Mail system, through proper administration, can help you reduce the risk of unauthorized persons gaining access to the network. However, phone numbers and authorization codes can be compromised when overheard in a public location, are lost through theft of a wallet or purse containing access information, or through carelessness (writing codes on a piece of paper and improperly discarding them). Additionally, hackers may use a computer to dial an access code and then publish the information to other hackers. Substantial charges can accumulate quickly. It is your responsibility to take appropriate steps to implement the features properly, evaluate and administer the various restriction levels, protect and carefully distribute access codes.

Under applicable tariffs, you will be responsible for payment of toll charges. AT&T cannot be responsible for such charges and will not make any allowance or give any credit resulting from unauthorized access.

To reduce the risk of unauthorized access through your Voice Mail system, please observe the following procedures:

- Employees who have voice mailboxes should be required to use the passwords to protect their mailboxes.
 - Have them use random sequence passwords.
 - Impress upon them the importance of keeping their passwords a secret.
 - Encourage them to change their passwords regularly.
- The administrator should remove any unneeded voice mailboxes from the system immediately.

- AUDIX Voice Power™ has the ability to limit transfers to subscribers only. You are strongly urged to limit transfers in this manner.
Use the PBX or Key system administration capability to do the following:
 - Block direct access to outgoing lines and force the use of account codes/authorization codes.
 - Disallow trunk-to-trunk transfer unless required.
 - Assign toll restriction levels to all AUDIX Voice Power ports.
 - If you do not need to use the Outcalling feature, completely restrict the outward calling capability of the AUDIX Voice Power ports.
- Monitor SMDR reports or Call Accounting System reports for outgoing calls that might be originated by AUDIX Voice Power ports.

Remote Administration and Maintenance

The Remote Administration and Maintenance feature of your telecommunications system, if you choose to use it, permits users to change the system features and capabilities from a remote location.

The Remote Administration and Maintenance feature, through proper administration, can help you reduce the risk of unauthorized persons gaining access to the network. However, telephone numbers and authorization codes can be compromised when overheard in a public location, are lost through theft of a wallet or purse containing access information, or through carelessness (writing codes on a piece of paper and improperly discarding them). Additionally, hackers may use a computer to dial an access code and then publish the information to other hackers. Substantial charges can accumulate quickly. It is your responsibility to take appropriate steps to implement the features properly, evaluate and administer the various restriction levels, and protect and carefully distribute access codes.

Under applicable tariffs, you will be responsible for payment of toll charges. AT&T cannot be responsible for such charges and will not make any allowance or give any credit resulting from unauthorized access.

To reduce the risk of unauthorized access through Remote Administration and Maintenance, please observe the following procedures:

- The System Administration and Maintenance capability of a PBX or Key system is protected by a password.
 - Change the default password immediately.
 - Continue to change the password regularly.
 - Only give the password to people who need it and impress upon them the need to keep it secret.
If anyone who knows the password leaves the company, change the password immediately.

- If you have a special telephone line connected to your PBX or Key system for Remote Administration and Maintenance, you should do one of the following:
 - Unplug the line when it is not being used
 - Install a switch in the line to turn it off when it is not being used.
 - Keep the Remote Administration and Maintenance telephone number secret. Only give it to people who need to know it, and impress upon them the need to keep it a secret. Do not write the telephone number on the PBX or Key system, the connecting equipment, or anywhere else in the system room.
- If your Remote Administration and Maintenance feature requires that someone in your office transfer the caller to the Remote Administration and Maintenance extension, you should impress upon your employees the importance of only transferring authorized individuals to that extension.

About This Book

The power and versatility of the MERLIN LEGEND™ Communications System is due in part to its many options and features. These options and features have been recorded on system planning forms and initially programmed at the time of installation. Changes in use patterns, additional equipment, or a change in operating mode may necessitate additional system programming. This book is a reference, containing all the programming procedures you need to enable your system to function at peak efficiency.

Intended Audience

This book is intended for system manager—people who plan, program, maintain, and manage the communications system. It is also intended for qualified support personnel who are responsible for installation and initial system programming.

Conventions

The following typographical conventions are used in this book:

- **Bold type** is used for telephone buttons.
Press **Drop** to delete the current entry.
- *Italic type* is used for emphasis and as a substitute for information for which you must supply a specific value.
Specify extension: dial/type *nnnn*.
Specify slot and port: dial/type *sspp*.

- Constant width type is used for information on telephone display screens or on a PC screen.
Select Sys Program.
- Bold constant width type indicates information that you enter exactly as shown.
Type **install**; dial #55.
- Keys on the PC are shown in boxes.
Press [**F7**]
- When two keys are to be pressed at the same time, the keys are connected by a plus sign.
Press [**ALT**] + [**P**]

Product Safety Labels

Throughout this book, hazardous situations are indicated by an exclamation point inside a triangle, along with the word caution or warning.



WARNING:

Warning indicates the presence of a hazard that could cause death or severe personal injury if the hazard is not avoided.



CAUTION

Caution indicates the presence of a hazard that will or can cause minor personal injury or property damage if the hazard is not avoided.

Related Documents

Document No.	Title
	System Documents
555-620-114	<i>System Overview</i>
555-620-110	<i>Feature Reference</i>
555-620-115	<i>Equipment and Operations Reference</i>
555-620-116	<i>Pocket Reference</i>
555-620-111	<i>System Programming</i>
555-620-112	<i>System Planning</i>
555-620-113	<i>System Planning Forms</i>
	Telephone User Support
555-620-122	<i>MLX- 10D™, MLX-28D™, and MLX-20L™ Display Telephones User's Guide</i>
555-620-123	<i>MLX-10D™, MLX-28D™, and MLX-20L™ Display Telephones Quick Reference</i>
555-620-150	<i>MLX-10D Telephone Tray Cards (6 cards)</i>
555-620-152	<i>MLX-28D and MLX-20L Telephone Tray Cards (5 cards)</i>
555-620-124	<i>MLX-10™ Non-Display Telephone User's Guide</i>
555-620-125	<i>MLX-10™ Non-Display Telephone Quick Reference</i>
555-620-151	<i>MLX-10 (non-display) Telephone Tray Cards (6 cards)</i>
555-620-120	<i>Analog Multiline Telephones User's Guide</i>
555-620-121	<i>Analog Multiline Telephones Quick Reference</i>
555-620-128	<i>MLC-5 Cordless Telephone Quick Reference</i>
555-620-126	<i>Single-Line Telephones User's Guide</i>
555-620-127	<i>Single-Line Telephones Quick Reference</i>
	System Operator Support
555-620-134	<i>MLX Direct-Line Consoles Operator's Guide</i>
555-620-135	<i>MLX Direct-Line Consoles Quick Reference</i>
555-620-132	<i>Analog Direct-Line Consoles Operator's Guide</i>
555-620-133	<i>Analog Direct-Line Consoles Quick Reference</i>
555-620-136	<i>MLX Queued Call Console Operator's Guide</i>
555-620-137	<i>MLX Queued Call Console Quick Reference</i>
	<i>Miscellaneous User Support</i>
555-620-130	<i>Calling Group Supervisor's Guide</i>
555-620-131	<i>Calling Group Supervisor's Quick Reference</i>
555-620-129	<i>Data User's Guide</i>

How to Comment on This Document

We welcome your comments, both good and bad. Please use the feedback form on the next page to let us know how we can continue to serve you. If the feedback form is missing, write directly to

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Programming Overview

1

This chapter covers the information you need to know before you begin using any of the programming procedures.

It includes:

- system programming basics
- how to use the system programming console
- how the programming screens and keys work
- how to interpret and use the programming procedures
- how to enter and exit system programming
- what system components require idle states for programming
- new programming features introduced in Release 1.1 and 2.0.

Introduction to System Programming

The Communications System offers easy-to-use, menu-driven software for system programming. After your system is installed, you use this software to reconfigure, update, or modify your system according to your changing business needs, such as modifying or upgrading lines, telephones, and modules connected to your system.

Planning Forms

Before you begin to program or modify your communications system, you should familiarize yourself with the system planning forms. Initially, system planning forms are used to plan your communications system and program your system during installation. After installation, they remain a source for all programming information on your communications system database. The information ranges from the system time and date to specific equipment configurations and feature programming.

Each planning form is either required or optional:

- required — forms needed to program the system.
- optional — forms needed only if the system included the features or options on the forms.

Before you begin to program or modify your system, review the control unit diagram on System Planning Form 1 to identify the module types installed in the system's control unit. Use this information to program or modify lines and trunks and assign or reassign lines to telephones. Check the physical control unit to verify that the modules are placed in the slots identified on the diagram and correct the diagram on System Form 1 if there are any discrepancies.

Before you make any changes to your system, be sure to do the following:

- Keep your planning forms up-to-date by indicating any system modifications or changes on the appropriate form after the change is made.
- Check the *Feature Reference* for possible feature interactions.
- Program the system or the system component during the appropriate idle state. See "Idle States" later in the chapter.

Types of Programming

There are three types of programming for the communications system:

- **System Programming** — enables the System manager to program features that affect all or most system users. System programming requires one the following:
 - an MLX-20L™ telephone connected to one of the first five ports of the first MLX module in the control unit
 - a PC with System Programming and Maintenance (SPM) software connected to the lower RS-232 port on the processor, with a built-in modem in the processor. The modem permits remote programming and maintenance via the public network. SPM emulates a system programming console on your PC.

NOTE:

If your system has the AT&T Integrated Solution II (IS II) — UNIX® application, you have a Master Controller equipped with the UNIX version of SPM. See Chapter 2 for more information.

- **Extension Programming** enables individual telephone users and system operators (except for QCC operators) to change their telephone features to meet individual needs. For details on extension programming, see the appropriate user and operator guides.
- **Centralized Telephone Programming** enables the System manager to program any feature that can be programmed by individual telephone users or system operators. Centralized Telephone Programming can be done on the programming console or on a PC with the SPM software. For details on Centralized Telephone Programming, see Chapter 4.

System Programming Console

The system programming console is an MLX-20L telephone connected to the system programming jack. When you enter system programming on a new system for the first time, the console must be connected to the first jack on the first 008 MLX module or 408 GS/LS-MLX module (Release 2.0 and later versions). This jack is factory set as the system programming jack and as an operator position. After you enter programming, you can change the system programming jack to anyone of the first five jacks on the first 008 MLX module or 408 GS/LS-MLX module (Release 2.0 and later versions). This allows you to program without interfering with the operator's call handling.

You can also have one or two Direct Station Selectors (DSSs) connected to the system programming console. Each DSS adds 50 extension buttons to the console, which facilitates assigning features to telephones.

The MLX-20L telephone with a DSS is shown in Figure 1-1.

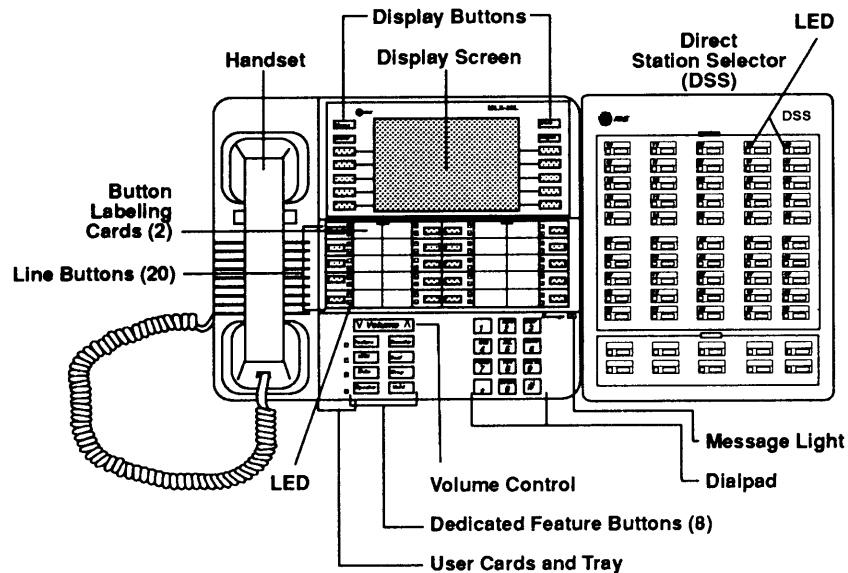


Figure 1-1. MLX-20L Telephone

Console Components

The MLX-20L console components are the following:

Desk Stand (not shown)

An adjustable stand on the console and the DSS that allows a 20- or 30-degree viewing angle.

Button Labeling Cards

Cards labeled with the number or feature assigned to each line button,

Contrast Control (not shown)

A sliding control at the top of the console used to brighten or dim the display screen.

Dedicated Feature Buttons

Eight imprinted buttons for most-used features.

Feature for viewing the Feature screen and selecting features.

HFAI (Hands Free Answer on Intercom) for answering voice-announced calls without the handset.

Mute for turning the speakerphone's microphone on and off.

Speaker for talking on a call through the speakerphone without lifting the handset.

Transfer for sending a call to another telephone.

Conf for adding a line or extension to a conference call.

Drop for disconnecting an extension or line from a conference call.

Hold for putting a call on hold.

Dialpad

Number pad for dialing telephone numbers.

Direct Station Selector (DSS)

A device that adds extension buttons and other inside and outside calling buttons to the console.

Display Buttons

Four imprinted buttons and ten non-imprinted buttons used to view the different screens and select names, features, and options from display screen.

Display Screen

7-line by 24 character screen that shows call information, features, prompts, date, and time.

Handset

The hand-held part of the console you pick up, talk into, and listen from.

LEDs

(Light-Emitting Diodes) The lights on the console that assist in checking feature status.

Line Buttons

20 buttons to make and receive calls; unlabeled buttons are programmable for one-step feature use.

Message Light

A red light that signals a waiting message.

User Cards and Tray

A slide-out drawer with erasable cards for noting telephone numbers and feature codes.

Volume Control

A button for adjusting the volume of the speaker, handset, headset, and ringer.

The DSS components are the following:

Covers:

Removable plastic covers to protect the designation cards. The top cover protects the 50 DSS button labels. The lower cover fits over the fixed feature buttons.

DSS Designation Cards

Cards for labeling the extension or feature assigned to each button.

DSS Buttons

50 buttons used for one-touch dialing of co-workers' extensions to make or transfer calls. DSS buttons are also used to page co-workers over speakerphones, to park calls, and to handle outside calls. The console can be configured with two DSSs to provide 3 "pages" of 100 extensions each.

Fixed Buttons

Ten additional buttons, including **Message Status** and three **Page** buttons. The six remaining buttons on the first DSS are not used. If a second DSS is connected to the console, the 10 buttons at the bottom of the second DSS are not used.

Fixed Message Status Button

A button used with the fixed **Page** buttons to see which telephones have message lights on.

Fixed Page Buttons Three buttons used to select the "pages" of extensions the 50 DSS buttons represent.

LEDs

(Light-Emitting Diodes) The lights on the DSS that assist in checking feature status.

Console Buttons

System programming can be done using the console's 14 display-area buttons. These buttons are arranged in two columns of seven buttons, as shown in Figure 1-2.

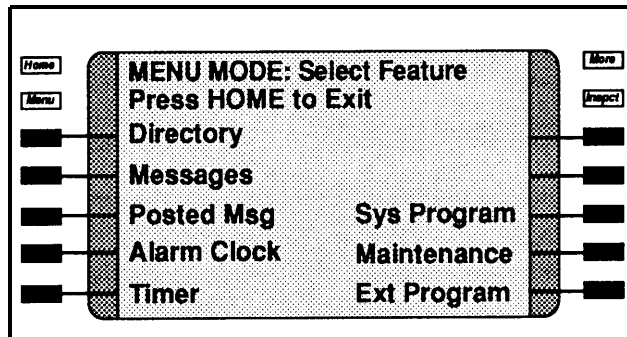


Figure 1-2. Display Buttons

The top two buttons in each column have the same labels and functions regardless of the display. Table 1-1 describes these functions.

Table 1-1. Display Button Descriptions

Button	Function
Home	Return to normal call-handling mode after you finish programming. This button displays the Home screen.
Menu	Display the Main Menu shown in Figure 1-2.
More	Display more menu items when a menu is continued on more than one screen (indicated by a ">").
Inspct (Inspect)	View a list of lines or telephones on which a feature is programmed.

The five unlabeled buttons on each side of the screen are used to select screen commands or items on a menu screen. The functions of these buttons vary, based on the option you select.

If you are using SPM for system programming, the simulated MLX-20L console screen on your PC screen shows the functions keys that correspond with the console screen selections. This manual indicates a function key in a box. For example, to save your entry, you select Enter or press [**F10**] on your PC details on using function keys and other information on SPM, see Chapter 2.

Console Overlay

The programmable lines and buttons are on the main part of the console. There are 20 physical buttons on the console itself but you can use the overlay to program up to 34 lines. Some of the unlabeled buttons on the lower part of the console may also be used for programming features. You can also use the dialpad for entering feature and programming codes.

Figure 1-3 illustrates the system console overlay.

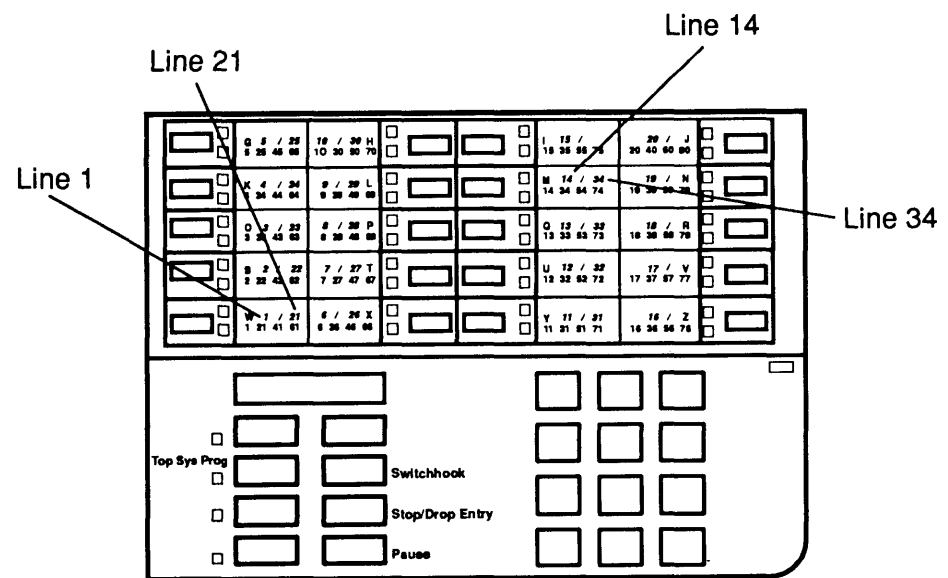


Figure 1-3. Console Overlay

Appendix D shows the button diagrams for the telephones used in the communications system. Refer to this appendix when programming buttons for other telephones.

Console and DSS Lights

The red and green lights (LEDs) next to each of the 20 line and feature buttons show the status of line features.

Console

The LEDs next to each button on the console are on or off, depending on whether the line is programmed with a feature. The feature being programmed determines whether the red or green LED is used to indicate feature status. The programming procedures specify which LED is used to verify feature status.

DSS

The lights on the DSS — if the console has one — show the status of features programmed onto the telephones that correspond to the lights. When you select a feature from a menu, the red LED next to the DSS button is on, off, or flashing depending on whether the feature is programmed on the corresponding telephone. For example, when you select Toll Restrict from the Restrictions menu under Extensions, the red LED will be on next to the DSS button for each toll restricted telephone. Appendix B provides tables showing the default LED status for system features.

Programming Procedures

The programming procedures provide step-by-step instructions for programming the communications system using system programming.

Procedure Organization

The procedures in Chapter 3 are arranged in logical groupings. This means that all the procedures for programming one aspect of the system are grouped under one heading. For example, if you want to assign network services for PRI, you would refer to the “PRI” section for that procedure. Chapter 3 provides both an alphabetical listing of all procedures and a listing by section. You can also use the Menu Hierarchy in Appendix A to find the menu path for a function.

General Programming Information

Each procedure begins with a general description of the feature, then provides a summary of programming information. This information includes the following:

- Programmable by—indicates who has system permission to use the procedure
- Mode — specifies which system mode supports the procedure
- Idle condition—specifies the idle state required before the procedure can be performed
- Planning form — indicates which planning forms provide information for the procedure
- Factory setting—shows the default settings, if any, for equipment or features affected by the procedure
- Valid entries — specifies the characters or numbers accepted during data entry
- Inspect — specifies whether or not the feature status can be verified using the Inspect feature
- Copy option — indicates whether or not the feature programmed with procedure can be copied to another system component
- Console Procedure — provides a summary of the procedure steps if using the system console
- PC Procedure — provides a summary of the procedure steps if using SPM

Programming Screens

There are three types of system programming screens:

- **Information screens** - to see what is currently programmed on the system
- **Menu selection screens** - to select options from a menu
- **Data entry screens** - to enter values or to identify a specific extension or line/trunk you want to program

Figure 1-4 shows an example of an information screen. When you select sys Program from the main menu screen (Figure 1-2), the screen shown in Figure 1-4 displays system set up information. (Your system information displays in place of the x's.)

System Set-up
Review and Exit
Size: xxxx
Type: xxxx
Operator: xxxx xxxx xxxx
xxxx xxxx xxxx xxxx xxxx
Exit

Figure 1-4. Information Screen

You cannot make changes on an information screen. Select Exit ([F5] on the PC) to continue to the next screen in the procedure.

An example of a menu selection screen is shown in Figure 1-5.

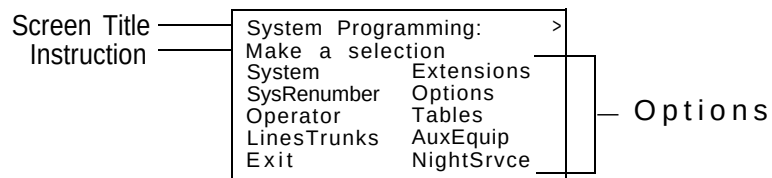


Figure 1-5. Menu Selection Screen

The first line of text on all screens is the screen title, followed on the second line by a system prompt or direction about how to proceed. The remaining lines of text vary according to the screen.

While a menu selection screen prompts you to select one of the available options, a data entry screen prompts you to enter specific data for the procedure, as shown in Figure 1-6.

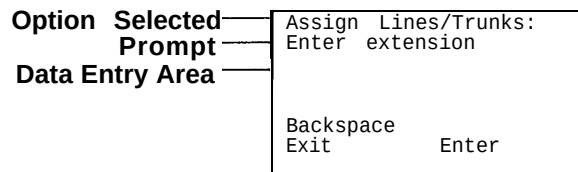


Figure 1-6. Data Entry Screen

If any data is currently programmed for the feature, it displays on the screen. Some screens also show data entered on a previous screen, such as an extension or trunk number.

A data entry screen may also offer menu selections—instead of entering data from the dialpad, you select options on the screen, such as Yes or No, to enable or disable a feature. These options are selected by pressing the button next to the option. Your selection is highlighted. To program or save that selection, you press the button next to Enter [**F10**] on the PC.

Verifying Data Entry

You can use the Inspect feature to verify or check the entries you save. For example, Figure 1-7 shows a data entry screen with the first of two required extension numbers needed to assign analog voice and data.

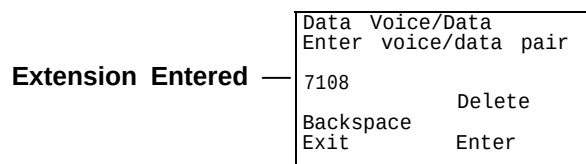


Figure 1-7. Inspect Example

After 7108 is entered and saved, the system automatically assigns the next sequential station jack number. This station jack pair does not display on the data entry screen; however, if you press **Inspect**, the pair displays as shown on the Inspect screen in Figure 1-8.

Inspect Data Displayed —

```
Voice/Data Pairs:  >
7108 7109

Exit
```

Figure 1-8. Inspect Example: Inspect Screen

You can select Exit ([F5] on the PC) to return to the previous screen. The Inspect feature also enables you to check a value currently programmed for a feature. This is helpful when you are changing or modifying features. You can also use Inspect when programming sequential extensions or lines to verify the last number programmed. See *Feature Reference* for details.

Using Procedures

The procedures are numeric steps. Each step requires an action on the console or PC. Some steps offer menu selections that may not be part of a required step and some steps present two ways to perform the procedure. This is called *branching*. To accommodate branching, a procedure offers a choice of steps to follow at the branching point. For example, the menu screen shown in Figure 1-9 provides three selections for network services. The procedure instructions break the step that follows into three branches to accommodate the three menu selections:

5

```
Network Services:
Make a selection
AT&T Toll
Local
Mist

Exit
```

For AT&T Toll, go to Step 6a.
For Local, go to Step 6b.
For Mist, go to Step 6c.

Figure 1-9. Procedure Branching for Menu Selections

Branching within procedures is also used when you can select between programming a single item or a block of items, such as a single line or a block of lines, as shown in Figure 1-10.

4

```
Copy Lines
Make a selection
Single
Block

Exit
```

For a single line, go to Step 5a.
For a block of lines, go to Step 5b.

Figure 1-10. Procedure Branching for Single and Block Selections

When you complete the branch step, you can continue on to the next numerical step. In many cases, you can also select Exit ([F5] on the PC) to return to the menu where the branch began.

Programming a Single Item Using Entry Mode

A screen may offer a selection between a block of items (such as block of lines or trunks) and Entry Mode, as shown in Figure 1-11:

```
Extension xxxx
Assign lines/trunks
Lines 01-20
Lines 21-40 Entry Mode
Lines 41-60
Lines 61-80
Exit
```

Figure 1-11. Entry Mode

To program one of the lines within any of the blocks, you select Entry Mode ([F6] on the PC). The procedure uses branching to provide the steps needed to accommodate your selection. Once you begin entry mode, you provide entries as in any other data entry screen.

Saving Entries and Moving Among Screens

At the bottom of each screen, there are one or more keys that enable you to change your entry, save your entry, or return to a previous screen. Combinations of these keys display within each programming option. These keys are shown in Figure 1-12.

QCC Priority x:	
Enter line/trunk number	
xxx	
Backspace	Delete
Exit	Next
	Enter

Figure 1-12. Screen Keys

You use these keys in the following ways:

- **Change your entry.** You can correct your entry by selecting Backspace ([F4] on the PC). Each time you press the key, the screen cursor moves backwards to erase one character at a time.
- **Save your entry.** Typically, you complete a procedure by selecting Enter ([F10] on the PC) to save the information. Occasionally, you must select Exit ([F5] on the PC) and go back to the previous screen.
- **Delete a current entry.** You can delete (or remove) a current entry by selecting Delete ([F8] on the PC).
- **Program sequentially numbered items.** If you are programming a group of sequentially numbered extensions or lines/trunks, you may have the option of selecting Next ([F9] on the PC). This saves your entry *and* automatically provides the number of the next extension or trunk in the sequence. Typically, you remain at the same screen for as long as you select Next. In a few cases, you may return to an earlier screen in the procedure.
- **Return to the previous screen.** When you have completed a procedure, selecting Exit ([F5] on the PC) takes you up one screen in the menu hierarchy. (Appendix A provides a reference to the entire system programming menu hierarchy.)
- **Exit a screen without changes.** In most cases, to exit from a screen without making any changes: select Exit (press [F5]). Exceptions are noted as part of a procedure.

When you complete a procedure, you can select select Exit or press [F5] *In a few cases*, you return to the System Programming menu. *In most cases*, you return to an intermediate step within the procedure. You can then select one of the options shown on the screen and continue programming, or you can continue to press Exit until you return to the System programming menu.

Entering System Programming

The instructions for entering system programming are given below in the same table format used for the programming instructions in Chapter 3:

- the step in the procedure (Step)
- the current screen display and the action you take (Display/Instructions)
- the selection from the menu (On the console)
- the function key to press on the PC (On the PC)

Typically, the results of each step are shown in the screen in the next step

Step	Display/Instructions	On the console	On the PC
1	12/24 11:30 Anne Kim Andre Jorge Jose Sarah Show Number Next Page		
	Display Main Menu	Press Menu .	Press [F2].
2	MENU MODE : Select Feature Press HOME to Exit Directory Messages Posted Msg Sys Program Alarm Clock Maintenance Timer Ext Program		
	Select System Programming. Note: Ext Program does not display if programming console is a QCC.	Select Sys Program.	Press [F8].

Step	Display/Instructions	On the console	On the PC
3	<pre>System Set-up: Review and Exit Size: xxxx Type: xxxx Operator: xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx Exit</pre>	Select Exit.	Press [F5]
	Display System Programming menu. (Your system set-up information displays in place of the x's shown in screen.) Note: The System Set-up screen is an information screen. The information shows the system size (small or large), type (mode), and Operator (position extension numbers). The size and type are programmed during installation. The operator positions that display will change as you add and remove operator extensions from the system.		
4	<pre>System Programming: > Make a selection System Extensions SysReNumber Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce></pre>	Press the button next to your selection.	Press the function key for your selection.
	Make a selection. Note: A > on the screen means that the menu has more than one screen. To see the additional screens, press More.		

System Programming Menu Options

Table 1-2 lists the System Programming options that display on the System Programming menu.

Table 1-2. System Programming Menu Options

Option	Description
System	Set system operating conditions.
SysRenumber	Select the system numbering plan and/or reassign extension numbers with 1- to 4-digit numbers that are more appropriate or convenient for your company.
Operator	Assign or remove operator positions and program operator features (such as Operator Hold Timer or QCC options).
LinesTrunks	Program line/trunk options.
Extensions	Program features for telephones (such as restrictions, line assignments).
Options	Program system-wide features (such as Transfer Return, Delay Ring).
Tables	Program feature that require entering information in a table (such as Allowed Lists, Disallowed Lists).
AuxEquip	Program auxiliary equipment connected to the system (such as loudspeaker paging, fax).
NightSrvce	Program Night Service Features.
Labeling	Program the labels shown on display telephones (such as System Directory, Posted Messages).
Data	Specify telephones that need simultaneous voice and data capability.
Print	Print system programming reports (such as system configuration, extension assignments).
Cntrl Prog	Do centralized telephone programming (assign features to specific buttons on telephones).
Language	Select the language that your console uses to display text on the screens. Selections are English (default), French, and Spanish.
Exit	Exit system programming.

Exiting System Programming

Use the following step to return to the System Programming menu, the main menu, or to the Home screen from within a programming screen.

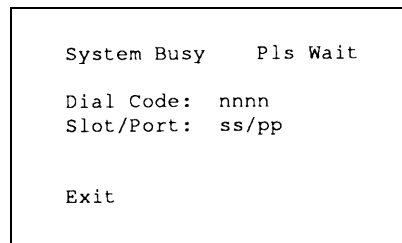
Display/Instructions	On the console	On the PC
Any Screen		
■ Return to previous menu	Press Exit.	Press [F5].
■ Return to main menu	Press Menu.	Press End.
■ Return to normal call handling	Press Home.	Press Home.

Idle States

Some programming procedures can be started only when the entire system, or some part of the system (such as a trunk or an extension), is idle, that is, not in use. Some procedures require that a trunk or extension be idle only at the instant of programming. Lengthy procedures require the system, trunk, or extension be forced into remaining idle until programming is completed. These procedures wait for the system or trunk or extension to become idle and then prevent the initiation of any new calls—a condition called forced idle,

If a procedure requires an idle condition, do the programming outside of normal business hours.

If a procedure requires an idle system and the system is busy when you begin, you see the screen shown in Figure 1-13:

A screenshot of a terminal window showing a 'System Busy' message. The text is as follows:

```
System Busy    Pls Wait  
  
Dial Code:   nnnn  
Slot/Port:   ss/pp  
  
Exit
```

Figure 1-13. System Busy Screen

When the system is no longer busy, the screen changes to the appropriate programming screen.

System Forced Idle

When the entire system is forced idle, no calls can be made or received. The following procedures can be done only when the entire system (all lines and telephones) is idle:

- select system mode
- identify system operator positions
- renumber system
- renumber modules
- identify telephones with voice signal pairs for Voice Announce to Busy feature
- identify telephones needing Simultaneous Voice and Data feature

- restore system programming information
- identify Music-on-Hold jack

When the system is forced idle, all multiline telephone users hear a signal, indicating that the telephone cannot be used. On a display telephone, the message

Wait : System Busy

appears. Single-line telephones do not get a dial tone.

Line or Trunk Idle

The following procedures can be done only when the line or trunk being programmed is idle. Since these procedure require the line or trunk to be idle only at the instant of programming, the line or trunk is not forced idle as described above.

- identify loudspeaker paging line jack
- assign trunks to pools
- specify incoming or outgoing DID or tie-trunk type
- specify tie-trunk direction
- specify tie-trunk E&M signal

Extension Forced Idle

When a telephone or data terminal is forced idle, no calls can be made or received on that telephone or data terminal. The following procedures can be started only when the telephone or data terminal being programmed is idle.

- assign call restrictions
- assign pool dial-out restrictions
- copy telephone assignments
- assign lines, trunks, or pools to extensions
- assign labels to a Personal Directory
- use centralized telephone programming

When the telephone is forced idle, a multiline telephone user hears a signal, indicating that the telephone cannot be used. On a display telephone, the message

Wait : System Busy

appears. Single-line telephone user does not get a dial tone.

100D Module Idle

The following can be done only when the 100D Module is idle:

- specify board type
- specify frame format
- specify board signaling format
- specify board suppression format
- specify board facility compensation

Forced Idle Reminder Tones

Forced idle reminder tones are provided in the following situations:

- At the telephone, to remind an extension that the system or the extension is in the forced idle state.
- At the programming console or SPM, to remind the system manager that the system or at least one extension is in the forced idle state because of administrative activity.

This tone is a high-low “doorphone” tone (400 ms of 667 Hz tone followed by 400 ms of 571 Hz tone).

In a Release 1.1 or Release 2.0 system, all three tones occur every 20 seconds. You can adjust the volume of these tones with the volume control.

Product Enhancements

Several enhancements were implemented for System Release 1.1 and 2.0. This section briefly describes these enhancements and new features. For details on each enhancement, see *Feature Reference* and *Equipment and Operations Reference*.

Procedures covering these enhancements are included in this manual. System planning for the enhancements is covered in *System Planning*.

Release 1.1 Enhancements

Release 1.1 includes all Release 1.0 functionality plus the following enhancements:

- **Language selection** — allows the system to be programmed for prompts, menus, and messages on MLX display telephones to appear in English, French, or Spanish. Each of the following can also be programmed for any of these languages, independent of the system language:
 - Individual extensions with MLX telephones
 - System programming reports
 - SMDR report headers
- **8102 and 8110 analog voice telephones**

Release 2.0 Enhancements

Release 2.0 includes all Release 1.1 functionality plus the following enhancements:

- **Programming Enhancements**
 - **Extension Copy feature** — reduces programming time by allowing the use of any extension as a template for programming another extension or block of extensions through centralized programming.
 - **Integrated Administration** — provides a single interface through Integrated Solution III (IS-III) for programming entries common to the system and AUDIX Voice Power™/FAX Attendant System™.
- **System Operational Enhancements**
 - **Coverage VMS feature** — prevents incoming external calls from going to voice mail. The feature is programmed extension-by-extension, either through extension programming or through centralized programming.

- **Calling Group as Night Service Group Assignment** — allows a Night Service group to be programmed to include a Calling Group as a member.
- **Direct Inward Dialing (DID) trunk emulation on T1 facility** — provides 24 DID channels on a single DS1 trunk interface, instead of requiring 24 separate physical trunks.
- **408 GS/LS-MLX module** — combines four ports for ground-start or loop-start trunks and eight ports for MLX telephones on a single module in the control unit.
- **Primary Rate Interface (PRI) enhancements** — provide the following:
 - Connectivity to the 5ESS® Generic 6
 - multiple incoming calls to directory number
 - Call-by-Call Service selection
 - Station ID (SID) as Calling Party Number for Automatic Number ID (ANI)
- **Call type for Automatic Route Selection (ARS) subpatterns** — voice, data, or both

This chapter describes the SPM software package. It explains:

- how to use SPM displays and function keys
- how to program in surrogate mode
- how to use the main menu and SPM Help
- how to establish local and remote PC connections
- how to program the communications system remotely
- how to backup and restore system programming information
- how to convert system programming information (part of the upgrade procedure)
- how to install your communications system and upgrade your system to a newer release

SPM runs on a DOS-based PC or on a UNIX® system platform with Integrated Solution II or Integrated Solution III (IS-II/III). It is available on a 3½-inch diskette. The DOS version is also available on a 5¼-inch diskette. This software can be used directly from the floppies on a DOS machine; however, if your PC has a hard disk, you should install SPM on the hard disk.

This chapter also describes programming on a PC with a DOS operating system. If your system has the IS-II/III application, you have a Master Controller equipped with the UNIX system version of SPM. For information about accessing SPM from the IS-II/III application, refer to the following books:

- *Integrated Solution III System Manager's Guide*, Order No. 555-601-010
- *Integrated Solution III Installation and Maintenance Guide*, Order No. 555-601-011

- *Integrated Solution II System Manager's Guide*, Order No. 555-600-726
- *Integrated Solution II Installation and Maintenance Guide*, Order No. 555-600-720

Introduction to SPM

Figure 2-1 illustrates the SPM display.

V2		QUIT MENU		Home End F1 F2 F3 F4 F5		Welcome to SPM The MERLIN LEGEND System Programming & Maintenance Utility Please press any key to continue: Version 2.xx				PgUp PgDn F6 F7 F8 F9 F10		MORE INSP		Drop ALT-P			
Shift F5		LINE 05		LINE 10		Shift F10		Alt F5		LINE 15		LINE 20		Alt F10		Pause ALT-H	
Shift F4		LINE 04		LINE 09		Shift F9		Alt F4		LINE 14		LINE 19		Alt F9		CONVERT ALT-U	
Shift F3		LINE 03		LINE 08		Shift F8		Alt F3		LINE 13		LINE 18		Alt F8		HELP CTL-F1	
Shift F2		LINE 02		LINE 07		Shift F7		Alt F2		LINE 12		LINE 17		Alt F7		RESET CTL-F5	
Shift F1		LINE 01		LINE 06		Shift F6		Alt F1		LINE 11		LINE 16		Alt F6		BROWSE CTL-F8	

Figure 2-1. The SPM Display

SPM screens simulate the system programming console. Each SPM screen includes a 7-line by 24-character console simulation window that corresponds to the display area of the MLX-20L telephone. To the right and left of this console simulation window are columns, listing the keys that correspond to similarly located buttons on the MLX-20L telephone. If you are working with Version 2.00 or higher (2.xx), v2 appears in the upper left-hand corner of the screen, as shown in Figure 2-1.

The 10 function keys, identified on the screen as **[F1]** through **[F10]**, are used to select screen options. When a screen offers you several choices, press the function key identified by the label next to your choice. (If you were programming on the console, you would press the telephone button next to your choice.)

Below the console simulation window are 20 simulated line buttons. Using **[PgDn]** (Inspect), you can determine the status of each line and which features are programmed on each line by the letter that appears next to the line number. R and G represent the ON state of the red and green LEDs on the system programming console.

The 20 line buttons can be selected by using the arrow keys to position the cursor on the appropriate key. For example, if a line, trunk, or pool is assigned to a line button, you see G next to that button. If a line, trunk, or pool is not assigned to a line button, you see neither G nor R. If a trunk is assigned to a pool, you see an R.

A list of labels on the right side of the screen shows key combinations that correspond to buttons on the MLX-20L telephone (Alt + P, Ctrl + F8, etc.). Table 2-1 describes the function of PC keys within SPM.

Table 2-1. Function of PC Keys in SPM

<u>PC Key</u>	<u>Console</u>	<u>SPM Function</u>
[Home]	Home	Quit: Exit from SPM and return to the DOS prompt when you have finished system programming. If you are using a modem, the call is disconnected.
[End]	Menu	Return to the SPM Main Menu.
[PgUp]	More	Display more menu items (when there is an additional screen and the > symbol appears next to the key).
[PgDn]	Inspct	Show the current information that has been programmed for a feature or button.
[Alt] + [P]	Drop	Enter a stop in a speed dialing sequence. This combination also deletes an entry in a field in any screen except one in which you are entering a speed dialing sequence.
[Alt] + [F]	Conf	Flash: Enter a switchhook flash in a speed dialing sequence.
[Alt] + [C]	N / A	TopSP: Return to the top of the System Programming menu.
[Alt] + [H]	Hold	Pause: Enter a pause in a speed dialing sequence.

Continued on next page

Table 2-1. - Continued

PC Key	Console	SPM Function
[Alt] + [U]	N / A	Convert: Convert a backup file from an earlier release to Release 2.0 format.
[Ctrl] + [F1]	N / A	Help: Display a help screen about SPM operations. To exit from Help, press [End].
[Ctrl] + [F5]	N / A	Reset: Reset the communications port. For example, if the information on the screen is garbled, try exiting from and then recentering the screen. If the screen remains garbled, use [Ctrl] + [F5] to clear the screen and return to the SPM Welcome screen. Note that using [Ctrl] + [F5] drops the modem connection.
[Ctrl] + [F8]	N / A	Browse: View print reports saved with Print Opts.
[Ctrl] + [F9]	N / A	Escape to shell. To use this key sequence, you must set DEBUG=1 in the SPM configuration file ams. cfg. You can then use this key sequence to execute DOS (or UNIX system) commands. To return to SPM, type exit ,
[↵]	Enter	The [↵] key on your PC can be used instead of [F10] (Enter) when Enter appears as a choice in the 7 x 24 console simulation window.
[Backspace]	Backspace	The Backspace key on your PC can be used instead of [F9] (Backspace) when it appears as a choice in the 7 x 24 console simulation window.
[Delete]	Delete	The [Delete] key on your PC can be used instead of [F8] (Delete) when it appears as a choice in the 7 x 24 console simulation window.

Continued on next page

Table 2-1. - Continued

<u>PC Key</u>	<u>Console</u>	<u>SPM Function</u>
[↑], [↓] [←], [→]	N/A	The up, down, left, and right arrow keys can be used to highlight selections in a menu and to select the 20 line buttons below the 7 x 24 console simulation window.

Surrogate Mode Programming

The purpose of surrogate mode programming is to allow system programming by qualified service personnel at a service location rather than on-site. The actual communications system hardware does not have to be installed; the programmer needs only a direct connection from the PC to the processor module. He or she then programs a system as if the appropriate modules, trunks, and telephones were installed, following a customer's set of planning forms. The programmer saves the system programming on disk by performing a system backup. The disk is then taken to a new installation and used (via the Restore option) to provide complete system programming for a new communications system.

You do not select surrogate mode programming; you enter it automatically, under the following conditions:

- The PC is connected to the lower RS-232 port on a control unit (direct local connection).
- Only the processor and power modules are connected.

Once you enter surrogate mode programming, the normal sequence of procedures is as follows:

1. At the service location:
 - a. System Erase
 - b. Boards
 - c. System Programming
 - d. Backup
2. On-site:
 - a. Restore

While you are in surrogate mode, Pass-Thru and Password are unavailable to other users. For more information, see "Boards" later in this chapter.

SPM Main Menu Options

The SPM Main Menu provides access to system programming and to the other functions of SPM:

Sys Program	enables you to program the system,
Backup*	enables you to make a backup copy of your system programming and store it on diskette or on hard disk.
Boards*	shows you which modules (port boards) are in each slot of the control unit and allows you to assign boards to slots.
Print Opts*	directs reports to the printer or to the PC for storage on diskette or hard disk.
Monitor*	is restricted to use by your technical support organization.
Maintenance	is restricted to use by your technical support organization and qualified technicians.
Restore*	enables you to restore your system programming from diskette or hard disk.
Pass-Thru*	(IS-II/III only) allows you to make a remote connection, via the control unit, to an IS-II/III machine to administer applications on the IS-II/III machine.
Password*	allows you to change the password for remote entry into the system.
Language	allows you to choose a language (English, French, or Spanish) for the 7 x 24 console simulation window on the PC. (There is also a Language selection under Sys program for setting the system language.)

SPM Help

SPM includes help screens that you can access by pressing [**Ctrl**] + [**F1**].

You can examine the help screens with [**PgUp**] and [**PgDn**]. To return to the first. Help screen, press [**Home**]; to exit from Help, press [**End**].

* SPM only; not available on the MLX-20L system programming console. To be used only by qualified service personnel.

A typical help screen is shown in Figure 2-2.

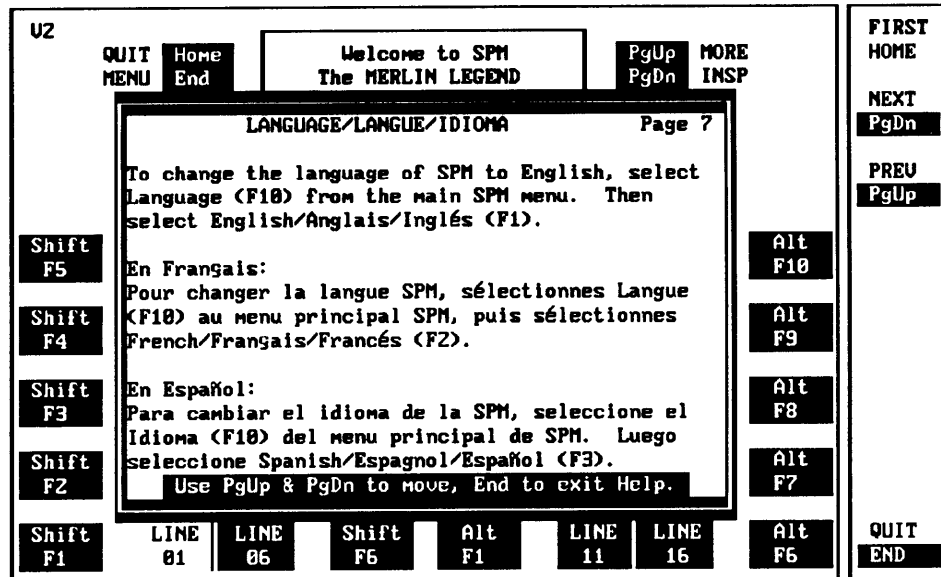


Figure 2-2. SPM Help Screen

Connecting the PC

There are three ways to connect the PC to the control unit. Choose the method that is most useful for your installation:

- direct local connection
- local modem connection
- remote modem connection

These types of connections are described later in this section.

System Requirements

To use SPM to program your system, you need the SPM diskette and an AT&T PC with version 3.3 (or a later version) of MS-DOS®. Your PC should include the following:

- at least 640 kbytes of RAM

- a floppy disk drive that will accommodate the SPM diskette
- a monochrome or color monitor
- a serial port that can use either a DB-9 or DB-25 connector

NOTE:

For a DB-9 connector, use a 9-pin to 25-pin adapter to convert the 25-pin connector to a modular connector.

- an RS-232 interface cable

Also, depending on how you connect the PC to the control unit, you may need the following:

- either a 355AF modular adapter (if there is a male connector on the interface cable) or a 355A modular adapter (if the connector is female)
- a 4-pair modular cord (D8W)

In addition, the following equipment is useful:

- a parallel printer (the PC needs a parallel port for the connection)
- a 1200- or 2400-bps modem

NOTE:

SPM uses Interrupt 4 and I/O address 3F8 for COM1. It uses Interrupt 3 and I/O address 2F8 for COM2.

Direct Local Connection

For a direct local connection, connect the PC to the system programming jack. This is the lower modular RS-232 jack on the processor module, as shown in Figure 2-3. (The upper jack is reserved for the SMDR printer.) For direct local connections, the system supports speeds of 1200 and 2400 bps. Use a direct local connection to program in surrogate mode.

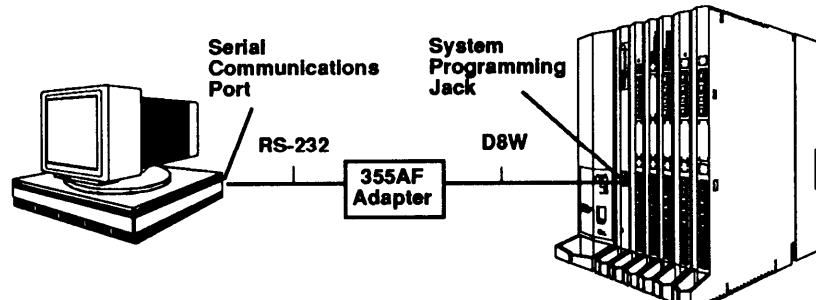


Figure 2-3. Direct Local Connection

Local Modem Connection

For a local modem connection, use a modem connected to (or built into) the PC to access the internal modem in the control unit. Connect the modem to an 012 module in the control unit, as shown in Figure 2-4. The internal modem operates at a speed of 1200 bps.

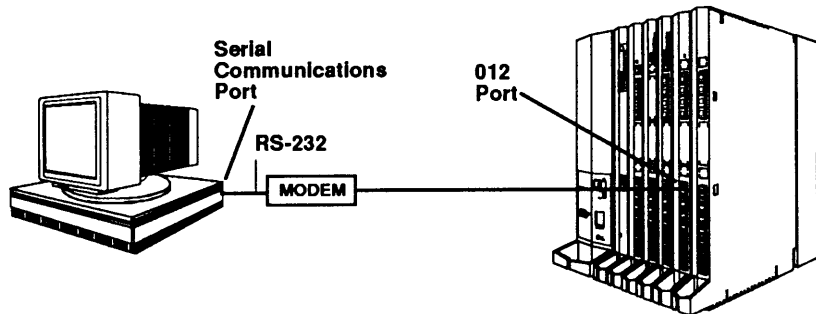


Figure 2-4. Local Modem Connection

Remote Modem Connection

For a remote modem connection, you also use a modem connected to (or built into) the PC to access the internal modem in the control unit; however, the connection is a dial-up connection, as shown in Figure 2-5. The internal modem operates at a speed of 1200 bps.

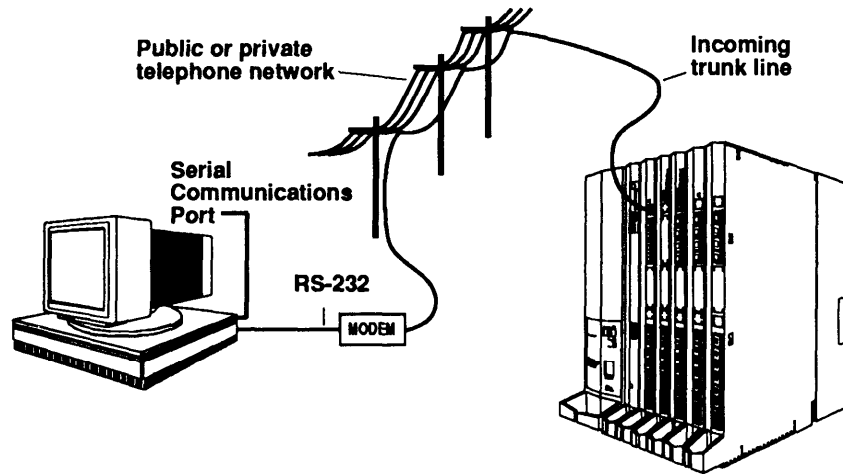


Figure 2-5. Remote Modem Connection

NOTE:

Any modem connection overrides a direct connection unless a backup or restore procedure is in progress via a direct local connection. When a modem connection is attempted while any other on-site programming is in progress, either at the system console or at a directly connected PC, the system sends a message to the on-site programmer indicating that a modem connection is being established, and the on-site programming session is terminated.

Starting SPM

The procedure for accessing SPM differs slightly, depending on whether your PC is connected directly or by modem to the control unit. Both procedures are described in the following sections.

With a Direct Local Connection

To access SPM when your PC is connected directly to the control unit, follow these steps:

Step	Display	Instructions
1		If you do not have a hard disk, insert the SPM diskette into Drive A and switch to Drive A, if it is not already the current drive.
2		Start the SPM program by typing spin. The SPM Welcome screen appears as shown in Step 3.
3	Welcome to SPM The MERLIN LEGEND System Programming & Maintenance Utility Please press any key to continue: Version 2.XX	Press any key. The SPM Main Menu appears as shown in Step 4. If the Main Menu does not appear or if the information on the screen is garbled, press any key again.
4	SPM Main Menu Menu: Select Function Sys Program Maintenance Backup Restore Boards Pass-Thru Print Opts Password Monitor Language	Select an option by pressing one of the function keys.

With a Local or Remote Modem Connection

The method you use to access SPM by modem depends on whether you are programming on-site or from a remote location.

If you are on-site, the modem must be connected to an 012 module on the control unit. To establish a connection to the control unit's internal modem, dial ***10**.

If you are at a remote location, do one of the following:

- Place a call to the system on a Remote Access line, enter the barrier code (if required), and dial the code for the internal modem (***10**).
- Place a voice call to the system on a regular line and ask the operator to transfer you to the modem (by dialing ***10**). When you hear answer tone, switch to data mode.

You can also set up the remote connection in the other direction. Place a voice call from the system to the remote PC running SPM and then transfer the call to the modem.

To access SPM with a local or a remote modem connection, follow these steps:

Step	Display	Instructions
1	Start the SPM program by typing <code>spm</code>. If you prefer to program in a language other than the current language setting for SPM, use the <code>- l</code> option to the <code>spm</code> command (note that the option is a lowercase letter <code>L</code>, not the number <code>1</code>): <pre>spm - l english spm - l french spm - l spanish</pre> The SPM welcome screen appears as shown in Step 2.	
2	<pre>Welcome to SPM The MERLIN LEGEND System Programming & Maintenance Utility Please press any key to continue: Version 2.xx</pre>	Press any key. (You may have to press it several times). This brings up a blank screen on which you can enter modem commands.
3	Make a data connection to the control unit's internal modem. The following modem commands are for Hayes® and Hayes-compatible modems. They may not be the commands used by your modem. Refer to your modem user's guide for specific information. ■ <i>If the PC is in the same location as the control unit, type *10.</i> ■ <i>If the PC is in a remote location and your system has activated the Remote Access feature, type ATDT followed by the remote access telephone number, followed by W*10, and press [↵]. (You may need to press it more than once to get the Password prompt.)</i> ■ <i>If the PC is in a remote location and your system has not activated the Remote Access feature, place a voice call to the system, using the main telephone number, and have the operator transfer the call to the modem. (The operator dials *10 to transfer the call to the modem.) To put the modem on line, type ATH1 and press [↵].</i>	

Step	Display	Instructions
4	Enter Password	Type the Remote Access password. The password you enter does not appear as you type it. The SPM Main Menu appears as shown in Step 5.
5	SPM Main Menu Menu: Select Function Sys Program Maintenance Backup Restore Boards Pass-Thru Print Opts Password Monitor Language	Select an option by pressing one of the function keys.

UsingSPM

The following sections describe the use of the SPM options. Note that most of the procedures described here are to be performed by qualified service personnel only. Options are presented in alphabetical order for ease of reference:

- Backup
- Boards
- Browse
- Convert
- Language
- Maintenance
- Monitor
- Pass-Thru
- Password
- Print Options
- Restore
- System Programming

Backup

The Backup procedure is used by qualified service personnel to create a file of system programming information in the \spm\backup directory (hard disk drive PC) or in the root directory of a diskette (floppy disk drive PC). Backing up your system regularly is strongly recommended. If you lose system programming information, you can restore your system quickly from a backup file.

Release 2.0 Only

If you have a backup diskette and do not know its release number, you may be able to find this information in the backup header. Backups of Release 2.0 and later versions of Release 1.1 contain a backup header 128 bytes long.

Approximately 59 of these bytes are currently used. Bytes 55 through 59 of the header contain the feature module identification number, as shown in Table 2-2. (Release 1.0 and early versions of Release 1.1 do not contain this information in readable form.)

Table 2-2. Backup Header: Feature Module Identification Number

	<u>Release No.</u>	<u>Build No.</u>	<u>System Size</u>	<u>Mode</u>
Size	2 bytes	1 byte	1 byte	1 byte
Examples	02 00 01 01	3 2	01	01 — Key 02 — Behind Switch 03 — Hybrid/PBX

The release number is found in the first 2 bytes of the feature module identification number (0200 = 2.0, 0101 = 1.1).

If the backup file is compressed, you can still read the header, but you cannot read the data area following the header. Use *type backup filename* to read the header on a DOS system or *cat backup filename* on a UNIX system.

Note that the feature module release number, not the version number of SPM, determines whether the backup file is compressed or uncompressed. Release 1.0 backups are uncompressed. Release 1.1 and 2.0 backups are compressed. Uncompressed files take longer to restore.

Before you begin a backup procedure, note the following:

- The communications system does not have to be idle during backup; however, station programming is blocked.
- Any objects that are in a maintenance-busy state are stored in that state. When you restore system programming, these objects are busied out, even if they have since been released from the maintenance-busy state.
- If you plan to store your backup file on a diskette, be prepared with a DOS-formatted diskette. (DOS formatting can be done on a UNIX system PC or a DOS PC.)
- Uncompressed backup files are 100,000 — 210,000 kbytes in size; compressed files are about 70,000 — 85,000 kbytes.
- Maintenance data (error logs and other data used by qualified service technicians) is not saved in the backup file.

Step	Display	Instructions
1	<pre> SPM Main Menu Menu: Select Function Sys Program Maintenance Backup Restore Boards Pass-Thru Print Opts Password Monitor Language </pre>	Select Backup by pressing [F2]. The following two screens appear.
2	<pre> Make a selection for the BACKUP file. NEW FILE will create a new file on selected device. Press Esc to Abort. </pre> <pre> GOTO FLOPPY MAKE NEW FILE BACKUP.AMS </pre>	The first screen (Make a selection for) is an information screen. Entries you make appear only on the second screen. If you are using a hard disk PC, go to Step 3. If you are using a floppy disk PC, remove the SPM diskette and insert a formatted diskette. Highlight GOTO FLOPPY (use the arrow keys) and press [↵].
3	<pre> Make a selection for the BACKUP file. NEW FILE will create a new file on selected device. Press Esc to Abort. </pre> <pre> GOTO FLOPPY MAKE NEW FILE BACKUP.AMS </pre> <pre> GOTO HARD DISK MAKE NEW FILE BACKUP.AMS </pre>	You see only one of the two narrow screens. If you are working on a floppy disk PC, you see the GOTO HARD DISK screen. If you are working on a hard disk PC, you see the GOTO FLOPPY screen. The filename shown on the GOTO screen (backup.ams) is the default name for a backup file. To select the default filename, highlight BACKUP.AMS (use the arrow keys) and press [↵]. Go to Step 5. To specify a different name for this file, select MAKE NEW FILE and press [↵]. Go to Step 4.

Step	Display	Instructions
4	<pre>Press ESC to abort Enter filename: (default is backup.ams)</pre>	Enter the filename you have chosen, or press [↵] to select the default name. You can specify a drive letter with the filename (A: or B:) but no path information.
5	<pre>Press ESC to Abort. Est. Blocks: xxx - xxxx filename BACKUP IN PROGRESS Received Block</pre>	SPM indicates the status of the backup by displaying the number of the last block received. If you are backing up from Release 1.1 or 2.0 of the communications system, Line 2 of the display screen shows the estimated number of blocks to be sent from the control unit. This line is blank if you are backing up from Release 1.0. If you abort the backup, the partial backup file is deleted to prevent restoration from a corrupted file. You see the screen shown in Step 6. Otherwise, when Backup is complete, you see the screen shown in Step 7.
6	<pre>Backup aborted. Please press Enter to see the main menu:</pre>	Press [↵] to return to the SPM Main Menu.
7	<pre>Backup successful. Please press Enter to see the main menu:</pre>	Press [↵] to return to the SPM Main Menu.

Boards

The Boards option allows qualified service personnel to add a board to the next available slot. The system must be idle to use this option. This option is not available from the system programming console.

The Boards option is also available in surrogate mode. In surrogate mode, you can assign trunk and station modules (boards) to slots, even though those boards have not actually been installed. Such boards are referred to as “phantom boards” or “null boards.”

NOTE:

If you assign phantom boards, they must be installed in higher slot numbers than any real boards you assign. If you assign a phantom board to a lower slot number than a real board, the control unit will not recognize the real board(s) that follow the phantom board.

The following boards can be selected:

Board Type	Description
400LSR	4 loop-start line jacks with 4 touch tone receivers
400GLR	4 ground-start loop-start line jacks with 4 touchtone receivers
800LS	8 loop-start line jacks
800GLS	8 ground-start/loop-start line jacks
408LSA	4 loop-start line jacks and 8 ATL station jacks
408GLR	4 ground-start loop-start line jacks and 8 ATL station jacks
008ATL	8 ATL station jacks
008MLX	8 MLX station jacks (16 endpoints)
012TR/OPT	12 tip/ring station jacks with 2 touchtone receivers or 008 OPT jacks
800DID	8 DID trunk jacks with 2 touchtone receivers
400E&M	4 E&M tie trunk jacks
100D	1 DS1 jack (24 channels)
408GLM	4 ground-start loop-start line jacks and 8 MLX station jacks (16 endpoints)

The Inspect function ([**PgDn**]) lets you see which modules have been assigned to slots on the control unit. Note that phantom boards as well as real boards are displayed with the Inspect function; to see phantom board assignments, you must print the System Information report (System -> More -> Print -> SysSet-up).

You cannot use this option to change a board type. All boards assigned with the Boards option, including phantom boards, are cleared (unassigned), if you perform a Board Renumber (System -> Board Renum).

Step	Display	Instructions
1	<pre> SPM Main Menu Menu: Select Function Sys Program Maintenance Backup Restore Boards Pass-Thru Print Opts Password Monitor Language </pre>	Select Boards by pressing [F3] .
2	<pre> Boards: > Make a selection 408LSA 800LS 012TR/OPT 008ATL 800DID 008MLX 800GLS 400GLR Exit 400LSR </pre> <pre> Boards: > Make a selection 400E&M 408GLR 100D 408GLM Exit </pre>	If the module you want to assign is not shown, press [PgUp] to see the next screen. When you see the module you want to assign, press the function key that corresponds to that module.
3	<pre> module name Enter slot numbers (01-17) Delete Backspace Next Exit Enter </pre>	Type the control unit slot number in which the module is to be reinstalled. Valid entries are 01 through 17.

Step	Display	Instructions
4	<pre>module name Enter slot numbers (01-17) nn Delete Backspace Next Exit Enter</pre>	To remove the module type from the specified slot number, press [F8] (Delete). To assign the module type to the specified slot number and assign that same module type to another slot, press [F9] (Next). To assign the module type to the specified slot number and assign a different module type to another slot, press [F10] (Enter).
5		To assign another module, select another module type and repeat Steps 3 and 4. To view types of modules assigned to all slots, press [PgDn]. When all entries are complete, press [F5] (Exit). The system restarts, terminating the programming session.

Browse

The Browse option is accessed by pressing [**Ctrl**] + [**F8**]. It allows you to browse through reports saved (by using Print Opts) in the reports directory of the PC's hard disk. When you access Browse, you see a listing of the contents of the reports directory. To select a report, highlight the desired filename by using the arrow keys, then press [**↵**]. To view the next page of a report, press [**PgDn**]. To go back a page, press [**PgUp**]. To return to the beginning of a report, press [**Home**]. To exit from the browse option, press [**End**].

Convert

The Convert option simplifies upgrading from an earlier release to Release 2.0 of the communications system. Convert is one of the steps in the upgrade procedure. The Convert option is available only on Version 2.xx of SPM (Version 2.00 or higher). Such versions can be easily identified by the v2 in the upper left-hand corner of the screen. Conversion is done by qualified service personnel. The Convert option can be invoked remotely. (See "System Programming and Maintenance (SPM))." Before you use this option, you must do the following:

- If your PC has a hard disk, install Version 2.xx of the SPM software.
- Backup system programming using Version 2.xx of SPM. (See "Backup" earlier in this chapter.)
- Make sure you know the name of the backup file that you have created.

Help screens are available to guide you through the Convert procedure.

Convert uses two files: the existing Release 1.0 or 1.1 backup file (the “convert from” file) and the converted file (the “convert to” file), which Convert creates. The “convert to” file contains system programming information in Release 2.0 format in an *uncompressed* form. The “convert from” file is unchanged. Because uncompressed files take longer to process than compressed files, you may want to restore this uncompressed backup to the Release 2.0 control unit, and then create a new backup. This new backup is in compressed form and does not have to be converted. For more information about compressed and uncompressed files, see “Backup” earlier in this chapter.

NOTE:

Once you begin to convert the backup file, you cannot stop the process. Pressing [Esc] has no effect.

Step	Display	Instructions
1	<pre>SPM Main Menu Menu: Select Function Sys Program Maintenance Backup Restore Boards Pass-Thru Print Opts Password Monitor Language</pre>	Select Convert by pressing [Alt] + [U]. The two screens shown in Step 2 appear.
2	<pre>Please select file name to convert from, then press Enter Press ESC to abort.</pre> <pre>GOTO FLOPPY filename filename</pre>	The first screen (Please select file name) is an information screen. Entries you make appear only on the second screen. If you are using a hard disk PC, go to Step 3. If you are using a floppy disk PC, highlight GOTO GLOPPY (use the arrow keys) and press [↵].

Step	Display	Instructions
3	Please select file name to convert from, then press Enter Press ESC to abort. GOTO FLOPPY filename filename GOTO HARD DISK filename filename	You see only one of the two narrow screens. If you are working on a floppy disk PC, you see the GOTO HARD DISK screen. If you are working on a hard disk PC, you see the GOTO FLOPPY screen. The filenames shown on the GOTO screen are from the \Spm\backup directory (hard disk) or the root directory of the diskette in Drive A (floppy disk). Highlight the name of the backup file that you want to convert from (use the arrow keys) and press [↵]. If the backup file you select is in Release 2.0 format (that is, does not need to be reconverted), you see the following message: File has already been converted Press [↵] to return to the beginning of Step 3. Select a different filename or press [Esc]. If the backup file you select is not in Release 2.0 format, go to Step 4.
4	Please select file name to convert from, then press Enter filename Press ESC to abort.	The Please select file name screen is updated to show the name of the file you selected. Press [↵]. The two screens shown in Step 5 appear.

Step	Display	Instructions
5	Please select file name to convert to, or select NEW FILE to create a new file on selected drive. Enter Filename: GOTO FLOPPY MAKE NEW FILE filename	The first screen (Please select file name) is an information screen. Entries you make appear only on the second screen. If you are using a hard disk PC, go to Step 6. If you are using a floppy disk PC, highlight GOTO FLOPPY (use the arrow keys) and press [↵].
6	Please select file name to convert to, or select NEW FILE to create a new file on selected drive. Enter Filename: GOTO FLOPPY MAKE NEW FILE filename GOTO HARD DISK MAKE NEW FILE filename	You see only one of the two narrow screens. If you are working on a floppy disk PC, you see the GOTO HARD DISK screen. If you are working on a hard disk Highlight the name of the file that you want to convert to, or to select a different name for the file, highlight MAKE NEW FILE (use the arrow keys) and press [↵].

Step	Display	Instructions
7	<pre> Please select file name to convert to, or select NEW FILE to create a new file on selected drive. Enter Filename: (default is RESTORE2.0) </pre> GOTO FLOPPY MAKE NEW FILE filename GOTO HARD DISK MAKE NEW FILE filename	If you selected the default filename, go to step 9. If you selected MAKE NEW FILE, type the file name. This file cannot have the same name as the backup file. If you deselect the same filename, you see the screen shown in Step 8.
8	<pre> The file selected to convert to is the same as the file selected to convert from. Please choose a different file. Press Enter to continue </pre>	Press [↵] to return to Step 7.
9	<pre> Please select file name to convert to, or select NEW FILE to create a new file on selected drive. Enter Filename: filename (default is RESTORE2.0) </pre>	The Please select file name screen is updated to show the name of the file you selected. Press [F10].

Step	Display	Instructions
10	CONVERSION IN PROGRESS Converting From: filename Converting To: filename	This screen informs you that the conversion is in progress. When the conversion is complete, the following screen appears.
11	Conversion successful. Please press any key to continue.	After you press a key, you see the SPM Main Menu.

Language

A language attribute in the SPM configuration file `\sprn\ams.cfg` (DOS version) or `/usr/ams/ams.Cfg` (UNIX System version) specifies whether SPM menus, pop-up windows, and other messages are presented in English, French, or Spanish. A second language selection option affects messages from the control unit to SPM, and controls the 7 x 24 console simulation window for the duration of the session. These two language options operate independently of each other.

The following discussion refers to the language specified in the SPM configuration file as the PC language and the language used by the control unit as the *console window language*.

PC Language

During installation of SPM, the user selects a language, and that selection is recorded in the SPM configuration file. Any time thereafter, SPM can be started with the `-l` option to specify a different language, using one of the following command lines:

```
spm -l english
spm -l french
spm -l spanish
```

Use of the `-l` option changes the language attribute in the `ams.cfg` file. The language specified becomes the new PC language, used whenever SPM is started without the `-l` option. (Note that the option is a lowercase letter L, not the number 1.)

Console Window Language

By default, the language used in the 7 x 24 console simulation window is the language specified in the `ams.cfg` file. However, the SPM user can select a different language for this window for the duration of the current session, as follows:

Step	Display	Instructions
	<pre>SPM Main Menu Menu: Select Function Sys Program Maintenance Backup Restore Boards Pass-Thru Print Opts Password Monitor Language</pre>	Select Language by pressing [F10]. The Language menu appears as shown in Step 2. The current language selection is highlighted.
	<pre>Language Make a Selection: English French Spanish Exit Enter</pre>	Highlight the new language selection. To highlight English, press [F1]. To highlight French, press [F2]. To highlight Spanish press [F3]. To complete the language selection, press [F10] (Enter).

Maintenance



CAUTION:

This option is for use by qualified technicians only. Maintenance procedures are provided in the documentation for qualified technicians.

Monitor



CAUTION:

This option is for use by your technical support organization only.

Pass-Thru

The Pass-Thru option allows qualified service personnel to administer IS-II/III applications on a remote PC by establishing a remote connection with the control unit to which the IS-II/III PC is directly connected. Figure 2-6 illustrates the relationship of the SPM PC, the communications system control unit, and the IS-II/III PC!

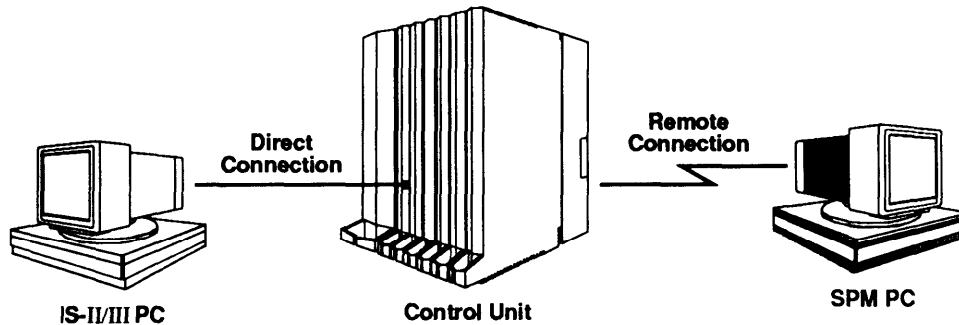


Figure 2-6. Pass-Thru

A Pass-Thru request must be initiated by a DOS PC. It is not available from a UNIX system PC; that is, Pass-Thru cannot be established between two IS-II/III PCs.

Once your Pass-Thru connection is established, you can administer any of the following IS-II/III applications from your SPM PC:

- AUDIX Voice Power™
- Call Accounting System
- Fax Attendant System® (IS-III only)
- CONVERSANT® Intro (IS-III only)

NOTE:

You cannot administer the SPM application on the IS-II/III PC because the remote call (from your SPM PC) uses the IS-II/III PC's COM1 port, so the system programming jack cannot be used for system programming. For the same reason, a user at the IS-II/III PC end of the connection cannot use SPM while your Pass-Thru is in effect. If use of SPM is attempted, the user at the IS-II/III end sees this message:

```
PRE-EMPT IN PROGRESS  
Please try again.
```

To initiate Pass-Thru, establish a modem connection between the SPM PC and the control unit.

If the IS-II/III PC does not respond to the Pass-Thru request from the control unit (for example, because the PC is turned off), you see the following message;

```
Pass-thru failed.  
Please try again.
```

If the connection between the control unit and the IS-II/III PC fails, the connection between the control unit and the SPM PC is dropped. You see the following message:

```
Pass-through Session
unexpectedly terminated.
Please press Enter
to continue.
```

When you press [↵], you are returned to the SPM Main Menu.

step	Display	Instructions
1	<pre>SPM Main Menu Menu: Select Function Sys Program Maintenance Backup Restore Boards Pass-Thru Print Opts Password Monitor Language</pre>	Press [F8] to initiate Pass-Thru.
2	<pre>Welcome to IS-II/III login:</pre>	Type your login name. The next screen you see is a full-sized screen (approximately 24 lines by 80 characters), not the 7 x 24 SPM screen.
3	<pre>Password:</pre>	Type the IS-II/III password
4	<pre>Unix disk usage information Term=</pre>	Type ams for your terminal emulation type The IS-II/III Main Menu appears. To exit from IS-II/III programming, select Exit. You are asked to confirm your selection and, when you confirm it, you are returned to the SPM Main Menu.

Password

The Password option is used by qualified service personnel to change the modem connection password. A password is always required to establish a connection with the built-in modem. The password always consists of five characters. You can perform remote system programming only if you enter the password correctly. Note that a default password is set in the factory.

Step	Display	Instructions
1	<pre>SPM Main Menu Menu: Select Function Sys Program Maintenance Backup Restore Boards Pass-Thru Print Opts Password Monitor Language</pre>	Select Password by pressing [F9].
2	<pre>Password Enter Old Password</pre>	Type the old password (which does not appear on the screen as you type it). If you do not type the old password correctly, you see Not Equal at the bottom of the screen. Type the old password again. If you do not type the old password correctly in three attempts, you see Old Password in Use at the bottom of the screen. The procedure is terminated. Press [↵] to return to the SPM Main Menu.
3	<pre>Password Enter New Password</pre>	To assign a new password, type any 5 characters. (The password does not appear on the screen as you type it.)
4	<pre>Password Enter New Password again New Password in use</pre>	Type the new password again. To return to the SPM Main Menu, press [F5].

Print Options

The Print Opts option allows qualified service personnel to direct system programming reports either to the PC (where you can save them, browse through them, or print them with the System Programming Print procedure) or to the SMDR printer. The Print procedure is described in detail in Chapter 2. This option merely specifies where reports are to be sent.

Step	Display	Instructions
	SPM Main Menu Menu: Select Function Sys Program Maintenance Backup Restore Boards Pass-Thru Print Opts Password Monitor Language	Select Print Opts by pressing [F4].
	Printer Options Make a selection SMDR Port PC Port Exit	Specify the target device for reports: ■ Press [F1] for the SMDR printer. ■ Press [F2] for the PC. Press [F5] (Exit) to return to the main menu.

Restore

The Restore option allows qualified service personnel to load system programming from a diskette or from the hard disk into the processor module memory. (You must have backed up system programming to use this procedure.)

This procedure is used to program a new system if a disk was created through surrogate mode programming or to restore information lost through system failure. It is also part of the upgrading procedure.

The system must be idle during a Restore procedure.



CAUTION:

An unsuccessful or aborted Restore results in a frigid start:

- All calls are dropped.
- The system configuration is erased.
- All system programming is lost, and the system returns to the factory settings.
- If the restore is being done remotely, the connection is dropped immediately.

If this happens, reconnect to the control unit and do another Restore immediately.

Restore is aborted under the following conditions:

- if fewer boards are listed on the disk than on the control unit
- if any real board is out of sequence with the boards listed on the disk
- if phantom boards are not listed last
- if the operating mode of the system being restored is Hybrid/PBX, but the control unit processor module has been modified with a hardware strap in place to operate only in Key mode

A successful Restore is followed by a cold start; however, you do not automatically exit from SPM.

Step	Display	Instructions
1	SPM Main Menu Menu: Select Function Sys Program Maintenance Backup Restore Boards Pass-Thru Print Opts Password Monitor Language	If you are restoring from diskette, remove the SPM diskette from Drive A and insert the backup diskette. Select Restore by pressing [F7]. The two screens shown in Step 2 appear.
2	Make a selection for the RESTORE file Press ESC to abort GOTO FLOPPY BACKUP.AMS OTHER.FILES	The first screen (Make a selection for the) is an information screen. Entries you make appear only on the second screen. If you are using a hard disk PC, go to Step 3. If you are using a floppy disk PC, highlight GOTO FLOPPY (use the arrow keys) and press [↵].

Programming with SPM

Step	Display	Instructions
3	Make a selection for the RESTORE file Press ESC to abort GOTO FLOPPY BACKUP.AMS OTHER.FILES GOTO HARD DISK BACKUP.AMS OTHER.FILES	You see only one of the two narrow screens. If you are using a floppy disk PC, you see the GOTO HARD DISK screen. If you are working on a hard disk PC, you see the GOTO FLOPPY screen. The filename shown on the GOTO screen (BACKUP.AMS) is the default name for the backup file. Highlight BACKUP.AMS or, if you have backed up to a different file, Select OTHER FILES (Use the arrow keys) and press [↵]. If the file selected is in Release 1.0 or 1.1 format and the communications system is Release 2.0, you see the screen shown in Step 4. otherwise, go to Step 5.
4	Must convert file first Please press Enter To see the main menu:	Press [↵] to return to the SPM Main Menu. For instructions on converting a backup file to Release 2.0 format, see "Convert" earlier in this chapter.
5	Press CTRL-F5 to Abort Est. Total Time: xx min filename RESTORE IN PROGRESS Blocks Sent Remaining xxxx xxxx	Wait until the screen shown in Step 6 appears.
6	Restore successful. Please press Enter to see the main menu	Press [↵] to return to the SPM Main Menu.

System Programming

One of the main functions of SPM is to provide a method for programming the communications system. The Sys Program option gives you access to all of the system programming features available from the system programming console. Complete information on system programming can be found in Chapter 2.

Programming with SPM

Step	Display	Instructions
1	<pre>SPM Main Menu Menu: Select Function Sys Program Maintenance Backup Restore Boards Pass-Thru Print Opts Password Monitor Language</pre>	Press [F1] to select Sys Program.
2	<pre>System Programming > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce</pre> <pre>System Programming Make a selection Labeling Language Data Print Cntr-Prg Exit</pre>	If the programming function you want to perform does not appear on the screen, press [PgUp] (More) to see the second screen. You can select any option by pressing one of the function keys.

Installing the SPM Software

Before you install or run SPM, make a backup copy of the SPM diskette (use the diskcopy or cp command) and store the original in a safe place. Use the backup copy to run the installation program.

NOTE:

If your PC does not have a hard disk, you do not need to run the installation program, Skip to the section entitled "Initializing the SPM Software."

Follow the appropriate instructions in the next sections of this chapter for installing SPM on a DOS or UNIX system PC.

DOS Installation

If you are installing a new version of SPM, the new files will overwrite your current SPM files. You do not need to remove them.

To install SPM on the PC's hard disk, follow these steps:

1. With the system prompt (c:>) on your screen, insert the backup copy of the SPM diskette into Drive A.

2. Change to Drive A (a:). You see the A:> prompt on the screen.
3. Type *one* of the following commands:

- **install**
- **install english**
- **install french**
- **install spanish**

The following message appears:

```
SPM HARD DISK INSTALLATION PROGRAM
Strike a key when ready
```

NOTE:

Since English is the default language, **install** and **install english** have the same effect. If you use the language argument (english, french, or Spanish), you must type it in Lowercase letters as shown. **install** itself is not case-sensitive.

4. Press any key

When the installation is finished, the following message appears:

```
SPM HARD DISK INSTALLATION IS NOW COMPLETE
YOU MUST REBOOT YOUR SYSTEM BEFORE USING SPM
```

5. Remove the SPM diskette from Drive A and reboot your system

NOTE:

If the OUT OF ENVIRONMENT SPACE error message appears on the screen, refer to the shell command in your DOS manual.

The installation procedure automatically does the following:

- Checks available space on the hard disk. Installation terminates with an error message if the space is insufficient.
- Checks permissions on the autoexec.bat and config.sys files. Installation terminates with an error message if either file is write-protected.
- Saves a copy of autoexec.bat as autoexec.old.
- Saves a copy of config.sys as config.old.
- If autoexec.bat has not already been configured for SPM, does the following:
 - Adds c:\spm to the PATH variable.
 - Adds the line SET AMS PATH+C: .

- Adds the background print command
`PRINT /D:PRN /B: 4096 /u:3 /M:200 /s:1 >NUL.`
- If config.sys has not already been configured for SPM, adds the line
`DEVICE=C:\ANSI.SYS.`
- Copies the ansi.sys file from the floppy disk to c:\.
- Creates the directory C:\SPrn.
- Copies the following files from the floppy disk into C:\SPrn:
 - spin. exe
 - ams_hlp. eng, the English-language help file
 - ams_hlp. fre, the French-language help file
 - ams_hlp. spa, the Spanish-language help file
- Creates the following directories if they do not already exist:
 - c: \spm\backup
 - c: \spm\reports
 - c: \spm\tmp
- Does one of the following:
 - Creates the SPM configuration file c: \ spm\ams.cfg, if it is not already present. In this case, the ams.cfg file consists of only one line, specifying the language attribute (LANG 1 if you specified English or did not specify a language with the install command, LANG 2 if you specified French, LANG 3 if you specified Spanish).
 - Modifies the ams.cfg file, if it is present, by adding or changing the LANG value.

Installation is complete. Continue with the section entitled "Initializing the SPM Software."

UNIX System Installation

The procedure for installing the UNIX system version of SPM saves any existing system programming backup files on the hard disk.

To install the UNIX system version of SPM, follow these steps:

1. Log on to IS-II/III as **maint**.
2. Select **Technician Maintenance** from the IS-II/III Maintenance menu.
3. Select **Administer Integrated Solution** from the Technician Maintenance menu.
4. Mark **System programming and Maintenance (SPM)** on the menu by pressing the UN/MARK function key, [**F2**].
5. Press the **UPDATE** function key, [**F4**].

6. Insert the SPM diskette into the floppy disk drive and press [↵].

A request for confirmation appears.

7. Press [↵] to continue.

You are prompted to insert the SPM diskette.

8. Press [↵] to continue.

The system shows the progress of the installation by displaying dots at the rate of one dot per second. The procedure takes about 3½ minutes.

When the installation is finished, a confirmation message appears.

9. Press [↵] to continue.

You are prompted to remove the SPM diskette and to shut down the system.

10. Remove the diskette and press [↵] to shut down the system.

(If you press [**Esc**] instead, you can continue running SPM; however, the software is not installed until you shut down and reboot.)

When shutdown is finished, you are prompted to reboot the system.

11. Press the PC's reset button or [**Alt**] + [**Ctrl**] + [**Delete**] to reboot.

The installation procedure is complete. Since the UNIX system version of SPM does not have to be initialized, you are ready to use SPM.

Initializing the SPM Software

To run correctly, the DOS version of SPM requires certain information (transmission speed, type of monitor, etc.). This information needs to be supplied only once, the first time you run SPM.

The information provided during the initialization process is written to the SPM configuration file (ares.cfg). If you need to change this information at some later time, you can do so in either of the following ways:

- Invoke SPM with one or more of the following options, for example,

```
spm -com1 -s1200 -color -1 french
```

Any of these options changes the information in ams.cfg.

spm -com1	specifies COM1 as the communications port used by SPM.
spm -com2	specifies COM2 as the communications port used by SPM.
spm -s1200	specifies modem speed of 1200 bps.
spm -s2400	specifies modem speed of 2400 bps.
spm -color	specifies color monitor.
spm -mono	specifies monochrome monitor.

spm -l english specifies English as the PC language.
spm -l french specifies French as the PC language.
spm -l spanish specifies Spanish as the PC language.

- Edit the `ams.cfg` file. (If you are unsure about editing the file, you can remove it. You are prompted to reinitialize the next time you invoke SPM.)

To initialize SPM, follow the steps below.

Step	Display	Instructions
1		Start the SPM program by typing spm at the <code>c:></code> prompt if your PC has a hard disk, otherwise at the <code>A: ></code> prompt.
2	<pre>Welcome to SPM The MERLIN LEGEND System Programming & Maintenance Utility Please press any key to continue: Version 2.xx</pre>	Press any key. The screens in Steps 3 through 7 appear only if the system has not been initialized.
3	<pre>COMM PORT: 1. Comm 1 2. Comm 2 Enter selection #</pre>	Select the communications port used by SPM by typing 1 for COM1 or 2 for COM2.
4	<pre>Speed: 1. 1200 2. 2400 Enter selection #</pre>	Select the communication speed by typing 1 for 1200 bps 2 for 2400 bps.
5	<pre>COLOR Enter selection (y/n):</pre>	If you have a color monitor, type y . Otherwise, type n .

Step	Display	Instructions
6	<pre>Language: 1. English 2. French 3. Spanish Enter selection #</pre>	Type 1, 2, or 3 to select a language. The language you choose becomes the SPM (PC) language.
7	<pre>SPM CONFIGURATION: Comm Port: (1 or 2) Speed: (1200 or 2400) Color: (Yes or No)</pre>	Review your selections and type y to change any of the information on the screen or n to save the initialization information. y takes you back to the screen shown in Step 3. n takes you to the screen shown in Step 8.
8	<pre> SPM Main Menu Menu: Select Function Sys Program Maintenance Backup Restore Boards Pass-Thru Print Opts Password Monitor Language</pre>	You see the SPM Main Menu, indicating that the SPM program is ready to use.

The `DEBUG` attribute is also specified in `ams.cfg` as `DEBUG=0` (off), the default setting, or `DEBUG=1` (on). This attribute is used to enable the Escape to Shell feature of SPM, activated by the **[Ctrl] + [F9]** key sequence.. It is not part of the initialization process — to turn `DEBUG` on, you must edit the `ams.cfg` file.

The `DEBUG` attribute is for use by qualified service personnel only.

Inter-Release Compatibility

It is important to understand compatibilities between files created on each of the different versions of SPM and the different feature modules of the communications system, not only for upgrading, but also for programming.

Table 2-3 summarizes programming compatibility. (It is assumed that the majority of the programming is done in surrogate mode and backed up on disk.)

Table 2-3. Programming Compatibility

SPM Version	Program/ Backup on	Restore on		
		1.0	1.1	2.0
1.13	1.0	yes	no	no
1.16	1.0	yes	yes	no
2.xx	1.0	yes	yes	yes*
1.16	1.1	no	yes	no
2.xx	1.1	no	yes	yes*
2.xx	2.0	no	no	yes

* The backup file must be converted before it is restored.

Upgrade Procedure

Upgrading involves several steps. It is not a difficult procedure, but the steps must be performed in the order listed.

1. Install SPM.

Complete instructions can be found in the section entitled "installing the SPM Software" earlier in this book.

To upgrade your communications system to Release 7.7, you will need to install (or, on a UNIX system PC, upgrade to) Version 1.16 of SPM.

To upgrade your communications system to Release 2.0, you will need to install (or upgrade to) Version 2.xx of SPM.

2. Backup your system programming.

This step creates a file containing system programming information. Complete instructions can be found in the section entitled "Backup" earlier in this book.

To upgrade the system to Release 7.7, you can use Version 1.16 or later of SPM.

To upgrade the system to Release 2.0, you must use Version 2.xx of SPM.

3. Change your feature module:

a. Turn off the AC power switches on the control unit in the following

- (1) Basic carrier
- (2) Expansion carrier 1, if present
- (3) Expansion carrier 2, if present

- b. Unplug the interface cords from the SPM and SMDR printer ports on the processor module.
- c. Remove the processor module from Slot 0.
- d. Remove the feature module from the processor module and replace it with a Release 1.1 or 2.0 feature module.
- e. Reinstall the processor module in Slot 0.
- f. Plug the interface cords into the SPM and SMDR printer ports on the processor module.
- g. Turn on AC power to the control unit in the following order:
 - (1) Expansion carrier 2, if present
 - (2) Expansion carrier 1, if present
 - (3) Basic carrier

4. Perform a System Erase (frigid start).

This step ensures that all system programming is returned to default values.

To upgrade to Release 1.1, use the System Erase function as follows:
Maintenance → Slot → 00 → Demand Test → System Erase.

To upgrade to Release 2.0, use the System Erase function as follows:
Maintenance → Slot → 00 → Demand Test → System Erase
(Line 5, left button) **twice** → Yes

See Maintenance and Troubleshooting for additional information on System Erase.

5. Convert your backup file (**Upgrade to Release 2.0 only**)

This procedure converts the backup file created in Step 2 to the Release 2.0 format. See "Convert" earlier in this book.

6. Restore your system programming.

The system is forced idle and cannot be used during this procedure. See "Restore" earlier in this book.

To upgrade to Release 7.1, Use Version 1.16 or Version 2.xx of SPM and restore the backup file you created in Step 2.

To upgrade to Release 2.0, Use Version 2.xx of SPM and restore the file you converted in Step 5.

7. Program new features.

Table 2-4 lists features added with Release 1.1 of the communications system. When you upgrade to Release 1.1, you must program these features as the last step (Step 7) of the upgrade procedure.

Table 2-5 lists features added with Release 2.0 of the communications system. When you upgrade from Release 1.1 to Release 2.0, you must program these features as the last step (Step 7) of the upgrade procedure. When you upgrade from Release 1.0 to Release 2.0, you must program the features listed in Table 2-4, then the features listed in Table 2-5.

Table 2-4. Programming Needed after Upgrade to Release 1.1

System language
System Programming → **More** → Language → SystemLang
Extension language
System Programming → **More** → Language → Extensions
SMDR language
System Programming → **More** → Language → SMDR
Printer language
System Programming → **More** → Language → printer

Table 2-5. Programming Needed after Upgrade to Release 2.0

Primary Rate Interface (PRI)
Sys Program → LinesTrunks → LS/GS/DS1 → Type → PRI
Sys Program → LinesTrunks → LS/GS/DS1 → FrameFormat
Sys Program → LinesTrunks → LS/GS/DS1 → Suppression
Sys Program → LinesTrunks → PRI → PhoneNufier
Sys Program → LinesTrunks → PRI → B-ChannlGrp
Sys Program → LinesTrunks → PRI → NumbrToSend
Sys Program → LinesTrunks → PRI → Test TelNum
Sys Program → Lines Trunks → PRI → Protocol
Sys Program → LinesTrunks → PRI → DialPlanRtg
Sys Program → LinesTrunks → PRI → OutgoingTbl
Sys Program → Tables → ARS

DID Emulation on T1
Sys Program → LinesTrunks → LS/GS/DS1 → Type → **More** → DID/All DID

Night Service Calling Group
Sys Program → NightSrvce → GroupAssign → Calling Group

Coverage VMS off
Sys program → **More** → Cntr-Prg → Program Ext

Continued on next page

Table 2-5. — Continued

Data Status

Sys Program → **More** → Cntr-Prg → Program Ext

Extension copy:

Sys Program → **More** → Cntr-Prg → Copy Ext

Posted Message button on analog multiline and MLX-10™ non-display telephones (for use with Do Not Disturb)

Sys Program → **More** → cntr-Prg → Program Ext

Basic System Operating Conditions

The procedures in this section are all related to the system rather than to the operation of telephones, operator positions, or trunks. These are conditions that have to be set only when the system is new or, sometimes, after a frigid start.

NOTE:

You have to reset the system time when Daylight Savings Time begins and ends.

This section contains the following programming procedures:

- System Restart
- System Programming Position Assignment
- System Language
- Board Renumbering
- Mode of Operation
- Automatic Maintenance Busy
- System Date
- System Time

System Restart

 **CAUTION:**
This procedure is for qualified support personnel only.

Use this procedure to perform a system restart (cold start).
All calls are dropped when you perform this procedure. System programming is saved.
Telephones with the Extension Status feature can lose toll restrictions as a result of a cold start.

Entering Programming

Console: Select Menu → Sys Program → Exit
PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select Exit on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: System Restart

Programmable by	Qualified support personnel
Mode	All
Idle Condition	Not required
Planning Form	Not applicable
Factory Setting	None
Valid Entries	None
Inspect	No
Copy Option	No
Console Procedure	System → Restart → Yes
PC Procedure	[F1] → [F1] → [F1]

Procedure: System Restart

Step	Display/Instructions	On the console	On the PC
1	System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvc		
	Select the System menu.	Select System.	Press [F1]
2	System: Make a selection Restart MaintenBusy SProg Port Date Mode Time Board Renum Exit		
	Select System Restart.	Select Restart.	Press [F1]
3	System Restart: System will be down ... Do you want to continue? Yes No Exit		
	To restart system	Select Yes.	Press [F1]
	To abort the restart and return to System menu	Select No, then select Exit.	Press [F2], then press [F5]
4	Restart System is restarting		
	Session is terminated; the system restarts. Re-enter system programming to continue,		

System Programming Position Assignment

Use this procedure to reassign the station jack used for system programming. This jack should *not* be the same jack used for the operator position.

The system programming position can be reassigned only to one of the first five jacks on the first MLX module. Only one system programming console is allowed per system.

If you are programming on the console:

- The console must be connected to the station jack currently assigned for system programming.
- As soon as you change the system programming jack, the system programming session is terminated. To proceed with system programming, you must connect the system programming console to the newly assigned station jack and re-enter system programming.

Entering Programming

Console: Select *Menu* → Sys Program → Exit
PC/SPM: Type **SPM** → press any key → [**F1**] → [**F5**]

Exiting Without Changes

To exit from any screen without making changes, select Exit on the console or press [**F5**] on the PC before saving your entry or menu selection,

Summary: System Programming Position Assignment

Programmable by	System manager
Mode	All
Idle Condition	Not required
Planning Form	Form 1, System Planning
Factory Setting	First jack on first MLX module (also set as an operator position)
Valid Entries	Extension number of one of the first five jacks on the first MLX module
Inspect	No
Copy Option	No
Console Procedure	System → SProg Port → Drop → Dial ext. no. → Enter → Exit
PC Procedure	[F1] → [F2] → [Alt] + [P] → Dial ext. no. → [F10] → [F5]

Programming Procedures

Procedure: System Programming Position Assignment

Step	Display/Instructions	On the console	On the PC
1	<pre> System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce </pre>		
	Select the System menu.	Select System.	Press [F1]
2	<pre> System: Make a selection Restart MaintenBusy SProg Port Date Mode Time Board Renum Exit </pre>		
	Select System Programming port.	Select SProg Port,	Press [F2]
3	<pre> System Programming Port: Enter extension xxxx Backspace Exit Enter </pre>		
	Erase current setting.	Press Drop .	Press [Alt] + [P]
4	Enter the new extension in one of the following ways:		
	Extension number	■ Dial [nnnn].	■ Type [nnnn]
	Slot and port number	■ Dial *[sspp]	■ Type *[sspp]
	Logical ID number	■ Dial #[nnn]	■ Type #[nnn]
	DSS	■ Press DSS button	
5	Save your entry.	Select Enter.	Press [F10]
6	To return to System Programming menu	Select Exit.	Press [F5]

System Language

Release 1.1 and 2.0 Only

Your communications system offers you a choice of three languages (English, French, and Spanish) for the following options:

- System language (set first)
- Station Message Detail Recording (SMDR) reports (see “System Features”)
- Print reports (see “Printing Reports”)
- Extensions (see “Optional Telephone Features”)

Use this procedure to set the system language.

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → [**F1**] → [**F5**]

Exiting Without Changes

To exit from any screen without making changes, select Exit on the console or press [**F5**] on the PC before saving your entry or menu selection.

Summary: System Language

Programmable by	System manager
Mode	All
Idle Condition	Not required
Planning Form	Form 1, System Planning
Factory Setting	English
Valid Entries	English, French, Spanish
Inspect	No
Copy Option	No
Console Procedure	More → Language → SystemLang → Yes → Select a language → Enter
PC Procedure	[PgUp] → [F6] → [F1] → [F3] → Select a language → [F10]

Programming Procedures

Procedure: System Language

Step	Display/Instructions	On the console	On the PC
1	System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce		
	Go to the second screen of the System Programming menu.	Press More .	Press [PgUp]
2	System Programming Make a selection Labeling Language Data Print Cntr-Prg Exit		
	Select Language.	Select Language	Press [F6]
3	Language: Make a selection SystemLang Extensions SMDR Printer Exit		
	Select System Language.	Select SystemLang.	Press [F1]
4	System Language: All stations, SMDR, and printer will be affected Do you want to continue? Yes No Exit		
	To set the system language	Select Yes.	Press [F3]
	To abort the procedure and return to the previous screen	Select No, then select Exit.	Press [F2], then press [F5]

Step	Display/Instructions	On the console	On the PC
5	System Language: Select one English French Spanish Exit Enter		
	Select a system language. (The default is English.)	Select English, French, or Spanish.	Press [F1], [F2], or [F3],
6	Save your entry. Session is terminated; the system restarts. Re-enter system programming to continue. For programming single or block of extensions, see Extension Language procedure under "Optional Telephone Features."	Select Enter.	Press [F10]

Board Renumbering



CAUTION:

This procedure is to be performed by qualified support personnel only.

Use this procedure to renumber boards that have already been installed. Note that this is *not* the same procedure as the Boards option, available to qualified service personnel with SPM only. This procedure restarts the system (system programming is not lost).

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → [**F1**] → [**F5**]

Exiting Without Changes

To exit from any screen without making changes, select Exit on the console or press [**F5**] on the PC before saving your entry or menu selection.

Summary: Board Renumbering

Programmable by	Qualified support personnel only
Mode	All
Idle Condition	System idle
Planning Form	Not applicable
Factory Setting	None
Valid Entries	Not applicable
Inspect	Not applicable
Copy Option	Not applicable
Console Procedure	System → Board Renum → Yes
PC Procedure	[F1] → [F4] → [F2]

Programming Procedures

Procedure: Board Renumbering

Step	Display/Instructions	On the console	On the PC
1	System Programming: > Make a selection System Extensions SysReNumber Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce		
	Select the System menu.	Select System.	Press [F1]
2	System: Make a selection Restart MaintenBusy SProg Port Date Mode Time Board Renum Exit		
	Select Board Renumbering.	Select Board Renum.	Press [F4]
3	Board Renumber: System will be down.... Do you want to continue? Yes No Exit		
	To continue the Board Renumbering procedure	Select Yes.	Press [F2]
	To abort this procedure and return to the System menu	Select NO, then select Exit.	Press [F3] then press [F5]
4	Board Renumber: System is Renumbering This is an information screen When renumbering is finished, the system returns to the screen shown in Step 1.		

Mode of Operation

The system mode — Key, Behind Switch, or Hybrid/PBX — determines how the system operates. More specifically, the system mode determines:

- how lines or trunks are provided to users
- types of operator consoles allowed
- features available

Changing this option causes a system restart and terminates the programming session. You must re-enter system programming to program other features.

NOTE:

The Hybrid/PBX option is not available if the control unit processor module has been modified with the hardware strap in place to operate in Key mode only. See *Equipment and Operations Reference*.

These options cannot be programmed for Behind Switch or Key systems:

- Automatic Route Selection (ARS)
- Pools
- Queued Call Consoles (QCCs) and associated features
- Direct Inward Dialing (DID) Trunks
- System Access buttons
- Dial Plan Routing (PRI)
- Call by Call Services (PRI)

The Ground-start trunks option cannot be programmed if the processor module has been modified for Key mode-only operation.

Entering Programming

Console: Select Menu → Sys Program → Exit
PC/SPM: Type **SPM** → press any key → [**F1**] → [**F5**]

Exiting Without Changes

To exit from any screen without making changes, select Exit on the console or press [**F5**] on the PC before saving your entry or menu selection.

Summary: Mode of Operation

Programmable by	System manager
Mode	All
Idle Condition	System idle
Planning Form	Form 1, System Planning
Factory Setting	Key
Valid Entries	Key, Behind Switch, Hybrid/PBX
Inspect	No
Copy Option	No
Console Procedure	System → Mode → Select mode → Enter
PC Procedure	[F1] → [F3] → Select mode → [F10]

Procedure: Mode of Operation

Step	Display/Instructions	On the console	On the PC
1	<pre> System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce </pre>		
	Select the System menu.	Select System.	Press [F1]
2	<pre> System: Make a selection Restart MaintenBusy SProg Port Date Mode Time Board Renum Exit </pre>		
	Select the Mode screen.	Select Mode .	Press [F3]
3	<pre> Mode: Select one Key Hybrid/PBX BehndSwch Exit Enter </pre>		
	Select the appropriate mode.	Select Key, Hybrid/PBX, or Behnd Switch.	Press [F1], [F2],or [F3],
4	Save your entry. Session is terminated; the system restarts. Re-enter system programming to continue.	Select Enter .	Press [F10].

Automatic Maintenance Busy

Automatic Maintenance Busy allows the system to take a malfunctioning trunk out of service for outgoing calls. (Incoming calls are never blocked.) This protects against disruptions in outgoing calling patterns that are caused by faulty outside facilities.

For optimum performance, enable Automatic Maintenance Busy for Hybrid/PBX systems with pooled trunks.

NOTE:

No more than 50% of the trunks in a trunk pool are allowed to be placed in the maintenance-busy state at one time *unless* the central office has failed to disconnect a trunk (which prevents anyone from using that trunk) or an entire trunk module is manually taken out of use (a user-imposed maintenance-busy state).

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → [**F1**] → [**F5**]

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press [**F5**] on the PC before saving your entry or menu selection.

Summary: Automatic Maintenance Busy

Programmable by	System manager
Mode	All
Idle Condition	Not required
Planning Form	Form 1, System Planning
Factory Setting	Disabled
Valid Entries	Enabled, Disabled
Inspect	No
Copy Option	No
Console Procedure	To disable Automatic Maintenance Busy: System → MaintenBusy → Disable → Enter → Exit To enable Automatic Maintenance Busy – no tie trunks: System → MaintenBusy → Enable → Enter → Exit

PC Procedure

To enable/disable with tie trunks:

System → MaintenBusy → Enable → Enter →
Enable/Disable → Enter → Exit

To disable Automatic Maintenance Busy:

[F1] → [F6] → [F2] → [F10] → [F5]

To enable Automatic Maintenance Busy – no tie trunks:

[F1] → [F6] → [F1] → [F10] → [F5]

To enable/disable with tie trunks:

[F1] → [F6] → [F1] → [F10] → [F1] / [F2] → [F10]
→ [F5]

Programming Procedures

Procedure: Automatic Maintenance Busy

Step	Display/Instructions	On the console	On the PC
1	System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce		
	Select the System menu.	Select System.	Press [F1]
2	System: Make a selection Restart MaintenBusy SProg Port Date Mode Time Board Renum Exit		
	Select the Automatic Maintenance Busy menu.	Select MaintenBusy.	Press [F6]
3	Auto-Maintenance Busy: Select one Enable Disable Exit Enter		
	Enable or disable Automatic Maintenance Busy. Disable leaves malfunctioning trunks available for outgoing calls.	Select Enable or Disable,	Press [F1] or [F2]
4	Save your entry. If you selected Enable or Disable (and your system has no tie trunks), you have finished this procedure.	Select Enter .	Press [F10]

Proaramming Procedures

Step	Display/Instructions	On the console	On the PC
5	Auto Busy TIE Trunks: Select one Enable Disable Exit Enter If you selected Enable and your system has tie trunks, specify whether to take malfunctioning tie trunks out of service automatically or leave malfunctioning tie trunks available for outgoing calls.	Select Enable Or Disable.	Press [F1] or [F2]
6	Save your entry.	Select Enter.	Press [F10]
7	To return to System Programming menu	Select Exit.	Press [F5]

System Date

The System Date feature allows you to set the month, day, and year that appear on MLX display telephones and on Station Message Detail Recording (SMDR) reports.

NOTE:

If you are planning to use the SMDR feature, make sure the current date is set.

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → [**F1**] → [**F5**]

Exiting Without Changes

To exit from any screen without making changes, select Exit on the console or press [**F5**] on the PC before saving your entry or menu selection.

Summary: Set System Date

Programmable by	System manager
Mode	All
Idle Condition	Not required
Planning Form	Form 1, System Planning
Factory Setting	01-01-00
Valid Entries	Month: 01-12 Day: 01-31 Year: 00-99
Inspect	No
Copy Option	No
Console Procedure	System → Date → Drop → Dial current date → Enter → Exit
PC Procedure	[F1] → [F7] → [Alt] + [P] → Type Current date → [F10] → [F5]

Procedure: Set System Date

Step	Display/Instructions	On the console	On the PC
1	<pre> System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvc </pre>		
	Select the System menu	Select System.	Press [F1]
2	<pre> System: Make a selection Restart MaintenBusy SProg Port Date Mode Time Board Renum Exit </pre>		
	Select the Date screen.	Select Date.	Press [F7]
3	<pre> Date: Enter month(01-12), Day(01-31) Year(00-99) xxxxxx Backspace Exit Enter </pre> xxxxxx = current system date		
	Erase current date.	Press Drop .	Press [Alt] + [P]
4	Enter 6 digits for the current date.	Dial <i>[mmddyy]</i> .	Type <i>[mmddyy]</i> .
5	Save your entry.	Select Enter .	Press [F10]
6	To return to System Programming menu	Select Exit .	Press [F5]

System Time

The System Time feature allows you to set the time that appears on MLX display telephones and on SMDR reports.

NOTE:

If you are planning to use the SMDR feature, make sure the system time is set accurately.

If you change the system time while the system is in Night Service mode, Night Service is deactivated and must be manually reactivated.

If you have installed applications such as Call Management System (CMS) or AUDIX™ Voice Power, you may need to set the time in the applications software whenever you reset the system time.

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → [F1] → [F5]

Exiting Without Changes

To exit from any screen without making changes, select Exit on the console or press [F5] on the PC before saving your entry or menu selection.

Summary: Set System Time

Programmable by	System manager
Mode	All
Planning Form	Form 1, System Planning
Factory Setting	0000
Valid Entries	0000-2359
Inspect	No
Copy Option	No
Console Procedure	System → Time → Drop → Dial current time → Enter → Exit
PC Procedure	[F1] → [F8] → [Alt] + [P] → Type current time → [F10] → [F5]

Procedure: Set System Time

Step	Display/Instructions	On the console	On the PC
1	<pre> System Programming: > Make a selection System Extensions SysRenumbe Options Operator Tables LinesTrunk AuxEquip Exit NightSrvce </pre>		
	Select the System menu.	Select System.	Press [F1]
2	<pre> System: Make a selection Restart MaintenBusy SProg Port Date Mode Time Board Renum Exit </pre>		
	Select the Time screen.	Select Time.	Press [F8]
3	<pre> Time: Enter hour (00-23) and minutes (00-59) xxx Backspace Exit Enter </pre> xxxx = current system time		
	Erase current time.	Press Drop.	Press [Alt] + [P].
4	Enter the current time. Use 24-hour (military) notation (for example, enter eleven thirty p.m. as 2330). Use leading zeroes if necessary (for example, enter four a.m. as 0400).	Dial [hhmm].	Type [hhmm],
5	Save your entry.	Select Enter.	Press [F10]
6	To return to System Programming menu	Select Exit.	Press [F5]

System Renumbering

The procedures in this section are used to assign the 2-digit, 3-digit, and Set Up Space numbering plans.

NOTE:

System Renumbering is called Flexible Numbering in the MERLIN® II Communications System. This is *not* the same as Board Renumbering, an option used when modules in the control unit are changed.

Do not attempt to assign a numbering plan without Planning Forms 2a, System Numbering-Station Jacks, 2b, System Numbering- Digital Adjuncts, and 2d, System Numbering, Special Renumbers, Form 6a, Optional Operator Features, is needed to assign a DSS Page button.

This section contains the following programming procedures:

- Select System Numbering Plan
- Single Renumbering
- Block Renumbering
- Direct Station Selector (DSS) Page Button Assignment

You select only one of the numbering plans (2-digit numbering, 3-digit numbering, or Set Up Space numbering). In addition, you may need to perform single and/or block renumbering. You do not need to assign DSS page buttons unless the system programming console or one of the operator positions is connected to a DSS. No matter which procedures you need to perform, assign the numbering plan first, then do single and/or block renumbering, and finally, assign DSS page buttons (if necessary).

Use the single renumbering procedure any time the extension numbers you are changing *from* or *to* are not sequential.

Block renumbering is quicker, but you can use block renumbering only when the extension numbers you are changing *from* and *to* are sequential.

When trunk or station modules are removed from the control unit, the remaining modules must be rearranged so that no empty slots remain. The system does not acknowledge any modules installed after an empty slot; therefore, if the system is renumbered, extensions are not assigned to station jacks after the empty slots.

Figures 3-1 through 3-3 show default extension numbers and numbers available for renumbering in all three numbering plans.

0	Operator Console (not flexible) 0						
1	S t a t i o n s 10 — 19						
2	S t a t i o n s 20 — 29						
3	S t a t i o n s 30 — 39						
4	S t a t i o n s 40 — 49						
5	S t a t i o n s 50 — 59						
6	S t a t i o n s 60 — 67			Extra Stations 6800 — 6885	6886 - 6889	Extra Adjuncts 6900 — 6985	6986 - 6999
7	Main Pool 70	MFMs/7500Bs 710 — 767	768 769	Calling Group 770 — 791, 7920 — 7929		Page 793 — 799	
8	800*	T r u n k s 801 — 880		Park 881 — 888	889**	Pools 890 — 899	
9	ARS Access (Hybrid/PBX mode)/Idle Line Access 9						

Listed Directory Number (QCC Queue).
** Remote Access

Figure 3-1. 2-Digit Numbering

0	Operator Console (not flexible) 0					
1	Stations 100 — 199					
2	Stations 200 — 243		2 4 4 — 2 9 9			
3	MFMs/7500Bs 300 — 399					
4	MFMs/7500Bs 400 — 443		4 4 4 — 4 9 9			
5	500 — 599					
6	600 — 699					
7	Main Pool 70	71 — 76		Calling Group 770 — 791, 7920 — 7929		Page 793 — 799
8	800*	Trunks 801 — 880		Park 881 — 888	8 8 9**	Pools 890 — 899
9	ARS Access (Hybred/PBX Mode)/Idle Line Access 9					

Listed Directory Number (QCC Queue)
** Remote Access

Figure 3-2. 3-Digit Numbering

0	Operator Console (not flexable) 0							
1	100 — 199							
2	200 — 299							
3	300 — 399							
4	400 — 499							
5	500 — 599							
6	600 — 699							
7	Main Pool 70	Stations 7100 — 7243	7243- 7299	MFMs/7500Bs 7300 — 7443	7444- 7699	Calling Group 770 — 791, 7920 — 7929	P a g e 793 — 799	
8	800*	Trunks 801 — 880			P a r k 881 — 888		8 8 9 **	P o o l s 890 — 899
9	ARS Access (Hybred/PBX Mode)/Idle Line Access 9							

Listed Directory Number (QCC Queue).
** Remote Access

Figure 3-3. SetUp Space Numbering

Select System Numbering Plan



CAUTION:

To avoid possible loss of system programming information, renumber the system before you program the rest of the options described in this chapter.

Three system numbering plans are available. These should appear on System Planning Form 2a. The three plans are as follows:

- The 2-digit plan (for systems with fewer than 50 extensions and no plans to exceed that number within two or three years): Each of the first 58 station jacks is assigned a 2-digit extension number, beginning with 10 and ending with 67. Any remaining extensions are assigned 4-digit numbers, beginning with 6800 and ending with 6885.
- The 3-digit plan (for systems with 50 or more extensions or plans to grow to that number within the next year or so): All extensions are assigned a 3-digit number, beginning with 100 and ending with 243.
- The Set Up Space plan (for systems with a need to customize their extension numbers or use extension numbers of varying lengths — 1 to 4 digits): All extensions are assigned 4-digit numbers in the 7000 range. Extension numbers 1000 through 6999 are also available for use when you renumber.

In all three numbering plans, the system assigns 3-digit extension numbers to pools (Hybrid/PBX only), calling groups, paging groups, remote access codes, the Listed Directory Number, park codes, and Idle Line Access (Key and Behind Switch modes). In addition, the system assigns 9 for Automatic Route Selection (Hybrid/PBX only) and Idle Line Access (Key and Behind Switch only).

Zero (0) represents a special extension number — actually a fixed dial code — for the primary operator or QCC queue. Any extension number *except* 0 can be renumbered.

Extension numbers can be composed of any combination of digits; however, no number can begin with 0. Trunk numbers (801 – 880) are not considered to be extensions and cannot be renumbered.

The system does not provide a message to indicate a successful renumber when either the 2-digit or 3-digit numbering plan is selected. For the set up space numbering plan, the system provides a message indicating that all extensions are in the 7000 range.



CAUTION:

Select **Exit** on the console, [**F5**] on the PC, when you have finished selecting the numbering plan. If you press **Home**, extensions may remain in the forced idle condition (indicated when the LED next to each DSS button is on). To restore extensions to their normal operating state, restart the system.

Entering Programming

Console: Select Menu → Sys Program → Exit
PC/SPM: Type **SPM** → press any key → [**F1**] → [**F5**]

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press [**F5**] on the PC before saving your entry or menu selection.

Summary: Select System Numbering Plan

Programmable by	System manager
Mode	All
Idle Condition	System idle
Planning Form	Form 2a, System Numbering – Station Jacks
Factory Setting	2-digit
Valid Entries	2-digit, 3-digit, Set Up Space
Inspect	No
Copy Option	No
Console Procedure	SysRenumber → Default Numbering → Select numbering plan → Exit → Exit
PC Procedure	[F2] → [F1] → Select numbering plan → [F5] → [F5]

Procedure: Select System Numbering Plan

Step	Display/Instructions	On the console	On the PC
1	System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce	Select SysRenumbr .	Press [F2]
2	System Renumbr: Make a selection Default Numbering Single Block Exit	Select Default Numbering.	Press [F1]
	<i>If you get the System Busy message, wait for an idle condition, or exit system programing and try again later.</i>		
3	Default Numbering: Make a selection 2-Digit 3-Digit SetUp Space Exit	Select 2-Digit, 3-Digit or SetUp Space.	Press [F1], [F2], or [F3] .

Step	Display/Instructions	On the console	On the PC
4	Initialize Space: AllExtensions 7000 range Exit If You select 2-digit or 3-digit, go to Step 5. If you select SetUp Space, exit to the System Renumber screen.	Select Exit two times.	Press [F5] two times.
5	System Renumber: Make a selection Default Numbering Single Block Exit To change individual extension numbers, go to the "Single Re- numbering" procedure in this section. To change a block of extension numbers, go to the "Block Re- numbering" procedure in this section.	Select Single. Select Block.	Press [F2] Press [F3]
6	To return to System Programming menu	Select Exit two times.	Press [F5] two times.

Single Renumbering

Use this procedure to assign a specified extension number to a telephone, accessory, line, pool (Hybrid/PBX only), calling group, paging group, or Listed Directory Number. Single renumbering is also used for Remote Access, Park, Idle Line Access (Key and Behind Switch only), and Automatic Route Selection (Hybrid/PBX only).

When required, this procedure should be performed immediately following the selection of a system numbering plan.



CAUTION:

Select **Exit** on the console, **[F5]** on the PC, after renumbering extensions. If you press **Home**, extensions may remain in the forced idle condition (indicated when the LED next to each DSS button is on). To restore extensions to their normal operating state, restart the system.

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select Exit on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Single Renumbering

Programmable by	System manager
Mode	All
Idle Condition	System idle
Planning Forms	Form 2a, System Numbering - Station Jacks Form 2b, System Numbering – Digital Adjuncts Form 2d, System Numbering – Special Renumbers
Factory Setting	Not applicable
Valid Entries	Old and new extension numbers
Inspect	Yes
Copy Option	No
Console Procedure	Single → Select item → Dial old ext. no. → Enter → Dial new ext. no. → Enter → Exit → Exit
PC Procedure	[F2] → [F2] → Select item → Type old ext. no. → [F10] → Type new ext. no. → [F10] → [F5] → [F5]

Procedure: Single Renumbering

Step	Display/Instructions	On the console	On the PC
1	<pre> System Programming: > Make a selection System Extensions SysReNumber Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce </pre> Select the System Renumbering menu,	Select SysReNumber .	Press [F2]
2	<pre> System Renumber: Make a selection Default Numbering Single Block Exit </pre> Select the Single Renumbering screen. <i>If you get the System Busy message, wait for an idle condition, or exit system programming and try again later</i>	Select Single	Press [F2]
3	<pre> System Renumber: > Make a selection Lines Grp Calling Extensions Adjuncts Pools Park Group Page ARS DialOut Exit RemoteAccs </pre> If the item you want to renumber is not displayed, go to the second screen of the System Renumber menu. <pre> System Renumber: Make a selection DSS Buttons ListDirctNo Exit </pre>	Press More .	Press [PgUp]

Step	Display/Instructions	On the console	On the PC
	Select an item for renumbering.	Press the button next to your selection.	Press the function key next to your selection.
5	****: Enter old **** number Backspace ExitEnter = option name selected in Step 4 Specify the old extension in one of the following ways (if you are programming a sequence enter the lowest number): Extension number Slot and port number Logical ID number DSS ■ Dial [nnnn]. ■ Dial ★ [sspp]. ■ Dial #[nnn]. ■ Press DSS button. ■ Type [nnnn]. ■ Type ★ [sspp]. ■ Type #[nnn]. If you get the <i>Station Busy</i> message, wait for an idle condition, or exit system programming and try again later.		
6	Save your entry.	Select Enter .	Press [F10]
	**** xxxx: Enter new **** number BackspaceNext ExitEnter *** = option name selected in Step 4 xxxx = number entered in Step 5 Specify the new extension in one of the following ways (if you are programming a sequence, enter the lowest number): Extension number Slot and port number Logical ID number DSS ■ Dial [nnnn]. ■ Dial ★ [sspp]. ■ Dial #[nnn]. ■ Press DSS button. ■ Type [nnnn]. ■ Type ★ [sspp]. ■ Type #[nnn].		

Step	Display/Instructions	On the console	On the PC
8	To save your entry and renumber another item of same type:		
	■ If next extension number is sequential	Select Next. Repeat Step 7.	Press [F9] Repeat Step 7.
	<i>Your previous entry is saved and next extension number displays on line 1 of the screen in Step 7,</i>		
	■ If next extension number is not sequential	Select Enter. Repeat Steps 3-7.	Press [F10] Repeat Steps 3-7.
	To save your entry when all entries are complete	Select Enter.	Press [F10]
9	To return to System Programming menu	Select Exit two times.	Press [F5] two times.

Block Renumbering

Use this procedure to assign extension numbers to a group of extensions, accessories, or lines. Both the original numbers and the numbers they are being changed to must be sequentially numbered.

When required, this procedure should be performed immediately following the selection of a system numbering plan.



CAUTION:

Select **Exit** on the console, [**F5**] on the PC, when you have renumbering extensions. If you press **Home**, extensions may remain in the forced idle condition (indicated when the LED next to each DSS button is on). To restore extensions to their normal operating state, restart the system.

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → [**F1**] → [**F5**]

Exiting Without Changes

To exit from any screen without making changes, select Exit on the console or press [**F5**] on the PC before saving your entry or menu selection.

Summary: Block Renumbering

Programmable by	System manager
Mode	All
Idle Condition	System idle
Planning Form	Form 2a, System Numbering – Station Jacks Form 2b, System Numbering – Digital Adjuncts Form 2d, System Numbering – Special Renumbers
Factory Setting	Not applicable
Valid Entries	Old and new extension numbers
Inspect	Yes
Copy Option	No

Console Procedure	SysRenumber → Block → Select type of group → Dial no. of first group member → Enter → Dial no. of last group member → Enter → Dial new beginning no. → Enter → Exit → Exit → Exit
PC Procedure	[F2] → [F3] → Select type of group → Type no. of first group member → [F10] → Type no. of last group member → [F10] → Type new beginning no. → [F10] → [F5] → [F5] → [F5]

Programming Procedures

Procedure: Block Renumbering

Step	Display/Instructions	On the console	On the PC
1	System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce		
	Select the System Renumber menu.	Select SysRenumbr .	Press [F2]
2	System Renumber: Make a selection Default Numbering Single Block Exit		
	Select Block Renumbering.	Select Block .	Press [F3]
	<i>If you get the System Busy message, wait for an idle condition, or exit system programning and try again later.</i>		
3	Block Renumber: Make a selection Lines Extensions Adjuncts Exit		
	Select type of group to renumber.	Select Lines, Extensions, or Adjuncts.	Press [F1], [F2], or [F3] .

Step	Display/Instructions	On the console	On the PC
4	Number ****: Enter starting **** Backspace Exit Enter **** = Option selected in Step 3 Specify currently assigned number for the first member of the group in one of the following ways: Extension number Slot and port number Logical ID number DSS ■ Dial [nnnn]. ■ Dial ★ [sspp]. ■ Dial #[nnn]. ■ Press DSS button. ■ Type [nnnn]. ■ Type ★ [sspp]. ■ Type #[nnn].		
5	Save your entry.	Select Enter .	Press [F10]
7	Save your entry.	Select Enter .	Press [F10]

Step	Display/Instructions	On the console	On the PC
8	Start At nnnn Enter new **** number Backspace Exit Enter nnnn = number entered in Step 6 **** = option name selected in Steps Specify new extension number for first member of the group in one of the following ways: Extension number Slot and port number Logical ID number DSS Dial [nnnn]. Dial ★ [sspp]. Dial #[nnn]. Press DSS button. Type [nnnn]. Type ★ [sspp] Type #[nnn].		
9	Save your entry.	Select Enter .	Press [F10]
10	To return to System Programming menu	Select Exit three times.	Press [F5] three times.

Direct Station Selector (DSS) Page Buttons

Use this procedure to set the three **Page** buttons on the DSS to correspond to the system numbering plan. This procedure assigns extension numbers to DSS buttons. You cannot program individual buttons on a DSS; this is the only method for programming DSS buttons.

If only one DSS is attached, each **Page** button assignment sets the console for a range of 50 extension numbers. If two DSSs are attached, each **Page** button assignment sets the console for a range of 100 extension numbers. **Page** button assignment should be sequential (Page 1: 0-49, Page 2: 50-99, Page 3: 100- 149).

NOTE:

If two DSSs are attached, change the factory setting so that the difference between extension numbers assigned to the range is at least 100. For example, assign Page 1 to begin with extension 10, Page 2 to begin with extension 110, and Page 3 to begin with extension 210.

Operator Park Zone codes must be included in the extension number range specified for one of the Page buttons.



CAUTION:

Select **Exit** on the console, [**F5**] on the PC, when you have finished this procedure. If you press **Home**, extensions may remain in the forced idle condition (the LED next to each DSS button is on), and the system may have to be restarted.

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → [**F1**] → [**F5**]

Exiting Without Changes

To exit from any screen without making changes, select Exit on the console or press [**F5**] on the PC before saving your entry or menu selection,

Summary: Assign Direct Station Selector Page Buttons

Programmable by Mode	System manager All
Idle Condition	Not required
Planning Form	Form 6a, Optional Operator Features
Factory Setting	Page 1 = 0 Page 2 = 50, Page 3 = 100
Valid Entries	1,2,3
Inspect	Yes
Copy Option	No
Console Procedure	SysRenumber → Single → More → DSS Buttons → Dial page no. → Enter → Dial first ext. no. → Enter → Exit → Exit
PC Procedure	[F2] → [F2] → [PgUp] → [F1] → Type Page no. → [F10] → Type first ext.no. → [F10] → [F5] → [F5]

Programming Procedures

Procedure: Assign Direct Station Selector Page Buttons

Step	Display/Instructions	On the console	On the PC
1	System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce		
	Select the System Renumbr menu.	Select SysRenumbr .	Press [F2]
2	System Renumbr: Make a selection Default Numbering Single Block Exit		
	Select Single Renumbering.	Select Single .	Press [F2]
3	System Renumbr: > Make a selection Lines GrpCalling Extensions Adjuncts Pools Park Group Page ARS DialOut Exit RemoteAccs		
	Go to the second screen of the System Renumbr menu.	Press More .	Press [PgUp]
4	System Renumbr: Make a selection DSS Buttons ListDirctNo Exit		
	Select DSS buttons.	Select Dss Buttons .	Press [F1]

Step	Display/Instructions	On the console	On the PC
5	DSS Page Buttons: Enter button number (1-3) Backspace Exit Enter Specify the Page button you want to program (n = 1-3).	Dial [n].	Type [n].
6	Save your entry.	Select Enter .	Press [F10]
7	DSS Page Button n: Enter first dial code of group (multiple of 50) nnnn Backspace Next Exit Enter n = page button number entered in Step 5 nnnn = current dial code Erase current dial code.	Press Drop .	Press [Alt] + [P]
8	Specify first extension of the group of 50 or 100 extension numbers (if you are programming a sequence, enter lowest number). If you reassign an extension from one page to another, you must repeat Steps 4 – 7 for each page affected before you return to the System Programming menu.	Dial [nnnn].	Type [nnnn].

Programming Procedures

Step	Display/Instructions	On the console	On the PC
9	To save your entry and program other Page buttons		
	■ If next Page button number is sequential	Select Next . Repeat Steps 7 and 8.	Press [F7]. Repeat Steps 7 and 8.
	<i>Your previous entry is saved and next Page button number displays on line 1 of the screen in Step 7.</i>		
	■ If next Page button number is not sequential	Select Enter . Repeat Steps 4-8.	Press [F10]. Repeat Steps 4-8.
	To save your entry when all entries are complete	Select Enter .	Press [F10]
10	To return to System Programming menu	Select Exit two times.	Press [F5] two times.

System Operator Positions

A system operator position — for the Queued Call Console operator or the Direct-Line Console operator — should be programmed before you program lines or trunks.

The QCC operator position is available only for Hybrid/PBX systems. The DLC operator position is available in any mode and must be programmed if you have Call Management Systems connected to any operator ports. Table 3-1 shows the maximum number of operator positions allowed for any one system.

Table 3-1. Maximum Number of Operator Positions

Position Type	Type of Telephone	Maximum Positions
QCC	MLX-20L	4
DLC	MLX-20L	8
	MLX-28D	
	Analog multiline telephones	
	MERLIN II Display Consoles	
TOTAL QCC + DLC		8

Any combination of operator positions can be assigned as long as no more than 4 operator positions are QCCs and the total combined number does not exceed eight.

If you want to designate a new operator position and the system already has the maximum number, you must change an existing operator position to a non-operator telephone before you designate a new operator position.

NOTE:

All settings return to factory settings for the port type that you are designating on a telephone when you change it to an operator position or vice versa. Therefore, you need to reassign lines and features to that telephone or console. You may also need to change any attached accessory equipment and optional features.

Primary Operator Positions

The primary operator position is the position to which your call is directed when you dial 0 on a System Access button.

The first jack on the first MLX module in your system is assigned as the primary operator position.

If your system has QCC operator positions, this position must be changed from the factory setting (DLC) to a QCC operator position. (The position of the primary operator cannot be changed from the first jack on the first MLX module.)

QCC System Operator Positions

This procedure applies to Hybrid/PBX systems only. Note that both QCC and DLC operator positions can be assigned with this procedure, although its primary purpose is to assign QCC operator positions.

QCC operators serve as central answering positions for all incoming calls. Incoming calls are held in the QCC queue and are directed to each QCC operator in a prioritized sequence. The calls are received one at a time, regardless of the number of incoming calls to the system.

Additional QCC operator positions can be assigned only to the first and fifth jacks of MLX modules. A maximum of four QCC operator positions can be assigned. Use this procedure to specify QCC operator positions that serve as central answering positions for all incoming calls.



CAUTION:

If you want to add or remove QCC operator positions, the following conditions apply:

- *The primary QCC operator position cannot be removed if other QCC positions remain in your system.*
- *When QCC operator positions are added, the primary QCC operator position should be the first one added.*
- *If QCC operator positions are being removed, the primary QCC operator position must be the last one removed.*

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → [**F1**] → [**F5**]

Exiting Without Changes

To exit from any screen without making changes, select Exit on the console or press [**F5**] on the PC before saving your entry or menu selection.

Summary: QCC Operator Positions

Programmable by	System manager
Mode	Hybrid/PBX
Idle Condition	System idle
Planning Form	Form 2a, System Numbering – Station Jacks
Factory Setting	Type - DLC
Valid Entries	first or fifth ports on MLX module (maximum — 2 per module, maximum — 4 QCCs per system)
Inspect	Yes
Copy Option	No
Console Procedure	Operator → Positions → Queued Call → Dial ext. no. → Enter → StoreAll
PC Procedure	[F3] → [F1] → [F2] → Type ext. no. → [F10] → [F3]

Programming Procedures

Procedure: QCC Operator Positions

Step	Display/Instructions	On the console	On the PC
1	System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce		
	Select the Operator menu.	Select Operator .	Press [F3]
2	System Operator: Make a selection Positions Queued Call Hold Timer DLC Hold Exit		
	Select Positions.	Select Positions.	Press [F1]
3	System Operator: Make a selection Direct Line Queued Call Exit		
	Select the QCC position.	Select Queued Call.	Press [F2]
	<i>If you get the System Busy message, wait for an idle condition, or exit system programming and try again later.</i>		
4	QCC Operator Positions: Enter extension Store All Delete Backspace Exit Enter		
	If you have a DSS attached, go to Step 5a.		
	If you do not have a DSS attached, go to Step 5b.		

Step	Display/Instructions	On the console	On the PC
5a	If a DSS is attached, do the following: Check red LEDs for feature status. <i>The red LED indicates the following:</i> <i>on = telephone is currently assigned as a QCC position</i> <i>flashing = telephone can be assigned as a QCC position</i> <i>off = telephone cannot be assigned as a QCC position</i>	Toggle the LED On/Off, as required.	
5b	If a DSS is not attached, do the following: - Specify the QCC operator position you want to assign or remove in one of the following ways: - Extension number - Slot and port number - Logical ID number - To assign or remove the displayed extension number as a QCC operator	■ Dial [nnnn]. ■ Dial ★ [sspp]. ■ Dial #[nnn]. Select Enter or Delete.	■ Type [nnnn]. ■ Type ★ [sspp]. ■ Type #[nnn]. Press [F10] or [F8]
6	Indicate that you have finished entering all positions. Session is terminated, the system restarts. Re-enter system programming to continue.	Select StoreAll.	Press [F3]

DLC Operator Positions

DLC operator positions can be assigned to the first and fifth ports on the first modules with digital or analog multiline station jacks. A maximum of eight DLC operator positions can be assigned. Any combination of operator positions can be assigned as long as there are no more than four QCC operators and no more than 8 operators in total.

Use this procedure to specify telephones that serve as central answering positions for all incoming calls, for Call Management Systems connected to operator ports, or as calling group supervisors. (You do not need to use this procedure in a Key or Behind Switch system unless you have more than one DLC position.) Trunks are assigned on individual buttons. The system programming console can have several incoming calls ringing simultaneously. For a new system, remove the factory set DLC operator position assignment for any telephone not used as an operator position.

Each CMS requires two DLC operator positions to connect the equipment and one position to serve as CMS supervisor.

Entering Programming

Console: Select Menu → Sys Program → Exit
PC/SPM: Type **SPM** → press any key → [**F1**] → [**F5**]

Exiting Without Changes

To exit from any screen without making changes, select Exit on the console or press [**F5**] on the PC before saving your entry or menu selection.

Summary: Identify or Remove DLC Operator Positions

Programmable by	System manager
Mode	All
Idle Condition	System idle
Planning Form	Form 2a, System Numbering - Station Jacks
Factory Setting	Type - DLC
Valid Entries	First or fifth ports (maximum — 2 per module, maximum — 8 DLCs per system)
Inspect	Yes
Copy Option	No
Console Procedure	Operator → Positions → Direct Line → Dial ext. no. → Enter → StoreAll
PC Procedure	[F3] → [F1] → [F1] → Type ext. no. → [F10] → [F3]

Procedure: Identify or Remove DLC Operator Positions

Step	Display/Instructions	On the console	On the PC

1

```
System Programming:  >
Make a selection
System      Extensions
SysRenumbr Options
Operator    Tables
LinesTrunks AuxEquip
Exit        NightSrvce
```

Select the Operator menu.

Select Operator .

Press [F3]

2

```
System Operator:
Make a selection
Positions
Queued Call
Hold Timer
DLC Hold
Exit
```

Select Positions.

Select Positions .

Press [F1]

3

```
System Operator:
Make a selection
Direct Line
Queued Call

Exit
```

Select the DLC position.

Select Direct Line.

Press [F1]

*If you get the System Busy message,
wait for an idle condition, or exit
system programming and try again
later.*

4

```
DLC Operator Positions:
Enter extension

Store All      Delete
Backspace
Exit           Enter
```

If you have a DSS attached, go
to Step 5a.

If you do not have a DSS
attached, go to Step 5b.

Programming Procedures

Step	Display/Instructions	On the console	On the PC
5a	If you have a DSS attached, do the following: Check red LEDs for feature status. <i>The red LED indicates the following:</i> on= telephone is assigned as a DLC position flashing = telephone can be assigned as a DLC position off = telephone cannot be assigned as a DLC position	Toggle the LEDs On/Off, as required.	
5b	If you do not have a DSS attached, do the following: - Specify the DLC operator position you want to assign or remove in one of the following ways: - Extension number - Slot and port number - Logical ID number - Assign or remove the displayed extension number as a DLC operator position.	■ Dial [nnnn]. ■ Dial ★ [sspp]. ■ Dial #[nnn]. Select Enter or Delete	■ Type [nnnn]. ■ Type ★ [sspp]. ■ Type #[nnn]. Press [F10] or [F8]
6	Indicate that you have finished entering all positions.	Select StoreAll.	Press [F3]
7	The system resets the operator positions and terminates your programming session. To continue programming you must re-enter System Programming.		

Lines and Trunks

The procedures in this section are used to assign optional features to individual lines and trunks. The optional features that can be assigned are the following:

- Type of Trunk
- Outmode Signaling for Loop or Ground Start Trunks
- Rotary Trunk Digit Transfer
- Disconnect Signaling Reliability
- Toll Type
- Hold Disconnect Interval
- Principal User for Personal Line
- QCC Queue Priority
- QCC Operator to Receive Calls
- Trunks to Pools Assignment

In addition, there is a Copy Options feature (described at the end of this section) that allows you to copy optional features from an idle trunk instead of entering the information an item at a time.

Type of Trunk

Use this procedure to specify the type of trunk—loop-start (LS) or ground-start (GS) — for each outside trunk connected to one of these modules:

- 400 GS/LS
- 408 GS/LS
- 800 GS/LS
- 408 GS/LS-MLX

Any combination of trunk types (all loopstart, all groundstart, or some of each) is permissible.

This procedure is not used for a system registered with a KF registration number (Key or Behind Switch). Ground-start trunks are allowed only for systems with an MF (Hybrid) or PF (PBX) registration number.

Entering Programming

Console: Select Menu → Sys Program → Exit
PC/SPM: Type **SPM** → press any key → [**F1**] → [**F5**]

Exiting Without Changes

To exit from any screen without making changes, select Exit on the console or press [**F5**] on the PC before saving your entry or menu selection.

Summary: Type of Trunk

Programmable by	System manager
Mode	All
Planning Form	Form 2c, System Numbering - Trunk Jacks
Factory Setting	All loop-start
Valid Entries	All Ground, All Loop, Ground-Start, Loop-Start
Inspect	Yes
Copy Option	Yes
Console Procedure	LinesTrunks → LS/GS/DS1 → Dial slot no. → Enter → Select trunk type → Dial port no. → Enter → Exit → Exit
PC Procedure	[F4] → [F1] → Type slot no. → [F10] Select trunk type → Type port no. → [F10] → [F5] → [F5]

Procedure: Type of Trunk

Step	Display/Instructions	On the console	On the PC
1	System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce		
	Select the Lines and Trunks menu.	Select LinesTrunks.	Press [F4]
2	Lines and Trunks: > Make a selection LS/GS/DS1 PRI TIE Lines Copy TT/LS Disc RemoteAccss DID Pools Exit Toll Type		
	Select Loop Start/Ground Start/DS1.	Select LS/GS/DS1.	Press [F1]
3	Loop/Ground/DS1: Enter slot number(1-17) Backspace Exit Enter		
	Specify slot number (1-17) in control unit that contains 400, 408, 408GS/LS-MLX, or 800 GS/LS module.	Dial [nn].	Type [nn].
4	Save your entry.	Select Enter.	Press [F10]

Step	Display/Instructions	On the console	On the PC
5	**** GS/LS Slot xx: Select one GroundStart All Ground Loop Start All Loop Exit **** = 400, 408, 408-MLX, or 800 module xx = slot number entered in step 3		
	Specify type of trunks connected to module. If you select All Ground or All Loop, you have completed this procedure. Go to Step8. If you select Ground Start or Loop Start, go to Step 6.	Select GroundStart, Loop Start, All Ground, or All Loop.	Press [F1], [F2], [F3] or [F4]
6	**** Start Slot xx: Enter port no. (1-8) Backspace Next Exit Enter **** = option name selected in Step 5 xx = slot number entered in Step 3		
	Specify port numbers on 400 or 408 ports (n = 1 – 4) or 800 ports (n = 1 -8) that have Ground Start or Loop Start trunks connected. <i>If you get the Trunk Busy message, wait for an idle condition, or exit system programming and try again later</i>	Dial <i>[n]</i>,	Type <i>[n]</i>

Programming Procedures

Step	Display/Instructions	On the console	On the PC
7	To save your entry and assign trunk type shown on line 1 to another port number	Select Enter. Repeat Steps 5 and 6.	Press [F10] Repeat Steps 5 and 6.
	To save your entry and program another module:		
	■ If next slot number is sequential	Select Next. Repeat Step 6.	Press [F9] Repeat Step 6.
	<i>Your previous entry is saved and next slot number is shown on line 1 of the screen in Step 6.</i>		
8	■ If next slot number is not sequential	Select Enter. Repeat Steps 2-6.	Press [F10] Repeat Steps 2-6.
	To save your entry when all entries are complete	Select Enter.	Press [F10]
	To return to System Programming menu	Select Exit two times.	Press [F5] two times.

Outmode Signaling for Loop or Ground Start Trunks

Use this procedure to identify either touch-tone signaling or rotary dial signaling for outgoing calls placed by using each loop-or ground-start trunk.

NOTE:

This procedure is not required if your system has only touch-tone lines/trunks.

Entering Programming

Console: Select Menu → Sys Program → Exit
PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select Exit on the console or press **[F5]** on the PC before saving your entry or menu selection,

Summary: Outmode Signaling for Loop or Ground Trunks

Programmable by	System manager
Mode	Loop Start - All; Ground Start - Hybrid/PBX only
Idle Condition	Not required
Planning Form	Form 2c, System Numbering – Trunk Jacks
Factory Setting	Touch-tone
Valid Entries	Touch-tone, rotary
Inspect	No
Copy Option	Yes
Console Procedure [†]	To program a single extension: LinesTrunks → TT/LS Disc → Outmode → Select entry mode → Dial no. of the line → Enter → Exit → Exit → Exit → To program a block of extensions: Lines Trunks → TT/LS Disc → OutMode → Select block of lines → Toggle LED On/Off → Enter → Exit → Exit → Exit

[†] Entry mode available

PC Procedure[†]

To program a single extension:

[F4] → **[F3]** → **[F1]** → **[F6]** → Type no. of the line →
[F10] → **[F5]** → **[F5]** → **[F5]**

To program a block of extensions:

[F4] → **[F3]** → **[F1]** → Select block of lines → Toggle
letter G On/Off → **[F10]** → **[F5]** → **[F5]** → **[F5]**

[†] Entry mode available

Procedure: Outmode Signaling for Loop or Ground Start Trunks

Step	Display/Instructions	On the console	On the PC
1	<pre> System Programming: > Make a selection System Extensions SysRenumber Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce </pre>		
	Select the Lines and Trunks menu.	Select LinesTrunks.	Press [F4]
2	<pre> Lines and Trunks: > Make a selection LS/GS/DS1 PRI TIE Lines Copy TT/LS Disc RemoteAccss DID Pools Exit Toll Type </pre>		
	Select Touch-Tone/Loop Start Disconnect	Select LinesTrunks	Press [F3]
3	<pre> TouchTone/LS Disconnect Make a selection Outmode LS Disconnect Exit </pre>		
	Select Outward Dialing Mode.	Select Outmode	Press [F1]
4	<pre> OutTrunk Dial: Enter Trunks w/TouchTone Lines 01-20 Entry Mode Lines 21-40 Lines 41-60 Lines 61-80 Exit </pre>		
	To select single line, go to Step 5a. To select block of lines, go to Step 5b.		

Step	Display/Instructions	On the console	On the PC
5a	For a single line, do the following:		
	1. Specify entry mode.	Select Entry Mode.	Press [F6]
	OutTrunk Dial: Enter Trunks w/TouchTone Delete Backspace Exit Enter		
	2. Specify the number of the line with touch-tone signaling.	Dial [nnn].	Type [nnn],
	3. Save your entry.	Select Enter .	Press [F10]
5b	For a block of lines, do the following:		
	1. Specify 20 lines associated with the 20 line buttons on the System Programming Console.	Select Lines 1-20, Lines 21-40, Lines 41-60, or Lines 61-80	Press [F1] , [F2] , [F3] , or [F4] .
	2. Specify touch-tone or rotary signaling for each block. <i>The green LED indicates the following. on = touch-tone off = rotary dialing</i>	Toggle the green LED On/Off, as required.	Toggle the letter G On/Off, as required.
	3. Save your entry.	Select Enter .	Press [F10]
6	To return to System Programming menu	Select Exit three times.	Press [F5] three times.

Rotary Trunk Digit Transfer

Use this procedure to designate whether dialed digits on rotary dial trunks are sent one-by-one as they are dialed (no delay), or are stored and sent when dialing is completed (delay).

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select Exit on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Rotary Trunk Digit Transfer

Programmable by	System manager
Mode	All
Idle Condition	Not required
Planning Form	Form 6f, System Features
Factory Setting	No Delay
Valid Entries	Delay and No Delay
Inspect	No
Copy Option	No
Console Procedure	Options → More → → Select Rotary → select option → Enter → Exit
PC Procedure	[F7] → [PgUp] → [F4] → Select option → [F10] → [F5]

Procedure: Rotary Trunk Digit Transfer

Step	Display/Instructions	On the console	On the PC
1	System Programming: > Make a selection System Extensions SysReNumber Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce		
	Select the Options menu.	Select Options.	Press [F7]
2	Options: > Make a selection Transfer Callback CampOn Ext Status CallParkRtn SMDR Delay Ring InsideDial Exit ReminderSrv		
	Go to the second screen of the Options menu.	Press More .	Press [PgUp]
3	Options: > Make a selection Unassigned Cover Delay BehndSwitch RecallTimer Rotary Exit		
	Select Rotary.	Select Rotary.	Press [F4]
4	Rotary Operation: Select one Delay No Delay Exit Enter		
	Specify delay or no delay.	Select Delay or No Delay.	Press [F1] or [F2] .
5	Save your entry.	Select Enter.	Press [F10]
6	To return to System Programming menu	Select Exit.	Press [F5]

Disconnect Signaling Reliability

Use this procedure to classify the disconnect signal sent by the central office on loop-start trunks as one of the following:

- Reliable – signal sent within a short time
- Unreliable – signal may not be provided

The setting selected applies to all trunks in the system; trunks cannot be programmed individually. The reliable/unreliable setting does not apply to ground-start trunks emulated on a T1 facility. If you specify a reliable disconnect for trunks programmed with a short hold disconnect interval, active calls as well as trunks on hold may be disconnected. For more information about reliable and unreliable disconnect and its implications, see *Feature Reference*.

NOTE:

Certain features (Remote Call Forwarding and call transfer to outside numbers) and applications (CMS, AUDIX Voice Power, and MERLIN MAIL®) are not recommended with loop-start trunks. See “Hold Disconnect Interval. ”

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select Exit on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Disconnect Signaling Reliability

Programmable by	System manager, Integrated Administration
Mode	All
Idle Condition	Not required
Planning Form	Form 2c, System Numbering – Trunk Jacks
Factory Setting	Unreliable
Valid Entries	Unreliable, Reliable
Inspect	No
Copy Option	No
Console Procedure	Lines Trunks → TT/LS Disc → LS Disconnect → Yes/No → Enter → Exit → Exit
PC Procedure	[F4] → [F3] → [F2] → [F1] / [F2] → [F10] → [F5] → [F5]

Procedure: Disconnect Signaling Reliability

Step	Display/Instructions	On the console	On the PC
1	<pre> System Programming: > Make a selection System Extensions SysReNumber Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce </pre>		
	Select the Lines and Trunks menu.	Select LinesTrunks.	Press [F4]
2	<pre> Lines and Trunks: > Make a selection LS/GS/DS1 PRI TIE Lines Copy TT/LS Disc RemoteAccss DID Pools Exit Toll Type </pre>		
	Select Touch - Tone/Loop Start Disconnect.	Select TT/LS Disc.	Press [F3]
3	<pre> TouchTone/LS Disconnect: Make a selection Outmode LS Disconnect Exit </pre>		
	Select Loop Start Disconnect.	Select LS Disconnect.	Press [F2]
4	<pre> LS Reliable Disconnect: Select one Yes No Exit Enter </pre>		
	Specify disconnect signal as reliable or unreliable.	Select Yes or No.	Press [F1] or [F2]
5	Save your entry.	Select Enter.	Press [F10]
6	To return to System Programming menu	Select Exit two times.	Press [F5] two times.

Toll Type

Use this procedure to specify whether users have to dial a toll prefix (1 or 0 before dialing an area code and telephone number. (Your local telephone company should verify toll prefix requirements for each trunk.)

This setting is used by the system to classify calls as local or long distance so that toll restrictions can be applied as appropriate.

NOTE:
This option applies only to loop- and ground-start trunks; it does not apply to tie trunks or DID trunks.

Entering Programming

Console: Select Menu → Sys Program → Exit
PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select Exit on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Toll Type

Programmable by	System manager
Mode	All
Idle Condition	Not required
Planning Form	Form 2c, System Numbering - Trunk Jacks
Factory Setting	Toll prefix required
Valid Entries	Required, not required
Inspect	No
Copy Option	Yes
Console Procedure [†]	To program a single telephone: Lines Trunks → Toll Type → select entry mode → Dial no. Of the line → Enter → Exit → Exit → To program a block of telephones: LinesTrunks → Toll Type → Select block of lines → Toggle LED On/Off → Enter → Exit → Exit

[†] Entry mode available

PC Procedure[†]

To program a single telephone:

[F4] → **[F10]** → **[F6]** → Type no. of the line → **[F10]**
→ **[F5]** → **[F5]**

To program a block of telephones:

[F4] → **[F10]** → Select block of lines → Toggle letter G
On/Off → **[F10]** → **[F5]** → **[F5]**

Procedure: Toll Type

Step	Display/Instructions	On the console	On the PC
1	<pre> System Programming: > Make a selection System Extensions SysReNumber Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce </pre>		
	Select the Lines and Trunks menu.	Select LinesTrunks.	Press [F4]
2	<pre> Lines and Trunks: > Make a selection LS/GS/DS1 PRI TIE Lines Copy TT/LS Disc RemoteAccss DID Pools Exit Toll Type </pre>		
	Select Toll Type.	Select Toll Type.	Press [F10]
3	<pre> Toll Type: Enter toll prefix lines Lines 01-20 Entry Mode Lines 21-40 Lines 41-60 Lines 61-80 Exit </pre>		
	To specify single line, go to Step 4a. To specify block of lines, go to Step 4b.		

[†] Entry mode available

Step	Display/Instructions	On the console	On the PC
4a	For a single line, do the following:		
	1. Specify entry mode	Select Entry Mode.	Press [F6]
	Toll: Enter toll prefix lines Backspace Delete Exit Enter		
	2. Specify the number of the line that requires a toll prefix (1 or 0 before the area code.	Dial <i>[n]</i> .	Type <i>[n]</i> ,
	3. Save your entry.	Select Enter .	Press [F10]
4b	For a block of lines, do the following:		
	1. Select the specific lines or trunks associated with the 20 line buttons on the system programming console.	Select Lines 01-20, Lines 21-40, Lines 41-60, or Lines 61-80.	Press [F1] , [F2] , [F3] , or [F4] .
	2. Specify whether a toll prefix is needed. <i>The green LED indicates the following: on = toll prefix needed off = toll prefix not needed</i>	Toggle the green LED On/Off, as required.	Toggle the letter G On/Off, as required.
	3. Save your entry	Select Enter .	Press [F10]
5	To return to System Programming menu	Select Exit two times.	Press [F5] two times.

Hold Disconnect Interval

Use this procedure to specify the number of milliseconds before a loop-start trunk is released when a caller on hold hangs up and abandons the call. This can be specified as either a long interval (450 ms) or a short interval (50 ins). The hold disconnect interval applies to loop-start trunks connected to 400, 408, or 800 modules; it does not apply to emulated loop-start trunks (T1 facility).

NOTE:

If the disconnect interval is longer than the telephone company setting, the line is not released when a caller on hold hangs up. Do not program a short interval unless the local telephone company's central office is the crossbar type.

Do not program a reliable disconnect for trunks with a short hold disconnect interval. This can cause active calls as well as trunks on hold to be disconnected. See "Disconnect Signaling Reliability."

For more information on Hold Interval Disconnect and Reliable and Unreliable Disconnect, see *Feature Reference*.

Entering Programming

Console: Select Menu → Sys Program → Exit
PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Hold Disconnect Interval

Programmable by	System manager
Mode	All
Idle Condition	Not required
Planning Form	Form 2c, System Numbering – Trunk Jacks
Factory Setting	Long interval (450 ms)
Valid Entries	Long interval, short interval
Inspect	N o
Copy Option	N o
Console Procedure [†]	To program a single telephone: LinesTrunks → More → HoldDiscnct → Select entry mode → Dial no. of the trunk → Enter → Exit → Exit To program a block of telephones: Lines Trunks → More → Hold.Discnct → Select block of lines → Toggle LED On/Off → Enter → Exit → Exit
PC Procedure [†]	To program a single telephone: [F4] → [PgUp] → [F1] → [F6] → Type no. of the trunk → [F10] → [F5] → [F5] To program a block of telephones: [F4] → [PgUp] → [F1] → Select block of lines → Toggle letter G On/Off → [F10] → [F5] → [F5]

[†] Entry mode available

Programming Procedures

Procedure: Hold Disconnect Interval

Step	Display/Instructions	On the console	On the PC
1	<pre>System Programming: > Make a selection System Extensions SysReNumber Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce</pre>		
	Select the Lines and Trunks menu.	Select LinesTrunks.	Press [F4]
2	<pre>Lines and Trunks: > Make a selection LS/GS/DS1 PRI TIE Lines Copy TT/LS Disc RemoteAccss DID Pools Exit Toll pe</pre>		
	Go to the second screen of the Lines and Trunks menu.	Press More.	Press [PgUp]
3	<pre>Lines and Trunks: > Make a selection HoldDiscnct PrncipalUsr QCC Prior QCC Oper Exit</pre>		
	Select Hold Disconnect Interval.	Select HoldDiscnct.	Press [F1]
4	<pre>Hold Disconnect: Lines w/long interval Lines 01-20 Entry Mode Lines 21-40 Lines 41-60 Lines 61-80 Exit</pre>		
	To specify a single line, go to Step 5a. To specify a block of lines, go to Step 5b.		

Programming Procedures

Step	Display/Instructions	On the console	On the PC
5a	For a single line, do the following:		
	1. Specify entry mode.	Select Entry Mode.	Press [F6]
	Hold Disconnect: Enter lines/trunks with long interval Delete Backspace Exit Enter		
	2. Specify the number of the trunk with long disconnect intervals.	Dial [nnn].	Type [nnn]
	3. Save your entry.	Select Enter .	Press [F10]
5b	For a block of lines, do the following:		
	1. Select the specific lines/trunks associated with the 20 line buttons on the system programming console.	Select Lines 01-20, Lines 21-40, Lines 41-60, or Lines 62-80.	Press [F1] , [F2] , [F3] , or [F4] .
	2. Assign a long or short Hold Disconnect interval. <i>The green LED next to each line button indicates the following: on = long hold disconnect interval off = short hold disconnect interval</i>	Toggle the LED On/Off, as required.	Toggle the letter G On/Off, as required.
	3. Save your entry.	Select Enter .	Press [F10]
6	To return to System Programming menu	Select Exit two times.	Press [F5] two times.

Principal User for Personal Line

Use this procedure to assign or remove one telephone as principal user for a personal line. When a telephone with Remote Call Forwarding activated is assigned as principal user, calls received on the personal line are forwarded to an outside telephone number. In addition, calls received on that line are sent to that telephone's individual and/or Group Coverage receivers unless the Personal Line button is set to No Ring.

The principal user assignment must be removed before the trunk can be removed from a button on the telephone.

When no principal user is assigned for a personal line, calls received on the personal line are not forwarded to outside telephone numbers and calls received on the personal line follow the Coverage patterns for all users who share the line.

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select Exit on the console or press **[F5]** on the PC before saving your entry or menu selection,

Summary: Principal User for Personal Line

Programmable by	System manager
Mode	All
Idle Condition	Not required
Planning Form	Form 4b, Analog Multiline Telephone Form 4d, MLX Telephone Form 4e, MFM Adjunct - MLX telephone Form 4f, Tip/Ring Equipment Form 5a, Direct-Line Console (DLC) - Analog Form 5b, Direct-Line Console (DLC) - Digital Form 5c, MFM Adjunct-DLC
Factory Setting	No principal user
Valid Entries	Not applicable
Inspect	No
Copy Option	No
Console Procedure	Lines Trunks → More → PncipalUsr → Dial trunk no. → Enter → Dial ext. no. → Enter → Exit → Exit
PC Procedure	[F4] → [PgUp] → [F2] → Type trunk no. → [F10] → Type ext. no. → [F10] → [F5] → [F5]

Programming Procedures

Procedure: Principal User for Personal Line

Step	Display/Instructions	On the console	On the PC
1	<pre>System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce</pre>		
	Select the Lines and Trunks menu.	Select LinesTrunks	Press [F4]
2	<pre>Lines and Trunks: > Make a selection LS/GS/DSL PRI TIE Lines Copy TT/LS Disc RemoteAccss DID Pools Exit Toll Type</pre>		
	Go to the second screen of the Lines and Trunks menu.	Press More.	Press [PgUp]
3	<pre>Lines and Trunks: > Make a selection HoldDiscnct PrncipalUsr QCC Prior QCC Oper Exit</pre>		
	Select Principal User.	Select PrncipalUsr .	Press [F2]

Programming Procedures

Step	Display/Instructions	On the console	On the PC									
4	<pre>Principal User: Enter line/trunk number Exit Enter</pre> Specify the trunk to which you are assigning a principal user in one of the following ways (if you are programming a sequence, enter the lowest number): <table><tr><td>Trunk number</td><td>■ Dial [nnn].</td><td>■ Type [nnn].</td></tr><tr><td>Slot and port number</td><td>■ Dial ★ [sspp].</td><td>■ Type ★ [sspp].</td></tr><tr><td>Logical ID number</td><td>■ Dial #[nnn].</td><td>■ Type #[nnn].</td></tr></table>	Trunk number	■ Dial [nnn].	■ Type [nnn].	Slot and port number	■ Dial ★ [sspp].	■ Type ★ [sspp].	Logical ID number	■ Dial #[nnn].	■ Type #[nnn].		
Trunk number	■ Dial [nnn].	■ Type [nnn].										
Slot and port number	■ Dial ★ [sspp].	■ Type ★ [sspp].										
Logical ID number	■ Dial #[nnn].	■ Type #[nnn].										
5	Save your entry.	Select Enter .	Press [F10]									
6	<pre>Line/Trunk xxx: Enter principal ext for Remote Forward/Coverage Backspace Delete Exit Next Exit Enter</pre> xxx = line/trunk number entered in Step 4 Specify telephone assigned as principal user for the specified line in one of these ways: <table><tr><td>Extension number</td><td>■ Dial [nnnn].</td><td>■ Type [nnnn].</td></tr><tr><td>Slot and port number</td><td>■ Dial ★ [sspp].</td><td>■ Type ★ [sspp].</td></tr><tr><td>Logical ID number</td><td>■ Dial #[nnn].</td><td>■ Type #[nnn].</td></tr></table>	Extension number	■ Dial [nnnn].	■ Type [nnnn].	Slot and port number	■ Dial ★ [sspp].	■ Type ★ [sspp].	Logical ID number	■ Dial #[nnn].	■ Type #[nnn].		
Extension number	■ Dial [nnnn].	■ Type [nnnn].										
Slot and port number	■ Dial ★ [sspp].	■ Type ★ [sspp].										
Logical ID number	■ Dial #[nnn].	■ Type #[nnn].										

Step	Display/Instructions	On the console	On the PC
7	To remove telephone as principal user for one line/trunk	Select De lete .	Press [F8]
	To assign telephone as principal user for line/trunk and assign principal user for another line/trunk:		
	■ If next line/trunk number is sequential	Select Next. Repeat Step 6.	Press [F9] Repeat Step 6.
	<i>Your previous entry is saved, and next line/trunk number is shown on line 1 in the screen in Step 6.</i>		
	■ If next line/trunk number is not sequential	Select Enter . Repeat Steps 3-6.	Press [F10] Repeat Steps 3-6.
	To assign telephone as principal user for line/trunk when all entries are complete	Select Enter .	Press [F10]
8	To return to System Programming menu	Select Exit two times.	Press [F5] two times.

QCC Queue Priority Level

Use this procedure to assign QCC queue priority level values (1-7) to each loop-start, ground-start, and automatic-in tie trunk in your system. The value assigned determines the order in which calls are sent to the QCC operator positions. Call priority 1 is the highest priority, 7 is the lowest priority.

NOTE:

This procedure applies only in Hybrid/PBX mode in a system that includes QCC operator positions.

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select Exit on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: QCC Queue Priority Level

Programmable by	System manager
Mode	Hybrid/PBX
Idle Condition	Not required
Planning Form	Form 2c, System Numbering – Trunk Jacks
Factory Setting	4
Valid Entries	1 - 7
Inspect	Yes
Copy Option	No
Console Procedure†	To program a single extension: Lines Trunks → More → QCC Prior → Dial priority level → Enter → Select entry mode → Dial trunk no. → Enter → Exit → Exit To program a block of extensions: LinesTrunks → More → QCC Prior → Dial priority level → Enter → Select block of lines → Toggle LED On/Off → Enter → Exit → Exit

† Entry mode available

PC Procedure†

To program a single extension:

[F4] → [PgUp] → [F3] → Type priority level → [F10]
→ Select entry mode → Type trunk no. → [F10] →
[F5] → [F5]

To program a block of extensions:

[F4] → [PgUp] → [F3] → Type priority level → [F10]
→ Select block of lines → Toggle letter G On/Off →
[F10] → [F5] → [F5]

Procedure: QCC Queue Priority Level

Step	Display/Instructions	On the console	On the PC
1	System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce	Select LinesTrunks.	Press [F4]
2	Lines and Trunks: > Make a selection LS/GS/DS1 PRI TIE Lines Copy TT/LS Disc RemoteAccss DID Pools Exit Toll Type	Press More.	Press [PgUp]
3	Lines and Trunks: > Make a selection HoldDiscnct PrncipalUsr QCC Prior QCC Oper Exit	Select Qcc Prior.	Press [F3]

† Entry mode available

Step	Display/Instructions	On the console	On the PC
4	QCC Priority: Enter queue priority (1-7) Backspace Exit Enter		
	Specify the priority level.	Dial [n].	Type [n].
5	Save your entry.	Select Enter .	Press [F10]
6	QCC Priority x: Enter line/trunk number Lines 01-20 Entry Mode Lines 21-40 Lines 41-60 Lines 61-80 Exit x = QCC Queue priority entered in Step 4 To specify a single line, go to Step 7a. To specify a block of lines, go to Step 7b.		
7 a	For a single line, do the following:		
	1. Specify entry mode.	Select Entry Mode	Press [F6]
	QCC Priority x: Enter line/trunk number Backspace Delete Next Exit Enter x = QCC Queue priority entered in Step 4		
	2. Specify the trunks with specified queue priority.		
	Trunk number	■ lDial [nnn].	■ Type [nnn].
	Slot and port number	■ lDial ★ [sspp].	■ Type ★ [sspp].
	Logical ID number	■ lDial #[nnn].	■ Type #[nnn].
	3. To remove trunks from the specified priority level	Select Delete.	Press [F8]

Step	Display/Instructions	On the console	On the PC
	4. To assign trunks to the specified priority level and assign trunks to another priority level		
	■ If next priority level is sequential <i>Your previous entry is saved, and next priority level is shown on line 1 in the screen in Step 7.</i> ■ If next priority level is not sequential	Select Next . Repeat Step 7a.	Press [F9] Repeat Step 7a.
	5. To assign priority level for trunk when all entries are complete	Select Enter .	Press [F10]
7 b	For a block of lines, do the following:		
	1. Select the trunks associated with the 20 line buttons on the system programming console.	Select Lines 01-20, Lines 21-40, Lines 41-60, or Lines 61-80.	Press [F1] , [F2] , [F3] , or [F4]
	2. Assign queue priority specified. <i>The green LED indicates the following: on = to assign the queue priority specified off = not to assign priority</i>	Toggle the LED On/Off, as required.	Toggle the letter G On/Off, as required.
	3. Save your entry.	Select Enter .	Press [F10]
8	To return to System Programming menu	Select Exit two times.	Press [F5] two times.

QCC Operator to Receive Calls

Use this procedure to do the following

- determine whether or not incoming calls on each trunk ring into the QCC queue
- identify the QCC system operator positions to receive incoming calls on each trunk

NOTE:

This procedure applies only in Hybrid/PBX mode in a system that includes QCC operator positions.

Each ground-start, loop-start, or automatic-in tie trunk programmed to ring into the QCC queue can be associated with one or more QCC operator positions.

If a trunk assigned to ring into the QCC queue is also used for shared Remote Access, use the “Remote Access Trunk Assignment” procedure to assign remote access before you assign a QCC system operator to receive calls.

NOTE:

Do not change the factory setting of No QCC Operator Assigned to Receive Calls for trunks dedicated to incoming calls for Calling Groups, trunks used as personal lines, DID trunks, unequipped DS1 trunks, or dial-in tie trunks.

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select Exit on the console or press **[F5]** on the PC before saving your entry or menu selection,

Summary: QCC Operator to Receive Calls

Programmable by	System manager
Mode	Hybrid/PBX
Idle Condition	Not required
Planning Form	Form 2c, System Numbering – Trunk Jacks
Factory Setting	No QCC operator is assigned to receive calls
Valid Entries	Extension number of first or fifth port
Inspect	Yes
Copy Option	No
Console Procedure [†]	To program a single extension: LinesTrunks → More → QCC Oper → Dial ext. no. → Enter → Entry Mode → Dial trunk no. → Enter → Enter → Enter To program a block of extensions: Lines Trunks → More → QCC Oper → Dial ext. no. → Enter → Select block of lines → Toggle LED On/Off → Enter → Exit → Exit
PC Procedure [†]	To program a single extension: [F4] → [PgUp] → [F4] → Type ext. no. → [F10] → [F6] → Type trunk no. → [F10] → [F5] → [F5] To program a block of extensions: [F4] → [PgUp] → [F4] → Type ext. no. → [F10] → Select block of lines → Toggle letter G On/Off → [F10] → [F5] → [F5]

[†] Entry mode available

Programming Procedures

Procedure: QCC Operator to Receive Calls

Step	Display/Instructions	On the console	On the PC
1	System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce		
	Select the Lines and Trunks menu.	Select LinesTrunks.	Press [F4]
2	Lines and Trunks: > Make a selection LS/GS/DSL PRI TIE Lines Copy TT/LS Disc RemoteAccss DID Pools Exit Toll Type		
	Go to the second screen of the Lines and Trunks menu.	Press More	Press [PgUp]
3	Lines and Trunks: > Make a selection HoldDiscnct PrncipalUsr QCC Prior QCC Oper Exit		
	Select QCC Operator.	Select Qcc Oper.	Press [F4]

Step	Display/Instructions	On the console	On the PC												
4	QCC Operator: Enter QCC operator extension number Backspace Exit Enter Specify QCC operator to receive calls in one of the following ways: <table><tr><td>Extension number</td><td>■ Dial [nnnn].</td><td>■ Type [nnnn].</td></tr><tr><td>Slot and port number</td><td>■ Dial * [sspp].</td><td>■ Type * [sspp].</td></tr><tr><td>Logical ID number</td><td>■ Dial #[nnn].</td><td>■ Type #[nnn].</td></tr><tr><td>DSS</td><td>■ Press DSS button.</td><td></td></tr></table> <i>The green LED indicates the following: on = operator receiving calls off = operator not receiving calls</i>	Extension number	■ Dial [nnnn].	■ Type [nnnn].	Slot and port number	■ Dial * [sspp].	■ Type * [sspp].	Logical ID number	■ Dial #[nnn].	■ Type #[nnn].	DSS	■ Press DSS button.		Toggle the LED On/Off, as required.	Toggle the letter G On/Off, as required.
Extension number	■ Dial [nnnn].	■ Type [nnnn].													
Slot and port number	■ Dial * [sspp].	■ Type * [sspp].													
Logical ID number	■ Dial #[nnn].	■ Type #[nnn].													
DSS	■ Press DSS button.														
5	Save your entry.	Select Enter .	Press [F10]												
6	QCC Operator: xxxx Enter line/trunk number Lines 01-20 Entry Mode Lines 21-40 Lines 41-60 Lines 61-80 Exit xxxx = extension number entered in Step 4 To specify a single line/trunk go to Step 7a. To specify a block of lines/trunks, go to Step 7b.														
7a	For a single line/trunk, do the following: 1. Specify entry mode.	Select Entry Mode.	Press [F6]												
	QCC Operator xxxx: Enter lines/trunk number Backspace Delete Exit Next Enter xxxx = extension number entered in Step 4														

Step	Display/Instructions	On the console	On the PC
2.	Specify the trunks assigned to ring into the QCC queue. Trunk number Slot and port number Logical ID number	■ Dial [nnn]. ■ Dial # [sspp] ■ Dial # [nnn].	■ Type [mm]. ■ Type # [sspp]. ■ Type # [nnn].
3.	To remove trunks from the specified QCC operator	Select DeLet e .	Press [F8]
4.	To assign trunks to the specified QCC operator and assign trunks to another QCC operator		
	■ If next QCC operator is sequential <i>Your previous entry is saved, and next QCC operator is shown on line 1.</i>	Select Next . Repeat number 2 in Step 7a.	Press [F9] Repeat number 2 in Step 7a.
	■ If next QCC operator is not sequential	Select Enter . Repeat Steps 3-7a	Press [F10] Repeat Steps 3-7a.
5.	To assign telephone as principal user trunks to QCC operator when all entries are complete	Select Enter .	Press [F10]

Step	Display/Instructions	On the console	On the PC
7b	For a block of lines/trunks, do the following:		
	1. Select the lines/trunks associated with the 20 line buttons on the system programming console.	Select Lines 01-20, Lines 21-40, Lines 41-60, or Lines 61-80.	Press [F1] , [F2] , [F3] or [F4]
	2. Assign or remove calls for QCC operator specified. <i>The green LED indicates the following:</i> on = operator receiving calls off = operator not receiving calls	Toggle the LED On/Off, as required.	Toggle the letter G On/Off, as required.
	3. Save your entry.	Select Enter .	Press [F10]
8	To return to System Programming menu	Select Exit two times.	Press [F5] two times.

Trunks to Pools Assignment

NOTE:

This procedure applies in the Hybrid/PBX mode only

Use this procedure to create pools (groups of outside trunks connected to the system). Pools are used to specify preferred routes for Automatic Route Selection. In addition, pools enable users to select a trunk by dialing a pool dial-out code or by pressing a single button on the telephone, (A separate button for each trunk is not needed.) Each pool should contain trunks of the same type (for example, loop- or ground-start or WATS); however, ground- and loop-start trunks of the same type can be included in the same pool. Ground-start trunks must be manually assigned. A maximum of 11 pools is allowed; a trunk can be assigned to only one pool.

Do not mix different bands of WATS trunks or FX lines to different cities. Do not include both incoming only and outgoing only trunks in a pool.

If you want to reassign a trunk to a different pool, you must remove it from the current pool before you assign it to the new pool. Once you assign a trunk to a pool, it can be assigned to a button only on a direct-line console operator position; individual lines intended for personal use on telephones other than the DLC console should not be assigned to pools.

DID trunks and/or trunks used for paging loudspeakers, Music-on-Hold, or maintenance alarms cannot be grouped in pools. Any such trunks that are loop start are automatically placed in pools and must be manually removed.

Dial-in tie trunks should not be grouped in pools if you intend to assign pool buttons on telephones.

If you are using Automatic Route Selection, the main pool (factory set dial-out code 70) must contain loop- or ground-start lines.

The system provides an error tone when a trunk is in use or if a loudspeaker paging system, Music-on-Hold, or Maintenance Alarm is already assigned; however, the system does not indicate the reason for the error tone.

Entering Programming

Console: Select Menu → Sys Program → Exit
PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select Exit on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Trunks to Pools Assignment

Programmable by	System manager
Mode	Hybrid/PBX
Idle Condition	Trunk idle
Planning Form	Form 2c, System Numbering — Trunk Jacks
Factory Setting	All loop-start trunks are assigned to the Main Pool (factory-set extension number 70); all tie trunks are assigned to the pool with the factory-set extension number 891; no factory-set extension assigned to ground-start trunks.
Valid Entries	Line numbers
Inspect	Yes
Copy Option	Yes
Console Procedure [†]	LinesTrunks → Pools → Dial pool dial-out code → Enter → Select block of lines → Toggle LED On/Off → Enter → Exit → Exit
PC Procedure [†]	[F4] → [F9] → Type pool dial-out code → [F10] → Select block of lines → Toggle letter R On/Off → [F10] → [F5] → [F5]

[†] Entry mode available

Programming Procedures

Procedure: Trunks to Pools Assignment

Step	Display/Instructions	On the console	On the PC
1	<pre> System Programming: > Make a selection System Extensions SysReNumber Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce </pre>		
	Select the Lines and Trunks menu,	Select LinesTrunks .	Press [F4]
2	<pre> Lines and Trunks: > Make a selection LS/GS/DS1 PRI TIE Lines Copy TT/LS Disc RemoteAccss DID Pools Exit Toll Type </pre>		
	Select Pools.	Select Pools	Press [F9]
3	<pre> Pools: Enter pool number Backspace Exit Enter </pre>		
	Specify the pool dial-out code for the pool you want to program.	Dial [nnn].	Type [nnn].
4	Save your entry.	Select Enter .	Press [F10]
5	<pre> Pool xxx: Assign lines to pool Lines 01-20 Entry Mode Lines 21-40 Lines 41-60 Lines 61-80 Exit </pre> xxx = pool dial-out code entered in Step 3 To specify a single line/trunk, go to Step 6a. To specify a block of lines/trunks, go to Step 6b.		

Programming Procedures

Step	Display/Instruction	On the console	On the PC
6a	For a single line/trunk, do the following:		
	1. Specify entry mode.	Select Entry Mode	Press [F6]
	<pre>Pool xxx: Enter line/trunk number Delete Backspace Exit Enter</pre>		
	2. Specify the trunk number for the pool.	Dial [nnn].	Type [nnn]
6b	3. Assign or remove trunk from the pool.	Select Enter or Delete.	Press [F10] or [F8]
	For a block of lines/trunks, do the following:		
	1. Select the trunks associated with the 20 line buttons on the system programming console.	Select Lines 01-20, Lines 21-40, Lines 41-60, or Lines 61-80.	Press [F1] , [F2] , [F3] , or [F4] .
	2. Assign the appropriate trunks to the pool. <i>The red LED indicates the following:</i> on = trunk is assigned to pool specified off = trunk is not assigned to pool specified	Toggle the LED On/Off, as required.	Toggle the letter R On/Off, as required.
7	3. Save your entry	Select Enter.	Press [F10]
	To return to System Programming menu	Select Exit two times.	Press [F5] two times.

Copy Options for Lines/Trunks

Use this procedure to copy options assigned to loop-start or ground-start trunks, tie trunks, or DID trunks. Note that many of these options apply to Hybrid/PBX systems only. The following information is copied for each type:

- For loop-start or ground-start trunks (including those emulated on T1 facilities): toll type, signaling type, and pool assignment (Hybrid/PBX only)
- For tie trunks: direction, tie trunk type, E&M signal, dial mode, dial tone, answer supervision time, disconnect time, and pool assignment (Hybrid/PBX only)
- DID trunks (Hybrid/PBX only): block assignment and disconnect time

To find out whether there is an optional feature assigned that you would like to copy, use **Inspct** from the system programming console or **[PgDn]** on a PC.

NOTE:

You can copy options to a block of trunks only if they are all the same type (loop-start, ground-start, tie trunks, or DID trunks). If you attempt to copy assignments and a mismatch in type is found, information is copied to that point only. You receive no error message.

If you are copying options to a block of lines/trunks, they must be sequentially numbered.

If the block you are copying to includes an invalid trunk type, the copying process stops at the invalid type. Only the trunks that were copied to before the invalid type was found are copied successfully.

If you are copying assignments to a block of trunks and one of the trunks is in use, you see the message **Trunk Busy — Pls wait** on your display. The copy for the rest of the trunks in the block is delayed until the busy trunk becomes idle. If you exit without waiting for the copying to be completed, the copying done up to that point is not canceled.

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select Exit on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Copy Options for Lines/Trunks

Programmable by	System manager
Mode	All (but note differences)
Idle Condition	Not required
Planning Form	Form 2c, System Numbering – Trunk Jacks Form 3c, Incoming Trunks – Tie Form 3d, Incoming Trunks - DID
Factory Setting	Not applicable
Valid Entries	Not applicable
Inspect	No
Copy Option	Not applicable
Console Procedure	To copy individual lines/trunks: LinesTrunks → Copy → Single → Dial Copy from trunk no. → Enter → Dial copy to trunk no. → Enter → Exit → Exit → Exit To copy blocks of lines/trunks: LinesTrunks → Copy → Block → Dial copy from trunk no. → Enter → Dial first copy to trunk no. in block → Enter → Dial last copy to trunk no. in block → Enter → Exit → Exit → Exit
PC Procedure	To copy individual trunks: [F4] → [F7] → [F1] → Type copy to trunk no. → [F10] → Type copy from trunk no. → [F10] → [F5] → [F5] → [F5] To copy blocks of trunks: [F4] → [F7] → [F2] → Dial copy from trunk no. → [F10] → Dial first copy to trunk no. in block → [F10] → Dial last copy to trunk no. in block → [F10] → [F5] → [F5] → [F5]

Programming Procedures

Procedure: Copy Options for Lines and Trunks

Step	Display/Instructions	On the console	On the PC
1	System Programming: > Make a selection System Extensions SysReNumber Options Operator Tables LinesTrunks AuxEquip Exit NightSrvc		
	Select the Lines and Trunks menu.	Select LinesTrunks.	Press [F4]
2	Lines and Trunks: > Make a selection LS/GS/DS1 PRI TIE Lines Copy TT/LS Disc RemoteAccss DID Pools Exit Toll Type		
	Select Copy.	Select Copy.	Press [F7]
3	Copy Trunks: Make a selection Single Block Exit		
	To copy a single trunk, select single and go to Step 4a.	Select Single.	Press [F1]
	To copy a block of trunks, select block and go to Step 4b.	Select Block.	Press [F2]

Step	Display/Instructions	On the console	On the PC
4a	For a single trunk, do the following: Copy Trunk Info From: Enter trunk number Backspace Exit Enter 1. Specify trunk to copy from in one of the following ways (if you are copying from more than one trunk, enter the lowest number): Trunk number Slot and port number Logical ID number ■ Dial [nnn]. ■ Dial * [sspp]. ■ Dial #[nnn]. ■ Type [nnn]. ■ Type * [sspp]. ■ Type #[nnn]. 2. Save your entry. <i>If you get the Station Busy message, wait for an idle condition, or exit system programming and try again later.</i> Copy Trunk xxx To: Enter trunk number Backspace Next Exit Enter xxx = trunk number entered in number 1 of Step 4a 3. Specify the trunk you want to copy to in one of the following ways: Trunk number Slot and port number Logical ID number ■ Dial [nnn]. ■ Dial * [sspp]. ■ Dial #[nnn]. ■ Type [nnn]. ■ Type * [sspp]. ■ Type #[nnn].		

Programming Procedures

Step	Display/Instructions	On the console	On the PC
4.	To save your entry and copy option assignments from same line/trunk shown on line 1 to another individual line/trunk:		
	■ If next line/trunk number is sequential <i>Your previous entry is saved and next extension number is shown.</i>	Select Next . Repeat number 3 in Step 4a.	Press [F9] Repeat number 3 in Step 4a.
	■ If next line/trunk number is not sequential	Select Enter . Repeat Steps 3 and 4a.	Press [F10] Repeat Steps 3 and 4a.
5.	Save you entry.	Select Enter .	Press [F10]
4b	For a block of trunks, do the following:		
	Copy Trunk: Enter copy from trunk number Backspace Enter Exit Enter		
1.	Specify trunk number to copy from.		
	Trunk number	■ Dial [nnn].	■ Type [nnn],
	Slot and port number	■ Dial * [sspp].	■ Type * [sspp].
	Logical ID number	■ Dial #[nnn].	■ Type #[nnn].

Programming Procedures

Step	Display/Instructions	On the console	On the PC
2.	Save your entry.	Select Enter .	Press [F10]
	Copy Trunk xxx To: Enter starting trunk number Backspace Exit Enter xxx = trunk number entered in number 1 of Step 4b		
3.	Specify first trunk number to copy to .		
	Trunk number Slot and port number Logical ID number	Dial <i>[nnn]</i> . Dial * <i>[sspp]</i> . Dial <i>#[nnn]</i> .	Type <i>[nnn]</i> . Type * <i>[sspp]</i> . Type <i>#[nnn]</i> .
4.	Save your entry.	Select Enter .	Press [F10]
	<i>If you get the Station Busy message, wait for an idle condition, or exit system programming and try again later.</i>		
	START at Trunk xxx: Enter ending trunk number Backspace Exit Enter xxx = trunk number entered in number 3 of Step 4b		
5.	Specify last trunk number in block to copy to .		
	Trunk number Slot and port number Logical ID number	Dial <i>[nnn]</i> . Dial * <i>[sspp]</i> . Dial <i>#[nnn]</i> .	Type <i>[nnn]</i> . Type * <i>[sspp]</i> . Type <i>#[nnn]</i> .
6.	Save your entry.	Select Enter .	Press [F10]
5	To return to System Programming menu	Select Exit three times.	Press [F5] three times,

DS1 Facilities

Use the procedures in this section to program the following options for DS1 facilities (T1 or PRI) connected to a 100D (DS1) module:

- Type of DS1 facility
 - T1
 - PRI
- Frame Format
- Zero Code Suppression
- Signaling Mode
- Line Compensation
- Clock Synchronization
- Channel Service Unit

Type of DS1 Facility

Use this procedure to specify the type of facility (T1 or PRI) connected to a 100D (DS1) module.

If T1 type is programmed and the channels are used for emulation and/or AT&T Switched Network (ASN) you must specify the type of channel emulation. If the type is T1 and the type of channel emulation is tie trunk, you must specify the transmit/receive loss parameter setting. The two valid settings are:

- **TIE-PBX** Select when emulated tie trunks are used to connect to another communications system (such as PBX or Centrex). The transmit/receive parameter is set to 0/4.
- **Toll** Select when emulated tie trunks are used for ASN services (such as Megacom™, Megacom 800, or Software Defined Network). The transmit/receive parameter is set to 0/6.

If you select T1, channels can emulate ground- or loop-start trunks, tie trunks, or DID trunks in any combination. Note that unused channels must be specified as unequipped.

If either T1 or PRI is selected, channels can be used for ASN services. When T1 channels are used for ASN services, each channel must be programmed for tie trunk emulation.

If you select PRI, you must also perform additional procedures—at a minimum, the Framing Mode and Zero Code Suppression procedures must be performed.

Entering Programming

Console: Select Menu → Sys Program → Exit
PC/SPM: Type SPM → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select Exit on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Type of DS1 Facility

Programmable by	System manager
Mode	All
Idle Condition	100D module idle
Planning Form	Form 2c, System Numbering - Trunk Jacks Form 3b Incoming Trunks - DS1 Connectivity (100D Module)
Factory Setting	T1
Valid Entries	T1, PRI
Inspect	Yes
Copy Option	No
Console Procedure	To select PRI: LinesTrunks → LS/GS/DSI → Dial Slot no. → Enter → Type → PRI → Enter → Exit → Exit → Exit → Exit To select T1 - All Ground, AH Loop, All DID, All Unequip: LinesTrunks → LS/GS/Dsl → Dial slot no. → Enter → Type → T1 → Enter → More → Select type Of emulation → Enter → Exit → Exit → Exit → Exit To select T1 - TIE: LinesTrunks → LS/GS/DSI → Dial slot 110. → Enter → Type → T1 → Enter → TIE-PBX or Toll → Enter → Dial channel no. → Enter → Exit → Exit → Exit → Exit To select T1 - Ground Start, Loop Start, All Tie, DID, or Unequip: LinesTrunks → LS/GS/DS1 → Dial slot no. → Enter → Type → T1 → Enter → More → select type Of emulation → Enter → Dial channel no. → Enter → Exit → Exit → Exit → Exit

PC Procedure

To select PRI:

[F4] → **[F1]** → Type slot no. → **[F10]** → **[F1]** →
[F2] → **[F10]** → **[F5]** → **[F5]** → **[F5]**

To select T1 - All Ground, All Loop, All DID, All

Unequip:

[F4] → **[F1]** → Type slot no. → **[F10]** → **[F1]** →
[F1] → **[F10]** → **[PgUp]** → Select type of emulation →
[F10] → **[F5]** → **[F5]** → **[F5]**

To select T1 - Tie:

[F4] → **[F1]** → Type slot no. → **[F10]** → **[F1]** →
[F1] → **[F10]** → Select facility → **[F10]** → Type channel
no. → **[F10]** → **[F5]** → **[F5]** → **[F5]** → **[F5]**

To select T1 - Ground Start, Loop Start, All Tie, DID, or

Unequip:

[F4] → **[F1]** → Type slot no. → **[F10]** → **[F1]** →
[F1] → **[F10]** → **[PgUp]** → Select type of emulation →
[F10] → Type channel no. → **[F10]** → **[F5]** → **[F5]** →
[F5] → **[F5]**

Programming Procedures

Procedure: Type of DS1 Facility

Step	Display/Instructions	On the console	On the PC
1	System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce	Select the Lines and Trunks menu.	Press [F4]
2	Lines and Trunks: > Make a selection LS/GS/DS1 PRI TIE Lines Copy TT/LS Disc RemoteAccss DID Pools Exit Toll Type	Select Loop Start/Ground Start/DS1.	Press [F1]
3	Loop/Ground/DS1: Enter slot number (1-17) Backspace Exit Enter	Specify the slot number in the control unit that contains the I00D module (if you are programming a sequence, enter the lowest number).	Type [nn].
4	Save your entry. <i>If you get the System Busy message, wait for an idle condition and try again, or exit system programming and try again later.</i>	Select Enter .	Press [F10]

Programming Procedures

Step	Display/Instructions	On the console	On the PC
5	DS1 Slot xx: Make a selection Type Line Comp FrameFormat Clock Sync Suppression ChannelUnit Signaling Exit xx = slot number entered in Step 3		
	Select Type.	Select Type.	Press [F1]
6	DS1 Slot xx: Select one T1 PRI Exit Enter xx = slot number entered in Step 3.		
	Select a facility type.	Select T1 or PRI.	Press [F1] or [F2]
7	Save your entry. If you selected PRI, you have finished this procedure. Go to Step 1 of the "Frame Format" procedure.	Select Enter.	Press [F10]
8	Port Type Slot xx: > Select One GroundStart All Ground Loop Start All Loop TIE All TIE Unequipped All Unequip Exit Enter xx = slot number entered in Step 3		
	Select trunk type.	Press the button next to your selection.	Press the function key next to your selection.

Step	Display/Instructions	On the console	On the PC
	To select DID or ALL DID	Press More	Press [PgDn]
	Port Type Slot xx: Select one DID All DID Exit Enter xx = slot number entered in Step 3		
	Select trunk type.	Press the button next to your selection.	Press the function key next to your selection.
9	Save your entry. If you select All Ground, All Loop, All Unequipped, or All DID, you have finished this procedure. For Ground Start, Loop Start, and Unequipped trunks, go to Step 10a. For TIE and ALL TIE Trunks, go to Step 10b.	Select Enter .	Press [F10]
10a	**** Slot xx: Enter channel num (1-24) Backspace Delete Next Exit Enter *** = option name selected in Step 8 xx = slot entered in Step 3		
	Specify the channel.	Dial <i>[nn]</i> .	Type <i>[nn]</i> .

Step	Display/Instructions	On the console	On the PC
10b	<pre>**** Type Slot xx: Select one TIE-PBX Toll Exit Enter</pre> **** = option select in Step 8 xx = slot entered in Step 3 1. Specify emulated tie trunks as TIE-PBX or Toll. TIE-PBX: Transmit receive loss set to 0/4. Toll: (channels used for network services) transmit receive loss set to 0/6. 2. Save your entry <pre>TIE Lines Slot xx: Enter channel num (1-24) Backspace Delete Exit Next Enter</pre> xx = slot number entered in Step 3 3. Specify the channel.	Select TIE - PBX or Toll. Select Enter .	Press [F1] or [F2] Press [F10]
11	Assign or remove channel, To save your selection and assign channel to another slot: ■ If next tie slot number is sequential <i>Your previous entry is saved and next tie slot number is shown on line 1.</i>	Select Enter or Delete. Select Next Repeat Steps 8-10.	Press [F10] or [F8] Press [F9] Repeat Steps 8-10.

Programming Procedures

Step	Display/Instructions	On the console	On the PC
	■ If next tie slot number is not sequential	Select Enter Repeat Steps 5-10.	Press [F10] Repeat Steps 5-10.
	When all entries are complete	Select Exit .	Press [F5]
12	To return to System Programming menu	Select Exit four times.	Press [F5] four times.

Frame Format

Use this procedure to specify the framing format for the 100D module as D4 Compatible or Extended Super Frame. Your selection must match the framing mode at the far end of the DS1 facility.

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select Exit on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Frame Format

Programmable by	System manager
Mode	All
Idle Condition	100D module idle
Planning Form	Form 3b, Incoming Trunks - DS1 Connectivity (100D Module)
Factory Setting	D4 compatible
Valid Entries	D4, ESF
Inspect	No
Copy Option	No
Console Procedure	LinesTrunks → LS/GS/DS1 → Dial Slot no. → Enter → FrameFormat → Select format type → Enter → Exit → Exit
PC Procedure	[F4] → [F1] → Type slot no. → [F10] → [F2] → Select format type → [F10] → [F5] → [F5]

Programming Procedures

Procedure: Frame Format

Step	Display/Instructions	On the console	On the PC

1

```
System Programming:  >
Make a selection
System               Extensions
SysRenumbr          Options
Operator            Tables
LinesTrunks         AuxEquip
Exit                NightSrvce
```

Select the Lines and Trunks menu.

Select LinesTrunks

Press **[F4]**

2

```
Lines and Trunks:  >
Make a selection
LS/GS/DS1          PRI
TIE Lines          Copy
TT/LS Disc         RemoteAccss
DID                Pools
Exit              Toll Type
```

Select Loop Start/
Ground Start/DS1.

Select LS/GS/DS1

Press **[F1]**

3

```
Loop/Ground/DS1:
Enter slot number (1-17)

Backspace
Exit                Enter
```

Specify the slot number in the control unit that contains the 100D module.

Dial [nn].

Type [nn].

4

Save your entry.

Select Enter .

Press **[F10]**

Programming Procedures

Step	Display/Instructions	On the console	On the PC
5	DS1 Slot xx: Make a selection Type Line Comp FrameFormat Clock Sync Suppression ChannelUnit Signaling Exit xx = slot number entered in Step 3		
	Select Frame Format.	Select FrameFormat .	Press [F2]
6	DS1 Slot xx: Select one D4 Compatible Extended Super Frame Exit Enter xx = slot number entered in Step 3		
	Select a format type.	Select D4 Compatible Or Extended Super Frame.	Press [F1] or [F2]
7	Save your entry	Select Enter	Press [F10]
8	To return to System Programming menu If you are using PRI Facilities, go to the Zero Code Suppression procedure.	Select Exit two times.	Press [F5] two times.

Zero Code Suppression

Use this procedure to specify zero code suppression for the 100D module as AMI Zero Code Suppression (AMI-ZCS) or Bipolar 8 Zero Suppression (B8ZS). Your selection must match the suppression at the far end of the DS1 facility.

Entering Programming

Console: Select Menu → Sys Program → Exit
PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select Exit on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Zero Code Suppression

Programmable by	System manager
Mode	All
Idle Condition	100D module idle
Planning Form	Form 3b, Incoming Trunks - DS1 Connectivity (100D Module)
Factory Setting	AMI-ZCS
Valid Entries	AMI-ZCS, B8ZS
Inspect	No
Copy Option	No
Console Procedure	Lines Trunks → LS/GS/DS1 → Dial Slot no. → Enter → Suppression → Select zero code suppression → Enter → Exit → Exit →
PC Procedure	[F4] → [F1] → Type slot no. → [F10] → [F3] → Select zero code suppression → [F10] → [F5] → [F5]

Programming Procedures

Procedure: Zero Code Suppression

Step	Display/Instructions	On the console	On the PC
1	System Programming: > Make a selection System Extensions SysReNumber Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce		
	Select the Lines and Trunks menu.	Select LinesTrunks.	Press [F4]
2	Lines and Trunks: > Make a selection LS/GS/DS1 PRI TIE Lines Copy TT/LS Disc RemoteAccss DID Pools Exit Toll Type		
	Select Loop Start/Ground Start/DS1.	Select LS/GS/DS1.	Press [F1]
3	Loop/Ground/DS1: Enter slot number (1-17) Backspace Exit Enter		
	Specify the slot number in the control unit that contains the 100D module.	Dial <i>[nn]</i> .	Type <i>[nn]</i> .
4	Save your entry.	Select Enter .	Press [F10]
5	DS1 Slot xx: Make a selection Type Line Comp FrameFormat Clock Sync Suppression ChannelUnit Signaling Exit xx = slot number entered in Step 3		
	Select Suppression.	Select Suppression.	Press [F3]

Step	Display/Instructions	On the console	On the PC
6	DS1 Slot xx: Select one AMI-ZCS B8ZS ExitEnter xx = slot number entered in Step 3 Select AMI Zero Code Supression or Bipolar 8 Zero Substitution	Select AMI - ZCS or B 8 Z S	
7	Save your entry.	Select Enter .	Press [F10]
8	To return to System Programming menu	Select Exit two times.	Press [F5] two times.

Signaling Mode

Use this procedure to specify the signaling for the 100D module as robbed-bit or common-channel signaling.

NOTE:

This procedure is needed only for T1 facilities; signaling is set automatically for PRI facilities.

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Signaling Mode

Programmable by	System manager
Mode	All
Idle Condition	100D module idle
Planning Form	Form 3b, Incoming Trunks - DS1 Connectivity (100D Module)
Factory Setting	Robbed bit
Valid Entries	Robbed Bit, Common Channel
Inspect	No
Copy Option	No
Console Procedure	LinesTrunks → LS/GS/DS1 → Dial Slot no. → Enter → Signaling → Select type of signaling → Enter → Exit → Exit →
PC Procedure	[F4] → [F1] → Type slot no. → [F10] → [F4] → Select type of signaling → [F10] → [F5] → [F5]

Programming Procedures

Procedure: Signaling Mode

Step	Display/Instructions	On the console	On the PC
1	<pre> System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvc </pre>		
	Select the Lines and Trunks menu.	Select LinesTrunks.	Press [F4]
2	<pre> Lines and Trunks: > Make a selection LS/GS/DS1 PRI TIE Lines Copy TT/LS Disc RemoteAccss DID Pools Exit Toll Type </pre>		
	Select Loop Start/Ground Start/DS1.	Select LS/GS/DS1.	Press [F1]
3	<pre> Loop/Ground/DS1: Enter slot number(1-17) Backspace Exit Enter </pre>		
	Specify the slot number in the control unit that contains the 100D module.	Dial [nn].	Type [nn].
4	Save your entry.	Select Enter	Press [F10]
5	<pre> DS1 Slot xx: Make a selection Type Line Comp FrameFormat Clock Sync Suppression ChannelUnit Signaling Exit </pre> xx = slot number entered in Step 3		
	Select Signaling.	Select Signaling.	Press [F4]

Step	Display/Instructions	On the console	On the PC
6	Signaling DS1 Slot xx: Select one Robbed Bit Common Channel Exit Enter xx = slot number entered in Step 3 Select type of signaling.	Select Robbed Bit or Common Channel.	Press [F1] or [F2]
7	Save your entry.	Select Enter .	Press [F10]
8	To return to System Programming menu	Select Exit two times.	Press [F5] two times.

Line Compensation

Use this procedure to specify the amount of cable loss in decibels based on the length of cable between the 100D module and the channel service unit or far end. The choices are as follows:

- 1 = 0.6 dB loss
- 2 = 1.2 dB loss
- 3 = 1.8 dB loss
- 4 = 2.4 dB loss
- 5 = 3.0 dB loss

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Line Compensation

Programmable by	System manager
Mode	All
Idle Condition	100D module idle
Planning Form	Form 3b, Incoming Trunks - DS1 Connectivity (100D Module)
Factory Setting	1 (0.6 dB loss)
Valid Entries	1 - 5
Inspect	No
Copy Option	No
Console Procedure	LinesTrunks → LS/GS/DS1 → Dial Slot no. → Enter → Line Comp → Drop → Dial line compensation value → Enter → Exit → Exit
PC Procedure	[F4] → [F1] → Type slot no. → [F10] → [F6] → [Alt] + [P] → Type line compensation value → [F10] → [F5] → [F5]

Programming Procedures

Procedure: Line Compensation

Step	Display/Instructions	On the console	On the PC
1	System Programming: > Make a selection System Extensions SysReNumber Options Operator Tables LinesTrunks AuxEquip Exit NightSrvc		
	Select the Lines and Trunks menu.	Select LinesTrunks.	Press [F4]
2	Lines and Trunks: > Make a selection LS/GS/DS1 PRI TIE Lines Copy TT/LS Disc RemoteAccss DID Pools Exit Toll Type		
	Select Loop Start/Ground Start/DS1.	Select LS/GS/DS1.	Press [F1]
3	Loop/Ground/DS1: Enter slot number(1-17) Backspace Exit Enter		
	Specify the slot number in the control unit that contains the 100D module.	Dial <i>[nn]</i>	Type <i>[nn]</i> .
4	Save your entry.	Select Enter .	Press [F10]
5	DS1 Slot xx: Make a selection Type Line Comp FrameFormat Clock Sync Suppression ChannelUnit Signaling Exit xx = slot number entered in step 3		
	Select Line Compensation.	Select Line Comp.	Press [F6]

Programming Procedures

Step	Display/Instructions	On the console	On the PC
6	Line Comp DS1 Slot xx: Enter line compensation value (1-5) x Backspace Exit Enter xx = slot number entered in step 3 x = current compensation value Erase current line compensation value.	Press Drop .	Press [Alt] + [P]
7	Enter value for line compensation.	Dial <i>[n]</i> .	Type <i>[n]</i> .
8	Save your entry.	Select Enter .	Press [F10]
9	To return to System Programming menu	Select Exit two times.	Press [F5] two times.

Clock Synchronization

Use this procedure to specify the modules that provide primary, secondary, and tertiary clock synchronization. In addition, you can specify whether the clock is synchronized to the external end point (loop) or to the clock reference source (local). This procedure is also used to activate or deactivate the clock.

NOTE:

This procedure is necessary only if your system includes more than one 100D module.

Entering Programming

Console: Select Menu → Sys Program → Exit
PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Clock Synchronization

Programmable by	System manager
Mode	All
Idle Condition	Not required
Planning Form	Form 3b, Incoming Trunks - DS1 Connectivity (100D Module)
Factory Setting	Primary clock - the first 100D module in the control unit carrier; source – loop; activation – active
Valid Entries	Primary/secondary/tertiary and loop/local
Inspect	No
Copy Option	No
Console Procedure	LinesTrunks → LS/GS/DS1 → Dial Slot no. → Enter → Clock Sync → Priority → Select clock synchronization → Enter → Source → Select source of synchronization → Enter → Activation → Select clock activation → Enter → Exit → Exit → Exit →
PC Procedure	[F4] → [F1] → Type slot no. → [F10] → [F7] → [F1] → Select clock synchronization → [F10] → [F2] → Select source of synchronization → [F10] → [F3] → Select clock activation → [F10] → [F5] → [F5] → [F5]

Procedure: Clock Synchronization

Step	Display/Instructions	On the console	On the PC
1	<pre> System Programming: > Make a selection System Extensions SysReNumber Options Operator Tables LinesTrunks AuxEquip Exit NightSrvc </pre>		
	Select the Lines and Trunks menu.	Select LinesTrunks.	Press [F4]
2	<pre> Lines and Trunks: > Make a selection LS/GS/DS1 PRI TIE Lines Copy TT/LS Disc RemoteAccss DID Pools Exit Toll Type </pre>		
	Select Loop Start/Ground Start/DS1.	Select LS/GS/DS1.	Press [F1]
3	<pre> Loop/Ground/DS1: Enter slot number(1-17) Backspace Exit Enter </pre>		
	Specify the slot number in the control unit that contains the 100D module.	Dial <i>[nn]</i> .	Type <i>[nn]</i> .
4	Save your entry.	Select Enter .	Press [F10]
5	<pre> DS1 Slot xx: Make a selection Type Line Comp FrameFormat Clock Sync Suppression ChannelUnit Signaling Exit </pre> xx = slot number entered in Step 3		
	Select Clock Synchronization.	Select Clock Sync.	Press [F7]

Programming Procedures

Step	Display/Instructions	On the console	On the PC
6	Clock Sync DS1 Slot xx: Make a selection Priority Source Activation Exit xx = slot number entered in Step 4		
	Select Priority.	Select Priority.	Press [F1]
7	ClkPriority DS1 Slot xx: Select one Primary Secondary Tertiary None Exit xx = slot number entered in Step 3		
	Select Primary, Secondary, Tertiary, or clock synchronization.	Select Primary, Secondary, Tertiary, or None	Press [F1] , [F2] , [F3] , or [F4]
8	Save your entry.	Select Enter .	Press [F10]
9	Clock Sync DS1 Slot xx: Make a selection Priority Source Activation Exit xx = slot number entered in step 3		
	Select Source.	Select Source .	Press [F2]
10	Clk Source DS1 Slot xx: Select one Loop Local Exit xx = slot number entered in Step 3		
	Specify whether the clock is to desynchronized to an external endpoint or is free-running.	Select Loop or Local.	Press [F1] or [F2]
11	Save your entry.	Select Enter .	Press [F10]

Step	Display/Instructions	On the console	On the PC
12	Clock Sync DS1 Slot xx: Make a selection Priority Source Activation Exit xx = slot number entered in Step 3		
	Select Activation.	Select Activation.	Press [F3]
13	ClkActivate DS1 Slot xx: Select one Active Not Active Exit Enter xx = slot number entered in Step 3		
	Activate or deactivate the clock.	Select Active or Not Active.	Press [F1] or [F2]
14	Save your entry.	Select Enter .	Press [F10]
15	To return to System Programming menu	Select Exit three times.	Press [F5] three times.

Channel Service Unit

Use this procedure to specify the type of equipment provided by the local telephone company as foreign exchange or special access.

NOTE:

You do not need to use this procedure unless your system emulates loop start or ground start with the T1 type of DS1 facility.

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select Exit on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Channel Service Unit

Programmable by	System manager
Mode	All
Idle Condition	100D module idle
Planning Form	Form 3b, Incoming Trunks - DS1 Connectivity (100D Module)
Factory Setting	Foreign Exchange
Valid Entries	Foreign Exchange, Special Access
Inspect	No
Copy Option	No
Console Procedure	LinesTrunks → LS/GS/DS1 → Dial Slot no. → Enter → ChannelUnit → Select type of channel unit → Enter → Exit → Exit
PC Procedure	[F4] → [F1] → Type slot no. → [F10] → [F8] → Select type of channel unit → [F10] → [F5] → [F5]

Procedure: Channel Service Unit

Step	Display/Instructions	On the console	On the PC
1	<pre> System Programming: > Make a selection System Extensions SysReNumber Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce </pre>		
	Select the Lines and Trunks menu.	Select LinesTrunks.	Press [F4]
2	<pre> Lines and Trunks: > Make a selection LS/GS/DS1 PRI TIE Lines Copy TT/LS Disc RemoteAccss DID Pools Exit Toll Type </pre>		
	Select Loop Start/Ground Start/DS1.	Select LS/GS/DS1.	Press [F1]
3	<pre> Loop/Ground/DS1: Enter slot number(1-17) Backspace Exit Enter </pre>		
	Specify the slot number in the control unit that contains the 100D module.	Dial <i>[nn]</i> .	Type <i>[nn]</i> .
4	Save your entry.	Select Enter .	Press [F10]
5	<pre> DS1 Slot xx: Make a selection Type Line Comp FrameFormat Clock Sync Suppression ChannelUnit Signaling Exit </pre>		
	Select Channel Unit.	Select ChannelUnit.	Press [F8]

Programming Procedures

Step	Display/Instructions	On the console	On the PC
6	ChannelUnit DSl Slot xx: Select one Foreign Exchange Special Access Exit Enter xx = slot number entered in Step 3 Select type of channel unit.	Select Foreign Exchanger Special Access.	Press [F1] or [F2]
7	Save your entry.	Select Enter .	Press [F10]
8	To return to System Programming menu	Select Exit two times.	Press [F5] two times.

Tie Trunks

The procedures in this section tell you how to program the following options for tie trunks:

- Direction
- Tie Trunk Type
- E&M Signal
- Dial Mode
- Tie Trunk Dial Tone
- Tie Trunk Answer Supervision Time
- Disconnect Time

Direction

Use this procedure to specify whether tie trunks operate in a one-or two-way direction. For one-way tie trunks, you must also specify whether the direction is out or in.

Entering Programming

Console: Select Menu → Sys Program → Exit
PC/SPM: Type **SPM** → Press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select Exit on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Direction

Programmable by	System manager
Mode	All
Idle Condition	Tie trunk idle
Planning Form	Form 3c, Incoming Trunks – Tie
Factory Setting	Two-way
Valid Entries	Two-way, Outgoing, Incoming
Inspect	No
Copy Option	Yes
Console Procedure	LinesTrunks → TIE Lines → Direction → Dial trunk no. → Enter → Specify direction → Enter → Exit → Exit
PC Procedure	[F4] → [F2] → [F1] → Type trunk no. → [F10] → Specify direction → [F10] → [F5] → [F5]

Programming Procedures

Procedure: Direction

Step	Display/Instructions	On the console	On the PC
1	System Programming: > Make a selection System Extensions SysRenumber Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce		
	Select the Lines and Trunks menu.	Select LinesTrunks.	Press [F4]
2	Lines and Trunks: > Make a selection LS/GS/DS1 PRI TIE Lines Copy TT/LS Disc RemoteAccss DID Pools Exit Toll Type		
	Select Tie Lines.	Select TIE Lines.	Press [F2]
3	TIE Trunks: Make a selection Direction Inmode Intype Outmode Outtype Dialtone E&M Signal AnsSupvr Exit Disconnect		
	Select Direction.	Select Direction.	Press [F1]
4	Direction: Enter trunk for assignmt Backspace Exit Enter		
	Specify tie trunk in one of the following ways (if you are programming a sequence, enter the lowest number):		
	Trunk number	■ Dial [nnn].	■ Type [nnn].
	Slot and port number	■ Dial * [sspp].	■ Type * [sspp].
	Logical ID number	■ Dial #[nnn].	■ Type #[nnn].
	DSS	■ Press DSS button.	

Programming Procedures

Step	Display/Instructions	On the console	On the PC
5	Save your entry. <i>If you get the Trunk Busy message, wait for an idle condition, or exit system programming and try again later.</i>	Select Enter .	Press [F10]
6	Trunk xxxx: Select trunk direction Two Way OutGoing InComing Exit Next Enter xxxx = trunk entered in Step 4 Specify the direction.	Select Two Way, OutGoing, or InComing.	Press [F1] , [F2] , or [F3]
7	To save your selection and specify direction for another tie trunk: ■ If next tie trunk number is sequential <i>Your previous entry is saved and next tie trunk number is shown on line 1 of the screen shown in Step 6.</i> ■ If next tie trunk number is not sequential	Select Next . Repeat Step 6. Select Enter . Repeat Steps 3-6,	Press [F9] Repeat Step 6. Press [F10] Repeat Steps 3-6.
	To save your entry when all entries are complete	Select Enter .	Press [F10]
8	To return to System Programming menu	Select Exit two times.	Press [F5] two times.

Tie Trunk Type

Use this procedure to specify whether the signaling type of incoming or outgoing tie trunk is wink, delay, immediate, or automatic.

The following settings are recommended when T1 facilities are programmed for tie-trunk emulation to provide special network services (such as Megacom, Megacom 800, or Software Defined Network (SDN)):

- If Automatic Route Selection (ARS) is used for all outgoing calls and no Personal Line or Pool buttons are used, assign the wink signaling type. Set the network to wink.
- If Personal Line or Pool buttons (pool or dial-out codes) are used for outgoing calls, assign the immediate signaling type. Set the network to dial.
- If Dialed Number Identification Service (DNIS) is used for incoming calls, assign the wink signaling type. The network is also set to wink. (Setting both ends to immediate also works. Check with the network service provider for proper settings.)
- When DNIS is not used for incoming calls, assign the automatic signaling type. The network is also set to automatic.

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select Exit on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Tie Trunk Type

Programmable by	System manager
Mode	All
Idle Condition	Tie trunk idle
Planning Form	Form 3c, Incoming Trunks - Tie
Factory Setting	Wink
Valid Entries	Wink, Delay, Immediate, Automatic
Inspect	No
Copy Option	Yes
Console Procedure	LinesTrunks → TIE Lines → Intype/Outtype → Dial trunk no. → Enter → Specify trunk type → Enter → Exit → Exit
PC Procedure	[F4] → [F2] → [F2]/[F3] → Type trunk no. → [F10] → Specify trunk type → [F10] → [F5] → [F5]

Procedure: Tie Trunk Type

Step	Display/Instructions	On the console	On the PC									
1	<pre>System Programming: > Make a selection System Extensions SysRenumber Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce</pre>											
	Select the Lines and Trunks menu.	Select LinesTrunks.	Press [F4]									
2	<pre>Lines and Trunks: > Make a selection LS/GS/DSL PRI TIE Lines Copy TT/LS Disc RemoteAccss DID Pools Exit Toll Type</pre>											
	Select Tie Lines.	Select TIE Lines.	Press [F2]									
3	<pre>TIE Trunks: Make a selection Direction Inmode Intype Outmode Outtype Dialtone E&M Signal AnsSupvr Exit Disconnect</pre>											
	Select Intype or Outtype.	Select Intype or Outtype.	Press [F2] or [F3]									
4	<pre>**** Trunk Type: Enter trunk for assgmt Backspace Exit Enter</pre> **** = option name selected in Step 3 Specify the tie trunk in one of the following ways (if you are programming a sequence, enter the lowest number): <table><tr><td>Trunk number</td><td>■ Dial <i>[nn]</i>.</td><td>■ Type <i>[nn]</i>.</td></tr><tr><td>Slot and port number</td><td>■ Dial * <i>[sspp]</i>.</td><td>■ Type * <i>[sspp]</i>.</td></tr><tr><td>Logical ID number</td><td>■ Dial #<i>[nnn]</i>.</td><td>■ Type #<i>[nnn]</i>.</td></tr></table>	Trunk number	■ Dial <i>[nn]</i> .	■ Type <i>[nn]</i> .	Slot and port number	■ Dial * <i>[sspp]</i> .	■ Type * <i>[sspp]</i> .	Logical ID number	■ Dial # <i>[nnn]</i> .	■ Type # <i>[nnn]</i> .		
Trunk number	■ Dial <i>[nn]</i> .	■ Type <i>[nn]</i> .										
Slot and port number	■ Dial * <i>[sspp]</i> .	■ Type * <i>[sspp]</i> .										
Logical ID number	■ Dial # <i>[nnn]</i> .	■ Type # <i>[nnn]</i> .										

Programming Procedures

Step	Display/Instructions	On the console	On the PC
5	Save your entry.	Select Enter.	Press [F10]
6	Trunk xxxx: Select **** Trk type Wink Delay Immed Auto Next Exit Enter xxxx = trunk entered in Step 4 **** = option name selected in Step 3 Select the tie trunk type.	Select Wink, Delay, Immed, or Auto.	Press [F1] , [F2] , [F3] , or [F4]
7	To save your selection and specify type for another tie trunk: ■ If next tie-trunk number is sequential <i>Your previous entry is saved, and next tie-trunk number is shown on line 1 of the screen in Step 6.</i> ■ If next tie-trunk number is not sequential To save your entry when all entries are complete	Select Next . Repeat Step 6. Select Enter . Repeat Steps 3-6. Select Enter .	Press [F9] Repeat Step 6. Press [F10] Repeat Steps 3-6. Press [F10]
8	To return to System Programming menu	Select Exit two times.	Press [F5] two times.

E&M Signal

Use this procedure to specify the type of tie trunk signal, as follows:

- 1S - tie trunks are connected through the local telephone company
- 1C – tie trunks are connected directly to a system using 1S signaling
- 5- tie trunks are connected to a system using type 5 signaling

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: E&M Signal

Programmable by	System manager
Mode	All
Idle Condition	Tie trunk idle
Planning Form	Form 3c, Incoming Trunks – Tie
Factory Setting	1S
Valid Entries	1S, 1C, 5
Inspect	No
Copy Option	Yes
Console Procedure	LinesTrunks → TIE Lines → E&M Signal → Dial trunk no. → Enter → Specify Signaling type → Enter → Exit → Exit
PC Procedure	[F4] → [F2] → [F4] → Type trunk no. → [F10] → Specify signaling type → [F10] → [F5] → [F5]

Programming Procedures

Procedure: E&M Signal

Step	Display/Instructions	On the console	On the PC
1	<pre> System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce </pre>		
	Select the Lines and Trunks menu.	Select LinesTrunks.	Press [F4]
2	<pre> Lines and Trunks: > Make a selection LS/GS/DS1 PRI TIE Lines Copy TT/LS Disc RemoteAccss DID Pools Exit Toll Type </pre>		
	Select Tie Lines.	Select TIE Lines.	Press [F2]
3	<pre> TIE Trunks: Make a selection Direction Inmode Intype Outmode Outtype Dialtone E&M Signal AnsSupvr Exit Disconnect </pre>		
	Select E&M Signal.	Select E&M Signal.	Press [F4]
4	<pre> E&M Signal: Enter trunk for assigmt Backspace Exit Enter </pre>		
	Specify the tie trunk in one of the following ways (if you are programming a sequence, enter the lowest number):		
	Trunk number	■ IDial [nnn].	■ Type [nnn].
	Slot and port number	■ IDial * [sspp].	■ Type * [sspp].
	Logical ID number	■ IDial #[nnn].	■ Type #[nnn].

Step	Display/Instructions	On the console	On the PC
5	Save your entry.	Select Enter .	Press [F10]
6	Trunk xxx: Select E&M Trk Signaling Type1S Type1C Type5 Next Enter Exit xxx = trunk entered in Step 4 Specify the type of signaling (1S, 1C, or 5).	Select Type 1S, Type1C, or Type5.	Press [F1] , [F2] , or [F3]
7	To save your selection and specify E&M signaling for another tie trunk: ■ If next tie-trunk number is sequential <i>Your previous entry is saved, and next tie trunk number is shown on line 1 of the screen in Step 6.</i> ■ If next tie-trunk number is not sequential To save your entry when all entries are complete	Select Next . Repeat Step 6. Select Enter . Repeat Steps 3-6. Select Enter .	Press [F9] Repeat Step 6. Press [F10] Repeat Steps 3-6 Press [F10]
8	To return to System Programming menu	Select Exit two times.	Press [F5] two times.

Dial Mode

Use this procedure to specify whether an incoming or outgoing tie trunk is touch-tone or rotary.

NOTE:

Touch-tone cannot be programmed for incoming immediate tie trunks.

Users of touch-tone single-line telephones cannot make calls by using individual trunks programmed for rotary operation.

Entering Programming

Console: Select Menu → Sys Program → Exit
PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select Exit on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Dial Mode

Programmable by	System manager
Mode	All
Idle Condition	Not required
Planning Form	Form 3c, Incoming Trunks — Tie
Factory Setting	Rotary
Valid Entries	Rotary, touch-tone
Inspect	Yes
Copy Option	Yes
Console Procedure [†]	LinesTrunks → TIE Lines → Inmode/Outmode → Select block of lines → Toggle LED On/Off → Exit → Exit → Exit
PC Procedure	[F4] → [F2] → [F6] / [F7] → Select block of lines → Toggle letter G On/Off → [F5] → [F5] → [F5]

[†] Entry mode available

Procedure: Dial Mode

Step	Display/Instructions	On the console	On the PC
1	System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce		
	Select the Lines and Trunks menu.	Select LinesTrunks.	Press [F4]
2	Lines and Trunks: > Make a selection LS/GS/DS1 PRI TIE Lines Copy TT/LS Disc RemoteAccss DID Pools Exit Toll Type		
	Select Tie Lines.	Select TIE Lines.	Press [F2]
3	TIE Trunks: Make a selection Direction Inmode Intype Outmode Outtype DIALtone E&M Signal AnsSupvr Exit Disconnect		
	Select Inmode or Outmode.	Select Inmode or Outmode.	Press [F6] or [F7]
4	**** Trunk Dial: Enter Trunks w/TouchTone Lines 01-20 Entry Mode Lines 21-40 Lines 41-60 Lines 61-80 Exit **** = option name selected in step 3 To specify a single line, go to Step 5a. To specify a block of lines, go to Step 5b.		

Programming Procedures

Step	Display/Instructions	On the console	On the PC
5a	To specify a single line, do the following:		
	1. Specify entry mode.	Select Entry Mode.	Press [F6]
	<pre>**** Trunk Dial: Enter Trunks w/TouchTone Delete Backspace Exit Enter</pre> *** = option name selected in Step 3		
	2. Enter the trunk with touch-tone signaling.	Dial [nnn].	Type [nnn].
	3. To add or remove trunk with touchtone	Select Enter or Delete.	Press [F10] or [F8]
5b	To specify a block of lines, do the following:		
	1. Select the tie trunks associated with the 20 line buttons on the system programming console.	Select Lines 01-20, Lines 21-40, Lines 41-60, or Lines 61-80.	Press [F1] , [F2] , [F3] , or [F4]
	2. Specify remote or local dial tone.	Toggle the LED On/Off, as required.	Toggle the letter G On/Off, as required
	<i>The green LED indicates the following:</i> <i>on = remote dial tone</i> <i>off = local dial tone</i>		
6	To return to System Programming menu	Select Exit three times.	Press [F5] three times.

Tie Trunk Dial Tone

Use this procedure to specify whether the system provides dial tone for people calling in on a tie trunk. Settings are remote (system provides dial tone) and local (system does not provide dial tone).

Entering Programming

Console: Select Menu → Sys Program → Exit
PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select Exit on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Tie Trunk Dial Tone

Programmable by	System manager
Mode	All
Idle Condition	Not required
Planning Form	Form 3c, Incoming Trunks – Tie
Factory Setting	Remote
Valid Entries	Remote, Local
Inspect	Yes
Copy Option	Yes
Console Procedure [†]	LinesTrunks → TIE Lines → Dialtone → Select block of lines → Toggle LED On/Off → Exit → Exit → Exit
PC Procedure [†]	[F4] → [F2] → [F8] → Select block of lines → Toggle letter G On/Off → [F5] → [F5] → [F5]

[†] Entry mode available

Programming Procedures

Procedure: Tie Trunk Dial Tone

Step	Display/Instructions	On the console	On the PC
1	System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce		
	Select the Lines and Trunks menu.	Select LinesTrunks.	Press [F4]
2	Lines and Trunks: > Make a selection LS/GS/DS1 PRI TIE Lines Copy TT/LS Disc RemoteAccss DID Pools Exit Toll Type		
	Select Tie Lines.	Select TIE Lines.	Press [F2]
3	TIE Trunks: Make a selection Direction Inmode Intype Outmode Outtype DIALtone E&M Signal AnsSupvr Exit Disconnect		
	Select Dial tone.	Select DIALtone.	Press [F8]
4	DIALtone: Enter Trks w/Remote Dial Lines 01-20 Entry Mode Lines 21-40 Lines 41-60 Lines 61-80 Exit		
	To specify a single line, go to Step 5a.		
	To specify a block of lines, go to Step 5b.		

Programming Procedures

Step	Display/Instructions	On the console	On the PC
5a	To specify a single line, do the following:		
	Specify entry mode.	Select Entry Mode.	Press [F6]
	DialTone: Enter Trks w/Remote Dial Delete Backspace Exit Enter		
	Enter the number of the trunk with remote dial signaling.	Dial <i>[nnn]</i> .	Type <i>[nn]</i> .
	To add or remove trunk with remote dial signaling	Select Enter or Delete.	Press [F10] or [F8]
5b	To specify a block of lines, do the following:		
	Select the tie trunks associated with the 20 line buttons on the system programming console.	Select Lines 01-20, Lines 21-40, Lines 41-60, or Lines 61-80.	Press [F1] , [F2] , [F3] , or [F4]
	Specify remote or local dial tone. <i>The green LED indicates the following.</i> <i>on = remote dial tone</i> <i>off = local dial tone</i>	Toggle the LED On/Off, as required.	Toggle the letter G On/Off, as required.
6	To return to System Programming menu	Select Exit three times.	Press [F5] three times.

Tie Trunk Answer Supervision Time

Use this procedure to specify the tie-trunk answer supervision time in milliseconds.

Entering Programming

Console: Select Menu → Sys Program → Exit
PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select Exit on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Tie Trunk Answer Supervision Time

Programmable by	System manager
Mode	All
Idle Condition	Not required
Planning Form	Form 3c, Incoming Trunks - Tie
Factory Setting	300 ms
Valid Entries	20-4800 ms, in increments of 20 ms
Inspect	No
Copy Option	Yes
Console Procedure	Lines Trunks → TIE Lines → AnsSupvr → Dial trunk no. → Enter → Drop → Dial no. of ms → "Enter" → Exit → Exit
PC Procedure	[F4] → [F2] → [F9] → Type trunk no. → [F10] → [Alt] + [P] → Type no. of ms → [F10] → [F5] → [F5]

Procedure: Tie Trunk Answer Supervision Time

Step	Display/Instructions	On the console	On the PC
1	<pre> System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvc </pre>		
	Select the Lines and Trunks menu.	Select LinesTrunks.	Press [F4]
2	<pre> Lines and Trunks: > Make a selection LS/GS/DSL PRI TIE Lines Copy TT/LS Disc RemoteAccss DID Pools Exit Toll Type </pre>		
	Select Tie Lines.	Select TIE Lines.	Press [F2]
3	<pre> TIE Trunks: Make a selection Direction Inmode Intype Outmode Outtype Dialtone E&M Signal AnsSupvr Exit Disconnect </pre>		
	Select Answer Supervision.	Select AnsSupvr .	Press [F9]
4	<pre> Answer Supv: Enter trunk for assgmt Backspace Exit Enter </pre>		
	Specify the tie trunk you want in one of the following ways (if you are programming a sequence, enter the lowest number):		
	Trunk number	■ Dial <i>[nnn]</i> .	■ Type <i>[nnn]</i> .
	Slot and port number	■ Dial * <i>[sspp]</i> .	■ Type * <i>[sspp]</i> .
	Logical ID number	■ Dial # <i>[nnn]</i> .	■ Type # <i>[nnn]</i> .

Programming Procedures

Step	Display/Instructions	On the console	On the PC
5	Save your entry.	Select Enter .	Press [F10]
6	Trunk xxxx: Enter AnsSupervisionTime (20-4800, increment 20) nnnn Backspace Next Exit Enter xxxx = trunk entered in Step 4 nnnn = current time Erase current number of milliseconds.	Press Drop .	Press [Alt] + [P]
7	Trunk xxxx: Enter AnsSupervisionTime (20-4800, increment 20) Backspace Next Exit Enter xxxx = trunk entered in Step 4 Specify answer supervision time (0-4800 ms).	Dial <i>[nnnn]</i> .	Type <i>[nnnn]</i> .
8	To save your entry and specify answer supervision time for another tie trunk: ■ If next tie-trunk number is sequential <i>Your previous entry is saved, and next tie trunk number appears on line 1 of screen shown in Step 7.</i> ■ If next tie-trunk number is not sequential To save your entry when all entries are complete	Select Next . Repeat Steps 6 and 7. Select Enter . Repeat Steps 3-7. Select Enter .	Press [F9] Repeat Steps 6 and 7. Press [F10] Repeat Steps 3-7. Press [F10]
9	To return to System Programming menu	Select Exit two times.	Press [F5] two times.

Disconnect Time

Use this procedure to specify the tie trunk disconnect time in milliseconds.

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Disconnect Time

Programmable by	System manager
Mode	All
Idle Condition	Not required
Planning Form	Form 3c, Incoming Trunks – Tie
Factory Setting	300 ms
Valid Entries	140-2400 ms
Inspect	No
Copy Option	Yes
Console Procedure	LinesTrunks → TIE Lines → Disconnect → Dial trunk no. → Enter → Drop → Dial no. of ms → Enter → Exit → Exit
PC Procedure	[F4] → [F2] → [F10] → Type trunk no. → [F10] → [Alt] + [P] → Type no. of ms → [F10] → [F5] → [F5]

Programming Procedures

Procedure: Disconnect Time

Step	Display/Instructions	On the console	On the PC									
1	<pre>System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce</pre>											
	Select the Lines and Trunks menu.	Select LinesTrunks .	Press [F4]									
2	<pre>Lines and Trunks: > Make a selection LS/GS/DS1 PRI TIE Lines Copy TT/LS Disc RemoteAccss DID Pools Exit Toll Type</pre>											
	Select Tie Lines.	Select TIE Lines .	Press [F2]									
3	<pre>TIE Trunks: Make a selection Direction Inmode Intype Outmode Outtype Dialtone E&M Signal AnsSupvr Exit Disconnect</pre>											
	Select Disconnect.	Select Disconnect .	Press [F10]									
4	<pre>Disconnect: Enter trunk for assignmt Backspace Exit Enter</pre> Specify the tie trunk in one of the following ways (if you are programming a sequence, enter the lowest number): <table><tr><td>Trunk number</td><td>■ Dial [nnn].</td><td>■ Type [nnn].</td></tr><tr><td>Slot and port number</td><td>■ Dial * [sspp].</td><td>■ Type * [sspp].</td></tr><tr><td>Logical ID number</td><td>■ Dial #[nnn].</td><td>■ Type #[nnn].</td></tr></table>	Trunk number	■ Dial [nnn].	■ Type [nnn].	Slot and port number	■ Dial * [sspp].	■ Type * [sspp].	Logical ID number	■ Dial #[nnn].	■ Type #[nnn].		
Trunk number	■ Dial [nnn].	■ Type [nnn].										
Slot and port number	■ Dial * [sspp].	■ Type * [sspp].										
Logical ID number	■ Dial #[nnn].	■ Type #[nnn].										
5	Save your entry.	Select Enter .	Press [F10]									

Programming Procedures

Step	Display/Instructions	On the console	On the PC
6	Trunk xxxx: Enter Disconnect Time (140-2400) nnnn Backspace Next Exit Enter xxxx = trunk entered in Step 4 nnnn = current time		
	Erase current disconnect time	Press Drop.	Press [Alt] + [P]
7	Trunk xxxx: Enter Disconnect Time (140-2400) Backspace Next Exit Enter xxxx = trunk entered in Step 4		
	Specify disconnect time (140-2400 ms).	Dial <i>[nnnn]</i> .	Type <i>[nnnn]</i> .
8	To save your entry and specify disconnect time for another tie trunk:		
	■ If next tie-trunk number is sequential <i>Your previous entry is saved, and next tie trunk number appears online 1 of screen shown in Step 7.</i>	Select Next . Repeat Steps 6 and 7.	Press [F9] Repeat Steps 6 and 7
	■ If next tie-trunk number is not sequential	Select Enter . Repeat Steps 3-7.	Press [F10] Repeat Steps 3-7
	To save your entry when all entries are complete	Select Enter .	Press [F10]
9	To return to System Programming menu	Select Exit two times.	Press [F5] two times.

DID Trunks

These procedures detail the steps for programming DID trunks and include the following:

- Block Assignment
- DID Trunk Type
- Disconnect Time
- Expected Digits
- Delete Digits
- Add Digits
- Signaling
- Invalid Destination

NOTE:

These procedures apply only in the Hybrid/PBX mode.

Block Assignment

Use this procedure to assign each DID trunk connected to the system either to Block 1 or Block 2.

NOTE:

DID trunks apply only in Hybrid/PBX mode.

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select Exit on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Block Assignment

Programmable by	System manager
Mode	Hybrid/PBX
Idle Condition	Not required
Planning Form	Form 3d, Incoming Trunks - DID
Factory Setting	Block 1
Valid Entries	Block 1, Block 2
Inspect	Yes
Copy Option	Yes
Console Procedure	LinesTrunks → DID → Block → Dial trunk block no. → Enter → Select trunk lines → Type trunk block no. → Enter → Toggle LED On/Off" → Enter → Exit → Exit → Exit
PC Procedure	[F4] → [F4] → [F1] → Type trunk block no. → [F10] → Select trunk lines → Toggle letter G On/Off → [F10] → [F5] → [F5] → [F5]

Programming Procedures

Procedure: Block Assignment

Step	Display/Instructions	On the console	On the PC
1	System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce		
	Select the Lines and Trunks menu.	Select LinesTrunks.	Press [F4]
2	Lines and Trunks: > Make a selection LS/GS/DS1 PRI TIE Lines Copy TT/LS Disc RemoteAccss DID Pools Exit Toll Type		
	Select DID.	Select DID	Press [F4]
3	Direct Inward Dial: Make a selection Block DeleteDigit Type Add Digits Disconnect Signaling ExpectDigit InvalDstn Exit		
	Select Block Assignment.	Select Block.	Press [F1]
4	DID Block Assignment: Enter the block number (1-2) Backspace Exit Enter		
	Specify the trunk block.	Dial <i>[n]</i> .	Type <i>[n]</i> .
5	Save your entry.	Select Enter.	Press [F10]

Step	Display/Instructions	On the console	On the PC

6

```
Direct Inward Dialing:
Assign lines to blocks
Lines 01-20  Entry Mode
Lines 21-40
Lines 41-60
Lines 61-80
Exit
```

For a single line, go to Step 7a.
For a block of lines, go to Step 7b.

7a

```
Block x:
Enter line/trunk number

Backspace      Delete
Exit           Next
Exit           Enter
```

x = block entered in Step 4

For a single line, do the following:

1. Select Entry Mode.	Select Entry Mode.	Press [F6]
2. Specify the line or trunk.	Dial <i>[nnn]</i> .	Type <i>[nnn]</i> .
3. To delete the trunk from the block	Select Delete.	Press [F8]
To save your entry and specify trunk(s) for the other trunk block		
■ If next trunk number is sequential <i>Your previous entry is saved and the next trunk number is shown on line 1.</i>	Select Next . Repeat number 2 in Step 7a.	Press [F9] Repeat number 2 in Step 7a.
■ If next trunk number is not sequential	Select Exit . Repeat Steps 3-7a.	Press [F5] Repeat Steps 3-7a.

Programming Procedures

Step	Display/Instructions	On the console	On the PC
	To save your entry when all entries are complete	Select Enter .	Press [F10]
7b	For a block of lines, do the following: 1. Select the DID trunks associated with the 20 line buttons on the system programming console. 2. Check green LEDs for feature status. <i>The green LED indicates the following: on = assign DID trunk to block off = remove DID trunk from block</i>	Select Lines 01-20, Lines 21-40, Lines 41-60, or Lines 61-80. Toggle the LED On/Off, as required.	Press [F1], [F2], [F3], or [F4] Toggle the letter G On/Off, as required.
8	To return to System Programming menu	Select Exit three times.	Press [F5] three times.

DID Trunk Type

Use this procedure to specify the type of DID trunk as either immediate-start or wink-start.

NOTE:

DID trunks apply only in Hybrid/PBX mode.

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select Exit on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: DID Trunk Type

Programmable by	System manager
Mode	Hybrid/PBX
Idle Condition	DID trunk idle
Planning Form	Form 3d, Incoming Trunks - DID
Factory Setting	Wink-start
Valid Entries	Immediate-Start, Wink-Start
Inspect	No
Copy Option	No
Console Procedure	LinesTrunks → DID → Type → Dial trunk block no. → Enter → Immed/Wink → Enter → Exit → Exit
PC Procedure	[F4] → [F4] → [F2] → Type trunk block no. → [F10] → [F1] / [F2] → [F10] → [F5] → [F5]

Programming Procedures

Procedure: DID Trunk Type

Step	Display/Instructions	On the console	On the PC
1	<pre>System Programming: > Make a selection System Extensions SysReNumber Options Operator Tables LinesTrunks AuxEquip Exit NightSrvc</pre>		
	Select the Lines and Trunks menu.	Select LinesTrunks.	Press [F4]
2	<pre>Lines and Trunks: > Make a selection LS/GS/DS1 PRI TIE Lines Copy TT/LS Disc RemoteAccss DID Pools Exit Toll Type</pre>		
	Select DID.	Select DID.	Press [F4]
3	<pre>Direct Inward Dial: Make a selection Block DeleteDigit Type Add Digits Disconnect Signaling ExpectDigit InvalDstn Exit</pre>		
	Select Type.	Select Type.	Press [F2]
4	<pre>DID Trunk Type: Enter block number (1-2) Backspace Exit Enter</pre>		
	Specify the trunk block.	Dial <i>[n]</i> .	Type <i>[n]</i> .
5	Save your entry.	Select Enter.	Press [F10]

Programming Procedures

Step	Display/Instructions	On the console	On the PC
6	DID Block x: Select type Immed Wink Exit Next Enter x = block entered in Step 4		
	Specify immediate start or wink start.	Select Immed or Wink.	Press [F1] or [F2]
7	To save your selection and specify type for the other trunk block		
	■ If next block number is sequential <i>Your previous entry is saved and the next trunk number is shown on line 1 of the screen in Step 6.</i> ■ If next block number is not sequential	Select Next . Repeat Step 6.	Press [F9] Repeat Step 6.
	To save your entry when all entries are complete	Select Enter .	Press [F10]
8	To return to System Programming menu	Select Exit two times.	Press [F5] two times.

Disconnect Time

Use this procedure to specify the DID trunk disconnect time in milliseconds

NOTE:

DID trunks apply only in Hybrid/PBX mode.

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Disconnect Time

Programmable by	System manager
Mode	Hybrid/PBX
Idle Condition	Not required
Planning Form	Form 3d, Incoming Trunks - DID
Factory Setting	500 ms
Valid Entries	10-2400 ms, in increments of 10 ms
Inspect	No
Copy Option	Yes
Console Procedure	LinesTrunks → DID → Disconnect → Dial trunk no. → Enter → Drop → Dial no. of ms → Enter → Exit → Exit
PC Procedure	[F4] → [F4] → [F3] → Type trunk no. → [F10] → [Alt] + [P] → Type no. of ms → [F10] → [F5] → [F5]

Procedure: Disconnect Time

Step	Display/Instructions	On the console	On the PC
1	<pre>System Programming: > Make a selection System Extensions SysReNumber Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce</pre>		
	Select the Lines and Trunks menu.	Select LinesTrunks.	Press [F4]
2	<pre>Lines and Trunks: > Make a selection LS/GS/DS1 PRI TIE Lines Copy TT/LS Disc RemoteAccss DID Pools Exit Toll Type</pre>		
	Select DID.	Select DID.	Press [F4]
3	<pre>Direct Inward Dial: Make a selection Block DeleteDigit Type Add Digits Disconnect Signaling ExpectDigit InvalDstn Exit</pre>		
	Select Disconnect.	Select Disconnect.	Press [F3]
4	<pre>DID Disconnect Time: Enter trunk number Backspace Exit Enter</pre>		
	Specify the DID trunk in one of the following ways (if you are programming a sequence, enter the lowest number):		
	Trunk number	■ Dial [nnn].	■ Type [nnn].
	Slot and port number	■ Dial * [sspp].	■ Type * [sspp].
	Logical ID number	■ Dial #[nnn].	■ Type# [nnn].

Step	Display/Instructions	On the console	On the PC
5	Save your entry.	Select Enter .	Press [F10]
6	DID Trunk xxx: Enter disconnect time (10-2400,incrmnts 10) nnn Backspace Next Exit Enter xxx = number entered in step 4 nnn = current disconnect time		
	Erase current disconnect time. Press Drop .		Press [Alt] + [P]
7	Specify the number of milliseconds for disconnect time.	Dial <i>[nnn]</i> .	Type <i>[nnn]</i> .
8	To save your entry and specify disconnect time for another DID trunk		
	■ If next time is sequential <i>Your previous entry is saved and the next trunk number is shown online 1 of the screen in Step 6.</i>	Select Next . Repeat Steps 6 and 7	Press [F9] Repeat Steps 6 and 7
	■ If next time is not sequential	Select Enter . Repeat Steps 3-7.	Press [F 1 0] Repeat Steps 4-7.
	To save your entry when all entries are complete	Select Enter .	Press [F10]
9	To return to System Programming menu	Select Exit two times. Press [F5] two times.	

Expected Digits

Use this procedure to specify the number of digits sent by the local telephone company.

NOTE:

DID trunks apply only in Hybrid/PBX mode.

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select Exit on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Expected Digits

Programmable by	System manager
Mode	Hybrid/PBX
Idle Condition	Not required
Planning Form	Form 3d, Incoming Trunks - DID
Factory Setting	3 digits
Valid Entries	1-4 digits
Inspect	No
Copy Option	No
Console Procedure	LinesTrunks → DID → ExpectDigit → Dial trunk block no. → Enter → Drop → Dial no. of digits → Enter → Exit → Exit
PC Procedure	[F4] → [F4] → [F4] → Type trunk block no. → [F10] → [Alt] + [P] → Type no. of digits → [F10] → [F5] → [F5]

Programming Procedures

Procedure: Expected Digits

Step	Display/Instructions	On the console	On the PC
1	System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvc		
	Select the Lines and Trunks menu.	Select LinesTrunks.	Press [F4]
2	Lines and Trunks: > Make a selection LS/GS/DS1 PRI TIE Lines Copy TT/LS Disc RemoteAccss DID Pools Exit Toll Type		
	Select DID.	Select DID.	Press [F4]
3	Direct Inward Dial: Make a selection Block DeleteDigit Type Add Digits Disconnect Signaling ExpectDigit InvalDstn Exit		
	Select Expected Digits.	Select ExpectDigit.	Press [F4]
4	DID Expected Digits: Enter block number (1-2) Backspace Exit Enter		
	Specify the trunk block.	Dial [n].	Type [n].
5	Save your entry.	Select Enter.	Press [F10]

Programming Procedures

Step	Display/Instructions	On the console	On the PC
6	DID Block x: Enter number of expected digits (1-4) Backspace Next Exit Enter x = block entered in Step 4 n = current number of expected digits		
	Erase current number of expected digits.	Press Drop .	Press [Alt] + [P]
7	Specify the number of expected digits.	Dial <i>[n]</i> .	Type <i>[n]</i> .
8	To save your entry and specify expected digits for other trunk block		
	■ If next block entry is sequential <i>Your previous entry is saved and the next trunk number is shown on line 1 of the screen in Step 6.</i> ■ If next block entry is not sequential	Select Next . Repeat Steps 6 and 7	Press [F9] Repeat Steps 6 and 7
	To save your entry when all entries are complete	Select Enter .	Press [F10]
9	To return to System Programming menu	Select Exit two times.	Press [F5] two times

Delete Digits

Use this procedure to specify the number of digits to be deleted from the digits sent by the local telephone company.

NOTE:

DID trunks apply only in Hybrid/PBX mode

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Delete Digits

Programmable by	System manager
Mode	Hybrid/PBX
Idle Condition	Not required
Planning Form	Form 3d, Incoming Trunks - DID
Factory Setting	0 digits
Valid Entries	0-4 digits
Inspect	No
Copy Option	No
Console Procedure	LinesTrunks → DID → DeleteDigit → Dial trunk block no. → Enter → Drop → Dial no. of digits → Enter → Exit → Exit
PC Procedure	[F4] → [F4] → [F6] → Type trunk block no. → [F10] → [Alt] + [P] → Type no. of digits → [F10] → [F5] → [F5]

Programming Procedures

Procedure: Delete Digits

Step	Display/Instructions	On the console	On the PC
1	System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce		
	Select the Lines and Trunks menu.	Select LinesTrunks.	Press [F4]
2	Lines and Trunks: > Make a selection LS/GS/DSL PRI TIE Lines Copy TT/LS Disc RemoteAccss DID Pools Exit Toll Type		
	Select DID.	Select DID.	Press [F4]
3	Direct Inward Dial: Make a selection Block DeleteDigit Type Add Digits Disconnect Signaling ExpectDigit InvalDstn Exit		
	Select Delete Digit.	Select DeleteDigit.	Press [F6]
4	DID Delete Digits: Enter block number (1-2) Backspace Exit Enter		
	Specify the trunk block you want to program.	Dial <i>[n]</i> .	Type <i>[n]</i>
5	Save your entry.	Select Enter .	Press [F10]

Step	Display/Instructions	On the console	On the PC
6	DID Block x: Enter number of digits to delete (0-4) n Backspace Next Exit Enter x = block entered in Step 4 n = current number of delete digits		
	Erase current number of delete digits.	Press Drop .	Press [Alt] + [P]
7	Specify number of delete digits.	Dial <i>[n]</i> .	Type <i>[n]</i> ,
8	To save your entry and specify delete digits for the other trunk block		
	■ If next trunk block is sequential <i>Your previous entry is saved and the next trunk number is shown on line 1 of the screen in Step 6.</i>	Select Next . Repeat Steps 6 and 7	Press [F9] Repeat Steps 6 and 7
	■ If next trunk block is not sequential	Select Enter . Repeat Steps 3-7.	Press [F10] Repeat Steps 3-7.
	To save your entry when all entries are complete	Select Enter .	Press [F10]
9	To return to System Programming menu	Select Exit two times .	Press [F5] two times .

Add Digits

Use this procedure to specify the specific digits that must be added to the digits sent by the local telephone company.

NOTE:

DID trunks apply only in Hybrid/PBX mode.

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Add Digits

Programmable by	System manager
Mode	Hybrid/PBX
Idle Condition	Not required
Planning Form	Form 3d, Incoming Trunks - DID
Factory Setting	0
Valid Entries	1-9999
Inspect	No
Copy Option	No
Console Procedure	LinesTrunks → DID → Add Digits → Dial trunk block no. → Enter → Drop → Dial added digits → Enter → Exit → Exit
PC Procedure	[F4] → [F4] → [F7] → Type trunk block no. → [F10] → [Alt] + [P] → Type added digits → [F10] → [F5] → [F5]

Programming Procedures

Procedure: Add Digits

Step	Display/Instructions	On the console	On the PC
1	System Programming: > Make a selection System Extensions SysReNumber Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce		
	Select the Lines and Trunks menu.	Select LinesTrunks.	Press [F4]
2	Lines and Trunks: > Make a selection LS/GS/DSL PRI TIE Lines Copy TT/LS Disc RemoteAccss DID Pools Exit Toll Type		
	Select DID.	Select DID.	Press [F4]
3	Direct Inward Dial: Make a selection Block DeleteDigit Type Add Digits Disconnect Signaling ExpectDigit InvalDstn Exit		
	Select Add Digits.	Select Add Digits.	Press [F7]
4	DID Add Digits: Enter block number (1-2) Backspace Exit Enter		
	Specify the trunk block.	Dial <i>[n]</i> .	Type <i>[n]</i> .
5	Save your entry.	Select Enter.	Press [F10]

Step	Display/Instructions	On the console	On the PC
6	DID Block x: Enter digits to add nnn Backspace Next Exit Enter x = block number entered in Step 4 nnnn = current added digits		
	Erase current number of digits. Press Drop .		Press [Alt] + [P]
7	Specify digits to add (1 - 9999).	Dial [nnnn].	Type [nnnn].
8	To save your entry and specify added digits for other trunk block		
	■ If next trunk block is sequential Your previous entry is saved and the next trunk number is shown on line 1 of the screen in Step 6.	Select Next . Repeat Steps 6 and 7	Press [F9] Repeat Steps 6 and 7
	■ If next trunk block is not sequential	Select Enter . Repeat Steps 3-7.	Press [F10] Repeat Steps 3-7.
	To save your entry when all entries are complete	Select Enter .	Press [F10]
9	To return to System Programming menu	Select Exit two times.	Press [F5] two times.

Signaling

Use this procedure to specify whether the type of dialing signal from the local telephone company is touch-tone or rotary.

NOTE:

DID trunks apply only in Hybrid/PBX mode.

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection. Touch-tone dial mode cannot be programmed for immediate start DID trunks.

Touch-tone single-line telephone users cannot make calls by using individual trunks programmed for rotary operation. The touch-tone signals generated from the telephone while dialing are transmitted to the central office at the same time the rotary signals are sent to the system. The central office receives both signals and cannot process the call.

Summary: Signaling

Programmable by	System manager
Mode	Hybrid/PBX
Idle Condition	Not required
Planning Form	Form 3d, Incoming Trunks - DID
Factory Setting	Rotary
Valid Entries	Rotary, Touch-tone
Inspect	No
Copy Option	No
Console Procedure	LinesTrunks → DID → Signaling → Dial trunk block 170. → Enter → Rotary/TouchTone → Enter → Exit → Exit
PC Procedure	[F4] → [F4] → [F8] → Type trunk block no. → [F10] → [F1] / [F2] → [F10] → [F5] → [F5]

Programming Procedures

Procedure: Signaling

Step	Display/Instructions	On the console	On the PC
1	<pre>System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvc</pre>		
	Select the Lines and Trunks menu.	Select LinesTrunks.	Press [F4]
2	<pre>Lines and Trunks: > Make a selection LS/GS/DS1 PRI TIE Lines Copy TT/LS Disc RemoteAccss DID Pools Exit Toll Type</pre>		
	Select DID.	Select DID.	Press [F4]
3	<pre>Direct Inward Dial: Make a selection Block DeleteDigit Type Add Digits Disconnect Signaling ExpectDigit InvalDstn Exit</pre>		
	Select Signaling.	Select Signaling.	Press [F8]
4	<pre>DID Signaling Enter Block number (1-2) Backspace Exit Enter</pre>		
	Specify the trunk block.	Dial <i>[n]</i> .	Type <i>[n]</i> .
5	Save your entry.	Select Enter.	Press [F10]

Step	Display/Instructions	On the console	On the PC
6	DID Block x: Select one Rotary Touch Tone Exit Next Enter x = block entered in Step 4		
	Specify Rotary or TouchTone.	Select Rotary or TouchTone.	Press [F1] or [F2]
7	To save your selection and specify type for other trunk block		
	■ If next trunk block is sequential <i>Your previous entry is saved and the next trunk number is shown on line 1 of the screen in Step 6.</i>	Select Next . Repeat Step 6.	Press [F9] Repeat Step 6.
	■ If next trunk block is not sequential	Select Enter . Repeat Steps 3-6.	Press [F10] Repeat Steps 3-6.
	To save your entry when all entries are complete	Select Enter .	Press [F10]
8	To return to the System Programming Menu	Select Exit two times .	Press [F5] two times .

Invalid Destination

Use this procedure to specify whereto direct outside calls (received on DID trunks) to unassigned extension numbers. Calls can be directed to a backup position (normally the primary system operator) or given a fast busy signal.

NOTE:

DID trunks apply only in Hybrid/PBX mode.

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Invalid Destination

Programmable by	System manager
Mode	Hybrid/PBX
Idle Condition	Not required
Planning Form	Form 3d, Incoming Trunks - DID
Factory Setting	Backup (calls are sent to the primary system operator)
Valid Entries	Backup, Fast Busy
Inspect	No
Copy Option	No
Console Procedure	LinesTrunks → DID → InvalDstn → Send to Backup Extension or Return Fast Busy → Enter → Exit → Exit
PC Procedure	[F4] → [F4] → [F9] → [F1] / [F2] → [F10] → [F5] → [F5]

Procedure: Invalid Destination

Step	Display/Instructions	On the console	On the PC
1	<pre> System Programming: > Make a selection System Extensions SysReNumber Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce </pre>		
	Select the Lines and Trunks menu.	Select LinesTrunks.	Press [F4]
2	<pre> Lines and Trunks: > Make a selection LS/GS/DS1 PRI TIE Lines Copy TT/LS Disc RemoteAccss DID Pools Exit Toll Type </pre>		
	Select DID.	Select DID.	Press [F4]
3	<pre> Direct Inward Dial: Make a selection Block DeleteDigit Type Add Digits Disconnect Signaling ExpectDigit InvalDstn Exit </pre>		
	Select Invalid Destination.	Select InvalDstn.	Press [F9]
4	<pre> Invalid Destination DID: Select one Send to Backup Extension Return Fast Busy Exit Enter </pre>		
	Specify handling of calls directed to an invalid destination.	Select Send to Backup Extension Or Return Fast Busy.	Press [F1] or [F2]
5	Save your entry.	Select Enter.	Press [F10]
6	To return to System Programming menu	Select Exit two times.	Press [F5] two times.

PRI Facilities

The procedures in this section provide the steps for programming the following options for Primary Rate Interface (PRI) Facilities connected to a 100D (DS1) module:

- Telephone Number
- B-Channel Groups
- Network Service
- Copy Telephone Number to Send
- Incoming Routing
- Telephone Number to Send
- Test Telephone Number
- Timers and Counters
- Terminal Equipment Identifier
- Dial Plan Routing
- Outgoing Tables
- Network Selection Tables
- Special Services Tables
- Call by Call Service Table

NOTE:

If you are adding PRI Facilities to an existing system, *do not start these procedures* until you have checked the following:

- Type of DS1 Facility must be set to PRI.
- Frame Format must be specified correctly.
- Zero Code Suppression must be specified correctly.

Your system will not operate properly if these values are not correctly set.

To inspect or change these values, see "DS1 Facilities."

If you are using ARS in connection with PRI, make sure you select voice, data, or voice and data as appropriate when you perform the ARS "Voice and/or Data Routing" procedure under Automatic Route Selection section.

Telephone Number

Use this procedure to assign a string of up to 12 digits to each PRI channel. This string must match the number sent by the network (that is, the number provided by the PRI service provider) to indicate the number dialed by an outside caller. The system uses this number to route the call to the correct destination, thus the number assigned to each channel in the same B-channel group must be unique. Note also that the number cannot be the same as the associated test telephone number.

Entering Programming

Console: Select Menu → Sys Program → Exit
PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Telephone Number

Programmable by	System manager
Mode	All
Idle Condition	Not required
Planning Form	Form 3b, Incoming Trunks — DS1 Connectivity (100D Module)
Factory Setting	No digits
Valid Entries	Up to 12 digits in any combination of the digits 0-9
Inspect	No
Copy Option	No
Console Procedure	Lines Trunks → PRI → PhoneNumber → Dial trunk no. → Enter → Drop → Dial telephone no. → Enter → Exit → Exit
PC Procedure	[F4] → [F6] → [F1] → Type trunk no. → [F10] → [Alt] + [P] → Type telephone no. → [F10] → [F5] → [F5]

Programming Procedures

Procedure: Telephone Number

Step	Display/Instructions	On the console	On the PC
1	<pre> System Programming: > Make a selection System Extensions SysReNumber Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce </pre>		
	Select the Lines and Trunks menu.	Select LinesTrunks .	Press [F4]
2	<pre> Lines and Trunks: > Make a selection LS/GS/DSL PRI TIE Lines Copy TT/LS Disc RemoteAccss DID Pools Exit Toll Type </pre>		
	Select PRI.	Select PRI .	Press [F6]
3	<pre> PRI Lines: Make a selection PhoneNumber Protocol B-ChannlGrp DialPlanRtg NumbrToSend OutgoingTbl Test TelNum Exit </pre>		
	Select Phone Number	Select PhoneNumber .	Press [F1]
4	<pre> PRI Phone Number: Enter line number Backspace Exit Enter </pre>		
	Specify the trunk in one of the following ways (if you are programming a sequence, enter the lowest number):		
	Trunk number	■ Dial [nnnn].	■ Type [nnnn].
	Slot and port number	■ Dial * [sspp].	■ Type * [sspp].
	Logical ID number	■ Dial #[nnn].	■ Type #[nnn].

Programming Procedures

Step	Display/Instructions	On the console	On the PC
5	Save your entry.	Select Enter .	Press [F10]
6	Line xxxx: Enter phone number nnnnnnnnnnnnnn Backspace Next Exit Enter xxxx = line number entered in step 4 n = current telephone number		
	Erase current number.	Press Drop.	Press [Alt] + [P]
7	Specify the telephone number to be assigned to channel (up to 12 digits).	Dial <i>[n]</i> .	Type <i>[n]</i> .
8	To save your entry and assign telephone number to another PRI channel: ■ If next line/trunk number is sequential <i>Your previous entry is saved, and next line/trunk number appears on line 1 of the screen in Step 6.</i> ■ If next line/trunk number is not sequential To save your entry when all entries are complete	Select Next . Repeat Step 7. Select Enter . Repeat Steps 3-7. Select Enter .	Press [F9] Repeat Step 7. Press [F10] Repeat Steps 3-7. Press [F10]
9	To return to System Programming menu	Select Exit two times.	Press [F5] two times.

B-Channel Groups

Use this procedure to assign B-channels to a group and to associate individual ISDN channels that can place and receive calls on the B-channels in each group.

Each B-channel can be assigned to only one group, and each ISDN channel can be associated with only one group.

Each group can contain up to 23 channels; however, all channels assigned must signal through the same D-channel (that is, must be connected to the same 100D module).

B-channels must be assigned in the order of system search (through the group) for an available channel. To minimize call attempts on the same line or trunk, arrange B-channels in the opposite order of the hunting arrangement provided by the network service provider.

B-channels must be identified by control unit slot and port number since they are not associated with a line/trunk number or a logical ID. Up to 69 B-channel groups can be established.

Entering Programming

Console: Select Menu → Sys Program → Exit
PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: B-Channel Groups

Programmable by	System manager
Mode	All
Idle Condition	Not required
Planning Form	Form 3b, Incoming Trunks – DS1 Connectivity (100D Module)
Factory Setting	Not applicable
Valid Entries	Group numbers
Inspect	Yes
Copy Option	No

Programming Procedures

Console Procedure [†]	Lines Trunks → PRI → B-ChannlGrp → B Channels → Dial group no. → Enter → Dial B channel slot and port no. → Enter → Lines → Dial group no. → Enter → Select specific lines/trunks → Toggle LED On/Off → Exit → Exit → Exit
PC Procedure [†]	[F4] → [F6] → [F2] → [F1] → Type group no. → [F10] → Type B channel slot and port nos. → [F10] → [F2] → Type group no. → [F10] → Select specific lines/trunks → Toggle letter G On/Off → [F5] → [F5] → [F5]

[†] Entry mode available

Programming Procedures

Procedure: B-Channel Groups

Step	Display/Instructions	On the console	On the PC
1	<pre> System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce </pre>		
	Select the Lines and Trunks menu.	Select LinesTrunks.	Press [F4]
2	<pre> Lines and Trunks: > Make a selection LS/GS/DSL PRI TIE Lines Copy TT/LS Disc RemoteAccss DID Pools Exit Toll Type </pre>		
	Select PRI.	Select PRI	Press [F6]
3	<pre> PRI Lines: Make a selection PhoneNumber Protocol B-ChannlGrp DialPlanRtg NumbrToSend OutgoingTbl Test TelNum Exit </pre>		
	Select B-Channel Groups.	Select B - ChannelGrp	Press [F2]
4	<pre> B-Channel Groups: Make a selection B Channels IncomingRtg Lines NetworkServ Copy Number Exit </pre>		
	Select B Channels.	Select B Channels.	Press [F1]

Step	Display/Instructions	On the console	On the PC
5	B-Channel Groups: Enter group number Backspace Exit Enter Specify the B-channel group (1-69) (if you are programming a sequence, enter the lowest number).	Dial [nn].	Type [nn].
6	Save your entry.	Select Enter .	Press [F10]
7	B Channel Group xx: Enter B-Channel Backspace Delete Next Exit Enter xx = number entered in Step 5 Specify B-channel slot and port number.	Dial * [sspp]	Type * [sspp].
8	To remove B channel from group To assign B channel to group and assign B channels to another group: ■ If next group number is sequential <i>Your previous entry is saved, and next group extension number appears on line 1 of the screen in Step 7.</i> ■ If next group number is not sequential To save your entry when all entries are complete	Select Delete . Select Next . Repeat Step 7. Select Enter . Repeat Steps 5-7. Select Enter .	Press [F8] Press [F9] Repeat Step 7. Press [F10] Repeat Steps 5-7. Press [F10]

Programming Procedures

Step	Display/Instructions	On the console	On the PC
9	B-Channel Groups: Make a selection B Channels IncomingRtg Lines NetworkServ Copy Number Exit		
	Select Lines.	Select Lines.	Press [F2]
10	B-Channel Groups: Enter group number Backspace Exit Enter		
	Specify the number (1-69) of the B-channel group.	Dial <i>[nn]</i> .	Type <i>[nn]</i> .
11	Save your entry.	Select Enter .	Press [F10]
12	B-Channel Group xx: Assign lines Lines 01-20 Entry Mode Lines 21-40 Lines 41-60 Lines 61-80 Exit xx = number entered in Step 10 To select a single line, go to Step 13a. To select a block of lines, go to Step 13b.		

Programming Procedures

Step	Display/Instructions	On the console	On the PC
13a	To select a single line, do the following:		
	1. Specify entry mode B-Channel Group xx: Enter line number Backspace Delete Exit Next Enter xx = number entered in Step 11	Select Entry Mode.	Press [F6]
	2. Enter the line number (if you are programming a sequence, enter the lowest number).	Dial <i>[nnn]</i> .	Type <i>[nnn]</i> .
	3. Save your entry.	Select Enter	Press [F10]
13b	To specify a block of lines, do the following:		
	1. Specify the lines/trunks associated with the 20 line buttons on the system programming console.	Select Lines 01-20, Lines 21-40, Lines 41-60, or Lines 61-80.	Press [F1] , [F2] , [F3] , or [F4]
	2. Assign Line/Trunk to group. <i>The green LED indicates the following:</i> <i>on = lines are assigned to B-channel</i> <i>off = lines are not assigned to B-channel</i>	Toggle the LED On/Off, as required.	Toggle the letter G On/Off, as required
	3. Exit the screen.	Select Exit.	Press [F5]
14	To return to System Programming menu	Select Exit three times.	Press [F5] three times.

Network Service

Use this procedure to specify the type of outgoing service provided by each B-channel group (Megacom WATS and 800, MultiQuest™ Service, ACCUNET™ Switched Digital Service (SDS), or Software Defined Network (SDN).

MultiQuest or any other service not shown on the Network Service screen can be indicated by entering the 5-digit binary code that represents the service in the Network Facilities Information Element of ISDN PRI layer 3 signaling protocol. The code for MultiQuest is 10000.

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select Exit on the console or press [F5] on the PC before saving your entry or menu selection.

Summary: Network Service

Programmable by	System manager
Mode	All
Idle Condition	Not required
Planning Form	Form 3b, Incoming Trunks - DS1 Connectivity (100D Module)
Factory Setting	Not applicable
Valid Entries	AT&T Toll, Local, Mist
Inspect	No
Copy Option	No
Console Procedure	Lines Trunks → PRI → B-ChannlGrp → NetworkServ → Dial group no. → Enter → Specify network service → Enter → Exit → Exit → Exit → Exit
PC Procedure	[F4] → [F6] → [F2] → [F3] → Type group no. → [F10] → Specify network service → [F10] → [F5] → [F5] → [F5] → [F5]

Programming Procedures

Procedure: Network Service

Step	Display/Instructions	On the console	On the PC
1	System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce		
	Select the Lines and Trunks menu.	Select LinesTrunks.	Press [F4]
2	Lines and Trunks: > Make a selection LS/GS/DS1 PRI TIE Lines Copy TT/LS Disc RemoteAccss DID Pools Exit Toll Type		
	Select PRI.	Select PRI	Press [F6]
3	PRI Lines: Make a selection PhoneNumber Protocol B-ChannlGrp DialPlanRtg NumbrToSend OutgoingTbl Test TelNum Exit		
	Select B-Channel Groups.	Select B-ChannlGrp.	Press [F2]
4	B-Channel Groups: Make a selection B Channels IncomingRtg Lines NetworkServ Copy Number Exit		
	Select Network Service.	Select NetworkServ.	Press [F3]

Programming Procedures

Step	Display/Instructions	On the console	On the PC
5	B-Channel Groups: Enter group number Backspace Exit Enter Specify the number (1-69) of the B-channel group.	Dial <i>[nn]</i> .	Type <i>[nn]</i> .
6	Save your entry.	Select Enter.	Press [F10]
7	Network Services: Make a selection AT&T Toll Local Misc Exit Specify a network service. If you select AT&T Toll, go to Step 8a. If you select Local, go to Step 8b. If you select Misc, go to Step 8c.	Select AT&T Toll, Local, or Misc.	Press [F1] , [F2] , or [F3] .
8a	For toll service, do the following: B-Channel Group xx: Select one MegacomWATS MULTIQUEST ACCUNET SDS LongDistance SoftDefNetw Megacom 800 Exit Enter xx = number entered in Step 5 1. Specify a service.	Press the button next to your selection.	Press the function key next to your selection.

Programming Procedures

Step	Display/Instructions	On the console	On the PC
	2. Save your entry.	Select Enter .	Press [F10]
	3. Repeat Steps 5-8a for each group number you want to program as toll.		
8b	For local service, do the following: <pre>B-Channel Group xx: Select one OUTWATS 56/64 Digt1 VirtPrivNet INWATS Exit Enter</pre> xx = number entered in Step 5		
	1. Specify a service.	Press the button next to your selection.	Press the function key next to your selection.
	2. Save your entry.	Select Enter .	Press [F10]
	3. Repeat Steps 5-8b for each group number you want to program as local.		
8c	For miscellaneous (misc) service, do the following: <pre>B-Channel Group xx: Select one Other CallByCall Exit Enter</pre> xx = number entered in Step 5		
	1. Specify a service.	Select Other or CallByCall.	Press [F1] or [F2]
	2. Save your entry.	Select Enter .	Press [F10]
	If you select Call By Call, you have finished this procedure.		

Programming Procedures

Step	Display/Instructions	On the console	On the PC
	B-Channel Group xx: Enter Network Service (5 digit code of 0,1) nnnnn Backspace Exit Enter xx = number entered in Step 5 nnnnn =current network service code		
	3. Erase current network service.	Select Drop .	Press [Alt] + [P]
	4. Specify the 5-digit code corresponding to the service selected.	Dial <i>[n]</i> .	Type <i>[n]</i> .
	5. Save your entry.	Select Enter .	Press [F10]
9	To return to System Programming menu	Select Exit four times.	Press [F5] four times.

Copy Telephone Number to Send

Use this procedure to indicate whether or not the telephone number to send to the network for calls going out over ISDN lines assigned to a B-channel group, is copied from the number assigned to that channel.

Select "Do Not Copy Phone Number" when a telephone number to send is assigned to each channel in the B-channel group or when no telephone number is to be sent to the network. In the latter case, make sure that no telephone number is assigned to each channel in the B-channel group by using the "Telephone Number to Send" procedure.

Entering Programming

Console: Select Menu → Sys Program → Exit
PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select Exit on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Copy Telephone Number to Send

Programmable by	System manager
Mode	All
Idle Condition	Not required
Planning Form	Form 3b, Incoming Trunks – DS1 Connectivity
Factory Setting	Do not copy
Valid Entries	Do not copy, copy
Inspect	No
Copy Option	No
Console Procedure	Lines Trunks → PRI → B ChannlGrp → Copy Number → Dial group no. → Enter → Specify copy Or no copy → Enter → Exit → Exit → Exit
PC Procedure	[F4] → [F6] → [F2] → [F4] → Type group no. → [F10] → Specify copy or no copy → [F10] → [F5] → [F5] → [F5]

Programming Procedures

Procedure: Copy Telephone Number to Send

Step	Display/Instructions	On the console	On the PC
1	System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce		
	Select the Lines and Trunks menu.	Select LinesTrunks.	Press [F4]
2	Lines and Trunks: > Make a selection LS/GS/DS1 PRI TIE Lines Copy TT/LS Disc RemoteAccss DID Pools Exit Toll Type		
	Select PRI.	Select PRI.	Press [F6]
3	PRI Lines: Make a selection PhoneNumber Protocol B-ChannlGrp DialPlanRtg NumbrToSend OutgoingTbl Test TelNum Exit		
	Select B-Channel Groups.	Select B-ChannlGrp.	Press [F2]
4	B-Channel Groups: Make a selection B Channels IncomingRtg Lines NetworkServ Copy Number Exit		
	Select Copy Number.	Select Copy Number	Press [F4]

Programming Procedures

Step	Display/Instructions	On the console	On the PC
5	B-Channel Groups: Enter group number Backspace Exit Enter Specify the B-channel group (if you are programming a sequence, enter the lowest number).	Dial <i>[nn]</i>	Type <i>[nn]</i> .
6	Save your entry.	Select Enter .	Press [F10]
7	B-Channel Group xx: Select one Copy PhnNum to NumToSend Do not Copy Phone Number Exit Next Enter xx = number entered in Step5		
	Specify whether or not the telephone number assigned to the channel is copied as the number to send to the network.	Select Copy PhnNum to NumToSend or Do not Copy Phone Number .	Press [F1] or [F2]
8	To save your selection and assign another group:		
	■ If next group number is sequential <i>Your previous entry is saved, and next group number appears on line 1 of the screen in Step 7.</i> ■ If next group number is not sequential	Select Next . Repeat Step 7.	Press [F9] Repeat Step 7.
	To save your entry when all entries are complete	Select Enter .	Press [F 1 0]
9	To return to System Programming menu	Select Exit three times.	Press [F5] three times.

Incoming Routing

Use this procedure to specify whether incoming routing is by line appearance or according to dial plan. Dial Plan Routing is available in Hybrid/PBX mode only.

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Incoming Routing

Mode	Line appearance - All; Dial Plan Routing - Hybrid/PBX only
Idle Condition	Not required
Planning Form	Form 3b, Incoming Trunks - DS1 Connectivity (100D Module)
Factory Setting	Line appearance
Valid Entries	Dial Plan Routing, Routing by Line Appearance
Inspect	No
Copy Option	No
Console Procedure	Lines Trunks → PRI → B-ChannlGrp → Incoming Rtg → Dial B-channel group no. → Enter → Specify method of routing → Enter → Exit → Exit → Exit
PC Procedure	[F4] → [F6] → [F2] → [F6] → Type B-channel group no. → [F10] → Specify method of routing → [F10] → [F5] → [F5] → [F5]

Programming Procedures

Procedure: Incoming Routing

Step	Display/Instructions	On the console	On the PC
1	System Programming: > Make a selection System Extensions SysReNumber Options Operator Tables LinesTrunks AuxEquip Exit NightSrvc		
	Select the Lines and Trunks menu.	Select LinesTrunks.	Press [F4]
2	Lines and Trunks: > Make a selection LS/GS/DS1 PRI TIE Lines Copy TT/LS Disc RemoteAccss DID Pools Exit Toll Type		
	Select PRI.	Select PRI.	Press [F6]
3	PRI Lines: Make a selection PhoneNumber Protocol B-ChannlGrp DialPlanRtg NumbrToSend OutgoingTbl Test TelNum Exit		
	Select B-Channel Groups.	Select B-ChannlGrp.	Press [F2]
4	B-Channel Groups: Make a selection B Channels IncomingRtg Lines NetworkServ Copy Number Exit		
	Select Incoming Routing.	Select IncomingRtg.	Press [F6]

Programming Procedures

Step	Display/Instructions	On the console	On the PC
5	PRI Incoming Routing: Enter group number Backspace Exit Enter Specify the B-channel group number (if you are programming a sequence, enter lowest number).	Dial <i>[nn]</i> .	Type <i>[nn]</i>
6	Save your entry.	Select Enter	Press [F10]
7	B-Channel Group xx: Select one Routing by Dial Plan Route by Line Appearance Next Exit Enter xx = number entered in Step 5 Specify the method of routing incoming calls.	Select Routing by Dial Plan or Route by Line Appearance.	Press [F1] or [F2]
8	To save your selection and assign routing method to another B-channel group: ■ If next group is sequential <i>Your previous selection is saved, and next group number appears on line 1 of the screen in Step 7.</i> ■ If next group is not sequential To save your entry when all entries are complete	Select Next . Repeat Step 7 Select Enter . Repeat Steps 4-7. Select Enter .	Press [F9] Repeat Step 7. Press [F10] Repeat Steps 4-7 Press [F10]
9	To return to System Programming menu	Select Exit three times.	Press [F5] three times.

Telephone Number to Send

Use this procedure to assign the telephone number to send to the network when outgoing calls are made on an ISDN line. If the person being called subscribes to an automatic number identification service, the number indicates who is calling.

The number assigned to each channel does not have to be unique because it is not used for routing.

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary Telephone Number to Send

Programmable by	System manager
Mode	All
Idle Condition	Not required
Planning Form	Form 3b, Incoming Trunks - DS1 Connectivity (100D Module)
Factory Setting	No digits are assigned
Valid Entries	Up to 12 digits in any combination of the digits 0-9
Inspect	No
Copy Option	No
Console Procedure	LinesTrunks → PRI → NumbrToSend → Specify type of no. → Enter → Drop → Dial base no. → Enter → Dial line no. → Enter → Drop → Dial telephone no. → Enter → Exit → Exit
PC Procedure	[F4] → [F6] → [F3] → Specify type of no. → [F10] → [Alt] + [P] → Type base no. → [F10] → [Alt] + [P] → Type telephone no. → [F10] → [F5] → [F5]

Programming Procedures

Procedure: Telephone Number to Send

Step	Display/Instructions	On the console	On the PC
1	System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvc	Select the Lines and Trunks menu.	Press [F4]
2	Lines and Trunks: > Make a selection LS/GS/DS1 PRI TIE Lines Copy TT/LS Disc RemoteAccss DID Pools Exit Toll Type	Select PRI	Press [F6]
3	PRI Lines: Make a selection PhoneNumber Protocol B-ChannlGrp DialPlanRtg NumbrToSend OutgoingTbl Test TelNum Exit	Select Number to Send.	Press [F3]
4	Phone Number to Send: Make a selection (for entire system) Extension Only Base Number with Ext. Line Telephone Number Exit Enter	Specify the type of number to send.	Press [F1] , [F2] , or [F3]

Step	Display/Instructions	On the console	On the PC
5	Save your entry. If you select Extension Only, you have completed this procedure. If you select Base Number with Ext., go to Step 6a. If you select Line Telephone Number, go to Step 6b.	Select Enter .	Press [F10]
6a	For Base Number with Ext., do the following: <pre>Base Number with Ext.: Enter max of 12 digit base telephone number nnnnnnn Backspace Exit Enter</pre> n = current base number - Erase current base number. - Specify base telephone number to be assigned. - Save your entry.	Press Drop. Dial <i>[n]</i>. Select Enter .	Press [Alt] + [P] Type <i>[n]</i>. Press [F10]
6b	For Line Telephone number, do the following: <pre>Phone Number to Send: Enter line number Backspace Next Exit Enter</pre> - Specify line number. - Save your entry.	Dial <i>[nnn]</i>. Select Enter .	Type <i>[nnn]</i>. Press [F10]

Programming Procedures

Step	Display/Instructions	On the console	On the PC
	Line xxx: Enter phone number to send on outgoing calls nnnnnnnnnnnn Backspace Next Exit Enter xxx. line entered in number 1 of Step 5b n = current telephone number		
3.	Erase current telephone number.	Press Drop	Press [Alt] + [P]
4.	Specify telephone number to reassigned as number to send (up to 12 digits).	Dial <i>[n]</i> .	Type <i>[n]</i> .
5.	To save your entry and assign telephone number to another line:		
	■ If next line number is sequential <i>Your previous entry is saved, and next number appears on line 1</i>	Select Next . Repeat numbers 3 and 4 in Step 6b.	Press [F9] Repeat numbers 3 and 4 in Step 6b.
	■ If next line number is not sequential	Select Enter . Repeat Steps 3-6b.	Press [F10] Repeat Steps 3-6b
	To save your entry when all entries are complete	Select Enter	Press [F10]
7	To return to System Programming menu	Select Exit two times	Select [F5] two times.

Test Telephone Number

Use this procedure to assign a test line or trunk telephone number for each 100D module installed in the control unit.

The number assigned to the test line/trunk must be different from the numbers assigned to other channels in the same B-channel group. It must be the same as the number provided by the PRI service provider.

Entering Programming

Console: Select Menu → Sys Program → Exit
PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Test Telephone Number

Programmable by	System manager
Mode	All
Idle Condition	Not required
Planning Form	Form 3b, Incoming Trunks - DS1 Connectivity (100D Module)
Factory Setting	Not applicable
Valid Entries	Telephone number
Inspect	No
Copy Option	No
Console Procedure	LinesTrunks → PRI → Test TelNum → Dial slot no. → Enter → Drop → Dial telephone no. → Enter → Exit → Exit
PC Procedure	[F4] → [F6] → [F4] → Type slot no. → [F10] → [Alt] + [P] → Type telephone no. → [F10] → [F5] → [F5]

Programming Procedures

Procedure: Test Telephone Number

Step	Display/Instructions	On the console	On the PC
1	System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce	Select the Lines and Trunks menu.	Select LinesTrunks . Press [F4]
2	Lines and Trunks: > Make a selection LS/GS/DSL PRI TIE Lines Copy TT/LS Disc RemoteAccss DID Pools Exit Toll Type	Select PRI.	Select PRI . Press [F6]
3	PRI Lines: Make a selection PhoneNumber Protocol B-ChannlGrp DialPlanRtg NumbrToSend OutgoingTbl Test TelNum Exit	Select Test Telephone.	Select Test TelNum. Press [F4]
4	PRI Test Telephone Num: Enter slot number (1-17) Backspace Exit Enter	Specify the slot number that contains the 100D module (if you preprogramming a sequence, enter the lowest number).	Dial <i>[nn]</i> . Type <i>[nn]</i> .
5	Save your entry.	Select Enter .	Press [F10]

Programming Procedures

Step	Display/Instructions	On the console	On the PC
6	Slot xx Test Tel Number: Enter test number nnnnnnnnnnnnnn Backspace Next Exit Enter xx = number entered in Step 4 n = current telephone number Erase current telephone number.	Press Drop .	Press [Alt] + [P]
7	Enter the telephone number to be assigned as test number to 100D module (up to 12 digits).	Dial <i>[n]</i> .	Type <i>[n]</i> .
8	To save your entry and assign test telephone number to another 100D module: ■ If next slot number is sequential <i>Your previous selection is saved and next slot number appears on line 1 of the screen in Step 6.</i> ■ If next slot number is not sequential To save your entry when all entries are complete	Select Next . Repeat Step 7. Select Enter . Repeat Steps 3-7. Select Enter .	Press [F9] Repeat Step 7. Press [F10] Repeat Steps 3-7. Press [F10]
9	To return to System Programming menu	Select Exit two times.	Press [F5] two times.

Timers and Counters

Use this procedure to set timer and counter thresholds.



CAUTION:

The factory settings for these thresholds are standard and rarely need to be changed.

If you are not sure of the correct timer and threshold settings for your PRI lines and trunks, check with your authorized support representative before you make a change.

Incorrect settings can cause your PRI lines and trunks to malfunction.

When no response is received from the network before the programmed setting, the system takes the appropriate corrective action.

The timers and counters are the following:

- T200 Timer – times the delay in the link layer acknowledgement of a message sent from the system to the network over a D-channel.
- T203 Timer - times the interval between each exchange of messages between the system and the network on the D-channel
- N200 Counter - counts the number of times the system has transmitted a message on a D-channel because no link layer acknowledgement is received from the network
- N201 Counter - counts the maximum number of layer 3 octets the system can send or receive in a single D-channel message
- K Counter – counts the number of layer 3 unacknowledged messages sent from the system to the network on a D-channel
- T303 Timer - times the delay in network response when the system sends a setup message to initiate an outgoing call
- T305 Timer – times the delay in network response when the system sends a disconnect message to clear a call
- T308 Timer – times the delay in network response when the system sends a release message to clear a call
- T309 Timer - times the duration of a D-channel data link failure (a loss of signaling for the entire PRI connection)
- T310 Timer - times the network delay following the receipt of a call proceeding message on an outgoing call
- T313 Timer – times the delay in network response when the system sends a connect message that indicates the completion of an incoming call

- T316 Timer – times the delay in network response when the system sends a restart message to clear a B-channel

NOTE:

If you enter an invalid timer value, the number you enter is truncated to the closest valid value. For example, if you enter 45 for a counter that ranges from 0-30, 4 is recorded.

The following table shows the factory setting for each timer and counter and the valid range for each threshold.

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary Timers and Counters

Programmable by	System manager
Mode	All
Idle Condition	Not required
Planning Form	Form 3b, Incoming Trunks — DS1 Connectivity (100D Module)
Factory Setting	See Table 3-2

Table 3-2. Timers and Counters			
Timer/Counter	Setting	Factory Setting	Valid Range
T200 Timer	Maximum response time	1 second	1000 - 3000 ms
T203 Timer	Maximum time	30 seconds	1-60 seconds
N200 Counter	Maximum transmissions	3 transmissions	1 – 5 transmissions
N201 Counter	Maximum octets	260 octets	16-260 octets
K Counter	Maximum outstanding I-frames	7 frames	1-15 frames
T303 Timer	Setup timeout	4 seconds	4-12 seconds
T305 Timer	Disconnect timeout	4 seconds	4-30 seconds
T308 Timer	Release timeout	4 seconds	4-12 seconds
T309 Timer	Signal loss	90 seconds	30-120 seconds
T310 Timer	Call Proc. timeout	10 seconds	2-10 seconds
T313 Timer	Connect timeout	4 seconds	4-12 seconds
T316 Timer	Restart timeout	120 seconds	30-120 seconds

Programming Procedures

Valid Entries	See Table 3-2
Inspect	No
Copy Option	No
Console Procedure	LinesTrunks → PRI → Protocol → Timers → Dial slot no. → Enter → Select timer/counter → Drop → Dial no. of ms/octets/etc. → Enter → Exit → Exit → Exit → Exit
PC Procedure	[F4] → [F6] → [F6] → [F1] → Type slot no. → [F10] → Select timer/counter → [Alt] + [P] → Type no. of ms/octets/etc. → [F10] → [F5] → [F5] → [F5] → [F5]

Programming Procedures

Procedure: Timers and Counters

Step	Display/Instruction	On the console	On the PC
1	System Programming: > Make a selection System Extensions SysReNumber Options Operator Tables LinesTrunks AuxEquip Exit NightSrvc		
	Select the Lines and Trunks menu.	Select LinesTrunks.	Press [F4]
2	Lines and Trunks: > Make a selection LS/GS/DS1 PRI TIE Lines Copy TT/LS Disc RemoteAccss DID Pools Exit Toll Type		
	Select PRI.	Select PRI.	Press [F6]
3	PRI Lines: Make a selection PhoneNumber Protocol B-ChannlGrp DialPlanRtg NumbrToSend OutgoingTbl Test TelNum Exit		
	Select Protocol	Select Protocol.	Press [F6]
4	PRI Protocol Options: Make a selection Timers TEI Exit		
	Select Timers.	Select Timers.	Press [F1]

Programming Procedures

Step	Display/Instructions	On the console	On the PC
5	PRI Timers: Enter slot number (1-17) Backspace Exit Enter Specify the slot that contains the 100D module (if you are programming a sequence, enter the lowest number).	Dial <i>[nn]</i> .	Type <i>[nn]</i> .
6	Save your entry.	Select Enter .	Press [F10]
7	Slot xx PRI Settings: > Make a selection T200 Timer K Counter T203 Timer T303 Timer N200Counter T305 Timer N201Counter T308 Timer Exit T309 Timer xx = number entered in Step 5 Select the timer/counter to change. To select other timers, go to the second screen. Slot xx PRI Settings: Make a selection T310 Timer T313 Timer T316 Timer Exit xx = number entered in Step 5 Select the timer/counter to change.	Press the button next to your selection. Press More Press the button next to your selection.	Press the function key next to your selection. Press [PgDn] Press the function key next to your selection.

Programming Procedures

Step	Display/Instructions	On the console	On the PC
8	(Display depends on timer/counter selected) Backspace Next Exit Enter		
	Erase current setting.	Press Drop .	Press [Alt] + [P]
9	Specify new setting using Table 3-2.	Dial <i>[nnnn]</i> .	Type <i>[nnnn]</i> .
10	To save your entry and assign setting to another slot:		
	■ If next slot number is sequential <i>Your entry is saved and next slot number appears on line 1 of the screen in Step 9.</i>	Select Next . Repeat Steps 9 and 10.	Press [F9] Repeat Steps 9 and 10.
	■ If next slot number is not sequential	Select Enter Repeat Steps 5-9.	Press [F10] Repeat Steps 5-9.
	To save your entry when all entries are complete	Select Enter .	Press [F10]
11	To return to System Programming menu	Select Exit four times.	Press [F5] four times.

Terminal Equipment Identifier

Use this procedure to assign the link layer address of a piece of equipment connected to each D-channel. Normally, only one piece is connected and the system assumes that the Terminal Equipment Identifier (TEI) is 0.



CAUTION:

The value of the TEI rarely has to be changed.

Check with your authorized support representative before changing this value.

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Terminal Equipment Identifier

Programmable by	System manager
Mode	All
Idle Condition	Not required
Planning Form	Form 3b, Incoming Trunks - DS1 Connectivity (100D Module)
Factory Setting	0
Valid Entries	0 - 63
Inspect	No
Copy Option	No
Console Procedure	LinesTrunks → PRI → Protocol → TEI → Dial slot no. → Enter → Drop → Dial new ID no. → Enter → Exit → Exit → Exit
PC Procedure	[F4] → [F6] → [F6] → [F2] → Type slot no. → [F10] → [Alt] + [P] → Type new ID no. → [F10] → [F5] → [F5] → [F5]

Procedure: Terminal Equipment Identifier

Step	Display/Instructions	On the console	On the PC
1	System Programming: > Make a selection System Extensions SysReNumber Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce		
	Select the Lines and Trunks menu.	Select LinesTrunks.	Press [F4]
2	Lines and Trunks: > Make a selection LS/GS/DSL PRI TIE Lines Copy TT/LS Disc RemoteAccss DID Pools Exit Toll Type		
	Select PRI.	Select PRI.	Press [F6]
3	PRI Lines: Make a selection PhoneNumber Protocol B-ChannlGrp DialPlanRtg NumbrToSend OutgoingTbl Test TelNum Exit		
	Select Protocol.	Select Protocol.	Press [F6]
4	PRI Protocol Options: Make a selection Timers TEI Exit		
	Select TEI.	Select TEI.	Press [F2]

Step	Display/Instructions	On the console	On the PC
5	PRI TEI: Enter slot number (1-17) Backspace Exit Enter Specify the slot number that contains the 100D module (if you are programming a sequence, enter the lowest number).	Dial [nn].	Type [nn].
6	Save your entry.	Select Enter .	Press [F10]
7	Slot xx TEI: Enter terminal equipment id number (0-63) nn Backspace Next Exit Enter xx = number entered in Step 5 nn = current TEI number Erase current setting.	Press Drop ,	
8	Enter new ID number.	Dial [nn].	Type [nn].
9	To save your entry and assign id to another slot: ■ If next slot number is sequential <i>Your previous entry is saved, and next slot number appears on line 1 of the screen in Step 7.</i> Select Next . Repeat Steps 7 and 8. Press [F9] Repeat Steps 7 and 8. ■ If next slot number is not sequential Select Enter Repeat Steps 4-8 Press [F10] Repeat Steps 4-8 To save your entry when all entries are complete	Select Enter	Press [F10]
10	To return to System Programming menu	Select Exit three times.	Press [F5] three times.

Dial Plan Routing

Dial Plan Routing is available only in Hybrid/PBX mode. Key and Behind Switch systems route incoming calls by line.

Dial Plan Routing provides a way of routing incoming calls on a "per B-channel group" basis. An incoming call is routed by matching the incoming number (by service, number of digits, and pattern) and then optionally deleting and/or adding digits to direct the call to a specific endpoint. A service must be specified; the number of digits and pattern are optional. For example, you can specify that calls received from a particular area code should be routed to the specific individual or group responsible for accounts in that area.

Entering Programming

Console: Select Menu → Sys Program → Exit
PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Dial Plan Routing

Programmable by	System manager
Mode	Hybrid/PBX
Idle Condition	Not required
Planning Form	System Form 3b, Incoming Trunks - DS1 Connectivity (100D Module)
Factory Setting	Not applicable
Valid Entries	Not applicable
Inspect	No
Copy Option	No

Console Procedure

To specify Service:

LinesTrunks → PRI → DialPlanRtg → Service →
Dial entry no. → Enter → Select service → Exit →
Exit → Exit

To specify Patterns:

LinesTrunks → PRI → DialPlanRtg → Patterns
→ Dial entry no. → Enter → **Drop** → Dial pattern →
Enter → Exit → Exit → Exit

To specify Total Digits:

LinesTrunks → PRI → DialPlanRtg → Total
Digits → Dial entry no. → Enter → **Drop** → Dial
digits → Enter → Exit → Exit → Exit

To specify Delete Digits:

Lines Trunks → PRI → DialPlanRtg → Delete
Digits → Dial entry no. → Enter → **Drop** → Dial
delete digits → Enter → Exit → Exit → Exit

To specify Add Digits:

Lines Trunks → PRI → DialPlanRtg → Add
Digits → Dial entry no. → Enter → **Drop** → Dial add
digits → Enter → Exit → Exit → Exit

PC Procedure

To specify Service:

[F4] → **[F6]** → **[F7]** → **[F2]** → Type entry no. →
[F10] → Select service → **[F10]** → **[F5]** → **[F5]** → **[F5]**

To specify Patterns:

[F4] → **[F6]** → **[F7]** → **[F2]** → Type entry no. →
[F10] → **[Alt]** + **[P]** → Type pattern → **[F10]** →
[F5] → **[F5]** → **[F5]**

To specify Total Digits:

[F4] → **[F6]** → **[F7]** → **[F3]** → Type entry no. →
[F10] → **[Alt]** + **[P]** → Type digits → **[F10]** →
[F5] → **[F5]** → **[F5]**

To specify Delete Digits:

[F4] → **[F6]** → **[F7]** → **[F4]** → Type entry no. → **[F10]**
→ **[Alt]** + **[P]** → Type specify delete digits → **[F10]**
→ **[F5]** → **[F5]** → **[F5]**

To specify Add Digits:

[F4] → **[F6]** → **[F7]** → **[F5]** → Type entry no. →
[F10] → **[Alt]** + **[P]** → Type add digits → **[F10]** →
[F5] → **[F5]** → **[F5]**

Programming Procedures

Procedure: Dial Plan Routing

Step	Display/Instructions	On the console	On the PC
1	System Programming: > Make a selection System Extensions SysReNumber Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce		
	Select the Lines and Trunks menu.	Select LinesTrunks.	Press [F4]
2	Lines and Trunks: > Make a selection LS/GS/DS1 PRI TIE Lines Copy TT/LS Disc RemoteAccss DID Pools Exit Toll Type		
	Select PRI.	Select PRI	Press [F6]
3	PRI Lines: Make a selection PhoneNumber Protocol B-ChannlGrp DialPlanRtg NumbrToSend OutgoingTbl Test TelNum Exit		
	Select Dial Plan Routing.	Select DialPlanRtg.	Press [F7]
4	PRI Dial Plan Routing: Make a selection Service Add Digits Patterns TotalDigits DeleteDigit Exit		
	Select Service. Service is mandatory and must be specified.	Select Service	Press [F1]

Step	Display/Instructions	On the console	On the PC
	If you select Patterns, go to Step 9. If you select Total Digits, go to Step 10. If you select Delete Digit, go to Step 11. if you select Add Digit, go to Step 12.	Press the button next to your selection.	Press function key next to your selection.
5	DialPlanRouting Service: Enter entry no. (0-15) Backspace Exit Enter Specify the entry number are programming a sequence, enter the lowest number).	Dial <i>[nn]</i>	Type <i>[nn]</i> .
6	Save your entry.	Select Enter .	Press [F10]
7	DialPlanRouting Service: Make a selection AT&T Toll Local Misc Exit Select the service. If you select AT&T Toll, go to Step 8a. If you select Local, go to Step 8b. If you select Misc (miscellaneous), go to Step 8c.	Select AT&T Toll, Local, or Misc.	Press [F1] , [F2] , or [F3]

Programming Procedures

Step	Display/Instructions	On the console	On the PC
8a	For AT&T Toll, do the following:		
	Dial Plan Rtg Entry xx: Select one Megacom 800 MegacomWATS ACCUNET SDS LongDistance SoftDefNetw MULTIQUEST Next Exit Enter		
	1. Select an AT&T service for the B-channel group.	Press the button next to your selection.	Press the function key next to your selection.
	2. To save your selection and assign service to another routing entry:		
	■ If next routing entry is sequential <i>Your previous selection is saved, and next routing entry number appears on line 1.</i>	Select Next . Repeat Step 8a.	Press [F9] Repeat Step 8a.
	■ If next routing entry is not sequential	Select Enter . Repeat Steps 4-8a.	Press [F10] Repeat Steps 4-8a.
	To save your entry when all entries are complete	Select Enter .	Press [F10]
8b	For Local, do the following:		
	Dial Plan Rtg Entry xx: Select one INWATS 56/64 Digt1 VirtPrivNet OUTWATS Next Exit Enter		
	xx = number entered in Step 5		
	1. Select a service for the B-channel group.	Press the button next to your selection.	Press the function key next to your selection.

Programming Procedures

Step	Display/Instructions	On the console	On the PC
	2. To save your selection and assign service to another routing entry: ■ If next entry is sequential <i>Your previous selection is saved, and next routing entry number appears on line 1.</i> ■ If next entry is not sequential To save your entry when all entries are complete	Select Next . Repeat Step 8b. Select Enter . Repeat Steps 5-8b. Select Enter	Press [F9] Repeat Step 8b. Press [F10] Repeat Steps 5-8b. Press [F10]
8c	For miscellaneous (misc), do the following: <pre>Dial Plan Rtg Entry xx: Select One Other Any Service No Service Exit Next Enter</pre> xx = number entered in Step 5		
	1. Select a miscellaneous service.	Select Other, Any Service, or No Service.	Press [F1] , [F2] , [F3]
	2. To save your selection and assign service to another routing entry: ■ If next routing entry is sequential <i>Your previous selection is saved, and next routing entry number appears on line 1.</i>	Select Next . Repeat number 1 in Step 8c.	Press [F9] Repeat number 1 in Step 8c.

Step	Display/Instructions	On the console	On the PC
	■ If next routing entry is not sequential To save your entry when all entries are complete If you select Any Service or No Service, you return to the screen shown in Step 5. <pre> Dial Plan Rtg Entry xx Enter Network Service (5 digit code of 0,1) nnnnn Backspace Next Exit Enter </pre> xx = number entered in Step 5 nnnnn = current code	Select Enter . Repeat Steps 5-8c. Select Enter .	Press [F10] Repeat steps 5-8c. Press [F10]
3.	Erase current code.	Press Drop .	Press [Alt] + [P]
4.	Specify the 5-digit binary code for your Network Service.	Dial <i>[n]</i> .	Type <i>[n]</i> .
5.	To save your selection and assign binary code to another routing entry:		
	■ If next entry is sequential <i>Your previous selection is saved, and next routing entry number appears on line 1.</i>	Select Next . Repeat numbers 3 and 4 in Step 8c.	Press [F9] Repeat numbers 3 and 4 in Step 8c.
	■ If next entry is not sequential To save your entry when all entries are complete	Select Enter . Repeat Steps 5-8c. Select Enter .	Press [F10] Repeat Steps 5-8c. Press [F10]

Step	Display/Instructions	On the console	On the PC
9	For patterns, do the following:		
	DialPlanRoutingPatterns: Enter entry no. (0-15) Backspace Exit Enter		
	1. Specify entry number (if you preprogramming a sequence, enter the lowest number). Leave blank to match any pattern.	Dial [n n]	Type [nn].
	2. Save your entry.	Select Enter	Press [F10]
	Dial Plan Rtg Entry xx: Enter digits to match Backspace Next Exit Enter xx = number entered in number 1 of Step 9		
	3. Erase current entry	Press Drop.	Press [Alt] + [P]
	4. Enter pattern to match.	Dial [n].	Type [n].
	5. To save your selection and assign pattern to another routing entry:		
	■ If next entry is sequential <i>Your previous selection is saved and next routing entry number appears on line 1.</i>	Select Next . Repeat numbers 3 and 4 in Step 9.	Press [F9] Repeat numbers 3 and 4 in Step 9.
	■ If next entry is not sequential	Select Enter . Repeat Step 9.	Press [F10] Repeat Step 9.
	To save your entry when all entries are complete	Select Enter	Press [F10]

Step	Display/Instructions	On the console	On the PC
10	For Total Digits, do the following: DialPlanRtg TotalDigits: Enter entry no. (0-15) Backspace Exit Enter		
	1. Specify entry number (if you are programming a sequence, enter lowest number). Enter 0 to match any number of digits.	Dial <i>[nn]</i>	Type <i>[nn]</i>
	2. Save your entry. Dial Plan Rtg Entry xx: Enter number of digits in dialed number (1-14) nn Backspace Next Exit Enter xx = number entered in number 1 of Step 10 nn = current number of digits	Select Enter .	Press [F10]
	3. Erase current number of digits.	Press Drop.	Press [Alt] + [P]
	4. Specify total number of digits.	Dial <i>[nn]</i> .	Type <i>[nn]</i> .
	5. To save your selection and assign dialed digits to another routing entry: ■ If next entry is sequential <i>Your previous selection is saved, and next routing entry number appears on line 1.</i>	Select Next. Repeat numbers 3 and 4 in Step 10.	Press [F9] Repeat numbers 3 and 4 in Step 10

Step	Display/Instructions	On the console	On the PC
	■ If next entry is not sequential To save your entry when all entries are complete	Select Enter . Repeat Step 10. Select Enter	Press [F10] Repeat Step 10. Press [F10]
11	For Delete Digit, do the following: <pre>DialPlanRtgDeleteDigits: Enter entry no. (0-15) Backspace Next Exit Enter</pre> - Specify entry number. - Save your entry. <pre>Dial Plan Rtg Entry xx: Enter number of digits to delete (0-14) nn Backspace Exit Enter</pre> xx = number entered in number 1 of Step 11 nn = current number of digits - Erase current number of digits. - Specify number of digits to be deleted. - To save your selection and assign digits to another routing entry: ■ If next entry is sequential <i>Your previous selection is saved, and next routing entry number appears on line 1.</i>	Dial <i>[nn]</i> Select Enter Press Drop. Dial <i>[nn]</i>. Select Next . Repeat numbers 3 and 4 in Step 11.	Type <i>[nn]</i>. Press [F10] Press [Alt] + [P] Type <i>[nn]</i>. Press [F9] Repeat numbers 3 and 4 in Step 11

Step	Display/Instructions	On the console	On the PC
	■ If next entry is not sequential	Select Enter . Repeat Step 11.	Press [F10] Repeat Step 11.
	To save your entry when all entries are complete	Select Enter	Press [F10]
12	For Add Digits, do the following:		
	DialPlanRtg Add Digits: Enter entry no. (0-15) Backspace Exit Enter		
	1. Specify entry number.	Dial <i>[nn]</i> .	Type <i>[nn]</i> .
	2. Save your entry.	Select Enter	Press [F10]
	Dial Plan Rtg Entry xx: Enter digits to add nn Backspace Next Exit Enter		
	3. Erase current number of digits	Press Drop.	Press [Alt] + [P]
	4. Specify number of digits to add.	Dial <i>[nn]</i> .	Type <i>[nn]</i> .
	5. To save your entry and assign digits to another routing entry:		
	■ If next routing entry is sequential <i>Your previous entry is saved, and next routing entry appears on line 1.</i>	Select Next . Repeat numbers 3 and 4 in Step 12.	Press [F9] Repeat numbers 3 and 4 in Step 12.

Programming Procedures

Step	Display/Instructions	On the console	On the PC
	■ If next routing entry is not sequential	Select Enter. Repeat Step 12.	Press [F10] Repeat Step 12.
	To save your entry when all entries are complete	Select Enter	Press [F10]
13	To return to System Programming menu	Select Exit three times.	Press [F5] three times.

Outgoing Tables

PRI provides tables that work in conjunction with pools and ARS tables to route calls. The following tables specify services for outgoing calls:

Network Selection	selects a long distance carrier. Calls that match Network Selection tables can be routed to a specific service by the Call by Call tables.
Special Services	selects services such as international dialing and operator assistance. Calls that match these tables are <i>not</i> routed by Call by Call tables.
Call by Call	selects an outgoing service, based on routing digits and the bearer capability (voice, data, or both) of the calling extension. It allows a single group of B channels to carry a variety of services, such as ACCUNET, SDN, and Megacom WATS.

Network Selection Tables

Dialed prefixes for selecting long distance carriers are matched to entries in the four Network Selection tables. Eight default tables are provided, specifying 10 *** and 101 *****. The asterisks are wildcards and stand for the various long distance carrier codes. (10 *** is the current U.S. standard for specifying long distance carriers; 101 **** is provided for future use.)

NOTE:

U.S. customers rarely need to program additional Network Selection tables because long distance carrier codes will match 10 *** or 101 **** .

Entering Programming

Console: Select Menu → Sys Program → Exit
PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Network Selection Tables

Programmable by	System manager
Mode	All
Idle Condition	Not required
Planning Form	Form 3b, Incoming Trunks - DS1 Connectivity (100D Module)
Factory Setting	Not applicable
Valid Entries	Prefix for long distance carrier
Inspect	No
Copy Option	No
Console Procedure	Lines Trunks → PRI → OutgoingTbl → NetwkSelect → Dial entry no. → Enter → Drop → Dial prefix → Enter → Exit → Exit → Exit
PC Procedure	[F4] → [F6] → [F8] → [F1] → Type entry no. → [F10] → [Alt] + [P] → Type prefix → [F10] → [F5] → [F5] → [F5]

Programming Procedures

Procedure: Network Selection Tables

Step	Display/Instructions	On the console	On the PC
1	System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce		
	Select the Lines and Trunks menu.	Select LinesTrunks.	Press [F4]
2	Lines and Trunks: > Make a selection LS/GS/DS1 PRI TIE Lines Copy TT/LS Disc RemoteAccss DID Pools Exit Toll Type		
	Select PRI.	Select PRI.	Press [F6]
3	PRI Lines: Make a selection PhoneNumber Protocol B-ChannlGrp DialPlanRtg NumbrToSend OutgoingTbl Test TelNum Exit		
	Select Outgoing Tables.	Select OutgoingTbl.	Press [F8]
4	PRI Outgoing Tables: Make a selection NetwkSelect SpecialServ CBC Service Exit		
	Select Network Selection tables.	Select NetwkSelect.	Press [F1]

Programming Procedures

Step	Display/Instructions	On the console	On the PC
5	Network Selection Table: Enter entry number (0-3) Backspace Exit Enter		
	Enter the table number.	Dial <i>[n]</i> .	Type <i>[n]</i> .
6	Save your entry.	Select Enter .	Press [F10]
7	Netwk SelectTbl Entry x: Enter dial prefix (use * for wild card) nnnnnnnn Backspace Next Exit Enter x = number entered in Step 5 nnnnnnn = current prefix		
	Erase current dial prefix.	Press Drop .	Press [Alt] + [P]
8	Enter the dial prefix (up to seven digits).	Dial <i>[n]</i> .	Type <i>[n]</i> .
9	To save your selection and assign dial prefix to another table entry:		
	■ If next entry is sequential <i>Your previous selection is saved, and next table entry number appears on line 1 of the screen in Step 7.</i>	Select Next . Repeat Steps 7 and 8	Press [F9] Repeat Steps 7 and 8.
	■ If next entry is not sequential	Select Enter Repeat Steps 4-8	Press [F10] Repeat Steps 4-8.
	To save your entry when all entries are complete	Select Enter	Press [F10]
10	To return to System Programming menu	Select Exit three times.	Press [F5] three times.

Special Services Tables

Eight tables provide for international calling and for operator-assisted calls. Default tables include the special prefixes O and 00 for operator-assisted calls. Dialed numbers are matched against entries in these tables for patterns (011, 010, 01, 00, 0, and 1); for operator assistance (operator-assisted, presubscribed common carrier operator, and none); and for type of number (national or international). Up to four digits can be deleted.

Entering Programming

Console: Select Menu → Sys Program → Exit
PC/SPM: Type SPM → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select Exit on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Special Services Tables

Programmable by	System manager
Mode	All
Idle Condition	Not required
Planning Form	Form 3b, Incoming Trunks - DS1 Connectivity (100D Module)
Factory Setting	See Table 3-3

Table 3-3. Special Services Table			
Table	Pattern (up to 4 digits)	Operator Local Op = Op Presubscribed carrier = p	Delete Digits (0-4)
0	011	none	3
1	010	OP	3
2	01	OP	2
3	00	OP/P	2
4	0	OP	1
5	1	none	1

Valid Entries	Prefix for international or operator-assisted calls
Inspect	No
Copy Option	No
Console Procedure	To specify Pattern: LinesTrunks → PRI → OutgoingTbl → Special Serv → Pattern → Dial entry no. → Enter → Drop → Dial pattern → Enter → Exit → Exit → Exit → Exit To specify Operator: LinesTrunks → PRI → OutgoingTbl → SpecialServ → Operator → Dial entry no. → Enter → Select type of operator → Enter → Exit → Exit → Exit → Exit To specify Type of Number: Lines Trunks → PRI → OutgoingTbl → SpecialServ → TypeOfNumbr → Dial entry no. → Enter → Select type → Enter → Exit → Exit → Exit → Exit To specify Delete Digits: Lines Trunks → PRI → OutgoingTbl → SpecialServ → DeleteDigit → Dial entry no. → Enter → Drop → Dial pattern → Enter → Exit → Exit → Exit → Exit
PC Procedure	To specify Pattern: [F4] → [F6] → [F8] → [F2] → [F1] → Type entry no. → [F10] → [Alt] + [P] → Type pattern → [F10] → [F5] → [F5] → [F5] → [F5] To specify Operator: [F4] → [F6] → [F8] → [F2] → [F2] → Type entry no. → [F10] → Select type of operator → [F10] → [F5] → [F5] → [F5] → [F5] To specify Type of Number: [F4] → [F6] → [F8] → [F2] → [F3] → Type entry no. → [F10] → Type number type → [F10] → [F5] → [F5] → [F5] → [F5] To specify Delete Digits: [F4] → [F6] → [F8] → [F2] → [F4] → Type entry no. → [F10] → [Alt] + [P] → Type digits to be deleted → [F10] → [F5] → [F5] → [F5] → [F5]

Programming Procedures

Procedure: Special Services Tables

Step	Display/Instructions	On the console	On the PC
1	System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce		
	Select the Lines and Trunks menu.	Select LinesTrunks.	Press [F4]
2	Lines and Trunks: > Make a selection LS/GS/DS1 PRI TIE Lines Copy TT/LS Disc RemoteAccss DID Pools Exit Toll Type		
	Select PRI.	Select PRI.	Press [F6]
3	PRI Lines: Make a selection PhoneNumber Protocol B-ChannlGrp DialPlanRtg NumbrToSend OutgoingTbl Test TelNum Exit		
	Select Outgoing Tables.	Select OutgoingTbl.	Press [F8]
4	PRI Outgoing Tables: Make a selection NetwkSelect SpecialServ CBC Service Exit		
	Select the Special Services tables.	Select SpecialServ.	Press [F2]

Step	Display/Instructions	On the console	On the PC
5	Special Services Table: Make a selection Pattern Operator TypeOfNumber DeleteDigit Exit If you select Pattern, go to Step 6a. If you select Operator, go to Step 6b. If you select Type of Number, go to Step 6c. If you select Delete Digit, go to Step 6d.	Press the button next to your selection.	Press the function key next to your selection.
6a	For pattern, do the following: Special Services Table: Enter entry number (0-7) Backspace Exit Enter 1. Enter the table number (if you are programming a sequence, enter the lowest number). 2. Save your entry. SpecialServ Tbl Entry x: Enter pattern nnn Backspace Next Exit Enter x = number entered in number 1 of Step 6a nnn = current pattern 3. Erase current pattern.	Dial [n]. Select Enter .	Type [n]. Press [F10]

Programming Procedures

Step	Display/Instructions	On the console	On the PC
4.	Enter the pattern to be matched.	Dial [nnnn].	Type [nnnn].
5.	To save your selection and assign pattern to another table: ■ If next table is sequential <i>Your previous selection is saved, and next table number appears on line 1.</i> ■ If next table is not sequential	Select Next . Repeat numbers 3 and 4 in Step 6a. Select Enter . Repeat Steps 5 and 6a.	Press [F9] Repeat numbers 3 and 4 in Step 6a. Press [F10] Repeat Steps 5 and 6a.
	To save your entry when all entries are complete	Select Enter	Press [F10]
6b	For Operator, do the following: Special Services Table: Enter entry number (0-7) Backspace Exit Enter		
1.	Enter the table number (if you are programming a sequence, enter the lowest number).	Dial [n].	Type [n].
2.	Save your entry.	Select Enter	Press [F10]
	SpecialServ Tbl Entry x: Choose type of operator Local Operator Presubscribed Carrier No Operator Next Exit Enter x = number entered in number 1 of Step 6b		

Step	Display/Instructions	On the console	On the PC
	3. Specify the type of operator	Select Local Operator, Presubscribed Carrier, or No Operator.	Press [F1], [F2], [F3]
	4. To save your selection and assign operator type to another table: ■ If next group is sequential <i>Your previous selection is saved, and next table number appears on line 1.</i> ■ If next table is not sequential	Select Next . Repeat number 3 in Step 6b. Select Enter . Repeat Steps 5 and 6b.	Press [F9] Repeat number 3 in Step 6b. Press [F10] Repeat Steps 5 and 6b.
	To save your entry when all entries are complete	Select Enter	Press [F10]
6c	For Type of Number, do the following: Special Services Table: Enter entry number (0-7) Backspace Exit Enter		
	1. Enter the table number (if you are programming a sequence, enter lowest number).	Dial [n].	Type [n].
	2. Save your entry.	Select Enter .	Press [F10]

Step	Display/Instructions	On the console	On the PC
	SpecialServ Tbl Entry x: Choose type of number National International Next Exit Enter x = number entered in number 1 of Step 6c		
3.	Specify the type of number.	Select National or International.	Press [F1] or [F2]
4.	To save your selection and assign number type to another table:		
	■ If next table is sequential <i>Your previous selection is saved, and next table number appears on line 1</i>	Select Next . Repeat number 3 in Step 6c.	Press [F9] Repeat number 3 in Step 6c.
	■ If next table is not sequential	Select Enter . Repeat Steps 5 and 6c.	Press [F10] Repeat Steps 5 and 6c.
	To save your entry when all entries are complete	Select Enter .	Press [F10]
6d	For Delete Digits, do the following:		
	Special Services Table: Enter entry number (0-7) Backspace Exit Enter		
1.	Enter the table number (if you are programming a sequence, enter lowest number).	Dial [n].	Type [n].

Programming Procedures

Step	Display/Instructions	On the console	On the PC
	2. Save your entry. <pre>SpecialServ Tbl Entry x: Enter number of digits n Backspace Next Exit Enter</pre> x = number entered in number 1 of Step 6d n = current delete digits	Select Enter .	Press [F10]
	3. Erase current digits.	Press Drop .	Press [Alt] + [P]
	4. Enter the number of digits to be deleted.	Dial <i>[n]</i> .	Type <i>[n]</i> .
	5. To save your selection and assign delete digits to another table:		
	■ If next table is sequential <i>Your previous selection is saved, and next table number appears on line 1.</i>	Select Next . Repeat numbers 3 and 4 in Step 6d.	Press [F9] Repeat numbers 3 and 4 in Step 6d.
	■ If next table is not sequential	Select Enter . Repeat Steps 5 and 6d.	Press [F10] Repeat Steps 5 and 6d.
	To save your entry when all entries are complete	Select Enter	Press [F10]
7	To return to System Programming menu	Select Exit four times.	Press [F5] four times.

Call by Call Service Table

When a call is placed on a Call by Call B-channel group, a specific service is selected, depending on the match between the dialed digits and the table entries. A service must be specified, otherwise the entry is ignored. The Call by Call table can contain up to 10 entries; each entry can contain up to 10 patterns, each with a maximum of eight digits. If a dialed number matches two patterns, the longer pattern takes precedence. That is, 212555 matches both 212555 and 212; however, the longer pattern is deemed the matching pattern. In addition to patterns, the Call by Call table can specify from 0 through 8 digits to be deleted (the default is 0).

If the last entry in the table is empty (no pattern is specified), this entry is used as a default and matches any pattern and type of call.

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Call by Call Service Table

Programmable by	System manager
Mode	All
Idle Condition	Not required
Planning Form	Form 3b, Incoming Trunks - DS1 Connectivity (100D Module)
Factory Setting	Not applicable
Valid Entries	Pattern — up to eight digits Call Type — voice, data, both Service — AT&T Toll, Local, Misc. Delete Digits — 0-8
Inspect	No
Copy Option	No

Console Procedure

To specify Patterns:

LinesTrunks → PRI → OutgoingTbl → CBC
Service → Patterns → Dial list no. → Enter →
Drop → Dial pattern → Enter → Exit → Exit →
Exit → Exit

To specify Voice/Data:

LinesTrunks → PRI → OutgoingTbl → CBC
Service → Voice/Data → Dial list no. → Enter →
Select voice, data, or both → Enter → Exit → Exit
→ Exit → Exit

To specify Network Service:

LinesTrunks → PRI → OutgoingTbl → CBC
Service → NetwkServ → Dial list no. → Enter →
Select service → Enter → Exit → Exit → Exit →
Exit

To specify Delete Digits:

LinesTrunks → PRI → OutgoingTbl → CBC
Service → DeleteDigit → Dial list no. → Enter →
Drop → Dial no. Of digits → Enter → Exit → Exit →
Exit → Exit

PC Procedure

To specify Patterns:

[F4] → **[F6]** → **[F8]** → **[F3]** → **[F1]** → Type list no. →
[F10] → **[Alt]** + **[P]** → Type pattern → **[F10]** → **[F5]** →
[F5] → **[F5]** → **[F5]**

To specify Voice/Data:

[F4] → **[F6]** → **[F8]** → **[F3]** → **[F2]** → Type list no. →
[F10] → Select voice, data, or both → **[F10]** → **[F5]** →
[F5] → **[F5]** → **[F5]**

To specify Network Service:

[F4] → **[F6]** → **[F8]** → **[F3]** → **[F3]** → Type list no. →
[F10] → Select service → **[F10]** → **[F5]** →
[F5] → **[F5]**

To specify Delete Digits:

[F4] → **[F6]** → **[F8]** → **[F3]** → **[F4]** → Type list no. →
[F10] → **[Alt]** + **[P]** → Type no. of digits → **[F10]** → **[F5]** →
[F5] → **[F5]** → **[F5]**

Programming Procedures

Procedure: Call by Call Service

Step	Display/Instructions	On the console	On the PC
1	System Programming: > Make a selection System Extensions SysReNumber Options Operator Tables LinesTrunks AuxEquip Exit NightSrvc		
	Select the Lines and Trunks menu.	Select LinesTrunks.	Press [F4]
2	Lines and Trunks: > Make a selection LS/GS/DS1 PRI TIE Lines Copy TT/LS Disc RemoteAccss DID Pools Exit Toll Type		
	Select PRI.	Select PRI.	Press [F6]
3	PRI Lines: Make a selection PhoneNumber Protocol B-ChannlGrp DialPlanRtg NumbrToSend OutgoingTbl Test TelNum Exit		
	Select Outgoing Tables.	Select OutgoingTbl.	Press [F8]
4	PRI Outgoing Tables: Make a selection NetwkSelect SpecialServ CBC Service Exit		
	Select Call by Call Service.	Select CBC Service.	Press [F3]

Step	Display/Instructions	On the console	On the PC
5	CallByCallService Table: Make a selection Patterns Voice/Data NetworkServ DeleteDigit Exit If you select Patterns, go to Step 6a. If you select Voice/Data, go to Step 6b. If you select Network Service, go to Step 6c. If you select Delete Digit, go to Step 6g.	Press the button next to your selection.	Press the function key next to your selection.
6a	For patterns, do the following: CBC Services - Patterns: Enter list (0-9) and entry (0-9) Backspace Exit Enter 1. Specify the list (l = 0-9) and the table (e = 0-9) entry numbers (if you are programming a sequence, enter the lowest number). 2. Save your entry. CBC Serv list x Entry y: Enter pattern nnn Backspace Next Exit Enter xy = number entered in number 1 of Step 6a nnn = current pattern 3. Erase current pattern. 4. Specify the pattern.	Dial [/e]. Select Enter Press Drop. Dial [/n].	Type [/e]. Press [F10] Press [Alt] + [P] Type [/n].

Step	Display/Instructions	On the console	On the PC
5.	To save your entry and assign pattern to another table:		
	■ If next table is sequential <i>Your previous selection is saved and next table entry number appears on line 1.</i>	Select Next . Repeat numbers 3 and 4 in Step 6a.	Press [F9] Repeat numbers 3 and 4 in Step 6a.
	■ If next table is not sequential	Select Enter . Repeat Steps 5 and 6a.	Press [F10] Repeat Steps 5 and 6a.
	To save your entry when all entries are complete	Select Enter	Press [F10]
6b	For Voice/Data, do the following: CBC Services Voice/Data: Enter list number (0-9) Backspace Exit Enter		
1.	Specify the list number (if you are programming a sequence, enter lowest number).	Dial <i>[n]</i> .	Type <i>[n]</i> .
2.	Save your entry.	Select Enter .	Press [F10]

Programming Procedures

Step	Display/Instructions	On the console	On the PC
	<pre> CBC Services List x: Make a selection Voice Only Data Only Voice/Data Next Exit Enter </pre>		
3.	Specify voice, data, or both.	Select Voice Only, Data Only, or Voice/Data.	Press [F1] , [F2] , or [F3]
4.	To save your selection and assign to another list:		
	■ If next list is sequential <i>Your previous selection is saved, and next list number appears on line 1.</i> ■ If next group is not sequential	Select Next . Repeat number 3 in Step 6b.	Press [F9] Repeat number 3 in Step 6b.
	To save your entry when all entries are complete	Select Enter . Repeat Steps 5 and 6b	Press [F10] Repeat Steps 5 and 6b
6c	For Network Service, do the following:		
	<pre> CBC Network Service: Enter list number (0-9) Next Exit Enter </pre>		
1.	Enter the list number (if you are programming a sequence, enter lowest number).	Dial <i>[n]</i> .	Type <i>[n]</i> .
2.	Save your entry	Select Enter .	Press [F10]

Programming Procedures

Step	Display/Instructions	On the console	On the PC
	<pre>CBC Network Service: Make a selection AT&T Toll Local Misc Exit</pre>		
3.	Specify a Network Service. If you select AT&T Toll, go to 6d. If you select Local, go to Step 6e. If you select Misc (miscellaneous), go to Step 6f.	Select AT&T Toll, Local, or Other.	Press [F1], [F2], or [F3]
6d	For AT&T Toll, do the following:		
	<pre>CBC Services List x: Select One MegacomWATS ACCUNET SDS SoftDefNetw LongDistance Next Exit Enter</pre> x = number entered in number 1 of Step 6c		
1.	Specify an AT&T Toll service. ■ If next list number is sequential <i>Your previous entry is saved, and next list number appears on line 1.</i> ■ If next list number is not sequential	Press the button next to your selection. Select Next Repeat number 1 in Step 6d. Select Enter Repeat Steps 5 and 6d.	Press the function key next to your selection. Press [F9] Repeat number 1 in Step 6d. Press [F10] Repeat Steps 5 and 6d.
2.	Save your entry.	Select Enter.	Press [F10]

Programming Procedures

Step	Display/Instructions	On the console	On the PC
6e	For Local, do the following:		
	<pre> CBC Services List: Select One OUTWATS 56/64 Digtl VirtPrivNet Next Exit Enter </pre> x = number entered in number 1 of Step 6c		
	1. Specify a local service.	Select Out WATS, 56/64 Digtl, or VirtPrivNet.	Press [F1] , [F2] , or [F3]
	2. To save your selection and specify service for another list number:		
	■ If next list number is sequential <i>Your previous selection is saved, and next list number appears on line 1.</i>	Select Next . Repeat number 1 in Step 6e.	Press [F9] Repeat number 1 in Step 6e.
	■ If next list number is not sequential	Select Enter . Repeat Steps 5 and 6e.	Press [F10] Repeat Steps 5 and 6e.
	To save your entry when all entries are complete	Select Enter .	Press [F10]
6f	For Miscellaneous, do the following:		
	<pre> CBC Service List x: Select one Other no service Next Exit Enter </pre> x = number entered in number 1 of Step 6c		

Step	Display/Instructions	On the console	On the PC
	1. Specify service. If you select No Service, you have completed this procedure. 2. To save your selection and specify service for another list number: ■ If next list number is sequential <i>Your previous selection is saved, and next list number appears on line 1.</i> ■ If next list number is not sequential To save your entry when all entries are complete	Select Other . Select Next . Repeat number 1 in Step 6f. Select Enter and then select Exit . Repeat Steps 5, 6c, and 6f. Select Enter .	Press [F1] Press [F9] Repeat number 1 in Step 6f. Press [F10] and then press [F5] Repeat Steps 5, 6c, and 6f. Press [F10]
	CBC Services List x: Enter Network Service (5 digit code of 0,1) nnnnn Backspace Next Exit Enter x = number entered in number 1 of step 6c nnnnn = current code		
	3. Erase current code.	Press Drop.	Press [Alt] + [P]

Step	Display/Instructions	On the console	On the PC
	4. Specify the 5-digit code for the other service.	Dial <i>[nnnnn]</i> ,	Type <i>[nnnnn]</i> .
	5. To save your selection and assign code to another service list:		
	■ If next list is sequential <i>Your previous selection is saved, and next list number appears on line 1.</i>	Select Next . Repeat numbers 3 and 4 in Step 6f.	Press [F9] Repeat numbers 3 and 4 in Step 6f.
	■ If next list is not sequential	Select Enter . Repeat Steps 5, 6c, and 6f.	Press [F10] Repeat Steps 5, 6c, and 6f.
	To save your entry when all entries are complete	Select Enter .	Press [F10]

6g

To Delete Digits, do the following:

```
CBC Serv--Delete Digits:
Enter list number (0-9)

Backspace
Exit          Enter
```

1. Specify the list number (if you are programming a sequence, enter lowest number).

Dial *[n]*.

Type *[n]*.

Programming Procedures

Step	Display/Instructions	On the console	On the PC
	2. Save your entry. CBC Services List x: Enter number of digits To delete (0-8) nn Backspace Next Exit Enter x = number entered in number 1 of Step 6g nn = current delete digits	Select Enter .	Press [F10]
	3. Erase current number of digits.	Press Drop .	Press [Alt] + [P]
	4. Specify the number of digits to be deleted.	Dial <i>[n]</i> .	Type <i>[n]</i> ,
	5. To save your selection and assign delete digits to another service list: ■ If next group is sequential <i>Your previous selection is saved, and next list number appears on line 1.</i> ■ If next list is not sequential	Select Next . Repeat numbers 3 and 4 in Step 6g. Select Enter . Repeat Steps 5 and 6g	Press [F9] Repeat numbers 3 and 4 in Step 6g. Press [F10] Repeat Steps 5 and 6g
	To save your entry when all entries are complete	Select Enter .	Press [F10]
7	To return to System Programming menu	Select Exit four times.	Press [F5] four times.

Telephones

The procedures in this section detail the steps for the following:

- assigning outside lines or trunks to the buttons on a telephone (including line and trunks used for loudspeaker paging)
- copying line button assignments from one telephone to an individual telephone or block of telephones
- **For Hybrid/PBX systems only:**
 - assigning the following buttons on telephones
 - System Access or Intercom Voice
 - System Access or Intercom Ring
 - System Access or Intercom Originate Only
 - Shared System or Intercom Access
- identifying analog multiline telephones that do not have built-in speakerphones or Hands Free Answer on Intercom capability
- identifying analog multiline telephones that require pairing of station jacks to provide the Voice Announce to Busy or to provide Simultaneous Voice and Data features

Assign Trunks or Pools to Telephones

Use this procedure to assign outside trunks connected to the control unit to specific buttons on each telephone. In the Hybrid/PBX mode, the trunks assigned to a button on a telephone are called personal lines.

This procedure is used only to change or add trunks, Loudspeaker Page, or pool buttons (Hybrid/PBX only) to telephones. Use the "Assign Intercom or System Access Button" procedures to add or change Intercom or System Access buttons.

Individual trunks can be assigned to a maximum of 64 telephones. Individual pools can be assigned as a Pool button on a maximum of 64 telephones.

The following lines/trunks cannot be assigned to a button on a telephone:

- lines/trunks used for Music-on-Hold
- lines/trunks used for maintenance alarms

NOTE:

If you use equipment that rebroadcasts music or other copyrighted materials, you may be required to obtain a copyright license from and pay license fees to a third party (such as the American Society of Composers, Artists, and Producers or Broadcast Music Incorporated).

Magic on Hold® requires no such license and can be purchased from your authorized dealer.

Pool buttons cannot be assigned or removed from extensions unless the pool has trunks assigned. If all trunks are to be removed from a pool, all Pool button assignments must first be removed from telephones. Another way of handling this situation is to program another trunk into the pool and then remove the Pool button assignments from the extensions.

Hybrid/PBX only — Individual trunks assigned to a pool can be assigned to a button only on a DLC operator position. If one of the trunks in a pool is assigned to a button on a non-DLC telephone, the result is a Pool button assignment.

Key only — The system assigns the first eight line numbers to buttons on multiline telephones whether or not an outside line is physically connected. If a line is not connected, the button assignment must be removed so the user can assign a feature to the button.

Key only — For MLC-5 cordless multi line telephones, the system assigns the first eight lines connected to the control unit even though the telephone has fewer than eight buttons available. Remove the extra lines in system programming so that no more than three lines are assigned to buttons on an MLC-5 telephone.

Trunks are assigned to buttons in the order that you press each trunk button on the system programming console or keyboard. Existing trunk assignments can be rearranged by removing all current assignments and then pressing the trunk buttons on the console or keyboard in the order that they should appear on the buttons. For information on the order of the programmed buttons, refer to the button numbers on the applicable planning form for each telephone.

If you want to reserve some blank buttons for features between trunk buttons, a line must be assigned as a placeholder for each blank button. After all trunks are assigned, remove the trunks used as placeholders on the buttons reserved for features.

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select Exit on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary Assign Trunks or Pools to Telephones

Programmable by	System manager
Mode	All, but note differences in factory settings
Idle Condition	Telephone idle
Planning Form	Form 4b, Analog Multiline Telephone Form 4d, MLX Telephone Form 4e, MFM Adjunct — MLX Telephone Form 4f, Tip/Ring Equipment Form 5a, Direct-Line Console (DLC) - Analog Form 5b, Direct-Line Console (DLC) - Digital Form 5c, MFM Adjunct — DLC Data Form 2a, Analog Data Station Data Form 2b, Digital Data Station
Factory Setting	Key Mode: Intercom Ring button, Intercom Voice button, and the first eight lines connected to the control unit are assigned to all analog multiline telephones, MLX telephones (excluding operator positions), and MFMs connected to MLX telephones. Two Intercom Ring buttons are assigned to single-line telephones; no outside lines are assigned.

Behind Switch Mode: Intercom Ring, Intercom Voice, and Prime Line buttons are assigned to all analog multiline telephones, MLX telephones (excluding operator positions), and MFMs connected to MLX telephones. Two Intercom Ring buttons are assigned to single-line telephones no outside lines are assigned. When prime lines are assigned to MLX extensions, lines are not assigned to MFMs used to connect adjuncts. Lines for MFMs must be assigned separately.

Hybrid/PBX Mode: System Access Ring, System Access Voice, and System Access Originate Only buttons are assigned to all analog multiline telephones, and MLX telephones (excluding operator positions). Five Call buttons are assigned to QCC operator positions. Two System Access Ring buttons and one System Access Originate Only button are assigned to single-line telephones. No Personal Line or Pool buttons are assigned.

Valid Entries	Extension numbers
Inspect	Yes
Copy Option	Yes
Console Procedure [†]	Extensions → Lines/Trunks → Dial ext. no. → Enter → Select trunk range → Toggle LED On/Off → Enter → Exit → Exit
PC Procedure [†]	[F6] → [F1] → Type ext. no. → [F10] → Select trunk range → Toggle letter G On/Off → [F10] → [F5] → [F5]

[†] Entry mode available

Procedure: Assign Trunks or Pools to Telephones

Step	Display/Instructions	On the console	On the PC

1

```
System Programming:  >
Make a selection
System      Extensions
SysRenumbr Options
Operator    Tables
LinesTrunks AuxEquip
Exit        NightSrvce
```

Select the Extensions menu.

Select Extensions .

Press **[F6]**

2

```
Extensions:  >
Make a selection
LinesTrunks RestrctCopy
Line Copy    Account
Dial Outcd   BIS/HFAI
Restriction  Call Pickup
Exit         VoiceSignl
```

Select Lines and Trunks.

Select LinesTrunks .

Press **[F1]**

3

```
Assign Lines/Trunks:
Enter extension

Backspace
Exit          Enter
```

Specify the telephone in one of the following ways:

Extension number
Slot and port number
Logical ID number
DSS

- Dial [nnnn].
- Dial * [sspp].
- Dial # [nnn].
- Press DSS button.

- Type [rmn].
- Type * [sspp].
- Type # [nnn].

If a DSS is attached, check the status of the feature.

Toggle the LED On/Off, as required.

The red LED indicates the following:
on = extension is assigned to trunk or pool
off = extension is not assigned to trunk or pool

4

Save your entry.

Select Enter .

Press **[F10]**

If you get the Station Busy message, wait for an idle condition, or exit system programming and try again later.

Step	Display/Instructions	On the console	On the PC
5	Extension xxxx: Assign lines/trunks Lines 01-20 Lines 21-40 Entry Mode Lines 41-60 Lines 61-80 Exit xxxx = extension number entered in Step 3 To specify line/trunk, go to Step 6a. To specify a block of lines, go to Step 6b.		
6a	For a single line/trunk, do the following: 1. Specify entry mode. Extension xxxx: Enter line/trunk numbers Backspace Exit Delete Next Enter xxxx = extension number entered in Step 3 2. Enter the trunk number. 3. Save or delete specified trunk number. To assign the specified trunk or pool to the extension and assign specified trunks or pools to another extension: ■ If next extension number is sequential <i>Your previous entry is saved and next extension number is shown on line 1.</i>	Select Entry Mode. Dial [nnnn]. Select Enter or Delete. Select Next. Repeat number 2 in Step 6a.	Press [F6] Type [nnnn]. Press [F10] or [F8] Press [F9] Repeat number 2 in Step 6a.

Programming Procedures

Step	Display/Instructions	On the console	On the PC
	■ If next extension number is not sequential To save your entry when all entries are complete	Select Enter . Repeat Steps 4-6a.	Press [F10] Repeat Steps 4-6a.
6b	For a block of lines, do the following: 1. Select the trunks associated with the 20 line buttons on the system programming console. 2. Assign trunk or pool to telephone. <i>The green LED indicates the following:</i> <i>on = trunk or pool assigned to telephone</i> <i>off = trunk or pool not assigned to telephone</i> <i>For Hybrid/PBX only: The red LED indicates the following:</i> <i>on = trunk assigned to pool</i> <i>off = trunk not assigned to pool</i> 3. Save your entry.	Select Lines 01-20, Lines 21-40, Lines 41-60, or Lines 61-80. Toggle the LED On/Off, as required. Select Enter .	Press [F1], [F2], [F3], or [F4] Toggle the letter G (or R) On/Off, as required. Press [F10]
7	To return to System Programming menu	Select Exit two times.	Press [F5] two times.

Copy Line/Trunk Assignments

Use this procedure to copy outside line/trunk button assignments, pool dial-out code restrictions (Hybrid/PBX only), and—for operator positions only — Night Service information from a telephone to another telephone or block of telephones with identical requirements.

If you are copying assignments to a block of telephones and one of the extensions in the block is in use, the Station BUSY – Pls wait message is shown on the display and the copy for the rest of the extensions in the block is delayed until the busy extension becomes idle. The busy number is not shown, but if you have a DSS attached, the LED associated with the busy extension is on. If you exit instead of waiting for the busy extension to become idle, the copy for the rest of the extensions is canceled; however, the assignments that have already been copied are not canceled.

If you are copying assignments from an operator position to a block of telephones that includes both operator and non-operator telephones, the information is copied only to the operator positions; the non-operator positions are not affected. Similarly, if you are copying assignments from a non-operator position to a block of telephones that includes both operator and non-operator telephones, the information is copied only to the non-operator positions; the operator positions are not affected. The system provides no error tone to signal that the copy did not work for all extensions in the block.

Entering Programming

Console: Select Menu → Sys Program → Exit
PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select Exit on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary Copy Line/Trunk Assignments

Programmable by	System manager
Mode	All
Idle Condition	Telephone idle
Planning Form	4a, Extension Copy — Analog Multiline Telephone Template 4c, Extension Copy — MLX Telephone Template
Factory Setting	Not applicable
Valid Entries	Not applicable
Inspect	Yes: lines/pools assigned to an extension
Copy Option	Not applicable
Console Procedure	To copy to a single extension: Extensions → Line Copy → Single → Dial copy from ext. no. → Enter → Dial copy to ext. no. → Enter → Exit → Exit To copy to a block of extensions: - Extensions → Line Copy → Block → Dial copy from ext. no. → Enter → Dial ext. no of first telephone in block → Enter → Dial ext. no of last telephone in block → Enter → Exit → Exit
PC Procedure	To copy to a single extension: [F6] → [F2] → [F1] → Type copy from ext. no. → [F10] → Type copy to ext. no. → [F10] → [F5] → [F5] To copy to a block of extensions: [F6] → [F2] → [F2] → Type copy from ext. no. → [F10] → Type ext. no. of first telephone in block → [F10] → Type ext. no. of last telephone in block → [F10] → [F5] → [F5]

Procedure: Copy Line and Trunk Assignments

Step	Display/Instructions	On the console	On the PC
1	<pre>System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce</pre>		
	Select the Extensions menu.	Select Extensions.	Press [F6]
2	<pre>Extensions: > Make a selection LinesTrunks RestrctCopy Line Copy Account Dial Outcd BIS/HFAI Restriction Call Pickup Exit VoiceSignl</pre>		
	Select Line Copy.	Select Line Copy.	Press [F2]
3	<pre>Copy Lines: Make a selection Single Block Exit</pre>		
	Copy line assignments to individual telephones or to a block of telephones. <i>To copy to a block of telephones, they must be connected to sequentially numbered station jacks (for example, logical ID 11, 12, 13).</i>	Select Single or Block.	Press [F1] or [F2]

Programming Procedures

Step	Display/Instructions	On the console	On the PC												
4	Copy Lines: Enter extension to copy from Backspace Exit Enter Specify the telephone you want to copy from in one of the following ways (if you are copying from more than one telephone, enter the lowest number): <table><tr><td>Extension number</td><td>■ Dial [nnnn].</td><td>■ Type [mm].</td></tr><tr><td>Slot and port number</td><td>■ Dial * [sspp].</td><td>■ Type * [sspp].</td></tr><tr><td>Logical ID number</td><td>■ Dial # [nnn].</td><td>■ Type # [nnn].</td></tr><tr><td>DSS</td><td>■ Press DSS button.</td><td></td></tr></table> If the DSS is attached, check the status of the feature. <i>The red LED indicates the following:</i> on= extension is to be copied from off = extension will not be copied from	Extension number	■ Dial [nnnn].	■ Type [mm].	Slot and port number	■ Dial * [sspp].	■ Type * [sspp].	Logical ID number	■ Dial # [nnn].	■ Type # [nnn].	DSS	■ Press DSS button.			
Extension number	■ Dial [nnnn].	■ Type [mm].													
Slot and port number	■ Dial * [sspp].	■ Type * [sspp].													
Logical ID number	■ Dial # [nnn].	■ Type # [nnn].													
DSS	■ Press DSS button.														
5	Save your entry. To copy line assignments to a single telephone, go to Step 6a. To copy line assignments to a block of telephones, go to Step 6b.	Select Enter .	Press [F10]												

Step	Display/Instructions	On the console	On the PC
6a	For a single telephone, do the following: Copy extension xxxx to: Enter extension Backspace Next Exit Enter xxxx = extension number entered in Step 4 1. Specify the telephone to copy assignments to in one of the following ways (if you are programming a sequence, enter the lowest number): Extension number ■ Dial [nnnn]. ■ Type [nnnn]. Slot and port number ■ Dial * [sspp]. ■ Type * [sspp]. Logical ID number ■ Dial # [nnn]. ■ Type # [nnn]. DSS ■ Press DSS button. If DSS is attached, check status of the features. Toggle the LED On/Off, as required. <i>The red LED indicates the following:</i> <i>on= extension is copied to specified extension</i> <i>off = extension is not copied to specified extension</i> 2. To save your entry and copy line assignments from another extension to an individual telephone	Select Enter . Repeat Steps 3-6a.	Press [F10] Repeat Steps 3-6a,

Programming Procedures

Step	Display/Instructions	On the console	On the PC
	To save your entry and copy line assignments from extension shown on line 1 to another individual telephone: ■ If next extension number is sequential <i>Your previous entry is saved and next copy to extension number is shown.</i> ■ If next extension number is not sequential	Select Next . Select Next for each sequential copy to extension. Select Enter . Repeat Steps 3-6a.	Press [F9] Press [F9] for each sequential copy to extension. Press [F10]. Repeat Steps 3-6a.
	To save your entry when all entries are complete	Select Enter .	Press [F10]
6b	For a block of telephones, do the following:		
	Copy extension xxxx Enter starting extension logical id (#1 - #144) Backspace Exit Enter xxxx = extension number entered in Step 4		
	1. Specify the logical id of the first extension number in the block to be copied.	Dial # [nnnn].	Type # [nnnn].
	2. Save your entry.	Select Enter .	Press [F10]
	Start at extension xxxx Enter ending extension logical id (#1 - #144) Backspace Exit Enter xxxx = extension number of logical ID entered in number 1 of Step 6b		

Programming Procedures

Step	Display/Instructions	On the console	On the PC
	3. Specify the logical id of the last extension number in the block to be copied.	Dial # [nnnn].	Type # [nnnn].
	4. Save your entry.	Select Enter .	Press [F10]
7	To return to System Programming menu	Select Exit two times.	Press [F5] two times.

Assign Intercom or System Access Buttons

Use this procedure to assign or change the assignments for Intercom buttons used to make and receive inside calls. This includes the following types of Intercom buttons:

- Ring
- Voice
- Originate Only (Ring or Voice)

In the Hybrid/PBX mode only, use this procedure to assign or change assignments for System Access (SA) buttons used to make or receive inside and outside calls. This includes the following types of System Access buttons:

- Ring
- Voice
- Originate Only (Ring or Voice)
- Shared (Ring or Voice)

You cannot change the factory setting for Call buttons assigned to QCC operator positions, and you cannot assign Ring, Voice, Originate Only, or Shared buttons to QCC operator positions.

NOTE:

System Access or Intercom buttons can be assigned only to the first 10 buttons on a telephone.

You can assign a combination of up to 10 System Access or Intercom buttons to each telephone (excluding QCC operator positions).

You can remove System Access or Intercom buttons, but at least one must remain on the telephone.

Each System Access Ring or Voice on an individual telephone can be assigned as a System Access Shared button on up to 16 other telephones.

System Access and Intercom buttons are centrally programmed and cannot be programmed by individual telephone users.

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Assign Intercom or System Access Buttons

Programmable by	System manager
Mode	All, but note differences in factory settings
Idle Condition	Telephone idle
Planning Form	Form 4b, Analog Multiline Telephone Form 4d, MLX Telephone Form 4e, MFM Adjuncts — MLX Telephone Form 4f, Tip/Ring Equipment Form 5a, Direct-Line Console (DLC) - Analog Form 5b, Direct-Line Console (DLC) - Digital Form 5c, MFM Adjunct (DLC) Data Form 2a, Analog Data Station Data Form 2b, Digital Data Station
Factory Setting	Key Mode: An Intercom Ring, an Intercom Voice, and the first eight lines connected to the system are assigned to all analog multiline and MLX telephones, excluding operator positions. Two Intercom Ring buttons are assigned to tip/ring equipment connected on an 012 module. An Intercom Ring and an Intercom Originate Only (Ring) button are assigned to tip/ring equipment connected by an MFM. No outside lines are assigned, Behind Switch Mode: An Intercom Ring, an Intercom Voice, and a Prime Line button are assigned to all analog multiline and MLX telephones, excluding operator positions. Two Intercom Ring buttons and a Prime Line button are assigned to tip/ring equipment connected on an 012 module. An Intercom Ring and an Intercom Originate Only (Ring) button are assigned to tip/ring equipment connected by an MFM. No outside lines are assigned.

	Hybrid/PBX Mode: System Access Ring, System Access Voice, and System Access Originate Only (Ring) buttons are assigned to all analog multiline and MLX telephones, excluding operator positions. Two System Access Ring buttons and a System Access Originate Only button are assigned to tip/ring equipment (for example, single-line telephones or fax machines connected to an 012 module). No Personal line or Pool buttons are assigned. All modes: System Access Ring (Hybrid/PBX mode) or Intercom Ring (Key and Behind Switch modes), System Access Voice (Hybrid/PBX mode) or Intercom Voice (Key and Behind Switch modes), and the first 18 through 29 lines connected to the control unit are assigned to all DLC operator positions. The number of lines assigned depends on the type of telephone used as a DLC operator position. Refer to the appropriate telephone planning form for details.
Valid Entries	Not applicable
Inspect	Yes: specific button options
Copy Option	Yes (You can copy additional SA buttons to another station, but you cannot overwrite SA buttons that are already assigned.)
Console Procedure	To Program Extension: More → Cntr-prg → program Ext. → Dial ext. no. → Enter → Start → Program extension → Enter → Exit → Exit To Copy Extension Programming: - More → Cntr-prg → copy ext. → Dial copy from ext. 170. → Enter → Dial copy to ext. no. → Enter → Exit → Exit
PC Procedure	To Program Extension: [PgUp] → [F4] → [F1] → Type ext. no. → [F10] → [F10] → Program extension → [F10] → [F5] → [F5] To Copy Extension Programming: [PgUp] → [F4] → [F2] → Type copy from ext. no. → [F10] → Type copy to ext. no. → [F10] → [F5] → [F5]

Programming Procedures

Procedure: Assign Intercom or System Access Buttons

Step	Display/Instructions	On the console	On the PC
1	<pre>System Programming > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvc</pre>		
	Go to the second screen of the System Programming menu.	Press More	Press [PgUp]
2	<pre>System Programming: Make a selection Labeling Language Data Print Cntr-Prg Exit</pre>		
	Select Centralized Telephone Programming.	Select Cntr -Prg.	Press [F4]
3	<pre>Centralized Programming: Make a selection Program Ext Copy Ext Exit</pre>		
	To program extensions, go to Step 4a.		
	To copy extension programming, go to Step 4b.		

Programming Procedures

Step	Display/Instructions	On the console	On the PC
4a	To program an extension, do the following:		
	1. Select extension programming Centralized Programming: Enter extension Backspace Exit Enter	Select Program Ext.	Press [F1]
	2. Specify telephone in one of the following ways: Extension number Slot and port number Logical ID number DSS 3. Save your entry Extension Program xx Press HOME to exit System Prog Start xx = extension entered in number 2 of Step 4a	■ IDial [nnnn]. ■ IDial * [sspp]. ■ IDial # [nnn]. ■ IPress DSS button. Select Enter.	■ Type [nnnn]. ■ Type * [sspp]. ■ Type # [nnn]. Press [F10]
	4. Start centralized telephone programming, Select Button: Extension Program xx Page 1 Page 2 System Prog xx . extension entered in number 2 of Step 4a	Select Start.	Press [F10]

Step	Display/Instructions	On the console	On the PC
5.	Select specific line buttons associated with the 20 line buttons on the console or PC with SPM:		
	To select buttons 1-20	Select Page 1.	Press [F6]
	To select buttons 21-34	Select Page 2.	Press [F7]
6.	Select the button you want to program.	Press the button being programmed.	Press the function key that corresponds to the button being programmed.

```
****
Press HOME to Exit
Delete           Page 1
                  Page 2
Sys Program ListFeature
```

**** = contents of selected button (Voice, Ring or Blank)

Although you can make selections from the screen (using ListFeature) to assign **Ring** and **Voice** buttons, this procedure provides the programming codes to perform these functions. Using the codes speeds the button assignment process.

As you enter the programming code for assigning a **Ring** button, the screen changes to the first ListFeature screen, then returns to the screen shown in number 6 of Step 4a. To assign the voice attribute to the **Ring** button, select the same button and enter the programming code for voice.

Step	Display/Instructions	On the console	On the PC
	7. To assign Voice buttons, first assign the button as a Ring button, then program the button with the voice attribute as described in Table 3-4.		
	8. To program another button on same telephone identified in number 2 of Step 4a	Repeat number 6 in Step 4a.	Repeat number 6 in Step 4a.
	9. Save your entry.	Select Enter .	Press [F10]

Programming Procedures

The following table provides the programming codes for assigning **Ring** and **Voice** buttons. You can handle errors in data entry as follows:

- If you enter a feature code incorrectly while programming, the message programming Error displays and the red LED next to the button flashes. If this happens, press the button again and repeat the procedure.
- If you make a mistake and program the wrong feature on a button, press the button, select Delete (or **[F2]** on the PC) and press the button again,

Table 3-4. Programming Codes for Assigning SA/ICOM Ring and Voice Buttons

Instruction	On the Console	On the PC
To assign System Access or Intercom Ring button	Dial ★ 16	Type ★ 16
To assign System Access or Intercom Voice button	Dial ★ 16, press button being programmed again, and Dial ★ 19	Type ★ 16, press Shift + function key for button being programmed again, and Type ★ 19
To assign System Access or Intercom Originate Only-Ring button	Dial ★ 18	Type ★ 18
To assign System Access or Intercom Originate Only—Voice button	Dial ★ 18, press button being programmed again, and dial ★ 19	Type ★ 18, press shift + function key for button being programmed again, and type ★ 19
To assign System Access Shared button	Dial ★ 17, press the extension number of principal telephone: [nnnn] then press the + button number of specific button being shared: [nn]	Type ★ 17, press the extension number of principal telephone [nnnn] then press the+ button number of specific button being shared: [nn]
To change current assignment for System Access or Intercom Voice, Originate Only or System Access Shared buttons from Voice to Ring	Dial ★★ 19	Type ★★ 19

Programming Procedures

Step	Display/Instructions	On the console	On the PC
4b	To copy an extension, do the following:		
	1. Select Copy Extension. Extension Program Copy Enter extension to copy from Backspace Exit Enter	Select Copy Ext .	Press [F2]
	2. Specify the extension to copy from .	Dial <i>[nnnn]</i> .	Type <i>[nnnn]</i> .
	3. Save your entry.	Select Enter .	Press [F10]
	Copy Extension xxxx to: Enter extension Backspace Next Exit Enter xxxx = extension entered in number 2 of Step 4b		
	4. Specify the extension to copy to (if programming a sequence, enter the lowest number).	Dial <i>[nnnn]</i> .	Type <i>[nnnn]</i> .
	5. To save your entry and copy line assignments from another extension to an individual telephone	Select Enter . Repeat Steps 3 and 4b.	Press [F10] Repeat Steps 3 and 4b.

Programming Procedures

Step	Display/Instructions	On the console	On the PC
	To save your entry and copy line assignments from extension shown on line 1 to another individual telephone: ■ If next extension number is sequential <i>Your previous entry is saved and next copy to extension number is shown.</i> ■ If next extension number is not sequential To save your entry when all entries are complete	Select Next Select Next for each sequential copy to extension. Select Enter . Repeat Steps 3 and 4b. Select Enter .	Press [F9] Press [F9] for each sequential copy to extension. Press [F10] Repeat Steps 3 and 4b. Press [F10]
5	To return to System Programming menu	Select Exit two times	Press [F5] two times.

Analog Multiline Telephones without Built-in Speakerphones

Use this procedure to identify those telephones that do not have the built-in speakerphone or Hands Free Answer on Intercom (HFAI) capability for analog multiline telephones with flat membrane buttons. The models that must be identified are 5-Button, 10-Button, 34-Button, and 34-Button Deluxe analog multiline models with flat membrane buttons.

Keep the factory setting for analog multiline models with raised plastic buttons, including the following models: 10-Button HFAI, 34-Button with speakerphone (SP-34), 34-Button with speakerphone and display (SP-34D), BIS-10, BIS-22, BIS-34, BIS-22D, and BIS-34D.

This procedure is not needed for MLX or single-line telephones.

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Analog Multiline Telephones without Built-in Speakerphones

Programmable by	System manager
Mode	All
Idle Condition	Not required
Planning Form	Form 4b, Analog Multiline Telephone Form 5a, Direct-Line Console (DLC) - Analog Data Form 2a, Analog Data Stations
Factory Setting	All models of analog multiline telephones (except the analog multiline display console) have the BIS/HFAI capability

Programming Procedures

Valid Entries	Extension numbers
Inspect	Yes
Copy Option	No
Console Procedure	Extensions → BIS/HFAI → Dial ext. no. → Enter → Exit → Exit
PC Procedure	[F6] → [F8] → Type ext. no. → [F10] → [F5] → [F5]

Procedure: Analog Multiline Telephones without BIS or HFAI Capability

Step	Display/Instructions	On the console	On the PC
1	<pre>System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvc</pre>		
	Select the Extensions menu.	Select Extensions .	Press [F6]
2	<pre>Extensions: > Make a selection LinesTrunks RestrctCopy Line Copy Account Dial Outcd BIS/HFAI Restriction Call Pickup Exit VoiceSignl</pre>		
	Select BIS/HFAI.	Select BIS/HFAI .	Press [F8]
3	<pre>BIS/HFAI Extensions: Enter extensions Delete Backspace Exit Enter</pre>		
	Specify the telephone in one of the following ways:		
	Extension number	■ Dial <i>[nnnn]</i>	■ Type <i>[nnnn]</i>
	Slot and port number	■ Dial * <i>[sspp]</i>	■ Type * <i>[sspp]</i>
	Logical ID number	■ Dial # <i>[nnn]</i>	■ Type # <i>[nnn]</i>
	DSS	■ Press DSS button	
	If DSS is attached, check status of the feature.	Toggle the LED On/Off, as required.	
	The red LED indicates the following:		
	on= telephone has BIS/HFAI capability		
	off = telephones does not have BIS/HFAI capability		

Programming Procedures

Step	Display/Instructions	On the console	On the PC
4	To assign or remove BIS/HFAI capability	Select Enter or Delete.	Press [F10] or [F8]
5	To return to System Programming menu	Select Exit two times.	Press [F5] two times.

Analog Multiline Telephones with Voice Announce to Busy

Use this procedure to dedicate a voice/voice pair to be used to provide the Voice Announce to Busy feature to an analog multiline telephone.

The extension number associated with the first (odd-numbered) station jack in the pair is the telephone's extension number. The extension number for the second (even-numbered) station jack is dedicated to the Voice Announce to Busy feature. Calls cannot be placed to the station jack reserved for the Voice Announce to Busy feature.

An extension number cannot be dedicated for both the Voice Announce to Busy feature and the Simultaneous Voice and Data feature.

NOTE:

This procedure does not apply for MLX telephones (Voice Announce to Busy is automatically provided) and cannot be programmed for single-line telephones.

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection,

Summary: Analog Multiline Telephones with Voice Announce to Busy

Programmable by	System manager
Mode	All
Idle Condition	System idle
Planning Form	Form 4b, Analog Multiline Telephone Form 5a, Direct-Line Console (DLC) — Analog Data Form 2a, Analog Data Station
Factory Setting	Not applicable
Valid Entries	Extension numbers
Inspect	Yes
Copy Option	Yes
Console Procedure	Extensions → VoiceSignl → Dial ext. no. → Enter → Exit → Exit
PC Procedure	[F6] → [F10] → Type ext. no. → [F10] → [F5] → [F5]

Procedure: Analog Multiline Telephones with Voice Announce to Busy

Step	Display/Instructions	On the console	On the PC												
1	<pre>System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvc</pre>														
	Select the Extensions menu.	Select Extensions .	Press [F6]												
2	<pre>Extensions: > Make a selection LinesTrunks RestrctCopy Line Copy Account Dial Outcd BIS/HFAI Restriction Call Pickup Exit VoiceSignl</pre>														
	Select Voice Signal.	Select VoiceSignl .	Press [F10]												
3	<pre>Voice Signal Pair: Enter voice signal pairs Delete Backspace Exit Enter</pre> Specify extension of telephone you want to program in one of the following ways: <table><tr><td>Extension number</td><td>■ Dial [nnnn]</td><td>■ `Type [nnnn]</td></tr><tr><td>Slot and port number</td><td>■ Dial * [sspp]</td><td>■ `Type * [sspp]</td></tr><tr><td>Logical ID number</td><td>■ Dial #[nnn]</td><td>■ `Type #[nnn]</td></tr><tr><td>DSS</td><td>■ Press DSS button</td><td></td></tr></table> if DSS is attached, check the status of the feature. <i>The red LED indicates the following:</i> on = assigns pairing for Voice Announce to busy off = removes pairing for Voice Announce to busy <i>Red LED autormatically goes on for other extension in pair.</i>	Extension number	■ Dial [nnnn]	■ `Type [nnnn]	Slot and port number	■ Dial * [sspp]	■ `Type * [sspp]	Logical ID number	■ Dial #[nnn]	■ `Type #[nnn]	DSS	■ Press DSS button		Toggle the LED On/Off, as required.	
Extension number	■ Dial [nnnn]	■ `Type [nnnn]													
Slot and port number	■ Dial * [sspp]	■ `Type * [sspp]													
Logical ID number	■ Dial #[nnn]	■ `Type #[nnn]													
DSS	■ Press DSS button														

Programming Procedures

Step	Display/Instructions	On the console	On the PC
4	Specify whether or not telephone is paired for Voice Announce to Busy.	Select Enter or Delete.	Press [F10] or [F8]
5	To return to System Programming menu	Select Exit two times.	Press [F5] two times.

Analog Multiline Telephones with Simultaneous Voice/Data

See "Data Features."

Auxiliary Equipment

The procedures in this section describe the steps needed to do the following:

- identify the trunk jacks used for Music-on-Hold, loudspeaker paging, and maintenance alarms
- identify the station jacks used for fax, MERLIN MAIL, Voice Messaging System, Automated Attendant, and AUDIX Voice Power

Music-on-Hold

Use this procedure to identify the trunk jack reserved for connection of a music source, such as a radio, tape player, or stereo system.

NOTE:

If you use equipment that rebroadcasts music or other copyrighted materials, you may be required to obtain a copyright license from and pay license fees to a third party (such as the American Society of Composers [ASCAP], Artists, and Producers or Broadcast Music Incorporated [BMI]). Magic on Hold® requires no such license and can be purchased from your authorized dealer.

Only one Music-on-Hold jack is allowed per system.

You cannot assign the trunk identified for Music-on-Hold to a trunk pool. If the trunk is currently assigned to a pool, you must remove it before you program this option.

You cannot assign the trunk identified for use with Music-on-Hold to a button on any telephone or as a Remote Access trunk, and you cannot use the jack identified for Music-on-Hold for a loudspeaker paging system or maintenance alarm.

Entering Programming

Console: Select Menu → Sys Program → Exit
PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection,

Summary Music-on-Hold

Programmable by	System manager
Mode	All - but in Hybrid/PBX mode, the trunk designated for Music-on-Hold cannot be assigned to a trunk pool.
Idle Condition	System idle
Planning Form	Form 2c, System Numbering – Trunk Jacks
Factory Setting	Not Applicable
Valid Entries	Line/trunk number
Inspect	No
Copy Option	No
Console Procedure	AuxEquip → MusicOnHold → Dial trunk no. → Enter → Exit
PC Procedure	[F9] → [F1] → Type trunk no. → [F10] → [F5]

Programming Procedures

Procedure: Music-on-Hold

Step	Display/Instructions	On the console	On the PC									
1	<pre>System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce</pre>	Select the Auxiliary Equipment menu.	Select AuxEquip. Press [F9]									
2	<pre>Auxiliary Equipment: Make a selection MusicOnHold VMS/AA Ldspkr Pg Fax MaintAlarms Exit</pre>	Select Music-On-Hold.	Select MusicOnHold. Press [F1]									
3	<pre>Music-On-Hold Enter music on hold line xxxx Delete Backspace Exit Enter</pre> xxxx = current line If trunk is shown on the screen and you want to remove the Music-on-Hold assignment, go to Step 4. Identify the trunk you want to program in one of the following ways: <table><tr><td>Extension number</td><td>■ Dial <i>[nnnn]</i>.</td><td>■ Type <i>[nnnn]</i>.</td></tr><tr><td>Slot and port number</td><td>■ Dial <i>★[sspp]</i>.</td><td>■ Type <i>★[sspp]</i>.</td></tr><tr><td>Logical ID number</td><td>■ Dial <i>#[nnn]</i>.</td><td>■ Type <i>#[nnn]</i>.</td></tr></table>	Extension number	■ Dial <i>[nnnn]</i> .	■ Type <i>[nnnn]</i> .	Slot and port number	■ Dial <i>★[sspp]</i> .	■ Type <i>★[sspp]</i> .	Logical ID number	■ Dial <i>#[nnn]</i> .	■ Type <i>#[nnn]</i> .		
Extension number	■ Dial <i>[nnnn]</i> .	■ Type <i>[nnnn]</i> .										
Slot and port number	■ Dial <i>★[sspp]</i> .	■ Type <i>★[sspp]</i> .										
Logical ID number	■ Dial <i>#[nnn]</i> .	■ Type <i>#[nnn]</i> .										
4	Specify whether the trunk shown is to reassigned to or removed from Music-On-Hold.	Select Enter or Delete.	Press [F10] or [F8]									
5	To return to System Programming menu	Select Exit.	Press [F5]									

Loudspeaker Paging

Use this procedure to identify the trunk jack reserved for connection of loudspeaker paging equipment.

NOTE:

If you use equipment that rebroadcasts music or other copyrighted materials, you may be required to obtain a copyright license from and pay license fees to a third party (such as the American Society of Composers, Artists, and Producers or Broadcast Music Incorporated).

Magic on Hold requires no such license and can be purchased from your authorized dealer.

A maximum of three single-zone or multizone loudspeaker paging systems can be connected to the system.

You cannot assign the trunk identified for use for loudspeaker paging equipment to a trunk pool. If the trunk is currently assigned to a pool, you must remove it before you program this option.

You cannot assign the trunk identified for use for loudspeaker paging equipment as a Remote Access trunk, and you cannot use its jack for Music-on-Hold or maintenance alarm.

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary Loudspeaker Paging

Programmable by	System manager
Mode	All - but in Hybrid/PBX mode, the trunk designated for loudspeaker paging cannot be assigned to a trunk pool.
Idle Condition	Line/trunk idle
Planning Form	Form 2c, System Numbering - Trunk Jacks
Factory Setting	Not Applicable
Valid Entries	Line/trunk numbers
Inspect	Yes
Copy Option	No
Console Procedure	AuxEquip → Ldspkr Pg → Dial trunk no. → Enter → Exit
PC Procedure	[F9] → [F2] → Type trunk no. → [F10] → [F5]

Procedure: Loudspeaker Paging

Step	Display/Instructions	On the console	On the PC									
1	<pre>System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce</pre>											
	Select the Auxiliary Equipment menu.	Select AuxEquip	Press [F9]									
2	<pre>Auxiliary Equipment: Make a selection MusicOnHold VMS/AA Ldspkr Pg Fax MaintAlarms Exit</pre>											
	Select Loudspeaker Page.	Select Ldspkr Pg.	Press [F2]									
3	<pre>Loudspeaker Page: Enter loudspeakr pg line Delete Backspace Exit Enter</pre> xxxx = current line If trunk is shown on the screen and you want to remove the Loudspeaker assignment, go to Step 4. Identify the trunk jack in one of the following ways: <table><tr><td>Extension number</td><td>■ Dial [nnnn].</td><td>■ Type [nnnn].</td></tr><tr><td>Slot and port number</td><td>■ Dial * [sspp].</td><td>■ Type * [sspp].</td></tr><tr><td>Logical ID number</td><td>■ Dial #[nnn].</td><td>■ Type #[nnn].</td></tr></table>	Extension number	■ Dial [nnnn].	■ Type [nnnn].	Slot and port number	■ Dial * [sspp].	■ Type * [sspp].	Logical ID number	■ Dial #[nnn].	■ Type #[nnn].		
Extension number	■ Dial [nnnn].	■ Type [nnnn].										
Slot and port number	■ Dial * [sspp].	■ Type * [sspp].										
Logical ID number	■ Dial #[nnn].	■ Type #[nnn].										
4	Specify whether the trunk jacks shown is used to connect loudspeaker paging system.	Select Enter or Delete.	Press [F10] or [F8]									
5	To return to System Programming menu	Select Exit.	Press [F5]									

F a x

Use this procedure to identify the station jacks used to connect fax machines. In addition, specify the telephones to receive a message-waiting indication (MWI) when a fax transmission is received, and specify the length of time before the system registers that a fax has arrived and sends the message-waiting indication.

NOTE:

Do not use this procedure for fax machines connected to analog multiline telephones via a General Purpose Adapter (GPA) because features cannot be assigned to the fax independently of the telephone in a GPA configuration.

A maximum of 16 fax machines can have the Fax Message Waiting feature. [Additional fax machines (more than 16) can be installed, but these machines cannot have this feature.]

You can specify up to four telephones to receive the message-waiting indication when a fax transmission is received. Note that fax machines can only send and not receive message-waiting indications.

Entering Programming

Console: Select Menu → Sys Program → Exit
PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection, .

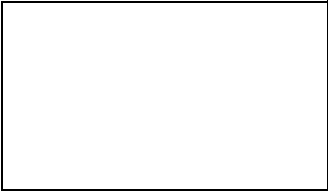
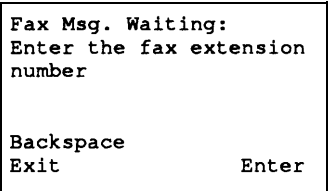
Summary: Fax

Programmable by	System manager
Mode	All
Idle Condition	Not required
Planning Form	Form 4b, Analog Multiline Telephone Form 4d, MLX Telephone Form 4e, MFM Adjunct - MLX Telephone Form 4f, Tip/Ring Equipment Form 5a, Direct-Line Console (DLC) — Analog Form 5b, Direct-Line Console (DLC) – Digital Form 5c, MFM Adjunct- DLC
Factory Setting	10 seconds
Valid Entries	0-30 seconds
Inspect	Yes
Copy Option	No
Console Procedure	AuxEquip → Fax → Extension → Dial Ext. no. → Enter → Exit → Msg Waiting → Dial fax machine ext. no. → Enter → Dial MWI ext. no. → Enter → Threshold → Drop → Dial no. of seconds → Enter → Exit → Exit
PC Procedure	[F9] → [F3] → [F1] → Type ext.no. → [F10] → [F5] → [F2] → Type fax machine ext. no. → [F10] → Type MWI ext. no. → [F10] → [F3] → [Alt] + [P] → Type no. of seconds → [F10] → [F5] → [F5]

Procedure: Fax

Step	Display/Instructions	On the console	On the PC
1	System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce		
	Select the Auxiliary Equipment menu.	Select AuxEquip.	Press [F9]
2	Auxiliary Equipment: Make a selection MusicOnHold VMS/AA Ldspkr Pg Fax MaintAlarms Exit		
	Select Fax.	Select Fax.	Press [F3]
3	Fax: Make a selection Extension Msg Waiting Threshold Exit		
	Select Extension.	Select Extension.	Press [F1]
4	Fax Extension: Enter fax extension Backspace Delete Exit Enter		
	Specify the station jack to be used for fax machine in one of the following ways:		
	Extension number	■ Dial <i>[nnnn]</i> .	■ Type <i>[nnnn]</i> .
	Slot and port number	■ Dial <i>★[sspp]</i> .	■ Type <i>★[sspp]</i> .
	Logical ID number	■ Dial <i>#[nrm]</i> .	■ Type <i>#[nnn]</i> .
	DSS	■ Press DSS button.	

Programming Procedures

Step	Display/Instructions	On the console	On the PC
	If DSS is attached, check the status of the feature. <i>The red LED indicates the following:</i> <i>on = jack connects to fax machine</i> <i>off = jack provides another purpose</i>	Toggle the LED On/Off, as required.	
5	Specify whether the station jack is used to connect a fax machine. When all entries are complete, return to the Fax menu.	Select Enter or Delete. Select Exit.	Press [F10] or [F8] Press [F5]
6			
	Select Message Waiting.	Select Msg Waiting.	Press [F2]
7	 Specify the fax machine sending message-waiting indication in one of the following ways: Extension number Slot and port number Logical ID number DSS	■ Dial [nnnn]. ■ Dial * [sspp]. ■ Dial #[nnn], ■ IPress DSS button.	■ Type [nnnn], ■ Type * [sspp]. ■ Type #[nnn].
8	Save your entry.	Select Enter.	Press [F10]

Programming Procedures

Step	Display/Instructions	On the console	On the PC
9	Fax xxxx: Enter message waiting extension BackspaceDelete ExitNext EnterEnter xxxx = number entered in Step 7 Specify the telephone you want to program in one of the following ways (if you are programming a sequence, enter the lowest number): Extension number Slot and port number Logical ID number DSS ■ Dial [nnnn]. ■ Dial * [sspp]. ■ Dial #[nnn]. ■ Press DSS button. ■ Type [nnnn]. ■ Type * [sspp]. ■ Type #[nnn]. <i>The red LED indicates the following:</i> <i>on = assign message waiting indication to an extension</i> <i>off = remove message waiting indication from an extension</i>		
10	To remove message-waiting indication from telephone To assign message-waiting indication to telephone and assign telephones to receive message-waiting indication for another fax ■ If next extension number is sequential <i>Your previous entry is saved and next extension number is shown on line 1 of screen in Step 9.</i> ■ If next extension number is not sequential	Select Delete . Repeat Step 9. Select Next . Repeat Steps 6-9.	Press [F8] Press [F9] Repeat Step 9. Press [F10] Repeat Steps 6-9.

Programming Procedures

Step	Display/Instructions	On the console	On the PC
	To assign message-waiting indication to telephone when all entries are complete	Select Enter.	Press [F10]
11	Fax: Make a selection Extension Msg Waiting Threshold Exit		
	Specify length of time before system is notified that a fax message has arrived.	Select Threshold.	Press [F3]
12	Fax Threshold Duration: Enter duration (0-30sec) xx Backspace Exit Enter		
	Erase current number of seconds.	Press Drop ,	Press [Alt] + [P]
13	Enter number of seconds to wait.	Dial <i>[nnnn]</i> .	Type <i>[nnnn]</i> .
14	Save your entry.	Select Enter.	Press [F10]
15	To return to System Programming menu	Select Exit two times.	Press [F5] two times.

Maintenance Alarms

Use this procedure to identify the trunk jack that connects an external alerting device that sounds or flashes when major maintenance problems occur.

You cannot assign the trunk identified for the maintenance alarm to a button on any telephone or as a Remote Access trunk, and you cannot use its jack to connect a loudspeaker paging system or Music-on-Hold.

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary Maintenance Alarms

Programmable by	System manager
Mode	All - but in Hybrid/PBX mode, the trunk designated for the maintenance alarm cannot be assigned to a trunk pool.
Idle Condition	System idle
Planning Form	Form 2c, System Numbering - Trunk Jacks
Factory Setting	Not Applicable
Valid Entries	Trunk number
Inspect	No
Copy Option	No
Console Procedure	AuxEquip → MaintAlarms → Dial trunk 170. → Enter → Exit → Exit
PC Procedure	[F9] → [F4] → Type trunk no. → [F10] → [F5] → [F5]

Procedure: Maintenance Alarms

Step	Display/Instructions	On the console	On the PC									
1	<pre>System Programming: > Make a selection System Extensions SysReNumber Options Operator Tables LinesTrunks AuxEquip Exit NightSrvc</pre>											
	Select the Auxiliary Equipment menu.	Select AuxEquip.	Press [F9]									
2	<pre>Auxiliary Equipment: Make a selection MusicOnHold VMS/AA Ldspkr Pg Fax MaintAlarms Exit</pre>											
	Select Maintenance Alarms.	Select MaintAlarms.	Press [F4]									
3	<pre>Maintenance Alarms: Enter maintenance alarm line number Backspace Delete Exit Enter</pre> Specify the jack to which the maintenance alarm is connected in one of the following ways: <table><tr><td>Extension number</td><td>■ Dial [nnnn]</td><td>■ Type [nnnn]</td></tr><tr><td>Slot and port number</td><td>■ Dial * [sspp]</td><td>■ Type * [sspp]</td></tr><tr><td>Logical ID number</td><td>■ Dial #[nnn]</td><td>■ Type #[nnn]</td></tr></table>	Extension number	■ Dial [nnnn]	■ Type [nnnn]	Slot and port number	■ Dial * [sspp]	■ Type * [sspp]	Logical ID number	■ Dial #[nnn]	■ Type #[nnn]		
Extension number	■ Dial [nnnn]	■ Type [nnnn]										
Slot and port number	■ Dial * [sspp]	■ Type * [sspp]										
Logical ID number	■ Dial #[nnn]	■ Type #[nnn]										
4	Specify whether the trunk is used to connect maintenance alarm.	Select Enter or Delete.	Press [F10] or [F8]									
5	To return to System Programming menu	Select Exit two times.	Press [F5] two times.									

Voice Messaging System and Automated Attendant

Use this procedure to specify the touch-tone duration and the interval between digits in codes sent between a voice messaging system and the communications system. The touch-tone duration and interval between digit assignment must be the same as those programmed on the voice messaging system.

This procedure specifies the integrated voice messaging ports used to connect voice messaging systems such as MERLIN MAIL Voice Messaging System or the AUDIX Voice Power-Integrated Solution II/III application. It also specifies the generic VMI ports used for automated attendants, such as MERLIN Attendant or Integrated Voice Power Automated Attendant-IS II.

In addition, this procedure can be used to specify the number of rings before a call transferred by the voice messaging system is sent to the backup position for both integrated and generic VMI ports. The number of rings cannot be programmed for individual voice messaging systems; the single setting applies for all. Use the Group Type procedure in the "Optional Group-Assigned Features" section to assign VMI ports as either integrated or generic.

Entering Programming

Console: Select Menu → Sys Program → Exit
PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary Voice Messaging System and Automated Attendant

Programmable by	System manager
Mode	All
Idle Condition	Not required
Planning Form	(See forms packaged with application.)
Factory Setting	Touch-tone duration -100 ms; interval between digits -50 ms; number of rings before transfer-4
Valid Entries	Touch-tone duration: 50-200 ms in increments of 25 ms; interval between digits: 50 – 200 ms in increments of 25 ms; number of rings before transfer: 0-9
Inspect	No
Copy Option	No
Console Procedure	AuxEquip → VMS/AA → TransferRtn → Drop → Dial no. of rings → Enter → TT Duration → Drop → Dial no. of ms → Enter → TT Interval → Drop → Dial no. of ms → Enter → Exit → Exit
PC Procedure	[F9] → [F6] → [F1] → [Alt] + [P] → Type no. of rings → [F10] → [F2] → [Alt] + [P] → Type no. of ms → [F10] → [F3] → [Alt] + [P] → Type no. of ms → [F10] → [F5] → [F5]

Programming Procedures

Procedure: Voice Messaging System and Automated Attendant

Step	Display/Instructions	On the console	On the PC
1	System Programming: > Make a selection System Extensions SysReNumber Options Operator Tables LinesTrunks AuxEquip Exit NightSrvc	Select the Auxiliary Equipment menu.	Select AuxEquip. Press [F9]
2	Auxiliary Equipment: Make a selection MusicOnHold VMS/AA Ldspkr Pg Fax MaintAlarms Exit	Select Voice Messaging/ Automated Attendant.	Select VMS/AA. Press [F6]
3	VMS/AA: Make a selection TransferRtn TT Duration TT Interval Exit If you do not want to change the current setting for number of rings before transfer, go to Step 7.	To change number of rings, select Transfer Return.	Select TransferRtn. Press [F1]
4	VMS TransferRtn Intvl: Enter return interval (0-9) x Backspace Exit Enter x = current interval	Erase current interval setting.	Press Drop . Press [Alt] + [P]

Programming Procedures

Step	Display/Instructions	On the console	On the PC
5	Enter number of rings before calls are transferred to backup position. (Dial 0 to specify that calls are not transferred to backup position.)	Dial <i>[n]</i> .	Type <i>[n]</i> .
6	Save your entry.	Select Enter .	Press [F10]
7	VMS/AA: Make a selection TransferRtn TT Duration TT Interval Exit If you do not want to change the current setting for touch-tone duration, go to Step 11. Select Touch-tone Duration.	Select TT Duration.	Press [F2]
8	Touch-Tone Duration: Enter duration length (50-200ms, increment 25) xxx Backspace Exit Enter xxx = current duration Erase current duration setting.	Press Drop.	Press [Alt] + [P]
9	Enter the touch-tone duration in milliseconds.	Dial <i>[nnn]</i>	Type <i>[nnn]</i>
10	Save your entry.	Select Enter .	Press [F10]
11	VMS/AA: Make a selection TransferRtn TT Duration TT Interval Exit Select Touch-Tone interval. If you do not want to change the setting for touch-tone interval, you have finished this procedure.	Select Interval	Press [F3]

Step	Display/Instructions	On the console	On the PC
12	Touch-Tone Interval: Enter interval length (50-200 ms) xxx Backspace Exit Enter xxx = current interval		
	Erase current setting.	Press Drop .	Press [Alt] + [P]
13	Enter touch-tone interval in milliseconds.	Dial <i>[nnn]</i>	Type <i>[nnn]</i>
14	Save your entry.	Select Enter .	Press [F10]
15	To return to System Programming menu	Select Exit two times.	Press [F5] two times.

Optional Telephone Features

The procedures in this section detail the steps in programming the following optional features:

- Extension Language
- Pool Dial-Out Code
- Call Restrictions
- Copy Call Restrictions
- Forced Account Code Entry
- Microphone Operation
- Remote Call Forwarding

Extension Language

Release 1.1 and Release 2.0 Only

Use this procedure to change the language for an MLX telephone.

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary Extension Language

Programmable by	Users and system manager
Mode	All
Idle Condition	Not required
Planning Form	Form 4d, MLX Telephone Form 5b, Direct-Line Console (DLC)-Digital Data Form 2b, Digital Data Station
Factory Setting	English
Valid Entries	English, French, Spanish
Inspect	No
Copy Option	No
Console Procedure	To program a single extension: More → Language → Extensions → Single → Dial ext. no. → Enter → Select a language → Enter → Exit → Exit To program a block of extensions: More → Language → Extensions → Block → Dial starting ext. no. → Enter → Dial ending ext. no. → Enter → Select a language → Enter → Exit → Exit
PC Procedure	To program a single extension: [PgUp] → [F6] → [F2] → [F1] → Type ext. no. → [F10] → Select a language → [F10] → [F5] → [F5] To program a block of extensions: [PgUp] → [F6] → [F2] → [F2] → Type starting ext. no. → [F10] → Type ending ext. no. → [F10] → Select a language → [F10] → [F5] → [F5]

Procedure: Extension Language

Step	Display/Instructions	On the console	On the PC
1	System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce		
	Go to the second screen of the System Programming menu.	Select More .	Press [PgUp]
2	System Programming: Make a selection Labeling Language Data Print Cntr-Prg Exit		
	Select Language.	Select Language .	Press [F6]
3	Language: Make a selection SystemLang Extensions SMDR Printer Exit		
	Select Extensions.	Select Extensions.	Press [F2]
4	Extension Language: Make a selection Single Block Exit		
	To specify a single telephone, select Single and go to Step 5a.	Select Single.	Press [F1]
	To specify a block of telephones, select Block and go to Step 5b.	Select Block.	Press [F2]

Step	Display/Instructions	On the console	On the PC
5a	For a single telephone, do the following:		
	Extension Language: Enter extension number Backspace Exit Enter		
	1. Specify the extension number.	Dial [nnnn]	Type [nnnn].
	2. Save your entry.	Select Enter .	Press [F10]
	Extension xxxx Language: Select one English French Spanish Next Exit Enter xxxx = extension entered in number 1 of Step 5a		
	3. Specify language for the telephone.	Select English, French or Spanish.	Press [F1] , [F2] , or [F3]
	4. To save your entry and assign language to additional extensions		
	■ If next extension number is sequential <i>Your previous entry is saved and next extension number is show on line 1 .</i> ■ If next extension number is not sequential	Select Next . Repeat number 3 in Step 5a.	Press [F9] Repeat number 3 in Step 5a.
	5. To save your entry when all entries are complete	Select Enter .	Press [F10]

Programming Procedures

Step	Display/Instructions	On the console	On the PC
5b	For a block of telephones, do the following:		
	Extension Language: Enter starting extension Backspace Exit Enter		
	1. Specify the starting extension.	Dial [nnnn]	Type [nnnn]
	2. Save your entry.	Select Enter .	Press [F10]
	Lang for ext xxxx to: Enter ending extension Backspace Next Exit Enter		
	xxxx = extension entered in number 1 of Step 5b		
	3. Specify the ending extension.	Dial [nnnn]	Type [nnnn]
	4. Save your entry.	Select Enter .	Press [F10]
	Lang Exts xxxx to xxxx: Select one English French Spanish Exit Enter		
	xxxx = extensions entered in numbers 1 and 3 of Step 5b		
	5. Specify language for the telephone.	Select English, French, or Spanish	Press [F1] , [F2] ,or [F3]
	6. Save your entry.	Select Enter .	Press [F10]
6	To return to System Programming menu	Select Exit two times.	Press [F5] two times.

Pool Dial-Out Code

Use this procedure to allow or restrict the dialing of pool dial-out codes and the placing of calls on specific trunk pools. Entering a code and then deleting that code restricts the user from using the pool associated with that pool dial-out code.

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select Exit on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary Pool Dial-Out Code

Programmable by	System manager
Mode	Hybrid/PBX
Idle Condition	Telephone idle
Planning Form	Form 4b, Analog Multiline Telephone Form 4d, MLX Telephone Form 4e, MFM Adjunct — MLX Telephone Form 4f, Tip/Ring Equipment Form 5a, Direct-Line Console (DLC) - Analog Form 5b, Direct-Line Console (DLC) - Digital Form 5c, MFM Adjunct (DLC) — Digital Form 5d, Queued Call Console (QCC) Data Form 2a, Analog Data Station Data Form 2b, Digital Data Station
Factory Setting	All telephones can dial any trunk pool dial-out code
Valid Entries	Pool numbers
Inspect	Yes
Copy Option	No
Console Procedure	Extensions → Dial OutCd → Dial ext. no. → Enter → Dial pool dial-out code → Enter → Exit → Exit
PC Procedure	[F6] → [F3] → Type ext. no. → [F10] → Type pool dial-out code → [F10] → [F5] → [F5]

Programming Procedures

Procedure: Pool Dial-Out Code

Step	Display/Instructions	On the console	On the PC												
1	System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvc														
	Select the Extensions menu.	Select Extensions.	Press [F6]												
2	Extensions: > Make a selection LinesTrunks RestrctCopy Line Copy Account Dial OutCd BIS/HFAI Restriction Call Pickup Exit VoiceSignl														
	Select Dial-Out Code.	Select Dial OutCd.	Press [F3]												
3	Assign Pool DialOut Cd: Enter extension Backspace Exit Enter														
	Specify the telephone in one of the following ways (if you are programming a sequence, enter the lowest number): <table><tr><td>Extension number</td><td>■ Dial [nnnn]</td><td>■ Type [nnnn]</td></tr><tr><td>Slot and port number</td><td>■ Dial * [sspp]</td><td>■ Type * [sspp]</td></tr><tr><td>Logical ID number</td><td>■ Dial # [nnn]</td><td>■ Type #[nnn]</td></tr><tr><td>DSS</td><td>■ Press DSS button.</td><td></td></tr></table> If DSS is attached, check the status of the feature. The red LED indicates the following: on= pool dial-code is assigned off= pool dial-code is not assigned			Extension number	■ Dial [nnnn]	■ Type [nnnn]	Slot and port number	■ Dial * [sspp]	■ Type * [sspp]	Logical ID number	■ Dial # [nnn]	■ Type #[nnn]	DSS	■ Press DSS button.	
Extension number	■ Dial [nnnn]	■ Type [nnnn]													
Slot and port number	■ Dial * [sspp]	■ Type * [sspp]													
Logical ID number	■ Dial # [nnn]	■ Type #[nnn]													
DSS	■ Press DSS button.														
		Toggle the LED On/Off, as required.													

Programming Procedures

Step	Display/Instructions	On the console	On the PC
4	Save your entry. <i>If you get the Station Busy message, wait for an idle condition, or exit system programming and try again later.</i>	Select Enter .	Press [F10]
5	Extension xxxx: Enter pool dialout code Backspace Delete Next Exit Enter xxxx = extension number entered in Step 3		
	Specify the pool dial-out code.	Dial <i>[nnn]</i>	Type <i>[nnn]</i>
6	To restrict telephone from using the pool dial out code To allow telephone to use pool dial-out code and program pool dial-out codes for another telephone:	Select Delete .	Press [F8]
	■ If next extension number is sequential <i>Your previous entry is saved and next extension number is shown on line 1 of the screen in Step 5.</i> ■ If next extension number is not sequential	Select Next . Repeat Step 5.	Press [F9] Repeat Step 5.
	To allow telephone to use pool dial-out code when all entries are complete	Select Enter .	Press [F10]
7	To return to System Programming menu	Select Exit two times.	Press [F5] two times.

Call Restrictions

Use this procedure to change individual telephone calling restrictions to one of the following:

- unrestricted
- restricted from making all outgoing calls
- restricted from making toll calls

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Call Restrictions

Programmable by	System manager
Mode	All
Idle Condition	Telephone idle
Planning Form	Form 4b, Analog Multiline Telephone Form 4d, MLX Telephone Form 4e, MFM Adjunct — MLX Telephone Form 4f, Tip/Ring Equipment Form 5a, Direct-Line Console (DLC) - Analog Form 5b, Direct-Line Console (DLC) - Digital Form 5c, MFM adjunct-DLC Form 5d, Queued Call Console (QCC) Data Form 2a, Analog Data Station Data Form 2b, Digital Data Station
Factory Setting	Unrestricted
Valid Entries	Unrestricted, Outward restricted, Toll restricted
Inspect	No
Copy Option	Yes
Console Procedure	Extensions → Restriction → Dial ext. no. → Enter → Select restriction → Enter → Exit
PC Procedure	[F6] → [F4] → Type ext. no. → [F10] → Select restriction → [F10] → [F5]

Procedure: Call Restrictions

Step	Display/Instruction	On the console	On the PC												
1	<pre>System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce</pre>														
	Select the Extensions menu.	Select Extensions.	Press [F6]												
2	<pre>Extensions: > Make a selection LinesTrunks RestrctCopy Line Copy Account Dial OutCd BIS/HFAI Restriction Call Pickup Exit VoiceSignl</pre>														
	Select Restrictions.	Select Restriction.	Press [F4]												
3	<pre>Call Restriction: Enter extension Backspace Exit Enter</pre>														
	Specify the telephone in one of the following ways (if you are programming a sequence, enter the lowest number): <table><tr><td>Extension number</td><td>■ Dial <i>[nnnn]</i></td><td>■ Type <i>[nnnn]</i></td></tr><tr><td>Slot and port number</td><td>■ Dial * <i>[sspp]</i></td><td>■ Type * <i>[sspp]</i></td></tr><tr><td>Logical ID number</td><td>■ Dial #<i>[nnn]</i></td><td>■ Type #<i>[nnn]</i></td></tr><tr><td>DSS</td><td>■ Press DSS button.</td><td></td></tr></table>			Extension number	■ Dial <i>[nnnn]</i>	■ Type <i>[nnnn]</i>	Slot and port number	■ Dial * <i>[sspp]</i>	■ Type * <i>[sspp]</i>	Logical ID number	■ Dial # <i>[nnn]</i>	■ Type # <i>[nnn]</i>	DSS	■ Press DSS button.	
Extension number	■ Dial <i>[nnnn]</i>	■ Type <i>[nnnn]</i>													
Slot and port number	■ Dial * <i>[sspp]</i>	■ Type * <i>[sspp]</i>													
Logical ID number	■ Dial # <i>[nnn]</i>	■ Type # <i>[nnn]</i>													
DSS	■ Press DSS button.														
	If a DSS is attached, check the status of the feature.	Toggle the LED On/Off, as required.													
	The red LED indicates the following: on= specified call restriction is assigned to extension off =specified call restriction is not assigned to the extension														

Step	Display/Instructions	On the console	On the PC
4	Save your entry. <i>If you get the Station Busy message, wait for an idle condition, or exit system programming and try again later.</i> <pre> Extension xxxx: Select one Unrestricted Outward Restrict Toll Restrict Next Exit Enter </pre> Specify the appropriate restriction: — Unrestricted = remove all restriction — Outward Restrict= restrict telephone from making outside calls (local and toll) — Toll Restrict= restrict telephone from making toll calls	Select Enter .	Press [F10]
6	To save your selection and assign or remove restrictions from another extension: ■ If next extension number is sequential <i>Your previous entry is saved and next extension number is shown on line 1 of the screen in Step 5.</i> ■ If extension number is not sequential To save your entry when all entries are complete	Select Next . Repeat Step 5. Select Enter . Repeat Steps 2-5. Select Enter .	Press [F9] Repeat Step 5. Press [F10] Repeat Steps 2-5. Press [F10]
7	To return to System Programming menu	Select Exit .	Press [F5]

Copy Call Restrictions

Use this procedure to copy calling restrictions, Allowed Lists, and Disallowed Lists. Feature assignment must be completed for the “copy from” telephone and can be copied to an individual telephone or block of telephones with identical calling restriction requirements.

If you are copying restrictions to a block of telephones and one of the extensions in the block is in use, you will see the Station Busy - Pls Wait message on your screen. The copy for the rest of the extensions in the block is delayed until the extension becomes idle. The specific busy extension is not shown; however, if a DSS is attached, the LED associated with the busy extension is on. If you exit without waiting for the extension to become idle, copying for the rest of the extensions in the block is canceled, but the copying that has been completed is recorded.

If you are copying restrictions to a block of extensions, they must be sequentially numbered.

The telephones you are copying to and from can be both operator and non-operator positions.

NOTE:

Dial-out code restrictions are not copied.

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select Exit on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary Copy Call Restrictions

Programmable by	System manager
Mode	All
Idle Condition	"Copy to" telephone(s) idle
Planning Form	Form 4b, Analog Multiline Telephone Form 4d, MLX Telephone Form 4e, MFM Adjunct — MLX Telephone Form 5a, Direct-Line Console (DLC) - Analog Form 5b, Direct-Line Console (DLC) – Digital Form 5c, MFM Adjunct-DLC Form 5d, Queued Call Console (QCC) Data Form 2a, Analog Data Station Data Form 2b, Digital Data Station
Factory Setting	Not applicable
Valid Entries	Not applicable
Inspect	No
Copy Option	Not applicable
Console Procedure	To copy to a single telephone: Extensions → RestrctCopy → Single → Dial Copy from ext. no. → Enter → Dial Copy to ext. no. → Enter → Exit → Exit → Exit To copy to a block of telephones: Extensions → RestrctCopy → Block → Dial Copy from ext. no. → Enter → Dial first no. in copy to block → Enter → Dial last no. in copy to block → Enter → Exit → Exit → Exit
PC Procedure	To copy to a single telephone: [F6] → [F6] → [F1] → Type copy from ext. no. → [F10] → Type copy to ext. no. → [F10] → [F5] → [F5] → [F5] To copy to a block of telephones: [F6] → [F6] → [F2] → Type copy from ext. no. → [F10] → Type first no. in copy to block → [F10] → Type last no. in copy to block → [F10] → [F5] → [F5] → [F5]

Programming Procedures

Procedure: Copy Call Restrictions

Step	Display/Instructions	On the console	On the PC
1	System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce		
	Select the Extensions menu.	Select Extensions.	Press [F6]
2	Extensions: > Make a selection LinesTrunks RestrctCopy Line Copy Account Dial OutCd BIS/HFAI Restriction Call Pickup Exit VoiceSignl		
	Select Restrict Copy.	Select RestrctCopy.	Press [F6]
3	Copy Restrictions: Make a selection Single Block Exit		
	Copy calling restrictions to an individual telephone or to a block of telephones.	Select Single or Block.	Press [F1] or [F2]

Programming Procedures

Step	Display/Instructions	On the console	On the PC
4	Restriction Copy: Enter extension to copy from Backspace Exit Enter Specify telephone you want to copy calling restrictions from in one of the following ways (if you are copying from more than one sequentially numbered extension, enter the lowest number): Extension number Slot and port number Logical ID number DSS If DSS is attached, check the status of the feature. <i>The red LED indicates the following:</i> <i>on= restriction copy is assigned to telephone</i> <i>off= restriction copy is not assigned to telephone</i>	■ Dial [nnnn] ■ Dial * [sspp] ■ Dial # [nnn]. ■ Press DSS button. Toggle the LED On/Off, as required.	■ Type [nnnn] ■ Type * [sspp] ■ Type # [nnn]
5	Save your entry. If you selected Single in Step 3, go to Step 6a. If you selected Block in Step 3, go to Step 6b.	Select Enter .	Press [F10]

Programming Procedures

Step	Display/Instructions	On the console	On the PC
6a	For single telephone, do the following: Copy extension xxxx to: Enter extension Backspace Next Exit Enter xxxx = extension number entered in Step 4 - Specify the telephone to copy call restrictions to in one of the following ways. - Extension number - Slot and port number - Logical ID number - DSS If DSS is attached, check the status of the feature. <i>The red LED indicates the following:</i> <i>on = copy extension is assigned to telephone</i> <i>off = copy extension is not assigned to telephone</i> - To save your entry and copy calling restrictions from another extension to an individual telephone: - If next extension number is sequential <i>Your previous entry is saved and next extension number is shown on line 1.</i>	■ Dial [nnnn] ■ Dial * [sspp] ■ Dial # [nnn] ■ Press DSS button. Toggle the LED On/Off, as required.	■ Type [nnnn] ■ Type * [sspp] ■ Type # [nnn] Press [F9]

Programming Procedures

Step	Display/Instructions	On the console	On the PC
	■ If next extension number is not sequential	Select Enter, then select Exit. Repeat Steps 3-6a.	Press [F10] , then press [F5] Repeat Steps 3-6a.
	3. To save your entry when all entries are complete	Select Enter.	Press [F10]
6b	For a block of telephones, do the following:		
	Copy extension xxxx To: Enter starting extension Logical id (1 - 144) Backspace Exit Enter xxxx = extension number entered in Step 4		
	1. Specify the first telephone in the block of telephones to copy call restrictions to by entering the logical ID.	Dial # [nnnn]	Type # [nnnn]
	2. Save your entry.	Select Enter.	Press [F10]
	Start at extension xxxx: Enter ending extension Logical id (1 - 144) Backspace Exit Enter xxxx = extension entered in number 1 of Step 6b		
	3. Specify the last telephone in the block by entering the logical ID.	Dial # [nnnn]	Type # [nnnn]
	4. Save your entry.	Select Enter.	Press [F10]
7	To return to System Programming menu	Select Exit three times.	Press [F5] three times.

Forced Account Code Entry

Use this procedure to assign or remove Forced Account Code Entry. When this feature is programmed on individual telephones, the user must enter a 1- to 16-digit account code before making an outside call.

Entering Programming

Console: Select Menu → Sys Program → Exit
PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select Exit on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary Forced Account Code Entry

Programmable by	System manager
Mode	All
Idle Condition	Not required
Planning Form	Form 4b, Analog Multiline Telephone Form 4d, MLX Telephone Form 4e, MFM Adjunct — MLX Telephone Form 4f, Tip/Ring Equipment Form 5a, Direct-Line Console (DLC) - Analog Form 5b, Direct-Line Console (DLC) - Digital Form 5c, MFM Adjunct — DLC Form 5d, Queued Call Console (QCC) Data Form 2a, Analog Data Station Data Form 2b, Digital Data Station
Factory Setting	Not assigned
Valid Entries	Assigned, not assigned
Inspect	Yes
Copy Option	No
Console Procedure	Extensions → Account → Toggle LED On/Off or Dial ext. no. → Enter → Exit → Exit
PC Procedure	[F6] → [F7] → Toggle letter R On/Off or Type ext. no. → [F10] → [F5] → [F5]

Procedure: Forced Account Code Entry

Step	Display/Instructions	On the console	On the PC
1	<pre> System Programming > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce </pre>		
	Select the Extensions menu.	Select Extensions .	Press [F6]
2	<pre> Extensions: > Make a selection LinesTrunks RestrctCopy Line Copy Account Dial OutCd BIS/HFAI Restriction Call Pickup Exit VoiceSignl </pre>		
	Select Forced Account Code Entry.	Select Account .	Press [F7]
3	<pre> Forced Account Code: Enter extensions Delete Backspace Exit Enter </pre>		
	If you have a DSS attached, go to Step 4a. If you do not have a DSS attached, go to Step 4b.		
4a	If you have a DSS attached, do the following: Check red LEDs for feature status. The red LED indicates the following: on= forced account code entry is assigned to telephone off= forced account code entry is not assigned to telephone		
		Toggle the LED On/Off, as required.	

Programming Procedures

Step	Display/Instruction	On the console	On the PC
4b	If you do not have a DSS attached, do the following: 1. Specify the telephone you want to program in one of the following ways: Extension number Slot and port number Logical ID number 2. To assign or remove Forced Account Code Entry to extension entered in number 1 of Step 4b	 Select Enter or Delete.	 Press [F10] or [F8]
5	To return to System Programming menu	Select Exit two times.	Press [F5] two times.

Microphone Operation

Use this procedure to enable or disable microphones on MLX telephones (except QCC operator positions). When the microphone is disabled, users cannot use the speakerphone to carry on conversations.

NOTE:

The microphone cannot be disabled on analog multiline telephones or on MLX telephones used as QCC operator positions.

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Microphone Operation

Programmable by	System manager
Mode	All
Idle Condition	Not required
Planning Form	Form 4d, MLX Telephone Form 5b, Direct-Line Console (DLC) - Digital
Factory Setting	Enabled
Valid Entries	Enabled, disabled
Inspect	Yes
Copy Option	No
Console Procedure	Extensions → More → Mic Disable → Toggle LED On/Off or Dial ext. no. → Enter → Exit → Exit
PC Procedure	[F6] → [PgUp] → [F7] → Toggle letter R On/Off or Type ext. no. → [F10] → [F5] → [F5]

Procedure: Microphone Operation

Step	Display/Instructions	On the console	On the PC
1	System Programming > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvc		
	Select the Extensions menu.	Select Extensions.	Press [F6]
2	Extensions: > Make a selection LinesTrunks RestrctCopy Line Copy Account Dial OutCd BIS/HFAI Restriction Call Pickup Exit VoiceSignl		
	Go to the second screen of the Extensions menu.	Press More .	Press [PgUp]
3	Extensions: > Make a selection Ext Status ARS Restrct Group Page Mic Disable Group Cover Remote Frwd Grp Calling Exit		
	Select Microphone Disable.	Select Mic Disable.	Press [F7]
4	Microphone Disable: Enter extension Delete Backspace Exit Enter		
	If you have a DSS attached, go to Step 5a. If you do not have a DSS attached, go to Step 5b.		

Programming Procedures

Step	Display/Instructions	On the console	On the PC
5a	If you have a DSS attached, do the following: Check red LEDs for feature status. <i>The red LED indicates the following:</i> <i>on= microphone operation is assigned to telephone</i> <i>off = microphone operation is not assigned to telephone</i>	Toggle the LED On/Off, as required.	
5b	If you do not have a DSS attached, do the following: 1. Specify the telephone you want to program in one of the following ways: Extension number Slot and port number Logical ID number 2. To assign or remove microphone operation to extension entered in number 1 of Step 5b	■ Dial [nnnn] ■ Dial * [sspp] ■ Dial # [nnn] Select Enter or Delete,	■ Type [nnnn] ■ Type * [sspp] ■ Type # [nnn] Press [F10] or [F8]
6	To return to System Programming menu	Select Exit two times.	Press [F5] two times.

Remote Call Forwarding

Use this procedure to allow or disallow the Remote Call Forwarding capability, which allows users to forward calls to an outside number.

If a telephone with Remote Call Forwarding has one or more personal lines assigned, that telephone can be assigned as the principal user, and calls received on that line are forwarded to outside numbers. (See “Principal User of Personal Line.”)

NOTE:

This feature is not recommended unless you have ground-start trunks. See “Disconnect Signaling Reliability” and “Hold Disconnect Interval.”

Entering Programming

Console: Select Menu → Sys Program → Exit
PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary Remote Call Forwarding

Programmable by	System manager
Mode	All
Idle Condition	Not required
Planning Form	Form 4b, Analog Multiline Telephone Form 4d, MLX Telephone Form 4e, MFM Adjunct — MLX Telephone Form 4f, Tip/Ring Equipment Form 5a, Direct-Line Console (DLC) - Analog Form 5b, Direct-Line Console (DLC) - Digital Form 5c, MFM Adjunct — DLC Form 5d, Queued Call Console (QCC) Data Form 2a, Analog Data Station Data Form 2b, Digital Data Station

Programming Procedures

Factory Setting	Disallowed
Valid Entries	Disallowed, allowed
Inspect	Yes
Copy Option	No
Console Procedure	Extensions → More → Remote Frwd → Toggle LED On/Off or Dial ext. no. → Enter → Exit → Exit
PC Procedure	[F6] → [PgUp] → [F8] → Toggle letter R On/Off or Type extono. → [F10] → [F5] → [F5]

Procedure: Remote Call Forwarding

Step	Display/Instructions	On the console	On the PC
1	System Programming > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce		
	Select the Extensions menu.	Select Extensions.	Press [F6]
2	Extensions: > Make a selection LinesTrunks RestrctCopy Line Copy Account Dial OutCd BIS/HFAI Restriction Call Pickup Exit VoiceSignl		
	Go to the second screen of the Extensions menu.	Press More .	Press [PgUp]
3	Extensions: > Make a selection Ext Status ARS Restrct Group Page Mic Disable Group Cover Remote Frwd Grp Calling Exit		
	Select Remote Call Forward.	Select Remote Frwd.	Press [F8]
4	Remote Call Forward: Enter extension Delete Backspace Exit Enter		
	If you have a DSS attached, go to Step 5a.		
	If you do not have a DSS attached, go to Step 5b.		

Programming Procedures

Step	Display/Instructions	On the console	On the PC
5a	If you have a DSS attached, do the following: Check red LEDs for feature status. <i>The red LED indicates the following:</i> <i>on= remote call forwarding is assigned to telephone</i> <i>off = remote call forwarding is not assigned to telephone</i>	Toggle the LED On/Off, as required.	
5b	If you do not have a DSS attached, do the following: 1. Specify the telephone you want to program in one of the following ways: Extension number Slot and port number Logical ID number 2. To assign or remove remote call forwarding to extension entered in number 1 of Step 4b	■ Dial [nnnn] ■ Dial * [sspp] ■ Dial # [nnn] Select Enter or Delete.	■ Type [nnnn] ■ Type * [sspp] ■ Type # [nnn] Press [F10] or [F8]
6	To return to System Programming menu	Select Exit two times.	Press [F5] two times.

Optional Operator Features

The procedures in this section affect feature programming for both DLC and QCC operator positions. The following procedures are included:

- Operator Hold Timer
- DLC Operator Automatic Hold
- QCC Optional Features
 - Hold Return
 - Automatic Hold or Release
 - Queue over Threshold
 - Elevate Priority
 - Calls-In-Queue Alert
 - QCC Operator to Receive Call Types
 - Call Type Queue Priority Level
 - Message Center Operation
 - Automatic or Manual Extended Call Completion
 - Return Ring
 - Position Busy Backup

Operator Hold Timer

Use this procedure to set the length of the Operator Hold Timer for all DLCs and QCCs. If the system operator does not pickup the call within the time programmed, an abbreviated ring is a reminder that a call is being held.

This option cannot be programmed for individual operator positions.

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary Operator Hold Timer

Programmable by	System manager
Mode	All
Idle Condition	Not required
Planning Form	Form 6a, Optional Operator Features
Factory Setting	60 seconds
Valid Entries	10-255 seconds
Inspect	No
Copy Option	No
Console Procedure	Operator → Hold Timer → Drop → Dial no. of seconds → Enter → Exit
PC Procedure	[F3] → [F3] → [Alt] + [P] → Type no. of seconds → [F10] → [F5]

Programming Procedures

Procedure: Operator Hold Timer

Step	Display/Instruction	On the console	On the PC
1	<pre> System Programming: > Make a selection System Extensions SysReNumber Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce </pre>		
	Select the Operator menu.	Select Operator .	Press [F3]
2	<pre> System Operator: Make a selection Positions Queued Call Hold Timer DLC Hold Exit </pre>		
	Select Hold Timer.	Select Hold Timer .	Press [F3]
3	<pre> Operator Hold Timer: Enter length of hold timer (10-255 sec) xxx Backspace Exit Enter </pre> xxx = current number of seconds		
	Erase current setting.	Press Drop.	Press [Alt] + [P]
4	Specify number of seconds to hold call (n = 10-25 sec.)	Dial <i>[n]</i>	Type <i>[n]</i>
5	Save your entry.	Select Enter .	Press [F10]
6	To return to System Programming menu	Select Exit .	Press [F5]

DLC Operator Automatic Hold

Use this procedure to enable or disable the DLC Operator Automatic Hold feature for DLC operator positions. When this feature is enabled, it prevents accidental disconnection of calls.

Entering Programming

Console: Select Menu → Sys Program → Exit
PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select Exit on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary DLC Operator Automatic Hold

Programmable by	System manager
Mode	All
Idle Condition	Not required
Planning Form	Form 6a, Optional Operator Features
Factory Setting	Disabled
Valid Entries	Disabled, enabled
Inspect	No
Copy Option	No
Console Procedure	Operator → DLC Hold → Enable or Disable Automatic Hold → Enter → Exit
PC Procedure	[F3] → [F4] → Enable or Disable Automatic Hold → [F10] → [F5]

Programming Procedures

Procedure: DLC Operator Automatic Hold

Step	Display/Instructions	On the console	On the PC
1	<pre>System Programming: > Make a selection System Extensions SysReNumber Options Operator Tables LinesTrunks AuxEquip Exit NightSrvc</pre>		
	Select the Operator menu.	Select Operator	Press [F3]
2	<pre>System Operator: Make a selection Positions Queued Call Hold Timer DLC Hold Exit</pre>		
	Select DLC Hold.	Select DLC Hold.	Press [F4]
3	<pre>DLC Auto Hold: Select one Auto Hold Enable Auto Hold Disable Exit Enter</pre>		
	Specify enable or disable DLC Operator Automatic Hold.	Select Auto Hold Enable or Auto Hold Disable.	Press [F1] or [F2]
4	Save your entry.	Select Enter.	Press [F10]
5	To return to System Programming menu	Select Exit.	Press [F5]

QCC Optional Features

NOTE:

These options are available in Hybrid/PBX mode only.

The following options can be provided for QCC operator positions:

- Hold Return
- Automatic Hold or Release
- Queue over Threshold
- Elevate Priority
- Calls-in-Queue Alert
- QCC Operator to Receive Call Types
- Call Type Queue Priority Level
- Message Center Operation
- Automatic or Manual Extended Call Completion
- Return Ring
- Position Busy Backup

Hold Return

Use this procedure to determine whether calls on hold are returned to the QCC queue or remain on hold on the QCC operator console after the hold timer has expired twice. After the hold timer expires the first time, the operator hears an abbreviated ring as a call-on-hold reminder. If another call is received at the same time the hold timer expires, 10 seconds are added to the programmed operator hold timer interval. If the QCC operator does not pick up a call by the time the hold timer expires twice, the call can be programmed to either remain on hold or return to the QCC queue.

This option cannot be programmed for individual QCC operator positions; the single setting applies to all QCC operator positions.

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary Hold Return

Programmable by	System manager
Mode	Hybrid/PBX
Idle Condition	Not required
Planning Form	Form 6a, Optional Operator Features
Factory Setting	Calls remain on hold
Valid Entries	Remain on hold, Return to QCC queue
Inspect	No
Copy Option	No
Console Procedure	Operator → Queued Call → Hold Rtrn → Select the hold return → Enter → Exit → Exit
PC Procedure	[F3] → [F2] → [F1] → Select the hold return → [F10] → [F5] → [F5]

Programming Procedures

Procedure: Hold Return

Step	Display/Instructions	On the console	On the PC
1	<pre> System Programming: > Make a selection System Extensions SysReNumber Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce </pre>		
	Select the Operator menu.	Select Operator .	Press [F3]
2	<pre> System Operator: Make a selection Positions Queued Call Hold Timer DLC Hold Exit </pre>		
	Select Queued Call.	Select Queued Call.	Press [F2]
3	<pre> Queued Call Operator: > Make a selection Hold Rtrn InQue Alert HoldRelease Call Types Threshold Msg Center ElvatePrior ExtndComplt Exit Return Ring </pre>		
	Select Hold Return.	Select Hold Rtrn	Press [F1]
4	<pre> Queued Call Hold Return: Select one Return to Queue Remain on Hold Exit Enter </pre>		
	Specify whether calls on hold return to the QCC queue or remain on hold when the Hold Timer expires twice.	Select Return to Queue or Remain on Hold.	Press [F1] or [F2]
5	Save your entry.	Select Enter .	Press [F10]
6	To return to System Programming menu	Select Exit two times.	Press [F5] two times.

Automatic Hold or Release

Use this procedure to specify whether a call in progress on a call button is automatically put on hold (Automatic Hold) or disconnected (Automatic Release) when the operator presses another button.

This option cannot be programmed for individual QCC operator positions; the single setting applies to all QCC operator positions.

Entering Programming

Console: Select Menu → Sys Program → Exit
PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary Automatic Hold or Release

Programmable by	System manager
Mode	Hybrid/PBX
Idle Condition	Not required
Planning Form	Form 6a, Optional Operator Features
Factory Setting	Automatic Release
Valid Entries	Auto Hold, Auto Release
Inspect	No
Copy Option	No
Console Procedure	Operator → Queued Call → HoldRelease → Select Auto Hold or Auto Release → Enter → Exit → Exit
PC Procedure	[F3] → [F2] → [F2] → Select Auto Hold or Auto Release → [F10] → [F5] → [F5]

Programming Procedures

Procedure: Automatic Hold or Release

Step	Display/Instructions	On the console	On the PC
1	<pre> System Programming > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvc </pre>		
	Select the Operator menu.	Select Operator	Press [F3]
2	<pre> System Operator: Make a selection Positions Queued Call Hold Timer DLC Hold Exit </pre>		
	Select Queued Call.	Select Queued Call.	Press [F2]
3	<pre> Queued Call Operator: > Make a selection Hold Rtrn InQue Alert HoldRelease Call Types Threshold Msg Center ElvatePrior ExtndComplt Exit Return Ring </pre>		
	Select Hold Release.	Select Hold Release.	Press [F2]
4	<pre> Queued Call HoldRelease: Select one Auto Hold Auto Release Exit Enter </pre>		
	Specify whether in-progress calls are automatically put on hold when another call button is pressed or disconnected.	Select Auto Hold or Auto Release.	Press [F1] or [F2]
5	Save your entry.	Select Enter .	Press [F10]
6	To return to System Programming menu	Select Exit two times.	Press [F5] two times.

Queue over Threshold

Use this procedure to specify the maximum number of calls (threshold) in the QCC queue before system operators are notified with a tone that the threshold has been reached or exceeded. If the threshold is set to 0, operators are not notified.

Entering Programming

Console: Select Menu → Sys Program → Exit
PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select Exit on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Queue over Threshold

Programmable by	System manager
Mode	Hybrid/PBX
Idle Condition	Not required
Planning Form	Form 6a, Optional Operator Features
Factory Setting	0
Valid Entries	0 - 99
Inspect	No
Copy Option	No
Console Procedure	Operator → Queued Call → Threshold → Drop Dial no. of calls → Enter → Exit → Exit
PC Procedure	[F3] → [F2] → [F3] → [Alt] + [P] → Type no. of calls → [F10] → [F5] → [F5]

Programming Procedures

Procedure: Queue over Threshold

Step	Display/Instructions	On the console	On the PC
1	System Programming: > Make a selection System Extensions SysReNumber Options Operator Tables LinesTrunks AuxEquip Exit NightSrvc		
	Select the Operator menu.	Select Operator .	Press [F3]
2	System Operator: Make a selection Positions Queued Call Hold Timer DLC Hold Exit		
	Select Queued Call.	Select Queued Call.	Press [F2]
3	Queued Call Operator: > Make a selection Hold Rtrn InQue Alert HoldRelease Call Types Threshold Msg Center ElvatePrior ExtndComplt Exit Return Ring		
	Select Threshold.	Select Threshold.	Press [F3]
4	Queue Over Threshold: Enter maximum number for queue (0-99) xx Backspace Exit Enter xx = current maximum number of calls		
	Erase current threshold.	Press Drop .	Press [Alt] + [P] .

Programming Procedures

Step	Display/Instructions	On the console	On the PC
5	Specify maximum number of calls allowed in QCC queue before operators are notified. (Dial or type O to specify that operators are not notified.)	Dial <i>[nn]</i>	Type <i>[nn]</i>
6	Save your entry.	Select Enter .	Press [F10]
7	To return to System Programming menu	Select Exit two times.	Press [F5] two times,

Elevate Priority

Use this procedure to specify the length of time before calls waiting in the QCC queue are automatically reprioritized to a higher level. if priority is set to 0, calls are not prioritized.

Entering Programming

Console: Select Menu → Sys Program → Exit
PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select Exit on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Elevate Priority

Programmable by	System manager
Mode	Hybrid/PBX
Idle Condition	Not required
Planning Form	Form 6a, Optional Operator Features
Factory Setting	0 seconds
Valid Entries	0 and 5 -30
Inspect	No
Copy Option	No
Console Procedure	Operator → Queued Call → ElvatePrior → Drop → Dial no. of seconds → Enter → Exit → Exit
PC Procedure	[F3] → [F2] → [F4] → [Alt] + [P] → Type no. of seconds → [F10] → [F5] → [F5]

Programming Procedures

Procedure: Elevate Priority

Step	Display/Instructions	On the console	On the PC
1	<pre>System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce</pre>		
	Select the Operator menu.	Select Operator .	Press [F3]
2	<pre>System Operator: Make a selection Positions Queued Call Hold Timer DLC Hold Exit</pre>		
	Select Queued Call.	Select Queued Call.	Press [F2]
3	<pre>Queued Call Operator: > Make a selection Hold Rtrn InQue Alert HoldRelease Call Types Threshold Msg Center ElvatePrior ExtndComplt Exit Return Ring</pre>		
	Select Elevate Priority.	Select ElvatePrior .	Press [F4]
4	<pre>Priority Elevated: Enter time(5-30, 0=no) call priority elevated xx Backspace Exit Enter</pre> xx = current number of seconds		
	Erase current priority.	Press Drop.	Press [Alt] + [P]

Programming Procedures

Step	Display/Instructions	On the console	On the PC
5	Specify number of seconds before calls are reprioritized. (Dial 0 to specify that calls are not reprioritized.)	Dial <i>[nn]</i>	Type <i>[nn]</i>
6	Save your entry.	Select Enter .	Press [F10]
7	To return to System Programming menu	Select Exit two times.	Press [F5] two times.

Calls-In-Queue Alert

Use this procedure to specify whether each QCC operator is notified (with a single beep) when a new call enters the QCC queue.

Entering Programming

Console: Select Menu → Sys Program → Exit
PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary Calls-In-Queue Alert

Programmable by	System manager
Mode	Hybrid/PBX
Idle Condition	Not required
Planning Form	Form 6a, Optional Operator Features
Factory Setting	Disable
Valid Entries	Enable, Disable
Inspect	Yes
Copy Option	No
Console Procedure	Operator → Queued Call → InQue Alert → Dial ext. no. → Enter → Enable or disable alert → Enter → Exit → Exit
PC Procedure	[F3] → [F2] → [F6] → Type ext. no. → [F10] → Enable or disable alert → [F10] → [F5] → [F5]

Programming Procedures

Procedure: Calls-In-Queue Alert

Step	Display/Instructions	On the console	On the PC
1	System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce		
	Select the Operator menu.	Select Operator .	Press [F3]
2	System Operator: Make a selection Positions Queued Call Hold Timer DLC Hold Exit		
	Select Queued Call.	SelectQueued Call.	Press [F2] .
3	Queued Call Operator: > Make a selection Hold Rtrn InQue Alert HoldRelease Call Types Threshold Msg Center ElvatePrior ExtndComplt Exit Return Ring		
	Select In-Queue Alert.	Select InQue Alert.	Press [F6]
4	In Queue Alert: Enter QCC operator extension number Backspace Exit Enter		
	If DSS is attached, go to Step 5a. If DSS is not attached, go to Step 5b.		

Programming Procedures

Step	Display/Instructions	On the console	On the PC
5a	If a DSS is attached, do the following: Check red LED next to each line button for feature status. <i>The red LED indicates the following:</i> <i>flashing = operator does not receive calls-in-queue alert</i> <i>on= operator receives calls-in-queue alert</i> <i>off = not an operator position</i>	Toggle the LED On/Off, as required.	Toggle the letter R On/Off, as required.
5b	If a DSS is not attached, do the following: - Specify operator position to receive Calls-In-Queue Alert and enter operator extension number in any one of the following ways (if you are programming a sequence of operator positions, enter the lowest number first): - Extension number - Slot and port number - Logical ID number - Save your entry. <pre> QCC Operator xxxx: Select one InQue Alert Enable InQue Alert Disable Next Exit Enter </pre> xxxx = operator entered in number 1 of step 5b	■ Dial [nnnn] ■ Dial * [sspp] ■ Dial #[nnn] Select Enter .	■ Type [nnnn] ■ Type * [sspp] ■ Type #[nnn] Press [F10]

Step	Display/Instructions	On the console	On the PC
	3. Specify whether operator receives alert.	Select Select InQue Alert Enable or InQue Alert Disable.	Press [F1] or [F2]
	4. To save your selection and program another operator position:		
	■ If next extension number is sequential <i>Your previous entry is saved and next extension number is shown on line 1.</i>	Select Next, Repeat number 3 in Step 5b.	Press [F9] Repeat number 3 in Step 5b.
	■ If next extension number is not sequential	Select Enter . Repeat Steps 3-5b.	Press [F10] Repeat to Steps 3-5b
	5. To save your entry when all entries are complete	Select Enter	Press [F10]
6	To return to System Programming menu	Select Exit two times.	Press [F5] two times.

QCC Operator to Receive Call Types

Use this procedure to specify which QCC operators receive the following types of calls:

- Dial 0 calls (internal calls to the system operator)
- DID calls to invalid destinations (unassigned extension numbers)
- Calls to the Listed Directory Number (extension for the QCC queue)
- Calls programmed to return to the QCC queue (returning from extending, camped-on, held calls, and operator parked calls)
- Group Coverage calls
- Forward/Follow Me calls

The QCC queue can be a receiver for the maximum number of coverage groups (30).

NOTE:

If you want a QCC operator position to operate as a Message Center (receiving returning parked and extended calls, Group Coverage calls, and calls to unassigned DID numbers), program the Message Center option before you assign the operator to receive call types.

This procedure does not include use of the menu selections Follow/Frwd or QCC Ext. These two options are used to assign queue priorities and are not associated with individual QCC operators. See “Call Type Queue Priority Level” in this section.

This procedure does not include programming the operator to receive calls on individual trunks. See “QCC Operator to Receive Calls” in the Lines and Trunks” section of this manual.

Programming an operator to receive DID calls to invalid destinations does not cause the calls to ring into the QCC queue unless you program such calls to be sent to a backup extension. See “Invalid Destination” in this section.

When no operator is assigned to receive the call types, the call does not ring into the QCC queue, and the caller hears an error tone.

Entering Programming

Console: Select Menu → Sys Program → Exit
PC/SPM: Type **SPM** → press any key → **[F1]** → **[F#]**

Exiting Without Changes

To exit from any screen without making changes, select Exit on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: QCC Operator to Receive Call Types

Programmable by	System manager
Mode	Hybrid/PBX
Idle Condition	Not required
Planning Form	Form 6a, Optional Operator Features
Factory Setting	QCC operator receives the following calls: ■ Dial 0 ■ Unassigned DID ■ Listed Directory Number ■ Returning
Valid Entries	Not applicable
Inspect	Yes
Copy Option	No
Console Procedure	Operator → Queued Call → Call Types → Select a call type → operator → Dial Coverage Group no. → Enter → Dial ext. no. → Enter → Exit → Exit → Exit → Exit → Exit
PC Procedure	[F3] → [F2] → [F7] → Select a call type → [F2] → Type Coverage Group no. → [F10] → Type ext. no. → [F10] → [F5] → [F5] → [F5] → [F5] → [F5]

Procedure: QCC Operator to Receive Call Types

Step	Display/Instructions	On the console	On the PC
1	System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce		
	Select the Operator menu.	Select Operator .	Press [F3]
2	System Operator: Make a selection Positions Queued Call Hold Timer DLC Hold Exit		
	Select Queued Call.	Select Queued Call.	Press [F2]
3	Queued Call Operator: > Make a selection HoldRtrn InQue Alert HoldRelease Call Types Threshold Msg Center ElvatePrior ExtndComplt Exit Return Ring		
	Select Call Types.	Select Call Types .	Press [F7]
4	Call Type: Make a selection Dial 0 QCC Ext Follow/Frwd Returning UnassignDID GrpCoverage ListedNumbr Exit		
	Select a call type. To use Follow/Frwd or QCC Ext, go to the next section, "Call Type Queue Priority Level."	Press the button next to your selection.	Press the function key next to your selection.

Programming Procedures

Step	Display/Instructions	On the console	On the PC
5	**** Make a selection Priority Operator Exit **** = option name selected in Step 4 Select Operator. If you did not select Group Coverage at Step 4, go to Step 9.	Select Operator .	Press [F2]
6	Group Coverage Calls: Enter grp coverage number (1-30) Backspace Exit Enter Specify the group coverage number.	Dial <i>[nn]</i>	Type <i>[nn]</i>
7	Save your entry.	Select Enter .	Press [F10]
8	Operator GrpCoverage xx: Enter QCC operator extension number Backspace Delete Exit Next Enter xx = number entered in Step 6 If DSS is attached, go to Step 10a. If DSS is not attached, go to Step 10b.		

Programming Procedures

Step	Display/Instructions	On the console	On the PC
9	**** Operator: Enter QCC operator extension number Delete Backspace Exit Enter **** = option name selected in Step 4 If a DSS is attached, go to Step 10a. If a DSS is not attached, go to Step 10b.		
10a	If a DSS is attached, do the following: Check red LEDs for feature status. <i>The red LED indicates the following:</i> flashing = operator does not receive call type on= operator receives call type off = extension is not an operator position	Toggle the LED On/Off, as required.	
10b	If DSS is not attached, specify the extension in one of the following ways: Extension number Slot and port number Logical ID number If you selected the Returning option in Step 4, dial 0.	■ Dial [nnnn] ■ Dial ★ [sspp] ■ Dial # [nnn]	■ Type [nnnn] ■ Type ★ [sspp] ■ Type # [nnn]
11	Specify whether operator receives call type.	Select Enter or Delete.	Press [F10] or [F8]
12	To return to the System Programming menu	Select Exit five times.	Press [F5] five times.

Call Type Queue Priority Level

Use this procedure to assign a priority value (1-7) that determines the order in which calls programmed to ring into the QCC queue are sent to QCC system operator positions. A value of 1 is the highest priority. The QCC queue priority level is assigned for the following types of calls:

- Dial 0 calls (internal calls to the system operator)
- DID calls to invalid destinations (unassigned extension numbers)
- Calls to the Listed Directory Number (extension for the QCC queue)
- Calls programmed to return to the QCC queue (returning from extending, camped-on, held calls, and operator parked calls)
- Group Coverage calls
- Calls signed in (Follow) or forwarded to the system operator
- Calls to a system operator extension number

This procedure does not include programming the QCC queue priority level for individual trunks to ring into the queue. See "QCC Queue Priority Level".

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Call Type Queue Priority Level

Programmable by	System manager
Mode	Hybrid/PBX
Idle Condition	Not required
Planning Form	Form 6a, Optional Operator Features
Factory Setting	4
Valid Entries	1-7
Inspect	No
Copy Option	No

Programming Procedures

Console Procedure Operator → Queued Call → Call Types → Press button next to selection → priority → **Drop** → Dial priority level → Enter → Exit → Exit → Exit → Exit

PC Procedure **[F3]** → **[F2]** → **[F7]** → Press function key next to selection → **[F1]** → **[Alt] + [P]** → Type priority level → **[F10]** → **[F5]** → **[F5]** → **[F5]** → **[F5]**

Procedure: Call Type Queue Priority Level

Step	Display/Instructions	On the console	On the PC
1	System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce		
	Select the Operator menu.	Select Operator .	Press [F3]
2	System Operator: Make a selection Positions Queued Call Hold Timer DLC Hold Exit		
	Select Queued Call.	Select Queued Call.	Press [F2]
3	Queued Call Operator: > Make a selection Hold Rtrn InQue Alert HoldRelease Call Types Threshold Msg Center ElvatePrior ExtndComplt Exit Return Ring		
	Select Call Types.	Select Call Types.	Press [F7]

Programming Procedures

Step	Display/Instructions	On the console	On the PC
4	Call Type: Make a selection Dial 0 QCC Ext Follow/Frwd Returning UnassignDID GrpCoverage ListedNumbr Exit Specify a call type. If you select Follow/Frwd or QCC Ext, go to Step 8.	Press the button next to your selection.	Press the function key next to your selection.
5	**** Calls: Make a selection Priority Operator Exit **** = option name selected in Step 4 Select Priority. If you did not select Group Coverage, go to Step 8.	Select Priority.	Press [F1]
6	Group Coverage Call: Enter coverage group (1-30) queue is receiver Backspace Exit Enter Specify Coverage Group number.	Dial <i>[nn]</i>	Type <i>[nn]</i>
7	Save your entry.	Select Enter .	Press [F10]

Programming Procedures

Step	Display/Instructions	On the console	On the PC
8	**** Priority: Enter queue priority (1-7) x Backspace Exit Enter **** = option name selected in Step 4 x = current priority level		
	Erase current priority level.	Press Drop.	Press [Alt] + [P]
9	Specify the queue priority level.	Dial <i>[n]</i>	Type <i>[n]</i>
10	Save your entry.	Select Enter .	Press [F10]
11	To return to System Programming menu	Select Exit four times.	Press [F5] four times.

Message Center Operation

Use this procedure to designate one or more QCC operator positions to operate as a Message Center. The following options are automatically set for the Message Center position:

- Incoming calls are not directed to this position.
- Returning calls are directed to this position (return from extending and operator parked calls).
- All Group Coverage calls are directed to this position.
- All DID calls to invalid destinations are directed to this position.

Designating a Message Center operation does not change any call type option programming except that the call types mentioned above are added to the calls received at the QCC Message Center.

Summary: Message Center Operation

Programmable by	System manager
Mode	Hybrid/PBX
Idle Condition	Not required
Planning Form	Form 6a, Optional Operator Features
Factory Setting	Not applicable
Valid Entries	QCC extension numbers
Inspect	Yes
Copy Option	No
Console Procedure	Operator → Queued Call → Msg Center → Dial ext. no. → Enter → Exit → Exit → Exit
PC Procedure	[F3] → [F2] → [F8] → Type ext. no. → [F10] → [F5] → [F5] → [F5]

Programming Procedures

Procedure Message Center Operation

Step	Display/Instructions	On the console	On the PC
1	<pre>System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce</pre>		
	Select the Operator menu.	Select Operator	Press [F3]
2	<pre>System Operator: Make a selection Positions Queued Call Hold Timer DLC Hold Exit</pre>		
	Select Queued Call.	Select Queued Call.	Press [F2]
3	<pre>Queued Call Operator: > Make a selection Hold Rtrn InQue Alert HoldRelease Call Types Threshold Msg Center ElvatePrior ExtndComplt Exit Return Ring</pre>		
	Select Message Center.	Select Msg Center.	Press [F8]
4	<pre>Operator Message Center: Enter QCC operator extension number Delete Backspace Exit Enter</pre>		
	If a DSS is attached, go to Step 5a.		
	If a DSS is not attached, go to Step 5b.		

Step	Display/Instructions	On the console	On the PC
5a	If a DSS is attached, do the following: Check the red LEDs for feature status. <i>The red LED indicates the Mowing:</i> <i>flashing = operator is not message center position</i> <i>on = operator is message center position</i> <i>off = extension is not an operator position</i>	Toggle the LED On/Off, as required.	
5b	If a DSS is not attached, do the following: 1. Specify operator position in one of the following ways: Extension number Slot and port number Logical ID number 2. Assignor remove operator as message center.	■ Dial [nnnn] ■ Dial * [sspp] ■ Dial # [nnn] Select Enter or Delete.	■ Type [nnnn] ■ Type * [sspp] ■ Type # [nnn] Press [F10] or [F8]
6	To return to System Programming menu	Select Exit three times.	Press [F5] three times.

Extended Call Completion

Use this procedure to specify one of two basic options for QCC operator positions with a DSS only:

- Automatic completion - allows one touch call transfer; that is, calls are transferred by touching only an extension button on the DSS. The operator does not have to press the Release button.
- Manual completion - QCC operators must press the Release button to extend a call using a DSS.

This option cannot be programmed for individual QCC operator positions; the setting applies to all QCC operator positions.

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Extended Call Completion

Programmable by	System manager
Mode	Hybrid/PBX
Idle Condition	Not required
Planning Form	Form 6a, Optional Operator Features
Factory Setting	Automatic Extended Completion
Valid Entries	Automatic, Manual
Inspect	No
Copy Option	No
Console Procedure	Operator → Queued Call → ExtndComplt → Select automatic or manual complete → Enter → Exit → Exit
PC Procedure	[F3] → [F2] → [F9] → Select automatic or manual complete → [F10] → [F5] → [F5]

Programming Procedures

Procedure: Extended Call Completion

Step	Display/Instructions	On the console	On the PC
1	<pre> System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce </pre>		
	Select the Operator menu.	Select Operator .	Press [F3]
2	<pre> System Operator: Make a selection Positions Queued Call Hold Timer DLC Hold Exit </pre>		
	Select Queued Call.	Select Queued Call.	Press [F2] .
3	<pre> Queued Call Operator: > Make a selection Hold Rtrn InQue Alert HoldRelease Call Types Threshold Msg Center ElvatePrior ExtndComplt Exit Return Ring </pre>		
	Select Extended Completion.	Select ExtndComplt .	Press [F9]
4	<pre> QCC Extend Completion: Select one Automatic Complete Manual Complete Exit Enter </pre>		
	Specify automatic call extension or require operator to extend calls manually.	Select Automatic Complete or Manual Complete.	Press [F1] or [F5]
5	Save your entry.	Select Enter .	Press [F10]
6	To return to System Programming menu	Select Exit two times.	Press [F5] two times.

Return Ring

Use this procedure to specify the number of rings before an unanswered extended call is returned to the QCC queue or QCC Message Center position.

This option cannot be programmed for individual QCC operator positions; the setting applies to all QCC operator positions.

NOTE:

If you want unanswered calls to proceed to voice mail, lengthen the return ring setting.

Entering Programming

Console: Select Menu → Sys Program → Exit
PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary Return Ring

Programmable by	System manager
Mode	Hybrid/PBX
Idle Condition	Not required
Planning Form	Form 6a, Optional Operator Features
Factory Setting	4 rings
Valid Entries	1-15 rings
Inspect	No
Copy Option	No
Console Procedure	Operator → Queued Call → Return Ring → Drop → Dial no. of rings → Enter → Exit → Exit
PC Procedure	[F3] → [F2] → [F10] → [Alt] + [P] → Type no. of rings → [F10] → [F5] → [F5]

Programming Procedures

Procedure: Return Ring

Step	Display/Instructions	On the console	On the PC
1	System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvc		
	Select the Operator menu.	Select Operator .	Press [F3]
2	System Operator: Make a selection Positions Queued Call Hold Timer DLC Hold Exit		
	Select Queued Call.	Select Queued Call.	Press [F2]
3	Queued Call Operator: Make a selection Hold Rtrn InQue Alert HoldRelease Call Types Threshold Msg Center ElvatePrior ExtndComplt Exit Return Ring		
	Select Return Ring.	Select Return Ring.	Press [F10]
4	Queued Call Return Ring: Enter number rings before return (1-15) xx Backspace Exit Enter		
	Erase current number of rings.	Press Drop.	Press [Alt] + [P]
5	Specify number of rings before Dial <i>[nn]</i> extended call returns.		Type <i>[nn]</i>
6	Save your entry.	Select Enter .	Press [F10]
7	To return to System Programming menu	Select Exit two times.	Press [F5] two times.

Position Busy Backup

Use this procedure to designate the calling group to provide the backup position for the QCC queue, that is, to receive incoming calls when all QCC operator positions are in a Position Busy mode.

Position Busy backup is programmed for the QCC queue rather than for individual QCC operator positions. The calling group designated as the QCC queue backup serves as the backup for the Remote Access feature and as backup when the QCC is being used as the system programming console.

Only one Position Busy backup can be programmed per system.

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary Position Busy Backup

Programmable by	System manager
Mode	Hybrid/PBX
Idle Condition	Not required
Planning Form	Form 6a, Optional Operator Features
Factory Setting	No backup
Valid Entries	Calling group number
Inspect	No
Copy Option	No
Console Procedure	Operator → Queued Call → More → QCC Backup → Drop → Dial ext. number → Enter → Exit → Exit
PC Procedure	[F3] → [F2] → [PgUp] → [Alt] + [P] → Type ext. no. → [F10] → [F5] → [F5]

Programming Procedures

Procedure: Position Busy Backup

Step	Display/Instructions	On the console	On the PC
1	System Programming: > Make a selection System Extensions SysReNumber Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce		
	Select the Operator menu.	Select Operator .	Press [F3]
2	System Operator: Make a selection Positions Queued Call Hold Timer DLC Hold Exit		
	Select Queued Call.	Select Queued Call.	Press [F2]
3	Queued Call Operator: Make a selection Hold Rtrn InQue Alert HoldRelease Call Types Threshold Msg Center ElvatePrior ExtndComplt Exit Return Ring		
	Go to the second screen of the Queued Call Operator menu.	Press More	Press [PgUp]
4	Queued Call Operator: > Make a selection QCC Backup Exit		
	Select QCC Backup.	Select QCC Backup.	Press [F1]

Step	Display/Instructions	On the console	On the PC
5	QCC Operator Backup: Enter QCC operator of Calling Group xxxx Delete Backspace Exit Enter xxxx = extension number of current QCC queue backup		
	Erase current number.	Press Drop .	Press [Alt] + [P]
6	Specify the calling group to provide QCC backup in one of the following ways:		
	Extension number	■ Dial <i>[nnnn]</i>	■ Type <i>[nnnn]</i>
	DSS	■ Press DSS button.	
7	Assign or remove extension as position busy backup.	Select Enter or Delete.	Press [F10] or [F8]
8	To return to System Programming menu	Select Exit two times.	Press [F5] two times.

Optional Group-Assigned Features

The procedures in this section describe how to program the following optional features:

- Call Pickup Groups
- Group Paging
- Group Coverage Member Assignments
- Group Coverage Delay Interval
- Group Calling Member Assignments
- Group Calling Trunk or Pool Assignments
- Optional Group-Calling Features
 - Hunt Type
 - Group Calling Delay Announcement
 - Group Coverage Receiver
 - Group Calling Overflow and Threshold
 - Group Calling Message Waiting Indicator
 - Group Calling Calls-In-Queue Alarm Threshold
 - Group Calling External Alert for Calls-In-Queue Alarms
 - Group Type

Call Pickup Groups

Use this procedure to assign or remove a telephone from a call pickup group, consisting of telephone users who can answer one another's calls by pressing a button or by dialing a code.

A maximum of 30 call pickup groups with a maximum of 15 telephones per group are allowed. A telephone can belong to only one group.

Before reassigning a telephone to a new group, you must remove it from its current group.

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary Call Pickup Groups

Programmable by	System manager
Mode	All
Idle Condition	Not required
Planning Form	Form 6d, Group Coverage
Factory Setting	Not applicable
Valid Entries	Call pickup group number, extension number
Inspect	Yes
Copy Option	No
Console Procedure	Extensions → Call Pickup → Dial pickup group no. → Enter → Dial ext. no. → Enter → Enter → Exit → Exit
PC Procedure	[F6] → [F9] → Type pickup group no. → [F10] → Type ext. no. → [F10] → [F5] → [F5]

Programming Procedures

Procedure: Call Pickup Groups

Step	Display/Instructions	On the console	On the PC
1	System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce		
	Select the Extensions menu.	Select Extensions.	Press [F6] .
2	Extensions: > Make a selection LinesTrunks RestrctCopy Line Copy Account Dial OutCd BIS/HFAI Restriction Call Pickup Exit VoiceSignl		
	Select Call Pickup.	Select Call Pickup.	Press [F9] .
3	Call Pickup Groups: Enter group number(1-30) Backspace Exit Enter		
	Specify the call pickup group you want to program (if you are programming a sequence, enter the lowest number).	Dial <i>[nn]</i>	Type <i>[nn]</i>
4	Save your entry.	Select Enter.	Press [F10]

Programming Procedures

Step	Display/Instructions	On the console	On the PC												
5	Call Pickup Group xx: Enter extensions Backspace Exit Delete Next Enter xx = number entered in Step 3 Specify the telephone you want to program in one of the following ways: <table><tr><td>Extension number</td><td>■ Dial [nnnn]</td><td>■ Type [nnnn]</td></tr><tr><td>Slot and port number</td><td>■ Dial * [sspp]</td><td>■ Type * [sspp]</td></tr><tr><td>Logical ID number</td><td>■ Dial # [nnn]</td><td>■ Type # [nnn]</td></tr><tr><td>DSS</td><td>■ Press DSS button.</td><td></td></tr></table> If DSS is attached, check status of the feature. The red LED indicates the following: on= telephone is included in paging group off = telephone is not included in paging group	Extension number	■ Dial [nnnn]	■ Type [nnnn]	Slot and port number	■ Dial * [sspp]	■ Type * [sspp]	Logical ID number	■ Dial # [nnn]	■ Type # [nnn]	DSS	■ Press DSS button.			
Extension number	■ Dial [nnnn]	■ Type [nnnn]													
Slot and port number	■ Dial * [sspp]	■ Type * [sspp]													
Logical ID number	■ Dial # [nnn]	■ Type # [nnn]													
DSS	■ Press DSS button.														
6	To remove telephone from call pickup group To assign telephone to call pickup group and assign telephones to another call pickup group: ■ If next group number is sequential <i>Your previous entry is saved and next group number is sho[F#] on line 1 of screen in Step 5.</i> ■ If next group number is not sequential To assign telephone to call pickup group when all entries are complete	Select Delete . Select Next . Repeat Step 5. Select Enter . Repeat Steps 3-5. Select Enter .	Press [F8] Press [F9] Repeat Step 5. Press [F10] Repeat Steps 3-5. Press [F10]												
7	To return to System Programming menu	Select Exit two times.	Press [F5] two times.												

Group Paging

Use this procedure to assign or remove a telephone from a paging group, consisting of telephone users who hear common announcements over the telephone speakerphone. Only MLX telephones and analog multiline telephones with speakerphones can be members of a paging group.

A maximum of six paging groups with a maximum of 10 telephones per group is allowed. A seventh paging group, called the Page All group, is not limited and includes all telephones connected to the system. Telephones cannot be added to or removed from the Page All group.

To reassign a telephone to a new paging group, just assign it; the telephone is automatically removed from its old paging group.

Entering Programming

Console: Select Menu → Sys Program → Exit
PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary Group Paging

Programmable by	System manager
Mode	All
Idle Condition	Not required
Planning Form	Form 6c, Group Paging
Factory Setting	Not applicable
Valid Entries	Extension number
Inspect	Yes
Copy Option	No
Console Procedure	Extensions → More → Group Page → Dial paging group no. → Enter → Dial ext. no. → Enter → Exit → Exit
PC Procedure	[F6] → [PgUp] → [F2] → Type paging group no. → [F10] → Type ext. no. → [F10] → [F5] → [F5]

Programming Procedures

Procedure: Group Paging

Step	Display/Instructions	On the console	On the PC
1	System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce		
	Select the Extensions menu.	Select Extensions.	Press [F6]
2	Extensions: > Make a selection LinesTrunks RestrctCopy Line Copy Account Dial OutCd BIS/HFAI Restriction Call Pickup Exit VoiceSignl		
	Go to second screen of the Extensions menu.	Press More.	Press [PgUp]
3	Extensions: > Make a selection Ext Status ARS Restrct Group Page Mic Disable Group Cover Remote Frwd Grp Calling Exit		
	Select Group Page.	Select Group Page.	Press [F2]
4	Group Page: Enter extension number of group Backspace Exit Enter		
	Specify the paging group number (if you are programming a sequence, enter the lowest number).	Dial <i>[nn]</i>	Type <i>[nn]</i>
5	Save your entry.	Select <i>Enter</i> .	Press [F10]

Programming Procedures

Step	Display/Instructions	On the console	On the PC
6	Group Page xxxx: Enter extensions Backspace Exit Delete Next Enter xxxx = number entered in step 4 Specify telephone you want to program in one of the following ways: Extension number Slot and port number Logical ID number DSS ■ Dial [nnnn] ■ Dial * [sspp] ■ Dial # [nnn] ■ Press DSS button. ■ Type [nnnn]. ■ Type * [sspp] ■ Type # [nnn] If DSS is attached, check status of the feature. <i>The red LED indicates the following:</i> on= telephone is included in paging group off= telephone is not included in paging group		
7	To remove telephone from paging group To assign telephone to paging group and assign telephone to another paging group: ■ If next extension number is sequential <i>Your previous entry is saved and next group extension number is shown on line 1 of screen in Step 6.</i> ■ If next extension number is not sequential To assign telephone to paging group when all entries are complete	Select Delete . Select Next Repeat Step 6 Select Enter Repeat Steps 3-6 Select Enter .	Press [F8] Press [F9] Repeat Step 6. Press [F10] Repeat Steps 3-6. Press [F10].
8	To return to the System Programming menu	Select Exit two times.	Press [F5] two times.

Group Coverage Member Assignments

Use this procedure to assign or remove a telephone from a coverage group. Coverage is an arrangement in which calls from a group of senders are redirected to one or more receivers. A coverage group is a group of senders.

NOTE:

This procedure assigns senders; make sure that receivers for the coverage group are also programmed. Receivers can be assigned either through individual or centralized telephone programming. See Chapter 4 for information on the appropriate centralized programming procedure.

A maximum of 30 coverage groups is allowed, each with an unlimited number of members. Up to eight receivers can be assigned per coverage group.

A telephone can be a sender in only one group; it can be a receiver for more than one coverage group. A calling group can be assigned as a receiver for a coverage group (see "Group Coverage Receiver"). In Hybrid/PBX mode only, the QCC queue can be a receiver for up to 30 coverage groups (see "QCC Operator to Receive Calls").

If the sender's telephone has one or more personal lines assigned, the sender can be assigned as the principal user so that calls received on the personal line are sent to receivers programmed for Individual or Group Coverage (see "Principal User for Personal Line").

To reassign a telephone to a new coverage group, just make the assignment; the telephone is automatically removed from its old group.

NOTE:

Use Integrated Administration to assign coverage receivers.

Entering Programming

Console: Select Menu → Sys Program → Exit
PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary Group Coverage Member Assignments

Programmable by	System manager
Mode	All
Idle Condition	Not required
Planning Form	Form 6d, Group Coverage
Factory Setting	Not applicable
Valid Entries	Extension numbers
Inspect	Yes
Copy Option	No
Console Procedure	Extensions → More → Group Cover → Dial group no. → Enter → Dial ext. no. → Enter → Exit → Exit
PC Procedure	[F6] → [PgUp] → Type group no. → [F10] → Type ext. no. → [F10] → [F5] → [F5]

Procedure: Group Coverage Member Assignments

Step	Display/Instructions	On the console	On the PC
1	<pre>System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce</pre>		
	Select the Extensions menu.	Select Extensions.	Press [F6]
2	<pre>Extensions: > Make a selection LinesTrunks RestrctCopy Line Copy Account Dial OutCd BIS/HFAI Restriction Call Pickup Exit VoiceSignl</pre>		
	Go to the second screen of the Extensions menu.	Press More	Press [PgUp]

Programming Procedures

Step	Display/Instructions	On the console	On the PC												
3	Extensions: > Make a selection Ext Status ARS Restrct Group Page Mic Disable Group Cover Remote Frwd Grp Calling Exit														
	Select Group Coverage.	Select Group Cover .	Press [F3]												
4	Group Coverage: Enter group number(1-30) Backspace Exit Enter														
	Specify the coverage group (if you preprogramming a sequence, enter the lowest number).	Dial <i>[nn]</i>	Type <i>[nn]</i>												
5	Save your entry.	Select Enter .	Press [F10]												
	Group Cover xx Senders Enter extensions Backspace Delete Next Exit Enter xx = number entered in Step 4 Specify the telephone you want to program in one of the following ways: <table><tr><td>Extension number</td><td>■ Dial <i>[nnnn]</i></td><td>■ Type <i>[nnnn]</i></td></tr><tr><td>Slot and port number</td><td>■ Dial * <i>[sspp]</i></td><td>■ Type * <i>[sspp]</i></td></tr><tr><td>Logical ID number</td><td>■ Dial # <i>[nnn]</i></td><td>■ Type # <i>[nnn]</i></td></tr><tr><td>DSS</td><td>■ Press DSS button.</td><td></td></tr></table> If DSS is attached, check status of the feature. The red LED indicates the following: on= telephone is sender in coverage group off= telephone is not sender in coverage group.	Extension number	■ Dial <i>[nnnn]</i>	■ Type <i>[nnnn]</i>	Slot and port number	■ Dial * <i>[sspp]</i>	■ Type * <i>[sspp]</i>	Logical ID number	■ Dial # <i>[nnn]</i>	■ Type # <i>[nnn]</i>	DSS	■ Press DSS button.			
Extension number	■ Dial <i>[nnnn]</i>	■ Type <i>[nnnn]</i>													
Slot and port number	■ Dial * <i>[sspp]</i>	■ Type * <i>[sspp]</i>													
Logical ID number	■ Dial # <i>[nnn]</i>	■ Type # <i>[nnn]</i>													
DSS	■ Press DSS button.														
		Toggle the LED On/Off, as required													

Programming Procedures

Step	Display/Instructions	On the console	On the PC
7	To remove telephone from coverage group To assign telephone to coverage group and assign telephones to another coverage group: ■ If next group number is sequential <i>Your previous entry is saved and next group number is shown on line 1 of screen shown in Step 6.</i> ■ If next group number is not sequential To assign telephone to coverage group when all entries are complete	Select Delete. Select Next. Repeat Step 6. Select Enter. Repeat Steps 3-6. Select Enter.	Press [F8] Press [F9] Repeat Step 6. Press [F10] Repeat Steps 3-6. Press [F10]
8	To return to System Programming menu	Select Exit two times.	Press [F5] two times.

Group Coverage Delay Interval

Use this procedure to specify the number of rings before a call is sent to Group Coverage receivers.

Entering Programming

Console: Select Menu → Sys Program → Exit
PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select Exit on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary Group Coverage Delay Interval

Programmable by	System manager, Integrated Administration
Mode	All
Idle Condition	Not required
Planning Form	Form 6d, Group Coverage
Factory Setting	3 rings
Valid Entries	1-9 rings
Inspect	No
Copy Option	No
Console Procedure	Options → More → Cover Delay → Drop → Dial no. of rings → Enter → Exit
PC Procedure	[F7] → ([PgUp]) → [F6] → [Alt] + [P] → Type no. of rings → [F10] → [F5]

Programming Procedures

Procedure: Group Coverage Delay Interval

Step	Display/Instructions	On the console	On the PC
1	<pre> System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce </pre>		
	Select the Options menu.	Select Options.	Press [F7]
2	<pre> Options: > Make a selection Transfer Callback CampOn Ext Status CallParkRtn SMDR Delay Ring InsideDial Exit ReminderSrv </pre>		
	Go to the second screen of the Options menu.	Press More .	Press [PgUp]
3	<pre> Options: > Make a selection Unassigned Cover Delay BehndSwitch RecallTimer Rotary Exit </pre>		
	Select Coverage Delay.	Select Cover Delay.	Press [F6]
4	<pre> Coverage Delay: Enter number rings (1-9) x Backspace Exit Enter </pre> x = current number of rings		
	Erase current number of rings.	Press Drop .	Press [Alt] + [P]
5	Specify number of rings.	Dial [n]	Type [n]
6	Save your entry.	Select Enter.	Press [F10]
7	To return to System Programming menu	Select Exit.	Press [F5]

Group Calling Member Assignments

Use this procedure to assign or remove a telephone from a calling group. A calling group is used to direct calls to a group of people who all handle the same type of call. A single extension number is assigned to the group and is used by both inside and outside callers to reach the group.

NOTE:

If a linear hunting pattern is indicated on the back of the form, be sure to assign telephones to the group in the exact order that they are shown on the form. The system searches for an available member in the order that you assign the telephones to the group.

A maximum of 32 calling groups with a maximum of 20 telephones per group is allowed.

A telephone can belong to only one calling group. A QCC cannot be a member of a calling group. The delay announcement device should not be programmed as a calling group member.

The extension status feature must be set to the Calling Group or CMS mode before you assign members to the group. See "Extension Status" for more information.

To reassign a telephone to a new calling group, you must remove it from its old group before programming the new assignment.

Entering Programming

Console: Select Menu → Sys Program → Exit
PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary Group Calling Member Assignments

Programmable by	System manager
Mode	All
Idle Condition	Not required
Planning Form	Form 6d, Group Coverage
Factory Setting	Not applicable
Valid Entries	Extension numbers
Inspect	Yes
Copy Option	No
Console Procedure	Extensions → More → Grp Calling → Members → Dial calling group ext. no. → Enter → Dial ext. no. → Enter → Exit → Exit → Exit
PC Procedure	[F6] → [PgUp] → [F4] → [F9] → Type calling group ext. no. → [F10] → Type ext. no. → [F10] → [F5] → [F5] → [F5]

Procedure: Group Calling Member Assignments

Step	Display/Instructions	On the console	On the PC
1	System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce		
	Select the Extensions menu.	Select Extensions.	Press [F6]
2	Extensions: Make a selection LinesTrunks RestrctCopy Line Copy Account Dial OutCd BIS/HFAI Restriction Call Pickup Exit VoiceSignl		
	Go to the second screen of the Extensions menu.	Press More	Press [PgUp]

Programming Procedures

Step	Display/Instructions	On the console	On the PC
3	Extensions: Make a selection Ext Status ARS Restrct Group Page Mic Disable Group Cover Remote Frwd Grp Calling Exit		
	Select Group Calling.	Select Grp Calling.	Press [F4]
4	Group Calling: > Make a selection Hunt Type Queue Alarm DelayAnnce Xtnl Alert GrpCoverage Overflow Message Members Exit Line/Pool		
	Select Members.	Select Members.	Press [F9]
5	Group Calling: Enter extension number of group Backspace Exit Enter		
	Specify the extension number of the calling group (if you are programming a sequence, enter lowest number.)	Dial [nnnn]	Type [nnnn]
6	Save your entry.	Select Enter.	Press [F10]

Programming Procedures

Step	Display/Instructions	On the console	On the PC
7	Group Calling xxxx: Enter group members Backspace Delete Exit Next Enter xxxx = number entered in Step 5 Specify the telephone you want to program in one of the following ways: Extension number Slot and port number Logical ID number DSS ■ Dial [nnnn] ■ Dial * [sspp] ■ Dial # [nnn] ■ Press DSS button. ■ Type [nnnn] ■ Type * [sspp] ■ Press DSS button. If DSS is attached, check status of the feature. The red LED indicates the following: on= telephone is a member of the calling group off = telephone is not a member of the calling group		
8	To remove telephone from calling group To assign telephone to calling group and assign telephones to another calling group: ■ If next group extension number is sequential <i>Your previous entry is saved and next group extension number is shown on line 1 of screen shown in Step 7.</i> ■ If next group extension number is not sequential To assign telephone to calling group when all entries are complete	Select Delete. Select Next . Repeat Step 7. Select Enter . Repeat Steps 4-7. Select Enter .	Press [F8]. Press [F9] Repeat Step 7. Press [F10] Repeat Steps 4-7. Press [F10]
9	To return System Programming menu	Select Exit three times.	Press [F5] three times.

Group Calling Trunk or Pool Assignments

Use this procedure to assign or remove trunks or pools (Hybrid/PBX only) that ring directly into a calling group.

Incoming calls on each trunk or pool can be directed to only one calling group.

To reassign a trunk or pool to a new calling group, you must remove it from its old group before making the new assignment.

Entering Programming

Console: Select Menu → Sys Program → Exit
PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Group Calling Trunk or Pool Assignments

Programmable by	System manager
Mode	All
Idle Condition	Not required
Planning Form	Form 6e, Group Calling
Factory Setting	Not applicable
Valid Entries	Line/trunk number
Inspect	Yes
Copy Option	No
Console Procedure	Extensions → More → Grp Calling → Line/Pool → Dial calling group ext. no. → Enter → Dial trunk no. → Enter → Exit → Exit → Exit
PC Procedure	[F6] → [PgUp] → [F4] → [F10] → Type calling group ext. no. → [F10] → Type trunk no. → [F10] → [F5] → [F5] → [F5]

Programming Procedures

Procedure: Group Calling Trunk or Pool Assignments

Step	Display/Instructions	On the console	On the PC

1

```
System Programming:  >
Make a selection
System              Extensions
SysReNumber         Options
Operator            Tables
LinesTrunks         AuxEquip
Exit                NightSrvc
```

Select the Extensions menu.

Select Extensions.

Press **[F6]**

2

```
Extensions:          >
Make a selection
LinesTrunks          RestrctCopy
Line Copy            Account
Dial OutCd           BIS/HFAI
Restriction          Call Pickup
Exit                 VoiceSignl
```

Go to the second screen of the
Extensions menu.

Press **More**.

Press **[PgUp]**

3

```
Extensions:          >
Make a selection
Ext Status           ARS Restrct
Group Page           Mic Disable
Group Cover          Remote Frwd
Grp Calling
Exit
```

Select Group Calling.

Select Grp Calling.

Press **[F4]**

4

```
Group Calling:       >
Make a selection
Hunt Type            Queue Alarm
DelayAnnce           Xtnl Alert
GrpCoverage          Overflow
Message              Members
Exit                 Line/Pool
```

Select Line/Pool.

Select Line/Pool.

Press **[F10]**

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Programming Procedures

Step	Display/Instructions	On the console	On the PC
	To assign line trunk or pool to calling group when all entries are complete	Select Enter .	Press [F10]
9	To return to System Programming menu	Select Exit three times.	Press [F5] three times.

Optional Group-Calling Features

The following options are available for calling groups:

- Hunt Type
- Group Calling Delay Announcement
- Group Coverage Receiver
- Group Calling Overflow and Threshold
- Group Calling Message Waiting Indicator
- Group Calling Calls-in-Queue Alarm Threshold
- Group Calling External Alert for Calls-in-Queue Alarms
- Group Type

Hunt Type

Use this procedure to assign one of the following hunt-type patterns to calling groups:

- Circular hunting pattern – The system distributes calls to group members by hunting in a circular pattern for the first available telephone after the one that received the last call to the group.
- Linear hunting pattern – The system searches for an available group member in the order in which telephones were assigned to the calling group.

Entering Programming

Console: Select Menu → Sys Program → Exit
PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Hunt Type

Programmable by	System manager
Mode	All
Idle Condition	Not required
Planning Form	Form 6e, Group Calling
Factory Setting	Circular hunting pattern
Valid Entries	Circular, Linear
Inspect	No
Copy Option	No
Console Procedure	Extensions → More → Grp Calling → Hunt Type → Dial calling group ext. no. → Enter → Circular/Linear → Enter → Exit → Exit → Exit
PC Procedure	[F6] → [PgUp] → [F4] → [F1] → Type calling group ext. no. → [F10] → [F1]/[F2] → [F10] → [F5] → [F5] → [F5]

Programming Procedures

Procedure: Hunt Type

step	Display/Instructions	On the console	On the PC
1	System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce		
	Select the Extensions menu.	Select Extensions .	Press [F6]
2	Extensions: > Make a selection LinesTrunks RestrctCopy Line Copy Account Dial OutCd BIS/HFAI Restriction Call Pickup Exit VoiceSignl		
	Go to the second screen of the Extensions menu.	Press More	Press [PgUp]
3	Extensions: > Make a selection Ext Status ARS Restrct Group Page Mic Disable Group Cover Remote Frwd Grp Calling Exit		
	Select Group Calling.	Select Grp Calling.	Press [F4]
4	Group Calling: > Make a selection Hunt Type Queue Alarm DelayAnnce Xtnl Alert GrpCoverage Overflow Message Members Exit Line/Pool		
	Select Hunt Type.	Select Hunt Type.	Press [F1]

Step	Display/Instructions	On the console	On the PC
5	Group Calling: Enter extension number of group Backspace Exit Enter Specify the extension of the calling group (if you are programming a sequence, enter the lowest number).	Dial <i>[nnnn]</i>	Type <i>[nnnn]</i>
6	Save your entry.	Select Enter .	Press [F10]
7	Group Calling xxxx: Select one Circular Linear Next Exit Enter xxxx = number entered in Step 5 Specify the hunt pattern.	Select Circular or Linear.	Press [F1] or [F2]
8	To save your selection and program hunt type for another calling group: ■ If next group extension number is sequential <i>Your previous entry is saved and next group extension number is shown on line 1 of screen show in Step 7.</i> ■ If next group extension number is not sequential To save your selection when all entries are complete	Select Next . Repeat Step 7. Select Enter . Repeat Steps 5-7. Select Enter .	Press [F9] Repeat Step 7. Press [F10] Repeat Steps 5-7. Press [F10]
9	To return to System Programming menu	Select Exit three times.	Press [F5] three times.

Group Calling Delay Announcement

Use this procedure to designate the announcement device used to play messages to callers while they are waiting in the queue.

Only one announcement device can be designated for each calling group; however, more than one calling group can use the same announcement device.

The delay announcement device should not be programmed as a calling group member.

If the station jack or MFM was previously programmed as a regular station, you must remove all trunk button assignments before you designate the station jack as a delay announcement device.

Entering Programming

Console: Select Menu → Sys Program → Exit
PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Group Calling Delay Announcement

Programmable by	System manager
Mode	All
Idle Condition	Not required
Planning Form	Form 6e, Group Calling
Factory Setting	No delay announcement devices are assigned.
Valid Entries	Announcement, No announcement
Inspect	No
Copy Option	No
Console Procedure	Extensions → More → Grp Calling → DelayAnnce → Dial Calling group ext. no. → Enter → Dial ext. no. of announcement device → Enter → Exit → Exit
PC Procedure	[F6] → [PgUp] → [F4] → [F2] → Type calling group ext. no. → [F10] → Type ext. no. of announcement device → [F10] → [F5] → [F5]

Programming Procedures

Procedure: Group Calling Delay Announcement

Step	Display/Instructions	On the console	On the PC
1	System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce		
	Select the Extensions menu.	Select Extensions.	Press [F6]
2	Extensions: > Make a selection LinesTrunks RestrctCopy Line Copy Account Dial OutCd BIS/HFAI Restriction Call Pickup Exit VoiceSignl		
	Go to the second screen of the Extensions menu.	Press More	Press [PgUp]
3	Extensions: > Make a selection Ext Status ARS Restrct Group Page Mic Disable Group Cover Remote Frwd Grp Calling Exit		
	Select Group Calling.	Select Grp Calling.	Press [F4]
4	Group Calling: > Make a selection Hunt Type Queue Alarm DelayAnnce Xtntl Alert GrpCoverage Overflow Message Members Exit Line/Pool		
	Select Delay Announcement.	Select DelayAnnce.	Press [F2]

Programming Procedures

Step	Display/Instructions	On the console	On the PC
5	GrpCall Delay Announce: Enter extension number of group Backspace Exit Enter Specify the extension of the calling group, (if you are programming a sequence, enter the lowest number).	Dial [nnnn]	Type [nnnn]
6	Save your entry.	Select Enter .	Press [F10]
7	Group Calling xxxx: Enter extension number of delay announcement Delete Backspace Next Exit Enter xxxx = number entered in Step 5 Specify the announcement device you want to program in one of the following ways: Extension number Slot and port number Logical ID number DSS ■ Dial [nnnn] ■ Dial * [sspp] ■ Dial # [nnn] ■ Press DSS button. ■ Type [nnnn] ■ Type * [sspp] ■ Type # [nnn] If DSS is attached, check status of the feature. <i>The red LED indicates the following:</i> on= telephone is included in group off= telephone is not included in group	Toggle the LED On/Off as required	

Programming Procedures

Step	Display/Instructions	On the console	On the PC
8	To remove delay announcement device from calling group	Select Delete .	Press [F8]
	To assign delay announcement device to calling group and assign delay announcement devices to another calling group:		
	■ If next group extension number is sequential <i>Your previous entry is saved and next group extension number is shown on line 1 of screen shown in Step 7.</i>	Select Next . Repeat Step 7.	Press [F9] Repeat Step 7.
	■ If next group extension number is not sequential	Select Enter . Repeat Steps 3-7.	Press [F10] Repeat Steps 3-7.
	To assign delay announcement device to calling group when all entries are complete	Select Enter	Press [F10]
9	To return to System Programming menu	Select Exit two times.	Press [F5] two times.

Group Coverage Receiver

Use this procedure to assign or remove a calling group as receiver for a coverage group.

Calling group member assignments must be made before you assign the group as a receiver for a coverage group.

NOTE:

Integrated Administration uses calling group 30 as the default group to cover AUDIX Voice Power.

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary Group Coverage Receiver

Programmable by	System manager, Integrated Administration
Mode	All
Idle Condition	Not required
Planning Form	Form 6d, Group Coverage
Factory Setting	Not applicable
Valid Entries	Group numbers
Inspect	Yes
Copy Option	No
Console Procedure	Extensions → More → Grp Calling → Grp Coverage → Dial calling group ext. no. → Enter → Dial coverage group no. → Enter → Exit → Exit → Exit
PC Procedure	[F6] → [PgUp] → [F4] → [F3] → Type calling group ext. no. → [F10] → Type coverage group no. → [F10] → [F5] → [F5] → [F5]

Programming Procedures

Procedure: Group Coverage Receiver

Step	Display/Instructions	On the console	On the PC
1	System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce		
	Select the Extensions menu.	Select Extensions.	Press [F6]
2	Extensions: > Make a selection LinesTrunks RestrctCopy Line Copy Account Dial OutCd BIS/HFAI Restriction Call Pickup Exit VoiceSignl		
	Go to the second screen of the Extensions menu.	Press More	Press [PgUp]
3	Extensions: > Make a selection Ext Status ARS Restrct Group Page Mic Disable Group Cover Remote Frwd Grp Calling Exit		
	Select Group Calling.	Select Grp Calling.	Press [F4]
4	Group Calling: > Make a selection Hunt Type Queue Alarm DelayAnnce Xtnl Alert GrpCoverage Overflow Message Members Exit Line/Pool		
	Select Group Coverage.	Select GrpCoverage.	Press [F3]

Programming Procedures

Step	Display/Instructions	On the console	On the PC
5	Group Calling: Enter extension number of group Backspace Exit Enter Specify the extension number of the calling group (if you are programming a sequence, enter the lowest number).	Dial [nnnn]	Type [nnnn]
6	Save your entry.	Select Enter .	Press [F10]
7	Group Calling xxxx: Enter coverage group number (1-30) Backspace Delete Exit Next Enter xxx = number entered in Step 5 Specify the coverage group for which you want to assign the calling group as receiver.	Dial [nn]	Type [nn]
8	To remove calling group as receiver for coverage group To assign calling group as receiver for coverage group and assign another calling group as receiver for coverage group: ■ If next group extension number is sequential <i>Your previous entry is saved and next group extension number is shown on line 1 of screen shown in Step 7.</i> ■ If next group extension number is not sequential	Select Delete. Select Next . Repeat Step 7. Select Enter . Repeat Steps 4-7.	Press [F8] Press [F9] Repeat Step 7. Press [F10] Repeat Steps 4-7.

Programming Procedures

Step	Display/Instructions	On the console	On the PC
	To assign calling group as receiver for coverage group when all entries are complete	Select Enter .	Press [F5]
9	To return to System Programming menu	Select Exit three times.	Press [F5] three times.

Group Calling Overflow and Threshold

Use this procedure to designate another calling group or the QCC queue (Hybrid/PBX only) to receive calls when the number of calls waiting in the queue for a calling group is equal to or greater than the programmed threshold.

Overflow coverage can be provided only by calling groups or the QCC queue (Hybrid/PBX only), not by individual telephones. Group members can be notified when the number of calls waiting in the queue reaches the threshold.

A calling group or the QCC queue (Hybrid/PBX only) can provide overflow coverage for more than one calling group; however, which group's calls go to an available member in the overflow calling group is unpredictable.

The factory-set extension number for QCC Listed Directory Number is 600.

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type SPM → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary Group Calling Overflow and Threshold

Programmable by	System manager
Mode	All
Idle Condition	Not required
Planning Form	Form 6e, Group Calling
Factory Setting	Overflow coverage - none; threshold -1 call
Valid Entries	Backup extension number; 1-99 calls
Inspect	No
Copy Option	No
Console Procedure	Extensions → More → Grp Calling → Overflow → Dial calling group ext. no. → Enter → Dial ext. no. → Enter → Drop → Dial no. of Calls → Enter → Exit → Exit
PC Procedure	[F6] → [PgUp] → [F4] → [F8] → Type calling group ext. no. → [F10] → Type backup ext. no. → [F10]/[F8] → [Alt] + [P] → Type no. of call → [F10] → [F5] → [F5]

Programming Procedures

Procedure: Group Calling Overflow and Threshold

Step	Display/Instructions	On the console	On the PC
1	System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvc		
	Select the Extensions menu.	Select Extensions.	Press [F6]
2	Extensions: > Make a selection LinesTrunks RestrctCopy Line Copy Account Dial OutCd BIS/HFAI Restriction Call Pickup Exit VoiceSignl		
	Go to the second screen of the Extensions menu.	Press More .	Press [PgUp]
3	Extensions: > Make a selection Ext Status ARS Restrct Group Page Mic Disable Group Cover Remote Frwd Grp Calling Exit		
	Select Group Calling.	Select Grp Calling. Press [F4]	
4	Group Calling: > Make a selection Hunt Type Queue Alarm DelayAnnce Xtnl Alert GrpCoverage Overflow Message Members Exit Line/Pool		
	Select Overflow.	Select Over flow	Press [F8]

Programming Procedures

Step	Display/Instructions	On the console	On the PC
5	Group Calling: Enter extension number of group Backspace Exit Enter Specify the extension of the calling group (if you are programming a sequence, enter the lowest number).	Dial [nnnn]	Type [nnnn]
6	Save your entry.	Select Enter .	Press [F10]
7	Group Calling xxxx: Enter cover overflow group number or QCC LDN xxxx Delete Backspace Exit Enter xxxx = number entered in Step 5 Specify the extension of the calling group or QCC Listed Directory Number you want to assign as backup coverage for calling group.	Dial [nnnn]	Type [nnnn]
8	Assign or remove extension as backup. If you do not want to change the current number of calls, you have finished this procedure.	Select Enter or Delete .	Press [F10] or [F8]

Step	Display/Instructions	On the console	On the PC
9	Group Calling xxxx: Assign number of calls before overflow (1-99) Backspace Exit Enter xxxx = number entered in Step 5 nnn = current number of calls Erase current number of calls.	Press Drop .	Press [Alt] + [P]
10	Specify desired number of calls.	Dial <i>[nn]</i>	Type <i>[nn]</i>
11	Save your entry.	Select Enter .	Press [F10] .
12	To return to System Programming menu	Select Exit two times.	Press [F5] two times.

Group Calling Message Waiting Indicator

Use this procedure to designate a telephone to receive calling group message-waiting indications (MWI).

Only one telephone can be designated as a message-waiting receiver for each calling group; however, more than one calling group can use the same message-waiting receiver. The telephone assigned as a message-waiting receiver does not have to be a member of the calling group.

Message-waiting indications cannot be sent to the extension assigned to the group unless this option is programmed. The message-waiting receiver cannot distinguish between messages left for the calling group and personal messages.

Entering Programming

Console: Select Menu → Sys Program → Exit
PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Group Calling Message Waiting Indicator

Programmable by	System manager
Mode	All
Idle Condition	Not required
Planning Form	Form 6e, Group Calling
Factory Setting	No message-waiting receiver assigned
Valid Entries	Extension number
Inspect	No
Copy Option	No
Console Procedure	Extensions → More → Grp Calling → Message → Dial calling group ext. no. → Enter → Dial ext. no. for MWI receiver → Enter → Exit → Exit
PC Procedure	[F6] → [PgUp] → [F4] → [F4] → Type calling group ext. no. → [F10] → Type ext. no. for MWI receiver → [F10] → [F5] → [F5]

Procedure: Group Calling Message Waiting Indicator

Step	Display/Instructions	On the console	On the PC
1	System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce		
	Select the Extensions menu.	Select Extensions.	Press [F6]
2	Extensions: > Make a selection LinesTrunks RestrctCopy Line Copy Account Dial OutCd BIS/HFAI Restriction Call Pickup Exit VoiceSignl		
	Go to the second screen of the Extensions menu.	Press More	Press [PgUp]
3	Extensions: > Make a selection Ext Status ARS Restrct Group Page Mic Disable Group Cover Remote Frwd Grp Calling Exit		
	Select Group Calling.	Select Grp Calling.	Press [F4]
4	Group Calling: > Make a selection Hunt Type Queue Alarm DelayAnnce Xtnl Alert GrpCoverage Overflow Message Members Exit Line/Pool		
	Select Message Waiting Receiver.	Select Message .	Press [F4]

Step	Display/Instructions	On the console	On the PC
5	Group Calling: Enter extension number of group Delete Backspace Exit Enter Specify the extension of the calling group (if you are programming a sequence, enter the lowest number).	Dial [nnnn]	Type [nnnn]
6	Save your entry.	Select Enter .	Press [F10]
7	Group Calling xxxx: Enter message waiting extension nnnn Backspace Next Exit Enter xxxx = number entered in Step 5 nnnn = current extension Erase current extension.	Press Drop.	Press [Alt] + [P]
8	Specify the telephone you want to assign in one of the following ways: Extension number Slot and port number Logical ID number DSS If DSS is attached, check status of the feature. <i>The red LED indicates the following:</i> on= telephone is included in group off= telephone is not included in group	■ Dial [nnnn] ■ Dial * [sspp] ■ Dial # [nnn] ■ Press DSS button. Toggle the LED On/Off as required.	■ Type [nnnn] ■ Type * [sspp] ■ Type # [nnn]

Step	Display/Instructions	On the console	On the PC
9	To remove calling group as receiver for coverage group To assign calling group as receiver for coverage group and assign calling group shown as receiver for another coverage group: ■ If next group extension number is sequential <i>Your previous entry is saved and next group extension number is shown on line 1 of screen in Step 7.</i> ■ If next group extension number is not sequential To assign calling group as receiver for coverage group when all entries are complete	Select Delete . Select Next . Repeat Steps 7 and 8. Select Enter . Repeat Steps 4-8. Select Enter .	Press [F8] Press [F9] Repeat Steps 7 and 8. Press [F10] Repeat Steps 4-8, Press [F5]
10	To return to System Programming menu	Select Exit two times.	Press [F5] two times.

Group Calling Calls-In-Queue Alarm Threshold

Use this procedure to specify the number of unanswered calls waiting in the calling group queue before group members are notified with either an external alert or a light on the telephone. Group members are notified when the number of calls waiting in the queue is equal to or greater than the programmed threshold.

Entering Programming

Console: Select Menu → Sys Program → Exit
PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary Group Calling Calls-In-Queue Alarm Threshold

Programmable by	System manager
Mode	All
Idle Condition	Not required
Planning Form	Form 6e, Group Calling
Factory Setting	1 call
Valid Entries	1 - 99
Inspect	No
Copy Option	No
Console Procedure	Extensions → More → Grp Calling → Queue Alarm → Dial calling group ext. no. → Enter → Drop → Dial no. of Calls → Enter → Exit → Exit
PC Procedure	[F6] → [PgUp] → [F4] → [F6] → Type calling group ext. no. → [F10] → [Alt] + [P] → Type no. of calls → [F10] → [F5] → [F5]

Procedure Group Calling Calls-In-Queue Alarm Threshold

Step	Display/Instructions	On the console	On the PC

1

```
System Programming:  >
Make a selection
System      Extensions
SysRenumbr  Options
Operator    Tables
LinesTrunks AuxEquip
Exit        NightSrvce
```

Select the Extensions menu.

Select Extensions.

Press **[F6]**

2

```
Extensions:  >
Make a selection
LinesTrunks RestrctCopy
Line Copy    Account
Dial OutCd   BIS/HFAI
Restriction  Call Pickup
Exit         VoiceSignl
```

Go to the second screen
of the Extensions menu.

Press **More**

Press **[PgUp]**

3

```
Extensions:  >
Make a selection
Ext Status   ARS Restrct
Group Page   Mic Disable
Group Cover   Remote Frwd
Grp Calling
Exit
```

Select Group Calling.

Select Grp Calling.

Press **[F4]**

4

```
Group Calling:  >
Make a selection
Hunt Type       Queue Alarm
DelayAnnce      Xtnl Alert
GrpCoverage     Overflow
Message         Members
Exit            Line/Pool
```

Select Queue Alarm.

Select Queue Alarm.

Press **[F6]**

Programming Procedures

Step	Display/Instructions	On the console	On the PC
5	Group Calling: Enter extension number of group Backspace Enter Exit Enter Specify the extension of the calling group (if you are programming a sequence enter the lowest number).	Dial [nnnn]	Type [nnnn]
6	Save your entry.	Select Enter .	Press [F10]
7	Group Calling xxxx: Enter number calls before alarm (1-99) nn Backspace Next Exit Enter xxxx = number entered in Step 5 nnn = current number of calls Erase current number of calls.	Press Drop.	Press [Alt] + [P]
8	Specify desired number of calls before notification.	Dial [nn]	Type [nn]
9	To save your entry and specify alarm threshold for another calling group: ■ If next group extension number is sequential <i>Your previous entry is saved and next group extension number is shown on line 1 of screen in Step 7.</i> ■ If next group extension number is not sequential To save your entry when all entries are complete	Select Next . Repeat Steps 7 and 8. Select Enter Repeat Steps 4-8 Select Enter .	Press [F9] Repeat Steps 7 and 8. Press [F10] Repeat Steps 4-8. Press [F10]
10	To return to System Programming menu	Select Exit two times.	Press [F5] two times.

Group Calling External Alert for Calls-In-Queue Alarms

Use this procedure to designate the external alert device used to notify calling group members when the number of calls in the queue reaches the programmed threshold.

Only one external alert device can be designated for each calling group.

Since the external alert signal is continuous, it is recommended that only lamp-type external alert devices be designated for use for the Calls-in-Queue alarm.

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Group Calling External Alert for Calls-In-Queue Alarms

Programmable by	System manager
Mode	All
Idle Condition	Not required
Planning Form	Form 6e, Group Calling
Factory Setting	Not applicable
Valid Entries	Extension number
Inspect	No
Copy Option	No
Console Procedure	Extensions → More → Grp Calling → Xtnl Alert → Dial calling group ext. no. → Enter → Drop → Dial ext. no. for alert → Enter → Exit → Exit
PC Procedure	[F6] → [PgUp] → [F4] → [F7] → Type calling group ext. no. → [F10] → [Alt] + [P] → Type ext. no. for alert → [F10] → [F5] → [F5]

Procedure: Group Calling External Alert for Calls-In-Queue Alarms

Step	Display/Instructions	On the console	On the PC
1	<pre>System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce</pre>		
	Select the Extensions menu.	Select Extensions.	Press [F6]
2	<pre>Extensions: > Make a selection LinesTrunks RestrctCopy Line Copy Account Dial OutCd BIS/HFAI Restriction Call Pickup Exit VoiceSignl</pre>		
	Go to the second screen of the Extensions menu.	Press More .	Press [PgUp]
3	<pre>Extensions: > Make a selection Ext Status ARS Restrct Group Page Mic Disable Group Cover Remote Frwd Grp Calling Exit</pre>		
	Select Group Calling.	Select Grp Calling.	Press [F4]
4	<pre>Group Calling: > Make a selection Hunt Type Queue Alarm DelayAnnce Xtnl Alert GrpCoverage Overflow Message Members Exit Line/Pool</pre>		
	Select External Alert.	Select Xtnl Alert.	Press [F7]

Programming Procedures

Step	Display/Instructions	On the console	On the PC
5	Group Calling: Enter extension number of group Backspace Exit Enter Specify the extension of the calling group (if you are programming a sequence, enter the lowest number).	Dial <i>[nn]</i>	Type <i>[nn]</i>
6	Save your entry.	Select Enter .	Press [F10]
7	Group Calling xxxx: Enter external alert extension nnnn Backspace Delete Exit Next Enter xxxx = number entered in Step 5 nnnn = current extension Erase current external alert.	Press Drop .	Press [Alt] + [P]
8	Specify the external alert you want to assign in one of the following ways: Extension number Slot and port number Logical ID number DSS If DSS is attached, check status of the feature. <i>The red LED indicates the following:</i> <i>on = telephone is included in group</i> <i>off = telephone is not included group</i>	■ Dial <i>[nnnn]</i> ■ Dial * <i>[sspp]</i> ■ Dial # <i>[nnn]</i> ■ Press DSS button. Toggle the LED On/Off as required	■ Type <i>[nnnn]</i> ■ Type * <i>[sspp]</i> ■ Type # <i>[nnn]</i>

Programming Procedures

Step	Display/Instructions	On the console	On the PC
9	To remove external alert as alarm for calling group	Select De l e t e .	Press [F8]
	To assign external alert as calls-in-Queue alarm and assign external alert as Calls-In-Queue alarm for another calling group:		
	■ If next group extension number is sequential <i>Your previous entry is saved and next group extension number is shown on line 1 of screen in Step 7.</i>	Select Next . Repeat Steps 7 and 8.	Press [F9] Repeat Steps 7 and 8.
	■ If next group extension number is not sequential	Select Enter . Repeat Steps 4-8.	Press [F10] Repeat Steps 4-8.
	To assign external alert as Calls-In-Queue alarm for calling group when all entries are complete	Select Enter .	Press [F10]
10	To return to System Programming menu	Select Exit two times.	Press [F5] two times.

Group Type

Use this procedure to determine whether or not the system automatically logs in members of a calling group after a power failure. This setting also determines the type of voice messaging interface when the calling group is used to connect voice messaging or automated attendant applications. The following are the possible settings:

- Automatic Log Out – Used for calling groups to specify that the system does not automatically log in calling group members after a power failure. Calling group members must manually log themselves into the group.
- Automatic Log In – Used for calling groups that consist of fax machines or data ports (also called data hunt groups) to specify that the system automatically logs in calling group members after a power failure. See Chapter 3 for more information, This setting can also be used for calling groups consisting of telephones.
- Integrated VMI - Used when a voice messaging system that requires special signaling for integrated operation (for example, AUDIX Voice Power-IS II or MERLIN MAIL Voice Messaging System) is connected to one or more station jacks assigned to a calling group. The system automatically logs in the group members after a power failure.
- Generic VMI - Used when a voice messaging system that does not need special signaling (for example, MERLIN Attendant) is connected to one or more station jacks assigned to a calling group. The system automatically logs in the group members after a power failure.

Entering Programming

Console: Select Menu → Sys Program → Exit
PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary Group Type

Programmable by	System manager
Mode	All
Idle Condition	Not required
Planning Form	Form 6e, Group Calling
Factory Setting	Automatic Log Out
Valid Entries	Automatic log in, automatic log out, integrated VMI, generic VMI
Inspect	No
Copy Option	No
Console Procedure	Extensions → More → Grp Calling → More → Group Type → Dial calling group ext. no. → Enter → Specify login type → Enter/Next → Enter → Exit → Exit
PC Procedure	[F6] → [PgUp] → [F4] → [PgUp] → [F1] → Type calling group ext. no. → [F10] → Specify login type → [F10] → [F5] → [F5]

Procedure: Group Type

Step	Display/Instructions	On the console	On the PC
1	<pre> System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvc </pre>		
	Select the Extensions menu.	Select Extensions.	Press [F6]
2	<pre> Extensions: > Make a selection LinesTrunks RestrctCopy Line Copy Account Dial OutCd BIS/HFAI Restriction Call Pickup Exit VoiceSignl </pre>		
	Go to the second screen of the Extensions menu.	Press More	Press [PgUp]
3	<pre> Extensions: Make a selection Ext Status ARS Restrct Group Page Mic Disabl Group Cover Remote Frw Grp Calling Exit </pre>		
	Select Group Calling.	Select Grp Calling.	Press [F4]
4	<pre> Group Calling: > Make a selection Hunt Type Queue Alarm DelayAnnce Xtnl Alert GrpCoverage Overflow Message Members Exit Line/Pool </pre>		
	Go to the second screen of the Group Calling menu.	Press More	Press [PgUp]

Programming Procedures

Step	Display/Instructions	On the console	On the PC
5	Group Calling: Make a selection Group Type Exit		
	Select Group Type.	Select Group Type.	Press [F1]
6	Group Calling: Enter extension number of group Backspace Exit Enter		
	Specify the extension of the group.	Dial [nnnn]	Type [nnnn]
7	Save your entry.	Select Enter .	Press [F10]
8	Group Calling xxxx: Select One Auto Login Auto Logout Integ VMI Generic VMI Next Exit Enter xxxx = number entered in Step 6		
	Specify type of login after power failure.	Press the button next to your selection.	Press the function key next to your selection.
9	To save your selection and assign Group Type to another calling group:		
	■ If next group extension number is sequential <i>Your previous entry is saved and next group extension number is shown on line 1 of screen in Step 8.</i>	Select Next . Repeat Step 8.	Press [F9] Repeat Step 8.
	■ If next group extension number is not sequential	Select Enter . Repeat Steps 5-8.	Press [F10] Repeat Steps 5-8.
	To save your entry when all entries are complete	Select Enter .	Press [F10]

Programming Procedures

Step	Display/Instructions	On the console	On the PC
10	To return to System Programming menu	Select Exit three times.	Press [F5] three times.

System Features

The procedures in this section consist of instructions for programming optional system features that affect all or most system users. The following procedures are included:

- Transfer Return Time
- One-Touch Transfer/Hold
- Transfer Audible
- Type of Transfer
- Camp-On Return Time
- Call Park Return Time
- Delay Ring Interval
- Automatic Callback Interval
- Extension Status
- SMDR Language
- SMDR Call Report Format
- SMDR Call Length
- SMDR Calls Recorded on Call Report
- Inside Dial Tone
- Reminder Service Cancel
- Redirect Outside Calls to Unassigned Extension Numbers
- Host System Dial Codes for Behind Switch Mode
- Recall Timer
- Allowed Lists
- Assign Allowed Lists to Telephones
- Disallowed Lists
- Assign Disallowed Lists to Telephones
- Remote Access Trunk Assignment
- Remote Access Automatic Callback
- Remote Access without Barrier Codes
- Remote Access Barrier Codes
- Remote Access with Barrier Codes

Transfer Return Time

Use this procedure to specify the number of rings before a call transferred to another inside telephone is returned to the originator. A setting of 0 means that transferred calls are never returned to the originator.

The transfer return time should not be set to 0 in a system with single-line telephones.

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Transfer Return Time

Programmable by	System manager, Integrated Administration
Mode	All
Idle Condition	Not required
Planning Form	Form 6f, System Features
Factory Setting	4 rings (Integrated Administration -6 rings)
Valid Entries	0-9 rings
Inspect	No
Copy Option	No
Console Procedure	Options → Transfer → Return Time → Drop → Dial no. of rings → Enter → Exit → Exit
PC Procedure	[F7] → [F1] → [F1] → [Alt] + [P] → Type no. of rings → [F10] → [F5] → [F5]

Programming Procedures

Procedure Transfer Return Time

Step	Display/Instructions	On the console	On the PC
1	<pre>System Programming: > Make a selection System Extensions SysReNUMBER Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce</pre>		
	Select the Options menu.	Select Options.	Press [F7]
2	<pre>Options: > Make a selection Transfer Callback CampOn Ext Status CallParkRtn SMDR Delay Ring InsideDial Exit ReminderSrv</pre>		
	Select Transfer.	Select Transfer.	Press [F1]
3	<pre>Transfer Make a selection Return Time One Touch Audible Type Exit</pre>		
	Select Return Time.	Select Return Time	Press [F1]
4	<pre>Transfer Return: Enter number rings (0-9) x Backspace Exit Enter</pre> x = current number of rings		
	Erase current number of rings.	Press Drop.	Press [Alt] + [P]

Programming Procedures

Step	Display/Instructions	On the console	On the PC
5	Specify number of rings before transferred call is returned to originator. (0 means that calls are not returned.)	Dial <i>[n]</i>	Type <i>[n]</i>
6	Save your entry.	Select Enter .	Press [F10]
7	To return to System Programming menu	Select Exit two times.	Press [F5] two times.

One-Touch Transfer/One-Touch Hold

Use this procedure to assign the One-Touch Transfer or One-Touch Hold feature. One-Touch Transfer allows users to initiate transfers to another person by pressing an **Auto Dial** or DSS button for that person.

The One-Touch Transfer feature is not available on single-line telephones.

If the One-Touch Transfer feature is assigned, you must also specify whether the transfer completion is manual (the user has to press another button to complete the transfer) or automatic (the transfer is completed automatically).

One-Touch Hold applies to incoming central office calls only. When the user presses an **Auto Dial** or DSS button to initiate a transfer, the outside caller is put on hold. The system automatically selects an intercom facility and dials the transfer destination. There is no transfer return function with this method. Consequently, if the transfer destination does not answer or is busy, the user who initiates the transfer must notify the outside caller, or the outside caller will remain on hold.

One-Touch Hold is the factory setting in the Behind Switch mode only.

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: One-Touch Transfer/Hold

Programmable by	System manager
Mode	All
Idle Condition	Not required
Planning Form	Form 6f, System Features
Factory Setting	One-Touch Transfer, automatic completion (One-Touch Hold is the factory setting in Behind Switch mode)
Valid Entries	Transfer, Hold
Inspect	No
Copy Option	No
Console Procedure	To program One-Touch Transfer: Options → Transfer → One Touch → Transfer → Enter → Manual/Automatic → Enter → Exit → Exit To Program One-Touch Hold: Options → Transfer → One Touch → Hold → Enter → Exit → Exit
PC Procedure	To program One-Touch Transfer: [F7] → [F1] → [F2] → [F1] → [F10] → [F1]/[F2] → [F10] → [F5] → [F5] To program One-Touch Hold: [F7] → [F1] → [F2] → [F2] → [F10] → [F5] → [F5]

Procedure: One-Touch Transfer/Hold

Step	Display/Instructions	On the console	On the PC
1	<pre>System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce</pre>		
	Select the Options menu.	Select Options	Press [F7]
2	<pre>Options: > Make a selection Transfer Callback CampOn Ext Status CallParkRtn SMDR Delay Ring InsideDial Exit ReminderSrv</pre>		
	Select Transfer.	Select Transfer .	Press [F1]
3	<pre>Transfer Make a selection Return Time One Touch Audible Type Exit</pre>		
	Select One Touch.	Select One Touch .	Press [F2]
4	<pre>One Touch Call Handling: Select one Transfer Hold Exit Enter</pre>		
	Specify transfer or hold.	Select Transfer or Hold.	Press [F1] or [F2]

Programming Procedures

Step	Display/Instructions	On the console	On the PC
5	Save your entry. If you select One-Touch Transfer, go to Step 6. If you select One-Touch Hold, you have finished this procedure.	Select Enter .	Press [F10]
6	Transfer Completion: Select one Manual Automatic Exit Enter Specify manual or automatic transfer completion.	Select Manual or Automatic .	Press [F1] or [F2]
7	Save your entry.	Select Enter .	Press [F10]
8	To return to System Programming menu	Select Exit two times.	Press [F5] two times.

Transfer Audible

Use this procedure to specify whether an outside caller hears ringing (also called ringback) or Music-on-Hold while being transferred. Inside calls hear ringback.

NOTE:

If you use equipment that rebroadcasts music or other copyrighted materials, you may be required to obtain a copyright license from and pay license fees to a third party (such as the American Society of Composers, Artists, and Producers or Broadcast Music Incorporated).

Magic on Hold® requires no such license and can be purchased from your authorized dealer.

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Transfer Audible

Programmable by	System manager
Mode	All
Idle Condition	Not required
Planning Form	Form 6f, System Features
Factory Setting	Music-on-Hold
Valid Entries	Music-on-Hold, Ringback
Inspect	No
Copy Option	No
Console Procedure	Options → Transfer → Audible → Music-on-Hold/Ringback → Enter → Exit → Exit
PC Procedure	[F7] → [F1] → [F3] → [F1]/[F2] → [F10] → [F5] → [F5]

Programming Procedures

Procedure: Transfer Audible

Step	Display/Instructions	On the console	On the PC
1	<pre> System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce </pre>		
	Select the Options menu.	Select Options	Press [F7]
2	<pre> Options: > Make a selection Transfer Callback CampOn Ext Status CallParkRtn SMDR Delay Ring InsideDial Exit ReminderSrv </pre>		
	Select Transfer.	Select Transfer.	Press [F1]
3	<pre> Transfer Make a selection Return Time One Touch Audible Type Exit </pre>		
	Select Transfer Audible.	Select Audible.	Press [F3]
4	<pre> Transfer Audible: Select one Music On Hold Ringback Exit Enter </pre>		
	Specify whether the caller hears Music On Hold or ringing.	Select Music on Hold or Ringback.	Press [F1] or [F2]
5	Save your entry.	Select Enter.	Press [F10]
6	To return to System Programming menu	Select Exit two times.	Press [F5] two times.

Type of Transfer

Use this procedure to specify whether the system automatically selects an Intercom or System Access Ring or Voice button when the Transfer button or an Auto Dial or DSS button (for One-Touch Transfer) is pressed.

Entering Programming

Console: Select Menu → Sys Program → Exit
PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary Type of Transfer

Programmable by	System manager
Mode	All
Idle Condition	Not required
Planning Form	Form 6f, System Features
Factory Setting	Ring button (Intercom or SA) is automatically selected
Valid Entries	Voice Announce, Ring
inspect	No
Copy Option	No
Console Procedure	Options → Transfer → Type → Voice Announce/Ring → Enter → Exit → Exit
PC Procedure	[F7] → [F1] → [F4] → [F1]/[F2] → [F10] → [F5] → [F5]

Programming Procedures

Procedure: Type of Transfer

Step	Display/Instructions	On the console	On the PC
1	System Programming: > Make a selection System Extensions SysReNumber Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce		
	Select the Options menu.	Select Options.	Press [F7]
2	Options: > Make a selection Transfer Callback CampOn Ext Status CallParkRtn SMDR Delay Ring InsideDial Exit ReminderSrv		
	Select Transfer.	Select Transfer.	Press [F1]
3	Transfer Make a selection Return Time One Touch Audible Type Exit		
	Select Transfer Type.	Select Type.	Press [F4]
4	Type of Transfer: Select one Voice Announce Ring Exit Enter		
	Specify whether a voice or ring button is automatically selected.	Select Voice Announce or Ring.	Press [F1] or [F2]
5	Save your entry.	Select Enter.	Press [F10]
6	To return to System Programming menu	Select Exit two times.	Press [F5] two times.

Camp-On Return Time

Use this procedure to specify the number of seconds before a camped-on call (a call transferred to a busy telephone with the Camp-On feature) is returned to the originator.

Entering Programming

Console: Select Menu → Sys Program → Exit
PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Camp-On Return Time:

Programmable by	System manager
Mode	All
Idle Condition	Not required
Planning Form	Form 6f, System Features
Factory Setting	90 seconds
Valid Entries	30-300 seconds, in 10-second increments
Inspect	No
Copy Option	No
Console Procedure	Options → CampOn → Drop → Dial no. of seconds → Enter → Exit
PC Procedure	[F7] → [F2] → [Alt] + [P] → Type no. of seconds → [F10] → [F5]

Procedure: Camp-On Return Time

Step	Display/Instructions	On the console	On the PC
1	<pre> System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce </pre>		
	Select the Options menu.	Select Options.	Press [F7]
2	<pre> Options: > Make a selection Transfer Callback CampOn Ext Status CallParkRtn SMDR Delay Ring InsideDial Exit ReminderSrv </pre>		
	Select Camp-On.	Select CampOn.	Press [F2]
3	<pre> Camp On: Enter number of seconds (30-300, increments 10) xxx Backspace Exit Enter </pre> xxx = current number of seconds		
	Erase current number of seconds.	Press Drop .	Press [Alt] + [P]
4	Specify number of seconds before camped-on call returns to originator.	Dial <i>[nnn]</i>	Type <i>[nnn]</i>
5	Save your entry.	Select Enter.	Press [F10]
6	To return to System Programming menu	Select Exit.	Press [F5]

Call Park Return Time

Use this procedure to specify the number of seconds before a call put on hold with the Park feature is returned to the originator.

Entering Programming

Console: Select Menu → Sys Program → Exit
PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Call Park Return Time

Programmable by	System manager
Mode	All
Idle Condition	Not required
Planning Form	Form 6f, System Features
Factory Setting	160 seconds
Valid Entries	30-300 seconds, in 10-second increments
Inspect	No
Copy Option	No
Console Procedure	Options → CallParkRtn → Drop → Dial no. of seconds → Enter → Exit
PC Procedure	[F7] → [F3] → [Alt] + [P] → Type no. of seconds → [F10] → [F5]

Programming Procedures

Procedure: Call Park Return Time

Step	Display/Instructions	On the console	On the PC
1	System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce		
	Select the Options menu.	Select Options.	Press [F7]
2	Options: > Make a selection Transfer Callback CampOn Ext Status CallParkRtn SMDR Delay Ring InsideDial Exit ReminderSrv		
	Select Call Park Return.	Select CallParkRtn.	Press [F3]
3	Call Park Return Time: Enter time before return (30-300sec increment 10) xxx Backspace Exit Enter xxx = current number of seconds		
	Erase current number of seconds.	Press Drop.	Press [Alt] + [P]
4	Specify number of seconds before parked call returns to originator.	Dial <i>[nnn]</i>	Type <i>[nnn]</i>
5	Save your entry.	Select Enter.	Press [F10]
6	To return to System Programming menu	Select Exit.	Press [F5]

Delay Ring Interval

Use this procedure to specify the number of rings for the Delay Ring Interval, which applies when a Primary, Secondary, or Group Cover button is set to delayed ring.

Entering Programming

Console: Select Menu → Sys Program → Exit
PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Delay Ring Interval

Programmable by	System manager
Mode	All
Idle Condition	Not required
Planning Form	Form 6d, Group Coverage
Factory Setting	2 rings
Valid Entries	1-6 rings
Inspect	No
Copy Option	No
Console Procedure	Options → Delay Ring → Drop → Dial no. of rings → Enter → Exit
PC Procedure	[F7] → [F4] → [Alt] + [P] → Type no. of rings → [F10] → [F5]

Procedure: Delay Ring Interval

Step	Display/Instructions	On the console	On the PC
1	<pre> System Programming: > Make a selection System Extensions SysReNumber Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce </pre>		
	Select the Options menu.	Select Options.	Press [F7]
2	<pre> Options: > Make a selection Transfer Callback CampOn Ext Status CallParkRtn SMDR Delay Ring InsideDial Exit ReminderSrv </pre>		
	Select Delay Ring.	Select Delay Ring.	Press [F4]
3	<pre> Delay Ring: Enter number rings (1-6) x Backspace Exit Enter </pre> x = current number of rings		
	Erase current number of rings.	Press Drop .	Press [Alt] + [P]
4	Specify number of rings for Delay Ring Interval.	Dial <i>[n]</i> .	Type <i>[n]</i> .
5	Save your entry.	Select Enter.	Press [F10]
6	To return to System Programming menu	Select Exit.	Press [F5]

Automatic Callback Interval

Use this procedure to specify the number of rings at the originator's telephone before the system cancels a Callback request.

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Automatic Callback Interval

Programmable by	System manager
Mode	All
Idle Condition	Not required
Planning Form	Form 6f, System Features
Factory Setting	3 rings
Valid Entries	1-6 rings
Inspect	No
Copy Option	No
Console Procedure	Options → Callback → Drop → Dial no. of rings → Enter → Exit
PC Procedure:	[F7] → [F6] → [Alt] + [P] → type no. of rings → [F10] → [F5]

Programming Procedures

Procedure: Automatic Callback Interval

Step	Display/Instructions	On the console	On the PC
1	<pre>System Programming: > Make a selection System Extensions SysReNumber Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce</pre>		
	Select the Options menu.	Select Options	Press [F7]
2	<pre>Options: > Make a selection Transfer Callback CampOn Ext Status CallParkRtn SMDR Delay Ring InsideDial Exit ReminderSrv</pre>		
	Select Automatic Callback Interval.	Select Callback.	Press [F6]
3	<pre>Automatic Callback: Enter number callback rings (1-6) x Backspace Exit Enter</pre> x = current number of rings		
	Erase current number of rings.	Press Drop.	Press [Alt] + [P]
4	Specify number of rings before system cancels Automatic Callback request.	Dial <i>[n]</i>	Type <i>[n]</i> .
5	Save your entry.	Select Enter.	Press [F10]
6	To return to System Programming menu	Select Exit.	Press [F5]

Extension Status

Use this procedure to specify whether the Extension Status feature is used in Hotel or Group Calling/Call Management System (CMS) mode.

The calling mode selected affects the meaning of the LEDs and use of Auto Dial or DSS buttons when the DLC operator position is in the Extension Status mode.

In the Hotel mode, telephones are restricted from making calls in Extension Status states 1 and 2 (ES1 and ES2). In Group Calling/CMS mode, ES states reflect member or agent status without restricting the telephones.

In the Group Calling/CMS mode, Extension Status is used by the agents to log in and out, and by the supervisor to see agent status.

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Extension Status

Programmable by	System manager
Mode	All
Idle Condition	Not required
Planning Form	Form 6f, System Features
Factory Setting	Group Calling/CMS mode
Valid Entries	Group Calling/CMS mode, Hotel mode
Inspect	No
Copy Option	No
Console Procedure	Options → Ext Status → Specify ext. status → Enter → Exit
PC Procedure	[F7] → [F7] → Specify ext. status → [F10] → [F5]

Procedure: Extension Status

Step	Display/Instructions	On the console	On the PC
1	<pre> System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce </pre>		
	Select the Options menu.	Select Options.	Press [F7]
2	<pre> Options: > Make a selection Transfer Callback CampOn Ext Status CallParkRtn SMDR Delay Ring InsideDial Exit ReminderSrv </pre>		
	Select Extension Status.	Select Ext Status.	Press [F7]
3	<pre> Ext Status Button Type: Select one Hotel GrpCall/CMS Exit Enter </pre>		
	Specify Extension Status for Hotel Mode or for Group Calling/CMS.	Select Hotel or GrpCall/CMS.	Press [F1] or [F2]
4	Save your entry.	Select Enter.	Press [F10]
5	To return to System Programming menu	Select Exit.	Press [F5]

SMDR Language

Release 1.1 and Release 2.0 Only

Use this procedure to change the language of the SMDR reports. The default language is the same as the system language. See "System Language".

Entering Programming

Conside: Select Menu → Sys Program → Exit
PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select Exit on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: SMDR Language

Programmable by	System manager
Mode	All
Idle Condition	Not required
Planning Form	Form 1, System Planning
Factory Setting	English (matches system language)
Valid Entries	English, French, Spanish
Inspect	No
Copy Option	No
Console Procedure	More → Language → SMDR → Select language → Enter → Exit
PC Procedure	[PgUp] → [F6] → [F3] → Select language → [F10] → [F5]

Programming Procedures

Procedure: SMDR Language

Step	Display/Instructions	On the console	On the PC
1	System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce		
	Go to the second screen of the System Programming menu.	Press More	Press [PgUp]
2	System Programming: Make a selection Labeling Language Data Print Cntr-Prg Exit		
	Select System Language.	Select Language .	Press [F6]
3	Language: Make a selection SystemLang Extensions SMDR Printer Exit		
	Program the system language first.	Select SMDR	Press [F3]
4	SMDR Language: Select one English French Spanish Exit Enter		
	Specify the SMDR language of English, French, or Spanish.	Select English, French, or Spanish.	Press [F1] , [F2] , or [F3]
5	Save your entry.	Select Enter .	Press [F10]
6	To return to System Programming menu	Select Exit .	Press [F5]

SMDR Call Report Format

Use this procedure to specify whether SMDR call reports are printed in basic format or ISDN format. In ISDN format, automatic number identification service appears in the calling number field instead of "IN," as in the basic report format. The call recording type for these calls is "I" in the ISDN format and "V" in the basic format.

ISDN format should be used only in conjunction with automatic number identification service subscription.

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: SMDR Call Report Format

Programmable by	System manager
Mode	All
Idle Condition	Not required
Planning Form	Form 6f, System Features
Factory Setting	Basic format
Valid Entries	Basic, ISDN
Inspect	No
Copy Option	No
Console Procedure	Options → SMDR → Format → Basic SMDR/ISDN SMDR → Enter → Exit → Exit
PC Procedure	[F7] → [F8] → [F1] → [F1] → [F1]/[F2] → [F10] → [F5] → [F5]

Programming Procedures

Procedure: SMDR Call Report Format

Step	Display/Instructions	On the console	On the PC
1	<pre> System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce </pre>		
	Select the Options menu.	Select Options.	Press [F7]
2	<pre> Options: > Make a selection Transfer Callback CampOn Ext Status CallParkRtn SMDR Delay Ring InsideDial Exit ReminderSrv </pre>		
	Select SMDR.	Select SMDR.	Press [F8]
3	<pre> Station Message Record: Make a selection Format Call Length Call Report New Page Exit </pre>		
	Select Call Report Format.	Select Format.	Press [F1]
4	<pre> SMDR Format: Select one Basic SMDR ISDN SMDR Exit Enter </pre>		
	Specify basic or ISDN format for SMDR reports.	Select Basic SMDR or ISDN SMDR.	Press [F1] or [F2]
5	Save your entry.	Select Enter.	Press [F10]
6	To return to System Programming menu	Select Exit two times.	Press [F5] two times.

SMDR Call Length

Use this procedure to set the minimum length of time before a call is recorded on SMDR call reports.

Entering Programming

Console: Select Menu → Sys Program → Exit
PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: SMDR Call Length

Programmable by	System manager
Mode	All
Idle Condition	Not required
Planning Form	Form 6f, System Features
Factory Setting	40 seconds
Valid Entries	0-255 seconds
Inspect	No
Copy Option	No
Console Procedure	Options → SMDR → Call Length → Drop → Dial no. of seconds → Enter → Exit → Exit
PC Procedure	[F7] → [F8] → [F2] → [Alt] + [P] → Type no. of seconds → [F10] → [F5] → [F5]

Programming Procedures

Procedure: SMDR Call Length

Step	Display/Instructions	On the console	On the PC
1	<pre> System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce </pre>		
	Select the Options menu.	Select Options.	Press [F7]
2	<pre> Options: > Make a selection Transfer Callback CampOn Ext Status CallParkRtn SMDR Delay Ring InsideDial Exit ReminderSrv </pre>		
	Select SMDR.	Select SMDR	Press [F8]
3	<pre> Station Message Record: Make a selection Format Call Length Call Report New Page Exit </pre>		
	Select Call Length.	Select Call Length	Press [F2]
4	<pre> SMDR Minimum Time: Enter minimum call time (0-255) xxx Backspace Exit Enter </pre> xxx = current number of seconds		
	Erase current number of seconds.	Press Drop.	Press [Alt] + [P]
5	Set minimum time before calls are recorded on SMDR reports	Dial <i>[nnn]</i>	Type <i>[nnn]</i>
6	Save your entry.	Select Enter.	Press [F10]
7	To return to System Programming menu	Select Exit two times.	Press [F5] two times

SMDR Calls Recorded on Call Report

Use this procedure to specify whether SMDR information is to be recorded for both incoming and outgoing calls, or only for outgoing calls.

NOTE:

The New Page option (see Step 3 of the procedure) merely inserts a page break in the report.

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select Exit on the console or press **[F1]** on the PC before saving your entry or menu selection.

Summary: SMDR Calls Recorded on Call Report

Programmable by	System manager
Mode	All
Idle Condition	Not required
Planning Form	Form 6f, System Features
Factory Setting	Incoming and outgoing
Valid Entries	In/Out, Out Only
Inspect	No
Copy Option	No
Console Procedure	Options → SMDR → Call Report → In/Out or Out Only → Enter → Exit → Exit
PC Procedure	[F7] → [F8] → [F3] → [F1]/[F2] → [F10] → [F5] → [F5]

Programming Procedures

Procedure: SMDR Calls Recorded on Call Report

Step	Display/Instruction	On the console	On the PC
1	<pre> System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce </pre>		
	Select the Options menu.	Select Options.	Press [F7]
2	<pre> Options: > Make a selection Transfer Callback CampOn Ext Status CallParkRtn SMDR Delay Ring InsideDial Exit ReminderSrv </pre>		
	Select SMDR.	Select SMDR	Press [F8]
3	<pre> Station Message Record: Make a selection Format Call Length Call Report New Page Exit </pre>		
	Select Call Report.	Select Call Report.	Press [F3]
4	<pre> SMDR Call Report: Select one In/Out Out Only Exit Enter </pre>		
	Specify whether SMDR information is recorded for both incoming and outgoing calls or for outgoing calls only.	Select In/Out or Out Only.	Press [F1] or [F2]
5	Save your entry.	Select Enter.	Press [F10]
6	To return to System Programming menu	Select Exit two times.	Press [F5] two times.

Inside Dial Tone

Use this procedure to set the system dial tone to be either different from or the same as the outside line/trunk dial tone.

NOTE:

The system dial tone must be the same as the outside dial tone when the internal dial tone is not recognized by software applications or modems.

Entering Programming

Console: Select Menu → Sys Program → Exit
PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Inside Dial Tone

Programmable by	System manager
Mode	All
Idle Condition	Not required
Planning Form	Form 6f, System Features
Factory Setting	Inside dial tone is different from outside dial tone
Valid Entries	Inside, outside
Inspect	No
Copy Option	No
Console Procedure	Options → InsideDial → Inside/Outside → Enter → Exit
PC Procedure	[F7] → [F9] → [F1]/[F2] → [F10] → [F5]

Procedure: Inside Dial Tone

Step	Display/Instructions	On the console	On the PC
1	<pre> System Programming: > Make a selection System Extensions SysReNUMBER Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce </pre>		
	Select the Options menu.	Select Options.	Press [F7]
2	<pre> Options: > Make a selection Transfer Callback CampOn Ext Status CallParkRtn SMDR Delay Ring InsideDial Exit ReminderSrv </pre>		
	Select Inside Dial Tone.	Select Inside Dial.	Press [F9]
3	<pre> Intercom Dial Tone: Select one Inside Outside Exit Enter </pre>		
	Specify whether the system dial tone is different from the outside dial tone.	Select Inside or Outside.	Press [F1] or [F2]
4	Save your entry.	Select Enter.	Press [F10]
5	To return to System Programming menu	Select Exit.	Press [F5]

Reminder Service Cancel

Use this procedure to set the time of day when all programmed Reminder Service calls are automatically canceled.

Enter the time in 4-digit, 24-hour format, using leading zeros as necessary.

To deactivate Reminder Service Cancel, erase the currently programmed time and do not enter a new time.

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Reminder Service Cancel

Programmable by	System manager
Mode	All
Idle Condition	Not required
Planning Form	Form 6f, System Features
Factory Setting	Not applicable
Valid Entries	0000-2359
Inspect	No
Copy Option	No
Console Procedure	To deactivate Reminder Service Cancel: Options → Reminder Srv → Drop → Enter → Exit To set Reminder Service cancel time: Options → Reminder Srv → Drop → Dial time → Enter → Exit
PC Procedure	To deactivate Reminder Service Cancel: [F7] → [F10] → [Alt] + [P] → [F10] → [F5] To set Reminder Service cancel time: [F7] → [F10] → [Alt] + [P] → Type time → [F10]) → [F5]

Programming Procedures

Procedure: Reminder Service Cancel

Step	Display/Instruction	On the console	On the PC
1	<pre> System Programming: > Make a selection System Extensions SysReNumber Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce </pre>		
	Select the Options menu.	Select Options.	Press [F7]
2	<pre> Options: > Make a selection Transfer Callback CampOn Ext Status CallParkRtn SMDR Delay Ring InsideDial Exit ReminderSrv </pre>		
	Select Reminder Service Cancel.	Select Reminder Srv.	Press [F10]
3	<pre> Reminder Service Cancel: Enter hour (00-23) and minute (00-59) xxxx Backspace Exit Enter </pre> xxxx = current time of day		
	Erase current time of day.	Press Drop.	Press [Alt] + [P]
4	To deactivate Reminder Service Cancel, go to Step 5 To activate time of day when all reminders are to be canceled	Dial <i>[hhmm]</i>	Type <i>[hhmm]</i>
5	Save your entry.	Select Enter.	Press [F10]
6	To return to System Programming menu	Select Exit	Press [F5]

Redirect Outside Calls to Unassigned Extension Numbers

Use this procedure to specify the extension number to receive redirected calls made to unassigned numbers by Remote Access users, by users on DID trunks (Hybrid/PBX only), or by users on dial-in tie trunks. Calls can be redirected to the following:

- the QCC queue (Hybrid/PBX only)
- another extension number
- a calling group

In Hybrid/PBX mode only This setting does not affect calls received on DID trunks if you have specified that calls to unassigned DID extensions are to receive a fast busy signal. See “Invalid Destination.”

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Redirect Outside Calls to Unassigned Extension Numbers

Programmable by	System manager
Mode	All
Idle Condition	Not required
Planning Form	Form 6f, System Features
Factory Setting	Extension number of primary operator
Valid Entries	QCC queue extension number, other extension number
Inspect	No
Copy Option	No
Console Procedure	To select QCC queue: Options → More → Unassigned → QCC Queue → Enter → Exit To select extension or calling group: Options → More → Unassigned → Extension or Grp Calling → Enter → Dial ext. no. → Enter → Dial group no. → Enter → Exit
PC Procedure	To select QCC queue: [F7] → [PgUp] → [F1] → [F1] → [F10] → [F5] To select extension or calling group [F7] → [PgUp] → [F1] → [F2]/[F3] → [F10] → [F5]

Programming Procedures

Procedure Redirect Outside Calls to Unassigned Extension Numbers

Step	Display/Instructions	On the console	On the PC
1	<pre>System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce</pre>		
	Select the Options menu.	Select Options.	Press [F7]
2	<pre>Options: > Make a selection Transfer Callback CampOn Ext Status CallParkRtn SMDR Delay Ring InsideDial Exit ReminderSrv</pre>		
	Go to the second screen of the Options menu.	Press More	Press [PgUp]
3	<pre>Options: > Make a selection Unassigned Cover Delay BehndSwitch RecallTimer Rotary Exit</pre>		
	Select Redirect Unassigned Extension Numbers.	Select Unassigned.	Press [F1]
4	<pre>Call Unassigned Ext: Select one QCC Queue Extension Grp Calling Exit Enter</pre>		
	Specify where to redirect calls to unassigned extension numbers.	Select QCC Queue, Extension, or Grp Calling.	Press [F1] , [F2] , or [F3]

Programming Procedures

Step	Display/Instructions	On the console	On the PC												
5	Save your entry. If you select Extension, go to Step 6a. If you select Grp Calling, go to Step 6b. If you select QCC Queues, you have finished this procedure.	Select Enter .	Press [F10]												
6a	To redirect calls to an extension, do the following: Unassign Calls Ext: Enter extension Backspace Exit Enter Specify the extension to which calls are to be redirected in one of the following ways: <table><tr><td>Extension number</td><td>■ Dial [nnnn]</td><td>■ Type [nnnn]</td></tr><tr><td>Slot and port number</td><td>■ Dial ★ [sspp]</td><td>■ Type ★ [sspp]</td></tr><tr><td>Logical ID number</td><td>■ Dial #[nnn]</td><td>■ Type #[nnn]</td></tr><tr><td>DSS</td><td>■ Press DSS button.</td><td></td></tr></table> If you have a DSS, check the red LEDs for feature status. The red LED indicates the following: on= calls are redirected to specified extension off = calls are not redirected to specified extension	Extension number	■ Dial [nnnn]	■ Type [nnnn]	Slot and port number	■ Dial ★ [sspp]	■ Type ★ [sspp]	Logical ID number	■ Dial #[nnn]	■ Type #[nnn]	DSS	■ Press DSS button.			
Extension number	■ Dial [nnnn]	■ Type [nnnn]													
Slot and port number	■ Dial ★ [sspp]	■ Type ★ [sspp]													
Logical ID number	■ Dial #[nnn]	■ Type #[nnn]													
DSS	■ Press DSS button.														

Step	Display/Instructions	On the console	On the PC
6b	To redirect calls to a calling group, do the following: Unassign Calls Grp Call: Enter extension number of group Backspace Exit Enter		
	Specify the extension of the calling-group to which calls are to be redirected.	Dial <i>[nnnn]</i>	Type <i>[nnnn]</i>
7	Save your entry.	Select Enter.	Press [F10]
8	To return to System Programming menu	Select Exit.	Press [F5]

Host System Dial Codes for Behind Switch Mode

Use this procedure to assign the host system dial codes for Transfer, Conference, and Drop.

NOTE:

This procedure applies in Behind Switch mode only.

When multiline telephone users press the **Transfer**, **Conference**, and **Drop** buttons, a signal is sent to the host system. Assigning the host dial codes ensures that users can take advantage of these features through the host system.

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Host System Dial Codes for Behind Switch Mode

Programmable by	System manager
Mode	Behind Switch
Idle Condition	Not required
Planning Form	Form 1, System Planning
Factory Setting	No host dial codes are assigned
Valid Entries	Not applicable
Inspect	No
Copy Option	No
Console Procedure	Options → More → BehndSwitch → Select feature → Drop → Dial host system dial code → Enter → Exit → Exit
PC Procedure	[F7] → [PgUp] → [F2] → Select feature → [Alt] + [P] → Type host system dial code → [F10] → [F5] → [F5]

Programming Procedures

Procedure: Host System Dial Codes for Behind Switch Mode

Step	Display/Instructions	On the console	On the PC
1	System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce		
	Select the Options menu.	Select Options.	Press [F7]
2	Options: > Make a selection Transfer Callback CampOn Ext Status CallParkRtn SMDR Delay Ring InsideDial Exit ReminderSrv		
	Go to the second screen of the Options menu.	Press More	Press [PgUp]
3	Options: > Make a selection Unassigned Cover Delay BehndSwitch RecallTimer Rotary Exit		
	Select Behind Switch.	Select BehndSwitch.	Press [F2]
4	Behind Switch: Make a selection Transfer Conference Drop Exit		
	Specify feature to which you want to assign a dial code.	Select Transfer, Conference, or Drop.	Press [F1] , [F2] , or [F3]

Programming Procedures

Step	Display/Instructions	On the console	On the PC
5	Program ****: Enter host system dial code xxxxxx Backspace Exit Enter **** = option name selected in step 4 xxxxxx = Current host system dial code		
	Erase current host system dial code.	Press Drop .	Press [Alt] + [P]
6	Assign host system dial code (up to 6 digits).	Dial <i>[n]</i> .	Type <i>[n]</i> .
7	Save your entry.	Select Enter .	Press [F10]
8	To return to System Programming menu	Select Exit two times.	Press [F5] two times.

Recall Timer

Use this procedure to designate the length of the timed flash that is sent when Recall is used to disconnect a call and get a new dial tone without hanging up. The interval of the timed flash and how Recall works depend on the type of telephone and system operating mode.

The Recall Timer should be reset if multiline telephone users experience either of the following problems:

- When the user presses the **Recall** button on an outside call, nothing happens. This indicates that the interval is too short and should be increased to 650 milliseconds or 1 second.
- In a system operating in Behind Switch mode, when the user presses the **Recall** button on an outside call, the call is disconnected. This indicates that the interval is too long and should be decreased to 350 milliseconds.

Entering Programming

Console: Select Menu → Sys Program → Exit
PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Recall Timer

Programmable by	System manager
Mode	All
Idle Condition	Not required
Planning Form	Form 6f, System Features
Factory Setting	450 ms
Valid Entries	350 ms, 450 ms, 650 ms, 1 second
Inspect	No
Copy Option	No
Console Procedure	Options → More → → Select RecallTimer → Select time → Enter → Exit
PC Procedure	[F7] → [PgUp] → [F3] → Select time → [F10] → [F5]

Procedure: Recall Timer

Step	Display/Instructions	On the console	On the PC
1	<pre> System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce </pre>		
	Select the Options menu.	Select Options.	Press [F7]
2	<pre> Options: > Make a selection Transfer Callback CampOn Ext Status CallParkRtn SMDR Delay Ring InsideDial Exit ReminderSrv </pre>		
	Go to the second screen of the Options menu.	Press More	Press [PgUp]
3	<pre> Options: > Make a selection Unassigned Cover Delay BehndSwitch RecallTimer Rotary Exit </pre>		
	Select Recall Timer.	Select RecallTimer.	Press [F3]
4	<pre> Recall Timer: Select one 350 ms 450 ms 650 ms 1 sec Exit Enter </pre>		
	Specify the timer setting.	Press the button next to your selection.	Press the function key next to your selection.
5	Save your entry.	Select Enter.	Press [F10]
6	To return to System Programming menu	Select Exit.	Press [F5]

Allowed Lists

Use this procedure to establish Allowed Lists, consisting of telephone numbers that can be dialed from specified telephones, regardless of calling restrictions assigned to the telephones.

A maximum of eight lists, numbered 0 through 7, with a maximum of 10 numbers each, numbered 0 through 9, is allowed. Each allowed number can be no more than 6 digits (an area code plus an exchange) or 6 digits with a leading 1, where required.

If you program 0 as the first digit of a list entry, any toll restriction assigned to the station is removed for calls that can be placed by a toll operator.

Special characters (such as “pause”) are not permitted in Allowed List entries.

Entering Programming

Console: Select Menu → Sys Program → Exit
PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select Exit on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Allowed Lists

Programmable by	System manager
Mode	All
Idle Condition	Not required
Planning Form	Form 6g, Allowed Lists
Factory Setting	Not applicable
Valid Entries	Not applicable
Inspect	Yes
Copy Option	No
Console Procedure	Tables → AllowList → Dial list no. and entry no. → Enter → Drop → Dial no. → Enter → Exit
PC Procedure	[F8] → [F1] → Type list no. and entry no. → [F10] → [Alt] + [P] → Type no. → [F10] → [F5]

Procedure: Allowed Lists

Step	Display/Instructions	On the console	On the PC
1	<pre> System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce </pre>		
	Select the Tables menu.	Select Tables .	Press [F8]
2	<pre> Tables: > Make a selection AllowList ARS AllowTo Disallow DisallowTo Exit </pre>		
	Select Allowed Lists.	Select AllowList .	Press [F1]
3	<pre> Allowed List: Enter list (0-7) and enter (0-9) Backspace Exit Enter </pre>		
	Specify list (l = 0-7) and entry (e = 0 - 9) number (if you are programming a sequence, enter the lowest number). If you do not enter a list number, List 0 appears.	Dial [/e].	Type [/e].
4	Save your entry.	Select Enter .	Press [F10]

Programming Procedures

Step	Display/Instructions	On the console	On the PC
5	Allowed List x Entry y : Enter list item nnnnnn Backspace Next Exit Enter x = list number entered in Step 3 y = entry number entered in Step 3 nnnnnn = current area code/exchange Erase current area code/exchange.	Press Drop.	Press [Alt] + [P]
6	Specify allowed area code/ exchange (up to 6 digits).	Dial <i>[n]</i> .	Type <i>[n]</i> ,
7	To save your entry and enter next item in Allowed List: ■ If next entry number is sequential <i>Your previous entry is saved and next entry number is shown on line 1 of screen in Step 5.</i> ■ If next entry number is not sequential To save your entry when all entries are complete	Select Next . Repeat Steps 5 and 6. Select Enter . Repeat Steps 2-6, Select Enter .	Press [F9] Repeat Steps 5 and 6. Press [F10] Repeat Steps 2-6. Press [F10]
8	To return to System Programming menu	Select Exit .	Press [F 5]

Assign Allowed Lists to Telephones

Use this procedure to assign access to established Allowed Lists to individual telephones. More than one Allowed List can be assigned to a telephone.

If you do not enter a list number, list 0 is assigned.

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Assign Allowed Lists to Telephones

Programmable by	System manager
Mode	All
Idle Condition	Not required
Planning Form	Form 6g, Allowed Lists
Factory Setting	Not applicable
Valid Entries	0 - 7
Inspect	Yes
Copy Option	Yes
Console Procedure	Tables → AllowTo → Dial list no. → Enter → Dial Ext. no. → Enter → Exit → Exit
PC Procedure	[F8] → [F2] → Type list no. → [F10] → Type ext. no. → [F10] → [F5] → [F5]

Programming Procedures

Procedure: Assign Allowed Lists to Telephones

Step	Display/Instructions	On the console	On the PC
1	<pre>System Programming: > Make a selection System Extensions SysReNumber Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce</pre>		
	Select theTables menu.	Select Tables.	Press [F8]
2	<pre>Tables: Make a selection AllowList ARS AllowTo Disallow DisallowTo Exit</pre>		
	Select Assign Allowed Lists To.	Select AllowTo	Press [F2]
3	<pre>Allow To List: Enter list number (0-7) Backspace Exit Enter</pre>		
	Specify Allowed List you want to assign (if you are programming a sequence, enter the lowest number).	Dial <i>[n]</i> .	Type <i>[n]</i> .
4	Save your entry.	Select Enter .	Press [F10]

Programming Procedures

Step	Display/Instructions	On the console	On the PC
5	Allow To List x: Enter extensions to list Backspace Exit Delete Next Enter x = list number entered in Step 3 Specify extension to assign to Allowed List in one of the following ways: Extension number Slot and port number Logical ID number DSS ■ Dial [nnnn] ■ Dial * [sspp]. ■ Dial #[nnn] ■ Press DSS button. ■ Type [nnnn] ■ Type * [sspp] ■ Type #[nnn] If you have a DSS, check the red LED for feature status. The red LED indicates the following: on = allowed list is assigned off = allowed list is not assigned		
6	To remove Allowed list from telephone To assign Allowed List to telephone and assign other telephones: ■ If next list number is sequential <i>Your previous entry is saved and the next list number is shown on line 1 in screen in Step 5.</i> ■ If next list number is not sequential To assign Allowed List to telephone when all entries are complete	Select Delete . Select Next . Repeat Step 5. Select Enter and then select Exit . Repeat Steps 2-5. Select Enter .	Press [F8] Press [F9] Repeat Step 5. Press [F10] and then press [F5] Repeat Steps 2-5. Press [F10]
7	To return to System Programming menu	Select Exit two times.	Press [F5] two times.

Disallowed Lists

Use this procedure to establish Disallowed Lists, consisting of telephone numbers that cannot be dialed from specified telephones (including unrestricted telephones).

A maximum of eight lists, numbered 0 through 7, with 10 entries each, numbered 0 through 9, is allowed. Each number can have a maximum of 11 digits, including a wildcard.

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Disallowed Lists

Programmable by	System manager
Mode	All
Idle Condition	Not required
Planning Form	Form 6h, Disallowed Lists
Factory Setting	Not applicable
Valid Entries	Not applicable
Inspect	No
Copy Option	No
Console Procedure	Tables → Disallow → Dial list no. and entry no. → Enter → Drop → Dial no. → Enter → Exit
PC Procedure	[F8] → [F3] → Type list no. and entry no. → [F10] → [Alt] + [P] → [F10] → Type no. → [F10] → [F5]

Programming Procedures

Procedure: Disallowed Lists

Step	Display/Instructions	On the console	On the PC
1	<pre> System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvc </pre>		
	Select the Tables menu.	Select Tables.	Press [F8]
2	<pre> Tables: Make a selection AllowList ARS AllowTo Disallow DisallowTo Exit </pre>		
	Select Disallowed Lists.	Select Disallow.	Press [F3]
3	<pre> Disallow List: Enter list (0-7) and entry (0-9) Backspace Exit Enter </pre> Specify list (l = 0-7) and entry (e = 0-9) number (if you are programming a sequence, enter the lowest number). If you do not enter a list number, List 0 appears.	Dial [/e]	Type [/e]
4	Save your entry.	Select Enter.	Press [F10]
5	<pre> Disallow List x Entry y Enter list item (12 digits maximum) nnnnn Backspace Next Exit Enter </pre> x = list number entered in Step 3 y = entry number entered in Step 3 nnnnn = current area code/exchange		
	Erase current area code/exchange.	Press Drop.	Press [Alt] + [P]

Programming Procedures

Step	Display/Instructions	On the console	On the PC
6	Identify disallowed area code/exchange (up to 12 digits).	Dial <i>[n]</i> .	Type <i>[n]</i> .
7	To save your entry and enter next item in Disallowed List: ■ If next entry number is sequential <i>Your previous entry is saved and next entry number k shown on line 1 in screen in Step 5.</i> ■ If next entry number is not sequential To save your entry when all entries are complete	Select Next . Repeat Steps 5 and 6. Select Enter . Repeat Steps 2-6. Select Enter .	Press [F9] Repeat Steps 5 and 6. Press [F10] Repeat Steps 2-6. Press [F10]
8	To return to System Programming menu	Select Exit .	Press [F5]

Assign Disallowed Lists to Telephones

Use this procedure to assign established Disallowed Lists to individual telephones. Each restricted telephone can be assigned to more than one list.

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type SPM → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select Exit on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Assign Disallowed Lists to Telephones

Programmable by	System manager
Mode	All
Idle Condition	Not required
Planning Form	Form 6h, Disallowed Lists
Factory Setting	Not applicable
Valid Entries	0 - 7
Inspect	Yes
Copy Option	Yes
Console Procedure	Tables → DisallowTo → Dial list. no. → Enter → Dial ext. no. → Enter → Exit → Exit
PC Procedure	[F8] → [F4] → Type list no. → [F10] → Type ext. no. → [F10] → [F5] → [F5]

Procedure: Assign Disallowed Lists to Telephones

Step	Display/Instructions	On the console	On the PC
1	System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvc		
	Select the Tables menu.	Select Tables .	Press [F8]
2	Tables: Make a selection AllowList ARS AllowTo Disallow DisallowTo Exit		
	Select Assign Disallowed Lists To.	Select Disallow To	Press [F4]
3	Disallow To List: Enter list number (0-7) Backspace Exit Enter		
	Specify Disallowed List you want to assign (if you are programming a sequence, enter the lowest number).	Dial <i>[n]</i> .	Type <i>[n]</i> .
4	Save your entry.	Select Enter .	Press [F10]

Step	Display/Instructions	On the console	On the PC
5	Disallow To List x: Enter extensions to list Delete Next Enter Backspace Exit x = list number entered in Step 3 Specify extension to assign to Disallowed List in one of the following ways: Extension number Slot and port number Logical ID number DSS ■ IDial [nnnn] ■ IDial * [sspp] ■ IDial #[nnn] ■ IPress DSS button. ■ Type [nnnn] ■ Type * [sspp] ■ Type #[nnn] If you have a DSS, check the red LED for feature status. <i>The red LED indicates the following:</i> on = disallowed list is assigned off = disallowed list is not assigned		
6	To remove Disallowed List from telephone To assign Disallowed List to telephone and assign another Disallowed List to other telephones: ■ If next list number is sequential <i>Your previous entry is saved and next extension number is shown on line 1 in screen in Step 5.</i> ■ If next list number is not sequential To assign Disallowed List to telephone when all entries are complete	Select Delete Select Next . Repeat Step 5. Select Enter and then select Exit. Repeat Steps 2-5. Select Enter .	Press [F8] Press [F9] Repeat Step 5. Press [F10] and then press [F5] Repeat Steps 2-5. Press [F10]
7	To return to System Programming menu	Select Exit two times.	Press [F5] two times.

Remote Access Features

The following Remote Access features are available:

- Remote Access Trunk Assignment
- Remote Access Automatic Callback
- Remote Access without Barrier Codes
- Remote Access Barrier Codes
- Remote Access with Barrier Codes

Security of Your System—Preventing Toll Fraud

As a customer of a new telephone system, you should be aware that there exists an increasing problem of telephone toll fraud. Telephone toll fraud can occur in many forms, despite the numerous efforts of telephone companies and telephone equipment manufacturers to control it. Some individuals use electronic devices to prevent or falsify records of these calls. Others charge calls to someone else's number by illegally using lost or stolen calling cards, billing innocent parties, clipping on to someone else's line, and breaking into someone else's telephone equipment physically or electronically. In certain instances, unauthorized individuals make connections to the telephone network through the use of remote access features.

The Remote Access feature of your system, if you choose to use it, permits off-premises callers to access the system from a remote telephone by using an 800 number or a 7- or 10-digit telephone number. The system returns an acknowledgement signaling the user to key in his or her authorization code, which is selected and administered by the system manager. After the authorization code is accepted, the system returns dial tone to the user. If you do not program specific egress restrictions, the user will be able to place any call normally dialed from a telephone associated with the system. Such an off-premises network call is originated at, and will be billed from the system location.

The Remote Access feature, as designed, helps the customer, through proper administration, to minimize the ability of unauthorized persons to gain access to the network. Most commonly, phone numbers and codes are compromised when overheard in a public location, through theft of a wallet or purse containing access information, or through carelessness (writing codes on a piece of paper and improperly discarding it). Additionally, hackers may use a computer to dial an access code and then publish the information to other hackers. Enormous charges can be run up quickly. It is the customer's responsibility to take the appropriate steps to properly implement the features, evaluate and administer the various restriction levels, protect access codes, and distribute access codes only to individuals who have been fully advised of the sensitive nature of the access information.

Common carriers are required by law to collect their tariffed charges. While these charges are fraudulent charges made by persons with criminal intent, applicable tariffs state that the customer of record is responsible for payment of all long-distance or other network charges. AT&T cannot be responsible for such charges and will not make any allowance or give any credit for charges that result from unauthorized access.

To minimize the risk of unauthorized access to your communications system:

- Use a nonpublished Remote Access number.
- Assign authorization codes randomly to users on a need-to-have basis, keeping a log of ALL authorized users and assigning one code to one person.
- Use random sequence authorization codes, which are less likely to be easily broken.
- Deactivate all unassigned codes promptly.
- Ensure that Remote Access users are aware of their responsibility to keep the telephone number and any authorization codes secure.
- When possible, restrict the off-network capability of off-premises callers, via use of Call Restrictions and Disallowed List capabilities.
- When possible, block out-of-hours calling.
- Frequently monitor system call detail reports for quicker detection of any unauthorized or abnormal calling patterns.
- Limit Remote Call Forward to persons on a need-to-have basis.

Remote Access Trunk Assignment

Use this procedure to assign or remove the trunks used for Remote Access. In addition, you can *use* this procedure to specify whether the Remote Access feature is dedicated (always used for Remote Access) or shared (used for Remote Access only when Night Service is activated).

Trunks used for dedicated Remote Access must not be assigned to ring into a calling group or the QCC queue.

In the Hybrid/PBX mode, if a trunk assigned to ring into the QCC queue is also used for shared Remote Access, perform this procedure before you perform the "QCC Operator to Receive Calls" procedure.

Entering Programming

Console: Select Menu → Sys Program → Exit
PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Remote Access Trunk Assignment

Programmable by	System manager
Mode	All
Idle Condition	Not required
Planning Form	Form 3a, Incoming Trunks - Remote Access
Factory Setting	Remote Access is not assigned
Valid Entries	Dedicated, shared, no remote
Inspect	Yes
Copy Option	No
Console Procedure	LinesTrunks → RemoteAccss → LinesTrunks → Dial line/trunk no. → Enter → Specify how trunk is used → Enter → Exit → Exit
PC Procedure	[F4] → [F8] → [F1] → Type line/trunk no. → [F10] → Specify how trunk is used → [F10] → [F5] → [F5]

Programming Procedures

Procedure: Remote Access Trunk Assignment

Step	Display/Instructions	On the console	On the PC
1	<pre> System Programming: > Make a selection System Extensions SysReNumber Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce </pre>		
	Select the lines and Trunks menu.	Select LinesTrunks.	Press [F4]
2	<pre> Lines and Trunks: > Make a selection LS/GS/DS1 PRI TIE Lines Copy TT/LS Disc RemoteAccss DID Pools Exit Toll Type </pre>		
	Select Remote Access.	Select RemoteAccss.	Press [F8]
3	<pre> Remote Access (DISA): Make a selection LinesTrunks AutoQueueing Non-TIE TIE Lines BarrierCode Exit </pre>		
	Select Lines and Trunks.	Select LinesTrunks.	Press [F1]
4	<pre> Remote Access Usage: Enter line/trunk port Backspace Exit Enter </pre> Specify the line/trunk in one of the following ways (if you are programming a sequence, enter the lowest number): trunk number Logical ID number ■ Dial [nnnn] ■ Dial #[nnn] ■ Type [nnnn] ■ Type #[nnn]		
5	Save your entry.	Select Enter.	Press [F10]

Programming Procedures

Step	Display/Instructions	On the console	On the PC
6	Line/Trunk xxxx: Select one Dedicated Shared No Remote Exit Next Enter xxxx = line/trunk entered in Step 4 Specify how line/trunk is used with Remote Access.	Select Dedicated, Shared, or No Remote.	Press [F1] , [F2] , or [F3]
7	To save your selection and assign Remote Access to another line/trunk: ■ If next line/trunk number is sequential <i>Your previous entry is saved and next line/trunk number is show on line 1 of screen in Step 6.</i> ■ If next line/trunk number is not sequential To save your selection when all entries are complete	Select Next . Repeat Step 6. Select Enter . Repeat Steps 3-6. Select Enter	Press [F9] Repeat Step 6. Press [F10] Repeat Steps 3-6. Press [F10]
8	To return to System Programming menu	Select Exit two times.	Press [F5] two times.

Remote Access Automatic Callback

Use this procedure to allow Remote Access users to use the Automatic Callback feature to request busy lines/trunks or pools or to prevent use of the Automatic Callback feature.

NOTE:

This feature applies in Hybrid/PBX mode only.

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Remote Access Automatic Callback

Programmable by	System manager
Mode	Hybrid/PBX
Idle Condition	Not required
Planning Form	Form 3a, Incoming Trunks - Remote Access
Factory Setting	Disable
Valid Entries	Disable, enable
Inspect	No
Copy Option	No
Console Procedure	LinesTrunks → RemoteAccss → AutoQueuing → Enable/Disable → Enter → Exit → Exit
PC Procedure	[F4] → [F8] → [F6] → [F1]/[F2] → [F10] → [F5] → [F5]

Procedure Remote Access Automatic Callback

Step	Display/Instructions	On the console	On the PC
1	<pre> System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce </pre>		
	Select the lines and Trunks menu.	Select LinesTrunks.	Press [F4]
2	<pre> Lines and Trunks: > Make a selection LS/GS/DS1 PRI TIE Lines Copy TT/LS Disc RemoteAccss DID Pools Exit Toll Type </pre>		
	Select Remote Access.	Select RemoteAccss.	Press [F8]
3	<pre> Remote Access (DISA): Make a selection LinesTrunks AutoQueueing Non-TIE TIE Lines BarrierCode Exit </pre>		
	Specify Automatic Callback (queueing).	Select AutoQueueing.	Press [F6]
4	<pre> Remote Access Auto Que: Select one Enable Disable Exit Enter </pre>		
	Allow or disallow use by Remote Access users of Automatic Callback feature.	Select Enable or Disable.	Press [F1] or [F2]
5	Save your entry.	Select Enter.	Press [F10]
6	To return to System Programming menu	Select Exit two times.	Press [F5] two times

Remote Access without Barrier Codes

Use this procedure to change the class of restriction for one of the following:

- all non-tie lines/trunks
- all tie trunks and DID trunks with Remote Access
- the DID remote access code

NOTE:

If barrier code requirements have been established for Remote Access users, do not use this procedure; use "Remote Access with Barrier Codes."

The class of restriction assigned is one of the following:

- Restriction - determines whether Remote Access users can make local and/or toll calls; the following settings are included:
 - unrestricted
 - toll restricted
 - outward restricted
- ARS Facility Restriction Level (Hybrid/PBX only) – allows or disallows use of outgoing trunks by assigning a facility restriction level from 0 through 6. (The value assigned is the opposite from the FRL assigned to the ARS route, where a value of 0 is the most, and a value of 6 is the least restrictive.)
- Allowed List Assignment - assigns Allowed Lists and is used when Remote Access users are restricted from making local or toll calls.
- Disallowed List Assignment - assigns Disallowed Lists and is used when Remote Access users are not restricted from making local or toll calls.

A maximum of eight Allowed or Disallowed Lists can be assigned to trunks.

Class of restriction settings are assigned either to all non-tie trunks or to all tie trunks and DID trunks. They cannot be assigned to each trunk on an individual basis.

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Remote Access without Barrier Codes

Programmable by	System manager
Mode	All
Idle condition	Not required
Planning Form	Form 3a, Incoming Trunks - Remote Access
Factory Setting	Call restriction: outward restricted; ARS restriction level: 3
Valid Entries	Unrestricted, toll restricted, outward restricted; 0-6
Inspect	No
Copy Option	No
Console Procedure	To change Call Restrictions: LinesTrunks → RemoteAccss → Non-TIE/TIE Lines → Restriction → Select restriction → Enter → Exit → Exit → Exit → Exit To change ARS FRL: LinesTrunks → RemoteAccss → Non-TIE/TIE Lines → ARS Restrict → Drop → Dial FRL value → Enter → Exit → Exit → Exit → Exit To assign/remove Allowed Lists: LinesTrunks → RemoteAccss → Non-TIE/TIE Lines → Allow List → Dial list no. → Enter → Exit → Exit → Exit → Exit To assign/remove Disallowed Lists: LinesTrunks → RemoteAccss → Non-TIE/TIE Lines → DisallowLst → Dial list no. → Enter → Exit → Exit → Exit → Exit
PC Procedure	To change Call Restrictions: [F4] → [F8] → [F2]/[F3] → [F2] → [F1]/[F2]/ [F3] → [F10] → [F5] → [F5] → [F5] → [F5] To change ARS FRL: [F4] → [F8] → [F2]/[F3] → [F3] → [Alt] + [P] → Type FRL value → [F10] → [F5] → [F5] → [F5] → [F5] To assign/remove Allowed Lists: [F4] → [F8] → [F2]/[F3] → [F4] → Type list no. → [F5] → [F5] → [F5] → [F5] To assign/remove Disallowed Lists: [F4] → [F8] → [F2]/[F3] → [F6] → Type list no. → [F10] → [F5] → [F5] → [F5] → [F5]

Programming Procedures

Procedure: Remote Access Without Barrier Codes

Step	Display/Instructions	On the console	On the PC
1	<pre>System Programming: > Make a selection System Extensions SysReNumber Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce</pre>	Select LinesTrunks.	Press [F4]
2	<pre>Lines and Trunks: > Make a selection LS/GS/DS1 PRI TIE Lines Copy TT/LS Disc RemoteAccss DID Pools Exit Toll Type</pre>	Select Remote Access.	Select RemoteAccss. Press [F8]
3	<pre>Remote Access (DISA): Make a selection LinesTrunks AutoQueuing Non-TIE TIE Lines BarrierCode Exit</pre>	Specify whether you are establishing/removing class of restrictions for non-tie lines/trunks or for tie and DID trunks.	Select Non-TIE or TIE Lines. Press [F2] or [F3]
4	<pre>**** Remote Access: Make a selection BarrierCode DisallowLst Restriction ARS Restrct Allow List Exit</pre> xxxx = option name selected in Step 3. To change current call restrictions, go to Step 5a. To change ARS Facility Restriction level, go to Step 5b. To change Allowed Lists or Disallowed Lists, go to Step 5c.		

Step	Display/Instructions	On the console	On the PC
5a	To change current call restrictions, do the following:		
	1. Select current call restrictions.	Select Restriction.	Press [F#]
	**** Remote Access: Select one Unrestricted Outward Restrict Toll Restrict Exit Enter **** = option name selected in Step 3.		
	2. Specify whether you are removing or assigning restrictions.	Select Unrestricted, Outward Restrict, or Toll Restrict.	Press [F1] , [F2] , or [F3]
	3. Save your entry.	Select Enter.	Press [F10]
5b	To change ARS restrictions, do the following:		
	1. Select current ARS Facility Restriction Level.	Select ARS Restrict.	Press [F3]
	**** Remote Access: Enter ARS restriction level (0-6) n Backspace Exit Enter **** = option name selected in Step 3 n = current restriction level		
	2. Erase current ARS Facility Restriction Level.	Press Drop .	Press [Alt] + [P]
	3. Assign new ARS Facility Restriction Level value level.	Dial [n] .	Type [n] .
	4. Save your entry.	Select Enter.	Press [F10]

Programming Procedures

Step	Display/Instructions	On the console	On the PC
5c	To change Allow/Disallow Lists, do the following: 1. Select Allowed Lists or Disallowed Lists. <pre>*** Remote Access: Enter **** List access (0-7) Delete Backspace Exit Enter</pre> 2. Specify the List you want to assign (0-7). 3. Specify whether to remove or assign the list.	Select Allow List or DisallowLst. Dial [n] Select Delete or Enter	Press [F4] or [F6] Type [n] Press [F8] or [F10]
6	To return to System Programming menu	Select Exit three times.	Press [F5] three times.

Remote Access Barrier Codes

Use this procedure to establish or remove the requirement for barrier codes as well as to establish or remove the barrier codes themselves. Barrier codes are security passwords that restrict people from making unauthorized Remote Access calls on non-tie lines/trunks and tie trunks.

A maximum of 16 four-digit barrier codes is allowed for all lines/trunks. Barrier code 16 is automatically assigned for Remote Access by qualified support personnel for system programming and maintenance.

Use 'Remote Access with Barrier Codes - Class of Restriction' to allow or deny use of system features for each barrier code assigned.

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select Exit on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Remote Access Barrier Codes

Programmable by	System manager
Mode	All
Idle Condition	Not required
Planning Form	Form 3a, Incoming Trunks – Remote Access
Factory Setting	No barrier codes are established
Valid Entries	Not applicable
Inspect	No
Copy Option	No
Console Procedure	LinesTrunks → RemoteAccss → Non-Tie/TIE Lines → BarrierCode → Specify whether barrier codes are required → Enter → Exit → BarrierCode → Codes → Dial barrier code no. → Enter → Drop → Dial code → Enter → Exit → Exit → Exit
PC Procedure	[F4] → [F8] → [F2]/[F3] → [F1] → Specify whether barrier codes are required → [F10] → [F5] → [F4] → [F6] → Type barrier code no. → [F10] → [Alt] + [P] → Type code → [F10] → [F5] → [F5] → [F5]

Procedure: Remote Access Barrier Codes

Step	Display/Instructions	On the console	On the PC

1

```
System Programming:  >
Make a selection
System      Extensions
SysRenumbr Options
Operator    Tables
LinesTrunks AuxEquip
Exit        NightSrvc
```

Select the Lines and Trunks menu.

Select LinesTrunks.

Press **[F4]**

2

```
Lines and Trunks:  >
Make a selection
LS/GS/DSL  PRI
TIE Lines   Copy
TT/LS Disc RemoteAccss
DID         Pools
Exit        Toll Type
```

Select Remote Access.

Select RemoteAccss.

Press **[F8]**

3

```
Remote Access (DISA):
Make a selection
LinesTrunks AutoQueuing
Non-TIE
TIE Lines
BarrierCode
Exit
```

To establisher remove barrier code requirements, go to Step 4a.

To add new barrier codes when barrier code requirements have been established, go to Step 4b.

Programming Procedures

Step	Display/Instructions	On the console	On the PC
4a	To establish or remove barrier code requirements, do the following:		
	Specify whether barrier codes apply to non-tie trunks or tie trunks.	Select Non-TIE or TIE Lines.	Press [F2] or [F3]
	<pre>**** Remote Access: Make a selection BarrierCode DisallowLst Restriction ARS Restrct Allow List Exit</pre> **** = option name selected in Step 3.		
	Establish or remove barrier code requirement.	Select BarrierCode.	Press [F1]
	<pre>**** Remote Access: Select one Barrier Code Required Barrier Code NotRequired Exit Enter</pre> **** option name selected in Step 3.		
	Specify whether barrier codes are required.	Select Barrier Code Required or Barrier Code Not Required.	Press [F1] or [F2]
	Save your entry.	Select Enter.	Press [F10]

Programming Procedures

Step	Display/Instructions	On the console	On the PC
4b	To add new barrier codes, do the following:		
	1. Add, change, or remove individual barrier codes.	Select BarrierCode.	Press [F4]
	RemoteAccss BarrierCode: Make a selection SProg/Maint Allow List Codes DisallowLst Restriction ARS Restrct Exit		
	2. Select Codes.	Select Codes.	Press [F2]
	RemoteAccss BarrierCode: Enter Barriercode number (1-16) Backspace Exit Enter		
	3. Specify barrier code.	Dial <i>[nn]</i>	Type <i>[nn]</i>
	4. Save your entry.	Select Enter.	Press [F10]
	Barrier Code xx: Enter four digit (0-9) code xxxx Backspace Next Exit Enter xx= barrier code entered in number 3 of Step 4b xxxx = current barrier code		
	5. Erase the current barrier code.	Press Drop	Press [Alt] + [P]
	6. Specify a four-digit code to add or change.	Dial <i>[nnnn]</i>	Type <i>[nnnn]</i>

Programming Procedures

Step	Display/Instructions	On the console	On the PC
	7. To save your entry and add, change, or remove another barrier code:		
	■ If next barrier code number is sequential <i>Your previous entry is saved and next barrier code number is shown on line 1.</i> ■ If next barrier code number is not sequential	Select Next . Repeat numbers 5 and 6 in Step 4b.	Press [F9] Repeat numbers 5 and 6 in Step 4b.
	To save your entry when all entries are complete	Select Enter .	Press [F10]
5	To return to System Programming menu	Select Exit three times.	Press [F5] three times.

Remote Access with Barrier Codes

Use this procedure to change the class of restriction for individual Remote Access barrier codes. The class of restriction assigned to each barrier code allows or denies the use of the following system features:

NOTE:

If barrier code requirements have not been established or have been removed for Remote Access users, do not use this procedure; use "Remote Access without Barrier Codes."

- **Restriction** - determines whether Remote Access users can make local and/or toll calls; the following settings are included:
 - unrestricted
 - toll restricted
 - outward restricted
- **ARS Facility Restriction Level (Hybrid/PBX only)** – allows or restricts users from using outgoing trunks by assigning a facility restriction level from 0 through 6. (The value assigned is the opposite from the FRL assigned to the ARS route, where a value of 0 is the most, and a value of 6 is the least restrictive.)
- **Allowed List Assignment**- assigns Allowed Lists and is used when Remote Access users are restricted from making local or toll calls.
- **Disallowed List Assignment** - assigns Disallowed Lists and is used when Remote Access users are not restricted from making local or toll calls.

A maximum of eight Allowed or Disallowed Lists can be assigned to each barrier code. Class of restriction settings apply to individual barrier codes.

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Remote Access with Barrier Codes

Programmable by	System manager
Mode	All
Idle Condition	Not required
Planning Form	Form 3a, Incoming Trunks - Remote Access
Factory Setting	Call restriction: Barrier Code - outward restricted; all other barrier codes – unrestricted. ARS restriction level -3
Valid Entries	Unrestricted, toll restricted, outward restricted; 0-6
Inspect	No
Copy Option	No
Console Procedure	LinesTrunks → RemoteAccss → BarrierCode → Restriction → Dial barrier code no. → Enter → Select restriction → Enter → ARS Restrict → Dial barrier code no. → Enter → Drop → Dial FRL value → Enter Allow List/Disallow List → Dial barrier code no. → Enter → Dial list no. → Enter → Exit → Exit → Exit → Exit
PC Procedure	[F4] → [F8] → [F4] → [F3] → Type barrier code no. → [F10] → Select restriction → [F10] → [F4] → Type barrier code no. → [F10] → [Alt] + [P] → Type FRL value → [F10] → [F6]/[F7] → Dial barrier code no. → [F10] → Type list no. → [F10] → [F5] → [F5] → [F5] → [F5]

Programming Procedures

Procedure: Remote Access With Barrier Codes

Step	Display/Instruction	On the console	On the PC

1

```
System Programming:  >
Make a selection
System      Extensions
SysRenumbr  Options
Operator    Tables
LinesTrunks AuxEquip
Exit        NightSrvce
```

Select the Lines and Trunks menu.

Select LinesTrunks.

Press **[F4]**

2

```
Lines and Trunks:  >
Make a selection
LS/GS/DSL  PRI
TIE Lines   Copy
TT/LS Disc RemoteAccss
DID         Pools
Exit        Toll Type
```

Select Remote Access.

Select RemoteAccss.

Press **[F8]**

3

```
Remote Access (DISA):
Make a selection
LinesTrunks AutoQueueing
Non-TIE
TIE Lines
BarrierCode
Exit
```

Select Barrier Code Access.

Select BarrierCode.

Press **[F4]**

4

```
RemoteAccss BarrierCode:
Make a selection
SProg/Maint Allow List
Codes      DisallowLst
Restriction
ARS Restrct
Exit
```

To change current call restrictions, go to Step 5a.

To change ARS Facility Restriction level, go to Step 5b.

To change Allowed/Disallowed lists, go to Step 5c.

Programming Procedures

Step	Display/Instructions	On the console	On the PC
5a	To change current call restrictions, do the following:		
	1. Select Restriction.	Select Restriction.	Press [F3]
	Barrier Code: Enter Barriercode number (1-16) Backspace Exit Enter		
	2. Specify barrier code.	Dial <i>[n]</i> .	Type <i>[n]</i> .
	3. Save your entry.	Select Enter.	Press [F10]
	Barrier Code xx: Select one Unrestricted Outward Restrict Toll Restrict Next Exit Enter xx = barrier code entered in number 2 of Step 5a.		
	4. Remove or specify restriction.	Select Unrestricted, Outward Restrict, or Toll Restrict,	Press [F1] , [F2] , or [F3]
	5. To save your selection and assign call restrictions to another barrier code:		
	■ If next barrier code number is sequential <i>Your previous entry is saved and next barrier code number is shown on line 1.</i>	Select Next. Repeat number 4 in Step 5a.	Press [F9] Repeat number 4 in Step 5a.
	■ If next barrier code number is not sequential	Select Enter. Repeat numbers 1-4 in Step 5a.	Press [F10] Repeat numbers 1-4 in Step 5a.
	To save your entry when all entries are complete	Select Enter.	Press [F10]

Step	Display/Instructions	On the console	On the PC
5b	To change ARS restrictions, do the following:		
	1. Select ARS Facility Restriction Level.	Select ARS Restrct.	Press [F4]
	Barrier Code: Enter Barriercode number (1-16) Backspace Enter Exit		
	2. Specify the barrier code.	Dial <i>[nn]</i>	Type <i>[nn]</i>
	3. Save your entry.	Select Enter .	Press [F10]
	Barrier Code xx: Enter ARS Restriction level (0-6) n Backspace Next Exit Enter xx = barrier code entered in number 2 of Step 5b n = current restriction level		
	4. Erase the current ARS FRL.	Press Drop .	Press [Alt] + [P]
	5. Assign new ARS FRL.	Dial <i>[n]</i> .	Type <i>[n]</i> ,
	6. To assign ARS Facility Restriction Level to another barrier code: ■ If next barrier code number is sequential <i>Your previous entry is saved and next barrier code number is shown on line 1.</i> ■ If next barrier code number is not sequential	Select Next . Repeat numbers 4 and 5 in Step 5b. Select Enter . Repeat numbers 1-5 in Step 5b.	Press [F9] Repeat numbers 4 and 5 in Step 5b. Press [F10] Repeat numbers 1-5 in Step 5b.

Programming Procedures

Step	Display/Instructions	On the console	On the PC
	To save your entry when all entries are complete	Select Enter .	Press [F10]
5c	To change Allow/Disallow lists, do the following:		
	1. Select Allowed Lists or Disallowed Lists.	Select Allow List or DisallowLst.	Press [F6] or [F7]
	Barrier Code: Enter barriercode number (1-16) Backspace Exit Enter		
	2. Specify barrier code.	Dial [nn]	Type [nn]
	3. Save your entry.	Select Enter .	Press [F10]
	Barrier Code xx: Enter AllowedList access (0-7) Backspace Delete Exit Next Enter xx = barrier code entered in number 2 of Step 5c		
	4. Specify list you want to assign or remove.	Dial [n].	Type [n].
	5. To remove Allowed List from barrier code	Select De lete .	Press [F8]

Step	Display/Instructions	On the console	On the PC
	6. To assign Allowed List to barrier code and assign Allowed List to another barrier code: ■ If next barrier code is sequential <i>Your previous entry is saved and next barrier code number is shown on line 1.</i> ■ If next barrier code number is not sequential To save your entry when all entries are complete	Select Next . Repeat number 4 in Step 5c. Select Enter and then select Exit . Repeat Steps 4 and 5c. Select Enter .	Press [F9] Repeat number 4 in Step 5c. Press [F10] and then press [F5]. Repeat Steps 4 and 5c. Press [F10]
6	To return to System Programming menu	Select Exit three times.	Press [F5] three times.

Automatic Route Selection

The following features can be programmed for Automatic Route Selection (ARS):

- 1 + 7 Digit Dialing Requirements
- ARS Tables
- Start and Stop Times for Subpatterns
- Pool Routing
- Facility Restriction Level (FRL)
- Digit Absorption
- Other Digits
- N11 Special Numbers Tables
- Dial 0 Table
- Voice and/or Data Routing

NOTE:

ARS applies only in the Hybrid/PBX mode.

1 + 7 Digit Dialing Requirements

Use this procedure for calls placed within the same area code as the system. The procedure allows you to specify whether or not the local telephone company requires dialing 1 plus a 7-digit number. Two settings are available:

- within area code – 1 plus a 7-digit number must be dialed; the system checks the 1 + 7 digit tables for routing
- not within area code -1 does not have to precede the 7-digit number (the system does this automatically)

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: 1 + 7 Digit Dialing Requirements

Programmable by	System manager
Mode	Hybrid/PBX
Idle Condition	Not required
Planning Form	Form 9b, Automatic Route Selection Tables
Factory Setting	Not within area code
Valid Entries	Not within area code, Within area code
Inspect	No
Copy Option	No
Console Procedure	Tables → ARS → ARS 1 + 7 Dial → Within Area Code/Not within Area Code → Enter → Exit → Exit
PC Procedure	[F8] → [F6] → [F1] → [F1]/[F2] → [F10] → [F5] → [F5]

Programming Procedures

Procedure: 1+7 Digit Dialing Requirements

S t e p	Display/Instructions	On the console	On the PC
1	System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce		
	Select the Tables menu.	Select Tables.	Press [F8]
2	Tables: Make a selection AllowList ARS AllowTo Disallow DisallowTo Exit		
	Select Automatic Route Selection.	Select ARS.	Press [F6]
3	ARS: > Make a selection ARS 1+7Dial SubA Absorb ARS Input Sub A Digit Sub A Pools Sub B Start Sub A FRL Sub B Stop Exit Sub B Pool		
	Select ARS 1+7 Digit Dial.	Select ARS 1+7Dial.	Press [F1]

Programming Procedures

Step	Display/Instructions	On the console	On the PC
4	1+7 Digit Dialing: Select one Within Area Code Not within Area Code ExitEnter Specify whether 1+7 digit dialing is required within home area code.	Select Within Area Code or Not within Area Code.	Press [F1] or [F2]
5	Save your entry.	Select Enter .	Press [F10]
6	To return to System Programming menu	Select Exit two times.	Press [F5] two times.

ARS Tables

Use this procedure for the following tasks:

- to specify type of table (6-digit, area code, exchange, or 1 + 7)
- to add or change area codes to be included in each table
- to add or change exchanges to be included in each table

A maximum of 16 tables can be established, numbered 1 through 16. Each table can have a maximum of 100 entries, numbered 1 through 100. Tables 17 and 18, the Default Toll and Default Local tables respectively, cannot be changed.

The first entry in a 6-digit table must be the area code. Subsequent entries consist of exchanges within that area code.

Area code tables can contain only area codes.

Exchange and 1 + 7 tables can contain only exchanges.

The wildcard character (pause) cannot be used to enter area codes or exchanges in ARS tables.

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: ARS Tables

Programmable by	System manager
Mode	Hybrid/PBX
Idle Condition	Not required
Planning Form	Form 9b, Automatic Route Selection Tables
Factory Setting	Not applicable
Valid Entries	Not applicable
Inspect	Yes
Copy Option	No
Console Procedure	Tables → ARS → ARS Input → Dial table no. → Enter → Specify table type → Enter → Dial entry no. → Enter → Drop → Dial no. → Enter → Exit → Exit
PC Procedure	[F8] → [F6] → [F2] → Type table no. → [F10] → Select table type → [F10] → Type entry no. [F10] → [Alt] + [P] → Type no. → [F10] → [F5] → [F5]

Programming Procedures

Procedure: ARS Tables

Step	Display/Instructions	On the console	On the PC
1	<pre>System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce</pre>		
	Select the Tables menu.	Select Tables.	Press [F8]
2	<pre>Tables: Make a selection AllowList ARS AllowTo Disallow DisallowTo Exit</pre>		
	Select Automatic Route Selection.	Select ARS.	Press [F6]
3	<pre>ARS: > Make a selection ARS 1+7Dial SubA Absorb ARS Input Sub A Digit Sub A Pools Sub B Start Sub A FRL Sub B Stop Exit Sub B Pool</pre>		
	Select ARS Table Input.	Select ARS Input.	Press [F2]
4	<pre>ARS Table Type: Enter table number(1-16) Backspace Exit Enter</pre>		
	Specify table.	Dial <i>[nn]</i>	Type <i>[nn]</i>
5	Save your entry.	Select Enter.	Press [F10]

Programming Procedures

Step	Display/Instructions	On the console	On the PC
6	ARS Table xx: Select one 6-Digit Area Code Exchange 1+7 Exit Enter xx = number entered in Step 4 Specify table type.	Select 6-Digit, Area Code, Exchange, or 1+7.	Press [F1] , [F2] , [F3] , or [F4]
7	Save your entry.	Select Enter.	Press [F10]
8	Table xx: Enter entry number (1-100) Backspace Exit Enter Specify table entry number (if you are programming a sequence, enter the lowest table number).	Dial <i>[nnn]</i>	Type <i>[nnn]</i>
9	Save your entry.	Select Enter .	Press [F10]
	ARS Table xx, Entry xxx: Enter area code or exchange nnn Backspace Next Exit Enter xx = number entered in Step 4 xxx = number entered in Step 8 nnn = current area code or exchange Delete current table entry.	Press Drop.	Press [Alt] + [P]
11	Specify area code or exchange included on table.	Dial <i>[nnn]</i>	Type <i>[nnn]</i>

Programming Procedures

Step	Display/Instructions	On the console	On the PC
12	To save your entry and enter another area code or exchange:		
	■ If next entry number is sequential <i>Your previous entry is saved and next entry number is shown on line 1 of the screen shown in Step 10.</i>	Select Next . Repeat Steps 10 and 11.	Press [F9] Repeat Steps 10 and 11.
	■ If next entry number is not sequential	Select Enter . Repeat Steps 3-11.	Press [F10] Repeat Steps 3-11.
	To save your entry when all entries are complete	Select Enter .	Press [F10]
13	To return to System Programming menu	Select Exit two times.	Press [F5] two times.

Start and Stop Times for Subpatterns

Use this procedure to specify the time of day when calls are routed using Subpattern B routing information.

Subpatterns are used to provide two different routing patterns according to the time of day. This allows you to take advantage of lower rates that may apply to some or all lines or to change restrictions on some facilities during off hours.

The stop time for Subpattern B is the start time for Subpattern A.

Enter times in 4-digit, 24-hour notation, using leading zeros as necessary.

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Start and Stop Times for Subpatterns

Programmable by	System manager
Mode	Hybrid/PBX
Idle Condition	Not required
Planning Form	Form 9b, Automatic Route Selection Tables Form 9c, Automatic Route Selection. Default and Special Numbers Tables
Factory Setting	No time is specified, thus all calls are routed according to Subpattern A
Valid Entries	0000-2359
Inspect	No
Copy Option	No
Console Procedure	Tables → ARS → Sub B Start → Dial table no. → Enter → Drop → Dial start time → Enter → Sub B stop → Dial table no. → Enter → Drop → Dial stop time → Enter → Exit → Exit
PC Procedure	[F8] → [F6] → [F8] → Type table no. → [F10] → [Alt] + [P] → Type start time → [F10] → [F9] → Type table no. → [F10] → [Alt] + [P] → Type stop time → [F10] → [F5] → [F5]

Programming Procedures

Procedure: Start and Stop Times for Subpatterns

Step	Display/Instructions	On the console	On the PC
1	System Programming: > Make a selection System Extensions SysReNumber Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce		
	Select the Tables menu.	Select Tables.	Press [F8]
2	Tables: Make a selection AllowList ARS AllowTo Disallow DisallowTo Exit		
	Select Automatic Route Selection.	Select ARS.	Press [F6]
3	ARS: > Make a selection ARS 1+7Dial SubA Absorb ARS Input Sub A Digit Sub A Pools Sub B Start Sub A FRL Sub B Stop Exit Sub B Pool		
	Select Subpattern B Start.	Select Sub B Start.	Press [F8]
4	Subpattern B Start Time: Enter table number (1-18) Backspace Exit Enter		
	Specify table number.	Dial <i>[nn]</i>	Type <i>[nn]</i>
5	Save your entry.	Select Enter.	Press [F10]

Programming Procedures

Step	Display/Instructions	On the console	On the PC
6	Subpattern B Start Time: Enter start time hour (00-23) and min (1-59) nnnn Backspace Exit Enter		
	Erase current start time.	Press Drop.	Press [Alt] + [P]
7	Specify start time for Subpattern B (24-hour time).	Dial [hhmm]	Type [hhmm]
8	Save your entry.	Select Enter.	Press [F10]
	ARS: > Make a selection ARS 1+7Dial SubA Absorb ARS Input Sub A Digit Sub A Pools Sub B Start Sub A FRL Sub B Stop Exit Sub B Pool		
	Select Subpattern B Stop Time. (This is also the start time for Subpattern A.)	Select Sub B Stop	Press [F9]
10	Subpattern B Stop Time: Enter table number(1-18) Backspace Exit Enter		
	Specify table number.	Dial [nn]	Type [nn]
11	Save your entry.	Select Enter.	Press [F10]

Step	Display/Instructions	On the console	On the PC
12	Subpattern B Stop Time: Enter stop time hour (00-23) and min (1-59) nnnn Backspace Exit Enter nnnn = current stop time Erase current stop time.	Press Drop.	Press [Alt] + [P]
13	Specify stop time for Subpattern B (24-hour time).	Dial <i>[hhmm]</i>	Type <i>[hhmm]</i>
14	Save your entry.	Select Enter .	Press [F10]
15	To return to System Programming menu	Select Exit two times.	Press [F5] two times.

Pool Routing

Use this procedure to identify the trunk pools on which to route calls to area codes and/or exchanges included in ARS tables.

A maximum of 6 routes (numbered 1 through 6) can be specified for each subpattern. Pool routing is programmed for Tables 1 through 16. Table 17 is the Default Toll table and Table 18 is the Default Local table.

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Pool Routing

Programmable by	System manager
Mode	Hybrid/PBX
Idle Condition	Not required
Planning Form	Form 9b, Automatic Route Selection Tables Form 9c, Automatic Route Selection Default and Special Numbers Tables
Factory Setting	Not applicable
Valid Entries	Not applicable
Inspect	No
Copy Option	No
Console Procedure	Tables → ARS → Sub A Pools/Sub B Pool → Dial table no. and pool route no. → Enter → Dial pool dial-out code → Enter → Exit → Exit
PC Procedure	[F8] → [F6] → [F3]/3[F10] → Type table no. and pool route no. → [F10] → Type pool dial-out code → [F10] → [F5] → [F5]

Programming Procedures

Procedure: Pool Routing

Step	Displyty/Instructions	On the console	On the PC
1	System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce		
	Select the Tables menu.	Select Tables.	Press [F8]
2	Tables: Make a selection AllowList ARS AllowTo Disallow DisallowTo Exit		
	Select Automatic Route Selection.	Select ARS.	Press [F6]
3	ARS: > Make a selection ARS 1+7Dial SubA Absorb ARS Input Sub A Digit Sub A Pools Sub B Start Sub A FRL Sub B Stop Exit Sub B Pool		
	Select pool routing for Subpattern A or Subpattern B. If you select Subpattern A, go to Step 4a. If you select Subpattern B, go to Step 4b.	Select Sub A Pools or Sub B Pool.	Press [F3] or [F10]

Step	Display/Instructions	On the console	On the PC
4a	For Subpattern A, do the following: SubPattern A Pools: Enter table (1-18) and route (1-6) Backspace ExitEnter 1. Specify table number (nn = 1-18) and pool route number (m= 1-6) (if you are programming a sequence, enter the lowest number). 2. Save your entry. ARS Pool Table x Route x: Enter pool dialout code BackspaceNext ExitEnter xx = table number entered in number 1 of Step 4a x = route number entered in number 1 of Step 4a 3. Specify pool on which to route calls.	Dial [nnm] Select Enter . Dial [nnn]	Type [nnm] Press [F10]. Type [nnn]

Programming Procedures

Step	Display/Instructions	On the console	On the PC
4.	To enter pool dial-out code for another pool route in ARS table shown on line 1:		
	■ If next pool route number is sequential <i>Your previous entry is saved and next pool route number is shown on line 1.</i>	Select Next . Repeat number 3 in Step 4a.	Press [F9] Repeat number 3 in Step 4a.
	■ If next pool route number is not sequential	Select Enter . Repeat Steps 3-4a.	Press [F10] Repeat Steps 3-4a.
	5. To save your entry when all entries are complete	Select Enter	Press [F10]
4b	For Subpattern B, do the following:		
	<pre>ARS Route Pattern: Enter table (1-18) and route (1-6) Backspace Exit Enter</pre>		
1.	Specify table number (nn = 1-18) and pool route number (m= 1-6) (if you are programming a sequence, enter the lowest number).	Dial <i>[nnm]</i> .	Type <i>[nnm]</i>
2.	Save your entry.	Select Enter .	Press [F10]

Programming Procedures

Step	Display/Instructions	On the console	On the PC
	ARS Pool (xx,x): Enter pool dialout code Backspace Next Exit Enter xx = table number entered in number 1 of Step 4 x = route number entered in number 1 of Step 4		
3.	Specify pool on which to Dial [nnn]. route calls.		Type [nnn]
4.	To enter dial-out code for another pool route:		
	■ If next pool route number is sequential <i>Your previous entry is saved and next pool route number is shown on line 1.</i>	Select Next . Repeat number 3 in Step 4b.	Press [F9] . Repeat number 3 in Step 4b.
	■ If next pool route number is not sequential	Select Enter . Repeat Steps 3-4b.	Press [F10] Repeat Steps 3-4b.
5.	To save your entry when all entries are complete	Select Enter .	Press [F10]
5	To return to System Programming-menu	Select Exit two times.	Press [E5] two times.

Facility Restriction Level

Use this procedure to assign a Facility Restriction Level (FRL) to each route. The FRL ranges from 0 (least restrictive) through 6 (most restrictive) and is used to restrict user access to the route. The FRL assigned to telephones and Remote Access users is opposite from the FRL assigned to routes, where 0 is the most and 6 is the least restrictive.

NOTE:
Pool routes must be programmed before you assign Facility Restriction Levels.

Facility Restriction Levels are assigned to Tables 1 through 18. Table 17 is the default toll table and Table 18 is the default local table.

Entering Programming

Console: Select Menu → Sys Program → Exit
PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select Exit on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Facility Restriction Level

Programmable by	System manager
Mode	Hybrid/PBX
Idle Condition	Not required
Planning Form	Form 9b, Automatic Route Selection Tables Form 9c, Automatic Route Selection Default and Special Numbers Tables
Factory Setting	3
Valid Entries	0 - 6
Inspect	No
Copy Option	No
Console Procedure	Tables → ARS → Sub A FRL / More and Sub B FRL → Dial table no. and pool route no. → Enter → Dial restriction level → Enter → Exit → Exit
PC Procedure	[F8] → [F6] → [F4]/[PgUp] and [F1] → Type table no. and pool route no. → [F10] → Type restriction level → [F10] → [F5] → [F5]

Programming Procedures

Procedure: Facility Restriction Level

Step	Display/Instructions	On the console	On the PC
1	System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvc		
	Select the Tables menu.	Select Tables.	Press [F8]
2	Tables: Make a selection AllowList ARS AllowTo Disallow DisallowTo Exit		
	Select Automatic Route Selection.	Select ARS.	Press [F6]
3	ARS: > Make a selection ARS 1+7Dial SubA Absorb ARS Input Sub A Digit Sub A Pools Sub B Start Sub A FRL Sub B Stop Exit Sub B Pool		
	Select Facility Restriction Level for Subpattern A or press More and select Subpattern B from the second screen of the ARS menu. If you select Subpattern A, go to Step 4a. If you select Subpattern B, go to Step 4b.	Select Sub A FRL or Press More and select Sub B FRL.	Press [F4] or press [PgUp] and [F1]

Step	Display/Instructions	On the console	On the PC
4a	For Subpattern A, do the following: Sub A Restriction Level: Enter table (1-18), route (1-6) Backspace Exit Enter 1. Specify table number (nn= 1-18) and pool route number (m= 1-6) (if you are programming a sequence, enter the lowest number). 2. Save your entry. ARS Table xx Route x: Enter restriction level (0-6) Backspace Next Exit Enter xx = table number entered in number 1 of Step 4a x = route number entered in number 1 of Step 4a 3. Specify restriction level.	Dial [nnm] Select Enter . Dial [n].	Type [nnm] Press [F10] Type [n].

Step	Display/Instructions	On the console	On the PC
4.	To enter FRL for next pool route:		
	■ If next pool route number is sequential <i>Your previous entry is saved and next pool route number is shown on line 1.</i>	Select Next . Repeat number 3 in Step 4a.	Press [F9] Repeat number 3 in Step 4a.
	■ If next pool route number is not sequential	Select Enter . Repeat Steps 3-4a.	Press [F10] Repeat Steps 3-4a.
5.	To save your entry when all entries are complete	Select Enter .	Press [F10]
4b	For Subpattern B, do the following:		
	Subpattern B Restriction: Enter table (1-18), route (1-6) Backspace Exit Enter		
1.	Specify table number (nn = 1-18) and pool route number (m= 1-6) (if you are programming a sequence, enter the lowest number).	Dial <i>[nnm]</i>	Type <i>[nnm]</i>
2.	Save your entry.	Select Enter .	Press [F10]

Programming Procedures

Step	Display/Instructions	On the console	On the PC
	ARS Table xx Route x: Enter restriction level (0-6) Backspace Next Exit Enter xx = table number entered in number 1 of Step 4b x = route number entered in number 1 of Step 4b		
3.	Specify restriction level.	Dial [n].	Type [n].
4.	To enter FRL for next pool route: ■ If next pool route number is sequential <i>Your previous entry is saved and next pool route number is shown on line 1.</i> ■ If next pool route number is not sequential	Select Next . Repeat number 3 in Step 4b. Select Enter . Repeat Steps 3-4b.	Press [F9] Repeat number 3 in Step 4b. Press [F10] Repeat Steps 3-4b.
5.	To save your entry when all entries are complete	Select Enter .	Press [F10]
5	To return to System Programming menu	Select Exit two times.	Press [F5] two times.

Digit Absorption

Use this procedure to specify how many of the digits dialed (0 through 11) by the caller should be absorbed by the system (not sent to the telephone company's central office) when a call is made on an identified route.

NOTE:

Pool routes must be programmed before you assign digit absorption.

Values 1 through 11 indicate that the system should not send a certain number of digits, starting with the first digit dialed by the user (after the dial-out code).

Digit absorption is assigned to Tables 1 through 18.

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Digit Absorption

Programmable by	System manager
Mode	Hybrid/PBX
Idle Condition	Not required
Planning Form	Form 9b, Automatic Route Selection Tables
Factory Setting	0
Valid Entries	0 - 11
Inspect	No
Copy Option	No
Console Procedure	Tables → ARS → SubA Absorb / More and SubB Absorb → Dial table no. and pool route no. → Enter → Drop → Dial no. of digits to absorb → Enter → Exit → Exit
PC Procedure	[F8] → [F6] → [F6]/[PgUp] and [F2] → Type table no. and pool route no. → [F10] → [Alt] + [P] → Type no. of digits to absorb → [F10] → [F5] → [F5]

Programming Procedures

Procedure: Digit Absorption

Step	Display/Instructions	On the console	On the PC
1	System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce		
	Select the Tables menu.	Select Tables.	Press [F8]
2	Tables: Make a selection AllowList ARS AllowTo Disallow DisallowTo Exit		
	Select Automatic Route Selection.	Select ARS.	Press [F6]
3	ARS: > Make a selection ARS 1+7Dial SubA Absorb ARS Input Sub A Digit Sub A Pools Sub B Start Sub A FRL Sub B Stop Exit Sub B Pool		
	Select absorb digits for Subpattern A and go to Step 4a.	Select SubA Absorb.	Press [F6]
	Select absorb digits for Subpattern B from the second screen of the ARS menu and go to Step 4b.	Press More, then Select SubB Absorb.	Press [PgDn] then press [F2]

Programming Procedures

Step	Display/Instructions	On the console	On the PC
4a	For Subpattern A, do the following:		
	Subpattern A Absorption: Enter table (1-18), route (1-6) Backspace Enter Exit Enter		
	1. Specify table number (nn = 1-18) and route number (m= 1-6) (if you are programming a sequence, enter the lowest number).	Dial <i>[nnm]</i>	Type <i>[nnn]</i>
	2. Save your entry.	Select Enter .	Press [F10]
	ARS Table xx, Route x: Enter table absorption digits (0-11) nn Backspace Next Exit Enter xx = table number entered in number 1 of Step 4a x = route number entered in number 1 of Step 4a nn = current number of digits		
	3. Erase current digits.	Press Drop .	Press [Alt] + [P]
	4. Specify the number of digits to be absorbed.	Dial <i>[nn]</i> .	Type <i>[nn]</i>

Step	Display/Instructions	On the console	On the PC
5.	To enter additional route numbers for Subpattern A:		
	■ If next route number is sequential <i>Your previous entry is saved and the next route number is shown on line 1.</i>	Select Next . Repeat numbers 3 and 4 in Step 4a.	Press [F9] Repeat numbers 3 and 4 in Step 4a.
	■ If next route number is not sequential	Select Enter . Repeat Steps 3-4a.	Press [F10] Repeat Steps 3-4a.
6.	To save your entry when all entries are complete	Select Enter .	Press [F10]
4b	For Subpattern B, do the following:		
	Sub B Absorption Enter table (1-18), route (1-6) Backspace Exit Enter		
1.	Specify table number (nn = 1-18) and route number (m = 1 -6) (if you are programming a sequence, enter the lowest number).	Dial <i>[nnm]</i>	Type <i>[nnm]</i>
2.	Save your entry.	Select Enter .	Press [F10]

Step	Display/Instructions	On the console	On the PC
	ARS Table xx, Route x: Enter number of digits to absorb (0-11) nn Backspace Next Exit Enter xx = table number entered in number 1 of Step 4b x = route number entered in number 1 of Step 4b nn = current number of digits		
3.	Erase current digits.	Press Drop .	Press [Alt] + [P]
4.	Specify the number of digits to be absorbed.	Dial <i>[nn]</i>	Type <i>[nn]</i>
5.	To enter additional route numbers for Subpattern B:		
	■ If next route number is sequential <i>Your previous entry is saved and the next route number is shown on line 1.</i> ■ If next route number is not sequential	Select Next . Repeat numbers 3 and 4 in Step 4b.	Press [F9] Repeat numbers 3 and 4 in Step 4b.
6.	To save your entry when all entries are complete	Select Enter .	Press [F10]
5	To return to System Programming menu	Select Exit two times.	Press [F5] two times.

Other Digits

Use this procedure to specify extra digits that must be added by the system to the beginning of the number dialed by the caller when calls are placed on an identified route.

NOTE:

Pool routes must be programmed before you assign other digits.

A maximum of 20 digits can be added, in any combination of the digits 0 through 9.

Special characters such as switchhook flash, **stop**, and # cannot be included as extra digits. Pause is allowed, except in the first position.

Other digits are assigned to Tables 1 through 18.

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Other Digits

Programmable by	System manager
Mode	Hybrid/PBX
Idle Condition	Not required
Planning Form	Form 9b, Automatic Route Selection Tables
Factory Setting	0
Valid Entries	20 digits (0 - 9)
Inspect	No
Copy Option	No
Console Procedure	Tables → ARS → Sub A Digit / More and Sub B Digit → Dial table no. and pool route no. → Enter → Drop → Dial digits to be added → Enter → Exit → Exit
PC Procedure	[F8] → [F6] → [F7]/[PgUp] and [F3] → Type table no. and pool route no. → [F10] → [Alt] + [P] → Type digits to be added → [F10] → [F5] → [F5]

Procedure: Other Digits

Step	Display/Instructions	On the console	On the PC
1	<pre> System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce </pre>		
	Select the Tables menu.	Select Tables.	Press [F8]
2	<pre> Tables: Make a selection AllowList ARS AllowTo Disallow DisallowTo Exit </pre>		
	Select Automatic Route Selection.	Select ARS.	Press [F6]
3	<pre> ARS: > Make a selection ARS 1+7Dial SubA Absorb ARS Input Sub A Digit Sub A Pools Sub B Start Sub A FRL Sub B Stop Exit Sub B Pool </pre>		
	Select other digits for Subpattern A or press More and select Subpattern B from the second screen of the ARS menu.	Select Sub A Digit or press More and select Sub B Digit.	Press [F7] or press [PgUp] and [F3]
4	<pre> Sub x Other Digits: Enter table (1-18), route (1-6) Backspace Exit Enter </pre> x = subpattern selected in Step 3 Specify table number (nn = 1-18) and route number (m = 1-6) (if you preprogramming a sequence, enter the lowest number).	Dial [nnm]	Type [mm].

Step	Display/Instructions	On the console	On the PC
	Save your entry.	Select Enter.	Press [F10]
6	ARS Table xx, Route x: > Enter other digits nnnnnnnnnnn Backspace Next Exit Enter xx = table number entered in Step 4 x = route number entered in Step 4 n = current number of digits		
	Erase current digits	Press Drop.	Press [Alt] + [P]
7	Specify other digits (up to 11) to be added.	Dial <i>[n]</i> .	Type <i>[n]</i> .
8	To specify other digits for another route in the specified subpattern: ■ If next route number is sequential <i>Your previous entry is saved and the next route number is shown on line 1 of screen in Step 6.</i> ■ If next route number is not sequential To save your entry when all entries are complete	Select Next . Repeat Steps 6 and 7. Select Enter . Repeat Steps 3-7. Select Enter .	Press [F9] Repeat Steps 6 and 7. Press [F9] Repeat Steps 3-7. Press [F10]
9	To return to System Programming menu	Select Exit two times.	Press [F5] two times.

N11 Special Numbers Tables

Use this procedure to specify Facility Restriction Level (FRL) and/or digits that must be added when emergency numbers in the N11 Special Numbers table are dialed (for example, 411, 811, or 911).

Subpattern B, absorb, and pool routing cannot be programmed for the special numbers tables.

Entering Programming

Console: Select Menu → Sys Program → Exit
PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: N11 Special Numbers Tables

Programmable by	System manager
Mode	Hybrid/PBX
Idle Condition	Not required
Planning Form	Form 9c, Automatic Route Selection Default and Special Numbers Tables
Factory Setting	Not applicable
Valid Entries	Not applicable
Inspect	No
Copy Option	No
Console Procedure	To change FRL: Tables → ARS → More → SpecNumber → ARS FRL → Drop → Dial FRL value → Enter → Exit → Exit → Exit To program other digits: Tables → ARS → More → SpecNumber → ARS Digit → Drop → Dial digits → Enter → Exit → Exit → Exit

Programming Procedures

PC Procedure

To change FRL:

[F8] → [F6] → [PgUp] → [F4] → [F1] →
[Alt] + [P] → Type FRL value → [F10] →
[F5] → [F5] → [F5]

To program other digits:

[F8] → [F6] → [PgUp] → [F4] → [F2] →
[Alt] + [P] → Type digits → [F10] →
[F5] → [F5] → [F5]

Procedure: N11 Special Numbers Tables

Step	Display/Instructions	On the console	On the PC
1	System Programming: > Make a selection System Extensions SysRenumber Options Operator Tables LinesTrunks AuxEquip Exit NightSrvc		
	Select the Tables menu.	Select Tables.	Press [F8]
2	Tables: Make a selection AllowList ARS AllowTo Disallow DisallowTo Exit		
	Select Automatic Route Selection.	Select ARS.	Press [F6]
3	ARS: > Make a selection ARS 1+7Dial SubA Absorb ARS Input Sub A Digit Sub A Pools Sub B Start Sub A FRL Sub B Stop Exit Sub B Pool		
	Go to the second screen of the ARS menu.	Press More .	Press [PgUp]

Programming Procedures

Step	Display/Instructions	On the console	On the PC
4	ARS: Make a selection Sub B FRL Dial 0 SubB Absorb Sub A Data Sub B Digit Sub B Data Spec1Number Exit		
	Select N11 Special Numbers Table,	Select Spec1Number .	Press [F4]
5	ARS Spec1 Numbers Table: Make a selection ARS FRL ARS Digit Exit		
	To change current Facility Restriction Level, select ARS FRL and go to Step 6a.	Select ARS FRL .	Press [F1]
	To specify other digits to add, select ARS Digit and go to Step 6b.	Select ARS Digit .	Press [F2]
6a	To change current facility restriction level, do the following:		
	Special Numbers Pool: Enter restriction level (0-6) n Backspace Exit Enter		
	n = current restriction level		
	1. Erase current restriction level.	Press Drop .	Press [Alt] + [P]
	2. Specify FRL value.	Dial FRL value.	Type FRL value.
	3. Save your entry.	Select Enter .	Press [F10]

Step	Display/Instructions	On the console	On the PC
6b	To specify other digits, do the following: Special Numbers Digits Enter other digits nnnnnnnnnnnnnnnnnnnnnnnnnnnnnn Backspace Exit Enter n = current digits 1. Erase current other digits. 2. Specify other digits (up to 20) to be added. 3. Save your entry.	Press Drop. Dial <i>[n]</i>. Select Enter .	Press [Alt] + [P] Type <i>[n]</i>. Press [F10]
7	To return to System Programming menu	Select Exit three times.	Press [F5] three times.

Dial 0 Table

Use this procedure to specify pool routing, Facility Restriction Level (FRL), and Other Digits for the dial 0 table.

Only one route can be specified; the Subpattern B route cannot be specified for this table. Digit absorption cannot be specified.

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select Exit on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Dial 0 Table

Programmable by	System manager
Mode	Hybrid/PBX
Idle Condition	Not required
Planning Form	Form 9c, Automatic Route Selection Default and Special Numbers Tables
Factory Setting	3
Valid Entries	0 - 6
Inspect	No
Copy Option	No
Console Procedure	Tables → ARS → More → Dial 0 → Specify ARS Pool/FRL/Digits → Dial code/value/digit → Enter → Exit → Exit → Exit
PC Procedure	[F8] → [F6] → [PgUp] → [F6] → Specify ARS Pool/FRL/Digits → Type code/value/digit → [F10] → [F5] → [F5] → [F5]

Programming Procedures

Procedure: Dial 0 Table

Step	Display/Instructions	On the console	On the PC
1	<pre>System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce</pre>		
	Select the Tables menu.	Select Tables .	Press [F8]
2	<pre>Tables: Make a selection AllowList ARS AllowTo Disallow DisallowTo Exit</pre>		
	Select Automatic Route Selection.	Select ARS .	Press [F6]
3	<pre>ARS: > Make a selection ARS 1+7Dial SubA Absorb ARS Input Sub A Digit Sub A Pools Sub B Start Sub A FRL Sub B Stop Exit Sub B Pool</pre>		
	Go to the second screen of the ARS menu.	Press More	Press [PgUp]
4	<pre>ARS: Make a selection Sub B FRL Dial 0 SubB Absorb Sub A Data Sub B Digit Sub B Data Spec1Number Exit</pre>		
	Select Dial 0.	Select Dial 0 .	Press [F6]

Programming Procedures

Step	Display/Instructions	On the console	On the PC
5	Operator Assist Calls: Make a selection ARS Pool ARS FRL ARS Digits Exit		
	To program pool routing, select Select ARS Pool.		Press [F1]
	ARS Pool and go to Step 6a.		
	To change current FRL Level, select ARS FRL and go to Step 6b.	Select ARS FRL.	Press [F2]
	To change other digits, select ARS digits and go to Step 6c.	Select ARS Digits.	Press [F3]
6a	To program pool routing, do the following:		
	Dial 0 Pool: Enter pool dialout code nnn Backspace Exit Enter nnn = current code		
	1. Erase current pool routing.	Press Drop.	Press [Alt] + [P]
	2. Specify pool dial-out code.	Dial <i>[nnn]</i>	Type <i>[nnn]</i>
	To change current FRL level, do the following:		
	Dial 0 Restriction: Enter restriction level (0-6) n Backspace Exit Enter n = current restriction level		
	1. Erase current restriction level.	Press Drop.	Press [Alt] + [P]
	2. Specify FRL value.	Dial <i>[n]</i> .	Type <i>[n]</i> .

Voice and/or Data Routing

Use this procedure for routing for voice, data, or voice and data. The voice/data specification is mainly used in conjunction with PRI. See “PRI Facilities.” Voice/data routes can be associated with Subpattern A or Subpattern B.

Entering Programming

Console: Select Menu → Sys Program → Exit
PC/SPM: Type SPM → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select Exit on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Voice and/or Data Routing

Programmable by	System manager
Mode	Hybrid/PBX
Idle Condition	Not required
Planning Form	Form 9c, Automatic Route Selection Default and Special Numbers Tables
Factory Setting	Voice
Valid Entries	Voice Only, Data Only, Voice/Data
Inspect	No
Copy Option	No
Console Procedure	Tables → ARS → More → Sub A Data/Sub B Data → Dial table no. and route no. → Enter → Select capability → Enter → Exit → Exit
PC Procedure	[F8] → [F6] → [PgUp] → [F7]/[F8] → Type table no. and route no. → [F10] → Select capability → [F10] → [F5] → [F5]

Programming Procedures

Procedure: Voice and/or Data Routing

Step	Display/Instructions	On the console	On the PC
1	System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce		
	Select the Tables menu.	Select Tables .	Press [F8]
2	Tables: Make a selection AllowList ARS AllowTo Disallow DisallowTo Exit		
	Select Automatic Route Selection.	Select ARS .	Press [F6]
3	ARS: > Make a selection ARS 1+7Dial SubA Absorb ARS Input Sub A Digit Sub A Pools Sub B Start Sub A FRL Sub B Stop Exit Sub B Pool		
	Go to the second screen of the ARS menu.	Press More	Press [PgUp]
4	Tables: Make a selection Sub B FRL Dial 0 SubB Absorb Sub A Data Sub B Digit Sub B Data Spec1Number Exit		
	Select Subpattern A or Subpattern B.	Select Sub A Data or Sub B Data .	Press [F7] or [F8]

Programming Procedures

Step	Display/Instructions	On the console	On the PC
5	Subpattern x Voice/Data: Enter table (1-18) and route (1-6) Backspace Exit Enter x = option name selected in Step 4 Specify the table (nn = 1-18) and route (m = 1-6) numbers for Subpattern A or B (if you are programming a sequence, enter the lowest number).	Dial <i>[nnm]</i> .	Type <i>[nnm]</i>
6	Save your entry.	Select Enter .	Press [F10]
7	ARS Pool Table xx Route x: Select capability Voice Only Data Only Voice/Data Exit Next Enter xx = table number entered in Step 5 x = route number entered in Step 5 Select the appropriate capability.	Select Voice Only, Data Only, or Voice/Data.	Press [F1] , [F2] , or [F3]
8	To specify other entries for specified Subpattern ■ If next route number is sequential <i>Your previous entry is saved and the next route number is shown on line 1 of screen shown in Step 5.</i> ■ If next route number is not sequential To save your entry when all entries are complete	Select Next . Repeat Step 7. Select Enter . Repeat Steps 3-7. Select Enter .	Press [F9] Repeat Step 7. Press [F10] Repeat Steps 3-7. Press [F10]
9	To return to System Programming menu	Select Exit two times.	Press [F5] two times.

Night Service

The procedures in this section tell you how to program the following optional Night Service features:

- Night Service with Group Assignment
- Night Service with Outward Restriction
- Night Service with Time Set

Night Service with Group Assignment

Use this procedure to assign all extensions and calling groups to a Night Service group for after-hours coverage.

A maximum of eight Night Service groups can be assigned (no more than one for each operator position assigned). Any number of telephones can be assigned to a Night Service group, and a telephone can belong to more than one group.

Release 2.0 Only

A calling group can also be assigned to a Night Service group.

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Night Service with Group Assignment

Programmable by	System manager
Mode	All
Idle Condition	Not required
Planning Form	Form 7a, Night Service - Group Assignment
Factory Setting	Not applicable
Valid Entries	Not applicable
Inspect	No
Copy Option	No
Console Procedure	To assign a calling group to a Night Service group: Night Srvce → GroupAssign → Calling Group → Dial ext. no. of Night Service attendant → Enter → Dial calling group no. → Enter → Exit → Exit To assign an extension to a Night Service group: NightSrvce → GroupAssign → Extensions → Dial ext. no. of Night Service attendant → Enter → Dial ext. no. of telephone → Enter → Exit → Exit
PC Procedure	To assign a calling group to a Night Service group: [F10] → [F1] → [F2] → Type ext. no. of Night Service attendant → [F10] → Type calling group no. → [F10] → [F5] → [F5] To assign an extension to a Night Service group: [F10] → [F1] → [F1] → Type ext. no. of Night Service attendant → [F10] → Type ext. no. of telephone → [F10] → [F5] → [F5]

Programming Procedures

Procedure: Night Service with Group Assignment

Step	Display/Instructions	On the console	On the PC
1	System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce		
	Select the Night Service menu.	Select NightSrvce.	Press [F10]
2	Night Service: Make a selection GroupAssign Start OutRestrict Stop Emergency Day of Week ExcludeList Exit		
	Select Group Assignment.	Select GroupAssign	Press [F1]
3	Night Serv Group Assign: Make a selection Extensions Calling Grp Exit		
	Add an extension to a Night Service group.	Select Extensions.	Press [F2]
	Add a calling group to a Night Service group.	Select Calling Grp.	Press [F1]
4	Night Serv Group Assign: Enter NS Attendnt number Backspace Exit Enter		
	Enter the operator number.	Dial <i>[nnnn]</i>	Type <i>[nnnn]</i>

Programming Procedures

Step	Display/Instructions	On the console	On the PC
5	Save your entry. If you selected Extensions in Step 3, go to Step 6a. If you selected Calling Grp in Step 3, go to Step 6b.	Select Enter .	Press [F10]
6a	For extensions, do the following Night Serv Group xxxx: Enter extension BackspaceDelete ExitNext Enter xxxx = number entered in Step 4 Specify telephone you want to assign to group in one of the following ways: Extension number Slot and port number Logical ID number DSS ■ Dial [nnnn] ■ Dial * [sspp] ■ Dial #[nnn] ■ Press DSS button. ■ Type [nnnn] ■ Type * [sspp] ■ Type #[nnn] If DSS is attached, check status of the feature. Toggle the LED On/Off as required. The red LED indicates the following: on = group assigned to telephone off = group not assigned to telephone		
6b	For calling group, do the following: Night Serv Group xxxx: Enter group call ext BackspaceDelete ExitNext Enter xxxx = number entered in Step 4 Specify the calling group to be added.	Dial [nnnn]	Type [nnnn]

Programming Procedures

Step	Display/Instructions	On the console	On the PC
7	To save your entry and assign extension to another service group operator		
	■ If next service group operator is sequential <i>Your previous selection is saved, and next service group operator number appears on line 1.</i>	Select Next . Repeat Step 6a or 6b.	Press [F9] Repeat Step 6a or 6b,
	■ If next service group operator is not sequential	Select Enter and then select Exit . Repeat Steps 2 through 6a or 6b.	Press [F10] and then Press [F5] Repeat Steps 2 through 6a or 6b.
	To save your entry when all entries are complete	Select Enter .	Press [F10]
8	To return to System Programming menu	Select Exit two times.	Press [F5] two times.

Night Service with Outward Restriction

Use this procedure to prevent unauthorized after-hours use of telephones. This feature requires the user, in a non-emergency situation, to enter a password to make a call when Night Service is activated. It also requires an operator to enter a password in order to activate Night Service manually.

In addition, this procedure is used to establish the following lists:

- Emergency Allowed List – telephone numbers that can be dialed without a password
- Exclusion List-telephones that are exempt from password requirements

A maximum of six telephone numbers can be included on the Emergency Allowed List, each number with a maximum of 12 digits.

Telephones included in the Exclusion List keep normal call restrictions (if any are assigned); however, they are not protected in any other way from unauthorized after-hours use.

AUDIX Voice Power ports are automatically included on the Exclusion List.

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Night Service with Outward Restriction

Programmable by	System manager
Mode	All
Idle Condition	Not required
Planning Form	Form 7b, Night Service-Outward Restrictions
Factory Setting	No password
Valid Entries	Any 4-digit combination of the digits 0-9
Inspect	Yes (exclusion list)
Copy Option	No
Console Procedure	NightSrvce → OutRestrict → Drop → Dial password → Enter → Emergency → Dial item no. → Enter → Drop → Dial telephone no. → Enter → ExcludeList → Dial ext. no. → Enter → Exit → Exit
PC Procedure	[F10] → [F2] → [Alt] + [P] → Type password → [F10] → [F3] → Type item no. → [F10] → [Alt] + [P] → Type telephone no. → [F10] → [F4] → Type ext. no. → [F10] → [F5] → [F5]

Programming Procedures

Procedure: Night Service with Outward Restriction

Step	Display/Instructions	On the console	On the PC
1	<pre>System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce</pre>		
	Select the Night Service menu.	Select NightSrvce.	Press [F10]
2	<pre>Night Service: Make a selection GroupAssign Start OutRestrict Stop Emergency Day of Week ExcludeList Exit</pre>		
	Select Outward Restriction.	Select OutRestrict.	Press [F2]
3	<pre>Night Serv OutRestrict: Enter 4-digit password xxxx Backspace Exit Enter</pre> xxxx = current password		
	Erase current password.	Press Drop .	Press [Alt] + [P]
4	<pre>Night Serv OutRestrict: Enter 4-digit password Backspace Exit Enter</pre>		
	Assign a password.	Dial <i>[nnnn]</i>	Type <i>[nnnn]</i>
	To remove password requirement, leave the screen blank and go to Step 5.		
5	Save your entry.	Select Enter.	Press [F10]
	If you removed the password requirement, you have completed this procedure.		

Programming Procedures

Step	Display/Instructions	On the console	On the PC
6	Night Service: Make a selection GroupAssign Start OutRestrict Stop Emergency Day of Week ExcludeList Exit		
	Add or change the Emergency Allowed List.	Select Emergency.	Press [F3]
7	Night Serv Emergency: Enter item number (0-9) Backspace Exit Enter		
	Specify the item number (if you are programming a sequence, enter the lowest number).	Dial <i>[n]</i> .	Type <i>[n]</i> .
8	Save your entry.	Select Enter.	Press [F10]
9	Night Serv Emergency x: Enter telephone number nnnnnnnn Backspace Next Exit Enter x = list number entered in Step 7 nnnnnnn = current number		
	Erase current telephone number.	Press Drop.	Press [Alt] + [P]
10	Specify the telephone number (up to 20 digits).	Dial <i>[n]</i> .	Type <i>[n]</i> .

Programming Procedures

Step	Display/Instructions	On the console	On the PC
11	To save your entry and enter another telephone number in the emergency list: ■ If next entry is sequential <i>Your previous entry is saved and next list number is shown on line 1 of screen in Step 9.</i> ■ If entry number is not sequential To save your entry when all entries are complete	Select Next . Repeat Steps 9 and 10. Select Enter . Repeat Steps 7-10. Select Enter .	Press [F9] Repeat Steps 9 and 10. Press [F10] Repeat Steps 7-10. Press [F10]
12	Night Service: Make a selection GroupAssign Start OutRestrict Stop Emergency Day of Week ExcludeList Exit Assign or remove telephones from the Exclusion List.	Select ExcludeList .	Press [F4]
13	Night Serv Exclusion: Enter extensions excluded Delete Backspace Exit Enter Specify telephones you want to program in one of the following ways: - Extension number - Slot and port number - Logical ID number - DSS.	■ IDial [nnnn] ■ IDial * [sspp] ■ IDial #[nnn] ■ IPress DSS button.	■ Type [nnnn] ■ Type * [sspp] ■ Type #[nnn]

Programming Procedures

Step	Display/Instructions	On the console	On the PC
	If DSS is attached, check status of the feature. <i>The the LED indicates the following:</i> <i>on = telephone is excluded from list</i> <i>off = telephone is not excluded from list</i>	Toggle the LED On/Off, as required.	
14	Assign telephone to or remove from Exclusion List.	Select Enter or Delete.	Press [F10] or [F8]
15	To return to System Programming menu	Select Exit two times.	Press [F5] two times.

Night Service with Time Set

Use this procedure to specify the time of day and the days of the week when Night Service is to be activated and deactivated.

Operators can override the timer and turn Night Service on and off manually. This feature can be deactivated when out-of-the ordinary situations occur (for example, a mid-week holiday).

Time of day is entered as four digits, using 24-hour notation. Day is entered as a single digit (0 - 6); 0 is Sunday. If you enter an invalid number, the system truncates the number.

Changing the system time while Night Service is active automatically deactivates it; it must be manually reactivated.

NOTE:

The current day of the week for Night Service must be reset after system programming information is loaded into memory from a backup.

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Night Service with Time Set

Programmable by	System manager
Mode	All
Idle Condition	Not required
Planning Form	Form 7c, Night Service - Time Set
Factory Setting	Not applicable
Valid Entries	0-6 (day); 0000-2359 (time)
Inspect	No
Copy Option	No
Console Procedure	To add or change start/stop time: NightSrvce → Start → Drop → Dial start day and time → Enter → Stop → Drop → Dial stop day and time → Enter → Exit To suspend: NightSrvce → Day of Week → Dial 9 → Dial day of week and time → Enter → Exit
PC Procedure	To add or change start time: [F10] → [F6] → [Alt] + [P] → Type start day and time → [F10] → [F7] → [Alt] + [P] → Type stop day and time → [F10] → [F5] To suspend: [F10] → [F8] → Type 9 → Type day of week and time → [F10] → [F5]

Procedure: Night Service with Time Set

Step	Display/Instructions	On the console	On the PC
1	<pre> System Programming: > Make a selection System Extensions SysRenumber Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce </pre>		
	Select the Night Service menu.	Select NightSrvce.	Press [F10]
2	<pre> Night Service: Make a selection GroupAssign Start OutRestrict Stop Emergency Day of Week ExcludeList Exit </pre> To add or change start time, go to Step 3a. To add or change stop time, go to Step 3b. To suspend Night Service with Time Set, go to Step 3c.		
3a	To change start time for night service, do the following:		
	1. Select start time.	Select Start.	Press [F6]
	<pre> Night Serv Start: Enter day(0-6),hr(00-23) and min(00-50) xxxxx Backspace Exit Enter </pre> xxxxx = current start day and time		
	2. Erase current start day and time.	Press Drop.	Press [Alt] + [P]

Programming Procedures

Step	Display/Instructions	On the console	On the PC
	3. Specify number for day of week (Sunday= 0, Monday = 1, etc.) followed by 4-digit time of day.	Dial <i>[dhhmm]</i>	Type <i>[dhhmm]</i>
	4. Save your entry.	Select Enter .	Press [F10]
3b	To add or change stop time, do the following:		
	1. Select stop time.	Select stop.	Press [F7]
	Night Serv Stop: Enter day (0-6) , hr (00-23) and min (00-59) xxxxx Backspace Exit Enter xxxxx = current stop day and time		
	2. Erase current stop day and time.	Press Drop.	Press [Alt] + [P]
	3. Specify number for day of the week (Sunday = 0, Monday = 1, etc.) followed by 4-digit time of day.	Dial <i>[dhhmm]</i>	Type <i>[dhhmm]</i>
	4. Save your entry.	Select Enter .	Press [F10]

Programming Procedures

Step	Display/Instructions	On the console	On the PC
3c	To Suspend Night service with Time Set or Record Current day of week, do the following:		
	To suspend Night Service with day of the week, select Day of Week.	Select Day of Week	Press [F8]
	Night Serv Day of Week: Enter current day (0-6, or 9=off) x Backspace Exit Enter x = current day		
	Erase current day of week.	Press Drop.	Press [Alt] + [P]
	To record current day of <i>the</i> week, specify the number for the current day (Sunday = 0, Monday = 1, etc.).	Dial <i>[n]</i> .	Type <i>[n]</i> .
	To suspend service	Dial 9.	Type 9.
	Save your entry.	Select Enter .	Press [F10]
4.	To return to System Programming menu	Select Exit .	Press [F5]

Labeling

The procedures in this section tell you how to add or change labels for the following:

- Extension Directory
- Lines or Trunks
- Posted Message
- Group Calling
- System Speed Dial Directory

These procedures can be accomplished with Integrated Administration.

If you are programming on the system programming console:

Use the buttons next to the display and line/feature buttons to specify alphanumeric characters and punctuation for labels. Use the template provided with the MLX-20L telephone to see which line buttons correspond to which alphanumeric characters.

If you are programming with SPM

Use the PC keyboard for labels. All letters will appear on the screen in uppercase.

Extension Directory

Use this procedure to establish alphanumeric system labels used by display set users to identify the person calling or leaving a message. This procedure is also used to program the Extension Directory feature for MLX telephones.

A label can have a maximum of seven characters.

Entering Programming

Console: Select Menu → Sys Program → Exit
PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Extension Directory

Programmable by	System manager, Integrated Administration
Mode	All
Idle Condition	Not required
Planning Form	Form 2a, System Numbering- Station Jacks
Factory Setting	Not applicable
Valid Entries	Not applicable
Inspect	No
Copy Option	No
Console Procedure	More → Labeling → Directory → Extension → Dial ext. no. → Enter → Drop → Enter label → Enter → Exit → Exit → Exit
PC Procedure	[PgUp] → [F1] → [F1] → [F2] → Type ext. no. → [F10] → [Alt] + [P] → Type label → [F6] → [F5] → [F5] → [F5]

Programming Procedures

Procedure: Extension Directory

Step	Display/Instructions	On the console	On the PC
1	System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce		
	Go to the second screen of the System Programming menu.	Press More	Press [PgUp]
2	System Programming: Make a selection Labeling Language Data Print Cntr-Prg Exit		
	Select the Labeling menu.	Select Labeling.	Press [F1]
3	Labeling Make a selection Directory LinesTrunks PostMessage Grp Calling Exit		
	Select Directory.	Select Directory	Press [F1]
4	Directory: Make a selection System Extension Personal Exit		
	Select Extension.	Select Extension.	Press [F2]

Programming Procedures

Step	Display/Instructions	On the console	On the PC
5	Extension Directory Enter extension Backspace Exit Enter Specify the extension you want to label in one of the following ways: Extension number Slot and port number Logical ID number DSS ■ Dial <i>[nnnn]</i> ■ Dial * <i>[sspp]</i> ■ Dial #<i>[nnn]</i> ■ Press DSS button. ■ Type <i>[nnnn]</i> ■ Type * <i>[sspp]</i> ■ Type #<i>[nnn]</i>		
6	Save your entry.	Select Enter .	Press [F10]
	Ext xxxx:Enter new name AAAAAAA Punctuation Enter Backspace Exit A ' , B C - & D E . Space F xxxx = number entered in Step 5 AAAAAAA = current label for extension entered in Step 5		
	Erase current label.	Press Drop.	Press [Alt] + [P]
8	Enter label for extension.	Enter the label. Use Punctuation to toggle between letters and punctuation.	Type the label.
9	Save your entry.	Select Enter .	Press [F6] Note: [F6] , not [F10]
10	To return to System Programming menu	Select Exit three times.	Press [F5] three times.

Lines or Trunks

Use this procedure to establish alphanumeric system labels used by display set users to identify the line or trunk being used.

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Lines or Trunks

Programmable by	System manager, Integrated Administration
Mode	All
Idle Condition	Not required
Planning Form	Form 2c, System Numbering- Trunk Jacks
Factory Setting	Not applicable
Valid Entries	Not applicable
Inspect	No
Copy Option	No
Console Procedure	More → Labeling → LinesTrunks → Dial line/trunk no. → Enter → Drop → Enter label → Enter → Exit → Exit
PC Procedure	[PgUp] → [F1] → [F2] → Type line/trunk no. → [F10] → [Alt] + [P] → Type label → [F6] → [F5] → [F5]

Programming Procedures

Procedure: Lines or Trunks

Step	Display/Instruction	On the console	On the PC
1	System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce		
	Go to the second screen of the Press More . System Programming menu.		Press [PgUp]
2	System Programming: Make a selection Labeling Language Data Print Cntr-Prg Exit		
	Select the Labeling menu.	Select Labeling.	Press [F1]
3	Labeling Make a selection Directory LinesTrunks PostMessage Grp Calling Exit		
	Select Lines/Trunks.	Select LinesTrunks.	Press [F2]
4	Label Lines/Trunks: Enter the line/trunk number Backspace Exit Enter		
	Specify the line or trunk you want to program in one of the following ways:		
	Trunk number	■ Dial [nnnn]	■ Type [nnnn]
	Slot and port number	■ Dial * [sspp]	■ Type * [sspp]
	Logical ID number	■ Dial #[nnn]	■ Type #[nnn]
5	Save your entry.	Select Enter .	Press [F10]

Step	Display/Instructions	On the console	On the PC
6	<pre> Lxxxx: Enter new label AAAAAAA Punctuation Enter Backspace Exit A ' , B C - & D E . Space F </pre> xxxx = number entered in Step 4 AAAAAAA = current label for line/trunk entered in Step 4		
	Erase current label.	Press Drop .	Press [Alt] + [P]
7	Enter label for trunk.	Enter the label. Use Punctuation to toggle between letters and punctuation.	Type the label.
8	Save your entry.	Select Enter .	Press [F6] Note: [F6] not [F10]
9	To return to System Programming menu	Select Exit two times.	Press [F5] two times.

Posted Message

Use this procedure to add or change existing posted messages that let callers with display telephones know why the person they called does not answer,

Each posted message can have a maximum of 16 characters. Messages 2 through 10 can be changed through programming. Message 1, Do Not Disturb, cannot be changed.

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Posted Message

Programmable by	System manager, Integrated Administration
Mode	All
Idle Condition	Not required
Planning Form	Form 8a, Label Form - Posted Message
Factory Setting	First 10 messages
Valid Entries	1-20
Inspect	No
Copy Option	No
Console Procedure	More → Labeling → PostMessage → Dial message no. → Enter → Drop → Enter message → Enter → Exit → Exit
PC Procedure	[PgUp] → [F1] → [F3] → Type message no. → [F10] → [Alt] + [P] → Type message → [F6] → [F5] → [F5]

Programming Procedures

Procedure: Posted Message

Step	Display/Instructions	On the console	On the PC
1	System Programming: > Make a selection System Extensions SysReNumber Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce		
	Go to the second screen of the System Programming menu.	Press More	Press [PgUp]
2	System Programming: Make a selection Labeling Language Data Print Cntr-Prg Exit		
	Select the Labeling menu.	Select Labeling.	Press [F1]
3	Labeling Make a selection Directory LinesTrunks PostMessage Grp Calling Exit		
	Select Posted Message.	Select PostMessage .	Press [F3]
4	Posted Message: Enter the message number (01-20) Backspace Exit Enter		
	Specify the posted message number.	Dial <i>[nn]</i>	Type <i>[nn]</i>
5	Save your entry.	Select Enter .	Press [F10]

Step	Display/Instructions	On the console	On the PC
6	Msg xx: Enter new message AAAAAAA Punctuation Enter Backspace Exit A ' , B C - & D E . Space F xx = number entered in Step 4 AAAAAAA = current posted rmessage for number entered in Step 4		
	Erase current message.	Press Drop .	Press [Alt] + [P]
7	Enter new message.	Enter the message. Use Punctuation to toggle between letters and punctuation.	Type the message.
8	Save your entry.	Select Enter .	Press [F6] Note: [F6] , <i>not</i> [F10]
9	To return to System Programming menu	Select Exit two times.	Press [F5] two times.

Group Calling

Use this procedure to establish alphanumeric system labels for display telephone users to identify calling groups.

A label can have a maximum of seven characters.

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Group Calling

Programmable by	System manager, Integrated Administration
Mode	All
Idle Condition	Not required
Planning Form	Form 6e, Group Calling
Factory Setting	Not applicable
Valid Entries	Not applicable
Inspect	No
Copy Option	No
Console Procedure	More → Labeling → Grp Calling → Dial calling group ext. no. → Enter → Drop → Enter label → Enter → Exit → Exit
PC Procedure	[PgUp] → [F1] → [F4] → Type calling group ext. no. → [F10] → [Alt] + [P] → Type label → [F6] → [F5] → [F5]

Programming Procedures

Procedure: Group Calling

Step	Display/Instructions	On the console	On the PC
1	<pre>System Programming: > Make a selection System Extensions SysReNumber Options Operator Tables LinesTrunks AuxEquip Exit NightSrvc</pre>		
	Go to the second screen of the System Programming menu.	Press More	Press [PgUp]
2	<pre>System Programming: Make a selection Labeling Language Data Print Cntr-Prg Exit</pre>		
	Select the Labeling menu.	Select Labeling.	Press [F1]
3	<pre>Labeling Make a selection Directory LinesTrunks PostMessage Grp Calling Exit</pre>		
	Select Group Calling.	Select Grp Calling.	Press [F4]
4	<pre>Group Calling: Enter extension number of group Backspace Exit Enter</pre>		
	Specify calling group extension number. Dial <i>[nnnn]</i>		Type <i>[nnnn]</i>
5	Save your entry.	Select Enter.	Press [F10]

Step	Display/Instructions	On the console	On the PC
6	GrpCl xxxx:Enter newlabel AAAAAAA Punctuation Enter Backspace Exit A ' , B C - & D E . Space F xxxx = number entered in Step 4 AAAAAAA = current label for calling group entered in Step 4		
	Erase current label.	Press Drop .	Press [Alt] + [P]
7	Enter label for calling group.	Enter the label. Use Punctuation to toggle between letters and punctuation.	Type the label.
8	Save your entry.	Select Enter .	Press [F6] Note: [F6] , not [F10]
9	To return to System Programming menu	Select Exit two times.	Press [F5] two times.

System Speed Dial Directory

Use this procedure to establish System Speed Dial numbers for all system users. This procedure is also used to enter the alphanumeric labels shown on display telephones (for the system directory feature of the MLX telephone).

A total of 130 numbers (System Speed Dial plus System Directory) can be entered with a maximum of 11 characters per label.

Dial code assignments are 600 through 729.

Entering Programming

Console: Select Menu → Sys Program → Exit
PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: System Speed Dial Directory

Programmable by	System manager, Integrated Administration
Mode	All
Idle Condition	Not required
Planning Form	Form 8b, System Speed Dial
Factory Setting	Not applicable
Valid Entries	Not applicable
Inspect	No
Copy Option	No
Console Procedure	More → Labeling → Directory → System → Dial dial code no. → Enter → Drop → Enter label → Enter → Backspace → Dial telephone no. → Enter → Yes/No → Enter → Exit → Exit → Exit
PC Procedure	[PgUp] → [F1] → [F1] → [F1] → Type dial code no. → [F10] → [Alt] + [P] → Type label → [F6] → [F2] → Type telephone no. → [F6] → [F1]/[F2] → [F6] → [F5] → [F5] → [F5]

Programming Procedures

Procedure: System Speed Dial Directory

Step	Display/Instructions	On the console	On the PC
1	System Programming: > Make a selection System Extensions SysRenumbr Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce		
	Go to the second screen of the System Programming menu.	Press More	Press [PgUp]
2	System Programming: Make a selection Labeling Language Data Print Cntr-Prg Exit		
	Select the Labeling menu.	Select Labeling.	Press [F1]
3	Labeling Make a selection Directory LinesTrunks PostMessage Grp Calling Exit		
	Select Directory.	Select Directory.	Press [F1]
4	Directory: Make a selection System Extension Personal Exit		
	Select System.	Select System.	Press [F1]

Programming Procedures

Step	Display/Instructions	On the console	On the PC
5	System Directory: Enter the entry number (600-729) Backspace Exit Enter Specify the dial code number you want to add or change.	Dial <i>[nnn]</i>	Type <i>[nnn]</i>
6	Save your entry.	Select Enter .	Press [F10]
7	Entry xxx: Enter new name AAAAAAA Punctuation Enter Backspace Exit A ' , B C - & D E . Space F xxx = number entered in Step 5 AAAAAAA = current label for dial code entered in Step 5 Erase current label.	Press Drop.	Press [Alt] + [P]
8	Enter label for dial code.	Enter the label. Use Punctuation to toggle between letters and punctuation.	Type the label.
9	Save your entry.	Select Enter .	Press [F6]
10	Enter Tel. No., and Enter xxxxxxxxxxxxxxxxxxxxxxxxxxxx Punctuation Enter Backspace Exit A ' , B C - & D E . Space F x = current telephone number Erase currently assigned telephone number.	Select Backspace . Note: Do not press Drop.	Press [F2] Note: Do not press [Alt] + [P]

Programming Procedures

Step	Display/Instructions	On the console	On the PC
11	Assign telephone number to dial code entered in Step 5. Include any special characters shown on planning form: ■ Hold (Alt + H) = pause ■ Drop (Alt + P) = stop ■ Conference (Alt + F) = switchhook flash	Dial telephone number: <i>[n]</i> .	Type telephone number: <i>[n]</i> .
12	Save your entry.	Select Enter .	Press [F6]
13	Displ no. while dialing? Yes No Enter Exit If you want the telephone number to display when using System Directory feature If you do not want the telephone number to display when dialed using System Directory feature	Select Yes . Select No .	Press [F1] Press [F2]
14	Save your entry.	Select Enter .	Press [F6] . Note: [F6] , not [F10]
15	To return to System Programming menu	Select Exit three times.	Press [F5] three times.

Print Reports

Use the procedures in this section to change the language for system reports and to print reports.

Report Language

Release 1.1 and Release 2.0 Only)

Use this procedure to change the language of system reports. Unless you change the report language, reports are printed in the language chosen as the system language.

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type SPM → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select Exit on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Report Language

Mode	All
Idle Condition	Not required
Planning Form	Form 1, System Planning
Factory Setting	English
Valid Entries	English, French, Spanish
Inspect	No
Copy Option	No
Console Procedure	More → Language → Printer → Select printer language → Enter → Exit
PC Procedure	[PgUp] → [F6] → [F4] → Select printer language → [F10] → [F5]

Programming Procedures

Procedure: Report Language

Step	Display/Instructions	On the console	On the PC
1	System Programming: > Make a selection System Extensions SysReNumber Options Operator Tables LinesTrunks AuxEquip Exit NightSrvc		
	Go to the second screen of the System Programming menu.	Press More	Press [PgUp]
2	System Programming: Make a selection Labeling Language Data Print Cntr-Prg Exit		
	Select language.	Select Language .	Press [F6]
3	Language: Make a selection SystemLang Extensions SMDR Printer Exit		
	Select Printer.	Select Printer .	Press [F4]
4	Printer Language: Select one English French Spanish Exit Enter		
	Specify a language for your reports.	Select English, French, or Spanish.	Press [F1] , [F2] , or [F3]
5	Save your entry.	Select Enter .	Press [F10]
6	To return to System Programming menu	Select Exit .	Press [F5]

Printing System Reports

The communications system can be used to print a variety of reports. You can print individual reports or use the ALL option to print the entire set of available reports, including all report sections and options. Appendix E contains samples of print reports.

- Use this procedure to print the following reports. With the exception of Trunk Information, the bullet lists show the sections of each report that automatically print when the report option is selected.

- All
 - Each report
 - Report options
- System Set Up
- System Dial Plan
 - Pools
 - Telephone Paging Zones
 - Direct Group Calling
 - Lines/Trunks
 - Stations
- Label Information
 - Telephone Personal Directory
 - Message Numbers and Posted Messages
- Trunk Information*
 - TIE
 - DID
 - Loop/Ground
 - General
- T1 Information
- PRI Information
- Remote Access
 - General Options
 - Non-TIE Restrictions
 - TIE Restrictions
 - Barrier Code Restrictions
- Operator Information
 - Position
 - General Options
 - DSS Options
 - QCC Operators
 - Operator Information
- Allowed Lists

* Trunk option must be specified.

- Allowed Lists Assigned to Extensions
- Disallowed Lists
- Disallowed Lists Assigned to Extensions
- Automatic Route Selection
 - Tables
- Extension Directory
- System Directory
- Group Page
- Extension Information
- Group Coverage
- Group Calling
- Night Service
- Call Pickup Groups
- Error Logs

- If you select the **All** option, keep in mind that the reports take several minutes to print. You may want to schedule use of the printer during off-peak hours.
- If you select a report for which there is no information, the report header still prints.
- Print reports if you cannot backup your system programming information.
- Do *not* print reports if your system must handle more than 100 calls per hour.
- If you are printing from the console, your printer must be connected to the SMDR port. If you are programming on a PC with SPM, you have the following choices:
 - print reports on the SMDR printer (if available)
 - print reports on the PC printer
 - save reports (on hard disk or floppy)
 - view reports (browse)

See Chapter 2, "Programming With SPM," for details.

Entering Programming

Console: Select Menu → Sys Program → Exit

PC/SPM: Type **SPM** → press any key → **[F1]** → **[F5]**

Exiting Without Changes

To exit from any screen without making changes, select **Exit** on the console or press **[F5]** on the PC before saving your entry or menu selection.

Summary: Printing System Reports

Programmable by	System manager
Mode	All
Idle Condition	Not required
Planning Form	Not applicable
Factory Setting	Not applicable
Valid Entries	Any saved report
Inspect	No
Copy Option	No
Console Procedure	To print trunk information: More → Print → Select Trunk Info → Select trunk type → Exit To print extension information: More → Print → More → Select Ext Info → Dial extension number → Enter → Exit To print all other reports: More → Print → Select report → Exit
PC Procedure	To print trunk information: [PgUp] → [F3] → [F6] → Select trunk type → [F5] To print extension information: [PgUp] → [F3] → [PgUp] → [F10] → Type extension number → [F10] → [F5] To print all other reports: [PgUp] → [F3] → Select report → [F5] To save report on disk: [PgUp] → [F3] → Select report → [F10] → GOTO FLOPPY → [F10] To view report: [Ctrl] + [8]

Programming Procedures

Procedure: Printing System Reports

Step	Display/Instructions	On the console	On the PC
1	System Programming: : Make a selection System Extensions SysReNUMBER Options Operator Tables LinesTrunks AuxEquip Exit NightSrvc		
	Go to the second screen of the System Programming menu.	Press More	Press [PgUp]
2	System Programming: Make a selection Labeling Language Data Print Cntr-Prg Exit		
	Select Print.	Select Print.	Press [F3]
3	Print (xxxx): > Make a selection All Trunk Info SysSet-up T1 Info Dial Plan PRI Info Labels RmoteAccess Exit Oper Info xxxx = previously selected language		
	Specify report to print. If you select Trunk Info, go to Step 4a. <i>NOTE: The All option prints each of the available reports and takes several minutes to complete.</i> For additional selections:	Press the button next to your selection. Press More .	Press the function key next to your selection. Press [PgDn]

Programming Procedures

Step	Display/Instructions	On the console	On the PC
	<pre>Print More: > Make a selection AllowList ARS AllowListTo Ext Direct DisallowLst Sys Direct DisallowTo Group Page Exit Ext Info</pre>		
	Specify report to print. If you select Ext Info, go to Step 4b. For additional selections:	Press the button next to your selection. Press More.	Press the function button next to your selection. Press [PgDn]
	<pre>Print More Make a selection GrpCoverage Error Log Grp Calling Night Servce Call Pickup Exit</pre>		
	Specify report to print.	Press the button next to your selection.	Press the function key next to your selection.
4a	For Trunk Information, do the following <pre>Trunk Info Enter line/trunk type TIE DID Loop/Ground General Exit</pre>		
	Specify a trunk type.	Press the button next to your selection.	Press the function key next to your selection.

Data Features

The following procedure is provided in this section:

- Analog Multiline Telephones with Simultaneous Voice and Data

The other procedures for programming data features can be found in earlier sections of this book except for the Ringing Option, which is described in Chapter 4. Refer to Table 3-5 for specific information.

Table 3-5. Data Features: Programming Procedures

Procedure	Section/Chapter
Assign Trunks or Pools to Data Stations	"Telephones"
Copy Trunk Assignments	"Telephones"
Assign Intercom or System Access Buttons	"Telephones"
Pool Dial-Out Code (Hybrid/PBX only)	"Optional Telephone Features"
Call Restrictions	"Optional Telephone Features"
Copy Call Restrictions	"Optional Telephone Features"
Forced Account Code Entry	"Optional Telephone Features"
Ringing Options	Chapter 4, "Centralized Telephone Programming"
Assign Data Hunt Group Members	"Optional Group-Assigned Features" in section "Group Calling Member Assignments"
Assign Data Hunt Group Trunks or Pools	"Optional Group-Assigned Features" in section "Group Calling Trunk or Pool Assignments"
Group Type	"Optional Group-Assigned Features" (choice restricted to Automatic Log In)

Analog Multiline Telephones with Simultaneous Voice/Data

Use this procedure to dedicate a voice/data pair to provide the Simultaneous Voice and Data feature to an analog multiline telephone.

The extension number associated with the first (odd-numbered) station jack in the pair is the telephone's extension number. The extension number for the second (even-numbered) station jack is dedicated to the Simultaneous Voice and Data feature.

- Calls cannot be placed to the station jack reserved for the Simultaneous Voice and Data feature.
- An extension number cannot be dedicated for both the Voice Announce to Busy feature and the Simultaneous Voice and Data feature.
- When you select **Enter** after entering the voice extension number in the data entry screen, the system automatically assigns the data station extension.
- Use the **Inspect** feature to verify the extension pair.

Summary: Analog Multiline Telephones with Simultaneous Voice/Data

Programmable by	System manager
Mode	All
Idle Condition	System idle
Planning Form	Form 2a, System Numbering— Station Jacks Form 4b, Analog Multiline Telephone Form 5a, Direct-Line Console (DLC)-Analog Data Form 2a, Analog Data Station
Factory Setting	Not applicable
Valid Entries	Extension numbers of analog sets
Inspect	Yes
Copy Option	Yes
Console Procedure	More → Data → Voice/Data → Dial ext. no. → Enter → Exit
PC Procedure	[PgUp] → [F2] → [F1] → Type ext. no. → [F10] → [F5]

Programming Procedures

Procedure: Analog Multiline Telephones with Simultaneous Voice and Data

Step	Display/Instructions	On the console	On the PC
1	System Programming: > Make a selection System Extensions SysReNumber Options Operator Tables LinesTrunks AuxEquip Exit NightSrvce		
	Go to the second screen of the System Programming menu.	Press More	Press [PgUp]
2	System Programming: Make a selection Labeling Language Data Print Cntr-Prg Exit		
	Select Data.	Select Data.	Press [F2]
3	Data: Make a selection Voice/Data Exit		
	Select Voice/Data.	Select Voice/Data.	Press [F1]

Programming Procedures

Step	Display/Instructions	On the console	On the PC
4	Data Voice/Data Enter voice/data pair BackspaceDelete ExitEnter Specify the voice extension number.	Dial <i>[nnnn]</i>	Type <i>[nnnn]</i>
5	To save your entry	Select Enter .	Press [F10]
	To delete the voice/data pair	Select Delete .	Press [F8]
6	To return to System Programming menu	Select Exit .	Press [F5]

Integrated Administration

NOTE:

This feature applies only to Release 2.0 or later of the communications system.

Integrated Administration is available in Hybrid/PBX and Key modes only.

Capabilities

The Integrated Administration capability of Integrated Solution III (IS-III) simplifies the programming of common information for the communications system (the “switch”), AUDIX Voice Power™, and, if it is also installed, AT&T FAX Attendant System™. Since the AUDIX Voice Power and FAX Attendant applications use some of the same information programmed on the switch, Integrated Administration lets the installer or system manager make changes or additions to this information just once, instead of on both sides of the connection. Using Integrated Administration reduces programming time and effort and ensures that the switch and the applications are in agreement.

Common Information

The switch and the applications share the following information:

- System numbering of extensions, trunks, and pools
- System labeling — the user or other name associated with each extension, trunk, and pool
- The Coverage Group that sends its calls to the applications
- The Calling Group set up for each service of the applications
- The Reliable Disconnect setting for loop-start trunks
- The Delay Ring and Coverage Delay Interval settings
- The Transfer Return Time and VMS Transfer Return Interval

Set Up

You cannot program the common information until you have completed basic setup programming for the communications system. Use SPM or the system programming console to program the following:

- Mode of operation
- System numbering
- System operator positions
- Phantom extensions
- Trunks to pools assignment

NOTE:

If you do not want all lines to have the same application services, you must assign lines with the same services to the same pools

Programmable Options

Once you have completed these system programming tasks, you can program the information in Table 3-6 through Integrated Administration:

Table 3-6. Programming through Integrated Administration

<u>Option</u>	<u>Factory Setting</u>	<u>Range</u>
Automated Attendant Calling Group	770	
Call Answer Calling Group	7926	
FAX Response Calling Group	7924	
Information Service Calling Group	7927	
Message Drop Calling Group	7928	
Voice Mail Calling Group	7925	
Coverage Group	30	1-30
Reliable Disconnect	yes	
Delay Ring	2 rings	1-6 rings
Coverage Delay Ring	3 rings	1-9 rings
VMS Transfer Return Interval	6 rings	0-9 rings
Transfer Return Time	6 rings	0-9 rings

The information programmed through Integrated Administration is shared with the communications system control unit and does not have to be programmed again when you program the communications system.

If the technician or system manager changes extension numbering on the switch, using the MLX-20L console or SPM, the switch and the application database will no longer be in agreement. To reduce the chance that such changes will disrupt communication between the switch and the applications, Integrated Administration includes an automatic reconciliation program that runs every day at 3:00 a.m., comparing the application database to the switch programming and bringing the two into agreement. The program makes changes, as necessary, only to the application database, according to the rules listed in Table 3-7. It does not change the switch programming.

Table 3-7. Database Reconciliation Rules

Extension appears in...			Action
Switch	Application Database		
yes	yes		None.
yes	no		Extension is added to database. Can be added as AUDIX Voice Power or AUDIX Voice Power/FAX Attendant subscriber through Extension Directory screen.
no	yes (regular extension)		Extension is deleted from database and removed as an AUDIX Voice Power or AUDIX Voice Power/FAX Attendant subscriber.
no	yes (special extension)		Extension is retained as special-purpose extension in database.
yes	yes (special extension)		Extension is converted from special-purpose extension to regular extension in database.

When you have finished programming the common information, you can complete any remaining system programming procedures. See *System Reference* for additional information on Integrated Administration.

Complete information on IS-III can be found in *Integrated Solution III System Manager's Guide*, Order No. 555-601-010 and *AT&T Integrated Solution III Installation and Maintenance Guide*, Order No. 555-601-011.

Centralized Telephone Programming

4

This section describes Centralized Telephone Programming for the System manager. It explains:

- the features programmed using this function
- how to access centralized programming
- how to program a single telephone
- how to copy programmed features from one extension to another extension (extension copy — release 2.0 and later versions)
- pertinent programming information about each feature.

For details on each feature, see *Feature Reference* or the appropriate user or operator guide.

Centralized Programming

Centralized Telephone Programming enables the system manager to program any feature that can be programmed by individual telephone user or system operator onto any telephone in the system. All features programmable at a individual telephone level can be programmed using Centralized Telephone Programming. There are also some features that can be programmed only by using centralized programming:

- Barge-in
- Handset Hang Up
- Intercom buttons-all types (Key and Behind Switch only)
- System Access buttons-all types (Hybrid/PBX only)

All programmable features are described later in this section.

To perform Centralized Telephone Programming, the system manager can use the system programming console described in Chapter 1 or a PC with SPM software as described in Chapter 2.

In Release 2.0 or later versions, the system manager can speed the programming of several telephones, which are alike (all analog or all MLX), by programming an extension and using the programmed extension as a template for programming additional extensions. See "Extension Copy" later in this section. Also refer to the planning forms used to plan the Extension Copy feature.

NOTE:

Some programming can be performed only when the entire system or some part of it, such as a trunk or an extension, is idle (that is, not in use or not in use at the instant of programming). See "Idle States" in Chapter 1 for more information.

Centralized Telephone Programming

Accessing Centralized Telephone Programming

The system manager accesses the Centralized Programming menu from the System Programming menu. Centralized programming is performed by selecting features from the display or by using programming codes.

To access Centralized Programming, follow these steps:

Step	Display/Instructions	On the console	On the PC
1	System Programming > Make a Selection System Extensions SysRenumber Options Operator Tables LinesTrunks AuxEquip Exit NightSrvc		
	Go to the second screen of the System Programming menu.	Select More .	Press [PgUp]
2	System Programming > Make a selection Labeling Data Print Cntr-Prg Exit		
	Select Centralized Programming.	Select Cntr-Prg.	Press [F4]
3	Centralized Programming: Make a selection Program Ext Copy Ext Exit Enter		
	Select program extension or copy extension.	Select Program Ext or Copy Ext.	Press [F1] or [F2]

The following sections explain the menu selections for programming a single extension (Program Ext) and using an extension's programming as a template for programming several extensions of the same type (Copy Ext).

Centralized Telephone Programming

Programming a Telephone

At the Centralized Programming menu, use the following procedure to program features onto a single telephone.

Step	Display/Instructions	On the console	On the PC
1	Centralized Programming: Make a selection Program Ext Copy Ext Exit Enter		
	Select program extension.	Select Program Ext.	Press [F1]
2	Centralized Programming: Enter extension Backspace Exit Enter		
	Specify the telephone in any one of the following ways:		
	Extension no.	Dial [nnnn]	Type [nnnn]
	Slot and port no.	Dial * [sspp]	Type [sspp]
	Logical ID no.	Dial [nnn]	Type [nnn]
	DSS	Press DSS button.	
3	Save your entry.	Select Enter	Press [F10]
4	Extension Program xxxx Press HOME to Exit System Prog Start		
	xxxx = extension entered in Step 2		
	Start centralized programming. Select Start.		Press [F10]

Centralized Telephone Programming

Step	Display/Instructions	On the console	On the PC
5	Select Button: Extension Program xxxx Page 1 Page 2 System Prog xxxx = extension entered in Step 2 Select button. If programming a telephone with more than 20 buttons, use the Page 2 selection on the screen to select the additional buttons. See Appendix D for button diagrams of all telephones.	Press the button on the console.	Press the function key for the button,
6	Blank Press HOME to Exit Delete System Prog ListFeature Use Table 4-1 to enter programming codes for a feature or select ListFeature to use the screen keys to program a feature. When the button is programmed, the system automatically returns to the screen in Step 5.	Enter programming code or Select ListFeature.	Enter programming code or press [F10]

Centralized Telephone Programming

Step	Display/Instructions	On the console	On the PC

For incorrect entries:

- If you enter a feature code incorrectly, the message **Programming Error** displays and the red LED next to the button flashes. If this happens, press the button again and repeat the procedure.
- If you make a mistake and program the wrong feature on a button:
 1. Press the button.
 2. Select Delete (**[F2]** on the PC)
 3. Press the button again.

You can also use the Ext Info report option on the Print menu to print all of the programmed features for a specific telephone.

Programming Codes

Table 4-1 provides a quick reference for programming features using the programming code.

Table 4-1. Telephone Programming Codes: Quick Reference Table

Feature	Code	Feature	Code
Account Code Entry	*82	Extension Status	
Alarm	*759	Direct-line Console§	
Auto Answer AH	*754	Status Off	*760
Auto Answer Intercom	*753	Status 1	*761
Auto Dial		Status 2	*762
Inside (ext, group, zone)	*22 + ext. no. + Enter	Telephones	
Outside	*21 + tel. no. + Enter	Status 1	*45
Automatic Line Selection		Status 2	*44
Enter	*14	Feature Button	*20
Exit	**14	Forward	*33
Barge - In †§	*58	Group Calling	
Callback		In-queue alarm button	*22 + group no. + Enter
Automatic		Calling group supervisor	
On	*12	Available (ES2)	*762
Off	**12	Unavailable	*760
Selective	*55	Calling Group Members	
Call Waiting		Sign-in (available)	*44
On	*11	After work call state	*45
Off	**11	Group Page	*22 + group no. + Enter
Camp-On	*57	Headset*	
Conference	*722	Auto Answer	*780
Coverage		Hang Up†	*781
Receiver buttons		Mute	*783
Primary	*40 + ext. no. + Enter	Status	*782
Secondary	*41 + ext. no. + Enter	Last Number Dial	*84
Group	*42 + group no. + Enter	Messaging	
Sender buttons		Leave message	*25
Cover in/outside calls	*48	Message LED off	*54
Cover outside calls only	**48	Posted message	*751
Coverage off	*49	Send/Remove message§	*38
VMS off	*46	Receiving messages	
Data status	*83 + Enter	Delete message‡	*26
Do Not Disturb	*47	Next message‡	*28
Drop	*773	Return call‡	*27
		Scroll message‡	*29
		Night Service§	*39
		Notify	
		Send	*757 + ext. no. + Enter
		Receive	*758 + ext. no. + Enter

* MLX telephones only.

† Centralized telephone programming only.

‡ Analog display telephone only. MLX display telephones use display instead of programmed buttons.

§ System operator-only.

Continued on next page

Centralized Telephone Programming

Table 4-1. - Continued

Feature	Code	Feature	Code
Park	*86	Saved Number Dial	*85
Park Zone Auto Dial	*22 + park zone	Send/Remove Messages	*38
Personal Speed Dial	# + (01-24) + * 2 1	Signaling	*23 + ext. no. + Enter
Personalized Ring Pickup	*32 + ring no. (1-8)	System Access Intercom/Buttons	
General use	*9	Access buttons†	*16
Specific ext.	*9 + ext. no. + Enter	Ring	*18
Specific line	*9 + line no. + Enter	Originate Only	*17 + primary
Group	*88	Shared System Access	ext. no. + Enter
Position Busy	*750	Change Type of Button	**19
Privacy	*31	Ring	*19
Recall	*775	System Speed Dial	*24 + Code (600-729)
Reminder Service		Transfer	+ Enter *744
Set	*81	Voice Announce	
Cancel	**81	On	*10
Missed	*752	Off	**10
Ringing Idle Line Preference			
On	*343		
Off	*344		
Ringing Options			
Ring Timing			
Individual Lines	*37		
Immediate Ring	*36		
Delay Ring	*35		
No Ring			
All Lines			
Immediate Ring	*347		
Delay Ring	*346		
No Ring	*345		
Abbreviated Ring			
On	*341		
Off	*342		
Send Ring (Shared SA)			
On	*15		
Off	**15		

Extension Copy

The System manager uses the extension copy feature to copy an extension's programmed buttons (with some exceptions) to one or more extensions. The features are individually programmed on an extension, thus creating a template that can then be copied to other extensions in the system.

Only like extensions can be copied to each other (that is, analog to analog, and MLX to MLX) since the two extension types have different button layouts. Therefore, for a system that has both telephone types, you will need two templates: one for analog and one for MLX.

An MFM can be copied to or from another MFM. A DLC can only be copied to another DLC. Single-line telephones and QCCs cannot be copied.

Copyable Features

Table 4-2 lists the features that are copied to another extension using the Copy Extension feature. Features that can be copied for operator extensions are listed in Table 4-3.

Table 4-2 Copyable Features for All Telephones

Feature	Analog and MLX Telephones	Analog Telephones Only	MLX Telephones Only
Account Code Entry	X		
Auto Answer All		X	
Auto Answer Intercom		X	
Auto Dial Inside	X		
Auto Dial Outside*	X		
Barge-In	X		
Callback-Selective	X		
Camp-On	X		
Conference**	X		
Coverage Off	X		
Coverage VMS Off	X		
Data Status	X		
Do Not Disturb	X		
Drop*	X		
Extension Status 2 (Non-operator)	X		
Extension Status 1 (Non-operator)	X		
Feature Button		X	
Forward	X		
Group Calling	X		
Group Page	X		
Headset Auto Answer			X

Continued on next page

Table 4-2 - Continued

Feature	Analog and MLX Telephones	Analog Telephones only	MLX Telephones Only
Headset Hang Up			X
Headset Status			X
Headset/Handset Mute			X
Last Number Dial*	X		
Messaging:			
Delete Message		X	
Leave Message	X		
Message Light Off	X		
Next Message		X	
Posted Message	X		
Return Call		X	
Scroll		X	
Park	X		
Pickup:			
Group	X		
General	X		
Extension	X		
Line	X		
Privacy	X		
Recall	X		
Reminder Service:			
Set	X		
Cancel	X		
Saved Number Dial*	X		
Signaling	X		
System Access/Intercom†:	X		
SA/ICOM Ring	X		
SA/ICOM Voice	X		
SA/ICOM Originate Only	X		
System Speed Dial	X		
Transfer**	X		

* Number is not copied.

** Behind Switch mode only.

† Ringing options (No Ring, Delay Ring, and immediate Ring) are copied with the button.

Centralized Telephone Programming

Table 4-3 shows the operator features than can be copied for operator consoles. QCC features cannot be copied.

Table 4-3. Copyable Features for Operator Consoles

Feature	Analog Direct-Line Console (DLC)	M L X Direct-Line Console (DLC)
Alarm	X	X
Extension Status Off	X	X
Extension Status 1	X	X
Extension Status 2	X	X
Missed Reminder	X	X
Night Service	X	X
Operator Park	X	X
Send/Remove Message	X	X

Extension Copy Procedure

Using the following procedure to copy extension programming to another extension.

Step	Display/Instructions	On the console	On the PC
1	Centralized Programming: Make a selection Program Ext Copy Ext Exit Enter		
	select copy extension.	Select Copy Ext.	Press [F2]
2	Extension Program Copy: Enter extension to copy from Backspace Exit Enter		
	Specify the number of the extension whose programming you want to copy.	Dial <i>[nnnn]</i>	Type <i>[nnnn]</i>
3	Save your entry.	Select Enter.	Press [F10]

Centralized Telephone Programming

Step	Display/Instructions	On the console	On the PC
4	Copy extension xxxx to: Enter extension Backspace Next Exit Enter xxxx = extension entered in Step 2 Specify the number of the extension that is to receive the copied programming.	Dial [nnnn]	Type [nnnn]
5	To save your entry and COPY line assignments from another extension to an individual telephone: To save your entry and copy line assignments from extension shown on line 1 to another individual telephone: ■ If next extension number is sequential <i>Your previous entry is saved and next copy to extension number is shown.</i> ■ If next extension number is not sequential To save your entry when all entries are complete	Select Enter . Repeat Steps 2-4. Select Next . Select Enter . Repeat Step 4. Select Enter .	Press [F10] Repeat Steps 2-4. Press [F9] Press [F10] Repeat Step 4. Press [F10]

Centralized Telephone Programming

Feature Quick Reference

The following feature descriptions provide a quick reference for system managers using centralized telephone programming.

Account Code Entry

Assign a button for Account Code Entry.

Summary: Account Code Entry

Telephones	All (except QCC)
Mode	All (except Single-line telephone in B/S mode)
Programmable by	User and System manager
Programming Code	★ 82
Display Label	AccountCode

Alarm

Assign a button to alert the operator to system problems.

Summary: Alarm

Telephones	DLC operator only
Mode	All
Programmable by	DLC operator and System manager
Programming Code	★ 759
Display Label	Alarm

Auto Answer All

Assign a button to direct calls to an answering device when the user is not available.

Summary Auto Answer All

Telephones	Analog Multiline only
Mode	All
Programmable by	User and System manager
Programming Code	*754
Display Label	AutoAns All

Auto Answer Intercom

Assign a button to answer both inside and outside calls without lifting the handset.

Summary Auto Answer Intercom

Telephones	Analog Multiline only
Mode	All
Programmable by	User and System manager
Programming Code	*753
Display Label	AutoAnsIcom

Centralized Telephone Programming

Auto Dial

Assign buttons for one-touch dialing of frequently called inside or outside numbers.

Summary: Auto Dial Inside and Outside

Telephones	Analog Multiline, all MLX telephones (except QCC)
Mode	All
Programmable by	User and System manager
Programming Code	Inside — * 22 + ext. no + Enter Outside — * 21 + telephone no. + Enter
Display Label	Auto Dial Inside/Outside

Automatic Line Selection

Use this procedure to select the order in which the system makes outside lines available to the user.

Summary: Automatic Line Selection

Telephones	Analog Multiline and all MLX telephones
Mode	All
Programmable by	User and System manager
Programming Code	Enter — * 14 Exit — ** 14
Display Label	AutoLineSel

Barge-In

Assign a button to allow an operator to interrupt a user's call in an emergency

Summary: Barge-In

Telephones	DLC operator only
Mode	All
Programmable by	System manager only
Programming Code	* 58
Display Label	Barge In

Callback

With Automatic Callback turned on, the system retries calls to busy extensions or busy trunk pools. Assign a Selective Callback button to allow the system to retry calls to busy extensions or busy trunk pools on a call-by-call basis.

Summary: Automatic Callback

Telephones	All
Mode	All
Programmable by	User and System manager
Programming Code	On — * 12 Off — ** 12
Display Label	Cback Auto On/Off

Summary: Selective Callback

Telephones	All
Mode	All
Programmable by	User and System manager
Programming Code	* 55
Display Label	Cback Sel

Call Waiting

With Call Waiting turned on, a user on a call will know that another call is waiting. User hears one beep for a waiting inside call, two for an outside call.

Summary: Call Waiting

Telephones	All
Mode	All
Programmable by	User and System manager
Programming Code	On — * 11 Off — ** 11
Display Label	CallWaiting On/Off

Camp-On

Assign a button to allow a user to complete a transfer to a busy extension.

Summary: Camp-On

Telephones	Analog Multiline and MLX-10 telephones (except QCC)
Mode	All
Programmable by	User and System manager
Programming Code	★ 57
Display Label	Camp On

Conference

Assign a button to access the host system Conference feature.

Summary: Conference

Telephones	Analog Multiline and MLX telephones (except QCC)
Mode	Behind Switch
Programmable by	User and System manager
Programming Code	★ 772
Display Label	Conference

Coverage

Assign a button to establish coverage: senders' calls are covered by receivers.

Summary: Receiver Buttons - Primary, Secondary, Group

This procedure assigns primary, secondary, or group coverage receivers.

Telephones	All (except QCC)
Mode	All
Programmable by	User and System manager
Programming Code	Primary — ★ 40 + ext. no. + Enter Secondary — ★ 41 + ext. no. + Enter Group — ★ 42 + group no. + Enter
Display Label	Coverage Primary/ Secondary/Group

Summary: Coverage Inside Off/On

This procedure allows or prevents coverage of inside calls.

Telephones	Analog Multiline and MLX telephones (except QCC)
Mode	All
Programmable by	User and System manager
Programming Code	In/Outside Calls — ★ 48 Outside Calls Only — ★★ 48
Display Label	CoverInside, On/Off

Summary: Sender Buttons - Coverage Off

This procedure turns off all coverage.

Telephones	Analog Multiline and MLX telephones (except QCC)
Mode	All
Programmable by	User and System manager
Programming Code	★ 49
Display Label	Coverage Off

Summary: Coverage VMS Off

This procedure prevents outside calls from being sent to Voice Mail.

Telephones	Analog Multiline and MLX telephones (except QCC)
Mode	AH
Programmable by	User and System manager
Programming code	★ 46
Display Label	Coverage VMS Off

Data Status

Assign a button to indicate when a data call is in progress.

Summary: Data Status

Telephones	All (except QCC)
Mode	All
Programmable by	User and System manager
Programming Code	* 83 + ext. no. + Enter
Display Label	Data Status

Do Not Disturb

Assign a button to prevent calls from ringing at the phone.

Summary: Do Not Disturb

Telephones	Analog Multiline and MLX telephones (except QCC)
Mode	All
Programmable by	User and System manager
Programming Code	* 47
Display Label	DoNotDisturb

Drop

Assign a button to access the host system Drop feature.

Summary: Drop

Telephones	Analog Multiline and MLX telephones (except QCC)
Mode	Behind Switch
Programmable by	User and System manager
Programming Code	* 773
Display Label	Drop

Extension Status

Assign a button to allow system operators or supervisors to monitor the status of extensions and restrict use of telephones (Hotel configuration) or change group members' availability to take calls (Group Calling/CMS configuration).

Summary: DLC Extension Status

Telephones	DLCs only
Mode	All
Programmable by	System manager
Programming Code	Off — ★ 760 ES1 — ★ 761 ES2 — ★ 762
Display Label	OperatorES, ES0ff/ES1/ES2

Summary: Telephone Extension Status 1 and 2

Telephones	Single-line, Analog Multiline, MLX telephones
Mode	All
Programmable by	User and System manager
Programming Code	ES1 — ★ 45 ES2 — ★ 44
Display Label	ES Status, ES1/ES2

Feature Button

Use in conjunction with features that require dial codes.

Summary: Feature Button

Telephones	Analog Multiline
Mode	All
Programmable by	User and System manager
Programming Code	★ 20
Display Label	Feature Btn

Forward

Assign a button to activate the forwarding of a user's calls to another extension or to an outside number.

Summary: Forward

Telephones	Single-line, Analog Multiline, MLX telephones (except QCC)
Mode	All
Programmable by	User and System manager
Programming Code	★ 33
Display Label	Forward

Group Calling

Assign buttons to allow calling group supervisor to monitor the number of calls in queue, or change calling group members' availability to take calls.

Summary: Group Calling — In-Queue Alarm Button

Telephones	Analog Multiline and MLX telephones
Mode	All
Programmable by	User and System manager
Programming Code	★ 22 + calling group ext. no. + Enter
Display Label	Group Call

Summary: Group Calling-Calling Group Supervisor

Telephones	Analog Multiline, MLX-28D, MLX-20L
Mode	All
Programmable by	User and System manager
Programming Code	ES2, Available — ★ 762 ES Off, Unavailable — ★ 760
Display Label	OperatorES, ES2/ES Off

Centralized Telephone Programming

Summary: Group Calling - Calling Group Members

Telephones	Single-line, Analog Multiline, MLX telephones
Mode	All
Programmable by	User and System manager
Programming Code	Sign-in, available — ★ 44 After-Call Work State, MS only — ★ 45
Display Label	ES Status, ES2/ES1

Group Page Auto Dial Button

Assign a button to allow user to broadcast an announcement to individuals or groups using a speakerphone or loudspeaker.

Summary: Group Page Auto Dial button

Telephones	Analog Multiline and MLX telephones
Mode	All
Programmable by	User and System manager
Programming Code	★ 22 + paging group ext. no. + Enter
Display Label	Group Page

Headset

Use these procedures to program headset buttons on MLX telephones only.

Summary: Headset Auto Answer

Assign a button to automatically answer a ringing call.

Telephones	MLX telephones only
Mode	All
Programmable by	User and System manager
Programming Code	★ 780
Display Label	Hdset Auto Answer

Summary: Headset Hang Up

Assign a button used to disconnect a call.

Telephones	MLX telephones only
Mode	All
Programmable by	System manager only
Programming Code	★ 781
Display Label	Hdset Hang Up

Summary: Headset Mute

Assign a button to turn microphone operation on or off for both Headset and Handset.

Telephones	MLX telephones only
Mode	All
Programmable by	User and System manager
Programming Code	★ 783
Display Label	Hdset Mute

Summary: Headset Status

Assign a button to activate headset operation.

Telephones	MLX telephones only
Mode	All
Programmable by	User and System manager
Programming Code	★ 702
Display Label	Hdset Status

Last Number Dial

Assign a button to redial the last number dialed.

Summary: Last Number Dial

Telephones	All
Mode	All
Programmable by	User and System manager
Programming Code	★ 84
Display Label	LastNumDial

Messaging

Assign a button to allow users to send, receive, and post messages.

Summary: Messaging - Leave Message After Calling

Telephones	Analog Multiline and MLX telephones
Mode	All
Programmable by	User and System manager
Programming Code	★ 25
Display Label	Leave Msg

Summary: Messaging - Leave Message, Message LED Off

Telephones	Analog Multiline and MLX telephones
Mode	All
Programmable by	User and System manager
Programming Code	★ 54
Display	[none]

Centralized Telephone Programming

Summary: Messaging - Posted Message

Telephones	Analog Multiline and MLX telephones
Mode	All
Programmable by	User and System manager
Programming Code	★ 751
Display Label	Posted Msg

Summary: Messaging - Send/Remove Message

Telephones	DLC operator only
Mode	All
Programmable by	User and System manager
Programming Code	★ 38
Display Label	Send/RmvMsg

Summary: Messaging - Receiving Messages Delete

Telephones	Analog Multiline only
Mode	All
Programmable by	User and System manager
Programming Code	★ 26
Display Label	Messages Delete Msg

Summary: Messaging - Receiving Message: Next

Telephones	Analog Multiline only
Mode	All
Programmable by	User and System manager
Programming Code	★ 28
Display Label	Messages Next Msg

Centralized Telephone Programming

Summary: Messaging - Receiving Messages Return Call

Telephones	Analog Multiline only
Mode	All
Programmable by	User and System manager
Programming Code	* 27
Display Label	Return Call

Summary: Messaging - Receiving Message: Scroll

Telephones	Analog Multiline only
Mode	All
Programmable by	User and System manager
Programming Code	* 29
Display Label	Scroll Msg

Night Service

Assign a button to activate after-hours telephone operation.

Summary: Night Service

Telephones	DLC operator only
Mode	All
Programmable by	Operators and System manager
Programming Code	* 39
Display Label	Night Srvc

Notify

Assign buttons to allow users to send a visual signal to another extension without making a call to that extension.

Summary: Notify - Send and Receive

Telephones	Analog Multiline and MLX telephones
Mode	All
Programmable by	User and System manager
Programming Code	Send — * 757 + ext. no. + Enter Receive — * 758 + ext. no. + Enter
Display Label	Notify Send/Receive

Park

Assign a button to “hold” a call and allow the call to be picked up by any telephone in the system.

Summary: Park

Telephones	All
Mode	All
Programmable by	User and System manager
Programming Code	* 86
Display Label	Park

Park Zone Auto Dial

Assign a button to allow DLC operators to "hold" a call at a specified extension or park zone.

Summary: Park Zone Auto Dial

Telephones	DLC operator only
Mode	All
Programmable by	User and System manager
Programming Code	* 22 + Park Zone + Enter
Display Label	Park Zone

Personal Speed Dial

Use this procedure to program codes that allow users to dial outside numbers by dialing a 2-digit code.

Summary: Personal Speed Dial

Telephones	Single-line, Analog Multiline, and telephones with 10 or less buttons
Mode	All
Programmable by	User and System manager
Programming Code	# + (01-24) + * 21 + tel. no + # + Enter

Pickup

Assign buttons to allow users to answer calls that are ringing, parked, or on hold anywhere in the system.

Summary: Pickup - General Use, Specific Extension, Specific Line

Telephones	All
Mode	All
Programmable by	User and System manager
Programming Code	General — * 9 Specific line or ext. — * 9 + line no./ext. no. + Enter Group — * 88
Display Label	General Use, Specific Extension, Specific Line Pickup General/Extension/Line Group Pickup Group

Privacy

Assign a button to prevent other people from connecting to a call on this telephone.

Summary: Privacy

Telephones	All
Mode	All
Programmable by	User and System manager
Programming Code	★ 31
Display Label	Privacy

Recall

Assign a button to send a switchhook flash.

Summary: Recall

Telephones	Analog Multiline and MLX telephones
Mode	All
Programmable by	User and System manager
Programming Code	★ 775
Display Label	Recall

Reminder Service

Assign buttons to allow the system to make calls automatically at preset times; cancel reminder service calls and operator reminder calls that were not answered.

Summary: Set, Cancel, or Missed Reminder Service

Telephones	All
Mode	All
Programmable by	User and System manager
Programming Code	Set — ★ 81 Cancel — ★★ 81 Missed — ★ 752
Display Label	Reminder Set/Cancel/Missed

Ringing and Idle Line Preference

Use this procedure to turn on ringing and idle line preference.

Summary: Ringing and Idle Line Preference

Telephones	Analog Multiline and MLX telephones
Mode	All
Programmable by	User and System manager
Programming Code	On — ★ 343 Off — ★ 344
Display Label	Line Prefer, On/Off

Ringing Options

Summary: Personalized Ringing

Use this procedure to individualize the ring of user's telephone.

Telephones	Analog Multiline and MLX telephones
Mode	Hybrid/PBX, Key, Behind Switch
Programmable by	User and System manager
Programming Code	* 32 + ring pattern (1-8)
Display Label	Personal Ring Pattern #n

Summary: Ring Timing Options

Use this procedure to establish whether and how the individual lines or all lines ring at a telephone.

Telephones	Analog Multiline and MLX telephones
Mode	All
Programmable by	User and System manager
Programming Code	Individual Lines Immediate — * 37 Delay — * 36 No Ring — * 35 All Lines Immediate — * 347 Delay — * 346 No Ring — * 345
Display Label	Individual Lines Ring Options One Line Immed/Delay/No Ring All Lines Ring Options All Lines Immed/Delay/No Ring

Centralized Telephone Programming

Summary: Abbreviated Ring Ringing Options

Use this procedure to turn abbreviated ringing on or off.

Telephones	Analog Multiine and MLX telephones
Mode	All
Programmable by	User and System manager
Programming Code	On — * 341 Off — * 342
Display Label	Ring Options Abbreviated On/Off

Summary: Send Ring Ringing Options

Use this procedure to override Delay Ring on an extension with Shared SA buttons.

Telephones	All
Mode	Hybrid/PBX
Programmable by	User and System manager
Programming Code	On — * 15 Off — ** 15
Display Label	Shared SA Ring On/Off

Saved Number Dial

Assign a button to selectively save the last number dialed and call that number again without manually redialing.

Summary: Saved Number Dial

Telephones	Analog Multiline and MLX telephones
Mode	All
Programmable by	User and System manager
Programming Code	* 85
Display Label	SaveNumDial

Send/Remove Message

Assign a button to allow the system operator to turn message LED on or Off for any telephone connected to the system.

Summary: Send/Remove Message

Telephones	DLC operator only
Mode	All
Programmable by	User and System manager
Programming Code	* 38
Display Label	Send/RmvMsg

Signaling

Assign a button to allow a user to send an audible signal to another extension without making a call to that extension.

Summary: Signaling (manual)

Telephones	Analog Multiline and MLX telephones
Mode	All
Programmable by	User and System manager
Programming Code	* 23 + ext. no. + Enter
Display Label	Signal

System Access/Intercom Buttons

Assign intercom or System Access Intercom buttons on telephones.

Summary: Assign System Access/Intercom Buttons

Telephones	All
Mode	Intercom buttons Key, Behind Switch
	System Access Intercom buttons Hybrid/PBX
Programmable by	System manager only
Programming Code	Intercom buttons Assign Intercom Ring button — ★ 16 Assign Intercom Originate Only button — ★ 18
	System Access Intercom buttons Assign Ring button — ★ 16 Assign Originate Only button — ★ 18
Display Label	SysAccess/SysAcc-00

Summary: Assign Shared System Access Buttons

Telephones	All
Mode	Hybrid/PBX
Programmable by	System manager only
Programming Code	★ 17 + primary ext. no.
Display Label	ShareSysAcc

Centralized Telephone Programming

Summary: Change Type of System Access Intercom Button

Telephones	All
Mode	Intercom buttons Key, Behind Switch
	System Access Intercom buttons Hybrid/PBX
Programmable by	User and System manager
Programming Code	Ring — ** 19 Voice — * 19
Display Label	Voice Annce, Place Ring/Voice

System Speed Dial

Assign a button to dial any 3-digit speed dial code.

Summary: System Speed Dial

Telephones	All
Mode	All
Programmable by	User and System manager
Programming Code	* 24 + 3-digit code (600-729) + Enter
Display Label	SysSpeedDl

Transfer

Assign a button to access the host system Transfer feature.

Summary: Transfer

Telephones	Analog Multiline and MLX telephones
Mode	Behind Switch
Programmable by	User and System manager
Programming Code	* 774
Display Label	Transfer

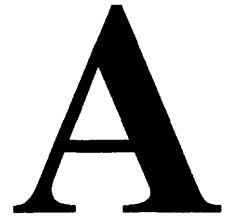
Voice Announce

Use this procedure to allow users to receive or prevent inside calls over their speakerphones, if they are busy on another call.

Summary: Voice Announce

Telephones	Analog Multiline and MLX telephones
Mode	All
Programmable by	User and System manager
Programming Code	On — * 10 Off — ** 10
Display Label	Voice Annce Receive On/Off

Menu Hierarchy



The system programming menu hierarchy details the sequence of menu screens that appear when you select the system programming options. The choice of an option on the first menu screen leads to either a second menu screen or a data-entry screen. A secondary menu screen may lead to still another menu screen, and soon up to six screens, as shown in the following pages.

You can use the inspect feature in system programming to display the telephone or line/trunk numbers that are programmed with a specific feature. Inspect is helpful when you must assign a feature to many lines/trunks or extensions and you do not have a Direct Station Selector (DSS) attached to the system programming console, or when you are programming using a PC with SPM.

Inspect can be used with the menu options on the following pages that have an asterisk (*) next to them. To use Inspect in system programming, choose an eligible option, and press **Inspct** or **PgDn**.

System Programming

System	SysRenumber	Operator	LinesTrunks	Extensions	Options	Tables	AuxEquip	NightSrvc	Labeling	Data	Print	Cntr-Prg	Language
Restart SProg Port Mode • Key • Hybrid/PBX • BehndSwitch Board Renum • Enable • Auto Busy Tie Trunks: • Enable • Disable • Disable Date Time	Default Numbering • 2-Digit • 3-Digit • SetUp Space Single • Lines* • Pools* • Extensions* • Group Page* • GrpCalling* • Park* • ARS DialOut • RemoteAccs • DSS Buttons* Block • Lines • Extensions • Adjuncts	Positions • Direct Line* • Queued Call* Queued Call • Hold Rtrn • Return to Queue • Remain On Hold • HoldRelease • Auto Hold • Auto Release • Threshld • ElvatePrior • InQue Alert* • InQue Alert • InQue Alert Disable • Call Types • Dial 0 • Priority • Operator* • Follow/Frwd • UnassignDID • Priority • Operator* • ListedNumbr • Priority • Operator* • QCC Ext • Returning • Priority • Operator* • GpCoverage • Priority • Operator* • QCC Backup • Mag Center* • ExtndCompt • Automatic • Complete • Manual • Complete • Return Ring • QCC Backup Hold Timer DCL Hold • Auto Hold Enable • Auto Hold Disable	LS/GS/DS1 • (DS1) • Type • GroundStart* • Loop Start* • TIE • TIE-PBX* • Toll* • Unequipped* • All Ground • All Loop • All TIE • TIE-PBX • Toll • All Unequip • DID* • All DID • PRI • FrameFormat • D4 • Compatible • Extended • Super Frame • Suppression • AMI-ZCS • B8ZS • Signaling • Robbed Bit • Common • Channel • Line Comp • Clock Sync • Priority • Primary • Secondary • Tertiary • None • Source • Loop • Activation • Active • Not Active • ChannelUnit • Foreign • Exchange • Special • Access • (4xx GS/LS) • GroundStart* • Loop Start* • All Ground • All Loop • (8xx GS/LS) • GroundStart* • Loop Start* • All Ground • All Loop TIE Lines • Direction • Two Way • OutGoing • Incoming • Intype • Wink • Delay • Immed • Auto • Outtype • Wink • Delay • Immed • Auto • E&M Signal • Type1S • Type1C • Type5 • Inmodet • Outmodet • Dialtone* • AnsSuprv • Disconnect	TT/LS Disc • OutModet • LS Disconnect • Yes • No DID • Block* • Type • Immed • Wink • Disconnect • ExpectDigit • DeleteDigit • Add Digits • Signaling • Rotary • TouchTone • InvalidDsn • Send to Backup • Extension • Return Fast Busy PRI • PhoneNumber • B-ChannlGp • B Channels* • Lines* • NetworkServ • AT&T Toll • Megacom • WATS • ACCUNET • SDS • Soft DefNetw • Megacom • 800 • MULTI • QUEST • Long Distnce • Local • OUTWATS • 56/64 Digt • VirPrivNet • INWATS • Misc • Other • CallByCall • Copy Number • Copy PhnNum • to NumToSend • Do not Copy • Phone Number • IncomingRtg • Routing by Dial Plan • Route by Line Appearance • NumbrToSend • Extension Only • Base Number with Ext. • Line Telephone Number • Test TelNum • Protocol • Timers • T200 Timer • T203 Timer • N200Counter • N201Counter • K Counter • T303 Timer • T305 Timer • T308 Timer • T309 Timer • T310 Timer • T313 Timer • T316 Timer • TEI • DialPlanRtg • Service • AT&T Toll • Megacom • 800 • ACCUNET • SDS • SoftDefNetw • MULTI • QUEST • Megacom • WATS • LongDistnce • Local • INWATS • 56/64 Digt • VirPrivNet • OUTWATS • Misc • Other • No Service • Patterns • TotalDigits • DeleteDigit • Add Digits • OutgoingTol • NetworkSelect • SpecialServ • Pattern • Operator • Local • Operator • Presubscribed • Carrier • No Operator • TypeOffNumber • National • International • DeleteDigit • CBC Service • Patterns • Voice/Data • Voice Only • Data Only • Voice/Data • NetworkServ • AT&T Toll • Megacom • WATS • ACCUNET/SDS • SoftDefNetw • LongDistnce • Local • OUTWATS • 56/64 Digt • VirPrivNet • Misc • Other • No Service • Delete Digit Copy • Single • Block RemoteAccess • LinesTrunks * • Dedicated • Shared • No Remote • Non-TIE • BarrierCode • Barrier Code Required • BarrierCode Not Required • Restriction • Unrestricted • Outward • Restrict • Toll Restrict • ARS Restrict • Allow List* • DisallowLs* • TIE Lines • BarrierCode • Barrier Code Required • BarrierCode Not Required	LinesTrunks† Line Copy • Single • Block Dial OutCdt Restriction • Unrestricted • Outward Restrict • Toll Restrict RestrictCopy • Single • Block Account* BIS/HFAL* Call Pickup* VoiceSign* Ext Status* Group Page* Group Cover* Gp Calling • Hunt Type • Circular • Linear • DelayAnnce • GpCoveraget • Message • Queue Alarm • Xtnl Alert • Overflow • Members* • Line/Pool* • Group Type • Auto Login • Auto Logout • Integ VMI • Generic VMI ARS Restrict Mic Disable* Remote Fred*	Transfer • Return Time • One Touch • Transfer • Manual • Automatic • Hold • Audible • Music On Hold • Ringback • Type • Voice • Announce • Ring CampOn CallParkRtn Delay Ring Callback Ext Status • Hunt Type • GpCall/CMS SMDR • Format • Basic SMDR • ISDN SMDR • Call Length • Call Report • In/Out • Out Only • New Page InsideDial • Inside • Outside ReminderSrv • Unassigned • QCC Queue • Extension • Gp Calling BehndSwitch • Transfer • Conference • Drop RecallTimer • 350 ms • 450 ms • 650 ms • 1 sec Rotary • Delay • No Delay Cover Delay	AllowList AllowTo† Disallow DisallowTo† ARS • ARS1+7Dial • Within Area Code • Not Within Area Code • ARS Input • 6 - Digt • Area Codet • Exchange • 1+7 • Sub A Pools • Sub A FRL • SubA Absorb • Sub A Digit • Sub B Start • Sub B Stop • Sub B Pool • Sub B FRL • SubB Absorb • Sub B Digit • SpeedNumber • ARS FRL • ARS Digit • Dial 0 • ARS Pool • ARS FRL • ARS Digits • Sub A Data • Voice Only • Data Only • Voice/Data • Sub B Data • Voice Only • Data Only • Voice/Data	MusicOnHold Ldsprk Pst • Fax • Extension* • Msg Waiting* • Threshld MaintAlarms VMS/AA • TransferRtn • TT Interval	GroupAssign† • Extensions* • Calling Gp OutRestrict Emergency ExcludeList* Start* Stop* Day of Week	Directory • System • Extension • Personal LinesTrunks PostMessage Gp Calling	VoiceData* All SysSet-up Dial Plan Labels Trunk Info • TIE • DID • Loop/Ground • General Y1 Info PRI Info RemoteAccess Oper Info AllowList AllowListTo DisallowList DisallowTo ARS Ext Direct Sys Direct Group Page Ext Info GpCoverage Gp Calling Night Service Call Pickup Error Log	Program Ext Copy Ext	SystemLang • English • French • Spanish Extensions • Single • English • French • Spanish • Block • English • French • Spanish SMDR • English • French • Spanish Printer • English • French • Spanish

* The Inspect feature can be used with this menu option. Press Inspect or PgDn.

† The Inspect feature can be used in entry mode with this menu option. Press Inspect or PgDn while in entry mode.

A-2

Menu Hierarchy

* The Inspect feature can be used with this menu option. Press Inspect or PgDn.

† The Inspect feature can be used in entry mode with this menu option. Press Inspect or PgDn while in entry mode.



LED Displays

B

Console LED Status

Tables B-1 and B-2 indicate LED status on the MLX-20L console. LED status is indicated on the LEDs next to the 20 buttons below the display area on the system programming console. LED status is simulated on the computer screen when you use SPM.

LED Displays

Table B-1. Line or Trunk Feature Status

System Program- ming Menu Option	Option	LED Status ★					
		Green LED			Red LED		
		O N	O F F	FLASHING	O N	O F F	FLASHING
Lines/Trunks	Tie Lines						
	In mode	Incomming tie line is touch-tone	Incoming tie line is rotary dial †				
	Outmode	Outgoing tie line is touch-tone	Outgoing tie line is rotary dial †				
	Dialtone	Remote dial tone †	Local dial tone				
Lines/Trunks	TT/LS Disc						
	Outmode	Line/trunk is touch-tone	Line/trunk is rotary dial				
Lines/Trunks	Remote Access						
		Remote access is assigned to line/trunk †	Remote access is not assigned to line/trunk †				
Lines/Trunks	Pools				Trunk is in pool	Trunk is not in pool	

★ LED Status is indicated on LEDs next to the 20 buttons below the display area of the system programming console or simulated on the computer screen when using SPM.

† This is the factory setting.

Table B-1. - Continued

System Program- ing Menu Option	Option	LED Status ★					
		Green LED			Red LED		
		ON	OFF	FLASHING	ON	OFF	FLASHING
Lines/Trunks	Toll Type	Must dial 1 + Area code †	1 + dialing is not needed				
Lines/Trunks	Hold/Disconnect	Long - 450 ms †	Short - 50 ms				
Lines/Trunks	Remote Fwd	Line/Trunk assigned	Line/Trunk not assigned †				
Extensions	Lines/Trunks	Line/trunk or pool is assigned to button	Line/trunk or pool is not assigned to button	Trunk is assigned to a pool			
Extensions	Dial Out Cd	Station can use dial-out code for pool access	Station cannot use dial-out code for pool access	Trunk is assigned to a pool			
System	SysProg Port				System programming port	Other	Can be assigned as system programming port
Operator	Position						
	Direct Trunk Queued Call				Operator position	Other	Can be assigned as operator position
Operator	Queued Call Message Center				Message center position	Other	Can be assigned as message center
	In Queue Alert				Position receives In-Queue Alert	Other	Position can receive In-Queue Alert

† This is the factory setting

★ LED Status is indicated on LEDs next to the 20 buttons below the display area of the system programming console or simulated on the computer screen when using SPM.

Table B-2. Telephone Feature Status for DSS Console Only

System Program- ming Menu Option	Option	Red LED Status		
		ON	OFF	FLASHING
	Call Types — Dial 0, LDN Unassigned DID, Grp Coverage	Position receives call type	Other	Position can receive call type
Extensions	Restriction	None† restricted	Outward restricted	Toll
Extensions	Account (FACE)	Forced Account Code Entry assigned assigned†	Forced Account Code Entry not	
Extensions	BIS/HFAI	Telephone has BIS/HFAI capability (factory setting for analog multiline telephones)	Other	
Extensions	Call Pickup	Telephone is assigned to Call Pickup Group Group†	Telephone is not assigned to Call Pickup	
Extensions	VoiceSignl	Voice Announce to Busy assigned assigned†	Voice Announce to Busy not	
Extensions	Ext Status	Extension Status assigned	Extension Status not assigned	Extension Status can be assigned
Extensions	Group Page	Telephone is in group group†	Telephone is not in	
Extensions	Group Cover	Telephone is in coverage group	Telephone is not in coverage group†	

† This is the factory setting.

Table B-2. - *Continued*

System Program- ming Menu Option	Option	Red LED Status		
		ON	OFF	FLASHING
Extensions	Group Calling Members	Telephone is assigned to group	Telephone is not assigned to group†	
Extensions	Mic Disable	Telephone microphone is disabled	Telephone microphone is enabled	
Extensions	Remote Frwd	Telephone can transfer calls to a remote telephone number	Telephone cannot transfer calls to a remote telephone number†	
Night Service	Group Assign	Telephone is in group	Telephone is not in group†	
Night Service	Exclude List	Telephone is excluded excluded†	Telephone is not	
Aux Equip	Msg Waiting	Station is a fax message- waiting station	Station is not a fax message- waiting	
Aux Equip	Fax	Station is a fax machine	Station is not a fax machine	
Aux Equip	VMS/AA	VMS or AA jack	Other†	Operator position
Tables	AllowTo	Allowed List assigned to to telephone	Allowed List not assigned to telephone†	
Tables	DisallowTo	Disallowed list assigned to telephone	Disallowed list not assigned to telephone†	
Data	Voice/ Data			

† This is the factory setting.

General Feature Use and Telephone Programming

C

This appendix contains information on the general use of features for the MLX, analog multiline, and single-line telephones. It covers telephone and operator features and the acceptable programming codes for each. It also describes how to program these features on MLX and analog multiline telephones.

General Feature Use Information	C-1
Feature Table	C-3
Telephone Programming	C-8

General Feature Use Information

The following provides general instructions for feature use on MLX, analog multiline, and single-line telephones. Features can be used in the following ways:

- by pressing a dedicated feature button
- by pressing a programmed button
- by dialing a feature code
- by selecting the feature from the display (MLX display telephones only)

Dedicated Feature Buttons

All multiline telephones have a group of dedicated feature buttons that are programmed and labeled at the factory. The functions of these buttons, which include Conference, Transfer, and Speaker, cannot be changed. Press the button for the feature you want to use.

Programmed Buttons

Any unlabeled line button on multiline telephones can be programmed with a feature for one-touch activation. See Tables C-1 through C-4 for more information on programming features onto line buttons.

Some features, such as Auto Dial, must be programmed onto line buttons in order to use them. Other features, such as Privacy, are best used if programmed onto line buttons — the LED next to the line button provides visual indication that the feature is in use. The following features must be programmed onto line buttons:

- Auto Answer All
- Auto Answer Headset
- Auto Dial
- Barge-In
- Coverage
 - Group Coverage
 - Primary Coverage
 - Secondary Coverage
 - Coverage Off
- Do Not Disturb
- Extension Status—Agent Login/Logout
- Feature Button (analog multiline telephones only)
- Headset/Handset Mute
- Headset Status
- Headset Hang Up
- Notify
- Posted Message (available from display on MLX display telephones)
- Saved Number Dial
- Signaling

Feature Codes

Feature codes are 1-, 2-, and 3-digit codes that activate features. A feature code is used by first pressing the dedicated **Feature** button on MLX telephones; pressing a programmed **Feature** button on analog multiline telephones; dialing # on single-line telephones. Each of these methods sends a signal to the system that a feature code is about to be dialed. When the code is dialed, the feature is activated.

NOTE:

Queued Call Console (QCC) system operators cannot use feature codes.

The following features can be used only by dialing feature codes:

- Call Pickup
- Forward/Follow Me-Cancel One
- Forward/Follow Me-Cancel All
- Message Cancel
- Personal Speed Dial
- System Speed Dial

NOTE:

Pressing the **Conference**, **Transfer**, **Speaker**, or **Feature** button while activating a feature cancels the process. Pressing any other button, such as the **Mute**, **HFAI**, **Message Status**, **DSS Page**, **More**, **Message**, **Clock**, analog multiline display keys, or analog multiline disconnect button does not cancel the feature activating process.

Feature Table

Table C-1 lists the telephone and operator features that can be assigned to telephones or consoles via Centralized Telephone Programming or by users from their telephones.

General Feature Use and Telephone Programming

Table C-1. Telephone and Operator Features

Feature	Prog. Code	Display Label	Single-Line	Analog Multi-line	MLX-10	MLX-10D	MLX-28D	MLX-20L
Account Code Entry	#82	AccountCode	KP	KPB	KPB	KPB	KPB	KPB
Alarm†	#759	Alarm		KPB			KPB	KPB
Auto Answer All	#754	AutoAns All		KPB				
Auto Answer Intercom	#753	AutoAnsIcom		KPB				
Auto Dial Inside Outside	#22 + ext. no. #21 + tel. no.	Auto Dial Inside Outside		KPB	KPB	KPB	KPB	KPB
Automatic Line Selection On Off	#14 ##14	AutoLineSel		KPB	KPB	KPB	KPB	KPB
Barge-In‡	#58	Barge In		KPB	KPB	KPB	KPB	KPB
Callback Automatic On Off Selective	#12 ##12 #55	Chack Auto On off Chack Sel	KP	KPB	KPB	KPB	KPB	KPB
Call Waiting On Off	#11 ##11	CallWaiting On off	KPB	KPB	KPB	KPB	KPB	KPB
Camp-On	#57	Camp On		KPB	KPB	KPB	KPB	KPB
Conference	#772	Conference		B	B	B	B	B
Coverage Receiver buttons Group Primary Secondary Sender buttons Cover inside & outside calls	#42 + ext. no. #40 + ext. no. #41 + ext. no.	Coverage Group Primary Secondary		KPB	KPB	KPB	KPB	KPB
Cover outside calls only	#48	CoverInside, On	KPB					
Coverage off VMS off	##48 #49 #46	CoverInside, Off CoverageOff	KPB KPB					
Data Status	#83 + ext. no.			KPB	KPB	KPB	KPB	KPB

† Operator console
‡ Centralized Telephone Programming only

K Key mode
P PBX mode
B Behind Switch mode

General Feature Use and Telephone Programming

Table C-1. — Continued

Feature	Prog. Code	Display Label	Single-Line	Analog Multi-line	MLX-10	MLX-10D	MLX-28D	MLX-20L
Directory								
System Directory (system programming)						KPB	KPB	KPB
Extension Directory (display only)						KPB	KPB	KPB
Personal Directory (display only)								KPB
Do Not Disturb	*47	DoNotDistrb		KPB	KPB	KPB	KPB	KPB
Drop	*773	Drop		B	B	B	B	B
Extension Status				KPB			KPB	KPB
Direct-Line Console†								
Status Off	*760	OperatorES, ESOff						
Status 1	*761	OperatorES, ES1						
Status 2	*762	OperatorES, ES2						
Telephones (rooms or agents)			KPB	KPB	KPB	KPB	KPB	KPB
Status 1	*45	ES Status, ES1						
Status 2	*44	ES Status, ES2						
Feature button	*20	Feature Btn		KPB				
Forward	*33	Forward	KPB	KPB	KPB	KPB	KPB	KPB
Forward (Inside)								
Remote Call Forward (Outside)								
Group Calling				KPB	KPB	KPB	KPB	KPB
In-Queue Alarm button	*22 + calling group ext. no.	Group Call		KPB				
Calling group supervisor				KPB			KPB	KPB
Available (ES Status 2)	*762	OperatorES, ES2						
Unavailable (ES Status Off)	*760	OperatorES, ES off						
Calling group members			KPB	KPB	KPB	KPB	KPB	KPB
Sign in (Available)	*44	ES Status, ES2						
After-call work state (CMS only)	*45	ES Status, ES1						

† Operator console

K Key mode
P PBX mode
B Behind Switch mode

General Feature Use and Telephone Programming

Table C-1.— Continued

Feature	Prog. Code	Display Label	Single-Line	Analog Multi-line	MLX-10	MLX-10D	MLX-28D	MLX-20L
Group Page Auto Dial button	*22 + paging group ext. no.	Group Page		KPB	KPB	KPB	KPB	KPB
Headset Auto Answer Hang Up† Mute (Headset/Handset) Status	*780 *781 *783 *782	Hdset Auto Answer Hang Up Mute Status			KPB	KPB	KPB	KPB
Intercom buttons Assign buttons‡ (factory-set type is Ring) Intercom Originate Only Change type of Intercom button Ring Voice	*16 *18 **19 *19	SysAccess SysAcc-00 Voice Annce, Place Ring Voice Annce, Place Voice	KB KB	KB	KB	KB	KB	KB
Last Number Dial	*84	LastNumDial	KP	KPB	KPB	KPB	KPB	KPB
Messaging Leave Message Message LED off Posted Message Send/Remove† Message Receiving messages: Delete Message* Next Message* Return Cal* Scroll*	*25 *54 *751 *38 *26 *28 *27 *29	Leave Msg Posted Msg Send/RmvMsg Messages Delete Msg Next Msg Return Call	KPB	KPB KPB KPB KPB KPB KPB KPB KPB	KPB KPB KPB KPB KPB KPB KPB	KPB KPB KPB KPB KPB KPB KPB	KPB KPB KPB KPB KPB KPB KPB	KPB KPB KPB KPB KPB KPB KPB
Night Service†	*39	Night Srvc		KPB			KPB	KPB
Notify Send Receive	*757 + ext. no. *758 + ext. no.	Notify Send Receive		KPB	KPB	KPB	KPB	KPB
Park	*86	Park	KP	KPB	KPB	KPB	KPB	KPB
Park Zone Auto Dial†	*22 + park zone	Park Zone		KPB			KPB	KPB
Personal Speed Dial	# + 01-24 + *21 + tel. no. + #		KP	KPB	KPB	KPB		
Personalized Ringing	*32 + ring (1-8)	PersonalRng, Pattern #1... Pattern # 8		KPB	KPB	KPB	KPB	KPB

† Operator console
‡ Centralized Telephone Programming only
‡ Display telephones only.
* Programming codes are used with analog multiline telephones only; MLX telephones use display.

K Key mode
P PBX mode
B Behind Switch mode

General Feature Use and Telephone Programming

Table C-1. — Continued

Feature	Prog. Code	Display Label	Single-Line	Analog Multi-line	MLX-10	MLX-10D	MLX-28D	MLX-20L
Pickup General use Specific extension Specific line Group	*9 *9 + ext. no. *9 + line no. *88	Pickup General Extension Line Group	KP	KPB	KPB	KPB	KPB	KPB
Privacy	*31	Privacy	KP	KPB	KPB	KPB	KPB	KPB
Recall	*775	Recall		KPB	KPB	KPB	KPB	KPB
Reminder Service Set Cancel Missed†	*81 **81 *752	Reminder Set Cancel Missed	KPB	KPB	KPB	KPB	KPB	KPB
Ringing/Idle Line Preference Cancel	*343 *344	Line Prefer, On Line Prefer, Off		KPB	KPB	KPB	KPB	KPB
Ringing Options Individual Lines Immediate Ring Delay Ring No Ring All Lines Immediate Ring Delay Ring No Ring Abbreviated Ring On Off Send Ring (Shared SA) On Off	*37 *36 *35 *347 *346 *345 *341 *342 *15 **15	Ring Options One Line Immed Ring Delay Ring No Ring All Lines Immed Ring Delay Ring No Ring Abbreviated On Off SharedSARng On Off	P	P	P	P	P	P
Saved Number Dial	*85	SaveNumDial		KPB	KPB	KPB	KPB	KPB
Send/Remove Message†	*38	Send/RmvMsg		KPB			KPB	KPB
Signaling (manual)	*23 + ext. no.	Signal		KPB	KPB	KPB	KPB	KPB

† Operator console

P	PBX mode
K	Key mode
B	Behind Switch mode

Table C-1. — *Continued*

Feature	Prog. Code	Display Label	Single-Line	Analog Multi-line	MLX-10	MLX-10D	MLX-28D	MLX-20L
System Access buttons				P	P	P	P	P
Assign buttons†								
System Access	*16	SysAccess	P					
Originate Only	*18	SysAcc-00	P					
Shared System Access	*17 + primary ext. no.	ShareSysAcc	P					
Change type of System Access button								
Ring	**19	Voice Annce, Place, Ring						
Voice	*19	Voice Annce, Place, Voice						
System Speed Dial	*24 + code (600-729)	SysSpeedDl	KP	KPB	KPB	KPB	KPB	KPB
Transfer	*774	Transfer		B	B	B	B	B
Voice Announce		Voice Annce		KPB	KPB	KPB	KPB	KPB
On	*10	Receive						
Off	**10	On off						

† Centralized Telephone Programming only

K Key mode
P PBX mode
B Behind Switch mode

Telephone Programming

The following describes how to program features on MLX and analog multiline telephones. Since Personal Speed Dial is the only feature that single-line telephone users can program, general programming instructions for single-line telephones are not provided.

NOTE:

Features cannot be programmed on QCCs in system operator positions. Features assigned to these consoles are fixed and cannot be changed.

Programming Methods

Telephones can be programmed by dialing programming codes or, on MLX display phones, selecting features from the display. An analog multiline telephone cannot be programmed by selecting features from the display.

To program a telephone, first enter programming mode:

- On analog multiline telephones, slide the Test/Program (T/P) switch on the side of the telephone to P, or lift the handset, or press Speakerphone and dial #00.
- On MLX-10 telephones, press the Feature button and dial 00.

- On MLX display telephones, use the same procedures as the MLX-10 or enter programming mode by selecting Ext Program from the menu screen on the display.

See the appropriate user or operator guide for more information.

NOTE:

Features can also be programmed onto individual telephones through Centralized Telephone Programming. The steps for using programming codes vary depending on the telephone. Tables C-2 through C-4 list the basic steps for programming each telephone type.

Table C-2. Programming Analog Multiline Telephones

Step		Action
1	Label the button. Note: Skip this step if the feature will not be programmed onto a button.	■ Remove the clear label cover from the telephone by the inserting the end of a paper clip in the notch at the top of the cover. ■ Write the feature name on the card next to the button to be programmed. ■ Replace the cover.
2	Begin programming.	■ Slide the T/P switch on the side of the telephone to P.
3	Select the feature.	■ Press the button you labeled. <i>If you have a display, it shows the name of the feature currently programmed on the button. If no feature is programmed, the display indicates that the button is blank.</i> Note: If the feature does not get programmed onto a button, press any line button. This does not affect the button in any way. Dial the programming code. <i>The feature is programmed.</i>
4	End programming.	■ Slide the T/P switch to the center position.

Table C-3. Programming MLX-10 Telephones

Step		Action
1	Label the button. Note: Skip this step if the feature will not be programmed onto a button.	■ Remove the clear label cover from the telephone by pulling upon the tab that extends from the top of the cover. ■ Write the feature name on the card next to the button to be programmed. ■ Replace the cover.
2	Begin programming.	■ Press the Feature button and dial then 00.
3	Select the feature.	■ Press the button you labeled. Note: If the feature does not get programmed onto a button, press any line button, This does not affect the button in anyway. ■ Dial the programming code. <i>The feature is programmed.</i>
4	End programming.	■ Press the Feature button and dial * 00.

Table C-4. Programming MLX Display Telephones Using the Display

Step	Action
1 Label the button to be programmed. Note: Skip this step if the feature will not be programmed onto a button.	■ Remove the clear label cover from the telephone by pulling upon the tab that extends from the top of the cover. ■ Write the feature name on the card next to the button to be programmed. ■ Replace the cover.
2 Begin programming.	■ Press Menu. ■ Select Ext program from the display. ■ Select Start from the display.
3 Identify the button to be programmed. To delete the feature currently programmed on the button:	■ Press the button you labeled. Note: If the feature does not get programmed onto a button, press any line button. This does not affect the button in anyway. <i>The display identifies the feature currently programmed on the button. If no feature is programmed, the display indicates that the button is blank.</i> ■ Select DeLetE from the display. <i>The button is now blank.</i> ■ Press the button you labeled again to continue programming. Note: If the currently programmed feature was not deleted from the button, the new feature programmed onto it will replace it.
To display features:	■ Select List Feature from the display. <i>The screen lists feature names in alphabetical order.</i>

Table C-4. — *Continued*

Step		Action
4	Select the feature.	
	If the feature name is on the display:	■ Press the button next to or below the name of the feature to be programmed.
	If the feature name is not on the display:	
	To move through the list of features page by page,	■ Press More .
	or	
	To jump to the screen that displays the feature name,	■ Select Find Feature from the display.
		■ Select the range of letters from the display that corresponds to the first letter of the feature name (for example, if the feature begins with A, select ABC).
		■ If the feature is not displayed on the page that you jumped to, press More .
		■ When you find the feature you want, press the button next to or below it.
5	Respond to any additional prompts on the display.	■ Select appropriate prompt (for example, select On or Off to turn Inside Coverage on or off), and/or enter required information (for example, dial a phone number for Auto Dial).
		■ Select Enter .
6	End programming.	
	To return to the Home screen:	■ Press Home or lift and replace the handset.
	To return to the Menu screen:	■ Press Menu .

NOTE:

MLX display telephones can also be programmed using the method described for MLX-10 telephones. For example, the programming mode can be entered by pressing the **Feature** button and dialing **00**, then referring to the display to continue the programming process. or, enter programming via the display and then dial a programming code to select the feature rather than selecting it from the display.

Button Diagrams

D

This appendix contains the button diagrams for Hybrid/PBX systems as well as button diagrams for Key and Behind Switch systems.

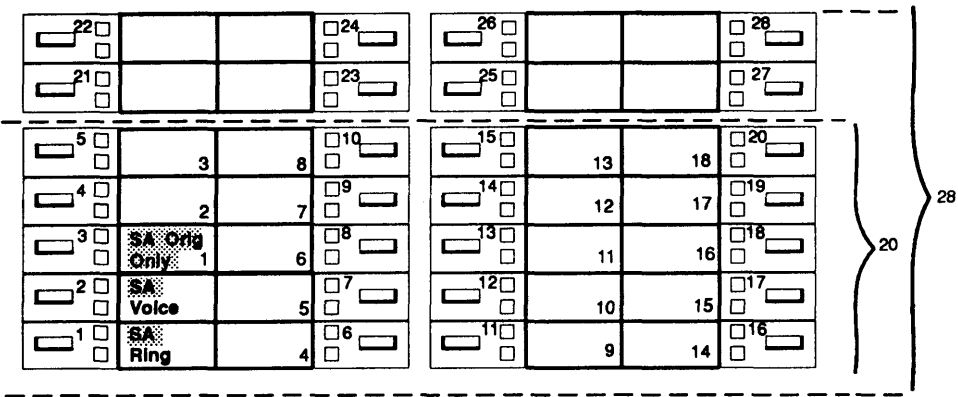
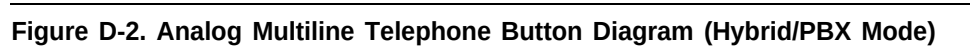


Figure D-1. MLX Telephone Button Diagram (Hybrid/PBX Mode)



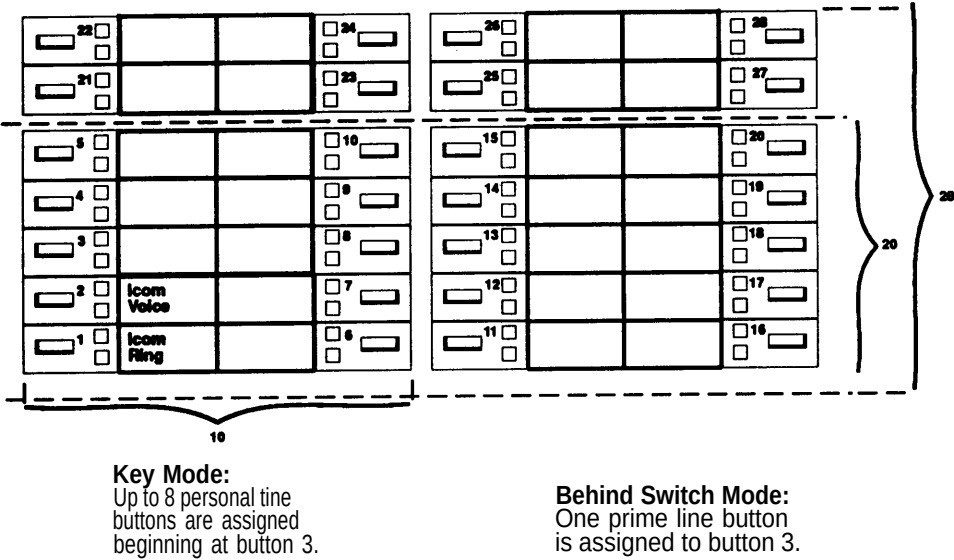


Figure D-3. MLX Telephone Button Diagram (Key and Behind Switch Mode)

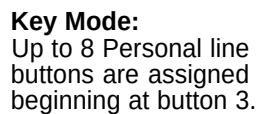


Figure D-4. Analog Multiline Telephone Button Diagram (Key and Behind Switch Mode)

Sample Reports

E

This appendix includes samples of the print reports generated by the communications system. Table E-1 lists the system reports and the pages in this appendix where samples can be found.

Table E-1. System Reports

For...	See...
System Information Report	E-6
Dial Plan Report	E-8
Label Information Report	E-10
Tie Trunk Information Report	E-11
DID Trunk Information Report	E-12
GS/LS Trunk Information Report	E-13
General Trunk Information Report	E-14
DS1 Information Report	E-15
PRI Information Report	E-16
Remote Access (DISA) Information Report	E-18
Operator Information Report	E-19
Allowed Lists Report	E-21
Access to Allowed Lists Report	E-22
Disallowed Lists Report	E-23
Access to Disallowed Lists Report	E-24
Automatic Route Selection Report	E-25
Extension Directory Report	E-27
System Directory Report	E-28
Group Paging Report	E-29
Extension Information Report	E-30
Group Coverage Information Report	E-32

Continued on next page

Table E-1. — Continued

For ...	See ...
Direct Group Calling Information Report	E-33
Night Service Information Report	E-34
Group Call Pickup Report	E-35
Error Log Report	E-36

Table E-2 lists all of the system reports and includes: the print menu option used to print each report; the report name; and a brief description of each report.

The menu options referred to in Table E-2 are accessed by selecting the print option on the System Programming menu. Refer to the “Print Reports” section of this guide for details on the Print option.

Table E-2 System Reports

Menu	Option	Report Name	Description
All			Prints each of the reports available on the Print menu, from SysSet-up to Error Log. Note: When All is selected, the four Trunk Information reports automatically print. See Trunk Info.
SysSet-up		System Information	System-wide information such as return intervals, system mode, system programming port, slot assignments, etc.
Dial Plan		Dial Plan	Extensions assigned to pools, paging zones, calling groups, lines or trunks, and stations; labels for lines/trunks and stations.
Labels		Label Information	Labels assigned to stations Posted Messages, and names and telephone numbers included in MLX-20L user's Personal Directory.
Trunk Info			Select to display four trunk options: TIE, DID, Loop/Ground, General.
	TIE	TIE Trunk Information	Extensions assigned to and signaling attributes associated with TIE trunks.
	DID	DID Trunk Information	Extensions assigned to and signaling attributes associated with DID trunks.
	Loop/ Ground	GS/LS Trunk Information	Extensions assigned to and signaling attributes associated with Ground- and Loop-Start trunks.
	General	General Trunk Information	All identified extensions and feature-related attributes of each extension.
T1 Info		DS1 Information	Options (line, signal, etc.) assigned to T1 trunks or lines.
PRI Info		PRI Information	PRI trunks/lines assigned to B-channel groups.
Rmote Access		Remote Access (DISA) Information	Remote access dial code, class of restriction, barrier code information.
Oper Info		Operator Information	For each system operator position; the logical ID, extension number, label, type (DLC or QCC); all general system operator options, such as backup position, etc.; call types and priorities.

Continued on next page

Table E-2 - Continued

Menu Option	Report Name	Description
AllowList	Allowed Lists	Telephone numbers included in Allowed Lists. Lists are numbered 0-7, and entries are numbered 0-9.
AllowListTo	Access to Allowed Lists	Lists are numbered 0-7. If the Allowed List is assigned to Remote Access users and barrier codes are used, the barrier codes are numbered 0-16. If no barrier codes are used, 17 means the Allowed List is assigned to tie-trunk users, and 18 means the Allowed list is assigned to non-tie-trunk users.
DisallowLst	Disallowed Lists	Telephone numbers included in Disallowed Lists. Lists are numbered 0-7, and entries are numbered 0-9.
DisallowTo	Access to Disallowed Lists	Telephones to which Disallowed Lists are assigned. Lists are numbered 0-7. If the Disallowed List is assigned to Remote Access users and barrier codes are used, the barrier codes are numbered 0-16. If no barrier codes are used, 17 means the Disallowed List is assigned to tie-trunk users, and 18 means the Disallowed list is assigned to non-tie-trunk users.
ARS	Automatic Route Selection	Access code; table types with area codes and exchanges; routes for subpatterns A and B, FRL, absorb digit, delete digit, Dial 0, and N11 tables.
Ext Direct	Extension Directory	Slot/port addresses, extensions, labels and feature-related attributes. Column headings are printed on the first page only and are not carried over to subsequent pages. Column headings 4 through 10 (and 14 through 20) should be read vertically. That is: FACE (Forced Account Code Entry); HBIS (HFAI/BIS); RCFW (Remote Call Forward); MICD (Microphone Disable); SIG (Voice Signal); RSTR (Calling Restrictions); ARSR (ARS Restriction Level).

Continued on next page

Table E-2. - Continued

Menu Option	Report Name	Description
Sys Direct	System Directory	System Speed Dial number, label and telephone number in System Directory, and whether number should display.
Group Page	Group Paging	Extension number for each group and the extension number of each telephone assigned to the group.
Ext Info	Extension Information	For each specified extension, type of equipment connected, features assigned to station, and features assigned to each button on the station.
GrpCoverage	Group Coverage Information	Extension number for each group and the extension number for each telephone assigned to the group. Information is printed only for calling groups with members and/or lines/trunks assigned.
Grp Calling	Direct Group Calling Information	Group calling options (hunt, type, message waiting, station, etc.), the extension number for each telephone assigned to the group, and the lines or trunks assigned to the group.
Night Service	Night Service Information	The operator, password required, time-of-day, and Emergency Allowed List extension numbers.
Call Pickup	Group Call Pickup	Extension numbers for telephones assigned to each group. Pickup groups are numbered 1-30.
Error Log	Error Log	Error message and code, time and day error occurred, frequency of error. See the Maintenance and Troubleshooting guide.

System Reports

System Information Report

Print Menu Option: SysSet-up

SYSTEM INFORMATION

Current Date: 01/04/00

Current Time: 00:21:15

System :	Mode	AutoMaintBusy	AutoBusyTie
:	Hybrid/PBX	Disable	Disable

Language:	SystemLang	SMDR	Printer
	English	English	English

Direct Line Operators : 14 18 22 42

Queued Call Operators : 10

SysProg Port : 10 Password : craft

Transfer :	Type	Audible	OneTouch (Complete)	ReturnTimer
:	Ring	MusicOnHold	Transfer(Auto)	5 rings

VMS Transfer Return Interval : 4

Paging System Lines :

Music On Hold Line : 804

Camp On Time : 90 sec

Call Park Return Time : 180 sec

Delay Rings : 2

Coverage Delay : 3

Auto Callback Rings : 3

Extension Status (ESS) : Group Call / CMS

ESS Operators :

Sample Reports

System Information Report - *Continued*

SMDR :	Min. Call Time	CallReport	Format
:	40 sec	In/Out	Basic
Intercom Dial Tone	:	Inside	
Reminder Service Cancel	:	:	
Behind Switch Code	:	Drop	Transfer Conference
	:		
Recall Timer	:	450 msec	
Rotary Line Cut Through	:	Delay	
Unassigned Extension	:	10	
Slot # 1:	008 MLX		
Slot # 2:	408		
Slot # 3:	008		
Slot # 4:	408		
Slot # 5:	800 GS/LS		
Slot # 6:	408 GS/LS-MLX		
Slot # 7:	800		
Slot # 8:	008		
Slot # 9:	012		
Slot # 10:	408 GS/LS		
Slot # 11:	008		
Slot # 12:	800		
Slot # 13:	800 DID		
Slot # 14:	400 EM		
Slot # 15:	012		
Slot # 16:	008 MLX		
Slot # 17:	408	* Not Present *	

Sample Reports

Dial Plan Report

Print Menu Option: Dial Plan
Sections: Pools; Telephone Paging Zones; Direct Group
Calling Group; Lines/Trunks; Stations

DIAL PLAN FOR POOLS

POOL # 1: 70
POOL # 2: 890
POOL # 3: 891
POOL # 4: 892
POOL # 5: 893
POOL # 6: 894
POOL # 7: 895
POOL # 8: 896
POOL # 9: 897
POOL # 10: 898
POOL # 11: 899

DIAL PLAN FOR TELEPHONE PAGING ZONES

TPZ # 1: 793
TPZ # 2: 794
TPZ # 3: 795
TPZ # 4: 796
TPZ # 5: 797
TPZ # 6: 798
TPZ # 7: 799

DIAL PLAN FOR DIRECT GROUP CALLING GROUP

DGCG # 1: 770
DGCG # 2: 771
DGCG # 3: 772
DGCG # 4: 773
DGCG # 5: 774

Sample Reports

Dial Plan Report - Continued

DIAL PLAN FOR LINES/TRUNKS

LINE # 1:	801	OUTSIDE	LINE # 2:	802	OUTSIDE
LINE # 3:	803	OUTSIDE	LINE # 4:	804	OUTSIDE
LINE # 5:	805	OUTSIDE	LINE # 6:	806	OUTSIDE
LINE # 7:	807	OUTSIDE	LINE # 8:	808	OUTSIDE
LINE # 9:	809	OUTSIDE	LINE # 10:	810	OUTSIDE

DIAL PLAN FOR STATIONS

STN #:	1	10	OPERATR	STN #:	2	710	
STN #:	3	11		STN #:	4	711	
STN #:	5	12		STN #:	6	712	
STN #:	7	13	EXT 13	STN #:	8	713	
STN #:	9	14	EXT 14	STN #:	10	714	
STN #:	11	15		STN #:	12	715	
STN #:	13	16		STN #:	14	716	
STN #:	15	17		STN #:	16	717	
STN #:	17	18	EXT 18	STN #:	18	19	
STN #:	19	20		STN #:	20	21	
STN #:	21	22	OPERATR	STN #:	22	23	
STN #:	23	24		STN #:	24	25	
STN #:	25	26		STN #:	26	27	
STN #:	27	28		STN #:	28	29	
STN #:	29	30	AUDIXVP	STN #:	30	31	AUDIXVP
STN #:	31	32	AUDIXVP	STN #:	32	33	AUDIXVP
STN #:	33	34		STN #:	34	35	
STN #:	35	36		STN #:	36	37	
STN #:	37	38		STN #:	38	39	
STN #:	39	40		STN #:	40	41	
STN #:	41	42	EXT 42	STN #:	42	742	
.							
.							
.							
STN #:	53	54	EXT 54	STN #:	54	754	AUDIXVP

Label Information Report

Print Menu Option: Labels
Sections: Telephone Personal Directory; Posted Messages and Numbers

LABEL INFORMATION

Executive Telephone #	10:	Personal Directory
Name	Number	Display
Executive Telephone #	14:	Personal Directory
Name	Number	Display
Executive Telephone #	15:	Personal Directory
Name	Number	Display

MSG #	POSTED MESSAGE
1	DO NOT DISTURB
2	OUT TO LUNCH
3	AT HOME
4	OUT SICK
5	IN A MEETING
6	IN CONFERENCE
7	WITH A CLIENT
8	WITH A CUSTOMER
9	AWAY FROM DESK
10	OUT ALL DAY
11	CUSTM MSG11
12	CUSTM MSG12
13	CUSTM MSG13
14	CUSTM MSG14
15	CUSTM MSG15
16	CUSTM MSG16
17	CUSTM MSG17
18	CUSTM MSG18
19	CUSTM MSG19
20	CUSTM MSG20

Tie Trunk Information Report

Print Menu Option: Trunk Info and TIE

TIE TRUNK INFORMATION

TRUNK	849	Slot/Port : 14/ 1	TIE-PBX
Direction:	2 Way	E&M Signal: Type1S	Dialtone : Remote
InType	: Wink	InMode : Rotary	AnsSupvr : 300 ms
Out Type	: Wink	OutMode : Rotary	Disconnect: 300 ms
TRUNK	850	Slot/Port : 14/ 2	TIE-PBX
Direction:	2 Way	E&M Signal: Type1S	Dialtone : Remote
InType	: Wink	InMode : Rotary	AnsSupvr : 300 ms
Out Type	: Wink	OutMode : Rotary	Disconnect: 300 ms
TRUNK	851	Slot/Port : 14/ 3	TIE-PBX
Direction:	2 Way	E&M Signal: Type1S	Dialtone : Remote
InType	: Wink	InMode : Rotary	AnsSupvr : 300 ms
OutType	: Wink	OutMode : Rotary	Disconnect: 300 MS
TRUNK	852	Slot/Port : 14/ 4	TIE-PBX
Direction:	2 Way	E&M Signal: Type1S	Dialtone : Remote
InType	: Wink	InMode : Rotary	AnsSupvr : 300 ms
OutType	: Wink	OutMode : Rotary	Disconnect: 300 ms

Sample Reports

DID Trunk Information Report

Print Menu Option: Trunk Info and DID

DID TRUNK INFORMATION

Trk	SS/PP	Blk	DiscTime	Type	ExpDig	DelDig	AddDig	Signal	InvDest
A	841	13/	1 1	500ms	Wink	4	3	1	TouchTone BkupExt
A	842	13/	2 1	500ms	Wink	4	3	1	TouchTone BkupExt
A	843	13/	3 2	500ms	Wink	3	0		Rotary BkupExt
A	844	13/	4 2	500ms	Wink	3	0		Rotary BkupExt
A	845	13/	5 1	500ms	Wink	4	3	1	TouchTone BkupExt
A	846	13/	6 1	500ms	Wink	4	3	1	TouchTone BkupExt
A	847	13/	7 2	500ms	Wink	3	0		Rotary BkupExt
A	848	13/	8 1	500ms	Wink	4	3	1	TouchTone BkupExt

GS/LS Trunk Information Report

Print Menu Option: Trunk Info and Loop/Ground

GS/LS TRUNK INFORMATION

Trk	SS/PP	Type	OutMode	RelDisc	ChannelUnit
801	2/ 1	Loop	TouchTone	Yes	N/A
802	2/ 2	Loop	TouchTone	Yes	N/A
803	2/ 3	Loop	TouchTone	Yes	N/A
804	2/ 4	Loop	TouchTone	Yes	N/A
805	4/ 1	Loop	Rotary	Yes	N/A
806	4/ 2	Loop	Rotary	Yes	N/A
807	4/ 3	Loop	Rotary	Yes	N/A
808	4/ 4	Loop	Rotary	Yes	N/A
809	5/ 1	Ground	TouchTone	N/A	N/A
810	5/ 2	Ground	TouchTone	N/A	N/A
811	5/ 3	Loop	Rotary	Yes	N/A
812	5/ 4	Loop	Rotary	Yes	N/A
813	5/ 5	Loop	Rotary	Yes	N/A
814	5/ 6	Loop	Rotary	Yes	N/A
815	5/ 7	Loop	TouchTone	Yes	N/A
816	5/ 8	Loop	Rotary	Yes	N/A
817	6/ 1	Ground	Rotary	N/A	N/A
.					
.					
.					
880	15/ 1	Ground	TouchTone	Yes	N/A

Sample Reports

General Trunk Information Report

Print Menu Option: Trunk Info and General

GENERAL TRUNK INFORMATION

Trk	SS/PP	RemAccess	Pool	TLPrfx	HldDisc	Principal	QCC	Prt	QCC	Oper
801	2/ 1	No Remote	70	Yes	Long		4			
802	2/ 2	No Remote	70	Yes	Long		4			
803	2/ 3	No Remote	70	Yes	Long		4			
804	2/ 4	No Remote		Yes	Long		4			
805	4/ 1	No Remote		Yes	Long		4			
806	4/ 2	No Remote		Yes	Long		4			
807	4/ 3	No Remote		Yes	Long		4			
808	4/ 4	No Remote		Yes	Long		4			
809	5/ 1	No Remote	890	Yes	Long		4		10	
810	5/ 2	No Remote		Yes	Long		4			
811	5/ 3	No Remote		Yes	Long		4			
812	5/ 4	No Remote		Yes	Long		4			
813	5/ 5	No Remote		Yes	Long		4			
814	5/ 6	No Remote		Yes	Long		4			
815	5/ 7	No Remote		Yes	Long		4			
816	5/ 8	No Remote		Yes	Long		4			
817	6/ 1	Dedicated		Yes	Long	42	4			

Sample Reports

DS1 Information Report

Print Menu Option: T1 Info

DS1 SLOT ATTRIBUTES

Slot	Type	Format	Supp	Signal	LineComp	ClkSync	Src	Active
3	T1	D4	ZCS	Rob Bit	1	Prim	Loop	Yes
3	T1	D4	ZCS	Rob Bit	1	None	Local	Yes

Sample Reports

PRI Information Report

Print Menu Option: PRI Info

Sections: Network Selection, Special Service, Call-by-Call
and Dial Plan Routing Tables; PRI Information

PRI INFORMATION

System: By line

BchnlGrp #: Slot: TestTelNum: NtwkServ: Incoming Routing:
1 9 00011 By Line Appearance

Channel ID: 1

Line PhoneNumber NumberToSend

Network Selection Table

Entry Number:	0	1	2	3
Pattern to Match:	101****	10***	101****	

Special Service Table

Entry Number:	0	1	2	3	4	5	6	7
Pattern to Match:	011	010	01	00	0	1		
Operator:	none	none	OP	OP	OP/P	none	none	none
Type of Number:	I	I	I	N	N	I	I	N
Digits to Delete:	3	1	3	2	1	1	0	0

Call-By-Call Service Table

Entry Number:	0	1	2	3	4
Pattern 0:	777				
Pattern 1:		212555			
Pattern 2:		212			
Call Type:	BOTH	BOTH	BOTH	BOTH	BOTH
NtwkServ:		No Service		OUT WATS	
DeleteDigits:	0	1	2	0	0
Entry Number:	5	6	7	8	9
Call Type:	BOTH	BOTH	BOTH	BOTH	BOTH
NtwkServ:	No Service		00111		
DeleteDigits:	0	0	0	0	0

Sample Reports

PRI Information Report - Continued

Dial Plan Routing Table

Entry Number:	0	1	2	3
NtwkServ:		OUT WATS	Any service	11100
Expected Digits:	0	0	11	0
Pattern to Match:		222		
Digits to Delete:	0	1	0	0
Digits to Add:		22		

Entry Number	4	5	6	7
NtwkServ:	11100			
Expected Digits:	2	1	0	0
Pattern to Match:	2			
Digits to Delete:	0	1	2	0
Digits to Add:	2			

Entry Number:	8	9	10	11

PRI INFORMATION

NtwkServ:				
Expected Digits:	0	0	0	0
Pattern to Match:				
Digits to Delete:	0	0	0	0
Digits to Add:				

Entry Number:	12	13	14	15
NtwkServ:				
Expected Digits:	0	0	0	0
Pattern to Match:				
Digits to Delete:	0	0	0	0
Digits to Add:				

Remote Access (DISA) Information Report

Print Menu Option: Rmote Access

Sections: General Options; System Default Class of Restrictions (Non-TIE); System Default Class of Restrictions (TIE); Barrier Code Administration

```
GENERAL OPTIONS (ACCESS CODE 889)
Barrier Code required for Non-TIE DISA lines:Yes
Barrier Code required for TIE DISA lines      : NO
Automatic Queuing enabled for DISA lines      : Yes
SYSTEM DEFAULT CLASS OF RESTRICTIONS (NON-TIE)
Restriction      : UNRESTRICTED
ARS Restriction Level: 3
Allowed Lists    :
Disallowed Lists :
SYSTEM DEFAULT CLASS OF RESTRICTIONS (TIE)
Restriction      : UNRESTRICTED
ARS Restriction Level: 3
Allowed Lists    :
Disallowed Lists :
BARRIER CODE ADMINISTRATION
Barrier Code number : 1
Barrier Digits      : 2468
Restriction         : OUTWARD RESTRICTED
ARS Restriction Level: 3
Allowed Lists       :
Disallowed Lists    :
Barrier Code number : 2
Barrier Digits       : 1234
Restriction          : UNRESTRICTED
ARS Restriction Level: 3
Allowed Lists        :
Disallowed Lists     :
Barrier Code number : 16
Barrier Digits       : 9876
Restriction          : OUTWARD RESTRICTED
ARS Restriction Level: 0
Allowed Lists        :
Disallowed Lists     :
```

Operator Information Report

Print Menu Option: Oper Info
Sections: Operator Positions; General Options; DSS Options; QCC operator Options; QCC Call Types

OPERATOR POSITIONS

PORT ADDR .	EXT #	LABEL	TYPE	CALL ALERT (QCC ONLY)
1/ 1	10	OPERATR	QCC	No
1/ 5	14	EXT 14	DLC	N/A
2/ 1	18	EXT 18	DLC	N/A
2/ 5	22	OPERATR	DLC	N/A
6/ 1	42	EXT 42	DLC	N/A

GENERAL OPTIONS

Length of hold reminder timer: 60 sec

DLC Automatic hold enabled : No

DIRECT STATION SELECTOR (DSS) OPTIONS"

BUTTON NUMBER	FIRST DIAL CODE
1	0
2	50
3	100

Operator Call Park codes: 881 882 883 884 885 886 887 888

QCC OPERATOR OPTIONS

Listed Directory Number for queue : 800

Held calls return to queue : No

Automatic hold enabled : No

Calls-in-queue alarm threshold : 0

Time until priorities are elevated: 0 sec

Message Center Operators

One Touch Extend : AUTOMATIC

Rings before extended calls return: 4

Backup operator station :

Sample Reports

Operator Information Report - *Continued*

QCC CALL TYPES:

CALL TYPE	PRIORITY	OPERATORS
=====	=====	=====
Dial 0 Operator	4	10
Follow Forward	4	N/A
Unassigned DID	4	10
Listed Directory Number	4	10
Operator's Extension	4	N/A
Returning	4	0
Group Coverage		
Group # 1	4	
Group # 2	4	
Group # 3	4	
Group # 4	4	
Group # 5	4	
Group # 6	4	
Group # 7	4	
Group # 8	4	
Group # 9	4	
Group # 10	4	
Group # 11	4	
Group # 12	4	
Group # 13	4	
Group # 14	4	
Group # 15	4	
Group # 16	4	
Group # 17	4	
Group # 18	4	
Group # 19	4	
Group # 20	4	
Group # 21	4	
Group # 22	4	
Group # 23	4	
Group # 24	4	
Group # 25	4	
Group # 26	4	
Group # 27	4	
Group # 28	4	
Group # 29	4	
Group # 30	4	

Allowed Lists Report

Print Menu Option: AllowList
Sections: Lists 1 through 7

ALLOWED LISTS

List : 0

Entry 0: -----
Entry 1: -----
Entry 2: -----
Entry 3: -----
Entry 4: -----
Entry 5: -----
Entry 6: -----
Entry 7: -----
Entry 8: -----
Entry 9: -----

.
.
.

List : 7

Entry 0: -----
Entry 1: -----
Entry 2: -----
Entry 3: -----
Entry 4: -----
Entry 5: -----
Entry 6: -----
Entry 7: -----
Entry 8: -----
Entry 9: -----

Sample Reports

Access to Allowed Lists Report

Print Menu Option: AllowListTo

ACCESS TO ALLOWED LISTS

FOR REMOTE ACCESS 17 & 18 MEAN TIE & NON-TIE RESTRICTIONS

List 1 STNS 10

RACC 1 17 18

List 3 STNS 33

RACC

Disallowed Lists Report

Print Menu Options: DisallowLst
Sections: Lists 1 through 7

DISALLOWED LISTS

List : 0

Entry 0: -----
Entry 1: -----
Entry 2: -----
Entry 3: -----
Entry 4: -----
Entry 5: -----
Entry 6: -----
Entry 7: -----
Entry 8: -----
Entry 9: -----

,
,
,

List: 7

Entry 0: -----
Entry 1: -----
Entry 2: -----
Entry 3: -----
Entry 4: -----
Entry 5: -----
Entry 6: -----
Entry 7: -----
Entry 8: -----
Entry 9: -----

Access to Disallowed Lists Report

Print Menu Option: DisallowTo

ACCESS TO DISALLOWED LISTS

FOR REMOTE ACCESS 17 & 18 MEAN TIE & NON-TIE RESTRICTIONS

List	1	STNS	33

		RACC	9

List	3	STNS	33

		RACC	

Automatic Route Selection Report

Print Menu Option: ARS
Sections: Tables

AUTOMATIC ROUTE SELECTION

ARS IS: ACTIVE ACCESS CODE: 9

TABLE 17: Default Toll Output Table

Pool	Absorb	Other Digits	FRL	Call type	Start Pattern
1) 70--	00		3	BOTH	--:-- A
2)----	--	-----		----	--:-- A
3)----	--	-----		----	--:-- A
4)----	--	-----		----	--:-- A
5)----	--	-----		----	--:-- A
6)----	--	-----		----	--:-- A
Pool	Absorb	Other Digits	FRL	Call type	Start Pattern
1)70--	00	-----	3	BOTH	--:-- B
2)----	--	-----		----	--:-- B
3)----	--	-----		----	--:-- B
4)----	--	-----		----	--:-- B
5)----	--	-----		----	--:-- B
6)----	--	-----		----	--:-- B

TABLE 18: Default Local Output Table

Pool	Absorb	Other Digits	FRL	Call type	Start Pattern
1)70--	00	-----	3	BOTH	--:-- A
2)----	--	-----		----	--:-- A
3)----	--	-----		----	--:-- A
4)----	--	-----		----	--:-- A
5)----	--	-----		----	--:-- A
6)----	--	-----		----	--:-- A
A Pool	Absorb	Other Digits	FRL	Call type	Start Pattern
1)70--	00	-----	3	BOTH	--:-- B
2)----	--	-----		----	--:-- B
3)----	--	-----		----	--:-- B
4)----	--	-----		----	--:-- B
5)----	--	-----		----	--:-- B

Automatic Route Selection Report - Continued

TABLE 19: Dial 0 Output Table							
A	Pool	Absorb	Other Digits	FRL	Call type	Start	Pattern
1)	70--	00	-----	3	BOTH	--:--	A
TABLE 20: N11 Output Table							
01)411 02)611 03)811 04)911							
Pool	Absorb	Other Digits	FRL	Call type	Start	Pattern	
1)	70--	00	-----	3	BOTH	--:--	A
l)	70--	00	-----	3	BOTH	--:--	A

Sample Reports

Extension Directory Report

Print Menu Option: Ext Direct

EXTENSION DIRECTORY

Port Addr	Ext #	Label	FHRMVRA ABCISSR CIFCITS ESWDGRR	Port Addr	Ext #	Label	FHRMVRA ABCISSR CIFCITS ESWDGRR
1/ 1	10	OPERATR	NNNN U3	1/21	710		NNNN U3
1/ 2	11		NNNN 03	1/22	711		NNNN U3
1/ 3	12		NNNN U3	1/23	712		NNNN U3
1/ 4	13	EXT 13	NNNN U3	1/24	713		NNNN U3
1/ 5	14	EXT 14	NNNN U3	1/25	714		NNNN U3
1/ 6	15		NNNN U3	1/26	715		NNNN U3
1/ 7	16		NNNN U3	1/27	716		NNNN U3
1/ 8	17		NNNN U3	1/28	717		NNNN U3
2/ 1	18	EXT 18	NYNN U3	2/ 2	19		NYNN U3
2/ 3	20		NYNN U3	2/ 4	21		NYNN U3
2/ 5	22	OPERATR	NYNN U3	2/ 6	23		NYNN U3
2/ 7	24		NYNN U3	2/ 8	25		NYNN U3
3/ 1	26		NYNN U3	3/ 2	27		NYNN U3
3/ 3	28		NYNN U3	3/ 4	29		NYNN U3
3/ 5	30	AUDIXVP	NYNN U3	3/ 6	31		NYNN U3
3/ 7	32	AUDIXVP	NYNN U3	3/ 8	33		NYNN U3
4/ 1	34		NYNN U3	4/ 2	35	AUDIXVP	NYNN U3
4/ 3	36	AUDIXVP	NYNN U3	4/ 4	37		NYNN U3
4/ 5	38		NYNN U3	4/ 6	39		NYNN U3
4/ 7	40		NYNN U3	4/ 8	41		NYNN U3
6/ 1	42	EXT 42	NNNN U3	6/21	742		NNNN U3
.							
.							
.							
7/ 1	54	EXT 54	NNNN U3	7/2	754		NNNN U3

Sample Reports

System Directory Report

Print Menu Option: Sys Direct

SYSTEM DIRECTORY

Code	Name	Number	Display
600	ABC Company	555-9999	YES
601	Jacques Smith	5551212	YES
605	Travel Agency	912015556677	YES

Group Paging Report

Print Menu Option: Group Page

GROUP PAGING

Group # 793 STNS : 20 21 22 23 24 25

Group # 794 STNS : 15 16 17 18 19

Sample Reports

Extension Information Report

Print Menu Option: Ext Info plus extension number

EXTENSION INFORMATION

Extn SS/PP Type
10 1/ 1 MLX-20L + 1 DSS

Pool Access : 70 890 891 892 893 894 895 896 897 898 899
Page Group :
Primary Coverage :
Secondary Coverage :
Coverage Group : 5
Group Coverers : 773
NS Groups : 10
Group Calling Member:
Pickup Groups :
Allowed Lists :
Disallowed Lists :
Restrictions : UNRESTRICTED
Auto Callback : OFF
Call Waiting : ON
Abbreviated Ring : ON
Line Preference : ON
Shared SA Ring : ON
Receive Voice Calls : ON
Coverage Inside : OFF
Forwarding to :
ARS Restriction : 3
Forced Account Code : No
Microphone Disable : No
Remote Forward Allow: No
NS Exclusion : No
Voice Announce Pair : No
Voice/Data Pair : No
BIS/HFAI : No
Language : English

Extension Information Report - *Continued*

EXTENSION INFORMATION

Extn	SS/PP	Type	
10	1/ 1	MLX-20L + 1 DSS	
Button 34		Blank	Status None
Button 33		Blank	Status None
Button 32		Blank	Status None
Button 31		Blank	Status None
Button 30		Blank	Status None
Button 29		Blank	Status None
Button 28		Blank	Status None
Button 27		Blank	Status None
Button 26		Blank	Status None
Button 25		Blank	Status None
Button 24		Blank	Status None
Button 23		Blank	Status None
Button 22		Blank	Status None
Button 21		Blank	Status None
Button 20		Forced Release	Status None
Button 19		Pool Inspect	Status None
Button 18		Headset Auto Answer	Status Off
Button 17		Join	Status None
Button 16		Cancel	Status None
Button 15		Alarm Status:	Status Off
Button 14		Night Service	Status Off
Button 13		Headset Status	Status Off
Button 12		Destination	Status None
Button 11		Release	Status None
Button 10		Position Busy	Status Off
Button 9		Send/Remove Message	Status None
Button 8		Handset/Headset Mute	Status Off
Button 7		Source	Status None
Button 6		Start	Status None
Button 5		Call 5	Status None
Button 4		Call 4	Status None
Button 3		Call 3	Status None
Button 2		Call 2	Status None
Button 1		Call 1	Status None

Group Coverage Information Report

Print Menu Option: GrpCoverage

GROUP COVERAGE INFORMATION

Group # 2 Senders : 6802 6804

Group # 5 Senders : 10 11 12 13 14 18 19 20 42
44 45 47 6810

DIRECT GROUP CALLING INFORMATION

Group \$: 770 Group Type : AutoLogout

Call Distribution Type : CIRCULAR

Delay Announcement Ext # : 11

Message Waiting Station : 20

Calls_in_queue Threshold : 1

External Alert ext # : 21

Overflow Threshold : 1

Overflow to DGC group # :

Group Coverage : 1

No.	EXT #	LABEL

1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		

Direct Group Calling Information Report

Print Menu Option: Grp Calling
Sections: Each programmed group

DIRECT GROUP CALLING INFORMATION

Group # : 782 Group Type : AutoLogout
Call Distribution Type : CIRCULAR
Delay Announcement Ext # :
Message Waiting Station :
Calls_in_queue Threshold : 1
External Alert ext # :
Overflow Threshold :1
Overflow to DGC group # :
Group Coverage : 1

No.	EXT #	LABEL
1	12	
2	13	
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		

LINES :

Sample Reports

Night Service Information Report

Print Menu Option: Night Service

NIGHT SERVICE INFORMATION

OPERATOR	10	DGCG #:	
		STNS :	10
OPERATOR	14	DGCG #:	
		STNS :	14
OPERATOR	18	DGCG #:	
		STNS :	18
OPERATOR	22	DGCG #:	
		STNS :	22
OPERATOR	42	DGCG #:	
		STNS :	42

Password :

Current Day : OFF

	Turn off at:	Turn on at:
Sunday	:	:
Monday	:	:
Tuesday	:	:
Wednesday	:	:
Thursday	:	:
Friday	:	:
Saturday	:	:

Emergency Allowed List:

0)
1)
2)
3)
4)
5)
6)
7)
8)
9)

NS Excluded STNS:

61 62 63 64 65

Group Call Pickup Report

Print Menu Option: Call Pickup

GROUP CALL PICKUP

Group # 1 STNS : 10 11 12 13 14 15 16

Group # 2 STNS : 17 18 19 20

Group # 3 STNS : 21 22 23 24 25 26 27 28 29 30

Group # 4 STNS : 31

Group # 5 STNS : 32

Group # 6 STNS : 33

Group # 7 STNS : 34

Group # 8 STNS : 35

Group # 9 STNS : 36

Group # 10 STNS : 37

Sample Reports

Error Log Report

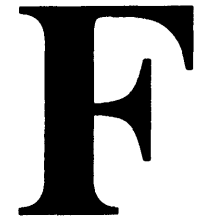
Print Menu Option: Error Log

ERROR LOG

Last 10 System Errors:

Message	ss/pp	Cnt	First	Last	Code
PRI SVC AUDIT TIMEOUT	00/00			01/08 00:00:53	7001
TIMEOUT COLD START	00/00			01/11 00:04:08	0001
PRI SVC AUDIT TIMEOUT	00/00			01/11 00:04:14	7001
TIMEOUT COLD START	00/00			01/21 00:22:14	0001
PRI SVC AUDIT TIMEOUT	00/00			01/03 00:22:14	7001
PRI SVC AUDIT TIMEOUT	00/00			01/04 00:22:14	7001
SOFTWARE COLD START	00/00			01/04 00:21:14	0003
SOFTWARE COLD START	00/00			01/04 00:21:14	0003
PRI SVC AUDIT TIMEOUT	00/00			01/04 00:21:14	7001
SOFTWARE COLD START	00/00				

General System Programming Sequence



System Programming Sequence

This appendix lists the basic procedures, in the order in which they must be performed, to program a new system. In some instances, you may need to rearrange the system planning forms to match this order.

Basic System Operating Conditions

- Select the system programming position
System → SProg Port
- Select the system language
More → Language → SystemLang
- Select the system mode
System → Mode
- Enable Automatic Maintenance Busy
System → MaintenBusy
- Set the system time
System → Time
- Set the system date
System → Date

System Renumbering

- Select the system numbering plan
SysRenumber → Default Numbering
- Single renumbering
SysRenumber → Single
- Block renumbering
SysRenumber → Block

- DSS console page buttons
SysReNumber → Single → **More** → DSS Buttons

Identify System Operator Positions

- Identify QCC system operator positions
Operator → Positions → Queued Call
- Identify DLC system operator positions
Operator → Positions → Direct Line

Lines and Trunks

- Specify type of trunk on 400 or 800 GL/LS module
LinesTrunks → LS/GS/DS1
- Identify dial signaling for loop-start/ground-start trunks
LinesTrunks → TT/LS Disc → Outmode
- Classify disconnect signaling reliability for loop-start trunks
LinesTrunks → TT/LS Disc → LS Disconnect
- Specify toll prefix requirements
LinesTrunks → Toll Type
- Specify Hold Disconnect interval
LinesTrunks → **More** → HoldDiscnct
- Assign the QCC queue priority
LinesTrunks → **More** → QCC Prior
- Identify QCC operator to receive calls
LinesTrunks → **More** → QCC Oper
- Assign trunks to pools
LinesTrunks → Pools

Complex Lines

- Program DS1 trunks
LinesTrunks → LS/GS/DS1
- Program tie lines
LinesTrunks → TIE Lines
- Program DID trunks
LinesTrunks → DID
- Program PRI trunks
LinesTrunks → PRI

Telephones

Many programmers prefer to program Auxiliary Equipment before programming Telephones.

- Assign trunks to telephones
Extensions → LinesTrunks
- Copy trunk assignments
Extensions → Line Copy
- Identify Principal User for Personal Line
LinesTrunks → **More** → PrncipalUsr
- Assign ring, voice, outgoing only, shared buttons
More → Cntr-Prg
- Copy telephone button assignments
More → Cntr-Prg
- Identify analog multiline telephones with BIS or HFAI
Extensions → BIS/HFAI
- Identify analog multiline telephones requiring Voice Announce to Busy
Extensions → VoiceSingl

Auxiliary Equipment

- Program Music-on-Hold
AuxEquip → MusicOnHold
- Program loudspeaker paging
AuxEquip → LdspkrPg
- Program a fax port
AuxEquip → Fax
- Identify the jack used for maintenance alarms
AuxEquip → MaintAlarms
- Program Voice Mail and Automated Attendant
AuxEquip → VMS/AA → TransferRtn

Print Reports

- Print system reports to simplify checking your work and to provide a paper copy of system configuration
More → Print

Programming Special Characters



This appendix provides the special characters used in dialing sequences for numbers dialed automatically. The characters allowed depend on the type of telephone. Ask your System manager which special characters are needed and when to use them.

Single-Line Telephones

Some dialing sequences need special characters. For example, you would press and release either the **Recall** or **Flash** button or the switchhook to insert a pause in a dialing sequence after a dial-out code to allow the system to seize an outside line before dialing the number.

Table G-1. Special Characters for Single-Line Telephones

Press...	Means...
Recall, Flash or switchhook	Pause. Inserts 1.5 second pause in the dialing sequence. Multiple consecutive pauses are allowed.
#	End of Dialing. Used to signal the end of the dialing sequence or to separate group digits, e.g., account code from number dialed.

Analog Multiline Telephones

Some dialing sequences need special characters. For example, you would press **Hold** to insert a pause (p) after the dial-out code in a dialing sequence to allow the system to seize an outside line before dialing the number. A pause can also be used to separate a phone number from an extension number.

Table G-2 Special Characters for Analog Multiline Telephones

Press...	See*...	Means...
Drop†	s	Stop. Inserts a stop within a sequence of automatically dialed numbers. For example, an outside Auto Dial button may be programmed with a password then a Stop, followed by a phone number. To use Auto Dial with a Stop in the sequence, press the button to dial the password, listen for the dialing and connection, and press the button again to dial the phone number.
Hold	p	Pause. Inserts 1.5 second pause in the dialing sequence. Multiple consecutive pauses are allowed.
Conference†	f	Flash. Sends a switchhook flash. Must be the first entry in the dialing sequence.
##	#	End of Dialing for Auto Dial buttons. Used at the end of a dialing sequence to indicate you have finished dialing or to separate one group of dialed digits from another.
#	#	End of Dialing. Used at the end of a dialing sequence to indicate you have finished dialing or to separate one group of dialed digits from another.

* Display phones only.

† Not available on MLC-5 cordless phones.

MLX Non-Display Telephone

Some dialing sequences need special characters. For example, you would press **Hold** to insert a pause in a dialing sequence after a dial-out code to allow the system to seize an outside line before dialing the number. A pause can also be used to separate a phone number from an extension number.

Table G-3. Special Characters for MLX Non-Display Telephone

Press...	Means...
Drop	Stop. Halts the dialing sequence to allow the system to respond.
Hold	Pause. Inserts 1.5 second pause in the dialing sequence. Multiple consecutive pauses are allowed.
Conf	Flash. Sends a switchhook flash. Must be the first entry in the dialing sequence.
##	End of Dialing for Extension Programming only. Used at the end of a dialing sequence to indicate you have finished dialing or to separate one group of dialed digits from another, for example, account codes from number dialed.
#	End of Dialing. Used to signal the end of the dialing sequence or to separate group digits, for example, account code from number dialed.

MLX Display Telephones

When you program Personal Directory listings, Auto Dial buttons, or Personal Speed Dial codes, you are storing a sequence of numbers to be dialed automatically.

Some dialing sequences need special characters. For example, you would press **Hold** to insert a pause in a dialing sequence after a dial-out code to allow the system to seize an outside line before dialing the number. A pause can also be used to separate a phone number from an extension number.

Table G-4 Special Characters for MLX Display Telephones

Press...	See...	Means...
D r o p	s	Stop. Halts dialing sequence to allow for system response.
Hold	p	Pause. Inserts 1.5 sec. pause in dial sequence. Multiple consecutive pauses allowed.
Conf	f	Flash. Sends switchhook flash. Must be first entry in sequence.
##	#	End of Dialing for Extension Programming only. Used at the end of a dialing sequence to indicate you have finished dialing or to separate one group of dialed digits from another, for example, account codes from number dialed.
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When you program Personal Directory listings, Auto Dial buttons, or Personal Speed Dial codes, you are storing a sequence of numbers to be dialed automatically.

Some dialing sequences need special characters. For example, you would press **Hold** to insert a pause in a dialing sequence after a dial-out code to allow the system to seize an outside line before dialing the number. A pause can also be used to separate a phone number from an extension number.

Table G-4 Special Characters for MLX Display Telephones

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D r o p	s	Stop. Halts dialing sequence to allow for system response.
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Conf	f	Flash. Sends switchhook flash. Must be first entry in sequence.
##	#	End of Dialing for Extension Programming only. Used at the end of a dialing sequence to indicate you have finished dialing or to separate one group of dialed digits from another, for example, account codes from number dialed.
#	#	End of Dialing. Used to signal end of dial sequences or to separate group digits, for example, account code from number dialed.

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