

Lucent Technologies
Bell Labs Innovations



MERLIN[®]

COMMUNICATIONS SYSTEM

PLANNING GUIDE:
MODELS 1030 AND 3070
WITH FEATURE MODULE 4

999-502-140IS
Issue 1

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Lucent Technologies – formed as a result of AT&T's planned restructuring – designs, builds, and delivers a wide range of public and private networks, communication systems and software, consumer and business telephone systems, and microelectronic components. The world-renowned Bell Laboratories is the research and development arm for the company.

Introduction

The advanced technology of the MERLIN communications system allows you to customize the system to meet your business needs. As the system administrator, you are responsible for selecting MERLIN system options and features that will enhance your business operations.

This guide will help you decide what features to assign to your MERLIN system, and to each voice terminal. We would like you to read through this guide and also the System Configuration Forms before the Technical Customer-Support Specialist (TC-SS) assigned to your account contacts you. Reading this guide beforehand will enable you to have an understanding of the questions the TC-SS will ask you, and also how you want your system to operate. Since the needs of customers vary, we need you to supply the information contained in the System Configuration Forms to customize your system.

This planning guide explains everything you need to know to customize your MERLIN communications system.

Here is what you need to do:

1. Read this planning guide, which is divided into the following sections:
 - **Decisions** — This section helps you make the following systemwide choices:
 - How will people access outside lines? Will you have a *square* or *pooled* system?
 - If you decide to have a *pooled* system, how will people access the line pools? Will they press a button or dial a number to get an outside line?
 - **Getting Started** — This section discusses systemwide features that will be set by you when your system is installed. If necessary, you can change these features at any time.
 - **Voice Terminal Programmability** — This section discusses the features that are programmed at each voice terminal. Voice terminals can also be programmed from the administration console. Voice terminals are MERLIN system telephones.
 - **Initial Feature Assignments** — This section shows you the initial features pre-assigned to voice terminal buttons.
2. After reading through this guide, remove the forms from the front pocket of this package. Read through the “Instructions for Completing System and Voice Terminal Configuration Forms.” If you want to begin filling out the forms, follow the directions in “Instructions for Completing System and Voice Terminal Configuration Forms” to complete:
 - The System Configuration Form.
 - One Voice Terminal Configuration Form for each voice terminal in your system (make enough copies of this form for all the voice terminals in your system). When filling out this form make certain that you have the correct form for your system; there are several of these forms.
3. If you have any questions, please call the Technical Customer-Support Specialist responsible for your account. You will find his or her name on the letter that accompanies this package.

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Decisions

SQUARE VS. POOLED

One of the first decisions you must make about your system is how people will access outside lines from their voice terminals. The MERLIN communications system gives you two configuration options for arranging your outside lines: square or pooled. In a square system, each outside line appears on a separate button at each voice terminal, except for those voice terminals with too few buttons to accommodate all the lines. In a pooled system, outside lines are grouped together so that one button provides access to several outside lines. On attendant consoles, however, each outside line appears on a separate button, whether your system is pooled or square, and you cannot change this arrangement.

Whether your system should be square or pooled depends on your specific business needs. If you want to use the Automatic Route Selection (ARS) feature, your lines must be pooled and your system must be set for Dial Access to Line Pools (Dial Access is discussed on page 8). The characteristics of both configurations are discussed in detail in the paragraphs that follow.

ABOUT SQUARE SYSTEMS

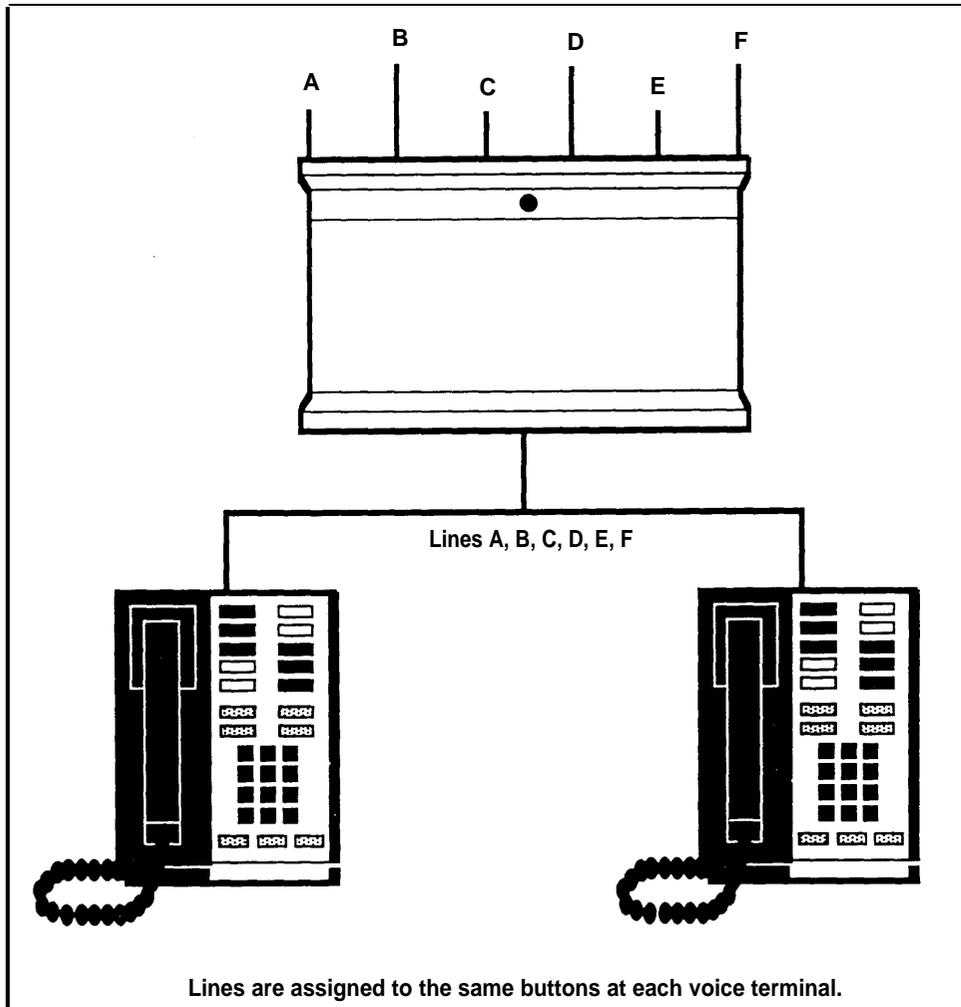
A square configuration is one in which outside lines are represented by separate buttons on every voice terminal in the system. A square configuration simplifies call handling because people can join in on calls or pick up calls on hold just by touching the appropriate line button at almost any voice terminal.

You can choose between two kinds of square configurations: standard or customized. In the standard configuration, you give all voice terminals in the system access to the same lines. In the customized configuration, you assign specific lines or sets of lines to selected groups of voice terminals. You can also assign personal lines to individual voice terminals in a customized square configuration.

STANDARD SQUARE CONFIGURATIONS

The standard square configuration is ideal for offices in which all employees use the same lines to make and receive calls. In this arrangement, every line in the system appears at each voice terminal that has enough buttons to accommodate that number of lines. Depending upon the size of your system, you can assign up to 30 lines to as many of your voice terminals as you wish.

You assign each of your lines to the same buttons at each voice terminal. To get the most from a standard square configuration, all your voice terminals should have enough buttons to handle all the lines in your system. If you have ordered many 5-button voice terminals, keep in mind that they will be more difficult to use in a square arrangement. An example of a standard square configuration appears below. All six lines in the system are available for general use and appear on the same buttons at each voice terminal, as shown.



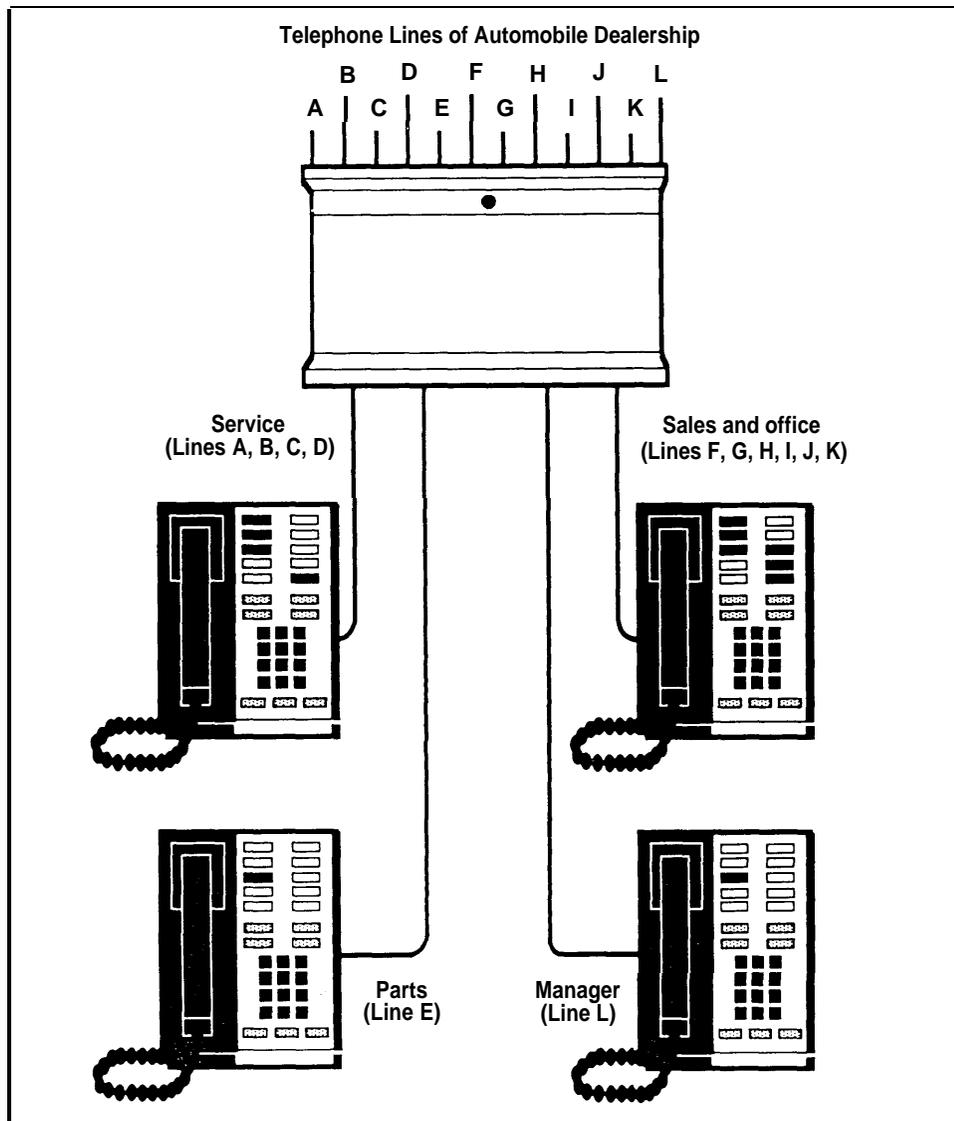
EXAMPLE OF STANDARD SQUARE CONFIGURATION

CUSTOMIZED SQUARE CONFIGURATIONS

In a customized square configuration, you assign individual lines or groups of lines to selected voice terminals with similar requirements for placing and receiving calls. This arrangement lets you tailor your communications system to meet the needs of different departments. Calls are easily passed between departments using the Line Pickup feature. This configuration also simplifies keeping records of calling patterns within your business.

For example, the departments at a car dealership may have different calling needs. Say Ultimate Motors has eight local lines, three WATS lines, and one Foreign Exchange (FX) line. The sales and office staff use the out-of-state WATS line frequently to speak with manufacturers' representatives, haulers, and other dealerships. This group uses an in-state WATS lines to contact customers, vendors, and the Division of Motor Vehicle Registration in the state capital. The third WATS line is an incoming in-state WATS line used by customers who live outside the immediate area. The service staff doesn't usually have to make long distance calls; however, one major equipment supplier is located 25 miles away, and calls to this supplier would normally be toll calls. To reduce this expense, Ultimate has a Foreign Exchange line for the supplier's exchange code, 560. When the staff uses this line, calls to the supplier are treated as the equivalent of local calls. The manager handles many confidential negotiations over the telephone and so requires a personal line.

A customized square configuration is the most appropriate system arrangement for Ultimate Motors' varied communications requirements. The administrator assigns the three WATS lines and three of the eight local lines to the sales and office staff. The service department's voice terminals get three other local lines and the Foreign Exchange line. The seventh local line is assigned to the voice terminal at the parts desk, and the eighth is assigned as a personal line at the manager's voice terminal. The figure below illustrates this type of configuration.

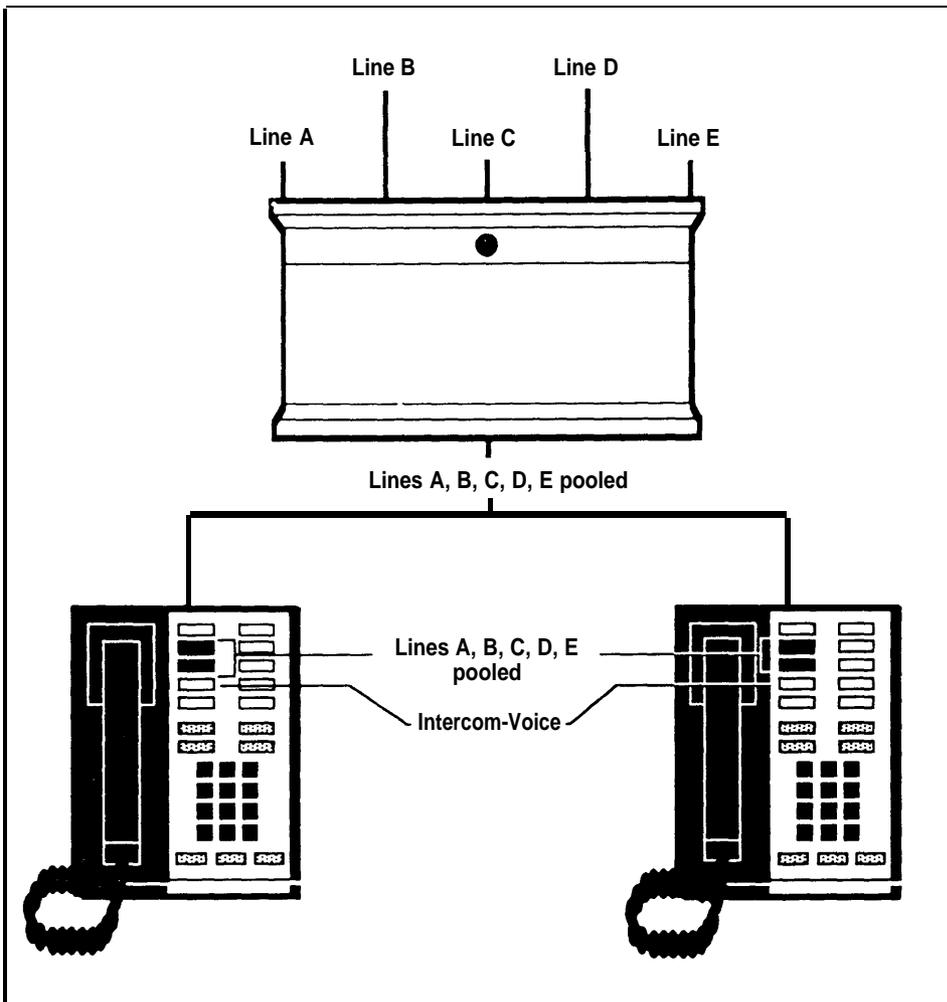


EXAMPLE OF CUSTOMIZED SQUARE CONFIGURATION

ABOUT POOLED SYSTEMS

For many businesses large enough to need the MERLIN system, Model 1030 or Model 3070, pooled operation is more cost-efficient than square because:

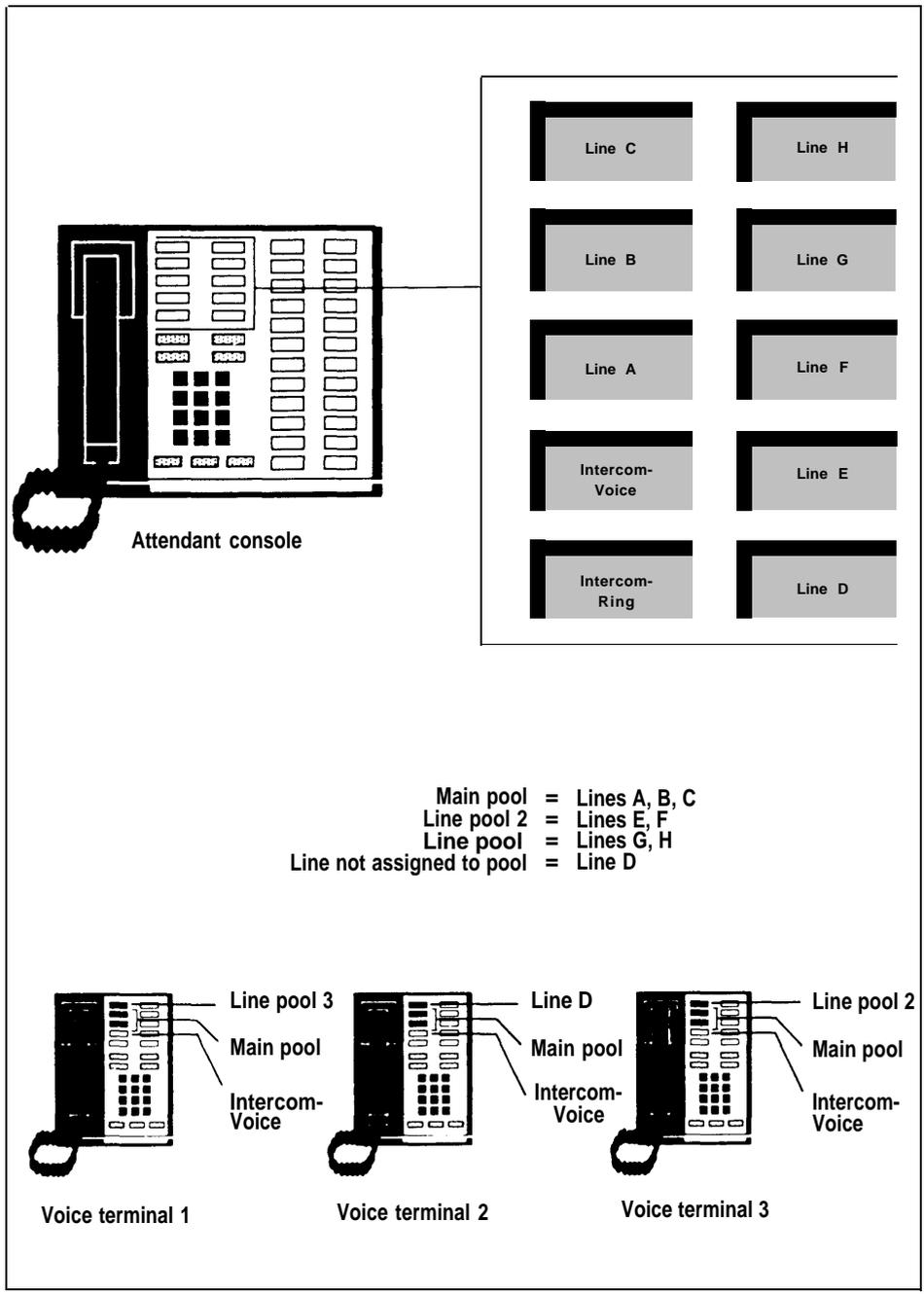
- The lines in the pool are shared by many people, so each line gets more use. As a result, you may need fewer outside lines.
- Only two buttons on each voice terminal are necessary to represent up to 30 interchangeable lines, so you can use more of the smaller, less expensive voice terminal models.
- Voice terminal buttons that would otherwise represent lines are used for system features — a substantial advantage in systems with a large number of outside lines or many 5- and 10-button voice terminals.
- Automatic Route Selection allows you to determine which of your line pools provide the lowest cost, most efficient dialing methods for particular types of calls.



SIMPLE POOLED SYSTEM

The diagram above shows all lines assigned to a pool. You do not need to assign all your lines to pools; you can assign individual lines that are not included in any pool to any voice terminal in your system. For example, you can assign individual

special-purpose lines such as personal or WATS lines. Assigning a special line to a button on one voice terminal in no way affects the use of the corresponding button on other voice terminals. A diagram of a pooled system with eight lines appears below.



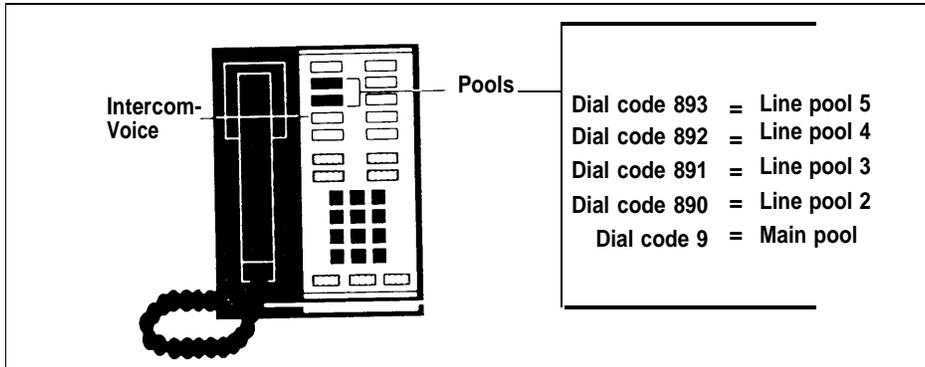
POOLED SYSTEM WITH 8 LINES

BUTTON ACCESS VS. DIAL ACCESS TO LINE POOLS

NOTE: If you want to use Automatic Route Selection, you *must* select Dial Access to Line Pools.

If you have decided to configure your system as pooled, you must also decide how voice terminals will access the pools. You can choose one of two options for line pools: Button Access to Line Pools or Dial Access to Line Pools.

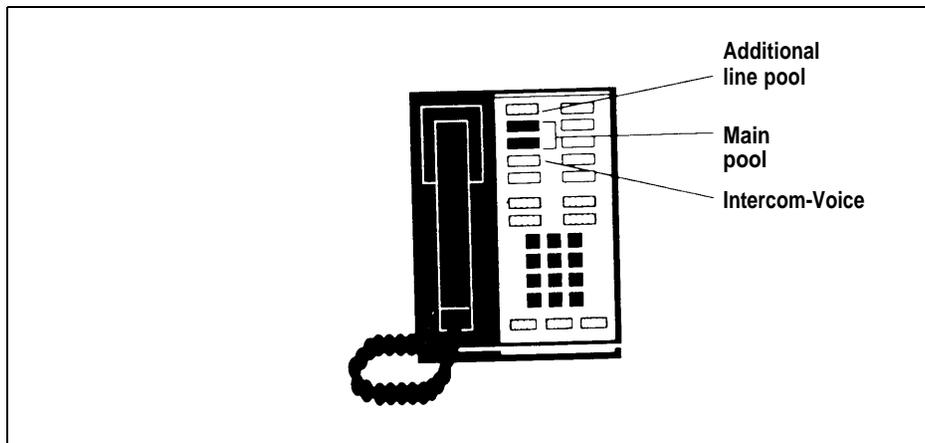
If you have only one or two line pools, Button Access is the best option for your system. If your system has several line pools, however, Dial Access is preferable because you can access all pools by using only two buttons on each voice terminal. Dial Access is also preferable if you want basic telephones to have access to more than one line pool or if you want 5-button voice terminals to have access to more than one special pool.



DIAL ACCESS TO POOLS

Assume that you have five line pools. With the Dial Access option (see the diagram above), you arrange the system so that people can access any line pool by lifting the handset, touching one of the two buttons above **Intercom-Voice**, and dialing the access code assigned to the pool (9 for the main pool or 890 through 899 for the others). Even if you set your system for Dial Access, you can still assign some pools to particular buttons, if you like.

With the Button Access option (see the diagram below), people access all line pools directly through pool buttons on each voice terminal. In such an arrangement, the first two buttons above **Intercom-Voice** provide access to the main pool. You may assign additional buttons for access to other pools that may include WATS lines, FX lines, or lines used for special purposes.



BUTTON ACCESS TO POOLS

Getting Started

Your MERLIN communications system can be tailored to meet your specific communications requirements. To customize your system, you can add a variety of system features.

The following pages discuss those features and explain the effect they have on your system. These features are the first ones that should be administered to get your system up and running. Read through this section and determine which features your system will use.

SPECIFYING TOUCH-TONE AND ROTARY LINES

Do you have any rotary lines coming into your system?

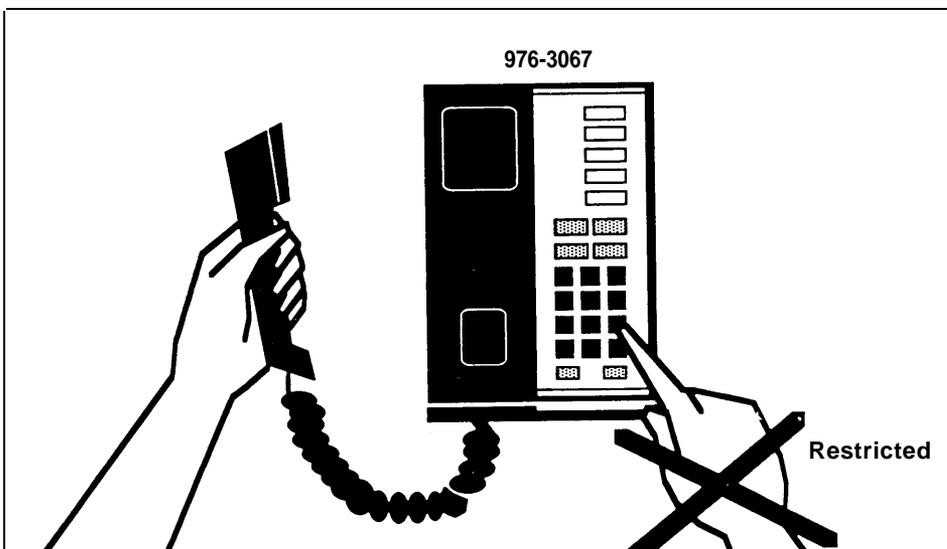
When first installed, your MERLIN communications system will be set to generate Touch-Tone signals. If some of your lines are rotary, your system will have to be reset to accommodate them. If you are not sure whether or you have any rotary lines, call your local telephone company. You will also need this information to complete the System Configuration Forms.

CALL RESTRICTIONS

Do you need to limit some voice terminals to incoming calls only, while leaving others with no limitations?

You may want to restrict some voice terminals to intercom or local calls if, for example, the employees using these voice terminals do not need to make outside or long distance calls. You may also want to restrict voice terminals located in a public area such as a lobby. If you want the restricted voice terminals to have limited additional calling capacity, you can set up allowed lists. You can assign one of the following basic calling ranges to each of your voice terminals:

- **Outward Call Restricted.** Permits intercom calls only, with allowed list(s) for specific local or toll calls if required.
- **Toll Call Restricted.** Permits intercom and local calls only, with allowed list(s) for specific toll calls if required.
- **Unrestricted.** All calls permitted.



CALL RESTRICTIONS

ALLOWED LISTS

Do some of your employees with call restrictions need to call numbers within a specific area code or exchange code?

Allowed lists add a group of permitted numbers to the calling range of an outward- or toll-restricted voice terminal. Permitted numbers consist of an area code and/or exchange code (the first three digits of a 7-digit telephone number) or an emergency number such as 911.

For example, a New York City customer service representative with a toll-restricted voice terminal might need to speak with customers in northern New Jersey (area code 201). This person should have area code 201 in his or her allowed list. A clerk in Houston with an outward-restricted voice terminal might need to call several local vendors and the company's headquarters in Chicago. The clerk's allowed list would include the first three digits of the local vendors' telephone numbers and the area code and first three digits of the firm's Chicago telephone number.

AUTOMATIC ROUTE SELECTION (ARS)

Would you like to be sure your employees place long distance calls through the most cost-efficient route?

Automatic Route Selection (ARS) allows you to specify which of your line pools provide the lowest cost and which of your dialing methods is most efficient for particular types of calls. For example, you may have several WATS line pools that provide the most economical means of making calls to different areas of the country. For certain types of long distance calls, you may also use an alternate long distance telephone company, whose lines are accessible through your main pool. When ARS is activated, the system automatically selects the available line pool that contains the preferred lines for a call to that area code or exchange. The caller does not have to dial the number of a pool to make an outside call. He or she just has to:

- Touch a Pool Access button.
- Lift the handset.
- Dial the outside number.

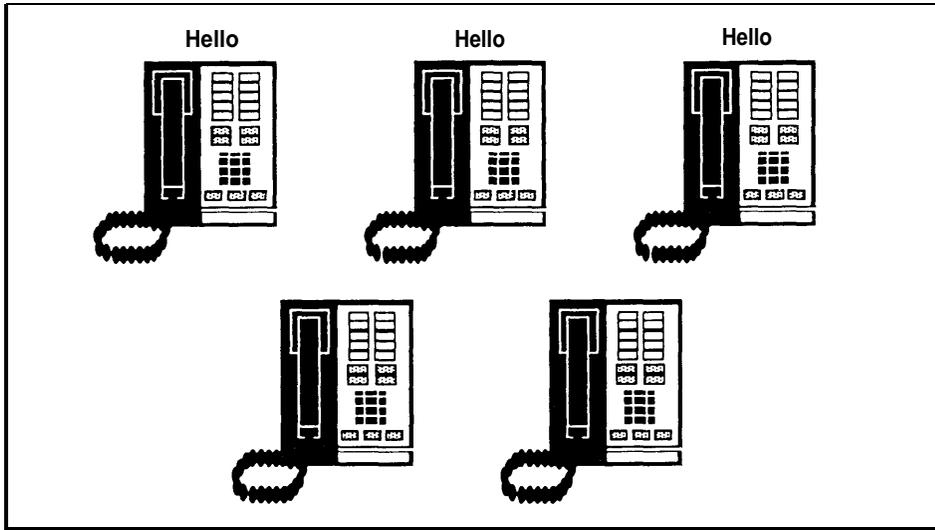
To get the maximum benefit from ARS, it is important to consider the calling patterns of people in your business and the relative costs of calls placed on different lines in your system. If people in your business place calls through different types of lines (e.g., local lines, in-state WATS lines, cross-country WATS lines, or an alternate long distance telephone company service) to different areas of the country, you can designate which type of line you want ARS to choose for different area codes and exchanges. For example, if you want employees to use the Cross-Country Band 5 WATS lines to call San Francisco, then you can program ARS to route all calls to area code 415 through the Band 5 WATS line pool. If you also want employees to be able to call San Francisco through an alternate long distance telephone company service when all Band 5 WATS lines are busy, then you can program the alternate service as your second choice for routing long distance calls to area code 415.

You can design the most efficient call routing system for your business. Once you program ARS, MERLIN will automatically place each call through the most economical available line.

GROUP PAGE

Would you like to be able to page a group of people at one time without disturbing everyone on your system and without having to make a phone call to each one in the group?

Group Page allows you to page a particular group of employees such as department heads, committee members, or a project team without disturbing the entire staff. The Group Page feature allows you to page up to ten people through the voice terminal speakers. No external paging system is needed to use this feature. You can create up to seven paging groups, and though a voice terminal can be assigned to more than one paging group, only ten voice terminals can be assigned to one group.



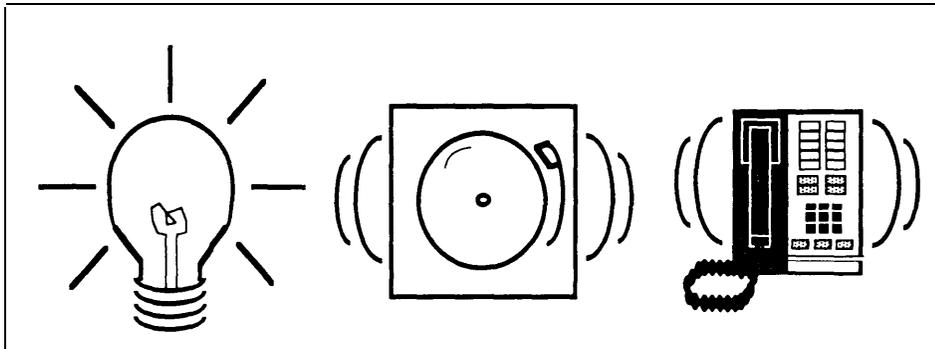
GROUP PAGE

NIGHT SERVICE

Should personnel be alerted to incoming calls during non-business hours and when the attendant is off duty?

Attendants at one of the answering positions activate as many as three extra alerting devices to ring when a call comes in on an outside line or pool of lines. When this feature is activated, people other than the attendant are alerted to incoming calls. People at other voice terminals can use Call Pickup to answer calls coming in to the attendant voice terminal.

You can connect extra-alerting devices such as bells or flashing lights to your system to provide Night Service for your business when the person who usually answers calls is not on duty. Three extra-alerting devices can be connected to the optional Services Module in the control unit to alert people to incoming calls.



NIGHT SERVICE

STATION MESSAGE DETAIL RECORDING (SMDR)

Would you like to keep records of your business' incoming and outgoing calls?

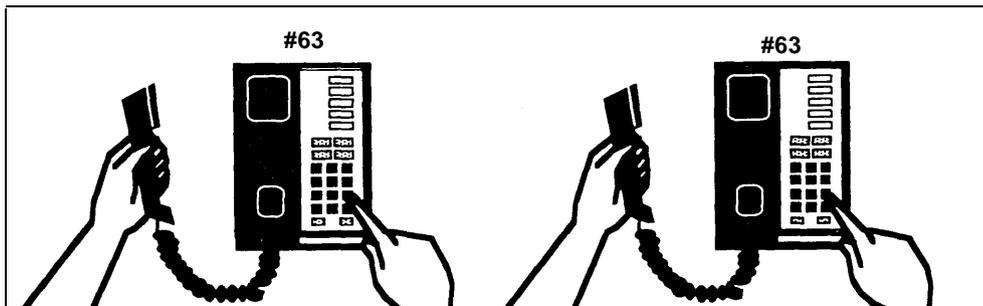
SMDR generates call reports that include such information as the date and time of each call, its duration, and the line and voice terminal on which the call was made. The call report can help you develop records of your system and individual telephone traffic patterns so you can use your system effectively. You can assign account numbers to clients, and then use the account numbers to identify who to bill for calls. In order to print out your call reports, you need to have a printer connected to your SMDR Module in your control unit.

SYSTEM SPEED DIAL CODES

Do many of your employees call the same telephone numbers (for example, customers or vendors)?

You can assign System Speed Dial codes to selected numbers and store them in your system so that people can reach the numbers by dialing the abbreviated codes. The System Speed Dial feature allows all employees to have access to the same Speed Dial codes without specially programming their own voice terminals. You can assign up to 40 System Speed Dial Codes for your system. Assigning System Speed Dial Codes does not affect the ability of individuals to assign their own Personal Speed Dial numbers (See page 16.)

System Speed Dial codes may be unmarked or marked. Marked codes are very useful for alternate long distance company numbers, access codes, and other numbers you may not want everyone in your business to know. When Station Message Detail Recording (SMDR) is used, an unmarked System Speed Dial code will print out the telephone number and not the code that was actually dialed. However, a marked System Speed Dial code will print out the code that was dialed (for example, #63) and not the telephone number.



SYSTEM SPEED DIAL CODES

RETURN INTERVAL FOR TRANSFERRED CALLS

When transferring calls from one voice terminal to another, how many times would you like the second voice terminal to ring?

When your system is installed, it is set up so that a call transferred from one voice terminal to another rings four times at the second voice terminal. If no one answers, the call continues to ring at this voice terminal and also begins to ring again at the voice terminal from which it was transferred. If you wish, you can vary the number of times that transferred calls ring before they are returned to the sender.

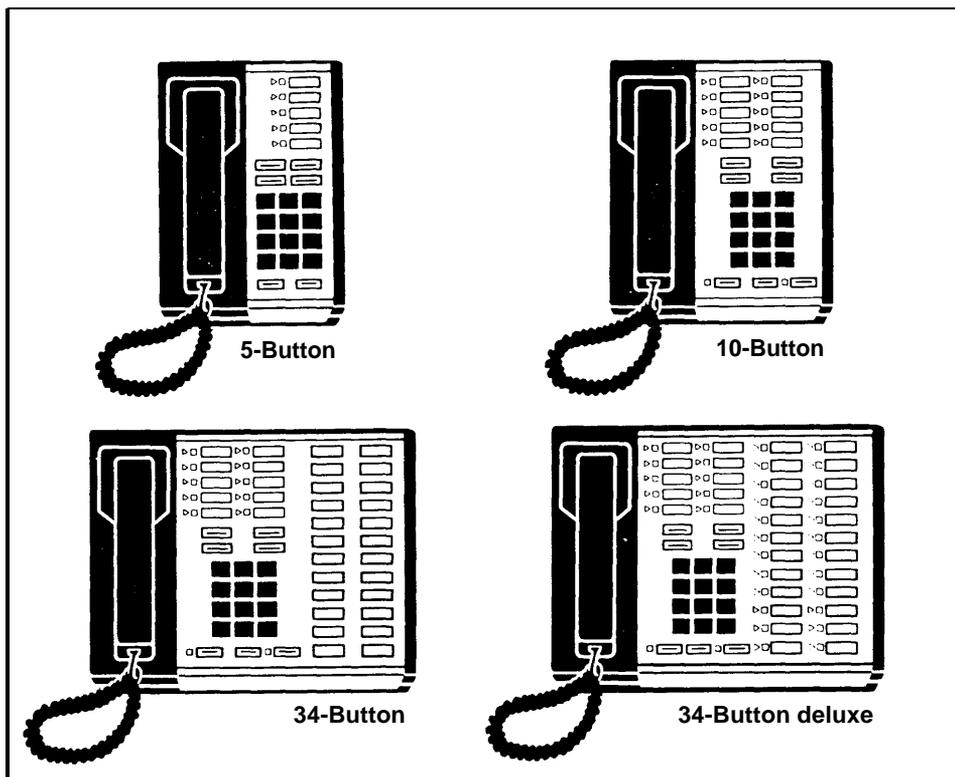
For example, if your voice terminals serve large areas or if employees cannot stop their work immediately to answer calls, you may want transferred calls to ring as many as nine times before they are returned. On the other hand, if you prefer to minimize ringing at voice terminals that are unattended or in public places, you can set the return interval for one or two rings. You can also set your system not to return transferred calls at all.

Voice Terminal Programmability

Several types of voice terminals may be connected to your Model 1030 or 3070. The different types of voice terminals are distinguished from each other by the number of silver membrane buttons above and to the right of the dial pad. These buttons give access to lines and features; most buttons are programmable, so you can customize each voice terminal by programming different features on these buttons.

Most of the custom features are designed primarily for the convenience of the person using them, but some have a broader application because they affect the calling patterns of your business. These features include Automatic Line Selection, Programmable Line Ringing, Call Coverage, and Line Pickup. Because these features have a businesswide influence, you may want to assign them yourself or oversee their assignment. By using Centralized Voice Terminal Programming, you can assign features conveniently to all voice terminals from the administrator console.

Available MERLIN communications system voice terminals are illustrated below.



Individuals can program their voice terminals to meet their particular needs. The features that people can program on the membrane buttons or general options are discussed on the following pages.

AUTO INTERCOM

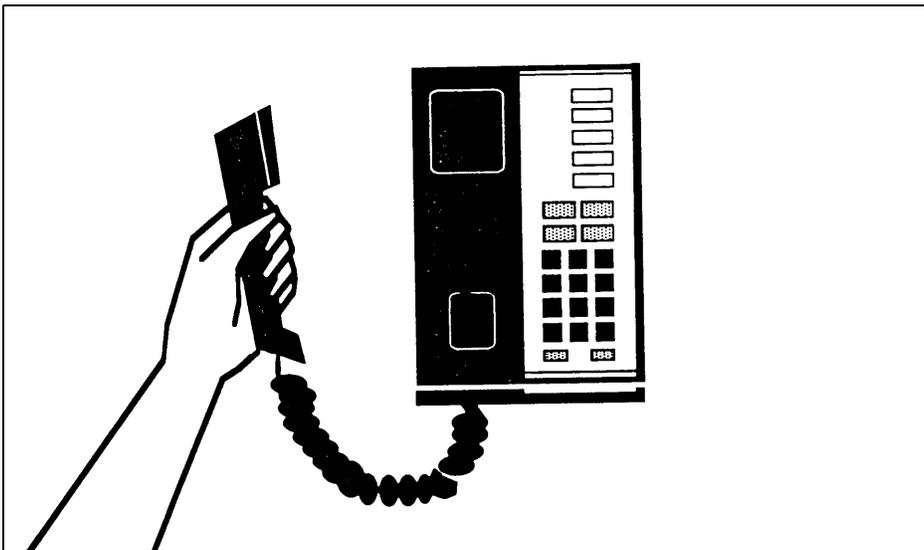
Would you like to call another intercom number by pressing only one button?

Auto Intercom allows you to program buttons on voice terminals for one-touch dialing of frequently called intercom numbers. Before using your programmed Auto Intercom button to call someone, look at the lights next to the button to see if his or her voice terminal is in use; the green light goes on when the voice terminal is in use or the Do Not Disturb feature is activated. Auto Intercom also allows you to transfer a call simply by touching the appropriate Auto Intercom button.

AUTOMATIC LINE SELECTION

Would you like to be connected to a free line just by lifting your handset?

Automatic Line Selection selects a free line when you lift your handset to make a call so that you do not need to touch a line button to obtain a free line. You can program the order in which lines are to be selected by the system. When your first-choice line is in use, the system will automatically connect you to your second choice.



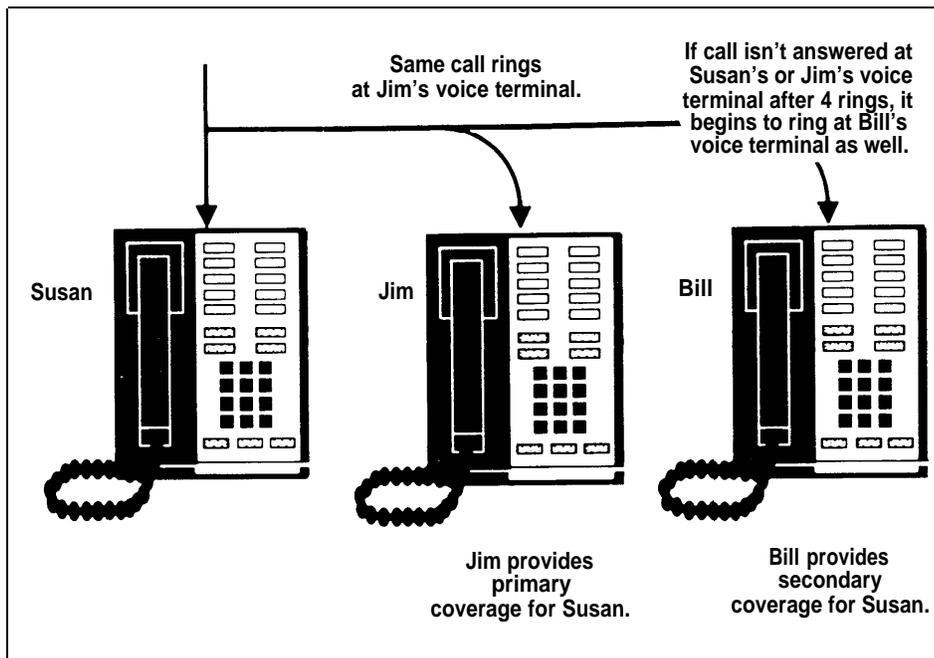
AUTOMATIC LINE SELECTION

CALL COVERAGE

Will it be necessary for some people to cover calls for others with whom they do not share lines?

A Cover button permits coverage of all lines on a voice terminal regardless of whether the covering voice terminal shares lines with the covered voice terminal.

You can program a Cover button for primary or secondary coverage. Suppose that you assign Jim primary coverage for Susan's voice terminal. Then each time a call rings at Susan's voice terminal it also rings at Jim's voice terminal. To make certain that Susan's calls are answered when both Susan and Jim are away from their desks, you assign secondary coverage with delayed ring for Susan's voice terminal to Bill. This means that when a call comes in for Susan, it rings at Susan's voice terminal and at Jim's voice terminal, then starts ringing at Bill's voice terminal on the fifth ring. Jim's calls do not ring at Bill's voice terminal, however, unless you assign Call Coverage for Jim's calls to Bill. With this system, up to six people can have Cover buttons for a single voice terminal.



PRIMARY AND SECONDARY COVERAGE

CALL PICKUP

Would you like to answer a call that has been put on hold at another voice terminal?

Call Pickup allows you to pick up a call that is ringing, parked, or held at another MERLIN system voice terminal. To pick up a call touch **Intercom-Ring** or **Intercom-Voice**, dial the Call Pickup code, and then dial the intercom number of the voice terminal to be answered.

DO NOT DISTURB

Would you like to prevent your voice terminal from ringing during a meeting or when you do not want to be disturbed?

Do Not Disturb allows you to temporarily prevent your voice terminal from ringing. While Do Not Disturb is activated, callers get a busy signal. This feature works for an outside call, an intercom call, or a transferred call.

LAST NUMBER REDIAL

Do you often dial a number only to get a busy signal, then end up dialing the number five or six times before finally getting through to your party?

Last Number Redial automatically stores the last number you dial. You can redial an outside number that is busy or doesn't answer simply by pressing one button. Last Number Redial also eliminates the need to remember or look up the telephone number next time you want to dial it.

LINE PICKUP

Would you like to answer an incoming call that does not ring at your voice terminal?

Line Pickup allows you to pick up a line that is ringing, held, or parked anywhere in the system.

OUTSIDE AUTO DIAL

Would you like to dial a frequently called outside number by touching one button?

Outside Auto Dial allows you to store each frequently called outside number on a separate button for one-touch dialing. Outside Auto Dial buttons are a fast, easy, and accurate method of dialing your most frequently dialed numbers.

PERSONAL SPEED DIAL

Would you like to store frequently called numbers, without taking up buttons on your voice terminal?

People with 5- and 10-button voice terminals can assign a 3-character Personal Speed Dial code to each telephone number they frequently dial, then dial the Personal Speed Dial code whenever they want to call one of those numbers. Each person assigns Personal Speed Dial codes for use at his or her own voice terminal.

PERSONALIZED RING

Would you like your voice terminal to have a distinctive ring so that you can easily distinguish calls to your voice terminal from calls to other voice terminals nearby?

Your MERLIN communications system allows you to select one of eight different ringing signals for each voice terminal.

PRIVACY

Do you share a line with someone else? Would you like to be assured that confidential calls are made in private?

Privacy prevents others from joining calls on a shared line in a square system. This feature is automatic on pooled lines and intercom lines.

SAVED NUMBER REDIAL

Do you sometimes get a busy signal, then make several more telephone calls to other numbers before trying the first again?

Saved Number Redial allows you to store a dialed number for later redialing with the touch of a button. The stored number remains the same until you replace it with another. By touching the button, you can redial the saved number after making other calls. You can program only one Saved Number Redial button onto your voice terminal.

SIMULTANEOUS VOICE AND DATA CALLS

Using your voice terminal, would you like to make an outside call while connected to a computer?

When a voice terminal in your system is connected to a General Purpose Adapter and a modem, it can link your computer terminal to a local or remote host computer. Simultaneous Voice and Data Calls allows you to place or receive calls on your voice terminal without interrupting the exchange of data between the computer terminal and the host computer.

TOUCH-TONE ENABLE

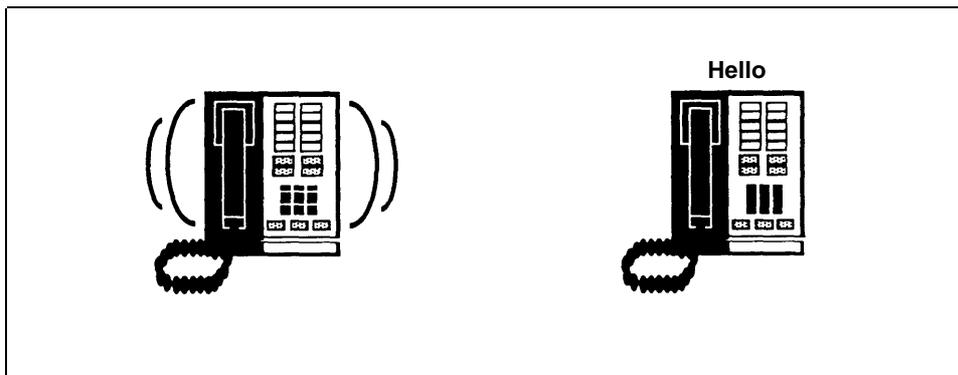
Do you have any rotary lines that need to access services (for example, alternate long distance company banking-by-phone, credit card authorization, or other electronic services) that require Touch-Tone dialing?

Touch-Tone Enable makes it possible for the system to generate Touch-Tone signals over rotary lines.

VOICE ANNOUNCEMENT DISABLE

Do you want to make sure that voice announcements are not heard in certain rooms (for example, lobbies or conference rooms)?

People who do not wish to be disturbed by voice announcements can use Voice Announcement Disable to receive intercom calls through their handset instead of through their voice terminal speaker. Voice Announcement Disable automatically turns voice intercom calls into ringing intercom calls at individual voice terminals.

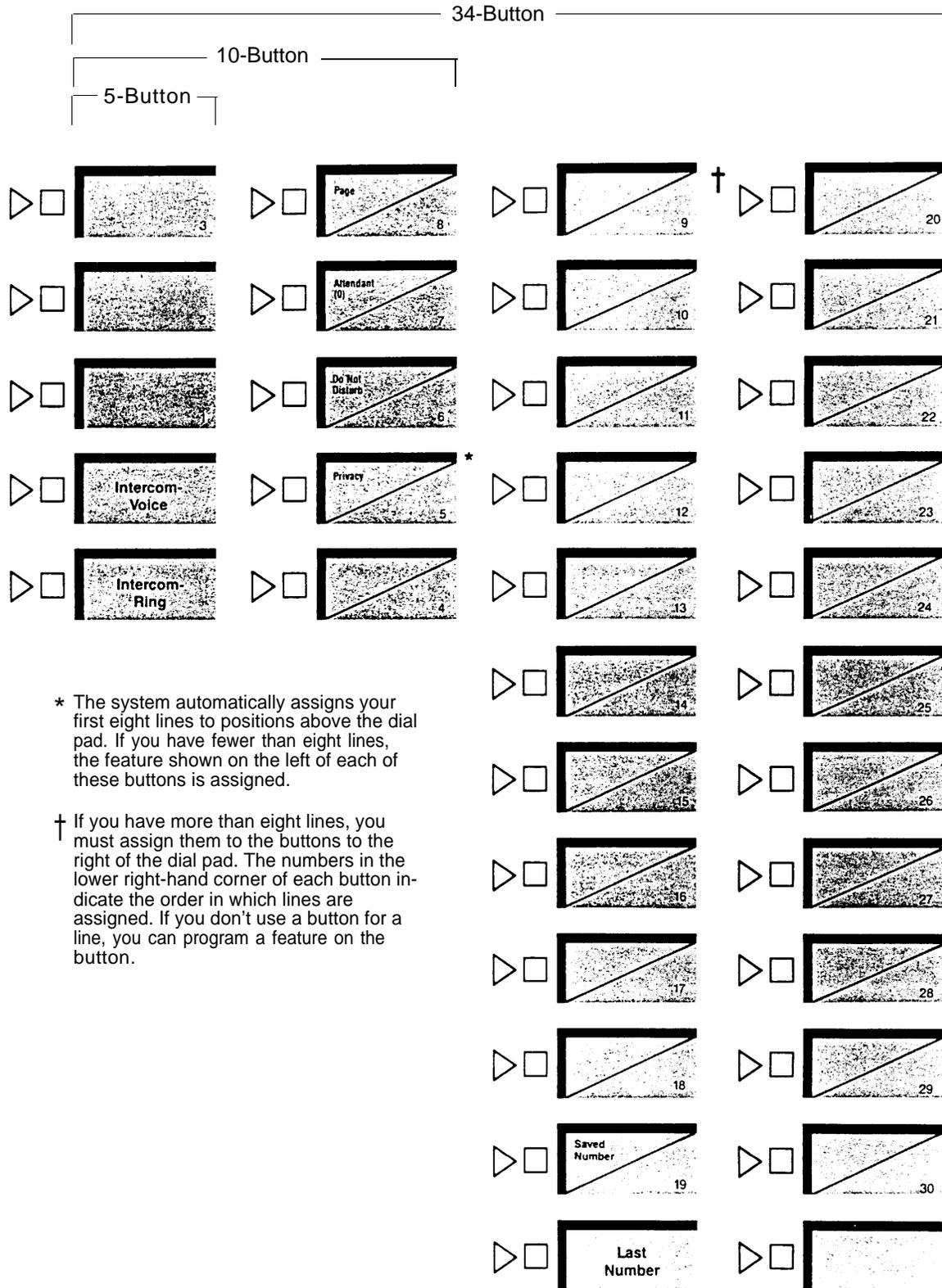


VOICE ANNOUNCEMENT DISABLE

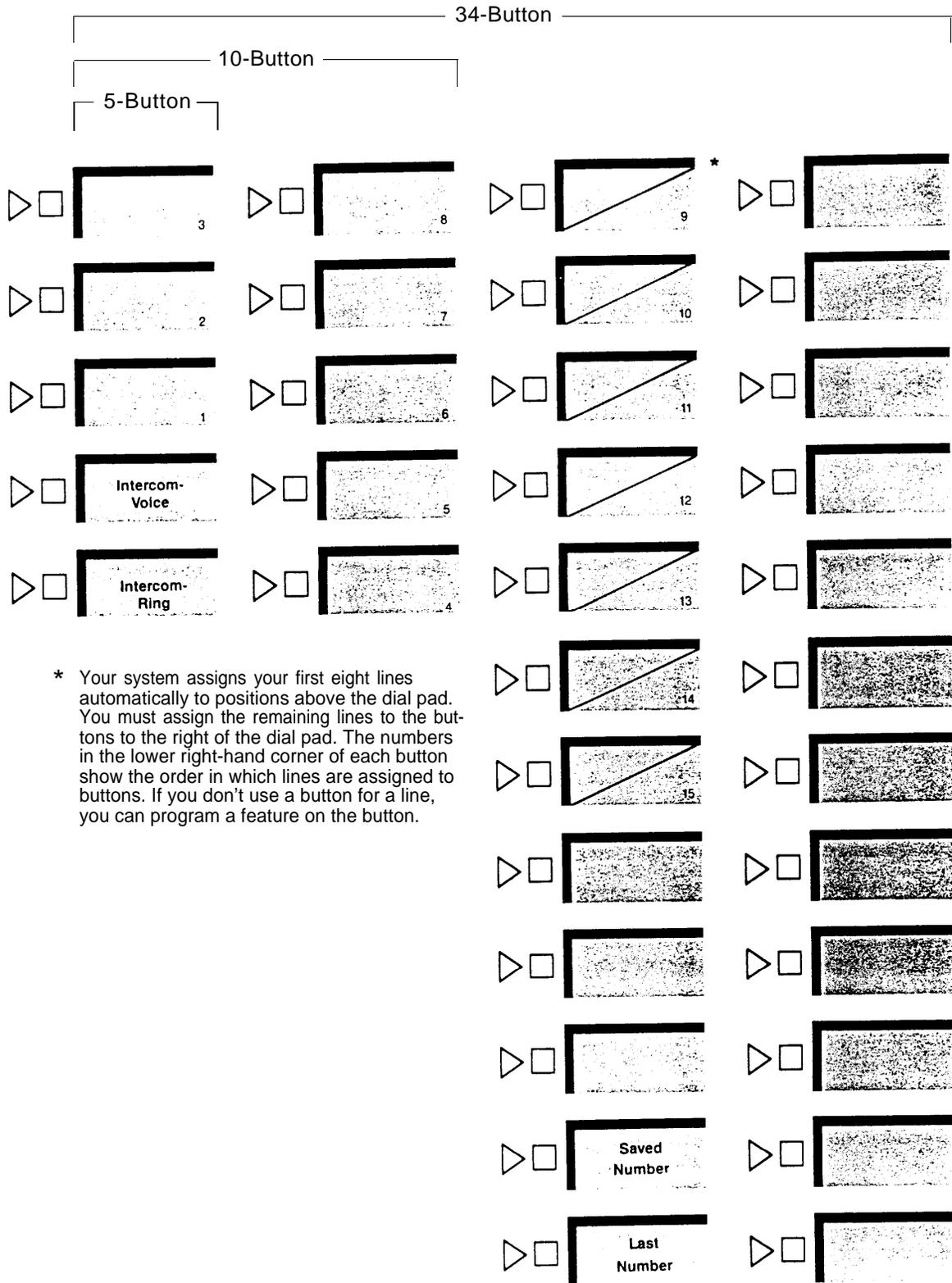
Initial Feature Assignments

The following diagrams show you the features that are automatically assigned to buttons when your system is first installed. You can leave the feature assignments as they are, or you can change the initial assignments by programming new features on the buttons.

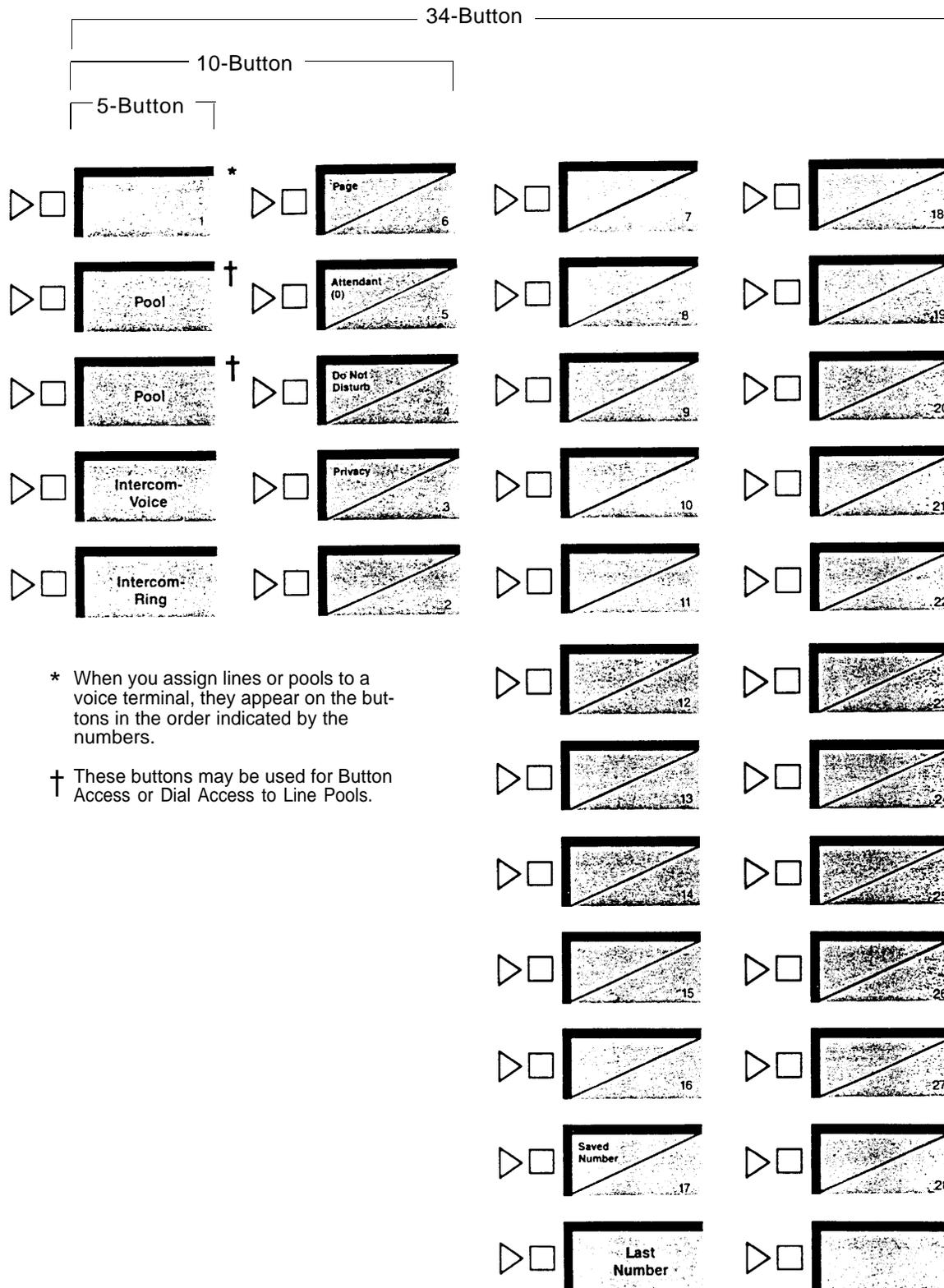
Initial Feature Assignments for Non-attendant Voice Terminals with 1030 or 3070 Configuration in Standard Square Systems



Initial Feature Assignments for Non-attendant Voice Terminals with 1520 Configuration in Standard Square Systems

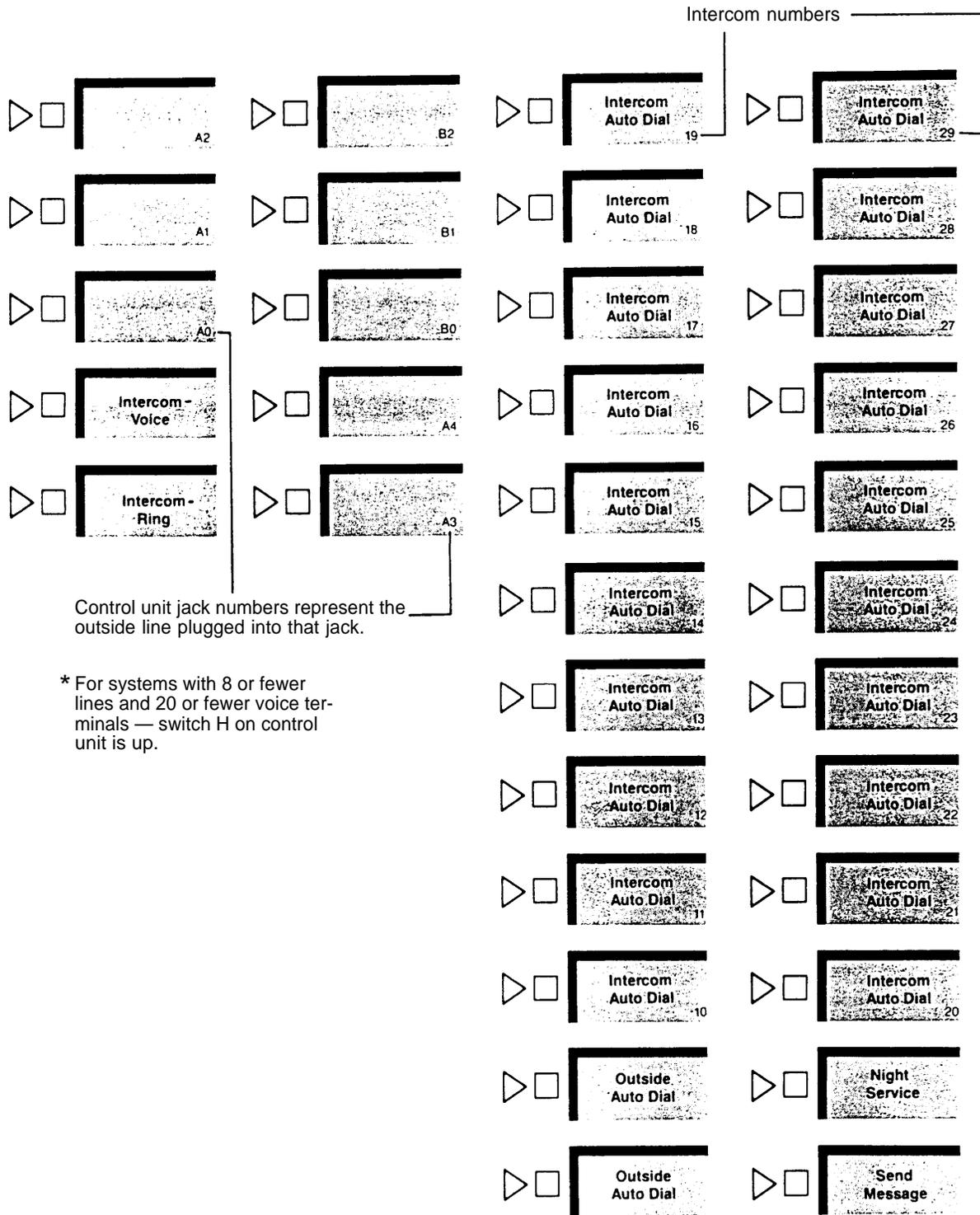


Initial Feature Assignments for Non-attendant Voice Terminals in Pooled Systems



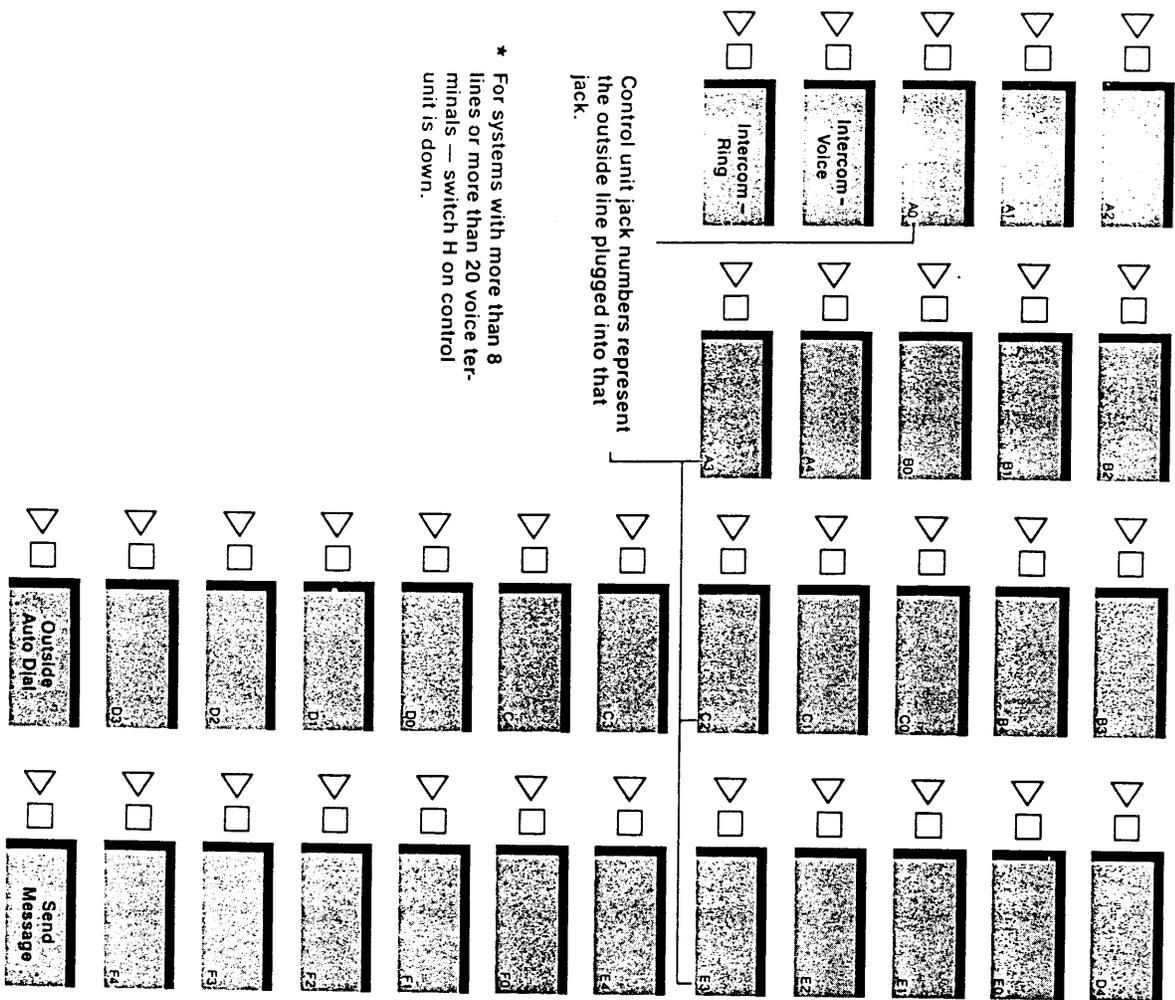
Initial Feature Assignments for Small Administrator/Attendant Console*

34-Button Deluxe Voice Terminal



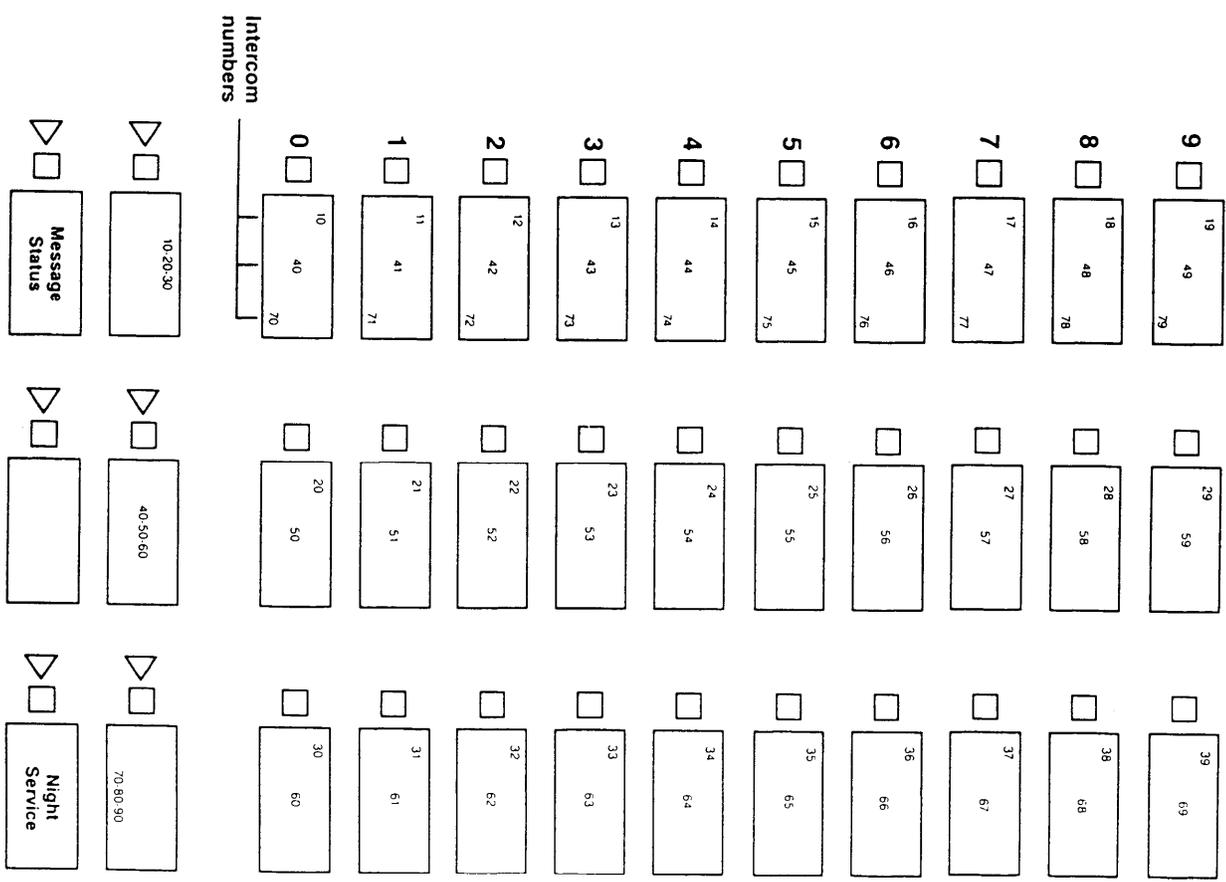
Initial Feature Assignments for Large Administrator/Attendant Console*

34-Button Deluxe Voice Terminal with an Attendant Intercom Selector



Control unit jack numbers represent the outside line plugged into that jack.

* For systems with more than 8 lines or more than 20 voice terminals — switch H on control unit is down.



Documents

Listed below are the documents you should receive when your MERLIN communications system is installed. If for some reason you do not receive all the documentation, please contact the TC-SS assigned to your account.

- Administration Manual — This document steps you through the procedures involved in customizing your system. It should be used only by the System Administrator.
- Attendant's Guide — This document contains the information you need to use your attendant console to your best advantage. It should be used only by persons who will be using the attendant console.
- User's Guide — This document contains information on how to program individual voice terminals. It should be used by all individuals with MERLIN voice terminals.



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Instructions for Completing System and Voice Terminal Configuration Forms

This brief guide helps you decide how to set up your MERLIN® communications system (Models 1030 and 3070, with Feature Module 4) to satisfy the needs of your business. Read through this guide and answer the questions as you come to them. Boxed instructions help you fill out a System Configuration Form and a Voice Terminal Configuration Form for each voice terminal in your system. Copies of these forms are in the front pocket of this package. You need these forms and the administration manual to customize your MERLIN system.

SYSTEM OPTIONS

The following questions help you fill out the System Configuration Form on page 10. Complete this form before filling out any Voice Terminal Configuration Forms.

- 1a. How many voice terminals are connected to your MERLIN system? _____
- 1b. How many additional voice terminals do you plan to add during the next year? _____
- 1c. Total number of voice terminals (#1a + #1b): _____
- 2a. How many outside lines does your system control? _____
- 2b. How many outside lines do you plan to add during the next year? _____
- 2c. Total number of outside lines (#2a + #2b): _____

A.

System Size

If the answer to #2c is greater than 8, or if the answer to #1c is greater than 20, check "Large" on the System Configuration Form. Otherwise, check "Small."

- 3. What sort of telephone system are the people in your system accustomed to using?
 - Key System (a system, such as COM-KEY® or 1A2 Key, where each line appears on a separate button at each telephone) _____
 - Non-Key System (a system, such as Horizon®, with many lines available through a few System Access or Trunk Access buttons or with basic telephones that each have their own line) _____
- 4. Do you want Automatic Route Selection (ARS)? ARS allows you to program your system to automatically select the least expensive and best available route for each outside call. You provide the system with the information it needs to make economical routing decisions. Otherwise, you can have individuals select the appropriate type of line.
 - Yes _____
 - No _____

B1.

Line Representation

If the answer to #4 is yes, then check "Pooled" and "Dial Access + ARS" on the System Configuration Form, and skip to #9.

5. Did you order any 5-button voice terminals that need to answer incoming calls or make outgoing calls on more than three outside lines, or any 10-button voice terminals that need to answer incoming calls or make outgoing calls on more than eight outside lines?

Yes _____

No _____

B2.

Line Representation

If the answer to #5 is no and the answer to #3 is Key, check "Square" for the type of line representation on the System Configuration Form, and skip to #9.

6. Circle A or B. To pass a call to a voice terminal that does not have an appearance of that particular line would you prefer to:

A. Use the Transfer feature.

B. Use the Line Pickup feature.

B3.

Line Representation

If the answer to #6 is B, and the answer to #5 is no, and the answer to #4 is Key, check "Square" for the type of line representation on the System Configuration Form, and skip to #9.

7. Did you order any 5-button voice terminals that need to handle calls on more than two types of lines (for example, local lines and private lines), or any 10-button voice terminals that need to handle calls on more than seven types of lines?

Yes _____

No _____

B4.

Line Representation

If the answer to #7 is yes, check "Pooled" and "Dial Access" on the System Configuration Form and skip to #9.

-
8. Circle A or B. Would you rather:
- A. Dial an access code (for example, 9) to get a line, leaving more buttons available for features.
 - B. Dedicate one button to each line or group of lines, making it unnecessary to dial an access code.

C. **Access to Pooled Line Representation**
If the answer to #8 is A, check "Dial Access" as the type of pool access on the System Configuration Form. If the answer to #8 is B, check "Button Access" as the type of pool access.

9. How many attendant consoles did you order (to be used for answering and transferring calls coming into your business, or for monitoring call traffic)? _____

D. **Attendant Configuration**
On the System Configuration Form, if the answer to #9 is 1 or 0, don't check any of the attendant configuration boxes. If the answer to #9 is 2, check the box beside "11" for attendant configuration. If the answer to #9 is 3, check the boxes beside "11" and "12." If the answer to #9 is 4, check the boxes beside "11," "12" and "13." If the answer to #9 is 5, check the boxes beside "11," "12," "13," and "14." The system supports a maximum of five attendant positions.

E. **Listing Telephone Numbers**
In the column labeled "Telephone Number" on the System Configuration Form, list the telephone numbers for your outside lines. Start at the top of the column and work down without skipping any spaces. The order in which you list lines determines the order in which lines appear initially on attendant consoles and on all voice terminals in systems with square line representation. Group lines of the same type together (for example, group WATS lines together, FX lines together, etc.).

F. **Special Lines**
Indicate which lines are special-purpose lines (for example, WATS, Foreign Exchange, personal lines, outward calls only, incoming calls only).

NOTE: If you checked "Square" for line representation, skip to question #10.

G.

Assigning Lines to Pools

Now consider any groups of lines that can be used interchangeably for placing calls (for example, all regular local lines or all in-state WATS lines to a particular location). Assign the access code 9 to the pool that contains your local group of lines—write “9” for “Pool Number” on the System Configuration Form. Assign a pool number (890 through 899) to each of the other groups of lines. Note that each pool can have as many or as few lines as you like but that each line can be in only one pool.

10. Is it necessary to dial 0 or 1 to place long distance calls on any of your lines?

Yes _____

No _____

H.

Toll Environment

For each line that does not require dialing 0 or 1 before placing long distance calls, check “Area Code Only” on the System Configuration Form.

I.

Rotary Lines

If you have any rotary outside lines, circle the “r” next to each line on the System Configuration Form. If you aren’t sure if you have rotary or Touch-Tone lines, call your local telephone company.

J.

Night Service

If your system will have an extra-alerting device, check “Night Ring” on the System Configuration Form to indicate which lines will activate this device when the person who usually answers calls is not available. If you have more than one extra-alerting device, indicate on the form which device will be activated by which lines.

K.

SMDR Options

If your system will use SMDR (Station Message Detail Recording) to keep a record of calls, fill in the minimum length of calls to be recorded. (If you don’t specify a minimum call length, the system doesn’t record calls that last less than 1 minute.) If you want to record all calls, enter “0.” Also indicate whether or not the system should record incoming calls.

L.

System Speed Dial Numbers

If you want to store numbers that anyone in your business can dial using a 3-character code, fill in these numbers on the System Speed Dial Directory, page 14. You can associate up to 40 digits and special characters, including pause (p), recall (r), and Touch-Tone Enable (t), with each System Speed Dial code. Remember to precede your marked Speed Dial codes with an asterisk (the asterisk counts as a digit).

M.

Group Page Groups

If you plan to use the Group Page feature, which allows people to receive paging messages through their voice terminal speakers, you need to assign intercom numbers to Group Page groups. On the Group Page Directory, page 15, fill in the intercom numbers and names of people designated for each group. You may establish up to seven groups, each covering a maximum of ten people.

N.

Allowed Lists

If you need to restrict the numbers that certain people can call, but you want them to be able to call some specific area codes or exchanges for business reasons, list the allowed area codes and exchanges on the Allowed-List Directory, page 16. Each entry can have up to six digits (for example, an area code followed by an exchange). You may create up to eight lists, each containing a maximum of ten allowed numbers.

NOTE: If you decided not to use Automatic Route Selection, skip to the next section, titled “Voice Terminal Options.”

O.

Automatic Route Selection

If you plan to use Automatic Route Selection, you need to fill out the "Form for Automatic Route Selection Table" on pages 17 through 19.

1. Fill in a group of area codes or exchanges to which calls could be routed through the same set of pools. You can fill out up to eight tables, numbered 0-7. (For example, if you decide that Northeastern WATS lines are the least expensive way of calling people in the northeastern states, then you might list the most frequently used area codes in the northeastern United States that could be accessed using the WATS lines.) You can list up to ten area codes or exchanges in a table. If you need to list more than ten, use a second table.

NOTE: It does not matter in which order you list these area codes or exchanges.

2. Beginning with entry 0 in the portion of the table labeled "Pool," list the pool number (9 or 890-899) for the pool you have chosen for making these calls. (For example, you might fill in the pool number for the pool containing the Northeastern WATS lines.)
3. If any extra digits need to be automatically inserted when using this pool, list these after the pool number under the heading "Other Digits." (For example, alternate long distance companies may require special dialing codes or account numbers.)
4. In case the pool that you have listed as your first choice is busy, list possible backup routes as Pool entries 1, 2, 3, 4, and 5. (For example, after you have listed the pool number for the pool containing the Northeastern WATS lines, you would then list the next least expensive way of calling that area, for instance, the pool number for the pool containing local lines by which you could call people in the northeastern United States.)
5. Follow steps 1 through 4 for each group of area codes or exchanges.
6. Use the "Default Toll Table," Table 8, to record route selections for all toll calls to area codes not already included in a table (those with "1" dialed as a prefix) that people in your business might make.
7. Use the "Default Local Table," Table 9, to record route selections for local calls that people in your business might make.
8. The "Special Numbers Table" is used for routing the following numbers: 0, 411, 611, 911, 800, and 900. If you must dial an access code to make operator-assisted calls, use this table to list the access code.

11. When transferring calls from one voice terminal to another, how many times would you like the second voice terminal to ring before the call is returned to the first voice terminal?

Select a number between 0 and 9 to represent the number of times that voice terminal should ring when a call is transferred to it. _____

P.

Return Interval for Transferred Calls

On the System Configuration Form, write the number of times (0-9) you would like the voice terminal to ring when a call is transferred, before the call is returned to the first voice terminal. If you indicate 0, then calls will not be returned.

VOICE TERMINAL OPTIONS

Now that you've completed the System Configuration Form, begin filling out Voice Terminal Configuration Forms, one for each voice terminal in your system. You may want to begin by creating a system directory and planning which intercom number and which type of voice terminal each person will use. (The system directory form is included in your control unit's installation kit.)

On pages 11 through 13, there are forms for voice terminals in square systems and pooled systems, and for attendant consoles. Make photocopies of these forms so you can fill out an appropriate form for each of your voice terminals (since some of the forms are for pooled systems and some are for square systems, be sure you photocopy the ones that are appropriate for your system).

Q.

Basic Information

Fill in an intercom number (10 through 39 for Model 1030 configured as a 1030, 10 through 29 for Model 1030 configured as a 1520, and 10 through 79 for Model 3070 configured as a 3070) and the user's name. Fill out a form for intercom 10 first (this should be your primary attendant's console; refer to your System Configuration Form for the intercom numbers for additional attendant consoles), then fill out forms for remaining intercoms in numerical order without skipping numbers. On each Voice Terminal Configuration Form, check the appropriate boxes to indicate voice terminal size, the type of voice terminal stand, and the type of accessories used with the voice terminal. Group basic telephones together (for example, reserve intercom numbers 60 through 69 for basic telephones) and use remaining intercom numbers for MERLIN system voice terminals.

R.

Assigning Lines (Pooled Systems)

If you have a square system or if the voice terminal serves as an attendant console, skip to box T. Otherwise, the first two buttons above the intercom buttons will be used for Dial Access to Line Pools or for Button Access to the main pool (access code 9). Assign any additional lines or pools to separate buttons. Remember not to assign lines or pools to buttons in the columns to the right of the dial pad on 34-button voice terminals, since these buttons do not have lights. Write the line or pool numbers or names in the numbered buttons on the Voice Terminal Configuration Form. Fill in the button labeled "1" first, then "2," "3," and so on.

S.

Dial Access to Line Pools

If you selected the Dial Access to Line Pools option, and the person using a particular voice terminal will use dial codes to select lines, list the dial codes in the lower left of the Voice Terminal Configuration Form. Refer to the System Configuration Form to check which lines are assigned to line pools.

T.

Assigning Lines (Attendant Consoles and Square Systems)

Although you can assign lines to whichever buttons you choose, there are several ways in which you can assign lines to make your system more easily administered and used. In a standard square system, assign identical line arrangements to all voice terminals. In a customized square system, assign identical line arrangements to voice terminals that have common call responsibilities. In any system — standard square, customized square, or pooled — assign identical line arrangements to all attendant consoles. In a customized square system, assign identical line arrangements to voice terminals that have common call responsibilities. If it is convenient, have lines appear on voice terminals in the same order as they are connected to the control unit. Once you have decided on line assignments, write telephone numbers on available line buttons.

U.

Call Coverage

If a voice terminal needs to cover calls to another voice terminal, write “Cover” and the name or intercom number of the person whose calls are to be covered on an available button (one that is not already a line or intercom button). Use only a button with lights next to it. Also assign an Auto Intercom button for each person to be covered and label the button with the person’s name. These buttons should have lights. Check the initial feature assignments (pages 19 through 23 in Planning Guide) to see if there is a feature you can replace with Call Coverage.

V.

Automatic Answering

If a voice terminal has a Hands-Free Unit, write “Auto Answer-Intercom” on an available button with lights on the Voice Terminal Configuration Form. If a voice terminal has a General Purpose Adapter, write “Auto Answer-All” on an available button with lights on the form.

W.

Assign Other Features to Buttons

Review the initial features assignment diagram (pages 19 through 23 in Planning Guide). Unless you have replaced the initial features with other features, copy the feature names onto the appropriate button label on the Voice Terminal Configuration Form.

X.

Line Ringing

Of the lines assigned to the voice terminal, determine which ones should ring immediately at the voice terminal, which should ring after a delay (so that calls ring only if the person who usually answers is unavailable), and which should not ring at all. Indicate the type of line ringing on the Voice Terminal Configuration Form by writing next to each line button “R” for immediate ringing, or “D” for delayed ringing after three rings. Similarly, indicate whether cover buttons should ring immediately (“R”), after a 3-ring delay (“D”), or after a 6-ring delay (“DD”). If a line shouldn’t ring at the voice terminal, leave the space next to its button blank. Calls *transferred* on this line will still ring.

Y.

Calling Restrictions

If the voice terminal should be restricted from making toll (long distance) calls, check "Toll Call Restriction" on the Voice Terminal Configuration Form. If the voice terminal should be restricted from making any outside calls, check "Outside Call Restriction."

Z.

Allowed-List Assignment

If you are assigning one or more allowed lists (lists of area codes and/or exchanges that people with restricted voice terminals can call) to the voice terminal, record the numbers of the lists on the Voice Terminal Configuration Form.

ZZ.

Automatic Line Selection

If lines don't appear on the voice terminal in the order in which they are most likely to be used, list them in the appropriate order under "Automatic Line Selection" on the Voice Terminal Configuration Form.

Return to box Q and repeat this process for each voice terminal in your system.

System Configuration Form for Model 1030 and 3070

System Size:

- Small (1-8 Lines)
 Large (8 Lines)

Attendant Configuration:

- 11 12 13 14

Return Ring Interval:

- Number of rings ___ _ _

Line Representation:

- Square Pooled
 Dial Access
 Button Access
 Dial Access + ARS

SMDR Options:

- Minimum length of calls recorded (minutes): _____
 Incoming calls recorded? (Y/N) _____

Telephone Number	Control Unit Jack Number	Line Code Number	Special Line Type?	Pool Number (9, 890-899)	Check if Area Code Only	Circle if Rotary	Check if Night Ring
	A0	01				r	
	A1	02				r	
	A2	03				r	
	A3	04				r	
	A4	05				r	
	B0	06				r	
	B1	07				r	
	B2	08				r	
	B3	09				r	
	B4	10				r	
	C0	11				r	
	C1	12				r	
	C2	13				r	
	C3	14				r	
	C4	15				r	
	D0	16				r	
	D1	17				r	
	D2	18				r	
	D3	19				r	
	D4	20				r	
	E0	21				r	
	E1	22				r	
	E2	23				r	
	E3	24				r	
	E4	25				r	
	F0	26				r	
	F1	27				r	
	F2	28				r	
	F3	29				r	
	F4	30				r	

Voice Terminal Configuration Form for Models 1030 and 3070 Attendant Consoles

Intercom # _____ Identification _____

Stand Type:

- Wall
- Plastic
- Fixed
- Desk
- Metal
- Adjustable

Accessories:

- General Purpose Adapter
- Headset
- Headset Adapter
- Hands-Free Unit
- Extra Long Cord

- Acoustic Coupler Adapter
- Hearing-Impaired Handset
- Push-to-Listen Handset
- Voice Terminal Power Supply
- Attendant Intercom Selector

34-Button

<input type="checkbox"/> A2	<input type="checkbox"/> B2	<input type="checkbox"/> B3	<input type="checkbox"/> D4
<input type="checkbox"/> A1	<input type="checkbox"/> B1	<input type="checkbox"/> B4	<input type="checkbox"/> E0
<input type="checkbox"/> A0	<input type="checkbox"/> B0	<input type="checkbox"/> C0	<input type="checkbox"/> E1
<input type="checkbox"/> Intercom - Voice	<input type="checkbox"/> A4	<input type="checkbox"/> C1	<input type="checkbox"/> E2
<input type="checkbox"/> Intercom - Ring	<input type="checkbox"/> A3	<input type="checkbox"/> C2	<input type="checkbox"/> E3
		<input type="checkbox"/> C3	<input type="checkbox"/> E4
		<input type="checkbox"/> C4	<input type="checkbox"/> F0
		<input type="checkbox"/> D0	<input type="checkbox"/> F1
		<input type="checkbox"/> D1	<input type="checkbox"/> F2
		<input type="checkbox"/> D2	<input type="checkbox"/> F3
		<input type="checkbox"/> D3	<input type="checkbox"/> F4
		<input type="checkbox"/>	<input type="checkbox"/>

Calling Restriction:

- Toll Call Restriction
- Outside Call Restriction

Allowed-List Numbers (0-7):

Automatic Line Selection:

Voice Terminal Configuration Form for Models 1030 and 3070 Non-attendant Voice Terminals (Square Systems)

Intercom # _____ Identification _____

Voice Terminal Size:

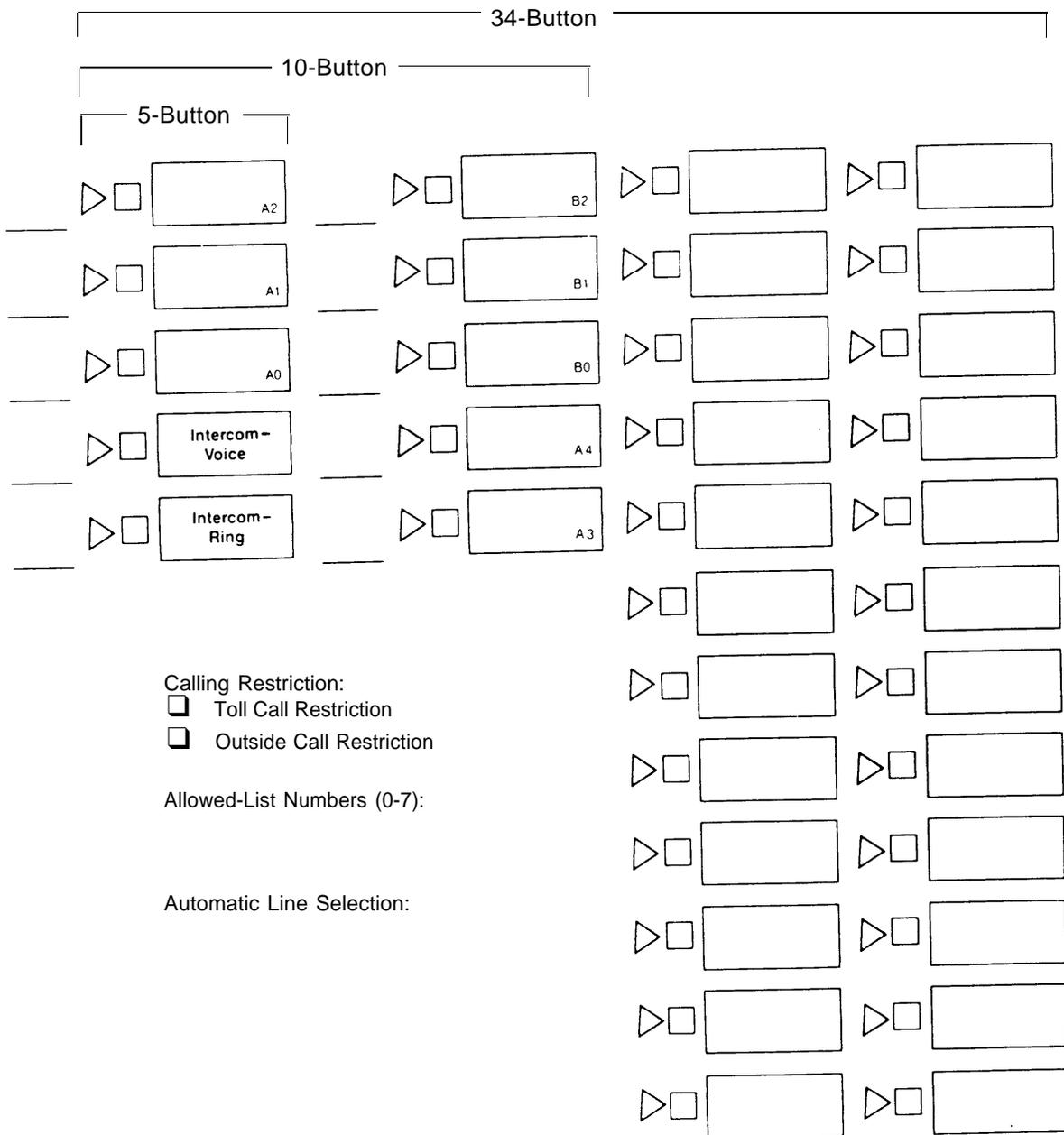
- 5-Button
- 10-Button
- 34-Button
- 34-Button Deluxe
- Basic Touch-Tone or Rotary Telephone

Stand Type:

- Wall
- Plastic
- Fixed
- Desk
- Metal
- Adjustable

Accessories:

- General Purpose Adapter
- Headset
- Headset Adapter
- Hands-Free Unit
- Extra Long Cord
- Acoustic Coupler Adapter
- Hearing-Impaired Handset
- Push-to-Listen Handset
- Voice Terminal Power Supply
- Attendant Intercom Selector



Voice Terminal Configuration Form for Models 1030 and 3070 Non-attendant Voice Terminals (Pooled Systems)

Intercom # _____ Identification _____

Voice Terminal Size:

- 5-Button
- 10-Button
- 34-Button
- 34-Button Deluxe
- Basic Touch-Tone or Rotary Telephone

Stand Type:

- Wall
- Plastic
- Fixed
- Desk
- Metal
- Adjustable

Accessories:

- General Purpose Adapter
- Headset
- Headset Adapter
- Hands-Free Unit
- Extra Long Cord
- Acoustic Coupler Adapter
- Hearing-Impaired Handset
- Push-to-Listen Handset
- Voice Terminal Power Supply
- Attendant Intercom Selector

	34-Button				
	10-Button				
	5-Button				
	▶ <input type="checkbox"/> 1		▶ <input type="checkbox"/> 6		▶ <input type="checkbox"/>
	▶ <input type="checkbox"/> Line Pool or Pool Access		▶ <input type="checkbox"/> 5		▶ <input type="checkbox"/>
	▶ <input type="checkbox"/> Line Pool or Pool Access		▶ <input type="checkbox"/> 4		▶ <input type="checkbox"/>
	▶ <input type="checkbox"/> Intercom - Voice		▶ <input type="checkbox"/> 3		▶ <input type="checkbox"/>
	▶ <input type="checkbox"/> Intercom - Ring		▶ <input type="checkbox"/> 2		▶ <input type="checkbox"/>
					▶ <input type="checkbox"/>
					▶ <input type="checkbox"/>
	Dial Access to Pools (9, 890-899):				▶ <input type="checkbox"/>
	Calling Restriction:				▶ <input type="checkbox"/>
	<input type="checkbox"/> Toll Call Restriction				▶ <input type="checkbox"/>
	<input type="checkbox"/> Outside Call Restriction				▶ <input type="checkbox"/>
	Allowed-List Numbers (0-7):				▶ <input type="checkbox"/>
					▶ <input type="checkbox"/>
	Automatic Line Selection:				▶ <input type="checkbox"/>
					▶ <input type="checkbox"/>
					▶ <input type="checkbox"/>

System Speed Dial Directory

Dial Code	Stored Number	Dial Code	Stored Number
#60		#80	
#61		#81	
#62		#82	
#63		#83	
#64		#84	
#65		#85	
#66		#86	
#67		#87	
#68		#88	
#69		#89	
#70		#90	
#71		#91	
#72		#92	
#73		#93	
#74		#94	
#75		#95	
#76		#96	
#77		#97	
#78		#98	
#79		#99	

Group Page Directory

Group 1		Group 2		Group 3	
Intercom #	Identification	Intercom #	Identification	Intercom #	Identification
1 _____	_____	1 _____	_____	1 _____	_____
2 _____	_____	2 _____	_____	2 _____	_____
3 _____	_____	3 _____	_____	3 _____	_____
4 _____	_____	4 _____	_____	4 _____	_____
5 _____	_____	5 _____	_____	5 _____	_____
6 _____	_____	6 _____	_____	6 _____	_____
7 _____	_____	7 _____	_____	7 _____	_____
8 _____	_____	8 _____	_____	8 _____	_____
9 _____	_____	9 _____	_____	9 _____	_____
10 _____	_____	10 _____	_____	10 _____	_____

Group 4		Group 5		Group 6		Group 7	
Intercom #	Identification						
1 _____	_____	1 _____	_____	1 _____	_____	1 _____	_____
2 _____	_____	2 _____	_____	2 _____	_____	2 _____	_____
3 _____	_____	3 _____	_____	3 _____	_____	3 _____	_____
4 _____	_____	4 _____	_____	4 _____	_____	4 _____	_____
5 _____	_____	5 _____	_____	5 _____	_____	5 _____	_____
6 _____	_____	6 _____	_____	6 _____	_____	6 _____	_____
7 _____	_____	7 _____	_____	7 _____	_____	7 _____	_____
8 _____	_____	8 _____	_____	8 _____	_____	8 _____	_____
9 _____	_____	9 _____	_____	9 _____	_____	9 _____	_____
10 _____	_____	10 _____	_____	10 _____	_____	10 _____	_____

Allowed-List Directory

List 0	List 1	List 2	List 3
Entry 0	Entry 0	Entry 0	Entry 0
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5	5	5	5
6	6	6	6
7	7	7	7
8	8	8	8
9	9	9	9
List 4	List 5	List 6	List 7
Entry 0	Entry 0	Entry 0	Entry 0
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5	5	5	5
6	6	6	6
7	7	7	7
8	8	8	8
9	9	9	9

Form for Automatic Route Selection Tables

TABLE 0

AREA CODE/EXCHANGE

0) ___ 1) ___ 2) ___ 3) ___ 4) ___ 5) ___ 6) ___ 7) ___ 8) ___ 9) ___

POOL OTHER DIGITS

0) ___ _____

1) ___ _____

2) ___ _____

3) ___ _____

4) ___ _____

5) ___ _____

TABLE 1

AREA CODE/EXCHANGE

0) ___ 1) ___ 2) ___ 3) ___ 4) ___ 5) ___ 6) ___ 7) ___ 8) ___ 9) ___

POOL OTHER DIGITS

0) ___ _____

1) ___ _____

2) ___ _____

3) ___ _____

4) ___ _____

5) ___ _____

TABLE 2

AREA CODE/EXCHANGE

0) ___ 1) ___ 2) ___ 3) ___ 4) ___ 5) ___ 6) ___ 7) ___ 8) ___ 9) ___

POOL OTHER DIGITS

0) ___ _____

1) ___ _____

2) ___ _____

3) ___ _____

4) ___ _____

5) ___ _____

TABLE 3

AREA CODE/EXCHANGE

0) ___ 1) ___ 2) ___ 3) ___ 4) ___ 5) ___ 6) ___ 7) ___ 8) ___ 9) ___

POOL OTHER DIGITS

0) ___ _____

1) ___ _____

2) ___ _____

3) ___ _____

4) ___ _____

5) ___ _____

**Form for Automatic Route
Selection Tables (continued)**

TABLE 4

AREA CODE/EXCHANGE

0) ___ 1) ___ 2) ___ 3) ___ 4) ___ 5) ___ 6) ___ 7) ___ 8) ___ 9) ___

POOL OTHER DIGITS

0) ___ _____

1) ___ _____

2) ___ _____

3) ___ _____

4) ___ _____

5) ___ _____

TABLE 5

AREA CODE/EXCHANGE

0) ___ 1) ___ 2) ___ 3) ___ 4) ___ 5) ___ 6) ___ 7) ___ 8) ___ 9) ___

POOL OTHER DIGITS

0) ___ _____

1) ___ _____

2) ___ _____

3) ___ _____

4) ___ _____

5) ___ _____

TABLE 6

AREA CODE/EXCHANGE

0) ___ 1) ___ 2) ___ 3) ___ 4) ___ 5) ___ 6) ___ 7) ___ 8) ___ 9) ___

POOL OTHER DIGITS

0) ___ _____

1) ___ _____

2) ___ _____

3) ___ _____

4) ___ _____

5) ___ _____

Form for Automatic Route Selection Tables (continued)

TABLE 7

AREA CODE/EXCHANGE

0) ___ 1) ___ 2) ___ 3) ___ 4) ___ 5) ___ 6) ___ 7) ___ 8) ___ 9) ___

POOL	OTHER DIGITS
------	--------------

0) ___	_____
1) ___	_____
2) ___	_____
3) ___	_____
4) ___	_____
5) ___	_____

TABLE 8: DEFAULT TOLL

POOL	OTHER DIGITS
------	--------------

0) ___	_____
1) ___	_____
2) ___	_____
3) ___	_____
4) ___	_____
5) ___	_____

TABLE 9: DEFAULT LOCAL

POOL	OTHER DIGITS
------	--------------

0) ___	_____
1) ___	_____
2) ___	_____
3) ___	_____
4) ___	_____
5) ___	_____

SPECIAL NUMBERS TABLE

AREA CODE/EXCHANGE

0) 911 1) 411 2) 611 3) 800 4) 900 5) 0

POOL	OTHER DIGITS
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0) 9	_____
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