Lucent Technologies
Bell Labs Innovations

DEFINITY® System's Little Instruction Book

By: R.G. and C.B.

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Easy reference

Pencil in your information below. (shows example only)

Cabinets (cabinet #3 is a remote cabinet in the downtown office)

Boards (TN754 = 4 wire digital, can be used with any digital)

Extension range (8000-8999=DID)

Coverage paths (Coverage path #1 = 3 rings, covers to AUDIX)

Hunt groups (h4=audix 84)

Trunk groups (group 1 = CO trunks for outside calls)

Feature access codes (*21=Abbrev dialing list 2)

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EMC Directive89/336/EEC
Low Voltage Directive73/23/EEC


The "CE" mark affixed to the equipment means that it conforms to the above Directives.

Acknowledgment
This document was prepared by the Product Documentation Development group, Lucent Technologies, Denver, CO.

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Welcome

Why this new book?

You've told us that you want step-by-step instructions on everyday administration tasks for your DEFINITY system, and we've been listening. This book contains the information you need for basic telephone system administration. Some steps may vary a bit between the different versions of DEFINITY, but the instructions provided will help you through the most basic operations.

We wrote this book for you!

Use this book if you are a DEFINITY system administrator. Use it before you attend training, and take it with you to your class. Mark it up, make notes in it, and use it daily even after you complete training. If you are a new administrator taking over the position from someone else, or you are filling in for your company's regular administrator, or if you simply want to refresh your memory, this book is for you.

What kind of information is in this book?

The Little Instruction Book is divided into sections to guide you through your day-to-day operations.

Getting started provides an overview of the phone system and types of phones. It provides instructions for logging in, saving changes, and logging off.

Planning the DEFINITY system explains how to read and update your dial plan. It also explains how to change feature access codes and how to add new area codes to your dial plan.

Managing phones explains how to add, change, and remove phones from your system. It also explains how to alias phones and how to customize a phone for your system administrator.

Managing features explains how to administer useful features including abbreviated dialing, pickup groups, call forwarding, call coverage, and bridged appearances.

Enhancing system security explains how to add and change user logins and passwords. It also provides an overview of security issues related to DEFINITY systems.

Keeping records provides guidelines for keeping records and explains how to print certain system reports.

Troubleshooting explains how to use specific features to determine the status of phones, trunk lines, and facilities. It also explains how to contact the DEFINITY helpline and lists what information you should gather before you call.

How to use this book

Become familiar with the following terms, procedures, and conventions. They help you use this book with your telephone system and its software.

- To “move” to a certain field, you can use the TAB key, arrows, or the RETURN key.
- A “screen” is a screen form displayed on the terminal monitor.
- In this book we always use the term phone; other Lucent books may refer to phones as voice terminals.
- We wrote the procedures assuming you use Terranova terminal emulation software.

  If you use a switch administration terminal (SAT) or a different terminal emulation program, you need to determine which keys correspond to keys for ENTER, RETURN, CANCEL, HELP, NEXT PAGE, etc.
- Commands are printed in bold face as follows: **command**.
- Keys and buttons are printed as follows: KEY.
- Screen displays are printed in constant width as follows: `screen display`.
- Variables are printed in italics as follows: *variable*.
- We show complete commands in this book, but you can always use an abbreviated version of the command. For example, **list configuration station** can be entered as **list config sta**.

- We show commands and screens from the newest DEFINITY telephone system and refer to the most recently released books. Please substitute the appropriate commands for your system (if necessary) and refer to the manuals you have on hand.
- If you need help constructing a command or completing a field entry, remember to use HELP.
  - — When you press HELP at any point on the command line, a list of available commands appears.
  - — When you press HELP with your cursor in a field on a screen, a list of valid entries for that field appears.
- The status line or message line can be found near the bottom of your monitor display. This is where the system displays messages for you. Check the message line to see how the system responds to your input. Write down the message if you need to call our helpline.
- When a procedure requires you to press ENTER to save your changes, the screen you were working on clears and the cursor returns to the command prompt. The message line shows "`command successfully completed`" to indicate that the system accepted your changes.

You may see the following icons in this book:

Tip:
Draws attention to information that you may find helpful.

NOTE:
Draws attention to information.

CAUTION:
Denotes possible harm to software, possible loss of data, or possible service interruptions.

SECURITY ALERT:
Indicates when system administration may leave your system open to toll fraud.

Security concerns

Toll fraud is the theft of long distance service. When toll fraud occurs, your company is responsible for charges. Refer to the *BCS Products Security Handbook* for information on how to prevent toll fraud, or call the Lucent Technologies National Customer Care Center at 1-800-643-2353.

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Related books

The *DEFINITY ECS Administration and Feature Description* explains system features and interactions in detail. It provides a reference for planning, operating, and administering your system, and we refer to it often. Please note that prior to April 1997, this same information was in two separate books. If you received your books before April 1997, please look for additional information in both the *DEFINITY Implementation* and the *DEFINITY Feature Description* books.

We also refer to *DEFINITY Systems Terminals and Adjuncts Reference, DEFINITY ECS Overview* and *BCS Products Security Handbook.*

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— North America	1-800-248-1111

Getting started

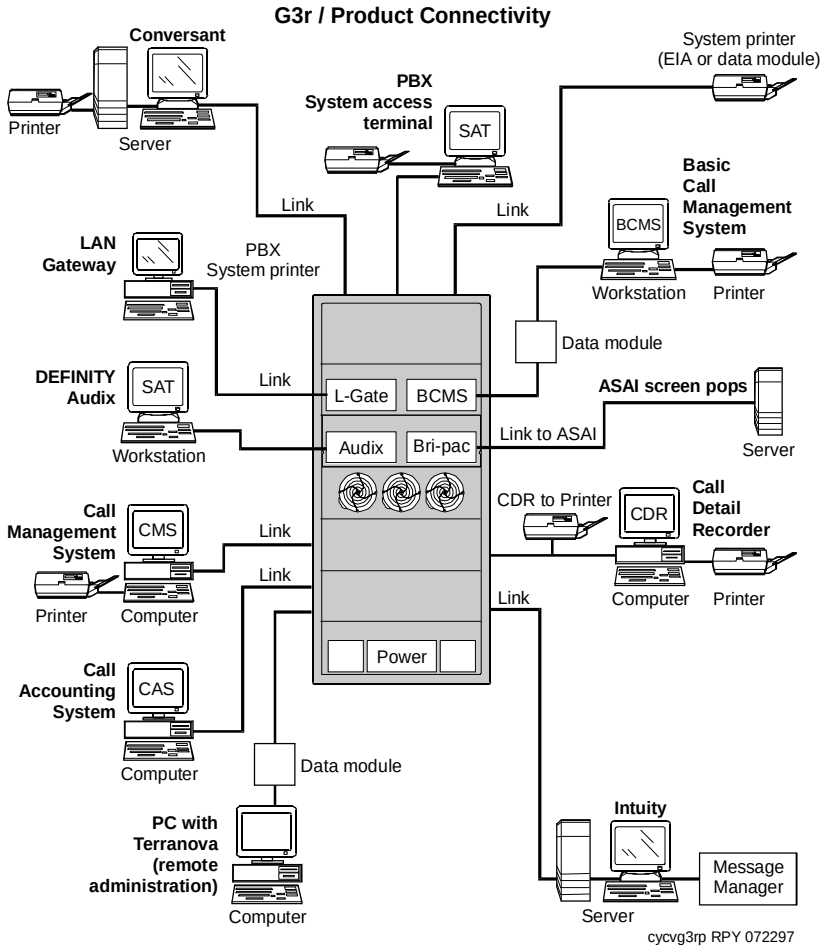
This section contains a brief overview of a DEFINITY system. It also explains how to log in to your telephone system, change the date and time, save changes to the system, and log off.

Overview of DEFINITY systems

Your DEFINITY telephone system organizes and routes voice, data, image, and video transmissions. Your system can be connected to communications paths that transmit voice and data signals between the phone system and a central office, and to other public and private networks. The following figure shows typical DEFINITY system connections, software packages, and additional hardware.

To find more detailed information and a comprehensive overview of your DEFINITY system, refer to your *DEFINITY ECS Overview*.

NOTE:
Your equipment may appear different than the equipment shown in the figure.



Example DEFINITY system

Example DEFINITY system

Your DEFINITY system may include some or all of the following components:

- Conversant— provides response to spoken information
- PBX system access terminal (SAT) — allows direct connection for administration and reports
- Basic Call Management System (BCMS) — collects information and prints reports on call-center performance
- Data module — provides digital information to the system
- ASAI — allows integration between adjunct computers and DEFINITY systems
- Call Detail Recorder — collects, stores, filters, and prints records on calls handled by your system.
- Intuity Message Manager — access to INTUITY AUDIX and DEFINITY AUDIX voice processing on a personal computer connected to a local area network
- PC with Terranova — allows remote system administration from a personal computer
- Call Accounting System (CAS) — uses call records to create billing reports for the hospitality industry
- Call Management System (CMS) — collects information and generates reports on telemarketing centers
- DEFINITY AUDIX SAT workstation — allows you to administer voice mail
- LAN Gateway/PBX System printer — connects to the local area network server and system printer

Phone types

Your DEFINITY system may have any of the following phone types administered as user phones. As you make changes to your system, you'll need to know whether each phone is an analog, digital, hybrid, or ISDN phone.

Analog	Digital	Hybrid	ISDN
500	6402	7303S	7505D
2500	6408, 6408+, 6408D	7305S	7506D
10MET	6416D+	7309H	7507D
20MET	6424D+	7313H	8503D
30MET	7401D, 7401+	7314H	8510T
7101A	7403D	7315H	8520T
7103A	7404D	7316H	ASAI
7104A	7405D, 7405ND	7317H	
8110	7406D, 7406+		
DS1FD	7407D, 7407+		
K2500	7410D, 7410+		
	7434D, 7434ND		
	7444D		
	8403B		
	8405B, 8405B+		
	8405D, 8405D+		
	8410B, 8410D		
	8411B, 8411D		
	8434D		
	602A1		
	603A1, 603D1, 603E1		
	606A1		

Accessing your system

You need to log in before you can administer your telephone system. To log in, you need to know:

- your login and password
- the type of terminal or terminal emulation program that you are using

Change your password frequently, at least once a month, to help keep hackers out of your system. For instructions on how to change your password or add new logins, refer to ‘‘Assigning and changing users’’ on page 59.

Logging into the system

1. At the prompt, type your login and press RETURN.

   The system prompts you for your password.

2. Type your password and press RETURN.

   Your password does not display on the screen. Be sure to keep your password private.

   The system next prompts you for your terminal type. The type in square brackets is the default.

```
Login:
Password:

System: XXXXXX        Software Version: xxxxxxxxxxxx

Terminal Type: (513, 715, 4410, 4425, VT220): [513]
```

Terminal screen for login

3. Press RETURN if you are using the default terminal. Otherwise, enter the terminal type and press RETURN.

Once you log in, "`Command`" appears. The system is ready to accept a new command.

Setting the system time and date

Update the system time and date for events such as leap year or daylight savings time. The correct time and date ensure that records are correct.

To set the system time and date:

1. Type **set time** and press RETURN.

   The Date and Time screen appears.

2. Fill in the appropriate fields.

   Use a 24-hour clock to set the hour. For example, for 2:00 p.m. type 14. Do not try to update the Seconds field because it automatically resets to 0 when you press ENTER.

```
                          DATE AND TIME
DATE
        Day of the Week: __________    Month: _________
       Day of the Month: __             Year: ____

TIME
                    Hour: __           Second: XX
                  Minute: __
```

Date and Time screen

3. Press ENTER to save your changes.

4. Type **display time** and press RETURN to double check the new date and time.

Tip:
When you change the date or time, some display phones may not automatically refresh the display. If this happens, have each user press the date/time button on their phone and the display should update.

Saving changes

Save your screen changes, also called translations, to memory immediately after each change. Run a manual backup of the entire system memory at the end of each administrative session. For instructions on how to run a manual backup, refer to ‘‘Permanent save’’ on page 8. Your system may be administered to automatically back up every 24 hours. However, performing manual backups after you make large changes is a good idea.

Tip:
To determine if your system backs up automatically, type **display system-parameters maintenance** *and see if you have scheduled maintenance.*

Temporary save

As you are working with the system, you can save changes to the system memory, but these saves are considered temporary. A permanent save occurs when your system automatically backs up or when you perform a manual backup.

1. Press ENTER to save any changes you make on a screen.

   When you press ENTER, "`command successfully completed`" appears and the cursor returns to the command prompt.

Permanent save

A permanent backup copies your changes from the system memory to a card (also called a flash ROM), disk, or tape. When you make large changes, you should perform this backup in case your system loses power before the next automatic or manual permanent backup.

Before you start a backup, be sure that the backup card or tape is in place or a minor alarm will occur. To create a back up:

1. Check the alarms panel and clear any active alarms.
2. Type **save translation** and press RETURN.

   The save process may take up to 10 minutes. You cannot administer your system while the save process takes place.

   If an error message appears in the Command Completion Status field, you must clear the error and repeat the save process.

```
                          SAVE TRANSLATION

Processor            Command Completion Status        Error Code
SPE_A                        Success                      0
```

Save Translation screen

It is a good idea to have 2 backups for each administrative session. You can run a second save translation to another card, or you can copy your automatic backup to another disk or tape with the backup command if your system allows. Some administrators keep a third backup in a safe place, perhaps off premises, so all changes can be recreated from memory if necessary.

Saving announcements

You can save announcements only if your system has an integrated announcement board and you have administered announcements.

If you change your recorded announcements and you have a TN750C board, the system automatically saves your changes to the on-board FLASH memory.

If you have a TN750 or TN750B board, you need to manually save the recorded announcements on your system.

1. Type **save announcements** and press RETURN to save the changes.

   This process can take up to 40 minutes. You cannot administer your system while the system is saving announcements.

   NOTE:
   If you have both TN750B and TN750C boards, save announcements to the TN750B slot.

See *DEFINITY ECS Administration and Feature Description* for more information about saving translations or announcements and performing backups of your system.

Logging off the system

For security reasons, you should log off every time you leave your terminal.

1. To log off the system, type **logoff** and press RETURN.

   You may see a security screen that indicates that you have Remote Access, Facility Test, or Busied Out administered. You may want to disable these features before you log off.

   This screen also indicates whether or not you have any active minor or major alarms that you should address before you end your session.

2. Type **y** and press RETURN to proceed with log off.

If you use terminal emulation software, such as Terranova for Windows, you should log off the system and exit the emulation application before alternating or switching to another software package.

Planning the DEFINITY system

This section provides you with background on system-wide functions. It explains how to read and use your dial plan, and shows you how to make simple changes such as adding extension ranges. This section also explains how to assign feature access codes. Finally, it explains how to change an area code in your system, a common task for most administrators.

Understanding the dial plan

Your dial plan tells your system how to interpret dialed digits. For example, if you dial 9 on your system to access an outside line, it is actually the dial plan that tells the system to find an external trunk when a dialed string begins with a 9.

The dial plan also tells the system how many digits to expect for certain calls. For example, the dial plan may indicate that all internal extensions are 4-digit numbers that start with 1 or 2.

Tip:

In this book, we do not usually explain each form as thoroughly as we do the dial plan. However, this form serves as the basis for almost everything in the system, so we wanted to be sure you have a clear understanding of how to read and update your dial plan. If you need more information, refer to DEFINITY ECS Administration and Feature Description.

Let’s take a look at an example dial plan so you’ll know how to read your system’s dial plan. The following figure shows an example of a simple dial plan.

```
                              DIAL PLAN RECORD                    Page 1 of 1
    North American Area Code: 214                Local Node Number:
       ARS Prefix 1 Required? y                    ETA Node Number:
        Uniform Dialing Plan: 4-digit          ETA Routing Pattern:
  UDP Extension Search Order: local-extensions-first
FIRST DIGIT TABLE
First                                  Length
Digit    -1-          -2-          -3-          -4-          -5-          -6-
  1:  __________  __________  __________  extension_  __________  __________
  2:  __________  __________  __________  extension_  __________  __________
  3:  __________  __________  __________  __________  __________  __________
  4:  __________  __________  __________  __________  __________  __________
  5:  __________  __________  __________  extension_  __________  __________
  6:  __________  __________  dac_______  __________  __________  __________
  7:  __________  __________  __________  __________  __________  __________
  8:  __________  __________  __________  __________  __________  __________
  9:  fac_______  __________  __________  __________  __________  __________
  0:  attd______  __________  __________  __________  __________  __________
  *:  __________  __________  fac_______  __________
  #:  __________  __________  fac_______  __________
```

Dial Plan Record screen

If you look at the lower half of the Dial Plan Record screen, you see the First Digit Table. This table defines the dialing plan for your system.

The rows in the first digit table indicate what the system does when the row’s first digit is dialed. The columns indicate how long the dialed string will be for each type of call. For example, this dial plan shows that when users first dial a 2 and the dialed string is 4 digits long, they are dialing an extension.

The first digit table may have any of the following codes:

- Attendant (attd) — Defines how users call an attendant. Attd access numbers can be any number from 0 to 9 and contain 1 or more digits. In our example figure, the system calls an attendant when users dial 0.
- Dial access codes (dac) — Allows you to use trunk access codes (tac) and feature access codes (fac) in the same range. For example, you could define the group 300–399 for dacs, which would allow both facs and tacs in that range. Dacs can start with any number from 1 to 9 and contain up to 4 digits. In recent releases, * and # also can be the first digit in dacs. In our example figure, dacs begin with 6 and must be 3 digits long, so this company can have a fac set to 633 and have a tac assigned to 634.
- Extensions (ext) — Defines extension ranges that can be used on your system. In our figure, extensions must be in the ranges: 1000–1999, 2000–2999, and 5000–5999.
- Feature access codes (fac) only — facs can be any number from 1 to 9 and contain up to 4 digits. You can use * or #, but only as a first digit. In our example, this company can use *21 to activate a feature and use #21 to deactivate the same feature. Our example also shows that one fac can be set to 9 (first digit 9, only one digit long).
- Miscellaneous code (misc) — these codes are used when you want to have more than one kind of code start with the same digit and be the same length. Using a misc code requires that you also define a second digit table. Refer to *DEFINITY ECS Administration and Feature Description* for more information about the second digit table. Our example does not show this type of code.

Displaying your dial plan

You might want to take this opportunity to look at and interpret your own dial plan. To display your system's dial plan:

1. Type **display dialplan** and press RETURN.

Modifying your dial plan

It is easy to make changes to your dial plan. For example, let's add a new range of dial access codes to the dial plan. We want to be able to assign both facs and tacs in the 700–799 range.

1. Type **change dialplan** and press RETURN.

   The Dial Plan Record screen appears.

2. Move the cursor to the 7th row in the 3rd column.

   This field defines what the system does when users dial any number from 700 to 799.

3. Type **dac** in the selected field.

4. Press ENTER to save your changes.

Adding extension ranges

You may find that as your needs grow you want a new set of extensions. Before you can assign a station to an extension, the extension must belong to a range that is defined in the dial plan. Let's add a new set of extensions that start with 3 and are 4 digits long (3000–3999).

To add this set of extensions to the dial plan:

1. Type **change dialplan** and press RETURN.

   The Dial Plan Record screen appears.

2. Move the cursor to the 3rd row in the 4th column.
3. Type **extension** in the selected field.
4. Press ENTER to save your changes.

Adding feature access codes

As your needs change, you may want to add a new set of feature access codes for your system. Before you can assign a fac on the Feature Access Code screen, it must conform to your dial plan.

In our example, if you want to assign a feature access code of 33 to Last Number Dialed, first you need to add a new fac range to the dial plan.

To add a fac range from 30–39:

1. Type **change dialplan** and press RETURN.

   The Dial Plan Record screen appears.

2. Move the cursor to the 3rd row and the 2nd column.
3. Type **fac** in the selected field.
4. Press ENTER to save your changes.

Changing feature access codes

Feature access codes (FAC) allow users to activate and deactivate features from their phones. A user who knows the fac for a feature does not need a programmed button to use the feature. For example, if you tell the users that the fac for the Last Number Dialed is *33, then users can redial a phone by entering the fac, rather than requiring a Last Number Dialed button.

Many features already have factory-set feature access codes. You can use these default codes or you can change the codes to ones that make more sense to you. However, every fac must conform to your dial plan and must be unique. For more information about the dial plan, refer to ‘‘Understanding the dial plan’’ on page 11.

Let’s try an example. If you want to change the feature access code for Call Park to *72:

1. Type **change feature-access-codes** and press RETURN.

   The Feature Access Code (FAC) screen appears.

2. Move the cursor to the Call Park Access Code field.

3. Type ***72** in the access code field over the old code.

4. Press ENTER to save your changes.

   If you try to enter a code that is assigned to a feature, the system warns you of the duplicate code and does not allow you to proceed until you change one of them.

Tip:
To remove any fac, merely delete the existing fac and leave the field blank.

Adding a new area code or prefix

In the last several years, a common task for system administrators is to configure their systems to recognize new area codes or prefixes. This section explains how to modify your system to handle new area codes or prefixes.

Tip:
If your local area code is changing or splitting, call the DEFINITY helpline and have them walk you through all the changes needed to have your system recognize the new area code.

When you want to add a new area code or prefix, you look up the settings for the old area code or prefix and enter the same information for the new one.

Let's add a new area code. When the California area code, 415, splits and portions change to 650, you'll need to add this new area code to your system.

Tip:
*If you do not need to use 1 for area code calls, omit the **1** in steps 1, 3, and 5 in our example. Also, enter **10** in the Total Min and Total Max fields (instead of 11) in step 6.*

To add this non-local area code:

1. Type **list ars route-chosen 14152223333** and press RETURN.

   You can use any 7-digit number after 1 and the old area code (415). We used 222-3333.

   The ARS Route Chosen Report screen appears.

```
                    ARS ROUTE CHOSEN REPORT
                  Partitioned Group Number:  1
          Dialed          Total       Route      Call       Node
          String        Min    Max     Pat       Type      Number
     141                 11     11      30       fnpa
```

ARS Route Chosen Report screen

2. Write down the Total Min, Total Max, Route Pat, and Node Number values from this screen.

   In this example, the Total Min is `11`, Total Max is `11`, Route pattern is `30`, and the Node Number is blank.

3. Type **change ars analysis 1650** and press RETURN.

   Enter 1 and the new area code (650).

   The ARS Digit Analysis Table screen appears.

```
                        AAR DIGIT ANALYSIS TABLE
                     Partitioned Group Number:  1    Percent Full:    6
      Dialed     Total  Rte Call Nd ANI       Dialed     Total Rte Call Nd ANI
      String     Mn Mx  Pat Type Num Rq       String     Mn Mx Pat Type Num Rq
  166_____________11 11   30 fnpa ___ n  _____________________ __ __  ___ ____ ___ n
  167_____________11 11   30 fnpa ___ n  _____________________ __ __  ___ ____ ___ n
  168_____________11 11   30 fnpa ___ n  _____________________ __ __  ___ ____ ___ n
  169_____________11 11   30 fnpa ___ n  _____________________ __ __  ___ ____ ___ n
  170_____________11 11   30 fnpa ___ n  _____________________ __ __  ___ ____ ___ n
  1700____________11 11   30 fnpa ___ n  _____________________ __ __  ___ ____ ___ n
  171_____________11 11   30 fnpa ___ n  _____________________ __ __  ___ ____ ___ n
  172_____________11 11   30 fnpa ___ n  _____________________ __ __  ___ ____ ___ n
  173_____________11 11   30 fnpa ___ n  _____________________ __ __  ___ ____ ___ n
  174_____________11 11   30 fnpa ___ n  _____________________ __ __  ___ ____ ___ n
  175_____________11 11   30 fnpa ___ n  _____________________ __ __  ___ ____ ___ n
  176_____________11 11   30 fnpa ___ n  _____________________ __ __  ___ ____ ___ n
```

ARS Digit Analysis Table screen

4. Use the arrow keys to move to a blank Dialed String field on the right of the screen.

   If the dialed string is already defined in your system, the cursor appears in the appropriate Dialed String field, where you can make changes.

5. Enter **1650** in the Dialed String field.

6. Enter the minimum and maximum values from step 2 in the Total Mn and Total Mx fields.

   In our example, enter **11** in each field.

7. Enter the route pattern from step 2 in the Rte Pat field.

   In our example, enter **den**.

8. Enter **fnpa** in the Call Type field.

9. Enter the node number from step 2 in the Nd Num field.

   For our example, you would leave the node number blank.

10. Press ENTER to save your changes.

To add a new prefix, follow the same directions, except use a shorter dial string (such as **list ars route-chosen 2223333**, where **222** is the old prefix) and a dial type of **hnpa**.

Managing phones

This section explains how to add, swap, or remove the phones on your system. This section also gives you tips for customizing your own phone so it has the feature buttons you need for many administration and troubleshooting tasks.

Note that this section does not tell you how to administer an attendant console. If you need to add or modify an attendant console, refer to *DEFINITY ECS Administration and Feature Description* and *DEFINITY Console Operation*s.

Adding new phones

When you are asked to add a new phone to the phone system, what do you do first? To connect a new phone you need to do three things:

- find an available port
- wire the port to the cross-connect field or termination closet
- tell the telephone system what you're doing

Before you can determine which port to use for the new phone, you need to determine what type of phone you are installing, what ports are available, and where you want to install the phone.

Gathering necessary information

1. Determine whether the phone is an analog, digital, ISDN, or hybrid set.

   You need this information to determine the type of port you need, because the port type and phone type must match. If you do not know what type of phone you have, refer to ‘‘Phone types’’ on page 4 for a list of phones by model number.

2. Record the room location, jack number, and wire number.

   You may find this information on the jack where you want to install the phone, recorded in your system records, or from the technician responsible for the physical installation.

3. Display the available boards (cards) and ports.

   To view a list of boards on your system, type **list configuration station** and press RETURN.

```
                          SYSTEM CONFIGURATION
Board                                                    Assigned Ports
Number     Board Type           Code     Vintage     u=unassigned t=tti p=psa

01A05      DIGITAL LINE          TN754B 000002      01 u  03 u  05 u  07 08
01A06      ANALOG LINE           TN742  000010      01 02 03 04 u  u  u  u
01B05      ANALOG LINE           TN746B 000008      u  u  u  u  u  u  u  u
                                                    u  u  u  u  u  u  u  u
01C04      ANALOG LINE           TN746B 000008      u  u  u  u  u  u  u  u
                                                    u  u  u  u  u  u  u  u
01C05      DIGITAL LINE          TN2224 000004      01 u  u  04 u  u  07 08
                                                    u  u  u  u  u  u  u  u
                                                    u  u  u  u  u  u  u  u
01C06      HYBRID LINE           TN762B 000004      01 02 u  u  u  u  u  u
01C09      MET LINE              TN735  000005      01 u  u  u
01C10      DIGITAL LINE          TN754  000004      u  u  u  u  u  u  u  u
```

System Configuration screen

The System Configuration screen shows all the boards on your system that are available for connecting phones. You can see the board number, board type, circuit-pack type, and status of each board's ports.

4. Choose an available port and record its port address.

   Each port that is available or unassigned is indicated by a 'u.' Choose an available port from a board type that matches your phone type (such as a port on an analog board for an analog phone).

   Every phone must have a valid port assignment, also called a port address. The combined board number and port number is the port address. So, if you want to attach a phone to the 3rd port on the 01C05 board, the port address is 01C0503 (01=cabinet, C=carrier, 05=slot, 03=port).

   Tip:
   If you add several phones at one time, you may want to print a paper copy of the System Configuration screen. To print the screen to a printer attached to the system terminal, type **list configuration station print** *and press* RETURN. *To print to the system printer that you use for scheduled reports, type* **list configuration station schedule immediate** *and press* RETURN.

5. Choose an extension number for the new phone.

   The extension you choose must not be assigned and must conform to your dial plan. You should also determine whether this user needs an extension that can be directly dialed (DID) or reached via a central phone number.

   Be sure to note your port and extension selections on your system's paper records.

Physically connecting the phone

Once you have collected all the information, you are ready to physically wire the port to the cross-connect field.

If you have a Lucent representative or on-site technician who completes the physical connections, you need to notify them that you are ready to add the phone to the system. To request that Lucent install the new connections, call your customer care center and place an order.

If you are responsible for making the connections yourself and if you have any questions about connecting the port to the cross-connect field, refer to your system installation guide.

Now you are ready to configure the system so that it recognizes the new phone.

Completing the station screens

The information that you enter on the station screen advises the system that the phone exists and indicates which features you want to enable on the phone.

To access the station screen for the new phone:

1. Type **add station *nnnn*** and press RETURN, where *nnnn* is the extension for the new phone.

   Make sure the extension conforms to your dial plan. You can also use the **add station next** command to add a phone to the next available extension.

   When the station screen appears, you see the extension number and some default field values. For example, the following screen is for a new phone at extension 2345.

```
                                STATION

Extension: 2345                          Lock Messages? _          BCC: _
     Type: 8411D                         Security Code: _________   TN: 1
     Port: _______________          Coverage Path 1: ____        COR: 1
     Name: ______________________________ Coverage Path 2: ____  COS: 1


STATION OPTIONS
             Data Option: none_______    Personalized Ringing Pattern: 1
            Speakerphone: 2-way                  Message Lamp Ext: 2345
        Display Language: english___           Mute Button Enabled? y
              PassageWay? n
                                                 MM Complex Data Ext:____
```

Station screen

2. Type the model number of the phone into the Type field.

   For example, to install a 8411D phone, type **8411D** in the Type field. Note that the displayed fields may change depending on the model you add.

3. Type the port address in the Port field.

4. Type a name to associate with this phone in the Name field.

   The name you enter displays on called phones that have display capabilities. For example, if you use Lucent voice mail, such as Intuity Audix, type the user's name (last name first) and their extension to identify the phone.

5. Press ENTER to save your changes.

To make changes to this new phone, such as assigning coverage paths or feature buttons, type **change station *nnnn*** and press RETURN, where *nnnn* is the extension of the new phone.

Using station templates to add phones

A quick way to add phones is to copy the information from an existing phone and modify it for each new phone. For example, you can configure one phone as a template for an entire work group. Then, you merely duplicate the template station screen to add all the other extensions in the group.

Note that only phones of the same model can be duplicated. The duplicate command copies all the feature settings from the template phone to the new phones.

To duplicate an existing phone:

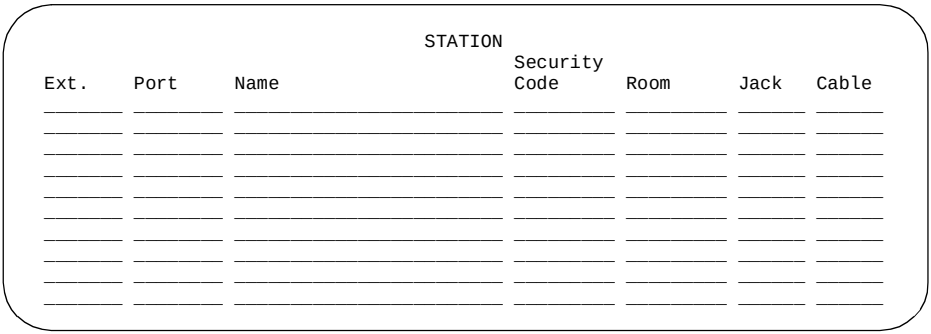
1. Type **display station *nnnn*** and press RETURN.

   nnnn is the extension of the station screen you want to duplicate to use as a template. Verify that this extension is the one you want to duplicate.

2. Press CANCEL to return to the command prompt.

3. Type **duplicate station *nnnn*** and press RETURN, where *nnnn* is the extension you want to duplicate.

   The system displays a blank Duplicate Station screen.



STATION

Ext.	Port	Name	Security Code	Room	Jack	Cable

Duplicate Station screen

4. Type in the extension, port address, and phone name for each new phone you want to add.

   The rest of the fields are optional. You can complete them at any time.

5. Press ENTER to save your changes to system memory.

To make changes to these phones, such as assigning coverage paths or feature buttons, type **change station *nnnn*** and press ENTER, where *nnnn* is the extension of the phone that you want to modify.

Using an alias

Not every phone model has a unique station screen in the system. You might have to use an available model number as an “alias” for another. If you need to enter a phone type that the system does not recognize or support, use an alias.

For example, you may purchase a phone model that is newer than your system. In this case, you can use an available model type

that best matches the features of your new phone. You can refer to your phone's manual to determine which alias to use. If your manual does not have this information, you can contact the DEFINITY helpline for an appropriate alias.

For example, let's use an alias to add a new 8403B phone to a DEFINITY G3V2 or earlier system.

1. Refer to your new phone's manual to find the correct alias.

   In our example, we find that the 8403B is administered on a G3V2 or earlier system as a 7405D phone.

2. Type **change alias station** and press RETURN.

   The Alias Station screen appears.

3. Enter **8403B** in the Alias Set Type field.

   Enter the model of the unsupported phone in this field.

4. Enter **7405D** in the Supported Set Type field.

   Enter the alias (supported model) in this field.

5. Press ENTER to save your changes.

```
                    ALIAS STATION
    Alias Set Type              Supported Set Type
       8403B                         7405D
       _____                         _____
       _____                         _____
       _____                         _____
       _____                         _____
       _____                         _____
       _____                         _____
       _____                         _____
       _____                         _____
       _____                         _____
 '#' indicates previously aliased set type is now native
```

Alias Station screen

Now follow the instructions for adding a new phone. Your switch now recognizes the new type you enter in the Type field.

Be sure to refer to your phone's manual for instructions on how to set feature buttons and call appearance buttons. Note that if you need to use an alias for a phone, you may not be able to take advantage of all the features of the new phone.

Adding or changing feature buttons

Once you add a phone to the system, you can use the station screen to change the settings for the phone, such as adding or changing feature button assignments. The system allows you to assign features or functionality to each programmable button. It is up to you to decide which features you want for each phone and which buttons you want to assign to each feature.

To assign feature buttons:

1. Type **change station *nnnn*** and press ENTER, where *nnnn* is the extension for the phone you want to modify.

   The station screen appears.

2. Press NEXT PAGE until you locate the Feature Button Assignment fields.

   Some phones have several feature button groups. Make sure that you are changing the correct button. If you do not know which button on the phone maps to which button-assignment field, press HELP on your terminal, refer to your phone's manual, or refer to *DEFINITY ECS Administration and Feature Description*.

3. Move the cursor to the field you want to change.

4. Type the button name that corresponds to the feature you want to add.

   To determine feature button names, press HELP or refer to *DEFINITY ECS Administration and Feature Description*.

5. Press ENTER to save your changes.

Some phones have default assignments for buttons. For example, the following figure shows that the 8411D includes defaults for 12 softkey buttons. It already has assignments for features like Leave Word Calling and Call Forwarding.

If you do not use an alias, you can easily assign different features to these buttons if you have different needs.

If you use an alias, you must leave the default softkey button assignments. The system will allow you to change the button assignments on the screen, but the features will not work on the alias phone.

```
                                    STATION
SOFTKEY BUTTON ASSIGNMENTS

 1: lwc-store
 2: lwc-cancel
 3: auto-cback
 4: timer
 5: call-fwd    Ext: _____
 6: call-park
 7: date-time
 8: priority
 9: abr-prog
10: abr-spchar  Char: ~p
11: abr-spchar  Char: ~m
12: abr-spchar  Char: ~w
```

Default softkey assignments for an 8411D phone

Customizing your phone

This section provides recommendations so you can set up or enhance your personal phones. You need a phone that is powerful enough to allow you to use all the features you may give to other employees. You may want to add feature buttons that allow you to monitor or test the system, so that you can troubleshoot the system from your phone.

It will be much easier to monitor and test your system if you have a phone with:

- a large multi-button display (such as 8434D or 8410D)
- a class of service (cos) that has console permissions
- the following feature buttons
  - — ACA and Security Violations (assign to lamp buttons)
  - — Busy verify
  - — Cover message retrieval button
  - — Major/minor alarm buttons
  - — Trunk ID buttons
  - — Verify button

Once you select a phone, you'll want to determine if you want to place this phone at your desk or in the switch room. If the phone is in the switch room (near the system administration terminal), you can quickly add or remove feature buttons to test features and facilities. You may decide that you want a phone at both your desk and in the switch room — it's up to you.

You may also find it handy to set up multiple phones for testing applications and features in advance of providing them to users. You may want to have a phone that mimics each type of user phone in your organization. For example, if you have four basic phone templates, one for executives, one for marketing, one for technicians, and one for other employees, you may want to have examples of each of these phones that you can use to test new features or options. Once you are satisfied that a change works on the test phone, you can make the change for all the users in that group.

Upgrading phones

If you want to change phone types for a user and do not need to change locations, you can just access the station screen for that extension and enter the new model number.

Tip:
This method can be used only if the new phone type matches the existing port type (such as digital phone with a digital port).

For example, if a user at extension 4556 currently has a 7410+ phone and you want to replace it with a new 8411D phone:

1. Type **change station 4556** and press RETURN.

   The station screen for 4556 appears.

2. Overwrite `7410+` with **8411D** in the Type field.

   Now you can access the functions and feature buttons that correspond to an 8411D phone.

Swapping phones

You will often find that you need to move or swap phones. For example, employees moving from one office to another want to bring their phones. In this case, you can use the Administration without Hardware (AWOH) feature to easily swap the phones.

In general, to swap one phone (phone A) with another phone (B), you change phone A's port assignment to **x**, change phone B's port assignment to A's old port, and, finally, change the **x** for phone A to B's old port. Note that these swapping instructions work only if the two phones are the same type (both digital or both analog, etc.).

For example, to swap phones for extension 4567 (port 01C0505) and extension 4575 (port 01C0516), complete the following steps:

1. Type **change station 4567** and press RETURN.
2. Record the current port address (`01C0505`) and type **x** in the Port field.
3. Press ENTER to save your changes.
4. Type **change station 4575** and press RETURN.
5. Record the current port address (`01C0516`).
6. Type **01C0505** in the Port field.
7. Update the Room and Jack fields.
8. Press ENTER to save your changes.
9. Type **change station 4567** again and press RETURN.

10. Type **01C0516** in the Port field.

    This is the port that used to be assigned to extension 4575.

11. Update the Room and Jack fields.

12. Press ENTER to save your changes.

13. Physically unplug the phones and move them to their new locations.

Removing phones

Before you physically remove a phone from your system, check the phone's status, remove it from any group or usage lists, and then delete it from the system's memory.

Tip:
Be sure to record the port assignment for this jack in case you want to use it again later.

For example, to remove a phone at extension 1234:

1. Type **status station 1234** and press RETURN.

   The General Status screen appears.

2. Make sure that the phone:

   - is plugged into the jack
   - is idle (not making or receiving calls)
   - has no messages waiting
   - has no active buttons (such as Send All Calls or Call Forwarding)

3. Type **list groups-of-extension 1234** and press RETURN.

   The Extension Group Membership screen shows whether the extension is a member of any groups on the system.

4. Press CANCEL.

5. If the extension belongs to a group, access the group screen and delete the extension from that group.

   For example, if extension 1234 belongs to pickup group 2, type **change pickup group 2** and delete the extension from the list.

6. Type **list usage extension 1234** and press RETURN.

   The Usage screen shows whether the extension is used in any vectors, has any bridged appearances, or used as a controller.

7. Press CANCEL.

8. If the extension appears on this screen, access the appropriate screen and delete the extension from that usage.

   For example, if extension 1234 belongs to hunt group 2, type **change hunt group 2** and delete the extension from the list.

9. Type **change station 1234** and press RETURN.

10. Delete any bridged appearances or personal abbreviated dialing entries and press ENTER.

11. Type **remove station 1234** and press RETURN.

    The system displays the station screen for this phone so you can verify that you are removing the correct phone.

12. If this is the correct phone, press ENTER.

    The system responds with `command successfully completed`.

    If the system responds with an error message, the set is busy or still belongs to a group. Press CANCEL to stop the request, correct the problem, and enter **remove station 1234** again.

13. Remove the extension from voice mail service if the extension has a voice mailbox.

14. Type **save translations** and press RETURN to save your changes.

Note that you do not need to delete the extension from coverage paths. The system automatically adjusts coverage paths to eliminate the extension.

Now you can unplug the set from the jack and store it for future use. You do not need to disconnect the wiring at the cross-connect field. The extension and port address remain available for assignment at a later date.

Once you successfully remove a set, that set is permanently erased from system memory. If you want to reactivate the set, you have to add it again as though it were a new phone. However, you can reuse the old port address if you have not assigned it to another phone.

Managing features

This section explains how to administer some of the major DEFINITY features. It provides instructions for changing feature parameters, using abbreviated dialing, creating pickup groups, setting up call forwarding, defining coverage paths, and administering bridged call appearances.

Changing feature parameters

You can modify the system parameters that are associated with some of the system features. For example, you can use the system parameters to allow music to play if callers are on hold or to allow trunk-to-trunk transfers on the system.

Generally, Lucent sets your system parameters when your system is installed. However, you can change these parameters as your organization's needs change. For example, let's say that you are told that the number of rings between each point for new coverage paths should change from 4 to 2 rings.

To change the number of rings:

1. Type **change system feature** and press RETURN.

   The Feature-Related System Parameters screen appears.

```
                        FEATURE-RELATED SYSTEM PARAMETERS
                                  Trunk-to-Trunk Transfer? none
Coverage Subsequent Redirection/CFWD No Answer Interval: 2
          Coverage - Caller Response Interval (seconds): 4
                           Keep Held SBA at Coverage Point? y
Automatic Callback - No Answer Timeout Interval (rings): 3
                    Call Park Timeout Interval (minutes): 10
    Off-Premises Tone Detect Timeout Interval (seconds): 20
                               AAR/ARS Dial Tone Required? y
                            Music/Tone On Hold: music port: none
          Music (or Silence) On Transferred Trunk Calls: no
                       DID/Tie/ISDN Intercept Treatment: attd
              Messaging Service Adjunct (MSA) Connected? n
 Internal Automatic Answer for Attendant Extended Calls? n
              Automatic Circuit Assurance (ACA) Enabled? n
                                    ACA Referral Calls: __
                             ACA Referral Destination: ________
           ACA Short Holding Time Originating Extension: ______
            ACA Long Holding Time Originating Extension: ______


        Abbreviated Dial Programming by Assigned Lists? n
               Auto Abbreviated/Delay Interval (rings): 2
```

Feature-Related System Parameters screen

2. Type **2** in the Coverage Subsequent Redirection/CFWD No Answer Interval field and press ENTER to save the change.

   Each phone in a Call Coverage path now rings twice before the call routes to the next coverage point. The Coverage Subsequent Redirection/CFWD No Answer Interval field also controls the number of rings before the call is forwarded when you use Call Forwarding for busy/don't answer calls.

Refer to the *DEFINITY ECS Administration and Feature Description* for details about changing other feature-related system parameters.

Setting up abbreviated dialing

Abbreviated dialing is sometimes called speed dialing. It allows you to dial a short code in place of an extension or phone number. It also can allow users to place calls by pressing only one button.

When you dial abbreviated-dialing codes or press abbreviated-dialing buttons, you access stored numbers from special lists. These lists can be personal (your list of numbers), group (a department-wide list), system (a system-wide list), or enhanced numbers (allows for a longer list of numbers). The version and type of your system determine which lists are available and how many entries you can have on each list.

As an example, let's define a new group list:

1. Type **add abbreviated-dialing group next** and press RETURN.

   The abbreviated-dialing list screen appears. In our example, the next available group list is group 3.

```
                        ABBREVIATED DIALING LIST

                            Group List: 3
    Size (multiple of 5): ___       Program Ext: _____       Privileged? _
DIAL CODE
      _11: ____________________________
      _12: ____________________________
      _13: ____________________________
      _14: ____________________________
      _15: ____________________________
```

Abbreviated Dialing List screen

2. Enter a number (in multiples of 5) in the Size field. This number defines the number of entries on your dialing list.

   For example, if you have 8 phone numbers you want to store in the list, type **10** in the Size field.

3. Enter the phone numbers you want to store, one for each dial code.

   Each phone number can be up to 24 digits long.

4. Press ENTER to save your changes.

You can display your new abbreviated-dialing list to verify that the information is correct or to print a copy of the list for your paper records.

Once you define a group list, you need to define which stations can use the list. For example, let's set up station 4567 so it has access to the new group list.

To give station 4567 access to the group list:

1. Type **change station 4567** and press RETURN.

   The station screen for extension 4567 appears.

2. Press NEXT PAGE to get to the Abbreviated Dialing List fields.

```
                                    STATION
SITE DATA
     Room: _______                                    Headset? n
     Jack: _______                                    Speaker? n
    Cable: _______                                   Mounting? d
    Floor: _______                                Cord Length: 0
 Building: _______                                  Set Color: ______

 ABBREVIATED DIALING
      List1: group   3__       List2: _________          List3: _________

 BUTTON ASSIGNMENTS
   1: call-appr
   2: call-appr                              4: __________
   3: call-appr                              5: __________
```

Station screen (page 3)

3. Type **group** in any of the List fields and press RETURN.
4. Type **3** in the list number field that appears.

   When you type group or personal in a List field, you must also type a personal list number or a group list number.
5. Press ENTER to save your changes.

The user at extension 4567 can now use this list by dialing the feature access code for the list and the dial code for the number they want to dial.

Creating pickup groups

A pickup group is a list of phones where each member of the group can answer another member's calls. For example, if you want everyone in the payroll department to be able to answer calls to any payroll extension (in case someone is away from their desk), create a pickup group that contains all of the payroll extensions. Members of a pickup group should be located in the same area so that they can hear when the other extensions in the group ring.

Note that each extension may belong to only one pickup group. Also, the maximum number of pickup groups may be limited by your system configuration.

To create a pickup group:

1. Type **add pickup-group next** and press RETURN.

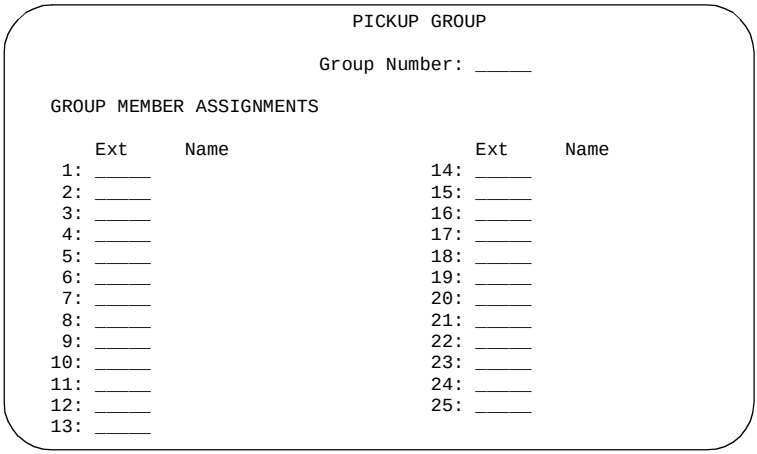
   The Pickup Group screen appears. The system selects the next undefined Group Number in the sequence of pickup groups.

2. Enter the extension of each group member.

   Up to 50 extensions can belong to one group.

3. Press ENTER to save your new group list.

   The system automatically completes the name field when you press ENTER to save your changes.



```
                              PICKUP GROUP

                            Group Number: _____

GROUP MEMBER ASSIGNMENTS

     Ext      Name                          Ext      Name
 1: _____                              14: _____
 2: _____                              15: _____
 3: _____                              16: _____
 4: _____                              17: _____
 5: _____                              18: _____
 6: _____                              19: _____
 7: _____                              20: _____
 8: _____                              21: _____
 9: _____                              22: _____
10: _____                              23: _____
11: _____                              24: _____
12: _____                              25: _____
13: _____
```

Pickup Group screen

Once you define a pickup group, you can assign call-pickup buttons for each phone in the group or you can give each member the call-pickup feature-access code. Use the station screen to assign call-pickup buttons.

To allow users to answer calls that are not in their pickup group, you may be able to use Directed Call Pickup if you have the appropriate software version. For more information, refer to *DEFINITY ECS Administration and Feature Description.*

Setting up call forwarding

This section explains how to administer various types of automatic call forwarding. To provide call forwarding to your users, assign each extension a class of service (cos) that allows call forwarding. Then assign call-forwarding buttons to the user phones (or give them the feature access code for call forwarding) so that they can easily forward calls. You use the station screen to assign the cos and any call-forwarding buttons.

Within each class of service, you can determine whether the users in that cos have the following call forwarding features:

- Call Forwarding All Calls — allows users to redirect all incoming calls to an extension, attendant, or external phone number.
- Call Forwarding Busy/Don't Answer — allows users to redirect calls only if their extension is busy or they do not answer.
- Call Fwd-Off Net — prevents users from forwarding calls to numbers that are outside your system network.

As the administrator, you can administer system-wide call-forwarding parameters to control when calls are forwarded. Use the Feature-Related System Parameters screen to set the number of times an extension rings before the system redirects the call because the user did not answer (CFWD No Answer Interval). For example, if you want calls to ring 4 times at an extension and then, if the call is not answered, redirect to the forwarding number, set this parameter to 4.

You also can use the Feature-Related System Parameters screen to determine whether the forwarded-to phone can override call forwarding to allow calls to the forwarded-from phone (Call Forward Override). For example, if an executive forwards incoming calls to an attendant and the attendant needs to call the executive, the call can be made only if Call Forwarding Override is set to yes.

To determine which extensions have call forwarding activated:

1. Type **list call-forwarding** and press RETURN.

   This command lists all the extensions that are forwarded along with each forwarding number.

   NOTE:
   If you have a V1, V2, or V3 system, you can see if a specific extension is forwarded only by typing **status station nnnn**, where nnnn is the specific extension.

Creating coverage paths

This section explains how to administer various types of call coverage. In general, call coverage refers to what happens to incoming calls. You can administer paths to cover all incoming calls, or define paths for certain types of calls, such as calls to busy phones. You can define where incoming calls go if they are not answered and in what order they reroute to other locations. For example, you can define coverage to ring the called phone, then move to a receptionist if the call is not answered, and finally access a voice mailbox if the receptionist is not available.

Defining basic coverage

With call coverage, the system redirects a call to alternate answering extensions when no one answers at the first extension. An extension can have up to 6 alternate answering points. (If you have an older system, you may have only 3 answering positions.) The system checks each extension in sequence until the call connects. This sequence of alternate extensions is called a coverage path.

The system redirects calls based on certain criteria. For example, you can have a call redirect to coverage without ever ringing on the principal set, or after a certain number of rings, or when one or all call appearances (lines) are busy. You can set coverage differently for internal (inside) and external (outside) calls, and you can define coverage individually for different criteria. For example, you can decide that external calls to busy phones can use the same coverage as internal calls to phones with Do Not Disturb active.

To create a coverage path:

1. Type **add coverage path next** and press RETURN.

   The system displays the next undefined coverage path in the sequence of coverage paths. Our example shows coverage path number 2.

2. Type a coverage path number in the Next Path field.

   The next path is optional. It is the coverage path to which calls are redirected if the current path's coverage criteria does not match the call status. If the next path's criteria matches the call status, it is used to redirect the call; no other path is searched.

```
                          COVERAGE PATH
              Coverage Path Number: 2       Hunt after Coverage? n
                 Next Path Number: ____     Linkage:
COVERAGE CRITERIA

    Station/Group Status    Inside Call     Outside Call
             Active?             n               n
               Busy?             y               y
       Don't Answer?             y               y      Number of Rings: 2
                All?             n               n
 DND/SAC/Goto Cover?             y               y

COVERAGE POINTS

    Terminate to Coverage Pts. with Bridged Appearance? __
      Point1: ____              Point2: ____               Point3: ____
      Point4: ____              Point5: ____               Point6: ____
```

Coverage Path screen

3. Fill in the Coverage Criteria fields.

   You can see that the default sets identical paths for inside and outside calls. The system sets coverage to take place for a busy phone, if there is no answer after a certain number of rings, or if the DND (do not disturb), SAC (send all calls), or Go to Cover buttons are pressed or feature-access codes are dialed.

4. Fill in the Point fields with the phone numbers you want for coverage points.

5. Press ENTER to save your changes.

Now assign the new coverage path to a user. For example, let's assign this new coverage path to extension 2054:

1. Type **change station 2054** and press RETURN.

   The station screen for extension 2054 appears.

2. Type **2** in the Coverage Path 1 field.

   To give extension 2054 another coverage path, you can type a coverage path number in the Coverage Path 2 field.

3. Press ENTER to save your changes.

Tip:
If you want to see which extensions or groups use a specific coverage path, type **display coverage sender group *n***, *where n is the coverage path number. For example, you should determine which extensions use a coverage path before you make any changes to it.*

Defining time-of-day coverage

The Time of Day Coverage Table on your system lets you redirect calls to coverage paths according to the time of day and day of the week when the call arrives. You need to define the coverage paths you want to use before you define the time of day coverage plan.

For example, let's say you want to administer the system so that incoming calls to extension 2054 redirect to a coworker in the office from 8:00 a.m. to 5:30 p.m. and to a home office from 5:30 p.m. to 8:00 p.m. on weekdays. You want to redirect the calls to voice mail after 8:00 p.m. weekdays and on weekends.

To set up a time-of-day coverage plan that redirects calls for our example above:

1. Type **add coverage time-of-day next** and press RETURN.

   The system displays the Time of Day Coverage Table and selects the next undefined table number in the sequence of time-of-day table numbers. If this is the first time-of-day coverage plan in your system, the table number is 1.

Record the table number so that you can assign it to extensions later.

2. To define your coverage plan, enter the time of day and path number for each day of the week and period of time.

```
                        TIME OF DAY COVERAGE TABLE

        Act   CVG      Act   CVG      Act   CVG      Act   CVG      Act   CVG
        Time  PATH     Time  PATH     Time  PATH     Time  PATH     Time  PATH
Sun      0:00 3          :               :               :               :
Mon      0:00 3        08:00 1         17:30 2         20:00 3         __:__ _____
Tue      0:00 3        08:00 1         17:30 2         20:00 3         __:__ _____
Wed      0:00 3        08:00 1         17:30 2         20:00 3         __:__ _____
Thu      0:00 3        08:00 1         17:30 2         20:00 3         __:__ _____
Fri      0:00 3        08:00 1         17:30 2         20:00 3         __:__ _____
Sat      0:00 3          :               :               :               :
```

Time of Day Coverage Table screen

Enter time in a 24-hour format from the earliest to the latest. For this example, assume that coverage path 1 goes to the coworker, path 2 to the home, and path 3 to voice mail.

Define your path for the full 24 hours in a day. If you do not list a coverage path for a period of time, the system does not provide coverage for that time.

3. Press ENTER to save your changes.

Now assign the time-of-day coverage to a user. For example, we use extension 2054:

1. Type **change station 2054** and press RETURN.

   The station screen for extension 2054 appears.

2. Move your cursor to Coverage Path 1 and type **t** plus the number of the Time of Day Coverage Table.
3. Press ENTER to save your changes.

Now calls to extension 2054 redirect to coverage depending on the day and time that each call arrives.

Defining coverage for calls redirected to external numbers

You can administer the system to allow calls in coverage to redirect to off-net (external) or public-network numbers.

Standard remote coverage to an external number allows you to send a call to an external phone, but does not monitor the call once it leaves your system. Therefore, if the call is busy or not answered at the external number, the call cannot be pulled back to the system. With standard remote call coverage, make the external number the last coverage point in a path.

With newer systems you may have the option to use the Coverage of Calls Redirected Off-Net feature. If this feature is active and you use an external number in a coverage path, the system can monitor the call to determine whether the external number is busy or does not answer. If necessary, the system can redirect a call to coverage points that follow the external number. With this feature, you can have a call follow a coverage path that starts at the user's extension, redirects to the user's home phone, and if not answered at home, returns to redirect to their voice mail box.

The call will not return to the system if the external number is the last point in the coverage path.

To use a remote phone number as a coverage point, you need to define the number in the Remote Call Coverage Table and then use the remote code in the coverage path.

For example, to add an external number (303-538-1000) to coverage path 2, complete the following steps:

1. Type **change coverage remote** and press RETURN.

   The Remote Call Coverage Table appears.

2. Type **93035381000** in one of the remote code fields.

   If you use a digit to get outside of your network, you need to add the digit before the external number. In this example, the system requires a '9' to place outside calls.


```
                        REMOTE CALL COVERAGE TABLE
01: 93035381000_____    16: _________________    31: _________________
02: _________________   17: _________________    32: _________________
03: _________________   18: _________________    33: _________________
04: _________________   19: _________________    34: _________________
05: _________________   20: _________________    35: _________________
06: _________________   21: _________________    36: _________________
07: _________________   22: _________________    37: _________________
08: _________________   23: _________________    38: _________________
09: _________________   24: _________________    39: _________________
10: _________________   25: _________________    40: _________________
11: _________________   26: _________________    41: _________________
12: _________________   27: _________________    42: _________________
13: _________________   28: _________________    43: _________________
14: _________________   29: _________________    44: _________________
15: _________________   30: _________________    45: _________________
```

Remote Call Coverage Table screen

3. Be sure to record the remote code number you use for the external number.

   In this example, the remote code is r01.

4. Press ENTER to save your changes.
5. Type **change coverage path 2** and press RETURN.

   The Coverage Path screen appears.

Tip:
*You can use **display coverage sender group** to determine which extensions or groups use this path before making changes.*

```
                         COVERAGE PATH
                  Coverage Path Number: 2
                                              Hunt after Coverage? n
                      Next Path Number: ____  Linkage:
COVERAGE CRITERIA
    Station/Group Status    Inside Call     Outside Call
              Active?            n               n
                Busy?            y               y
       Don't Answer?             y               y    Number of Rings: 2
                 All?            n               n
 DND/SAC/Goto Cover?             y               y

COVERAGE POINTS

 Terminate to Coverage Pts. with Bridged Appearance? __
   Point1: 4104              Point2: r01             Point3: h77
   Point4: ____              Point5: ____            Point6: ____
```

Coverage Path screen

6. Type **r01** in a coverage Point field.

   In this example, the coverage rings at extension 4101, then redirects to the external number. If you administer Coverage of Calls Redirected Off-Net and the external number is not answered or is busy, the call redirects to the next coverage point. In this example, the next point is Point3 (h77).

If you do not have the Coverage of Calls Redirected Off-Net feature, the system cannot monitor the call once it leaves the network. The call ends at the remote coverage point.

7. Press ENTER to save your changes.

Defining telecommuting coverage

Telecommuting access allows users to change their lead-coverage path or call-forwarding destination no matter where they are. You need to set up coverage paths and assign security codes before telecommuting coverage will work.

To see if telecommuting coverage is enabled on your system, make sure the Feature Access Codes screen contains the correct codes.

1. Type **display feature-access codes** and press RETURN.

   The Feature Access Codes screen appears. Make sure codes are in these fields:

   - Check the Change Coverage Access Code
   - Extended Call Fwd All Activate Busy D/A All fields

   Telecommuters use these codes when they dial into the system.

Your users can make remote changes to lead coverage when the Class of Restriction (cor) screen assigned to their phones has a **y** in the Can Change Coverage field. Users can make remote changes to call forwarding when the Class of Service (cos) assigned to their phones has a **y** in the Extended Forwarding All

and Extended Forwarding B/DA fields. Display the cor and cos screens with the **display** command.

Make sure that Coverage Path 1 and Coverage Path 2 fields are completed on each station screen assigned to people using telecommuting access. The security code field on the station screen must also be completed.

Tip:
*If the security code has been assigned, a * appears in the Security Code field on the station screen.*

To allow users remote access to the system:

1. Type **change telecommuting-access** and press RETURN.
2. Enter the extension that you want remote users to use to access the system.

   All remote users dial this same extension.
3. Press ENTER to save your changes.

If the Telecommuting Access Extension is left blank, you disable the feature for *all* users.

```
                    TELECOMMUTING ACCESS

          Telecommuting Access Extension: ____
```

Telecommuting access screen

SECURITY ALERT:

Invalid extensions and station security codes are logged as security violations. See DEFINITY ECS Administration and Feature Description for information on security violations.

Setting up bridged call appearances

Think of a bridged call appearance as a phone (the primary set) with an extension (the bridged-to appearance). Both phones can be used to call in and out and both show when a line is in use. A call to the primary phone is bridged to a specific appearance, or button, on the secondary phone. The secondary phone retains all its functions, and a specific button is dedicated as the bridged-to appearance from the primary phone.

Bridged call appearances have to be assigned to phones with double-lamp buttons, or lights. The phone types do not need to match, but as much consistency as possible is recommended for all phones in a bridged group. When a call comes in on bridged phones, the buttons assigned to the bridged appearances flash. You can assign as many bridged appearances as there are line appearances on the primary phone, and you can assign ringing (alerting) to one or more of the phones.

To create a bridged call appearance:

1. Note the extension of the primary phone.

   A call to this phone lights the button and, if activated, rings at the bridged-to appearance on the secondary phone.

2. If you want to use a new phone for the bridged-to extension, duplicate a station (see “Managing phones”).

3. Type **change station** and the bridged-to extension and press RETURN.

   The station screen appears.

```
                                STATION

  FEATURE OPTIONS
          LWC Reception? _______          Auto Select Any Idle Appearance? _
        LWC Activation? _                       Coverage Msg Retrieval? _
           CDR Privacy? _                                 Auto Answer? __
  Redirect Notification? _                          Data Restriction? _
Per Button Ring Control? _                  Idle Appearance Preference? _
  Bridged Call Alerting? _
 Active Station Ringing: ______               Restrict Last Appearance? _
                                                        Data Module? _

                  XID? _     Fixed TEI? _    TEI: __
            MIM Support? _   Endpt Init? _   SPID: ____   MIM Mtce/Mgt? _
             AUDIX Name: ______
  Messaging Server Name: ______                Audible Message Waiting? _
                                                     Disp Client Redir? _
                                          Select Last Used Appearance? _
```

Station screen

4. Press NEXT PAGE until Per Button Ring Control appears (digital sets only).
   - If you want to assign ringing separately to each bridged appearance, type **y**.
   - If you want all bridged appearances to either ring or not ring, leave the default **n**.
5. Move to Bridge Call Alerting.
   - If you want the bridged appearance to ring when a call arrives at the primary phone, type **y**.
   - If you do not want the bridged appearance to ring, leave the default **n**.

6. Complete the appropriate field for your phone type.

If. . .	Then. . .
your primary phone is analog	move to the Line Appearance field and enter **abrdg-appr**
your primary phone is digital	move to the Button Assignments field and enter **brdg-appr**

7. Press RETURN.

   Btn and Ext fields appear.

   If Per Button Ring Control is set to **y** on the digital screen, Btn, Ext, and Ring fields appear.


```
                                    STATION
 SITE DATA
      Room: _______                                    Headset? n
      Jack: _______                                    Speaker? n
     Cable: _______                                   Mounting? d
     Floor: _______                                 Cord Length: 0
  Building: _______                                   Set Color: ______

ABBREVIATED DIALING
     List1: ___________       List2: _________       List3: _________

HOT LINE DESTINATION

         Abbreviated Dialing List Number (From above 1, 2 or 3):
                                                      Dial Code:
      Line Appearance:  brdg-appr   Btn:     Ext:
```

Station screen (analog set)

```
                                   STATION
 SITE DATA
       Room: _______                                  Headset? n
       Jack: _____                                    Speaker? n
      Cable: _____                                   Mounting: d
      Floor: _______                               Cord Length: 0
   Building: _______                                 Set Color: ______


 ABBREVIATED DIALING
      List1: ________           List2: ________           List3: ________

 BUTTON ASSIGNMENTS
   1: brdg-appr  Btn:   Ext:      Ring:
   1: brdg-appr  Btn:   Ext:      Ring:
```

Station screen (digital set)

8. Enter the primary phone's button number that you want to assign as the bridged call appearance.

   This button flashes when a call arrives at the primary phone.

9. Enter the primary phone extension.
10. If the Ring field appears:
    - If you want the bridged appearance to ring when a call arrives at the primary phone, type **y**.
    - If you do not want the bridged appearance to ring, leave the default **n**.
11. Press ENTER to save your changes.

To see if an extension has any bridged call appearances assigned, type **list bridge** and the extension, and press RETURN.

Enhancing system security

This section explains how to add and modify user logins. It also provides an introduction to phone system security issues. It describes possible security problems you should be aware of and gives you instructions for detecting these problems.

Tip:

If your organization has not yet completed the Service Agreement Indemnity Enhancement Certification, we highly recommend that you call the Security Hotline at the World-class Customer Service Center (1 800 643-2353) and ask how to become certified. When you complete this certification and administer your DEFINITY system according to Lucent's fraud prevention requirements, Lucent will indemnify your organization for charges associated with Toll Fraud.

Assigning and changing users

The system allows you to add or change user logins as needed. When you want to add or change a login, remember the following DEFINITY system security requirements:

- a login must be 3 to 6 alphanumeric characters in length
- a password must be from 4 to 11 alphanumeric characters in length and contain at least one non-alphabetic character.

Note that to create or change logins for G3V3 and later releases, you must login as a superuser with administrative permissions.

Assigning new logins and passwords

As you work as an administrator, you may be fortunate enough to have help administering your switch or you may want to have an assistant to make changes to the switch while you are out of the office. In these cases, you should set up a new user in the system and limit what this individual can do. As you'll see, adding logins is very easy.

Tip:
You increase system security when you choose the longest possible password with a mix of lowercase and uppercase numbers and letters.

The following example shows you how to add a new login called angi3 with a password of b3stm0m.

To add this user and password, log in with a superuser ID and complete the following steps:

1. Type **add login angi3** and press RETURN.

   Use the new login name as part of the add command.

   The Login Administration screen appears. The Login's Name field shows the name you typed in the add command; other fields contain defaults.


```
                    LOGIN ADMINISTRATION

       Password of Login Making Change:

       LOGIN BEING ADMINISTERED
                          Login's Name: angi3
                            Login Type: customer
                         Service Level: non-super-user
Disable Following a Security Violation? y
                  Access to INADS Port? n

        LOGIN'S PASSWORD INFORMATION
                      Login's Password:
              Reenter Login's Password:
    Password Aging Cycle Length (Days):

    LOGOFF NOTIFICATION
    Facility Test Call Notification? y     Acknowledgment Required? y
         Remote Access Notification? y     Acknowledgment Required? y
```

Login Administration screen

2. Complete the following fields:
   - Password of Login Making Change

     This is *your password*.
   - Login's Password

     Assign an initial password for the new login. We'll type in **b3stm0m** as part of our example. The password does not appear on the screen as you type.
   - Re-enter Login's Password
3. Press ENTER to save your changes.

Setting login permissions

Once you add the new user, you should review the user's command permissions and modify them, if necessary.

To review command permissions for our new example login:

1. Type **change permissions angi3** and press RETURN.

   Use the new login name as part of the add command. The Command Permission Categories screen appears.

```
                        COMMAND PERMISSION CATEGORIES
                          Login Name: angi3
COMMON COMMANDS
              Display Admin. and Maint. Data? n
                         System Measurements? n
ADMINISTRATION COMMANDS
          Administer Stations? n                 Administer Features? n
            Administer Trunks? n              Administer Permissions? n
     Additional Restrictions? n
MAINTENANCE COMMANDS
            Maintain Stations? n       Maintain Switch Circuit Packs? n
              Maintain Trunks? n      Maintain Process Circuit Packs? n
              Maintain System? n
```

Command Permission Categories screen

2. If you want the default permissions, press CANCEL.
3. If you want to change any permissions, enter **y** to give the user access or **n** to restrict access for each permission type.
4. Press ENTER to save your changes.

Changing passwords

You should change your passwords often.

Tip:
To force users to change passwords, set password aging in the Login Administration screen.

To change the password (b3stm0m) for angi3:

1. Type **change password angi3** and press RETURN.

   The Password Administration screen appears.

2. Complete the following fields:

   - Password of Login Making Change

     This is *your password* that you used to login to the session.

   - Login Name
   - Login's Password
   - Reenter Login's Password

3. Press ENTER to save your changes.

Changing logins

Occasionally you'll need to change permissions for a user's login. For example, you may want to change a login so that the user must change their password every 30 days (a good rule of thumb).

To change the password aging for our new login, angi3:

1. Type **change login angi3** and press RETURN.

   The Login Administration screen appears with the current information for angi3.

2. Type **30** in the Password Aging Cycle Length (Days) field.

3. Press ENTER to save your changes.

Preventing toll fraud

An important role for every administrator is to manage the security of their phone system. You need to make every effort to ensure that your phone system is not open to toll fraud. Toll fraud is the unauthorized use of telephone features and services and the theft of long distance service. When toll fraud occurs, your company is responsible for charges.

For more information on system security and preventing toll fraud, we recommend you obtain the *BCS Products Security Handbook* and use it often.

⚠ SECURITY ALERT:

When you suspect toll fraud, call the Security Hotline immediately (1 800 643-2353).

Top 10 tips to help prevent toll fraud

You can reduce your company's risk of toll fraud by following a few important guidelines.

1. Protect system administration from unauthorized access.

   Make sure all system administration and maintenance logins are secure. Change your passwords frequently.

2. Deny unauthorized remote access.

   If you do not use remote access, disable all its related features. If you use remote access, require barrier codes and set your authorization codes, if applicable, at the maximum length. Also, change these codes frequently.

3. Restrict individual ability to make international calls.

   Set up class of restriction groups to allow only certain people to call international numbers required for your business.

4. Protect access to information stored in voice mail.

   Require passwords for access to voice mailboxes. Use complicated passwords and change the passwords regularly.

5. Deny any transfer from a voice mail system to a dial tone.

   Place restrictions on the ports that allow access to and from your voice mail system. Activate "secure transfer" features in voice mail systems.

6. Use system software to intelligently control call routing.

   Set up your system to control how each call is handled or routed. If possible, use time-of-day routing to limit the use of your system during off hours.

7. Place protection on systems that ask callers to dial digits.

   Restrict certain users' access to dial tone. Restrict the digit combinations dialed at prompts.

8. Monitor traffic and system activity for suspicious call patterns.

   Use your traffic reports and call detail records to monitor call activity. Activate features that deny access to your system when unauthorized attempts are detected.

9. Provide physical security for telecommunications assets.

   Restrict unauthorized access to equipment rooms and wire connection closets. Keep translation backups, system manuals, and reports in a safe place.

10. Educate system users to recognize toll fraud activity and react appropriately.

    Train your users how to protect themselves from inadvertent compromises to system security.

Using reports to detect problems

Call Detail Recording

Call Detail Recording (CDR) collects detailed information about calls handled by your system. This CDR information can be sent directly to a printer or into call accounting software. You can use the printed CDR output or call accounting reports to monitor calls on your system and look for possible toll fraud problems.

Review your call accounting reports or CDR output each day to help detect possible toll fraud. When reviewing these records, look for:

- unusual calling patterns
  - — numerous calls to the same number
  - — calls outside of normal business hours
  - — long calls
- calls to suspicious destinations, including international calls not typical for your business
- patterns of authorization code usage (same code used simultaneously or high activity)
- high numbers of “ineffective call attempts” indicating attempts at entering invalid codes
- undefined account codes

If you are unfamiliar with reading CDR printed output, you’ll want to refer to the description of CDR in the *DEFINITY ECS Administration and Feature Description*.

If your organization uses call accounting software to analyze your CDR output, you probably receive formatted reports that list the information you need to detect possible toll fraud. If you have questions about reading your call accounting reports, refer to your call accounting software manuals.

Security Violations Notification

You can administer Security Violations Notification so that the system notifies you and provides reports when users enter invalid information. You want to know about the following types of violations, which may indicate an attempt to breach your security:

- login violations
- remote access barrier code violations
- authorization code violations
- station security code violations

For example, let's have the system notify us at extension 80000 when someone tries to enter more than 3 invalid authorization codes within a 1-minute time span.

To set up Security Violations Notification for our example:

1. Type **change system-parameters security** and press RETURN.

   The Security-Related System Parameters screen appears.


```
                    SECURITY-RELATED SYSTEM PARAMETERS

SECURITY VIOLATION NOTIFICATION PARAMETERS

 SVN Login Violation Notification Enabled? n


 SVN Remote Access Violation Notification Enabled? n


SVN Authorization Code Violation Notification Enabled? y
       Originating Extension: _____     Referral Destination: 80000
Authorization Code Threshold: 3_              Time Interval: 0:01
      Announcement Extension: _____
```

Security-Related System Parameters screen

2. In the SVN Authorization Code Violation Notification Enabled field, type **y** and press RETURN.

   Additional fields now display on the screen.

3. In the Originating Extension field, type the extension you want the system to use to originate the call.

   Use the extension of an unused non-dial station.

4. Enter **80000** in the Referral Destination field.

   Use the extension you want the system to notify.

5. If the referral destination is on a different system or is a non-display phone, fill in the Announcement Extension field.

6. Enter **3** in the Authorization Code Threshold field.

   Enter the maximum number of invalid entry attempts you want to allow.

7. Enter **0:01** (1 minute) in the Time Interval field.

   Use an hour:minute format for the amount of time you want the system to use for the monitor interval.

8. Press ENTER to save your changes.

Viewing security reports

Your system generates two types of Security Violations reports:

- Security Violations Detail report — displays the number of successful and failed login attempts by login ID.
- Security Violations Summary report — displays valid and failed access attempts, as well as security violations for logins, authorization codes, barrier codes, and station security codes.

To display a Security Violations Detail report and see a list of login data:

1. Type **list measurements security-violations detail** and press RETURN.

To display a Security Violations Summary report:

1. Type **list measurements security-violations summary** and press RETURN.

Printing security reports

You may want to keep a paper copy of a Security Violations report to monitor security trends for a specific time period.

To print a Security Violations Summary report to the slave printer associated with the administration terminal:

1. Type **list measurements security-violations summary print** and press RETURN.

To print a Security Violations Summary report to the system printer:

1. Type **list measurements security-violations summary schedule** and press RETURN.

   The system prompts whether you want to print the report immediately or schedule to print it later.

2. Enter the appropriate Print Interval and press ENTER to send the report.

Clearing security reports

Once you review the security measurement reports, you may want to clear the current measurements and reset the Counted Since field.

To clear measurements for security violations and reset the counter:

1. Type **clear measurements security-violations** and press RETURN.

Keeping records

Record keeping plays a vital role in system administration. Your records should provide a current status of what hardware and features are installed on your system. Your records also help you determine which phone features are available for your users.

Whether you are the administrator of a new or existing switch, follow your own company policy concerning keeping records. We have included the information below only as a guide. Our list contains different types of information for you to consider, but you need to determine which method of record keeping works best for you and your organization.

Paper records

Your DEFINITY switch keeps an electronic record of your system configuration and any changes you make.

A common method for keeping paper records is to print copies of screens and reports so you have backup copies of the information stored on your system. If you use this method, be sure to keep the copies in a safe and easy-to-access location.

If you end a list or display command with the command **print**, the system prints a paper copy of the selected list or display screen to the slave printer associated with the administration terminal. For example, to print a list of stations that are currently administered

on your system, complete the following steps at the command prompt:

1. Type **list station print**
2. Press RETURN.

Tip:
To print a screen or report to the system printer, end a list or display command with the word ***schedule****. The system then prompts you to select to print immediately or schedule printing,*

Planning information

You should keep current copies of each of the following system lists in your records. If you ever need to replace information because of a system failure, these lists help Lucent rebuild your system.

Use the following commands to print general system lists, and save these lists as your paper records:

- **display dialplan print** — prints your dialing parameters
- **display system-parameters customer-options print** — prints the current version and shows which features have been enabled on your system
- **display system-parameters features print** — prints the parameter settings for features on your system
- **display feature-access-codes print** — prints the current feature access codes by feature
- **list configuration all print** — prints your slot and port assignments

- **list extension-type print** — prints information for each extension on your system
- **list station print** — prints information for each station on your system
- **list data print** — prints information for each data module on your system
- **list *type* group print** — where *type* can be replaced with hunt, trunk, pickup, and so on. Prints parameters for the specified group.
- **list coverage path** — prints each defined coverage path and each of the coverage points

In addition to the above reports, you may want to periodically print other lists, traffic reports, or security reports to monitor the use of your system.

Specific extension information

You'll probably want to keep both system and individual extension records. To keep extension records, print a copy of the station form for each extension.

For example, to print a station form for extension 4567:

1. Type **display station 4567 print** and press RETURN.

As another example, to print a station form for data module 5567:

1. Type **display data 5567 print** and press RETURN.

Other information

You may find that you want to keep track of information that is not stored on the system and is specific to your company, such as:

- switch locations and handles (names)
- groups of extensions you've reserved for certain departments or types of lines
- login names and privileges
- customized soft-key assignments

Basically, you can track whatever information is appropriate for your company. And you can decide whether you want to keep just paper copies or perhaps design a computer database to track all your system information. It is up to you.

Remember that the better records you keep, the better able you'll be to solve problems, reconstruct information, and make the best use of the features on your DEFINITY system.

Troubleshooting

Using features to troubleshoot

You can use some DEFINITY features to help you identify if your system is having problems or to help you diagnose problems you know are occurring. This section shows you how to use the following features to troubleshoot your phone system:

- Automatic Circuit Assurance
- Busy Verify
- Facility Busy Indication
- Facility Test Calls
- Terminal Alarm Notification
- Trunk Identification
- Busy & Release

Automatic Circuit Assurance

You can use Automatic Circuit Assurance (ACA) to help you identify possible faulty trunks.When ACA is turned on, your system notifies you when it detects anomalies in trunk usage. This notification is called a referral call. The system sends you an ACA referral call whenever the system detects large numbers of very short calls or detects very long calls.

The referral call arrives on an idle call appearance. If you answer the call, your display shows:

- that the call is an ACA call
- the trunk-group access code
- the trunk-group member number
- the reason for the referral (short or long holding time).

To use ACA on a G3V2 or older switch:

1. Assign an ACA button to your phone.
2. Press the ACA button to activate your phone for referrals.
3. When you receive an ACA referral call, answer the call.
4. Record the information listed on your display to use for further troubleshooting.

To use ACA on a G3V3 or newer switch:

1. Assign an ACA-Halt button to your phone.
2. Leave the ACA-Halt button OFF to keep your phone active for referrals.
3. When you receive an ACA referral call, answer the call.
4. Record the information listed on your display to use for further troubleshooting.

Busy Verify

You can use Busy Verify to place test calls to check the busy condition of trunks, phones, or hunt groups. This test helps you determine if the trunk, phone, or hunt group is truly busy or busy because of a problem.

To use Busy Verify, you should administer a Busy Verify button on your phone.

To busy-verify a phone

1. Press the Busy Verify button on your phone.

   The busy verify light turns green.

2. Dial the extension of the phone you want to test.

   You hear a tone and see a display. The following table describes what the tone and display indicate and how to respond.

display	tone	status of extension	next step
INVALID	intercept	invalid number	cancel and try again
TERMINATED	ringback	idle and ringing (working properly)	release the call
BRIDGED	none	bridged onto active call (working properly)	release the call
OUT OF SERVICE	reorder	trouble condition or station was administered without hardware and no coverage path	cancel and report an out-of-service condition

To busy-verify a hunt group

1. Press the Busy Verify button on your phone.

   The busy verify light turns green.

2. Dial the extension for the hunt group you want to test.

   You hear a tone and see a display. The following table describes what the tone and display indicate and how to respond.

display	tone	status of extension	next step
INVALID	intercept	invalid number	cancel and try again
TERMINATED	ringback	idle and ringing	release the call
ALL MADE BUSY	reorder	made busy is active	release the call and try again later
DENIED	reorder	active on a call	release the call and try again later
OUT OF SERVICE	reorder	trouble condition or station was administered without hardware	cancel and report an out-of-service condition

To busy-verify a trunk:

1. Press the Busy Verify button on your phone.

   The busy verify light turns green.

2. Dial the trunk access code for the trunk you want to test.

   Your display should be blank and you should hear dial tone. If your display shows “DENIED” and you hear intercept tone, you need to repeat steps 1 and 2.

If you have trunk group select buttons on your phone, you can also press the Busy Verify button and then press the Trunk Group Select button for the appropriate trunk.

3. Dial the trunk-group member number you want to verify.

   You hear a tone and see a display. The following table describes what the tone and display indicate and how to respond.

display	tone	status of extension	next step
INVALID	intercept	invalid	cancel and try again
VERIFIED	confirmation	idle and ringing (working properly)	release the call
none	ringback	idle automatic or release link (working properly)	release the call
none	dial tone	idle (working properly)	release the call
BRIDGED	none	bridged onto active call (working properly)	release the call
OUT OF SERVICE	reorder	trouble condition	cancel and report an out-of-service condition

Facility Busy Indication

You can use Facility Busy Indication to display the idle or busy condition of phones, trunks, or paging zones.

To use this feature you need to add facility busy indication buttons to your phone. Label the facility busy buttons as “Busy” followed by the number or name of the facility being monitored.

If the green light associated with the Facility Busy Indication button stays lit for a long time, the facility may have a problem.

Facility Test Calls

You can use Facility Test Calls to place test calls to specific trunks, receivers, timeslots, or system tones. This feature actually bypasses the system and is very helpful in finding static-filled lines and problems. However, this feature can be easily misused by outside parties. Disable this feature when you are not using it.

SECURITY ALERT:

Whenever you use this feature, enable the feature access code only for the tests you want to make. Be sure to immediately remove the access code when you are through testing because leaving this feature enabled can leave you open to security breaches.

To place a test call to a trunk or touch-tone phone

1. At the system terminal, enable a feature access code for Facility Test Call.
2. At your phone, dial the feature access code for Facility Test Call. Listen for dial tone.
3. Dial the 6- or 7-digit port address.

   The port address uses an *nnxyyzz* format, where:

   nn = cabinet number (01, 02, etc.)

   x = carrier number (A=1, B=2, C=3, D=4, E=5)

   yy = slot number (01-20)

   zz = port number (01-08)

If you have problems with this step, try dialing the port address without the first zero.

You hear a tone and see a display. The following table describes what the tone and display indicate and how to respond.

tone	status	next step
dial	connected	go to step 4
reorder	busy	release the call
intercept	no access	release the call

4. If you are testing a trunk, place the call.
   or
   If you are testing a touch-tone receiver, dial the number.
5. If you receive a dial tone, the test passed.
   or
   If you receive an intercept tone, the test failed.
6. At the system terminal, BE SURE to disable the Facility Test Call feature access code.

To place a test call to a specific timeslot

1. At the system terminal, enable a feature access code for Facility Test Call.
2. At your phone, dial the feature access code for Facility Test Call. Listen for dial tone.
3. Dial ***nn***, where *nn* is the cabinet number.
4. Dial **#** and the 3-digit timeslot number.

5. Listen for one of the following tones.

tone	status
confirmation	idle
reorder	busy
dedicated	See *DEFINITY Voice Terminal Operations* for details on specific slots and corresponding tones

6. At the system terminal, BE SURE to disable the Facility Test Call feature access code.

To place a test call to an out-of-service timeslot:

1. At the system terminal, enable a feature access code for Facility Test Call.
2. Dial the Facility Test Call access code. Listen for dial tone.
3. Dial ***nn***, where *nn* is the cabinet number.
4. Dial ******
5. Listen for one of the following tones.

tone	status
confirmation	connection is made.
reorder	all timeslots are in working order.

6. At the system terminal, BE SURE to disable the Facility Test Call feature access code.

Terminal Alarm Notification

You can administer feature button lamps on your phone to act as alarm indicators. The following table describes the meaning of the green light associated with an alarm button.

status of light	meaning
flashing green	an alarm occurs
steady green	maintenance is notified and acknowledges alarm
light goes off	an alarm is resolved

You can press the alarm button to turn off the light. However, the light flashes again if the alarm is still active when the next system test is run.

Trunk Identification

You can identify a faulty or noisy trunk with Trunk Identification. You can use Trunk Identification at these times:

- on an active call
- while a trunk is being accessed
- while digits are being outpulsed on a trunk
- during intervals between digit outpulsing

To identify a specific trunk being used on a call:

1. Press the Trunk ID button.

   Trunk access code and trunk group member number appear.

If 2 trunks are used on the call, the identification of the last trunk added to the call is displayed. If more than 2 trunks are on a call, Trunk Identification is denied.

2. Report the trunk problem and the identification information to the appropriate maintenance personnel.

Preparing to contact Lucent

Do you need to call the Lucent Helpline?

If you do, please have the following information handy. This helps the person taking your call find the answer to your question.

- Your installation location ID (also called your IL)

  _____

  (Write your IL number here for easy reference)

- Your name
- Your phone number (in case we need to call you back)
- Your company's main listed phone number
- The task you want to accomplish, complete with all the numbers involved in the task (for example, phone numbers, trunk numbers, type of phones, or type of report)

Notes

Glossary

A

Abbreviated Dialing
: A feature that allows callers to place calls by dialing just one or two digits.

access code
: A dial code used to activate or cancel a feature, or access an outgoing trunk.

analog phone
: A phone that receives acoustic voice signals and sends analog electrical signals along the phone line.

attendant
: A person at a console who provides personalized service for incoming callers and voice-services users by performing switching and signaling operations.

attendant console
: The workstation used by an attendant. The attendant console allows the attendant to originate a call, answer an incoming call, transfer a call to another extension or trunk, put a call on hold, and remove a call from hold. Attendants using the console can also manage and monitor some system operations.

Audio Information Exchange (AUDIX)
: A fully integrated voice-mail system. Can be used with a variety of communications systems to provide call-history data, such as subscriber identification and reason for redirection.

Automatic Alternate Routing (AAR)
: A feature that routes calls to alternate routes when facilities are unavailable.

Automatic Circuit Assurance (ACA)
A feature that tracks calls of unusual duration to facilitate troubleshooting.

Automatic Route Selection (ARS)
A feature that allows the system to automatically choose the least-cost way to send a toll call.

B

barrier code
A security code used with Remote Access to prevent unauthorized access.

bridge (bridging)
The appearance of a phone's extension at one or more other phones.

bridged appearance
A call appearance on a phone that matches a call appearance on another phone for the duration of a call.

C

call appearance
For the phone or attendant console, a button labeled with an extension and used to place outgoing calls, receive incoming calls, or hold calls. Lights next to the button show the status of the call appearance.

Call Detail Recording (CDR)
A feature that uses software and hardware to record call data.

carrier
An enclosed shelf containing vertical slots that hold circuit packs.

central office (CO)
The location of phone switching equipment that provides local phone service and access to toll facilities for long-distance calling.

circuit
A channel or transmission path between two or more points.

Class of Restriction (COR)
A feature that defines call-origination and call-termination restrictions.

Class of Service (COS)
A feature that determines whether users can activate certain features.

coverage answer group
A group of phones that ring simultaneously when a call is redirected to it.

coverage path
The order in which calls are redirected to alternate answering positions.

coverage point
An extension designated as an alternate answering position in a coverage path.

D

data module
An interconnection device between the switch and data equipment.

E

extension
A number by which calls are routed through a communications system.

external call
A connection between a communications system user and a party on the public network or on another communications system in a private network.

F

facility
A telecommunications transmission pathway and associated equipment.

feature button
A button on a phone or attendant console used to access a specific feature.

H

hunt group
A group of extensions that are assigned the Station Hunting feature so that a call to a busy extension reroutes to an idle extension in the group.

I

internal call
A connection between two users on the same phone system.

M

major alarm
An indication of a failure that requires immediate attention.

minor alarm
An indication of a failure that could affect customer service.

multiappearance phone
A phone equipped with several call-appearance buttons allowing the user to handle more than one call on that same extension at the same time.

P

pickup group
A group of individuals authorized to answer any call directed to an extension within the group.

port carrier
A carrier in a cabinet containing port circuit packs, power units, and service circuits. Also called a port cabinet.

primary extension
The main extension associated with the physical phone or data terminal.

principal
A phone that has its primary extension bridged on one or more other phones.

public network
The network that can be openly accessed by all customers for local and long-distance calling.

R

redirection criteria
Information administered for each phone's coverage path that determines when an incoming call is redirected to coverage.

S

system administrator
: The person who maintains overall customer responsibility for system administration.

system printer
: An optional printer that may be used to print scheduled reports via the report scheduler.

system report
: A report that provides historical traffic information for internally measured splits.

T

trunk
: A dedicated telecommunications channel between 2 phone systems or COs.

trunk group
: Telecommunications channels assigned as a group for certain functions that can be used interchangeably between two communications systems or COs.

U

Uniform Dial Plan (UDP)
: A feature that allows a unique 4- or 5-digit number assignment for each point in a multiswitch system.

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Bell Labs DEFINITY ECS site

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http://www.lucent.com/enterprise/sig/develop/

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You've told us that you want step-by-step instructions on everyday administration tasks for your DEFINITY system, and we've been listening. This book contains the information you need for basic telephone system administration.