ONYX™ VS

Administrator's Guide

For your convenience, an alphabetized VS Feature List is provided at the end of this guide.

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How To Use This Guide

The ONYX VS Administrator's Guide is divided in two parts:

- Part I: ONYX VS Features
- Part II: ONYX VS Programs

Use Part I to learn about the ONYX VS features.

Part I describes each VS feature, its operating instructions, and its programming requirements.

The VS features are arranged in 10 categories.[1] Each category contains features that have similar functions. The first nine categories are essentially telephone user features. The tenth category, *Understanding Other ONYX VS Features*, describes system features; that is, VS features that are, for the most part, transparent to the telephone user.

For more detailed information on using Part I, see, About Part I: An Introduction, on page 2.

Use Part II to customize (program) the ONYX VS features.

Part II contains the programs you use to customize the VS features. Part II describes each program and its data codes, and shows you how to enter those data codes into VS system memory from a special programming extension.

The programs are arranged in numerical order (1-20), and divided into four categories. The first three categories are system, line, and extension programs. The fourth category contains only Program 20. Program 20 resets (initializes) the system.

IMPORTANT
When you program the system for the first time, run Program 20 before any others. Program 20 initializes your system.

For more detailed information on using Part II, see, About Part II: An Introduction, on page 186.

[1] For your convenience, an alphabetized VS feature list is provided at the end of this guide.

About Related Documents

Below are the related ONYX VS documents:

- ONYX VS Program Record Form (P/N 01853PRF02)
  Lets you record the data codes for each VS program and shows you how to enter the data codes into memory
- ONYX VS Hardware Manual (01853INS01)
  Describes the VS equipment and shows you how to install it
- ONYX Feature and Terminal Programming Manual (P/N 01850SWG02).
  Describes the VS features and shows you how to program them from a terminal connected to the AUX module
- ONYX Multibutton Telephone Feature Handbook (01850MFH02)
  Shows you how to use the VS features from a Multibutton Telephone
- ONYX Multibutton Telephone Quick Reference Guide (01850MBG02)
  Shows you how to use the VS features from a Multibutton phone (only the most commonly-used features are included with abbreviated instructions)
- ONYX System Attendant's Guide (01850ATG02)
  Shows you how to use the VS features from an Attendant Telephone

Part I:
ONYX VS Features

About the VS Features

Each VS feature in Part I contains the following:

- A description
- An application/benefit in a shaded box. For example, the benefit box for Call Parking looks like this:

> ***With Call Parking you can:***
>
> ***Be sure a call gets sent to a person even when you don't know what part of the building they are in.***

Then you will see the following headings:

- **Initial Configuration**, which tells you how the feature was programmed at the factory.
- **Using the Feature**, which tells you how to operate the feature. The last category of features, *Understanding Other VS Features*, does not have operating instructions since it does not include telephone user features. To find operating instructions for an Analog Station Interface see Analog Station Interface on page 14.
- **Understanding Related Programming**, which lists the VS programs you would use to customize the feature.

How to Use Part I

To use Part I of this guide:

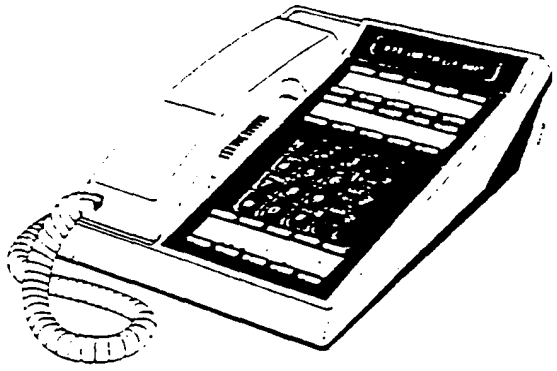
1. Read about a feature the customer desires.
2. Check its **Initial Configuration**.
3. If the initial configuration meets the customer's needs: Read about another feature the customer desires.

   OR

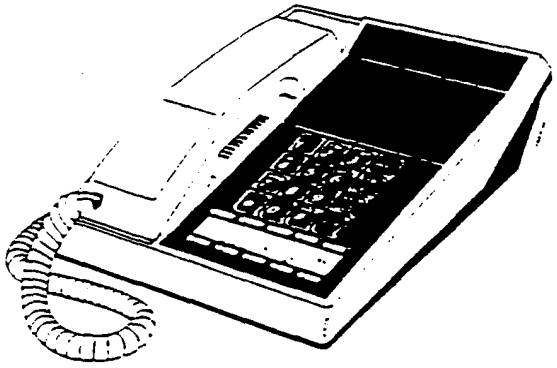
   If the initial configuration does not meet the customer' needs: Check the required programs under the heading, **Understanding Related Programming** and find them in Part II. For instructions on using Part II, see, About Part II: An Introduction, on page 186.

About the Phones

The Multibutton Phones



30-Button Display Telephone



10-Button Telephone

The following types of ONYX VS Multibutton Telephones are available:

Modular Telephones

- 30-Button Modular Telephone (P/N 88160)
- 30-Button Modular Telephone with Handsfree (P/N 88161)
- 30-Button Modular Telephone with Display and Handsfree (P/N 88163A)
- 10-Button Modular Telephone (P/N 88155)
- 10-Button Modular Telephone with Handsfree (P/N 88154)

Non-Modular Telephones

- 30-Button Non-Modular Telephone (P/N 88260)
- 30-Button Non-Modular Telephone with Handsfree (P/N 88261)
- 30-Button Non-Modular Telephone with Display and Handsfree (P/N 88263)

Attendant Telephone

- Attendant Telephone (P/N 88254)

Modular telephones allow you to upgrade the performance of the phone without replacing it. For example, you can add a plug-in module to change a 10-button telephone into a 30-button telephone. Or, you can enhance your phone with Handsfree or a display. The available modules are:

- Handsfree (Speakerphone) Module (P/N 88170)
- 20-Button Module (P/N 88171)
- 20-Button Module with Display (P/N 88176)

Modular telephones also have dual mode (red/green) LEDs (feature lamps). These LEDs help you identify your own calls.

Non-modular telephones provide all the features of modular telephones, but are not field upgradeable. Additionally, non-modular telephones have red LEDs with distinctive flash rates, rather than dual mode LEDs.

The Multibutton Phones (cont'd)

Handsfree (see 43) and Monitor (see 45) let you use a Multibutton Phone without lifting the handset.

The display on a Display Phone shows the time and date when the phone is idle. It also shows messages when you use or program certain features. For example, the display shows the number of an extension that is calling you. For a listing of display messages, see The Display Messages on page 144.

The Display Phone also provides a few features not available to a Standard Multibutton Phone:
- Call Timer (see page 137)
- Dialing Number Preview (see page 54)
- Directory Dialing (see page 55)
- Selectable Display Messages (see page 129)
- Viewing Message Waitings (see page 124)

If you are an attendant, you can use the Attendant Telephone as an alternative to the 30-button display phone. The attendant's phone gives you all the features of the 30-button display, plus:
- 18 programmable keys (instead of 24)
- Styling matched to the Direct Station Selection Console (see page 59)

Note: Each CEU can support six modular display telephones (including the Attendant Telephone), or any number of non-modular display phones.

Initial Configuration
N/A

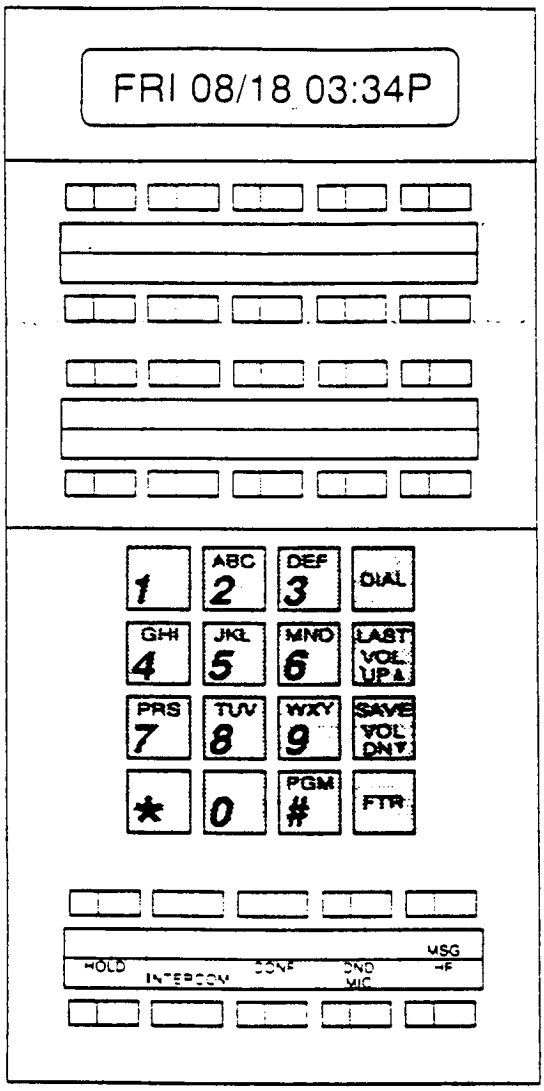
Using the Feature

See the desired feature.

Understanding Related Programming

Program 14	To assign a circuit (phone) type to an extension port (the system does, however, assign the correct circuit type when you plug in a phone)
	To assign a name to an extension (this name appears in displays that would otherwise show the extension's number)

The Dialpad Buttons



The 16 Dialpad Buttons (shaded) let you:

- Dial calls
- Program certain features
- Activate features
- Control the volume of calls and certain features

The function of each key is as follows:

0-9, *, #
For dialing calls

PGM#
For programming features

DIAL
For Speed Dial (see page 66), Last Number Redial (see page 64), and Save (see page 65)

LAST
For Last Number Redial (see page 64)

SAVE
For Save (see page 65)

VOL UP ▲ and VOL DN ▼
For raising or lowering the volume of Background Music, incoming pages, ringing, and Handsfree or handset voice levels (see page 48). In non-modular phones, also for controlling the brightness of the display.

FTR
For Flash (see 49)

Initial Configuration
Dialpad buttons always have these functions

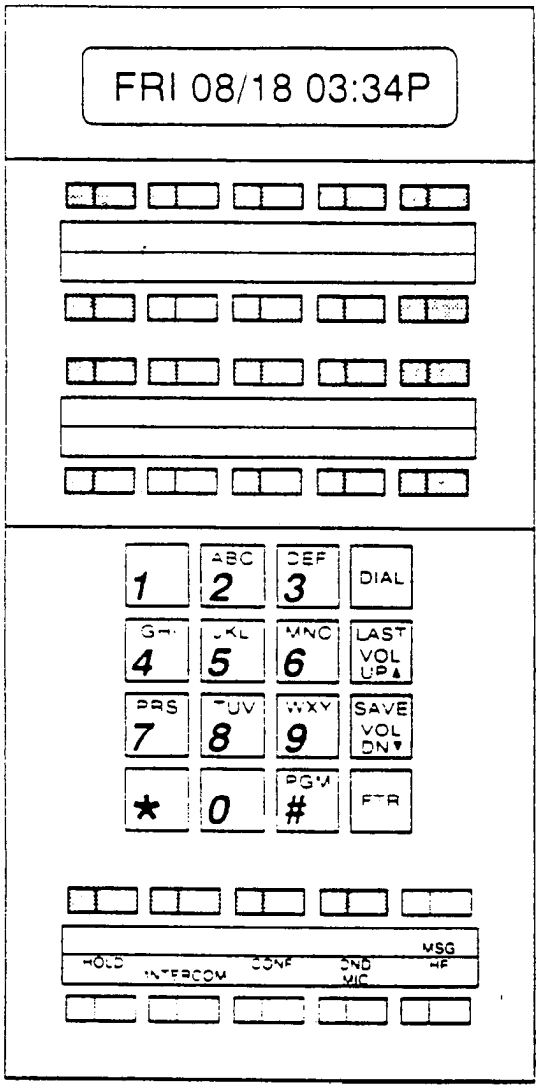
Using the Feature

See the page references for a key.

Understanding Related Programming

N/A

The Programmable Keys



The 30-button phone has 24 Programmable Keys (shaded), numbered 1-24. The keys are numbered from left to right in each row (e.g., keys 1-5 are in the first row). The 10-button phone has four Programmable Keys (numbered 21-24).

Each key can be assigned a function, through system programming, so you can just press the key to activate the assigned function.

The available functions for a programmable key are listed below:

Line key
For Placing an Outside Call (see page 26) and Answering an Outside Call (see page 30)

Park Orbit
For Call Parking (see page 119)

One-Touch Speed Dial
For Speed Dial (see page 66)

Hotline
For Hotline (see page 62)

Loop Group
For Placing an Outside Call/Using Direct Line Group Access (see page 26)

Loop Switch
For Answering an Outside Call (see page 30)

Pickup Group
For Group Call Pickup (see page 93)

Call Coverage
For Call Coverage (see page 90)

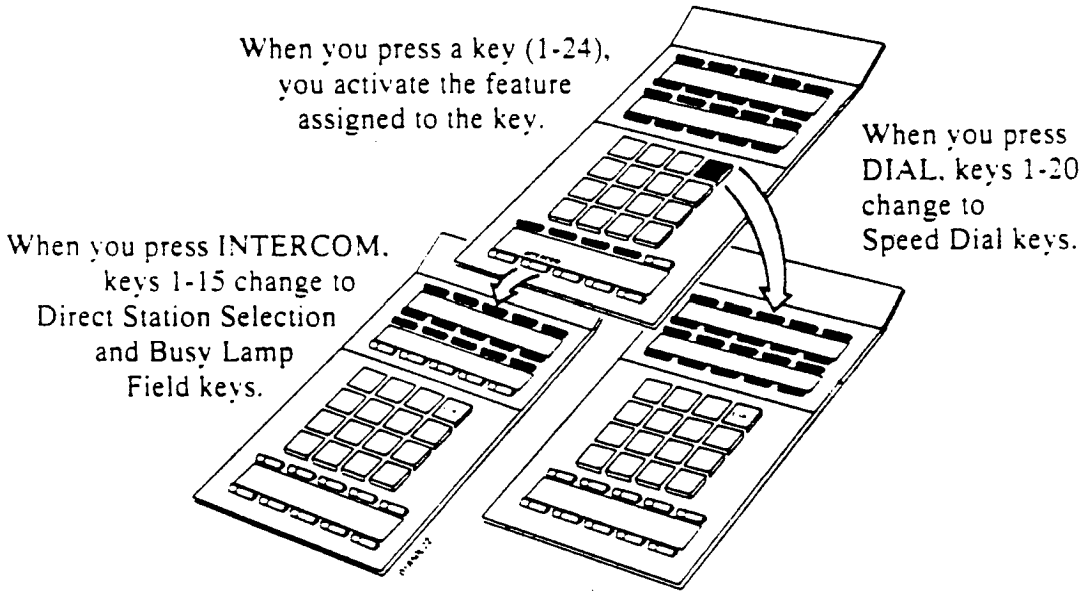
Page Zone
For Paging (see page 126)

Automatic Call Timer or Manual Call Timer
For Call Timer (see page 137)

The Programmable Keys (cont'd)

Record Key
For Voice Mail (see page 131)

On 30-button phones, some programmable keys may have two additional functions. Keys 1-20 become Speed Dial keys when you press DIAL (see page 66). Keys 1-15 become DSS keys when you press INTERCOM (see page 57).



Initial Configuration
- If the system has one CEU, keys 1-8 are programmed as Line keys and access lines 01-08 . Keys 9-24 are undefined.
- If the system has two CEUs, keys 1-16 are programmed as Line keys and access lines 01-16. Keys 17-24 are undefined.
- When you press INTERCOM, DSS keys 1-15 each call extension 300.
- When you press DIAL, keys 1-10 access Personal Speed Dial bins 50-59 and keys 11-20 access bins 20-29.

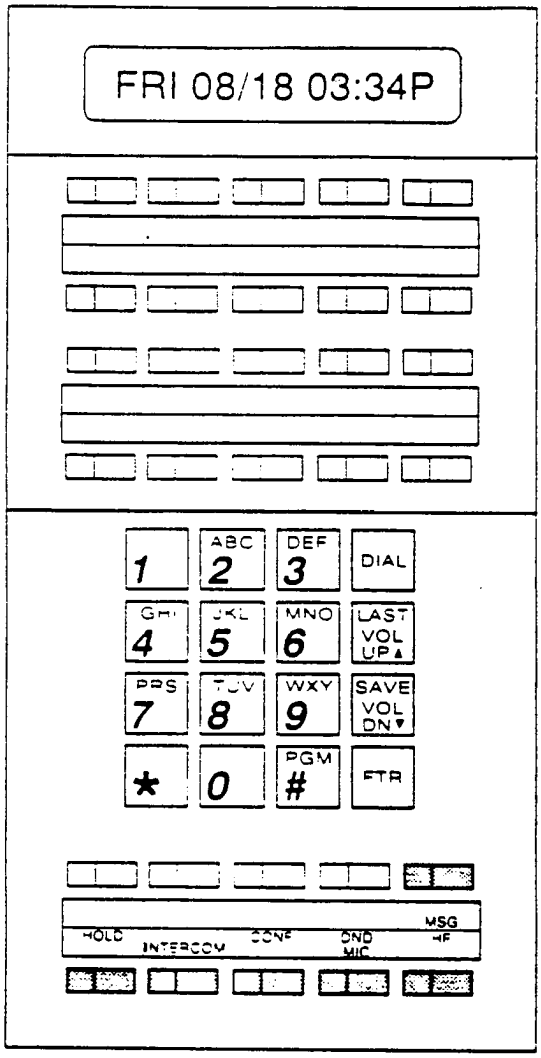
Using the Feature

See the page reference for each programmable key.

Understanding Related Programming

Program 17	To assign a function to a programmable key

The Fixed Keys



The VS Multibutton Phone has 6 Fixed keys (shaded). They are keys 25-30 on the bottom of the phone. Each Fixed key corresponds to a feature (see below).

Note: The DND/MIC and HF keys on an attendant phone have different functions than on a non-attendant phone (see below).

HOLD
For Regular Hold (see page 36), Exclusive Hold (see page 39), Background Music (see 96)

CONF
For Conference (see page 72)

DND/MIC
For Microphone Mute (see page 99), Microphone On/Off (see page 98), and Do Not Disturb (see page 97) on a non-attendant phone

For Night Answer (see page 121) on an attendant phone

INTERCOM
For Placing and Answering Intercom Calls (see page 32)

MSG
For Message Waiting (see page 124)

HF
For Handsfree (see page 43) on a non-attendant phone

For Answering Intercom Calls (see page 32) on an attendant phone

Initial Configuration
A Multibutton at extension 300 has the attendant functions for DND/MIC & HF

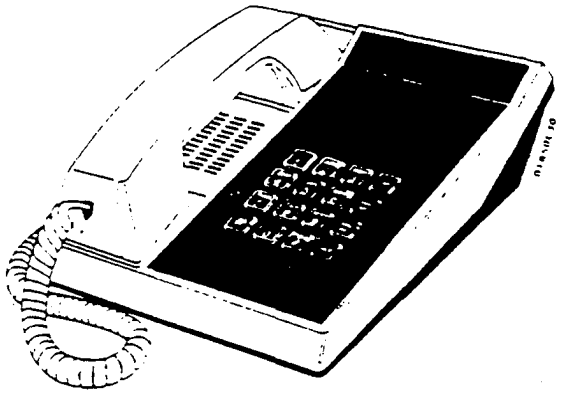
Using the Feature

See the page reference for a key.

Understanding Related Programming

Program 3	To assign attendant extensions

The Electronic Single Line (ESL) Telephone



The Electronic Single Line (ESL) Telephone (P/N 88250) gives basic telephone service to your co-workers that don't need the convenience of a multibutton phone. The ESL phone provides dial access to many system features. The ESL set does not have programmable keys or dedicated feature keys. The ESL set cannot use any of the features that require these types of keys. For ESL feature operation, refer to the individual features in this guide.

The following multibutton extension features are not available at ESL extensions:

- Alternate Attendant
- Automatic Handsfree
- Call Coverage
- Call Timer
- Dialing Number Preview
- Direct Station Selection
- Direct Station Selection, DSS Console
- Directory Dialing
- Display Messages
- Do Not Disturb
- Group Listen
- Handsfree
- Headset
- Hotline
- Microphone Mute
- Microphone On/Off
- Monitor
- PBX/Centrex Keys
- Prime Line
- Privacy Release
- Programmable Keys
- Save
- Time and Date

Note: You can disable incoming Intercom voice announcements and Page broadcasts from your telephone. Refer to pages 32 and 126 for the specifics.

Initial Configuration

N/A

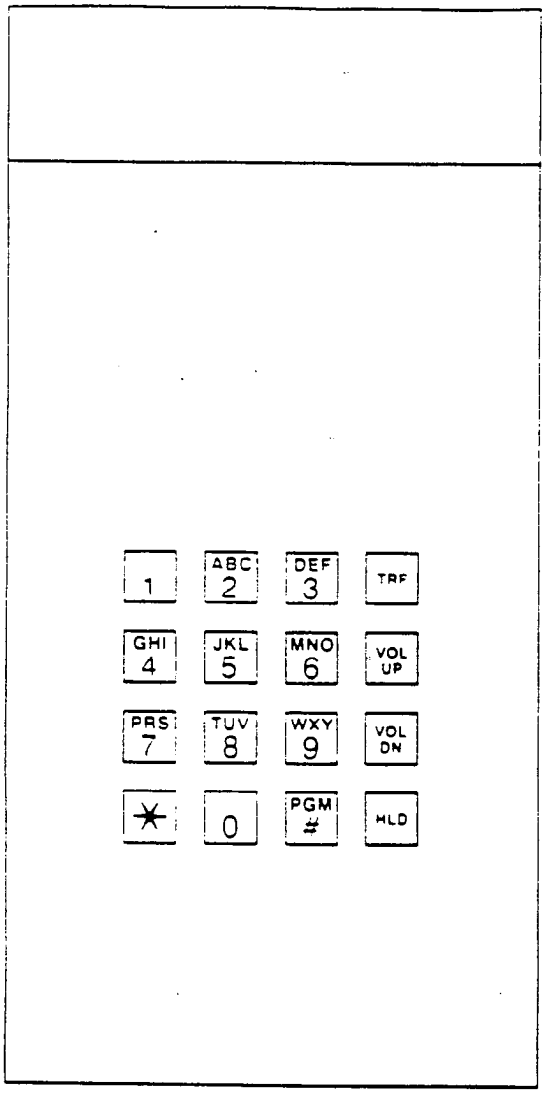
Using the Feature

See the desired feature.

Understanding Related Programming

Program 14	To assign a circuit (phone) type to an extension port (the system does, however, assign the correct circuit type when you plug in an ESL phone)
	To assign a name to an extension (this name appe in displays that would otherwise show the extension's number)

The Electronic Single Line (ESL) Dialpad Buttons



The 16 ESL dialpad buttons let you:

- Dial calls
- Program certain features
- Activate features
- Control the volume of calls and certain features.

The function of each key is as follows:

0-9, *, #
For dialing calls

PGM#
For programming features

TRF
For transferring calls (see 41)

VOL UP ▲ and VOL DN ▼
For raising or lowering the volume of Background Music, incoming pages, ringing, and Handsfree or handset voice levels (see page 48).

HLD
For placing calls on Hold (see page 36)

Initial Configuration

Dialpad buttons always have these functions

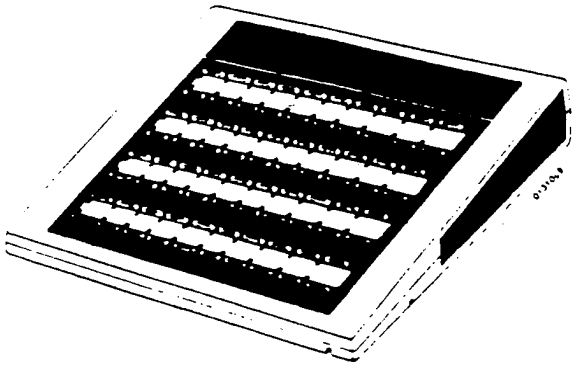
Using the Feature

See the page references for a key.

Understanding Related Programming

N/A

The Direct Station Selection (DSS) Console



The Direct Station Selection Console (P/N 88255) gives you 80 keys for one-button access to extensions and selected features. The DSS Console also provides a Busy Lamp Field (BLF) for the feature or extension assigned to each key (see page 59). Any multibutton telephone user can have a DSS Console.

Notes:

- You cannot install a DSS Console in the expansion cabinet.
- The DSS Console is a dual port device, using adjacent even and odd numbered ports. You can install as many DSS Consoles as there are available dual ports. However, the system allows only four unique DSS Console key configurations (layouts). See page 59.

Initial Configuration

- The DSS Console is automatically enabled (circuit type 06) when you plug it in (refer to page 59).

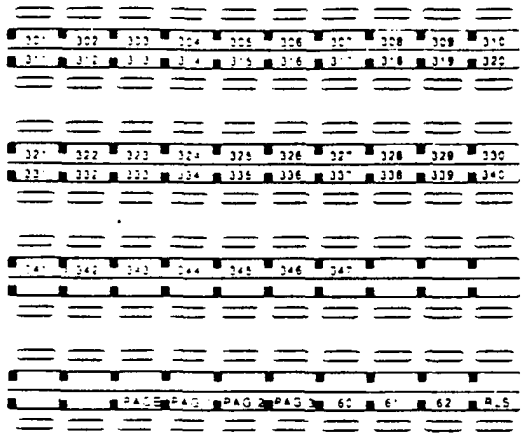
Using the Feature

Refer to page 59.

Understanding Related Programming

Refer to page 59.

The DSS Console Programmable Keys



You can assign Direct Station Selection (DSS) Console keys to the following:

- Hotline to extensions (see page 62)
- Park Orbits (see page 119)
- Outside Lines (see page 26)
- Page Zones (see page 126)
- DSS Console Speed Dial (see page 66)
- Release (always on key 80)

Initial Configuration

- Each console has the following key assignments:

Key	Assignment
1-47	Extensions 301-247
48-72	Undefined
73-76	Page zones 0-3
77-79	Park orbits 60-62
80	Release

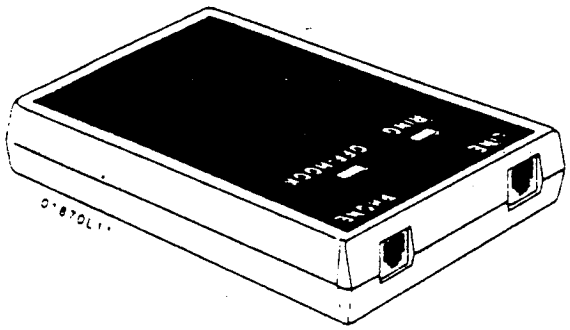
Using the Feature

Refer to page 59.

Understanding Related Programming

Refer to page 59.

The Analog Station Interface



The Analog Station Interface module (P/N 89749) provides standard 2500 set DTMF service at a VS extension port. The 2500 set connects to the ASI and the ASI connects to a VS extension port (for installation instructions, see P/N 01850ASI02).

The ASI is helpful when the system administrator needs to install a limited number of analog interfaces but does not want to dedicate a line port to each one.

Other devices that can connect to an ASI include:
- FAX machines
- Credit card terminals
- Modems
- Voice Mail/Automated Attendant

A connected device must:
- Meet FCC Part 68 requirements for Type B ringers (with a REN of 1.0 or less). For outdialing, the device connected must provide standard DTMF signals. The ASI provides 50 volt peak-to-peak square wave ringing.
- Not use an electromechanical ringer
- Be installed indoors (not off-premise, with outdoor wiring)

Initial Configuration
No ASIs installed

Using the Feature

The VS features available to an ASI are listed below with abbreviated operating instructions. To find more information on a feature, refer to the page number provided.

In the instructions that follow:
- "Lift" = Lift handset.
- "Hookflash" = hold down the hookswitch for about .5 seconds, then release it.

The Analog Station Interface (cont'd)

Handling Calls: The Basics

Placing an Outside Call
(see page 26)

Using Line Dial-Up: Lift + line code (801-816) + number

Using Direct Line (Trunk) Access: Lift + line code (348-363) + number

Using Direct Line Group Access: Lift + line group (90-98) + number

Placing an Intercom Call
(see page 32)

Lift + extension or 0 for attendant

Answering a Call
(see page 30 and page 32)

To answer any call (all calls ring): Lift

Regular Hold
(see page 36)

To hold: Hookflash + hang up

To retrieve: Lift + * 7

To retrieve call on hold at another extension: Lift + * + extension (300-347) or line (801-816)

Transfer
(see page 41)

To transfer: Hookflash + extension + wait for answer + announce call + hang up

To return to call if party does not answer: Hookflash + * 7

To receive a Transfer when announced: Stay on line (you are connected when the transferer hangs up)

The Analog Station Interface (cont'd)

Features (in alphabetical order)

Account Codes
(see page 136)

After dialing a number: # + account code + #

While on a call: Hookflash + # + account code + # + * 7 (to return to call)

Call Forwarding
(see page 115 and page 117)

To an extension: Lift + # + extension + forwarding code + hang up
Code 1: Forwards unanswered calls
Code 2: Forwards unanswered and busy calls
Code 3: Forwards all calls

To an outside number: Lift + # + 1 + line (01-16) that calls will forward on + number to receive calls + hang up

To cancel forwarding: Lift + # + hang up

Call Parking
(see page 119)

To park your call: Hookflash + * + park orbit (extension or 5 + 60-69) + page person to receive call + hang up

To pick up parked call: Lift + park orbit

Callback
(see page 102)

To leave callback at busy tone: 2 + hang up

To answer ring: Lift (you get connected to previously busy extension)

To cancel a callback: Call busy extension again + * + hang up

To cancel all callbacks: Lift + # * + hang up

The Analog Station Interface (cont'd)

Features (in alphabetical order)

Camp-On (Call Waiting)
(see page 87)

To send beeps at busy tone: 2 + wait

To answer beeps: Hookflash + * 2 (see also Split)

Conference
(see page 72)

Establish call + hookflash + establish call + hookflash + * #

Directed Call Pickup
(see page 92)

Lift + * + extension

Forced Line Disconnect
(see page 108)

Lift + line (348-363 or 801-816 for lines 01-16) + #
(to use line for a call: line + number)

Group Call Pickup
(see page 93)

Lift + * 1

Group Ringing
(see page 77)

Lift + Ring Group (364-371)

Intrusion (Barge-In)
(see page 105)

At busy tone: 4

Last Number Redial
(see page 64)

Lift + * *

The Analog Station Interface (cont'd)

Features (in alphabetical order)

Line Queuing
(see page 109)

At busy tone: 2 + hang up

To answer ring: Lift (you have outside dial tone and can dial number)

To cancel one: Try to access busy line again + * + hang up

To cancel all: Lift + # * + hang up

Meet-Me Conference
(see page 74)

To set up Meet-Me: Page parties + announce Meet-Me code (11 or 12) + hookflash + 11 or 12 + do not hang up

To join Meet-Me: Lift + 11 or 12

Night Answer
(see page 121)

To answer ring over page: Lift + * 0

Off-Hook Signaling
(see page 106)

To send at ring-busy tone: 1 + speak after beeps or wait for answer

Paging
(see page 126)

To make a page: Lift + 1 * - 8 * + announce + hang up

Selectable Display Messages
(see page 129)

To select: Lift + # 6 + message number 00-15 + hang up

To cancel: Lift + # + hang up

Silent Monitor
(see page 45)

At busy tone: 6

The Analog Station Interface (cont'd)

Features (in alphabetical order)

Speed Dial
(see page 66)

To store: Lift + # + Personal bin (50-59, 20-29) or System bin (700-799) + line (01-16) or line group (90-98) + number + hang up

To call: Lift + Personal bin or System bin

Split
(see page 88)

To answer waiting call (beeps): Hookflash + * 2

To split between calls: Hookflash + * 7

Tandem Calls
(see page 76)

Establish call + hookflash + establish call + hookflash + * # + hang up

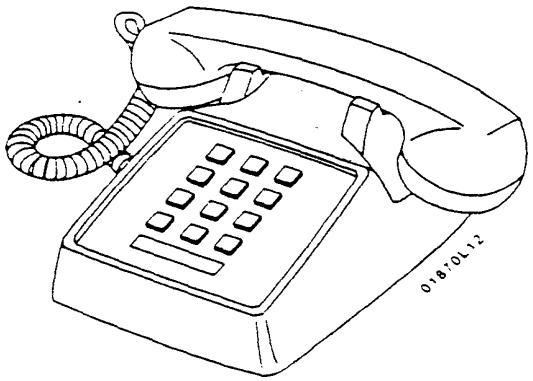
Walking Class of Service
(see page 53)

Lift + # # + WCOS code + line (01-16) + dial number

Understanding Related Programming

Program 14	To assign the correct circuit to an ASI port
Program 1	To assign a single ring to all calls that ring an ASI in a Class of Service (see also Program 18 [I])
Program 18 (I)	To assign a Class of Service (from Program 1) to an extension

The Power Failure Telephone



2500 Set

A standard 500/2500 set can be connected to a Line module so that if AC power fails, you can use the 500/2500 set to place and receive calls. One 500/2500 set can be connected to each Line module. To install a 500/2500 set as a Power Failure Telephone, see the Hardware Manual.

Initial Configuration
No Power Failure Telephones installed

Using the Feature

To make a call on a Power Failure telephone:
1. Lift handset.
2. Dial number.

To answer a call when the Power Failure telephone rings:
1. Lift handset.

Understanding Related Programming

N/A

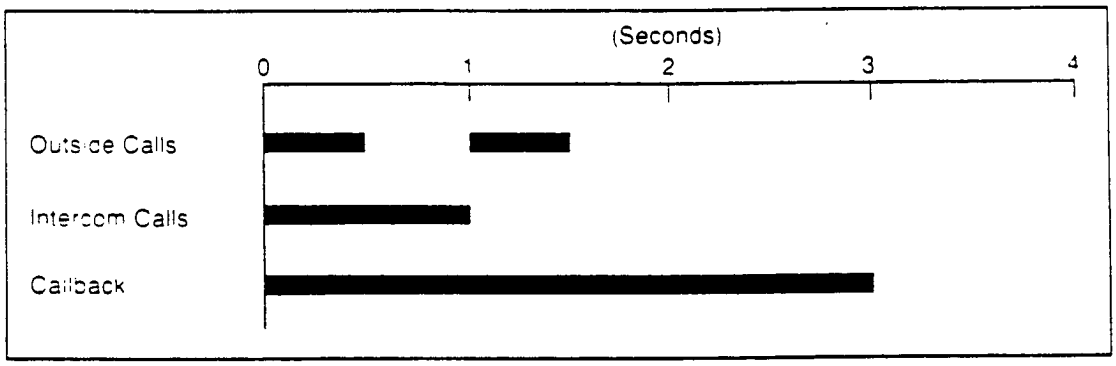
Handling Calls: The Basics

The Ringing Patterns

With Ringing Patterns you can:

Easily identify the type of call ringing your phone.

The VS provides ringing at three different durations so you know which kind of call is ringing your phone (see the chart below). As you can see from the chart, outside calls ring with two short rings, Intercom calls with one long ring (repeated). The Callback ring is the ring you hear for the Callback and Line Queuing features.



The VS also provides ringing at four different pitches. Extension 300 rings at one pitch, 301 at another, 302 at another, and 303 at yet another. Then the pattern repeats for the next group of four extensions (e.g., extension 304 rings at the same pitch as 300).

Initial Configuration

All calls ring as described above

Using the Feature

N/A

Understanding Related Programming

Program 1	To assign a single ring to all calls that ring an ASI in a Class of Service (see also Program 18 [I]). This means Intercom calls, outside calls, and Callbacks ring with a single ring at the Intercom duration (1 second)
Program 18 (I)	To assign a Class of Service (from Program 1) to an extension

The Flash Patterns

With Flash Patterns you can:

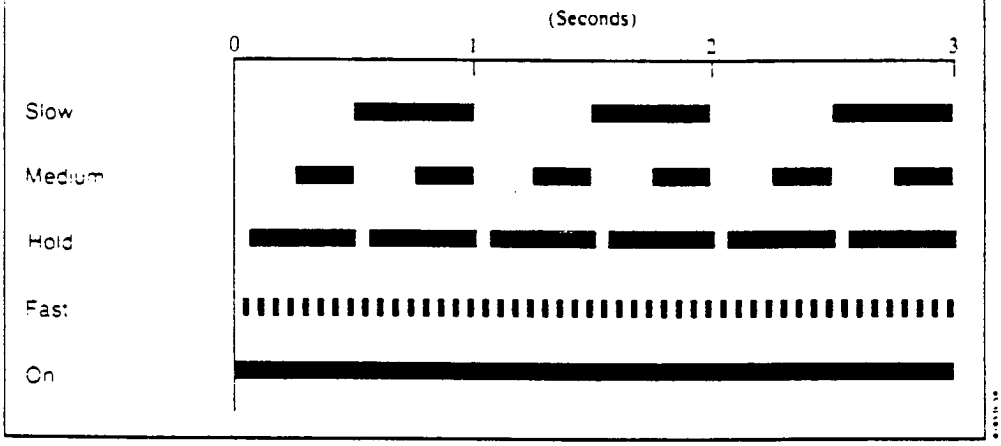
Figure out the status of call by becoming familiar with the different flash rates for a key.

The VS provides different flash rates for a key depending on the status of the associated call or feature (see charts below).

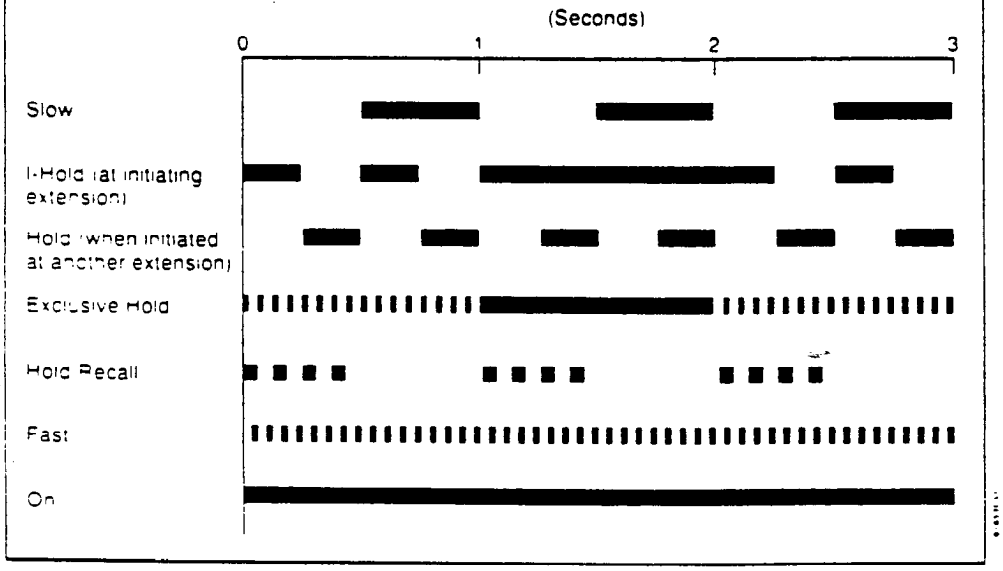
For example, when you place a call on Hold at your non-modular keyset extension, the key flashes one way at your extension (see the entry in the second chart called I-HOLD) and another way at other extensions (see the third entry in the chart). If you leave the call on Hold too long and it recalls your extension, the key flashes at the Hold Recall rate (fifth entry in the chart).

So when this guide tells you a key flashes fast, it means the key flashes at the "Fast" rate shown in the chart. With practice, you will become familiar with the flash rates. For Flash Patterns for the DSS Console, refer to page 59.

Modular Multibutton Telephone Flash Rates



Non-Modular Multibutton Telephone Flash Rates



The Flash Patterns (cont'd)

Initial Configuration
As described above

Using the Feature

N/A

Understanding Related Programming

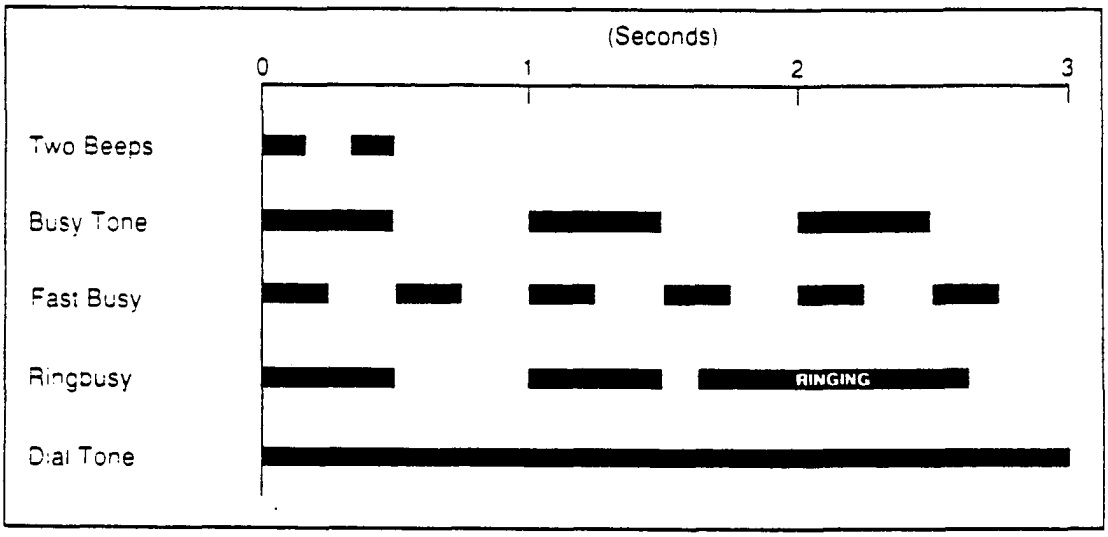
N/A

The Tone Patterns

With Tones Patterns you can:

Identify certain feature conditions by becoming familiar with their corresponding tone patterns.

The VS provides tones of different durations to indicate certain conditions (see the chart below).



You most commonly hear:

- Two beeps when you make a voice-announced Intercom call to an extension or send Call Waiting signals
- Busy tone when you call a busy extension
- Fast busy tone when you call an extension in Do Not Disturb
- Ring-Busy tone when you call a busy extension that is programmed for Off-Hook Signaling
- Dial tone when you press INTERCOM or a Line key to a make a call

You may also hear some of these tones when you use other features. If so, this guide will tell you in the operating instructions for a feature.

Initial Configuration

As described above

Using the Feature

N/A

Understanding Related Programming

N/A

Placing an Outside Call

With the VS system you can place outside calls by:

- ***Using a Line Key***
- ***Using Prime Line***
- ***Using Line Dial-Up***
- ***Using Direct Line (Trunk) Access***
- ***Using Direct Line Group Access***
- ***Using PBX/Centrex Lines***

Placing an outside call simply involves getting an outside line, then dialing your number. Your system may, however, be set up with certain Toll Restrictions which limit the types of calls you can place (e.g., international calls).

For more information on placing calls, see the categories. More About Placing Calls and Handling Busy Extensions and Lines.

The different ways you can place a call include:

Using a Line Key

You press a Line key to get an outside line, then dial your number.

Using Prime Line

You lift your handset to get outside dial tone on a specific Line key, then dial your number. If your extension has program access level 2-5, you can program, right from your phone, the Line key you want to be your Prime Line key. Prime Line keys are not, however, meant for attendant or Headset extensions.

Note: If you assign a Prime Line, the system automatically assigns Ringing L Preference to that line (see page 86). And, Ringing Line Preference overrides Pri...e Line (i.e., if a call rings in and you lift the handset, you answer the call instead of getting dial tone on your Prime Line).

Using Line Dial-Up

You dial a three-digit code to get an outside line, then dial your number. Codes 801-816 access lines 01-16.

Using Direct Line (Trunk) Access

You dial a three-digit code to get an outside line, then dial your number. Codes 348-363 access lines 01-16.

This method is primarily for attendants because it also provides access to special features. With Direct Line Access you can also:

- Place any type of call (unrestricted dialing)
- Camp-On to a busy line (see page 103)
- Use Forced Line Disconnect (see page 108).
- Remove Extensions and Lines from Service (see page 139)

Placing an Outside Call (cont'd)

Using Direct Line Group Access

You dial a two-digit code to get the first available line in a group of lines, then dial your number. Codes 90-98 access line groups 00-08. If your phone has a key for a particular group, you can just press the key instead of dialing the group's code. If your system has Automatic Route Selection (ARS), you'll dial either 9 or 90 before placing your call. See page 152 for more information on ARS.

Note: To have line groups, the VS must be equipped with an AUX module.

Using PBX/Centrex Lines

When the VS is installed behind a PBX/Centrex, you place an outside call as follows:

- Use one of the above methods to get PBX/Centrex dial tone.
- Dial a one- or two-digit PBX/Centrex Access Code to get outside dial tone.
- Dial your number.

To call a PBX/Centrex extension, you do not dial the PBX/Centrex Access Code.
To access PBX/Centrex features, see page 49).

Initial Configuration

- No PBX/Centrex lines (all lines are CO Loop Start DTMF)
- All extensions have outgoing and incoming access to all lines
- If the system has one CEU, keys 1-8 are Line keys, and access lines 01-08. Keys 9 24 are undefined. With two CEUs, keys 1-16 are Line keys and access lines 01-16 Keys 17-24 are undefined.
- Line Dial-Up enabled
- Prime Line disabled. Extensions 301-305 can program Prime Lines. All other extensions only have program access level 01.
- Direct Line (Trunk) Access enabled for attendant extension 300
- Direct Line Group Access disabled (no groups programmed)
- No Toll Restrictions (all types of calls are allowed)

Using the Feature

See also Handling Calls Without Using the Handset on page 43.

To place a call using a Line key:

1. Lift handset and press Line key. The key lights, you hear dial tone
2. Dial number.

To program a Line key for Prime Line Assignment (PLA) when your extension has program access level 2-5:

Do not program PLA if you are an attendant or are using a Headset.

1. Do not lift handset.
2. Press PGM# and dial PLA.
3. Press desired Line key.
4. Dial Y to enable; N to disable.
5. Press SAVE.

Placing an Outside Call (cont'd)

Using the Feature

To place a call using your Prime Line key:

1. Lift handset.	The key lights, you hear dial tone.
2. Dial number.	To use another Line key, press it before dialing your number.

To answer a call on your Prime Line:

1. Lift handset.	The key lights steadily.

To place a call using Line Dial-Up or Direct Line (Trunk) Access or Direct Line Group Access:

1. Lift handset.	
2. Press INTERCOM (except at an ESL set), then dial: ■ 801-816 for lines 01-16 ■ 348-363 for lines 01-16 ■ 90-98 for line groups 00-08 OR Press key for line group.	When you press INTERCOM, the key lights and you hear Intercom dial tone. When you dial a code, INTERCOM goes out and you hear outside dial tone. You hear outside dial tone.
3. Dial number.	

To place a call on a PBX/Centrex line:

1. Lift handset.	
2. Use one of the methods above to get PBX/Centrex dial tone.	
3. Dial PBX Access code to get outside dial tone.	To place a call to a PBX/Centrex extension, skip step 3.
4. Dial number.	

Understanding Related Programming

For all calling methods:

Program 10	To identify line attributes (type [CO or PBX], gain, side tone, name)
Program 16	To allow/deny an extension outgoing access to a line
Program 4	To set the Line Response timer
Program 6	To set up Toll Restrictions

To change the first digit of line numbers, line dial-up codes, or line group numbers, see Flexible Numbering Plan on page 173.

Placing an Outside Call (cont'd)

Understanding Related Programming

Make sure you refer to the programming on the previous page before you do the programming below.

For Line Keys:

Program 17	To assign a line to a key at an extension or DSS Console.

For Prime Line:

Program 17	To assign a line to a key to an extension
Program 18 (II)	To enable/disable a Prime Line key for an extension
Program 15	To assign program access level 2-5 to extensions so they can program their own Prime Line key

For Line Dial-Up:

Program 18 (I)	To allow/deny Line Dial-Up for an extension

For Direct Line Access:

Program 1	To allow/deny Direct Line (Trunk) Access in a Class of Service (see also Program 18 [I])
Program 18 (I)	To assign a Class of Service (from Program 1) to an extension

For Direct Line Group Access (when VS has AUX module):

If you program line groups, the FCC classifies the VS as a hybrid. Use FCC registration number on your CEU that has "MF-E" on the end. If you do not program line groups, the FCC classifies the VS as a key system. Use FCC registration number on your CEU that has "KF-E" on the end.

Program 11	To place lines into groups
Program 16	To allow/deny an extension access line groups. With a terminal, you can program one-digit access to line group 90 using the QY command
Program 17	To assign a line group to a key at an extension

For PBX Lines:

Program 5	To store PBX Access Codes
Program 4	To set the Flash timer

Answering an Outside Call

With the VS system:

Answering an outside call can be just as easy as lifting the handset.

When an outside call comes into your extension, its Line key flashes slowly, if the line has a designated key. If a line does not have a designated key, the call flashes a "catch-all" key, call a Loop key.

The call may ring or not ring, depending on programming. If your extension has program access level 2-5, you can program, right from your phone, how the lines ring (see the category, Selecting Ringing Options For Incoming Calls, starting on page 84).

In addition, calls may ring over the paging speakers or they may ring a bell (especially at night).

Initial Configuration

- All extensions have incoming and outgoing access to all lines
- If the system has one CEU, keys 1-8 are Line keys and access lines 01-08. Keys 9-24 are undefined. With two CEUs, keys 1-16 are Line keys and access lines 01-16. Keys 17-24 are undefined.
- No Loop keys assigned
- Outside calls to extensions 300, 302, 303 flash and ring. Outside calls to other extensions only flash.
- Extensions 300-305 can program ringing. All other extensions only have prograr access level 01.
- All lines are CO Loop Start and have no name assigned (a line's name appears when a Display Phone user answers a call on that line)

Using the Feature

See also Handling Calls Without Using the Handset starting on page 43.

To answer an outside call that comes into your extension:

1. Lift handset.
2. If not connected, press flashing Line or Loop key.

If the line is a Prime Line (see page 26) or your extension is programmed for Ringing Line Preference (see page 86), you do not have to press the key to answer the call.

To answer an outside call that rings over the paging speakers or a bell:

1. Lift handset.
2. Press INTERCOM (except at an ESL set).
3. Dial * 0.

INTERCOM lights, you hear d tone.

Answering an Outside Call

Understanding Related Programming

Program 10	To define line attributes: type, gain, side tone, name
Program 16	To allow/deny an extension incoming access to a line
Program 17	To assign a line to a key at an extension To assign a Loop (Switch) key to every extension (a Loop key flashes for incoming calls that do not appear under a Line key). Make sure you assign one Loop key to each extension so all incoming calls can appear somewhere.
Program 18 (II)	To assign ringing to a line at an extension. Make sure the attendant extension has ringing for all lines (this ensures that a call rings or recalls somewhere).
Program 15	To assign program access level 2-5 to extensions so they can program ringing right from their phones
Program 4	To set Delayed Ring timer (if you assign Delayed Ringing to a line in Program 18 [II])

For additional ways of routing incoming calls to extensions, see:

- Direct Inward Lines (see page 156)
- Group Ringing (see page 77)
- Hunting (see page 158)
- Multiple Attendants (see page 160)
- Night Answer (see page 121)
- Private Lines (see page 162)

To have an incoming call ring a bell, see External Alerting Device on page 172.

To have an incoming call ring the external paging speakers, see Paging on page 126.

Placing and Answering Intercom Calls

With Intercom Calls you can:

Easily contact your co-workers.

The VS Intercom feature lets you call another VS extension user by dialing their extension number. You can also call attendant extensions by dialing their extension number or 0 for the main attendant, 01-04 for other attendants.

Your system can be programmed for ringing or voice-announced Intercom calls. In other words, when you place an Intercom call to an extension, your call will either:

- Ring the extension
- Alert the extension with two beeps. After you hear the beeps, you can speak -- your voice will be announced over the speaker of that extension.

If your system is programmed for ringing Intercom calls, voice-announced Intercom calls are not available.

If your system is programmed for voice-announced Intercom calls, you can:

- Force an Intercom call to ring the called extension, if you wish.
- Disable incoming voice-announced Intercom calls so all Intercom calls ring your extension. Your extension must, however, have program access level 3-5.
- Answer a voice-announced call by just speaking toward the phone if your system is programmed for Handsfree Reply. If not, you answer a voice-announced Intercom call by lifting the handset.

Note: Attendants and Headset extensions do not receive voice-announced Intercom calls.

Initial Configuration

- Voice-announced Intercom calls enabled system-wide
- Handsfree Reply enabled
- Extensions 301-305 can program voice-announced calls. All other extensions only have program access level 01.
- One attendant at extension 300
- Dialing 0 calls extension 300
- Extension ports 00-47 have extension numbers 300-347, respectively
- No extensions have names (at a Display Phone, the extension's name appears in all displays that would normally show the extension's number)

Placing and Answering Intercom Calls (cont'd)

Using the Feature

See also the category, Handling Calls Without Using the Handset, starting on page 43.

To place an Intercom call:

1. Lift handset.

   If you do not lift the handset and your phone does not have Handsfree, your call always rings the other extension.

2. Press INTERCOM (except at an ESL set).

   INTERCOM lights and you hear dial tone.

   To force the call to ring the extension, dial 1 before dialing the extension number in step 3.

3. Dial extension (300-347).

   INTERCOM flashes fast when the call goes through.

   OR

   Dial 0 for main attendant or 01-01 for other attendants.

   You cannot call your attendant during the Night Answer mode.

4. If you hear ringing, wait for an answer.

   OR

   If you hear two beeps, you can speak right away.

To answer an Intercom call that comes over your speaker (you hear two short beeps):

1. Speak toward the phone.

   If you hear two long beeps, this means one of two things:

   - The microphone is off (see page 98). Turn it on or lift the handset to speak.
   - Handsfree Reply is disabled. Lift the handset to speak.

Placing and Answering Intercom Calls (cont'd)

Using the Feature

To answer an Intercom call that rings your phone:
If you are an attendant, the HF key flashes slowly.
If you are not an attendant, INTERCOM flashes slowly.

1. Lift handset. INTERCOM flashes fast.
2. Press HF (if you are the attendant).

To enable/disable voice-announced Intercom calls when your extension has program access level 3-5:
You can do this only if the system if programmed for voice-announced Intercom calls.

1. Do not lift handset.
2. Press PGM#.
3. Dial VA.
4. Dial Y to enable voice-announced calls.
   OR
   Dial N to disable voice-announced calls (i.e., to enable ringing calls).
5. Press SAVE.

Understanding Related Programming

Program 2	To enable/disable voice-announced Intercom calls system-wide
	To enable/disable Handsfree Reply system-wide
Program 18 (II)	To enable/disable voice-announced Intercom calls for specific extensions (the system must be programmed for voice-announced Intercom calls in Program 2)
Program 15	To assign program access level 3-5 to extensions so they can enable/disable voice-announced Intercom calls themselves
Program 18(I)	To assign an attendant to an extension. This is the attendant that gets called when the extension user dials 0.

Placing and Answering Intercom Calls (cont'd)

Understanding Related Programming

Program 14	To assign extension numbers to ports and to assign the correct circuit (phone) type to an extension port To program a name for an extension (Display Phone users see this name in displays instead of the extension's number)
Program 3	To assign the number of attendants (operators) in the system and to assign their extension numbers

To change the first digit of extension numbers, the digit that forces Intercom calls to ring, or the single digit that calls the operator, see Flexible Numbering Plan on page 173.

Regular Hold

With Regular Hold you can:

Answer an outside call at co-worker's phone, then go to your own phone to retrieve it. Or vice versa.

Regular Hold lets you place an outside or Intercom call in a temporary waiting state. While a call waits on Regular Hold, you can process other calls or use another feature. A waiting caller on Hold hears silence or Music on Hold, not the conversation in your work area. See also Automatic Hold on page 40.

When you place an outside call on Regular Hold, it can be picked up from any extension with access to that line. When you place an Intercom call on Regular Hold, it can be picked up only from the phone you used to hold it.

If you leave a call on Regular Hold longer than the programmed Hold Recall time, the call recalls (rings) your extension to remind you. If you do not answer a recalling outside call within a programmed number of rings, it rings all extensions that normally receive ringing on that line.

Initial Configuration

- Regular Hold always allowed
- Hold Recall time is 30 seconds
- Held outside calls recall for 5 rings before ringing other extensions
- Music on Hold disabled

Using the Feature

To place a call on Regular Hold:

1. Press HOLD.

   Outside calls flash the Line/Loop key at your extension and at others with access to the line. To see the difference in the flash patterns, see page 23.

   At your non-modular extension, Intercom calls flash the HOLD key at the Exclusive Hold flash rate.

2. Hang up.

   Do not hang up if an it's an Handsfree or voice-announced Intercom call (the system will disconnect these calls).

To retrieve an outside call from Regular Hold when the call is flashing a key:

1. Lift handset.
2. Press flashing Line/Loop key. — The Line key lights steadily.

Regular Hold (cont'd)

Using the Feature

To retrieve an outside call on Regular Hold when the call is not flashing a key:
This is the case when someone places a call on Regular Hold at another extension and you do not have a Line key for the call.

1. Lift handset.
2. Press INTERCOM (except at an ESL set). — INTERCOM lights and you hear dial tone.
3. Dial *. — Dial tone stops.
4. Dial line access code (801-816) or extension number 300-347).

Note: Dialing an extension number in step 4 also picks up other types of calls at that extension. The pick-up order is as follows:

- Ringing Intercom calls
- Personal Park calls
- Ringing outside calls and Direct Inward Lines
- Calls on Hold

To retrieve an Intercom call from Regular Hold before it recalls (i.e., when the HOLD key is still flashing):

1. Lift handset.
2. If you hear dial tone, press INTERCOM. Otherwise, skip this step. Also, if you have an ESL set, skip this step).
3. Press flashing HOLD key. — HOLD goes out, INTERCOM flashes fast.

To retrieve an Intercom call from Regular Hold when it is recalling (when HOLD is out and INTERCOM is flashing fast):

1. Lift handset if you hear ringing.
   OR
   Speak toward the phone if you hear two beeps.

Regular Hold (cont'd)

Understanding Related Programming

Program 4	To set two timers: Hold Recall and Rings Before Recall (number of times a recall rings before ringing all extensions with ringing on that line)
Program 16	To give an extension access to every line it should be able to pick up from Hold
Program 7	To enable/disable Music On Hold (for more information, see Music on Hold on page 175)

Exclusive Hold

With Exclusive Hold you can...

Ensure that a held call of a sensitive nature does not get picked up at another extension.

Exclusive Hold lets you place an outside cal on Hold at your extension so that it cannot be picked up at another extension. An outside line on Exclusive Hold appears busy to al other extensions that have access to the line While a call waits on Exclusive Hold, you car process other calls or use another feature Callers on Exclusive Hold hear Music on Hold or silence, not the conversation in you work area.

If you leave a call on Exclusive Hold longer than the programmed Hold Recall time, the call recalls (rings) your extension to remind you. If you do not answer the recall, the cal rings all extensions that normally ring on that line.

Initial Configuration

- Exclusive Hold always allowed
- Hold Recall time is 30 seconds
- Held calls recall for 5 rings before ringing other extensions
- Music on Hold disabled

Using the Feature

To place an outside call on Exclusive Hold:

1. Press HOLD twice.	At your non-modular extension, the Line/Loop key flashes at the Exclusive Hold rate. At other extensions, it lights steadily (appearing busy).
2. Hang up.	

To retrieve an outside call on Exclusive Hold:

If the call is recalling your non-modular extension, its key flashes at the Hold Recall rate.

1. Lift handset at your phone.	
2. Press flashing Line/Loop key.	The key lights steadily.

Understanding Related Programming

Program 4	To set two timers: Hold Recall and Rings Before Recall (number of times a recall rings before ringing all extensions with ringing on that line)
Program 7	To enable/disable Music On Hold when the system is equipped with an customer-provided music source (for more information, see Music on Hold on page 175)

Automatic Hold

With Automatic Hold you can:

Speed up your call processing by pressing one less key.

Automatic Hold lets you be on a call and activate a feature without first pressing the HOLD key to hold your call. The VS system automatically places a call on Regular Hold for you when you press the following keys: INTERCOM, CONF, Call Coverage, Hotline, or Page. This way, for example, you can be on a call and start a Conference call by simply pressing CONF -- no need to press HOLD, then CONF.

If you are an attendant and on call, pressing a Line key also places your call on Regular Hold automatically.

For more information on Regular Hold, see page 36.

Initial Configuration

Automatic Hold always allowed when you press above mentioned keys

Using the Feature

See above

Understanding Related Programming

See Regular Hold

Transfer

With Transfer you can:

Quickly send a call to another extension when your caller needs to talk to someone else in your company.

Transfer lets you send your outside call to another extension. You can Transfer any outside line to another extension, even if that extension does not have access to the line. And you can Transfer calls to busy extensions. The transferred call Camps-On (waits) at the busy extension and sends two beep tones to the busy user (if your system is programmed for Call Waiting tones).

You can Transfer a call in two ways. You can:
- Announce (screen) the Transfer before actually completing the Transfer
- Transfer the call directly, without announcing (screening) it

A transferred caller may hear Music on Hold (if available).

If the extension receiving the Transfer does not pick up (answer) the Transfer, it recalls your extension. If you do not answer the recall, the call rings at all extensions that are programmed for ringing on that line.

Initial Configuration
- Transfer always allowed
- Transfers to busy extensions send Call Waiting beeps
- Transfers will ring busy ASIs for 60 seconds and other extensions for 3 rings before recalling the transferer
- Transfers will recall for 3 rings before ringing other extensions
- Transferred callers do not hear Music on Hold

Using the Feature

To Transfer your outside call:

You can also use a Hotline key (page 62), Call Coverage key (page 90), or DSS key (see page 57).

1. Press INTERCOM. Or, if you have an ESL set, press TRF.	INTERCOM lights, you hear dial tone. Your call goes on Exclusive Hold under the HOLD key.
2. Dial extension number.	You see the Line key for the call. If you hear busy tone, hang up to have the call Camp-On.
3. Announce the call: If you hear beeps, you can speak right away. OR If you hear ringing, wait for an answer, then speak.	If the person does not want the Transfer, press the key for the call. To Transfer the call unannounced, skip step 3.
4. Hang up.	Your Transfer goes through.

Transfer (cont'd)

Using the Feature

To receive a Transfer:
The Line key for the transferred line flashes. If you do not have a Line key for the transferred line, your Loop key flashes.
1. Lift handset.
2. If not connected, press flashing Line/Loop key.

Understanding Related Programming

Program 2	To enable/disable Call Waiting tones system-wide (if enabled, Transfers to busy extensions send the tones to the busy user)
Program 3	To enable/disable Music On Hold for transferred calls
Program 4	To set Rings Before Recall timer (the number of times a Transfer rings an idle or busy Multibutton or an idle ESL/ASI before recalling; and, the number of times a Transfer recall rings before ringing all extensions that are programmed for ringing on that line)
	To set the Camp-On timer (how long a call Camps-On to a busy ESL/ASI before recalling)
Program 16	To give an extension access to a line
Program 17	To assign a line to a key at an extension
	To assign a Loop key to an extension
Program 18 (II)	To assign ringing to a line at any extension that should ring during Transfer recall. Transfers themselves always ring the destination extension.

Handsfree

With Handsfree you can:

Move across the office while on a call and still talk to the caller– your phone's microphone picks up your voice from any point in the room.

With a Handsfree phone, you can place calls, answer ringing calls, and activate features without lifting the handset; instead, you use the speaker and microphone in your phone (see also Automatic Handsfree on the next page). If you do not have a Handsfree phone, read Monitor on page 45.

To answer a voice-announced Intercom call Handsfree, see Answering an Intercom Call on page 32.

Initial Configuration

Handsfree capability at all Handsfree phones

Using the Feature

Handsfree is not available to attendant or Headset extensions, or when the system is already accommodating the maximum number of Handsfree conversations, which is 12 per CEU.

To activate Handsfree instead of lifting the handset:

1. Press HF.	HF lights. If DND/MIC also lights, your phone does not have Handsfree or all Handsfree circuits are busy.

To talk on a Handsfree call:

1. Speak toward the phone.	To turn off the mic, see Microphone Mute on page 99. If you hear a beep while on a call, see Split on page 88.

To hang up a Handsfree call:

1. Press HF.	HF goes out.

To change a handset call into a Handsfree call:

1. Press HF.	HF flashes.
2. Hang up the handset.	HF lights steadily.

To change a Handsfree call into a handset call:

1. Lift handset.	HF goes out.

Understanding Related Programming

N/A

Automatic Handsfree

With Automatic Handsfree you can:

Use the Handsfree (HF) feature without pressing the HF key.

Automatic Handsfree lets you activate Handsfree for a call or feature by just pressing the primary key for that call or feature. There is no need to press the HF key first (see also Handsfree on the previous page).

With a Handsfree phone, you can always use Automatic Handsfree for:
- Dialing Number Preview
- Directory Dialing
- Intercom (when you press INTERCOM)
- Last Number Redial and Save
- Speed Dial (when you press a One-Touch Speed Dial key or DIAL)

You can also use Automatic Handsfree for the features below, but only if the system is programmed for Automatic Handsfree:
- Outside Calls (for all types of Line keys)
- Group Call Pickup (with a Pickup key)
- Paging (with a Page key)
- Call Parking (with a Park Orbit key)
- Call Coverage (with a Call Coverage key)

If you do not have a Handsfree phone, see Monitor on page 45.

Initial Configuration
Automatic Handsfree enabled

Using the Feature

Automatic Handsfree is not available to attendant or Headset extensions, or when the system is already accommodating the maximum number of Handsfree conversations, which is 12 per CEU.

To use Automatic Handsfree:
1. Do not lift handset or press HF.
2. Press (first) key for feature.
3. Press remaining keys for feature.

HF lights, Handsfree is activated.

To place a call, for example:
- Press Line key to get dial tone over the speaker.
- Dial the number.

Understanding Related Programming

Program 2	To allow/deny Automatic Handsfree system-wide
Program 17	To assign a line/feature to a key at an extension

Monitor

With Monitor you can:

Dial a call, then use both hands to work while you wait for someone to answer -- no need to hold the handset to your ear while you wait.

Wait on Hold without holding the handset to your ear.

Monitor lets you dial calls and activate features without lifting the handset; instead, you press the HF key. When you want to talk, however, you must lift the handset.

Note: The Monitor feature, as described here, is for non-Handsfree phones. If you have a Handsfree phone, read Handsfree on page 43 or Automatic Handsfree on page 44.

Initial Configuration

Monitor capability at all non-Handsfree phones

Using the Feature

Monitor is not available to attendant or Headset extensions.

To use Monitor to dial a call or activate a feature:

1. Do not lift handset.
2. Press HF instead of lifting handset. — HF and DND/MIC light. If DND/MIC does not light, use the Handsfree instead.

   If your system has Automatic Handsfree, you can skip steps 1-2.
3. Press keys for call or feature.

To talk on the phone during Monitor:

1. Lift handset. — HF goes out.

To hang up while using Monitor call:

1. Press HF. — HF goes out.

To change from the handset to Monitor:

You can do this while on Hold, waiting for the other party to return.

1. Press HF. — HF flashes.
2. Hang up the handset. — HF lights steady.

Understanding Related Programming

Program 2	To allow/deny Automatic Handsfree

Headset

With a Headset you can:

Have the privacy of a handset call without having to hold the handset. And, the Headset frees up both hands so you can easily process paperwork while you are on a call.

If you have a multibutton phone, you can use a Headset instead of a handset to process calls. While in the Headset mode, you hear the following signals in the Headset instead of the speaker: ringing, Paging, Background Music. If your extension has program access level 2-5, you can enable/disable Headset operation right from your phone. The recommended Headset is the Plantronic Supra Star Mate (Model MH0530-1).

With a Headset, you cannot use: Group Listen, Handsfree, Microphone Mute, Prime Line, Ringing Line Preference, and you will not receive voice-announced Intercom calls.

Notes:
- If you are an attendant, you should have a DSS Console when using a headset.
- Enabling the headset lowers the volumes at your phone. To readjust the volumes, refer to Using the Volume Controls on page 48.

Initial Configuration
- Headset operation disabled
- Extensions 300-305 can enable/disable Headset operation. All other extensions only have program access level 01.

Using the Feature

To install the Headset while your phone is idle:
1. Make sure your phone is programmed for a Headset.
2. Unplug the handset. Leave it in the cradle.
3. Plug in the Headset.

To enable/disable Headset operation when your extension has program access level 2-5:
1. Do not lift handset.
2. Press PGM#.
3. Dial HS.
4. Dial Y to enable Headset.
   OR
   Dial N to disable Headset.
5. Press SAVE.

To use the Headset for all features in this guide (multibutton phone only):
1. Press HF when you see "Lift handset" or "Hang up." HF lights when you are on a call and goes out when you hang u

Headset (cont'd)

To answer a call using the Headset (attendant's only):

1. Press RLS on the DSS Console.
2. Press the flashing line or Intercom loop key.

If you have Ringing Line Preference, this answers the call.

To place a call using the headset (attendant's only):

1. Press RLS on the DSS Console.
2. Press the flashing line or Intercom loop key.

If you have Ringing Line Preference, press the line or Intercom loop key before pressing RLS.

Understanding Related Programming

Program 18 (II)	To enable/disable Headset operation for an extension
Program 15	To assign program access level 2-5 to extensions so they can enable/disable Headset operation themselves

Using the Volume Controls

With the Volume Controls you can:

Adjust the volume of calls and certain features. Handy when it's especially noisy in the office.

You can use the VOL UP ▲ and VOL DN ▼ keys to raise or lower the volume of the following:

- Background Music (adjusting this volume also changes the volume of incoming ringing and paged announcements)
- Voice levels over the handset
- Voice levels over the speaker (i.e., Handsfree volume)

If you have a non-modular Display phone, you can also use VOL UP ▲ and VOL DN ▼ to control the brightness of your display.

When you adjust the volume for Background Music or voice levels on Intercom calls, the volume remains where you set it until you change it again.

When you adjust the volume for voice levels on outside calls, the volume remains where you set it only for the duration of the call. The volume returns to a pre-set (usually mid-range) value for the next outside call.

Initial Configuration
Mid-range volume

Using the Feature

To adjust the volume of Background Music, incoming ringing, paged announcements, and the brightness of your display:

1. Press VOL UP ▲ or VOL DN ▼
   while the feature is active or
   while the phone is idle.

To adjust the volume for handset or Handsfree voice levels:

1. Press VOL UP ▲ or VOL DN ▼
   while on a call.

Understanding Related Programming

Program 10	To set the volume (gain) for a line (this is the "preset" volume a line takes on after the user hangs up a call on that line)

Using Flash for PBX/Centrex

With Flash you can:

Use your VS phone to access the PBX/Centrex features that you are accustomed to.

When your system is installed behind a PBX or Centrex, Flash lets you access features of the PBX/Centrex while on an outside call. You simply press a key on your phone and dial the code for the PBX/Centrex feature.

Initial Configuration

- Flash allowed
- Flash timer set at .7 seconds

Using the Feature

To use Flash while you are on an outside call:

1. Press FTR.
2. Wait for PBX/Centrex dial tone.
3. Dial the code for the desired PBX/Centrex feature.

Understanding Related Programming

Program 4	To set the Flash timer
Program 10	To identify a line as a PBX line
Program 5	To store PBX Access Codes (to access outside lines)
Program 16	To give an extension access to a line

Using a PBX/Centrex Key

With a PBX/Centrex key you can:

Access a PBX/Centrex feature with a single touch.

When your system is installed behind a PBX or Centrex, a PBX/Centrex key lets you access a PBX/Centrex feature without dialing the feature code. The feature code is stored in a key so you can just press the key.

PBX/Centrex keys can be enabled only through terminal programming, which requires the AUX module. To enable PBX/Centrex keys, see Centrex Compatible Feature Keys in the ONYX Feature and Terminal Programming Manual.

Initial Configuration

No PBX/Centrex keys assigned

Using the Feature

See the ONYX Feature and Terminal Programming Manual.

Understanding Related Programming

Program 3	To set the baud rate of the AUX module's port for terminal programming

More About Placing Calls

Pulse to Tone Conversion

With Pulse to Tone Conversion you can:

Use your pulse (rotary) lines to access computer services that require tone dialing (such as banking, MCI, Sprint, etc.).

Pulse to Tone Conversion lets you dial digits on a Dial Pulse (rotary) line, then convert to tone dialing. After you dial the pulse digits, you simply stop dialing for six seconds. Any digits you dial after the six-second pause will be dialed out as tones. When you hang up the call, the dialing mode automatically reverts to pulse.

Initial Configuration
Pulse to Tone Conversion enabled

Using the Feature

To convert to tone dialing when using a pulse line:
1. Place call on pulse line.
2. Wait six seconds.
3. Dial more digits.

Note: If you call a Speed Dial number that contains a pulse line and a pause, the system automatically dials tone digits after the pause.

Understanding Related Programming

Program 6	To make sure the *Active Dialpad* option is enabled in a Toll Restriction level so a user can continue dialing after a pause; otherwise, Pulse to Tone Conversion would be disabled (see also Program 1)
Program 1	To assign a Toll Restriction level (from Program 6) to a Class of Service (see also Program 18 [I])
Program 18 (I)	To assign a Class of Service (from Program 1) to an extension
Program 10	To identify a line as a pulse line
Program 16	To give an extension outgoing access to a line

Walking Class of Service

With Walking Class of Service you can:

Make any type of outside call from any phone in the system, regardless of the phone's dialing restrictions. No need to find an "unrestricted" phone when you need to make a special call.

Walking Class of Service lets you temporarily override an extension's dialing restrictions by dialing a security code at that extension. Dialing the code overrides the restrictions set up in Class of Service (Program 1).

For example, if an extension's Class of Service restricts long distance calls, dialing the security code at that extension removes those restrictions ***and*** all others. In other words, once you dial the security code, you can place any type of call on that extension's outgoing lines. When you hang up, the extension's normal dialing restrictions are automatically reinstated, though you can redial the call you just made without using the security code. You can redial it using Last Number Redial or Save.

Initial Configuration

Walking Class of Service disabled (no security code is programmed)

Using the Feature

To use Walking Class of Service to place an outside call:

1. Lift handset.	
2. Press INTERCOM (except at an ESL set).	INTERCOM lights and you hear dial tone.
3. Dial # twice.	Dial tone stops.
4. Dial Walking Class of Service security code.	INTERCOM goes out and you hear Intercom dial tone again.
5. Dial an access code or press a Line key for an outgoing line at that extension.	■ Codes 801-816 for lines 1-16 (if Line Dial-Up is allowed) ■ Codes 348-363 for lines 1-16 (if Direct Line (Trunk) Access is allowed) ■ Code 90-98 for Line Groups (if line group access is allowed)
6. Dial your call.	After you dial the call, you can redial it using Last Number Redial. You can also store the number at that phone using Save, then redial it later using Save.

Understanding Related Programming

Program 3	To define a Walking Class of Service security code

Dialing Number Preview

With Dialing Number Preview you can:

Make a mistake in dialing and not have to redial the entire number.

If you have a Display Phone, Dialing Number Preview lets you dial an outside number, review its digits on your display and correct them, if necessary, before the system dials out the call. To correct a mistake, you back up to the mistake and enter the correct digit. Then you simply press a few keys to have the system dial out your call.

Initial Configuration

Dialing Number Preview always allowed at Display Phones

Using the Feature

To use Dialing Number Preview:

1. Do not lift handset (unless you are using an attendant extension).
2. Dial *. — HF lights.
3. Dial number.
4. Correct any mistakes as follows:
   - Press VOL DN ▼ to move the cursor left to the incorrect digit. If you go to far, press VOL UP ▲ to move the cursor right. — If the number is correct, go to step 6.
   - Dial the correct digit.
5. Press FTR to move the cursor to the end of the number.
6. Press DIAL. — If your phone has a Prime Line key (page 26), this step dials out the call and you can skip step 7.
7. Press Line key to have the system dial your call.

To exit Dialing Number Preview without dialing the call:

1. Press HF. — At an attendant extension, hang up.

Understanding Related Programming

Program 16	To give an extension outgoing access to a line

Directory Dialing

With Directory Dialing you can:

Place Intercom or Speed Dial calls by displaying the name of the person you want to call -- the VS does the rest for you. No need to refer to a list of Intercom and Speed Dial numbers filed away at your desk.

If you have a Display Phone, Directory Dialing lets you make an Intercom or Speed Dial call by name instead of by number. It works like this:

- You display the name of the person you want to call from a stored directory ("phone book")
- Press a button to have the system dial the person's number.

Intercom Directory Dialing is always available if the system administrator has stored extension names in memory.

Speed Dial Directory Dialing is available only if your system is equipped with an AUX module. If so, you can store names with your Personal Speed Dial numbers as long as your extension has program access level 1-5. If your extension has program access level 4-5, you can store 100 System Speed Dial names. To store Speed Dial names from your phone, see Speed Dial on page 66. Optionally, the system administrator can store Speed Dial names from a terminal connected to the AUX module.

Initial Configuration

Directory Dialing always allowed at Display Phones, but no names are stored initially

Using the Feature

To place a call using Directory Dialing:

1. Lift handset.
2. Dial code (I, P, or C) for names.
   - I = Intercom names
   - P = Personal Speed Dial names
   - C = System (Company-Wide) Speed Dial names.

   To scroll through the directory, go to step 5.

   If you see, NO RAM INSTALLED, this means only Intercom Directory Dialing is available.
3. Dial first letter of the desired name.

   For example, to dial G: Dial 4. To dial a blank, Q, Z: Dial 0 (zero).

   After you dial G, for example, the display shows: 1=G, 2=H, 3=I. "1=G" because G is the first letter on the 4 button, etc.

Directory Dialing (cont'd)

Using the Feature

4. Dial the number (1, 2, or 3) that corresponds to the letter you just dialed.

   The display shows you the first name stored for that letter. If you see UNLISTED NAME, this means there are no stored names for that letter.

5. Press VOL UP ▲ or VOL DN ▼ to scroll through the directory until you see the name you want.

   To begin scrolling from the first name again, dial #.

6. Press DIAL to have the system dial your call.

To exit Directory Dialing at any time:

1. Hang up.

Understanding Related Programming

Program 14	To assign a name to an extension for Intercom Directory Dialing
Program 18 (I)	To assign a Speed Dial block to an extension (names cannot be stored at extensions with blocks 51-57). Remember: Speed Dial names can be stored only if the system has an AUX card.
Program 18 (II)	To store Speed Dial numbers and names
Program 15	To assign program access level 1-5 to extensions so they can store their own Personal Speed Dial numbers and names
	To assign program access level 4-5 to any extension that should be able to store System Speed Dial names

Direct Station Selection

With Direct Station Selection you can:

Make Intercom calls with two touches. No need to remember, look up, or dial extension numbers. Your phone can remember and dial them for you.

Direct Station Selection (DSS) lets you call an extension by pressing two keys: INTERCOM, then the DSS key for the desired extension. Keys 1-15 are the DSS keys. You can program a DSS key to call whichever extension you wish as long as your extension has program access level 1-5. You can also use DSS keys to Transfer calls.

In addition, when you press INTERCOM, the DSS keys show you the status of their associated extensions (the status is called Busy Lamp Field [BLF] and is described below).

When the DSS/BLF key is...	The extension is...
Off	Idle
On	Busy or ringing
Flashing fast	in Do Not Disturb

Direct Station Selection also does the following:
- Signals a busy extension if it is programmed for Off-Hook Signaling (see page 106).
- Lets you manually send Call Waiting beeps (see page 103) to a busy extension if it is not programmed for Off-Hook Signaling

Direct Station Selection does not, however, let you contact an extension in Do Not Disturb unless your extension is programmed for Intrusion (see page 105).

Initial Configuration
- DSS/BLF enabled for keys 1-15
- All DSS keys call extension 300
- All extensions can change DSS extension assignments
- DSS keys automatically activate Off-Hook Signaling (Voice Overs)
- Intrusion allowed for attendant extension 300

Using the Feature

To assign an extension to a DSS key when your extension has program access level 1-5:

1. Do not lift handset.	
2. Press PGM#.	
3. Dial DSS.	DSS keys flash fast.
4. Press desired DSS key.	The key flashes slowly.
5. Dial extension, press PGM#.	
6. Return to step 4. OR Press SAVE to finish.	All keys go out.

Direct Station Selection (cont'd)

Using the Feature

To place a call using a DSS key:

1. Lift handset.
2. Press INTERCOM.

   If INTERCOM does not light, you do not have DSS keys.
3. Press lit or unlit DSS key to call the extension.

   - If you hear two beeps, speak.
   - If you hear ringing, wait for an answer.
   - If you hear busy tone, dial C to send Call Waiting beeps.
   - If you hear fast busy, dial I to intrude (override DND).

To transfer a call using a DSS key:

1. Press INTERCOM.

   This puts your call on Hold. If INTERCOM does not light, you do not have DSS keys.
2. Press lit or unlit DSS key to call the extension.

   See step 3 above for your options.
3. Announce the call and hang up.

   OR

   Hang up to have the call wait at your partner's extension unannounced.

   If the person does not pick up the Transfer, it recalls your phone like a normal Transfer.

Understanding Related Programming

Program 18 (I)	To enable/disable DSS capability on keys 1-15
Program 18 (II)	To assign extensions to the DSS keys (after you enable them in Program 18 [I])
Program 15	To assign a program access level to an extension

Direct Station Selection, DSS Console

With a Direct Station Selection Console you can:

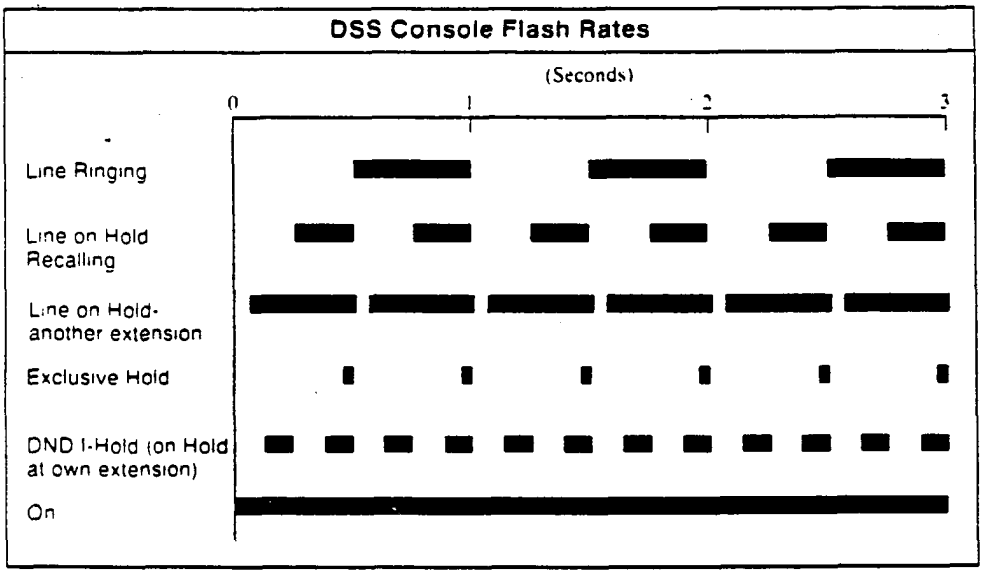
Get 80 additional keys to make intercom calls and use selected features with one touch. No need to remember, look up, or dial extension numbers. Your DSS Console can remember and dial them for you.

A Direct Station Selection (DSS) Console gives you 80 keys for one-button access to extensions and selected features. This saves time if you do a lot of call processing. You can have DSS Console keys for:

- Hotline to extensions (see page 62)
- Park Orbits (see page 119)
- Outside Lines (see page 26)
- Page Zones (see page 126)
- DSS Console (One-Touch) Speed Dial (see page 66)
- Release (always on key 80)

DSS Console Busy Lamp Field (also see page 12)

The DSS Console Busy Lamp Field shows the status of the associated extension, line or feature. See the chart below. When programmed for Hotline, the key shows when the extension is idle, busy or in Do Not Disturb. If the key is a line key, it shows when the assigned line is ringing, idle, busy, on Hold or recalling. For a Park orbit key, the key is on when the orbit is in use. If a key is a Page zone or Speed Dial key, the key is on when the feature is active.



Notes:

- You cannot install a DSS Console in the expansion cabinet.
- The DSS Console is a dual port device, using adjacent even and odd numbered ports. You can install as many DSS Consoles as there are available dual ports. However, the system allows only four unique DSS Console key configurations (layouts). See Understanding Related Programming below.
- For attendants, pressing a DSS Console key while on an outside call automatically puts the outside call on Hold (Automatic Hold).

Direct Station Selection, DSS Console (cont'd)

Initial Configuration

- The DSS Console is automatically enabled (circuit type 06) when you plug it in
- Each console is assigned to extension 300
- Each console uses Block (configuration) 01, with key assignments as follows:

Key	Assignment
1-47	Extensions 301-247
48-72	Undefined
73-76	Page zones 0-3
77-79	Park orbits 60-62
80	Release

Using the Feature

To use your DSS Console keys:

1. Lift handset.
2. Press DSS Console key for desired function.

To use your DSS Console Hotline keys to Transfer your outside call:

1. Lift handset.
2. Press INTERCOM.

   If you are an attendant, skip this step to Transfer the call unscreened.
3. Press DSS Console Hotline key.
   - If you hear two beeps, speak.
   - If you hear ringing, wait for an answer.
   - If you hear busy tone, dial C to send Call Waiting beeps.
   - If you hear fast busy, dial I to intrude (override DND).

Direct Station Selection, DSS Console (cont'd)

Understanding Related Programming

Program 14	To assign circuit type, DSS Owner, DSS Block and (optional) name to each DSS Console (The system does, however, assign the correct circuit type. DSS Owner 300 and DSS Block 01 when you plug in the DSS Console)
Program 17	To designate the function of each DSS Console key. You must use Program 17 from the extension assigned to the console.
Program 18 (1)	To assign a Personal Speed Dial block to a DSS Console (if the console has Speed Dial keys) and program Personal Speed Dial for the console's One-Touch keys.

Hotline

With Hotline you can:

Speed up intercom calls to co-workers you frequently call. Touch one button to get through.

Hotline lets you place a call or Transfer a call to another extension (your Hotline partner) by pressing a single key -- the Hotline key for that extension. If your extension has programming access level 2-5, you can change the partner extension associated with a Hotline key.

In addition, a Hotline key shows you the status of the partner extension:

When the key is...	The partner extension is...
Off	Idle
On	Busy or ringing
Flashing fast	in Do Not Disturb (DND)

The Hotline feature also does the following:

- Signals your partner extension when it is busy, if your partner is programmed for Off-Hook Signaling (see page 106)
- Lets you manually send Call Waiting beeps to your busy partner, if your partner is not programmed for Off-Hook Signaling
- Lets you contact your partner extension when it is in Do Not Disturb

Initial Configuration

- No Hotline keys programmed.
- Extensions 300-305 can change Hotline partner extensions. All other extensions only have program access level 01.
- Hotline automatically activates Off-Hook Signaling

Using the Feature

To assign a partner to your Hotline key when your extension has program access level 2-5:

1. Do not lift handset.
2. Press PGM#.
3. Dial HL.
4. Press desired Hotline key.
5. Dial desired extension number.
6. Return to step 4.

   OR

   Press SAVE to finish.

Hotline (cont'd)

Using the Feature

To place a call to your Hotline partner:

1. Lift handset.
2. Press Hotline key once if it is lit or unlit.

- If you hear two beeps, speak.
- If you hearing ringing, wait for an answer.
- If you hear busy tone, dial C to send Call Waiting beeps.
- If you hear fast busy tone, this means your partner is on a call while in DND. You cannot get through.

OR

Press Hotline key twice if it is flashing fast.

This overrides your partner's DND and you hear ringing.

To transfer your outside call to your Hotline partner:

1. Press Hotline key once if it is lit or unlit.

See step 2 above for your options. If you hear busy tone, you do not have to dial C to send beeps. Just hang up (see step 2 below).

OR

Press Hotline key twice if the key is flashing.

In either case, your outside call goes on Hold.

2. Announce the call and hang up.

OR

Hang up to have the call wait at your partner's extension unannounced.

If your partner does not pick up the Transfer, it recalls your phone like a normal Transfer.

Understanding Related Programming

Program 17	To assign Hotline keys (and partners) to an extension
Program 18 (II)	To change Hotline assignments
Program 15	To give extensions program access level 2-5 so they change Hotline partner extensions themselves

Last Number Redial

With Last Number Redial you can:

Remake your last call by touching two buttons. Very handy for retrying busy numbers.

Last Number Redial lets you redial the last outside number you called without manually redialing the digits. The system remembers the last call you made and will dial it out for you on the same line you used for the original call unless you manually select a different one.

You can use Last Number Redial to redial calls up to 24 digits long. If, however, you wait more than six seconds between dialing the digits of the original call, Last Number Redial only redials the digits after the six-second pause.

Initial Configuration

Last Number Redial always enabled

Using the Feature

A power failure erases the last number you called and you cannot use Last Number Redial to redial it.

To place a call using Last Number Redial:

1. Lift handset.	To have the call dial out on a line other than the original one: Access an idle outgoing line before you do step 2.
2. Press DIAL.	You hear dial tone.
3. Press LAST to have the call dial out.	Immediate busy tone means the original line is busy. Press an idle outgoing Line key to have your call go out.

Understanding Related Programming

Program 16	To give an extension outgoing access to a line
Program 17	To assign a line to a key at an extension

Save

With Save you can:

Call a busy number in the morning, quickly "save" it in memory, then periodically retry it throughout the day by touching two keys. You do not waste time looking up the number again.

Save lets you store (save) in memory the last outside number you dialed so you can easily redial it later on. Save lets you store numbers up to 24 digits long. After you save a number, you can make other calls without affecting it. The saved number stays in memory until you save a new one in its place.

When you call a saved number, the system dials it out on the same line used for the original call unless you manually select a different line.

Initial Configuration

Save always allowed

Using the Feature

A power failure or system reset erases a saved number from memory.

To save an outside number after you dial it:

1. Do not hang up.	
2. Press DIAL.	The Line key goes out.
3. Press SAVE.	The Line key lights again.

To call a saved outside number:

1. Lift handset.	To have the call dial out on a line other than the original one: Access an idle outgoing line before you do step 2.
2. Press DIAL.	You hear dial tone.
3. Press SAVE to have the call dial out.	Immediate busy tone means the original line is busy. Press an idle outgoing Line key to have your call go out.

Understanding Related Programming

Program 16	To give an extension outgoing access to a line
Program 17	To assign a line to a key at an extension

Speed Dial

With Speed Dial, you can:

Save time dialing the outside numbers you frequently call.

Speed Dial allows a number to be stored in a memory bin so you can call the number by dialing its bin or by pressing its key. If the VS is equipped with an AUX module, a 16-character name can be stored with a number. The name appears on a Display Phone when the number is called.

There are two types of Speed Dial: Personal and System.

Personal Speed Dial lets you store 20 numbers at your extension as long as your extension has program access level 1-5. You store numbers in bins 50-59 and 20-29 and call them as follows:
- Press DIAL, then dial the bin number, or
- Press DIAL, then press the corresponding bin key (1-20).

The system administrator can also store numbers for you.

System Speed Dial lets the system administrator store numbers in system memory from any extension that has program access level 4-5. System Speed Dial numbers can be called from any extension in the system. For example, the system administrator may store the number for your company's branch office so everyone has quick access to it. The system does not apply your Toll Restrictions to System Speed Dial numbers (i.e, you can call them even if you are normally restricted from manually placing the same call). Depending on how your system is programmed, there may be 10 System numbers stored in bins 70-79 or 100 numbers stored in bins 700-799.

In addition, the system administrator can assign **One-Touch Speed Dial keys** to your extension. A One-Touch Speed Dial key also corresponds to a bin number. You just press the key to call the stored number. There is no need to press DIAL first. You can also store "Intercom" feature codes in a One-Touch Speed Dial key. For example, you could store the Call Forwarding codes (#, extension, Call Forward code) in a bin and activate Call Forwarding by pressing the key. If you have a DSS Console, you can have One-Touch Speed Dial on keys 1-79 for an additional 79 Personal Speed Dial bins.

Some particulars about storing numbers are as follows:
A bin can store 16 digits, including a pause or "#" character (if allowed). Numbers longer than 16 digits flow to the next consecutive bin. Long numbers can also be stored in two consecutive bins, then linked together when you want to call the long number. When the system encounters a pause in a number, it waits a programmed time for dial tone before it dials out the remaining digits. If the system does not detect dial tone, you must dial * to restart the dialing. After a pause, the system dials out the remaining stored digits in tones (DTMF) even if you are using a Dial Pulse (rotary) line.

Speed Dial (cont')

Initial Configuration

- Each extension can store 20 Personal Speed Dial numbers except 303 (there is no Speed Dial block of memory assigned to 303)
- Extensions 300-305 can store System Speed Dial numbers. All other extensions only have program access level 01.
- There are 100 System Speed Dial bins (700-799)
- All extensions can access System Speed Dial numbers
- Speed Names can only be stored if the system has an AUX module
- One-Touch Speed Dial keys not assigned
- The system waits 10 seconds for dial tone before sending out a Speed Dial number. The system waits 30 seconds for dial tone when it encounters a pause.

Speed Dial (cont')

Using the Feature

To store a Personal or System Speed Dial number:

- To store a Personal Speed Dial number, your extension must have program access level 1-5.
- To store a System Speed Dial number, your extension must have access level 4-5.

1. Do not lift handset.
2. Press PGM#.
3. Dial SD.
4. For System Speed Dial: Dial bin 70-79 or 700-799.
   OR
   For Personal Speed Dial: Dial bin (50-59, 20-29) or press lit One-Touch Speed Dial key (on phone or DSS Console).
5. **If the system lets you store a name:**
   At a Display Phone: Enter a name, press PGM#. Or, to skip name, press PGM#, go to step 6.
   At a Standard Phone: Press PGM# and go to step 6.
   OR
   If the system does not let you store a name, go to step 6.
6. Dial a line (01-16) or group 90-98 (if your system has line groups), or press Line key.
7. Dial number, including a pause *, # (if allowed).
8. Hang up.

To enter a letter in a name:

- Dial letter. Zero button = blank, Q, Z, (in that order).
- Dial digit (1, 2, 3) = letter's position on button (e.g., dial 1 to get the 1st letter). To erase last letter, press LAST.

To store Intercom codes, press INTERCOM instead of storing a line, then dial the codes in step 7.

To enter a pause, press HOLD.
To enter *: Press DIAL, dial *.
To enter #: Press DIAL, dial #.

Speed Dial (cont'd)

Using the Feature

To call a Personal or System Speed Dial number (by using the bin number or bin key):

1. Lift handset.	To preselect a line instead of using the line stored with the number: ■ Press desired Line key. ■ Press INTERCOM in step 2, then go to step 3.
2. Press DIAL (except at an ESL set).	
3. Dial System Speed Dial bin (70-79, 700-799). OR Dial Personal Speed Dial bin (50-59 or 20-29). OR Press Personal Speed Dial bin key (1-20).	Your number dials out. Immediate busy tone means the stored line is busy. Press an idle outgoing Line key to have your call dial out. If the number contains a pause, you may have to dial * to restart the dialing.

To call a Personal or System Speed Dial number (by pressing a One-Touch Speed Dial key):

1. Lift handset.	To preselect a line instead of using the line stored with the number: Simply press the desired Line key.
2. Press One-Touch Speed Dial key (on your phone or DSS Console) for desired number.	Your number dials out. Immediate busy tone means the stored line is busy. Press an idle outgoing Line key to have your call dial out. If the number contains a pause, you may have to dial * to restart the dialing.

Speed Dial (cont'd)

Using the Feature

To link Speed Dial numbers stored in different bins (multibutton phones only):

1. Place first Speed Dial call.
2. Press One-Touch Speed Dial key for next number.
   OR
   Press DIAL, then dial bin or press bin key for next number.

Speed Dial (cont'd)

Understanding Related Programming

Program 1	To allow/deny access to System Speed Dial numbers in a Class of Service (see also Program 18 [I])
Program 18 (I)	To assign a Class of Service (from Program 1) to an extension
	To assign a Speed Dial block of memory to an extension. A block lets a user store 20 numbers. If the system has an AUX module, the block also lets a user store a name with a number except for blocks 51-57.
Program 3	To determine how many digits in a System Speed Dial code (2 digits allows 10 numbers to be stored under codes 70-79; 3 digits allows 100 numbers to be stored under codes 700-799)
	To enable or disable the dialing out of a "#" character in a System Speed Dial number
Program 17	To assign One-Touch Speed Dial keys to an extension or DSS Console
Program 4	To set the Dial Tone Detection timer (this sets the amount of time the system should wait for dial tone before sending out a Speed Dial number or after a stored pause)
Program 18 (II)	To store Personal Speed Dial or System Speed Dial numbers
Program 15	To assign a program access level to extensions so they can store Speed Dial numbers themselves
Program 16	To give an extension outgoing access to a line so it can store and call Speed Dial numbers

To change the first digit of Personal or System Speed Dial codes. see Flexible Numbering Plan on page 173.

Conference

With Conference you can:

Conduct a telephone meeting with inside and/or outside parties so you do not have to leave your office.

Conference lets you set up a three-way telephone conversation. To set up a Conference, you establish an Intercom or outside call, then add someone to it. You can add an outside party or an extension user.

To set up a Conference with two outside parties, your system must be equipped with loop start lines that have disconnect supervision.

Initial Configuration
Conference allowed

Using the Feature

Conference is temporarily unavailable when the system is already accommodating the maximum number of three-party conversations, which is 8 per system.

To set up a Conference:

1. Establish first call.
2. Press CONF. — Your call goes on Hold. Busy tone means that all Conference circuits are busy. Try again later.
3. Establish second call.
4. Press CONF again. — CONF lights and all three of you are connected.

If the Conference includes at least one other extension user, you can hang up (leave the Conference) without disconnecting the remaining parties.

Understanding Related Programming

N/A

Group Listen

With Group Listen you can:

Broadcast an important call over your speaker so all your colleagues can hear the information at once. They can give you feedback on the information without the person on the line hearing their comments.

While you talk to someone using the handset, you can activate Group Listen to broadcast that person's voice over your phone's speaker. Anyone in the general vicinity of your phone can hear what the caller says, but that person will only hear what you say into the handset.

Initial Configuration
Group Listen always allowed

Using the Feature

Attendant and Headset extensions cannot use Group Listen.

To activate Group Listen while on a handset call:

1. Press HF, but do not hang up. — HF flashes slowly and the speaker is on.

To cancel Group Listen (without terminating your call):

1. Do not hang up the handset.
2. Press HF. — HF goes out and the speaker is off. You can still talk to the other person using the handset.

To terminate (hang up) a call after activating Group Listen:

1. Press HF, then hang up the handset.
   OR
   Hang up the handset, then press HF.

Understanding Related Programming

N/A

Meet-Me Conference

With Meet-Me Conference you can:

Conduct a telephone meeting with two people in the office even when you don't know where they are.

Meet-Me Conference lets you set up a three-way telephone conversation. You page the people you want in the Conference and wait without hanging up. Then, from any phone, they dial the Meet-Me Conference code (11 or 12) to be connected to you.

Initial Configuration

Meet Conference always allowed

Using the Feature

Meet-Me Conference is temporarily unavailable when the system is already accommodating the maximum number of three-party conversations, which is 8 per system.

To set up a Meet-Me Conference:

1. Page parties and announce the Meet-Me Conference Code (11 or 12). Do not hang up.	See Paging on page 126.
2. Press INTERCOM (except at an ESL set).	You hear dial tone.
3. Dial the Meet-Me Conference code you announced in step 1.	
4. Do not hang up. Wait for parties to join.	When the first person joins, INTERCOM flashes fast. When the second person joins, CONF lights. One party can hang up without disconnecting the other two.

To join a Meet-Me Conference after *you* are paged:

You must respond within one minute of the page.

1. Lift handset and press INTERCOM (except at ESL set).	You hear dial tone.
3. Dial announced Meet-Me Conference code (11 or 12).	When the first person joins, INTERCOM flashes fast. When the second person joins, CONF lights. One party can hang up without disconnecting the other two.

Understanding Related Programming

N/A

Privacy Release

With Privacy Release you can...

Convert an outside call into a Conference call with a single touch. No need to dial codes.

Privacy Release lets you quickly join a co-worker's outside call, creating a three-party Conference. You can use Privacy Release as long as your co-worker:

- Is a member of your Privacy Release Group
- Has not activated Privacy
- Is not on Conference call

Initial Configuration
No Privacy Release Groups defined

Using the Feature

Privacy Release is temporarily unavailable when the system is already accommodating the maximum number of three-party conversations, which is 8 per system.

To join a co-worker's outside call (when your co-worker is a member of your Privacy Release Group):

1. Lift handset.	If that group member just placed the call, you must wait six seconds before doing step 2.
2. Press the busy Line key for the call you want to join.	The CONF key lights at your phone and at your co-worker's. You hear the conversation and can join it. If you hear busy tone, you cannot join the call.

To prevent a member of your Privacy Release Group from interrupting an outside call you are on (i.e, to activate Privacy):

1. Press the flickering Line key of your call.	The Line key lights steadily. No group members can join that call.

Understanding Basic Programming

Program 18 (I)	To assign an extension to a Privacy Release Group
Program 16	To give Privacy Release Group members outgoing access to lines they should be able to join
Program 17	To assign a key to each line intended for Privacy Release at an extension

Tandem Calls

With Tandem Calls you can, as a dispatcher:

Answer a call from a salesman who is on the road, then connect his call to a salesman in another state. No need for the first salesman to hang up and call the other salesman.

Tandem Calls let you set up a Conference with two outside parties, then drop out of the conversation leaving the two outside parties connected.

Initial Configuration

Tandem Calls disabled

Tandem Calls can be enabled only through terminal programming, which requires the AUX module. To enable Tandem Calls, see Tandem Trunking in the ONYX Feature and Terminal Programming Manual.

Note: To use Tandem Calls, the VS system must be equipped with a Line module that provides disconnect supervision. In addition, the connected CO line must also provide disconnect supervision.

Using the Feature

N/A

Understanding Related Programming

Program 3	To set the baud rate of the AUX module's port for terminal programming

Group Ringing

With Ring Groups you can:

Call a group of extensions by dialing a single code.

The extensions in your system can be placed into Ring Groups. When you make an Intercom call or Transfer to a Ring Group, all extensions in the group ring simultaneously. If your extension is in a Ring Group, you can answer any call that rings your group by simply lifting the handset.

Your system can also be set up so that incoming outside calls ring all extensions in a Ring Group directly (i.e., without having to be transferred to the group).

The system can accommodate up to eight different Ring Groups (01-08). The dial-up codes for Ring Groups 01-08 are 364-371.

Initial Configuration

No Ring Groups programmed

Using the Feature

To make an Intercom call to a Ring Group:

1. Lift handset.
2. Press INTERCOM (except at an ESL set). — INTERCOM lights and you hear dial tone.
3. Dial Ring Group number (364-371).

To transfer your outside call to a Ring Group:

1. Press INTERCOM. At an ESL set, press TRF instead. — Your call goes on Hold.
2. Dial Ring Group number (364-371).
3. Hang up. — If the group is busy, the transferred call Camps-On (waits) until someone in the group is free or the transferred caller hangs up. The call will not recall your extension.

To answer a call that rings your Ring Group:

The call rings like any other Intercom or outside call.

1. Lift handset. — You cannot use Automatic Handsfree to answer the call.

Group Ringing (cont'd)

Using the Feature

To answer a call that rings someone else's Ring Group:
If it's an outside call, you can answer it only if you have access to that line.

1. Lift handset.	If you have a Call Coverage key (see page 90) for the other group, just press the key instead of using steps 2-4.
2. Press INTERCOM (except at an ESL set).	INTERCOM lights and you hear dial tone.
3. Dial *.	Dial tone stops.
4. Dial Ring Group number (364-371).	

Understanding Related Programming

Program 18 (I)	To assign extensions to a Ring Group (do not assign an attendant or Hunt Group extension to a Ring Group)
Program 12	To directly terminate a line (i.e, assign a Direct Inward Line [DIL]) to a Ring Group. When a call comes in on the DIL, all extensions in the group ring.
Program 17	To assign a DIL to a key at every extension in the Ring Group (if desired)

To change the first digit of Ring Group numbers, see Flexible Numbering Plan on page 173.

Using Other Common Carriers

With the VS you can:

Use Other Common Carriers such as, MCI, GTE Sprint, etc.

The VS system lets you access Other Common Carriers (OCCs), like MCI and GTE Sprint, in two different ways. You can:

- Manually dial their telephone number and any other required codes.
- Store their telephone number, a pause, and their security code (or other required numbers) in a Personal Speed Dial bin. When you access the bin, the system dials out the number, then pauses (waits) for dial tone from the OCC. When the VS detects OCC dial tone, it dials out any other stored digits.

Optionally, the system administrator can store an OCC telephone number and other required codes in a System Speed Dial bin for quick access by everyone in the system.

Initial Configuration

The VS is always compatible with OCCs

Using the Feature

To manually make a call to an OCC:
See Placing an Outside Call on page 26.

To store an OCC's number in a Speed Dial bin:
See Speed Dial on page 66.

Understanding Related Programming

Program 6	To enable/disable *Active Dialpad (Continuous Dialing)* in a Toll Restriction level. Enabling it lets a user manually dial digits during an established outside call. This way, a user can establish a call to an OCC, wait for OCC dial tone, then dial more digits (see also Program 1) **Note:** Continuous Dialing is always allowed at ASIs.
Program 1	To assign a Toll Level (from Program 6) to a Class of Service. You can assign Toll Level 0 or a Toll Level that has *Active Dialpad* enabled (see also Program 18 [I]).
Program 18 (I)	To assign a Class of Service (from Program 1) to an extension

Equal Access Compatibility

With Equal Access you can:

Use an alternative long distance service without dialing its telephone number.

If the VS is installed in an Equal Access area, you can dial a five-digit code to access a long distance carrier other than your main one (i.e., the one you access by dialing 1 before a number). The five-digit code is in the form 10XXX, where XXX is the carrier's identification code. The identification code is set up by the local telephone company.

Once you manually dial an Equal Access code, you can dial any number (i.e., you have unrestricted dialing) unless your phone has any of the following options enabled in its Class of Service:

- **Only Intercom Call at Night**, which prevents Equal Access dialing during the Night Answer mode.
- **Only Local Calls at Night**, which prevents Equal Access dialing to long distances numbers during the Night Answer mode.
- **Only Local Calls (Day or Night)**, which prevents Equal Access dialing to long distance numbers.

However, the system never restricts an Equal Access call that is stored in System Speed Dial bin.

Initial Configuration

Equal Access Dialing allowed (if the system is in an Equal Access area)

Using the Feature

To use Equal Access Dialing:

1. Access an outside line.
2. Dial Equal Access code.
3. Dial number.

See Placing an Outside Call on page 26.

Understanding Related Programming

Program 6	To allow/deny Equal Access Dialing (see also Program 1). If you can do terminal programming through the AUX module (AP command), you can allow/deny specific 10XXX codes.
Program 1	To assign a Toll Level (from Program 6) to a Class of Service (see also Program 18 [I])
	To limit Equal Access Dialing using Class of Service dialing options (see the explanation above)
Program 18 (I)	To assign a Class of Service (from Program 1) to an extension

Using Tie Lines

With Tie Lines installed between two of your company's buildings, you can:

Quickly call a co-worker who works in the other building without having to dial a seven-digit telephone number.

A Tie Line directly links your VS telephone system with another telephone system. People in your system can:

- Use the lines in the other system
- Call extensions in the other system
- Use Speed Dial numbers from the other system

The VS provides a connection for two-wire Type I Signaling (TL11M) Tie Lines. However, Tie Lines require a special module (future) and terminal programming, which requires the AUX module. For more information, see Tie Lines in the ONYX Feature and Terminal Programming Manual.

Initial Configuration

No Tie Lines

Using the Feature

See ONYX Feature and Terminal Programming Manual.

Understanding Related Programming

N/A

Intentionally Left Blank

More About Answering Calls

Selecting Ringing Options for Incoming Calls

Answering Calls While You are Already On the Phone

See also:
Call Waiting/Camp-On (103)
Off-Hook Signaling/Voice Over (106)

Answering Calls That Ring Other Extensions

See also:
Group Ringing (77)

Delayed Ringing Assignment

With Delayed Ringing Assignment you can:

Have your calls ring at your secretary's phone, then at your phone after a short delay. This way, you are not disturbed by a ringing call unless your secretary cannot get to it right away.

Delayed Ringing Assignment (DRA) lets you enable or disable delayed day/night ringing for:

- Lines
- Call Coverage keys
- Pickup Group keys

A call rings the line or key after a pre-programmed delay instead of right away. To enable/disable DRA, your extension must have program access level 2-5. Enabling DRA disables immediate Ringing Assignment (see page 85) or Night Ringing (see page 87).

Initial Configuration

- DRA disabled at all extensions
- Extension 300-305 can program DRA. All other extensions only have program access level 01.

Using the Feature

To enable/disable Delayed Ringing Assignment (DRA) when your extension has program access level 2-5:

1. Do not lift handset.
2. Press PGM#.
3. Dial DRA.

   Your Line, Call Coverage, Pickup keys flash or light steadily. Flashing means Delayed Ring is on; steadily lit means it is off.
4. Press desired key or dial desired line number.
5. To enable DRA, dial Y.
   OR
   To disable DRA, dial N.
6. Press PGM# and return to step 4, or press SAVE to finish.

Understanding Related Programming

Program 18 (II)	To enable/disable Delayed Ringing for an extension
Program 15	To assign program access level 2-5 to extensions so they can program Delayed Ringing themselves
Program 4	To set the Delayed Rings timer
Program 17	To assign Line, Call Coverage, Pickup keys to an extension
Program 16	To assign line access to an extension

Ringing Assignments

With Ringing Assignments you can:

Select the lines you want to ring.

Ringing Assignments (RA) lets you enable or disable immediate day/night ringing for:

- Lines
- Call Coverage keys
- Pickup Group keys

To enable/disable Ring Assignments, your extension must have program access level 2-5. Enabling RA automatically disables Delayed Ringing (see page 84) or Night Ringing (see page 87).

Initial Configuration

- RA enabled for lines 1-16 at extensions 300, 302, 303 only
- RA disabled for Call Coverage and Pickup Group keys
- Extension 300-305 can program RA. Other extensions only have access level 01.

Using the Feature

To enable/disable Ringing Assignments (RA) when your extension has program access level 2-5:

1. Do not lift handset.
2. Press PGM#.
3. Dial RA.

   Your Line, Call Coverage, Pickup keys flash or light steadily. Flashing means immediate ring is on; steadily lit means it is off.
4. Press desired key.

   OR

   Dial desired line number.
5. To enable immediate ring, dial Y.

   OR

   To disable immediate ring, dial N.

   5. Press PGM# and return to step 4, or press SAVE.

Understanding Related Programming

Program 18 (II)	To enable/disable Ring Assignments for an extension
Program 15	To assign program access level 2-5 to extensions so they can enable/disable Ring Assignments themselves
Program 16	To assign line access to an extension
Program 17	To assign Line, Call Coverage, Pickup keys to an extension

Ringing Line Preference

With Ringing Line Preference you can:

Answer calls in a single step, much like you do with your phone at home.

Ringing Line Preference (RLP) lets you answer calls ringing a Line or Loop key by just lifting the handset. To enable or disable RLP, your extension must have program access level of 2-5. If several calls are ringing your extension, RLP answers Intercom calls first, then outside calls, starting with the one on the lowest numbered line.

Notes:

- If you have a Prime Line Key (see page 26), the system automatically assigns RLP to that line.
- Ringing Line Preference overrides Prime Line. So if a call rings in, lifting the handset answers the call; it does not give you dial tone on your Prime Line.

Initial Configuration

- RLP disabled at all extensions
- Extension 301-305 can program RLP. All other extensions only have program access level 01.

Using the Feature

Do not enable Ringing Line Preference for attendant or Headset extensions.

To enable/disable Ringing Line Preference (RLP) when your extension has program access level 2-5:

1. Do not lift handset.
2. Press PGM#.
3. Dial RLP.
4. To enable RLP, dial Y.
   OR
   To disable RLP, dial N.
5. Press SAVE.

To answer a call when RLP is enabled:

1. Lift handset.

Understanding Related Programming

Program 18 (II)	To enable/disable RLP for an extension
Program 15	To assign program access level 2-5 to extensions so they can enable/disable RLP themselves
Program 16	To assign line access to an extension

Night Ringing

With Night Ringing you can:

Help answer calls at night, when the attendant goes home.

Night Ringing (NR) lets you make a line ring at your extension only when the line's attendant goes into the Night Answer mode (a line's attendant is usually the attendant who answers the line). Night Ringing is for those lines that appear at your extension, but do not normally ring it.

To enable or disable NR, your extension must have a program access level 2-5. Enabling NR automatically disables Ringing Assignment (see page 85) or Delayed Ringing Assignment (see page 84).

Initial Configuration

- NR disabled at all extensions
- Extension 300-305 can program NR. All other extensions only have access level 01.

Using the Feature

To enable/disable Night Ringing (NR) for a line:

1. Do not lift handset.
2. Press PGM#.
3. Dial NR.

   Your Line keys flash or light steadily. Flashing means Night Ring is on: steadily means it is off.
4. Press desired Line key.
   OR
   Dial line number (01-16).
5. To enable Night Ring, dial Y.
   OR
   To disable Night Ring, dial N.
6. Press PGM# and return to step 4, press SAVE to finish

Understanding Related Programming

Program 16	To assign incoming lines to an extension
Program 18 (II)	To enable/disable Night Ringing for a line at an extension. A line follows its Night Ringing assignment under two conditions: When its night termination in Program 12 is 300 and when its terminated day attendant (also assigned in Program 12) activates Night Answer.
Program 15	To assign program access level 2-5 to extensions so they can program NR themselves

Split

With Split you can:

Handle two calls at once.

When you are on a call and you hear two Call Waiting beeps in your handset or Off-Hook Ringing (ringing over your speaker). this means another call is trying to reach you. Split lets you answer the second call. then alternate between the two.

If you are on a call and hear two beeps in your handset followed by your co-worker's voice. see Off-Hook Signaling/Voice Over on page 106.

Initial Configuration

- Split always allowed
- Call Waiting beeps enabled
- Off-Hook Ringing disabled
- Voice Over enabled

Using the Feature

At your multibutton phone, to answer an Intercom call when you are on the phone (INTERCOM flashes):

1. Press INTERCOM. Your first call goes on Hold.
2. To alternate: Press INTERCOM, dial * 7.

At your multibutton phone, to answer an outside call when you are on an Intercom call (a Line/Loop key flashes):

1. Press HOLD to hold your Intercom call.
2. Press flashing Line key.
3. To alternate: Press INTERCOM, dial * 7.

At your multibutton phone, to answer an outside call when you are on an outside call (a Line/Loop key flashes):

1. Press HOLD to hold the call you are on.
2. Press flashing Line or Loop key.
3. To alternate, repeat steps 1-2.

Split (cont'd)

At your ESL set, to Split between a new call and your current call:

1. Press HLD to put current call on Hold.
2. Dial * 2 to answer waiting call.
3. Press HLD again.
4. Dial * 7 to answer the call on hold.

Repeat steps 3 and 4 to continue alternating between the calls.

Understanding Related Programming

Program 2	To enable/disable Call Waiting beeps
Program 18 (II)	To enable/disable incoming Voice Over at an extension
Program 18 (I)	To enable/disable Off-Hook Ringing at an extension

Call Coverage

With Call Coverage you can:

Touch one key at your phone to answer a co-worker's call. No codes to dial.

Call Coverage lets you answer a call ringing a co-worker's extension by pressing your Call Coverage key for that extension (called the "covered" extension). In addition, you can use the Call Coverage key to make an Intercom call or Transfer to the covered extension.

The Call Coverage key shows you the status of the covered extension:

When the Call Coverage key is...	The covered extension is...
Off	Idle
On	Busy
Flashing Slowly	Ringing
Flashing fast	in Do Not Disturb

The Call Coverage feature also does the following:

- Signals a busy covered extension, if it's programmed for Off-Hook Signaling (see page 106)
- Lets you Camp-On to the busy covered extension, if it's not programmed for Off-Hook Signaling (see page 103)
- Lets you contact the covered extension when it is in Do Not Disturb

And, if your extension has the proper program access level, you can enhance the Call Coverage feature as follows:

- With program access level 2-5, you can assign ringing to a Call Coverage key so when a call rings the covered extension, your extension rings, too (see Delayed Ringing Assignment on page 84 and Ringing Assignment on page 85).
- With program access level 1-5, you can change the covered extension assigned to a Call Coverage key (see Direct Station Selection on page 57).

Initial Configuration

- No Call Coverage keys programmed
- All Call Coverage keys activate Off-Hook Signaling (Voice Over)
- Extensions 300-305 can program ringing for Call Coverage keys. All other extensions have program access level 01.
- All extensions can change a Call Coverage key's extension

Using the Feature

To answer a call using a Call Coverage key:

1. Lift handset.
2. Press (slow) flashing Call Coverage key. — The key goes out. INTERCOM or a Line key lights.

Call Coverage (cont'd)

Using the Feature

To place a call to a covered extension:

1. Lift handset.
2. Press Call Coverage key once if it is lit or unlit.

   - If you hear two beeps, speak.
   - If you hearing ringing, wait for an answer.
   - If you hear busy tone, dial C to Camp-On.
   - If you hear fast busy tone, this means your partner is busy on a call and has DND on. You cannot get through.

   OR

   Press Call Coverage key twice if it is flashing fast.

   This overrides the covered extension's DND and you hear ringing.

To Transfer an outside call to a covered extension:

1. Press Call Coverage key.

   The call goes on Exclusive Hold (Line key and HOLD key flash). INTERCOM flashes fast.

2. Announce the call, then hang up.

   If you hear beeps, speak. If you hear ringing, wait for an answer.

   OR

   Hang up to send the call unannounced.

   You can also hang up when you hear busy tone to have the call Camp-On (wait) at that extension.

Understanding Related Programming

Program 17	To assign Call Coverage keys (and their covered extensions) to an extension. If you want Call Coverage keys for ACD/UCD master numbers, your system must have an AUX module.
Program 16	To give an extension access to any line it should be able to answer at the covered extension
Program 18 (II)	To assign ringing to a Call Coverage key
Program 15	To assign program access level 2-5 to extensions so they program ringing themselves

Directed Call Pickup

With Directed Call Pickup you can:

Answer someone else's call from your phone as long as you know their extension number.

Directed Call Pickup lets you answer, from your extension, a call that is ringing a co-worker's extension. You must, however, know the number of the ringing extension.

Directed Call Pickup does not answer calls ringing another extension's Call Coverage keys.

Initial Configuration

Directed Call Pickup always allowed

Using the Feature

To answer a call that is ringing another extension:

1. Lift handset.	If you have a One-Touch Speed Dial key, you can press it instead of using steps 2-4.
2. Press INTERCOM (except at an ESL set).	You hear dial tone.
3. Dial *.	Dial tone stops.
4. Dial number of ringing extension (300-347).	

Note: This procedure picks up calls other than calls ringing other extensions. The pick-up order is as follows:

- Ringing Intercom calls
- Personal Park calls
- Ringing outside calls and Direct Inward Lines
- Calls on Hold

Understanding Related Programming

Program 16	To give an extension access to any line it should be able to pick up

Group Call Pickup

With Group Call Pickup you can:

Easily answer a call ringing your group (e.g., department) even if you don't know which extension is ringing.

Group Call Pickup places your extension in a Pickup Group with other extensions so you can easily pick up (answer) each other's calls. In other words, anyone in the group can pick up a call ringing any other extension in the group by dialing a simple code (* 1). Group Call Pickup answers the following types of calls:

- Ringing Intercom calls
- Transferred Calls
- Outside calls on Direct Inward Lines
- Outside calls on lines that have been assigned, through system programming, to the Pickup Group

To further simplify answering calls that ring a Pickup Group, your extension can be assigned a Pickup Group key. This way, when a call rings any extension in the group, the key flashes and you simply press it to answer the call. If your extension has program access level 2-5, you can assign ringing to a Pickup Group key so when a call rings an extension in the group, your extension rings, too (see Delayed Ringing Assignment on page 84 and Ringing Assignment on page 85).

The system can accommodate up to seven Pickup Groups (01-07). Any number of extensions can be in a group, but an extension can only be in one group.

Initial Configuration

- No Pickup Groups
- No Pickup Group keys
- No Direct Inward Lines assigned to extensions
- No lines assigned to Pickup Groups
- Extension 301-305 can program ringing. All other extensions only have access level 01.

Using the Feature

To answer a call ringing your Pickup Group from any extension in that Pickup Group:

This procedure does not answer Ring Group calls at other extensions in the Pickup Group.

1. Lift handset.
2. Press INTERCOM (except at an ESL set).
3. Dial *.
4. Dial 1.

If you have a One-Touch Speed Dial key, you can press it instead of using steps 2-4.

Group Call Pickup (cont'd)

Using the Feature

To answer a call ringing a Pickup Group using the Pickup key for the group:

1. Lift handset.
2. If not connected. press flashing Pickup key.

Understanding Related Programming

Program 18 (I)	To assign an extension to a Pickup Group
Program 17	To assign a Pickup Group key to an extension. You can also assign a Pickup Group key to an extension that is not in a Pickup Group so the extension can answer calls ringing that group.
Program 18 (II)	To assign ringing to a Pickup key at an extension
Program 15	To assign program access level 2-5 to Pickup Group extensions so they can program ringing for Pickup keys themselves
Program 12	To assign a line to a Pickup Group

Establishing Privacy

Background Music

With Background Music you can:

Add music to your private work area to create a pleasant atmosphere.

With a touch of a key you can have Background Music (BGM) play over the speaker of your extension while it is idle. If a page or call comes in while BGM is playing, the music stops and starts again when the page or ringing stops.

BGM is available only if the VS is equipped with an outside music source (such as a tape player).

BGM can also play over external paging speakers, if your system is equipped and programmed for it.

Initial Configuration

BGM disabled

Using the Feature

BGM is not available to attendant extensions.

To turn BGM on or off while your extension is idle:

A system reset or activating Do Not Disturb automatically turns off BGM

1. Do not lift handset.
2. Press HOLD.

To adjust the volume of BGM:

1. Press VOL UP ▲ or VOL DN ▼ while BGM is on.

This simultaneously adjusts paging and ringing volume.

Understanding Related Programming

BGM uses line circuit #04. A line cannot be connected to it.

The music source must meet the following specifications:

Input Impedance	100 K Ohms
Maximum Input	- 10 dBm

Program 7

To enable BGM (use Enable Background Music)

To have music play over customer-provided external paging speakers, also do the following:

- Enable External All Call Page Zone
- Enable External Page Zone 1 (if you have CEU #2)
- Enable BGM to All External Page Zones.
- Adjust Paging and Music Gain (Volume) Over External Speakers

To install external speakers, see the Hardware Manual.

Do Not Disturb

With Do Not Disturb you can:

Work uninterrupted by phone calls when you have paper work to do.

Do Not Disturb (DND) lets you block incoming pages, ringing, and Intercom voice announcements. While in DND, you can still use your extension to process calls and use features. Incoming outside calls still flash the Line keys and you can answer them, if you wish.

Someone using Hotline (at a phone or DSS Console) or Intrusion, can however, override your DND and get through. Likewise, you can use these features to contact an extension in DND.

Initial Configuration
Do Not Disturb enabled

Using the Feature

DND is not available to the attendant, even if the attendant is programmed for it. Pressing the DND key at an attendant extension puts the system in the Night Answer mode.

To activate DND for your extension:
1. Do not lift handset.
2. Press DND until it flashes.

Activating DND does the following at your extension:

- Turns off Background Music, if it was on
- Cancels any Call Forwards
- Makes your extension appear busy if it is a Hunt Group member

To cancel DND at your extension:
The attendant can automatically cancel a DND condition at your extension by making it an Alternate Attendant or by canceling Call Forwarding system-wide.
1. Do not lift handset.
2. Press DND until it goes out.

Understanding Related Programming

Program 18 (I) To allow/deny Do Not Disturb for an extension

Microphone On/Off

With Microphone On/Off you can:

Make sure a conversation in your work area is not overheard by Intercom callers.

Microphone On/Off lets you turn off your phone's microphone while your phone is idle. With the microphone off, Intercom callers who make voice announcements over your speaker will not be able to hear what people are saying in your work area at the moment the call comes through. To talk to the Intercom caller, you must turn the microphone back on or lift the handset. See also Microphone Mute on page 99.

Initial Configuration

Microphone On/Off always allowed

Using the Feature

Microphone On/Off is not available to attendant or Headset extensions.

To turn off the microphone while your phone is idle:

1. Press DND/MIC.

DND/MIC lights. When a voice-announced Intercom call comes in, you will hear two long beeps instead of the usual two short beeps.

To turn your microphone back on:

Turning it back on automatically cancels any Call Forwards or Selectable Display Messages at your extension.

1. Press DND/MIC until it goes out.

If DND/MIC flashes, your microphone is back on but your extension is in Do Not Disturb. Press it again.

Understanding Related Programming

N/A

Microphone Mute

With Microphone Mute you can:

Privately confer with someone in your work area while on a Handsfree call.

Microphone Mute lets you turn off the microphone while you are on a Handsfree call. With the microphone off, you can listen to the person on the other end, but that person will not be able to hear what people are saying in your work area. To talk to the person on the phone, you must cancel Microphone Mute (i.e., turn the microphone back on). See also Microphone On/Off on page 98.

Initial Configuration

Microphone Mute always allowed

Using the Feature

Microphone Mute is not available to attendant or Headset extensions.

To activate Microphone Mute while on a Handsfree call:

1. Press DND/MIC.	DND/MIC lights.

To cancel Microphone Mute:

Canceling it automatically cancels any Call Forwards or Selectable Display Messages at your extension.

1. Press DND/MIC until it goes out.	If DND/MIC flashes, your microphone is back on but your extension is in Do Not Disturb. Press it again.

Understanding Related Programming

N/A

Handling Busy Extensions and Lines

See also:

Privacy Release (75)

Callback

With Callback you can:

Save time retrying a busy extension. The VS calls you back when it becomes idle.

When you make an Intercom call and get busy tone, you can place a Callback request, hang up, and continue using your extension. The VS then does the following for you:

- Monitors the busy extension and your extension, and calls you back (rings you) when both extensions are free.
- Calls the previously busy extension when you answer the "callback" ring.

You can leave one Callback per busy extension. For extensions with several Callbacks, the system processes them in the order they were left.

Initial Configuration

Callback always allowed

Using the Feature

Callback is not available to attendant extensions.

To use Callback after you call an extension and hear busy tone or ring-busy tone:

You cannot use Callback if you hear fast busy tone.

1. Dial C and hang up.

To answer Callback (long) rings:

You must answer within five rings or the system cancels the Callback.

1. Lift handset. — This connects you to the previously busy extension.

To cancel a specific Callback after you leave it:

1. Call the busy extension again.
2. Dial * at busy tone and hang up.

To cancel all your Callbacks (and Line Queuing requests):

1. Lift handset and press INTERCOM (except at an ESL set).
3. At a multibutton phone, dial * and press FTR.
   At an ESL set, dial # *.
4. Hang up.

Understanding Related Programming

N/A

Camp-On (Call Waiting)

With Call Waiting you can:

Be assured that you are connected to a busy extension as soon as it becomes free.

When you make an Intercom call and get busy tone, Camp-On lets you dial a code, and wait off-hook for the busy extension to become available. Dialing the code may send Call Waiting beeps to the busy user (if enabled in programming). The VS automatically connects you to that extension when the busy user hangs up or if the busy user chooses to interrupt their call and respond to your beeps.

When a line you want to use is busy, Camp-On also lets you dial a code and wait off-hook for it to become free. When free, the VS gives you dial tone on the line.

On the other hand, when ***you*** are busy on a call, you'll hear Call Waiting beeps when:
- An Intercom caller sends them
- Someone transfers an outside call to you
- You receive an outside call on a line that normally rings your phone

If several calls come in while you are busy on a call, you'll hear the beeps only for the first one. You will not, however, hear any Call Waiting beeps if your extension is programmed for Privacy.

Initial Configuration
- All extensions can use Camp-On
- Call Waiting tones enabled system-wide
- Privacy disabled except for attendant extension 300
- Attendant extension 300 can Camp-On to a busy line

Using the Feature

To Camp-On to an extension when you call it and hear call busy tone or ring-busy tone:

You cannot Camp-On if you hear fast busy tone (the extension is in Do Not Disturb).

1. Dial C. — You hear ringing while you wait.
2. Do not hang up and wait to be connected. — If you choose to hang up, the system converts your Camp-On to a Callback (see page 102).

To have a Transfer Camp-On to an extension after you call it and hear busy tone or ring-busy tone:

1. Simply hang up when you hear the busy or ring-busy tone.

See also Transfer on page 41.

Camp-On (Call Waiting)

Using the Feature

To Camp-On to a busy line:

1. Try to access the busy line.	
2. Dial C when you hear busy tone.	Busy tone stops.
3. Do not hang up and wait for dial tone.	If you choose to hang up, the system converts your Camp-On to a Line Queuing request (see page 109).

To answer Call Waiting beeps from an Intercom call (your hear two beeps, INTERCOM flashes):

1. At a multibutton phone, press INTERCOM to answer the waiting call. At an ESL set, press HLD and dial * 2.	Your first call goes on Hold. To alternate between the calls, see Split on page 88.

To answer Call Waiting tones from an outside call (your hear two beeps, a Line/Loop key flashes):

1. Press HOLD to hold the call you are on.	
2. At a multibutton phone, press flashing Line/Loop key. At an ESL set, dial * 2.	To alternate between the calls, see Split on page 88.

Understanding Related Programming

Program 1	To allow/deny Camp-On to a busy extension or line in a Class of Service (see also Program 18 [I]) To allow/deny Privacy in a Class of Service. Allow Privacy for any extension that should not receive Call Waiting beeps (see also Program 18 [I]).
Program 18 (I)	To assign a Class of Service (from Program 1) to an extension To enable/disable Off-Hook Ringing at an extension. If enabled, the system converts the extension's Call Waiting tones to a ring signal over the speaker.
Program 2	To enable/disable Call Waiting beeps system-wide

Intrusion (Barge-In)

With Intrusion (Barge-In) you can:

Quickly interrupt a co-worker's telephone call to deliver an emergency message

Intrusion (Barge-In) lets you use your phone to break into a co-worker's telephone call and have a three-party conversation. You can also use Intrusion to contact an extension in Do Not Disturb (DND). You cannot use Intrusion to break into a Conference call or an extension programmed for Privacy.

CAUTION: An unauthorized Intrusion may be interpreted as an invasion of privacy.

Initial Configuration

- Intrusion enabled for attendant extension 300
- Privacy disabled except for attendant extension 300

Using the Feature

Intrusion is temporarily unavailable when the system is already accommodating the maximum number of three-party conversations, which is 8 per system.

To use Intrusion after you call an extension and hear busy tone, fast busy tone (for DND), or ring-busy tone:

1. Dial I (digit 4).

   Busy tone stops and the system sends two warning beeps to your co-worker.

   If busy tone continues, you cannot intrude.

   You hear ringing if you override DND. Wait for an answer (skip steps 2-3).

2. Wait for the CONF key to light.
3. Speak.

Understanding Related Programming

Program 1	To enable/disable Intrusion in a Class of Service (see also Program 18 [I])
	To allow/deny Privacy in a Class of Service. Allow Privacy for any extension that should not be intruded upon (see also Program 18 [I]).
Program 18 (I)	To assign a Class of Service (from Program 1) to an extension

Off-Hook Signaling/Voice Over

With Voice Over:

You can break into a co-worker's call and talk to him without the other person on the line hearing you.

When you call a busy multibutton extension, Off-Hook Signaling lets you send a signal to the busy user. Depending on programming, sending the signal can result in a Voice Over or Off-Hook Ringing:

Voice Over sends two beeps into the handset of the busy user. After the beeps sound, you can speak. The busy user hears your voice over their conversation, but the other person does not hear you. The busy user can also respond to you without the other person hearing. Voice Overs do not occur if the busy user is on a Handsfree/Monitor call. Off-Hook Ringing may occur instead, depending on programming.

Off-Hook Ringing sends a beep (repeated) over the speaker of the busy extension. While the beep sounds at the busy extension, you hear ringing and must wait for the busy user to respond.

On the other hand, when ***you*** receive a Voice Over or Off-Hook Ringing, you can respond or not respond, as is convenient. If your extension has program access level 3-5, you can disable or enable incoming Voice Overs. To block Off-Hook Signals while on a particular call, activate Do Not Disturb.

Initial Configuration

- Voice Over enabled
- Off-Hook Ringing disabled
- Extension 301-305 can enable/disable Voice Over. All other extensions only have access level 01.

Using the Feature

To use Off-Hook Signaling when you call an extension and hear ring-busy tone:

You can't send a signal if you hear busy tone.

1. Dial 1.
2. If you hear two beeps: Speak.
   OR
   If you hear ringing: Wait for the called party to answer.
   OR
   If you hear busy or fast busy tone, you cannot send a signal. Hang up.

Note: Pressing a lit Hotline, Call Coverage, or DSS key automatically activates Off-Hook Signaling. For more information see Hotline on page 62, Call Coverage on page 90, and Direct Station Selection on page 57.

Off-Hook Signaling/Voice Over

Using the Feature

To enable/disable incoming Voice Over when your extension has program access level 3-5:

1. Do not lift handset.
2. Press PGM#.
3. Dial VO.
4. Dial Y to enable.
   OR
   Dial N to disable.
5. Press SAVE.

To respond to a Voice Over in your handset:

You hear two beeps, then your co-worker's voice. The INTERCOM key flashes fast.

1. Press and hold DND/MIC to talk.
2. Release DND/MIC to talk to initial caller.

To answer an Off-Hook Signal you hear over your speaker:

You hear a single beep repeated. INTERCOM flashes fast if you are on an Intercom call or slowly if you are on an outside call.

1. Press HOLD to hold an Intercom call.	If you are on an outside call, you can skip this step (doing step 2 automatically places an outside call on Exclusive Hold).
2. Press flashing INTERCOM.	If you are on an outside call, the HOLD and Line key flashes. If you are on an Intercom call: HOLD and INTERCOM flashes. To switch (alternate) between the two calls, see Split on page 88.

Understanding Related Programming

Program 18 (II)	To enable/disable incoming Voice Overs for an extension
Program 15	To assign program access level 3-5 to extensions so they can enable/disable Voice Over themselves
Program 18 (I)	To assign Off-Hook Ringing to an extension

Forced Line Disconnect

With Forced Line Disconnect you can:

Quickly get an outside line for an emergency call when all lines are busy.

Forced Line Disconnect lets you disconnect an outside call that is going on at another extension. The outside line becomes idle and you can use it, for example, to make a call. You can also use Forced Line Disconnect to disconnect a busy (seized) outside line if it does not properly disconnect after the outside party hangs up.

Forced Line Disconnect is primarily for attendants to use in emergencies and for maintenance technicians to use when there is a problem with a line.

Initial Configuration

Forced Line Disconnect enabled for attendant extension 300

Using the Feature

To disconnect a busy line (by dialing a code):

1. Lift handset.
2. Press INTERCOM.
3. Dial the busy line's number (348-363) for lines 01-16. — You hear busy tone.
4. Dial # to disconnect the line. — You hear Intercom dial tone. To place a call on the line, do step 3 again and dial the number.

To disconnect a busy line (by pressing a Line key):

1. Lift handset.
2. Press Line key for busy line. — You hear busy tone.
3. Dial # to disconnect the line. — The Line key goes out and you hear Intercom dial tone. To place a call on the line, press the Line key and dial the number.

Understanding Related Programming

Program 1	To enable Direct Line (Trunk) Access in a Class of Service; it must enabled for Forced Line Disconnect to work (see also Program 18 [I])
Program 18 (I)	To assign a Class of Service (from Program 1) to each extension that should be able to use Forced Line Disconnect
Program 16	To give an extension access to a line
Program 17	To assign a line to a key at an extension

Line Queuing

With Line Queuing you can...

Wait for a busy line to become free without "watching your phone" or retrying the line. The VS system monitors the line and gives it to you when it's free.

Line Queuing lets you place your extension in queue (on a "waiting list") for a busy outgoing line to become free. As soon as it does, the VS rings your phone with a long ("callback") ring. When you answer it, you have dial tone on that line. If your extension is busy when the line is free, the VS rings your extension later.

If a few extensions queue for a line, the VS rings the ones programmed for Line Queuing Priority (if any), then any others that queued, in the order they queued.

Initial Configuration

Line Queuing always allowed

Using the Feature

Line Queuing is not available to attendant extensions.

To queue for a busy line:

You can also do this when you use Last Number Redial, Save, or Speed Dial and immediately get busy tone, which means the stored line is busy.

1. Try to access the busy line. — You hear busy tone.
2. Dial C.
3. Hang up.

To answer a callback (long) ring:

If you do not answer, the VS removes your extension from the queue.

1. Lift handset. — You hear outside dial tone (or your Last Number Redial, Save, or Speed Dial call dialing out).

To cancel a Line Queuing request before the system calls you:

1. Try to access the busy line. — You hear busy tone.
2. Dial *.
3. Hang up.

To cancel all your Line Queuing (and Callback) requests:

A power failure or system reset automatically cancels them.

1. Lift handset.
2. Press INTERCOM (except at an ESL set).
3. At a multibutton phone, dial * and press FTR.
   At an ESL set, dial # *.
4. Hang up.

Line Queuing (cont'd)

Understanding Related Programming

Programs 1	To allow Line Queuing (Callback) Priority in a Class of Service (see also Program 18 [I])
Program 18 (I)	To assign a Class of Service (from Program 1) to each extension that should have Line Queuing Priority

Silent Monitor

With Silent Monitor you can, as a Customer Service supervisor:

Listen to the way a trainee handles outside callers.

Silent Monitor lets you enter a co-worker's outside call and listen to the conversation without sending any warning tones to indicate your presence. You simply call your co-worker's extension and dial the Silent Monitor code. If your co-worker is on an Intercom call, you hear only the person who is talking to your co-worker, not the co-worker you called.

Silent Monitor does not let you break into calls at extensions programmed for Privacy.

CAUTION: Since Silent Monitor provides no warning tones, using this feature may be interpreted as an invasion of privacy.

Initial Configuration

- Silent Monitor disabled
- Privacy disabled except for attendant extension 300

Using the Feature

If your extension is in a Call Pickup Group, you can only monitor other extensions in the group.

To use Silent Monitor to listen to a call at another extension:

1. Lift handset.
2. Press INTERCOM (except at an ESL set).
3. Dial number of extension you want to monitor. — You hear busy tone.
4. Dial 6 to break in and listen. — If you still hear busy tone, this means you cannot monitor the call.

To cancel Silent Monitor:

1. Hang up.

Understanding Related Programming

Programs 1	To allow/deny Silent Monitor in a Class of Service (see also Program 18 (I) To allow/deny Privacy in a Class of Service. Allow Privacy for any extension that should not be monitored (see also Program 18 [i]).
Programs 18 (I)	To assign a Class of Service (from Program 1) to an extension

Intentionally Left Blank

Sending a Call or Message to Another Person

Sending a Call to Another Person

See also:

Call Coverage (page 90)
Transfer (page 41)

Sending a Message to Another Person

Alternate Attendant

With Alternate Attendant you can...

Temporarily leave your attendant position without missing calls or asking a co-worker to take your place.

If you are an attendant, Alternate Attendant lets you send your incoming calls to another extension. When you activate Alternate Attendant, outside calls ring your attendant extension ***and*** the alternate extension. Intercom calls ring only the alternate unless the alternate is busy; then they ring your attendant extension instead.

Initial Configuration

Alternate Attendant enabled for extension 300

Using the Feature

To activate Alternate Attendant at an attendant extension:

This procedure automatically cancels a Do Not Disturb or Call Forward condition that is active at the alternate.

1. Lift handset.	If you have a One-Touch Speed Dial key, you can press it instead of using steps 2-5.
2. Press INTERCOM.	
3. Dial #.	
4. Dial alternate's extension number.	Do not dial another attendant extension.
5. Dial 3.	MSG and DND/MIC keys flash.
6. Hang up.	If the alternate activates DND after you send calls there, the alternate assignment is canceled.
	An alternate cannot forward calls to yet another extension.

To cancel Alternate Attendant:

1. Do not lift handset.	
2. Press DND/MIC.	MSG and DND/MIC keys go out.

Understanding Related Programming

Program 1	To enable/disable Internal Call Forwarding for Class of Service 00. This enables or disables Alternate Attendant for Class of Service 30 (the attendant's Class of Service).

Call Forwarding, Internal

With Internal Call Forwarding you can:

Go to a meeting in a co-worker's office and not miss your calls. Simply send them there.

Internal Call Forwarding lets you reroute your incoming Intercom calls and some outside calls to a co-worker's extension. You can forward one of three types of calls:

- Ringing calls that you do not answer after a programmed number of rings
- Ringing calls that you do not answer after a programmed number of rings, and calls that try your phone when it is busy
- All calls, immediately

The system does not forward: Intercom calls from the forwarded destination, Ring Group calls, calls that ring a Call Coverage key, and outside calls not on Direct Inward Lines.

Initial Configuration

- Internal Call Forwarding enabled
- A call rings an extension 5 times before being forwarded

Using the Feature

Call Forwarding is not available to an Alternate Attendant.

To forward your calls to another extension:

You can do this from your phone or the destination phone. Do not do this to forward calls back to your own phone; simply cancel Call Forwarding.

1. Lift handset.	If you have a One-Touch Speed Dial key, you can press it instead of using steps 2-5.
2. Press INTERCOM (except at ESL set).	
3. Dial # and ext. to receive calls.	
4. Dial Call Forward code (1,2,3).	■ Code 1 forwards ring-no-answer calls ■ Code 2 forwards ring-no-answer and busy calls ■ Code 3 forwards all calls
6. Hang up.	MSG key flashes.

To cancel Call Forwarding:

The attendant can also cancel your Call Forwards (see Call Forwarding Cancel on page 138). A power failure, system reset, or activating Do Not Disturb cancels them automatically.

1. Lift handset.	
2. Press INTERCOM (except at ESL set).	
3. Dial # and hang up.	MSG key goes out.

Call Forwarding (cont'd)

Understanding Related Programming

Program 1	To enable/disable Internal Call Forwarding in a Class of Service (see also Program 18 [I])
Program 18 (I)	To assign a Class of Service (from Program 1) to an extension
Program 4	To set the Number of Rings Before Recall timer (the number of times a call rings before being forwarded)
Program 12	To assign Direct Inward Lines to an extension (only calls on these lines will get forwarded)

Call Forwarding, Off-Premise

With Off-Premise Call Forwarding you can:

Go home early in the day and have your calls follow you there or to your car phone.

If your phone has Direct Inward Lines, Off-Premise Call Forwarding lets you reroute calls on those lines to an outside telephone number.

Note: To use Call Forwarding, the VS system must be equipped with a Line module that provides disconnect supervision. In addition, the connected device must also provide disconnect supervision.

Initial Configuration

Off-Premise Call Forwarding disabled

Using the Feature

To forward your calls off-premise:

1. Lift handset.	If you have a One-Touch Speed Dial key, you can press it instead of using steps 2-5.
2. Press INTERCOM (except at an ESL set).	
3. Dial # 1 and the line (01-16) you want your calls to forward out on.	Use a line you have access to.
4. Dial telephone number to receive your calls.	
5. Hang up.	MSG key flashes slowly.

To cancel Call Forwarding:

The attendant can also cancel your Call Forwards. A power failure, system reset, or activating Do Not Disturb cancels them automatically.

1. Lift handset.	
2. Press INTERCOM (except at an ESL set).	
3. Dial #.	
4. Hang up.	MSG key goes out.

Call Forwarding, Off-Premise (cont'd)

Understanding Related Programming

Program 1	To enable/disable Off-Premise Call Forwarding in a Class of Service (see also Program 18 [I])
Program 18 (I)	To assign a Class of Service (from Program 1) to an extension
Program 12	To assign Direct Inward Lines
Program 16	To give an extension access to the line it will use to forward calls out on

Call Parking

With Call Parking you can:

Be sure that a call gets sent to a person even when you don't know what part of the building they are in.

Call Parking lets you send an outside call into an "Orbit" (which is a special waiting state) so that a person can pick it up from any extension in the system. After you park a call using a Park Orbit code, you page the person for whom it is intended. The paged person then dials the Park Orbit code from any extension to pick up the call.

You can park a call so it waits in a:

- System Orbit, by using codes 60-69 or a Park Orbit key (if your phone has one). If someone does not pick up the call within the Park Orbit time, it recalls your extension. If you do not answer a recall within the Rings Before Recall time, the call rings all extensions that normally ring on that line.

- Personal Orbit (at someone's extension), by using an extension number. If someone does not pick up the call within the Hold Recall time, it recalls your extension. If you do not answer a recall within the Rings Before Recall time, the call rings all extensions that normally ring on that line.

Initial Configuration

- Park allowed
- No Park Orbit keys assigned
- Park Orbits 60-67 are 60 seconds, Park Orbits 68-69 are permanently 300 seconds
- The Hold Recall time for Personal Orbits is 60 seconds
- The Rings Before Recall time is 5 rings

Using the Feature

To park a call in a System or Personal Orbit:

1. At a multibutton phone, press INTERCOM while on a call. At an ESL set, press TRF.

   If you have a One-Touch Speed Dial key, you can press it instead of using steps 1-2.

2. For System Park: Dial Park Orbit code (60-69) or press Park Orbit key.

   If you hear busy tone, press INTERCOM and dial a different code (only one call can wait in a System Orbit).

   OR

   For Personal Park: Dial *, then extension number.

   The call goes on Exclusive Hold at your extension and the other (it does not ring). You can park any number of calls at the same extension.

3. Page person to receive call and announce orbit.

   See Paging on page 126.

4. Hang up.

Call Parking (cont'd)

Using the Feature

To pick up a parked call:

1. Lift handset.
2. Press INTERCOM (except at an ESL set).
3. For System Park: Dial announced Park Orbit Code or press Park Orbit key for that Orbit.
   OR
   For Personal Park: Dial *, then announced extension number.

To pick up a parked outside call, you must use an extension that has access to that line.

If you have a One-Touch Speed Dial key, you can press it instead of using steps 2-3.

Note: The procedure for picking up Personal Park calls also picks u other types of calls. The pick-up order is as follows:

- Ringing Intercom calls
- Personal Park calls
- Ringing outside calls and Direct Inward Lines
- Calls on Hold

Understanding Related Programming

Program 4	To change the Park Orbit time for Orbits 60-67
Program 17	To assign a System Park Orbit (60-69) to a key at an extension
Program 16	To let an extension access any line it should be able tc pick up from an Orbit

To change the first digit of System Park Orbit codes, see Flexible Numbering Plan on page 173.

Night Answer (Off-Hours Ringing)

With Night Answer (Off-Hours Ringing) you can, as the attendant:

Send calls to extensions at night so other people (perhaps security personnel) can answer them until you return in the morning.

If you are the attendant, Night Answer (Off-Hours Ringing) lets you place the system in the "night" mode so your incoming calls ring at other destinations. Your system may be set up for Assigned Night Answer or Universal Night Answer.

- Assigned Night Answer sends calls to extensions, Ring Groups or UCD Hunt Group extensions.
- Universal Night Answer sends calls to the external paging system so they ring over the paging speakers. Or, the calls can ring an External Alerting Device, such as a bell.

You activate Assigned Night Answer and Universal Night Answer in the same way.

Note: Non-attendant extensions or UCD Groups with Direct Inward Lines can put their extensions in the "Night Answer" mode by activating Do Not Disturb (see Direct Inward Lines on page 156 and Do Not Disturb on page 97).

Initial Configuration

- Night Answer is available to attendant extension 300
- No night destinations assigned

Using the Feature

To activate Night Answer at an attendant extension:

1. Do not lift handset.
2. Press DND/MIC until it flashes. — DND/MIC flashes fast. Extension users cannot make Intercom calls to your attendant extension while it is in the Night mode.

Note: If your attendant extension is in a Circular Hunt Group with another attendant extension, both of you have to activate Night Answer in order for the system to go into the Night Answer mode.

To cancel Night Answer:

1. Do not lift handset.
2. Press flashing DND/MIC. — DND/MIC goes out.

To answer a call that rings an extension during Night Answer:

1. Lift handset.
2. Press flashing key. — If Ringing Line Preference is enabled, there is no need to press the key.

Night Answer (Off-Hours Ringing) (cont'd)

Using the Feature

To answer a call that rings the paging speakers or a bell:

1. Lift handset.	
2. Press INTERCOM (except at an ESL set)	INTERCOM lights and you hear dial tone.
3. Dial *.	Dial tone stops.
4. Dial 0.	If you hear busy tone, you cannot answer that line from that phone.

Understanding Related Programming

For Universal or Assigned Night Answer:

Program 18 (I)	To enable Do Not Disturb for any attendant extension that should be able to activate Night Answer
Program 3	To assign attendant extensions
Program 19	To assign two attendants to a Circular Hunt Group, if desired. In this case, both attendants must activate Night Answer for the system to go into the Night mode

For Assigned Night Answer:

Program 12 — To enable day and night ringing destinations.
For a line that should ring an attendant during the day and elsewhere at night:

(1) Make the line's day destination (termination) an attendant extension. This makes the line ring that attendant during the day mode.

(2) Make the line's night termination a particular extension, UCD master number, or Ring Group. This makes the line ring the night termination when its attendant (assigned in step 1) activates Night Answer. If an extension or UCD group does not answer, the call rings all extension with access (see Program 16) and ringing (see Program 18 [Ii]).

OR

Make the line's night termination 300, which is the initial [default]) setting for all lines. When the line s attendant (assigned in step 1) activates Night Answer, the line rings at any extension that has incoming access (see Program 16) and ringing (see Program 18 [II]) for that line.

Night Answer (Off-Hours Ringing) (cont'd)

Understanding Related Programming

For Assigned Night Answer (cont'd):

Program 16	To give an extension access to a line
Program 18 (II)	To assign day/night ringing or just night ringing to a line at an extension

For Universal Night Answer (ringing over paging speakers)
Line port 04 must be available for the External All Call Page Zone. To install the Paging Speakers, see the Hardware Manual.

Program 7	To enable the External All Call Page Zone To enable audible (ringing) over the External All Call Page Zone
Program 12	To assign extension 300 as the night termination of any line that should ring over the paging speakers (i.e., DTN = 300) . The line rings over the paging speakers when extension 300 goes into the Night Answer mode.
Program 16	To let an extension access the lines that ring over the paging speakers so they can answer them

For Universal Night (ringing a bell):
See External Alerting Devices on page 172.

Message Waiting

With Message Waiting you can:

Let a busy co-worker know you need a return call without having to leave a note at their desk.

When you call a busy, "no-answer," or DND (Do Not Disturb) extension, Message Waiting lets you leave a message indication at that extension requesting a return call. The message indication is a flashing MSG key, and the message recipient can respond at their convenience. When the recipient responds (answers the Message Waiting), the system automatically places an Intercom call to you (the person who left it).

You can leave a Message Waiting at any number of extensions, and any number of your co-workers can leave a Message Waiting at your extension.

You can also do the following with Message Waiting:
- Cancel all Message Waitings left at your extension
- Cancel Message Waitings that you left
- View the extensions that left you Message Waitings (if you have a Display Phone)

Initial Configuration
Message Waiting always allowed (except if Voice Mail is installed)

Using the Feature

A power failure or system reset cancels all active Message Waitings.

To leave a Message Waiting when you call an extension and hear busy tone, ring-busy, fast busy, or get no-answer:
You cannot leave a Message Waiting at an attendant extension.

1. At a multibutton phone, press MSG.
   At an ESL set, dial 6.
2. Hang up.

The MSG key flashes fast at the extension you called.

To cancel a Message Waiting you left:
1. Lift handset.
2. Press INTERCOM (except at an ESL set).
3. Dial extension that has your Message Waiting.
4. Hang up.

Message Waiting (cont'd)

Using the Feature

To cancel all Message Waitings left at your extension:
This also cancels Callback and Line Queuing requests.
1. Lift handset.
2. Press INTERCOM (except at an ESL set).
3. Dial # *.
4. Hang up.

To answer a Message Waiting (your MSG key is flashing fast):
1. Lift handset.
2. At a multibutton phone, press MSG.
   At an ESL set, dial * 6.

MSG goes out and the system connects you to the extension that left the message. If MSG continues to flash, this means you have more messages.

To view and selectively answer your messages (if you have a Display phone):
1. Do not lift handset.
2. Press MSG to see the first message.
3. Repeatedly press MSG to see other messages, if any.
4. When you see the extension you want to call:
   Lift handset, press MSG.

MSG goes out and the system connects you to the extension that left the message. If MSG continues to flash, this means you have more messages.

Understanding Related Programming

N A

Paging

With Paging you can:

Make an important announcement to a group of people.

Quickly locate someone who is away from their phone.

Paging lets you use your phone to broadcast an announcement over speakers. The announcement can be up to 90 seconds long. There are two types of Paging: Internal Zone Paging and External Zone Paging

Internal Zone Paging lets you broadcast an announcement over the speakers of idle Multibutton extensions. You can page:

- A group of extensions (Internal Page Zone), or
- All Internal Page Zones at once (All Call Page)

An All Call Page automatically overrides an Internal Zone Page that is in progress.

Regarding incoming pages to your extension:

- If your phone has program access level 3-5, you can enable or disable incoming pages over your speaker.
- If you are the attendant, you do not receive pages over your speaker.
- If you are using a Headset, you hear incoming pages in your Headset.
- You can activate Do Not Disturb to block incoming pages.

External Zone Paging lets you broadcast an announcement over external paging speakers (called External Zones), if your system is equipped with them. These speakers are typically installed in the ceilings or walls.

With one CEU, your system can have an External All Call Page Zone. With two CEUs, your system can have an External All Call Zone and an External Zone 1. Making an All Call Page (to all Internal Zones) also sends your announcement to all external paging speakers. Making a page to Internal Zone 1 also sends your announcement to the external paging speakers in External Zone 1.

In addition, if your extension has a Page key for a particular zone, you can use the key to make pages. When the key is lit, the zone is busy. When the key is unlit, the zone is available.

Initial Configuration

- All extensions can make and receive All Call pages
- No Internal Pages Zones
- No External Page Zones
- Extension 301-305 can enable/disable incoming pages. All other extensions have program access level 01.

Paging (cont'd)

Using the Feature

To make an All Call Page or Zone Page:

Remember: You can make an All Call Page even if an Internal Zone Page is in progress.

1. Lift handset.

   If you have a Page key or One-Touch Speed Dial key for the desired zone, you can press it instead of using steps 2-3.

2. Press INTERCOM (except at an ESL set).

   INTERCOM lights and you hear dial tone.

3. Dial Page Zone code.

For:	Dial:
All Call	1 *
Zone 1	2 *
Zone 2	3 *
Zone 3	4 *
Zone 4	5 *
Zone 5	6 *
Zone 6	7 *
Zone 7	8 *

   You hear two beeps. If you hear busy tone, try again later.

4. Make announcement.
5. Hang up.

To enable or disable incoming pages when your extension has program access level 3-5:

1. Do not lift handset.
2. Press PGM#.
3. Dial VP (for voice page).
4. Dial Y to enable.
   OR
   Dial N to disable.
5. Press SAVE.

Understanding Related Programming

For Internal Paging:

Program 1	To allow/deny the capability of initiating an All Call Page in a Class of Service (see also Program 18 [I])
	To allow/deny the capability of initiating a Page to Internal Zone 1-3 in a Class of Service (see also Program 18 [II]

Paging (cont'd)

Understanding Related Programming

Program 18 (I)	To assign a Class of Service (from Program 1) to an extension
	To assign an extension to an Internal Page Zone (an extension can be in only one Internal Zone)
	To enable or disable incoming pages for an extension (see also Program 15)
Program 15	To assign program access level 3-5 to extensions so they can enable/disable incoming pages themselves
Program 17	To assign a page zone to a key at an extension

For External Paging:
To have External All Zone Paging, line port 04 must be available in CEU #1. To have External Zone 1 Paging, line port 04 must be available in CEU #2 (line port 04 is equivalent to line 12). To install the speakers, see the Hardware Manual.

Program 7	To enable the External All Call Page Zone (in CEU #1)
	To enable External Page Zone 1 (in CEU #2).
	To control the volume of pages

To have music play over the External Paging Speakers, see Background Music on page 96.

To have Night Answer calls ring over external paging speakers, see Night Answer on page 121.

Selectable Display Messages

With Selectable Display Messages you can:

Let co-workers know your whereabouts without having to call each one individually.

The Selectable Display Messages feature lets you "attach" a message to your phone so Display Phone users see it on their display when they call you. For example, when you leave for vacation, you could select the message: ON VACATION (if your system has it). This way, when Display Phone users call and you do not answer, they know why.

Your system can store up to 16 messages for you to choose from, numbered 00-15. Messages 00-07 are special in that you can add digits to the end of them as long as the entire message does not exceed 16 characters (including blank spaces). For example, you could add a telephone number to the end of the message, CALL. This way, the message would read CALL XXX XXXX so people would know where to reach you.

Initial Configuration

00 = CALL
01 = BACK BY
02 = MEETING IN RM
03 = OUT TO LUNCH
04 = GONE FOR THE DAY
05 = ON VACATION
06 = ON BUSINESS TRIP
07 = IN THE MEETING
08 = BACK BY 10AM
09 = BACK BY 11AM
10 = BACK BY NOON
11 = BACK BY 2PM
12 = BACK BY 4PM
13 = BACK TOMORROW
14 = BACK NEXT WEEK
15 = HAVE A GOOD DAY

If the system has an AUX module, there are no messages initially.

Using the Feature

You can select only one message for your phone at a time. You do not have to cancel an old message in order to select a new message.

To directly select a specific Selectable Display Message:

These steps automatically cancel a Call Forwarding condition.

1. Lift handset.	If you have a One-Touch Speed Dial key, you can press it instead of using steps 2-6.
2. Press INTERCOM (except at an ESL set).	You hear dial tone.
3. Press PGM#.	Dial tone stops.
4. Dial M.	
5. Dial message number (00-15).	To add digits to 00-07, dial them.
6. Hang up.	MSG flashes.

Selectable Display Messages (cont'd)

Using the Feature

To select a message by scrolling through them (when you have a Display Phone):

This automatically cancels a Call Forwarding condition at your phone.

1. Lift handset.	
2. Press INTERCOM.	You hear dial tone.
3. Press PGM#.	Dial tone stops.
4. Dial M.	
5. Press VOL UP ▲ or VOL DN ▼ to scroll through the messages. Stop at the one you want.	VOL UP scrolls this way: Message 00, 01, 02....15. VOL DN scrolls this way: 00, 15, 14, 13...01. To add digits to messages 00-07, simply dial them.
6. Press DIAL, then SAVE.	If you add digits to messages 00-07, skip this step.
7. Hang up.	MSG flashes.

To cancel a message:

Activating Do Not Disturb automatically cancels a message.

1. Lift handset.	
2. Press INTERCOM (except at an ESL set).	You hear dial tone.
3. Press PGM#.	Dial tone stops.
4. Hang up.	MSG goes out.

Understanding Related Programming

Program 8	To store or change the messages

Voice Mail/Automated Attendant

With Voice Mail you can:

Send and receive recorded messages. No need to carry a hand-written note to someone's desk. And, outside callers can leave a private message for you when you are away from your desk or busy on the phone.

Your VS system is compatible with a TIE SYSTEM 1001/1002. TIE SYSTEM 1001 provides Voice Mail. TIE SYSTEM 1002 provides Automated Attendant and Voice Mail.

The Automated Attendant answers your company's incoming calls. An outside caller hears a recording which explains their dialing options. The caller can then dial an extension or the code for Voice Mail.

Voice Mail lets an outside caller leave a recorded message in your voice "mailbox", and it lets you leave one in a co-worker's mailbox. More specifically, Voice Mail enhances the VS system with the following features:

Call Forward to Voice Mail (Mailbox Call Forward)...
Lets you send your incoming calls to Voice Mail. Voice Mail answers the call and lets the caller leave a message.

Mailbox Message Waiting (Leaving a Voice Message)...
Lets you call a busy, no-answer, DND extension, then press a key to leave a recorded message in that person's mailbox.

Message View...
Lets you view the number of voice messages you have, if you have a Display Phone.

Transfer to Voice Mail (Mailbox Transfer)...
Lets you Transfer a call to your own mailbox or to a co-worker's mailbox.

Conversation Record...
Lets you record a phone conversation, if your phone has a Record key. The conversation gets stored in your mailbox as if it were a message.

If Voice Mail installed, the VS's Message Waiting feature is not available.

Initial Configuration
Voice Mail not installed

Voice Mail/Automated Attendant (cont'd)

Using the Feature

For more specifics, see the documentation for TIE SYSTEM 1001/1002.

To call your mailbox (from your multibutton phone)

1. Lift handset.
2. Press MSG.
3. Wait for the voice prompt.
4. Dial your security code.

You can store your security code in a One-Touch Speed Dial key.

To call your mailbox (from your ESL set)

1. Lift handset.
2. Dial voice mail master number.
3. Wait for the voice prompt.
4. Dial # and your mailbox number.
5. Wait for the voice prompt.
6. Dial your security code.

To activate Call Forwarding to Voice Mail:

1. Lift handset.
2. Press INTERCOM (except at an ESL set).
3. Dial #.
4. Press MSG key or dial Voice Mail master extension number.
5. Dial Call Forward code (1,2,3).
   - Code 1 forwards ring-no-answer calls
   - Code 2 forwards ring-no-answer and busy calls
   - Code 3 forwards all calls
6. Hang up.

MSG key flashes.

To cancel Call Forwarding to Voice Mail:

1. Lift handset.
2. Press INTERCOM (except at an ESL set).

You hear dial tone.

3. Dial #.

Dial tone stops.

4. Hang up.

MSG key goes out.

Voice Mail/Automated Attendant (cont'd)

To Transfer a call to a co-worker's mailbox (multibutton phone only):

1. Press INTERCOM. Your call goes on Exclusive Hold.
2. Press MSG.
3. Dial co-worker's extension.
4. Hang up.

To record a conversation (if your multibutton phone has a record key):

1. Press Record key to start and stop recording.

To view how many voice messages you have (if you have a display phone):

MSG flashes fast when you have messages in your mailbox.

1. Do not lift handset.
2. Press MSG.

Voice Mail/Automated Attendant (cont'd)

Understanding Related Programming

Voice Mail requires Analog Station Interfaces (see page 14).

Note: Use the programs below in the order they are listed.

Program 14	To assign an ASI circuit type to each extension port intended for Voice Mail
Program 18 (I)	To assign the Voice Mail feature to each Voice Mail extension port selected in Program 14
Program 3	To indicate that a Voice Mail system is installed, and to select a master extension number for Voice Mail. Use any of the Voice Mail extensions selected in Program 14.
Program 19	To set up a UCD Hunt Group as follows: ■ Hunt Type = 05 ■ Master Extension = Voice Mail master extension that you selected in Program 3 ■ Overflow Extension = Operator Extension that you assigned to the Voice Mail master extension in Program 18 (I) ■ UCD Members = Voice Mail extensions you selected in Program 18
Program 12	To directly terminate each line that the Automated Attendant should answer to the Voice Mail master extension you selected in Program 3
Program 17	To assign a Record key to an extension
Program 16	To assign to each Voice Mail port (selected in Program 14) outgoing access to the lines used by 1001/1002's Message Notification and Message Reminder features

To enable the Mailbox Message Waiting feature for an extension, also use:

Program 19	To form a Terminal Hunt Group with the following members: the extension that should have the Mailbox Message Waiting feature and the Voice Mail master extension (in that order)

Keeping Track of Calls and Maintaining the System

Account Codes

With Account Codes you can:

Uniquely identify a call with a special number so it is easy to keep track of who you talked to and, if necessary, charge them for your time.

When your system is equipped with Station Message Detail Recording (SMDR), you can assign a 10-digit Account Code to a call. The Account Code will print out with the other SMDR data for that call. You enter the code while placing the call or while on the call.

For introductory information on SMDR, see page 163.

Account Codes and SMDR require the AUX module and a customer-provided ASCII record collection device (e.g., printer or terminal). Account Code and SMDR options are programmed through a terminal connected to the AUX module. For more information, see Account Codes and SMDR in the ONYX Feature and Terminal Programming Manual.

Initial Configuration
Account Codes not allowed

Using the Feature

N/A

Understanding Related Programming

Program 3	To set the baud rate of the AUX module's port for terminal programming

Call Timer

With Call Timer you can:

Easily keep track of how much time you spend on a call.

If you have a Display Phone, the Call Timer feature lets you time your outside calls. The duration shows on your display.

Your phone can be programmed for Automatic or Manual Call Timer:

- With Automatic Call Timer, the timer automatically starts when you establish an incoming or outgoing call.
- With Manual Call Timer, you start the timer by pressing the Manual Call Timer key.

In addition, you can use the Call Timer feature while your phone is idle to time events, much like a stopwatch.

Note: If your system has Station Message Detail Recording (SMDR), the system records and times your calls.

Initial Configuration

Call Timer disabled (no Timer keys programmed)

Using the Feature

To start timing a call when you have a Manual Call Timer key:

1. Press Timer key.	The key lights.

To stop timing a call before or after you hang up:

1. Press Timer key.	The key goes out. To reset the timer back to 00:00, press the Timer key again. After a few seconds, the date and time reappear.

To use the Call Timer as a stopwatch while your phone is idle:

1. Press Timer key to start and stop the stopwatch.	The key is lit while the stopwatch is on. To reset the timer back to 00:00 after you stop, press the Timer key again. After a few seconds, the date and time reappears.

Understanding Related Programming

Program 17	To assign Automatic or Manual Call Timer keys to an extension

Call Forwarding Cancel

With Call Forwarding Cancel you can, as the attendant:

Return the system to normal status at the end of the work day or after the weekend so incoming calls ring their normal (not forwarded) destinations.

If you are an attendant, Call Forwarding Cancel lets you cancel all Call Forwarding conditions in the system at once. Using Call Forward Cancel also cancels two other conditions system-wide: Do Not Disturbs and Selectable Display Messages.

Initial Configuration

Call Forward Cancel allowed for attendant extension 300

Using the Feature

To activate Call Forwarding Cancel from your attendant extension:

1. Lift handset.	
2. Press INTERCOM.	INTERCOM lights and you hear dial tone.
3. Press PGM#.	Dial tone stops.
4. Dial *.	You hear dial tone again.
5. Hang up.	

Understanding Related Programming

Program 3	To assign attendant extensions

Removing Extensions and Lines From Service

With this feature you can, as the attendant:

Ensure maximum system performance by removing a noisy or faulty extension or line from service until it can be repaired.

If you are an attendant, you can remove lines and extensions from service. You may want to do this after viewing an Alarm that tells you an extension or line failed (see page 141). When you remove an extension or line from service, that extension or line appears busy to anyone trying to use or call it. After the line or extension is repaired, you can return it to service.

Initial Configuration

Attendant extension 300 can remove extensions and lines from service

Using the Feature

Removing an extension from service automatically cancels its Call Forwarding conditions or Selectable Display Messages (if any).

To remove a line or extension from service:

1. Lift handset.	
2. Press INTERCOM.	INTERCOM lights and you hear dial tone.
3. Press PGM#.	Dial tone stops.
4. Dial line (348-363) for lines 01-16) or extension (300-347).	
5. Dial 0.	You hear dial tone again.
6. Hang up.	The key for the line or extension (if there is one) lights.

To return a line or extension to service:

1. Lift handset and press INTERCOM.	INTERCOM lights and you hear dial tone.
2. Press PGM#.	Dial tone stops.
3. Dial line (348-363 for lines 01-16) or extension and hang up.	The key associated with the line and/or extension goes out.

Understanding Related Programming

Program 1	To allow/deny Direct Line (Trunk) Access in Class of Service 00 (the attendant COS). If you deny it, the attendant cannot remove lines/extensions from service.
Program 3	To assign attendant extensions

Time and Date

With Time and Date you can:

Quickly see both the time and date in a glance. No need to refer to a separate clock and calendar. And you can reset it, if necessary.

The Time and Date feature shows you the tir and date on your phone's display. The tim and date also appear on the following syste features:

- Station Message Detail Recording
- Diagnostic/Maintenance Utilities and Systen Reports
- Traffic Management Report

If your extension has program access level 4-5, you can reset the Time and Date fro your phone. If you do, you reset the Time and Date for all of the above mentione features.

Initial Configuration

Extension 300-305 can set the Time and Date. All other extensions only have acces level 01.

Using the Feature

To reset the time and date (TD) when your extension has program access level 4 or 5:

1. Do not lift handset.
2. Press PGM#.
3. Dial TD.
4. Dial month (01-12), press PGM#.
5. Dial date (1-31), press PGM#.
6. Dial last two digits of the year, press PGM#.
7. Dial hour (00-23), press PGM#. — For example, 14 = 2:00 PM
8. Dial minutes (00-59), press PGM#. — You hear a confirmation tone.
9. Press SAVE

Note: If, for example, you wish to change only the minutes, do steps 1- then press the PGM# key until you see, MINUTES =. Dial the ne minutes, press PGM#, then press SAVE.

Understanding Related Programming

Program 15	To assign program access level 4-5 to any extension that should be able to change the Time and Date

Viewing Alarms

With Viewing Alarms you can, as the attendant:

Quickly zero in on a system problem and report it your service center and/or remove the problem line or extension from service.

If you are an attendant, your phone's display may show Alarm messages. You can view the cause of the Alarm by pressing a single button.

You may see MINOR ALARM, MAJOR ALARM or MAJOR/MINOR ALARM. A minor alarm occurs when an extension is unplugged or fails, or when a line fails. A major alarm occurs when the expansion KSU (CEU) fails. A major/minor alarm occurs when both a major and minor alarm occur simultaneously. After you view an extension or line failure, you may want to remove the extension or line from service (see page 139).

When an Alarm displays, your phone will not ring normally for incoming calls. If your phone has Off-Hook Ringing, it rings with a single beep (repeated). If your phone does not have Off-Hook Ringing, calls do not ring at all.

Initial Configuration

Alarms occur at attendant extension 300

Using the Feature

To View Alarms from your attendant phone:

1. Do not lift handset.
2. Press MSG. — The display shows you the cause of the alarm. For example, you may see STA 302 FAILED or LINE 02 FAILED.
3. Press MSG to see if there are more alarms. — When you see the first failure message again, you have gone through the entire list.
4. Lift and replace handset to clear the alarms.

Understanding Related Programming

Program 18 (I)	To assign Off-Hook Ringing to an attendant extension so their phone "rings" while Alarms display
Program 3	To assign attendant extensions

Understanding the Alphanumeric Displays

The Display Messages

With Display Messages you can:

See which extension is calling you, which call you are picking up, etc.

If you have a Display Phone, you see "featur status messages" on your display when you use your phone. For example, you see any number you dial, the extension that is calling you, the name of the line you are answering names are programmed), a recalling Transfe (when the destination extension does not answer it), etc. When your phone is idle, the display shows you the time and date. Ir addition, you can control the brightness of your display.

All the feature status display messages are listed below in alphabetical order. So only appear at the attendant phone, and are so noted. See also Selectable Disp Messages on page 129.

This display	Appears when you
ACCESS DENIED	Try to use company-wide (System Speed Dial) Directory Dialing from a restricted extension
ALT OPR ASSIGNED (Attendant extension only)	Enable Alternate Attendant
B name	Answer a Transfer recall from busy extension wi indicated name
Bin No. = nn	Dial # SD, then first digit of a Speed Dial bin
BUSY RECALL nnn	Answer a Transfer recall from busy extension nr
CALL FROM nnn	Receive an Intercom call from extension nnn
CALL FROM Lnn	Press a key to answer line nn
CALL FROM ORBIT	Retrieve a call from a Park Orbit
Caller's name	Receive a call from an extension or answer a lin with indicated name
CANCEL ALT OPR (Attendant extension only)	Cancel Alternate Attendant
CFWD FROM nnn	Receive a call forwarded from extension nnn
COMPANY WIDE DIR	Dial C for company-wide (System Speed Dial) Directory Dialing

The Display Messages (cont'd)

This display	Appears when you
CONFERENCE CALL	Establish a Conference or join a call using Privacy Release
DATE = nn	Set the Time and Date
Date and Time	Look at your phone while it is idle
DAY & NIGHT RING	Dial # RA to program Ring Assignments
DELAYED RING	Dial # DRA to program Delayed Ringing Assignment
DIAL PREVIEW	Dial * to activate Dialing Number Preview
Digits	Dial a call
DND OFF	Disable Do Not Disturb
DND ON	Enable Do Not Disturb
DO NOT DISTURB	Call an extension in Do Not Disturb
DSS ASSIGNMENT	Dial # DSS to program Direct Station Selection
DSS LAMP FIELD	Press INTERCOM
DSS. EXT. 6.9.8 ?	Press INTERCOM # (system shows you what you can do next: press DSS key, dial extension or 6 for Selectable Display Messages (9 & 8 not available)
EXP. KSU FAILED (Attendant extension only)	Receive a MAJOR ALARM from the system that the expansion KSU failed
EXT	Press INTERCOM # (with DSS suppressed) and system shows selection options (you can dial an extension)
F name FWD to nnn	Place an Intercom call to an extension that has forwarded its calls to extension nnn or to extension with assigned name

The Display Messages (cont'd)

This display	Appears when you
GROUP-R PICK-UP	Answer (pick up) an outside call ringing a Ring Group (when your extension is not a member of the group)
HEADSET =	Dial # HS to program Headset operation
HF CIRCUIT BUSY	Try to use Handsfree and no system Handsfree (Speakerphone) circuits are available
HOLD RECALL nnn	Pick up a call abandoned on Hold by extension nnn
HOLD/WAIT xx/yy	Transfer a call to a busy extension that has xx calls on Hold and yy calls Camped-On (waiting)
HOT LINES	Dial # HL to program Hotline keys
HOUR = nn	Set Time and Date
ICM DIRECTORY	Dial I for Intercom directory
ICM NO:	Press a Direct Station Selection or Hotline key to program it
INC VOICE CALL =	Dial # VA to program voice-announced Intercom calls
LINE nn	Answer an outside call on line nn
LINE nnn FAILED (Attendant extension only)	Press MSG to view a MINOR ALARM and line nnn has failed
MAJOR ALARM (Attendant extension only)	Receive major alarm from the system
MAJOR MINOR ALRM (Attendant extension only)	Receive both major and minor alarms from the system simultaneously
MIKE MUTED	Press DND/MIC to turn off the phone's mic
MINOR ALARM (Attendant extension only)	Receive minor alarm from the system
MINUTES = nn	Set the Time and Date

The Display Messages (cont'd)

This display	Appears when you
MONTH =	Set the Time and Date
MSG FRM nnn	View Message Waitings and have one from extension nnn
Name	Place a call, answer a call, or view a Message Waiting for an extension with a programmed name
NIGHT MODE OFF (Attendant extension only)	Press DND/MIC to disable Night Mode operation
NIGHT MODE ON (Attendant extension only)	Press DND/MIC to enable Night Mode operation
NIGHT RING	Dial # NR to program Night Ringing for lines
NO RAM INSTALLED	Try to use Speed Dial Directory Dialing in a system without an AUX Module
NO SPEED DIAL	Try to use Personal Speed Dial Directory Dialing with no Speed Dial blocks assigned in programming
NO. OF MSG = nn	Press MSG to check the number of Voice Mail messages
ORBIT RECALL nnn	Answer a parked call that is recalling extension nnn
P Assigned name	Pick up (answer) a call for extension with assigned name
PAGE THRU SPKR =	Dial # VP to program paging thru the speaker
PARKED IN nn	Park a call in orbit nn
PERSONAL DIR.	Dial P for Personal Directory Dialing
PICKUP FROM nnn	Pick up a call ringing extension nnn
PRIME LINE	Dial # PLA to program a Prime Line
PRIVACY	Press line key to have Privacy

The Display Messages (cont'd)

This display	Appears when you
PRIVATE CALL	Press a line key for a line that has Privacy enable
PROGRAM	Dial # to program a feature
R Assigned name	Answer recalling line from extension with assigned name
RELEASE PRIVACY	Press a line key to release Privacy on a call for which you previously established Privacy
RING LINE PREF =	Dial # RLP to program Ringing Line Preference
RING NO ANS nnn	Answer a line recalling from extension nnn
SELECT LNE GRP	Dial # SD + bin (system wants line or group no.)
SELECTED IDLE LINE	Press DIAL to place call (using Dial Number Preview) and system asks you to select a line
SPEED DIAL	Dial # SD to store a Speed Dial number
SPEED DIAL BINS	Press DIAL to use Speed dial
Speed Dial name	Make a Speed Dial call with a stored name
STA nnn FAILED (Attendant extension only)	Receive a MINOR ALARM that extension nnn failed
UNLISTED NAME	Try to access Directory Dialing and the system has no names programmed
VOICE OVER =	Dial # VO to program Voice Over
WELCOME	Unplug and plug in your extension
YEAR = nn	Set Time and Date

Initial Configuration
All displays appear (without names) at Display phones.

The Display Messages (cont'd)

Using the Feature

To control the brightness (contrast) of the display:

1. Press VOL UP ▲ or VOL DN ▼
   while your phone is idle
   (Background Music not playing).

Understanding Related Programming

Program 14	To assign extension names so they appear in displays
Program 10	To assign line names so they appear in displays

Understanding Other ONYX VS Features

This category describes VS features that are mainly intended for the system administrator's use. They are, for the most part, transparent to the telephone user.

Automatic Route Selection

With Automatic Route Selection (ARS):

Calls go out on the most cost-effective routes, according to the digits users dial. For example, a call to a branch office can automatically route over the company's WATS line.

Automatic Route Selection (ARS) provides ca routing and call restriction based on the digit a user dials. ARS lets you obtain the mos cost-effective use of your system's connecte long distance carriers.

ARS gives you over 8,000 call routing choice -- without a custom-ordered rate structur database. You can make modifications to th routing choices quickly and easily. This i often necessary as the cost structure of th connected services change.

Note: ARS is an on-line call routing program. You can only customize it from th programming terminal. To have ARS, your system must be equipped with an AU module.

ARS provides:

Call Routing

- ARS can apply 3-digit (Area Code) and 6-digit (Area Code and Exchange) analysis t every number.

Dialing Translation (Special Dialing Instructions)

- ARS can automatically execute stored dialing instructions when it chooses a route fo a call.

Time of Day Selection

- You can program route selection according to the time of day/day of week.

Hierarchical Class of Service Control

- ARS allows or denies call route choices based on an extension's Class of Service.

Forced Authorization Code

- Designated routes may require the user to enter an Authorization Code before AR allows routing. This code is verifiable and is enforced by an extension's Class o Service.

Separate Routing for Operator Assisted, International and Equal Access Calls

- To provide unique control, you can program separate routing instructions for Operato Assisted, International and Equal Access calls.

Independently Programmed Restriction for Exchanges 976 and 555

- Restriction for these exchanges is hierarchical according to an extension's Class o Service.

Initial Configuration

ARS not installed

Automatic Route Selection (cont'd)

Using the Feature

To place a call using ARS:

1. Lift handset.	If you have an ARS loop key, press it and skip to step 4.
2. Press INTERCOM (except at an ESL set).	You hear Intercom dial tone.
3. Dial ARS access code (9 or 90).	You hear another (higher pitched) dial tone.
4. Dial number.	

Understanding Related Programming

You can only program Automatic Route Selection from the programming terminal. Refer to the ONYX Feature and Terminal Programming Manual.

Automatic Call Distribution

With Automatic Call Distribution (ACD):

The system automatically distributes calls to co-workers (agents) in the same department. No need to have receptionist or attendant screen and route calls for a department.

Automatic Call Distribution (ACD) uniforr distributes incoming calls among members of a department (ACD group). Each ACD group consists of member extensions, called agents, and a master number. When a call rings the master number, the system automatically routes the call to the agent that has been idle (on hook) the longest. The call can be a transferred call or Intercom call to the master number.

Supervisor Functions

Each ACD group can have a supervisor extension. The supervisor must have a display telephone with a DSS Console. This lets the supervisor monitor the status of the ACD group and each agent extension. When all ACD agents are busy, the supervisor's display shows:

- The number of calls waiting
- The line or extension that has been waiting the longest
- How long the extension or line has been waiting

Note: The ACD supervisor display timer requires an AUX Module. If your system doesn't have an AUX Module, the supervisor's display does not show how long a call has been waiting for an available agent.

Using their DSS Console, the supervisor can also take agent extensions in and out of service as the traffic into the ACD group changes. ACD agents can also remove and reinstall their own extensions. However, the supervisor can always reinstall an extension if it was removed by an agent.

The Supervisor's DSS Console

The supervisor's DSS Console should have a Hotline key for each ACD agent. This shows at a glance the status of each agent.

When the DSS key is...	Agent is...
Off	Idle
On	Busy
Slow Flash	Removed from service
Fast Flash	In Do Not Disturb

Optionally, the supervisor's DSS Console can have a Hotline key for the ACD master number. This shows the status of the entire ACD group. The key lights when all agents in the department are busy. As soon as an agent becomes free, the key goes out.

Notes:

- Activating Call Forwarding at an ACD group extension disrupts normal hunting.
- Activating Do Not Disturb (DND) at an ACD Group extension temporarily removes it from the group.
- The supervisor cannot be the overflow destination for the ACD group.

Automatic Call Distribution (cont'd)

Initial Configuration
No ACD groups

Using the Feature

To remove or install a member agent (from the supervisor's extension):

1. Lift handset.
2. Press INTERCOM.
3. Dial PGM#.
4. Press DSS Console key for agent you want to change.
5. Dial 7 to remove an agent; 4 to install.

To remove or install yourself as an agent (from your agent extension):

1. Lift handset.
2. Press INTERCOM (except at an ESL set).
3. Dial 6 to remove yourself as an agent; 4 to install.
4. Press PGM# and hang up.

Understanding Related Programming

Program 19	To set up ACD/Hunt Groups
Program 4	To set two timers: Camp-On time (how long a call waits at a busy ACD group before ringing the Overflow destination - if any) and Rings Before Recall (the number of times a call rings an ACD Hunt Group extension before going to the next one)
Program 17	To assign a DSS Console Hotline key for an ACD master number (key lights when all members are busy)
Program 12	To directly terminate a line to an ACD master number so calls ring it instead of having to be transferred to it

Direct Inward Lines

With Direct Inward Lines (DIL):

A VS line can be assigned to a specific VS extension so outside callers can directly reach that extension. For example, an DIL could ring a Sales Manager's extension, and if unanswered, all the other salespeople in the group.

The Direct Inward Line (DIL) feature lets yc program a line so it rings a specific destinatior and if unanswered, rings other extensions The initial destination (termination) for a DI can be:

- An extension
- The master extension for a UCD Hunt Grou (including Voice Mail master extensions)
- A Ring Group

A DIL always rings its initial destination; ther is no need to assign ringing through syste programming. In addition, an extension user can place calls on a DIL.

A DIL can have a day termination and a night termination:

- A line with a day termination to an attendant (operator) rings at the night termination when the attendant activates Night Answer (see page 121).
- A line with a day termination to a non-attendant extension rings at the night termination when that extension activates Do Not Disturb (see page 97).
- A line with a day termination to a UCD master extension rings the night termination when the master extension's attendant (assigned in Program 18 [I]) activates Do No Disturb (see page 97).
- A line with a day termination to a Ring Group rings at the night termination when extension 300 activates Night Answer.

If the terminated extension or group does not answer the DIL within a programme time, the DIL may ring extensions programmed for ringing on that DIL (called "ke ring"). More specifically:

- If a terminated extension does not answer the DIL, the DIL converts to key ring.
- If a member of a terminated UCD Hunt Group does not answer the DIL, the DIL ring the overflow extension (if one is programmed). If the overflow extension does n answer, the DIL converts to key ring.
- If a member of a terminated Ring Group does not answer the DIL, the DIL continue to ring the Ring Group until someone answers or the caller hangs up.

For more information on Ring Groups see page 77. For more information on UCD Hu Groups see page 158.

Initial Configuration

No DILs

Using the Feature

N/A

Direct Inward Lines (cont'd)

Understanding Related Programming

Program 12	To make DILs (i.e. to directly terminate a line to an extension, UCD master extension, or Ring Group)
Program 17	To assign a DIL to a key at an extension (if you do not assign it to a key, it rings a Loop key)
Program 16	To give an extension (other than the terminated extension) access to the DIL so they can answer it if it diverts to their extension
Program 18 (II)	To assign ringing to the DIL at extensions other than the terminated extension
Program 4	To set the Rings Before Recall timer (how long a DIL rings an idle/busy terminated extension or a UCD overflow extension before diverting to key ring; and, how long a DIL rings a Hunt Group extension before going to the next Hunt Group extension)
	To set the Camp-On timer (how long a DIL rings a busy UCD group before going to the overflow extension)
Program 10	To assign names to the DILs

Hunting

With Hunting:

Call handling among people in a sales or service department becomes very efficient. If one person is busy handling a customer, the VS sends a new call to another person in the group. No need for an attendant to look for an available person to take a call.

Hunting sends a call through a group of extensions until it is answered. In other words, if a call tries a Hunt Group extension and it is busy, the call tries (hunts for) the next available extension in the group, and so on.

The following types of calls hunt when they come into a Hunt Group extension:

- Ringing Intercom calls
- Transferred calls
- Directly Inward Lines
- Tie Lines (Tie lines available in the future)
- DISA calls (DISA available in the future)

Voice-announced Intercom calls and lines assigned to a Hunt Group extension through Program 16 do not hunt.

A Hunt Group can have any number of members, and the system can have any number of Hunt Groups. However, an extension can be in only one Hunt Group.

There are three types of Hunting:

Circular Hunting

A Circular Hunt Group consists of extensions programmed into an ordered "circular" list where the first and last extension are the same (e.g., 304, 305, 306, 307, 304). If a call is unanswered at one extension, it moves to the next extension in the list. If still unanswered, it rings all remaining members, circling back to the top of the list if necessary. If not picked up after ringing all group members:

- An Intercom call continues to ring the last extension in the group
- An outside call rings all extensions programmed for ringing on that line (an unanswered Transfer call may recall the transferer before ringing the other extensions)

Terminal Hunting

A Terminal Hunt Group consists of extensions programmed into a ordered list (e.g., 304, 305, 306, 307). If a call is unanswered at one extension, it moves to the next extension in the list. If still unanswered, it rings the remaining members until it reaches the bottom of the list; it does not circle back to the top of the list. If still unanswered:

- An Intercom call continues to ring the last extension in the group
- An outside call can ring the attendant or all extensions programmed for ringing on that line (an unanswered Transfer may recall the transferer before ringing the other extensions)

Hunting (cont'd)

Uniform Call Distribution (UCD) Hunting

A UCD Hunt Group consists of extensions programmed into a list, and the group is assigned a master extension number. The UCD Hunting process begins when a call comes into the master extension number (such as a call transferred to the master number). The order in which the call rings the member extensions depends on how busy the extensions have been. The first extension rung is the one that has been idle the longest. The last extension rung is the one that has been busiest. If all UCD members are busy, the call waits (Camps-On) for the programmed Camp-On time, then moves to the overflow extension (if any). If not answered at the overflow extension, a waiting outside call rings all extensions programmed for ringing on that line.

Notes:

- Hunt Groups can be linked together. For example, a UCD master number can be the last member of a Terminal Hunt Group, or the overflow for another UCD Hunt Group.
- Activating Call Forwarding at a Hunt Group extension disrupts normal hunting.
- Activating DND at a Hunt Group extension temporarily removes it from the group. If a "Circular" extension is in DND, an outside call continually cycles through the group.
- Two attendants (e.g., 307, 304) can be in a circular Hunt Group for special Night Answer operation (the group = 307, 304, 307 with type 02). Both attendants must activate Night Answer to put their lines into the Night Answer mode.
- Automatic Call Distribution is similar to UCD Hunting, but with unique supervisor and agent features. Refer to page 154 for the specifics.

Initial Configuration

Hunting disabled (No Hunt Groups assigned)

Using the Feature

N/A

Understanding Related Programming

Program 19	To set up Hunt Groups
Program 4	To set two timers: Camp-On (how long a call waits at a busy UCD group) and Rings Before Recall (the number of times a call rings a Hunt Group extension before going to the next one; and, before ringing all extensions with ringing and access for that line)
Program 17	To assign a Call Coverage or Hotline key for a UCD master number (key lights when all members are busy)
Program 12	To directly terminate a line to a UCD master number so calls ring it instead of having to be transferred to it
Program 18 (II)	To disable Voice Over for extensions in Circular and Terminal Hunt Groups

Multiple Attendants

With Multiple Attendants:

Incoming calls can be split up among attendants to speed up call processing.

The VS system can have up to four attendant. This lets you reduce the call traffic into th main attendant phone by assigning some line to the main attendant and the remaining line to another attendant.

Each attendant must have a Displa Multibutton Telephone. Two keys on the attendant's Display Telephone have differer functions than those same keys on a non-attendant Display Phone (see Fixed Keys o page 9).

The following VS features can be activated only from an attendant extension:
- Viewing Alarms (see page 141)
- Automatic Hold using a Line key (see page 40)
- Alternate Attendant (see page 114)
- Forced Line Disconnect (see page 108)
- Removing Extensions and Lines From Service (see page 139)
- Night Answer (see page 121)

The following VS features are not available to an attendant extension:
- Call Forwarding
- Callback
- Do Not Disturb
- Group Listen
- Handsfree, Automatic Handsfree, Monitor
- Line Queuing
- Message Waiting (receiving)
- Off-Hook Signaling (receiving)
- Paging (receiving)

In addition, the attendants should not have Ringing Line Preference or Prime Line.

Initial Configuration

One attendant at extension 300

Using the Feature

The attendant phone is used like any other Multibutton (any exceptior are noted in individual feature operations).

To call an attendant, see Placing and Answering Intercom Calls on pag 32.

Multiple Attendants (cont'd)

Understanding Related Programming

Program 3	To assign attendants (attendant 01 must be extension 300)
Program 18 (I)	To assign Off-Hook Ringing to an attendant (this allows the phone to ring [beep] while Alarms display at the attendant phone)
	To assign an attendant (operator) to each extension (this is the attendant that gets called when the user presses INTERCOM and dials 0)
Program 16	To assign line access to attendant extensions
Program 17	To assign a line to a key at an attendant extension
Program 1	To manually assign the proper Class of Service (COS) to an extension when you change it from an attendant to a non-attendant (non-attendant extensions use COS 01-27; attendant extensions use COS 30)

Private Lines

With Private Line:

An executive or group of executives can have their own line.

A Private Line is a line that is dedicated to extension or group of extensions. A Private Line can be incoming only or incoming and outgoing.

Initial Configuration
No Private Lines

Using the Feature

You place, answer, and Transfer calls on a Private Line as you would on any other line. See the category, Handling Calls: The Basics.

Understanding Related Programming

Program 16	To assign an extension access to the Private Line Since a Private Line is assigned to an extension like any other line (i.e., by using Program 16), it has all the features and restrictions of normal (non-Private) lines.
Program 17	To assign the Private Line to a key at an extension
Program 18 (II)	To assign ringing to the Private Line
Program 10	To assign the correct circuit type (and name) to a Private Line

Station Message Detail Recording (SMDR)

With SMDR:

It's easy to keep track of the calls made at each extension.

Station Message Detail Recording (SMDR) provides a record of the system's outside calls. The record can display on a terminal or be sent to a printer. The record shows the following information about a call:

- Date of the call
- Last extension on the call
- Line used for the call
- Number dialed (for outgoing calls only)
- Account Code, if entered (for more information, see Account Codes on page 136)
- Start time of the call
- Duration of the call

SMDR requires the AUX module and a customer-provided ASCII record collection device (e.g., terminal or printer). SMDR options are programmed through a terminal connected to the AUX module. For more information, see SMDR in the ONYX Feature and Terminal Programming Manual.

Initial Configuration

SMDR not available without AUX Module and terminal programming

Using the Feature

N/A

Understanding Related Programming

Program 3	To set the baud rate of the AUX module's port for terminal programming

Traffic Management Reporting

With Traffic Management:

It's easy to see which lines and extensions are being overused or underused so you can make the appropriate adjustments.

Traffic Management System (TMS) Reportir provides a record of the system's call activity for both Intercom and outside calls. The record can display on a terminal or be sent to a printer. A TMS record shows the call activity for each installed extension, line, line group, and Uniform Call Distribution (UCD) group. For example, the TMS report would show the following call activity data for a line:

- Total number of calls received, answered, and terminated
- Total number of "Long Wait" calls (calls that ring longer than the TMS "Long Wait" time)
- Total number of abandoned calls (where the outside caller hangs up while the call is on Hold, parked or being transferred)
- Total number of outgoing calls
- Total time the line was in use

Traffic Management Reporting requires the AUX module and a customer-provided ASCII record collection device (e.g., terminal or printer). Traffic Management Reporting options are programmed through a terminal connected to the AUX module. For more information, see Traffic Management Reporting in the ONYX Feature and Terminal Programming Manual.

Initial Configuration

Traffic Management Reporting not available without AUX module and terminal programming

Using the Feature

N/A

Understanding Related Programming

Program 3	To set the baud rate of the AUX module's port for terminal programming

Diagnostics/Maintenance Utilities and Reports

With Diagnostics/Maintenance Utilities and Reports:

It's easy to investigate and diagnose a problem in the system. There may be no need for a service call.

The system provides diagnostic and maintenance utilities and reports to help troubleshoot the system.

There are 30-35 diagnostic/maintenance/report options, five of which are shown below:

- List Toll Restriction data
- Swap extension ports
- Reset expansion CEU
- Display the status of every line and extension
- List programmable key data

Diagnostics Maintenance Utilities and Reports requires the AUX module and terminal programming. For more information, see System Reports, Diagnostics and Maintenance Utilities in the ONYX Feature and Terminal Programming Manual.

Initial Configuration

Diagnostics/Maintenance Utilities and Reports not available without the AUX module and terminal programming

Using the Feature

N/A

Understanding Related Programming

Program 3	To set the baud rate of the AUX module's port for terminal programming

Battery Backup

With Battery Backup:

The VS system performs normally during a power failure.

The Battery Backup feature automatically supplies battery power to a VS CEU during AC power failures or brownouts. The recommended battery backup unit is the Valcom VB260, and one is required for each CEU. The VB260 supplies power to a fully loaded system for approximately two hours.

Initial Configuration

Battery Backup allowed, but only with required equipment

Using the Feature

To install the VB260, see the Hardware manual. Once installed, Battery Backup is automatic during a power failure or brownout.

Understanding Related Programming

N/A

Class of Service

With Class of Service:

Each extension can have a customized group of features depending on its needs.

A Class of Service (COS) is a group of 17 feature and dialing options that you can assign to an extension. First, you customize a COS by enabling or disabling each option, then you assign the COS to an extension. You can customize up to 28 different COSs (00-27), and you can assign the same COS to any number of extensions. In addition, there is a special COS (30) for attendant extensions.

Below are the COS options, their initial setting, and a feature reference. A "Y" code means the feature is allowed, "N" means denied.

Initial Configuration

- Attendant extension 300 has COS 30 (equivalent to COS 00)
- Extensions 301-347 have COS 01
- **Place only Intercom Calls during Night Answer = N**
  See Night Answer on page 121.
- **Off-Premise Call Forward = N**
  See Off-Premise Call Forward on page 117.
- **Break-In (Intrusion) = Y for COS 00; N for others**
  See Intrusion (Barge-In) on page 105.
- **Camp-On (Busy Extension) = Y**
  See Camp-On on page 103.
- **Internal Call Forwarding = Y**
  See Call Forwarding, Internal on page 115.
- **System Speed Dial Access = Y**
  See Speed Dial on page 66.
- **Toll Restriction Level = 00 (not restricted)**
  See Toll Restriction on page 182.
- **Place Only Local Calls (Day or Night Answer mode) = N**
  See Toll Restriction on page 182.
- **Place Only Local Calls during Night Answer = N**
  See Toll Restriction on page 182.
- **Extended Ring = N**
  See Extended Ringing on page 171.
- **Privacy = N**
  See Privacy on page 177.
- **Callback (Line Queuing) Priority = N**
  See Line Queuing on page 109.
- **Direct Line Access & Camp-On to Busy Line = Y for COS 00; N for others**
  See Placing Outside Calls (Using Direct Line Access) on page 26.
- **Initiate All Call Page = Y**
  See Paging on page 126.
- **Access Page Zones 1-3 = Y**
  See Paging on page 126.
- **Silent Monitor = N**
  See Silent Monitor on page 111.

Class of Service (cont'd)

- **No Flash for Electronic Single Line Phones = N**
- **ACD Supervisor Keyset = N**
  See Automatic Call Distribution on page 154.
- **Single Ring for ASI Calls = N**
  See Analog Station Interface on page 14.

Using the Feature

N/A

Understanding Related Programming

Program 1	To customize a Class of Service (see also Program 18 [I])
Program 18 (I)	To assign a Class of Service (from Program 1) to an extension

)ata

With Data:

The VS system can also be used for data communications.

The Data feature lets you connect a Data Module (P/N 88400), a Dataport PCB (P/N 89460), and/or a Modem Pooling PCB (P/N 89465) to the VS for data communications with computers, terminals, printers and other RS-232 devices.

Note: Depending on the version of the your system, you may need to install an AUX module to use Dataport and Modem Pooling PCBs. For more information on all Data devices, see the Data Products Manual (P/N 01850DMG01).

Initial Configuration

For a Data Module:
Baud Mode: Slave
Parity: None, 8 bits
Interactive Mode: Yes
Interactive Echo: Yes
RS-232 Controls Active: Yes
Allow DTR Disconnect: Yes
Allow Break Disconnect: Yes
Auto Baud: Yes
Busy on DTR Low: No

Using the Feature

See the Data Products Manual (P/N 01850DMG01).

Understanding Related Programming

Program 14	To assign the correct circuit type to a Data Module
Program 18 (I)	To configure an extension as a Dataset (when it is installed with a Data Module)
Program 3	To set the baud rate of the AUX module's port for terminal programming
Program 4	To set the modem reserve timer (when using a Modem Pooling PCB)

Dial Pulse (DP) and Dual Tone Multifrequency (DTMF) Compatibility

With DP and DTMF Compatibility:

Any combination of DP and DTMF Central Office lines can be connected to the VS system.

DP and DTMF Compatibility lets the VS system be programmed for DP or DTMF lines from the local Central Office.

Note: A user can change the dialing mode of a DP line to DTMF dialing (see Pulse to Tone Conversion on page 52).

Initial Configuration

All Lines are CO Loop Start DTMF

Using the Feature

N/A

Understanding Related Programming

Program 10	To identify the type of line (DP or DTMF) connected to a line port
Program 4	To set the Make, Break, and Interdigit timers for DP lines
	To set the Line Response timer for DP and DTMF lines

Extended Ringing

With Extended Ringing:

Calls can ring longer than usual to assist people who can't readily get to their phones (like a warehouse worker, for example)

Extended Ringing forces an unanswered call to ring an extension 15 times before the system can reroute it to another extension. For example, a Transfer would ring an extension 15 times before recalling the extension that transferred it.

If an extension has Extended Ringing, the following types of calls ring it 15 times before being rerouted:

- A Hunting call
- A Transfer
- A recalling call on Hold
- A ring-no-answer forwarded call
- A Direct Inward Line
- A Direct Inward Dialing call

Initial Configuration

Extended Ringing disabled

Using the Feature

N/A

Understanding Related Programming

Note: Enabling Extended Ringing overrides timer 06 (Number of Rings Before Recall).

Program 1	To enable/disable Extended Ringing in a Class of Service (see also Program 18 [I])
Program 18 (I)	To assign a Class of Service (from Program 1) to an extension

External Alerting Device

With an External Alerting Device:

The ringing for incoming calls is amplified so it can be heard in large noisy areas, such as a machine shop.

An External Alerting Device, such as a be can be connected to Relay 01 (located in CEU #1) and Relay 02 (located in CEU #2). You can program the system so that a relay activates and the bell rings when an incoming call rings one of the following destinations:

- A line (348-363)
- An extension (300-347)
- A Ring Group (364-371)

The relay activates for day and Night Answer calls with one exception: If you select extension 300 for a relay, the relay activates only for calls that ring extension 300 while it is in the Night Answer mode. You can also program the relays to have a steady or interrupted closure, depending on what the External Alerting Device requires.

An External Alerting Device must be compatible with the following relay specifications:

Maximum Load	60 mA @ 30 Vdc 10 mA @ 90 Vdc

Initial Configuration

- Relays 01 and 02 activate when a call rings extension 300 during the Night mode
- Relays 01 and 02 are programmed for steady closure

Using the Feature

See Answering an Outside Call on page 30 or Night Answer on page 121.

Understanding Related Programming

Program 7	To select the type of call that activates a relay To select interrupted or steady closure for the relays
Program 16	To give an extension access to the line you assign to a relay so the extension can answer a call on that line

Flexible Numbering Plan

With Flexible Numbering Plan:

The VS numbering plan can be changed to a numbering plan the customer is more familiar with, if necessary.

Flexible Numbering Plan lets you change the digits that access lines, extensions and features. For instance, you can change the extension numbers from 300-347 to 500 to 547. The following system numbers can be changed:

- The digit that forces Intercom calls to ring
- First digit of Personal Speed Dial bins
- First digit of System Speed Dial bin numbers
- First digit of extension numbers
- First digit of Ring Group numbers
- First digit of Line numbers
- First digit of Park Orbit codes
- First digit of Line Dial-Up codes
- First digit of Line Group numbers
- The single digit that calls the main attendant

Changing these code also affects other feature codes.

The Flexible Numbering Plan feature requires the AUX module and terminal programming. For more information, see Flexible Numbering Plan in the ONYX Feature and Terminal Programming Manual.

Initial Configuration

- The digit that forces Intercom calls to ring = 1
- The Personal Speed Dial bin numbers = 50-59, 20-29
- System Speed Dial bin numbers = 70-79 or 700-799
- Extension numbers = 300-347
- Line numbers = 348-363
- Ring Group numbers = 364-371
- Park Orbit codes = 60-69
- Line Dial-Up codes =801-816
- Line Group numbers = 90-98
- The single digit that calls the main attendant =0

Using the Feature

NA

Understanding Related Programming

Program 3	To set the baud rate of the AUX module's port for terminal programming

Intercept of Calls

With Intercept of Calls:

Users quickly know when they dial an invalid code.

Intercept of Calls sends fast busy tone anyone who dials an invalid code while making a call. In other words, the system automatically prevents (intercepts) an invalid call.

Initial Configuration

Intercept always occurs when appropriate

Using the Feature

N/A

Understanding Related Programming

N/A

Music On Hold

With Music On Hold:

Callers on Hold can listen to music while they wait.

Music On Hold (MOH) sends music to calls on Hold, parked calls, and transferred calls. If there is no Music On Hold in the system, callers on Hold hear silence. Music on Hold requires a customer-provided music source (e.g., tape player, receiver).

Note: In accordance with U.S. copyright law, a license may be required from the American Society of Composers, Authors and Publishers (ASCAP) or other similar organizations, if radio, television broadcasts or music and other material not in the public domain are transmitted through the Music On Hold feature of telecommunications systems. TIE/communications, Inc., hereby disclaims any liability arising out of the failure to obtain such a license.

The music source must be compatible with the following system specifications:

Input Impedance	100 K Ohms
Maximum Input	- 10 dBm

The music source can also be used for Background Music (see page 96). To install the music source, see the Hardware Manual.

Initial Configuration

- Music on Hold not available
- MOH for Transfers disabled

Using the Feature

N/A

Understanding Related Programming

Program 7	To enable/disable MOH
Program 3	To enable/disable MOH on transfer

Non-Blocking Architecture

With Non-Blocking Architecture:

Everyone can be on the phone at once.

Non-Blocking Architecture means that th. number of transmission paths is greater than the number of extension and line ports. In other words, all the extensions and lines can be busy on calls simultaneously, without blocking or interfering with one another.

The system allows simultaneous handset and Handsfree calls, with a maximum of 12 simultaneous Handsfree calls per CEU. So if 12 Handsfree calls are in progress and someone tries to make a Handsfree call, the system emits a busy tone and the person must make a handset call instead.

Note: The VS has 12 dialing buffers. This means that a maximum of 12 people can simultaneously dial calls (i.e., without being blocked).

Initial Configuration

Non-Blocking architecture always available

Using the Feature

N/A

Understanding Related Programming

N/A

Privacy

With Privacy:

Calls in progress are not interrupted by other callers.

Privacy prevents an extension from receiving the following interruptions while on a call:

- Intrusion (Barge-In) attempts (page 105)
- Silent Monitor attempts (page 111)
- Camp-On (Call Waiting) signals (103)

Privacy does not prevent Off-Hook Signaling attempts (page 106).

Note: While on an Intercom call, a user with Privacy will hear Intrusion and Call Waiting beeps directed to the other extension user. However, this will not occur if the other extension also has Privacy enabled.

Initial Configuration

Privacy disabled except for attendant extension 300

Using the Feature

N/A

Understanding Related Programming

Program 1	To enable/disable Privacy in a Class of Service (see also Program 18 [I])
Program 18 (I)	To assign a Class of Service (from Program 1) to an extension

Tenant Service

With Tenant Service:

A single VS system can serve more than one business.

The VS system can be divided up so that mo than one tenant (business) can use it. If each tenant requires its own attendant (operator), the VS can accommodate up to four tenants. Otherwise, the VS can accommodate any number of tenants.

In addition to having its own attendant, each tenant can have their own:
- Outside lines or line groups
- Internal Page Zones (seven zones are available)

Note: Members of one tenant group can place Intercom calls to members of another tenant group.

Initial Configuration
All extensions in same tenant group (they are all assigned to attendant 300)

Using the Feature

N/A

Understanding Related Programming

For attendant programming, use:

Program 3	To assign the number of attendants/operators and their extension numbers. If there are two tenants and each wants its own operator, enter 2 in this program and then enter the desired extension numbers.
Program 18	To assign to an extension its attendant extension (from Program 3). The attendant you assign to an extension is the one that gets called when the extension user dials 0.

For line and line group programming:

Program 11	To make line groups
Program 16	To assign lines and/or line groups to each extension in a tenant group. Make sure each tenant has access to a different set of lines/groups.
Program 17	To assign a line to a key at an extension
Program 18 (II)	To assign ringing to lines at an extension

See also Placing an Outside Call on page 26 and Answering an Outside Call on page 30.

Tenant Service (cont'd)

Understanding Related Programming

For Paging programming:

Program 1 — To enable/disable the capability of making an All Call Page in a Class of Service (see also Program 18[l]). Since all tenant groups would probably not want to hear an All Call Page, you may want to disable this.

To enable/disable the capability of making a Page to Zones 1-3 in a Class of Service (see also Program 18 [l]). You may want to enable zone 1 paging for one tenant and disable it for another. All extensions can page zones 4-7, regardless of programming

Program 18 (l) — To assign a Class of Service (from Program 1) to an extension

To assign extensions to Internal Page Zones. Tenant A's extensions should not be in the same page zones as tenant B's extensions.

See also Paging on page 126.

Timers

With Timers:

Customize the duration of certain feature options.

There are timers in the system that can b customized through programming. The timers affect extensions, lines, features and system performance. The available timers are as follows:

The ***Park Orbit*** timer determines how long a call stays in a system Park Orbit before it recalls the extension that parked it (see Call Parking on page 119).

The ***Hold Recall*** timer determines how long a call stays on Hold before it recalls the extension that placed it on Hold (see Regular Hold on page 36, Exclusive Hold on page 39, and Automatic Hold on page 40).

The ***Camp-On*** timer determines how long a transferred call or Direct Inward Line Camps-On to a:
- Busy UCD Hunt Group before it rings the overflow extension
- Busy ESL ASI before it recalls the transferring extension

The ***Line Response*** timer determines how long the system waits before assuming that a seized outgoing line is defective (i.e., defective = the system does not detect loop current from the telephone company). The time you select must be compatible with your local telephone company.

The ***Modem Reserve*** timer determines how long the system reserves a modem (for user) from the modem pool before returning it to the pool.

The ***Number of Rings Before Recall*** timer sets the number of times:
- A recalling held outside call rings the extension that placed it on Hold before it changes to "key ring" and rings all extensions programmed for ringing on that line
- A transferred call rings an idle or busy Multibutton extension before recalling the transferring extension (see Transfer on page 41)
- A transferred call rings an idle ESL/ASI before recalling the transferring extension
- A recalling Transfer rings the transferer before it changes to "key ring" and rings all extensions programmed for ringing on that line
- A call rings a Hunt Group extension before ringing the next extension in the group (see Hunting on page 158)
- A call rings an extension in the ring-no-answer Call Forwarding mode before the system forwards the call to the destination extension (see Call Forwarding on page 115)
- A Direct Inward Line (i.e., a directly terminated line in Program 12) rings an idle or busy Multibutton or UCD overflow extension before it changes to "key ring" and rings all extensions programmed for ringing on that line (see Direct Inward Lines on 156)

Timers (cont'd)

The ***Number of Delayed Rings*** timer determines how many rings the system suppresses before a call audibly rings an extension that is programmed for Delayed Ringing (see Delayed Ringing Assignment on page 84).

The ***Flash Response*** timer determines how long a line circuit opens to allow the CO or PBX to recognize it as a Flash. The value you select must be compatible with your CO or PBX (see Flash on page 49).

The ***Dial Tone Detect*** timer determines how long the system waits to detect dial tone before sending out a Speed Dial call. The system uses three times this value for a pause in a Speed Dial number (see Speed Dial on page 66).

The ***Make*** timer determines how long the relays close on Dial Pulse (DP) lines.

The ***Break*** timer determines how long the relays open on Dial Pulse (DP) lines.

The ***Interdigit*** timer determines how long of a pause there is between digits dialed on a Dial Pulse (DP) line.

Initial Configuration

- Park Orbit = 60s
- Hold Recall = 60s
- Camp-On = 60s
- Line Response = 1.5s
- Modem Reserve = 30s
- Number of Rings Before Recall = 5
- Number of Delayed Rings = 3
- Flash Response = .7s
- Dial Tone Detect = 10s
- Make = 40ms
- Break = 60ms
- Interdigit = 640ms

Using the Feature

N/A

Understanding Related Programming

Program 4	To set the duration of the timers

Toll Restriction

With Toll Restriction:

Long distance calls can be limited to control the cost of communications.

Toll Restriction limits the types of calls a user may dial from their extension. The system applies Toll Restriction (i.e., limits calls) for a particular extension according to the Toll Restriction level (01-07) assigned to that extension through its Class of Service. Each Toll Restriction level can be customized to enable or disable the following:

- Continuous dialing (for access to special services, such as MCI)
- Special access (N11) dialing (such as 411 Directory Assistance)
- Outside Operator (0 +) dialing
- Direct international dialing
- Equal Access dialing (see page 80)
- 1 + NNX (long distance exchange) dialing
- NXX (local exchange) dialing
- NPA (area code) dialing
- Six-digit (NPA and NNX) dialing. This type of dialing limits a user to dialing only specific exchanges (NNX) within specific area codes (NPA).

When the VS is installed behind a PBX, the VS applies Toll Restriction after the user dials the PBX Access Code.

Toll Restriction does not restrict 911 calls, System Speed Dial calls, or calls made using Direct Line (Trunk) Access. A user can also activate Walking Class of Service to override dialing restrictions (see Walking Class of Service on page 53).

Additional dialing restrictions can be set up in a Class of Service (Only Intercom Calls at Night, Only Local Calls Day or Night, Only Local Calls at Night). These restrictions override any restrictions set up in a Toll Restriction level (01-07).

Initial Configuration

No Toll Restriction (all types of calls allowed)

Using the Feature

When a user dials a call that is restricted, the systems sends a fast busy tone to the user. If Station Message Detail Recording (SMDR) is installed, the restricted (blocked) call shows up on the SMDR report.

Understanding Related Programming

Program 6	To set up Toll Restriction levels 01-07 (see also Program 1)
Program 1	To assign a Toll Restriction level (from Program 6) to Class of Service (see also Program 18 [I])

Toll Restriction (cont'd)

Understanding Related Programming

Program 1	To set up the following (additional) dialing restrictions in a Class of Service: Only Intercom Calls at Night, Only Local Calls Day or Night, Only Local Calls at Night (see also Program 18 [I]). These restrictions override any restrictions set up in Program 6.
Program 18 (I)	To assign a Class of Service (from Program 1) to an extension
Program 12	To assign Toll Restriction to a line (initially, Toll Restriction is applied to every line at an extension and you would want to leave it that way except for WATS line, for example)
Program 3	To identify whether the calling area requires a "1" before dialing an area code (NPA)
Program 16	To give an extension outgoing access to lines

Part II:
ONYX VS Programs

About the VS Programs

Each VS program (1-20) in Part II includes[2]:

- A description of its programmable options
- A feature reference for each programmable option under the heading. **FOR FEATURE INFORMATION: See.** Here you find the VS feature in Part I that is related to a programmable option.
- The initial configuration for each programmable option. The initial configurations are in a shaded box. For example, the initial configuration for Call Waiting tones in Program 2 looks like this:

> ***Program 2 is initially set as follows:***
>
> - ***Call Waiting (Camp-On) Tones = Y***

A "Y" means "Yes" or "Enabled," and an "N" means "No" or "Disabled."

Then you will see the following headings:

- **Filling Out the Program Record Form,** which lists the data codes for each programmable option and shows you how to enter them on the Program Record Form (P/N 01853PRF02).
- **Entering Data Codes into Memory,** which provides step-by-step instructions for entering the data codes into memory.
- **Understanding Related Programming**, which lists the related VS programs.

How to Use Part II to Customize the VS

After you read about a feature in Part I and determine you need to customize it by using its related programs:

1. Read about a program in Part II. If you are programming the system for the first time, check the initial configuration in the shaded box. Make sure you need to change it.
2. Go to the heading, **Filling Out the Program Record Form**. Enter the required data codes on the Program Record Form.
3. Repeat steps 1-2 for each program a feature requires, and for all features you must customize.

---

[2] Programs 9 and 13 are reserved for future use. Program 11 (Line Groups) is available only if the VS is equipped with an AUX module.

How to Use Part II to Customize the VS (cont'd)

4. Connect a Display Phone to port 00 (extension 300). You can also program the system from an extension that has program access level 04 (see Program 15).
5. Do the following (described in the box) if you are programming the system for the first time. Otherwise, go to step 6.

IMPORTANT
When you program the system for the first time, run Program 20 before any others. Program 20 initializes your system. It ensures that the initial values are installed in Programs 1-19. Failure to run Program 20 as described may result in erratic system operation.

6. Use the instructions on the Program Record Form to enter the data codes into memory from extension 300. You can also use the instructions provided with the program (see the heading, **Entering Data Codes into Memory**).

General Programming Tips

As stated before, each program has specific instructions on how to enter its data codes into memory. There are, however, four basic steps to using any program. Once you become familiar with them, you will not need to continually refer to the specific programming instructions.

To use a program:
1. Enter the program mode from extension 300 or any extension that has program access level 04. You must use a Display Phone.
2. Enter a program.
3. Enter the data codes using the dialpad, erase any mistakes you make, and move through the program's feature options.
4. Save and Exit.

Entering the Program Mode

To enter the program mode from the extension 300 Display Phone (or from an extension with program access level 04 [see Program 15]):
1. Do not lift the handset and press PGM#.
2. Dial SP.
   The code SP stands for "System Program" and is 77 on the dialpad.
3. Dial 5312.
   The code 5312 is the ONYX VS system password.
4. Press PGM#.

General Programming Tips (cont'd)

Entering the Program Mode (cont'd)

If you leave the system in the program mode too long without pressing a key or dialing a code, two things happen: you'll hear reorder (fast busy) tone and the system will automatically exit the program mode.

Entering a Program

To enter a program after you enter the program mode:

1. Press the program's key.
   Programmable keys 1-20 give you access to programs 1-20, respectively. Keys 1-5 are in the top row, keys 6-10 are in the second row, keys 11-15 are in the third row and keys 16-20 are in the fourth row.

Entering Data, Erasing Mistakes and Moving Through Program Options

To enter data after you enter a program:

1. Dial the data.
2. Press the PGM# key.
   This step stores the data and moves you to the next feature option.

For example, to enter the data code Y or N (for "Yes" or "No"):

1. Dial Y or N, which is 9 or 6 on the dialpad.
2. Press PGM#.

When you dial data for the last feature option in a program and press PGM#, you exit the level you are working in and return to the previous level. In some cases, "returning to the previous level" means you exit the program and therefore do not have to press the SAVE key to exit the program (see below).

To accept (i.e., not change) the data on display and move to the next feature option:

1. Press the PGM# key.

To erase a mistake:

1. Dial * right after you dial the mistake but before you press the PGM# key to store it.

If you make an invalid data entry and press PGM#, you will hear reorder (fast busy) tone and can also dial * and re-enter data.

Saving and Exiting

To save and exit after entering data:

1. Press the SAVE key.
   Pressing SAVE moves you out of a program, one level at a time. You may have to press SAVE several times to exit all the way out.

Customizing System-Wide Options

Customizing System-Wide Options From an ONYX VS Phone

Customizing System-Wide Options (cont'd)

Program 1 ➠ Class of Service

Program 1 is initially set as follows for each COS:

- *Only Intercom Calls at Night = N*
- *Off-Premise Call Forward = N*
- *Break-In (Intrusion) = Y for COS 00; N for COS 01-27*
- *Camp-On (Busy Extension) = Y*
- *Internal Call Forwarding = Y*
- *System Speed Dial Access = Y*
- *Toll Restriction Level = 00 (not restricted)*
- *Only Local Calls (Day or Night) = N*
- *Only Local Calls at Night = N*
- *Extended Ring = N*
- *Privacy = N*
- *Callback (Line Queuing) Priority = N*
- *Direct Trunk Access and Camp-On to Busy Line = Y for COS 00; N for COS 01-27*

Program 1 lets you customize a Class of Service (COS). You do this by enabling or disabling each of its feature options (see below). After you customize a COS, you use Program 18 (I) to assign it to an extension so the extension has access to (or cannot access) the COS's features.

You can customize up to 28 COSs (00-27), and you can assign the same COS to more than one extension. COS 30 is a special COS reserved for the attendant. The system automatically assigns COS 30 to any extension you designate as an operator in Program 3. You customize COS 30 by customizing COS 00.

Below are the COSs feature and dialing options:

Only Intercom Calls at Night

Use this option to determine whether an extension can place only Intercom Calls during the Night Answer mode. If you enter "Y," the extension cannot place outside calls (or use Flash) when its attendant (assigned in Program 18 [I]) goes into the Night Answer Mode. This holds true even if the extension's COS has a Toll Restriction Level (see next page) that allows outside calls.

FOR FEATURE INFORMATION: See Night Answer on page 121

Off-Premise Call Forward

Use this option to allow/deny Off-Premise Call Forwarding.

FOR FEATURE INFORMATION: See Call Forwarding, Off-Premise on page 117.

Break-In (Intrusion)

Use this option to allow/deny Intrusion (Barge-In). Extensions programmed for Intrusion cannot intrude upon extensions programmed for Privacy (see below).

FOR FEATURE INFORMATION: See Intrusion (Barge-In) on page 105.

Program 1 (cont'd)

- *Initiate All Call Page = Y*
- *Access Page Zones 1-3 = Y*
- *Silent Monitor = N*
- *No Flash for Single Line and ACD Supervisor = N (i.e., Flash allowed and ACD Supervisor not allowed)*
- *Single Ring for ASI Calls*

Camp-On to Busy Extension

Use this option to allow/deny Camp-On to a busy extension.

FOR FEATURE INFORMATION: See Call Waiting (Camp-On) on page 103.

Internal Call Forwarding

Use this option to allow/deny Internal Call Forwarding. Allowing Internal Call Forwarding for COS 00 lets the attendant activate Alternate Attendant.

FOR FEATURE INFORMATION: See Call Forwarding, Internal on page 115, and Alternate Attendant on page 114.

System Speed Dial Access

Use this option to determine whether an extension can call System Speed Dial numbers.

FOR FEATURE INFORMATION: See Speed Dial on page 66.

Toll Restriction Level

Use this option to assign a Toll Restriction Level (00-07) to an extension.

FOR FEATURE INFORMATION: See Toll Restriction on 182.

Only Local Calls (Day or Night)

Use this option to determine whether an extension can place only local and Intercom calls (during Day or Night Answer mode). If you enter a "Y," the extension can place the following types of outside calls:

- 7-digit calls
- 1 + 911 and 911 calls
- 1 + 800 + NNX + nnn calls

The extension will not be able to place toll (1 + NNX) or long distance calls to other area codes even if the extension's COS has a Toll Restriction Level (see above) that normally allows them.

FOR FEATURE INFORMATION: N/A

Program 1 (cont'd)

Only Local Calls at Night

Use this option to determine whether an extension can place only local and Intercom calls during the Night Answer mode. If you enter a Y, the extension can place the following outside calls when its attendant (assigned in Program 18 [I]) goes into the Night Answer mode:

- 7-digit calls
- 1 + 911 and 911 calls
- 1 + 800 + NNX + nnn calls

The extension will not be able to place toll (1 + NNX) or long distance calls to other area codes even if the extension's COS has a Toll Restriction Level (see above) that normally allows them.

FOR FEATURE INFORMATION: N/A

Extended Ring

Use this option to enable/disable Extended Ringing.

FOR FEATURE INFORMATION: See Extended Ringing on page 171.

Privacy

Use this option to enable/disable Privacy.

FOR FEATURE INFORMATION: See Privacy on page 177.

Callback (Line Queuing) Priority

Use this option to determine whether an extension has priority status when there are several Line Queuing requests in the system. If you enter "Y, the priority extension receives a Callback before any non-priority extensions. If a few priority extensions make a Line Queuing request, the one that makes it first gets called back first, and so on.

FOR FEATURE INFORMATION: See Line Queuing on page 109.

Direct Trunk Access and Camp-On to Busy Line

Use this option to determine whether an extension can use Direct Line (Trunk) Access and Camp-On for a busy line.

FOR FEATURE INFORMATION: See Placing an Outside Call (Using Direct Line [Trunk] Access) on page 26 and Camp-On on page 103.

Initiate All Call Page

Use this option to determine whether an extension can make All Call Pages. See also *Access to Page Zones 1-3* below.

FOR FEATURE INFORMATION: See Paging on page 126.

Program 1 (cont'd)

Access Page Zones 1-3

Use this option to determine whether an extension can make pages to Internal Zones 1-3. All extensions can always access Internal Zones 4-7. Also see *Initiate All Call Page* above.

FOR FEATURE INFORMATION: See Paging on page 126.

Silent Monitor

Use this option to allow/deny Silent Monitor. Silent Monitor cannot break into a call at an extension programmed for Privacy (see above).

FOR FEATURE INFORMATION: See Silent Monitor on page 111.

No Flash for Single Line and ACD Supervisor = Y

For ESL sets, use this option to determine whether the ESL extension can use the Flash feature. For ACD Supervisor keysets, use this option to indicate that the extension is an ACD supervisor.

Note: Entering "Y" for ***No Flash for Single Line*** means the system does not support Flash for Single Line phones, while entering "N" means it does.

FOR FEATURE INFORMATION: See *Flash* on page 49 and Automatic Call Distribution on page 154.

Single Ring for ASI Calls

Use this option to enable/disable a Single Ring for calls into an Analog Station Interface (ASI). If you enable Single Ring, outside calls, Intercom calls, and Callbacks ring with a single ring repeated (i.e., they follow the typical Intercom ring pattern).

FOR FEATURE INFORMATION: See The Ringing Patterns on page 22 and Analog Station Interface on page 14.

Filling Out the Program Record Form

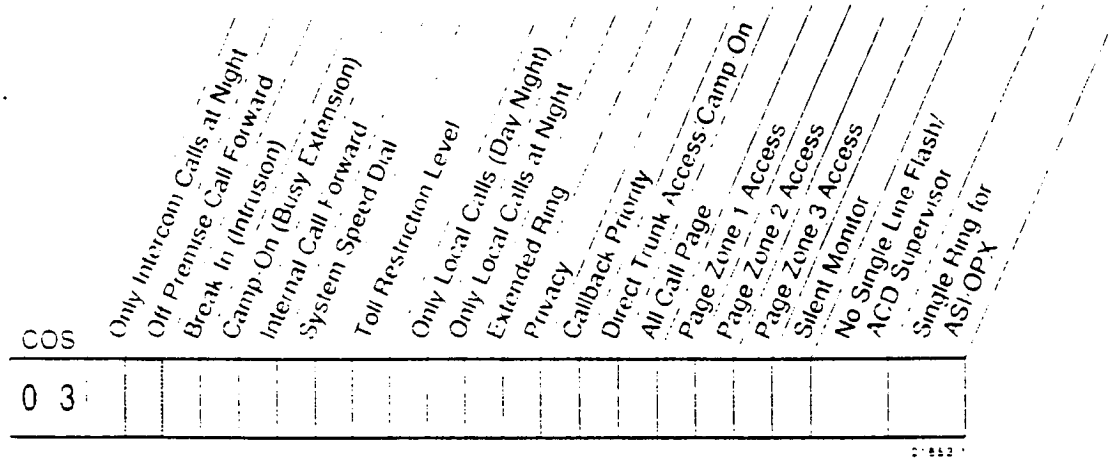
1. Select a COS (00-27).
2. **In this box:** / **Enter this data:**

In this box:	Enter this data:
A feature's data box (except Toll Restriction Level)	Y - enable the feature N - disable the feature
Toll Restriction Level	00 - Not restricted 01-07 - Toll Levels 01-07

Program 1 (cont'd)

Example

COS 03 has Internal Call Forwarding disabled (only this option will be shown).



Entering Data Into Memory

To enter Program 1 data:

1. Enter program mode. — Press PGM# + dial SP + dial 5312 + press PGM#.
2. Press key 1 to enter Program 1.
3. Dial COS No., press PGM#.
4. To accept the displayed data: Press PGM#.
   OR
   To change or enter data: Dial data, press PGM#. — To erase data before pressing PGM#: Dial *.
5. Repeat step 4 for all data. — If you finish and do not see "COS. NO.": Press SAVE before step 6.
6. Select an option:
   - To program another COS: Go to step 3.
   - To exit Program 1: Press SAVE once. — To enter another program after exiting: Press its key.
   - To exit the program mode: Press SAVE twice.

Program 1 (cont'd)

Understanding Related Programming

After customizing a Class of Service, use:
Program 18 (I) To assign a COS to one or more extensions

For Camp-On to a busy extension:
Program 2 To enable (Camp-On) Call Waiting tones system-wide

For Toll Restriction:
Program 6 To set up different types of Toll Restrictions

For Internal Page Zones:
Program 18 (I) To assign extensions to internal zones

For the ACD Supervisor:
Program 19 To set up ACD Groups

Program 2 ➠ Intercom Signaling

Program 2 is initially set as follows:

- *Call Waiting (Camp-On) Tones = Y*
- *Handsfree Reply on Intercom Calls = Y*
- *Voice-Announced Intercom Calls = Y*
- *Automatic Handsfree = Y*
- *Only Hotline Calls on Second Channel (future) = Y*

Program 2 lets you enable or disable the following options for all extensions in the system:

Call Waiting (Camp-On) Tones

Use this option to enable/disable Call Waiting Tones (double-beeps).

If you assign Off-Hook Ringing to a particular extension (Program 18 [I]), the system converts its Call Waiting tones into Off-Hook Ringing.

FOR FEATURE INFORMATION: See Call Waiting (Camp-On) on page 103.

Handsfree Reply on Intercom Calls

Use this option to enable/disable Handsfree Reply for voice-announced Intercom calls. Enabling this option has no affect on the system unless you enable voice-announced Intercom calls for the system (see the option below).

FOR FEATURE INFORMATION: See Placing and Answering Intercom Calls on page 32.

Voice-Announced Intercom Calls

Use this option to enable/disable voice-announced Intercom calls. If you disable them, the extensions can only receive ringing Intercom calls.

Note: Attendants, extensions in the Headset mode, and ASI ports do not receive voice-announced calls even if you enable them in this program.

FOR FEATURE INFORMATION: See Placing and Answering Intercom calls page 32.

Automatic Handsfree

Use this option to enable/disable Automatic Handsfree.

FOR FEATURE INFORMATION: See Automatic Handsfree on page 44.

Only Hotline Calls on Second Channel (future) = Y

FOR FEATURE INFORMATION: N/A

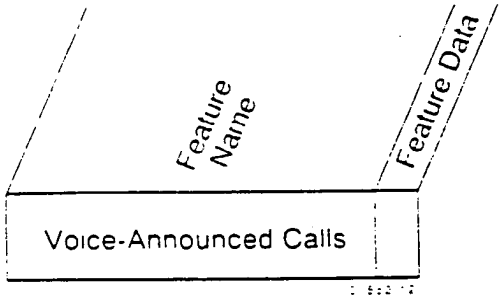
Program 2 (cont'd)

Filling Out the Program Record Form

In this box:
A feature's data box

Enter this data:
Y - enable the feature
N - disable the feature

Example
Voice-Announced Intercom calls are disabled.



Entering Data Into Memory

To enter Program 2 data:

1. Enter program mode. — Press PGM# + dial SP + dial 5312 + press PGM#.
2. Press key 2 to enter Program 2.
3. To accept the displayed data: Press PGM#.
   OR
   To change or enter data: Dial data, press PGM#. — To erase data before pressing PGM#: Dial *.
4. Repeat step 3 for all data. — If you finish and do not see, "SAVE TO EXIT": Press SAVE before step 5.
5. Select an option:
   - To enter another program: Press its key.
   - To exit the program mode: Press SAVE once.

Program 2 (cont'd)

Understanding Related Programming

For Call Waiting Tones:

Program 1	To allow/deny an extension the capability of sending Waiting Tones in a Class of Service (see also Program 18 [I])
	To enable/disable Privacy for an extension in a Class of Service (see also Program 18 [I]). If enabled, an extension does not receive Call Waiting tones.
Program 18 (I)	To assign a Class of Service (from Program 1) to an extension
	To have an extension hear the Call Waiting tones as Off-Hook Ringing instead of a double beep
Program 4	To set the Rings Before Recall timer (how long a call waits at a busy extension before recalling the extension that sent the Call Waiting tones)

For Voice-Announced Intercom calls (when they are programmed system-wide):

Program 18 (II)	To enable/disable incoming voice-announced calls at an extension
Program 15	To assign a program access level 3-5 to extensions so they can enable/disable incoming voice-announced intercom calls themselves

Program 3 ➠ Miscellaneous System Features

Program 3 is initially set as follows:

- ***Number of Operators = 01***
- ***Operator Extension = 300 for Operator 01***
- ***Number of Digits in a System Speed Dial Code = 03 (the codes are 700-799)***
- ***Side Tone Test Digit = 2***
- ***Voice Mail Installed = N***
- ***Voice Mail Master Extension Number = 300 (none assigned)***
- ***Enable Dial-out of # in a Speed Dial Number = N***
- ***Dial 1 Before Area Code (NPA) Calls = Y***
- ***Walking Class of Service Security Code = None***
- ***Play MOH for Transferred Calls = N***
- ***Baud Rate of Auxiliary Module's Port = 300***

Program 3 lets you set the following options for the system:

Number of Operators

Use this option to determine the number of operators (attendants) in the system. The system can accommodate up to four operators. If you ever decrease the number of operators in the system (i.e. you remove an operator), you must change the Class of Service of the old operator extension to 01-27. Otherwise, it still behaves as an operator extension. Also see *Operator Extension* below.

FOR FEATURE INFORMATION: See Multiple Attendants on page 160.

Operator Extension

Use this option to assign the operator (attendant) extensions (300-347). The main operator (01) should be 300. Also see *Number of Operators* above.

FOR FEATURE INFORMATION: See Multiple Attendants on page 160.

Number of Digits in a System Speed Dial Code

Use this option to select the number of digits in a System Speed Dial code (bin). The bins can have two or three digits.

If you select two-digit bins, the system uses bin numbers 70-79 to store up to 10 System Speed Dial numbers.

If you select three-digit bins, the system uses bin numbers 700-799 to store up to 100 System Speed Dial numbers.

FOR FEATURE INFORMATION: See Speed Dial on page 66.

Side Tone Test Digit

Use this option to select the side tone test digit (0-9). This is the digit that the system dials out on a line to adjust the transmission characteristics (side tone) of that line. The system tests all installed lines upon power-up or when you request a side tone test through Program 10. Be sure that the digit you select does not access an operator, trunk, or feature.

FOR FEATURE INFORMATION: N/A

Program 3 (cont'd)

Voice Mail Installed

Use this option to indicate whether or not a Voice Mail system is installed.

Note: Use the VX programs in the following order: 14, 18 (I), 3, 19, 12, 17, 16.

FOR FEATURE INFORMATION: See Voice Mail on page 131.

Voice Mail Master Extension Number

Use this option to select the master extension number (301-347) for Voice Mail (VX).

Note: Use the VX programs in the following order: 14, 18 (I), 3, 19, 12, 17, 16.

FOR FEATURE INFORMATION: See Voice Mail on page 131.

Enable Dial-out of # in a Speed Dial Number

Use this option to determine whether the ONYX VS can dial out a "#" character stored in a Speed Dial bin. You may have to disallow dial-out when the ONYX VS is installed behind a PBX that uses "#" to access certain features.

FOR FEATURE INFORMATION: See Speed Dial on page 66.

Dial 1 Before Area Code (NPA) Calls

Use this option to specify whether the system is in an area that requires the user to dial 1 before an area code.

FOR FEATURE INFORMATION: See Dialing (Toll) Restrictions on page 182.

Walking Class of Service Security Code

Use this option to define a Walking Class of Service Security Code (up to 8 digits).

FOR FEATURE INFORMATION: See Walking Class of Service on page 53.

Play MOH for Transferred calls

Use this option to enable/disable Music On Hold for transferred calls.

FOR FEATURE INFORMATION: See Music on Hold on page 175.

Baud Rate of Auxiliary Module's Port

Use this option to select the baud rate for the communications port on the AUX module. Do this if you want to program the ONYX VS from a terminal connected to the AUX port. For more information, see the ONYX Feature and Terminal Programming Manual.

FOR FEATURE INFORMATION: N/A

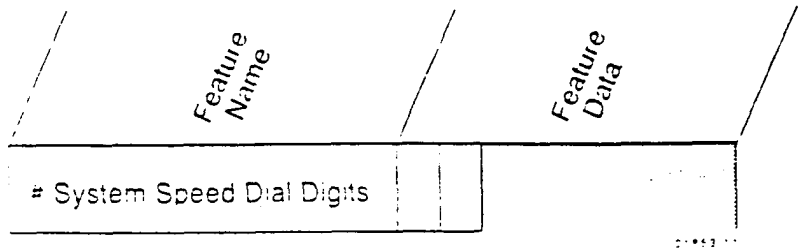
Program 3 (cont'd)

Filling Out the Program Record Form

In this box:	Enter this data:
# Operators	00-04
Operator XX Extension	300-347
# System Speed Dial Digits	02-03
Side Tone Test Digit	0-9
Voice Mail	Y - installed N - not installed
Voice Mail Master Ext.	300 - none assigned 301-347 - extensions 301-347
Dial-out "#" in Speed Dial	Y - enable dial-out N - disable dial-out
Dial 1 Before Area Code	Y - 1 is required N - 1 is not required
Walking COS Security Code	Up to eight digits
Play MOH on Transfer	Y - enable N - disable
AUX Port's Baud Rate	00 - 300 baud 01 - 1200 baud 02 - 2400 baud 03 - 4800 baud 04 - 9600 baud 05 - 19.2 K baud

Program 3 (cont'd)

Example
There are two digits in a Speed Dial bin.



Entering Data Into Memory

To enter Program 3 data:

1. Enter program mode. — Press PGM# + dial SP + dial 5312 + press PGM#.
2. Press key 3 to enter Program 3.
3. To accept the displayed data: Press PGM#.
   OR
   To change or enter data: Dial data. press PGM#. — To erase data before pressing PGM#: Dial *.
4. Repeat step 3 for all data. — If you finish and do not see. "SAVE TO EXIT": Press SAVE before step 5.
5. Select an option:
   - To select another program: Press its key.
   - To exit the program mode: Press SAVE once.

Understanding Related Programming

For attendant (operator):

Program 1 — To customize the attendant Class of Service 00

To manually assign the proper Class of Service (COS) to an extension when you change it from an attendant phone to a non-attendant phone. Non-attendant phones use COS 01-27.

Program 3 (cont'd)

For Side Tone Test Digit:

Program 10	To activate Side Tone test

For Voice Mail (VX):

Program 14	To assign an ASI circuit type (51) to each extension port intended for VX
Program 18 (I)	To assign the VX feature to each VX extension selected in Program 14
Program 19	To set up a UCD Hunt Group with the following characteristics: (a) Hunt Type = 05 (b) Master Extension = VX master extension selected in Program 3 (c) Overflow Extension = Operator extension assigned to the VX master extension in Program 18 (I) (d) UCD Members = VX extensions selected in Program 18
Program 12	To directly terminate each line the Automated Attendant should answer to the VX master extensio selected in Program 3
Program 17	To assign a Record key to an extension for recording conversations
Program 16	To assign to each Voice Mail extension (selected in Program 18) outgoing access to the lines used by 1001/1002's Message Notification and Message Reminder features

For Dial 1 + Area Code:

Program 6	To set up Toll Restrictions

Program 4 ➠ System Timers

Program 4 is initially set as follows for timers 01-12:

- ***(01) Park Orbit = 60s***
- ***(02) Hold Recall = 60s***
- ***(03) Camp-On = 60s***
- ***(04) Line Response = 1.5s***
- ***(05) Modem Reserve = 30s***
- ***(06) Number of Rings Before Recall = 5***
- ***(07) Number of Delayed Rings = 3***
- ***(08) Flash Response = .7s***
- ***(09) Dial Tone Detect = 10s***
- ***(10) Make = 40ms***
- ***(11) Break = 60ms***
- ***(12) Interdigit = 640ms***

Program 4 lets you set the duration of the following system timers:

(01) Park Orbit

Use this timer to determine how long (00-970 seconds) a call stays in a System Park Orbit (60-67) before it recalls the extension that parked it. Park Orbits 68 and 69 are permanently set at 5 minutes (300 seconds) each.

FOR FEATURE INFORMATION: See Call Parking on page 119.

(02) Hold Recall

Use this timer to determine how long (00-970 seconds) a call stays on Hold before it recalls the extension that placed it on Hold.

FOR FEATURE INFORMATION: See Regular Hold on page 36, Exclusive Hold on page 39, and Automatic Hold on page 40.

(03) Camp-On

Use this timer to determine how long (00-970 seconds) a transferred call or Direct Inward Line Camps-On to a:

- Busy UCD Hunt Group before it rings the overflow extension
- Busy ESL/ASI before it recalls the transferer

FOR FEATURE INFORMATION: See Hunting on page 158, Transfer on page 41, Direct Inward Line on page 156.

(04) Line Response

Use this timer to determine how long (.5-9.9 seconds) the system waits before assuming that a seized outgoing line is defective (i.e.. defective = the system does not detect loop current from the telco). The time you select must be compatible with your local telco.

(05) Modem Reserve

Use this timer to determine how long (0-970 seconds) the system reserves a modem (for a user) from the modem pool before returning it to the pool.

FOR FEATURE INFORMATION: See Data on page 169.

Program 4 (cont'd)

(06) Number of Rings Before Recall

Use this timer to set the number of times (03-15):

- A recalling held outside call rings the extension that placed it on Hold before it changes to "key ring" and rings all extensions programmed for ringing on that line
- A transferred calls rings an idle or busy Multibutton or an idle ESL/ASI before recalling the transferring extension
- A recalling Transfer rings the transferring extension before it changes to "key ring" and rings all extensions programmed for ringing on that line
- A call rings a Hunt Group extension before ringing the next extension in the group
- A call rings an extension in the ring-no-answer Call Forwarding mode before the system forwards the call to the destination extension
- A Direct Inward Line (i.e., a directly terminated line in Program 12) rings an idle or busy Multibutton or UCD overflow extension before it changes to "key ring" and rings all extensions programmed for ringing on that line

FOR FEATURE INFORMATION: See Regular Hold on page 36. Transfer on page 41. Hunting Groups on page 158. Call Forwarding, Internal on page 115. and Direct Inward Lines on page 156.

(07) Number of Delayed Rings

Use this timer to determine how many rings (01-10) the system suppresses before a call audibly rings an extension programmed for Delayed Ringing (Program 18 [II]).

FOR FEATURE INFORMATION: See Delayed Ringing Assignment on page 84.

(08) Flash Response

Use this timer to determine how long (0-2.5 seconds) a line circuit must open for the PBX/Centrex to recognize it as a Flash (time must be compatible with PBX/Centrex).

Note: The actual duration of the Flash is approximately 50ms less than the number you enter, so enter a value 50ms higher than the PBX/Centrex requires.

FOR FEATURE INFORMATION: See Using Flash for Centrex/PBX on page 49.

(09) Dial Tone Detect

Use this timer to determine how long (10-60 seconds) the system waits for dial tone before sending out a Speed Dial call. The system uses three times this value for a pause you insert in a Speed Dial number.

Note: The system needs the first dial tone to be at least .5 seconds long, and the second dial tone to be at least 2.5 seconds long.

FOR FEATURE INFORMATION: See Speed Dial on 66.

(10) Make

Use this timer to determine how long (04-1020 milliseconds) the relays close on Dial Pulse (DP) lines. You can only enter a value that is a multiple of 04 (e.g., 04, 08, etc.), and it must be compatible with the requirements of the local telco.

FOR FEATURE INFORMATION: See Dial Pulse (DP) and Dual Tone Multifrequency (DTMF) Compatibility on page 170.

Program 4 (cont'd)

(11) Break

Use this timer to determine how long (04-1020 milliseconds) the relays open on Dial Pulse (DP) lines. You can only enter a value that is a multiple of 04 (e.g., 04, 08, etc.), and it must be compatible with the requirements of the local telco.

FOR FEATURE INFORMATION: See Dial Pulse (DP) and Dual Tone Multifrequency (DTMF) Compatibility on page 170.

(12) Interdigit

Use this timer to determine how long (04-1020 milliseconds) of a pause there is between digits dialed on a Dial Pulse (DP) line. You can only enter a value that is a multiple of 04 (e.g., 04, 08, etc.), and it must be compatible with the local telco.

FOR FEATURE INFORMATION: See Dial Pulse (DP) and Dual Tone Multifrequency (DTMF) Compatibility on page 170.

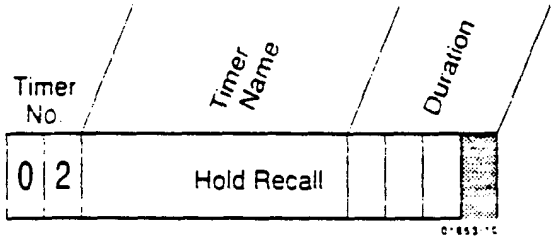
Filling Out the Program Record Form

In the Duration boxes for:	Enter this data:
(01) Park Orbit	00-970
(02) Hold Recall	00-970
(03) Camp-On	00-970
(04) Line Response	05-99 (5 = .5s; 99 = 9.9s)
(05) Modem Reserve	00-970
(06) # Rings Bef. Recall	03-15
(07) # Delayed Rings	01-10
(08) Flash Response	00-25 (e.g., 01 = .1s or 100 ms) **Note:** The actual duration of the Flash is approximately 50ms less than the number you enter
(09) Dial Tone Detect	01-06 (01 = 10s; 06 = 60s)
(10) Make	04, 08, 12, 16...1020
(11) Break	04, 08, 12, 16...1020
(12) Interdigit	04, 08, 12, 16...1020

Program 4 (cont'd)

Filling Out the Program Record Form

Example
The Hold Recall timer is set for 90 seconds.



Entering Data Into Memory

To enter Program 4 data:

1. Enter program mode. — Press PGM# + dial SP + dial 5312 + press PGM#.
2. Press key 4 to enter Program 4.
3. Dial Timer No., press PGM#.
4. To accept the displayed data: Press PGM#.
   OR
   To change or enter data: Dial data, press PGM#. — To erase data before pressing PGM#: Dial *.
5. Repeat steps 3-4 for remaining timers.
6. Select an option:
   - To exit Program 4: Press SAVE once.
   - To exit the program mode: Press SAVE twice.

   To enter another program after exiting: Press its key.

Understanding Related Programming

N/A

Program 5 ➠ PBX Access Codes

Program 5 is initially set as follows:

- ***PBX Access Codes = None***

Program 5 lets you store up to 11 PBX Access Codes in system memory. A PBX Access Code is a code that an ONYX VS extension user dials for an outside line when the ONYX VS is installed behind PBX. The codes can be one or two digits long, and a two-digit code can have a wild card character (X). For example, if you enter 9X, the system recognizes 90-99 as valid PBX Access codes.

Use this program to store PBX Access Codes only if the ONYX VS is providing Toll Restriction (via Program 6). If the PBX is providing Toll Restriction instead, simply identify the PBX lines in Program 10, and leave Program 5 empty.

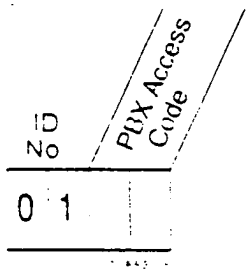
FOR FEATURE INFORMATION: See Using PBX/Centrex Lines on page 27.

Filling Out the Program Record Form

1. Select an ID number (01-11).
2. **In this box:**
   PBX Access Code

Enter this data:
One or two digits (enter an "X" for a wild card)

Example
PBX Access Code 01 is 9.



Entering Data Into Memory

To enter Program 5 data:

1. Enter program mode. — Press PGM# + dial SP + dial 5312 + press PGM#.
2. Press key 5 to enter Program 5.

Program 5 (cont'd)

Entering Data Into Memory

3. To accept the displayed data:
   Press PGM#.
   OR
   To change or enter data: Dial data. press PGM#.

   To erase a code: Dial *, press PGM#. To enter a wild card: Press DIAL, then dial X (digit 9).

4. Repeat step 3 for all data.

   If you finish and do not see, "SAVE TO EXIT": Press SAVE before step 5.

5. Select an option:
   - To enter another program: Press its key.
   - To exit the program mode: Press SAVE once.

Understanding Related Programming

Program 10	To identify a line as a PBX line

Program 6 ➠ Toll Restriction

Program 6 is initially set as follows for Toll Restriction levels (01-07):

- ***Active Dialpad = Y***
- ***Special N11 Dialing = Y***
- ***0 + Dialing = Y***
- ***International Dialing = Y***
- ***Equal Access Dialing = Y***
- ***1 + NNX Dialing = Y***
  Allow or Deny Tables = Empty
- ***NNX Dialing = Y***
  Allow or Deny Tables = Empty
- ***NPA Dialing = Y***
  Allow or Deny Tables = Empty
- ***6-Digit Analysis = Y***
  Allow or Deny Tables = Empty

Program 6 lets you customize a Toll Restriction level. A Toll Restriction level is a set of nine dialing options for making outside calls. You customize a Toll Restriction level by enabling or disabling these dialing options. For example, you can customize a Toll Restriction Level so that long distance calls to other area codes are disabled.

You can customize up to seven unique Toll Restriction levels (01-07). After you customize a Toll Restriction level, you assign it to an extension to define the type of outside calls that can be made from the extension. You make the assignment in two steps:

- Use Program 1 to assign the Toll Restriction level to a Class of Service.
- Use Program 18 (Part I) to assign the Class of Service to an extension.

In addition, you can customize three other dialing options in a Class of Service (Program 1). They are called: Only Local Calls (Day or Night), Only Local Calls at Night, and Only Intercom Calls at Night. Enabling any of these overrides (takes precedence over) any restrictions set up in a COS's Toll Restriction Level.

The nine Toll Restriction options are as follows:

Active Dialpad (Continuous Dialing)

Use this option to determine whether a user can manually dial digits ***during*** an established outside call. The need to dial digits during a call typically arises when a user calls an Other Common Carrier (OCC). After the OCC answers, the user needs to dial more digits (security code and other digits the OCC requires).

FOR FEATURE INFORMATION: See Using Other Common Carriers on page 79.

Special N11 Dialing

Use this option to allow/deny manually-dialed calls to N11 or 1 + N11 (N = 2 to 8). The system does not restrict 911 or 1 + 911. For information on international calls (011), see the next two options.

FOR FEATURE INFORMATION: See Toll Restriction on page 182.

Program 6 (cont'd)

0 + Dialing

Use this option to allow or deny manually-dialed calls that begin with a zero (0). These calls usually include operator-assisted or credit card calls, and international calls (011 +). Disabling "0 +" dialing automatically disables international calls and you can ignore the option below.

To disable international calls but allow other calls that begin with a zero, enter Y for this option and N for the next option (below).

FOR FEATURE INFORMATION: See Toll Restriction on page 182.

International Dialing

Use this option to allow or deny international calls that begin with 011. To allow or deny international calls that begin in a different way (e.g., calls to certain parts of Mexico or Canada that start with an area code), use the *NPA Dialing* option below.

To allow International dialing, you must also allow "0 +" dialing above.

FOR FEATURE INFORMATION: See Toll Restriction on page 182.

Equal Access Dialing

Use this option to determine whether a user can manually dial calls using Equal Access Codes (10XXX).

FOR FEATURE INFORMATION: See Equal Access Compatibility on page 80.

1 + NNX Dialing with Allow/Deny Tables

Use this option to allow or deny manually-dialed toll calls to specific exchanges (i.e., 1 + NNX calls, where NNX is the exchange).

To deny all 1 + NNX calls: Enter N and leave the Allow/Deny Tables empty.

To allow all 1 + NNX calls: Enter Y and leave the Allow/Deny Tables empty.

To allow only specific 1 + NNX calls: Enter Y for this option, then create an Allow or Deny Table.

-- With an Allow Table: Enter the NNX codes (up to 48) the users can dial. Any codes you do not enter are automatically denied.
-- With a Deny Table: Enter the NNX codes (up to 48) the users cannot dial. Any codes you do not enter are automatically allowed.

FOR FEATURE INFORMATION: See Toll Restriction on page 182.

Program 6 (cont'd)

NNX Dialing with Allow/Deny Tables

Use this option to allow or deny manually-dialed calls to specific exchanges (i.e., NNX calls, where NNX is the exchange or conflict code).

To deny all NNX calls: Enter N and leave the Allow/Deny Tables empty.

To allow all NNX calls: Enter Y and leave the Allow/Deny Tables empty.

To allow only specific NNX calls: Enter Y for this option, then create an Allow or Deny Table.

-- With an Allow Table: Enter the NNX codes (up to 48) the users can dial. Any codes you do not enter are automatically denied.
-- With a Deny Table: Enter the NNX codes (up to 48) the users cannot dial. Any codes you do not enter are automatically allowed.

FOR FEATURE INFORMATION: See Toll Restriction on page 182.

NPA Dialing with Allow/Deny Tables

Use this option to allow or deny manually-dialed calls to specific area codes (i.e., NPA calls or 1 + NPA calls, where NPA is the area code).

To deny all NPA or 1 + NPA calls: Enter N and leave the Allow/Deny Tables empty.

To allow all NPA or 1 + NPA calls: Enter Y and leave the Allow/Deny Tables empty.

To allow only specific NPA or 1 + NPA calls: Enter Y for this option, then create an Allow or Deny Table.

-- With an Allow Table: Enter the NPA codes (up to 48) the users can dial. Any codes you do not enter are automatically denied.
-- With a Deny Table: Enter the NPA codes (up to 48) the users cannot dial. Any codes you do not enter are automatically allowed.

Make sure you allow NPA or 1 + NPA calls if you want 6-digit analysis (see below).

FOR FEATURE INFORMATION: See Toll Restriction on page 182.

6-Digit Analysis with Allow/Deny Tables

Use this option to allow or deny manually-dialed calls to specific exchanges (NNX) in specific area codes (NPA). In other words, the call is allowed or denied based on the first 6 digits of the telephone number.

To bypass 6-digit analysis: Enter N and leave the Allow/Deny Tables empty.

Program 6 (cont'd)

To use 6-digit analysis: Enter Y for NPA calls (above). Enter Y for 6-digit analysis. Enter each area code (up to 10) intended for 6-digit analysis with its allowed or denied exchanges.

-- With an Allow Table: Enter the NNX codes (up to 48) the users can dial. Any codes you do not enter are automatically denied.

-- With a Deny Table: Enter the NNX codes (up to 48) the users cannot dial. Any codes you do not enter are automatically allowed.

FOR FEATURE INFORMATION: See Toll Restriction on page 182.

Filling Out the Program Record Form

Before you fill in the data, make a copy of the three Toll Restriction forms for each toll level you wish to program.

1. In this box:	Enter this data:
Toll Level	01-07
Feature boxes (except Allow/Deny)	Y - enable the feature N - disable the feature
Allow/Deny boxes	A - for an "Allow" table D - for a "Deny" table

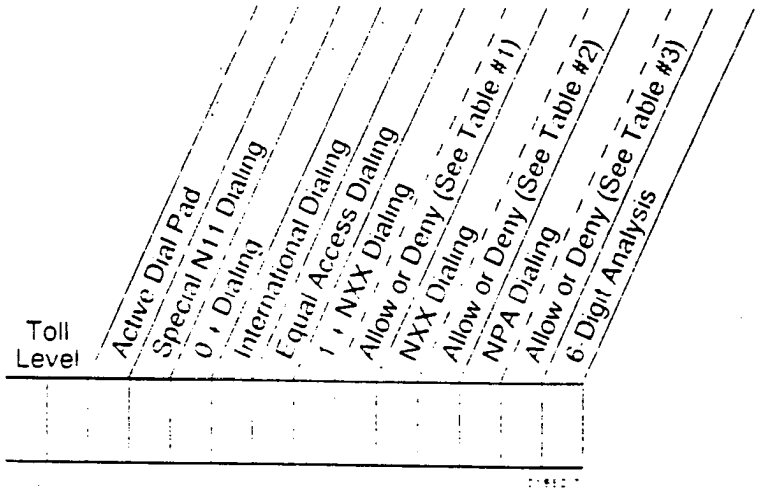
2. In this table:	Enter this data:
Table # 1	At top of table: Circle "Allow" or "Deny" In body of table: Enter allowed or denied NNX codes for toll calls
Table # 2	At top of table: Circle "Allow" or "Deny" In body of table: Enter allowed or denied NNX codes for local calls

Program 6 (cont'd)

3. In this table:	Enter this data:
Table # 3	At top of table: Circle "Allow" or "Deny" In body of table: Enter allowed or denied NPA codes for long distance calls
Tables # 4-13	At top of table: Circle "Allow" or "Deny." Enter NPA code intended for 6-digit analysis In body of table: Enter allowed or denied NNX codes.

Filling Out the Program Record Form

Example
For Toll Level 02, International Dialing is not allowed, but all other calls that begin with zero (0) are allowed (only this option will be shown).



Program 6 (cont'd)

Entering Data Into Memory

To enter Program 6 data:

1. Enter program mode.

   Press PGM# + dial SP + dial 5312 + press PGM#.

2. Press key 6 to enter Program 6.

3. **For first-time programming or to initialize (reset) all toll restriction levels**: Dial I to initialize, then dial Y. Otherwise, go to step 4.

   If you change your mind after dialing I, dial N. You return to the TOLL PROG/INIT? prompt (i.e., the beginning of step 3).

4. Dial P to program (change) the toll restriction values.

   If you hear re-order tone and leave the program mode, this means you must go to step 1 and initialize in step 3.

5. Dial toll restriction level, press PGM#.

6. To accept the displayed data: Press PGM#.
   OR
   To change or enter data: Dial data, press PGM#.

   To erase data before pressing PGM#: Dial *.

   You do not need to press PGM# after dialing "A" or "D".

   When you see, "ADD-DELETE-LIST," you can add, delete or list codes in the Allow/Deny Tables (go to the proper Tables on the next two pages).

7. Repeat steps 6 until you enter all data for a toll level.

   If you finish and do not see, "TOLL LEVEL": Press PGM# until you do see it.

8. Select an option:
   - To program another toll level: Go to step 5.
   - To exit Program 6: Press SAVE once.
   - To exit the program mode: Press SAVE twice.

   To enter another program after exiting: Press its key.

Program 6 (cont'd)

Entering Data Into Memory

To use the 1 + NXX, NNX, or NPA Tables when you see "ADD-DELETE-LIST" on the display:

1. Dial A for ADD, D for DELETE, or L for LIST.
   OR
   Press PGM# to exit the table and go to step 6 in the first procedure.

   If you list, you see four codes at a time.
2. To add/delete codes: Dial them.
   OR
   To list more codes or exit at the end of the list: Press PGM# and go to step 1 in this procedure.

   Step 3 does not apply to listing.
3. To save changes and exit the table: Press PGM# and go to step 6 in the first procedure.
   OR
   To save changes and return to "ADD-DELETE-LIST.": Press SAVE and go to step 1 in this procedure.

To use the 6-Digit Analysis Tables when you see ADD-DELETE- LIST on the display:

1. Dial A for ADD, D for DELETE, or L for LIST.
   OR
   Press PGM# to exit the table (and the program).
2. Dial the area code intended for 6-digit analysis.

   If you selected "listing" in step 1, you see the codes now, four at a time. To see more codes or exit at the end of the list: Press PGM# and return to step 1 in this procedure. Steps 3-6 do not apply to listing.
3. Dial A for an Allow Table of NXX codes.
   OR
   Dial D for a Deny Table of NXX codes.

Program 6 (cont'd)

Entering Data Into Memory

4. Dial codes to be added or deleted.
5. Select an option:
   - To save changes and go to "ADD-DELETE-LIST" for another area code: Press SAVE and go to step 1 in this procedure.
   - To save changes and exit toll level: Press PGM# and go to step 6 in the first procedure.
   - To save and exit Program 6: Press SAVE three times.
   - To save and exit the program mode: Press SAVE four times.

To enter another program after exiting: Press its key.

Understanding Related Programming

Program 1	To assign a Toll Level (from Program 6) to a Class o Service (see also Program 18 [I])
	To set up additional dialing restrictions in a Class of Service: Only Local Calls (Day or Night), Only Local Calls at Night, Only Intercom Calls at Night (see also Program 18 [I])
Program 18 (I)	To assign a Class of Service (from Program 1) to an extension
Program 3	To identify whether the calling area requires a "1" before dialing an area code (NPA)
Program 12	To assign Toll Restriction to a line (initially, Toll Restriction is applied to every line and you would want to leave it that way except for a WATS line, for example)

Program 7 ➠ Music, External Paging, Relays

Program 7 is initially set as follows:

- ***Enable Background Music = N***
- ***Enable Music on Hold = N***
- ***External All Call Page = N***
- ***Audible Ring Over External All Call Page Zone = Y***
- ***External Page Zone 1 (with CEU #2 only) = N***
- ***BGM to All External Page Zones = N***
- ***Interrupted Ring Relays = N***
- ***Paging and Music Gain (Volume) Over External Speakers = - 6dB***
- ***Relay 01 Owner (for CEU #1 only) = 300***
- ***Relay 02 Owner = 300 (for CEU #2 only)***

Speakers in this program.

Program 7 lets you select various options for:
- Music On Hold
- Background Music
- External Paging
- Relays for the External Alerting Devices

Enable Background Music

Use this option to enable/disable BGM.

Note: If you enable BGM, you cannot connect a line to line port 04 because the system uses it for BGM. As soon as you enter Y for BGM, the system enters X in Program 10 for line 04's circuit type, which means "uninstalled."

FOR FEATURE INFORMATION: See Background Music on page 96.

Enable Music on Hold

Use this option to enable/disable MOH. If you enable MOH, but not BGM, only outside calls receive MOH. If you enable MOH and BGM, outside and Intercom calls receive MOH.

FOR FEATURE INFORMATION: See Music On Hold on page 175.

External All Call Page Zone

Use this option to allow/deny All Call Paging to external paging speakers. Also see *Paging and Music Gain (Volume) Over External*

Note: If you enable the External All Call Page Zone, you cannot connect a line to line port 04 because the system uses it for External All Call Paging. As soon as you enter Y for External All Call Paging, the system enters X in Program 10 for line 04's circuit type, which means "uninstalled."

FOR FEATURE INFORMATION: See Paging on page 126.

Program 7 (cont'd)

Audible Ring Over External All Call Page Zone

Use this option to send ringing over the External All Call Page Zone when a call comes into extension 300 during the Night Answer mode. Make sure you enable *External All Call Page Zone* (see above).

FOR FEATURE INFORMATION: See Paging on page 126.

External Page Zone 1 (only if CEU #2 is installed)

Use this option to send Internal Zone 1 pages over external paging speakers. Also see *Paging and Music Gain (Volume) Over External Speakers* below.

Note: If you enable External Page Zone 1, you cannot connect a line to line port 04 in CEU #2 (i.e., line 12) because the system uses it for the External Page Zone 1. As soon as you enter Y for External Zone 1, the system enters X in Program 10 for line 12's circuit type, which means "uninstalled."

FOR FEATURE INFORMATION: See Paging on page 126.

BGM to All External Page Zones

Use this option to send Background Music over the external paging equipment (External All Call Zone and External Zone 1) when the equipment is idle (e.g., not receiving a page). Also enable the following in this program: *Enable Background Music, External All Call Page Zone, External Page Zone 1, Paging and Music Gain (Volume) Over External Speakers.*

FOR FEATURE INFORMATION: See Background Music on page 96.

Interrupted Ring Relays

Use this option to control the operation of Relays 01 and 02 (see next page). You can force the relays to follow a call's ring cycle (i.e., interrupted closure) or you can force the relays to stayed closed until someone answers the call (uninterrupted/steady closure).

FOR FEATURE INFORMATION: See External Alerting Devices on page 172.

Paging and Music Gain (Volume) Over External Speakers

Use this option to control the volume of Paging and Background Music over the external paging speakers.

FOR FEATURE INFORMATION: See Background Music on page 96, and Paging on page 126.

Program 7 (cont'd)

Relay 01 Owner (for CEU #1 only)

Use this option to determine which type of day/night call activates Relay 01 for an External Alerting Device. There are three choices:
-- A call on a specific line (348-363)
-- A call to a specific Ring Group (364-371)
-- A call to an extension (300-347), except Callbacks

Note: When you assign extension 300 as the Relay 01 owner, only Night calls that ring 300 activate the relay.

FOR FEATURE INFORMATION: See External Alerting Devices on page 172.

Relay 02 Owner (for CEU #2 only)

Use this option to determine which type of day/night call activates Relay 02 for an External Alerting Device. There are three choices:
-- A call on a specific line (348-363)
-- A call to a specific Ring Group (364-371)
-- A call to an extension (300-347), except Callbacks
Note: If you select 300, only Night calls that ring 300 activate the relay.

FOR FEATURE INFORMATION: See External Alerting Devices on page 172.

Filling Out the Program Record Form

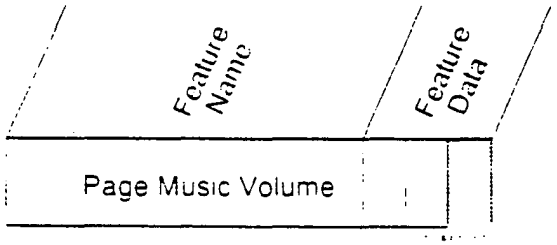
In this box:	Enter this data:
Background Music (BGM)	Y - enable N - disable
Music On Hold	Y - enable N - disable
Ext. All Call Page	Y - enable N - disable
Ring over All Call	Y - enable N - disable
Ext. Page Zone 1	Y - enable N - disable

Program 7 (cont'd)

Filling Out the Program Record Form

BGM Music to Ext. Zones	Y - enable N - disable
Interrupted Ring Relays	Y - interrupted N - uninterrupted
Page/Music Volume	01 - -6 dB (soft) 02 - -3 dB 03 - 0 dB (medium) 04 - +3 dB 05 - +6 dB (loud)
Relay 01 Owner	348-363 for calls on lines 300-347 for calls to extensions 364-371 for Ring Group Calls
Relay 02 Owner	348-363 for calls on lines 300-347 for calls to extensions 364-371 for Ring Group Calls

Example
The Paging/Music Volume is set at the medium volume.



Entering Data Into Memory

To enter Program 7 data:

1. Enter program mode.	Press PGM# + dial SP + dial 5312 + press PGM#.
2. Press key 7 to enter Program 7.	
3. To accept the displayed data: Press PGM#.	
OR	
To change or enter data: Dial data. press PGM#.	To erase data before pressing PGM#: Dial *.

Program 7 (cont'd)

Entering Data Into Memory

4. Repeat step 3 for all data.

If you finish and do not see, "SAVE TO EXIT": Press SAVE before step 5.

5. Select an option:
   - To enter another program: Press its key.
   - To exit the program mode: Press SAVE.

Understanding Related Programming

For Relays:

Program 16 — To provide an extension with incoming access to a line so it can answer that line when it rings over an External Page Zone

Program 8 ➠ Selectable Display Messages

Program 8 is initially set as follows for messages 600-615:

- *600 = CALL*
- *601 = BACK BY*
- *602 = MEETING IN RM*
- *603 = OUT TO LUNCH*
- *604 = GONE FOR THE DAY*
- *605 = ON VACATION*
- *606 = ON BUSINESS TRIP*
- *607 = IN THE MEETING*
- *608 = BACK BY 10AM*
- *609 = BACK BY 11AM*
- *610 = BACK BY NOON*
- *611 = BACK BY 2PM*
- *612 = BACK BY 4PM*
- *613 = BACK TOMORROW*
- *614 = BACK NEXT WEEK*
- *615 = HAVE A GOOD DAY*

Note: When the system has an AUX module, there are no messages initially.

Program 8 lets you store up to 16 messages system memory for the Selectable Display Messages feature.

You store the messages under the numbers 600-615 (the corresponding numbers a user would dial for these messages are 00-15). Each message can contain up to 16 characters (numbers, letters, and blank spaces). Messages 600-607 are special in that an extension user can add digits to the end of them as long as the entire message does not exceed 16 characters. For example, a user can add a telephone number to the end of message 600 so it reads, CALL XXX XXXX. If you choose to change the initial messages for 600-607, be sure to add a blank space at the end of the message so that any digits a user may add do not appear right next to the last character of the message.

FOR FEATURE INFORMATION: See Selectable Display Messages on page 129.

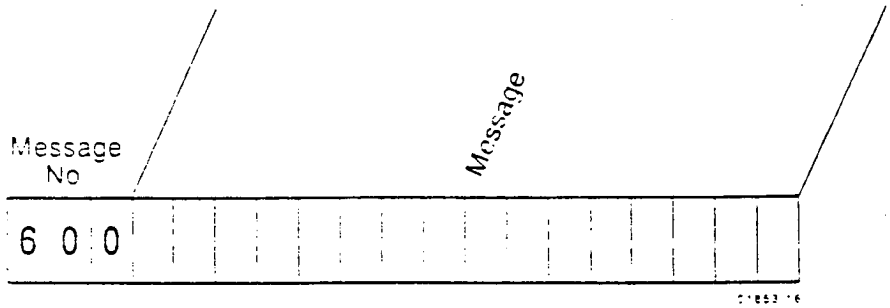
Filling Out the Program Record Form

In these boxes:	Enter this data:
Message	Up to 16 characters (numbers, letters, blank spaces)

Program 8 (cont'd)

Filling Out the Program Record Form

Example
Message 600 is as follows: IN CONFERENCE.



Entering Data Into Memory

To enter Program 8 data:

1. Enter program mode.

   Press PGM# + dial SP + dial 5312 + press PGM#.

2. Press key 8 to enter Program 8.
3. Dial Message No.. press PGM#.
4. To accept the displayed data:
   Press PGM#.
   OR
   To erase the displayed data:
   Dial *. then enter message data ***or*** (press PGM# and go to step 3).
   OR
   To change or enter data:
   Enter the message. press PGM#.

   To enter a message:
   a. Press the dialpad button for the desired letter or number. To enter a blank space. Q. or Z. press 0.
   b. To make a letter appear: Dial the number (1. 2. or 3) that corresponds to the letter's position on the button (e.g. dial 1 if you want the first letter on the button).
   OR
   To make a number to appear: Dial 4.

(continued)

Program 8 (cont'd)

Entering Data Into Memory

4. (continued)

Note: To make a blank space, Q, or Z to appear: Dial 1, 2, or 3, respectively.

c. Repeat a-b for all characters (to erase the previous character, press LAST).

5. Repeat steps 3-4 for all messages.
6. Select an option:
   - To exit Program 8: Press SAVE once.
   - To exit the program mode: Press SAVE twice.

To enter another program after exiting: Press its key.

Understanding Related Programming

N/A

Customizing the Lines

Customizing the Lines From an ONYX VS Phone

Program 10 ➠ Line Port Characteristics

Program 10 is initially set as follows for each line (01-16):

- ***Line Circuit Type = C0 (Central Office) Loop Start Line with DTMF signaling***
- ***Line Gain = 0 dB***
- ***PBX Line = N***
- ***Side Tone Test = N***
- ***Line Name = Unassigned***

Program 10 lets you define the following characteristics for each line (01-16):

Line Circuit Type

Use this option to identify the type of line connected to each line port.

FOR FEATURE INFORMATION: Dial Pulse (DP) and Dual Tone Multifrequency (DTMF) Compatibility on page 170.

Line Gain

Use this option to adjust the audio volume for a line. The extension user can also adjust the volume of a conversation on an outside line by pressing the VOL UP ▲ and VOL DN ▼ keys (the user cannot, however, adjust the volume past the highest or lowest volume offered in this program). With each press, the volume raises or lowers 3 dB. When a user hangs up an outside call, the line's volume returns to the value you select here.

FOR FEATURE INFORMATION: See Using Volume Controls on page 48.

PBX Line

Use this option to identify a line as a PBX line.

FOR FEATURE INFORMATION: See Placing an Outside Call (Using PBX/Centrex Lines) on page 27.

Side Tone Test

Use this option to activate a side tone test on the line. This is a test that the system performs on a line to adjust the transmission characteristics of the line. The system tests all installed lines upon power-up or when you request one using this program.

FOR FEATURE INFORMATION: N/A

Line Name

Use this option to assign a 16-character name to a line. The name you select for line XX replaces the display "LINE XX" when a user answers a call on that line.

FOR FEATURE INFORMATION: N/A

Filling Out the Program Record Form

In this box:	**Enter this data:**
Circuit Type	10 - CO Loop Start, DTMF 11 - CO Loop Start, DP X - Not installed

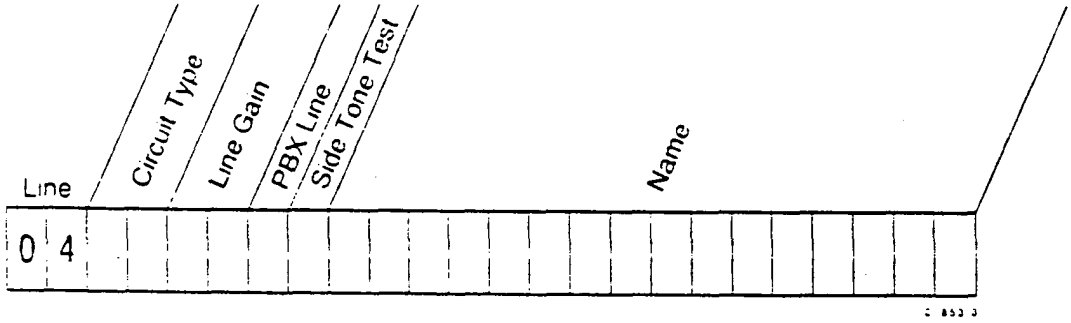
(cont'd)

Program 10 (cont'd)

Filling Out the Program Record Form

Line Gain	01 - -6 dB 02 - -3 dB 03 - 0 dB (normal) 04 - +3 dB 05 - +6 dB
PBX Line	Y - PBX Line N - Non-PBX Line
Side Tone Test	Y - enable side tone test N - bypass side tone test
Name	Up to 16 characters (letters, numbers, blank spaces)

Example
Line 04 is a CO Loop Start DP line with normal Line Gain, no Side Tone Test and the name, MR. JONES.



Entering Data Into Memory

To enter Program 10 data:

1. Enter program mode. — Press PGM# + dial SP + dial 5312 + press PGM#.
2. Press key 10 to enter Program 10.
3. Dial Line No., press PGM#.
4. To accept the displayed data: Press PGM#.
   OR
   To change or enter data: Dial data, press PGM#. — To erase data before pressing PGM#: Dial *. To enter circuit type X: Press DIAL, dial X (9).

Program 10 (cont'd)

Entering Data Into Memory

4. (continued)

To enter a name:

a. Press the dialpad button for the letter or number. To enter a blank space, Q, or Z, press 0.

b. To get a letter to appear: Dial the number (1, 2, or 3) that corresponds to the letter's position on the button (e.g. dial 1 if you want the first letter).

OR

To make a number appear: Dial 4.

Note: To make a blank space, Q, or Z appear: Dial 1, 2, or 3, respectively.

c. Repeat a-b for all characters (to erase the previous character, press LAST).

5. Repeat step 4 for all data.

If you finish and do not see, "LIN NO.": Press SAVE before step 6.

6. Select an option:
   - To enter data for another line: Go to step 3.
   - To exit Program 10: Press SAVE once.
   - To exit the program mode: Press SAVE twice.

To enter another program after exiting: Press its key.

Understanding Related Programming

Program 3	To select a digit for the side tone test
Program 5	To store PBX Access Codes if there are PBX lines
Program 11	To place lines into groups
Program 12	To assign features to lines
Program 16	To let an extension access a line or line group
Program 17	To assign a line to a key at an extension
Program 18 (II)	To assign ringing to lines at an extension

Program 11 ➠ Line Groups

Program 11 is initially set as follows:

- ***No Line Groups***

Program 11 lets you place lines into groups for placing outside calls. When an extension user selects a line group to place a call, the ONYX VS gives the user the first available line in the group. You can program line groups only if the ONYX VS system is equipped with an AUX module.

The ONYX VS can accommodate up to nine line groups, numbered 90-98. Any number of lines can be in a group, but a group should contain similar types of lines (e.g., WATS band 5 or WATS band 3). You also place Direct Inward Lines (assigned in Program 12) into a group. If you do this and someone uses a DIL for an outgoing call, the DIL is simply not available for incoming calls.

If the ONYX VS has line groups, the FCC classifies it as a hybrid. You must use the FCC registration number on your CEU that ends in "MF-E." If your system does not use line groups, the FCC classifies it as a key system. You must use the FCC registration number on your CEU that ends in "KF-E."

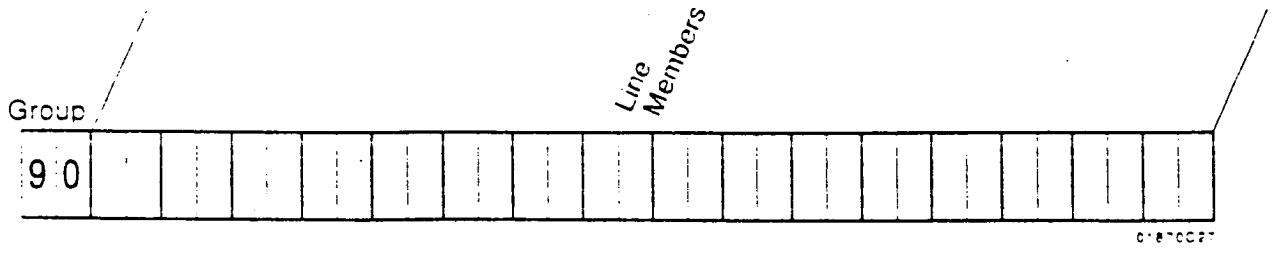
FOR FEATURE INFORMATION: See Placing an Outside Call (Using Direct Line Group Access) on page 27.

Filling Out the Program Record Form

1. Select a group (90-98).
2. **In this box:**
   Line Members

Enter this data:
Lines (01-16) that belong to the group. List the lines in the order the ONYX VS should check them for availability.

Example
Line group 90 contains lines 04, 05, 06.



Program 11 (cont'd)

Entering Data Into Memory

To enter Program 11 data:

1. Enter program mode. — Press PGM + dial SP + dial 5312 + press PGM.
2. Press key 11 to enter Program 11.
3. Dial Line (Trunk) Group No., press PGM.
4. To accept the displayed data: Press PGM.
   OR
   To change or enter data: Dial line data, press PGM. — To erase a data entry before you press PGM: Dial *.

   To remove a line from a group, dial * when you see it. Dialing * when you see the first line removes all lines from the group.
6. Repeat steps 4-5 for all lines.
7. Press SAVE.
8. Select an option:
   - To enter data for another group: Go to step 3.
   - To exit Program 11: Press SAVE once. — To enter another program after exiting: Press its key.
   - To exit the program mode: Press SAVE twice.

Understanding Related Programming

Program 16	To give an extension access to a line group
	To give an extension access to the lines in a line group
Program 10	To assign the correct circuit type to all lines in a group
Program 17	To assign a line group to a key at an extension
QY (terminal)	To let users access line group 90 by dialing 9 (if you can do terminal programming through the AUX module). With "dial 9" access, the user cannot access line groups 91-98.

To change the first digit of line group numbers, see Flexible Numbering Plan on page 173.

rogram 12 ➠ Line Features

Program 12 is initially set as follows for each line (01-16):

- ***Call Pickup Group = 00 (does not ring a Pickup Group)***
- ***Toll Restrict = Y***
- ***Direct Termination (Day) = 300 (not directly terminated)***
- ***Direct Termination (Night) = 300 (not directly terminated)***

Program 12 lets you assign the following features to each line (01-16) in the system:

Call Pickup Group

Use this option to have an incoming line ring all the extensions in a Pickup Group (01-07).

FOR FEATURE INFORMATION: See Group Call Pickup on page *93*.

Toll Restrict

Use this option to enable/disable Toll Restriction for calls made on a line. Typically, if you set up Toll Restrictions in Program 6, you would want the system to apply them to all lines except, for example, WATS lines.

FOR FEATURE INFORMATION: See Toll Restriction on 182.

Direct Termination (Day)

Use this option to determine the day termination for a Direct Inward Line (DIL). A DIL can ring one of the following terminations during the day:

- An extension (301-347), but not a Data Module
- A UCD or Voice Mail (VX) master extension (301-347)
- A Ring Group (364-371)

A terminated extension/group has both incoming **and** outgoing access to the DIL and ringing on the DIL. There is no need to assign access in Program 16 or ringing in Program 18 (II).

Note: If a line's day termination is 300, this means the line is ***not*** directly terminated (i.e., is not a DIL). The line follows the access assignments made in Program 16 and the ring assignments made in Program 18 (II).

FOR FEATURE INFORMATION: See Direct Inward Lines on page 156.

Direct Termination (Night)

Use this option to determine the night termination for a Direct Inward Line (DIL). A DIL can ring one of the following terminations during the Night Answer mode:

- An extension (301-347), but not a Data Module
- A UCD or Voice Mail master extension (301-347)
- A Ring Group (364-371)

A terminated extension/group has both incoming **and** outgoing access to the DIL and ringing on the DIL. There is no need to assign access in Program 16 or ringing in Program 18 (II).

Note: If a line's night termination is 300, this means the line is ***not*** directly terminated (i.e., is not a DIL). The line follows the access assignments made in Program 16 and the ring assignments made in Program 18 (II).

FOR FEATURE INFORMATION: See Direct Inward Lines on page 156.

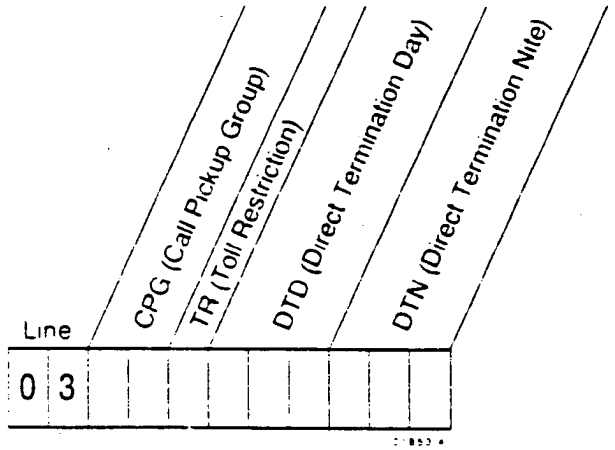
Program 12 (cont'd)

Filling Out the Program Record Form

1. Select a Line (01-16).
2. **In this box:** / **Enter this data:**

In this box:	Enter this data:
CPG (Call Pickup Group)	00 - Rings no group 01-07 - Rings group 01-07
TR (Toll Restrict)	Y - enable N - disable
DTD (Direct Termination Day)	300 - Not directly terminated 301-347 - Ext. or Master Ext. 364-371 - Ring Group
DTN (Direct Termination Night)	300 - Not directly terminated 301-347 - Ext. or Master Ext. 364-371 - Ring Group

Example
Line 03 belongs to Call Pickup Group 06, receives Toll Restriction, and is directly terminated to extension 308 during the day.



Entering Data Into Memory

To enter Program 12 data:

1. Enter program mode. — Press PGM# + dial SP + dial 5312 + press PGM#.
2. Press key 12 to enter Program 12.
3. Dial Line No., press PGM#.
4. Dial abbreviation for desired feature, press PGM#.

Program 12 (cont'd)

Entering Data Into Memory

5. To accept the displayed data: Press PGM#.
   OR
   To change or enter data: Dial data, press PGM#.
6. Repeat steps 4-5 for all features.
7. Press SAVE.
8. Select an option:
   - To enter data for another line: Dial Y and go to step 3.
   - To exit Program 12: Press SAVE once.
   - To exit the program mode: Press SAVE twice.

To accept DTD or DTN data, you may have to press SAVE instead.

To erase a data entry before you press PGM#: Dial *.

To enter another program after exiting: Press its key.

Understanding Related Programming

For lines in Pickup Groups:

Program 18 (I)	To place extensions in Pickup Groups
Program 17	To assign a Pickup Group to a key (if desired)
Program 18 (II)	To assign ringing to Pickup Group keys (if desired)

For directly terminated lines (DILs):

Program 17	To assign a DIL to a key (if desired)
Program 18 (I)	To make a Ring Group (if a DIL terminates there)
Program 19	To make a UCD Hunt Group (if a DIL terminates there)
Program 4	To set the Rings Before Recall timer (how long the DIL rings before diverting)
	To set the Camp-On timer for DILs to UCD Hunt Groups
Program 10	To assign a name to a DIL
Program 16	To give an extension (other than the terminated extension) access to the DIL so they can answer it if it diverts to their extension
Program 18 (II)	To assign ringing to the DIL at extensions other than the terminated extension

Customizing the Extensions

Customizing the Extensions From an ONYX VS Phone

Program 14 ➠ Extension Port Characteristics

Program 14 is initially set as follows for each station (extension) port:

- ***Extension Numbering Plan for Ports 00-47 = extensions 300-347, respectively***
- ***Extension Circuit Type = X (not installed)***
- ***DSS Owner Extension = 300***
- ***DSS Block Number = 01***
- ***Extension Name = Unassigned***

Program 14 lets you define the following characteristics for each extension port (00-47):

Extension Numbering Plan for Ports 00-47

Use this option to assign an extension number (300-347) to an extension port (00-47). If you change the initial numbering plan, the system makes sure there are not duplicates (e.g., if you assign port A's extension number to port B, the system automatically assigns port B's extension to port A).

FOR FEATURE INFORMATION: N/A

Extension Circuit Type

Use this option to identify the equipment installed at an extension port. You can install the following equipment:

Modular Telephones
- 30-Button Modular Telephone (P/N 88160)
- 30-Button Modular Telephone with Handsfree (P/N 88161)
- 30-Button Modular Telephone with Display and Handsfree (P/N 88163A)
- 10-Button Modular Telephone (P/N 88155)
- 10-Button Modular Telephone with Handsfree (P/N 88154)

Non-Modular Telephones
- 30-Button Non-Modular Telephone (P/N 88260)
- 30-Button Non-Modular Telephone with Handsfree (P/N 88261)
- 30-Button Non-Modular Telephone with Display and Handsfree (P/N 88263)

Attendant Telephone
- Attendant Telephone (P/N 88254)

Other Station Instruments
- Electronic Single Line Phone (P/N 88250).
- DSS Console (P/N 88255 [to be paired only with 88254])
- Analog Station Interface (P/N 89749)

You can also install a Data Module (P/N 88400). Before you install the Data Module, you should do the required programming (see below). If you install the Data Module (with or without an extension) before you do the programming, you must unplug the Data Module and extension (if any), then plug them back in.

Program 14 (cont'd)

To program a stand-alone Data Module:
Use Program 14 to assign circuit type Z to the Data Module's port (you must actually enter ZY on the Program Record Form).

To program a Data Module (installed in an odd port) with a Multibutton Phone (installed in the consecutive even port):
1. Use Program 14 to assign circuit type 01 to the odd port.
2. Use Program 14 to assign the correct Multibutton circuit type to the even port (01 for a Standard Multibutton or 02 for a Display Multibutton).
3. Use Program 18 (I) to enable the Dataset (DS) option for the even port.

The initial configuration of a Data Module is as follows:

Baud Mode: Slave	Allow DTR Disconnect: Yes
Parity: None, 8 bits	Allow Break Disconnect: Yes
Interactive Mode: Yes	Auto Baud: Yes
Interactive Echo: Yes	Busy on DTR Low: No
RS-232 Controls Active: Yes	

To change these settings and for installation instructions, see the Data Products Manual (01850DMG01).

Notes:
- Attendant 01 should be extension 300 and have a Display Phone.
- You cannot change the circuit type of a system programming extension while using it to program; you must use another extension with access level 04 (see Program 15).
- When you install a Multibutton, the system assigns the correct circuit type. This does not happen for a Data Module, the Multibutton paired with a Data Module, or an ASI.

FOR FEATURE INFORMATION: See The Multibutton Phones on page 4, Analog Station Interface on page 14 and Data on page 169.

DSS Owner Extension (For DSS Consoles Only)
Use this option to identify the extension that is paired with a DSS Console.

FOR FEATURE INFORMATION: See Direct Station Selection, DSS Console on page 59.

DSS Block Number (For DSS Console Only)
Use this option to assign a memory block (01-04) to a Console for its key configuration.

FOR FEATURE INFORMATION: See Direct Station Selection, DSS Console on page 59

Extension Name
Use this option to assign a 16-character name to an extension. The name can include letters, numbers, and blank spaces (the first character cannot be a number). This name appears in displays instead of the extension's number and is used for Directory Dialing.

FOR FEATURE INFORMATION: See The Display Messages on page 144 and Directory Dialing on page 55.

Program 14 (cont'd)

Filling Out the Program Record Form

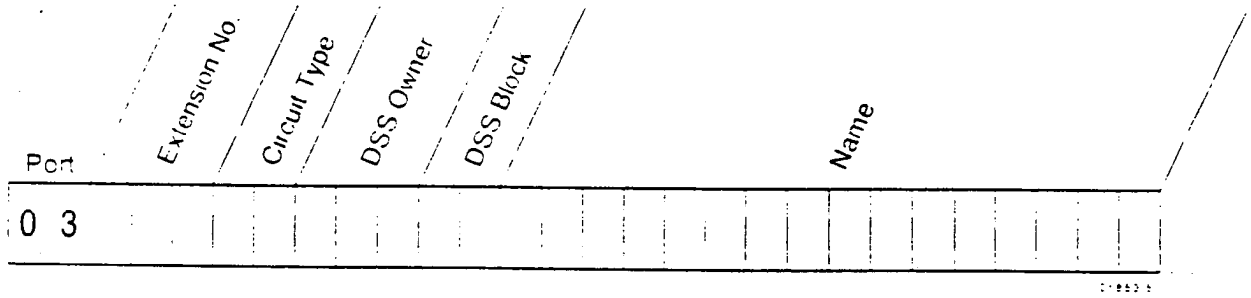
1. Select a port (00-47).
2. **In this box:** / **Enter this data:**

In this box:	Enter this data:
Extension No.	300-347
Circuit Type	00 - Electronic Single Line 01 - Multibutton Non-Display 02 - Multibutton Display 04 - Multibutton Display for attendant only (P/N 88254) 06 - DSS Console 51 - ASI 52 - Digital Voice Mail port card Z - Stand-Alone Data Module X - Not installed **Note:** For details on programming a Data Module with an extension, see previous page.
DSS Owner	300-347 - Extension paired with the DSS Console
DSS Block	01-04
Name	Up to 16 letters, numbers, blanks

Program 14 (cont'd)

Filling Out the Program Record Form

Example
Port 03 is set up as follows: It has extension number 307, an Electronic Single Line Phone connected to it, and the name MR. SMITH.



Entering Data Into Memory

To enter Program 14 data:

1. Enter program mode.

   Press PGM# + dial SP + dial 5312 + press PGM#.

2. Press key 14 to enter Program 14.
3. Dial Port No., press PGM#.
4. To accept the displayed data: Press PGM#.
   OR
   To change or enter data: Dial data, press PGM#.

   To erase a data entry before you press PGM#: Dial *.

   To enter a circuit type of X: Press DIAL, dial X. To enter circuit type Z: Press DIAL, dial 0.

Program 14 (cont'd)

Entering Data Into Memory

4. (continued)

To enter a name:

a. Press the dialpad button for the desired letter or number. To enter a blank, Q, or Z, press 0.

b. To make a letter appear: Dial the number (1, 2, or 3) that corresponds to the letter's position on the button (e.g. dial 1 if you want the first letter on the button to appear).

OR

To make a number appear: Dial 4.

Note: To make a blank space, Q, or Z appear: Dial 1, 2, or 3, respectively.

c. Repeat a-b until you enter the entire message (to erase the previous character, press LAST).

5. Repeat step 4 for all data.

If you finish and do not see, "STN PORT NO.": Press SAVE before step 6.

6. Select an option:
   - To enter data for another port: Go to step 3.
   - To exit Program 14: Press SAVE.
   - To exit the program mode: Press SAVE twice.

After exiting, you can select another program.

Understanding Related Programming

For a Data Module installed with an extension:

Program 18 (I) To program the extension as a Dataset

For an extension with circuit type 04:

Program 3 To program the extension as an operator

Program 15 ➠ Programming Access Level

Program 15 is initially set as follows:

- ***Extension 300 has access level 05.***
- ***Extension 301-305 have access level 04.***
- ***Extensions 306-347 have access level 01.***

Program 15 lets you assign a programming access level (00-04) to extensions (301-347). Extension 300 permanently has access level 05, and you cannot assign level 05 to any other extension. The access level determines:

-- Whether you can use the extension to do system programming. You can always do system programming from extension 300, which has access level 05, or from any extension that has access level 04.

-- Which features the user can program from their phone (see the table below). For example, with access level 01, an extension user can program two of these features from their own phone: Direct Station Selection and Speed Dial numbers. From, however, the system programming extension, you can program any of these features (except Time and Date) for an extension even if its access level does not allow the user to program that feature (see Program 18 [Part II]).

User-Programmable Features	Access Level 00	01	02	03	04	05
Delayed Ringing Assignment	-		✓	✓	✓	✓
FOR FEATURE INFORMATION: See Delayed Ringing Assignment on page 84.						
Direct Station Selection	-	✓	✓	✓	✓	✓
FOR FEATURE INFORMATION: See Direct Station Selection on page 57.						
Hotline	-			✓	✓	✓
FOR FEATURE INFORMATION: See Hotline on page 62.						
Headset	-		✓	✓	✓	✓
FOR FEATURE INFORMATION: See Headset on page 46.						
Night Ringing	-		✓	✓	✓	✓
FOR FEATURE INFORMATION: See Night Ringing on page 87.						
Prime Line Assignment	-		✓	✓	✓	✓
FOR FEATURE INFORMATION: See Placing an Outside call (Using Prime Line) on page 26.						
Ringing Assignment	-		✓	✓	✓	✓
FOR FEATURE INFORMATION: See Ringing Assignments on page 85.						

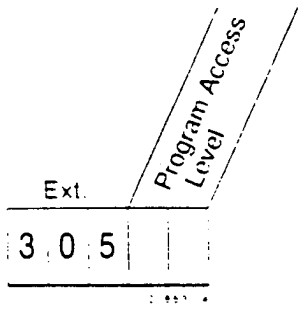
Program 15 (cont'd)

User-Programmable Features	Access Level 00	01	02	03	04	05
Ringing Line Preference	-	-	✓	✓⇒❣	✓	✓
FOR FEATURE INFORMATION: See Ringing Line Preference on page 86.						
Speed Dial (Storing Personal Numbers)	-	✓	✓	✓	✓	✓
FOR FEATURE INFORMATION: See Speed Dial on page 66.						
Speed Dial (Storing System Numbers)	-	-	-	-	✓	✓
FOR FEATURE INFORMATION: See Speed Dial on page 66.						
Time and Date	-	-	-	-	✓	✓
FOR FEATURE INFORMATION: See Time and Date on page 140.						
Voice Announce	-	-	-	✓	✓	✓
FOR FEATURE INFORMATION: See Placing and Answering Intercom Calls on page 32.						
Voice Over	-	-	-	✓	✓	✓
FOR FEATURE INFORMATION: See Off-Hook Signaling/Voice Over on page 106.						
Voice Page (Thru Speaker)	-	-	-	✓	✓	✓
FOR FEATURE INFORMATION: See Paging on page 126.						

Filling Out the Program Record Form

1. Select an extension.
2. **In this box:** Program Access Level — **Enter this data:** 00-05

Example
Extension 305 has programming access level 03.



Program 15 (cont'd)

Entering Data Into Memory

To enter Program 15 data:

1. Enter program mode.
2. Press key 15 to enter Program 15.
3. Dial extension number, press PGM#.
4. To accept the displayed data: Press PGM#.
   OR
   To change or enter data: Dial data, press PGM#.
5. Repeat steps 3-4 for all extensions.
6. Select an option:
   - To exit Program 15: Press SAVE once.
   - To exit the program mode: Press SAVE twice.

Press PGM# + dial SP + dial 5312 + press PGM#.

To erase a data entry before you press PGM#: Dial *.

To enter another program after exiting: Press its key.

Understanding Related Programming

N/A

Program 16 ➠ Line and Line Group Access

Program 16 is initially set as follows for each extension:

- ***Access to Lines 01-16 = Incoming and Outgoing***
- ***Access to Line Groups 90-98 = Y, though no Line Groups exist in Program 11***

Program 16 lets you give an extension access to lines 01-16 and line groups 90-98. You can give an extension:

-- No access to a line.
-- Only incoming access to a line, so the extension can only answer calls on that line.
-- Both incoming and outgoing access to a line, so the extension can place and answer calls on that line.
-- No access to line groups 90-95 (you cannot prevent an extension from using line groups 96-98).
-- Outgoing access to a line group so the extension can use it to place calls. An extension cannot have incoming access to a line group.

FOR FEATURE INFORMATION: See Placing an Outside Call on 26 and Answering an Outside Call on page 30.

Filling Out the Program Record Form

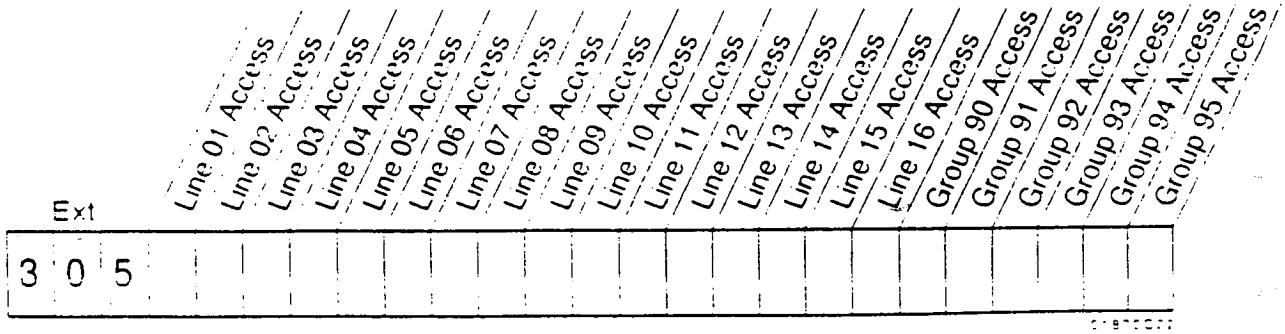
1. Select an extension (300-347).
2. **In this box:**
   Line XX Access

   Enter this data:
   0 - No access to line XX
   1 - Only incoming access to line XX
   2 - Incoming & outgoing access to line XX

   Group XX Access

   Y - enable outgoing access to group XX
   N - disable access to group XX

Example
In an 8-Line system, extension 305 has incoming access to lines 01, 03, 06; no access to the other lines; and outgoing access to line group 90.



Program 16 (cont'd)

Entering Data Into Memory

To enter Program 16 data:

1. Enter program mode.
2. Press key 16 to enter Program 16.
3. Dial extension number, press PGM.
4. Dial L to enter line access data.
   OR
   Dial G to enter group data.
5. Dial Line No., press PGM.
   OR
   Dial Group No., press PGM.
6. To accept the displayed data: Press PGM.
   OR
   To change or enter data: Dial data, press PGM.
7. Repeat steps 5-6 for remaining lines or groups.
8. Press SAVE.
9. Select an option:
   - To enter line or group data for same extension: Go to step 4.
   - To enter line/group data for another extension: Press SAVE once, dial Y, and go to step 3.
   - To exit Program 16: Press SAVE twice.
   - To exit the program mode: Press SAVE three times.

Press PGM + dial SP + dial 5312 + press PGM.

To erase a data entry before you press PGM: Dial *.

To enter another program after exiting: Press its key.

Understanding Related Programming

For line access:

Program 10	To identify line characteristics (type, gain, name)
Program 17	To assign a line to a key at an extension
	To assign a Loop key to an extension. The Loop key flashes for incoming calls on lines without Line keys.
Program 18 (ii)	To assign ringing to lines at an extension

Program 16 (cont'd)

Understanding Related Programming

Program 1	To enable/disable Direct Line (Trunk) Access in a Class of Service (see also Program 18 [I]). Direct Line Access lets a user access lines 01-16 by dialing 348-363.
Program 18 (I)	To assign a Class of Service (from Program 1) to an extension To allow Line Dial-Up for an extension. This lets a user access lines 01-16 by dialing 801-816.
Program 12	To directly terminate a line to an extension so it rings only that extension. A directly terminated line is both incoming and outgoing without making it so in Program 16. For more information, see Direct Inward Line on page 156.

For line group access:

Program 10	To identify line characteristics (type, gain, name)
Program 11	To place lines into groups
Program 17	To assign a line group to a key

Program 17 ➠ Key Assignments

Program 17 is initially set as follows:

- *On a 10-Button Phone:*
  - *Keys 21-24 = Undefined*
- *On a 30-Button Phone in an 8-Line System:*
  - *Keys 1-8 = Lines 1-8*
  - *Keys 9-24 = Undefined*
- *On a 30-Button Phone in a 16-Line System:*
  - *Keys 1-16 = Lines 1-16*
  - *Keys 17-24 = Undefined*
- *On a 28-Button Phone in an 8-Line System:*
  - *Keys 1-8 = Lines 1-8*
  - *Keys 9-18 = Undefined*
- *On a 28-Button Phone in an 16-Line System:*
  - *Keys 1-16 = Lines 1-16*
  - *Keys 17-18 = Undefined*
- *On a DSS Console:*
  - *Keys 1-47 = Hotlines to extensions 301-347*
  - *Keys 48-72 = Undefined*
  - *Key 73 = All Call Page*
  - *Key 74 = Internal Page Zone 1*
  - *Key 75 = Internal Page Zone 2*
  - *Key 76 = Internal Page Zone 3*
  - *Key 77 = Park Orbit 60*
  - *Key 78 = Park Orbit 61*
  - *Key 79 = Park Orbit 62*
  - *Key 80 = Release*

Program 17 lets you assign functions to the programmable keys at a:

-- 30-Button Telephone. Keys 1-24 are programmable.
-- 10-Button Telephone. Keys 21-24 are programmable (if you add a 20-Button module to a 10-Button phone, you are adding keys 1-20).
-- 28-Button Telephone. Keys 1-18 are programmable.
-- 80-Button DSS Console. Keys 1-79 are programmable.

For example, you can assign a Park Orbit (60-69) to a key so that a user can just press the key to access the orbit instead of dialing the Park Orbit code.

The choices for a programmable key are below. All of them are available to a Multibutton Phone, but not all to a DSS Console. (The key functions that are not available to a DSS Console are labeled "On Multibutton Phone Only").

Undefined Key

Use this option to give a key no function.

FOR FEATURE INFORMATION: N/A

Line Key

Use this option to assign a line (01-16) to a key. Do not assign the same line to two different keys.

FOR FEATURE INFORMATION: See Placing an Outside Call (Using a Line key) on page 26 and Answering an Outside Call on page 30.

Loop Switch

Use this option to assign a Loop Switch key to an extension. A Loop Switch key flashes for incoming calls that do not appear under a Line key. Make sure you assign one Loop key to each extension so incoming calls can appear somewhere.

FOR FEATURE INFORMATION: See Answering an Outside Call on page 30.

Program 17 (cont'd)

Loop Group
Use this option to assign a line group (00-08) to a key. Codes 00-08 correspond to line groups 90-98 .

FOR FEATURE INFORMATION: See Placing an Outside Call (Using Direct Line Group Access) on page 27.

Park Orbit
Use this option to assign a System Park Orbit (60-69) to a key.

FOR FEATURE INFORMATION: See Call Parking on page 119.

One-Touch Speed Dial Key
Use this option to assign a Speed Dial bin to a key. On a Multibutton phone, you can assign a Personal bin (50-59, 20-29) or a System bin (70-79 or 700-799). On a DSS Console, you can assign bins 1-79 to the keys.

Note: On a 30-button phone, keys 1-20 **automatically** represent Personal Speed Dial bins 50-59 and 20-29 (i.e., without using Program 17). On a 28-button phone, keys 1-15 **automatically** represent Personal Speed Dial bins 50-59 and 20-24 (i.e., without using Program 17). To call a number that is stored under these bin keys, a user presses DIAL, then the key (a two-touch call). If you use Program 17 to make a one-touch Personal Speed Dial key, the bin you assign: (a) overwrites the original personal bin number (b) lets the user call the stored number by just pressing the key (no need press DIAL).

FOR FEATURE INFORMATION: See Speed Dial on page 66.

Hotline
Use this option to assign a Hotline key and its associated extension (300-347).

FOR FEATURE INFORMATION: See Hotline on page 62.

Group Pickup
Use this option to assign a Pickup Group (01-07) to a key.

FOR FEATURE INFORMATION: See Group Call Pickup on page 93.

Program 17 (cont'd)

Call Coverage
Use this option to assign a Call Coverage key.

Notes:
- If you assign the Call Coverage function to a DSS key (1-15), the system changes the DSS key's extension assignment to match the Call Coverage extension and vice versa.
- You can use the DSS procedure in Program 18 (II) to change a Call Coverage extension even if the Call Coverage key is not also a DSS key.

FOR FEATURE INFORMATION: See Call Coverage on page 90.

Page Zone
Use this option to assign a page zone (00-07) to a key.

FOR FEATURE INFORMATION: See Paging on page 126.

Automatic Call Timer
Use this option to assign an Automatic Call Timer key.

FOR FEATURE INFORMATION: See Call Timer on page 137.

Manual Call Timer
Use this option to assign a manual Call Timer key.

FOR FEATURE INFORMATION: See Call Timer on page 137.

Record Key
Use this option to assign a Record key when the system is installed with Voice Mail.

FOR FEATURE INFORMATION: See Voice Mail on page 131.

Data Key
To assign a Data Key to a phone, you must define the phone as a Dataset in Program 18 (I). When you do, key 23 automatically becomes the Data key; there is no need to make any assignment in Program 17. Be sure, however, that you do not assign some other function to key 23 using Program 17.

FOR FEATURE INFORMATION: See Data on page 169.

Program 17 (cont'd)

Filling Out the Program Record Form

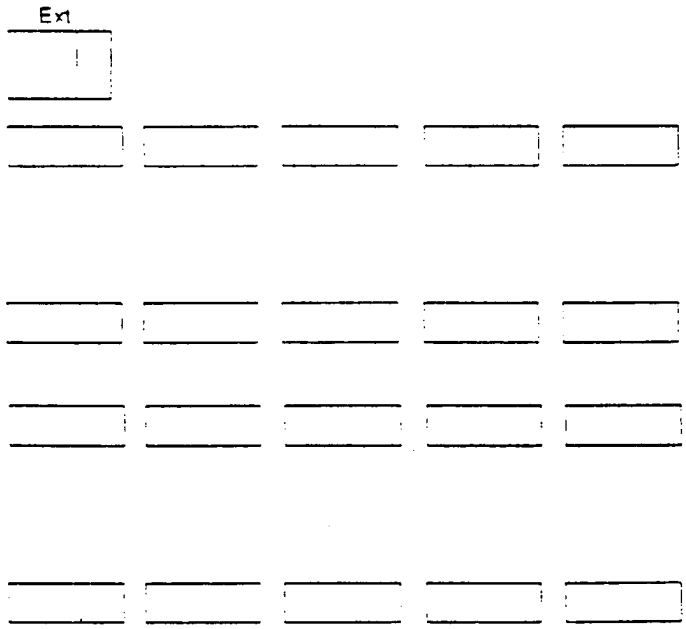
1. Select a key on the appropriate phone drawing.
2. **To assign this function:** / **Enter this abbreviation + number code (if any):**

To assign this function:	Enter this abbreviation + number code (if any):
Undefined key	UK
Line key	LK + Line number (01-16)
Loop Switch	LS
Loop Group	LG + Group (00-09)
Park Orbit	PO + Park Orbit (60-69)
Speed Dial	On a Multibutton: SD + Personal bin (50-59, 20-29) OR SD + System bin (700-799) On a DSS Console: SD + 1-79
Hotline	HL + Partner ext. (300-347)
Group Pickup	GP + Pickup Group (00-07) **Note:** 00 = Not a member
Call Coverage key	CCK + Covered ext. (300-347)
Page Zone	P0 + Page Zone (00-07) **Note:** 00 = All Call
Call Timer (Automatic)	CTA
Call Timer (Manual)	CTM
Record key	RK
Data key	See Program 18 (I). Dataset

Program 17 (cont'd)

Example

Extension 307 is a 30-Button phone with the following key assignments: keys 1-5 are Loop Switch keys, keys 6-8 are lines 01-03, key 9 accesses Page Zone 07, and key 10 accesses Park Orbit 62 (no assignments will be shown for the other keys).



Program 17 (cont'd)

Entering Data Into Memory

To enter Program 17 data:

1. Enter program mode.	Press PGM# + dial SP + dial 5312 + press PGM#. If you are programming assignments for a DSS Console, you must program from the phone assigned to the console.
2. Press key 17 to enter Program 17.	You see "DEST. ICM NO:" (for destination extension).
3. Dial extension (XXX) to be programmed, press PGM#.	You see "SOURCE:" (for source extension). If you are programming assignments for your DSS Console, enter your extension number.
4. To program the keys at extension XXX: Dial extension XXX again, press PGM#. OR To copy keys from extension YYY onto XXX: Dial YYY, press PGM#, then go to step 8 if you do not need to change certain keys after you copy; otherwise, go to step 5.	If you are programming assignments for your DSS Console, enter your extension number. This procedure does not copy: - Speed Dial (stored) numbers - Ring Assign. (Program 18 [II]) - Line Access (Program 16)
5. Press key you wish to program.	For DSS Consoles, press the DSS Console key.
6. To accept the displayed data: Press PGM#. OR To change or enter data: Dial data, press PGM#.	
7. Repeat steps 5-6 for all keys.	

Program 17 (cont'd)

Entering Data Into Memory

8. Press SAVE.
9. Select an option:
   - To program another extension: Dial Y, then go to step 3.
   - To exit Program 17: Press SAVE once.
   - To exit the program mode: Press SAVE twice.

To enter another program after exiting: Press its key.

Understanding Related Programming

See the feature reference for each key.

Program 18 ➠ Extension Features (Part I)

Program 18 is initially set as follows for each extension:

- *Do Not Disturb = Y*
- *Class of Service =*
  - *30 for ext. 300*
  - *01 for ext. 301-347*
- *Ring Group Member = 00 (not a member)*
- *Call Pickup Group Member = 00 (not a member)*
- *Privacy Release Group Member = 00 (not a member)*
- *Off-Hook Ringing = N*
- *Busy Lamp Field (BLF) and Direct Station Selection (DSS) for Keys 1-15 on a 28- or 30-Button Phone = Y*
- *Line Dial-Up = Y*
- *Page Zone Member = 00 (receives only All Call pages)*
- *Extension's (Station's) Operator = 300*
- *Speed Dial Block =*
  - *Blocks 01-05 for System Speed Dial numbers*
  - *Block 06-07 for exts. 300-301; 08 for 302; 00 (no block) for 303; 09-28 for 304-323*
- *Voice Mail = N*
- *Dataset = N*

Program 18 (Part I) lets you assign following features to an extension. For information on other extension features, see Program 18 (Part II).

Do Not Disturb

Use this option to allow/deny Do Not Disturb at an extension. Enabling Do Not Disturb for an attendant extension lets the attendant put the system in the Night Answer mode.

FOR FEATURE INFORMATION: See Do Not Disturb on page 97, and Night Answer on page 121.

Class of Service

Use this option to assign a Class of Service (00-27) to an extension. The system automatically assigns COS 30 to any extension you designate as an operator in Program 3. COS 30 is the same as COS 00. When, however, you remove an operator from the system, you must manually assign it a non-operator COS (01-27).

FOR FEATURE INFORMATION: See Class of Service on page 167.

Ring Group Member

Use this option to make an extension a member of a Ring Group (01-08). A Ring Group extension should not also be in a Hunt Group or an attendant extension. Ring Groups 01-08 correspond to Ring Group numbers 364-371.

FOR FEATURE INFORMATION: See Group Ringing on page 77.

Call Pickup Group Member

Use this option to assign an extension to a Pickup Group (01-07).

FOR FEATURE INFORMATION: See Group Call Pickup on page 93.

Privacy Release Group Member

Use this option to assign a Multibutton extension to a Privacy Release Group (01-99)

FOR FEATURE INFORMATION: See Privacy Release on page 75.

Program 18, Part I (cont'd)

Off-Hook Ringing

Use this option to enable/disable Off-Hook Ringing at an extension. Enabling Off-Hook Ringing for an extension also converts its Call Waiting beeps into Off-Hook Ringing.

Always assign Off-Hook Ring to an attendant. Analog Station Interfaces do not receive Off-Hook Ringing even if you enable it here.

To see how Off-Hook Ringing and Voice Over programming interact, see Voice Over in Program 18 (II).

FOR FEATURE INFORMATION: See Off-Hook Signaling/Voice Over on page 106.

DSS/BLF Lamps

Use this option to let a 28- or 30-Button extension use keys 1-15 as Direct Station Selection/Busy Lamp Field (DSS/BLF) keys.

FOR FEATURE INFORMATION: See Direct Station Selection on page 57.

Line Dial-Up

Use this option to determine whether an extension can access lines (01-16) by dialing codes 801-816.

FOR FEATURE INFORMATION: See Placing an Outside Call (Using Line Dial-Up) on page 26.

Page Zone Member

Use this option to assign an extension to an Internal Page Zone (00-07). An extension can be in only one Internal Zone. An extension in Zones 01-07 receives a page made to its assigned zone ***and*** All Call Pages. An extension in Zone 00 receives only All Call Pages.

FOR FEATURE INFORMATION: See Paging on page 126.

Extension's (Station's) Operator

Use this option to designate which operator (attendant) gets called when the extension user dials 0.

FOR FEATURE INFORMATION: See Placing and Answering Intercom Calls on page 32.

Speed Dial Block

Use this option to assign a Personal Speed Dial block (of memory) to an extension or DSS Console. If your system doesn't have an AUX module, there are 28 Speed Dial blocks in the system, numbered 01-28, and each block can store 20 Speed Dial numbers (i.e., each block has 20 storage bins). However, not all 28 blocks are available for Personal Speed Dial numbers. The blocks available for Personal Speed Dial numbers depends on how many System Speed Dial numbers (bins) you select for the system in Program 3 (see table below).

Program 18, Part I (cont'd)

Speed Dial Block (cont'd)

# System Speed Numbers	Blocks Used for System Speed Dial	Blocks Available for Personal Speed Dial
10	1/2 of 01	(1/2 of 01)-28
100	01-05	06-28

Three more things you need to know about assigning blocks are these:
-- A DSS uses four consecutive blocks. So if you assign block 05, for example, the DSS Console actually uses 05, 06, 07, and 08.
-- You can assign the same block to more than one extension when, for example, there are more extensions than blocks. The extension users would share access to the 20 bins in the block. For example, one person could use bins 50-59 and the other could use bins 20-29 (to store Speed Dial numbers, see Program 18 [Part II]).
-- If your system has an AUX module, you have 57 Speed Dial blocks (numbered 1-57).

FOR FEATURE INFORMATION: See Speed Dial on page 66.

Voice Mail

Use this option to assign the Voice Mail (VX) feature to each ASI extension port designated for Voice Mail in Program 14.

Note: Use the VX programs in the following order: 14, 18 (I), 3, 19, 12, 17, 16.

FOR FEATURE INFORMATION: See Voice Mail on page 131.

Dataset

Use this option to program an extension as a Dataset when the extension is installed with a Data Module. Remember: The extension must be installed in an even-numbered port and you should program the port before you plug in the extension. If you plug it in before programming it, you must unplug it and plug it back in. As soon as you program an extension as a Dataset, key 23 becomes the Data key.

FOR FEATURE INFORMATION: See Data on page 169.

Filling Out the Program Record Form

1. Select an extension (300-347).
2. **In this box:** / **Enter this data:**

In this box:	Enter this data:
DND (Do Not Disturb)	Y - enable N - disable
COS (Class of Service)	00-30
RG (Ring Group)	00-08 **Note:** 00 = Not a member
CPG (Call Pickup Group)	00-07 **Note:** 00 = Not a member

Program 18, Part I (cont'd)

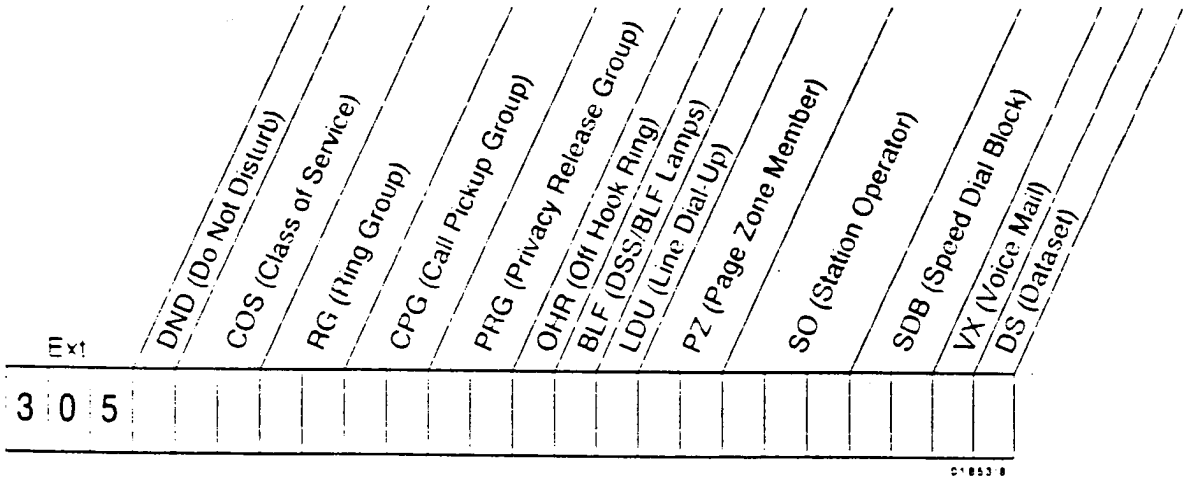
Filling Out the Program Record Form

PRG (Privacy Release Group)	00-99 **Note:** 00 = Not a member
OHR (Off-Hook Ring)	Y - enable N - disable
BLF (DSS/BLF Lamps)	Y - enable N - disable
LDU (Line Dial-Up)	Y - enable N - disable
PZ (Page Zone)	00 - Receives All Call only 01-07 - Receives All Call and pages to Zones 01-07
SO (Station Operator)	Ext. 300-347
SDB (Speed Dial Block)	00-28 **Note:** 00 = No block assigned
VX (Voice Mail)	Y - enable N - disable
DS (Dataset)	Y - enable N - disable

Filling Out the Program Record Form

Example

Extension 305 has Do Not Disturb disabled (no other options will be shown).



Program 18, Part I (cont'd)

Entering Data Into Memory

To enter Program 18 (Part I) data:

1. Enter program mode. — Press PGM# + dial SP + dial 5312 + press PGM#.
2. Press key 18 to enter Program 18.
3. Dial extension number, press PGM#.
4. Dial abbreviation for desired feature, press PGM#. — To dial PZ: Dial P, then 0 (zero).
5. To accept the displayed data: Press PGM#. — To accept the SO data, you may have to press SAVE instead.
   OR
   To change or enter data: Dial data, press PGM#. — To erase a data entry before you press PGM#: Dial *.
6. Repeat steps 4-5 for all features.
7. Press SAVE.
   OR
   Enter Program 18 (Part II) data for the same extension as follows: Go to step 4 in the procedures for Program 18 (Part II).
8. Select an option:
   - To enter data for another extension: Dial Y, then go to step 3.
   - To exit Program 18: Press SAVE once. — To enter another program after exiting: Press its key.
   - To exit the program mode: Press SAVE twice.

Understanding Related Programming

For Class of Service:

Program 1	To set up a Class of Service

For Privacy Release Groups:

Program 16	To give an extension outgoing access to the lines intended for Privacy Release
Program 17	To assign a Privacy Release line to a key at an extension

Program 18, Part I (cont'd)

Understanding Related Programming

For DSS/BLF:

Program 18 (II)	To determine which extensions the DSS keys call

For Line Dial-Up:

Program 16	To give an extension outgoing access to lines

For Page Zones:

Program 18 (II)	To enable/disable incoming pages at an extension

For Speed Dial Blocks:

Program 3	To select the number of System Speed Dial numbers

For Voice Mail (VX):

Program 14	To assign an ASI circuit type (51) to each extension intended for VX
Program 3	To install VX and select a VX master number from the ones selected in Program 18 (I)
Program 19	To set up the following UCD Hunt Group: (a) Hunt Type = 05 (b) Master Extension = VX master number selected in Program 3 (c) Overflow Extension = Operator extension assigned to VX master extension in Program 18 (I) (d) UCD Members = VX extensions selected in Program 18
Program 12	To directly terminate each line the Automated Attendant should answer to the VX master number selected in Program 3
Program 17	To assign a Record key to an extension
Program 16	To assign to each Voice Mail port (selected in Program 14) outgoing access to the lines used by 1001/1002's Message Notification and Message Reminder features.

For a Dataset extension:

Program 14	To program the accompanying Data Module with the correct circuit type

Program 18 ➠ Extension Features (Part II)

Program 18 is initially set as follows for each extension:

- ***Day/Night Ringing Assignments = Y for all lines at ext. 300; N for all lines at all other extensions; N for all Call Coverage and Pickup keys***
- ***Night Ringing = N for all lines***
- ***Delayed Ringing Assignment = N for all lines; N for all Call Coverage and Pickup keys***
- ***Prime Line Assignment = N for all lines***
- ***Ringing Line Preference = N for all lines***
- ***Direct Station Selection Key Assignments = Keys 1-15 at a 28- or 30-Button phone each call extension 300***
- ***Hotline Key Assignments***
- ***Headset Installed = N***
- ***Incoming Voice-Announced Call = N***
- ***Voice Page Thru Speaker = Y***
- ***Voice Over = Y***
- ***Speed Dial = No numbers stored***

Program 18 (Part II) lets you assign the following features to an extension. With the proper programming access level, a Multibutton extension user can also program these features from their phone (see Program 15)

For information on other extension features, see Program 18, Part I.

Day/Night Ringing Assignments

Use this option to enable/disable immediate day/night ringing for an extension's lines, Call Coverage keys, and Pickup Group keys. Enabling immediate ring automatically disables Night Ringing or Delayed Ringing (see below).

Note: To have a line ring an ESL/ASI phone, you must directly terminate the line to the phone using Program 12.

FOR FEATURE INFORMATION: See Ringing Assignments on page 85.

Night Ringing

Use this option to enable or disable immediate ringing during the Night Answer mode for the lines at a Multibutton phone. Enabling Night Ring automatically disables Delayed Ringing or Day/Night Ringing Assignments (see below and above).

FOR FEATURE INFORMATION: See Night Ringing on page 87 and Night Answer on page 121.

Delayed Ring Assignment

Use this option to enable/disable delayed day/night ringing for an extension's lines, Call Coverage keys, and Pickup Group keys. Enabling Delayed Ringing Assignment automatically disables ringing assigned through Ringing Assignment or Night Ringing (see above).

Note: Do not enable Delayed Ringing for a Call Coverage key assigned to the UCD master extension number unless your system has an AUX module.

FOR FEATURE INFORMATION: See Delayed Ringing Assignment on page 84.

Program 18, Part II (cont'd)

Prime Line Assignment
Use this option to enable/disable a Prime Line key for a Multibutton phone. When you enable Prime Line for a Line key, the system automatically assigns Ringing Line Preference (below) to that Line key. Do not assign a Prime Line to an attendant or Headset extension.

FOR FEATURE INFORMATION: See Placing an Outside call (Using Prime Line) on page 26.

Ringing Line Preference
Use this option to assign Ringing Line Preference to a Multibutton extension. Do not assign Ringing Line Preference to a headset or attendant extension.

FOR FEATURE INFORMATION: See Ringing Line Preference on page 86.

Direct Station Selection
Use this option to change a DSS (or Call Coverage) key's assigned extension.

Notes:
- You must assign the Call Coverage function (and extension) to a key through Program 17 before you can use this DSS procedure to change its extension.
- If you change the extension for a DSS key that is also a Call Coverage key, the system assigns that extension to the Call Coverage key.

FOR FEATURE INFORMATION: See Direct Station Selection on page 57 or Call Coverage on page 90.

Hotline Key Assignments
Use this option to change a Hotline key's assigned extension.

FOR FEATURE INFORMATION: See Hotline on page 62.

Headset Installed
Use this option to enable/disable Headset capability for an extension. If you enable Headset, do not enable Prime Line Assignment or Ringing Line Preference (above).

FOR FEATURE INFORMATION: See Headset on page 46.

Incoming Voice-Announced Call
Use this option to enable/disable voice-announced Intercom calls at an extension. This option does not apply to attendant extensions (attendants do not receive voice-announced Intercom calls) and ASI extensions.

FOR FEATURE INFORMATION: See Placing and Answering Intercom Calls on page 32.

Voice Page Thru Speaker
Use this option to enable/disable incoming pages over the speaker of an extension. This option does not apply to attendant extensions (attendants do not receive pages) and ASI extensions.

FOR FEATURE INFORMATION: See Paging on page 126.

Program 18, Part II (cont'd)

Voice Over

Use this option to determine whether a multibutton extension receives Voice Over. This option does not apply to attendant extensions (attendants do not receive Voice Over). Disable Voice Over for extensions in Circular or Terminal Hunt Groups.

The chart below shows you how Off-Hook Ringing (Program 18 [I]) and Voice Over (VO) programming interact when the caller is using the handset or Handsfree and the person receiving the Off-Hook Signaling ("Dest.") is using the handset or Handsfree.

Caller	Dest.	OHR	VO	Result after dialing 1
Handset	Handset	N	Y	Voice Over to dest.
Handset	Handsfree	N	Y	No Off-Hook Signaling
Handsfree	Handset	N	Y	No Off-Hook Signaling
Handsfree	Handsfree	N	Y	No Off-Hook Signaling
Handset	Handset	N	N	Off-Hook Signaling
Handset	Handsfree	N	N	Off-Hook Signaling
Handsfree	Handset	N	N	No Off-Hook Signaling
Handsfree	Handsfree	N	N	No Off-Hook Signaling
Handset	Handset	Y	Y	Voice Over to dest.
Handset	Handsfree	Y	Y	Off-Hook ringing
Handsfree	Handset	Y	Y	No Off-Hook Signaling
Handsfree	Handsfree	Y	Y	Off-Hook ring if dest. has HF - otherwise no Off-Hook Signals
Handset	Handset	Y	N	Off-Hook Ringing
Handset	Handsfree	Y	N	Off-Hook Ringing
Handsfree	Handset	Y	N	Off-Hook Ringing
Handsfree	Handsfree	Y	N	Off-Hook Ringing

FOR FEATURE INFORMATION: See Off-Hook Signaling on page 106.

Program 18, Part II (cont'd)

Speed Dial

Use this option to store Personal Speed Dial numbers at an extension/DSS Console or System Speed Dial numbers for the system. You can store Personal Speed Dial numbers in bins 50-59 and 20-29 at a Multibutton phone. You can also store Personal Speed Dial numbers in extension and DSS Console One-Touch Speed Dial keys. You can store System Speed Dial numbers in bins 70-79 or 700-799 (i.e., in whatever bins you selected in Program 3). If you have a DSS Console, you can also use this option to store numbers in your console One-Touch Speed Dial keys.

Note: From a system programming extension you can store, at an extension, any Personal Speed Dial number that is allowed by the toll level of that system programming extension.

FOR FEATURE INFORMATION: See Speed Dial on page 66.

Filling Out the Program Record Form

For Day/Night Ring Assignment (RA), Night Ringing (NR), Delayed Ring Assignment (DRA), Prime Line Assignment (PLA):

1. Select a feature (e.g., RA).

2. In this box:	**Enter this data:**
Line (01-16)	Y - enable feature for the line N - disable feature for the line

For Direct Station Selection (DSS) and Call Coverage:

In this box:	**Enter this data:**
Key	Extension to be called (300-347)

For Headset (HS), Voice-Announced Calls (VA), Voice Page Thru Speaker (VP), Voice Over (VO), Ringing Line Preference (RLP):

In this box:	**Enter this data:**
Feature Data	Y - enable feature N - disable feature

For Personal Speed Dial (SD):

Across from this heading:	**Enter this data:**
Bin or Key	Telephone Number, up to 32 digits (when a number is longer than 16 digits, record digits 17-32 in the next consecutive bin)

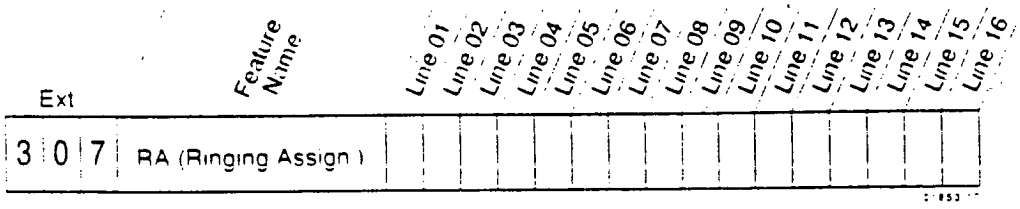
Program 18, Part II (cont'd)

Filling Out the Program Record Form

For System Speed Dial (SD):

Across from this heading:	Enter this data:
Bin	Complete the bin number (70-79 or 700-799), then enter the telephone number, up to 32 digits (when a number is longer than 16 digits, record digits 17-32 in the next consecutive bin)

Example
In an 8-Line system, extension 307 has immediate Day/Night ringing on lines 1-5 (no other options will be shown).



Entering Data Into Memory

To enter Program 18 data for RA, NR, DRA, PLA:

1. Enter the program mode.	Press PGM# + dial SP + dial 5312 + press PGM#.
2. Press key 18 to enter Program 18.	
3. Dial extension number, press PGM#.	
4. Dial the abbreviation for the desired feature, press PGM#.	The Line keys you can program light steadily or flash. Steady means the feature is disabled, flashing means it is enabled.
5. Store a line as follows: Dial a line number or press a lit Line key.	
6. To change or enter data: Dial data, press PGM#.	
7. Repeat steps 5-6 for all lines.	

Program 18, Part II (cont'd)

Entering Data Into Memory

To enter Program 18 data for RA, NR, DRA, PLA:

8. Select an option:
   - To program another feature: Press SAVE and go to step 4 (in a Program 18 procedure).
   - To program another extension: Press SAVE twice, dial Y, and go to step 3 (in any Program 18 procedure).
   - To exit Program 18: Press SAVE three times.
   - To exit the program mode: Press SAVE four times.

To enter another program after exiting: Press its key.

To enter Program 18 data for DSS (or Call Coverage) and Hotline:

1. Enter the program mode. — Press PGM# + dial SP + dial 5312 + press PGM#.
2. Press key 18 to enter Program 18.
3. Dial ext. number, press PGM#.
4. Dial DSS or HL, press PGM#. — DSS keys (1-15), any Call Coverage and Hotline keys flash.
5. Press a flashing key.
6. To accept the displayed data: Press PGM#.
   OR
   To change or enter data: Dial data, press PGM#.
7. Repeat steps 5-6 for all keys.
8. Select an option:
   - To program another extension for DSS or the other features: Press SAVE twice, dial Y, and go to step 3 (in any Program 18 procedure).
   - To program another feature for same extension: Press SAVE and go to step 4 (in any Program 18 procedure).
   - To exit Program 18: Press SAVE three times.
   - To exit the program mode: Press SAVE four times.

To enter another program after exiting: Press its key.

Program 18, Part II (cont'd)

Entering Data Into Memory

To enter Program 18 data for HS, VA, VP, VO, RLP:

1. Enter the program mode. — Press PGM# + dial SP + dial 5312 + press PGM#.
2. Press key 18 to enter Program 18.
3. Dial extension number, press PGM#.
4. Dial the abbreviation for the desired feature, press PGM#.
5. To accept the displayed data: Press PGM#.
   OR
   To change or enter data: Dial data, press PGM#.
6. Select an option:
   - To program another feature: Go to step 4 (in any Program 18 procedure).
   - To program another extension: Press SAVE, dial Y, and go to step 3 (in any Program 18 procedure).
   - To exit Program 18: Press SAVE twice. — To enter another program after exiting: Press its key.
   - To exit the program mode: Press SAVE three times.

To enter Program 18 data for SD:

1. Enter the program mode. — Press PGM# + dial SP + dial 5312 + press PGM#.
2. Press key 18 to enter Program 18.
3. Dial extension number, press PGM#. — For System Speed Dial, dial the number of the extension you are programming from.
4. Dial SD, press PGM#.
5. Press a lit One-Touch Personal Speed Dial key or (Dial Personal bins 50-59 or 20-29, press PGM#).
   OR
   Dial System Speed Dial bin, press PGM#. — You make One-Touch Speed Dial keys using Program 17.

Program 18, Part II (cont'd)

Entering Data Into Memory

To enter Program 18 data for SD:

6. If you can store a name: Enter a name, press PGM. Or, just press PGM to not store a name and go to step 7.

   To enter a letter, number, blank:
   - Press dialpad button that has desired character. Zero button = blank, Q, Z, (in that order).
   - Dial digit (1, 2, 3) = letter's position on button (e.g., dial 1 for 1st letter), OR Dial 4 for the button's number.

   To erase last char., press LAST.

   OR

   If you cannot store a name, go to step 7.

7. Dial a line (01-16) or press a Line key or dial a group 90-98 (if your system has line groups).

   Fast busy tone means: Go to step 4, select another line in step 7.

   To store Intercom feature codes: Press INTERCOM in step 7, dial codes in step 8.

8. To accept the displayed data: Press PGM.

   OR

   To change or enter data: Dial telephone number data, press PGM.

   Numbers longer than 16 digits automatically flow to the next bin.
   - To enter a pause: HOLD.
   - To enter *: DIAL + dial *.
   - To enter #: DIAL + dial #

   To erase a data entry before you press PGM: Dial *.

9. Select an option:
   - To program more bins: Go to step 5.
   - To program another feature: Press SAVE once and go to step 4 (in any Program 18 procedure).
   - To program another extension: Press SAVE twice, dial Y, and go to step 3 (in any Program 18 procedure).
   - To exit Program 18: Press SAVE three times.
   - To exit the program mode: Press SAVE four times.

   To enter another program after exiting: Press its key.

Program 18, Part II (cont'd)

Understanding Related Programming

For any option in Program 18, Part II:

Program 15	To assign the appropriate program access level to extensions so the users can program Program 18 [II] options themselves

For RA, NR, DRA, PLA, RLP:

Program 16	To give an extension access to a line
Program 4	To set the Delayed Ring timer (for DRA only)
Program 17	To assign a line to a key at an extension (required for PLA only)
	To assign Call Coverage or Pickup keys (for RA, DRA)

For DSS keys:

Program 18 (I)	To enable DSS/BLF keys

For Voice-Announced Intercom calls:

Program 2	To enable voice calls system-wide

For Voice Pages Thru Speaker:

Program 18 (I)	To assign an extension to a page zone

For Speed Dial numbers:

Program 16	To provide an extension with access to a line so you can store a line with a Personal Speed Dial number
Program 1	To allow/deny access to System Speed Dial numbers in a Class of Service (see also Program 18 [I])
Program 18 (I)	To assign a Class of Service (from Program 1) to an extension
Program 3	To enable/disable dial-out of # in a Speed Dial number
	To select the System Speed Dial bin numbers
Program 17	To assign Speed Dial keys, if desired
Program 4	To set the Dial Tone Detection timer (this sets the time the system waits for dial tone before sending out a Speed Dial number or after a stored pause)

Program 19 ➠ Hunt Groups

Program 19 is initially set as follows:

- ***Circular Hunt Groups = None***
- ***Terminal Hunt Groups = None***
- ***UCD/ACD Hunt Groups = None***

Program 19 lets you set up Hunt Groups the Extension Hunting feature. You can create three types of Hunt Groups:

Circular Hunt Groups

To make Circular Hunt Groups, place extensions into a group in the order you want a call to hunt. Make the first and last extension in the group the same to form the circle (loop). An example of a Circular Hunt Group would be: 304, 305, 306, 307, 304. You must also assign a Hunt Type (01, 02, or 03) to each extension in the group (see the next page for an explanation of these Hunt Types). Each extension in the group can have a different Hunt Type.

Terminal Hunt Groups

To make Terminal Hunt Groups, place extensions into a group in the order you want a call to hunt. You must also assign a Hunt Type (01, 02, or 03) to each extension in the group (see next page for an explanation of these Hunt Types). Each extension in the group can have a different Hunt Type.

Notes:

- To have an unanswered outside call ring an attendant, make sure the last extension in the Terminal Hunt Group is an attendant extension with Hunt Type 00.
- To have an unanswered outside call ring all extensions that have ringing and acce on that line, make sure the last extension in the Terminal Hunt Group is a non-attendant extension with Hunt Type 00. In this case, an unanswered transfer recalls the transferer before ringing the other extensions.

Uniform Call Distribution (UCD) Hunt Groups and Automatic Call Distribution (ACD) Hunt Groups

To make UCD Hunt Groups, you assign a master extension number to the group, and a hunt type 04 or 05 (with type 05, you can also enter an overflow extension). Then you enter the members of the group in any order. For information on UCD Hunt Types, see the next page.

To form an Automatic Call Distribution (ACD) Hunt Group, first form a UCD group, then assign an ACD Supervisor Extension.

Note:

- The master extension number must be an uninstalled extension unless it is a master number for Voice Mail or Modem Pooling.

FOR FEATURE INFORMATION: See Hunting on page 158 and Automatic Call Distribution on page 154.

Program 19 (cont'd)

Filling Out the Program Record Form

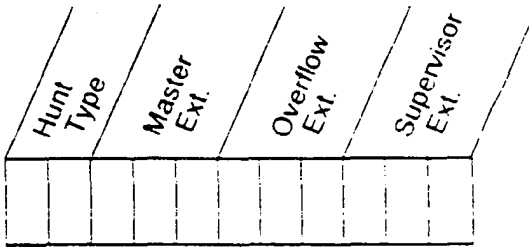
For Circular and Terminal Groups:	
In this box:	**Enter this data:**
Member Ext.	301-347
Hunt Type	01 - Busy/unanswered outside calls are sent through the group 02 - Busy/unanswered outside and Intercom calls are sent through the group 03 - Unanswered outside calls are sent through the group

For UCD/ACD Groups	
Hunt Type	04-UCD with no overflow 05-UCD with overflow
Master Ext.	301-347
Overflow Ext. (for type 05)	301-347 (do not use Superv. ext.)
Member Ext.	301-347
Supervisor Ext.	301-347

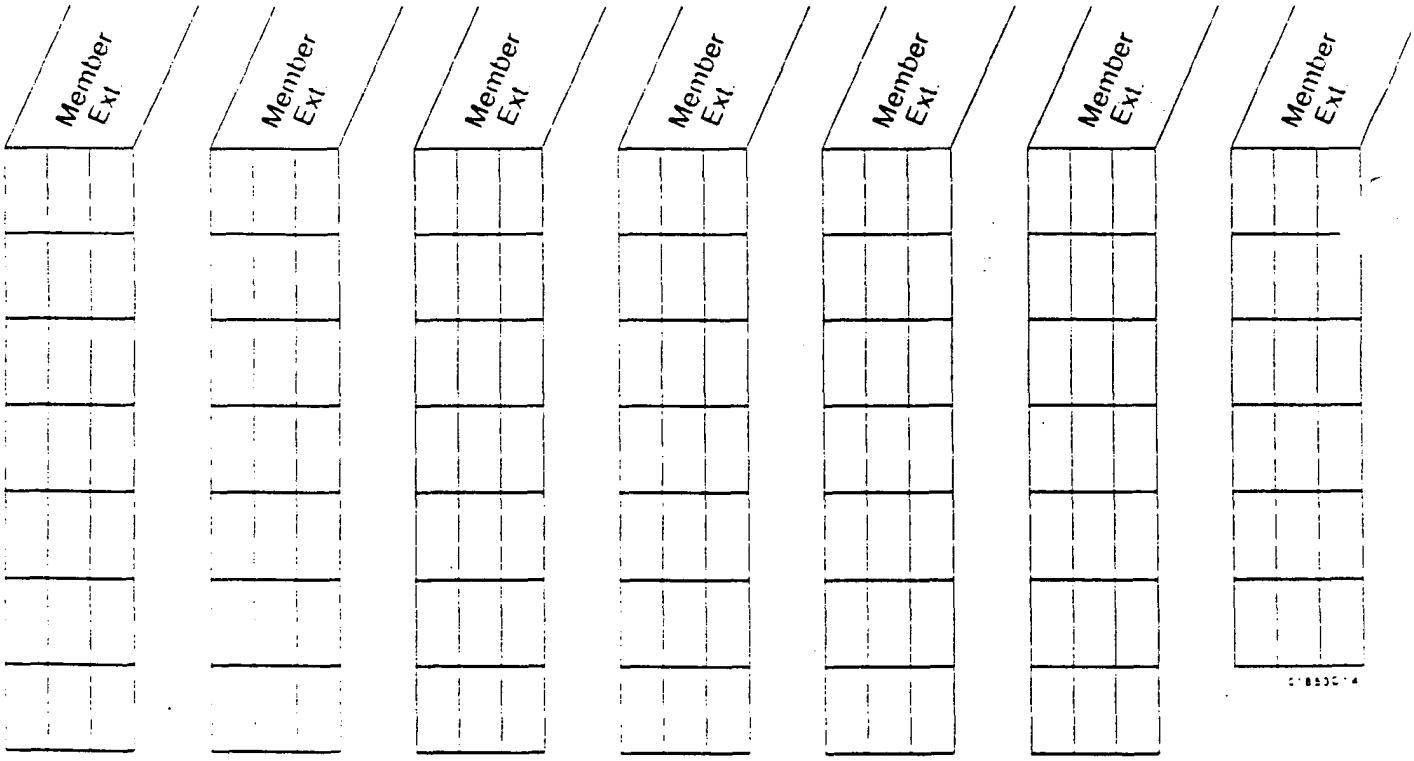
Program 19 (cont'd)

Filling Out the Program Record Form

Example
There is a type 05 ACD group for Sales with Master Ext. 306. Overflow Ext. 307, Supervisor Ext. 301 and Member Exts. 310, 311, 312, 313.



Group Name _____



Program 19 (cont'd)

Entering Data Into Memory

To enter Program 19 data for Circular/Terminal Hunt (types 01, 02, 03):

1. Enter program mode.	Press PGM# + dial SP + dial 5312 + press PGM#.
2. On a 30-Button phone, press key 19 to enter Program 19.	On a 28-Button phone, press DIAL to enter Program 19.
3. Dial 01, 02, or 03 to let the system know you want Circular or Terminal Hunting, not UCD.	It doesn't matter which of the three numbers you enter.
4. Dial Member Ext., press PGM#.	
5. Dial Hunt Type for the extension, press PGM#.	
6. Repeat steps 4-5 for all Member Exts.	
7. Select an option:	
- To program another group: Press PGM# until you see HUNT TYPE -, then go to step 3 (in any Program 19 procedure).	
- To exit Program 19: Press SAVE once.	To enter another program after exiting: Press its key.
- To exit the program mode: Press SAVE twice.	

Program 19 (cont'd)

Entering Data Into Memory

To delete a member of a Circular/Terminal Group:

1. Enter program mode. — Press PGM# + dial SP + dial 5312 + PGM#.
2. On a 30-Button phone, press key 19 to enter Program 19. — On a 28-Button phone, press DIAL to enter Program 19.
3. Dial 01, 02, or 03 to let the system know you want Circular or Terminal Hunt, not UCD. — It doesn't matter which of the three numbers you dial.
4. Dial first Member Ext. in group, press PGM#.
5. Press PGM# until you see the extension you want to delete.
6. If the extension is the last extension in a Terminal Hunt: Dial 300, press PGM#.
   OR
   If the extension is in the middle of the group: Dial the extension that comes after it, press PGM#. — If the group is 304, 305, 306 and you want to delete 305:
   - Press PGM# until you see 305 (as explained in step 5).
   - Dial 306, press PGM# (as explained in step 6).
7. Continue as follows:
   - Press PGM# until you see HUNT TYPE - .
   - Dial 01, 02, or 03, press PGM#.
   - Dial the extension you just deleted, press PGM#.
   - Dial 00 for Hunt Type, press PGM#.
8. Press SAVE until you exit the program mode.

To add a member to a Circular or Terminal Group:

1. Enter program mode. — Press PGM# + dial SP + dial 5312 + press PGM#.
2. On a 30-Button phone, press key 19 to enter Program 19. — On a 28-Button phone, press DIAL to enter Program 19.
3. Dial 01, 02, or 03 to let the system know you want Circular or Terminal Hunting, not UCD Hunt. — It doesn't matter which of the three numbers you dial.

Program 19 (cont'd)

Entering Data Into Memory

To add a member to a Circular or Terminal Group:

4. Dial first Member Ext., press PGM#.
5. Press PGM# until you see the extension before which you want to add an extension.

   For example, if the group is 304, 305, 306 and you want to add 307 before 306, press PGM# until you see 306.
6. Dial the extension you want to add, press PGM#. Dial its Hunt Type, press PGM#. Repeat for the extension after it.

   Using the example, above, do this step for 307, then 306.
7. Press PGM# until you see "HUNT TYPE-."
8. Press SAVE until you exit the program mode.

To enter (or delete) Program 19 data for UCD/ACD Hunt Groups (type 04, 05):

1. Enter program mode.

   Press PGM# + dial SP + dial 5312 + press PGM#.
2. On a 30-Button phone, press key 19 to enter Program 19.

   On a 28-Button phone, press DIAL to enter Program 19.
3. Dial Hunt Type, press PGM#.
4. Dial Master Ext., press PGM#.

   After step 4 or 5 (depending on Hunt type), you see the "MASTER EXT". prompt again.
5. **If using type 04:** Go to step 6.
   OR
   For using 05: Dial the overflow extension, press PGM#.
6. Press PGM# to move past "MASTER EXT." prompt.

   You see: UCD MEMBER

   OR
   To delete the entire group. Dial *, press SAVE, go to step 10.
7. To enter a Member Ext.: Dial Member Ext., press PGM#.

   To add a Member Ext. to an existing group: Press PGM# until you see: UCD MEMBER (without an extension). Then, dial the Member Ext., press PGM#.

   OR
   To delete a Member Ext., Dial * (you'll see the next member).

Program 19 (cont'd)

Entering Data Into Memory

8. Repeat step 7 for all members.
9. Press SAVE.
10. Select an option:
    - To program another group: Go to step 3 (in any Program 19 procedure).
    - To exit Program 19: Press SAVE.
    - To exit the program mode: Press SAVE twice.

To enter another program after exiting: Press its key.

To enter Program 19 data for ACD Supervisor:

1. Enter program mode. — Press PGM# + dial SP + dial 5312 + press PGM#.
2. On a 30-Button phone, press key 19 to enter Program 19. — On a 28-Button phone, press DIAL to enter Program 19.
3. Dial 00 for Hunt Type, press PGM#.
4. Dial Master Ext. for the Supervisor's group, press PGM#. — You see "UCD MEMBER."
5. Dial Supervisor Ext., press PGM#.
6. Select an option:
    - To program another Supervisor: Go to step 3.
    - To exit Program 19: Press SAVE.
    - To exit the program mode: Press SAVE twice.

To enter another program after exiting: Press its key.

To delete an ACD Supervisor:

1. Enter program mode. — Press PGM# + dial SP + dial 5312 + press PGM#.
2. On a 30-Button phone, press key 19 to enter Program 19. — On a 28-Button phone, press DIAL to enter Program 19.
3. Dial Hunt Type for Supervisor's group, press PGM#.

Program 19 (cont'd)

Entering Data Into Memory

4. Dial Master Ext. for Supervisor's Group, press PGM#.
5. Press PGM# until you see the Supervisor's extension number.
6. Dial *.
7. Press SAVE.
8. Select an option:
   - To delete more Supervisors: Go to step 3.
   - To exit Program 19: Press SAVE.
   - To exit the program mode: Press SAVE twice.

To enter another program after exiting: Press its key.

Understanding Related Programming

For UCD or ACD Groups:

Program 3	To select a VX Master Extension Number if the system is installed with Voice Mail
Programs 1,18 (I)	To set up a Class of Service (COS) that allows an ACD Supervisor; To assign that COS to the Supervisor extensions
Program 17	To assign Hotline or Call Coverage keys to the Supervisor's Console or Supervisor's extension for each ACD member and for the master extension
Program 4	To set the Camp-On timer
Program 12	To directly terminate a trunk to an UCD/ACD master extension

Intentionally Left Blank

Resetting the System

Resetting the System From an ONYX VS Phone

Program 20 ➠ System Initialization

Program 20 is initially set as follows:

N/A

Program 20 automatically assigns the initial (default) value to all the feature options in Programs 1-19. To quickly review the initial values of a program, turn to the first page of that program and refer to the shaded box in the upper left-hand corner.

FOR FEATURE INFORMATION: N/A

Filling Out the Program Record Form

N/A

Entering Data Into Memory

To use Program 20:

1. Enter program mode.	Press PGM# + dial SP + dial 5312 + press PGM#.
2. On a 30-Button phone, press key 20 to enter Program 20.	On a 28-Button phone, press MSG/FLASH to enter Program 20.
3. Dial Y to initialize and wait for the date and time.	When you see the date and time, this means the database has been initialized.
OR Dial N to exit Program 20.	To select another program: Press its key. OR To exit the program mode: Press SAVE.

Understanding Related Programming

N/A

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DTMF and DP Compatibility
See Dial Pulse (DP) and Dual Tone Multifrequency (DTMF) Compatibility.

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Hotline
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NITSUKO AMERICA
TELECOM DIVISION

Use this manual to learn about and install your system's hardware.

ONYX VS and ULTRACOM DCS

Hardware Manual

Part No. N1853INS01
Issue 1-1, March 1992
Printed in U.S.A.
VP/183

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TEL: 203-926-5400 FAX: 203-929-053

To learn about your system's hardware...

Read Section 1, System Description. You'll find out about each of the components required for a successful installation. Section 1 also contains a complete Parts List and Specifications table.

To connect your system's hardware...

Go to Section 2, Installation. This section guides you step-by-step through a complete installation.

To find out more about your system...

Read the following related manuals and user guides:

VS Administrator's Guide N1853ADG02
DCS Administrator's Guide N1863ADG01
Helps the system administrator understand and customize the system. Also describes the system programming entered at the administrator's telephone.
Software Manual N1850SWG03
Provides a complete reference for all the system's features and terminal programming options.
VS Multibutton Telephone Feature Handbook . N1850MFH03
DCS Multibutton Telephone Feature Handbook N1860MFH02
Gives detailed instructions for using every feature available at multibutton keysets.
VS Multibutton Quick Reference Guide N1850MBG02
DCS Multibutton Quick Reference Guide N1860MBG01
Contains abbreviated instructions for the most commonly used keyset features.
VS Single Line Quick Reference Guide N1852SLO01
DCS SL/Four Button Quick Reference Guide . . .N1862FBU01
Provides abbreviated instructions for the most commonly used features.
VS Program Record Form N1853PRF02
DCS Program Record Form N1863PRF01
Lets the system administrator keep a written record of the system's programming.
Standard Practices Manual N2710STD01
Contains general installation guidelines.

Section 1

System Description

Table of Contents

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ONYX VS
ULTRACOM DCS

Small Capacity Digital Communications Systems
Unique User Programmability
Simple, Powerful and Expandable

The ONYX VS and ULTRACOM DCS are the smallest members of the ONYX and ULTRACOM family of digital telephone systems. Modular design allows these systems to respond immediately to a business's changing requirements and growth. They are expandable from 12 extensions and four lines to 48 extensions and 16 lines. Like the rest of the ONYX and ULTRACOM family, the VS and DCS are unique in their adaptability, cost effectiveness and ease of use.

With ONYX VS and ULTRACOM DCS, the installer can quickly program new requirements or system configurations. Installation is simplified by:

- Two pair extension wiring
- Replaceable modules
- A single, modular, wall-mounted Common Equipment Unit (CEU).
- Program entry from a terminal or the attendant's telephone

For maximum reliability and cost-effectiveness, ONYX VS and ULTRACOM DCS use advanced digital architecture. This design ensures non-obsolescence. The ONYX VS and ULTRACOM DCS fully integrate voice and data, without a new and expensive wiring network.

Each telephone is user-programmable. User programmability makes each phone a self-tailored communications tool. Employees can personalize their telephones simply by pressing a few keys. Additionally, employees can easily access a vast array of communications features.

Common Equipment Unit (VS P/N 88500, DCS P/N 89500)

The Common Equipment Unit (CEU) is the control center for the system. The CO Modules, Station Modules, AUX Module and power supply all plug into the CEU. An eight line by 24 extension system requires one CEU. If you want more than eight lines or 24 extensions, install a second CEU. In a two-CEU system, one CEU is the main and the other is the expansion. The standard CEU kit (VS P/N 88501, DCS P/N 89501) supports four lines and 12 extensions.

Power Supply (P/N 60001)

The Power Supply provides the direct current (DC) voltages necessary to operate the system. Each CEU requires a separate Power Supply (2 maximum). The standard CEU kit (VS P/N 88501, DCS P/N 89501) includes one power supply.

CO (Outside Line) Module (P/N 88511)

The CO Module lets you connect up to four CO (outside) lines to the system. You can install two CO Modules on each CEU. The CO Module is compatible with loop start, DTMF or Dial Pulse lines. The maximum number of outside lines is 16 (i.e., two CO Modules per CEU). The standard CEU kit includes one CO Module.

External Page, Music on Hold (for internal extensions) and Background Music use the fourth line circuit on the first CO Module. Music on Hold for outside calls only doesn't require a line circuit.

Station Module (P/N 88521)

The Station Module (P/N 88521) connects up to 12 system telephones to the CEU. The maximum number of extensions is 48 (i.e., two Station Modules per CEU). The standard CEU kit includes one Station Module.

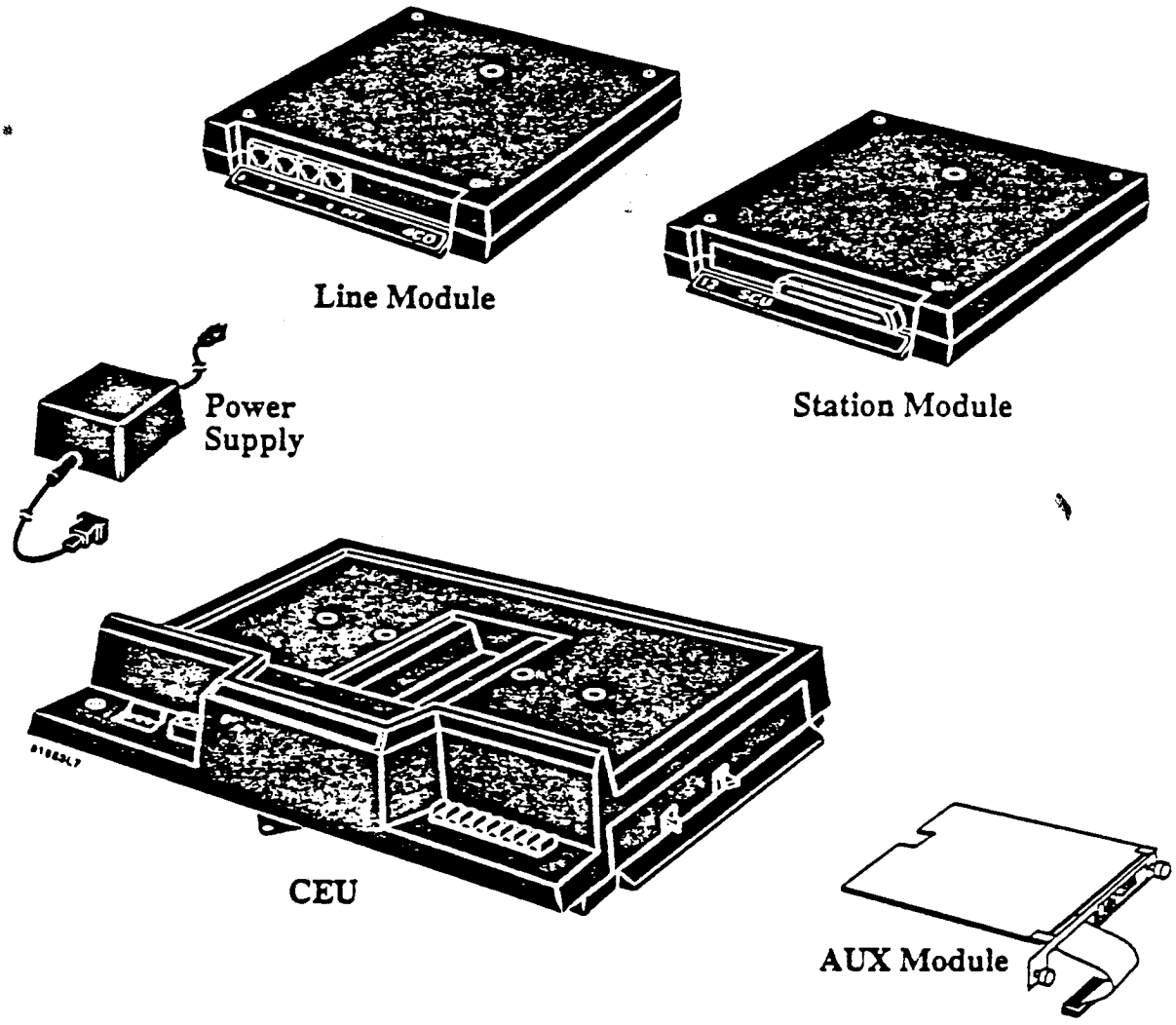


Figure 1-1 COMMON EQUIPMENT

AUX Module

The AUX Module gives the system:

- Automatic Route Selection
- Automatic Call Distribution Supervisor Displays
- Centrex Feature Keys
- Full Directory Dialing
- Modular jacks for connecting two CEUs
- Names for Speed Dial blocks 1-50
- Real Time Clock (battery backed-up)
- Speed Dial blocks 29-57
- Station Message Detail Recording (SMDR)
- Support for the Mini Data Unit
- Terminal Programming
- Verifiable Account Codes

You can also use the AUX Module to upgrade the CEU software. In a two-CEU system, one AUX Module is the main module and the other is the expansion. See the chart below for module part numbers.

System	Main	Expansion
VS	88525	88529
DCS	89525	88529

The ONYX VS system accommodates up to 48 telephones. The available types are (Figure 1-2):

- 30-Button Modular and Non-Modular Telephone
- 10-Button Modular Telephone
- Digital Single Line Telephone
- DSS Console (80 Button)

30-Button Telephones

The 30-Button Telephone is the system's most fully-featured telephone. With one-button access to a wide range of features, it is also the easiest to use. Three types of 30-Button Telephones are available:

30-Button Modular Telephone (P/N 88160A), featuring:

- Six fixed feature keys for the most commonly used features
- Up to 24 programmable keys for Hotline, Speed Dial, Direct Station Selection or selected features
- Dual mode (red/green) line keys that identify a user's own calls
- Easy-to-use dial pad with feature buttons
- Dial access to additional features
- Off-hook signaling with Voice Over

30-Button Modular Telephone with Handsfree (P/N 88161A), featuring

- All the capabilities of the 30-Button Modular Telephone
- Full Speakerphone (Handsfree) operation

30-Button Modular Telephone with Display and Handsfree (P/N 88163A), featuring

- All the capabilities of the 30-Button Modular Telephone
- Alphanumeric Display that provides feature status messages[1]
- Full Speakerphone (Handsfree) operation

30-Button Non-Modular Telephone (P/N 88260B), featuring:

- All the features of the 30-button Modular telephone
- Red LEDs in all keys

30-Button Non-Modular Telephone with Handsfree (P/N 88261B), featuring

- All the capabilities of the 30-Button Non-Modular Telephone
- Full Speakerphone (Handsfree) operation

[1] Each CEU can support six modular display telephones (including Attendant Telephone P/N 88254), or any number of non-modular display telephones (48 max.).

30-Button Telephones (Cont'd)

30-Button Non-Modular Telephone with Display and Handsfree (P/N 88263B), featuring

- All the capabilities of the 30-Button Non-Modular Telephone
- Alphanumeric Display that provides feature status messages[1]
- Full Speakerphone (Handsfree) operation

All extension instruments use a single station position (port).

Attendant Telephone (P/N 88254)

Attendants can use the Attendant Telephone (P/N 88254) as an alternative to a 30-button display telephone. The Attendant Telephone provides.

- All the capabilities of the 30-Button Modular Telephone, with 18 programmable keys
- Alphanumeric Display that provides feature status messages[1]

10-Button Modular Telephones

The 10-Button Modular Telephone gives users many convenient features. Two types of 10-Button Modular Telephones are available:

10-Button Modular Telephone (P/N 88155), featuring

- Six fixed feature keys for the most commonly used features
- Up to four programmable keys for Hotline, Speed Dial, Direct Station Selection or selected features.
- All other features of the 30-Button Modular Telephone (P/N 88160A).

10-Button Modular Telephone with Handsfree (P/N 88154), featuring

- All the capabilities of the 10-Button Modular Telephone
- Full Speakerphone (Handsfree) operation

[1] Each CEU can support six modular display telephones (including Attendant Telephone P/N 88254), or any number of non-modular display telephones (48 max.).

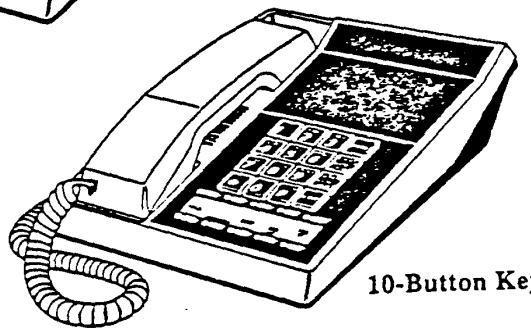
Telephone Modules

With the modular telephones, there is no need to replace a phone to upgrade its performance. With the addition of a plug-in module, the 10-button telephone expands to a 30-button phone. Additional modules add the speakerphone and display features.

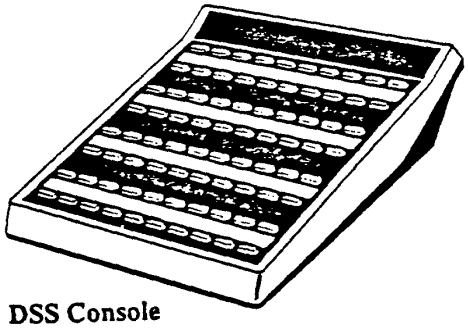
You can add the following modules to any modular telephone:

- **Handsfree (Speakerphone) Module (P/N 88170)**, to add Handsfree to any non-handsfree modular phone
- **20-Button Module (P/N 88171)**, to convert a 10-button modular telephone to a 30-button modular telephone
- **20-Button Module with display (P/N 88176)**, to convert a 10-button modular telephone to a 30-button modular telephone with display

30-Button Keyset



10-Button Keyset



DSS Console

Digital Single
Line Telephone

Figure 1-2 ONYX VS TELEPHONES

The ULTRACOM DCS accommodates up to 48 telephones. The available types are (Figure 1-3):

- Multibutton Keyset
- Executive Display Multibutton Keyset
- Four Button Telephone
- Digital Single Line Telephone
- DSS Console (80 Button)

Multibutton Keysets

The multibutton keyset is the system's most fully-featured telephone. With one-button access to a wide range of features, it is also the easiest to use. There are two types of multibutton keysets:

Multibutton Keyset (P/N 89758A), featuring:

- Seven fixed feature keys for the most commonly used features
- Up to 21 programmable keys for Hotline, Speed Dial, Direct Station Selection or selected features
- Easy-to-use dial pad with feature buttons
- Dial access to additional features
- Off-hook signaling with Voice Over
- Full Speakerphone (Handsfree) operation

Executive Display Multibutton Keyset (P/N 89759A), featuring:

- All the capabilities of the Multibutton Telephone
- Alphanumeric Display that provides feature status messages[1]

Four Button Telephone (P/N 89765A)

The Four Button Telephone gives users many convenient features. The Four Button Telephone provides:

- Four feature keys for the most commonly used features
- Easy-to-use dial pad with feature buttons
- Dial access to additional features
- Handsfree Answerback (Handsfree reply) for Intercom calls

1 Each CEU can support a maximum of six display telephones.

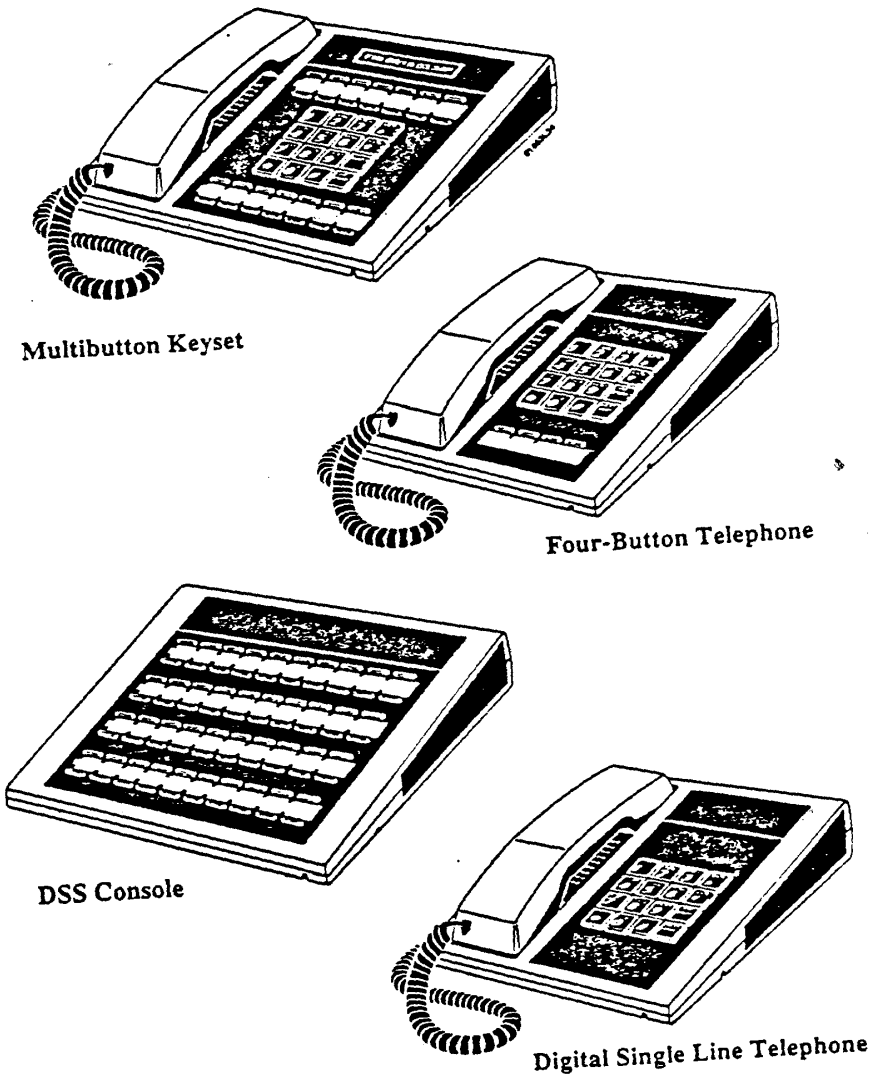


Figure 1-3 ULTRACOM DCS TELEPHONES

DSS Console, 80 Button (VS P/N 88555, DCS P/N 89764A)

The 80-Button DSS/BLF Console provides one-button access to:

- Extensions (Hotline)
- Park Orbits
- Outside Lines
- Page zones
- DSS Console Speed Dial
- Release (key 80)

The DSS Console is a dual port device, using adjacent even and odd numbered ports. You can have as many DSS Consoles as there are available dual ports. The system allows, however, only 16 unique DSS Console key configurations. Always install the DSS Console in the even numbered port. ***Do not install a DSS Console in the expansion cabinet.***

Digital Single Line Telephone (VS P/N 88250, DCS P/N 89762A)

The Digital Single Line Telephone gives basic telephone service to users that don't need the convenience of keysets. The Digital Single Line Telephone provides dial access to many system features.

Analog Station Interface (P/N 89749)

The Analog Station Interface (ASI) provides standard 2500 type DTMF service at any extension port. Use the ASI when the system requires a limited number of analog interfaces -- without reducing the number of outside lines. The ASI lets you easily connect auxiliary equipment such as Integrated Voice Messaging.

ASIs require DTMF detection (i.e., receivers) for outgoing calls. ASI P/N 89749 has its own DTMF receiver.

2500/500 Sets

You can connect a 2500 type telephone to any ASI device for single line telephone service. You can also connect a 500 or 2500 set as a power failure telephone. Each CO Module allows for one power failure telephone.

Wall/Desk Mounting Kit

The wall-mounting kit allows wall mounting of system telephones. Each kit contains the hardware necessary to mount one telephone. You can also use the wall-mounting kit as a telephone tilted desk stand. The following wall-mounting kits are available:

- VS wall-mounting kit (P/N 88179)
- DCS Multibutton Keyset wall-mounting kit (P/N 89769)
- DCS Single Line/Four Button wall-mounting kit (P/N 89768)

Tractor Feed Label Inserts (VS P/N 88257, DCS P/N 89257)

Use the Tractor Feed Label Inserts to print your own customized telephone labels. To print the label inserts, you must have:

- An Epson FX compatible printer
- An AUX Module

Music Source

Background Music and Music on Hold require a customer-provided music source (i.e., tape deck, receiver, etc.). If you have a two-CEU system, you can use the same music source for both CEUs. Or, you can use a separate music source for each CEU. The music source must meet the following specifications:

Input Impedance:	100 K Ohms
Maximum Input:	-10 dBm

Headset

Any extension can have a headset (refer to the Headset Compatibility feature). The recommended headset is the Plantronics Supra Star Mate (Model MH0530-1).

External Paging Equipment

Each CEU provides one port for external Paging. You can connect these ports to customer-provided external Paging equipment. In the main CEU, the external Paging output is for All Call Paging. In the expansion CEU, the external Paging output is for Paging zone 1.

The Paging equipment must be compatible with the following system specifications:

Output Impedance:	600 Ohms
Maximum Output:	+3 dBm

External Alerting Device

Each CEU has an external relay that you can connect to a customer-provided alerting device. These devices are typically loud ringers or bells that provide ringing in large or noisy areas.

In the main CEU, the external relay corresponds to software Relay 01. In the expansion CEU, the external relay corresponds to software Relay 02.

The equipment you connect to the external relays must be compatible with the following system specifications:

Maximum Load:	60 mA @ 30 V DC
	10 mA @ 90 V AC

SMDR Printer/ Programming Terminal

The AUX Module provides an RS-232-C serial port for connecting a Station Message Detail Recording (SMDR) printer or optional programming terminal. The customer-provided printer/terminal selected should be a standard ASCII RS-232-C device. The printer or terminal connects to the AUX Module with customer-provided RS-232-C cable (see page 2-24).

Modem

If you want the system to have Remote Maintenance and Programming capability, you'll need two 103 or 212A Hayes compatible modems. Install a modem at the off-site service center and near the system CEU. The on-site modem plugs into the RS-232-C serial port on the AUX Module. You'll also need a DCE-DCE Adaptor (P/N 89079) for the modem connected to the AUX Module.

Backup and Online Software Disk (P/N 88216)

With the Backup and Online Software Disk, you can:

- Backup (save) the system programming to disk
- Upload (send) previously saved programming back to the system
- Program the system directly from the PC

The Backup and Online Software Disk requires an IBM compatible PC. The PC must have:

- An RS-232-C serial port
- At least 256K RAM
- DOS version 2.1 (or higher)

The Backup and Online option requires an AUX Module. Consult your sales representative for additional details.

Battery Backup

The CEU provides connection for a customer-provided battery backup unit. The recommended battery backup unit is the Valcom VB260. The VB260 provides short term (approximately two hours) battery backup if AC power fails.

Installation Backboard

The common equipment mounts on an installation backboard. This backboard should be 3/4" exterior grade plywood. The minimum recommended size for a two-CEU system is 4' x 5'.

RFI Suppressor Beads

The power supply cable and the optional equipment terminal strip require RFI suppressor ferrite bead assemblies. Each assembly consists of two split beads and a plastic housing. Two RFI bead assemblies are included with each CEU

RJ11C Telco Interface

The line ports in each CO Module connect to Telco RJ11C interface jacks. The site must have one RJ11C for each CO Module port used for outside lines. Make a record of the phone numbers associated with each RJ11C.

66M1-50 Connecting Blocks

Each Station Module should have two 66M1-50 connecting blocks. One block, the extension block, connects to each Station Module. The second block, the cross-connect block, connects the extensions. During installation, you cross-connect between the two blocks.

Bridging Clips

Each extension and cross-connect block requires 50 bridging clips. Bridging clips simplify troubleshooting.

Modular Jacks

Each extension and power failure telephone requires a 625A or 625F modular jack. The power failure telephones require two additional 6-pin jacks. All jacks must use screw type terminals. Do not use modular jacks with push-on type terminals.

Cables

The system requires the cables listed below.

- **25-Pair cable** connects each Station Module to its extension block. The cable end that plugs into the Station Module must be a Type 57 female connector. The other cable end depends on the type of extension block you use.
- **Station cable** connects each extension modular jack to the cross-connect blocks. Station cable is two-pair twisted, insulated, jacketed, solid copper wire. Station cable can be 22-26 AWG, depending on the length of the cable run. See Specifications on page 1-21.
- **Cross-connect cable** connects the extension blocks to the cross-connect blocks. Cross-connect cable is single-pair, twisted, insulated, non-jacketed solid copper wire. Cross-connect cable is normally 22-26 AWG.
- **Modular line cords** (four-conductor) connect each extension to its modular jack. A Modular line cord comes in the box with each phone. Modular line cords also connect each Telco RJ11C to each CO Module line port. Each power failure telephone uses a four-conductor line cord and an additional six-conductor line cord for the CO Module.
- **Ground Wire** connects each CEU to verified earth ground. Ground wire is normally 12-14 AWG insulated copper wire.

Surge Protector

Each power supply must use a power line surge protector. Refer to the Standard Installation Practices Manual (P/N N2710STD01) for recommended types.

The Data Products allow your system to link (network) computers, printers, terminals and other data devices. Refer to the system Data Products Manual for complete installation and programming details.

Data Module (P/N 88400)

With the Data Module, any extension position can connect to an RS-232-C compatible device. When bridged to a telephone, Data Module users can:

- Place voice calls (using just the telephone)
- Place data calls (using just the Data Module)
- Place simultaneous voice and data calls (using the module and the telephone).

DATAPORT PCB (P/N 89460)

The DATAPORT PCB is similar in function to the Data Module. Anything you can do from a terminal connected to a Data Module you can do from a terminal connected to a DATAPORT. The DATAPORT has DIP configuration switches to customize its RS-232-C parameters. Each DATAPORT PCB supports two connected devices. The DATAPORT PCB plugs into a Mini Data Unit (see below). ***You can connect a Mini Data Unit only if your system has an AUX Module.***

Modem Pooling PCB (P/N 89465)

The Modem Pooling PCB allows users to call data devices outside of the system (such as bulletin boards or off-site computers). The system automatically assigns a modem from this PCB to the outside data call. The system modem communicates with the modem connected to the off-site (remote) device. Each Modem Pooling PCB has two modem circuits. The Modem Pooling PCB plugs into a Mini Data Unit (see below). ***You can connect a Mini Data Unit only if your system has an AUX Module.***

Mini Data Unit (P/N 89408)

The Mini Data Unit holds up to two DATAPORT PCBs, two Modem Pooling PCBs, or one of each. It can network up to four devices or provide four modem circuits. Like the Data Module, the Mini Data Unit plugs into extension jacks, not the CEU. Because of its small size, you can place the unit on a desk top. You can also mount it on the wall.

With each Mini Data Unit you'll also need a Mini Data Unit Power Supply (P/N 89409). ***You can connect a Mini Data Unit only if your system has an AUX Module.***

Description	Part No.
The Common Equipment	
ONYX VS Common Equipment Unit (CEU)	88500
ONYX VS CEU 4 x 12 kit (4 lines and 12 extensions)	88501
Consisting of...	
(1) CEU Base, P/N 88500	
(1) CO Module, P/N 88511	
(1) Station Module, P/N 88521	
(1) Power Supply, P/N 60001	
ULTRACOM DCS Common Equipment Unit (CEU)	89500
ULTRACOM DCS CEU 4 x 12 kit (4 lines and 12 extensions)	89501
Consisting of...	
(1) CEU Base, P/N 89500	
(1) CO Module, P/N 88511	
(1) Station Module, P/N 88521	
(1) Power Supply, P/N 60001	
Power Supply	60001
CO Module	88511
Station Module	88521
ONYX VS Aux Module (main)	88525
ULTRACOM DCS Aux Module (main)	89525
Aux Module (expansion)	88529
ONYX VS Telephones	
Modular Telephones (red and green LEDs)	
30-Button Keyset without Handsfree	88160A
30-Button Keyset with Handsfree	88161A
30-Button Keyset with display and Handsfree	88163A
10-Button Keyset with Handsfree	88154
10-Button Keyset without Handsfree	88155
Modules for Modular Phones	
Handsfree Module	88170
20-Button Module	88171
20-Button Module with display	88176
Attendant Telephone	88254
Non-Modular Telephones (red LEDs only)	
30-Button Keyset without Handsfree	88260B
30-Button Keyset with Handsfree	88261B
30-Button Keyset with display and Handsfree	88263B
ULTRACOM DCS Telephones	
Multibutton Keyset	89758A
Executive Display Multibutton Keyset	89759A
Four Button Telephone	89765A

Other Station Equipment

- ONYX VS DSS Console (80 button) 88555
- ONYX VS Digital Single Line Telephone 88250
- ULTRACOM DCS DSS Console 89764A
- ULTRACOM DCS Digital Single Line Telephone 89762A
- Analog Station Interface (ASI), with DTMF receiver 89749
- 2500/500 Sets[1]
- VS Wall/Desk Mounting Kit 88179A
- DCS Multibutton Keyset Wall/Desk Mounting Kit 89769
- DCS Four Button/Single Line Wall/Desk Mounting Kit 89768
- VS Tractor Feed Label Inserts 88257
- DCS Tractor Feed Label Inserts 89257

Optional Equipment

- Music Source[1]
- Headset[1]
- External Paging Equipment[1]
- External Alerting Device[1]
- SMDR Printer/Programming Terminal[1]
- Modem (103 or 212A Compatible)[1]
- DCE-DCE Adapter 89079
- Backup and Online Software Disk 88216
- Battery Backup[1]

Installation Equipment

- Installation Backboard[1]
- RFI Suppressor Kits (Provided with CEU)
- RJ11C Telco Interface[1]
- 66M1-50 Connecting Blocks[1]
- Bridging Clips[1]
- Modular Jacks[1]
- 25-Pair Cable[1]
- Station Cable[1]
- Cross-connect Cable[1]
- Modular Line Cords, four conductor[1]
- Modular Line Cords, six conductor[1]
- Modular Line Cords, eight conductor[1]
- Ground Wire[1]
- Surge Protectors (One for each CEU)[1]

Data Products

- Data Module 88400
- DATAPORT PCB 89460
- Modem Pooling PCB 89465
- Mini Data Unit 89408
  - Mini Data Unit Power Supply 89409

[1] Item not available from Nitsuko America.

VS Spare Parts

CEU Base	88500
Handset and Cord Assembly (K2)	88185H
Handset and Cord Assembly (K1)	89085H
Handset Coil Cord (6')	12442
Handset Coil Cord (9')	12443
Handset Coil Cord (13')	12444
Telephone Label Insert	88157
Keyset Directory Tray (without card)	88158
Keyset Directory Tray Card	88159
Four-Conductor Line Cord (7')	89086
Four-Conductor Line Cord (14')	89087
Four-Conductor Line Cord (25')	89088
DTS Paper Tray Module	88172

DCS Spare Parts

CEU Base	89500
Handset and Cord Assembly (K2)	89780H
Handset Coil Cord (6')	85326
Handset Coil Cord (9')	85323
Handset Coil Cord (13')	85324
Telephone Label Insert (Multibutton)	89157
Telephone Label Insert (Four Button)	89158
Keyset Directory Tray (without card)	89788
Keyset Directory Tray Card	89787
Four-Conductor Line Cord (7')	89086
Four-Conductor Line Cord (14')	89087
Four-Conductor Line Cord (25')	89088

CEU Specifications:

	Lines	Stations
Main CEU	8	24
Expansion CEU	8	24
Total	16	48

System Capacity:

Power Failure Cut-Through Circuit	1 per CO Module
Talk Timeslots (Intercom/lines)	Non-blocking
DTMF Tone Duration (manual dial)	256 ms on/128 ms off
DTMF Tone Duration (speed dial)	128 ms on/128 ms off
Internal Page Zones	7 (and all-call)
External Page Zones	1 output per CEU
External Control Relay Circuits	1 set of contacts per CEU
Special Trunk Interface Units:	1
- OPX/DID Circuits	8
- Tie Lines	7

Electrical Specifications:

AC Input:
115 V AC +/- 10% @ 57-63 Hz, Dedicated 15 A circuit.

Grounding Requirements:
Copper wire, continuous, No. 14 AWG, or larger

Power Requirements:
75 VA maximum (per CEU)

Heat Dissipation:
TBD

External Control Relay Contact Rating:
Max. Load: 60 mA @ 30 V DC
10 mA @ 90 V AC
Maximum Initial Contact Resistance:
50 m OHMS

Background Music\Music on Hold:
Input Impedance: 100 K OHMS
Maximum Input: -10 dBm

External Zone Paging:
Output Impedance: 600 OHMS
Max. Output: +3 dBm

Cable Requirements:

From CEU to Keysets or ASI:
Four-conductor (two-pair twisted station cable)
1,500 feet w/No. 26 AWG
2,000 feet w/No. 24 AWG
2,500 feet w/No. 22 AWG

From ASI to connected OPX device:
100 feet using 22 AWG four-conductor
Use 25-pair cables with Type 57 female connectors to connect to Station Modules.
Use four conductor modular line cords to connect to CO Modules.
Use multiconductor "riser cables" to an Intermediate Distribution Frame (IDF) when required.

Mechanical Specifications:

	Width	Height	Depth	Weight
CEU	14 5/16" 39.2 cm	9 1/4" 23.7 cm	3" 7.6 cm	3 lb, 11 oz 1.7 kg
CO Module	6 3/4" 17.1 cm	6 3/4" 17.2 cm	1 1/2" 3.8 cm	1 lb .5 kg
Station Module	6 3/4" 17.1 cm	6 3/4" 17.1 cm	1 1/2" 3.8 cm	1 lb .7 kg
Power Supply	2 13/16" 7.2 cm	5" 12.7 cm	2 3/4" 7.0 cm	3 lbs 1.4 kg
Keysets	3 1/2" 8.9 cm	7 1/2" 19.1 cm	10 1/8" 25.8 cm	2.7 lb 1.3 kg

NOTE: Weight of CEU is with modules not installed.

Environmental Specifications:

Refer to the Standard Practices Manual (P/N N2710STD01).

FCC Registration Information:

Model:	ONYX VS, ULTRACOM DCS
Manufacturer:	Nitsuko America
Load number (DOC)	20
FCC Part 15 Registration:	Class A
Sample FCC Registration Number:	1ZDTHA-65325-MF-E

(Refer to the label on the CEU for FCC Registration number.)

Type of Interface	USOC Jack Connector	REN/Service Code	Facility Interface Code
2-Wire Loop	RJ11C	2.5B	02LS2

Section 2

Installation

Table of Contents

List of Illustrations

List of Tables

Before Installing

Step 1 ➤ Unpack the equipment.

Unpack the equipment and check it against your equipment lists. Inspect for physical damage. If you have any questions about the quantity or function of the equipment received, review Section 1 of this manual.

Step 2 ➤ Check your tools.

In addition to your equipment, make sure you have the appropriate tools for the job. These tools should include:

- Lineman's test set
- Punch down (impact) tool
- Digital voltmeter (Fluke 8012A or equivalent)

Step 3 ➤ Make sure you have a building plan showing the location of the common equipment and the extensions.

Mounting the CEUs

To mount the CEUs:

Step 1 ➤ Install the backboard using suitable fasteners.

Step 2 ➤ Have the telco install the RJ11C interface connectors to the left of the CEU locations (Figure 2-1).

Step 3 ➤ Using Figure 2-1 as a guide, mark the mounting holes for the CEUs.

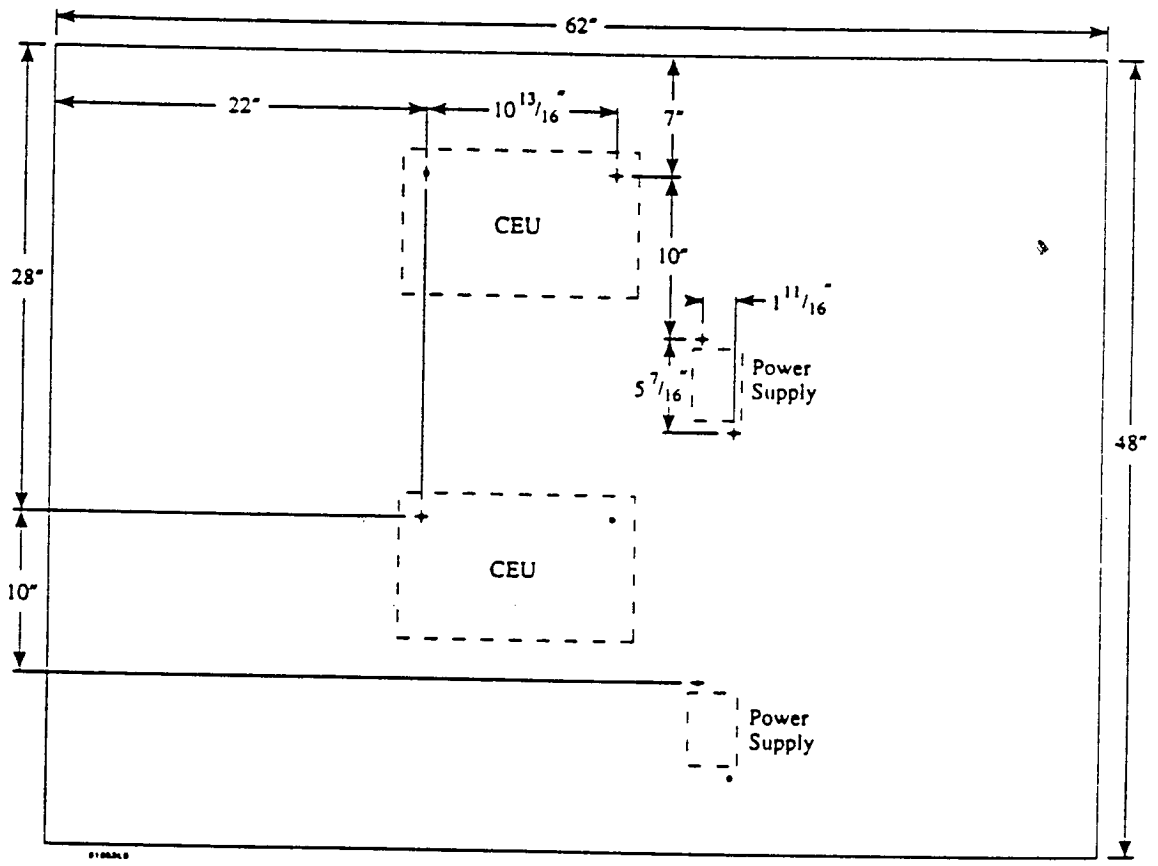


Figure 2-1 COMMON EQUIPMENT LOCATION

Mounting the CEUs (Cont'd)

Step 4 ➤ Start pilot holes (Figure 2-2) and insert suitable fasteners.

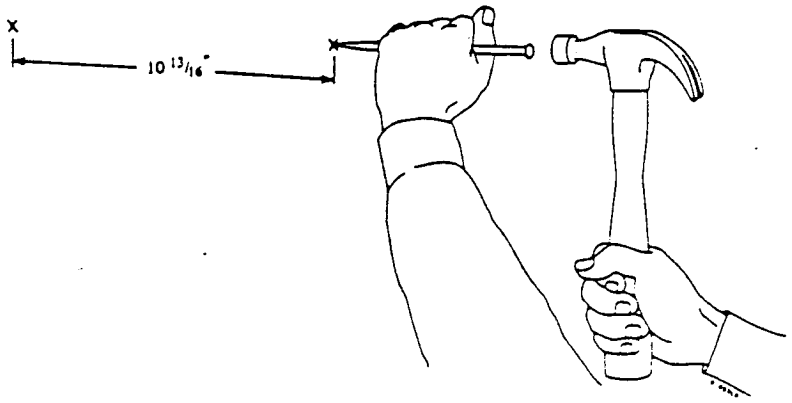


Figure 2-2 LOCATING THE CEU MOUNTING HOLES

Step 5 ➤ Using the plastic screw gauge provided with your CEUs (Figure 2-3), tighten the CEU mounting screws until they just touch the screw gauge.

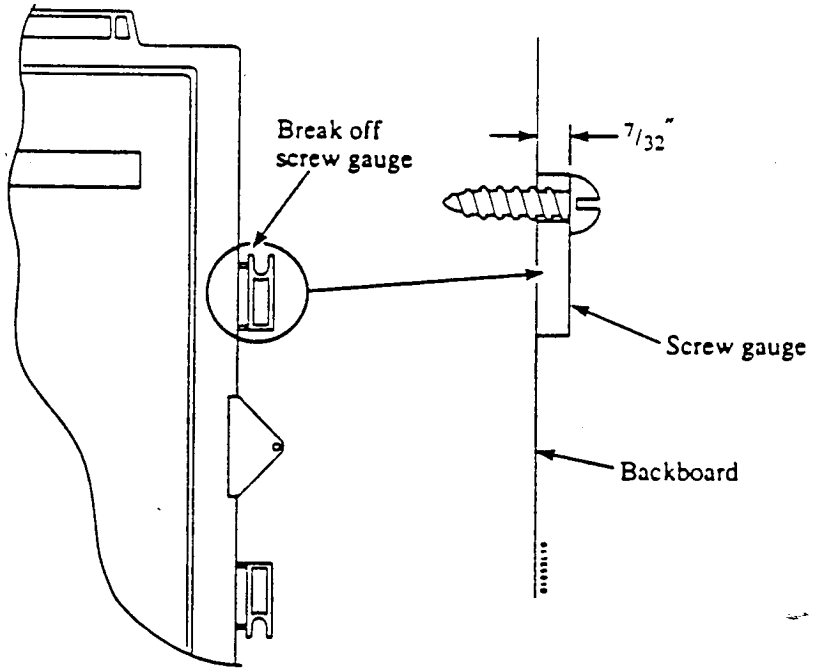


Figure 2-3 USING THE SCREW GAUGE

Mounting the CEUs (Cont'd)

Step 6 ➤ Remove the screw gauge.

Step 7 ➤ Hang the CEUs on their mounting screws (Figure 2-4).

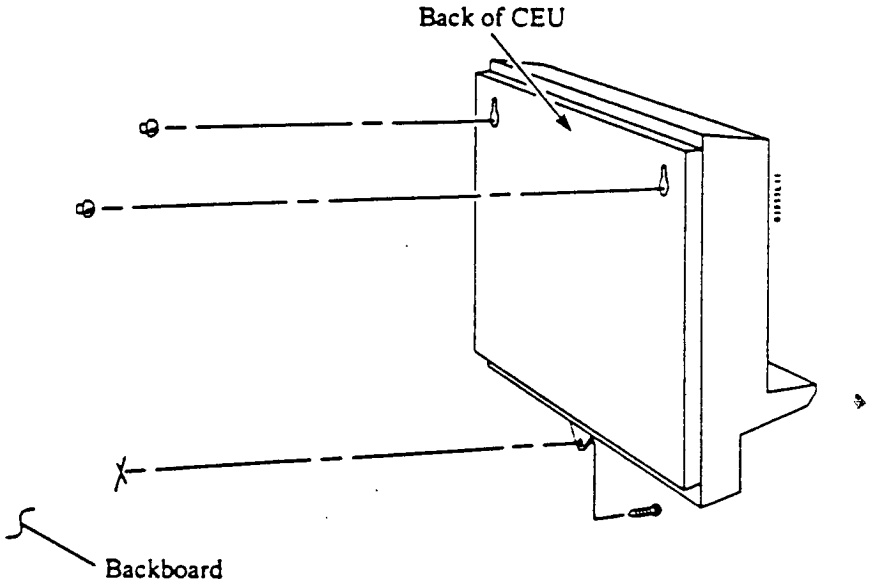


Figure 2-4 HANGING THE CEUs

Step 8 ➤ Install the third mounting screw in each CEU (Figure 2-4). This screw keeps the CEU from inadvertently sliding off the wall.

Mounting the Power Supplies

To mount the Power Supplies:

Step 1 ➤ Using Figure 2-1 as a guide, mark the mounting holes for the power supplies.

Step 3 ➤ Start pilot holes for the power supplies.

Step 4 ➤ While holding a power supply against the wall, insert and tighten its fasteners. Repeat for the second power supply.

Installing the RFI Suppressor Beads on the Power Supply Cable

You must install two RFI Suppressor ferrite beads (one assembly) on the power supply cable before plugging it into the CEU.

To install the RFI Suppressor beads (Figure 2-5):

Step 1 ➤ Form three loops in the power supply cable within 3" of the connector that plugs into the CEU.

Step 2 ➤
- Insert the beads in the plastic cover.
- Snap on the plastic cover around the loops.

Step 3 ➤ Plug the power supply connector into the CEU. *Do not plug the power supply into the AC receptacle.*

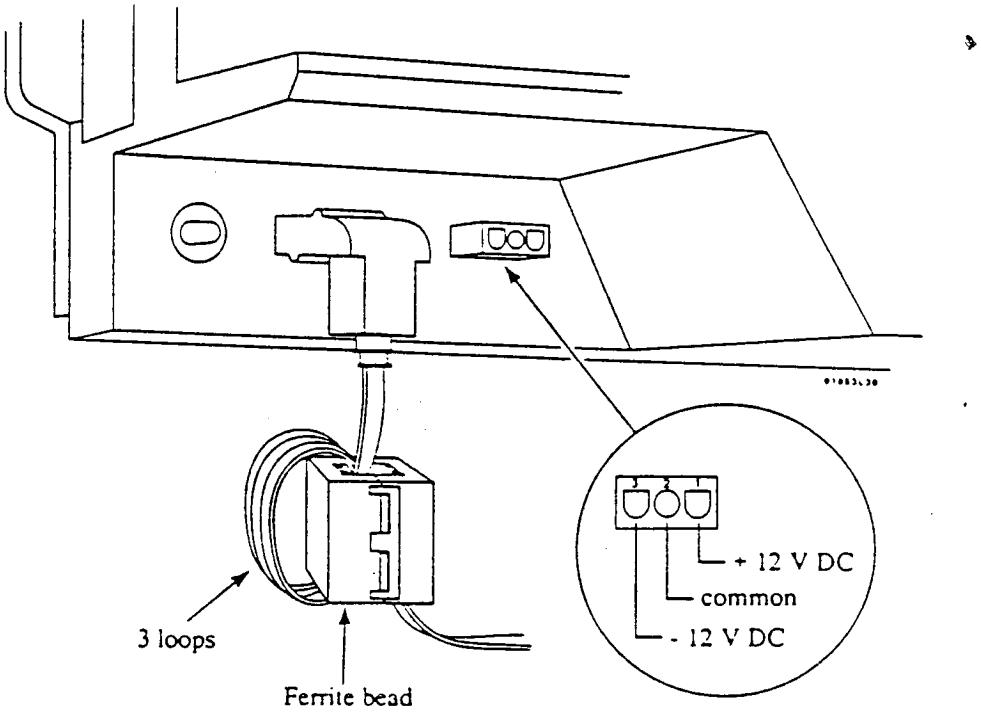


Figure 2-5 POWER SUPPLY RFI SUPPRESSOR BEADS

Installing the Modules

The CO Modules always install on the left side of the CEU. The Station Modules always install on the right side of the CEU. Remember, the first (inside) station module in the main CEU should be a 12 Station Module. Also, External Page, Music on Hold (for internal extensions) and Background Music use the fourth line circuit on the first CO Module.

CAUTION: Never install the modules with the power supply plugged in.

To install the CO and Station Modules (Figure 2-6):

Step 1 ➤ Place the two CO or Station Modules together. Make sure the ground plug on the outside module plugs into the ground receptacle in the inside module.

Step 2 ➤ Line up the modules you placed together in step 1 with the CEU pilot holes.

Step 3 ➤ Pass the long screw provided through each pair of modules and tighten the modules against the CEU. This holds the modules in place while you plug in the ribbon cables.

If you have two modules on the same side of the CEU, use the long screw provided. If you have only one module on a side, use the short screw.

Step 4 ➤ Grasp the stiffeners and plug the module ribbon cables firmly into the CEU connectors. The inside modules plug into the outside connectors. The outside modules plug into the inside connectors. ***Do not twist or crush the module ribbon cables.***

Step 5 ➤ For each pair of modules:

- Remove the screw that holds the modules in the pilot holes.
- Line up the modules in their final mounting position. The inside module ground plugs must fit into their receptacles in the CEU.
- Tighten the screws in the final mounting holes.

Installing the Modules (Cont'd)

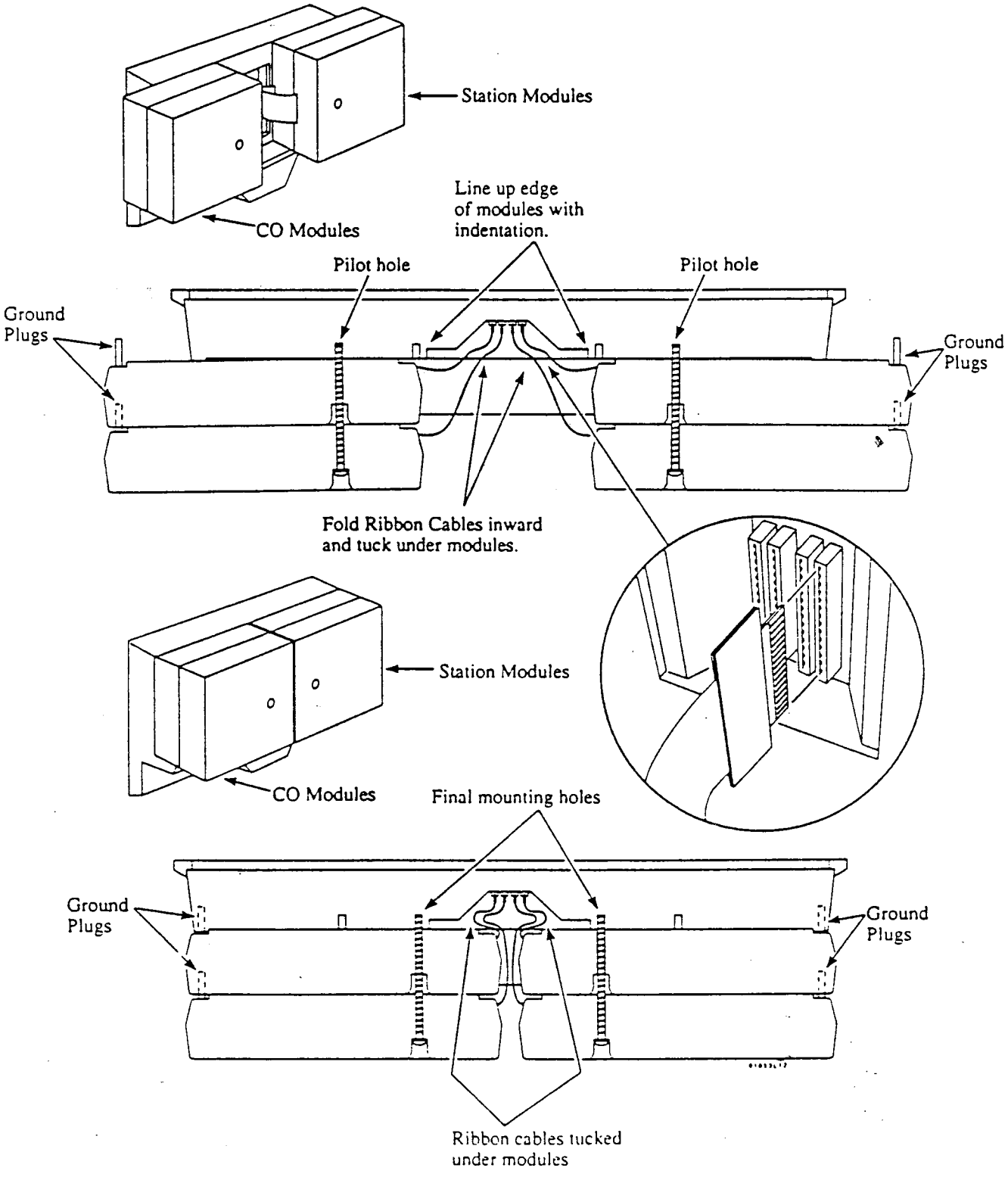


Figure 2-6 INSTALLING THE CO AND STATION MODULES

Installing the Modules (Cont'd)

To install the AUX Module (Figure 2-7):

Step 1 ➤ Make sure the CEU power supply is unplugged. You'll need at least 7" of clearance between the CEU and any object to the right of the CEU.

Step 2 ➤ With the CEU ejector tabs closed, slide the AUX Module on the guides part way into the CEU.

Step 3 ➤
- Plug the AUX Module in until the ejector tabs clear the AUX Module front panel.
- Open the CEU ejector tabs by pushing them outward.
- Firmly seat the AUX Module ribbon cable before pushing the module all the way in. Push on the ribbon cable connector until the ejector tabs close.

Step 4 ➤ Push the AUX Module all the way in and tighten the two thumbscrews.

If you plug an AUX Module into an existing system without reinitializing, the level 2 terminal programming password is DCH. If you reinitialize, the default programming is reinstated. Consult your software manual for the terminal programming passwords.

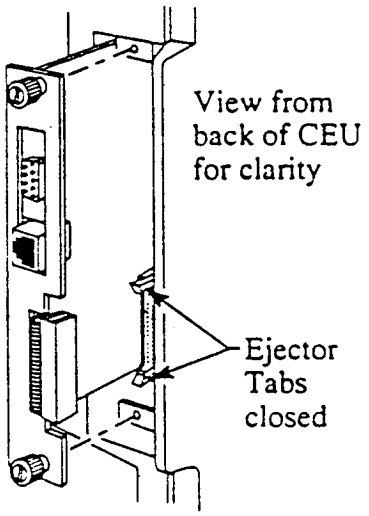


Figure 1

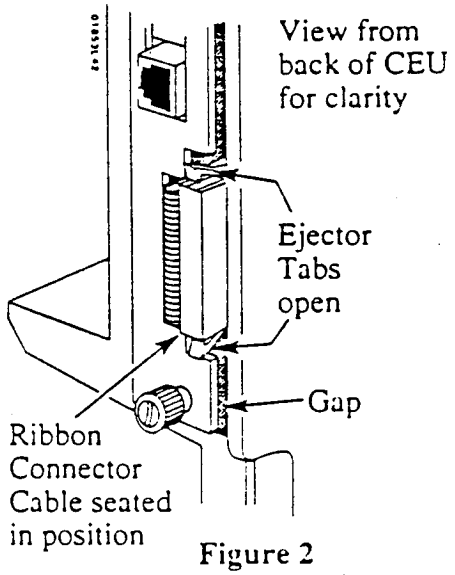


Figure 2

Figure 2-7 INSTALLING THE AUX MODULE

Mounting the Connecting Blocks

Figure 2-8 shows a typical layout for the system and the 66M1-50 connecting blocks. Each Station Module has two blocks: an extension block and a cross-connect block. Modify this layout to suit the site requirements and your preference.

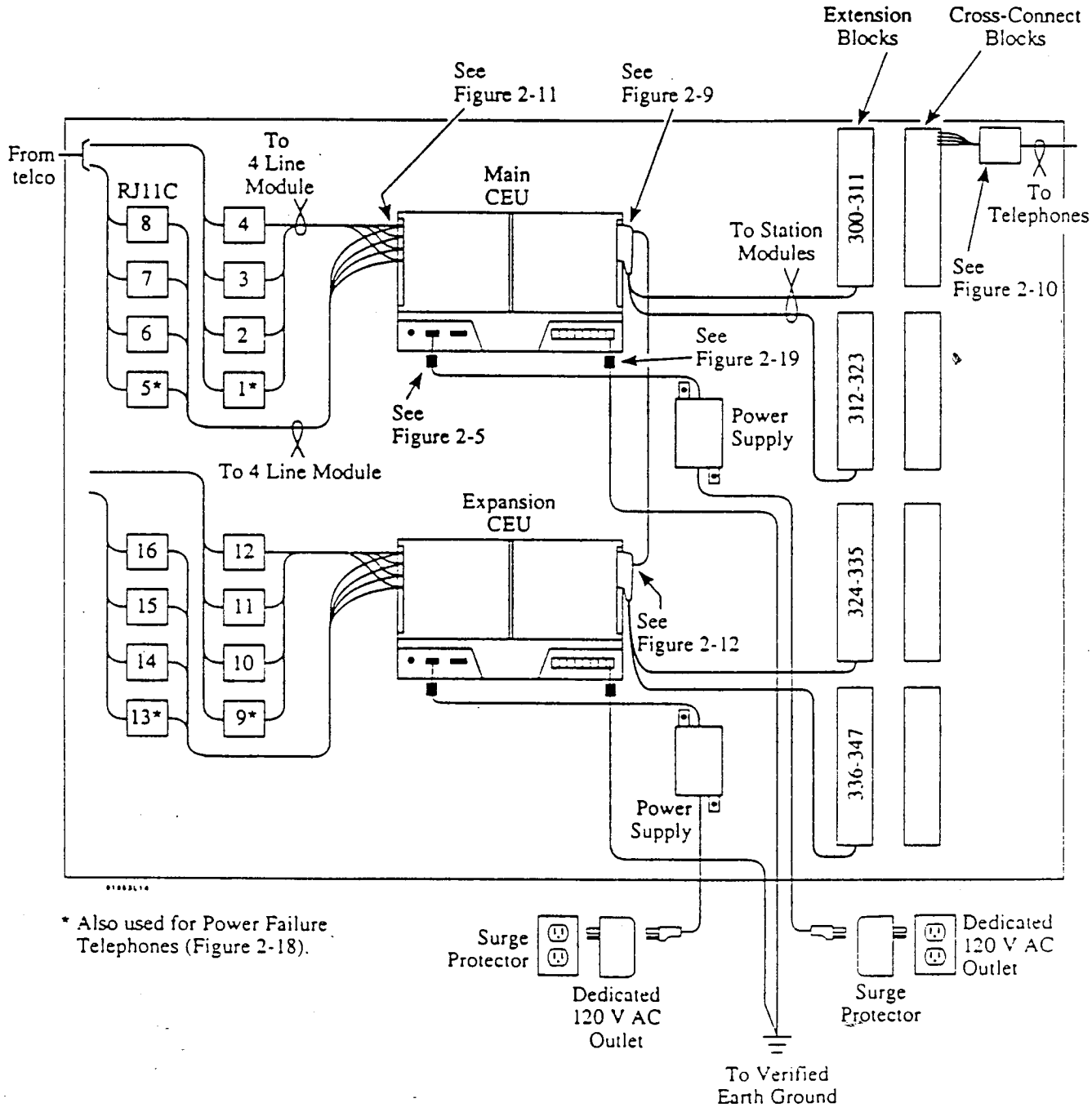


Figure 2-8 TYPICAL SYSTEM LAYOUT

Grounding

You *must* ground each CEU to a verified earth ground (Figure 2-8). Run a separate ground wire for each CEU. The ground wire connects from the right lug on the CEU terminal strip to earth ground. Keep the ground wire as short as possible, generally not exceeding 25'.

Station Module Cabling

To cable the Station Modules (Figure 2-9):

Step 1 ➤ Use 25-pair cable to connect each Station Module to its extension block. The female end of the 25-pair cable plugs into the Station Module.

Step 2 ➤ Punch down the other end of the cable on the extension block (see Table 2-1). The chart below shows the extension numbers for each Station Module.

CEU	Position	Extensions
Main	1 (inside)	300-311
Main	2 (outside)	312-323
Expansion	1 (inside)	324-335
Expansion	2 (outside)	336-347

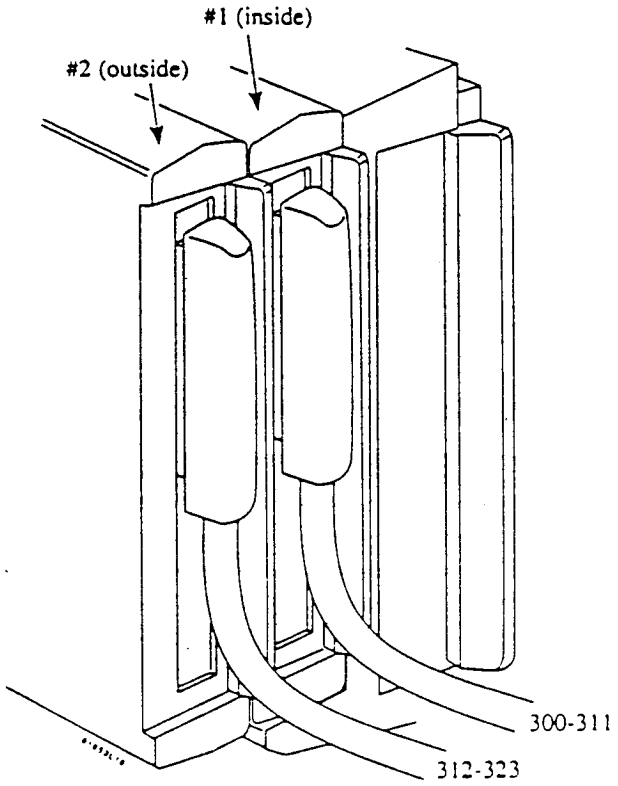


Figure 2-9 STATION MODULE CABLING

Table 2-1 EXTENSION ASSIGNMENTS

25-PAIR CABLE							
CONN PIN	BLOCK TERM.	COLOR CODE	MAIN CEU (INSIDE)	MAIN CEU (OUTSIDE)	EXP. CEU (INSIDE)	EXP. CEU (OUTSIDE)	FUNCTION
26	1	WHT-BLU	300 (00)	312 (12)	324 (24)	336 (36)	TT
1	2	BLU-WHT					TR
27	3	WHT-ORN					RT
2	4	ORN-WHT					RR
28	5	WHT-GRN	301 (01)	313 (13)	325 (25)	337 (37)	TT
3	6	GRN-WHT					TR
29	7	WHT-BRN					RT
4	8	BRN-WHT					RR
30	9	WHT-SLT	302 (02)	314 (14)	326 (26)	338 (38)	TT
5	10	SLT-WHT					TR
31	11	RED-BLU					RT
6	12	BLU-RED					RR
32	13	RED-ORN	303 (03)	315 (15)	327 (27)	339 (39)	TT
7	14	ORN-RED					TR
33	15	RED-GRN					RT
8	16	GRN-RED					RR
34	17	RED-BRN	304 (04)	316 (16)	328 (28)	340 (40)	TT
9	18	BRN-RED					TR
35	19	RED-SLT					RT
10	20	SLT-RED					RR
36	21	BLK-BLU	305 (05)	317 (17)	329 (29)	341 (41)	TT
11	22	BLU-BLK					TR
37	23	BLK-ORN					RT
12	24	ORN-BLK					RR
38	25	BLK-GRN	306 (06)	318 (18)	330 (30)	342 (42)	TT
13	26	GRN-BLK					TR
39	27	BLK-BRN					RT
14	28	BRN-BLK					RR
40	29	BLK-SLT	307 (07)	319 (19)	331 (31)	343 (43)	TT
15	30	SLT-BLK					TR
41	31	YEL-BLU					RT
16	32	BLU-YEL					RR
42	33	YEL-ORN	308 (08)	320 (20)	332 (32)	344 (44)	TT
17	34	ORN-YEL					TR
43	35	YEL-GRN					RT
18	36	GRN-YEL					RR
44	37	YEL-BRN	309 (09)	321 (21)	333 (33)	345 (45)	TT
19	38	BRN-YEL					TR
45	39	YEL-SLT					RT
20	40	SLT-YEL					RR
46	41	VIO-BLU	310 (10)	322 (22)	334 (34)	346 (46)	TT
21	42	BLU-VIO					TR
47	43	VIO-ORN					RT
22	44	ORN-VIO					RR
48	45	VIO-GRN	311 (11)	323 (23)	335 (35)	347 (47)	TT
23	46	GRN-VIO					TR
49	47	VIO-BRN					RT
24	48	BRN-VIO					RR
50	49	VIO-SLT					N/C
25	50	SLT-VIO					N/C

Station Module Cross-Connect Cabling

Use cross-connect cable to connect the clips on the extension blocks to their corresponding clips on the cross-connect blocks. Bridging clips simplify troubleshooting later on.

Installing the Telephones

To install the telephones:

Step 1 ➤ Install a modular jack at each extension location. The modular jack should be within six feet of the phone location.

Step 2 ➤ For each extension, run two-pair twisted station cable from the modular jack to the cross-connect block.

Step 3 ➤ Connect the station cable to each modular jack (Figure 2-10).

Step 4 ➤ Punch down the station cable on the cross-connect block. ***DSS Consoles always use the even numbered port of a dual port.***

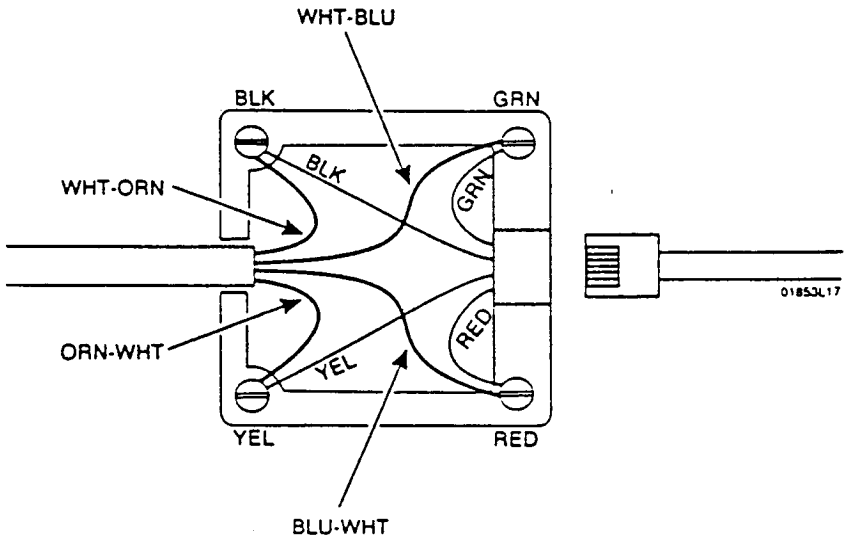


Figure 2-10 MODULAR JACK CONNECTIONS

CO Module Cabling

To connect the outside lines (Figure 2-11):

Step 1 ➤ Plug one end of a modular line cord into the first telco RJ11C.

Step 2 ➤ Plug the other end of the modular line cord into the "1" connector on the inside CO Module.

Step 3 ➤ Repeat steps 1 and 2 for each RJ11C. External Page and internal MOH use the fourth line circuit on the inside CO Module in each CEU. You may not want to connect an RJ11C to these ports.

The chart below shows the line numbers for each CO Module.

CEU	Position	Lines
Main	1 (inside)	1-4
Main	2 (outside)	5-8
Expansion	1 (inside)	9-12
Expansion	2 (outside)	13-16

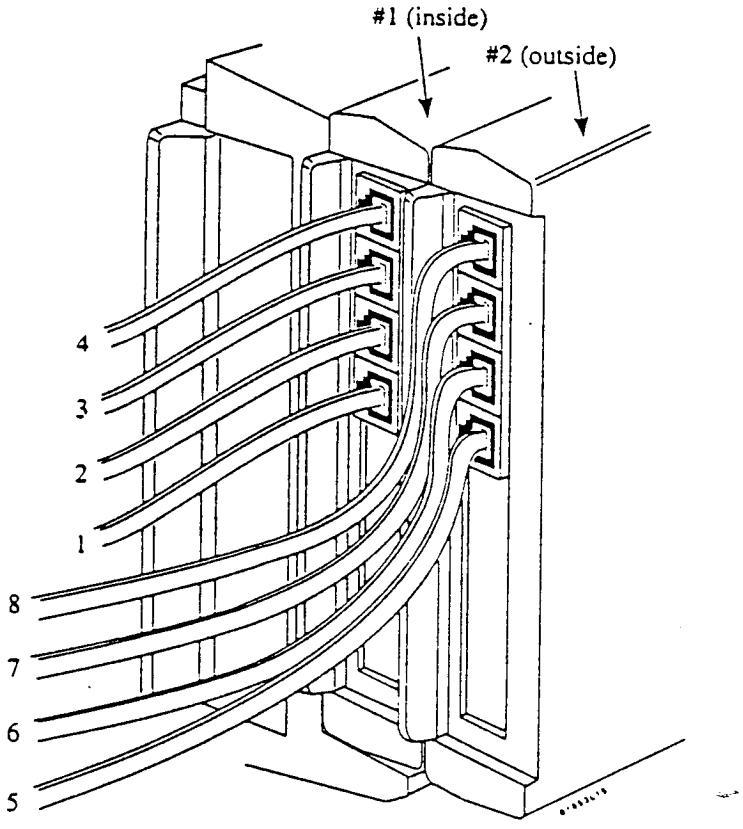


Figure 2-11 CO MODULE CABLING

Connecting the CEUs

If you have a two-CEU system, you must connect the main CEU to the expansion CEU. Both CEUs must have AUX Modules. In addition, you'll need an eight-pin modular line cord.

To connect two CEUs (Figure 2-12):

Step 1 ➤ Plug one end of an eight-pin line cord into the jack on the main CEU AUX Module.

Step 2 ➤ Plug the other end of the same line cord into the jack on the expansion CEU AUX Module.

Connecting the CEUs (Cont'd)

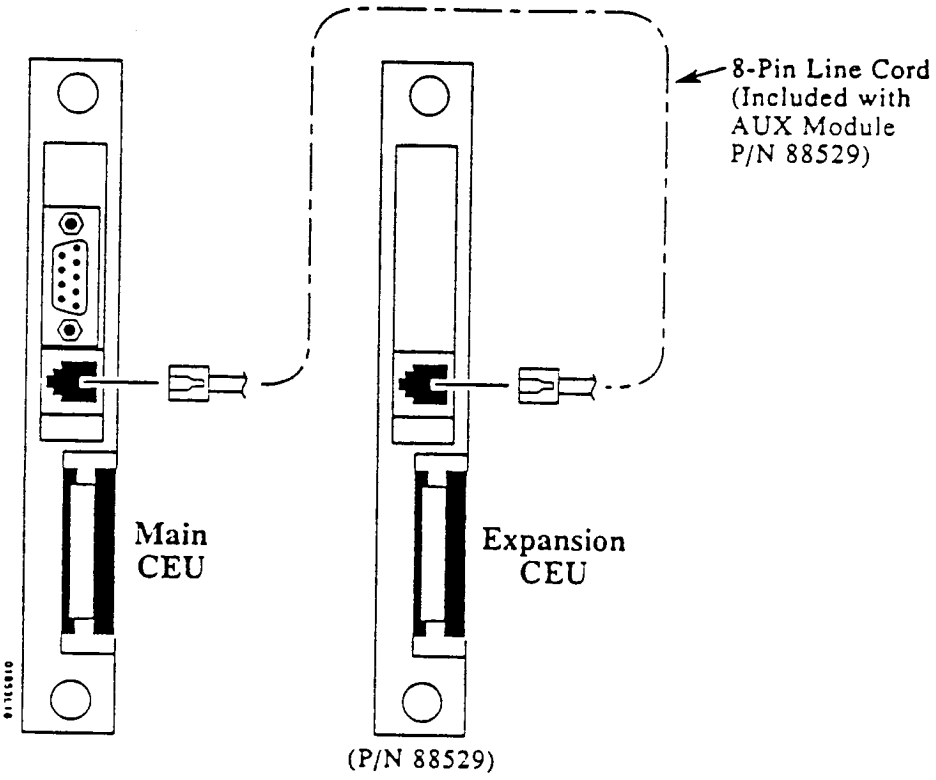


Figure 2-12 CONNECTING TWO CEUs

You can now power up the system and briefly check its operation. Before proceeding, be sure that:

- The common equipment is installed
- All extensions are wired and cross-connected
- All telco RJ11C jacks are connected to the CO Modules
- The RFI Suppressor beads are installed

Initial Power-up

To power up the system:

Step 1 ➤ Plug in each CEU power supply.

The system automatically starts up after a few seconds. If your system has any display sets, their displays will show, "WELCOME."

On initial power up:

- Attendant is extension 300
- DSS Console is extension 302
- 30-button VS keyset and DCS keyset programmable keys 1-16 are for lines 1-16. Remaining keys are undefined.
- 10-button VS keyset programmable keys are undefined
- Line keys on attendant's phone flash and ring for all incoming calls
- Line keys on other phones flash but do not ring for incoming calls
- All lines are loop start DTMF signaling
- The system performs a side tone test on all lines

Making Test Calls

To test the Intercom:

Step 1 ➤ Go to any keyset and lift the handset.

Step 2 ➤ Press INTERCOM.

The key lights and you hear Intercom dial tone.

Step 3 ➤ Dial the number of another installed extension.

You hear two beeps and are connected.

To test outside calls:

Step 1 ➤ Go to any keyset and lift the handset.

Step 2 ➤ Press line key 1.

The key lights and you hear telco dial tone.

Step 3 ➤ Dial the telephone number that rings line two.

Line two flashes at all keysets.

Step 4 ➤ Have an assistant go to any keyset, lift the handset and press line key 2.

You are connected to your assistant.

Basic Troubleshooting

To troubleshoot extension problems:

Step 1 ➤ Check and verify programming.

Step 2 ➤ Check and verify extension. The voltages at the extension's modular jack should be:

Meter Lead	Jack Terminal	Voltages[1]
Black lead to	GRN	+27 V DC
Red lead to	BLK	
Black lead to	RED	+27 V DC
Red lead to	YEL	
Black lead to	GRN	0 V DC
Red lead to	RED	
Black lead to	BLK	0 V DC
Red lead to	YEL	

Step 3 ➤ Check and verify extension, cross-connect and Station Module wiring.

Step 4 ➤ Check and verify Station Module.

Step 5 ➤ Check and verify CEU and power supply.

To troubleshoot line problems:

Step 1 ➤ Check and verify programming.

Step 2 ➤ Check and verify RJ11C with a test set.

Step 3 ➤ Check and verify line and CO Module wiring.

Step 4 ➤ Check and verify CO Module.

Step 5 ➤ Check and verify CEU and power supply.

[1] All voltages are +/- 5%.

- For your notes -

Installing the Music Source

To install the music source (Figure 2-13):

Step 1 ➤

- Using station cable (or suitable audio cable), connect the CEU MOH terminals to the music source audio output.
- If your system has two CEUs, connect the expansion cabinet MOH terminals to the main cabinet MOH terminals. Use station cable or suitable audio cable.

You can optionally install a second music source for the expansion CEU.

CAUTION: **Make sure the music source output meets the stated specifications. Do not connect to speaker terminals.**

Step 2 ➤ Connect the music source according to the manufacturer's instructions.

Step 3 ➤ Plug the music source power cord into the 120 V AC outlet.

Step 4 ➤ Activate BGM and/or MOH and adjust for a distortion-free signal. Refer to the system Software Manual or Administrator's Guide for programming considerations.

After making all your connections to the optional equipment terminal strip, you must install the RFI suppressor beads (page 2-30).

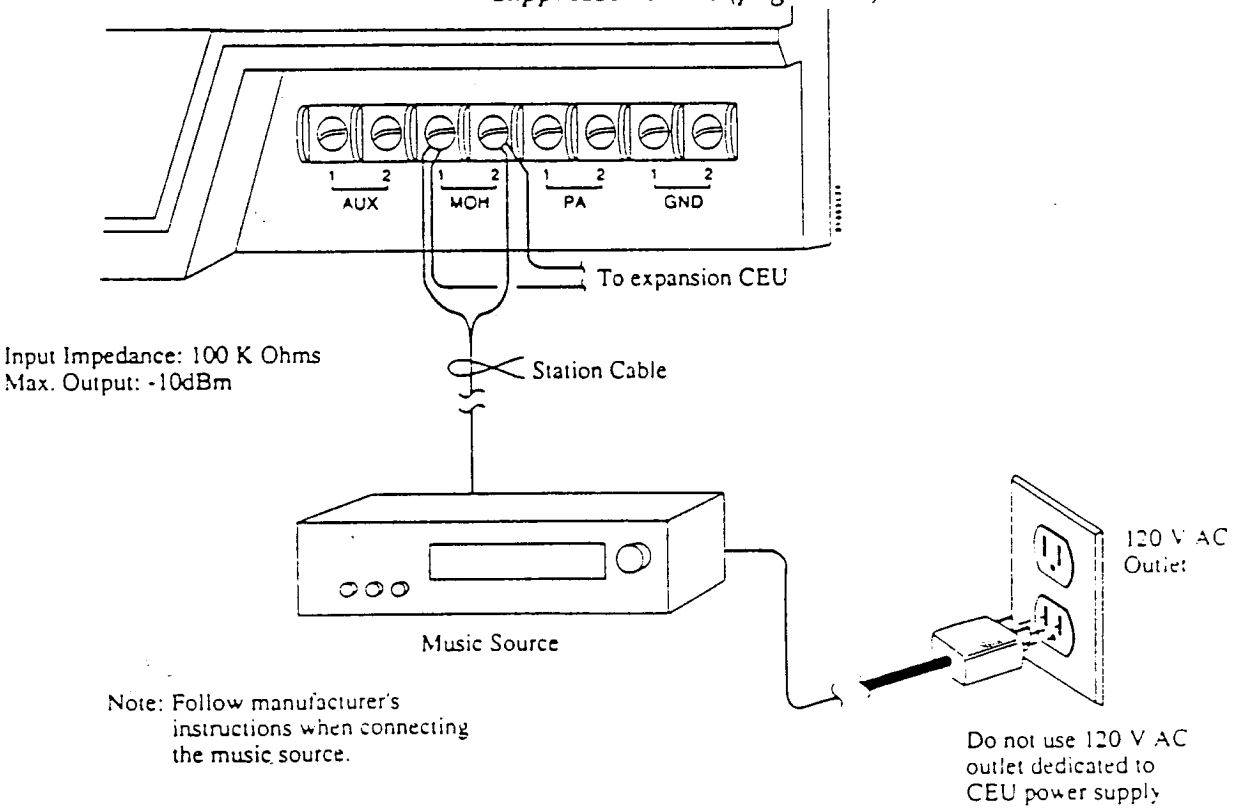


Figure 2-13 INSTALLING THE MUSIC SOURCE

Installing External Paging Equipment

To install External Paging equipment (Figure 2-14):

Step 1 ➤ Using station cable (or suitable audio cable), connect the CEU PA terminals to the paging equipment audio input.

In the main CEU, the external Paging output is for All Call Paging. In the expansion CEU, the Paging output is for Paging zone 1.

CAUTION: **Make sure the Paging equipment is compatible with the stated system output specifications.**

Step 2 ➤ Connect the Paging equipment according to the manufacturer's instructions.

Step 3 ➤ Plug the Paging equipment power cord into the 120 V AC outlet.

Step 4 ➤ Activate External Paging or night ringing and adjust for a distortion-free signal. Refer to the system Software Manual or Administrator's Guide for programming considerations.

After making all your connections to the optional equipment terminal strip, you must install the RFI suppressor beads (page 2-30).

Installing External Paging Equipment (Cont'd)

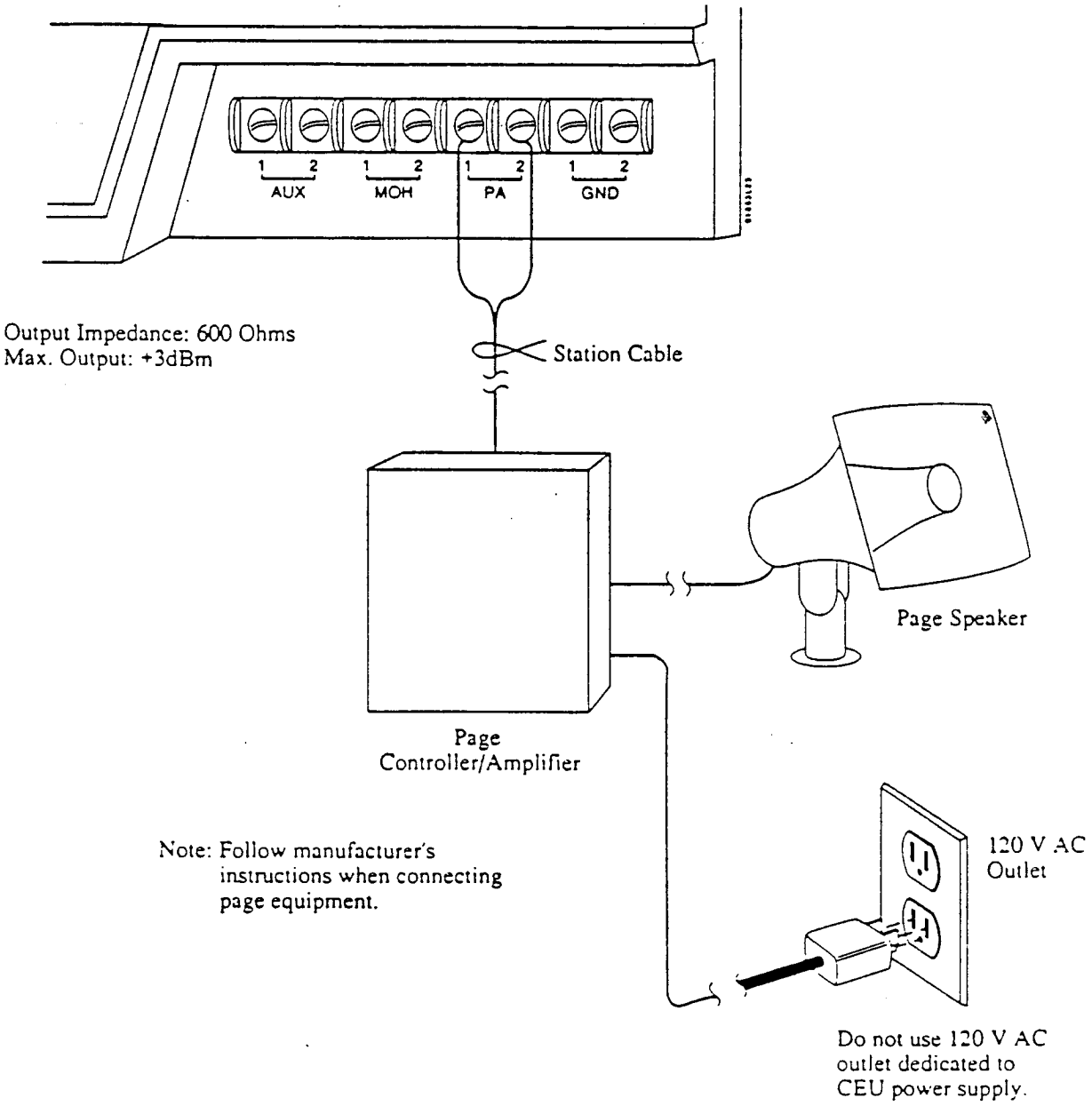


Figure 2-14 INSTALLING EXTERNAL PAGING EQUIPMENT

Installing an External Alerting Device

To connect an external alerting device (Figure 2-15):

Step 1 ➤ Using station cable, connect the CEU AUX terminals to the appropriate terminals in the external alerting device.

In the main CEU, the AUX contacts correspond to software Relay 01. In the expansion CEU, the AUX contacts correspond to software Relay 02.

CAUTION: **Make sure the external alerting device is compatible with the stated system output specifications.**

Step 2 ➤ Connect the external alerting device according to the manufacturer's instructions.

Step 3 ➤ If required, plug the external alerting device power cord into the 120 V AC outlet.

Step 4 ➤ Activate the external alerting device and check for proper operation. Refer to the system Software Manual or Administrator's Guide for programming considerations.

After making all your connections to the optional equipment terminal strip, you must install the RFI suppressor beads (page 2-30).

Installing an External Alerting Device (Cont'd)

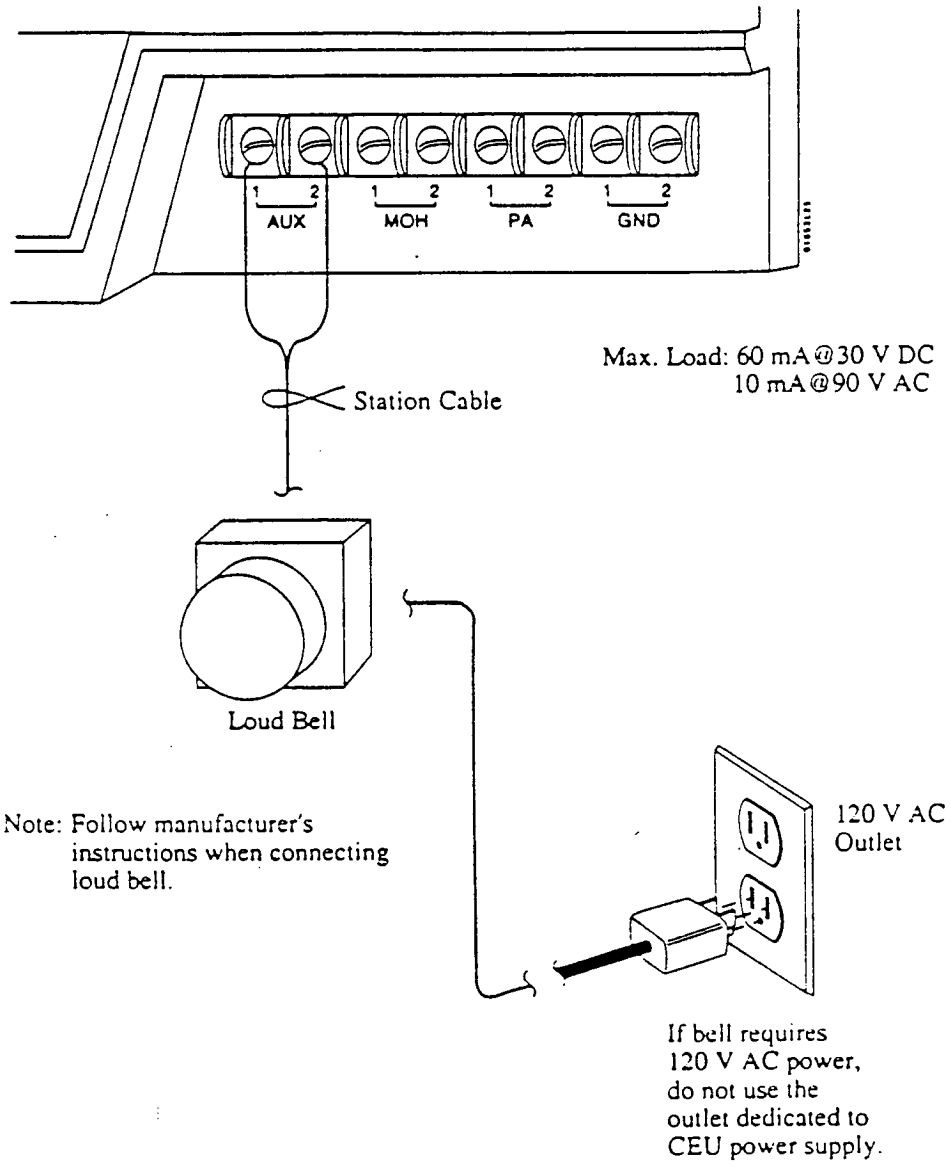


Figure 2-15 INSTALLING AN EXTERNAL ALERTING DEVICE

Installing a Programming Terminal, SMDR Printer or Modem

The AUX Module provides an RS-232-C serial port for connecting a programming terminal, SMDR printer or modem. The AUX Module serial port is configured as Data Communications Equipment (DCE). Most printers are Data Terminal Equipment (DTE). This means that in most cases you can plug a printer or terminal directly into the AUX Module, without special cables.

To connect a programming terminal or SMDR printer to the AUX Module (Figure 2-16):

Step 1 ➤ Plug a 9-pin to 25-pin adapter cable into the AUX Module serial port. The 9-pin cable end must have a female connector.

Step 2 ➤ Use a standard 25-pin RS-232-C cable to connect the adapter cable to the back of the modem.

The cable ends required depends on the requirements of the terminal/printer and the adapter cable.

Step 3 ➤ Plug the terminal/printer power cord into the 120 V AC outlet.

To connect a Modem to the AUX Module (Figure 2-16):

Step 1 ➤ Plug a 9-pin to 25-pin adapter cable into the AUX Module serial port. The 9-pin cable end must have a female connector.

Step 2 ➤ Plug a DCE/DCE Adapter into the back of the modem.

Step 3 ➤ Use a standard 25-pin RS-232-C cable to connect the adapter cable to the back of the modem.

The cable end that plugs into the modem must have a 25-pin male connector. The other cable end depends on the requirements of the adapter cable.

Step 3 ➤ Plug the modem power cord into the 120 V AC outlet.

To set the AUX serial port speed (from port 00/ext. 300):

Step 1 ➤ Lift handset and press ICM.

Step 2 ➤ Press # and dial 0.

Step 3 ➤ Dial digit to select baud rate (0=300, 1=1200, 2=2400, 3=4800, 4=9600, 5=19.2K).

Step 4 ➤ Ha

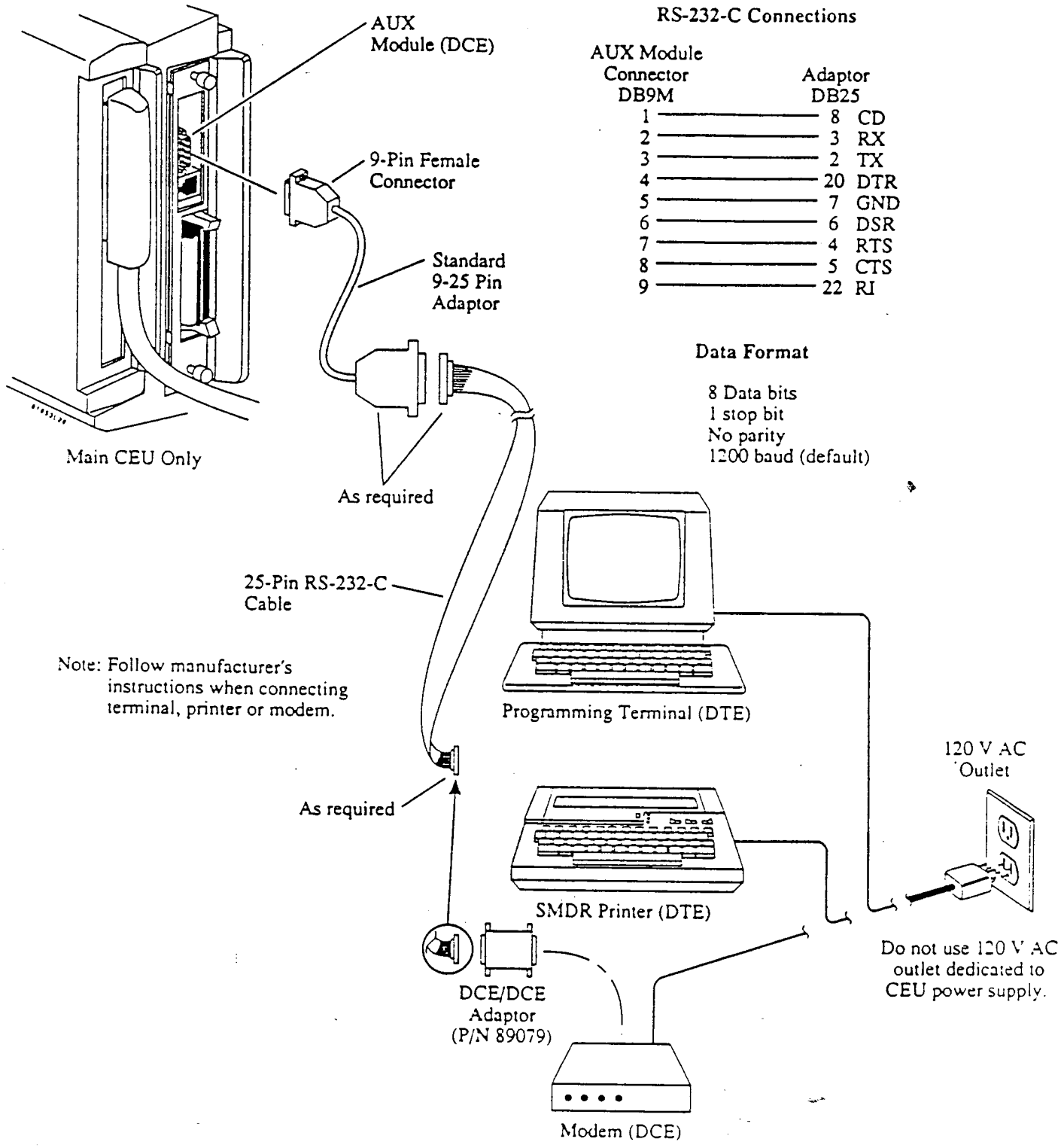


Figure 2-16 INSTALLING A PROGRAMMING TERMINAL, SMDR PRINTER OR MODEM

Installing Battery Backup

The battery backup unit provides short term battery backup if AC power fails. The recommended unit is the Valcom VB260.

To connect the battery backup unit (Figure 2-17):

Step 1 ➤ Mount the unit on the installation backboard, within 3' of the CEU.

Step 2 ➤ Plug the battery backup unit 3-pin plug into the CEU connector. The plug and connector are keyed so they fit together only one way.

Step 3 ➤ Plug the battery backup unit into the 120 V AC outlet.

Installing Battery Backup (Cont'd)

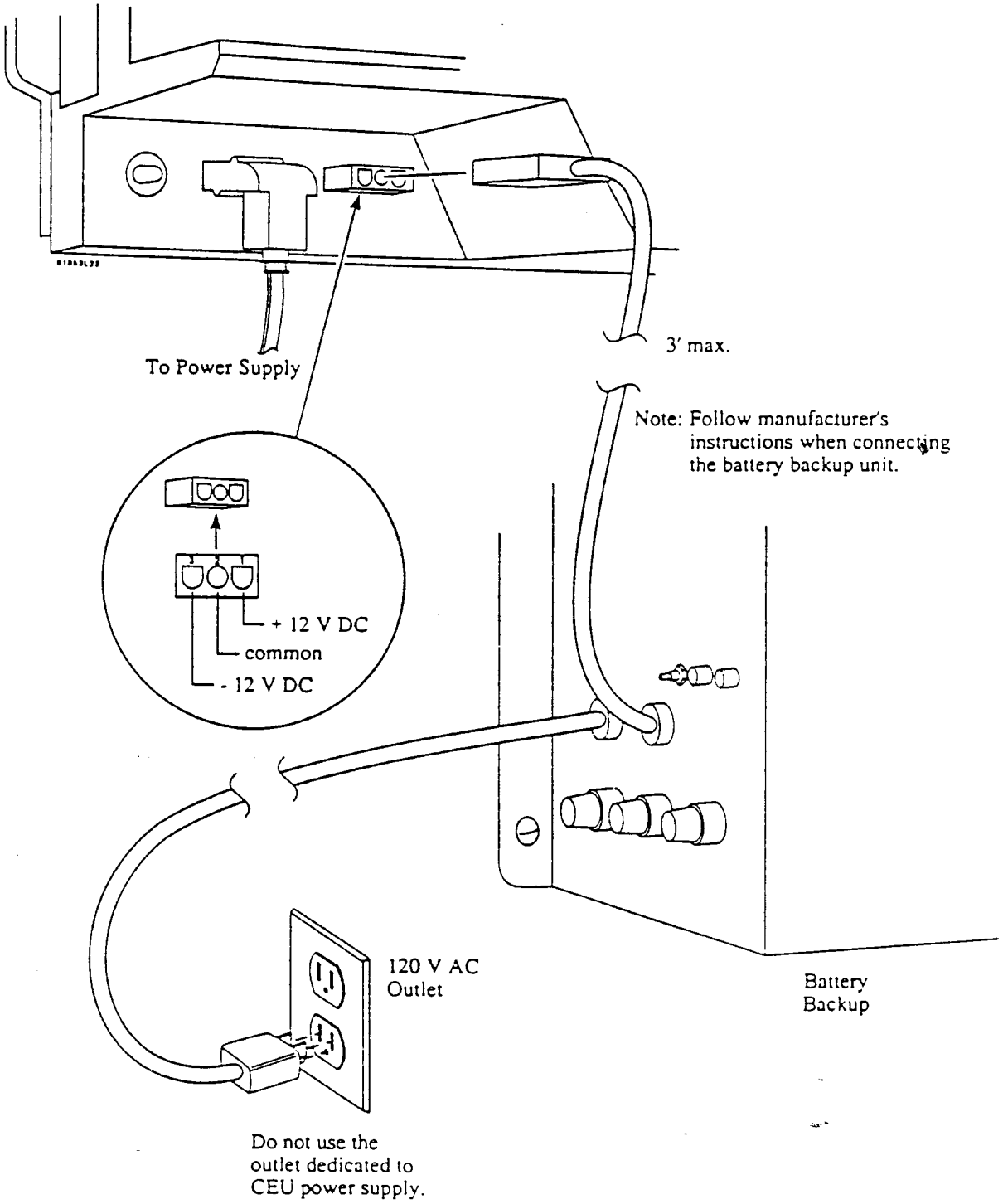


Figure 2-17 INSTALLING BATTERY BACKUP

Installing Power Failure Telephones

The first line port in each CO Module provides power failure cut-through. When power fails, a relay closes in the CEU to cut line 1 through to the third pair in the modular jack. The system can have up to four single line sets wired for power failure cut-through. Make sure the phone you select is compatible with your telco service (DTMF or Dial Pulse).

To install a power failure telephone (Figure 2-18):

Step 1 ➤ Install three modular jacks close to the CEU. One of the jacks must be 6-pin. The other two jacks can be 6-pin or 4-pin.

Step 2 ➤ Using station cable, connect the green/red pair of the first 6-pin jack to the green/red pair of the second 6-pin jack.

Step 3 ➤ Using station cable, connect the blue/white pair of the second 6-pin jack to the green/red pair of the third jack.

Step 4 ➤ Using a four-conductor line cord, connect the telco RJ11C to the first 6-pin jack.

Step 5 ➤ Using a six-conductor line cord, connect the second 6-pin jack to CO Module line 1.

Step 6 ➤ Using a four-conductor line cord, connect the power failure telephone to the third jack.

To test power-failure cut-through:

Step 1 ➤ Unplug the CEU.

Step 2 ➤ Lift the handset on the power failure telephone.
You should hear dial tone and be able to place and answer calls.

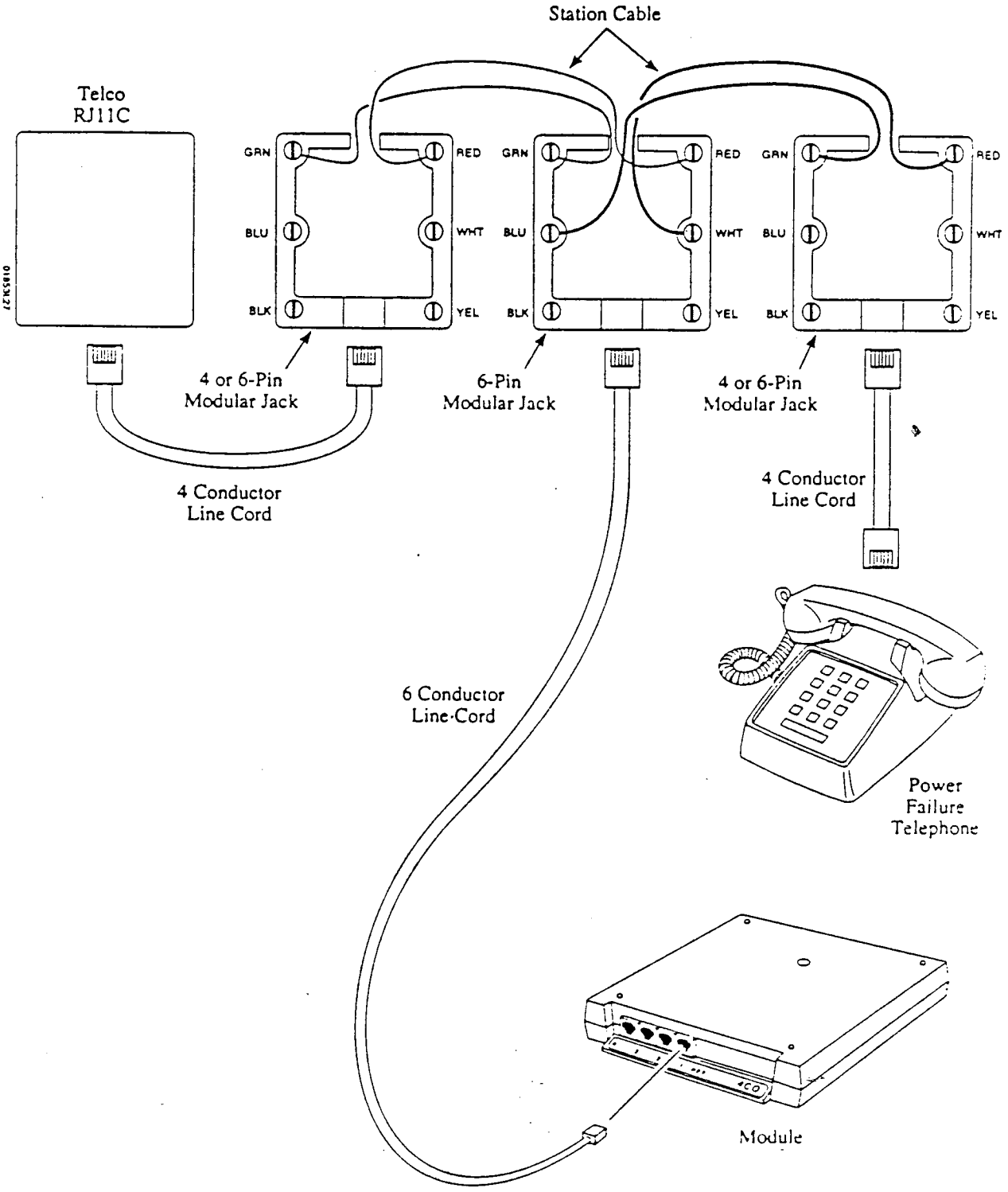


Figure 2-18 INSTALLING POWER FAILURE TELEPHONES

Installing the RFI Suppressor on the Optional Equipment Terminal Strip

You must install two RFI Suppressor ferrite beads (one assembly) on the wires connected to the optional equipment terminal strip.

To install the RFI Suppressor Bead Assembly for the optional equipment terminal strip (Figure 2-19):

Step 1 ➤ Assemble the RF beads around all the wires connected to the terminal strip.

Step 2 ➤ Position the bead assembly as close to the optional equipment terminal strip as possible.

Step 3 ➤ Snap the bead assembly plastic cover around the wires.

Step 4 ➤ Secure the wires with a tie wrap.

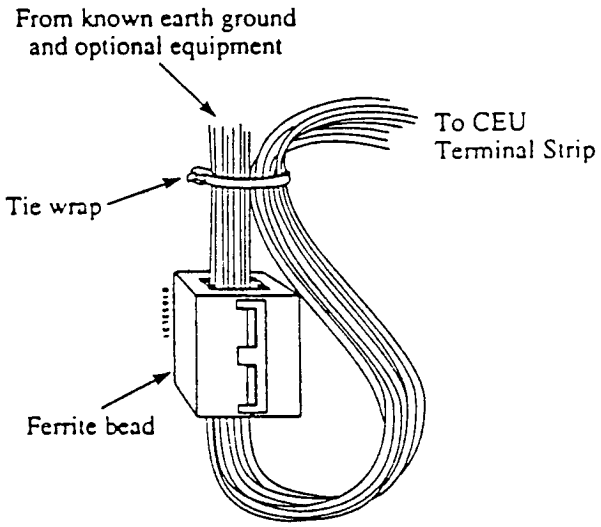


Figure 2-19 TERMINAL STRIP RFI SUPPRESSOR BEADS