

IPS 308 / 416

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# User's Guide

For Use with the IVT-16/16D Key Phone



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# Welcome to Your IPS Telephone System

## **Notice**

*The IPS 308/416 Telephone System is shipped with all extensions configured for ordinary phones.*

*The key phone that is described in this User's Guide will not work correctly until the system is properly configured by the System Administrator.*

## **Introduction**

This User's Guide provides easy-to-follow instructions for the many useful and flexible features of the IVT-16 series of key phones for use with the IPS 308/416 Telephone Systems. The difference in features between the various models are shown in the following table:

Model	Features
IVT-16	Basic 52-key telephone with buttons and indicators for each extension and outside line. This phone provides speakerphone capability, message waiting display, and many other features.
IVT-16D	All the features of the IVT-16 plus an LCD display capable of displaying system status messages and Caller ID information.

One person in your office should be designated as the System Administrator. This should be the person who configured and programmed your system, and who is in possession of the System Guide. Some pages in this guide refer you to the System Administrator for more information.

It is suggested that you take some time to read through this User's Guide. Try out each of the features discussed. Practice using common features such as "Hold" and "Transfer" as this will help you feel more comfortable using and understanding the many features available to you. It will also help you understand the different signals that your phone gives to indicate that someone else has "Parked" or "Transferred" a call to you, etc.

It is also suggested that you develop and keep a "Command Summary" for the

features you use most beside your key phone. This “Command Summary” should summarize the keys to press for each feature.

## **Key Phone Extension**

Ordinary phones, key phones, door phones, and FAX machines/modems can be attached to any extension on the IPS. This User’s Guide describes features as utilized with a key phone with other system features set to Default.

With a key phone and the applicable Default settings, Intercom dial tone is provided when you go off-hook. To access Central Office (CO) or outside lines you need to press one of the CO line keys (see Page 6).

It is possible for the System Administrator to configure the system such that you are automatically connected to an available CO line when you go off-hook. In this case, you need to perform a switch-hook to get Intercom dial tone and to use other key phone features.

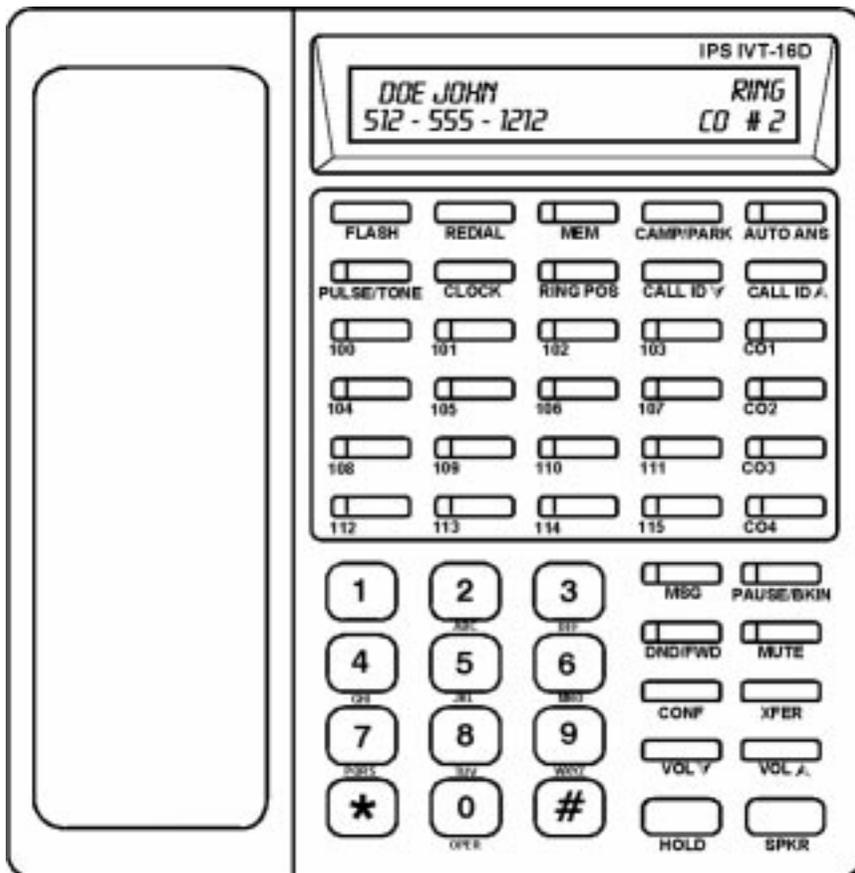
Before going through the features of this User’s Guide, lift your handset to see which of these two off-hook conditions applies at your extension. If you are able to go off-hook and immediately dial an outside line and connect, it is likely that your System Administrator has opted for automatic CO line access.

### **How to Switch-hook**

If your extension is set to automatically access a CO line when you lift the handset, then a switch-hook is required before using the DSS keys (see Page 6) to place intercom calls and before using some of the key phone feature keys. To perform a switch-hook, simply depress the switch-hook button (i.e., the button in the phone cradle that is also used to disconnect the line) for about half a second.

Intentionally  
Left  
Blank

## KEY PHONE LAYOUT



**Note :** The above layout is the IVT-16D model. The IVT-16 is identical except for the fact that it has no LCD (Liquid Crystal Display).

## Key Phone Feature Buttons

**FLASH** - Sends a switch-hook (i.e., flash) to an outside line.

**REDIAL** - Automatically redials the last number dialed.

**MEM** – Accesses the IPS system speed dial numbers and phone programming options.

**CAMP/PARK** – Activates the Camp On feature for busy extensions and CO lines. Parks CO line calls at busy extensions.

**AUTO ANS** - Automatically answers intercom calls via “speakerphone”.

**TONE/PULSE** - Switches between tone (DTMF) and pulse (rotary) dialing.

**CLOCK** - Displays the time of day.

**RING POS** - Allows the phone to ring during an incoming call.

**CALL ID** ▼ and **CALL ID** ▲ - Shows the status of the active CO lines and scrolls through the stored Caller ID information.

**CO 1 to 4** - Central Office Lines (see Central Office (CO) Lines 1 – 4, Page 6).

**DSS 100 to 107** - Direct Station Selection (see DSS (Direct Station Selection) 100-115, Page 6).

**DSS 108 to 115** - Direct Station Selection or programmable speed dial/special function keys.

**MSG** – Enables the user to illuminate the message waiting lamp (LED) on another key phone.

**PAUSE/BKIN** - Inserts a 2-second pause when dialing numbers. Enables the user to break-in on other conversations on the system.

**DND/FWD** – Activates/Deactivates Do Not Disturb and Call Forwarding.

**MUTE** – Deactivates the microphone (handset or speakerphone).

**CONF** - Conferences calls with other extensions or outside lines.

**XFER** - Transfers outside calls to other extensions.

**VOL** ▼ and **VOL** ▲ - Adjusts the volume for speakerphone conversations, handset conversations, and ringing (see Volume ▼ and Volume ▲ Buttons, Page 8).

**HOLD** - Places an outside call on hold.

**SPKR** - Activates speakerphone operation.

## **DSS (Direct Station Selection) 100-115**

The DSS keys (a.k.a., extension keys) allow you to quickly access another extension when placing an Intercom call or transferring a CO line call. The DSS keys also provide a visual indication as to whether the extension is busy. DSS keys 108 to 115 can alternatively be used for speed dial numbers.

The following list presents the various states of the DSS key LEDs and what the state indicates.

- ◆ **Off** -Extension is inactive or in Do Not Disturb mode.
- ◆ **Red** -Extension is active or busy.
- ◆ **Flashing red with an audible triple beep** - This extension is attempting to call you.

**Note :** *The flashing red indication only occurs when your line is active (i.e., you are on the line with another caller).*

## **Central Office (CO) Lines 1 – 4**

### **Definition:**

*The Central Office or CO is the local telephone company facility where your telephone lines originate. Therefore, your telephone lines are often referred to as CO lines.*

The CO line keys allow you to access CO lines to make outside calls. They also provide a visual indication as to whether the CO line is busy.

The following list presents the various states of the CO line key LEDs and what the state indicates.

- ◆ **Off** - CO line is not in use or is unavailable for use.
- ◆ **Solid Red** - CO line is in use by another extension.
- ◆ **Solid Green** - CO line is in use by this extension.
- ◆ **Slow Flashing Red** - CO line has been put on hold by another extension.
- ◆ **Slow Flashing Green** - CO line has been put on hold by this extension.
- ◆ **Fast Flashing Red** - CO line has an incoming call (i.e., the line is ringing).
- ◆ **Fast Flashing Green** - CO line is parked at this extension.

***Dial Pad 0 – 9, \*, #***

These dial keys operate in the same manner as any other type of phone.

## **Volume ▼ and Volume ▲ Buttons**

The volume (VOL) buttons control multiple functions of the key phone.

- ◆ During speakerphone operation, press the volume buttons to increase or decrease the loudness of the speaker.
- ◆ During conversations using the handset, press the volume buttons to increase or decrease the loudness of the earpiece on the handset.
- ◆ When the phone is ringing, press the volume buttons to adjust the loudness of the ringer. (You can also press the DND/FWD button during ringing to silence the ringer.)

## **Group Listening Mode**

A special speakerphone mode, Group Listening Mode, allows the handset and the speakerphone to be simultaneously active. This allows one person to talk into the handset while the speaker is enabled so that others in the room can hear the caller. This facilitates a speakerphone-like conversation without the speaker deactivating each time the microphone is active. Group Listening Mode is useful when only one person is talking but others are listening.

To enter Group Listening Mode simply hold down the **SPKR** button for two seconds while talking in the handset. This enables the handset microphone and disables the speakerphone microphone. To end Group Listening press the **SPKR** button again to enable a private handset conversation or place the handset on hook to enable a full speakerphone conversation.

**Note :** *Depending on speaker volume and the acoustics of your office, it may be advisable to deactivate Group Listening Mode by pressing the SPKR button before hanging up. This will eliminate a momentary squeal.*

## LCD Display Features

### ***First Display After Power is Applied***

The Liquid Crystal Display (LCD) will show many different messages concerning the state of the IPS and this extension. When the power is first applied to the phone, the LCD will display:

I P S   P h o n e   S y s t e m  
I n t e l i D a t a

### ***Initialization Display***

The phone must then establish communications with the IPS system. This procedure will typically take one or two seconds.

**If the above message continues to display on the LCD, then your extension has probably not been programmed as a key phone extension. The System Administrator must configure the IPS system to specify that a key phone is at this extension. By default, all IPS extensions are set to communicate with ordinary, single line telephones.**

After communications are established, the phone will give a short beep and display the following message for about two seconds.

I n i t i a l i z e d   E x t n   1 0 3  
I V T - 1 6 ,   V e r s i o n   -   X X -

The actual display on each phone will differ with respect to the extension number and the current version number of the software (i.e., firmware) in the phone.

## ***Inactive Mode Display***

After the Initialization Display and whenever the key phone is inactive, the LCD will display the following message.

F	r	i		N	i	g	h	t				Ω			3	:	3	3	p	
c	u	s	t	o	m			m	s	g					2	9	-	J	a	n

The actual display you will see may differ in the following ways:

- ◆ The “Night” message will display if the IPS is in the Night Mode. If the IPS is in the Day Mode, this portion of the display will be blank.
- ◆ The headphone symbol (‘Ω’) indicates that the IPS is programmed to use a headset. This symbol will not appear in the default mode where a headset is not used.
- ◆ The time of day may be displayed in a 12-hour (shown) or a 24-hour format. This parameter is set on the IPS unit itself. In the 24-hour mode, the hours are displayed as ‘00’ to ‘23’.
- ◆ The ‘custom msg’ on the second line of the display can be set to any desired message. Typical values might be “Extn 105” or “XYZ Corp.”.

## ***Message Waiting Display***

When a Message Waiting command is sent to your phone (e.g., from another extension), the light associated with the MSG button will blink. Additionally, the LCD will display the following message.

F	r	i													3	:	3	3	p	
*	*		M	e	s	s	a	g	e		*	*			2	9	-	J	a	n

### ***Intercom Calls Ringing at Your Extension***

If another extension is making an intercom call to your extension or if another extension is trying to transfer a CO call to your extension, the light associated with that extension will flash on your phone, indicating the source of the call.

If the call is an intercom call, the display will show the following message indicating the physical extension number of the extension, which is calling.

F	r	i		N	i	g	h	t				Ω			3	:	3	3	p
	C	a	l	l		f	r	o	m		E	x	t	n		1	0	2	

## LCD Display of Call Information

The IVT-16 key phone can provide a great deal of information about calls being made from the IPS system.

### ***Incoming Caller ID Message***

A Caller ID message from the Central Office can accompany an incoming call and contains information specifying the phone number and (optionally) the name of the person who is calling. In order to receive the Caller ID message, your CO line must be capable of supplying this information. Additionally, your IPS unit must be equipped with Caller ID capability. When an incoming call is ringing on a CO line of the IPS, the key phone will display the following information.

E	v	e		A	d	a	m	s											
	5	1	2	-	5	5	5	-	1	2	1	2			C	O		#	2

Up to twenty characters of the calling name (in this case “Eve Adams”) will be displayed.

**Note :** *When reviewing stored Caller ID records, only the first 14 characters are displayed.*

### ***Currently Connected CO Line Message***

When your extension is connected to a CO line, the LCD will display information about the call. If the call is an incoming call and the Caller ID information is available, the display will appear as follows:

E	v	e		A	d	a	m	s								0	:	4	5
	5	1	2	-	5	5	5	-	1	2	1	2			C	O		#	2

The right-most part of the top line will display the call duration in minutes and seconds.

If the call is an outgoing call or an incoming call for which Caller ID information is not available, the display will appear as follows:

					#	#	#	#	#	#	#										
		0	:	4	5													C	O	#	2

For outgoing calls, the '#' symbols are replaced by the digits dialed to make the call.

***CO Calls Ringing at Your Extension***

When an incoming DISA (Direct Inward Station Access) or Auto-Attendant call is ringing at your extension and the Caller ID information is available for that call, the display will appear as follows:

E	v	e		A	d	a	m	s										R	i	n	g
	5	1	2	-	5	5	5	-	1	2	1	2						C	O	#	2

If the call is an incoming call for which Caller ID information is not available, the display will appear as follows:

																			R	i	n	g
																			C	O	#	2

### ***CO Calls Being Transferred to Your Extension***

When another extension transfers a call to your extension and the call is a CO call with Caller ID information, the display will appear as follows:

E	v	e		A	d	a	m	s								X	f	e	r	
	5	1	2	-	5	5	5	-	1	2	1	2				C	O		#	2

This information is displayed on your LCD even when your line is active (i.e., you are on the line with another caller).

If the call is an outgoing call or an incoming call for which Caller ID information is not available, the display will appear as follows:

																	X	f	e	r	
																	C	O		#	2

### ***CO Calls Being Parked at Your Extension***

When someone at another extension is trying to transfer a call to you, while you are engaged in another call, they can hang up to park the call at your extension. You have the option to continue your current conversation, hang up to be connected to the parked call, or place the current call on hold and be connected to the parked call. If the parked call is an incoming call and the Caller ID information is available, the display will appear as follows:

E	v	e		A	d	a	m	s								P	a	r	k	e	d
	5	1	2	-	5	5	5	-	1	2	1	2				C	O		#	3	

If the parked call is an outgoing call or an incoming call for which Caller ID information is not available, the display will appear as follows:

																	P	a	r	k	e	d
																	C	O		#	3	

### **CO Calls Placed on Hold**

If you place a CO call on hold in order to transfer it or if you place a CO call on non-exclusive hold (by pressing the HOLD button), the following information is displayed:

```
E v e      A d a m s      H e l d
5 1 2 - 5 5 5 - 1 2 1 2      C O # 2
```

If the call is an outgoing call or an incoming call for which Caller ID information is not available, the display will appear as follows:

```
# # # # # # #      H e l d
      C O # 2
```

### **Checking the Status of CO Lines**

At any time (with the exception of the when a new incoming Caller ID message is being displayed), you can press the “Call ID ▲” button to check the status of the CO lines on the IPS system. The LCD will display the status of the first active CO line (starting with CO #1). Pressing “Call ID ▲” again will show the status of the next CO line (and so on). If the CO line is attached to an incoming call for which Caller ID information is available, the display will appear as follows:

```
E v e      A d a m s      H e l d
5 1 2 - 5 5 5 - 1 2 1 2      C O # 2
```

If the call is an outgoing call or an incoming call for which Caller ID information is not available, the display will appear as follows:

```
      H e l d
E x t n .      1 0 3      C O # 2
```

The extension number on the second line of the display shows the physical extension to which the outside call is attached.

## Reviewing Stored Caller ID Information

To review stored Caller ID records, keep pressing the “Call ID ▲” button after viewing the status of active CO lines (see Checking the Status of CO Lines, Page 15). The records are displayed in chronological order beginning with the most recent record. The IVT-16D is capable of storing up to 88 records. Caller ID records appear on the display as follows:

E	v	e		A	d	a	m	s							1	:	1	1	p	
	5	1	2	-	5	5	5	-	1	2	1	2			1	1	-	A	p	r

Use the “Call ID ▲” and the “Call ID ▼” buttons to scroll through the Caller ID records.

**Note :** *If there are no active CO lines and you do not have the IVT-16D model, pressing either the “Call ID ▲” or “Call ID ▼” button will not change the display.*

## Programming Your Key Phone

Various features of the IVT-16 key phone are programmable and can be set by you, the user. These parameters are stored into permanent memory and remain intact even after loss of power. The parameters you can program are as follows:

- ◆ Ring tone - You can select from several different, distinct ring tones.
- ◆ Ring tone volume - You can select from several different ring volume settings.
- ◆ Headset mode - You can program the key phone for use with a headset. In Headset mode, pressing the SPKR button activates the headset instead of the speakerphone.
- ◆ LCD contrast - You can adjust the contrast of the LCD display for optimal viewing.
- ◆ Display name - You can enter the message that is displayed on your LCD during idle conditions. You may want to display your company name or your extension number.
- ◆ Caller ID format - You can select the display format for the Caller ID phone number.
- ◆ Programmable keys - You can select alternative functionality (e.g., speed dial) for eight (8) of the extension keys.

### ***Entering Programming Mode***

To enter programming mode, simply press the MEM button for more than one second while the phone is inactive. The LED associated with the MEM button will flash both red and green to indicate that programming mode is active.

**Note :** *While in programming mode, the key phone cannot be used to make or receive phone calls.*

Only certain buttons are active in programming mode. The LED lamps for these active buttons will illuminate upon entering programming mode. The active buttons are used to make changes in the programming.

### ***Leaving Programming Mode***

To exit programming mode, simply press the MEM button again.

## Ring Tone Selection

You can select from several different, distinct ring tones. This enables your key phone to emit a different ring tone than that of other key phones in your area. The ring tone may be selected when the LCD appears as follows:

R	i	n	g	e	r		T	y	p	e	:				0	0			
A	c	t	i	v	e		K	e	y	s		a	r	e		l	i	t	

The number after “Ringer Type” indicates the currently selected ring tone.

**Note :** *The default setting is ‘00’.*

Press the MUTE button to select the next ring tone. Press the DND/FWD button to select the previous ring tone. When either button is pressed, the selected ring tone will be heard through the speaker. Press the SPKR button to advance to the next parameter.

**Note :** *The IVT-16 key phone (without the LCD) will illuminate the LED lamp associated with extension #100 to indicate that you are programming the ring tone parameter.*

## ***Ring Volume Selection***

You can select from several different ring volume settings. There are eight volume settings. Zero (0) is the lowest volume and seven (7) is the highest. The ring volume may be selected when the LCD appears as follows:

R	i	n	g	e	r		V	o	l	u	m	e	:			1			
A	c	t	i	v	e		K	e	y	s		a	r	e		l	i	t	

The number after “Ringer Volume” indicates the currently selected ring volume.

**Note :** *The default setting is ‘1’.*

Press the MUTE button to increase the ring volume. Press the DND/FWD button to decrease the ring volume. When either button is pressed, a ring tone will be played through the speaker at the specified volume setting. Press the SPKR button to advance to the next parameter.

**Note :** *The IVT-16 key phone (without the LCD) will illuminate the LED lamp associated with extension #101 to indicate that you are programming the ring volume parameter.*

## Headset Mode

You can program the key phone for use with a headset. If you use a headset, you must choose whether to enable this parameter. When this parameter is enabled, pressing the SPKR button activates the headset instead of activating the speakerphone. Headset mode may be enabled/disabled when the LCD appears as follows:

U	s	e		H	e	a	d	s	e	t	:			N	o				
A	c	t	i	v	e		K	e	y	s		a	r	e			l	i	t

**Note :** *The default setting is 'No' (i.e., disabled).*

Press either the MUTE button or the DND/FWD button to switch between 'Yes' and 'No'. Press the SPKR button to advance to the next parameter.

**Note :** *If you wish to retain the use of the speakerphone, you may connect a headset without enabling this parameter. In this case, you will have to lift the handset from the cradle to activate the headset.*

**Note :** *The IVT-16 key phone (without the LCD) will illuminate the LED lamp associated with extension #102 to indicate that headset use is disabled (the LED lamp associated with extension #103 will illuminate to indicate that headset use is enabled).*

## **LCD Contrast Selection**

You can adjust the contrast of the LCD display for optimal viewing. There are nine settings ('0' through '8') for LCD contrast. The LCD contrast may be selected when the LCD appears as follows:

L	C	D		C	o	n	t	r	a	s	t	:			1				
A	c	t	i	v	e		K	e	y	s		a	r	e		l	i	t	

The number after "LCD Contrast" indicates the currently selected contrast.

**Note :** *The default setting is '4'.*

Press the MUTE button to increase the contrast or the DND/FWD button to decrease the contrast. Press the SPKR button to advance to the next parameter.

**Note :** *This parameter does not apply to the IVT-16 key phone (without the LCD) as there is no LCD.*

## Display Name

You can enter the message that is displayed on your LCD during idle conditions. The IVT-16D displays the message on the second line of the LCD. The message can be up to twelve (12) characters in length and is typically your company name or extension number. The message may be entered when the LCD appears as follows:

```

P r e s s   L e t t e r   K e y s :
X Y Z   C o r p

```

The default message is “XYZ Corp” and the cursor will appear under the first character. Press the MUTE button to move the cursor to the right one position or the DND/FWD button to move the cursor to the left one position. Press the SPKR button to advance to the next parameter.

Pressing the digits ‘0’ through ‘9’ plus ‘\*’ and ‘#’ will sequence through various characters at the cursor position. Pressing the ‘1’ digit is a special case which will display the extension number of this key phone location. The following table shows the characters associated with each of the keys:

Digit Pressed	Characters Displayed
1	“Extn: 103” (Displays the value of the current extension number. If the phone is moved to a different extension, this display will need to be reprogrammed with the new value.)
2	2 A a B b C c
3	3 D d E e F f
4	4 G g H h I i
5	5 J j K k L l
6	6 M m N n O o
7	7 P p Q q R r S s
8	8 T t U u V v
9	9 W w X x Y y Z z
0	0 1
*	! @ # \$ % ^ & * ; , .
#	(space) ( ) - + ? / ‘

**Note :** This parameter does not apply to the IVT-16 key phone (without the LCD) as there is no LCD.

## Caller ID Format Selection

For IPS units equipped with Caller ID, you can select the display format for the Caller ID phone number. The Caller ID display format is changed by repositioning the dashes that separate groups of digits. The Caller ID format may be selected when the LCD appears as follows:

C	a	l	l	e	r		I	D		T	e	m	p	l	a	t	e	:		
#	#	#	#	-	#	#	#	-	#	#	#	#								

The incoming telephone number will display according to the dashes shown on the second line. For example, if a seven digit number is received, the second line will display as follows:

					5	5	5	-	1	2	1	2								
--	--	--	--	--	---	---	---	---	---	---	---	---	--	--	--	--	--	--	--	--

If a ten digit number is received, it will display as follows:

	5	1	2	-	5	5	5	-	1	2	1	2								
--	---	---	---	---	---	---	---	---	---	---	---	---	--	--	--	--	--	--	--	--

Press the DND/FWD button to change the position of one of the dashes. Press the MUTE button to change the position of the other dash. Press the SPKR button to advance to the next parameter.

**Note :** *This parameter does not apply to the IVT-16 key phone (without the LCD) as there is no LCD.*

## ***Programmable Keys***

You can select alternative functionality (e.g., speed dial) for eight (8) of the extension keys (108 through 115). When a key is being programmed, the associated LED lamp will illuminate red. Keys set to perform a special function, will display the following information on the LCD:

P	r	o	g	r	a	m	m	a	b	l	e	K	e	y	s	:		
H	:	8	8															

The '88' position in the display will show a hexadecimal number between '00' and 'FF'. For keys programmed as speed dial numbers, the LCD display will appear as follows:

P	r	o	g	r	a	m	m	a	b	l	e	K	e	y	s	:		
N	:	5	5	5	1	2	1	2										

The '5551212' represents the speed dial number.

To enter a special function code for a programmable key, press the DND/FWD button or the MUTE button to position the cursor under the character you wish to change. Then press one of the digit keys ('0' through '9') or press the '2' or '3' key multiple times to show the digits 'A' through 'F'. Press the SPKR button to advance to the next programmable key.

The default values of '88' to '8F' represent the codes for extensions '108' to '115'. The only other special function that can be programmed (which is not already a separate function key) is the ALARM function. The code for this is '1F'.

Pressing a key defined with the ALARM function followed by a 4-digit time entry (in the 24-hour mode) sets an alarm for your extension. When the time is reached, your key phone sounds an alert tone. (See "Alarm Clock", page 49.)
--

To enter a speed dial number for a programmable key, position the cursor using the DND/FWD button or the MUTE button and enter the number to be stored. You may press the TONE/PULSE button at any position in the dial string to cause subsequent digits to dial in either tone or pulse (rotary) mode. Pressing the PAUSE/BKIN button inserts a 2-second pause into the dial string. Each programmable key defined with a speed dial number can store up to 18 digits [Tone/Pulse indicators and pause entries each require a digit position for storage]. The LCD display will show an 'r' to indicate pulse (rotary) dialing, a 't' to indicate tone dialing, and a 'p' to indicate a pause entry. Some examples of speed dial programming are as follows:

P	r	o	g	r	a	m	m	a	b	l	e		K	e	y	s	:		
N	:	r	5	5	5	1	1	1	1	t	p	1	2	3	4	5			

This example will dial the number “555-1111” in the pulse (rotary) mode, switch to tone dialing, and then dial “12345”. Extra pause characters may be needed after switching to pulse dialing to give the IPS system sufficient time to send the pulse digits before subsequent digits are sent in the tone mode.

P	r	o	g	r	a	m	m	a	b	l	e		K	e	y	s	:		
N	:	5	5	5	1	1	1	1	p	p	p	1	2	3	4	5	6		

This example will dial the number “555-1111”, pause for 6-seconds, and then dial “123456”. The digits will be sent in either the tone or pulse (rotary) mode, whichever is currently set on the phone.

To use one of the speed dial keys, simply press the corresponding key. The digits sent to the IPS will be displayed on the LCD display.

To change the mode of a programmable key from “speed dial number” to “special function”, simply position the cursor under the ‘H’ or ‘N’ characters in the first position using the DND/FWD button or the MUTE button and press any digit.

**Note :** *The IVT-16 key phone (without the LCD) will illuminate the LED lamp associated with extension #106 to indicate that the key is programmed as a “special function” key (the LED lamp associated with extension #107 will illuminate to indicate that the key is programmed as a “speed dial number”).*

### **Reset All Parameters to Default Values**

To reset all parameters to the default values, simply press the MUTE button when the LCD appears as follows:

P r e s s   “ M u t e “   t o   r e -  
s t o r e   D e f a u l t   V a l u e s

Press the SPKR button to advance to the next parameter.

**Note :** *The IVT-16 key phone (without the LCD) will illuminate the LED lamp associated with extension #104 to indicate that you are programming this parameter.*

## Intercom Calls

Take notice of the state of the DSS key LED corresponding to the desired extension before making an intercom call (see DSS (Direct Station Selection) 100-115, Page 6).

### To make an Intercom call:



1. Lift the handset, then press the desired DSS key.

*You may also press the DSS key while the handset is on-hook, causing the “speakerphone” to be activated.*

## ***Camp On - Busy Extension***

To be connected to a busy extension as soon as the extension becomes available, use the Camp On – Busy Extension feature.

### **To Camp On a busy extension:**



- 1.** Lift the handset, then press the DSS key corresponding to the busy extension.



- 2.** Press the CAMP/PARK button. Wait for the confirmation tone and then hang up.

*When the busy extension becomes available, you will receive a reminder tone and the DSS key LED associated with your extension will illuminate red.. If you go off-hook within 15 seconds of these indicators, your extension will automatically begin to ring the other extension.*

## **Call Pick Up - Intercom**

**To pick up an Intercom call ringing at another extension:**



- 1.** Lift the handset, press “3”, then answer as usual.

## **Extension Hunt Groups**

**Definition:**

*Hunt Groups are groups of extensions used for the purpose of distributing calls.*

The IPS System supports four separate Hunt Groups allowing you to dial a 3-digit group number to be connected to the first available extension in that group.

**Note :** *Hunt Groups are set by the System Administrator.*

**To access Hunt Groups:**



- 1.** Lift your handset and enter:

“122” = Hunt Group #2

“133” = Hunt Group #3

“144” = Hunt Group #4

“155” = Hunt Group #5

You can also forward your calls from your extension to a Hunt Group by entering the group number instead of an extension number (see Call Forwarding, Page 41).

If your extension is part of a Hunt Group, you can temporarily stop receiving

calls directed to you by activating Do Not Disturb mode (see Do Not Disturb, Page 48).

## Outside Calls

Take notice of the state of the CO line key LED corresponding to the desired CO line before making an outside call (see Central Office (CO) Lines 1 – 4, Page 6).

### To make an outside call:



- 1.** Lift the handset, press the desired CO line key.
- 2.** After you hear CO dial tone, dial the telephone number.

## **Switch-hook to the Central Office**

Some features offered by local telephone companies, such as Call Waiting, require that a switch-hook (i.e., flash) be sent to the Central Office.

### **To send a switch-hook to the Central Office:**



- 1.** While on line, press the FLASH button.

*Pressing FLASH sends a switch-hook signal to the Central Office. Note that the System Administrator may disable this feature.*

## **Camp On - CO line**

To access a busy CO line as soon as it becomes available (e.g., in cases where all CO lines are in use), use the Camp On - CO line feature.

### **To Camp On a busy CO line:**



- 1.** Lift the handset, press the CO line key corresponding to the busy CO line.



- 2.** Press the CAMP/PARK button, wait for confirmation tone, and then hang up.

*When the selected CO line becomes available, you will receive a reminder tone and the DSS key LED associated with your extension will illuminate red. If you go off-hook within 15 seconds of these indicators, your extension will automatically be connected to the selected CO line.*

## ***Auto Redial***

### **To redial the last number called:**



- 1.** Lift the handset, press the REDIAL button.

*You must select a CO line before pressing the REDIAL button.*

## ***Call Pick Up - Outside Line***

### **To pick up an outside call ringing at another extension:**



- 1.** Lift the handset, press the CO line key indicating an incoming call (see Central Office (CO) Lines 1 – 4, Page 6).

*The key phone has a ring position toggle switch (RING POS) that allows you to select whether your phone will ring for incoming calls.*

## Call Holding

**Note :** *Outside calls can be put on hold. Intercom calls cannot.*

### To put a call on hold:



1. While on line, press the HOLD button then hang up.

*While a call is on hold, you have full use of your key phone. You can place another outside call or call someone at another extension.*

### Reminder Feature

Your key phone will ring you back after a caller has been on hold for the amount of time set by the System Administrator. If you do not answer the ringing phone within 20 seconds, the call will forward to the Operator or Voice Mail unit.

### Retrieving a Call on Hold

#### To retrieve a call that was placed on hold:



1. Lift the handset, press the CO line key corresponding to the call placed on hold.

*Note that the CO line key LED will be flashing slowly either red or green depending on the extension that placed the call on hold.*

## Call Transferring

To transfer an outside call to an available extension:



1. While on line, press the desired DSS key. The next step depends on how you want to transfer the call; there are two methods.

### “Blind Transfer”

2. Hang up (or press the XFER button) and the called extension will automatically be connected to the outside caller when the called extension goes off-hook.

*If the called extension does not answer, within 20 seconds, the call will forward to the Operator or to a Voice Mail unit.*

OR

### “Announce the Call”

2. Wait for the called extension to answer and then announce the outside caller that it holding for them.
3. Hang up (or press the XFER button) to transfer the outside call to the called extension, or the called extension can hang up and you will be reconnected to the outside caller.

**Note :** *Outside calls can also be transferred to the Operator or an optional Voice Mail unit in the same manner.*

## To transfer an outside call to a busy extension:

There are two methods to transfer an outside call to a busy extension.

### “Call Park”



1. Press the DSS key of the extension that is busy.



2. Press the CAMP/PARK button and then hang up.

*The person at the busy extension will hear a rapid tone, indicating that a call is parked for them. When they hang up, their line will ring.*

OR

### “Call Break-in”



1. Press the DSS key of the extension that is busy.



2. Press the PAUSE/BKIN button.

*You will be conferenced with the busy extension. Both parties to the conversation will be able to hear you. Note that the System Administrator determines which extensions are granted the “Call Break-In” privilege.*

### **To transfer an outside call to an unavailable extension:**

Attempts to transfer outside calls to an unavailable extension (i.e., an extension in DND mode) or a non-existent extension result in error tone. Upon receiving error tone there are two actions that you can take.

#### **“Reconnect” with the outside caller.**



1. Press the CO line key corresponding to the call placed on hold.

#### **“Transfer” the outside call to a different extension.**



1. Press the DSS key for a different extension.

**Note :** *Outside calls can also be transferred to the Operator or an optional Voice Mail unit in the same manner.*

## Conference Calling

### *1 Outside Line, 2 Extensions*

To “conference in” another extension:



1. While on line, press the DSS key for the desired extension.

*This will place the outside call on hold. When the person answers, you have the opportunity to announce the conference call without the outside call hearing.*



2. Press the CONF button.

*You are now in conference mode. All three parties can speak together.*

## **2 Outside Lines, 1 Extension**

To “conference in” an outside call.



- 1.** While on line, press the CONF or HOLD button.

*This will put the first outside call on hold.*



- 2.** Press the desired CO line key to access another outside line, then dial the desired number.

*When the party answers, you have the opportunity to speak to them without being heard by the party on the first outside call.*



- 3.** Press the CONF button again.

*You are now in conference mode. All three parties can speak together.*

## Special Features

### ***Call Forwarding***

Call Forwarding allows you to forward calls directed to your extension to another extension on the system.

#### **To set from your extension:**



- 1.** Lift the handset and press the DND/FWD button.



- 2.** Press the DSS key for the extension to which you want to forward your calls and then hang up.

*The DND/FWD LED lamp will illuminate.*

*Each time a call is directed to your extension, the key phone will emit a short ring indicating that the extension is in call forwarding mode.*

#### **To cancel call forwarding:**



- 1.** Lift the handset, press the DND/FWD button, and hang up.

*The DND/FWD LED lamp will shut off.*

## **Call Follow Me**

Call Follow Me is similar to Call Forwarding in that it allows you to forward calls directed to your extension to another extension on the system. Call Follow Me differs from Call Forwarding in that it is activated from the extension to which you want your calls forwarded.

### **To activate Call Follow Me:**



- 1.** Lift the handset at the extension to which you want your calls forwarded and enter “43”.



- 2.** Press the DSS key for your extension.

*You will hear a triple- tone.*

### **To deactivate Call Follow Me:**



- 1.** Lift the handset at the extension to which your calls are being forwarded and enter “53”.



- 2.** Press the DSS key for your extension.

*You will hear a triple- tone.*

**Note :** *The ability to activate “Call Follow Me” from another extension is enabled/disabled by the System Administrator.*

## **Call Barring Override / System**

If you have been granted the privilege of making unrestricted calls, you may enter a password to make such calls from any restricted extension. This feature temporarily deactivates call barring at the extension for as long as the phone remains off-hook.

**Note :** *Passwords are assigned by the System Administrator.*



- 1.** Lift the handset and enter “40”.



- 2.** Enter your password.

*You will hear an error tone if the password is entered incorrectly.*

- 3.** Pause for a triple-tone, press a CO line key, and then proceed with dialing the phone number.

## ***Outside Call Restriction (Extension)***

In some situations you may wish to prevent others from using your key phone (i.e., extension) to make outside calls (e.g., when you go to lunch, on vacation, or home for the weekend). The IPS system provides call barring tables which allow the System Administrator to define various levels of restriction. When activated, Outside Call Restriction typically applies the most restrictive table to all calls from the extension.

### **To activate Outside Call Restriction:**



- 1.** Lift the handset and enter “59”.

*You will hear a triple-tone.*

### **To deactivate Outside Call Restriction:**



- 1.** Lift handset and enter “50”.



- 2.** Enter your 6-digit password.

*If the password is entered correctly, you will hear a triple-tone.*

*If the password is not entered correctly, you will hear an error tone and the extension will remain in the restricted mode.*

**Note :** *The default password is “111111”.*

**Note :** *The System Administrator can configure the system such that all extensions use the most restrictive table when the system is in Night Mode.*

## ***Outside Call Restriction (Password)***

**To change your password:**



- 1.** Lift the handset and enter “255”.



- 2.** Enter your new 6-digit password.

*The new password can only be entered when the extension is not in the restricted mode or an error tone will be heard.*

**Note :** *The default password is “111111”.*

## ***Paging - External / Groups #1 and #2***

There is a paging output on the IPS system to which the System Administrator can connect an external amplifier and speaker. Extensions on the system can page through this external paging system or through speakers on key phones and doorphones throughout the office. The System Administrator can assign extensions into one of two paging groups to enable pages to specific areas only.

### **External Paging:**



- 1.** Lift the handset, enter “410”, and then begin speaking.

### **External Paging and Page Group #1:**



- 1.** Lift the handset, enter “411”, and then begin speaking.

### **Page Group #2:**



- 1.** Lift the handset, enter “412”, and then begin speaking.

## **Message Waiting Lamp/Tone**

Each extension is capable of activating the message waiting lamp (i.e., the LED lamp on the MSG button) or message waiting tone of any extension on the system.

Typically the activation of a message waiting indicator is handled by an optional Voice Mail unit. However, in some office environments, the System Operator takes all messages. In such cases, the System Operator can manually activate a message waiting lamp or tone at an extension to indicate that new messages have been taken.

### **To Turn On the Message Waiting Lamp/Tone:**



1. Lift the handset and press the MSG button.



2. Press the DSS key for the particular extension. Pause for confirmation tone and then hang up.

### **To Turn Off the Message Waiting Lamp/Tone:**



1. Lift the handset and enter "55"



2. Press the DSS key for the particular extension. Pause for confirmation tone and then hang up.

## **Do Not Disturb**

Do Not Disturb mode prevents both outside and intercom calls from ringing at your extension. Callers attempting to reach you when your extension is in Do Not Disturb mode will receive error tone.

### **To Activate Do Not Disturb mode:**



- 1.** Lift the handset, press the DND/FWD button and then hang up.

*The DND/FWD LED lamp will illuminate.*

### **To Deactivate Do Not Disturb mode:**



- 1.** Lift the handset, press the DND/FWD button and then hang up.

*The DND/FWD LED lamp will shut off.*

## Alarm Clock

This feature allows you to program your key phone to emit an alarm tone (e.g., as a reminder) at a certain time.

### To set the alarm for a specific time:



1. Lift the handset and enter “45”.

*One of the programmable keys can be defined to automatically enter the “45” so that you just have to enter the 4-digits for the time (see Programmable Keys, Page 24).*



2. Enter 2 digits for the hour (00 to 23).



3. Enter 2 digits for the minutes. Pause for confirmation tone and then hang up.

### To cancel a pending alarm:



1. Lift the handset and enter “46”.

*You will hear a triple-tone.*

## ***Emergency Alarm***

This feature is designed to indicate that there is an emergency. When activated, each extension rings repeatedly every 10 to 20 seconds. Anyone who picks up their handset will hear a repeated rapid tone.

### **To Activate:**



- 1.** Lift the handset and enter “49”.

*The emergency alarm tone will begin immediately.  
Leave the handset off-hook.*

### **To Deactivate:**

- 1.** Hang up.

*Note that the System Administrator may disable the  
Emergency Alarm feature for certain extensions.*

## Speed Dial Numbers

### ***System / Speed Dial Numbers***

Your System Administrator may preset up to 45 system-wide speed dial numbers. A 2-digit code is assigned to each system speed dial number (Ask your System Administrator for a list).

#### **To place a call using a system speed dial number:**



- 1.** Lift the handset and press the MEM button.



- 2.** Enter the 2-digit code for the desired system speed dial number.

### ***Personal / Speed Dial Numbers***

In addition to the system speed dial numbers, each extension can store up to 4 personal speed dial numbers. Codes 01 to 04 are available for this purpose.

#### **To set personal speed dial numbers:**



- 1.** Lift the handset and press the MEM button. For each speed dial number, enter the corresponding programming code.



2. Enter the 2-digit programming code (i.e., 51-54) corresponding to the desired personal speed dial code (i.e., 01-04) (see Codes for Personal Speed Dial Numbers on Page 53).



3. Enter the phone number that you wish to store and then hang up.

*Up to 20 digits may be entered. To enter a pause, press the PAUSE/BKIN button.*

*Repeat these steps to add additional numbers.*

**Note :** *These personal speed dial numbers are stored on the IPS system. The speed dial numbers discussed in the Programmable Keys section on Page 24 are stored in your key phone.*

### **To place a call using a personal speed dial number:**



1. Lift the handset and press the MEM button.



2. Enter the 2-digit personal speed dial code.

### ***Codes for Personal Speed Dial Numbers***

<b>Speed Dial Code</b>	<b>Number/Person Assigned</b>	<b>Programming Code</b>
01		51
02		52
03		53
04		54

***Tip:*** Photocopy the above chart and keep it by your key phone for reference.

## Guide to Tone Patterns

The following table shows the different tone patterns that a caller may hear as a result of different actions.

<b>Tone Type</b>	<b>Description</b>
Busy Tone	The Busy Tone is on for 400 ms. This tone is generated when (1) accessing a CO line which is in use, or (2) dialing a busy ordinary (non key-) phone in either intercom mode or in trying to transfer a CO call.
Key Phone Busy Tone	The Key Phone Busy tone is on for 400 ms, off for 280 ms, on for 120 ms, off for 120, on for 120 ms, then off for 2.016 seconds. This tone is generated when dialing a busy key phone in either the intercom mode or in trying to transfer a CO call.
Ringing Tone	The Ringing tone is on for 320 ms, off for 280 ms, on for 320 ms, then off for 2.016 seconds. This tone is generated when (1) calling another extension in the intercom mode or (2) when trying to transfer a CO call to an available extension.
Flash Tone	The Flash tone is on for 56 ms, off for 32 ms, on for 56 ms, off for 32 ms, then on for 56 ms. This tone is generated after a phone flashes (i.e. switch-hooks) during a CO call. It is also generated as a confirmation tone for any programming.
Error Tone	The Error tone is on for 160 ms, off for 160 ms. This tone is generated in many instances such as when a phone dials an incorrect digit or tries to access an invalid extension or other resource. It is also generated during a CO call when the extension dials a number which is barred according to the Call Barring tables.

<b>Tone Type</b>	<b>Description</b>
Clear Forwarding Tone	The Clear Forwarding tone is on for 1 second, off for 160 ms, on for 80 ms, off for 160 ms, on for 80 ms, then off for 160 ms, then switching to system dial tone. This tone is generated when the PBX detects, through the clear forwarding detection or polarity reversal detection, that the outside caller has hung up.
Wait Tone	The Wait tone is on for 64 ms, then off for 240 ms for as long as a resource is unavailable. This tone is generated when an extension is waiting for an unavailable system resource.
Alarm Tone	The Alarm tone is on for 400 ms, off for 160 ms, on for 80 ms, off for 160 ms, on for 80 ms, then off for 824 ms. This tone is generated when an extension answers the phone after an alarm clock rings.
Stutter Tone	The Stutter tone is on for 80 ms and off for 80 ms, lasting for about 3 seconds. This tone is generated when a non-key phone extension picks up the phone while its message waiting indicator is active. This informs the non-key phone extension that someone has left a message.

## Command Summary

The following table presents the commands for accessing the special features of the IPS system. Your System Administrator may have configured your system to require a “\*” key to be pressed before dialing sequences beginning with a ‘4’ or ‘5’ digit.

Pg#	Sequence	Description
	56	From the Operator station only, set Night Mode.
	57	From the Operator station only, set Day Mode.
27	DSS or 1 nn	Place an Intercom Call to extension or to one of the Hunt Groups.
29	3	Pick up an intercom call ringing at another extension.
35	CO 1-4	Retrieve CO calls placed on hold.
41	FWD, DSS	Forward all calls from this extension to another extension.
41	FWD	Cancel the forwarding of calls from this extension.
42	43, DSS	Forward all calls from another extension to this extension (Follow Me).
42	53, DSS	Cancel calls being forwarded from another extension to this extension. (Clear Follow Me)
43	40 nnnnnn	Enter the 6-digit Call Unbarring Password.
44	59	Force this extension to use the restricted calling list.
44	50 nnnnnn	The correct password ‘nnnnnn’ will cause this extension to no longer use the restricted calling list.
46	410	Connect to the paging system.
46	411	Connect to the key phones and door phones in Pager Group #1 and the external paging system.
46	412	Connect to the key phones and door phones in Pager Group #2.
47	MSG, DSS	Turn on the Message light / tone at another extension.
47	55, DSS	Turn off the Message light / tone at another extension.
48	DND	Place the phone at this extension into the Do Not Disturb mode.
48	DND	Take the phone at this extension out of the Do Not Disturb mode.
49	45, hh, mm	Set the alarm clock for ‘hh’ hours (0-23) and ‘mm’ minutes (0-59).
49	46	Cancel the alarm clock setting.
50	49	Start the Emergency Alarm signal to all extensions.

51	MEM nn	Place an outside call using one of the speed dial numbers.
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