

# IP Server 900

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## Administrator's Manual

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Rev. D

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**Note:** Remember to tell your users about [www.esi-estech.com/support](http://www.esi-estech.com/support) — ESI user help on the Web.

# Administrator programming: An introduction

You can program ESI's **IP Server 900** locally or remotely from an ESI 60, ESI 40, ESI 30, or 48-Key Feature Phone while the system is operating. You also can program using *IP Server 900 System Administrator*, a Web server-based software application your ESI Reseller can provide.

**Read the *User's Guide* first.** The programming of features requires a clear understanding of **user** interface and application.

## Administrator's duties

The System Administrator can perform the following tasks:

- Administering station assignments
- Managing station feature authorization
- Maintaining the employee directory (if it's used)
- Re-recording system prompts
- Administering manual change of day/night mode (if required)

## User assistance

The IP Server 900's **Verbal User Guide** includes all of the information printed in the *User's Guide* (except for special features). Additionally, [www.esi-estech.com/support](http://www.esi-estech.com/support) includes the *User's Guide* and other helpful information.

**Note:** Except where noted, the remainder of this "General description" chapter describes only **features**, rather than any system **capacities**. For **system-specific** capacity specifications — e.g., CO lines, ports, message storage, etc. — see "System capacities" (page B.1).

## Telephone system features

- **T1 and PRI support** — Can connect to higher-bandwidth lines, which more and more offices use.
- **ESI phones** — Compact and stylish, yet rugged, each current ESI phone includes a high-quality speakerphone, large and informative multi-functional display, and a specially designed key layout with several dedicated keys to minimize or eliminate the need to memorize codes. The following models are supported on the IP Server 900:
  - **ESI 60 Business Phone** — Digital and two IP (Gigabit Ethernet and 10/100 Ethernet) versions. Each includes an integrated headset jack, a backlit display, and full-duplex HD-quality speakerphone.
  - **ESI 40 Business Phone** — Digital and IP (10/100 Ethernet) versions. Each includes an integrated headset jack and a backlit display.
  - **ESI 30D (digital) Business Phone.**
  - **48-Key Feature Phone** — Digital and IP (10/100 Ethernet) versions. Each includes an integrated headset jack, a backlit display, and full-duplex speakerphone.
  - **ESI Cordless Handset II** — Available in digital and two (local and remote) IP versions.<sup>1</sup>
- **Extensive help** — ESI's Verbal User Guide™ uses spoken and displayed help prompts to help everyone from the Installer through the Administrator down to the least experienced end user. Easily accessible with one press of the **PROG/HELP** key.<sup>2</sup> One can also visit [www.esi-estech.com/support](http://www.esi-estech.com/support) for help.
- **Enhanced Caller ID** — Allows one-touch automatic message return.<sup>3</sup> The IP Server 900 passes Caller ID data to both digital and analog ports.
- **Live call recording** — Can record any conversation or personal memo, with moving or copying of any recording to another user's voice mailbox (see "Voice mail features," page A.3).
- **Call waiting** — Includes helpful display, showing both calls' Caller ID information, and easy one-key toggling between calls.

<sup>1</sup> See also the *IP Server 900 Hardware Installation Manual* (ESI document #0450-1305).

<sup>2</sup> The 48-Key Feature Phone has separate **PROGRAM** and **HELP** keys.

<sup>3</sup> This and all other references to Caller ID service within this manual assume the end-user organization subscribes to Caller ID service from its telephone service provider.

- **Conference calling** — Includes up to 64 dynamic conference ports; a single conference may contain up to 16 members.<sup>1</sup> Conference bridges are dynamic, so possible conference sizes include: 21 three-member; 16 four-member; 10 six-party; and various combinations in-between. Analog phones on the system also may originate conferences.
- **Esi-Dex™ speed-dialing** — Calls any number using four separate lists (personal, station, system and — when Esi-Link is in use — cabinet location); uses Caller ID information or direct keypad entries.
- **Dedicated overhead paging interface** — Allows for external paging through overhead speakers or multi-zone paging units (amplification required) and separate, vendor-supplied zone page adapters.
- **Intelligent Call Forwarding™** — Lets users of compatible PRI-equipped ESI systems view the original Caller ID data of a call forwarded to an off-premises phone.
- **911 alert** — Provides immediate line access if any station<sup>2</sup> dials **9 1 1** to report an emergency; sends a message via the serial port indicating the start date, time, station number and end-time of the 911; also sounds an audible warning at the operator station and displays, for example:

```
911 CALL FROM
X102 JOHN JAMES
```

**Important:** Remember to advise your customers **not** to make 911 calls using a remote IP phone.<sup>3</sup> Because such a phone isn't connected directly to the local telephone network, it's necessary instead to use a regular phone connected locally, not the remote IP phone, to make 911 or other emergency calls. (For more information, see the documentation included with the remote IP phone.)

- **Shared-office tenanting** — Tenant service allows multiple business entities to share a telephone system while maintaining separation of various facilities and features. For more details, consult your ESI Reseller.
- **Twinning** — Lets a user set his/her extension so that an incoming call will ring both it and an additional number simultaneously. The additional number can be either an internal extension or an off-premises number, such as a cell phone or home phone.
- **Support for these options:**
  - **Esi-Link** — Allows a multi-site enterprise to network any combination of dozens of compatible ESI phone systems across an IP-based network.
  - **VIP™ 7** — Provides a value-added interface to the IP Server 900. Delivers call control and on-screen message handling.
  - **ESI Presence Management** — Provides integrated building entry control, access control, status indication, personal call routing, and (optionally) time and attendance management.
  - **ESI Mobile Messaging** — Lets users receive messages (voice mails and recordings) as .WAV attachments to regular e-mails; works with any standard e-mail client application.
  - **ESI Media Management** — Provides software and hardware to monitor the workplace and (with ESI Presence Management) help users control access; lets authorized supervisors record and monitor calls to help improve employees' customer service and efficiency; archives system-created video, audio, and data for off-system storage.
  - **ESI Video Viewer** — Shows live streaming video from cameras connected to the IP Server 900. Basic version is free; optional Advanced version offers multi-camera views and much more.

<sup>1</sup> See "System capacities" (page B.1).

<sup>2</sup> An ESI Remote IP Cordless Handset sends 911 calls via the local analog CO line attached to the Cordless Handset's base station. The 911 alert information isn't available at the operator station or via serial port.

<sup>3</sup> A remotely installed ESI desktop IP phone, a Remote IP Cordless Handset, or a remote installation of *VIP Softphone*.

## Voice mail features

- **Built-in voice mail ports** — These are **in addition to** the call-processing ports; thus, you may build the system to its maximum for call-handling without having to balance voice mail needs versus call-handling needs. For specific voice storage capacities on a system-by-system basis, see “System capacities” (page B.1).
- **Highest-grade voice quality** (64-kilobit/second sampling) for voice mail and other storage of voice messages.
- **Message-on-hold (MOH) recordings** — Among these are three prerecorded tracks; also supports live entry. If your Installer has enabled tenant service, each tenant has its own MOH source.
- **Off-premises message delivery** — Automatically delivers voice messages to designated phone number, such as a cell phone, when one is out of the office.
- **Urgent messages** — Can deliver higher-priority messages first.
- **Several different mailbox types**, including group, broadcast, informational, cascade notification and Q & A.
- **Message Recycle Bin** (undelete) — Remembers, and can restore, each mailbox's 10 most recently deleted messages.
- **Quick Groups™** — Makes it easy to leave voice mail messages for several users.
- **Quick Move™** — Records a conversation into another user's mailbox.
- **Virtual Mailbox Key™** allows easy monitoring of a second mailbox.

## Auto attendant features

- **Six levels, 100 branches** — Allow you and your customer to set up a more caller-friendly answering environment, including a company directory.
- **Virtually unlimited call routing** — Includes off-premises transfer, pager notification, more.

## ACD features

- **Routes calls within designated departments for quickest possible call answering.**
- **Uses three-line ESI phone display** to provide up-to-the-second information on queues, wait times, delay announcement, priority queueing, and overflow routing.<sup>1</sup>
- **Optional VIP 7 ACD Supervisor and VIP 7 ACD Agent** enhance ACD usage; *VIP 7 ACD Supervisor* offers highly useful reports and also gives ability to customize reports.<sup>2</sup>

## Phone overlays

Each ESI desktop phone comes with one overlay for the programmable feature keys. To order additional overlays, visit the DESI™ Web site, [www.desi.com](http://www.desi.com). While there, you may also want to download the free Windows-based software, *DESI Lite*, which allows you to print on the overlays. For assistance with DESI products, contact DESI (the DESI Web site contains contact information).

**Tip:** Remember that *VIP 7* and *Web ESI Personal Programmer* (available from your ESI Reseller) also let you print on the overlays as well as perform many other programming tasks.

<sup>1</sup> Three-line display not available on ESI 30D.

<sup>2</sup> Report customization requires either *Crystal Reports Standard Edition* or *Crystal Reports Professional Edition* (not available from ESI).

## Programming basics

**Note:** If using a 48-Key Feature Phone to perform any programming described herein, please note that this phone has separate **PROGRAM** and **HELP** keys, rather than a combo **PROG/HELP** key.

As mentioned earlier, you may program from **any** ESI desktop phone<sup>1</sup> in the system (while the system is operating).

Once you've entered programming mode on an ESI phone, the system will prompt for — and confirm — each keystroke action via voice commands and the display. You program both configuration data and recordings in the same manner.

**Important:** During programming, the ESI 30D's two-line display shares the same content as the top two lines of the three-line display on most other ESI desktop phones. As a result, to save space, the sample displays shown herein will show only two lines.

If installing ESI Presence Management on this system, refer to the *ESI Presence Management Installation Manual* (ESI # 0450-0792) for important information **before** you program the system.

### Entering programming mode

1. Press **PROG/HELP** at any digital station. The normal **station** programming menu prompts will begin to play.
2. Press **HOLD**. The “enter password” prompt will play.
3. Enter the **Administrator password**.<sup>2</sup> Then, to confirm the password, either press **#** or wait two seconds. **You are now in programming mode**. The extension will be automatically placed in DND, and its display will show:

```
ADMINISTRATOR
CMD :
```

4. The system will play the **system** programming menu. Follow it to program as you wish.
5. When finished, hang up.

**Warning:** Always **FINISH** programming in **ANY** function **BEFORE** exiting programming mode (as needed, press **#** to accept current entries for function parameters you're not changing).

**Note:** The system will automatically exit programming mode after 10 minutes of inactivity.

**Example:** If your Administrator password is **864**, **enter** programming mode by pressing **PROG/HELP HOLD 8 6 4 #**. (To **exit** programming mode, hang up.)

<sup>1</sup> Although a legacy 12-Key Feature Phone allows you to **enter** Administrator programming, we don't recommend that you use a 12-Key Feature Phone for programming because of its one-line display and small number of programmable feature keys.

<sup>2</sup> The default is **4 5 6**.

## System programming overview

### 1 System parameters

- 13 Administrator password
- 14 System clock and calendar
  - 141 Set time/date
  - 142 Automatic time setting
  - 143 Clock adjustment
- 16 System feature parameters
  - 162 Connect tone
  - 163 Station feature set activation
- 17 System speed-dial

### 3 Extension programming

- 32 Extension feature authorization
- 33 Department programming
  - 332 VIP 7 ACD parameters
- 37 RFID programming
  - 371 Access schedules
  - 372 RFID tag programming
  - 373 View RFID tag numbers
  - 374 ESI Presence Management parameters
  - 375 ESI Presence Management Reader parameters
  - 376 ESI Video Adapter programming
- 30 Station move<sup>1</sup>

### 5 Voice mail programming

- 53 Guest/info mailboxes
- 54 Group mailboxes
- 55 Message notification options
  - 551 Station delivery options
  - 552 Delivery/paging parameters
- 56 Cascade notification mailboxes
- 57 Q & A mailboxes

### 6 Recording

- 61 Record system prompts
- 62 Record directory names
- 63 MOH programming
  - 631 MOH source
  - 632 Record MOH
  - 633 MOH volume
- 64 Call recording settings
  - 641 CO line recording parameters
    - 6411 Analog line recording settings
    - 6412 T1 line recording settings
    - 6413 PRI line recording settings
    - 6414 SIP trunk recording settings
  - 642 Extension or department recording parameters
  - 643 Call recording purge parameters

### 7 Reports

- 72 ESI Presence Management access door report
- 73 ACD department detail report
- 74 Voice mail statistics report
- 75 System speed-dial list

## Programming keys

During programming, the first line of the display will show the current **item** being programmed, and the second line will be the entry line. You can enter values as directed by the combination of the voice prompts and display. To enter multiple values, such as a list of extension numbers, separate each value by # (to exit the list, enter ##).

To...	Press ...	What this does
Enter	#	Confirms new or existing entry and advances to next programming step.
Back up ( <i>i.e.</i> , reverse direction)	*	Backs up to previous prompt without changing its value.
Delete	<b>HOLD</b>	Deletes data or recording.
Exit	[Hang up]	Exits programming mode and removes extension from DND.
Help	<b>PROG/HELP</b>	Provides more detailed instructions during programming.
Select/scroll	▼ ( <i>left-side scroll key</i> )	<ul style="list-style-type: none"> <li>• During entry of a value, backs up.</li> <li>• If a list is present ("&gt;" is displayed), scrolls to left.</li> </ul>
	▲ ( <i>right-side scroll key</i> )	<ul style="list-style-type: none"> <li>• Selects from options presented.</li> <li>• If a list is present ("&gt;" is displayed), scrolls to right.</li> <li>• Inserts a space during entry of a name.</li> </ul>

**Notes:** Either < or > in the display indicates that additional choices or values are available by pressing a corresponding scroll key (▼ or ▲).

Only one person at a time can be performing Installer or Administrator programming.

<sup>1</sup> Shown in the same order as it appears in the programming menu on an ESI desktop phone.

## Entering alphanumeric characters

Enter names for **extensions, departments, branch IDs, CO lines, guest mailboxes and DIDs** by pressing the dial pad key that corresponds to the character to be entered. The key's possible entries will change each time the key is pressed, and the display will show this. When the desired character appears on the display, press **#** to confirm; the cursor will move to the next character position. You may move the cursor left (to correct an entry) by pressing the left scroll key (▼) or move right (to add a space) by pressing the right scroll key (▲).

Key	Options
0	0, - (hyphen), _ (underline)
1	Q, Z, 1, " " (space)
2	A, B, C, 2
3	D, E, F, 3
4	G, H, I, 4
5	J, K, L, 5
6	M, N, O, 6

Key	Options
7	P, R, S, 7
8	T, U, V, 8
9	W, X,Y, 9
▼ (left scroll key)	Backs up and erases
▲ (right scroll key)	Adds a space
#	[Enter]
##	Ends the name

**Example:** To enter a **B**, press **2** twice (the possible options to scroll through are **A, B, C** and **2**). When **B** is displayed, press **#** to confirm; the cursor will move to the next character to be entered. To complete the name, press **##**.

**Note:** On an incoming call, the name you assigned to the call's CO line or DID — rather than the Caller ID data — will appear until the call is answered.

## Selectable numbering plan

The IP Server 900's selectable numbering plan offers up to nine pre-configured ranges — three **three-digit** plans and six **four-digit** plans. When an extension range is selected, department numbers and guest mailbox numbers are also changed. However, regardless of which extension range is selected, feature key codes and CO line group access numbers will stay the same. The dial plan range is selected through Installer programming.

**Notes:** The ESI Presence Management digital RFID Reader<sup>1</sup> uses one digital extension, regardless of dial plan. An ESI desktop IP phone, the IP Cordless Handset (Local or Remote), *VIP 7 Softphone*, and a SIP phone **each** use one IP port, regardless of dial plan.

**Important:** Full capacity on the IP Server 900 can be achieved **only** by using a **four-digit** plan. (See "System capacities," page B.1.)

<sup>1</sup> For more information, see the *ESI Presence Management Installation Manual* (ESI # 0450-0792).

**Three-digit selectable numbering plan templates for the IP Server 900**

**Selection 100 (default)**

From	To	Used for
100	267	Extensions
280	299	Departments
300	489	Guest/info mboxes
270	273	Conference bridge

**Selection 200**

From	To	Used for
200	367	Extensions
380	399	Departments
100	199	Guest/info mboxes
400	489	Guest/info mboxes
370	373	Conference bridge

**Selection 300**

From	To	Used for
300	467	Extensions
470	489	Departments
100	289	Guest/info mboxes
290	293	Conference bridge

**Common to all three-digit numbering plan selections for the IP Server 900**

From	To	Used for
0	—	Operator
490	499	Q & A mailboxes
500	—	Broadcast mailbox
501	532	Group mboxes
533	542	Cascade notif. mboxes

From	To	Used for
*500	*599	Feature key codes
600	699	System speed-dial
700	709	Esi-Link <sup>1</sup> locations
770	799	Esi-Link locations
71	76	Esi-Link/CO line grps.

From	To	Used for
8	—	CO line grp.
9	—	CO line grp./ARS
*	—	Call pickup
#	—	Paging

**Four-digit numbering plan selection for the IP Server 900**

**Selection 1000**

From	To	Used for
1000	1863	Extensions
1864	1927	Departments
3000	3999	Guest/info mboxes
4000	—	Broadcast mailbox
4001	4032	Group mboxes
4040	4059	Q & A mboxes
4060	4079	Cascade notif. mboxes
4080	4083	Conference bridge
6000	6999	System speed-dial

**Selection 2000**

From	To	Used for
2000	2863	Extensions
2864	2927	Departments
3000	3999	Guest/info mboxes
4000	—	Broadcast mailbox
4001	4032	Group mboxes
4040	4059	Q & A mboxes
4060	4079	Cascade notif. mboxes
4080	4083	Conference bridge
6000	6999	System speed-dial

**Selection 3000**

From	To	Used for
3000	3863	Extensions
3864	3927	Departments
2000	2999	Guest/info mboxes
4000	—	Broadcast mailbox
4001	4032	Group mboxes
4040	4059	Q & A mboxes
4060	4079	Cascade notif. mboxes
4080	4083	Conference bridge
6000	6999	System speed-dial

**Selection 4000**

From	To	Used for
4000	4863	Extensions
4864	4927	Departments
3000	3999	Guest/info mboxes
2000	—	Broadcast mailbox
2001	2032	Group mboxes
2040	2059	Q & A mboxes
2060	2079	Cascade notif. mboxes
2080	2083	Conference bridge
6000	6999	System speed-dial

**Selection 5000**

From	To	Used for
5000	5863	Extensions
5864	5927	Departments
3000	3999	Guest/info mboxes
4000	—	Broadcast mailbox
4001	4032	Group mboxes
4040	4059	Q & A mboxes
4060	4079	Cascade notif. mboxes
4080	4083	Conference bridge
6000	6999	System speed-dial

**Selection 6000**

From	To	Used for
6000	6863	Extensions
6864	6927	Departments
3000	3999	Guest/info mboxes
4000	—	Broadcast mailbox
4001	4032	Group mboxes
4040	4059	Q & A mboxes
4060	4079	Cascade notif. mboxes
4080	4083	Conference bridge
2000	2999	System speed-dial

**Common to all four-digit numbering plan selections for the IP Server 900**

From	To	Used for
0	—	Operator
*500	*599	Feature key codes
700	709	Esi-Link locations

From	To	Used for
770	799	Esi-Link locations
71	76	CO line grps. or Esi-Link loc. prefixes
8	—	CO line grp.

From	To	Used for
9	—	CO line grp./ARS
*	—	Call pickup
#	—	Paging

<sup>1</sup> For more information, see [www.esi-estech.com](http://www.esi-estech.com).

## Remote setting of day, night, holiday and auto modes

Normally, the system's day/night mode operation will be manually controlled at an ESI desktop phone and/or set to follow the day/night mode tables (programmed by the Installer) automatically. In addition, the Administrator can remotely change the mode and/or re-record the holiday greeting to handle unexpected closings such as for inclement weather.

Remotely logging into the system with either the Installer password or the Administrator password lets the caller do the following for branch IDs 1–8:

- Re-record the greetings (day, night, day2 and night2).
  - Re-record the holiday greeting.
  - Change the mode to day/night/holiday/day2/night2 (or auto).
1. At the main greeting, enter \* \* 7 8 9 # or 4 5 6 # — or the new password — to enter remote programming mode.
  2. You'll hear prompts that will allow you to change the answer mode (day, night, day2, night2, holiday or auto) and/or to re-record the holiday greeting and the main greeting (ID 1). Follow the prompts to perform the desired operation.

**Note:** To access these options for branch IDs 1–8, you must call in on the phone number of the tenant that uses those branches.

3. Exit by pressing \* and hanging up.

## Prompts for remote settings: an outline

### 1 Set answer mode

- 1 Day mode
- 2 Night mode
- 3 Holiday mode
- 4 Use day/night table\*
- 5 Day2 mode
- 6 Night2 mode

### 2 Record holiday main greeting

### 3 Record daytime main greeting

### 4 Record nighttime main greeting

### 5 Record day2 main greeting

### 6 Record night2 main greeting

**Note:** If the system is answered live and call is then routed to a mailbox, the Administrator can press 8 to return to the main greeting and then follow the steps for making remote settings.

---

\* This is used if the Installer has programmed an automatic calendar.

### **Programming “meet-me” conference bridges**

Each “meet-me” conference bridge in the system supports an optional log-in password with which participants will be challenged before they’re allowed to join a “meet-me” conference. Setting a “meet-me” password is very similar to setting the password for an information or guest mailbox:

1. Press **PROG/HELP** (or **PROGRAM** on a 48-Key Feature Phone).
2. Dial the conference bridge extension number.
3. Use the keypad to enter the Administrator password.
4. The *OWNER PW* field is for future use, so leave it at its default value of *0* and press **#** to skip this field.
5. The *PARTICIPANT PW* field sets the password each participant must use to log into the “meet-me” conference bridge. The default value of *0* disables the password, so users won’t be prompted. The password must be numeric and can be up to 16 digits in length.

# System capacities

**Important:** Each ESI Presence Management RFID Reader uses one digital station.

## Stations and trunks

The specifications shown below reflect maximum capacities and configurations. **Not all of the station and trunk maximums can be reached simultaneously.**

Dialing plans (-digits) ►	Four	Three
Maximum modules	8	8
Maximum port configuration <sup>1</sup>	500	400
– Maximum stations	191	168
– Maximum IP stations	127	127
– Maximum digital stations	64	64
– Maximum analog stations	32	32
Maximum CO lines	192	84
Maximum T1/PRI Modules	2	2
Esi-Link channels	127	127
SIP trunking capability	(Built-in)	(Built-in)
Maximum number of SIP trunks	127	84
Maximum lines available	192	84

## Dedicated ports

Dialing plans (-digits) ►	Four	Three
Voice mail/auto attendant ports	32	32
Conference ports (max. of 16 members per conference)	64	64
NSP <sup>2</sup>	1	1
Overhead paging ports	1	1
Serial/SMDR ports	n/a	n/a
Meet-Me Conference Bridges	4	4

## Voice mail capacities

Dialing plans (-digits) ►	Four	Three
Voice mail storage (hours)	140	140
Broadcast mailbox (one to all extensions)	Yes	Yes
Cascade notification mailboxes	20	10
Group mailboxes/max. members	32/64	32/64
Guest/info mailboxes	1,000	190
Maximum station mailboxes	191	168
Q & A mailboxes	20	10
Maximum unheard messages per mailbox	128	128
Maximum stored messages per mailbox	256	256
Find-Me stored phone numbers	1,000	1,000

<sup>1</sup> Includes Esi-Link channels.

<sup>2</sup> Network Services Processor; see the *IP Server 900 Hardware Installation Manual* (ESI # 0450-1305).

## Departments

Dialing plans (-digits) ▶	Four	Three
Max. departments	64	20
Department types: Ring-all, ACD, UCD, in-order, pick-up, attendant	Yes	Yes
Max. members, non-ring-all depts.	64	64
Max members, ring-all depts.	64	64

## Automatic call distribution (ACD)

Dialing plans (-digits) ▶	Four	Three
Max. ACD departments	64	20
Max ACD agents per department	64	64
Max ACD agents (system-wide)	191	168

## Shared-office tenanting

Dialing plans (-digits) ▶	Four	Three
Tenants	8	8

## CO line groups

Dialing plans (-digits) ▶	Four	Three
Line groups 9, 8, 71–76	Yes	Yes
Max. members, CO ring assignment list	64	64

## Translation tables

Dialing plans (-digits) ▶	Four	Three
Pilot numbers	100	100
Max. DID entries	600	600

## System speed-dial numbers

Dialing plans (-digits) ▶	Four	Three
System speed-dial numbers	1,000	100

## Maximum installations of VIP 7 applications

Dialing plans (-digits) ▶	Four	Three
Installations, <i>VIP 7 PC Attendant Console</i>	8	8
Installations, <i>VIP 7 ACD Supervisor</i>	8	8

## ESI Presence Management features

Dialing plans (-digits) ▶	Four	Three
RFID Reader access door records	10,000	10,000
RFID Reader entries in Fn. 372 <sup>1</sup>	32	32
Max. RFID tags ("electronic keys")	500	500

## ESI Mobile Messaging features

Dialing plans (-digits) ▶	Four	Three
Maximum stations	191	168
Maximum guest mailboxes	250	250

## ESI Video Viewer and ESI Video Adapters

Dialing plans (-digits) ▶	Four	Three
ESI Video Adapters (see below)	12	12
RFID Readers per ESI Video Adapter	1	1
User extns./depts. per ESI Video Adapter	64	64
ESI Video Viewer users	20	20

Although the system supports up to 12 cameras, a variety of other factors can affect the maximum number of usable cameras. The frequency and duration of video recordings from each camera as well as overall network load to the system — such as local or remote IP phones, SIP trunks, SIP stations, and usage of ESI applications (e.g., ESI Mobile Messaging, VIP 7, or ESI Presence Management) — can severely impact the performance of both the cameras and the IP Server 900. The following chart can be used as a general guideline for determining the number of cameras supported based on system configuration and usage:

Number of users	Light usage	Medium usage	Heavy usage
20	12 cameras	12 cameras	10 cameras
40	12 cameras	10 cameras	8 cameras
60	10 cameras	8 cameras	5 cameras
120	8 cameras	6 cameras	4 cameras

## ESI Media Management features

Dialing plans (-digits) ▶	Four	Three
Video recordings	12	12
Audio recordings	32	32
SMDR events	Yes	Yes
Fob activity	Yes	Yes
ESI Media Manager users	20	20

<sup>1</sup> See the *ESI Presence Management Installation Manual* (ESI document # 0450-0792).

# Function 1: System parameters

## Function 13: Administrator password

These functions will display the existing password and prompt for entry of a new password. The passwords can be 2–8 digits long, followed by #. **The Installer can change either the Installer or Administrator Password. Only those functions listed in the *Administrator Manual* can be programmed via the Administrator Password.** The default Administrator password is **4 5 6**:

**Note:** Be sure to write down the new Administrator password, and store it in a safe place.

### *Accessing user station programming*

Should a user forget his password or if an employee leaves the organization, this feature allows the Administrator to enter a user's station programming and operate within it as if he were the user. From the user's station, enter the **Administrator** password when the system prompts for the **user** password.

**Example:** From station 105, entering **4 5 6 #** instead of the user password (**1 0 5 #**) will enter the station's user programming. (Default passwords shown for this example).

## Function 14: System clock and calendar

### *Function 141: Set time/date*

1. Enter a new time in a **twelve**-hour format.

**Example:** Enter **1 2 3 3** for 12:33, or **3 1 5** for 3:15 (note that you need **no** leading zero for the time).

2. Select AM or PM by pressing a scroll key (either ▼ or ▲).
3. Enter a new date in an **eight-digit** format, **including** leading zeroes.

**Example:** Enter **0 7 0 4 2 0 1 1** for July 4, 2011 (note that leading zeroes **are** required here, unlike in Step 1).

4. Press a scroll key (either ▼ or ▲) to select the time zone in which this system is located.  
**Default:** Central (CST).  
**Choices:** Hawaii (HST), Alaska (AST), Pacific (PST), Mountain (MST), Central (CST), Eastern (EST).
5. Press # to finish the entry.

**Note:** A built-in battery maintains the correct time and date, even in the event of a power loss.

## Function 142: Automatic time setting

### 1: Synchronize with Caller ID<sup>1</sup>

This function, when enabled, synchronizes the real-time clock with Caller ID (CID) messaging: call processing compares the time of a CID message to the system real-time clock and, if the difference is more than two minutes, resets the real-time clock to match the time (minutes) of the CID message. The system will analyze each such message (or — if it receives more than four calls with CID information within a one-minute period — as is needed). Select *ENABLE* or *DISABLE* by pressing a scroll key (either ▼ or ▲). Choosing *ENABLE* will allow the CID data to update the time and date.

**Default:** Disabled.

#### Esli-Link-related notes:

If “synchronize with Caller ID” is enabled, Esli-Link time synchronization (from location 700) will be disabled.

If “synchronize with Caller ID” is disabled, Esli-Link time synchronization will be allowed (minutes only).

When Esli-Link is used, all cabinets' time will be synchronized by cabinet 700, unless “synchronize with Caller ID” is enabled in Function 142.

### 2: Adjust for Daylight Saving Time

This function, when enabled, causes the real-time clock to adjust itself automatically for Daylight Saving Time (DST). Select *AUTO* or *DISABLE* for DST by pressing a scroll key (either ▼ or ▲). Choosing *DISABLE* is best for those areas that don't observe DST.

**Default:** Disabled.

**Note:** If this function is enabled and it causes an automatic time change, the system won't update the real-time clock from either Caller ID messages (Function 1421, *above*) or Esli-Link time synchronization for 25 hours before and 25 hours after the time change is due to be effective (*i.e.*, 2:00 AM Sunday).

## Function 143: Clock adjustment

This function lets the Installer or Administrator have the system automatically compensate for a clock that's running too fast or too slow. The clock adjustment speeds up or slows down the clock over a 30-day period by the amount selected. If the system clock is running **slow**, select a **positive** value. If the clock is running **fast**, select a **negative** value.

**Range:** -2 to +5.5 minutes. **Default:** 0.

**Example:** If the clock is running two minutes fast over a month, select -2 (minus two minutes).

---

<sup>1</sup> Does not work with PRI.

## Function 16: System feature parameters

### **Function 162: Connect tone**

This sets whether the system plays a system connect tone (two short beeps a user hears when a station answers).

**Default:** Enabled (the beeps play).

### **Function 163: Station feature set activation**

#### **Field 1: Group listen enable/disable**

With this feature **disabled**: if a station user presses **SPEAKER** while on a call, the ESI phone immediately turns off the handset and switches to hands-free mode.

If enabled, the group listen feature is available system-wide. If disabled, it is no longer available.

**Default:** Disabled.

#### **Field 2: Privacy release enable/disable**

With this feature **enabled**: if a station user presses a CO line key that is in use (lit red), the user will be immediately conferenced with the call in progress on that line. With this feature **disabled**: pressing an in-use CO line key has no effect.

**Default:** Disabled.

<p><b>Warning:</b> Adjusting this parameter while calls are in progress may result in temporary loss of audio.</p>
--

#### **Field 4: VIP 7 text-messaging enable/disable**

With this **enabled**, users of VIP 7 applications<sup>1</sup> can use VIP 7 to text-message.

**Default:** Enabled.

---

<sup>1</sup> VIP 7, VIP 7 ACD Agent, VIP 7 ACD Supervisor, VIP 7 PC Attendant Console, and VIP 7 Softphone.



## Function 3: Extension programming

This section provides programming for extensions and department groups.

**Important:** Where any **gray shading** (■) appears in an example, it represents values either **unavailable** to the function or **unused** in the particular example.

### Function 30: Station move

This feature allows the Installer or Administrator to exchange the extension numbers of two extensions. It is used **only** for exchanging **extensions** — **not** guest mailboxes or departments.

**Important:** Before you use this function on two extensions, make sure they're **both idle** at the time.

Along with the extension numbers, this function also will exchange the following parameters (depending on station type):

- Extension name and other assignments (including of the Operator to extension 0 from Functions 31<sup>1</sup> and 32).
- Mailbox information (personal greeting, notification, schedules).
- Programmable feature keys.
- Personal Dex.

Function 30 has the following **limitations**:

- Mailboxes cannot be exchanged. Instead, the **Installer** must use Function 34 (flexible number assignment).
- Both extensions must be of the same "type" — *i.e.*, analog to analog, digital to digital, IP to IP — as shown in the following table:

From . . .	To . . .	Function 30 allowed?
Digital phone	Digital phone	Yes
Analog extension	Analog extension	Yes
IP Phone (local or remote)	IP Phone (local or remote)	Yes
Digital phone	Analog extension	No <sup>2</sup>
IP Phone (local or remote)	Analog extension	No <sup>2</sup>
IP Phone (local or remote)	Digital phone	No <sup>2</sup>
Fax, modem, door, ringer, server, RFID Reader, SIP station, <i>VIP Softphone</i>	Any type of phone	No <sup>2</sup>

To use this feature:

1. Enter Installer programming through an ESI desktop phone and go to Function 30.
2. Enter the **first** extension and press #.

STATION MOVE  
1ST EXT: 1044

3. Enter the **second** extension and then press #.

X1044 J SMITH  
2ND EXT: 1056

(Continued)

<sup>1</sup> Function 31 is accessible by only Installers.

<sup>2</sup> Your installing ESI Reseller must use Function 34 to change the numbers of these types of extensions.

- Both extensions will now appear in the display. Confirm the exchange by pressing #.

X1044 J SMITH  
X1056 S BROWN

- If one of the phones is in use, the display will show that extension:

STATION MOVE  
EXT 1044 BUSY

(If both are in use, the display will show only the first extension.)

To back up to the previous step, press \* and then re-try the extension exchange by pressing # again.

## Function 32: Extension feature authorization

### Function 321: Standard feature authorization

The Installer or Administrator can allow or deny many extension features on an extension-by-extension basis. A User, however, can only program and use allowed features (by using a combination of voice and display prompts) from his/her phone. Below is an example of a completed Function 321 programming worksheet.

1. Ext.	2. Name	3. Call wait	4. DND	5. AA block	6. Rec.	7. Svc. obs.	8. Local allow	9. Toll allow	10. Sys. spd. dial	11. Auto-Page	12. Ext. fwdg.	13. Fwdg. to toll nos.	14. Trk-to-trk xfer	15. Assoc. ext.	16. Mob. Msg.
XXX	Default	Y	Y	N	Y	N	Y	Y	Y	Y	Y	N	Y		N
100	Jane	Y	Y	N	Y	N	Y	Y	Y	Y	N	N	N		Y
101	Roger	Y	Y	N	Y	N	Y	Y	Y	N	N	N	N	X206 <sup>†</sup>	N
102	Sally	Y	Y	N	N	N	Y	Y	Y	Y	N	N	N		Y
103	Sam	Y	Y	N	N	N	Y	Y	Y	Y	N	N	N		Y
110*	Bill	Y					Y	Y	Y	N	N	N	N		

Here are the programming steps.

- Extension number** — Enter the extension number to program.
- Extension name** — Name the extension (if not previously named in Installer programming).

For each of the following features, press a scroll key (▼ or ▲) to select YES or NO.

- Call waiting** — Allows the user to turn call waiting on or off for his station.<sup>1</sup>
- Do not disturb** — Allows the user to activate DND from his station.
- Auto attendant block** — Blocks calls from being transferred to the station from the auto attendant; follows the extension's call forward day/night as programmed by the Installer.
- Live recording feature** — If enabled, will allow the user to record conversations.
- Service observing** — Allows the user to monitor the conversations of those stations listed in the **service observing list** for his/her station. If this is enabled, you must enter a list of allowed extensions.

**Note:** A Department number can be entered as an extension in the Service Observing list and will then automatically include all members of the Department even if the members of the Department are later changed.

- Local allow** — "YES" allows the user to place seven-digit toll calls. If you select "NO," the user can make only calls to numbers listed in the **local allow table** (Installer-programmed).
- Toll allow** — "YES" allows the user to place toll calls. If you select "NO," the user can make only either non-toll calls<sup>2</sup> or calls to numbers listed in the allow exception table.
- System speed-dial** — "YES" allows the user to access and place system speed-dial calls.

<sup>†</sup> An example of a digital Cordless Handset.

\* An example of an analog phone.

<sup>1</sup> Analog stations programmed as FAX or MODEM can't have call waiting.

<sup>2</sup> Set in the fixed allow table (Function 222, which is an Installer-only function).

11. **AutoPage** — Lets the user turn AutoPage (*defined below*) on or off at his/her station.

**Note:** This feature is used in conjunction with the directory names recorded in Function 62. If a name isn't recorded in Function 62, the station default name ("*Extension [xxx]*") is paged.

If the station user has his/her mailbox set to answer with personal greeting 3 and a caller presses **3** to page that user, this feature automatically pages the station user in the page zones entered in Function 31. If no page zone is entered, all ESI desktop digital phones and locally installed ESI desktop IP phones on the system are paged.<sup>1</sup>

**Default:** Enabled.

**Note:** When AutoPage is enabled, the system will use the last installed idle digital port to perform the page. Therefore, if a phone is on the last installed port (e.g., X124 on a system with only a DKT8 Module), the phone's user may experience a brief delay in telephone operation if he/she picks up the handset (or presses **SPEAKER**) during the AutoPage.

12. **External forwarding** — Allows the station user to use the call forwarding/off-premises and off-premises "reach-me" features. See the *User's Guide* for more information about these features.

**Default:** Enabled.

**Note:** After the system dials the external forwarding number, it will play a prompt saying, "You are receiving a forwarded call. Press any key to accept." This prompt will play continuously for 30 seconds. If the forwarded call is answered and the called person dials a digit, the forwarded call will be connected to that person. If no digit is dialed, the caller is automatically forwarded to voice mail. While the two lines (trunks) are connected, the system constantly monitors the line for open loop conditions (hang-up). If an open loop is detected on either line, the call is disconnected. The system also monitors for voice activity on the connected lines; if voice is no longer detected, the call is disconnected. Finally, if both lines are connected for more than 60 minutes,<sup>2</sup> the call will be disconnected.

13. **Forwarding to toll numbers** — This feature is used in conjunction with external forwarding (see previous item). When enabled, this feature lets the user program a long-distance number for external forwarding.

**Default:** Disabled.

14. **Trunk-to-trunk transfer** — When enabled, this lets the station user initiate a **trunk-to-trunk transfer**. The user, while connected to a CO line, can press **TRANSFER**, dial an off-site number and then complete the trunk-to-trunk transfer by simply hanging up. Both outside parties are then connected. A station user also can set up a conference call and then drop out of the conference, leaving the other members conferenced. **This feature MUST be enabled in order for external call forwarding, twinning to an external number, and/or off-premises "reach-me" to succeed.**

**Default:** Enabled.

**Important:** USE OF FEATURES, SUCH AS TRUNK-TO-TRUNK TRANSFER, THAT REQUIRE TRUNK-TO-TRUNK CONNECTIONS WILL INCREASE THE RISK OF TOLL FRAUD. IN NO EVENT SHALL ESI (ESTECH SYSTEMS, INC.) BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES WHATSOEVER INCLUDING, BUT NOT LIMITED TO, FRAUDULENT TOLL CHARGES, LOSS OF BUSINESS PROFITS, BUSINESS INTERRUPTIONS OR ANY OTHER COSTS OR DAMAGES RELATED THERETO ARISING FROM THE USE OF THESE FEATURES.

(Continued)

<sup>1</sup> ESI Cordless Handsets don't receive pages.

<sup>2</sup> Default timer setting. To adjust this, contact ESI Technical Support.

- 15. **Associated extension** — Enter the desired ESI Cordless Handset extension or *VIP Softphone* extension. This creates a **relationship** that allows use of the **Quick Switch key**. For information about the Quick Switch key, consult the *User's Guide* (ESI # 0450-1306). This field is not available for an extension using an ESI Cordless Handset.
- 16. **Mobile Messaging** — If this is enabled, each time a new voice mail message arrives for the user, the system sends the user an e-mail (with or without an attached .WAV file of the voice message).  
**Default:** No.

**Example:** Here is a portion of a completed programming worksheet for extension feature authorization. Note that:

- Extension 100 cannot record calls but **can** make toll calls (except those listed in the deny table) and can access the system speed-dial numbers.
- By comparison, extension 102 cannot make general toll calls but also can call any system speed-dial number — **including to make a toll call** — even those listed in the allow table.
- Extension 102 is associated with an ESI Digital Cordless Handset at extension 113; and extension 115 is associated with a *VIP Softphone* installation at extension 119.
- (Extension 112 doesn't have DND, AA block, recording, or service observing capability because it's an analog port.)

1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.
Ext.	Name	Call wait	DND	AA blk.	Rec.	Svc. obsv.	Local allow	Toll allow	Sys. spd. dial	Auto-Page	Ext. fwdg.	Fwdg. to toll nos.	Trk.-to-trk. xfer	Assoc. ext.	Mob. Msg.
100	Jane	Y	Y	N	N	N	Y	Y	Y	N	N	N	N		N
102	Sally	Y	Y	N	Y	N	Y	N	Y	Y	N	N	N	X113	Y
112*	Bill	Y					Y	Y	Y	N	N	N	N		
113	(Sally's Cordless)	Y	Y	N	Y	N	Y	N	Y	Y	N	N	N	X102	Y
115	Tom	Y	Y	N	Y	N	Y	Y	Y	Y	N	N	N	X119	Y
119	(Tom's VIP Softphone)	Y	Y	N	Y	N	Y	N	Y	Y	N	N	N	X115	Y

### Paired ESI desktop phone/analog phone operation

For someone wishing to have an ESI desktop phone (digital or IP) in his office and an existing analog cordless phone for roaming the building, program as follows:

1. Create a call-forward key on the ESI desktop phone to forward to the analog cordless phone.
2. Assign the analog cordless phone's call forward busy/no answer to the ESI desktop phone's mailbox.

The user will then have all of his messages in one location (but can retrieve them from either phone).

---

\* An example of an analog phone.

### Function 322: Advanced extension feature authorization

This function allows authorization of some other ESI features, particularly those involving licensing.

Below is an example of a completed Function 322 programming worksheet.

1. Ext.	2. Name	3. VIP 7	4. Type	5. VIP 7 ACD Supervisor department(s)	6. Media Manager	7. Media Manager Administrator	8. Video files	9. Call record	10. SMDR	11. Fob events
XXX	Default	N			N	N	N	N		
100	Jane	Y	Attendant		Y	N	Y	Y		
101	Roger	Y	Pro		Y	Y	Y	Y	Y	Y
102	Sally	Y	VIP		N		N	N		
103	John	Y	Agent		Y	N	Y	Y		
104	Dave	Y	Supervisor	290, 291	Y	N	Y	Y		
105	Bob	N			N		N	N		
106	Kathy	N			Y	N	Y	Y		
110*	Bill	N								

Here are the programming steps.

- 1. Ext.** — Enter the extension number to program.
- 2. Name** — Enter the name of the extension.
- 3. VIP** — Scroll to enable (YES) or disable (NO) the extension to use any of the VIP 7 applications.<sup>1</sup>

**Notes:** Before you enable *VIP 7 Softphone* in Function 322, your Installer must first have completed Function 31 programming for the PC phone.  
If you select *NO* in this step, the remaining steps are non-applicable and won't appear.

- 4. Type** — Scroll to select which type of VIP application the extension can use.  
**Choices:** *VIP7* (regular *VIP 7*), *VIP7 OPR* (*VIP 7 PC Attendant Console*), *VIP7 SPR* (*VIP 7 ACD Supervisor*), *VIP7 AGT* (*VIP 7 ACD Agent*), and *VIP7 SFT* (*VIP 7 Softphone*).

**Notes:** If you select *VIP 7 Softphone* and the extension hasn't previously been programmed in Function 31 as a local or remote PC phone, an error message will play.  
If you select *VIP7* in this step, the remaining steps are non-applicable and won't appear.

- 5. VIP 7 ACD Supervisor departments** (this step appears only if you selected *VIP7 SPR* in step 3) — Enter the ACD department numbers for which this extension is a supervisor.  
**Maximum:** 4.

(Continued)

\* An example of an analog phone.

<sup>1</sup> *VIP 7*, *VIP 7 PC Attendant Console*, *VIP 7 ACD Supervisor*, *VIP 7 ACD Agent*, or *VIP 7 Softphone*.

6. **ESI Media Manager** — Scroll to enable (*YES*) or disable (*NO*) the extension's ability to use *ESI Media Manager*.

**Note:** If you select *NO* in this step, the options in steps 7–11 cannot be programmed (because they won't appear).

7. **ESI Media Manager Administrator** — Scroll to enable (*YES*) or disable (*NO*) the extension's ability to serve as the *ESI Media Manager Administrator*.

**Note:** Only one extension per system can be set as the *ESI Media Manager Administrator*. This extension also will be notified in case the Applications Services Card drive is nearly out of recording space.

8. **Video files** — Scroll to enable (*YES*) or disable (*NO*) the extension's ability to view video recordings by using *ESI Media Manager*.

**Note:** Extensions where this option is enabled can retrieve and view video recordings from those cameras that the user has been authorized (in Function 376) to view.

9. **Call recording** — Scroll to enable (*YES*) or disable (*NO*) the extension's ability to listen to audio recordings by using *ESI Media Manager*.

**Note:** Extensions where this option is enabled can retrieve and listen to recordings made by not only themselves but also those extensions listed in the service observe list in Installer Function 321.

10. **Station message detail recording (SMDR)** — Scroll to enable (*YES*) or disable (*NO*) the *ESI Media Manager Administrator's* ability to view SMDR records for all extensions.

**Note:** This option is available only for an extension that has been defined in step 9, *above*, as the *ESI Media Manager Administrator*.

11. **Fob events** — Scroll to enable (*YES*) or disable (*NO*) the *ESI Media Manager Administrator's* ability to view ESI Presence Management fob events for all extensions.

**Note:** This option is available only for an extension that has been defined in step 9, *above*, as the *ESI Media Manager Administrator*.

## Function 33: Department programming

**Departments** can be used to direct inbound calls for more extensive call coverage. The IP Server 900 supports up to 64 departments, and up to 64 members per department (for details, see "System capacities," page B.1). You also can assign an extension to more than one department.

### Function 332: VIP 7 ACD parameters

This function establishes settings to be used for *VIP 7 ACD*. It covers programming for the **database owner**, the **real-time display clearing**, and the **service level**.

#### Function 3321: Assign database owner

Enter the extension that will be the *VIP 7 ACD* database owner (the *VIP 7 ACD Supervisor* extension that collects and stores ACD events in the ACD event database). Only one extension is needed, regardless of the number of ACD departments in the system.

**Important:** This extension **must** keep its *VIP 7 ACD Supervisor* application running **at all times**, in order to collect event records that will be stored in the ACD event database.

#### Function 3322: Manual real-time display clearing

Enter the number of the department whose real-time statistics are to be cleared.

Clearing the real-time statistics resets the counters in the *VIP 7 ACD Supervisor Department Details* (real-time statistics) display to zero, so new statistics can be calculated until the display is manually or automatically cleared again.

#### Function 3323: Automatic real-time display clearing

At a programmed time, this function clears the real-time statistics, which automatically resets the counters in the *VIP 7 ACD Supervisor Department Details* (real-time statistics) display to zero. Only one clearing time can be set per department.

1. Enter the department number.
2. Select *ENABLED* or *DISABLED*.  
**Default:** *DISABLED*.
3. Enter the time (in 24-hour format) when the department's real-time statistics are to be cleared.  
**Range:** 00:00–23:59. **Default:** 00:00.

#### Function 3324: Service level

This function sets the **threshold time**, in minutes and seconds, by which **service level** is determined for the *VIP 7 ACD Supervisor Department Details* display. The service level is calculated by dividing the number of calls answered within the threshold by the last 30 calls presented to the queue. (The number of calls used to make this calculation — 30 — is rolling and can't be adjusted.)

**Example:** The threshold time is set to 02:00 (two minutes, zero seconds; that's the default). Thus, each call must be answered within two minutes from the time it goes to the department. If 30 calls are presented and the department agents answer 20 of them within each call's two-minute threshold time, the service level is 67% ( $20 \div 30 = 0.6667$ ). This percentage will appear in the supervisor's **Department Details** display.

**Range:** 00:00–16:00 (zero to 16 minutes). **Default:** 02:00.

## Function 37: RFID programming

Choices are:

- 1 — Access control schedule programming.
- 2 — RFID tag assignment.
- 3 — View RFID tag number.
- 4 — ESI Presence Management parameters.
- 5 — RFID Reader parameters.
- 6 — ESI Video Adapter programming.

**Note:** For more information about ESI Presence Management, consult its *Administrator's Manual* (ESI # 0450-0795).

### Function 371: Access schedule programming

**Access schedules** are used to allow or deny door access with electronic keys ("RFID tags" on the system display) at certain times of the day. Up to seven access schedules can be programmed. Each schedule has an allow access time and a deny access time for each day of the week. By default, all access schedules allow access 24 hours a day, seven days a week.

**Note:** Access schedules don't take effect until the **current** time has passed the **next schedule** time. For example: if you program a schedule time to deny access Wednesdays at 5:30 PM but it's **already** 5:45 PM on Wednesday when this programming occurs, the change won't take effect until the **following** Wednesday.

- Using the scroll keys, select the access schedule to be programmed. Press # to confirm.  
**Range:** 1–7.

**Note:** Schedule 0 (default of full-time access) isn't selectable.

```
ACCESS SCHEDULES
1-ACC SCHED1 >
```

- Enter the name of the schedule (up to 10 characters in length).  
Press # to confirm.  
**Default:** ACC SCHED[x], where [x] represents the access schedule selected in step 1.

```
ACC SCHED1
NAME :
```

- Use the scroll keys to select the day of the week to program for the selected access schedule.  
Press # to confirm.

```
ACC SCHED1
DAY: MONDAY >
```

If you haven't yet assigned an allow time (see next step) for this schedule, the display will show something like:

```
ACC SCHED1 MON
NO ALLOW TIME
```

(Continued)

4. Enter the **allow time** — the time when an electronic key user can begin controlling door locks — in **12-hour** format. (To **delete** an entry, press **HOLD**.)  
Press **#** to confirm when done.

```
ACC SCHED1 MON
ALLOW: 900
```

5. Select *AM* or *PM* by pressing a scroll key. Press **#** to confirm.

```
ACC SCHED1 MON
ALLOW: 900 AM
```

If you haven't yet assigned a deny time (next step) for this schedule, the display will show something like:

```
ACC SCHED1 MON
NO DENY TIME
```

6. Now, enter the **deny time** — the time when an electronic key user begins to be denied door lock control — in **12-hour** format. (To **delete** an entry, press **HOLD**.)  
Press **#** to confirm when done.

```
ACC SCHED1 MON
DENY: 700 >
```

7. Select *AM* or *PM* by pressing a scroll key. Press **#** to confirm.

```
ACC SCHED1 MON
DENY: 700 PM
```

8. Press **#** again to exit the function, **or** select another day of the week by using the scroll keys and then go back to step 4.

### Function 372: RFID tag number programming

As described earlier in this document, each electronic key has an embedded unique **RFID tag number**. This function is used to associate each RFID tag number to an extension or mailbox for Personal Call Routing and presence indication (except mailboxes).

1. Enter an RFID tag number, **or** use the scroll keys to select from the list of tag numbers.

**Note:** If using any RFID features — *i.e.*, if using ESI Presence Management for anything more than its doorphone capabilities — you should save time by first scanning the electronic keys at any RFID Reader connected to the system. The system will store the electronic keys' tag numbers automatically, and you can use the scroll keys to select the tag numbers to be assigned.

To **delete** a tag number, press **HOLD**. Press **#** to confirm.

```
TAG ID: 2
9012345678 >
```

The tag ID is the list index of the RFID tag number.

**Note:** If a tag number is entered manually but the tag limit has been exceeded, *LICENSE EXCEEDED* will appear on the display. Therefore, you must delete one or more unassigned tag numbers.

2. Enter the extension or mailbox number to which you wish to assign the tag number. (To **delete** an entry, press **HOLD**.) Press **#** to confirm.

```
RFID TAG PROG
EXT OR MB:
```

3. Enter the extension numbers of up to the system limit<sup>1</sup> of ESI Presence Management RFID Readers for which this tag is allowed to control door access. To give the tag access to **all** doors, press **FLASH**. (To **delete** an entry, press **HOLD**.) Press **#** after **each entry** and then press **#** again to confirm (in other words: after the last entry, you'll press **#** twice).

**Note:** If all ESI Presence Management RFID Readers are allowed, "ALL" will appear on the second line.

```
DOOR ACCESS:
123 124 138 >
```

4. Use the scroll keys to select an **access schedule**. Access schedules are used to allow or deny door access with an electronic key at certain times of the day. Each day of the week can have a **start time** to allow access and a **stop time** to deny access. To allow **constant** ("full") door access, select *0 - FULL*. Otherwise, select a schedule to restrict access. The schedule name will appear. **Range:** 1–7. **Default:** 0 (full)

**Note:** You assign access schedules in Function 371 (see page D.8). If not using access schedules, select *0 - FULL*.

```
ACCESS SCHEDULE:
0 - FULL >
```

<sup>1</sup> For details on the maximum number of RFID Readers that can be entered for your system, see "ESI Presence Management features" in "System capacities" (page B.1).

### Function 373: View RFID tag number

This is used to display tag numbers that are associated to extensions or mailboxes. You can only view tag numbers with this function. You cannot change any tag numbers or assignments.

Enter the station or mailbox number to display, and then press #. If there's an RFID tag number assigned to that extension or mailbox, it will appear.

```
RFID TAG DISPLAY
EXT :
```

**Tip:** You can use *IP Server 900 System Programmer* to print out a list of assigned tag numbers.

### Function 374: ESI Presence Management parameters

#### Playing prompts

This determines whether the system plays a prompt — and, if so, which one — when the ESI Presence Management RFID Reader reads an electronic key. Select *YES* to enable playing of the prompt or *NO* to disable playing of the prompt.

**Default:** *YES* (a prompt will play).

```
EPM RFID READER
PROMPTS: YES >
```

When this function is set to *NO*, no prompts will play through the ESI Presence Management RFID Reader. When “EPM RFID Reader prompts” is set to *YES*, prompts will play as shown below. (These prompts can't be customized.)

When the RFID Reader displays:	It plays this prompt:
WELCOME	"Welcome"
GOODBYE	"Goodbye"
ACCESS DENIED	"Invalid entry"
LICENSE EXCEEDED	"Error"
ERROR READER FULL	"Error"

#### Enable/disable sending time and attendance records

**Notes:** The NSP must be programmed and connected to a local area network for time and attendance record collection.

Only ESI Presence Management RFID Readers programmed as type **ENTRANCE/EXIT** (Function 31) generate time and attendance records.

This parameter is used when the **optional** *WaspTime* software application<sup>1</sup> is used in conjunction with the ESI Presence Management RFID Reader.

Use the scroll keys to enable or disable time and attendance records, and press # to confirm.

**Default:** Disabled.

(Continued)

<sup>1</sup> Not sold by ESI; available for direct purchase from the manufacturer, Wasp Barcode Technologies ([www.waspbarcode.com](http://www.waspbarcode.com)).

### Store fob events

Use the scroll keys to enable or disable the storage of ESI Presence Management fob events to the IP/ASC Carrier Card.

**Default:** Disabled.

```
STORE FOB EVENTS
DISABLED >
```

### Function 375: RFID Reader parameters

This function is used to adjust the doorphone speaker volume of each ESI Presence Management RFID Reader.

1. Enter the extension number of the RFID Reader.

```
EPM READER SET
EXT:
```

2. Select the volume level by using the scroll keys.

```
X211 FRONT DOOR
VOLUME: 6 >
```

**Range:** 1–8, with 8 as the highest. **Default:** 4.

## Function 376: ESI Video Adapter programming

### Local Video Adapter

An ESI Video Adapter's **type** is either local or remote (local IP or remote IP). Here, we will program a **local** ESI Video Adapter.

**Important:** You may perform only limited ESI Video Adapter programming using a phone, as opposed to use of *IP Server 900 System Programmer* (for full details, see the *ESI Video Adapter Installation and Programming Manual*, ESI # 0450-1241).

For step 4 of this procedure, you will need to know the Video Adapter's unique MAC address (located on its underside), so it's best to write down that information **before** installing the Video Adapter.

1. Each ESI Video Adapter on the system has a unique **ID number**.

**Range:** 1–999.

You may **create** or **delete** an ESI Video Adapter's ID number.

Enter the desired ID number (here, 150):

```
VIDEO_ADP_ID:150
```

To **create** the ID number, press **#** to accept and continue programming the Video Adapter.

To **delete** the ID number you entered, press **HOLD** and ignore the remaining steps.

2. An ESI Video Adapter's **type** is either local IP or remote IP.

**Notes:** One Video Adapter can be associated with one ESI Presence Management RFID Reader.

An ESI Video Adapter uses no ports on the ESI Communications Server.

Select **LOCAL** for the ESI Video Adapter **type** by using the scroll keys:

```
VIDEO_ADP_TYPE:
SURV_LOCAL
```

After making your selection, press **#** to confirm.

3. Each ESI Video Adapter has a **name** (1–10 characters in length). You'll probably want to edit the default name so *ESI Video Viewer* users can easily identify and view video from the Adapter's camera.

**Default:** *VID\_ADP###* (where *###* refers to the Video Adapter's ID number).

Enter the desired name (if necessary, review "Entering alphanumeric characters," page A.6) — or make no entry if the currently displayed name is acceptable . . .

```
VID_ADP150
NAME:MAIN_LOBBY
```

. . . and press **#** to confirm.

(Continued)

4. Each ESI Video Adapter has a unique **MAC address**.

**Note:** The Adapter's MAC address can be found on its bottom side.

Use the first six programmable feature keys to enter the letters *A, B, C, D, E, or F*, respectively, in the MAC address. You may choose to make no entry if the value shown is acceptable.

```
VID_AD150_MAC:
00304D13579A
```

Press # to confirm.

**Note:** For each IP address in the following steps, enter the address in a dotted-decimal format consisting of four numbers separated by dots. Valid numbers are 0 through 255. Use # to enter the dots between numbers.

5. Enter the ESI Video Adapter's **IP address**:

```
VA150_IP_ADD:
10.0.5.115
```

... and press # to confirm.

**Default:** 0.0.0.0.

**Note:** The ESI system will allow the entry of any number, but an erroneous entry which cannot constitute a valid IP address (such as 10.0.5115 instead of 10.0.5.115) will leave the Video Adapter's IP address unchanged.

6. The Video Adapter's **HTTP port number** provides access through gateways and network firewalls for access to the Video Adapter.

Enter the Video Adapter's HTTP port number:

```
HTTP_PORT:
59000
```

... and press # to confirm.

**Range:** 10000–65000.

7. If desired, one (and **only one**) **ESI Presence Management RFID Reader extension** can be associated with the Video Adapter. Often, a camera may be installed primarily to capture motion-detection events in locations where no RFID Reader is installed; in such a case, there would be no need to make an entry in this step.

Enter an RFID Reader extension here **only** if the Video Adapter's location corresponds to that of an RFID Reader (or leave the entry blank, otherwise):

```
EPM_EXT:
150
```

... and press # to confirm.

(Continued)

8. Now, enter the **authorized user extensions** whose users may view video from this Adapter.

**Notes:** Be mindful here of network utilization and bandwidth considerations. The ease with which *ESI Video Viewer* users can create multi-view layouts (as described in the *ESI Video Viewer Setup and User's Guide*, ESI # 0450-1214) can tempt users to put many available camera views on their screens, when they may really **need** only a very small quantity of available views to do their jobs.

If you prefer to come back to this field later, you may leave the entry blank.

Enter the authorized user extensions for viewing this Adapter's video:

```
AUTH_VIEWER_EXT:  
100_101_102_103>
```

... and press # to confirm.

**Range:** 0–64 extensions.

9. Use the scroll keys to select the ASC to which this camera's video output will be recorded (or remove the associated ASC and select *NONE*):

```
ASSOC ASC CARD  
NONE
```

... and press # to confirm.

**Default:** *NONE*.

**Note:** Only ASCs to which fewer than 12 ESI Video Adapters have been assigned will be shown. If *NONE* is selected, the camera's output will not be recorded.

## Remote Video Adapter

An ESI Video Adapter's **type** is either local or remote (local IP or remote IP). Here, we will program a **remote** ESI Video Adapter.

**Important:** You may perform only limited ESI Video Adapter programming using a phone, as opposed to use of *IP Server 900 System Programmer* (for full details, see the *ESI Video Adapter Installation and Programming Manual*, ESI # 0450-1241).

For step 4 of this procedure, you will need to know the Video Adapter's unique MAC address (located on its underside), so it's best to write down that information **before** installing the Video Adapter.

1. Each ESI Video Adapter on the system has a unique **ID number**.

**Range:** 1–999.

You may **create** or **delete** an ESI Video Adapter's ID number.

Enter the desired ID number (here, 150):

```
VIDEO_ADP_ID:150
```

To **create** the ID number, press **#** to accept and continue programming the Video Adapter.

To **delete** the ID number you entered, press **HOLD** and ignore the remaining steps.

2. An ESI Video Adapter's **type** is either local IP or remote IP.

**Notes:** One Video Adapter can be associated with one ESI Presence Management RFID Reader.

An ESI Video Adapter uses no ports on the ESI Communications Server.

Select **REMOTE** for the ESI Video Adapter **type** by using the scroll keys:

```
VIDEO_ADP_TYPE:
SURV_REMOTE
```

After making your selection, press **#** to confirm.

3. Each ESI Video Adapter has a **name** (1–10 characters in length). You'll probably want to edit the default name so *ESI Video Viewer* users can easily identify and view video from the Adapter's camera.

**Default:** *VID\_ADP###* (where *###* refers to the Video Adapter's ID number).

Enter the desired name (if necessary, review "Entering alphanumeric characters," page A.6) — or make no entry if the currently displayed name is acceptable . . .

```
VID_ADP150
NAME:MAIN_LOBBY
```

. . . and press **#** to confirm.

(Continued)

4. Each ESI Video Adapter has a unique **MAC address**.

**Note:** The Adapter's MAC address can be found on its bottom side.

Use the first six programmable feature keys to enter the letters *A, B, C, D, E, or F*, respectively, in the MAC address. You may choose to make no entry if the value shown is acceptable.

```
VID_ADP150_MAC:
00304D13579A
```

Press # to confirm.

**Note:** For each IP address in the following steps, enter the address in a dotted-decimal format consisting of four numbers separated by dots. Valid numbers are 0 through 255. Use # to enter the dots between numbers.

5. Enter the ESI Video Adapter's **IP address**:

```
VA150_IP_ADD:
10.0.5.115
```

... and press # to confirm.

**Note:** The ESI system will allow the entry of any number, but an erroneous entry which cannot constitute a valid IP address (such as *10.0.5115* instead of *10.0.5.115*) will leave the Video Adapter's IP address unchanged.

6. Enter the **remote-access HTTP port** of the network to which the ESI Video Adapter is connected:

```
REM ACC HTTP PRT
8080
```

... and press # to confirm.

**Range:** 0–65000. **Default:** 8080.

7. Enter the **default gateway IP address** for the ESI Video Adapter:

```
VA150_GATEWAY:
0.0.0.0
```

... and press # to confirm.

8. The Video Adapter's **remote-access IP address** provides remote access to this Adapter. Enter the remote-access IP address for the Video Adapter:

```
RMT_ACCESS_IP:
65.115.210.33
```

... and press # to confirm.

(Continued)

9. The Video Adapter's **HTTP port number** provides access through gateways and network firewalls for remote access to the Video Adapter.

Enter the Video Adapter's HTTP port number:

```
HTTP_PORT:
59000
```

... and press # to confirm.

**Range:** 10000–65000.

10. If desired, one (and **only** one) **ESI Presence Management RFID Reader extension** can be associated with the Video Adapter. Often, a camera may be installed primarily to capture motion-detection events in locations where no RFID Reader is installed; in such a case, there would be no need to make an entry in this step.

Enter an RFID Reader extension here **only** if the Video Adapter's location corresponds to that of an RFID Reader (or leave the entry blank, otherwise):

```
EPM_EXT:
150
```

... and press # to confirm.

11. Now, enter the **authorized user extensions** whose users may view video from this Adapter.

**Notes:** Be mindful here of network utilization and bandwidth considerations. The ease with which *ESI Video Viewer* users can create multi-view layouts (as described in the *ESI Video Viewer Setup and User's Guide*, ESI # 0450-1214) can tempt users to put many available camera views on their screens, when they may really **need** only a very small quantity of available views to do their jobs.

If you prefer to come back to this field later, you may leave the entry blank.

Enter the authorized user extensions for viewing this Adapter's video:

```
AUTH_VIEWER_EXT:
100_101_102_103>
```

... and press # to confirm.

**Range:** 0–64 extensions.

12. Use the scroll keys to select the ASC to which this camera's video output will be recorded (or remove the associated ASC and select *NONE*):

```
ASSOC ASC CARD
NONE
```

... and press # to confirm.

**Default:** *NONE*.

**Note:** Only ASCs to which fewer than 12 ESI Video Adapters have been assigned will be shown. If *NONE* is selected, the camera's output will not be recorded.

## Function 5: Voice mail programming

To simplify initial installation, all programmed extensions will automatically have the generic personal greeting, "You have reached the mailbox for extension [xxx]." The mailbox user should replace this with a personalized greeting. Each guest/info, group, cascade notification, or Q & A mailbox must have a greeting recorded for the system to consider the mailbox active.

**Important:** A mailbox will not receive broadcast messages until a greeting has been recorded for it. Additionally: If the greeting is deleted, the mailbox will be considered inactive. On a legacy 12-Key Feature Phone, it is necessary to assign the code **5 7 9** (voice mail) to a programmable feature key for the mailbox to become active.

If a programmable feature key is programmed as a Virtual Mailbox Key with any mailbox number, the key's LED will blink, to indicate that new messages exist.<sup>1</sup> To retrieve messages from a station, **either (a.)** press the Virtual Mailbox Key **or (b.)** press **VOICE MAIL \*** and then enter the mailbox number. To record a greeting, press **PROG/HELP \*** and enter the mailbox number; then press **#** to confirm, and follow the prompts. The default password is the mailbox number. To retrieve messages from the outside, press **\*** and enter the mailbox number **during the main greeting**. To enter mailbox programming from any ESI phone on the system, press **PROG/HELP \*** and enter the mailbox number.

## Function 53: Guest/info mailboxes

**Important:** Although Function 53 programs guest and info mailboxes, remember that information mailboxes **don't** work with ESI Mobile Messaging.

Any guest mailbox can be programmed as either a guest or info mailbox.<sup>2</sup> Enter the mailbox number and select *Guest* or *Info* by pressing a scroll (▼ or ▲) key.

**Guest mailboxes** are designed to be used by personnel, such as in outside sales or manufacturing, who don't have an extension assigned to them. A guest mailbox requires no programming other than the assigning of a name. The maximum recording length is controlled by Function 51; the default is 10 minutes.

**Notes:** A guest mailbox can be handled like a regular extension (i.e., listed in the directory, assigned a station key, etc.), and is password-protected by default.

Guest mailboxes do not support AutoPage (but do support off-premises "reach-me").

**Info mailboxes** can be used to give callers information on a variety of different subjects by "publishing" these mailbox numbers. Info Mailboxes are identical to Guest Mailboxes except that the caller will not be given a record tone after the personal greeting (the information to be played). Instead, the caller will be forwarded as programmed in this function (default is the caller will be disconnected after the information is played).

Guest/info mailboxes are created or deleted here, but are turned "on" only when a personal greeting (the information to be played) has been recorded. Deleting the personal greetings will turn "off" the mailbox.

To record a greeting, press **PROG/HELP \*** and the mailbox number; then press **#** to confirm, and follow the prompts. The default password is the mailbox number. The maximum length of the recording time is 14 minutes.

Below is an example of a completed Programming Worksheet, showing the sequence of programming:

1. MB	2. Name	3. Type	4. Ext. fwd.	5. Line grp.	6. Ext. fwd. toll	7. CF day	8. CF night	9. Mobile Msg.
400	Dana	Guest	Y	9	N			N
401	Doug	Guest	Y	9, 8	N			Y
402	Literature	Info			N	MB 100	MB 100	

(Continued)

<sup>1</sup> Otherwise, the key is a station key that allows for single-key transfer of a call with no message indication.

<sup>2</sup> Guest and info mailboxes' range depends on dial plan selected (see "Selectable numbering plan," page A.6).

Each programming step is defined as follows:

1. **Mailbox number** — Enter a guest mailbox number.
2. **Name** — The mailbox name is used for the display, reports, and as a programming aid. The name length can be no longer than 10 characters (see “Entering alphanumeric characters,” page A.6).  
**Default:** The mailbox number.
3. **Type** — Select a mailbox type: Guest or Info.  
**Default:** Guest.
4. **External forward** (*guest mailbox only*) — A guest mailbox can be set to allow off-premises “reach-me.”  
**Default:** No.
5. **Line group** (*guest mailbox only*) — Used for off-premises “reach-me.”  
**Default:** 9.
6. **External forward toll** (*guest mailbox only*) — If this is set to *No*, a “find-me” number is limited to 10 digits. If this is set to *Yes*, a “find-me” number can be 11 digits. In either case, the system will continue to check the deny table in Installer Function 222.  
**Default:** No.
7. **and 8. Call forward** (*info mailbox only*) — An info mailbox can be set to call forward after the personal greeting has played to an extension, department, a mailbox or a branch ID for day mode and differently for night mode.  
**Default:** ID9999 (automatic disconnect).
9. **Mobile Messaging** (*guest mailbox only*) — A guest mailbox can be set so that, whenever it receives a new voice mail message, the mailbox’s user will receive an e-mailed notification (at a location set in user programming).  
**Default:** No.

## Function 54: Group mailboxes and the broadcast mailbox

### Broadcast mailbox

The **broadcast mailbox**<sup>1</sup> is a special group mailbox which can be used to leave messages for all of the system's station users who have recorded a personal greeting. The broadcast mailbox's user list cannot be edited. Guest mailboxes are not included in the broadcast group.

### Group mailboxes

**Group mailboxes** can be used for quickly leaving the same message simultaneously in mailboxes belonging to extensions and guests. Anyone who knows the password can leave messages for all users listed as members of that group and who have recorded a personal greeting. (If no member has a personal greeting recorded, the group mailbox won't save any messages.) The Administrator or group mailbox "owner(s)" may set or change the list of group mailbox members. To record a greeting, press **PROG/HELP \*** and the mailbox number; then press **#** to confirm, and follow the prompts. The default password is the mailbox number. The maximum recording length is controlled by Function 51; the default is 10 minutes. For system-by-system number of group mailboxes and users per group mailbox, see "System capacities," page B.1.

**Important:** A group mailbox is turned "on" (able to record and playback messages) **only** when its "owner" has recorded a greeting for it, such as *"This is the group mailbox for East Coast Regional Sales."* Similarly, deleting the group mailbox greeting will turn "off" the group mailbox; any outstanding messages will remain in its members' mailboxes until erased by each member.

**Notes:** Programming 0 (zero) as the password lets **anyone** leave group messages or program the group mailbox.

If a user saves a group message, it will be saved as a new message.

Broadcast and group mailboxes can have a maximum of 32 messages per mailbox. Only extensions and guest mailboxes can be members of a group.

When a message is deleted from the group mailbox, this deletes all copies from its member mailboxes. Conversely, when the last user to delete his/her copy of the message does so, this deletes the message from the group mailbox.

Here is the programming sequence:

1. Enter the group mailbox number.<sup>1</sup>
2. Enter group member mailboxes' numbers —  
 Separate each by #; enter # # to end the list.  
**Range:** Depends on dial plan selected (see "Selectable numbering plan," page A.6).

1. MB	2. Group member mailboxes' numbers
501	102 104 106 107 122 303 314

<sup>1</sup> Mailbox numbering depends on the selected dial plan; see page A.6.

## Function 55: Message notification

On a mailbox-by-mailbox basis for user or guest mailboxes, the system can be programmed to call an off-premises number or another extension to deliver messages and/or dial to an external commercial paging network to activate a user's pager. The system will call and/or page when the first new message is left in a mailbox, and will repeat (at the interval of minutes programmed in this function) until the new message(s) have been deleted, saved, or moved. The user can program the numbers and delay and can also select delivery of only messages marked as urgent. The Installer and Administrator can set, on an individual-station basis:

- The number to be called
- A delay period
- The number of attempts (maximum of 99)
- The interval between attempts
- A "quiet period" to suspend phone delivery — *e.g.*, late at night (the quiet period is an on-and-off time that applies to all days of the week)

### Function 551: Station delivery options

Programming of the station options, as shown below, can be performed by the Installer or Administrator. In addition, the user can change his phone number and pager number (but not phone or pager delay time). The phone number's maximum length is 24 digits.

	1. Number	2. Delay	3. Attempts	4. Interval	5. Quiet on	6. Quiet off
1. Phone	2145556789	30	6	60	10:30PM	7:15AM
2. Pager	2145551234	0	10	30		

To program, enter the extension number to program and select phone or pager to program. Then, enter:

1. **Phone/pager number** — The number to be dialed (**without** the CO line group).

**Note:** Use the ▲ scroll key to enter special characters; use the ▼ scroll key to backspace. Press # to confirm the inserted character and continue. Press ## to complete the entry. To change the number, delete and then re-enter it.

2. **Delay** — How many minutes the system is to wait before dialing the phone or pager number. This allows the user to pick up a message if he is in the office.  
**Range:** 0–500. **Default:** 0.
3. **Attempts** — How many times that the system will call/page.  
**Range:** 0–99. (0 turns off delivery.) **Default:** 3.
4. **Interval** — How many minutes should elapse between attempts.  
**Range:** 10–1440. **Default:** 30.
5. **Quiet period on** — When the quiet period should begin.  
**Default:** (None.)
6. **Quiet period off** — When the quiet period should end.  
**Default:** (None.)

## Function 552: Delivery/paging parameters

The sequence of programming is as follows:

1. **CO line access** — Enter the CO line group (9, 8, or 71–76) to be accessed for delivery.  
**Default:** 9.
2. **Pager dialing pause** — When paging, the IP Server 900 will send the mailbox number to be shown in the pager's display. To allow time for the paging service to answer, enter the pause, in seconds, to occur between when the system dials the pager number and when it then dials the mailbox number.  
**Range:** 0–20. **Default:** 6.

**Note:** The message notification and delivery process uses one CO line at a time. As a result, if a system has multiple users who have programmed delivery options, there may be a delay in notification.

## Function 56: Cascade notification mailboxes

In addition to individual mailbox paging, the IP Server 900 supports **cascade notification mailboxes**. These can be assigned to anyone who requires escalating levels of notification beyond the single level available in all user mailboxes. In this function, you program the notification numbers and number of times each is to be notified before the next notification number is dialed; additionally, the mailbox owner can program these settings. To record a greeting, press **PROG/HELP \*** and the mailbox number; then press **#** to confirm, and follow the prompts. The default password is the mailbox number. The maximum recording length is controlled by Installer Function 51; the default is 10 minutes. The IP Server 900 supports up to 20 cascade notification mailboxes, depending on the chosen numbering plan, see "System capacities," page B.1.

### Cascade mailbox options

The user can program up to three external numbers, of up to 24 digits each, to be called or paged whenever the mailbox takes a new or urgent message. The system will dial the first number (for the number of times listed), then dial the second paging number (for the number of times listed), and finally dial the third number, continuing in this sequence to call all three numbers until the message has been retrieved.

1. MB	2. 1st Number	3. Type	4. Attempts	5. 2nd Number	6. Type	7. Attempts	8. 3rd Number	9. Type
533	2145553232	PHONE	2	2145554254	PHONE	3	2145555452	PAGER

To program this, enter:

1. **The mailbox number** — **Range:** Depends on dial plan selected. [Then press **1** to enter number programming, and proceed to Step 2.]
2. **First number** — The number to be dialed (**without** the CO line group).
3. **Type** — *PHONE* or *PAGER*. Use scroll keys to select.
4. **Attempts** — How many times the system will call before adding the second number.  
**Range:** 0–99 (0 immediately pages all numbers). **Default:** 1.
5. **Second number** — The number to be dialed (**without** the CO line group).
6. **Type** — *PHONE* or *PAGER*. Use scroll keys to select.
7. **Attempts** — How many times the system will call before adding the third number.  
**Range:** 0–99. **Default:** 1.
8. **Third number** — The number to be dialed (**without** the CO line group).
9. **Type** — *PHONE* or *PAGER*. Use scroll keys to select.

**Notes:** Use the ▲ scroll key to enter special characters; use the ▼ scroll key to backspace. Press **#** to confirm the inserted character and continue. Press **##** to complete the entry. To change the number, delete and then re-enter it.

## Cascade notification parameters

The cascade notification mailboxes will use the same CO line group and pager dialing pause as programmed in Function 552 (see page E.5).

### Notification interval

To program the notification interval parameter for a cascade notification mailbox:

1. Enter the mailbox number.<sup>1</sup>
2. Press 2 to set parameters for the mailbox.
3. Enter the number of minutes for the interval between attempts.  
**Range:** 1–1440. **Default:** 30.

## Function 57: Q & A mailboxes

You can create **question and answer (Q & A) mailboxes**.<sup>1</sup> Each Q & A mailbox owner can record up to 10 questions. The questions are recorded in the same manner as recording users' multiple personal greetings (see the *User's Guide*). The individual answer segments recorded by the caller are stored as a single message, with the answer segments separated by short beep tones. Each answer segment's maximum length will be as programmed by the Installer. Normal message handling capability — delete, save, etc. — applies to the entire message (all segments). For information on the number of Q & A mailboxes supported by your system and its numbering plan, see "System capacities," page B.1.

The caller, when recording each answer, can be instructed to conclude by pressing **1** or to pause for the next question (the system advances when it detects either a 3-second period of silence or the pressing of **1**) — e.g., "Record your name at the tone and press 1 when finished"... "Record your address at the tone and press 1 when finished." If the caller fails to respond to two questions in a row, the system disconnects the call.

**Important:** This programming creates or deletes Q & A mailboxes, but these mailboxes are turned "on" **only** when the mailbox owner has recorded questions. Similarly, deleting all questions turns "off" the mailbox.

To record questions, press **PROG/HELP \*** and the mailbox number; then press **#** to confirm, and follow the prompts. The default password is the mailbox number. The maximum recording length is controlled by Function 51; the default is 10 minutes.

Here is an example of a completed programming worksheet (numbers correspond to steps below):

1. MB	2. Name	3. CF day	4. CF night
<b>490</b>	Employment	ID 9999	ID 9999
<b>491</b>	Survey	ID 9999	ID 9999

Each programming step is defined as follows:

1. **Mailbox number** — Enter a Q & A mailbox number.<sup>1</sup>
2. **Name** — The mailbox name is used for the display, reports, and as a programming aid. The name length can be no longer than 10 characters (see "Entering alphanumeric characters," page A.6).  
**Default:** The mailbox number.
3. **& 4. Call forward** — A Q & A mailbox can be set to call forward, after the last question has been answered, to an extension, department, a mailbox or a branch ID for day mode and differently for night mode.  
**Default:** ID9999 (automatic disconnect).

**Tip:** If you need a Q & A mailbox with more than 10 questions, set the call-forwarding to another Q & A mailbox.

**Default:** Disabled.

<sup>1</sup> Mailbox numbering depends on the selected numbering plan.

## Function 6: Recording

### Function 61: Re-record system and branch prompts

The IP Server 900 plays the **system prompts** to an outside caller at different points in the call routing or mailbox functions. These system prompts have been pre-recorded at the factory but you may re-record them, if preferred — e.g., in a different voice or with different instructions.

The **auto attendant branch prompts** (such as the main greeting or sub-menus) are also recorded here. For each, enter the branch ID number as the prompt number — e.g., the prompt for ID 1 is prompt **1**, the prompt for ID 2 is prompt **2**, etc. Once you record the day greeting for a main ID branch such as ID 1 or ID 2, the system will give you the option to record greetings for night, day2, and night2. (If necessary, consult your installing ESI Reseller for more information concerning the built-in auto attendant.)

For both system prompts and branch prompts, the maximum recording length is five minutes per prompt.

#### Recording a prompt

1. Practice the prompt by recording and re-recording (start and stop by pressing **1**).
2. When satisfied with its quality, press **#** to confirm.

**Note:** Deleting a system prompt by pressing **HOLD** (instead of **#**) restores to the default recording.

#### System prompts

- **Busy Prompt: 530** — Plays to the outside caller if an extension is busy.  
**Default:** "That extension is busy."
- **No Answer Prompt: 531** — Plays to the caller if an extension does not answer.  
**Default:** "That extension does not answer."
- **Hold Prompt: 532** — Plays to the caller who makes a menu selection or enters an extension number.  
**Default:** "One moment, please."
- **Q/Z Prompt: 534** — Plays to a caller who has selected an alphabetic directory; instructs the caller to press **1** for the letters Q or Z since these two letters do not appear on the phone keypad; plays at the end of the first directory prompt (but only if a name in the directory starts with a Q or Z).  
**Default:** "For the letters Q or Z, use key number 1."
- **No Names Matched Prompt: 535** — Played to the caller if, in a directory branch, the first letter he/she selected does not have any names associated with it, or if he/she has listened to all of the names played and has not made a selection. After playing the prompt, the system forwards the call to the extension, branch or mailbox as programmed in call forward no response.  
**Default:** "No names matched; one moment please."
- **End of Message Prompt: 537** — Plays after a caller leaving a message presses **1** to stop recording; the prompt then tells the caller his/her options.  
**Default:** "To continue this recording, press 1; to return to the main menu, press 8; or, if finished, press \* and hang up."
- **ACD Queue Announcements: 538, 548, 558, 568, 578, 588** — The first prompt played to a caller when all extensions are busy in an ACD department.  
**Default:** "All agents are currently assisting other customers. Please hold; your call will be answered in the order received."
- **ACD Second Announcements: 539, 549, 559, 569, 579, 589** — Periodically played to callers on hold in an ACD department when all extensions are busy. See Function 33 (page D.7) for information about assigning the ACD Second Announcement.  
**Default:** "All agents are still busy assisting other customers. Please hold; your call will be answered in the order received."

(Continued)

- Holiday Main Greeting Prompt: 540** — Plays to callers when the system has been manually placed in holiday mode.  
**Default:** *"Thank you for calling. Our office is closed in observance of the holiday. You may dial your party's extension, at any time, or please call back during regular business hours."*

**Note:** While in holiday mode, the system follows night mode programming for call routing. The day/night mode setting and holiday greeting can be activated remotely (see "Remote setting of day, night and holiday modes," page A.8).

- VIP 7 PC Attendant Console Queue Prompts: 648, 649, 650, 651, 652, 653, 654, 655** — Played to callers automatically or manually placed in the Attendant Queue in *VIP 7 PC Attendant Console*.  
**Default:** *"All attendants are currently busy. One moment, please."*

## Function 62: Record directory names

This function is accessible only if a directory branch has been created as part of auto attendant programming. Enter the extension number and record the name. If this is a by-alpha branch, the system will automatically set the name key using the name assigned in Functions 31, 33, or 53; if necessary, enter a different name key.

**Important:** Make photocopies of the blank worksheet for preparing directories and making future changes. As names change, the Administrator can enter this function and change any field via the Administrator password.

1. Ext.	2. Recorded name	3. Key
102	John Jones	5 6 4
113	Janet Smith	5 2 6

Each programming step is defined as follows:

- 1. Extension number** — Enter the extension number for the directory name.
- 2. Record name** — Press **1** to begin recording and press **1** again when finished.
- 3. Name key** — (Necessary if the directory type is alpha [ask your ESI Reseller if you're not sure].) Enter the numeric equivalent to the letters appearing on a phone keypad (for Q or Z, use 1). Up to three numbers may be entered. Your ESI Reseller can give you more information about this.

A by-alpha directory branch allows the caller to be connected to a system user by selecting his/her name from a directory. The alpha directory has two prompts: the first instructs the caller to enter the first **three letters** of the individual's first or last name; the second instructs the caller to press **#** when he/she hears the desired individual's name. The system then plays the matched names to the caller, in alphabetical order according to the extension names programmed by the Installer.

With the name key set to three digits, when a caller selects a directory branch and dials only one or two digits to select a name, the system will wait three seconds for the entry of another digit. If the system receives no other digit within that time, the auto attendant will begin to play, in alphabetical order, the subset of directory names bounded by the digits dialed.

**Examples:** Caller dials **5** and waits three seconds. The system plays names beginning with *J, K, and L*.  
 Caller dials **3 2** and waits three seconds. The system plays names beginning with *DA* through *FC*.  
 Caller dials **7 7 2**. The system plays names beginning with *PPA* through *SSC*.

If a user dials **more** than three digits, the system ignores the additional digits (except for the **#** key, which signals the directory to connect the caller to the extension or department associated with the directory entry that's playing).

**Note:** To re-record the prompt that says, "Enter the first three letters of the person's last name," you must enter Function 61 and then enter the ID number of the directory branch.

## Function 63: Message-on-hold (MOH) programming

MOH can be:

- A live feed from an external music source connected to the MOH connector located on the front of the cabinet.
- One of three default, generic MOHs pre-recorded by the factory.
- One of up to nine custom MOHs loaded into the system by using a CD player or similar device connected to the MOH connector.

**Note:** If ACD is used, we recommend that you use prompt 590, prompt 591, or a custom prompt without periodic "voice-overs," since the ACD hold prompt **also** will be played while a caller is on hold.

### Function 631: MOH source

This selects the source for the system (or only tenant 1, if tenant service is enabled) that will be played to callers on hold.

Code	Without tenant service enabled	With tenant service enabled
590	Live external source*	[same]
591	Pre-recorded music	[same]
592	Pre-recorded with "please continue to hold"	[same]
593	Pre-recorded with "dial 0 or extension from hold"	[same]
594	Customer-recorded message on hold	Customer-recorded message on hold
595	Customer-recorded message on hold	Customer-recorded message on hold
596	Customer-recorded message on hold	Tenant 2 customer-recorded message on hold [fixed]
597	Customer-recorded message on hold	Tenant 3 customer-recorded message on hold [fixed]
598	Customer-recorded message on hold	Tenant 4 customer-recorded message on hold [fixed]
599	Customer-recorded message on hold	Tenant 5 customer-recorded message on hold [fixed]
600	Customer-recorded message on hold	Tenant 6 customer-recorded message on hold [fixed]
601	Customer-recorded message on hold	Tenant 7 customer-recorded message on hold [fixed]
602	Customer-recorded message on hold	Tenant 8 customer-recorded message on hold [fixed]

\* If desired, dialing off-hold can be disabled by your Installer.

**Default:** 592 (generic message-on-hold).

**Notes:** While any of the MOH sources can be assigned for tenant 1, MOH source **isn't** selectable for tenants 2–8; if tenant service is enabled, each of these tenants has a **fixed** MOH source as indicated in the table above.

For each tenant, if there is no customer-recorded message, the default, generic MOH source (592) will be played, instead.

### Function 632: MOH recording

1. Connect the message/music source to the MOH port on the front of the cabinet.

**Note:** The connector is monophonic-only — if you use a stereo source, you must either set it to output mono, if possible, **or** use a stereo-to-mono conversion cable (or adapter).

2. Enter the prompt number to be recorded.
3. Press **1** to begin recording. To aid you in queuing, the source will be played through the phone's speaker.

**Note:** The recorded material should not have a "beginning" or "end" — so that playback can loop continuously. The maximum record length is controlled by the amount of space available on the Memory Module.

4. Press **1** when finished. The recording will play back so you can review it.
5. Press **#** to accept the recording. (To delete it, press **HOLD**.)

### Function 633: MOH volume

If a custom MOH is recorded, the output volume can be adjusted in this function.

**Range:** 1 (faint)—12 (loudest). **Default:** 6.

**Notes:** If an external audio source such as a radio is used for MOH, adjust the volume at the source.

To turn **live** MOH volume completely off, turn off volume at the source.

To turn **recorded** MOH volume completely off, select (in Function 631) one of the prompts in the range of 594–598, but make sure it's blank. These prompts are blank by default; if you have recorded some audio on all of them, just select one and record a few seconds of silence.

## Function 64: Call recording settings

Choices for this function include:

- 1 — CO line recording settings
- 2 — Extension or department recordings
- 3 — Call recording parameters

**Note:** If you need assistance with any of the system components mentioned within this discussion, please contact your Certified ESI Reseller.

### Function 641: CO line recording parameters

Choices for this function include:

- 1 — Analog line recording settings
- 2 — T1 line recording settings
- 3 — PRI line recording settings
- 4 — SIP trunk recording settings

### Function 6411: Analog line recording settings

#### 1. Choose CO lines to program

During this step, you use the programmable feature keys to represent CO lines. Press one or more these keys to select lines to be programmed. Press the scroll keys (▼ or ▲) to “page” in increments appropriate for the port card configuration. The display will indicate which CO lines the programmable keys currently represent.

The system software will identify the port card type installed in each slot. The display will show the following information:

- The first line will show the carrier card number and the type of module
- The second and third lines will show the CO lines available for programming.

The LEDs on the appropriate programmable feature keys will glow red to indicate the lines that are available for programming.

```
CC 2 FX0 DAY >
A:01-04 B:NONE
C:05-08 D:NONE
```

The four LEDs appropriate for each installed FXO Module glow red. Select the CO lines to be programmed alike (you can scroll to select the next port card and continue to select CO lines to be programmed alike), and press # to confirm. The LEDs for the selected lines (keys) will now glow green.

ESI phone	Module or carrier card	Keys lit
<b>ESI 60</b>	A	Left-side 1, 2, 3, 4
	B	Left-side 5, 6, 7, 8
	C	Right-side 1, 2, 3, 4
	D	Right-side 5, 6, 7, 8
<b>ESI 40</b>	A	1, 2, 3, 4
	B	5, 6, 7, 8
	C	9, 10, 11, 12
	D	13, 14, 15, 16

ESI phone	Module or carrier card	Keys lit
<b>48-Key</b>	A	1, 2, 4, 5
	B	8, 9, 11, 12
	C	13, 14, 15, 17
	D	20, 21, 23, 24

(Continued)

## 2. Select to enable call recording

The call recording service for this line is authorized as displayed. Press a scroll key to change — or, to confirm the current setting, press #.

**Default:** NO.

```
CO LINE
RECORDING: NO >
```

## Function 6412: T1 line recording settings

### 1. Choose T1 lines to program

You can select from the first set of 12 CO lines on the first T1/PRI Module. Use the scroll keys to view the next 12 CO lines on the same T1/PRI Module. To see the first 12 CO lines on the second T1/PRI Module (if installed), scroll again; if there is only one T1/PRI Module installed, scrolling will return you to the first 12 CO lines.

**Note:** A 48-Key Feature Phone will display the first set of 24 CO lines on the T1/PRI Module; scrolling again will allow you to select the 24 CO lines on a second T1/PRI Module.

Select the CO lines to be programmed alike and press # to confirm. The LEDs on the keys for the selected lines will glow green; then, after a CO line is programmed, its key's LED will glow amber. Programming of the first CO line should default forward for the remaining CO lines selected. After the selected CO lines are programmed, their keys' LEDs will glow amber.

If a T1/PRI Module is installed on the main board, the display will be:

```
CC 2 T1 DAY
    32-55 >
```

### 2. Select to enable call recording

The call recording service for this line is authorized as displayed. Press a scroll key to change — or, to confirm the current setting, press #.

**Default:** NO.

```
CO LINE
RECORDING: NO >
```

## Function 6413: PRI line recording settings

### 1. Choose PRI lines to program

You can select from the first set of 12 CO lines on the first T1/PRI Module. Use the scroll keys to view the next 11 CO lines on the same T1/PRI Module. To see the first 12 CO lines on the second T1/PRI Module (if installed), scroll again; if there is only one T1/PRI Module installed, scrolling will return you to the first 12 CO lines.

**Note:** A 48-Key Feature Phone will display the first set of 23 CO lines on the T1/PRI Module; scrolling again will allow you to select the 23 CO lines on a second T1/PRI Module.

Select the CO lines to be programmed alike and press # to confirm. The LEDs on the keys for the selected lines will glow green; then, after a CO line is programmed, its key's LED will glow amber. Programming of the first CO line should default forward for the remaining CO lines selected. After the selected CO lines are programmed, their keys' LEDs will glow amber.

If a T1/PRI Module is installed on the carrier card, the display will be:

```
CC 3  PRI DAY
      1-23  >
```

### 2. Select to enable call recording

The call recording service for this line is authorized as displayed. Press a scroll key to change — or, to confirm the current setting, press #.

**Default:** NO.

```
CO LINE
RECORDING: NO >
```

## Function 6414: SIP trunk recording settings

### 1. Choose SIP trunks to program

You can select from the first set of 12 CO lines on the first carrier. Use the scroll keys to view the next 12 CO lines on the first carrier. To see the first 12 CO lines on the next carrier, scroll again; if no SIP trunks are installed on that carrier, scrolling will return you to the first 12 CO lines.

**Note:** A 48-Key Feature Phone will display the first set of 24 CO lines on the first carrier; scrolling again will allow you to select the next 24 CO lines, and so on.

Select the CO lines to be programmed alike and press # to confirm. The LEDs on the keys for the selected lines will glow green; then, after a CO line is programmed, its key's LED will glow amber. Programming of the first CO line should default forward for the remaining CO lines selected. After the selected CO line are programmed, their keys' LEDs will glow amber.

Since the SIP trunks are located on the Master Control Unit's IP/ASC Carrier Card (Card 1), the display will be:

```
CC 1  SIP DAY
      56-70  >
```

**Note:** Only carrier card 1 supports SIP trunk programming.

### 2. Select to enable call recording

The call recording service for this line is authorized as displayed. Press a scroll key to change — or, to confirm the current setting, press #.

**Default:** NO.

```
CO LINE
RECORDING: NO >
```

## Function 642: Extension and department recordings

### 1. Select the extension or department to be recorded

Enter the extension or department number to be programmed:

```
CALL RECORDING
EXT/DEPT: 100
```

### 2. Select to enable call recording

The call recording service for this line is authorized as displayed. Press a scroll key to change — or, to confirm the current setting, press #.

**Default:** NO.

```
X100 BOB
RECORD: NO >
```

### 3. Select to enable privacy-on-demand

**Note:** This step will appear only if a valid extension was entered in step 1 and the ESI phone at the extension has a three-line display.

Privacy-on-demand allows the defined user to decide whether a call will be recorded and saved. While on a call, a user with this option enabled may press the *PVY* (privacy) soft key, which will immediately stop the recording of the call and delete any recording that may have been started.

Privacy-on-demand can be assigned only to individual extensions, not departments. Therefore, if you want to enable privacy-on-demand for any extensions in a department, you must enter each extension individually and then enable privacy-on-demand for that extension.

```
X100 BOB
PRIVACY: NO >
```

**Default:** NO.

### Function 643: Call recording parameters

#### 1. Set the minimum call timer

The **minimum** length for a call recording can be between two and 10 seconds, in increments of one second, and applies equally to all channels. If the call length is less than this minimum setting, the call's recording will be deleted automatically upon termination of the call.

**Default:** 10 seconds. **Range:** 2–10 seconds.

MIN RECORD TIME 10 SECONDS
-------------------------------

#### 2. Set the maximum call timer

The **maximum** length for a call recording can be between one minute and 120 minutes, in increments of one minute, and applies equally to all channels. If a call's length reaches the maximum, the call's recording will be terminated immediately and a new recording will begin (the new recording will be indicated in the SMDR record by the word *CONT* following the *digits dial* field).

**Default:** 60 minutes. **Range:** 1–120 minutes.

MAX RECORD TIME 60 MINUTES
-------------------------------

## Function 7: Reports

**Important:** You may wish to read "Feature description: SMDR" (beginning on page H.1) before using this function.

### Report printing

The system's built-in reports can be output to a PC via *IP Server 900 System Programmer*.

When printing captured reports from the PC to a laser printer, use a fixed monoproportional font (such as Consolas, Courier New, Andale Mono, or Letter Gothic), 9 points or smaller.

From either the Installer or Administrator programming menu, select the desired report as shown in Functions 72–75 (*starting below*). The reports can be printed with either: (1) the data saved for inclusion in future reports, or (2) the data and totals cleared. (You **can't** clear data in either the system program report or the system speed-dial report.)

### Reporting functions

- **Function 72: ESI Presence Management access door report** — Provides historical data on access door entry.
- **Function 73: ACD department detail report** — (See G.3.)
- **Function 74: Voice mail statistics report** — Provides statistics indicating the message activity in each mailbox since the data was last cleared.
- **Function 75: System speed-dial list** — Lists the current system speed-dial numbers. Distribute a copy to those who are authorized to use them.

### Function 72: ESI Presence Management access door report

The ESI Presence Management access door report is available to the Installer and System Administrator, and is based on historical data for the desired access door RFID Reader.<sup>1</sup>

The report contains records of extensions/mailboxes, names, RFID tag numbers, and the date and time from the 10,000 most recent records for access-only door (**not** entrance/exit) RFID Readers in the system. Once the limit of 10,000 is reached, older records are discarded as newer records are stored. Initializing the system deletes all stored records.

1. Enter the extension number of the desired access door RFID Reader, and press #.

```
EPM READER
EXT: 123
```

2. Enter the **start time** in 12-hour, *HHMM* format, and press #.

```
ENTER START TIME
```

3. Use the scroll keys to select *AM* or *PM* for the start time, and press #.

```
ENTER AM OR PM
```

(Continued)

<sup>1</sup> For reference, if necessary, consult the *ESI Presence Management Administrator's Manual* (ESI #0450-0795).

- The eight-digit **start date** for this report is composed of two digits for the month, two digits for the day, and four digits for the year. The start date should be today's date or earlier. Enter the start date in *MMDDYYYY* format, and press #.

ENTER START DATE

- Enter the **end time** in 12-hour, *HHMM* format, and press #.

ENTER END TIME

- Use the scroll keys to select *AM* or *PM* for the end time, and press #.

ENTER AM OR PM

- The eight-digit **end date** for this report is composed of two digits for the month, two digits for the day, and four digits for the year. The end date should be no earlier than the start date. Enter the end date in *MMDDYYYY* format, and press #.

ENTER END DATE

- To print the report, press **1** and then #.

PRESS 1 TO PRINT  
REPORT

Here's an example of an access door report for an RFID Reader:

Access Door Report				Page 1
EPM Reader	123			
Start	01/25/2007 7:00 AM	END	01/25/2007	2:00 PM
Ext/MB	Name	Tag ID	Date	Time
-----	-----	-----	-----	-----
0103	TOM	0001234567890	01/25/2007	7:01 AM
0103	TOM	0001234567890	01/25/2007	7:01 AM
0102	GREG	0002345678901	01/25/2007	7:02 AM
0103	TOM	0001234567890	01/25/2007	7:02 AM
0000		0003456789012	01/25/2007	7:02 AM
0108	DAVID T	0004567890123	01/25/2007	9:01 AM
0109	BILL	0005678901234	01/25/2007	9:05 AM
0110	DAVID M	0006789012345	01/25/2007	12:45 PM
0111	DEREK	0007890123456	01/25/2007	12:50 PM
0112	STEVE W	0008901234567	01/25/2007	1:02 PM
0108	DAVID T	0004567890123	01/25/2007	1:05 PM
0108	DAVID T	0004567890123	01/25/2007	1:15 PM
Report Complete				

**Notes:** Extensions and mailboxes are reported as four digits each, regardless of your numbering plan selection.  
Each RFID tag that hasn't been assigned an extension or mailbox is reported as *0000*.

## Function 73: ACD department detail report

The ACD department detail report provides extension usage by ACD department. This report includes the following "fixed" information:

- All ACD departments will be included.
- The current report's **start** date and time will be the previous report's **end** date and time.
- The current report's **end** date and time will be the current date and time.

Function 73 offers two choices:

1. **Current report** ("Press 1 to print the current ACD report") — Outputs the current ACD department report. All information is automatically copied to the previous report (see next choice) and cleared from the current report.
2. **Previous report** ("Press 2 to repeat the previous ACD report") — Re-sends the last report printed.

**Notes:** After the current report is requested, it will be stored indefinitely (as the "previous" report) until the next "current" report is selected.

The optional *VIP 7 ACD Supervisor* provides greatly enhanced ACD reporting capabilities. See the *VIP 7 Product Overview* (ESI # 0450-1340).

### Sample Function 73 report

ACD Report by Department, Current								Page 1
Department Detail		Dept: 291, TRAINED						
Start: 12/15/2004 17:07		End: 12/17/2004 16:07						
Incoming ACD				PBX Calls				
Ext Name	Answer	Duration	Recovered	Answer	Duration	Out	Duration	
		H:MM:SS			H:MM:SS	H:MM:SS	H:MM:SS	
114 MATT	44	5:48:42	1	14	1:15:44	13	0:41:10	
115 RICK	0	0:00:00	0	6	0:14:32	2	0:03:55	
102 CRAIG	33	5:15:00	3	9	1:03:35	15	0:27:30	
103 TOMMY	19	2:47:39	1	9	0:20:10	15	0:27:15	
104 JOHN D	1	0:10:21	0	11	0:25:30	11	0:57:35	
106 SCOTT	36	3:59:38	1	24	1:57:02	20	0:36:12	
112 CHRIS	51	5:00:19	1	19	2:04:02	17	0:20:54	
116 PHIL	31	3:14:50	0	23	1:35:41	34	0:36:33	
105 BOBBY	40	4:42:32	5	15	0:43:31	18	1:20:01	
119 EDWARD	41	4:25:11	2	24	0:59:53	8	0:26:17	
117 MARK D	0	0:00:00	0	2	0:00:28	4	0:06:40	
113 DAVID	0	0:00:00	0	7	0:52:38	13	0:42:46	
120 JENNY A	4	0:09:07	1	4	0:16:10	0	0:00:00	
Totals	300	35:33:19	15	167	11:48:56	170	6:46:48	
Abandoned Calls:	3							
Rerouted Calls:	2							
Average CO queue time: 0:21 -- Max CO queue time: 0:50								

### Function 73 report description

The ACD department detail report is divided into four major sections: the report header, the incoming ACD call statistics, the PBX call statistics, and the report footer.

#### Report header

The **report header** (A) includes the report name ("ACD Report by Department, Current" or "ACD Report by Department, Previous"), ACD department name and number, report start date and time, and ending date and time:

- **Start** — Beginning date and time of the reporting period. This will match the ending date and time of the previous report.
- **End** — Ending date and time of the reporting period.

## Incoming ACD call statistics

The **incoming ACD call statistics** section <sup>ⓑ</sup> shows ACD calls offered to each ACD agent position. These are calls that are transferred to, or ring into, the department number and then are distributed to the agent positions (extensions).

Column name	Description
Ext	ACD extension
Name	Extension name
Answer	Number of ACD incoming calls answered at that extension (includes Esi-Link calls to the ACD department)
Duration	Total time connected to ACD calls
Recovered <sup>1</sup>	Number of ACD calls unanswered at that extension and returned to the ACD queue.

## PBX call statistics

The **PBX call statistics** section <sup>ⓒ</sup> shows non-ACD calls for each extension — *i.e.*, all calls that weren't delivered directly through the ACD department number.

Column name	Description
Answer	Number
Duration	Total time connected to incoming PBX calls
Out	Number of PBX calls originated at that extension
Duration	Total time connected to outgoing PBX calls

## Report footer

The **report footer** <sup>ⓓ</sup> includes totals of the incoming ACD call statistics and PBX call statistics; it also includes the average and maximum **queue times**, as well as total **abandoned calls** and **rerouted calls**, for each ACD department:

- **Average CO queue time** — The average length of time, in minutes and seconds, that callers were holding ("queued") for an available agent over the reporting period.
- **Max CO queue time** — The maximum length of time, in minutes and seconds, that one or more callers had been queued for an available agent over the reporting period.
- **Abandoned calls** — Total ACD calls that disconnected (hung up) while held in queue or listening to the ACD queue or hold prompt (announcement).
- **Rerouted calls** — Total ACD calls that followed the ACD department call forwarding assigned in Function 33 after expiration of the ACD exit timer (assigned in Function 154).

### Notes:

1. A CO call transferred to an ACD department or ACD extension will be counted as a new call each time it's successfully transferred.
2. An ACD call transferred to the same, or another, ACD department will be counted as a new ACD call for that department.
3. An ACD call transferred to an ACD extension will be counted as a PBX incoming call for that extension.
4. A PBX call (outgoing or incoming) transferred to an ACD department will be counted as an ACD call.
5. A call retrieved from hold will be counted as an incoming PBX call.
6. PBX calls that forward to voice mail or other forwarding destinations are not included in the ACD department report.
7. An incoming ACD call that disconnects (hangs up) while ringing at an ACD extension won't be counted as an abandoned call.

<sup>1</sup> Each time a call is recovered, that ACD extension will be automatically logged-out of the ACD department. For more information, see the *User's Guide*.

## Feature description: SMDR

**SMDR (station message detail reporting)** call records are output in real time via the IP Server 900's NSP UDP port (59003). SMDR data will be stored temporarily if a laptop is connected for programming (five minutes after you exit programming mode, the buffered SMDR will resume output to the port).

SMDR may be output in one of three formats, selected in system programming: **standard**, **CSV**, or **extended**. The tabular format is the default.

### Standard tabular SMDR format

ESI's tabular SMDR output format, which is compatible with the standard Panasonic® DBS® format except for the last two (ESI-exclusive) items, is as shown below:

#### Four-digit dial plan

```

      1           2           3           4           5           6           7           8
1234567890123456789012345678901234567890123456789012345678901234567890
T MM/DD HH:MM:SS HH:MM:SS NNNN XXXXXXXXXXXXXXXXXXXXXXXXXXXX AAAAAAAAAA EE RR LLL

```

#### Three-digit dial plan

```

      1           2           3           4           5           6           7           8
1234567890123456789012345678901234567890123456789012345678901234567890
T MM/DD HH:MM:SS HH:MM:SS NNN XXXXXXXXXXXXXXXXXXXXXXXXXXXX AAAAAAAAAA EE RR LL

```

The columns are:

- **Call type** — Outbound (“O”), inbound (“I”) or transferred (“T”) at column 1.
- **Date** (“MM/DD”) — Begins at column 3.
- **Start time** (“HH:MM:SS”) — Begins at column 9.
- **Duration** (“HH:MM:SS”) — Begins at column 18.
- **Extension number** (“NNNN” under the four-digit dial plan, “NNN” under the three-digit dial plan) — Begins at column 27.
- **Digits dialed** (right-justified)/**Caller ID** (left-justified) — Begins at column 32 under the four-digit dial plan or column 31 under the three-digit dial plan (28 characters).
- **Account code** (“AAAA”) — Begins at column 60. (See also “SMDR format when using account codes,” page H.3.)
- **Esi-Link home location number** (“EE”)<sup>1</sup> — Begins at column 71.
- **Esi-Link remote location number** (“RR”)<sup>1</sup> — Begins at column 74.
- **CO line number** (“LLL” under the four-digit dial plan, “LL” under the three-digit dial plan) — Begins at column 77.

Each record is terminated with a line feed and carriage return character.

<sup>1</sup> Used only when Esi-Link is enabled and programmed. Esi-Link SMDR records are generated at only the home location.

## CSV SMDR format

The **comma-separated value (CSV)** format is readable from within *Microsoft Excel*<sup>®</sup> and other spreadsheet applications.

**Note:** The CSV format does not support account codes (see page H.3).

A CSV record is output for each completed call, and represented as follows (word-wrapped):

### Format:

```
"T", "MMDDYYYY", "HHMMSS", "HHMMSS", "NNN", "XXXXXXXXXX. . .XXX", "CCCCCCCCCC. . .CCC", "EE", "RR", "LL"
```

### Example A (with Esi-Link):

```
"I", "07042002", "000852", "000059", "101", "2144229700", "ESTECH SYS INC. ", "01", "04", "54"
```

### Example B (no Esi-Link):

```
"O", "10312003", "221502", "020512", "190", "12125551212", "", " ", " ", "11"
```

The fields are:

- **Call type** ("T") — Outbound ("O"), inbound ("I") or transferred ("T").
- **Start date** ("MMDDYYYY") — Eight characters, zero-filled.
- **Start time** ("HHMMSS") — Six characters, zero-filled; 24 hour clock.
- **Duration** ("HHMMSS") — Six characters, zero-filled.
- **Extension number** ("NNN") — Four characters, space-filled, right-justified.
- **Digits dialed/Caller ID** ("XXXXXXXX . . .XXX") — Up to 28 characters, null-filled.
- **Caller ID name** ("CCCCCCCCCC . . .CCC") — Up to 24 characters, null-filled.
- **Esi-Link home location number** ("EE")<sup>1</sup> — Two characters (two-digit suffix).
- **Esi-Link remote location number** ("RR")<sup>1</sup> — Two characters, null-filled (two-digit suffix).
- **Line number** ("LL") — Three characters, null-filled, right-justified.

Each field is delimited with double quote marks and separated with a single comma. Null fields are still included as place holders (see Example B, *above*). Each record is terminated with a line feed and carriage return character.

<sup>1</sup> Used only when Esi-Link is enabled and programmed. Esi-Link SMDR records are generated at only the home location.

## SMDR format when using account codes

The account code will be output in the SMDR record in character positions 60 through 69, inclusive (compliant with Panasonic DBS SMDR format). A new line will be generated each time someone enters an account code (indicated below by "A").

```

1           2           3           4           5           6           7           8
12345678901234567890123456789012345678901234567890123456789012345678901234567890
T MM/DD HH:MM:SS HH:MM:SS NNN XXXXXXXXXXXXXXXXXXXXXXXXXXXX AAAAAAAAAA EE RR LL

```

**Examples:** One account code entered during an incoming call:

```

1234567890123456789012345678901234567890123456789012345678901234567890
I 11/23 09:22:45 00:10:15 104 2145559700 DOE AND CO. 1234500001 EE RR 07

```

Three different account codes entered during the same incoming call:

```

1234567890123456789012345678901234567890123456789012345678901234567890
I 11/23 09:22:45 00:10:15 104 2145552324 AAA FINANCIAL 1234500001 EE RR 07
I 11/23 09:33:00 00:27:00 104 2145552324 AAA FINANCIAL 1234500010 EE RR 07
I 11/23 10:00:00 00:56:22 104 2145552324 AAA FINANCIAL 1234500050 EE RR 07

```

A user should be able to tell from this SMDR report that the following charges should apply:

- Account 1234500001, for a 10-minute, 15-second call (between 9:22:45 and 9:33:00).
- Account 1234500010, for a 27-minute call (between 9:33:00 and 10:00:00).
- Account 1234500050, for a 56-minute, 22-second call (between 10:00:00 and 10:56:22).

There's no indication in the SMDR record if an incorrect account number was used.

**Note:** The *Es* and *Rs* starting at position 70 will be the only digits used for Esi-Link, which will display the last two digits of the cabinet numbers. For example, an Esi-Link intercom call between Cabinet 701 in Dallas and Cabinet 702 in Chicago would appear as: *01 02*.

## Capturing SMDR data over Ethernet

The NSP<sup>1</sup> can be used to output SMDR data over an IP network; and a Telnet connection can be made to the NSP, using port xx003 (default is 59003), to capture this data. For more information, see *NSP Installation Made Simple* (ESI # 0450-0669).

## TAPIT EX compatibility

Trisys, Inc., offers a call accounting application, *TAPIT EX*, that supports ESI's extended SMDR format. For more information about *TAPIT EX*, contact Trisys at 973 360-2300 or visit [www.trisys.com](http://www.trisys.com).

<sup>1</sup> Network Services Processor, a standard feature of all ESI Communications Servers.

## Reporting conventions and rules (standard and CSV formats)

Inbound and outbound call records are generated only for calls between a station and a CO line. ESI systems provide SMDR records only for calls answered by, or originated from, a system extension. Unless otherwise noted, ESI systems **don't** provide SMDR records for the following types of calls:

- **Incoming** calls . . .
  - To the auto attendant that don't leave the auto attendant.<sup>1</sup>
  - Directly to a mailbox.<sup>1</sup>
  - Call-forwarded off-premises (using Intelligent Call Forwarding or ESI Presence Management).
- **Outgoing** calls . . .
  - Call-forwarded off-premises (using Intelligent Call Forwarding or ESI Presence Management).
  - Sent to the auto attendant and forwarded out using go-to outdial branches.
  - Generated using message delivery notification.

The duration of each call record represents the period of time that that station controlled its portion of a call. A record is generated each time a station does any of the following:

- Disconnects.
- Places a call on hold.
- Transfers a call.

### ***Additional notes regarding call record generation and duration times***

- A single CO call could be included in multiple records if it is transferred from station to station.
- Periods when calls are placed on hold are not included in the call record duration. However, a new call record is started when a caller is retrieved from hold.
- Time spent in the auto attendant, leaving/retrieving voice mail, or in an ACD queue is included in call record duration.
- The timer shown on the phone's display is the duration for the CO line, not the time connected to the station.
- Unsuccessful supervised transfers are included in the station's record.
- A new record begins when a station answers an incoming call, a transferred call, a call on hold, or a hold recall.
- Records will be generated independently for all stations in a conference. If more than one CO line is involved in a conference, each call record generated by that conference will be associated with only the last line disconnected.
- Dialed digits don't include the line group or location number.
- Outbound calls begin a call record 10 seconds after the call has cleared toll restriction.

---

<sup>1</sup> Extended format only.

## Extended SMDR format

```

1           2           3           4           5           6           7           8           9           10
012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
T MM/DD HH:MM:SS HH:MM:SS NNNN VTTT ddddddddddddddddddddddd aaaaaaaaaa ddddddddddd cccccccccc
    
```

The columns are:

- **Call type** — Outbound (“O”), inbound (“I”) or transferred (“T”) at column 1.
- **Date** (“MM/DD”) — Begins at column 3.
- **Start time** (“HH:MM:SS”) — Begins at column 8.  
The start date and time of (a.) when the call was originated from or (b.) presented to the system or (c.) retrieved from hold or (d.) successfully transferred.
- **Duration** (“HH:MM:SS”) — Begins at column 17.  
The duration of the connection to the call plus, if the call was transferred or placed on hold, the duration the call was on hold until the call was retrieved from hold or the transfer was completed or the call was released (disconnected).
- **Extension number** (“NNNN”) — Begins at column 26.  
Includes the number of the resource that answered or originated the trunk call. Trunk numbers are prefixed with T (trunk-to-trunk calls only). If an incoming call isn't answered and subsequently disconnects, this field will be blank.
- **CO trunk number** (“VTTT”) — Begins at column 31.  
When a voice mailbox answers a trunk call and the caller disconnects, the call record generated will populate this field with an asterisk (\*). Otherwise, the field will be blank.
- **Digits dialed** — Begins at column 36 (24 characters).  
Outgoing and transferred outgoing calls: dialed number. Incoming and incoming transferred calls: DNIS or DID digits (DNIS takes precedence).
- **Account code** (“AAAA”) — Begins at column 61. (See also “SMDR format when using account codes,” page H.3.)  
The account code will appear only in the call record of the station that dialed the account code.
- **Incoming Caller ID number** (“ddd”) — Begins at column 78 (10 characters).
- **Incoming Caller ID name** (“ccc”) — Begins at column 91 (12 characters).

Each record is terminated with a line feed and carriage return character.

**Note:** For more information concerning this format, see the *SMDR Feature Overview* (ESI # 0450-0463).

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