

ESI Presence Management

Administrator's Manual

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Rev. E

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We Make It Easy To Communicate

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Introduction

ESI Presence Management is a suite of technologies and features enhancing an organization's communications mobility, presence of personnel, and management of access control. These features are made available when an ESI system is equipped with one or more special purpose integrated terminals, called **RFID Readers**.

Related documents

You may see references to the following related documents as you go through this *Administrator's Manual*. If you don't already have them, your ESI Reseller can provide them to you at your request or you may download them from www.esiusers.com/downloads.

ESI part	Description
0450-1048	<i>ESI Communications Server Administrator's Manual</i>
0450-1152	<i>ESI-50L Administrator Manual</i>
0450-0458	<i>IVX® S-Class Administrator's Manual</i>
0450-0507	<i>IVX X-Class Administrator's Manual</i>
0450-0328	<i>IVX E-Class Administrator's Manual</i>
0450-0793	<i>ESI Presence Management User's Guide</i>

About the ESI Presence Management RFID Reader

ESI Presence Management's **basic features** include hands-free doorphone (intercom) operation and remote electric door lock operation, which allows a station user to unlock a door from anywhere in the office by pressing a programmable feature key on an ESI Feature Phone. Innovative RFID¹ technology adds **advanced features** to the basic ESI Presence Management feature set:

- Presence indication
- Personal Call Routing
- Automatic door lock control
- Time and attendance
- Access door report²
- Door-ajar alarm³

Each employee (or other authorized person) carries a unique RFID tag in the form of an **electronic key** (see "Electronic keys," *below*). The employee simply waves an electronic key near an ESI Presence Management RFID Reader, which then "reads" the tag number embedded in the electronic key. One or more of the following features can be activated when an electronic key is read:

- In and out status of the employee is automatically indicated on an ESI Feature Phone's programmable station keys.
- Automatically activate or deactivate various station features, such as automatically forwarding calls from the ESI Feature Phone to a cell phone.
- Automatically unlock a door (access control).
- Log time and attendance for automatic timesheet and payroll processing.

¹ Radio frequency identification.

² Available for only ESI Communications Servers (ESI-1000, ESI-600, ESI-200, ESI-100, ESI-50, and ESI-50L).

³ Only on IP version of ESI Presence Management RFID Reader.

Electronic keys with licensing

Electronic keys come in the form of either a credit-card-sized RFID **card** or key-ring **fob**. Each is encoded with a unique RFID tag number. When the electronic key is held within four inches of the ESI Presence Management RFID Reader, the RFID Reader will scan the electronic key's RFID tag number, provide a confirmation tone and optional prompt, and display an informational (or greeting) message.

The electronic keys used with the RFID Readers are designed **specifically** for use with ESI's ESI Presence Management, and your Reseller must obtain them for you from ESI. **Licensing is included** with the purchase of each electronic key, which is required for RFID feature operation. ESI offers electronic keys in packages of 5, 25, 100, and 500.

Each compatible ESI phone system supports a maximum number of RFID tags, as shown in the chart, "Maximum tags," below. If a tag is read on a system that has used all its RFID tags, "*LICENSE EXCEEDED*" will appear on the Reader, no time and attendance records will be sent, and no phone or access control will be allowed with that tag.

No licensing is required for the ESI Presence Management RFID Readers themselves, or for RFID features.

Maximum tags

ESI-1000	ESI-600	ESI-200	ESI-100	ESI-50 or ESI-50L	IVX S-Class Generation II	IVX X-Class	IVX E-Class Generation II
2,000	500	500	500	500	500	500	500

Feature summary

Basic features

Doorphone — A call can be initiated to a pre-assigned destination (an extension, department, mailbox, auto-attendant branch ID, or Esi-Link location) by pressing the **CALL** button on the ESI Presence Management RFID Reader.

Manual door lock control (remote door unlock) — Where an ESI Presence Management RFID Reader is installed, a call can be made to a station, department, mailbox, auto-attendant branch ID, or Esi-Link location by pressing the **CALL** button. If a user answers that call, the user can then use the remote door unlock feature key to unlock the associated door. The user remains connected to the doorphone when using the remote door lock control feature. The **CALL** button destination can be different for day and night modes.

Important: Only ESI Feature Phones can be used to remotely unlock the door.

The code for the remote door unlock feature key is **5 8 1**.

RFID features

Automatic door control — Electronic keys are allowed, or restricted from, activation of **electric door strike locks** via programming. Each electronic key that's allowed door control is assigned the extension number(s) (or "ALL" for all Readers) of the RFID Readers for which it's allowed to control door locks.

Authentication confirmation — When an RFID Reader scans an electronic key, and the system validates or rejects the electronic key for door control, the RFID Reader will display a message and play a tone or optional greeting. Valid electronic keys receive the message *WELCOME* or *GOODBYE*. Rejected electronic keys receive the message *ACCESS DENIED*.

Access schedules — Each electronic key may be allowed to open doors at any time, or allowed and restricted at certain times of day and day of week, by assigning the tag number to any one of seven programmable schedules.

DSS and DND key presence indication — DSS keys assigned with an electronic key user's extension or mailbox number can provide a unique indication when that person is out of the office.

Personal Call Routing — Electronic key users that have phone extensions can have the option of pre-assigning features that are applied automatically when tagging in or out. One or more of the following features can be set:

- Personal greeting selection (greeting 1, 2, or 3).
- Call forward all calls (to a voice mailbox, extension, department, Esi-Link location, or external number) or send all calls directly to voice mail.
- Voice mail message delivery/notification on/off.

Electronic key users associated with guest mailboxes can only select a personal greeting.

Quiet time — Each electronic key user can schedule a "quiet time" for each day of the week, during which the system automatically turns off message notification and/or call forwarding (if assigned). For example, calls that would have forwarded are, instead, directed to voice mail.

Time and attendance management — Provided by the **optional** software package, *WaspTime*¹, for time and attendance tracking, reporting, and integration with popular payroll and financial packages.

Door-ajar alarm² — Some doors will generate an alarm if the door has been left open for too long. If this alarm is generated by the door, a message will appear in the display of the phones that ring when the **CALL** button is pressed.

¹ Not sold by ESI; available for direct purchase from the manufacturer, Wasp Barcode Technologies (www.waspbarcode.com).

² Only on IP version of ESI Presence Management RFID Reader.

About door lock control

Note: While the detailed information in “About door lock control” is of concern primarily to your installing ESI Reseller, we are including it in this *Administrator's Manual*, as well, in case you wish to learn more about some of the issues discussed here.

There are several types of **electric and electromagnetic door locks**. The installation of some of these types of locks is regulated in many municipalities, specifically to meet building and fire codes. This section briefly describes the more common types of electric door locks and their associated requirements.

Electric strikes

Electric strikes are installed in a door frame where the strike plate is usually mounted. It includes a plate called the keeper or gate which is electrically released to swing out and thereby allows the latch to move through the space the keeper has vacated. There are several different types of electric strikes. Most electric strikes require 12 or 24 volts DC, and they may be **fail-safe** or **fail-secure**. A fail-safe electric strike needs power to remain locked, and is not commonly used. The most common type of electric strike is fail-secure. A fail-secure electric strike stays locked even without power from the outside coming in. To exit, a door knob or lever on the entry lockset is manually operated. Since the electric strike is not needed for this, it allows for safe exit. To provide an audible indication that the door is unlocked, DC-powered electric strikes will make a slight click when operated.¹ It should be noted that the ESI Presence Management RFID Reader emits a confirmation tone when the door control relay is operated; therefore ESI recommends that a DC-powered electric strike be used with the RFID Reader for door access control.

Electromagnetic locks

Electromagnetic locks (magnalocks) are designed to secure any type of door or gate that closes against a fixed stop. All magnetic locks will work only with DC current, usually 12 to 24 volts. **All electromagnetic locks are fail-safe.** This means that they need a **constant** source of current to remain locked: if power is removed, the lock will open.

All electromagnetic locks are silent, even when powered and locked. The lock consists of an electromagnet which mounts on the door frame and a strike plate which mounts on the moving door or gate. The strike plate is mounted in such a way that, when the door closes, it automatically self-aligns with the magnet. Magnetic force then takes over, strongly securing the door. Release is achieved by switching off power to the magnet. This type of lock secures the door from both entering and exiting, and there is no alternate method of unlocking the door.

Important: **Electromagnetic locks can be dangerous** with respect to fire and smoke safety if not installed properly. Because of this, installation of this type of lock must be done by a licensed professional in most, if not all, areas. Before planning an installation it's very important to always check with the Local Authority Having Jurisdiction.

Electric deadbolts

Electric deadbolts come in several different styles, and as with electric strikes, they come in fail-safe and fail-secure configurations. The deadbolt is operated via a solenoid in the lock housing. Some models have a manual cylinder that allows exit without operating the solenoid. However, because electric deadbolts are installed separate from a standard entry lockset, **they can be as dangerous as electromagnetic locks** if not installed properly. Because of this, installation of this type of lock **must** be done by a licensed professional in most if not all areas.

¹ A buzzing sound, instead, indicates an **AC**-powered electric strike; ESI Presence Management doesn't work with AC-powered strikes.

Stand-alone battery locks (SABLs)

Stand-alone battery locks (SABLs) control access through electrically locked doors. The SABL is a combined digital keypad and cylindrical lock similar to an electric deadbolt. Since this type of lock is mounted on the door itself, and is “self-contained,” it cannot be connected to the RFID Reader.

Recommendations

Because of code requirements in most municipalities, **ESI does not recommend** that a non-certified and/or unlicensed person attempt to connect certain types of electric door locks to an RFID Reader. Below is a table listing the types of door locks and recommendations.

Lock type	Fire alarm override ¹ required?	Regulated? ²	ESI recommendation
Door strike (fail-safe)	No	Possible	Recommended
Door strike (fail-secure)	No	Possible	Recommended
Electromagnetic lock	Yes	Yes	Not recommended
Electric dead bolt	N/A	Yes	Not recommended
Stand-alone battery lock	N/A	Possible	Not recommended

ESI disclaimer

DISCLAIMER: ESI TAKES NO RESPONSIBILITY AS TO THE LEGALITY OF CONTROLLING THE OPERATION OF AN ELECTRIC DOOR LOCK USING THE ESI PRESENCE MANAGEMENT RFID READER IN ALL JURISDICTIONS. IT IS THE RESPONSIBILITY OF THE INSTALLING COMPANY AND THE END USER TO DETERMINE AND FOLLOW THE APPLICABLE STATE AND LOCAL LAWS AND REGULATIONS REGARDING THE PROPER MOUNTING, CONNECTION AND USE OF THE ESI PRESENCE MANAGEMENT RFID READER FOR DOOR LOCK CONTROL.

¹ In many jurisdictions, a fire alarm or automatic sprinkler system must be able to unlock an electromagnetic door lock.

² There may be additional regulatory requirements if the lockset is other than a “standard” entry set (i.e. deadbolt, keyed both sides, etc.)

Programming

Note: You can use *Esi-Admin* v. 4.14.2 (or higher) to program ESI **IVX** systems that support ESI Presence Management. (For ESI Communications Servers, any version of *ESI System Administrator* is compatible.)

Overview

RFID Readers and feature parameters are assigned using the following programming functions:

- **Function 37** — RFID programming:
- **Function 371** — Access control schedule programming.
- **Function 372** — RFID tag assignment.
- **Function 373** — View RFID tag number.
- **Function 374** — ESI Presence Management parameters.
- **Function 375** — RFID Reader parameters.
- **Function 81** — View licensing: RFID tag licenses.

Depending on your application, not all functions necessarily need to be programmed. Later on in this document, we'll go over some common applications of ESI Presence Management features and how to program to support these applications.

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.

Programming functions

Function 37: RFID programming

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 a allow time (see next step) for this schedule, the display will show something like:

ACC SCHED1 MON
NO ALLOW TIME

- 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

(Continued)

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). If Personal Call Routing or presence indication is not desired **but** access control is required, enter **0** instead of an extension or mailbox number.

1. Enter an RFID tag number, **or** use the scroll keys to select from the list of tag numbers (see the **Note** on page 6). (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 500-tag limit has been exceeded, "LICENSE EXCEEDED" will appear on the display. Therefore, you must **either** delete one or more unassigned tag numbers **or** purchase additional licenses to add new tag numbers. To view the system's total number of RFID licenses, use Function 81 (see page 10).

2. Enter the extension or mailbox number to which you wish to assign the tag number. If **no** extension or mailbox is to be assigned this tag number, press **0**. (To **delete** an entry, press **HOLD**.) Press # to confirm.

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

(Continued)

- Enter the extension numbers of the 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 RFID Readers are allowed, "ALL" will appear on the second line.

DOOR ACCESS:
123 124 138 >

The following table indicates the **maximum** individual RFID Reader extension number entries that you can enter for each compatible system, with system software versions listed where applicable:

System	Max. entries
ESI-1000	64
ESI-600 (v. 16.x.x or higher)	32
ESI-600 (v. 15.1.x or 15.2.x)	10
ESI-200	32
ESI-100	16

System	Max. entries
ESI-50	10
ESI-50L	10
IVX S-Class Gen. II (v. 4.6.0 or higher)	10
IVX X-Class (v. 10.7.0 or higher)	10
IVX E-Class Gen. II (v. 2.6.0 or higher)	10

- 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 7).

ACCESS SCHEDULE:
0 - FULL >

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 *ESI System Administrator* or *Esi-Admin* (depending on the ESI system) to print out a list of assigned tag numbers. Use *ESI System Administrator* if the system is an ESI-1000, ESI-600 (running system software version 16.2.0 or higher), ESI-200, ESI-100, ESI-50, or ESI-50L. Use *Esi-Admin* if the system is an ESI C-Plus or any IVX system. If you're not sure which system you have (or, in the case of the ESI-600, which software version it's running, contact your ESI Reseller.

Function 374: ESI Presence Management parameters

This determines whether the system plays a prompt — and, if so, which one — when the 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 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:
<i>WELCOME</i>	“Welcome”
<i>GOODBYE</i>	“Goodbye”
<i>ACCESS DENIED</i>	“Invalid Entry”
<i>LICENSE EXCEEDED</i>	“Error”
<i>ERROR READER FULL</i>	“Error”

Function 375: RFID Reader parameters

This function is used to adjust the doorphone speaker volume of each 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 81: Display licenses

Function 81 is used to view the RFID tag **license information** — *i.e.*, allows you to see how many RFID tags (up to the maximum of 500) are available for enabling. Parameters include:

- **Max** — The total number of licenses (users) that can have the feature enabled. **This will always be 500.**
- **Used** — The total number of licenses in use.

```
LICENSE TAG
MAX:500 USED:0
```

User programming

Personal Call Routing

Personal Call Routing automatically redirects a station user's calls when the user exits the office using an electronic key with an ESI Presence Management RFID Reader in **Entrance/exit** mode¹. Entry settings are used for call handling when the user is in the office. Exit settings are used to handle calls when the individual is out of the office. Quiet-time settings are used to stop call forwarding and message delivery for a set period each day.

A quick reference of user programming functions for Personal Call Routing begins below. For more information about these functions, consult the *ESI Presence Management User's Guide* (#0450-0793).

User programming 7: Personal Call Routing

1 – Entry settings

- Select the personal greeting (1, 2, or 3) to play to callers when the user has entered the office.
- Select message delivery/notification.

2 – Exit settings

- **Options:** VOICE MAIL or CALL FORWARD.
 - If *CALL FORWARD* is selected:
 - Use the scroll keys to select an option:
 - *OUTDIAL* to call forward to an external number²
 - *EXTENSION* to forward to a station
 - *MAILBOX* to a voice mailbox
 - *REMOTE* to forward calls to a remote Esi-Link location.
 - Select the personal greeting (1, 2, or 3) to be played to unanswered or rejected calls when you exit the office.

3 – Quiet time settings

- Select the day of week using the scroll keys.
- Enter quiet time on.
- Enter quiet time off.

(Continued)

¹ This must be set by the Installer; if necessary, consult your ESI Reseller.

² This feature is available only if the System Administrator enables it on the station.

Note: Personal Call Routing to an external number uses the standard ESI *call-forwarding/off-premises* feature. **To let users set Personal Call Routing to an external number, that user's extension must be allowed the following capabilities under Functions 31 and 32.**

Function 31 — Extension definition and routing

Note: Function 31 is accessible by **only** your installing ESI Reseller.

- **CO line group** — Assign the CO line group that the user will be allowed to call forward calls to.

Function 32 — Extension feature authorization

- **External forwarding** — allows the station user to use the call forwarding off-premises and off premises reach-me features.
- **Forwarding to toll numbers** — this feature is used in conjunction with external forwarding. When enabled, this feature lets the user program a long-distance number for external forwarding.
- **Trunk-to-trunk transfer** — When enabled, this lets the station user initiate a trunk-to-trunk transfer. This feature must be enabled for external call forwarding to succeed.

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.

Note: These parameters must also be set when a user wishes to use the off-premises "reach-me" feature (using personal greeting 2). For more information about these features and others, refer to the specific system's *Administrator's Manual*.

Remote door unlock feature key

The key code for the **remote door unlock feature key** is **5 8 1**.¹ This feature key may be assigned to any ESI Digital or IP Feature Phone. When the remote door unlock feature key is pressed while the station is connected to the RFID Reader/doorphone, a tone will sound from the RFID Reader and the door lock relay will energize, unlocking the door.

Note: The station **must** be connected to the doorphone in order for the remote unlock feature key to work.

This operation allows a single door unlock key to control several RFID Reader/doorphones.

¹ To protect against unauthorized access, this feature code is **not** mentioned in the *ESI Presence Management User's Guide*.

How to program for specific applications

Here we will be describing certain possible applications and how to program ESI Presence Management features to support them:

- Personal Call Routing
- Access control
- Time and attendance

Reminder: All RFID features require electronic keys and licenses. Before you get started, check Function 81 to make sure you have enough RFID licenses for the application.

Personal Call Routing

For **each** individual who will be using Personal Call Routing, follow these programming steps:

1. Confirm that your ESI Reseller has assigned the CO line group to which the user will forward calls.
2. In Function 32, assign the following:
 - **External forwarding** — Set to *YES* to allow the station user to use the call forwarding/off-premises and off-premises “reach-me” features.
Default: *YES*.
 - **Forwarding to toll numbers** – Set to *YES* to let the user program a long-distance number for external call forwarding.
Default: *NO*.
 - **Trunk-to-trunk transfer** — Set to *YES* for external call forwarding to succeed.
Default: *YES*.
3. In Function 372, assign the following:
 - Tag number of the user’s electronic key.¹
 - Extension number of the individual’s phone.
 - Extension number of each of the RFID Readers that the individual will be using.

Note: The RFID Reader will not acknowledge the user’s electronic key unless the RFID Reader’s extension number is entered here.

- The access schedule may be left at default (*0 - FULL*).

Example:	Tag no.	Ext/MB	Door access	Access schedule
	7890123456	115	123 132	0 - FULL

(Continued)

¹ To make it easier to input tag numbers, electronic keys can be scanned in first at the RFID Reader, then selected using a scroll key in Function 372.

4. To test, perform the following:
 - a. Go to a phone you just programmed as described above, and enter user programming 72.
 - b. Select *CALL FORWARD* and press #.
 - c. Select *OUTDIAL* and press #.
 - d. Enter an outside phone number, including the line group access code.
 - e. Wave the electronic key in front of the RFID Reader.
 - f. On the RFID Reader, you should see *GOODBYE* and the name of the extension.
 - g. Now, look at the station's display. You'll see *OFF PREMISES* and the station's DND key will be lit.
 - h. Check other phones' DSS keys for that extension; they should be lit amber (they may be "winking," depending on how your installing ESI Reseller has set Function 169).
 - i. Call the extension; you should immediately be forwarded to the number programmed in step 6b above.
 - j. Wave the electronic key in front of the RFID Reader again.
 - k. The RFID Reader will display *WELCOME*. On the phone, the DND key should be off, and DSS keys of that station should also be turned off.
 - l. Call the extension; it should ring normally.
 - m. To prevent other calls from following the forwarding until the user assigns his/her own Personal Call Routing, go back to the phone, enter user programming 72, select *VOICE MAIL*, and press #.

Access control

In this scenario, an employee is allowed to enter the office between 7:00 AM and 6:00 PM each week day, and denied access all other times, including all day Saturday and Sunday. We'll assign access schedule 2 for this.

1. In Function 371, select access schedule 2 and press the pound key.
2. Enter the schedule name.
3. The first day that will be scheduled will be Monday. Press the pound key to continue.
4. Enter **700** for the allow time, press the pound key, and select **AM** and press the pound key to confirm.
5. Enter **600** for the deny time, press the pound key, and select **PM** and press the pound key to confirm.
6. Select **TUESDAY** and repeat steps 4 and 5. Do the same for Wednesday through Friday.
7. Saturday and Sunday do not need to have any schedule times assigned, since access is denied from Friday at 6:00 PM until Monday at 7:00 AM. Therefore, **NO ALLOW TIME** and **NO DENY TIME** should be displayed for both Saturday and Sunday.

Example: Schedule name: WEEKDAYS B

	Allow	Deny
Monday	7:00 AM	6:00 PM
Tuesday	7:00 AM	6:00 PM
Wednesday	7:00 AM	6:00 PM
Thursday	7:00 AM	6:00 PM
Friday	7:00 AM	6:00 PM
Saturday	No allow	No deny
Sunday	No allow	No deny

(Continued)

8. In Function 372, assign the following:

- Tag number of the individual's electronic key¹
- Extension number of the individual's phone
- Extension number of each of the RFID Readers that the individual will be using.

Note: An RFID Reader won't acknowledge the user's electronic key unless that RFID Reader's extension number is entered here.

Example:

Tag no.	Ext/MB	Door access	Access schedule
7890123456	115	123 132	0 - FULL

9. To test, wave the electronic key between 7:00 AM and 6:00 PM; the door lock will be unlocked. If you wave the electronic key between 6:00 PM and 7:00 AM, the door **won't** be unlocked, and the RFID Reader will display *ACCESS DENIED*.

Time and attendance

Before you enable the time and attendance messaging interface, the ESI phone system must have a Network Services Processor (NSP) installed and properly connected to a local area network.

Note: The NSP is neither user-installable nor user-programmable. If you're not sure whether your ESI system has a properly installed and connected NSP, contact your ESI Reseller.

1. In Function 374, set *TIME & ATTEND* to *ENABLED*.

2. In Function 372, assign the following:

- Tag number of the individual's electronic key
- *OPTIONAL*: Extension number of the individual's phone — This is required **only** if the customer wishes to use Personal Call Routing as well. Otherwise, enter **0**.
- Extension number of each of the RFID Readers that the individual will be using.

Note: An RFID Reader won't acknowledge the user's electronic key unless that RFID Reader's extension number is entered here.

- The access schedule may be left at default (*0 - FULL*).

3. If you've already installed *WaspTime*², wave an employee's electronic key in front of one of the RFID Readers.

4. View the employee's time sheet for today; the tag number event should appear on the time sheet.³

¹ Remember: To make it easier to enter tag numbers, scan electronic keys in first at the RFID Reader, then select tag numbers using a scroll key in Function 372.

² Not sold by ESI; available for direct purchase from the manufacturer, Wasp Barcode Technologies (www.waspbarcode.com).

³ For more information, refer to the documentation supplied with the third-party *WaspTime for ESI* software application.

Access door report

Note: Available only on ESI Communications Servers (ESI-1000, ESI-600, ESI-200, ESI-100, ESI-50, and ESI-50L).

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.

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. In Function 72, 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

4. 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

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

ENTER END TIME

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

ENTER AM OR PM

7. 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

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

PRESS 1 TO PRINT
REPORT

See the next page for an example of an access door report.

Shown below is an example of an RFID Reader access door report with the following parameters:

- **Extension:** 123.
- **Start time:** 7:00 AM.
- **Start date:** October 11, 2006 (entered as 10112006).
- **End time:** 2:00 PM.
- **End date:** [Same as the start date.]

Access Door Report				Page 1
EPM Reader	123			
Start:	10/11/2006	7:00 AM	End: 10/11/2006	2:00 PM
Ext/MB	Name	TAG ID	Date	Time
-----	-----	-----	-----	-----
0103	TOM	0001234567890	10/11/2006	7:01 AM
0103	TOM	0001234567890	10/11/2006	7:01 AM
0102	GREG	0002345678901	10/11/2006	7:02 AM
0103	TOM	0001234567890	10/11/2006	7:02 AM
0000		0003456789012	10/11/2006	7:02 AM
0108	DAVID T	0004567890123	10/11/2006	9:01 AM
0109	BILL	0005678901234	10/11/2006	9:05 AM
0110	DAVID M	0006789012345	10/11/2006	12:45 PM
0111	DEREK	0007890123456	10/11/2006	12:50 PM
0112	STEVE W	0008901234567	10/11/2006	1:02 PM
0108	DAVID T	0004567890123	10/11/2006	1:05 PM
0108	DAVID T	0004567890123	10/11/2006	1:15 PM
Report Complete				

Notes: Extensions and mailboxes are reported as four digits.

RFID tags that haven't been assigned an extension or mailbox are reported as 0000.

RFID Reader display reference

Display	What it means
<div style="border: 1px solid black; padding: 5px; text-align: center;"> 12/14 12:07 PM CALL </div>	Idle display. <div style="border: 1px solid black; padding: 5px;"> Note: If no destination has been assigned for the CALL key, CALL won't appear. </div>
<div style="border: 1px solid black; padding: 5px; text-align: center;"> 12/14 12:07 PM CONNECTED </div>	The RFID Reader/doorphone has called (or received a call), and is connected to an extension. The two individuals may now converse.
<div style="border: 1px solid black; padding: 5px; text-align: center;"> CARD READ </div>	This appears when an electronic key not already assigned in Function 372 is waved in front of an RFID Reader for the first time.
<div style="border: 1px solid black; padding: 5px; text-align: center;"> WELCOME C LEE (Appears for several seconds) </div>	A user has waved a valid electronic key in front of an RFID Reader. (If the user waves the electronic key again, <i>GOODBYE</i> will appear; see next item). Now, the user's extension or mailbox will change to "Entry" mode and Personal Call Routing (if assigned) will be deactivated. Also, if an electric door lock is installed and connected, the door will be unlocked.
<div style="border: 1px solid black; padding: 5px; text-align: center;"> GOODBYE C LEE (Appears for several seconds) </div>	This appears for several seconds after a user waves a valid electronic key in front of an RFID Reader. (If the user waves the electronic key again, <i>WELCOME</i> will appear; see previous item). Now, the user's extension or mailbox will change to "Exit" mode and Personal Call Routing (if assigned) will be activated. Also: if an electric door lock is installed and connected, the door will be unlocked.
<div style="border: 1px solid black; padding: 5px; text-align: center;"> ACCESS DENIED (Appears for several seconds) </div>	A user has waved an electronic key in front of an RFID Reader, and the electronic key fits one or more of the following conditions: <ul style="list-style-type: none"> • Its tag number hasn't been assigned in Function 372. • It's denied access at that RFID Reader (Function 372). • It's denied access by the access schedule programmed in Function 371 and assigned in Function 372. <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> Note: If this appears, ESI Presence Management will perform no other action — <i>i.e.</i> the extension or mailbox mode will not change, the door lock will not be controlled, and no time and attendance record will be sent. </div>
<div style="border: 1px solid black; padding: 5px; text-align: center;"> ERROR READER FULL </div>	The time and attendance messaging interface is enabled, and the time and attendance record storage in the system has reached its maximum. ¹

¹ The maximum number of time and attendance records that can be stored is 20,000 (except for IVX S-Class Generation II, where the limit is 4,000).

Troubleshooting • Glossary • Index

Troubleshooting

Here we'll go over some common problems and how to troubleshoot them. If necessary, consult your ESI Reseller for more assistance and information.

Problem	Troubleshooting steps
Call key won't ring extension or go to mailbox	<ul style="list-style-type: none"> • Make sure the system is in the correct day or night mode by assigning a programmable feature key with feature code 5 6 0.
Remote door unlock key won't unlock door	<ul style="list-style-type: none"> • Verify the door unlock key is programmed with feature code 581. • Remember that the extension with the remote door unlock key must be on a call with the door phone for the remote door unlock key to work. • Make sure the door lock power supply is plugged into a working outlet.
Electronic key won't unlock door or RFID Reader shows: <i>ACCESS DENIED</i>	<ul style="list-style-type: none"> • Make sure the tag number of the electronic key is entered correctly and the extension number of the RFID Reader is entered under <i>DOOR ACCESS</i> in Function 372 for that tag number. • If not already assigned, in Function 372 assign access schedule <i>0 - FULL</i> to the tag number. <ul style="list-style-type: none"> • If the electronic key now unlocks the door, then there is a problem with the access schedule assignment. Verify that the last scheduled time was not a Deny time.
RFID Reader shows <i>LICENSE EXCEEDED</i> when electronic key is read	<ul style="list-style-type: none"> • To verify the number of licenses in use, enter Function 81. <ul style="list-style-type: none"> • Before you can add a new electronic key, the number of RFID licenses listed as "<i>USED</i>" must be fewer than 500 (the system maximum). • Print out a program report or use <i>Esi-Admin</i> to search for any unused tag numbers that can be deleted. (If all are in use, you must decide which can be deleted — for example, whether some employees could let others in due to overlapping work schedules.) • In Function 372, delete unused (or otherwise expendable) tag numbers by pressing HOLD. Then use Function 81 to confirm that "<i>USED</i>" is <i>500</i> or lower.
Phone won't go into/come out of <i>OFF PREMISES</i> or The extension name doesn't display when an electronic key is scanned by the RFID Reader	<ul style="list-style-type: none"> • Verify that the extension number is assigned to the tag number of the electronic key in Function 373.
RFID Reader won't scan an electronic key (no message shows on the RFID Reader display)	<ul style="list-style-type: none"> • Verify that the door phone feature works. <ul style="list-style-type: none"> • If the door phone doesn't work, try disconnecting and reconnecting the RFID Reader. • Try another electronic key. <ul style="list-style-type: none"> • If the other electronic key scans OK, then the original key is defective. • If the other key doesn't work, the RFID Reader may need to be replaced; contact your ESI Reseller.

Glossary

DSS — Direct station select.

LCD — Liquid crystal display.

NSP — Network Services processor

RFID — Radio frequency identification.

Tag — RFID transponder.

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