Power832/X-10 PRO Residential Project Kit For Lighting Control

Special Application Guide

DSC®
Security Products

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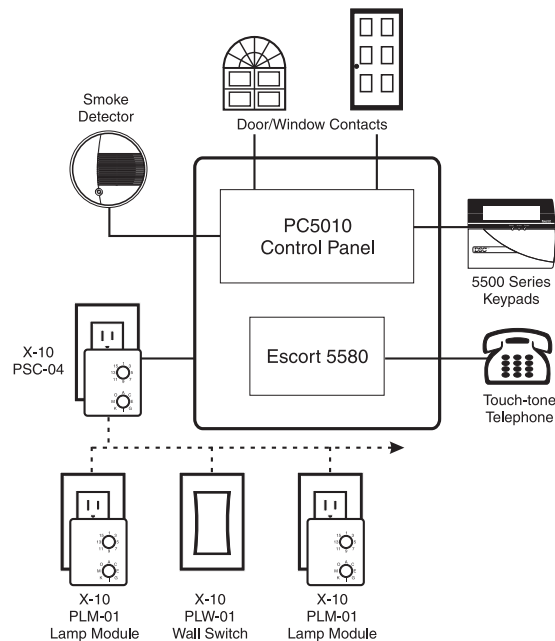# Power832/X-10 PRO Residential Project Kit

Introduction

The Power832/X-10 PRO Residential Kit for Lighting Control provides exciting opportunities for you to attract new customers and boost sales. Here are just a few of the ways automated lighting control can make your customer feel even more safe and secure.

- Your customer can turn lights on and off from any touch-tone phone.
- You can provide a light that automatically comes on during exit/entry periods.
- You can provide a light that signals an alarm.
- You can provide a lighted fire escape route.
- You can simulate home occupancy to discourage intruders.

In this guide, we show you how easy it is to plan and program each of these applications for your customers.

It is recommended that you read this entire manual *before* starting the system installation.

The Control Panel houses the Escort5580 Module which controls lights and other electrical devices using the Automation Modules from X-10 Corporation. One X-10 module is required for each device (Automation Item) you want to control. One X-10 Power-line Interface is required for the system to connect to the house wiring. The 6 foot cord included connects the Escort module to the PSC-04 X-10 Power-line Interface.

About This Manual

This manual is intended to guide you through the process of installing and programming the security and home automation system. It first deals with the actual installation of the devices and later with the operation and the programming of the Automation items. Please note that the Security portion of your kit will be installed according to the *PC5010 Installation Manual*, included

Installation

STEP 1

Installing the Security Alarm System

For additional information, see: *PC5010 Installation Manual*

Install and program the security alarm system (Power832 Control and all detecting devices) as normal.

Once you are satisfied that the security system is working properly, you can begin the installation of the Escort5580 Module and the home automation devices.

Before proceeding further, disconnect both AC and DC power from the Power832 Control. The panel utilizes EEPROM memory and will retain all programming.
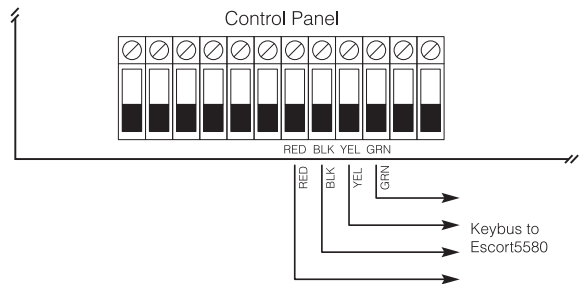
STEP 2

Installing The Escort5580 Module

For additional information, see: *Escort5580 Installation Manual*, Sections 2.1, 2.2, and 2.3
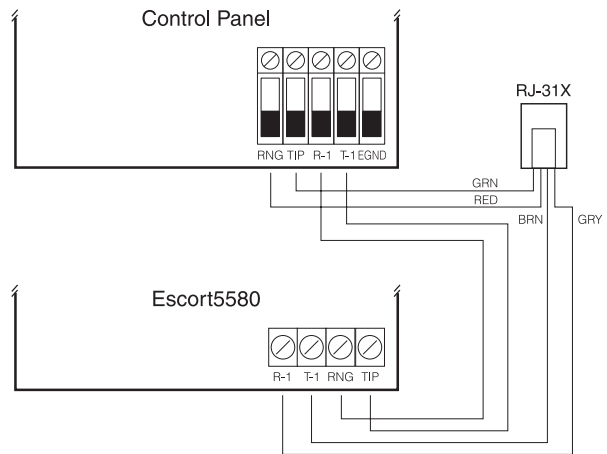
Install the Escort5580 Module, which will consist of mounting the module inside the same cabinet as the main control or in a separate enclosure located close to the control panel. Use the nylon stand-offs provided.

Connect the Keybus wiring as shown in the following diagram:

Connect the incoming phone line to TIP and RING of the control panel. Connect T1 and R1 of the control panel to TIP and RING of the Escort5580. Connect the return to the house phones to T1 and R1 of the Escort5580.

Reconnect both AC and DC power to the Power832 Control Panel.

STEP 3

Enrolling the Escort5580 Module

For additional information, see: *Escort5580 Installation Manual*, Section 2.4

The Escort5580 module will automatically function properly as soon as STEP 2 is completed and will be 'enrolled' on the system within one minute after power is applied.

NOTE: *Once enrolled, the Escort module is fully supervised by the Power832 control panel which will generate a Supervisory Trouble if the module is removed from the system.*

To confirm the Escort5580 module is connected properly to the control panel, perform the following:

1. Press [*] [8] [Installer Code]   - enter Installer Programming

2. Press [903]   - enter Module Supervision Section

If you are using an LED Keypad, Light #24 should be on. This means the module is connected properly and in communication with the panel via the Keybus. If you are using an LCD Keypad, scroll through the display. The keypad will show each module enrolled on the system. It will read 'Escort5580' if the enrollment has been successful.

If the enrollment has been unsuccessful, remove power, check all wiring between the control panel and the Escort5580. Once any wiring problems have been resolved, reconnect power, repeat this STEP 3, or see *Escort5580 Installation Manual*, Section 2.4

STEP 4

Connecting the X-10 Power-line Interface (Model PSC-04)
Plug one end of the 6' connector cord into the jack on the Escort5580 and the other end into the X-10 PSC-04 Power-line Interface. Plug the X-10 PSC-04 Power-line Interface unit into an unswitched, 110 Volt outlet.

STEP 5

Installing the X-10 Control Modules
The two X-10 Lamp (Control) Modules supplied with this kit plug into a 110 Volt outlet near the lights that you wish to control. The Escort5580 can control any incandescent light plugged into a Lamp Module.
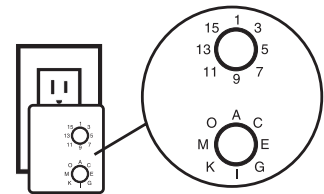
NOTE:

Lights plugged into the X-10 Control Modules will also operate normally by turning the individual light switch on and off. The light fixture switch must be left in the 'on' position in order for the control functions to operate.

Other types of X-10 Control Modules are available from your local distributor. These include Wall Switch and Appliance modules.

Each X-10 Lamp Module must have a unique ID or code for independent operation. The ID number has two components:

- a letter from A to P ('House Code')
- a number from 1 to 16 ('Unit Number').

Using a screwdriver, set any ID (House Code & Unit Number) you want by turning the two dials on the front of the module.

In Appendix B of the Escort5580 *Installation Manual,* find the House Code and Unit Number that you have selected for each module. Write down the three digit number

AppendixB

AUTOMATION ITEM HOUSE CODES & UNIT NUMBERS

Enter	Code	Enter	Code	Enter	Code	Enter	Code	Enter	Code
[000]	A 1	[052]	D 5	[103]	G 8	[154]	J 11	[205]	M 14
[001]	A 2	[053]	D 6	[104]	G 9	[155]	J 12	[206]	M 15
[002]	A 3	[054]	D 7	[105]	G 10	[156]	J 13	[207]	M 16
[003]	A 4	[055]	D 8	[106]	G 11	[157]	J 14	[208]	N 1

found to the left of the code (use the space below). This is the number that you will use when programming the Escort5580.

Record Module Information Here:

Automation Device	Module Location	Code (House & Unit Number)	Programming Code (From Appendix B)
Module # 1			
Module # 2			

Home Automation Operation

What It Does

Each X-10 Control Module (lamp module, wall switch, appliance module, etc....) is referred to as an 'Automation Item'.

The Escort5580 can be programmed to:

- allow the end user to activate Automation Items via any touch tone telephone, either local or remote. In the case of lighting, dimming can also be controlled.
- activate an Automation Item as designated by any or all of the 16 schedules available. Each schedule consists of an 'On' time, 'Off' time and day(s) of the week selection.
- activate an Automation Item when an event occurs. The event can be any of the PGM Output options of the control panel.
- activate an Automation Item when an event occurs *or* as programmed in any or all of the 16 schedules available.
- activate an Automation Item when an event occurs *and* as programmed in any or all of the 16 schedules available.
- activate a group of Automation Items with one command. This is referred to as 'Global' control.

Programming the Escort5580

For additional information, see: *Escort5580 Installation Manual*, 'Programming Worksheets'

Programming Basics

The Escort5580 module is programmed via any local touch-tone telephone and provides full voice prompting.

Refer to *Escort5580 Installation Manual*, Section 4.

Programming is done by 'Sections' (Programming Addresses) which are identified by 3-digit Section Numbers, represented in the manuals like this: Section [999]. Programmed data are either decimal (entered on the telephone touch-pad) or toggle (feature is toggled on and off by entering feature number on the telephone touch-pad. The Escort5580 responds to each toggle).

Programming Procedure for Lighting Control (Home Automation)

In order to assist you in your programming of the Home Automation portion of the Power832/X-10 Pro Residential Kit, we have selected five of the most common lighting control applications as examples. In the following sections, the step-by-step programming requirements are outlined.

For additional information, see: *Escort5580 Installation Manual*, Section 6

NOTE:: *For some applications, it will be necessary to perform a small amount of additional Power832 control panel programming, dealing with the PGM Output Options and the PGM Attributes.*

Refer to *PC5010 Installation Manual*, Section 5.10

Application 1: Basic Lighting Control

The following programming will allow your customer to turn lights on or off, or to dim lights from any touch-tone phone.

Enter Escort5580 Programming

To enter Escort5580 programming, perform the following on any local touch-tone phone:

1. Enter [*] [*] [*] on any local touch-tone phone to turn the Escort5580 on.
2. Listen. The Escort5580 will respond with "Hello" and will commence to announce the status of the system.
3. Enter [*] [8].
4. Listen. The Escort5580 will respond with "Enter the service code".
5. Enter [Escort Service Code] – default is [5580].
6. Listen. The Escort5580 will respond with "Enter a section number".

Step 1

First System Options – Escort5580 Section [002]
1. Enter [002]
2. Listen. Escort will respond with "Options (option numbers) are on, enter a two digit number"
3. Enter [03]
4. Listen. Escort will respond with "Options (option numbers) are on, enter a two digit number"

Continue programming using the above procedure.

- Turn Option [03] ON to enable Home Automation.
- An access code can be required to enter the [*] [5] Automation for additional security. If Option [04] is ON, an access code is required. If Option [04] is OFF, an access code is not required.

Step 2 (Optional)

Number of Automation Transmissions – Escort5580 Section [007]
Since the Automation transmissions are non-confirmed and occur over the existing AC wiring of the premises, having the Escort5580 transmit multiple On/Off commands to the control modules can increase reliability.

Program the number of on/off transmissions to be sent for each command.

NOTE: Each transmission takes approximately one second. The larger the number, the slower the Automation system will appear to operate.

The default setting is [001], one transmission. The programming range is 001 to 255.

A setting of [003] will overcome most signal transmission difficulties.

Step 3

Escort5580 Section [130] – Item [01] – House Code & Unit Number

(Assuming that this is the 1st module on the System, it is defined as Item #01)

Referring to your notes, program the three digit code (from Appendix B) equivalent to the letter and number corresponding to the ID code selected for the *first* X-10 light module (i.e. [A1] = [000]).

Step 4

Item #01 Miscellaneous Options – Escort5580 Section [131]
Turn Option [01] ON to enable the X-10 module.

Turn Option [02] ON to enable end user manual control.

Option [03] allows you to select if the X-10 module will be included in global commands. For example, several light modules may be in use to control downstairs lighting. At bed-time, rather than having to turn off each light module individually, the user could initiate a

'global off' command. All the light modules included in the global command option would be turned off.

Turn Option [03] ON to include the X-10 module in the global command group. Turn Option [03] OFF to exclude the X-10 module from the global command group.

Turn Option [04] ON to enable dimming.

Option [05] is not used for manual control. It only applies if the X-10 module is being used in conjunction with schedules or outputs. Leave it OFF.

Turn Option [06] ON so that the light will remain on until told to turn off.

The Escort can be programmed to announce different words when an X-10 module is activated/deactivated. Depending on the application, turn Option [07] or [08] or [09] ON. Only turn ON one of these options. In the case of lighting, it is logical for the Escort to announce 'on' and 'off'.

Turn Option [07] ON so that the Escort5580 will announce the light is on and off when activated.

Turn Option [08] OFF.

Turn Option [09] OFF.

Step 5	**Escort Section [132] – all options should be OFF**
Step 6	**Escort Section [133] – all options should be OFF**
Step 7	**Item #01 Schedule/Output Condition – Escort5580 Section [134]** Enter data [00] to disable schedule/output control.
Step 8	**Program Additional X-10 Modules.** *NOTE: Repeat steps 3 through 7 for each X-10 module on the system. The programming sections are identical, but the Section numbers are different for each. The same decisions will have to be made for the programming of each X-10 Module on the system.*
Summary:	The user will be able to turn on or off individual lights on the system from a touch-tone phone using the [*] [5] command.

Application 2: Courtesy Lighting

The following programming will enable a lamp to come on automatically during exit/entry periods (also known as a 'Courtesy Light'). Select an interior light that illuminates the entry/ exit area enough to let the customer see where he is going, and that shows that no one is lurking in the area. If you want to use a switched ceiling light, you must install an optional X-10 Wall Switch Module.

NOTE: Automation Items can be programmed to activate when an event occurs on the Alarm Control Panel. The event can be any of the PGM Output Options for the Power832 Control.

General Programming

In this case, using any system keypad or DLS downloading software, we will program the Power832's PGM 03 to signal a Courtesy Pulse to the Escort5580.

In the Power832, Section [010] program decimal data: [08] in the first position. Then, in Section [143], toggle Options 1 and 3 ON(Y), and all others OFF(N).

The Courtesy Light control module should only come on at night, so you must set a Schedule for it to follow. You set the "on" time, "off" time, and the day of the week for a schedule in three sections. The Escort enables you to create 16 different schedules, but you need only one for the Courtesy Light application. The following will create 'Schedule 1' (ON at 8:00PM, OFF at 8:00AM, every day of the week.

Using a touch-tone telephone, perform the following programming in the Escort5580.

- Program Section [030] with decimal data:2000
- Program Section [031] with decimal data:0800
- Program Section [032] with ALL options:ON

NOTE:To set up a module on the Escort, you change the settings in six sections: 130-134 and 401 for the first module, 135-139 and 402 for the 2nd module and so on. You can set up and control as many as 32 modules or 'Items'. No entry was required in Application #1, since that application dealt with a manual command, rather than an automated one.

Step 1

Already done during Application 1 (Turn Option [03] ON to enable Home Automation)

Step 2 (Optional)

Already done during Application 1 (Number of Automation Transmissions – Escort5580 Section [007])

Step 3

Escort5580 Section [135] – Item [02] House Code & Unit Number

(Assuming that this is the 2nd module on the System, it is defined as Item #02)

Referring to your notes (Module Information), program the three digit code (from Appendix B) equivalent to the letter and number corresponding to the ID code selected for the *second* X-10 light module (i.e. [A2] = [001]).

Step 4

Item #02 Miscellaneous Options – Escort5580 Section [136]
- Turn Option [01] ON to enable the X-10 module.
- Turn Option [05] ON to follow a schedule / output always.
- Turn Option [06] ON, as in Application #1.
- Turn Option [07] ON, as in Application #1.

Step 5

Item #02 Schedule Assignment – Escort5580 Section [137]
Turn option [01] ON to use Schedule 1 (ON at 8:00PM, OFF at 8:00AM, every day of the week)

Step 6   **Section [138] ALL options should be OFF.**

Step 7   **Item #02 Schedule /Output Condition – Escort Section [139]**
Enter data [04] to turn the module on according to both the PGM output AND Schedule 1.
In other words, the system will ignore the PGM output during daylight hours, but will acti-
vate the X-10 module when the PGM output occurs between 8:00PM and 8:00AM, any day
of the week.

Step 8   **Item #02 Automation Item Output Follower – Escort Section [402]**
Enter data [03] to set PGM 03 as the Programmable Output for the module to follow
(Power832 Courtesy Pulse), as programmed in the Power832, section [010].

Summary: The Courtesy Light will automatically come on (at night) during the exit (arming) and entry
(disarming) delay periods.

*NOTE: Repeat steps 3 through 5 for each X-10 module on the system. The programming is
identical, but the section numbers are different for each.*

Application 3: Alarm Signal Lighting

An 'Alarm Signal' Light can help a customer in several ways:

- It lets the customer know when returning home that an alarm has occurred so that he/she knows not to enter the house and to alert the security service or the police.
- It can act as a silent alarm for those situations where a siren is not appropriate or has been turned off.
- Intruders hate light.

General Programming

For this application, we will program the Power832's PGM 03 to signal a Latched System Event to the Escort Module.

- In the Power832, Section [010] program decimal data: 10

The Latched System Event option requires that you also set which types of alarm will signal the event. You set these in the Power832 programming Sections [143] to [154]. There is one section for each PGM Output.

- We are using PGM 03, so set Section [143] to enable signaling of Burglar Alarm events. Option #1 should be ON.

Refer to the Power832, *PC5010 Programming Worksheets* to determine if there are other events that you may think useful for this application.

For the purposes of this document, we will treat this programming outline as if it were dealing once again with the SECOND Automation Item (Item #02).

Make the following programming entries:

Step 1

First System Options – Escort5580 Section [002] – Option [3] ON
Turn Option [03] ON to enable Home Automation

Step 2 (Optional)

Number of Automation Transmissions – Escort5580 Section [007]
Program the number of on/off transmissions to be sent for each command.

Step 3

Escort5580 Section [135] – Item [02] - House Code & Unit Number
Referring to your notes (Module Information), program the three digit code (from Appendix B) equivalent to the letter and number corresponding to the ID code selected for the *second* X-10 light module (i.e. [A2] = [001]).

Step 4

Escort5580 Section [136] - Options 1, 5, 6 and 7 should be ON (as per Application 2).

Step 5

Escort5580 Section [137] – ALL options should be OFF (no schedule assignments used).

Step 6

Escort5580 Section [138] - ALL options should be OFF.

Step 7

Escort5580 Section [139] – Enter [04] (Power832 Output).

Step 8

Escort5580 Section [402] – Enter [03] (following PGM 03).

Summary

When an alarm occurs at any time of day, the lamp will come on and stay on until the panel is disarmed.

Application 4: Fire Escape Route Lighting

When a fire alarm condition occurs, it is important that occupants depart the premises immediately. In order to make this evacuation easier, you can program the lamps to come on automatically during a fire alarm event.

General Programming

For this application, we will program the Power832's PGM 03 to signal a Latched System Event to the Escort5580.

- In the Power832, Section [010] program decimal data: 10

The Latched System Event option requires that you also set which types of alarm will signal the event. You set these in the Power832 programming Sections [143] to [154]. There is one section for each PGM Output.

- We are using PGM 03, so set Section [143] to enable signaling of Fire Alarm events. Option #2 should be ON.

▪▪
Refer to the Power832, *PC5010 Programming Worksheets* to determine if there are other events that you may think useful for this application.
▪▪

For purposes of this document, we will treat this programming outline as if it were dealing, once again, with the SECOND Automation Item (Item #02).

Make the following programming entries:

Step 1

First System Options – Escort5580 Section [002] – Option [3] ON
Turn Option [03] ON to enable Home Automation

Step 2 (Optional)

Number of Automation Transmissions – Escort5580 Section [007]
Program the number of on/off transmissions to be sent for each command.

Step 3

Escort5580 Section [135] – Item [02] - House Code & Unit Number
Referring to your notes (Module Information), program the three digit code (from Appendix B) equivalent to the letter and number corresponding to the ID code selected for the *second* X-10 light module (i.e. [A2] = [001]).

Step 4

Escort5580 Section [136] - Options 1, 5, 6 and 7 should be ON (as per Application 2)

Step 5

Escort5580 Section [137] – ALL options should be OFF (no schedule assignments)

Step 6

Escort5580 Section [138] - ALL options should be OFF.

Step 7

Escort5580 Section [139] – Enter [01] (PC5010 output only).

Step 8

Escort5580 Section [402] – Enter [03] (following PGM 03).

Summary

When a Fire Alarm occurs at any time of day, the lamp will come on and stay on until the panel is disarmed.

Application 5: Simulated Home Occupancy

The Escort5580 can be programmed to turn lights ON and OFF at intervals, in such a manner as to simulate the type of activity that might occur if the home were occupied.

**General Program-
ming**

For this application, we will program the Power832's PGM 03 to signal a Latched System Event to the Escort Module.

No additional programming is required in the Power832.

For this application, we will use both Automation Item #01 and Automation Item #02 .

Make the following programming entries:

Step 1

First System Options – Escort5580 Section [002] – Option [3] ON
Turn Option [03] ON to enable Home Automation.

Step 2 (Optional)

Number of Automation Transmissions – Escort5580 Section [007]
Program the number of on/off transmissions to be sent for each command.

Step 3

Program Schedules
Set up eight different schedules (Schedule 1, Schedule 2, etc., through Schedule 8). Follow the procedure used in Application 1.

Step 4(a)

Escort5580 Section [130] – Item [01] – House Code & Unit Number

(Assuming that this is the 1st module on the System, it is defined as Item #01.)

Referring to your notes (Module Information), program the three digit code (from Appendix B) equivalent to the letter and number corresponding to the ID code selected for the *first* X-10 light module (i.e. [A1] = [000]).

Step 4(b)

Escort5580 Section [135] – Item [02] - House Code & Unit Number

(Assuming that this is the 2nd module on the System, it is defined as Item #02.)

Referring to your notes (Module Information), program the three digit code (from Appendix B) equivalent to the letter and number corresponding to the ID code selected for the *second* X-10 light module (i.e. [A2] = [001]).

Step 5

Escort5580 Section [131] and [136] – Enter. Options 1, 5, 6 and 7 should be ON.

Step 6 (a)

Escort5580 Section [132] – Options 1, 3, 5 and 7 should be ON. (Module 1 follows schedules 1,3,5 and 7.)

Step 6 (b)

Escort5580 Section [137] – Options 2, 4, 6 and 8 should be ON (Module 2 follows schedules 2,4,6 and 8.)

Step 7

Escort5580 Section [133] and [138] - ALL options should be OFF

Step 8

Escort5580 Section [134] and [139] – Enter [02] (Follow schedule only)

Summary

The lamp connected to X-10 Module #1 will turn ON and OFF as per the times programmed in Schedules #1, #3, #5 and #7. The lamp connected to X-10 Module #2 will turn ON and OFF as per the times programmed in Schedules #2, #4, #6 and #8.

Additional Features of the Escort5580

Telephone Interface

The Escort5580 makes it possible to use either in-house or remote touch-tone telephones as additional keypads on your Power832 system. This permits commands and programming for the X-10 Power-line Interface to be performed from any "on-site" touch-tone telephone or, if desired, from a remote touch-tone telephone located anywhere in the world.

Gaining Access to The System Through the Escort5580

Accessing the Escort5580 From An On-site Telephone (a phone connected to the same telephone line as the Escort5580)

NOTE: The Escort5580 will function even if the telephone line is disconnected. If there is a problem with the telephone line, the Escort5580 will provide the current required to permit "local" operation. In PC5010 v1.x panels, you must enable the Telephone Line Monitor (TLM) feature to ensure this type of operation. Refer to the PC5010 Installation Manual.

To gain access using a telephone connected to the same telephone line as the Escort5580, pick up the handset and dial the 3-digit Escort Code. The default code is [*][*][*].

The Escort5580 will respond and announce 'Hello'.

The Escort5580 will begin to announce the status of the system. Locally, you have the option to require an access code before access is given. If this is the case, the Escort5580 will announce 'Enter Your Access Code'. Enter a valid user code and the Escort5580 will begin to announce the status of the system.

Accessing the Escort5580 From A Remote Telephone

Call the telephone number to which the Escort5580 is connected.

Let the telephone ring once or twice only.

Hang up.

Wait 10 seconds, then call again.

The Escort5580 will answer on the first ring and will announce, 'Hello'.

Within 10 seconds, enter the 3-digit Escort Code (default [*][*][*]). Failure to enter the correct Escort Code within 10 seconds will cause the Escort5580 to announce 'Goodbye' and hang up.

Important Programming Addresses And What They Control

For additional information, see: *Escort5580 Installation Manual*, Section 5

Escort5580 Star (*) Announcements

To make the system user-friendly, the user can be directed to perform certain functions by pressing the [*] key on the telephone keypad. When this key is pressed, a list of available functions is announced.

Programming Section [004] is entitled 'Star Function Prompt Mask'. Here, you will find all such Star Functions listed. You may edit this list by enabling those functions that are applicable to your system, while disabling those that do not apply.

Escort5580 Status Prompts

When the Escort5580 is accessed through a local or remote telephone, it immediately begins to announce the status of the system. A list of the items announced can be found at Programming Section [003].

You may edit this list by enabling those items that are applicable to your system, while disabling those that do not apply

Local/Remote Escort Code

The default Escort Code is [*] [*] [*]. A new 3-digit Escort Code can be programmed at Programming Section [020].

Any 3-digit code using numbers 0 through 9, as well as * and # can be selected. HOW-EVER YOU SHOULD AVOID USING A VALID 3-DIGIT TELEPHONE AREA CODE OR SERVICE CODE SUCH AS 911, 411, 611 OR 0XX

NOTE: For UL Listed Installations, Local Access Only must be enabled (See Programming Section [021])

Programming Lockout

The 4-digit service code (default 5580) is used when programming the Escort5580. A new code can be programmed at Programming Section [001].

To further safeguard against unauthorized access to the Escort5580, you may choose to activate the Local Programming Lockout Counter. To do so, go to Programming Section [005]. Note that the default value is 000, meaning that this feature is disabled. To enable the Lockout feature, enter a value from 001 to 255. The number you enter will represent the number of invalid service code entries the system will tolerate before going into Lockout Mode.

If you have activated the Local Programming Lockout Counter you must also advise the system of the desired duration of the lockout. Enter the desired number of minutes (from 001 to 255) at Programming Section [006].

Once the Escort Code has been successfully entered, the Escort5580 will announce, 'Enter Your Access Code'.

Within 10 seconds, enter a valid access code.

The Escort5580 will begin to announce the status of the system.

NOTE:The system has a default library of voice words that are used to announce the status of the system. For example 'Zone 3', 'Mode 4', 'Partition 2', etc. These identifiers are referred to as 'Labels'. Labels can be customized for each application. Up to 6 words can be programmed for any zone label.

Receiving Incoming Telephone Calls While On-Line With the Escort5580

Should an incoming telephone call be registered while you have accessed the system with an on-site telephone, the Escort5580 will announce, 'Attention. You have an incoming call. To receive the call, press pound now.'

You may relinquish control of the Escort5580 and answer the incoming call by pressing [#]. This action will automatically connect you to the incoming call.

There is Lots More You Can Do

The actual number of applications is limited only by your imagination. In order to completely familiarize yourself with all possible applications, take time to thoroughly study the *Escort5580 Installation Manual* and its *Programming Worksheets*.