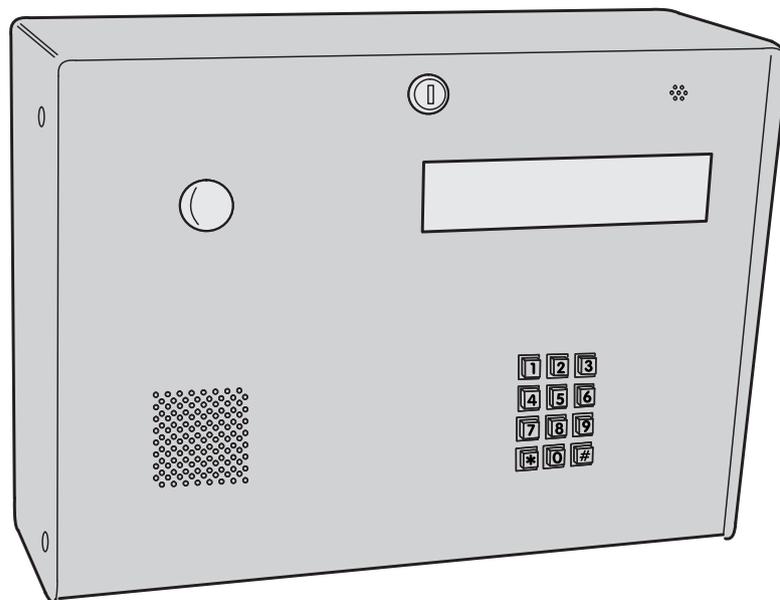


# AE-2

## Telephone Entry Control Console



### *Facility Manager's Programming Guide*

**Linear**<sup>®</sup>

(760) 438-7000 • FAX (760) 438-7043  
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# INTRODUCTION

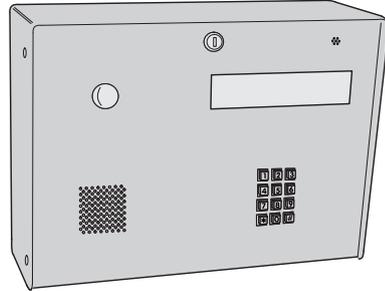
The Model AE-2 Telephone Entry Control Console is designed for use as a primary access control device for gated communities, parking garages, office buildings, apartments, dormitories, hotels/motels, commercial buildings and recreational facilities.

The unit's electrical connections have been made and the basic system functions have been programmed by your installer. This manual will guide you through programming the functions typically used with the AE-2 Telephone Entry System.

The programming areas covered are:

- Area 01 Single Transmitter Programming
- Area 02 Block Transmitter Programming
- Area 05 Entry Code Programming
- Area 06 Block Card Programming
- Area 07 Telephone Entry Numbers Programming

Included are pages for telephone entry code and entry media code logs. They may be copied if additional log entries are required. In addition, keypad function and system programming overviews are also provided.



# SYSTEM OPERATION

In a typical installation, the unit's memory would be programmed with each tenant's name and directory code number. A visitor would use the \* or # key on the AE-2 to view the directory names and code number for the desired party. Upon entering the directory number, the AE-2 will automatically dial the tenant's telephone number and establish two-way voice communication between the visitor and the tenant. The tenant will then have the option to grant access to the guest by pressing a digit on their telephone.

In addition to the telephone entry, the AE-2 can grant access using various remote devices that are commonly used. These devices include wireless transmitters, proximity receivers, swipe card readers and remote keypads.

Access can also be granted by entering a programmed entry code on the AE-2's keypad.

All of the programming functions of the AE-2 can be performed directly through the AM/II keypad inside the AE-2. An optional telephone modem can be installed for easy remote programming with a personal computer.



GUEST ENTERS DIRECTORY CODE NUMBER OR USERS ENTER THEIR ENTRY CODE ON THE AE-2

USERS CAN GRANT ACCESS WITH THEIR PUSHBUTTON TELEPHONE



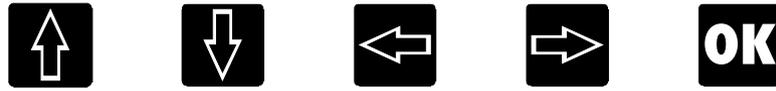
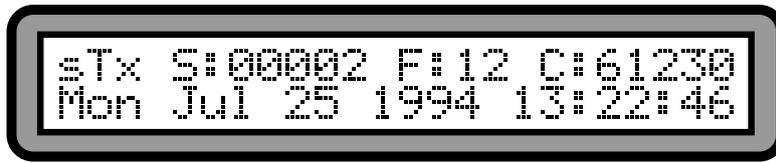
# INSTALLER SET OPTIONS

## YOUR INSTALLER HAS PRE-SET THESE SYSTEM OPTIONS

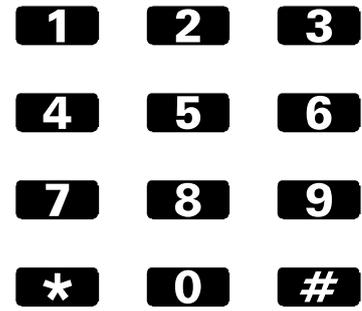
SYSTEM PASSWORD: \_\_\_\_\_  
 DIRECTORY CODE LENGTH: \_\_ 1 \_\_ 2 \_\_ 3 \_\_ 4  
 DIRECTORY BEGINS AT: \_\_ BEGINNING(A) \_\_ MIDDLE(M)  
 PBX DIALING DIGIT: \_\_\_\_  
 TALK TIME: \_\_\_\_\_ SECONDS  
 MAXIMUM DIRECTORY ENTRIES: \_\_\_\_\_  
 RELAY "A" \_\_\_\_\_ TELEPHONE DIGIT: \_\_\_\_  
 RELAY "B" \_\_\_\_\_ TELEPHONE DIGIT: \_\_\_\_  
 RELAY "C" \_\_\_\_\_ TELEPHONE DIGIT: \_\_\_\_  
 RELAY "D" \_\_\_\_\_ TELEPHONE DIGIT: \_\_\_\_

VALIDATION GROUP 0: FULL ACCESS AT ALL TIMES  
 VALIDATION GROUP 1: \_\_\_\_\_  
 VALIDATION GROUP 2: \_\_\_\_\_  
 VALIDATION GROUP 3: \_\_\_\_\_  
 VALIDATION GROUP 4: \_\_\_\_\_  
 VALIDATION GROUP 5: \_\_\_\_\_  
 VALIDATION GROUP 6: \_\_\_\_\_  
 VALIDATION GROUP 7: \_\_\_\_\_  
 VALIDATION GROUP 8: \_\_\_\_\_  
 VALIDATION GROUP 9: \_\_\_\_\_  
 VALIDATION GROUP 10: \_\_\_\_\_

# KEYPAD FUNCTIONS



DATA ENTRY KEYS



NUMERIC KEYPAD

NOTE: The following keypad functions pertain to the black AM/II keypad inside the AE-2, **not** the chrome entry keypad on the face of the AE-2 unit.

## Data Entry Keys

The arrow keys (↑ ↓ ← ⇒) are used to navigate through the various menu trees during programming.

The up and down arrows change the display to the previous or next programming item. Items that are above or below each other in the programming menu trees can be selected using the up and down arrow keys.

The OK key is used to accept an entry or to branch to sub-menu items in the programming menu trees. Items that blink in the displayed menus are the current selection, (← & ⇒) scrolls to a new selection. Pressing OK accepts that item and enters it into the system's memory.

## Numeric Keypad

The numeric keypad is used to enter area numbers, media codes and any other numeric data required during programming. Special key combinations are used for special functions (resetting supervisory low battery, status and trouble indications from MGT safety edge transmitters).

## [\*] Key

The [\*] key has several functions. Pressing and holding the [\*] key for about three seconds will cause the unit to ask for a password to enter Program Mode. This is the only way to enter Program Mode.

While in Program Mode, the [\*] key acts as an escape (cancel) key. Pressing the [\*] key during any programming step will cancel any ongoing entries and return the display to the top of that area's menu. Pressing the [\*] key again will return the display to the top of Area 01 (the first programming step).

Pressing and holding the [\*] key for about three seconds in Program Mode will cause the unit to exit Program Mode and return to the normal Run Mode.

While in Run Mode, pressing and holding the [\*] key and pressing an ACCESS button will lock that relay closed, preventing any transmitters from activating that output. The output can be unlocked by pressing the appropriate ACCESS button twice (to lock open, then to return to normal unlocked operation).

## [#] Key

The [#] key is used as a shift key to activate special system functions.

Pressing and holding the [#] key and pressing [1] will reset any trouble indications caused by supervised MGT safety edge transmitters. If an MGT transmitter sends a trouble signal for low battery, tamper or doesn't send status signals for six hours, the OBSTACLE indicator will flash and a trouble message will be shown on the LCD display. To clear the trouble indication, hold the [#] key and press [1].

## Alphanumeric Data Entry

The unit's keypad has alphanumeric capabilities that can be used to program telephone entry directory names. Each button on the numeric keypad can create five characters.

The first press of the key enters the key number, presses 2-4 enters a lower case alphabetic character. Press the [#] key to change a lower case to an upper case letter. Press a number key then the [#] key for symbol characters.

NOTE: Entering alphanumeric characters is much easier using a computer or data terminal through the RS-232 port.

abc	def	ghi
<b>1</b>	<b>2</b>	<b>3</b>
jkl	mno	pqr
<b>4</b>	<b>5</b>	<b>6</b>
stu	vwx	yz;
<b>7</b>	<b>8</b>	<b>9</b>
	∅-	
<b>*</b>	<b>0</b>	<b>#</b>

∅ = BLANK

PRESS [#] TO MAKE CAPITAL

NUM THEN	[#] KEY
1	=
2	@
3	#
4	\$
5	%
6	?
7	&
8	*
9	(
0	)

# SYSTEM PROGRAMMING

Following are instructions for programming "Areas" of the system memory. Only the Areas pertaining to the specific installation need to be programmed. Reference the following pages with the programming outline to program the system.

**The unit must be in Program Mode to perform any system programming. FOLLOW THE STEPS IN THE PROGRAMMING OUTLINE TO PROGRAM THE SYSTEM.**

☞ **NOTE:** The following keypad functions pertain to the black AM/II keypad inside the AE-2, **not** the chrome entry keypad on the face of the AE-2 unit.

## Entering Program Mode

**STEP 1** Enter programming mode by pressing and holding the [\*] key for about five seconds. With computer access press the ESC key.

**STEP 2** Enter 123456 (if the system is new), or the correct password and press [OK].

## Exiting Program Mode

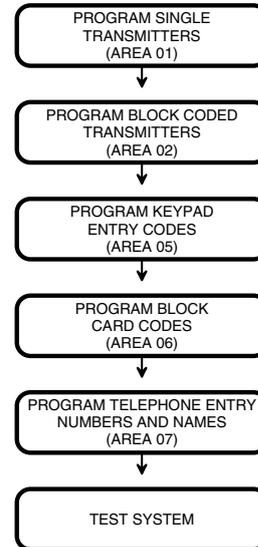
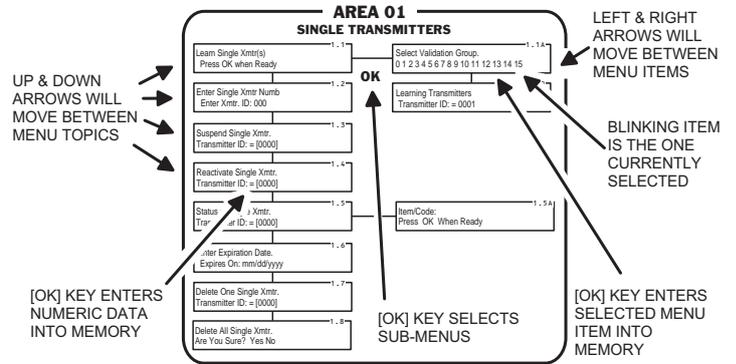
Exit Program Mode by pressing and holding the [\*] key for three seconds. With computer access, press CTRL-Z.

☞ **NOTE:** The system will automatically exit Program Mode after five minutes of programming inactivity.

# PROGRAMMING OUTLINE

The following outline is intended to guide you through the programming of the system. The unit is programmed by setting options in various program "Areas". Use this outline in conjunction with the following program area detail pages to set up the system.

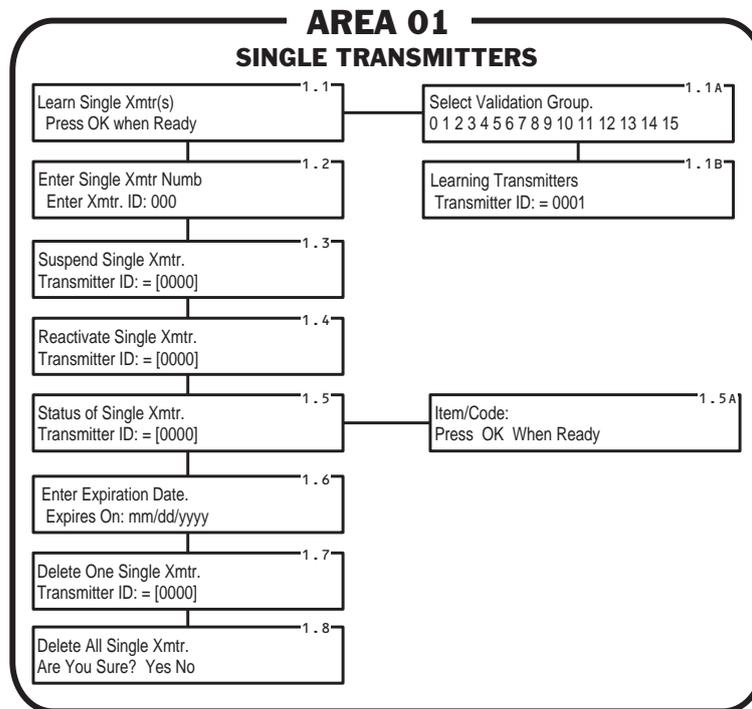
1. Enter program mode (Hold the [\*] key for 5 seconds or press ESC on programming computer).
2. Program any single transmitters using Single Transmitters Area 01.
3. Program any block coded transmitters using Block Area 02.
4. Program any keypad entry codes using Entry Code Area 05.
5. Program any block card codes using Block Card Codes Area 06.
6. Program the telephone and directory numbers and names using Telephone Entry Numbers Area 07.



# AREA 01

## SINGLE TRANSMITTER PROGRAMMING

**Area 01 is used to enter, suspend, reactivate, delete, and check the status of single transmitters. A validation group can be selected for each transmitter when it's entered into memory.**



Each of the following activities are performed in programming Area 01. From the main menu, use [↑], [↓] or enter "01" on the keypad to scroll to "Single Transmitter(s), Enter Program Area 01" and press [OK]. Press [\*] when finished to return to the main menu.

### Learning Single Transmitters

- 1 Use [↑] or [↓] to scroll to "Learn Single Xmtr(s)" and press [OK].
- 2 Use [←] or [→] to choose a validation group for the transmitter. Press [OK] when desired selection is blinking.
- 3 Enter the desired transmitter ID# and activate the transmitter.

☞ **NOTE:** If the transmitter ID# is already in use, an asterisk will show before the ID #.

For additional transmitters in the same validation group, use [↑] or [↓] to select the next ID# and repeat Step 3.

For additional transmitters in different validation groups, press [OK] and repeat Steps 1-3.

### Suspending Single Transmitters

- 1 Use [↑] or [↓] to scroll to "Enter Single Xmtr Numb".
- 2 Enter the transmitter ID# to suspend and press [OK].
- 3 Use [↑] or [↓] to select "Suspend Single Xmtr" and press [OK].

To suspend additional transmitters, repeat Steps 1-3.

### Reactivating Single Transmitters

- 1 Use [↑] or [↓] to scroll to "Enter Single Xmtr Numb".
- 2 Enter the transmitter ID# to reactivate and press [OK].
- 3 Use [↑] or [↓] to select "Reactivate Single Xmtr." and press [OK].

To reactivate additional transmitters, repeat Steps 1-3.

### Status of Single Transmitters

- 1 Use [↑] or [↓] to scroll to "Enter Single Xmtr Numb".
- 2 Enter the transmitter ID# for status and press [OK].
- 3 Use [↑] or [↓] to select "Status of Single Xmtr." and press [OK].

To view status of additional transmitters, press [OK] then repeat Steps 1-3.

### Transmitter Expiration Date

- 1 Use [↑] or [↓] to scroll to "Enter Single Xmtr Numb".
- 2 Enter the transmitter ID# and press [OK].
- 3 Use [↑] or [↓] to select "Enter Expiration Date".
- 4 Enter the date for the transmitter to be automatically suspended (in mm/dd/yyyy format) and press [OK].

To set additional transmitters for expiration, press [OK] then repeat Steps 1-4.

### Deleting One Single Transmitter

- 1 Use [↑] or [↓] to scroll to "Enter Single Xmtr Numb".
- 2 Enter the transmitter ID# to delete and press [OK].
- 3 Use [↑] or [↓] to select "Delete Single Xmtr." and press [OK].

To delete additional transmitters, repeat Steps 1-3.

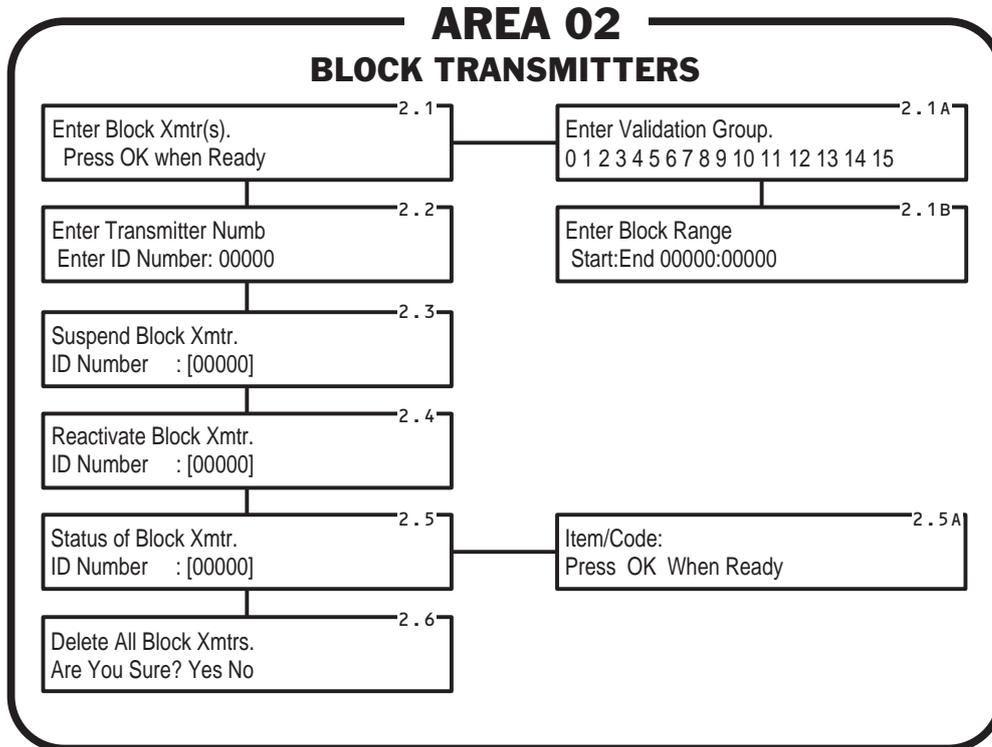
### Deleting All Single Transmitters

☞ **NOTE:** Facility Managers should not use this function. After deleting all single transmitters, active transmitters must be retrieved from all of the users to allow reprogramming.

# AREA 02

## BLOCK TRANSMITTERS

**Area 02 is used to enter, suspend, reactivate, delete, and check the status of block coded transmitters. A validation group can be selected for each transmitter block when it is entered into memory.**



Each of the following activities are performed in programming Area 02. From the main menu, use [↑], [↓] or enter "02" on the keypad to scroll to "Block Transmitter(s), Enter Program Area 02" and press [OK]. Press [\*] when finished to return to the main menu.

### Entering Block Transmitters

- 1 Use [↑] or [↓] to scroll to "Enter Block Xmtr(s)".
- 2 Use [←] or [→] to choose a validation group for the transmitter block. Press [OK] when desired selection is blinking.
- 3 Enter the numbers for the start and the end of the transmitter block and press [OK].

To learn additional block transmitters, repeat Steps 1-3.

### Suspending Block Transmitters

- 1 Use [↑] or [↓] to scroll to "Enter Transmitter Numb".
- 2 Enter the transmitter ID# to suspend and press [OK].
- 3 Use [↑] or [↓] to select "Suspend Block Xmtr" and press [OK].

To suspend any additional transmitters, repeat Steps 1-3.

### Reactivating Block Transmitters

- 1 Use [↑] or [↓] to scroll to "Enter Transmitter Numb".
- 2 Enter the transmitter ID# to reactivate and press [OK].
- 3 Use [↑] or [↓] to select "Reactivate Block Xmtr." and press [OK].

To reactivate additional transmitters, repeat Steps 1 & 2.

### Status of Block Transmitters

- 1 Use [↑] or [↓] to scroll to "Enter Transmitter Numb".
- 2 Enter the transmitter ID# for status and press [OK].
- 3 Use [↑] or [↓] to select "Status of Block Xmtr." and press [OK].

To view status of additional transmitters, press [OK] then repeat Steps 1-3.

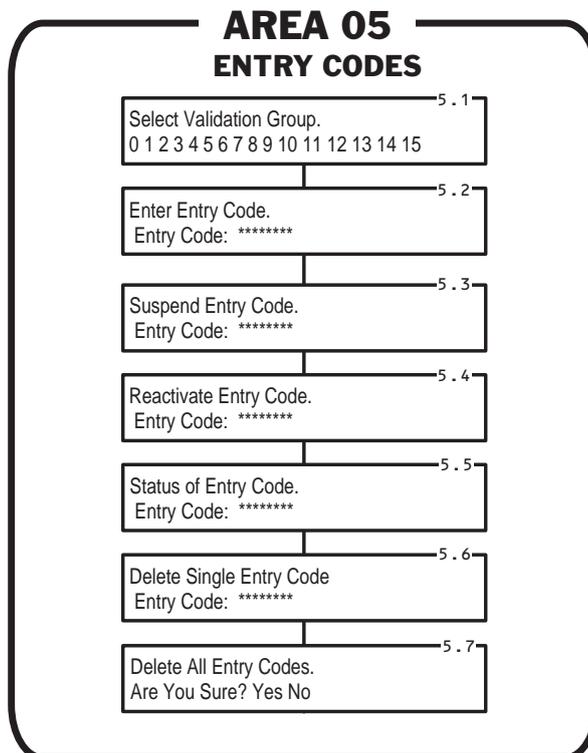
### Deleting All Block Transmitters

⚠ NOTE: Facility Managers should not use this function. Contact the Installer for making any complex or critical programming changes.

# AREA 05

## ENTRY CODES

**Area 05 is used to enter, suspend, reactivate, delete, and check the status of keypad entry codes. A validation group can be selected for each entry code when it is entered into memory.**



Each of the following activities are performed in programming Area 05. From the main menu, use [↑], [↓] or enter "05" on the keypad to scroll to "Entry Codes, Enter Program Area 05" and press [OK]. Press [\*] when finished to return to the main menu.

### Entering Entry Codes

☞ **NOTE:** Entry codes should all have the same length. For the best security, the entry codes should be at least four digits long.

- 1 Use [↑] or [↓] to scroll to "Select Validation Group".
- 2 Use [←] or [→] to choose a validation group for the entry code. Press [OK] when desired selection is blinking.
- 3 Enter up to eight digits for the entry code and press [OK].

For additional entry codes with the same validation group repeat Step 3. For entry codes in other validation groups, repeat Steps 1-3.

### Suspending Entry Codes

- 1 Use [↑] or [↓] to scroll to "Suspend Entry Code".
- 2 Enter the entry code to suspend and press [OK].

To suspend additional entry codes, repeat Steps 1 & 2.

### Reactivating Entry Codes

- 1 Use [↑] or [↓] to scroll to "Reactivate Entry Code".
- 2 Enter the entry code to reactivate and press [OK].

To reactivate additional entry codes, repeat Steps 1 & 2.

### Status of Entry Codes

- 1 Use [↑] or [↓] to scroll to "Status of Entry Code".
- 2 Enter the entry code for status and press [OK].

To view status of additional entry codes, press [OK] then repeat Steps 1 & 2.

### Deleting One Single Entry Code

- 1 Use [↑] or [↓] to scroll to "Delete Single Entry Code".
- 2 Enter the entry code to delete and press [OK].

To delete additional entry codes, repeat Steps 1 & 2.

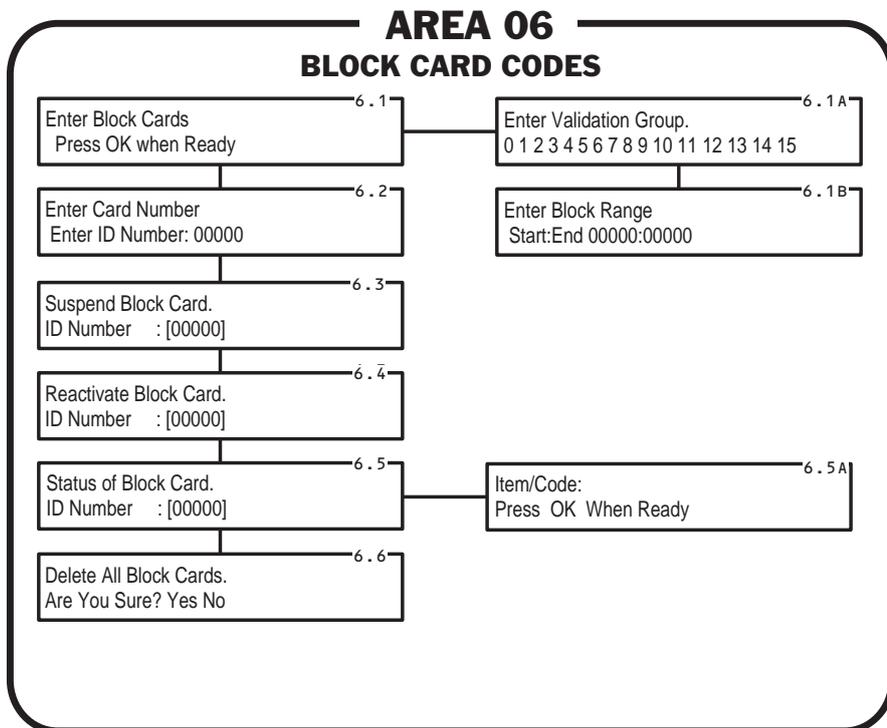
### Deleting All Entry Codes

☞ **NOTE:** Facility Managers should not use this function. Contact the Installer for making any complex or critical programming changes.

# AREA 06

## BLOCK CARD CODES

**Area 06 is used to enter, suspend, reactivate, delete, and check the status of swipe cards entered as a block. A validation group can be selected for each card block when it is entered into memory.**



Each of the following activities are performed in programming Area 06. From the main menu, use [↑], [↓] or enter "06" on the keypad to scroll to "Block Card Codes, Enter Program Area 06" and press [OK]. Press [\*] when finished to return to the main menu.

### Entering Block Card Codes

- 1 Use [↑] or [↓] to scroll to "Enter Block Cards".
- 2 Use [←] or [→] to choose a validation group for the transmitter block. Press [OK] when desired selection is blinking.
- 3 Enter the numbers for the start and the end of the card block and press [OK].

To enter additional block card codes, repeat Steps 1-3.

### Suspending Block Card Codes

- 1 Use [↑] or [↓] to scroll to "Enter Card Number".
- 2 Enter the card number to suspend and press [OK].
- 3 Use [↑] or [↓] to select "Suspend Block Card" and press [OK].

To suspend any additional block cards, repeat Steps 1-3.

### Reactivating Block Card Codes

- 1 Use [↑] or [↓] to scroll to "Enter Card Number".
- 2 Enter the card number to reactivate and press [OK].
- 3 Use [↑] or [↓] to select "Reactivate Block Card" and press [OK].

To reactivate additional block cards, repeat Steps 1 & 2.

### Status of Block Card Codes

- 1 Use [↑] or [↓] to scroll to "Enter Card Number".
- 2 Enter the card number for status and press [OK].
- 3 Use [↑] or [↓] to select "Status of Block Card" and press [OK].

To view status of additional block cards, press [OK] then repeat Steps 1-3.

### Deleting All Block Card Codes

👉 **NOTE: Facility Managers should not use this function. Contact the Installer for making any complex or critical programming changes.**

# AREA 07

## TELEPHONE ENTRY NUMBERS

**Area 07 is used to enter and delete telephone directory codes, tenant names and select extended talk time for users.**

**AREA 07**

**TELEPHONE ENTRY NUMBERS**

Enter Directory Code Directory Code: 0000	7.1
Enter Tenent Name	7.2
Enter Telephone Number Telephone#: *****	7.3
Extended Talk Time Yes No	7.4
Delete Directory Entry Directory Code: 0000	7.5

Each of the following activities are performed in programming Area 07. From the main menu, use [↑], [↓] or enter "07" on the keypad to scroll to "Telephone Entry Numbers, Enter Program Area 07" and press [OK]. Press [\*] when finished to return to the main menu.

### Entering Tenant Names & Numbers

- ❶ Use [↑] or [↓] to scroll to "Enter Directory Code".
- ❷ Enter the tenant's directory code number and press [OK]. (This will be the number displayed on the AE-2 that the guest enters to make the unit dial the tenant.)

☞ **NOTE:** This number must be between 1 and the "Maximum Directory Entries" number programmed (see entry on Page 2).

- ❸ Enter the tenant's name (up to 24 characters, but only the first 20 can be displayed on the current Model AE-2) and press [OK]. (This will be the text displayed as the tenant's name.)
- ❹ Enter the tenant's telephone number and press [OK]. (This is the actual telephone number of the tenant's telephone. For security, it will not be displayed on the AE-2 and cannot be viewed by the guests.) Do not include a PBX dialing digit (if a dialing digit is required, it has been pre-programmed by the installer).

- ❺ Use [←] or [→] to choose "YES" or "NO" for "Extended Talk Time". Press [OK] when the desired selection is blinking. Extended talk time allows the tenant to talk up to 250 seconds to the guest at the AE-2. Regardless of this programming option, the tenant can always press the telephone's # key to talk longer. The tenant will hear beeps during the last 10 seconds of talk time programmed. Pressing the telephone's # key during the beeps will extend the allotted time 50% of the talk time programmed.

*To enter additional tenant information, repeat Steps 1-5.*

### Deleting Directory Entries

- ❶ Use [↑] or [↓] to scroll to "Enter Directory Code".
  - ❷ Enter the tenant's directory code number to delete and press [OK].
- To delete additional tenant entries, repeat Steps 1 & 2.*





## **LINEAR LIMITED WARRANTY**

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This Linear product is warranted against defects in material and workmanship for twelve (12) months. The Warranty Expiration Date is labeled on the product. **This warranty extends only to wholesale customers** who buy direct from Linear or through Linear's normal distribution channels. **Linear does not warrant this product to consumers.** Consumers should inquire from their selling dealer as to the nature of the dealer's warranty, if any. **There are no obligations or liabilities on the part of Linear Corporation for consequential damages arising out of or in connection with use or performance of this product or other indirect damages with respect to loss of property, revenue, or profit, or cost of removal, installation, or reinstallation.** All implied warranties, including implied warranties for merchantability and implied warranties for fitness, are valid only until Warranty Expiration Date as labeled on the product. **This Linear Corporation Warranty is in lieu of all other warranties express or implied.**

All products returned for warranty service require a Return Product Authorization Number (RPA#). Contact Linear Technical Services at 1-800-421-1587 for an RPA# and other important details.

### **IMPORTANT !!!**

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Linear radio controls provide a reliable communications link and fill an important need in portable wireless signaling. However, there are some limitations which must be observed.

- For U.S. installations only: The radios are required to comply with FCC Rules and Regulations as Part 15 devices. As such, they have limited transmitter power and therefore limited range.
- A receiver cannot respond to more than one transmitted signal at a time and may be blocked by radio signals that occur on or near their operating frequencies, regardless of code settings.
- Changes or modifications to the device may void FCC compliance.
- Infrequently used radio links should be tested regularly to protect against undetected interference or fault.
- A general knowledge of radio and its vagaries should be gained prior to acting as a wholesale distributor or dealer, and these facts should be communicated to the ultimate users.