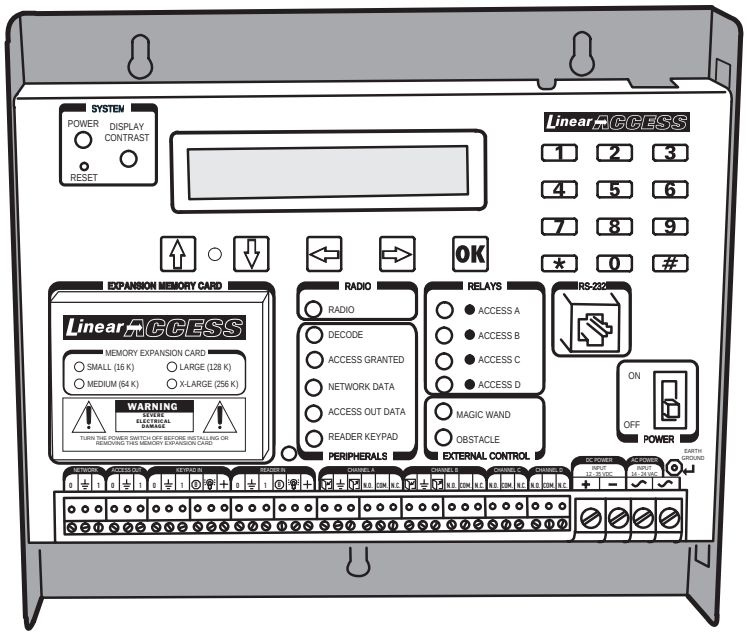
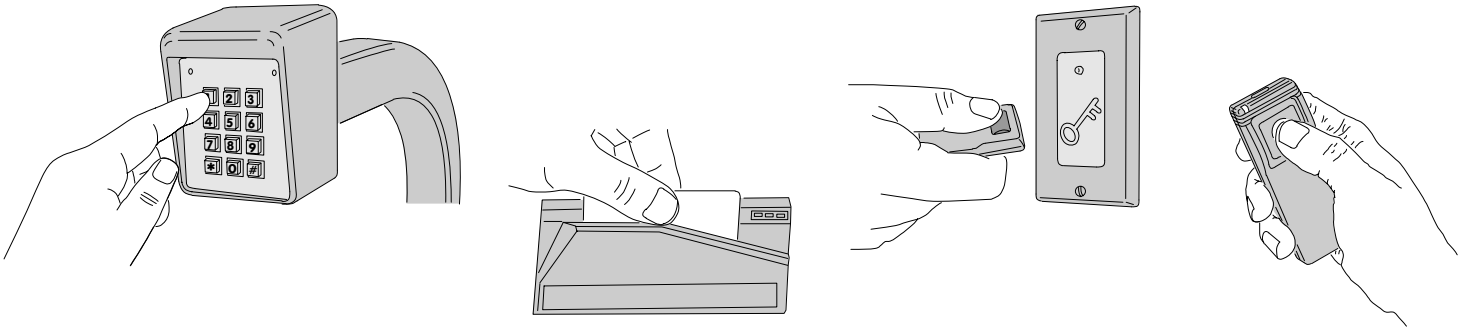
Linear ACCESS

Wireless Access Control System





Installation & Programming Instructions

FOR AM/II VERSION 5.0

Linear®

(760) 438-7000 • FAX (760) 438-7043
USA & Canada (800) 421-1587 & (800) 392-0123
Toll Free FAX (800) 468-1340
www.linearcorp.com

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INTRODUCTION

The AM/II is designed for a broad range of access control applications. Its wireless design with the proven MegaCode radio format, the Wiegand and RS-232 interfaces, make it easily adaptable for virtually any access control requirement.

The AM/II contains a high-gain superheterodyne UHF receiver. When used with an external antenna, signals can be received from up to 200 feet away. Two lockable metal enclosures are available to house the AM/II.

Four dry contact relay outputs are provided to activate four access devices, such as door strikes, barrier gates, automatic sliding gates and automatic doors. The relay outputs can also be used for alarm contact shunting, operator obstacle triggering, and alarm activation. Two open request pushbutton inputs are supplied for hardwire activation of the access devices. Two door sense inputs allow detection of propped open doors.

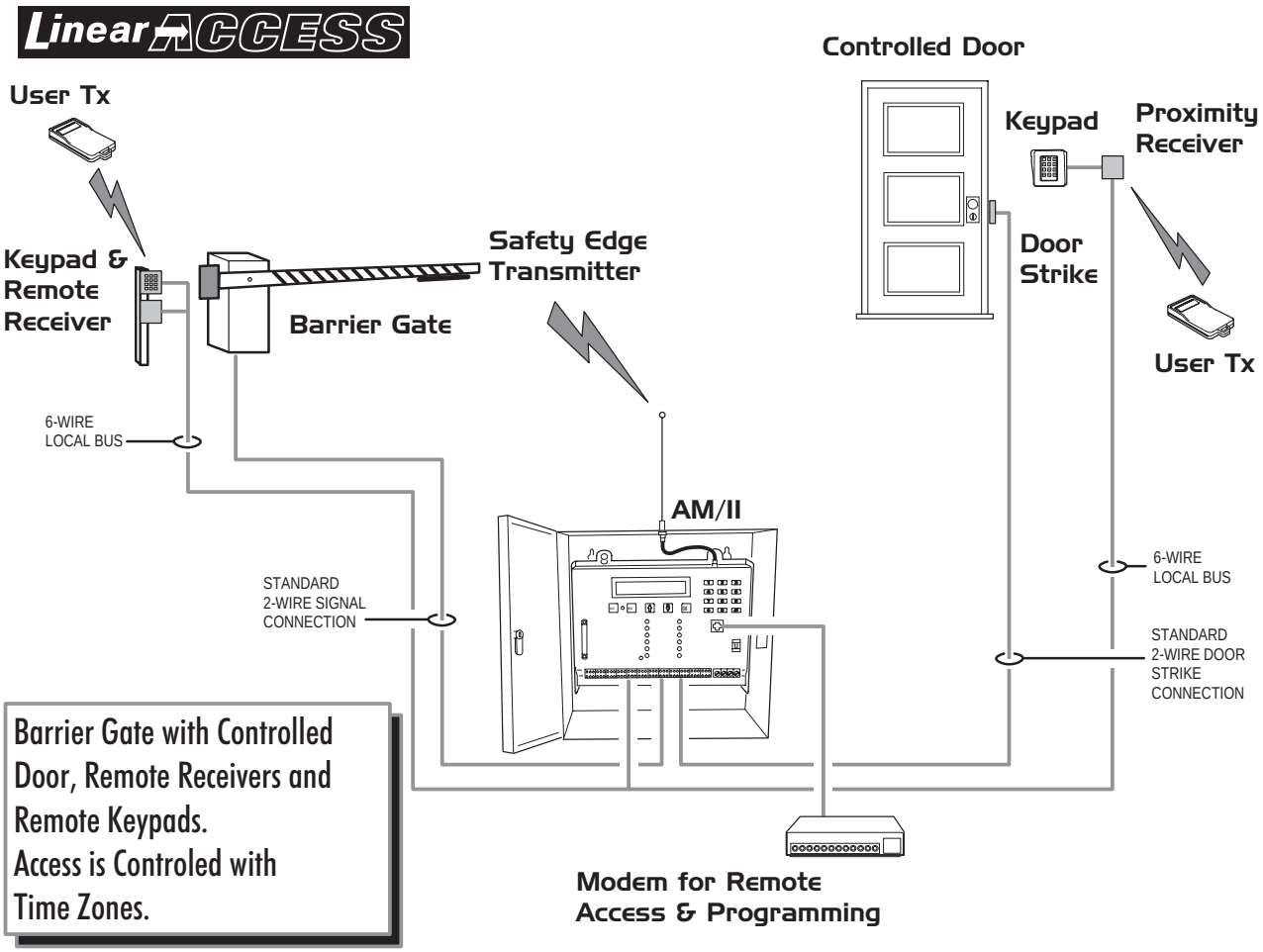
The AM/II has an RS-232 interface (bi-directional). The system can be linked to a printer or personal computer. The event log feature, for example, makes it possible to keep track of how many employees are on premises, which employees are present, and when they clock in and out. With connection to a personal computer, the AM/II can be programmed locally or remotely through the telephone system with standard Hayes compatible modems. System reports can be printed or captured from the RS-232 port.

The Wiegand interface is for connection to other manufacturer's access control systems. The AM/II can act as a wireless receiver for an existing access control system. When interconnected to a Sentex Infinity system, the AM/II can simulate two Sentex card readers, receiving signals from thousands of transmitters. The AM/II also supports the industry standard Wiegand26 and Securakey31 data formats for connecting to other access control panels.

Up to eight AM/II's can be networked together allowing information sharing between the units. A common event log is retained for all of the networked units.

Four different size memory modules are available. The small, medium, large and x-large modules allow tailoring the system to meet the requirements of the installation. The larger the memory module, the more transmitter ID codes and logged events can be stored.

Additional remote accessory devices can be connected to the AM/II. A rugged, die cast, weatherproof keypad (AM-KP) for manual input of entry codes. A card reader interface (AM-CRI) can connect to one or two card readers. A proximity receiver (AM-RPR) provides ultra-short range radio reception for transmitters. A remote radio receiver (AM-RRR) can be used to extend the reception capabilities of the AM/II. Up to six remote accessory devices can be used with each AM/II unit.



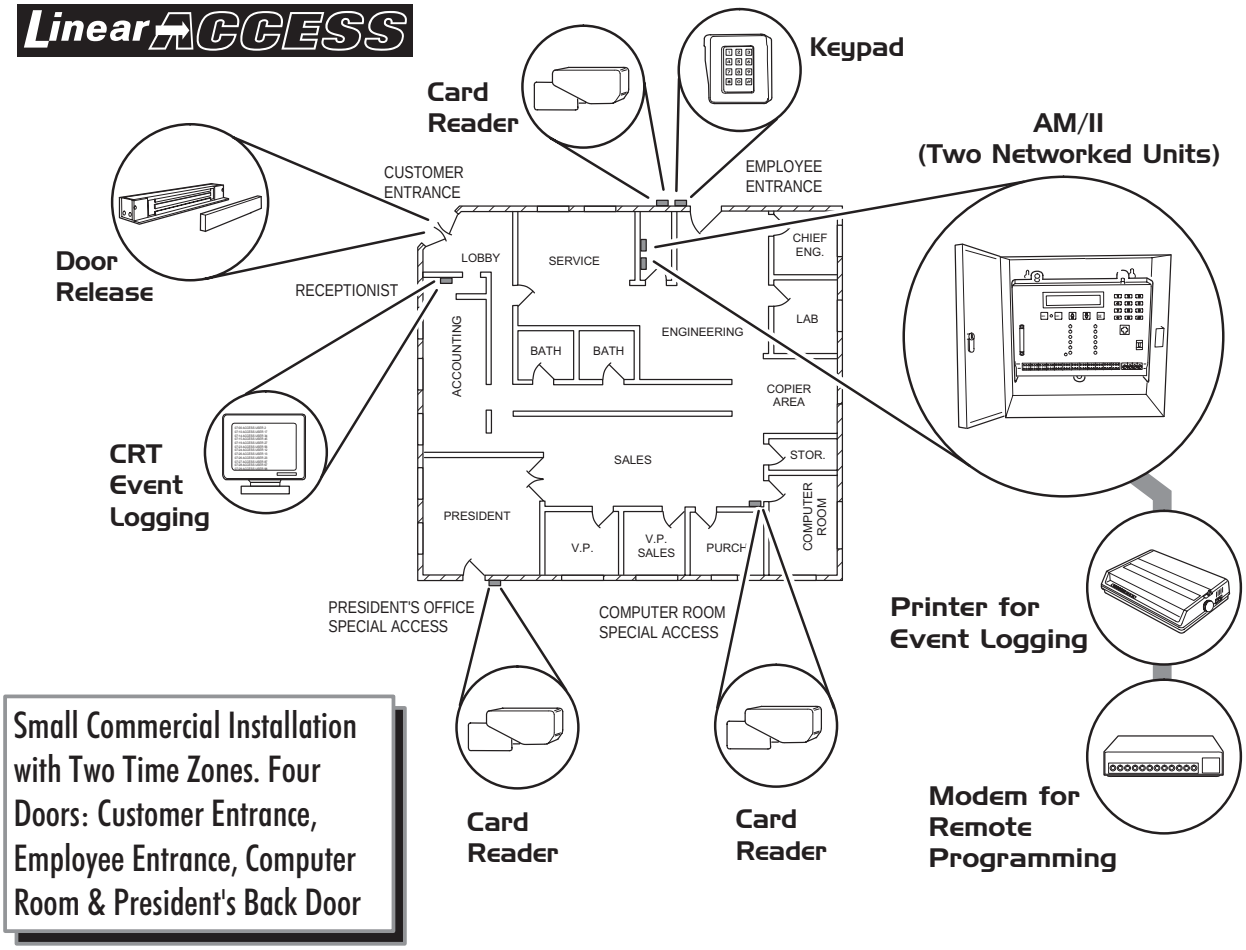
FEATURES

- ✶ Ideally suited for gated communities, condos, airports, parking garages, municipal gated parking, office buildings, government buildings, hospitals, factories, utility companies, computer facilities, museums, warehouses, dormitories, banks, libraries, retail stores, hotels/motels, educational facilities, small commercial buildings and recreational facilities.
- ✶ Controls up to four access devices.
- ✶ Supports thousands of transmitters, entry codes and card codes (depends on memory module size).
- ✶ MegaCode radio format features over one million possible transmitter identification codes.
- ✶ Remote activation from up to 200 feet away.
- ✶ Integral 2 line by 24 character backlit LCD display.
- ✶ Real-time print log (RS-232 output to a line printer).
- ✶ Remote and local programming with a personal computer.
- ✶ Sentex30, Securakey31, and Wiegand26 compatible output to connect to other access control panels.
- ✶ Block coding for transmitters and cards (just the first and last number in a “block” needs to be programmed).
- ✶ Magic wand support (special transmitter for maintenance personnel).
- ✶ Obstacle-sensing support with Linear’s MGT Safety Edge transmitter.
- ✶ Two door sensing inputs for propped open doors.
- ✶ Automatic door relock when door sense input is used.
- ✶ Two request to exit inputs for pushbutton or knox box activation.
- ✶ Time scheduled relay activation, 15 time zones with 4 periods each.
- ✶ Time zone access validation, 15 time zones with 4 periods each.
- ✶ Day of week and holiday access validation, up to 24 expiring holidays and 24 non-expiring holidays.
- ✶ Door access restriction for each validation group.
- ✶ Timed anti-passback modes.

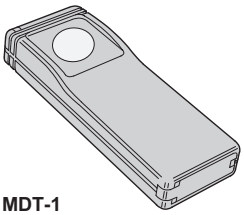
Remote Access Software

Either of the following two Windows™ based software programs can be downloaded from our website (www.linearcorp.com)

- ✶ Access Base - used in networks or single AM/II installations.
- ✶ Account Manager - used in non-networked, single AM/II installations.



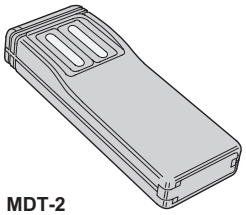
AM/II ACCESSORIES



MDT-1

2-Button MegaCode Transmitter

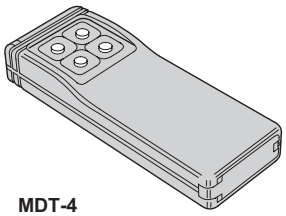
Top and front buttons function the same to control a single relay channel.



MDT-2

3-Button MegaCode Transmitter

Two front buttons and a top button can be used with any relay channel.



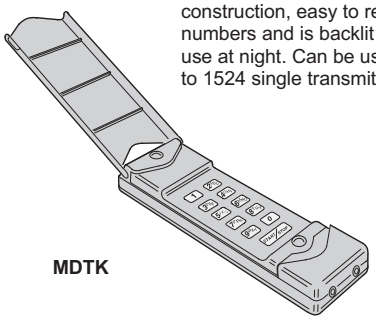
MDT-4

5-Button MegaCode Transmitter

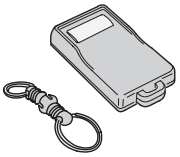
Can control all relay channels or be used as a magic wand transmitter.

MegaCode Wireless Keypad

User code is entered on keypad. Keypad has weather-proof construction, easy to read numbers and is backlit for use at night. Can be used for up to 1524 single transmittter codes.



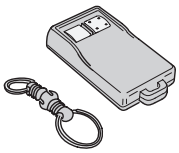
MDTK



ACT-21

1-Button MegaCode Mini Transmitter

Designed to be used with the keychain provided. Activates one relay channel.

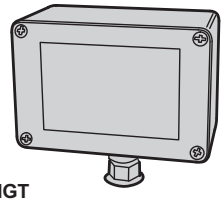


ACT-22

2-Button MegaCode Mini Transmitter

Designed to be used with the keychain provided. Activates two relay channels.

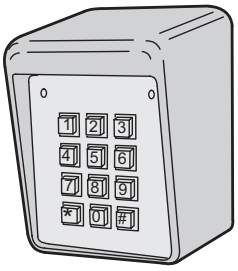
SINGLE & BLOCK CODED TRANSMITTERS



MGT

Supervised Gate Safety Edge Transmitter

Connects to safety edge sensor. Activates obstacle relay channel.

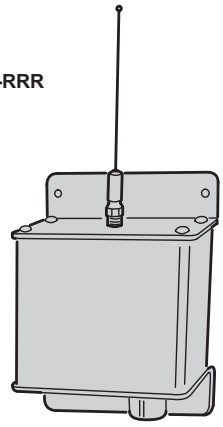


AM-KP

Entry Keypad

Outdoor housing with lighted keypad and two indicators. Activates one relay channel.

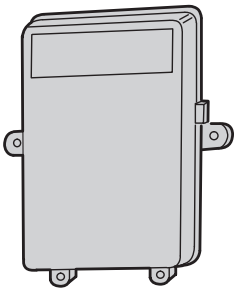
AM-RRR



Remote Radio Receiver

High-gain remote radio receiver with outdoor housing.

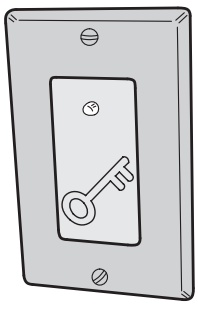
AM-CRI



Card Reader Interface

Connects to one or two 26-bit or 31-bit card readers. Functions as two remote devices.

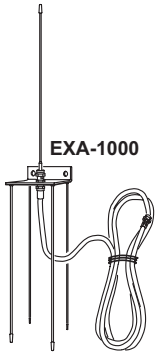
AM-RPR



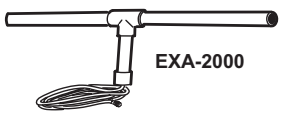
Remote Proximity Receiver

Receives transmitter signals from inches away. For transmitter activation of specific access point.

REMOTE ACCESSORY DEVICES



EXA-1000

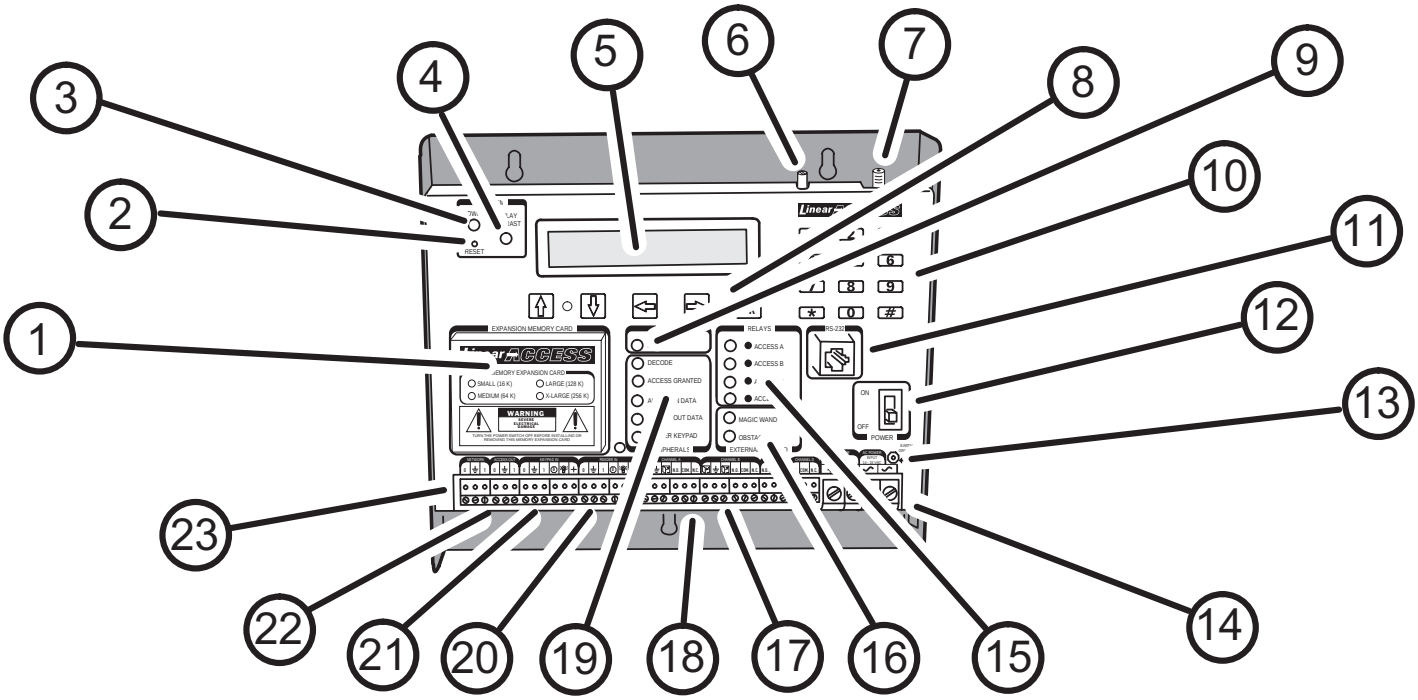


EXA-2000

Remote Antennas

Directional and omni-directional antennas for remote placement in best reception areas.

AM/II FEATURES



1. MEMORY EXPANSION CARD

Plug-in memory module. Four sizes available: small, medium, large and jumbo.

2. RESET BUTTON

Resets and restarts the microprocessor. Runs startup tests.

3. POWER LIGHT

Indicates that DC or AC power is being applied to the unit and that the POWER switch is turned on.

4. DISPLAY CONTRAST CONTROL

Adjusts the contrast of the unit's LCD display. Allows setting the display for maximum readability for different viewing angles.

5. LCD DISPLAY

Backlit, 24-character-per-line, 2-line LCD display. Displays system operation and programming information.

6. RADIO RANGE KNOB

Controls the gain of the radio receiver. Used to limit the maximum operating range of transmitters. Turn clockwise for more gain, counterclockwise for less gain.

7. ANTENNA INPUT

For connection to the EXA-1000 omni-directional or EXA-2000 directional remote antenna.

8. DATA ENTRY KEYS

Arrow keys are used to scroll through displayed menu trees. OK key is used as an enter key to accept data entered or selected.

9. RADIO INDICATOR

The RADIO light indicates the presence of RF signal into the unit's receiver.

10. NUMERIC KEYPAD

Used for entering data while programming the AM/II.

11. RS-232 PORT

Connects to a serial line printer, PC or data terminal for logging access transactions. For local programming with a PC or remote programming with a PC and a modem. Also used to interconnect two AM/II units to copy the memory between systems.

12. POWER SWITCH

Controls the DC and AC power inputs. This is the master power switch for the AM/II.

13. EARTH GROUND TERMINAL

For connection to a good earth ground. For electrical safety and optimum lightning protection, this connection is mandatory.

14. POWER TERMINALS

DC power input terminals for 12 to 35 VDC. AC power input terminals for 14 to 24 VAC. Use either AC or DC power, DO NOT USE BOTH.

15. RELAY INDICATORS AND ACCESS BUTTONS

Indicators will light when an output relay is activated. Outputs can be activated (open) by a transmitter or locked open by pressing an ACCESS button.

16. EXTERNAL CONTROL INDICATORS

MAGIC WAND indicator lights when the special "MAGIC WAND" transmitter is activated by a system administrator. OBSTACLE indicator lights when a signal from a Model MGT safety edge transmitter is received.

17. RELAY TERMINALS

Connects to the access device to be controlled (door strike, gate operator, etc.). Open request switch inputs are provided for relay channels A & B.

18. WIRING STRAIN RELIEF HOOKS

Strain relief hooks are provided on the bottom of the AM/II case. After wiring is complete, wires can be zip-tied to the strain relief hooks.

19. PERIPHERALS INDICATORS

The DECODE light indicates that the data being received is a valid format that the unit recognizes. The ACCESS GRANTED indicator lights when a device that is allowed to have access is triggered. The ACCESS IN and ACCESS OUT indicators light when data is being sent or received from the remote devices.

20. READER IN TERMINALS

Connects to remote accessory devices.

21. KEYPAD IN TERMINALS

Connects to remote accessory devices.

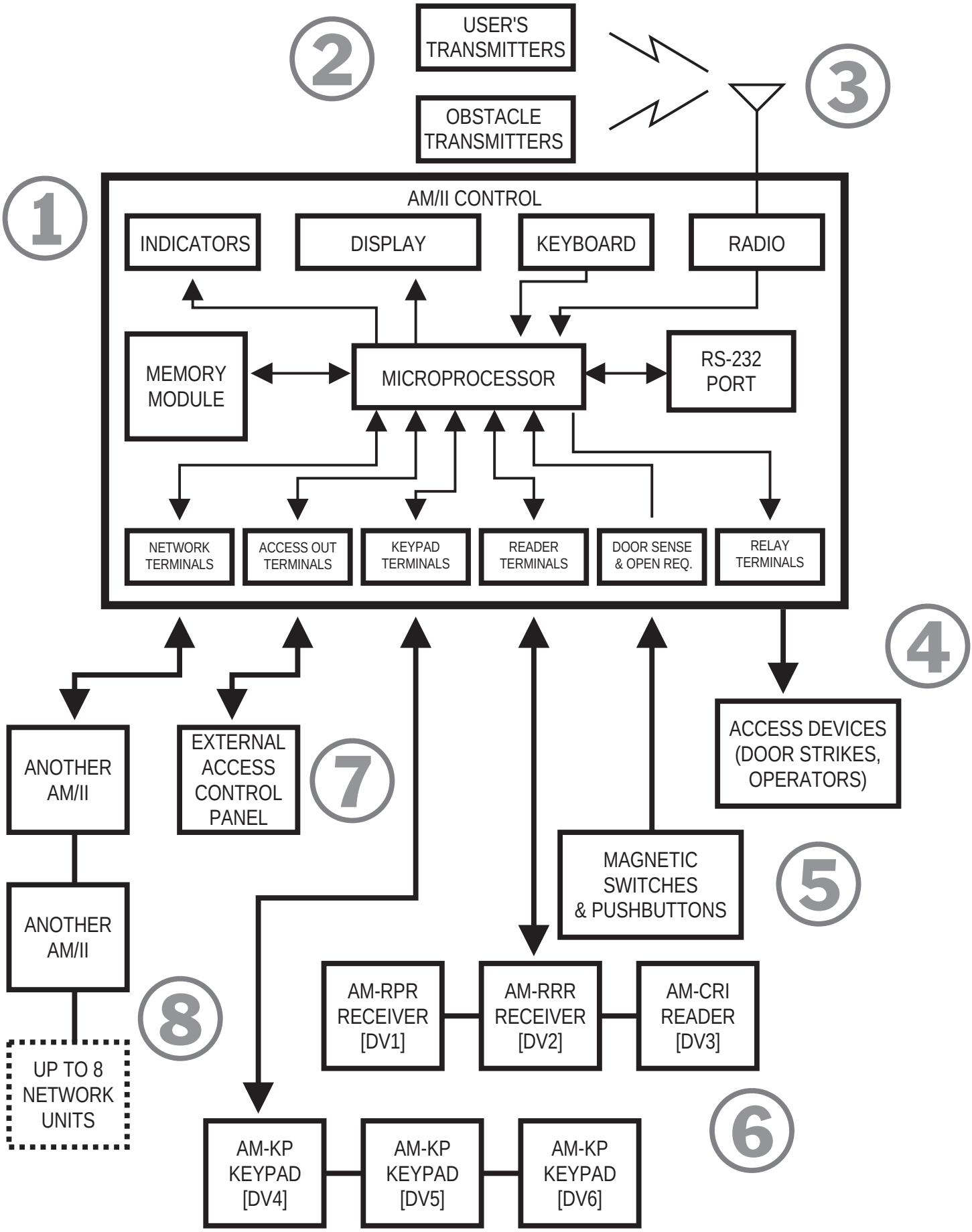
22. ACCESS OUT TERMINALS

AccessNet Data Bus for connection to other access control units. Sentex access out format is programmable for connection to Sentex Infinity systems. Wiegand26 and SecuraKey31 access out formats are programmable for connection to Wiegand inputs on other access control units.

23. NETWORK TERMINALS

For connection to other AM/II units. Up to 8 units can be networked together.

SYSTEM HARDWARE BLOCK DIAGRAM



①

AM/II CONTROL

The AM/II is a microprocessor based, world class access control system with a built-in superheterodyne radio receiver. The microprocessor runs the entire system, granting access, performing system "housekeeping" functions, displaying information, reading inputs and controlling outputs. Programming information and event logs are stored in the removable memory module. The soft touch silicone keypad and numeric keys are used for data entry. The plug-in terminal blocks connect to access devices, power, remote devices and sensing inputs. The RS-232 port connects to external computer equipment for event logging and system programming.

②

RADIO TRANSMITTERS

Many models of transmitters can be used with the AM/II. Some are individually coded, others are coded in blocks of numbers. Both code types will appear to function the same to the end users. The users will activate their transmitter to attempt to gain access. When the transmitted signal is detected by an AM/II receiver, the control decides if the user is currently allowed access. If the programming in the AM/II determines that the user can have access at that time, the programmed output relay will activate. Model MGT gate obstacle transmitters can also send signals to the AM/II.

③

EXTERNAL ANTENNA

The AM/II control has a type "F" antenna connector. The external antenna is connected with co-ax cable to the connector. A Model EXA-1000 (omni-directional), or Model EXA-2000 (directional) antenna is used to receive signals from the user's transmitters. The radio gain control knob can be used to custom tailor the reception area to the installation.

④

ACCESS DEVICES

The access devices wired to the relay terminals control specific access portals. When a user is granted access by the AM/II the access device activates (usually for a timed period).

⑤

OPEN REQUEST AND DOOR SENSE INPUTS

The open request inputs wire to pushbuttons or knox boxes so that users can activate access devices without needing their card code or transmitter. Open request pushbuttons are usually next to the controlled portal inside the controlled area. Door sense inputs are wired to normally closed magnetic or mechanical switches attached to the door.

⑥

REMOTE DEVICES

The remote devices communicate with the AM/II through a common electrical buss. Each device is set to a unique device address so the AM/II can recognize each unit as an individual. Currently available remote devices include entry keypads, remote radio receivers, radio proximity receivers and card reader interfaces.

⑦

EXTERNAL ACCESS CONTROL

Access control panels from other manufacturers can be connected to the AM/II. The AM/II can serve as a remote device for the external panel. The external panel can validate the data coming from the AM/II and perform its own access functions.

⑧

NETWORKED UNITS

Up to eight AM/II's can be networked together to function in unison. Each AM/II functions as an independent unit, but programming and event logging is shared between all units. Cards, codes and transmitters can be programmed to activate a specific AM/II unit.

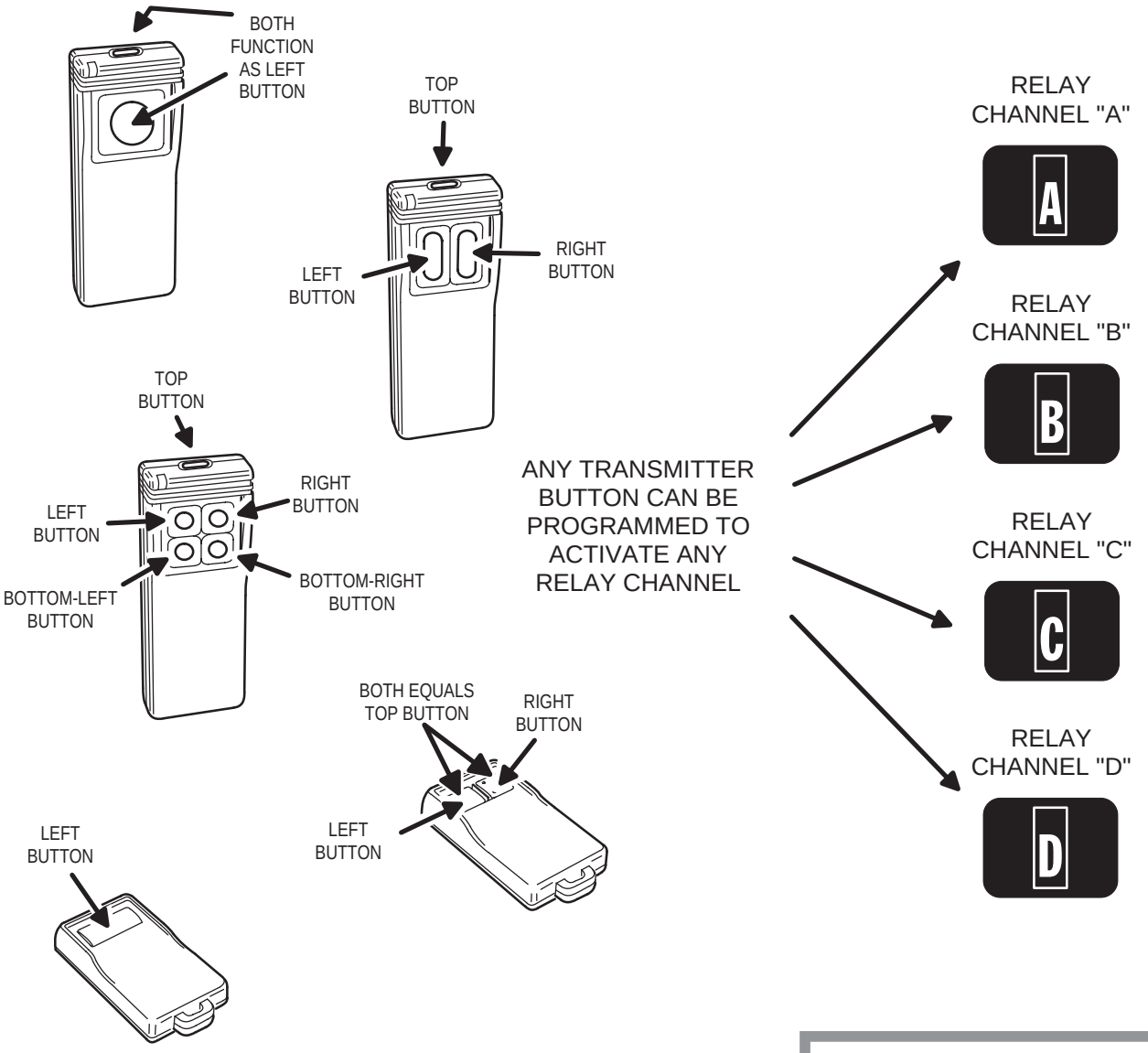
Linear ACCESS

CONCEPTS

The following pages provide a foundation for learning the access control concepts used in the AM/II system.

BUTTON SCHEDULE

Select which transmitter buttons activate which relay channels



BUTTON DEFAULTS

CHANNEL "A" = LEFT
CHANNEL "B" = RIGHT
CHANNEL "C" = BOTTOM-LEFT
CHANNEL "D" = BOTTOM-RIGHT

SPECIAL INFORMATION

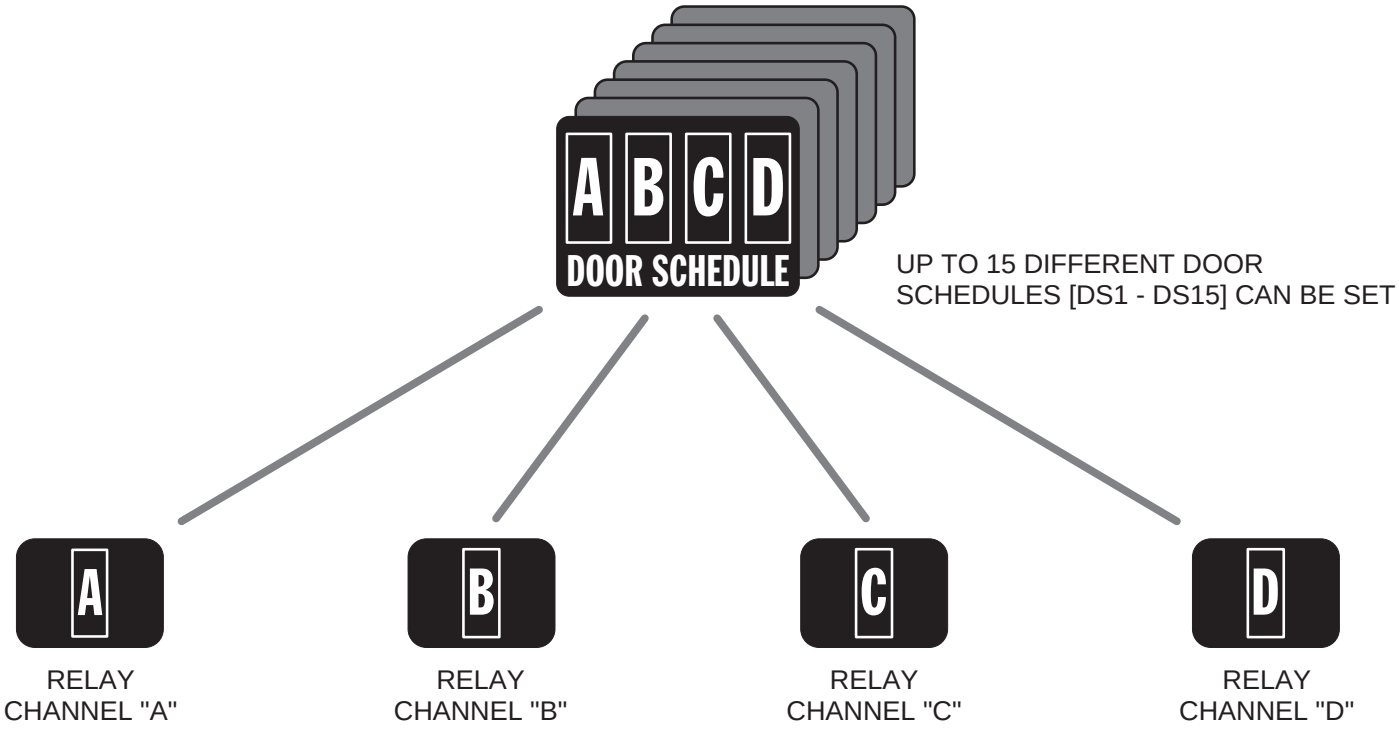
The button schedule must be set before programming any validation group.

Each validation group can have different button schedules.

To avoid confusion, using the same button schedule for all validation groups is recommended.

DOOR SCHEDULES

Select which relay channels a validation group can access



SPECIAL INFORMATION

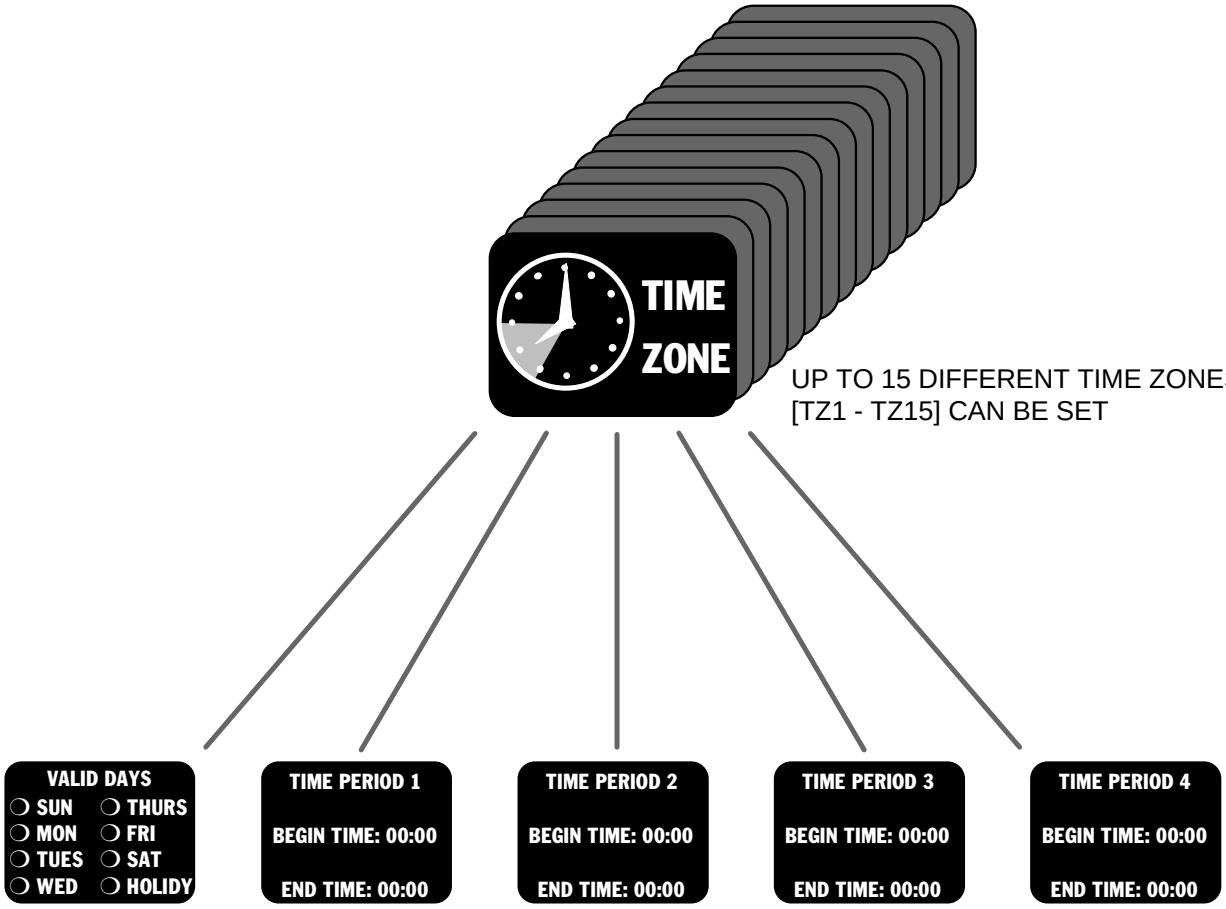
Program door schedules before programming validation groups.

Door schedule 0 [DS0] always allows access to all four door relay channels.

Up to 15 door schedules can be programmed.

TIME ZONES

Select the days of the week & what times that a validation group will be active



VALID DAYS SET WHICH DAY(S) THE TIME ZONE IS ACTIVE. HOLIDAY OPTION ALLOWS ACCESS ON PROGRAMMED HOLIDAY DAYS.

UP TO FOUR SEPARATE TIME PERIODS CAN BE SET FOR EACH TIME ZONE. ACCESS WILL ONLY BE GRANTED DURING A TIME PERIOD.

SPECIAL INFORMATION

Time zones also enables holiday schedules for a validation group.

Up to 15 time zones can be programmed.

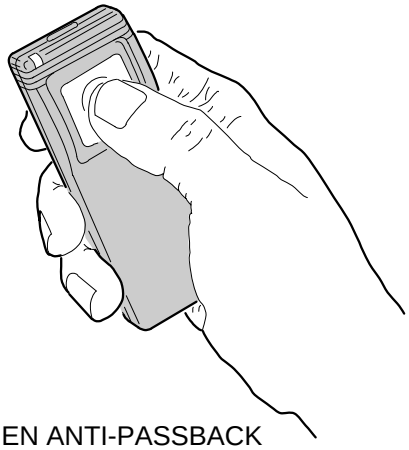
Note: 00:00 settings for all time periods in a time zone allows 24-hour access.

Time zone 0 [TZ0] always allows 24-hour access.

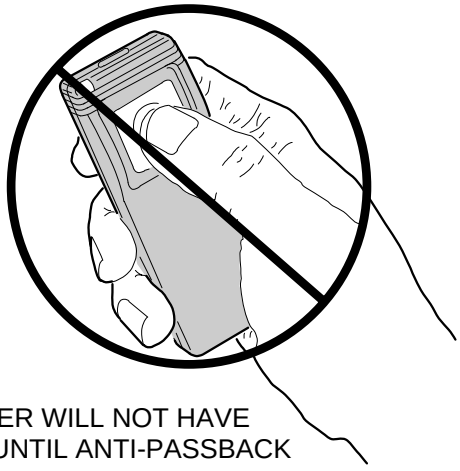
ANTI-PASSBACK & KEYPAD STRIKEOUT

ANTI-PASSBACK & STRIKEOUT

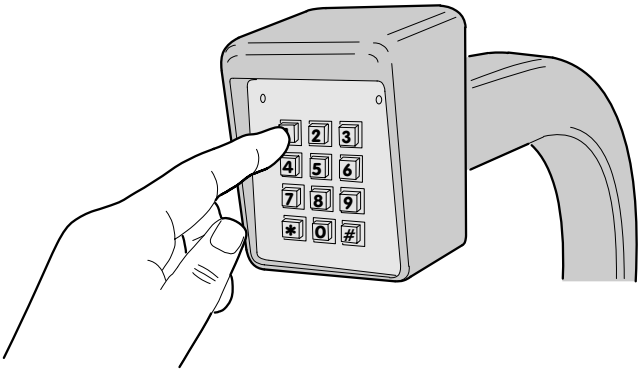
Timed anti-passback prevents "tailgating" by unauthorized users, keypad strikeout discourages keycode "guessing"



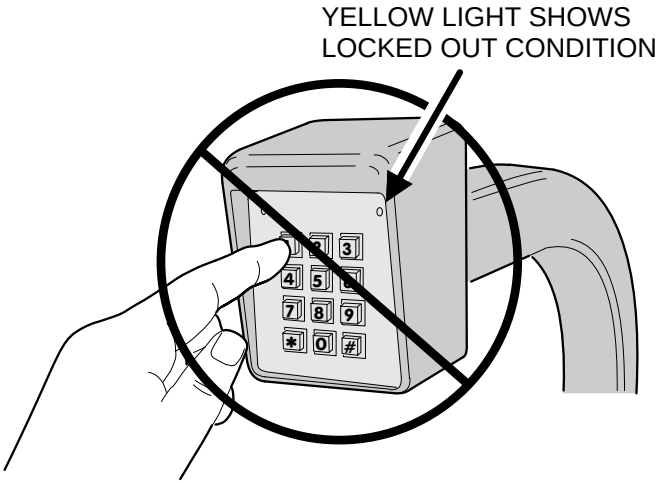
WHEN ANTI-PASSBACK OPTION IS ENABLED AND TRANSMITTER IS ACTIVATED...



THE TRANSMITTER WILL NOT HAVE ACCESS AGAIN UNTIL ANTI-PASSBACK TIME EXPIRES



WHEN KEYPAD STRIKEOUTS ARE SET, AFTER THE SET NUMBER OF WRONG CODE ATTEMPTS THE KEYPAD WILL "LOCKOUT" IGNORING FURTHER ATTEMPTS UNTIL ONE MINUTE PASSES



SPECIAL INFORMATION

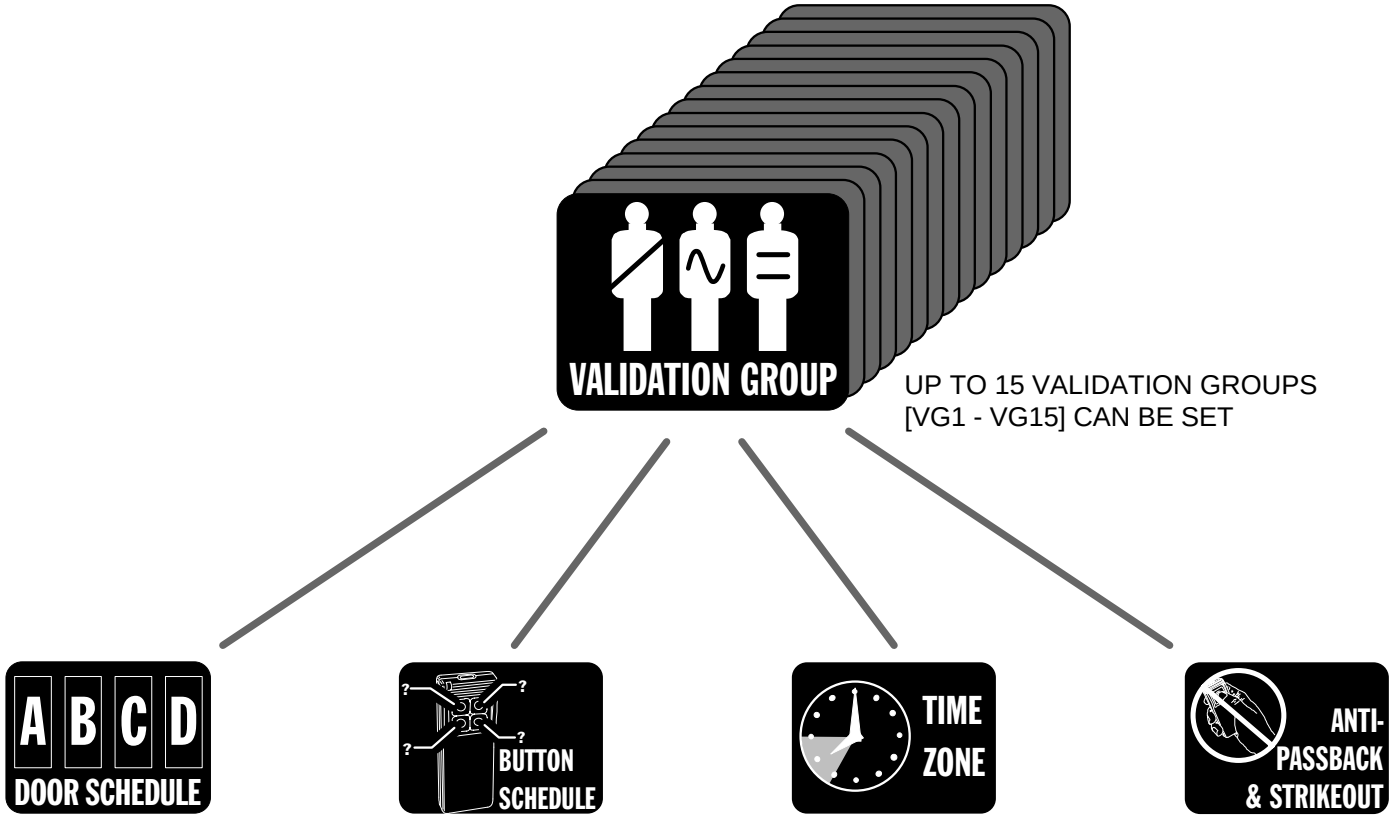
Anti-passback time can be programmed to 1, 2, 3 or 4 minutes.

Intregral radio direction must be set to IN for anti-passback to function.

Keypad strikeout can be set from one to seven failed attempts.

VALIDATION GROUPS

Control who gets access to which areas and at what times



SPECIAL INFORMATION

Set door schedules, time zones, button schedules and anti-passback timer before programming validation groups.

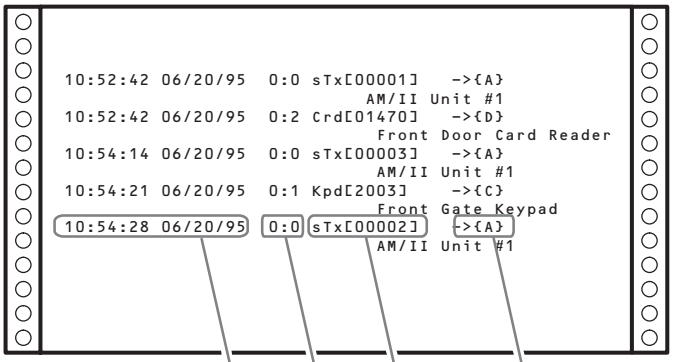
Up to 15 validation groups can be programmed. Each selects a door schedule, time zone, button schedule and anti-passback option.

Validation group "0" has full access at all times.

EVENT LOG

Keeps a record of all access transactions and supervisory conditions

SAMPLE REAL-TIME EVENT PRINTOUT



REAL-TIME EVENT LOG PRINTS EACH EVENT AS IT HAPPENS

TOP LINE OF EVENT SHOWS:

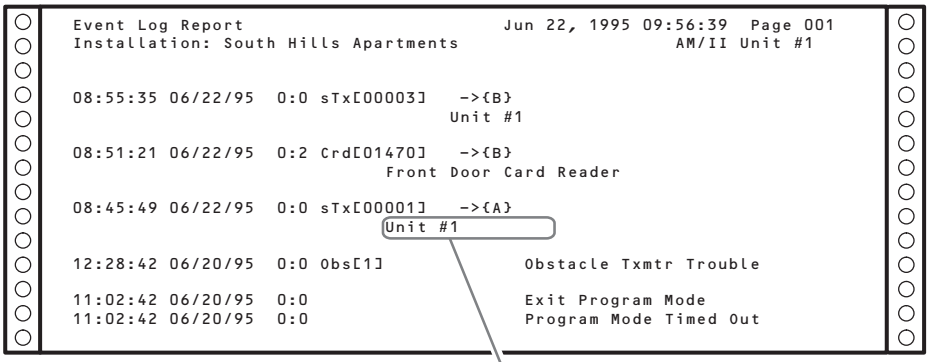
TIME & DATE

MEDIA TYPE & ID#

DIRECTION OF ENTRY & RELAY LETTER

NETWORK ADDRESS : REMOTE DEVICE ADDRESS

SAMPLE STORED EVENT LOG



STORED EVENT LOG SHOWS ALL EVENTS FROM MOST RECENT TO OLDEST STORED EVENT

BOTTOM LINE OF EVENT SHOWS:

DEVICE NAME

SPECIAL INFORMATION

The number of possible stored events depends on the size of memory installed and the amoumt of other data stored.

The stored event log can be set to retain up to 500, 1000, 2000, 5000, maximum or no events.

Stored event log can be printed in total, from the last report or from a selected date.

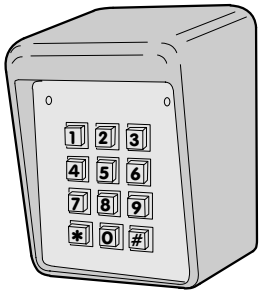
REMOTE DEVICES

Accept input from various media

EACH REMOTE DEVICE CAN BE WIRED TO THE AM/II AND HAS A ROTARY SWITCH THAT SELECTS THE DEVICE ADDRESS

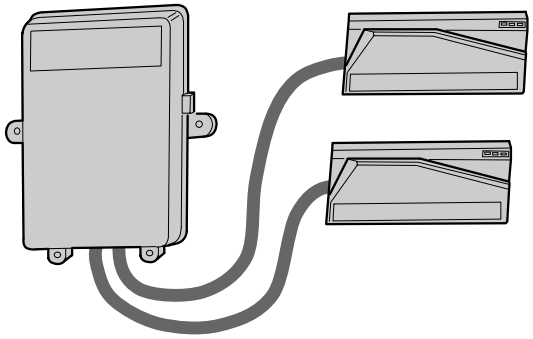
MODEL AM-KP ENTRY KEYPAD

ACCEPTS ENTRY CODES AS USERS KEY THEM IN



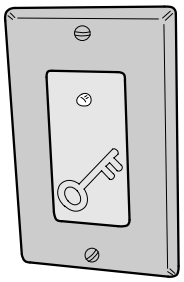
MODEL AM-CRI CARD READER INTERFACE

ACCEPTS CARD CODES FROM ONE OR TWO CARD SWIPE READERS



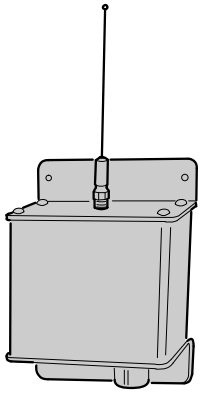
MODEL AM-RPR RADIO PROXIMITY RECEIVER

ACCEPTS ID CODES FROM TRANSMITTERS AS USERS ACTIVATE THEM NEXT TO RECEIVER



MODEL AM-RRR REMOTE RADIO RECEIVER

ACCEPTS ID CODES FROM TRANSMITTERS AS USERS ACTIVATE THEM WITHIN RANGE OF THE REMOTE RECEIVER'S ANTENNA



ACCESS MEDIA

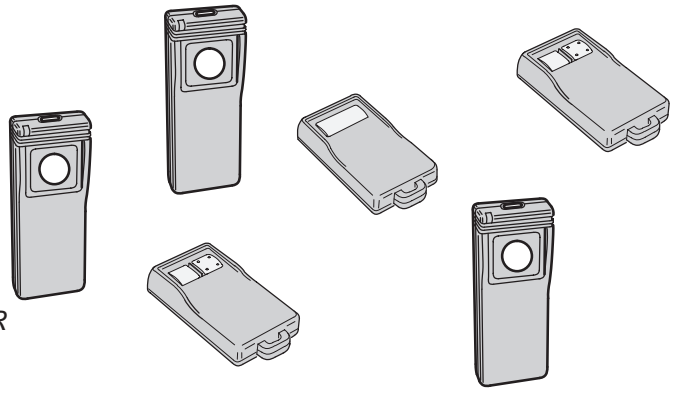
The following pages provide a foundation for learning the hardware devices and access control media used in the AM/II system.

Cards, keypad codes & transmitters (CCT's)

SINGLE TRANSMITTERS

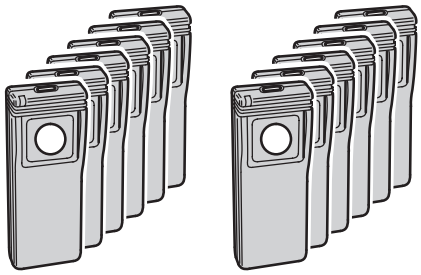
UNIQUELY CODED AT THE FACTORY AND PROGRAMMED ONE AT A TIME

NOTE: SINGLE TRANSMITTERS ARE NOT COMPATIBLE WITH ACCESSBASE OR ACCOUNT MANAGER



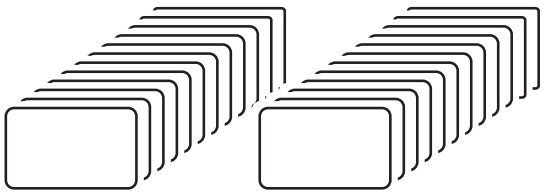
BLOCK CODED TRANSMITTERS

SEQUENTALLY CODED AT THE FACTORY AND PROGRAMMED BY ENTERING THE STARTING AND ENDING BLOCK NUMBERS



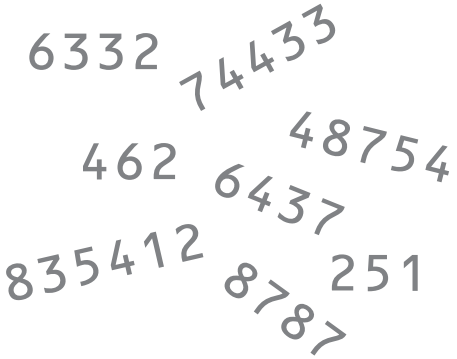
BLOCK CODED CARDS

SEQUENTALLY CODED AT THE FACTORY AND PROGRAMMED BY ENTERING THE STARTING AND ENDING BLOCK NUMBERS

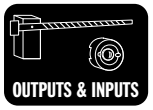


KEYPAD ENTRY CODES

PROGRAMMED BY THE INSTALLER, CAN BE FROM TWO TO EIGHT DIGITS LONG - RECOMMENDED THAT ALL CODES BE THE SAME LENGTH - FOR HIGHEST SECURITY, CODES SHOULD BE AT LEAST FOUR DIGITS LONG



RELAY OUTPUTS & SENSING INPUTS



Control access devices and sense auxiliary inputs

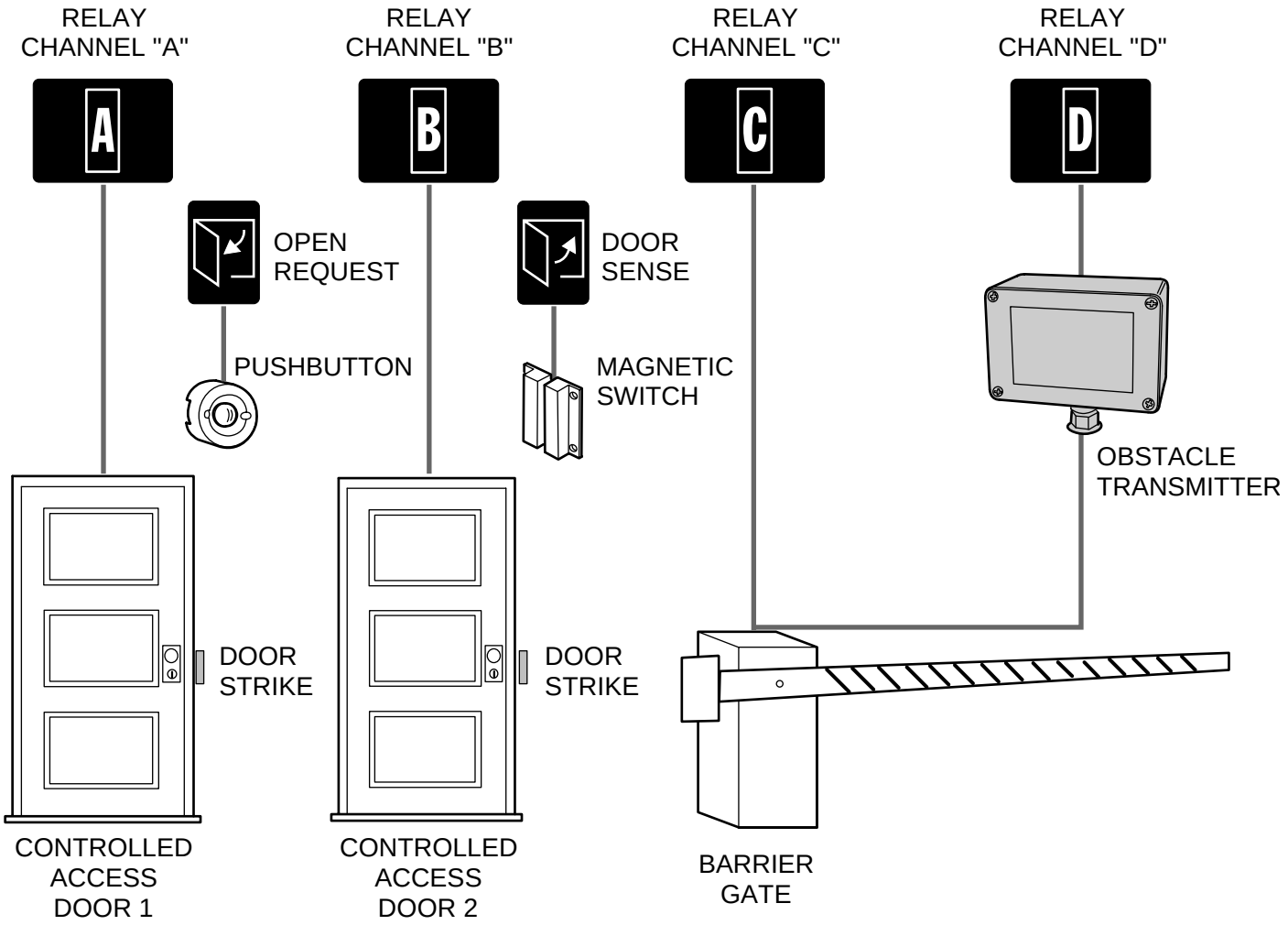
RELAY OUTPUTS

- ELECTRICALLY ISOLATED CONTACTS (3 AMPS, 30 VOLTS MAXIMUM)
- NORMALLY OPEN AND NORMALLY CLOSED CONTACTS
- PROGRAMMABLE FOR TIME DURATION, PULSE, TOGGLE AND LATCH OUTPUTS

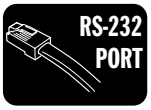
SENSING INPUTS

- OPEN REQUEST INPUT AVAILABLE FOR RELAY CHANNELS A & B (NORMALLY OPEN SWITCH)
- DOOR SENSE INPUT AVAILABLE FOR RELAY CHANNELS A & B (NORMALLY CLOSED SWITCH)

TYPICAL INSTALLATION



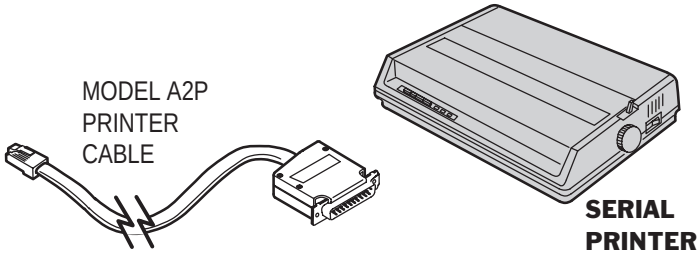
RS-232 PORT



For printing event log, programming and transferring memory between units

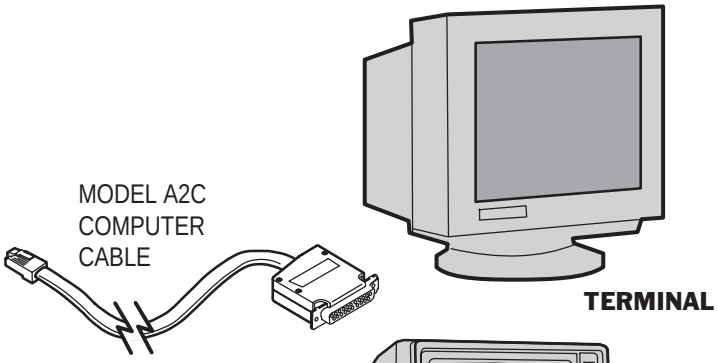
SERIAL PRINTER

- PRINTS REAL-TIME EVENT LOG
- PRINTS SYSTEM REPORTS
- USE MODEL A2P CABLE



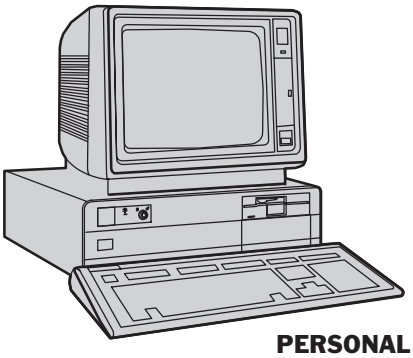
COMPUTER TERMINAL

- DISPLAYS REAL-TIME EVENT LOG
- DISPLAYS SYSTEM REPORTS
- LOCALLY PROGRAM AM/II
- USE MODEL A2C CABLE



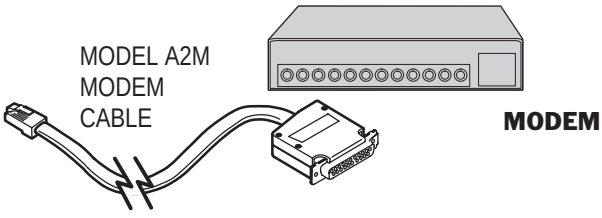
PERSONAL COMPUTER

- DISPLAYS REAL-TIME EVENT LOG
- DISPLAYS SYSTEM REPORTS
- LOCALLY PROGRAM AM/II
- STORE AM/II MEMORY TO DISK
- LOAD AM/II MEMORY FROM DISK
- USE MODEL A2C CABLE



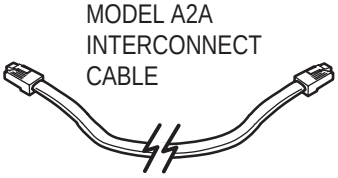
COMPUTER MODEM

- CONNECTS TO AM/II RS-232 PORT
- ANSWERS CALLS FROM REMOTE COMPUTER
- REMOTELY PROGRAM AM/II
- REMOTELY STORE AM/II MEMORY TO DISK
- REMOTELY LOAD AM/II MEMORY FROM DISK
- REMOTELY DISPLAY STORED EVENT LOG
- REMOTELY DISPLAY SYSTEM REPORTS
- USE MODEL A2M CABLE



AM/II INTERCONNECT

- CONNECTS TWO AM/II UNITS TOGETHER
- TRANSFER MEMORY BETWEEN UNITS
- USE MODEL A2A CABLE



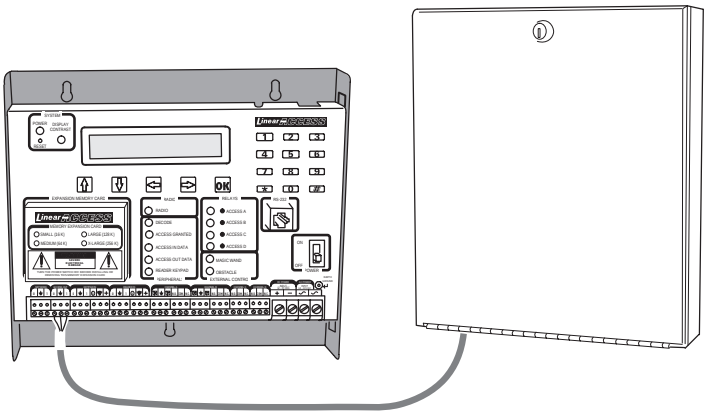
ACCESS OUT & NETWORK TERMINALS

ACCESS OUT & NETWORK

For linking an AM/II to an external access control panel and connecting multiple AM/II's together

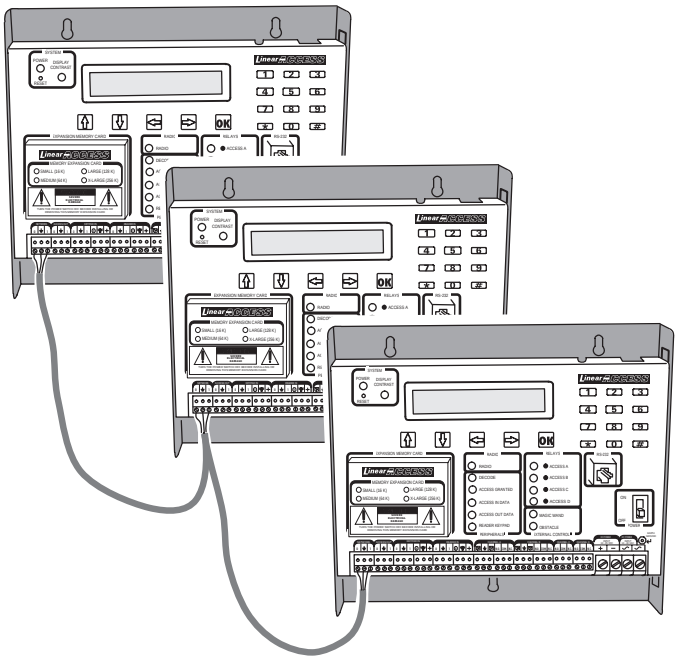
ACCESS OUT TERMINALS

- PASSES ACCESS OUT INFORMATION TO AN EXTERNAL ACCESS CONTROL SYSTEM
- SUPPORTS WIEGAND26 SECURAKEY31, AND SENTEX30 DATA FORMATS
- EXTERNAL ACCESS PANEL CAN BE USED FOR VALIDATION OF PASS-THROUGH DATA FROM THE AM/II
- SIMPLE THREE-WIRE CONNECTION



NETWORK TERMINALS

- UP TO EIGHT AM/II UNITS CAN BE CONNECTED TOGETHER
- EVENT LOG IS SHARED BETWEEN THE NETWORKED UNITS
- SIMPLE TWO-WIRE RS-485 CONNECTION



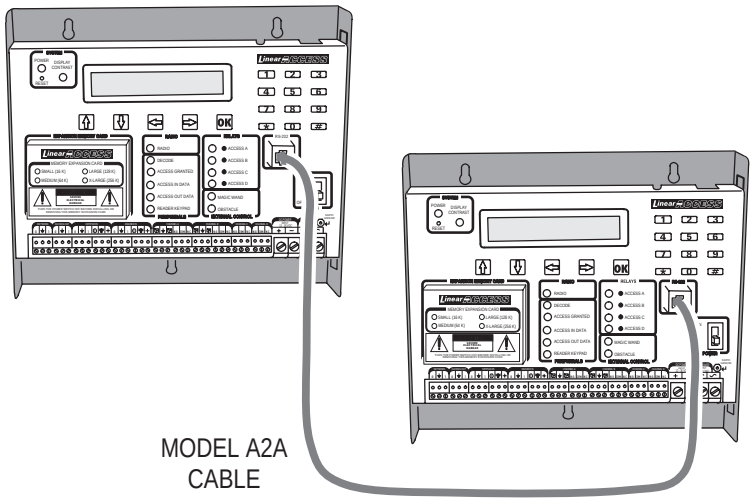
MEMORY UTILITIES

MEMORY UTILITIES

For copying and transferring memory module data

COPYING MEMORY DATA

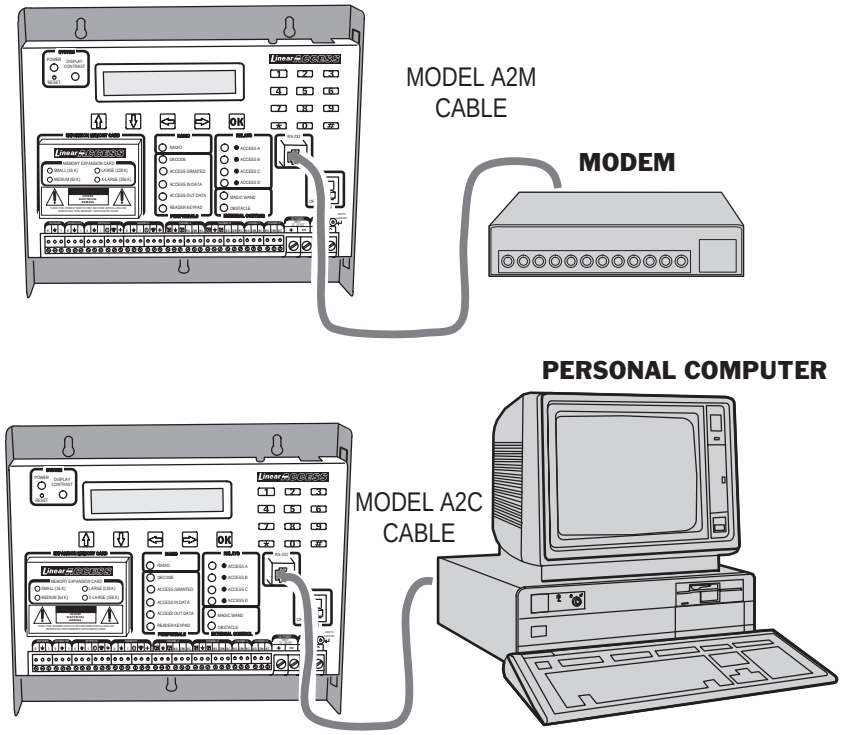
● MEMORY MODULE INFORMATION CAN BE SENT TO AND RECEIVED FROM ANOTHER AM/II THROUGH THE RS-232 PORT USING THE MODEL A2A CABLE



SENDING AND RECEIVING MEMORY DATA

● MEMORY MODULE DATA CAN BE SENT AND RECEIVED THROUGH THE RS-232 PORT OVER THE PHONE LINE USING A MODEM WITH THE MODEL A2M CABLE

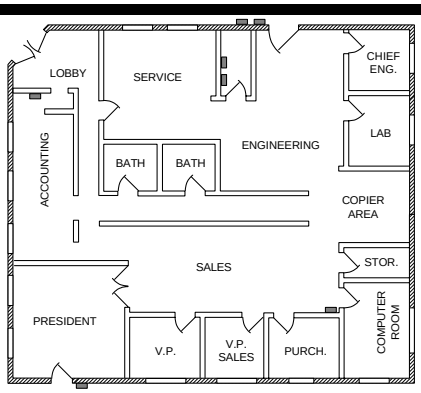
● MEMORY MODULE DATA CAN ALSO BE SENT AND RECEIVED THROUGH THE RS-232 PORT WITH A PERSONAL COMPUTER DIRECTLY CONNECTED TO THE AM/II USING THE MODEL A2C CABLE



PRE-INSTALLATION PLANNING

Before beginning, take time to plan the installation.

- ✶ Make a sketch of the installation floor plan showing all controlled access points.
- ✶ Select a good location to mount the AM/II.
- ✶ Determine a good location for the antenna.
- ✶ Select locations for the remote accessory devices (keypads, card readers, remote receivers, proximity receivers).
- ✶ Research possible places for wire runs to accessories and access devices.



INSTALLATION OUTLINE

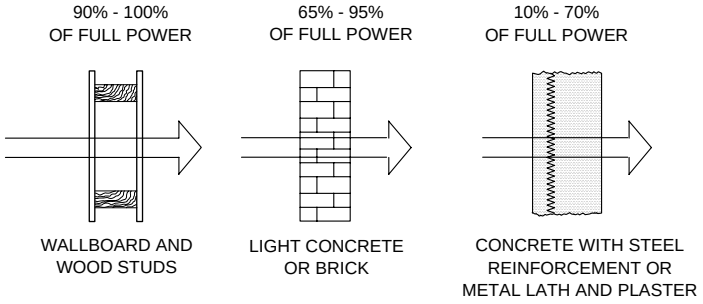
The following outline is intended to guide you through the installation of an AM/II system.

1. Unpack the system. Identify the system components (transformer, antenna, etc.).
2. Plan the installation by creating an installation diagram.
3. Mount the AM/II (in an optional cabinet if required).
4. Connect the antenna.
5. Install any remote accessory devices.
6. Wire connections to the AM/II terminals.
   - **A.** Install a ground stake and run the ground wire or use a cold water pipe as earth ground for the AM/II.
   - **B.** Connect relay outputs to the access device(s) to be controlled.
   - **C.** Turn AM/II POWER switch **off** and connect the plug-in transformer or connect the AM/II to a 14-24 VAC or 12-35 VDC auxiliary power supply.
   - **D.** Turn the POWER switch on. The green POWER indicator should light.
   - **E.** Adjust the display contrast as desired.
7. Program the system.
8. Test the system.
9. Adjust the red RADIO RANGE knob to limit the maximum range of the receiver.

WIRELESS INSTALLATION TIPS

Signals Through Construction Materials

When installing any wireless system, certain limitations must be considered. Low power wireless UHF transmitter signals will not broadcast equally through all types of construction materials. The AM/II contains a receiver that should allow reception of the transmitters in almost all locations. Refer to figure showing approximate signal strength that will occur with different types of building materials.



Transmitters in Vehicles

The radio range of a transmitter will also be affected when the transmitter is located in a vehicle. Depending on the location of the transmitter (on the visor, on the dash, in the center console) the range will vary. Most of the signal strength changes are related to the amount of metal in close proximity to the transmitter. If a transmitter is clipped to the top of the driver's sun visor, with the visor flipped up, placing the transmitter between the metal roof and the metal reinforced visor, the transmitters range will be reduced.

PRE-INSTALLATION

Unpacking the System

The basic AM/II system package includes the following accessories:

- ✶ Plug-in Transformer. Provides low voltage power to the access control panel.
- ✶ Mounting Screws. Used to mount the AM/II inside the cabinet.

Installing the Memory Module

Four sizes of memory modules are available for the AM/II:

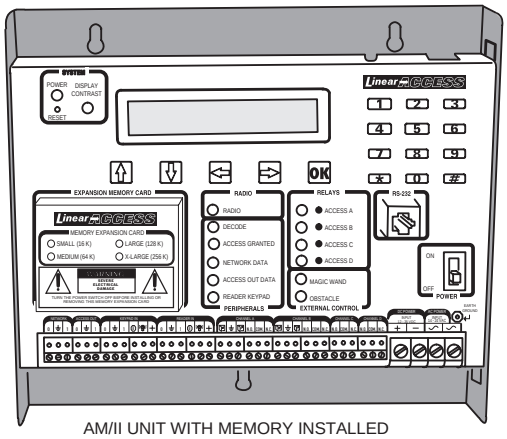
- ✶ SMALL (16K) MEMORY
- ✶ MEDIUM (64K) MEMORY
- ✶ LARGE (128K) MEMORY
- ✶ X-LARGE (256K) MEMORY

One of the memory modules must be installed for the AM/II to function.

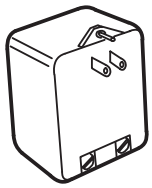
- ✘ ***CAUTION! Be sure the AM/II is disconnected from power or that the AM/II's POWER switch is off before removing of replacing the memory module.***

STEP 1 With the system power off, plug the memory module into the AM/II.

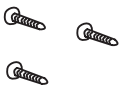
STEP 2 Secure the memory module with two screws.



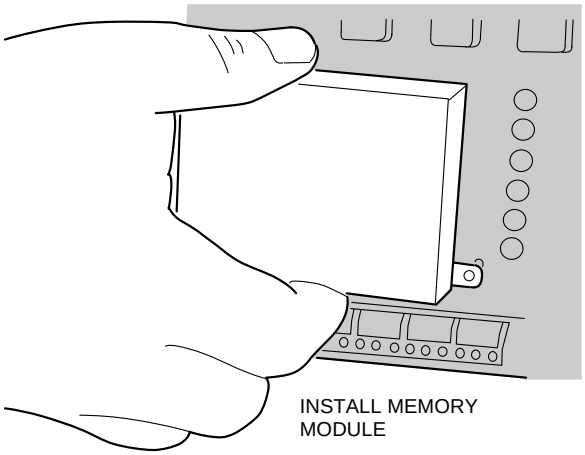
AM/II UNIT WITH MEMORY INSTALLED



PLUG-IN
TRANSFORMER



CASE MOUNTING
SCREWS



INSTALL MEMORY
MODULE

MOUNT UNIT

The AM/II can be mounted indoors directly to a wall or in the Model CAB-1 indoor cabinet. For outdoor mounting, the Model CAB-2 weather resistant cabinet is recommended. The two cabinets both provide some security for the unit.

Each cabinet has wiring knockouts for connection to wiring conduit.

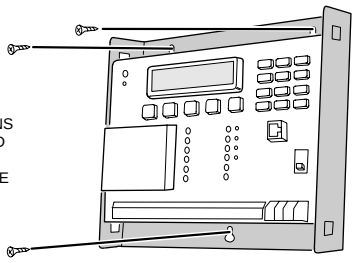
STEP 1 Decide on a good location (near power and good wiring access) to mount the AM/II. It should be in a secure location. The mounting area should be between -22 and +149 degrees Fahrenheit year-around.

STEP 2 If a cabinet is used, punch out the conduit knockouts as required for the installation. Attach the cabinet to the wall with the appropriate fasteners.

STEP 3 Secure the AM/II with three screws.

DIRECT MOUNTING

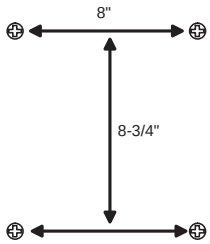
FOR INDOOR INSTALLATIONS THE AM/II CAN BE MOUNTED DIRECTLY USING THREE SCREWS AND APPROPRIATE SCREW ANCHORS



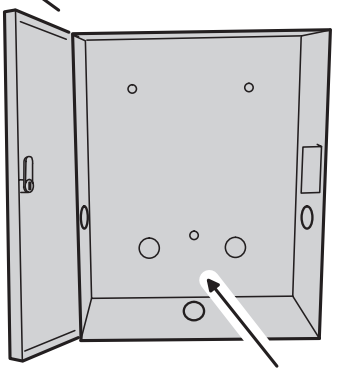
CAB-1 MOUNTING

HANG CABINET ON SCREWS

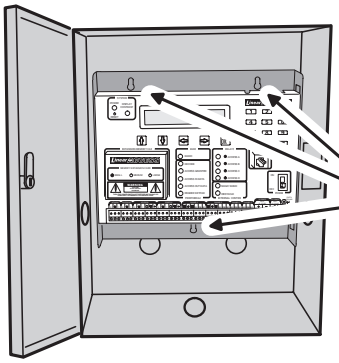
DRIVE FOUR SCREWS INTO WALL AT THESE LOCATIONS (LEAVE SCREW HEAD 1/8" OUT FROM WALL)



USE PLASTIC SCREW ANCHORS IF REQUIRED



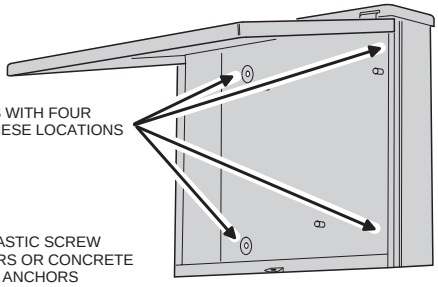
DIRLL A HOLE AND DRIVE A FIFTH SCREW INTO THE HOLE TO LOCK CABINET TO WALL



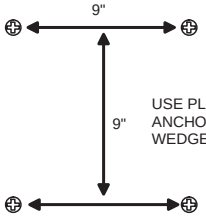
MOUNT AM/II UNIT INTO CABINET WITH THREE SCREWS SUPPLIED

PUNCH OUT REQUIRED CONDUIT CONNECTION KNOCKOUTS FOR ANTENNA, POWER, GROUND AND SIGNALS

CAB-2 MOUNTING

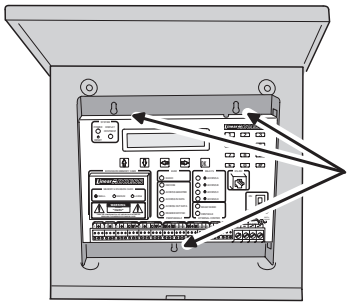


CAB-2 MOUNTS WITH FOUR SCREWS AT THESE LOCATIONS



USE PLASTIC SCREW ANCHORS OR CONCRETE WEDGE ANCHORS

PUNCH OUT REQUIRED CONDUIT CONNECTION KNOCKOUTS FOR ANTENNA, POWER, GROUND AND SIGNALS



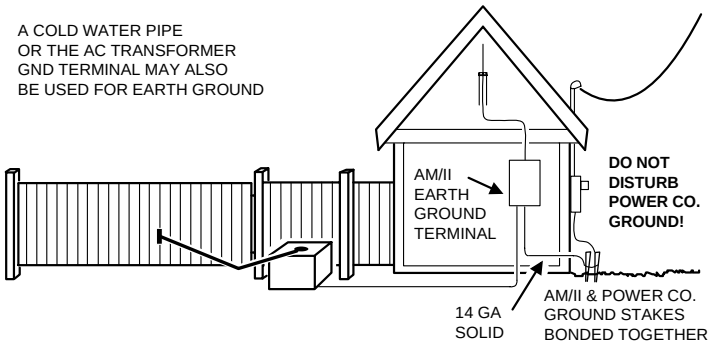
MOUNT AM/II UNIT INTO CABINET WITH THREE SCREWS SUPPLIED

EARTH GROUND & POWER CONNECTIONS

Earth Ground

For the best ground, use size 14 gauge solid wire or larger to connect the EARTH GROUND terminal to an 8-foot copper ground rod. Locate the ground rod next to the Power and Telephone company rods and bond the rods together with a new clamp. **Do not disturb the clamps installed by the Power or Telephone Company.**

Alternately, connect the EARTH GROUND terminal to a cold water pipe or to the GND terminal on the AC transformer.



Power

The AM/II is powered by a 16.5 Volt, 20 VA to 50 VA, internally fused, UL listed, Class 2 transformer. This transformer is included with the AM/II system pack.

The system can alternately be powered from a 12-35 VDC or 14-24 VAC auxiliary power supply. Refer to the chart below for selecting wire size for the distance to the power source.

Typically DC power is used when battery backed-up uninterruptable operation is required. The externally charged battery must be capable of supplying the power requirements of the AM/II and it's complement of devices.

✘ ***WARNING! Never short the terminals of the transformer together. This will cause the internal fuse to blow. The transformer must be connected to a 120 VAC 60 Hz unswitched (24 hour) power outlet not controlled by a wall switch.***

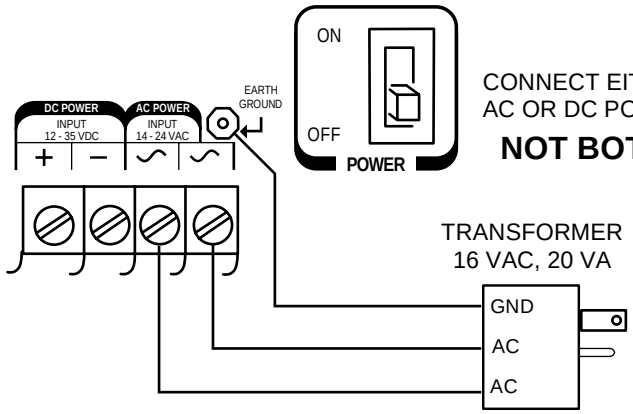
STEP 1 Be sure that the AM/II POWER switch is off.

STEP 2 Connect the transformer to the AC terminals ***or*** connect the AM/II to the operator's auxiliary power output.

✘ ***WARNING! Do not connect both AC and DC power.***

STEP 3 If used, plug transformer into AC outlet and secure with case screw (if provided).

☞ *NOTE: Never power door strikes or other high current magnetic devices from the same power source as the AM/II.*



POWER WIRE DISTANCE	MINIMUM WIRE SIZE
1-50 FEET	18 AWG
51-150 FEET	16 AWG
151-250 FEET	14 AWG
251-500 FEET	12 AWG

REMOTE DEVICE WIRING REQUIREMENTS

Cable Type

Each remote device requires a 6-wire connection to the AM/II. Depending on the distance of the cable run, two different types of cable are recommended.

- For cable distance up to 300 feet, use BELDEN 9931 (24 AWG).
- For cable distance up to 500 feet, use WEICO 9405 (20 AWG).

Load Number

Each hardwired remote accessory device has been assigned a “load number”. Homerun wiring is recommended for accessories, although multiple accessories can be wired on the same cable run if the following formulas are used.

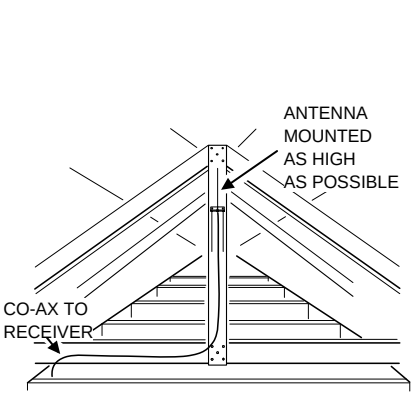
- For cable distance up to 300 feet:
  CABLE RUN IN FEET x LOAD UNITS = 3,000 OR LESS
- For cable distance up to 500 feet:
  CABLE RUN IN FEET x LOAD UNITS = 10,000 OR LESS

REMOTE DEVICE	LOAD NUMBER
AM-KP	9
AM-RRR	4
AM-CRI	25
AM-RPR	4

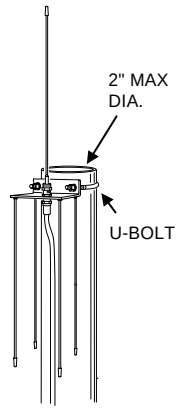
ANTENNA HOOK-UP

If using a remote antenna, construct the antenna kit as described in its instructions. Mount the antenna as high as possible. Connect the coax lead to the AM/II antenna connector. Up to 25 feet of coax cable may be used to connect the antenna.

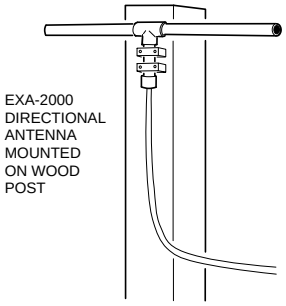
☞ *NOTE: Mount the antenna at least 10 feet from the AM/II control.*



ATTIC MOUNTING



POST MOUNTING

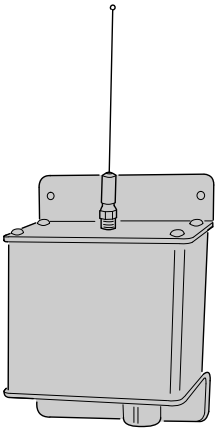


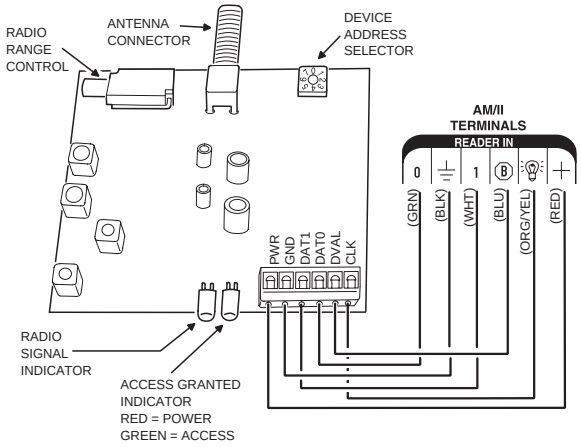
REMOTE RADIO RECEIVER CONNECTIONS

The Model AM-RRR remote radio receiver can be used to extend the radio range and remote the radio input of the AM/II. Use the AM-RRR with its local whip antenna or with the EXA-1000 or EXA-2000 remote antennas.

The receiver is connected to the READER IN terminals on the AM/II. Follow the instructions supplied with the remote receiver and the hook-up diagram shown.

The DEVICE ADDRESS SELECTOR switch in the unit selects the device address. It must be set from 1-6, and be different from any other remote accessory device.



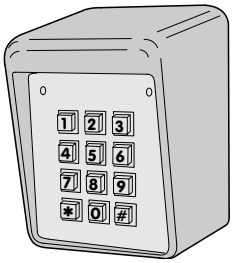


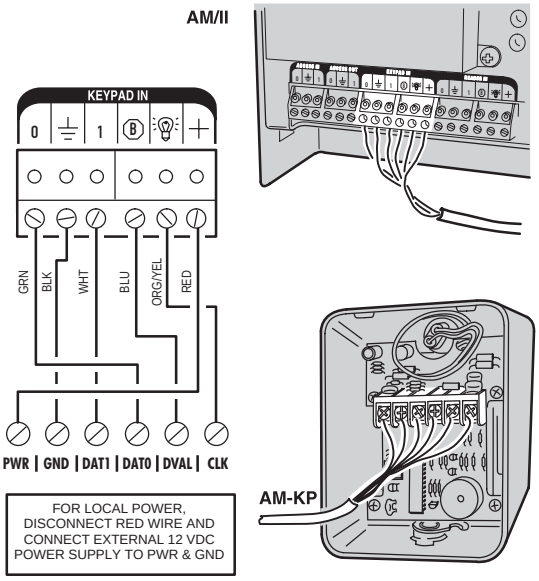
REMOTE KEYPAD CONNECTIONS

The Model AM-KP access control keypads can be used for manual code entry for the AM/II. The keypad can be mounted on a pedestal or directly to a wall.

The keypad is connected to the KEYPAD IN terminals on the AM/II. Follow the instructions supplied with the keypad and the hook-up diagram shown.

The DEVICE ADDRESS SELECTOR switch in the unit selects the device address. It must be set from 1-6, and be different from any other remote accessory device.



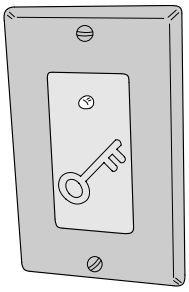


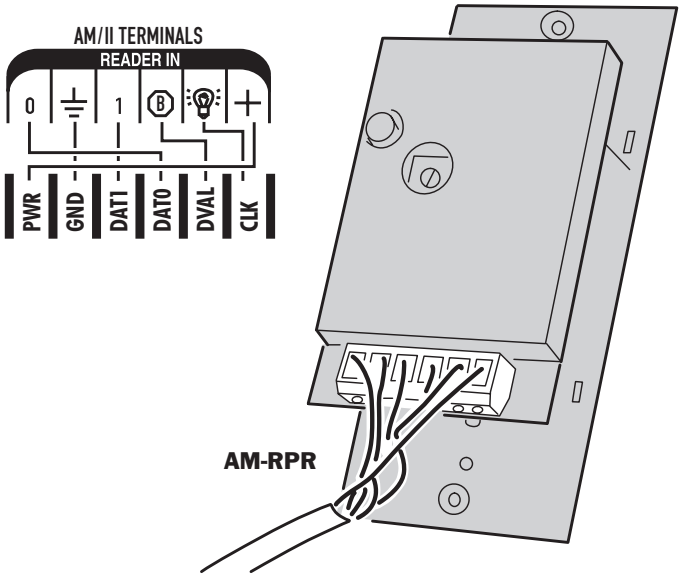
REMOTE PROXIMITY RECEIVER

The Model AM-RPR proximity receiver can be used for ultra-short range transmitter reception at access portals. The transmitter will have to be activated right next to this receiver to activate it. The receiver is mounted in a single-gang plastic outlet box.

The receiver is connected to the READER IN terminals on the AM/II. Follow the instructions supplied with the proximity receiver and the hook-up diagram shown.

The DEVICE ADDRESS SELECTOR switch in the unit selects the device address. It must be set from 1-6, and be different from any other remote accessory device.



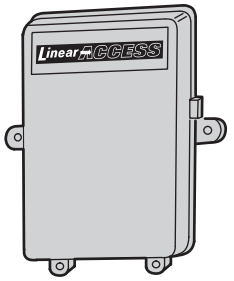


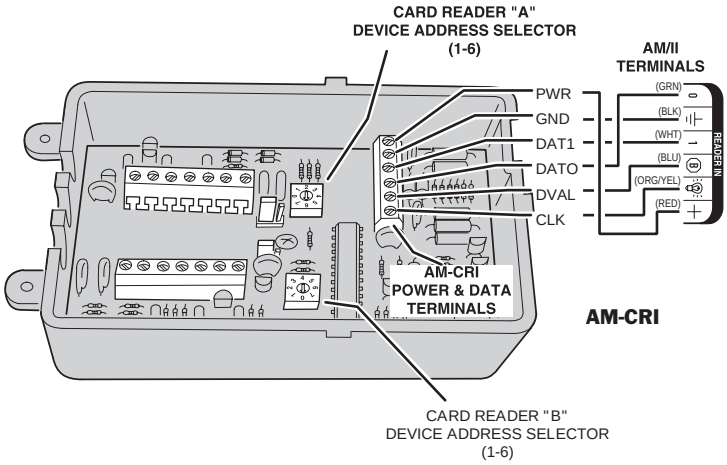
CARD READER INTERFACE

The Model AM-CRI card reader interface can support two card readers. It would be located between the card readers and the AM/II, usually near the card readers.

The card reader is connected to the READER IN terminals on the AM/II. Follow the instructions supplied with the keypad and the hook-up diagram.

Two rotary switches in the unit selects the device address for each card reader. They must be set to different numbers from 1-6, and also be different from any other remote accessory device.



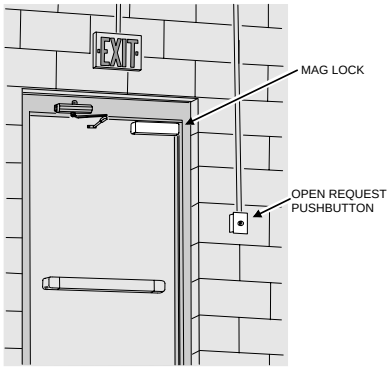


CONTROL INPUTS

Open Request

The open request terminals for relays A & B are available for connection to an external switch. When the switch closes to ground, if the relay channel is not locked closed, the relay will activate.

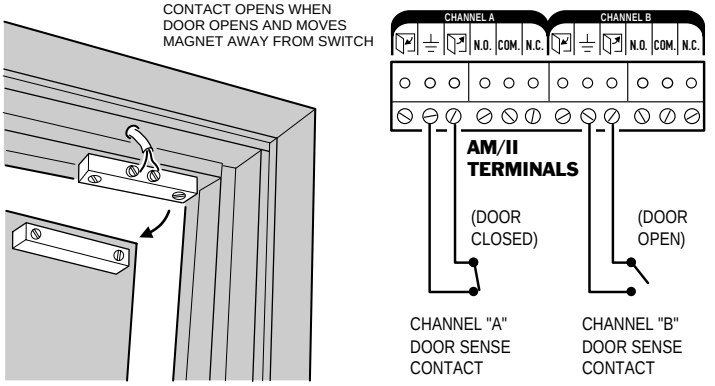
Common uses would be with a knox box, pushbutton, or key lock where someone would need to open the access portal from inside the controlled area.



Door Sense

The door sense terminals for relays A & B are used with normally closed door contacts. The contacts monitor the position of the access door. When the door opens, the contacts open.

Door sensing is required to use the door ajar and door relock features. Door sensing can detect when a door is propped open and cause an alarm relay to activate when the door is open longer than the door ajar time. Door sensing also detects when the door is closed, deactivating the control relay the moment the door closes.



RELAY OUTPUT CONNECTIONS

The AM/II provides four relay outputs. Each relay has isolated, dry contact, Form “C” (N/O & N/C) contacts rated at 3 amps 30 volts maximum.

Relay Operation Options

Relays can be programmed for access control, alarm contact shunting, alarm triggering, obstacle triggering and CCTV triggering. Relay wiring method depends on the option selected and the type of device controlled.

Control Relay Option

Relays programmed with the control option will activate when access is granted to access media. Relays set with the control option would be connected to access devices (door strikes, mag-locks, automatic operators, etc.).

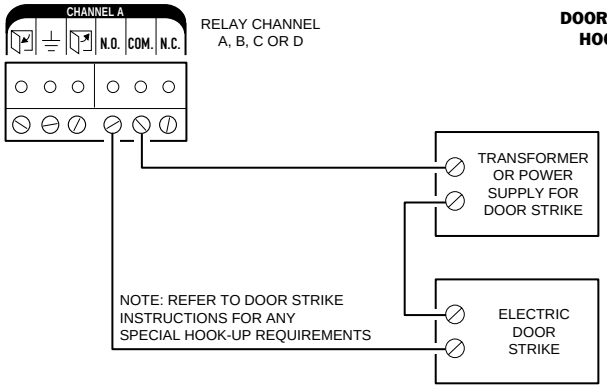
☞ *NOTE: Relay channels “A” & “B” are always set as control relays.*

Shunt Relay Option

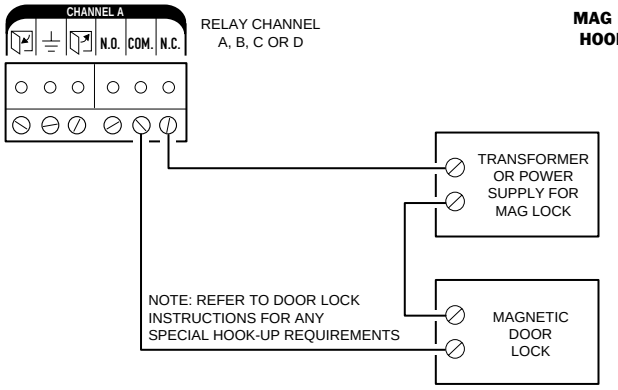
Relay channels “C” & “D” can be programmed for shunt operation. A shunt relay would be wired across a set of alarm contacts, shunting their operation, preventing the alarm from triggering when genuine access is granted. If the door or gate is forced open, without having access granted by the AM/II, the alarm would be triggered.

When programmed for shunt operation, relay channel “C” will mirror the activation of relay channel “A”. Relay channel “D” will mirror the activation of relay channel “B”.

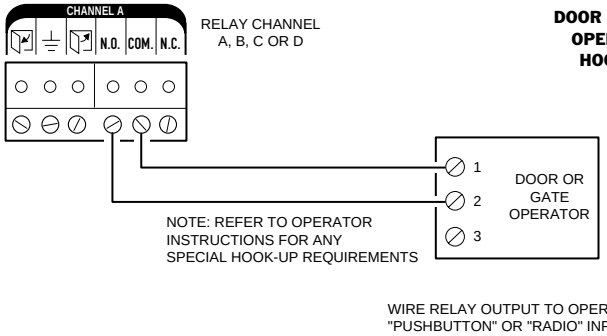
DOOR STRIKE HOOK-UP



MAG LOCK HOOK-UP

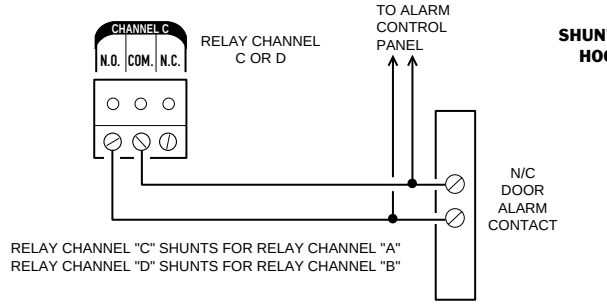


DOOR OR GATE OPERATOR HOOK-UP



WIRE RELAY OUTPUT TO OPERATOR
"PUSHBUTTON" OR "RADIO" INPUT

SHUNT RELAY HOOK-UP



WHEN RELAY CHANNEL "C" OR "D" ACTIVATES, IT SHUNTS THE
ALARM CONTACT PREVENTING THE ALARM FROM TRIGGERING
WHEN THE DOOR IS OPENED

Alarm Relay Option

Relay channels “C” & “D” can be programmed for alarm operation. An alarm relay would be wired to a noisemaker or to the loop input of an alarm control panel.

Relay channel “C” can function as an alarm relay for relay channel “A”. Relay channel “D” can function as an alarm relay for relay channel “B”. The door sense input must be wired for relay channel “A” and/or “B” for the alarm relay function to work.

If door “A” or “B” is held open longer than the Door Ajar Time time programmed, the alarm relay for the appropriate relay channel will activate.

Obstacle Relay Option

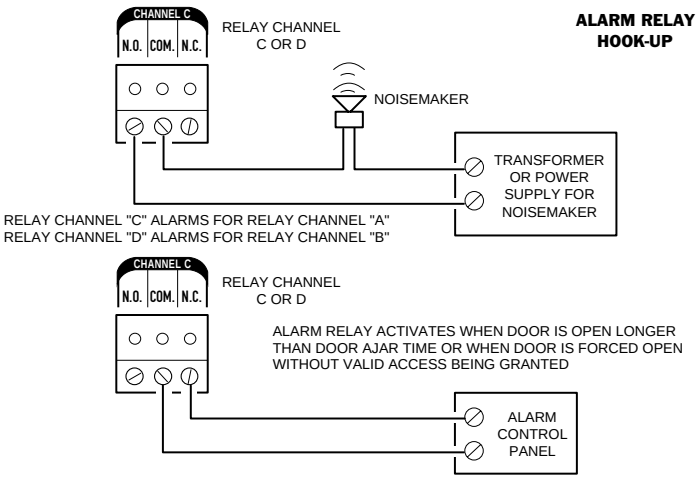
Relay channels “C” & “D” can function as obstacle relays when Model MGT obstacle transmitters are used. Relay channel “C” activates for MGT obstacle transmitter #1, relay channel “D” activates for MGT obstacle transmitter #2.

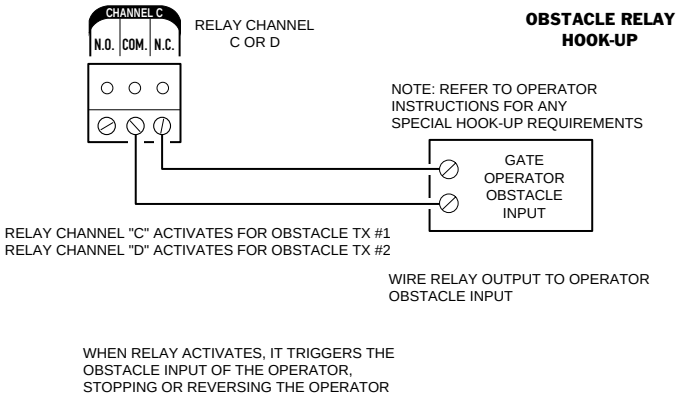
Obstacle relays are used to trigger obstacle inputs on automatic door and gate operators. Triggering the obstacle input will reverse or stop the operator.

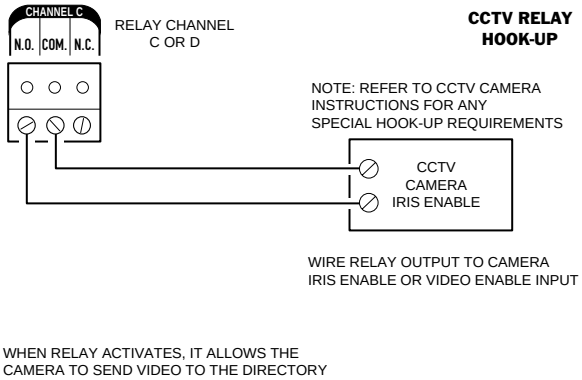
CCTV Relay Option

Relay channels “C” & “D” can function as CCTV relays. They can be used only when a Model AE-1 or AE-2 telephone entry module is installed with the AM/II.

When a telephone connection is made to a directory party, they can press the “5" digit on their telephone to activate the CCTV relay. A CCTV camera would activate to send a picture of the entry area to the directory party.







RS-232 PORT CONNECTIONS

The AM/II RS-232 port can be used to connect to a serial input line printer, a personal computer, modem or data terminal.

Printer Connections

☞ *NOTE: The installation of a printer is optional. The AM/II may be used without a printer if activity logging is not required.*

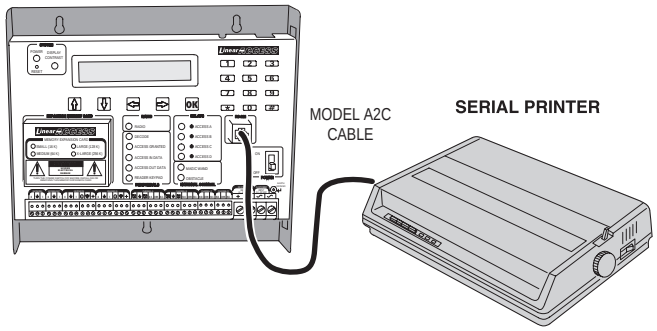
The AM/II can connect to virtually any standard personal computer printer that accepts a 9600 baud serial RS-232 input. Connecting a printer to the AM/II allows for a printed copy of each transmitter activation showing the transmitter number, time and date of activation as well as the various system reports. **Use the Model A2P cable to connect the AM/II to a printer.**

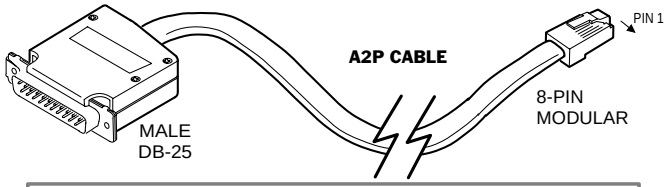
Personal computer printers contain switches for setting the printer's data format and options. The printer's switches must be set correctly to match the output of the AM/II before the printer will function properly. Refer to the specific printer's instruction manual for the location and possible settings of the printer's switches.

The printer may have additional options that may or may not be useful with the AM/II.

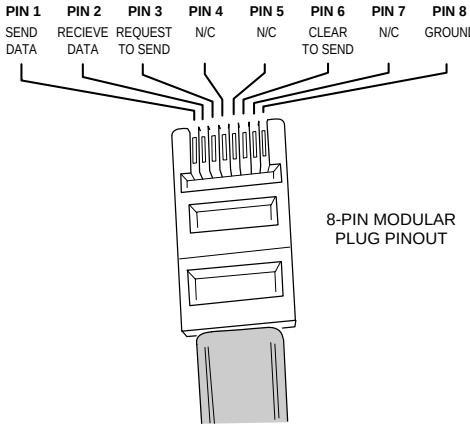
The printer options that must be set are:

- ✶ Baud Rate 9600
- ✶ 8 Data Bits
- ✶ No Parity
- ✶ 1 Stop Bit
- ✶ No Auto Line Feed after Carriage Return
- ✶ X-ON/X-OFF Data Flow Control

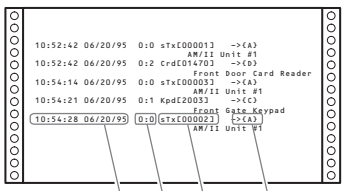




	SIGNAL	DB-25		8-PIN	SIGNAL	
	TD	2	→	2	RD	
PRINTER	RD	3	←	1	TD	AM/II
	GND	7	—	8	GND	
	DTR	20	→	6	CTS	



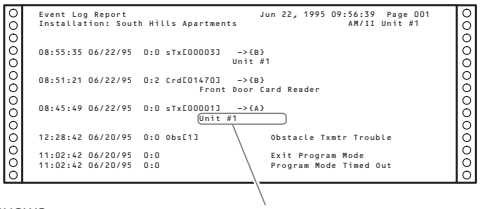
SAMPLE REAL-TIME EVENT PRINTOUT



REAL-TIME EVENT LOG PRINTS EACH EVENT AS IT HAPPENS

TOP LINE OF EVENT SHOWS:
TIME & DATE
MEDIA TYPE & ID#
DIRECTION OF ENTRY & RELAY LETTER
NETWORK ADDRESS : REMOTE DEVICE ADDRESS

SAMPLE STORED EVENT LOG



STORED EVENT LOG SHOWS ALL EVENTS FROM MOST RECENT TO OLDEST STORED EVENT

BOTTOM LINE OF EVENT SHOWS:
DEVICE NAME

Personal Computer and Data Terminal Connections

☞ *NOTE: The installation of a personal computer (PC) or data terminal for event logging and system programming is optional, but recommended. Programming the AM/II is much easier, especially when using names, with a PC or data terminal.*

The AM/II can connect to virtually any PC's serial port. Use the Model A2C-DB25 (25-pin) or A2C-DB9 (9-pin) cable to connect the AM/II to a computer.

When using a data terminal, connecting the cable and setting the terminal port options is all that's required. When using a PC, a communications program (AccessBase, Account Manager, Windows™ Terminal, Procomm™, Quick Link™, BitComm™, etc.) must be used to communicate with the AM/II.

The computer's software will have settings for the PC's port options. **The software port options must be set correctly to match the output of the AM/II before the PC software will function properly.** Refer to the specific software's instructions for details on how to set the port options.

The serial port (COM port) options that must be set are:

- ✶ Baud Rate 9600
- ✶ 8 Data Bits
- ✶ No Parity
- ✶ 1 Stop Bit
- ✶ X-ON/X-OFF Data Flow Control

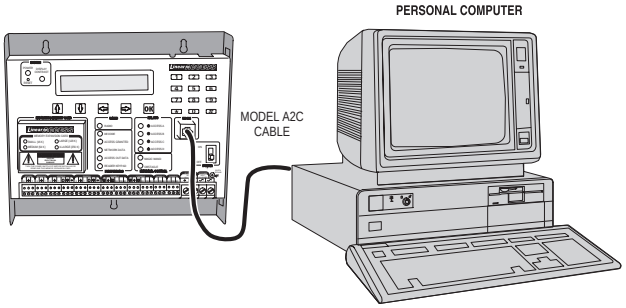
Setting the AM/II RS-232 port output to the "PRINTER" option will show the ongoing event log on the computer screen. Setting the AM/II RS-232 port output to the "TERMINAL" option will allow the computer to access the AM/II just like the keyboard on the AM/II. The only keyboard differences when using a PC or terminal to access the AM/II are:

- ✶ The ENTER key equals the AM/II's OK key.
- ✶ The ESCAPE (Esc) key is similar the AM/II's * (star) key. Press ESCAPE twice to enter program mode, once to jump back to the main menu.
- ✶ The A-Z & 0-9 keys are used for character inputs.
- ✶ Hold the CONTROL (Ctrl) key and press "Z" to exit programming.

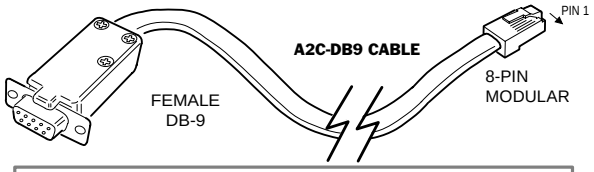
Modem Connections

☞ *NOTE: The installation of a modem is optional. It will allow remote programming of the AM/II.*

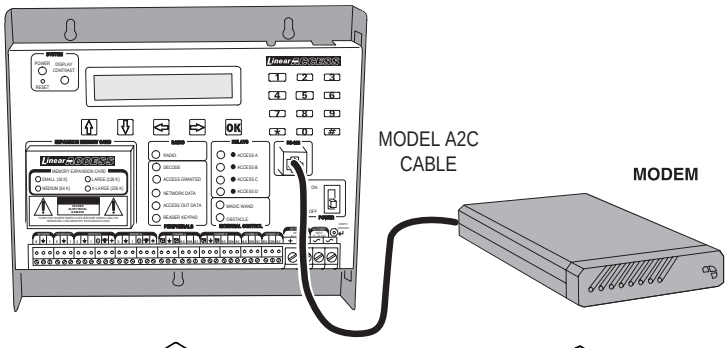
The AM/II can connect to most personal computer external modems. Use the Model A2M cable to connect the AM/II to a modem. Connection to a modem allows you to call the AM/II over the telephone with a personal computer and another modem. All of the same programming functions that can be performed locally can be made remotely, off-site. System reports and the event log can be retrieved remotely.

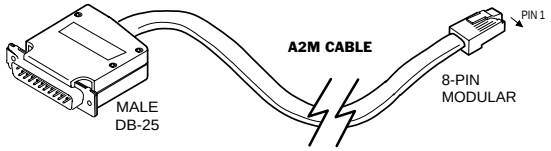


	SIGNAL	DB-25		8-PIN	SIGNAL	
	TD	2	→	2	RD	
COMPUTER	RD	3	←	1	TD	AM/II
	GND	7	—	8	GND	
	DTR	20	→	6	CTS	



	SIGNAL	DB-9		8-PIN	SIGNAL	
	TD	3	→	2	RD	
COMPUTER	RD	2	←	1	TD	AM/II
	GND	5	—	8	GND	
	DTR	4	→	6	CTS	
	DSR	6				
	CTS	8				
	RTS	7				





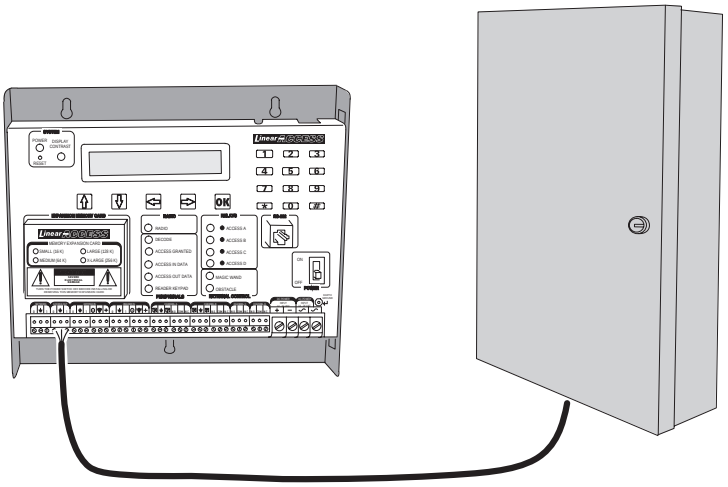
	SIGNAL	DB-25		8-PIN	SIGNAL	
	RD	3	→	2	RD	
MODEM	TD	2	←	1	TD	AM/II
	GND	7	—	8	GND	
	CTS	5	→	6	CTS	
	RTS	4	←	3	RTS	

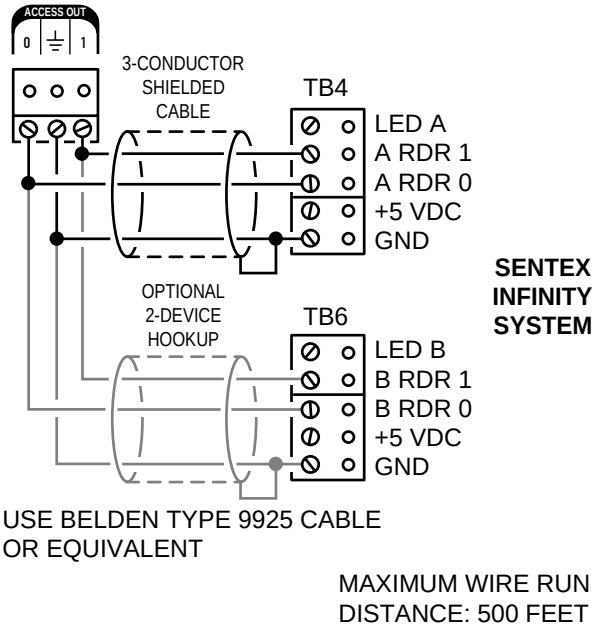
ACCESS OUT CONNECTIONS

Radio control can be added easily to Sentex Infinity and other systems. The AM/II can output the Sentex30, SecuraKey31, and Wiegand26 data formats through its ACCESS OUT terminals.

When connected, the AM/II output simulates a card reader input to the external access control panel. A few programming options must be set in the AM/II to configure the output to match the access control panel.

☞ *NOTE: Connection to an external access control panel is optional.*





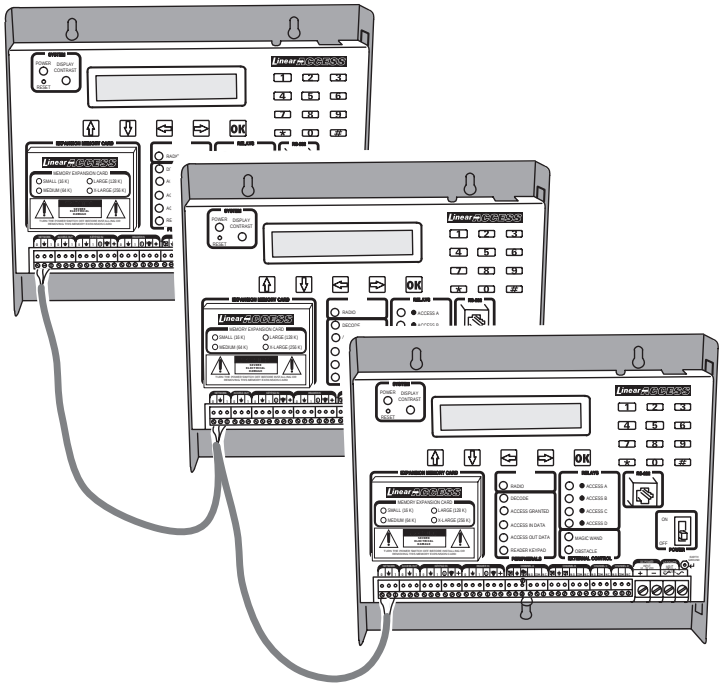
USE BELDEN TYPE 9925 CABLE
OR EQUIVALENT

MAXIMUM WIRE RUN
DISTANCE: 500 FEET

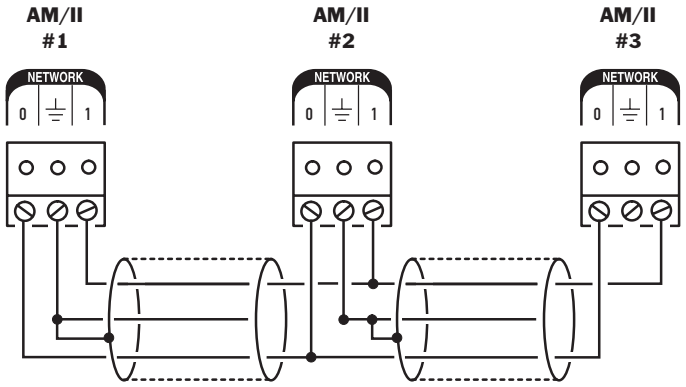
NETWORK CONNECTIONS

Up to eight AM/II's can be networked together allowing information sharing between the units. A common event log is retained for all of the networked units.

Each unit is interconnected with a two-wire RS-485 connection to the NETWORK terminals. Belden Type 9925 shielded cable is recommended for network connections.



UP TO 8 AM/II UNITS
CAN BE NETWORKED



USE BELDEN TYPE 9925
OR CAROL C0600 SHIELDED
CABLE OR EQUIVALENT

MAXIMUM WIRE RUN
DISTANCE: 4000 FEET

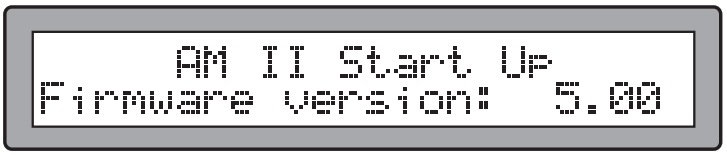
GROUND EACH SHIELD AT
ONE END ONLY

SYSTEM POWER-UP

First Time Power-up

Turn the POWER switch on. The factory loaded defaults are already installed in memory. Adjust the display contrast as desired.

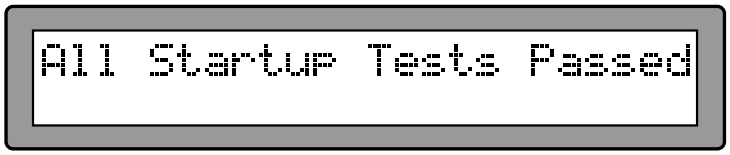
After programming, adjust the red RADIO RANGE knob next to the antenna to limit the maximum range of the receiver. Start with the knob fully counterclockwise, this will be minimum range. Adjust the range up as required by the installation. This can be determined during testing.



START UP DISPLAY SHOWING FIRMWARE VERSION

Internal Diagnostic Checks

The AM/II performs an automatic internal diagnostic check when the system is first powered up. The system checks itself to be sure everything is in order. The internal check takes about 5 seconds. The display will indicate that start-up is occurring, the firmware version number, the date of manufacture and the serial number. If all tests are good, the display will show “ALL STARTUP TESTS PASSED”.



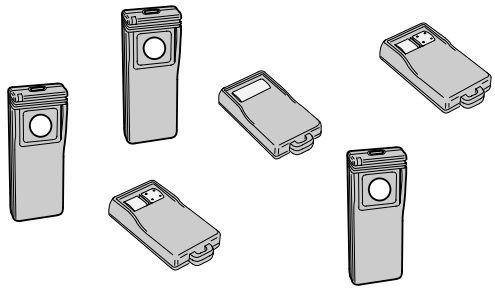
START UP DISPLAY SHOWING SUCCESSFUL TESTS

Watchdog Monitor

While the system is operating, an internal “watchdog” circuit monitors the system. If for some reason (lightning strike, etc.) the system is upset, the watchdog monitor will reset the system, restoring system integrity.

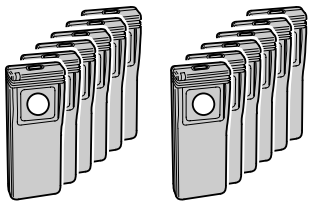
MEDIA ENCODING

All code data is stored in the non-volatile EEPROM memory module. Even with complete loss of all power, the AM/II will remember all of the media code data.



Transmitter Coding

There is no programming of transmitter codes or setting of dipswitches required to set up the system. Each transmitter is preset at the factory to a unique code. With over 1,000,000 codes available, the MegaCode format virtually eliminates any possibility of transmitter code duplication. Since the AM/II “learns” specific transmitter codes, no unauthorized person can gain access by reprogramming a transmitter.

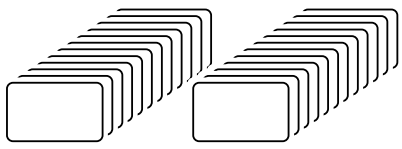


Block Coded Transmitters

Sequentially “block-coded” transmitters are available to speed installation and programming and simplify installation record keeping. The entire transmitter block can be programmed into the system by simply entering the first and last transmitter in the block.

Block transmitters are identified with two numbers:

1. A transmitter number in the range of 1-65,535 is printed on a label on the back of the transmitter.
2. A facility code in the range of 0-15 is printed on the block transmitters’ box.

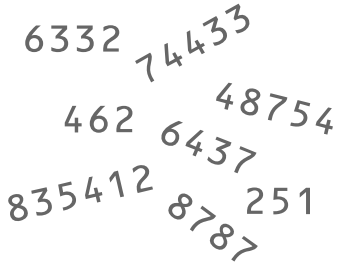


Block Coded Cards

Sequentially “block-coded” cards are available for use with card readers attached to Model AM-CRI card reader interface. The entire card block can be programmed into the system by simply entering the first and last card in the block.

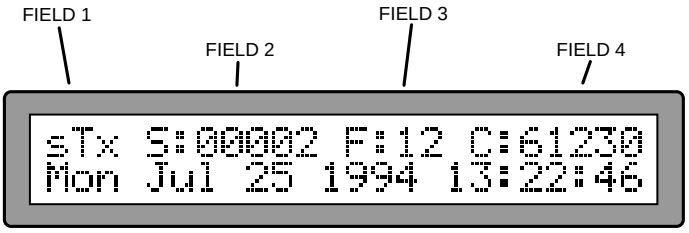
Keypad Entry Codes

Keypad entry codes are programmed one at a time.



DISPLAYS

When a transmitter is activated, the AM/II LCD display will show four “fields” of information about the transmitter and the transmitter’s system information.



FIELD 1: **Activation Type.** “sTx” = Single Transmitter
“bTx” = Block Transmitter
“uTx” = Un-learned Transmitter
“OB1” & “OB2” = Obstacle Transmitters one & two
“MW1 - MW8” = Magic Wand Transmitters one to eight
“KpadX” Remote Keypads (X=device number)
“CardX” Remote Card Reader (X=device number)
“RadoX” Remote Radio Receiver (X=device number)

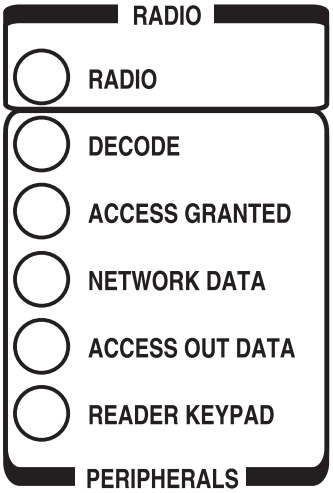
FIELD 2: **Sequence Number.** For single transmitters, this is the transmitter sequence number as assigned when the transmitter is learned by the system. (Field will be blank for MGT safety edge and Magic Wand transmitters.)

FIELD 3: Facility Code. With block coded transmitters, this number will be the same for all transmitters in the same block. With single transmitters this number can be ignored, it is derived from part of the internal code of the transmitter.

FIELD 4: Media Code. This is a numeric equivalent of the internal code programmed into the transmitters, the entry code or the card code.

Radio Indicator

The RADIO indicator displays the output of the built-in radio receiver. The visual display is used to determine when signals are “on-the-air” on the frequency that the radio is tuned to. It is normal for the RADIO indicator to flicker, showing the receiver responding to the ambient background radio noise. When a transmitter is triggered the RADIO indicator will light brightly, showing that the receiver is detecting the transmitter’s data. If the RADIO indicator flashes continuously, it is usually an indication of radio interference.



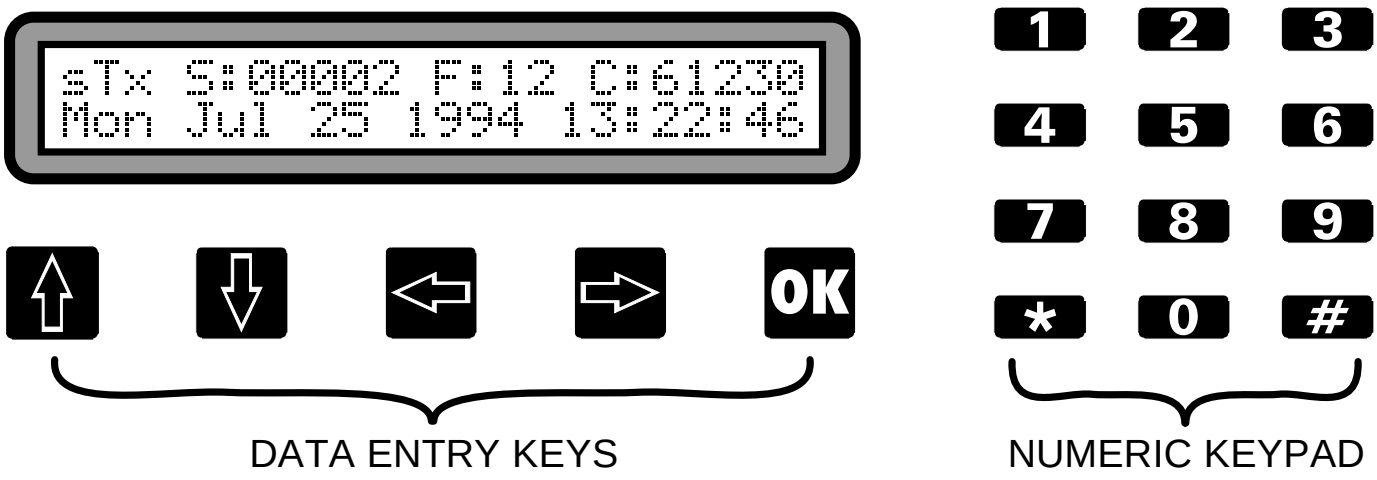
Decode Indicator

The DECODE indicator lights when a device sends the correct format data to the AM/II. This indicator signals that the control has decoded the data from the device correctly. The media code will be shown on the display. Even though a device is decoded, it will only activate an access output if it has been programmed into the AM/II and has not been suspended.

Access Granted Indicator

The ACCESS GRANTED indicator lights when all of the correct conditions are met by a device. The device must be decoded properly, it must send correct data, it must be programmed into the AM/II, meet the validation criteria and it must not be suspended from access.

KEYPAD FUNCTIONS



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 AM/II 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 AM/II 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.

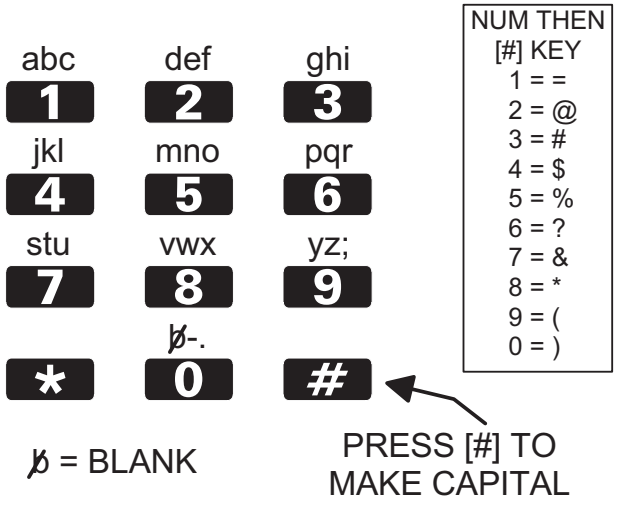
Pressing and holding the [#] key and pressing [1] will reset any trouble indications caused by supervised MGT safety edge transmitters. If an MGT transmitter sends a trouble signal for low battery, tamper or doesn't send status signals for six hours, the OBSTACLE indicator will flash and a trouble message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

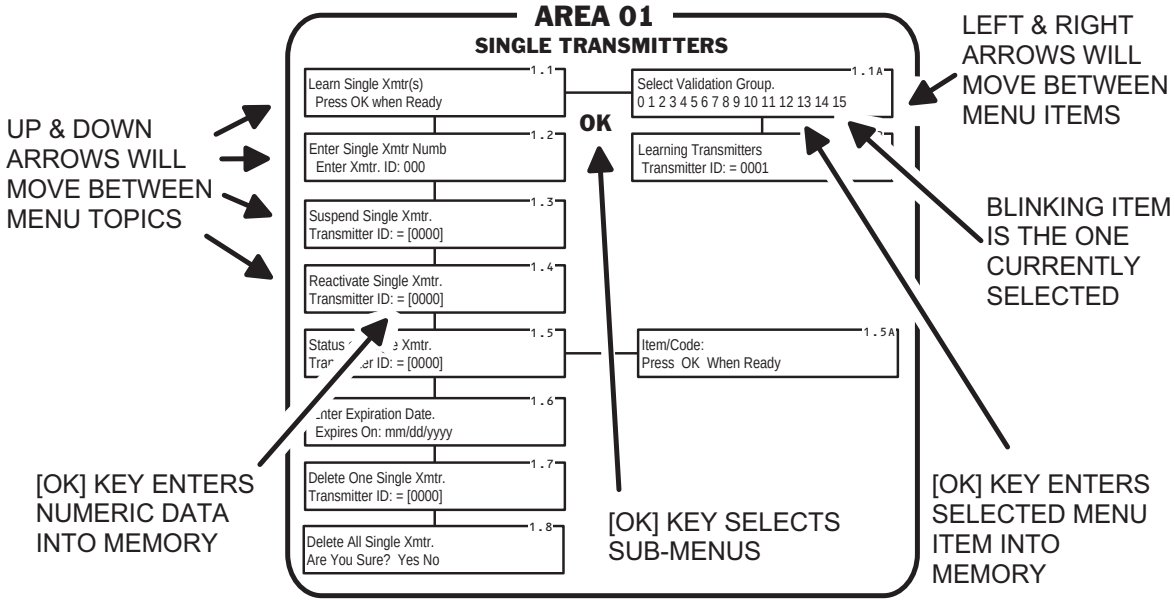
Alphanumeric Data Entry

The AM/II keypad has alphanumeric capabilites. 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.*





SYSTEM PROGRAMMING

Following are instructions for programming each Area of the AM/II memory. Only the Areas pertaining to the specific installation need to be programmed. Reference the following pages with the programming outline to complete the system programming.

The AM/II must be in Program Mode to perform any system programming. FOLLOW THE STEPS IN THE PROGRAMMING OUTLINE TO PROGRAM THE SYSTEM. Because many of the features of the AM/II are interrelated, certain areas must be programmed before other areas.

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 MENU TREES

AREA 01
SINGLE TRANSMITTERS

- 1.1 Learn Single Xmtr(s) Press OK when Ready
  - 1.1A Select Validation Group. 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
- 1.2 Enter Single Xmtr Numb Enter Xmtr. ID: 000
  - 1.1B Learning Transmitters Transmitter ID: = 0001
- 1.3 Suspend Single Xmtr. Transmitter ID: = [0000]
- 1.4 Reactivate Single Xmtr. Transmitter ID: = [0000]
- 1.5 Status of Single Xmtr. Transmitter ID: = [0000]
  - 1.5A Item/Code: Press OK When Ready
- 1.6 Enter Expiration Date. Expires On: mm/dd/yyyy
- 1.7 Delete One Single Xmtr. Transmitter ID: = [0000]

AREA 02
BLOCK TRANSMITTERS

- 2.1 Enter Block Xmtr(s). Press OK when Ready
  - 2.1A Enter Validation Group. 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
- 2.2 Enter Transmitter Numb Enter ID Number: 00000
  - 2.1B Enter Block Range Start:End 00000:00000
- 2.3 Suspend Block Xmtr. ID Number : [00000]
- 2.4 Reactivate Block Xmtr. ID Number : [00000]
- 2.5 Status of Block Xmtr. ID Number : [00000]
  - 2.5A Item/Code: Press OK When Ready
- 2.6 Delete All Block Xmtrs. Are You Sure? Yes No

AREA 03
OBSTACLE TRANSMITTERS

- 3.1 Which Obstacle Xmtr. OBTx1 OBTx2
- 3.2 Transmitter Name.
- 3.3 Learn Obstacle Xmtr. Press OK when Ready
  - 3.3A Learning Obstacle Xmtr. Learned ID = 00000
- 3.4 Delete Obstacle Xmtr. Press OK when Ready

AREA 04
MAGIC WAND TRANSMITTERS

- 4.1 Which MagicWand Xmtr. MW1 MW2 MW3 MW4 MW5 MW6 MW7 MW8
- 4.2 Transmitter Name.
- 4.3 Learn MagicWand Xmtr. Press OK when Ready.
  - 4.3A Learning MagicWand Xmtr. Learned ID = 00000
- 4.4 Delete MagicWand Xmtr. Press OK when Ready.

AREA 05
ENTRY CODES

- 5.1 Select Validation Group. 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
- 5.2 Enter Entry Code. Entry Code: ********
- 5.3 Suspend Entry Code. Entry Code: ********
- 5.4 Reactivate Entry Code. Entry Code: ********
- 5.5 Status of Entry Code. Entry Code: ********
- 5.6 Delete Single Entry Code Entry Code: ********
- 5.7 Delete All Entry Codes. Are You Sure? Yes No

AREA 06
BLOCK CARD CODES

- 6.1 Enter Block Cards Press OK when Ready
  - 6.1A Enter Validation Group. 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
- 6.2 Enter Card Number Enter ID Number: 00000
  - 6.1B Enter Block Range Start:End 00000:00000
- 6.3 Suspend Block Card. ID Number : [00000]
- 6.4 Reactivate Block Card. ID Number : [00000]
- 6.5 Status of Block Card. ID Number : [00000]
  - 6.5A Item/Code: Press OK When Ready
- 6.6 Delete All Block Cards. Are You Sure? Yes No

AREA 07
TELEPHONE ENTRY NUMBERS

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

AREA 11
BUTTON SCHEDULES

- 11.1 Channel A Valid Buttons. None Any Left Right Top Top&Lft Top&Rgt BtmLft BtmRgt
- 11.2 Channel B Valid Buttons. None Any Left Right Top Top&Lft Top&Rgt BtmLft BtmRgt
- 11.3 Channel C Valid Buttons. None Any Left Right Top Top&Lft Top&Rgt BtmLft BtmRgt
- 11.4 Channel D Valid Buttons. None Any Left Right Top Top&Lft Top&Rgt BtmLft BtmRgt

AREA 10
VALIDATION GROUPS

- 10.1 Validation Group [1-15]. Validation Group Num: 00
- 10.2 Door Schedule [0-15] Door Schedule Number
- 10.3 Choose First Time Zone Time Zone [0-15] 00
- 10.4 Choose Second Time Zone Time Zone [0-15] 00
- 10.5 Choose Third Time Zone Time Zone [0-15] 00
- 10.6 Choose Fourth Time Zone Time Zone [0-15] 00
- 10.7 Select Anti-Passback. None Timed

AREA 12
DOOR SCHEDULES

- 12.1 Which Door Sch. [1-15]. Door Schedule Number: 0
- 12.2 Select Valid Doors ABCD DS[1]: 0=No, 1=Yes: 1111

AREA 13
TIME ZONES

- 13.1 Which Time Zone [1-15] Time Zone Number: 00
- 13.2 Valid Days SMTWTFSH 0=No, 1=Yes: 11111111
- 13.3 Period 1 Begin/End Time Tz[01]: 00:00/00:00
- 13.4 Period 2 Begin/End Time Tz[01]: 00:00/00:00
- 13.5 Period 3 Begin/End Time Tz[01]: 00:00/00:00
- 13.6 Period 4 Begin/End Time Tz[01]: 00:00/00:00

AREA 20
TIME AND CALENDAR

20.1 STANDARD time hh:mm
13:33

20.2 Enter Date as mm/dd/yyyy
05/26/1995

20.3 Select Daylight Savings
Yes No

20.4 Downlight On/Off time.
On/Off: 00:00/00:00

20.5 Which Holiday [1-24]
Holiday Number: 00

20.6 Holiday Number[]: Date
Hol[01] Month/Day 00/00

20.7 Which Ex Holiday [1-24]
Holiday Number 00

20.8 Expiring Holiday XX
MM/DD/YYYY 00/00/0000

AREA 21
RELAY SETUP

21.1 Which Relay to Program.
CH-A CH-B CH-C CH-D

21.2 Select Operation:
Control Shunt Alarm Obstacle CCTV

21.3 Select Timing Mode:
Time Pulse Toggle Latch

21.4 Enter Activation Time:
Time in seconds: 00000

21.5 Assign Time Zone [1]:
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

21.6 Assign Time Zone [2]:
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

21.7 Assign Time Zone [3]:
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

21.8 Assign Time Zone [4]:
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

21.9 Enter Channel Name

21.10 Assign Telephone Digit
None 1 2 3 4 5 6 7 8 9

21.11 Channel Control
Normal Activate LockOpen LockClosed

AREA 23
FACILITY/SITE CODES

23.1 System Site Code
Site Code: 00000

23.2 Txmtr Facility Code
Fac Code: 000

23.3 Card Facility Code 1
Fac Code [1]: 000

23.4 Card Facility Code 2
Fac Code [2]: 000

23.5 Card Facility Code 3
Fac Code [3]: 000

23.6 Card Facility Code 4
Fac Code [4]: 000

AREA 22
SYSTEM SETUP

22.1 Installation Name

22.2 AM/II Name

22.3 Retained Event Log
None 500 1000 2000 5000 Max

22.4 Antipassback Time
None 1min 2min 3min 4min

22.5 Integral Radio Direction
None In Out Neutral

22.6 Network Address
0ff 1 2 3 4 5 6 7 8

22.7 Keypad Strikes and Out
Strikes Allowed: 0

22.8 Door Ajar Time
Open Time Seconds: 000

22.9 Local Program Password
Password: 123456

22.10 Remote Program Password
Password: 123456

22.11 Priority Access Password
Password: 123456

AREA 24
RS-232 PORT SETUP

24.1 RS-232 Port Device
Off Printer Modem Terminal PC

24.2 Modem Init. String 1
ATH0&F0F8E0&K0&Q0&D0&W0

24.3 Modem Init. String 2
ATH0&FS0=0E0&N6&H0Y1&W1

24.4 Modem Termination String
ATH0

AREA 25
CONFIGURE REMOTE DEVICES

25.1 Which Remote Device
DV1 DV2 DV3 DV4 DV5 DV6 DV7

25.2 Type of Device
None Keypad CardRdr Radio Relay Phone SecuraKey31

25.3 Assign Control Channel
CH-A CH-B CH-C CH-D Buttons

25.4 Access Direction
None In Out Neutral

25.5 Enable Options ABCD
0=No, 1=Yes: 1111

25.6 Enter Name for Device

AREA 26
CONFIGURE ACCESS OUT

26.1 Access Out Format
Off Wiegand26 Sentex30 SecuraKey31

26.2 Access Out Mode
Validation Pass-TXID Pass-SEQID

26.3 Access Out Facility Code
Facility Code: 00000

26.4 Access Out Button Offset
Off On

AREA 27
TELEPHONE ENTRY SETUP

27.1 Directory Code Length
1 2 3 4

27.2 Directory Begins At
Beginning(A) Middle(M)

27.3 PBX Dialing Digit
Off 9 8 7 6 5 4 3 2 1 0

27.4 Set Talk Time
Talk Time Seconds: 060

27.5 Assign Postal Key Door
CH-A CH-B CH-C CH-D Buttons

27.6 Sort Directory Names Now
Yes No

27.7 Edit Display Messages
Message Number: 00

27.8 Edit Display Message

27.9 Max Directory Entries
Maximum Entries: 00000

27.10 Delete All Tlph. Entries
Yes No

27.11 Adjust Hybrid Level
Press OK To Start/Stop

27.12 Display Brightness
Dim Low Med High

27.13 Priority Access ABCD
0=No 1=Yes 0000

AREA 29
MEMORY MODULE UTILITIES

29.1 Send Memory Module
Yes No

29.2 Receive Memory Module
Yes No

29.3 Copy Memory Module
Off SendMM ReceiveMM

29.4 Print Memory Module
Yes No

29.5 Initialize Memory Module
Are You Sure? Yes No

AREA 30
SYSTEM REPORTS/UTILITIES

30.1 Print System Report
Yes No

30.2 Print Single Xmtr Report
Yes No

30.3 Print Block Xmtr Report
Yes No

30.4 Print Entry Code Report
Yes No

30.5 Print Block Card Report
Yes No

30.6 Print Tele/Entry Report
Yes No

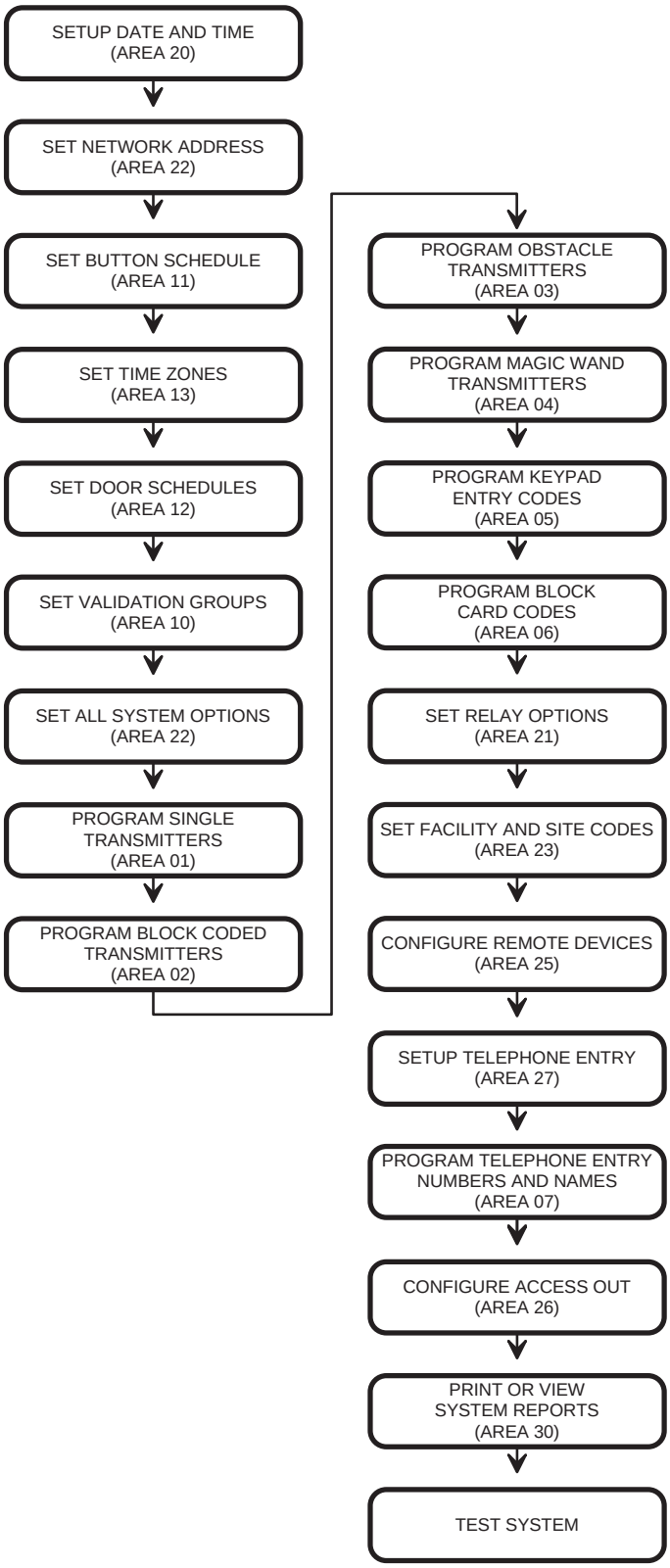
30.7 EvntLog Rpt Start Date
00/00/1990

30.8 Print Event Log Report
All SinceLastRpt FromDate

PROGRAMMING OUTLINE

The following outline is intended to guide you through the programming of an AM/II system. The AM/II 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.

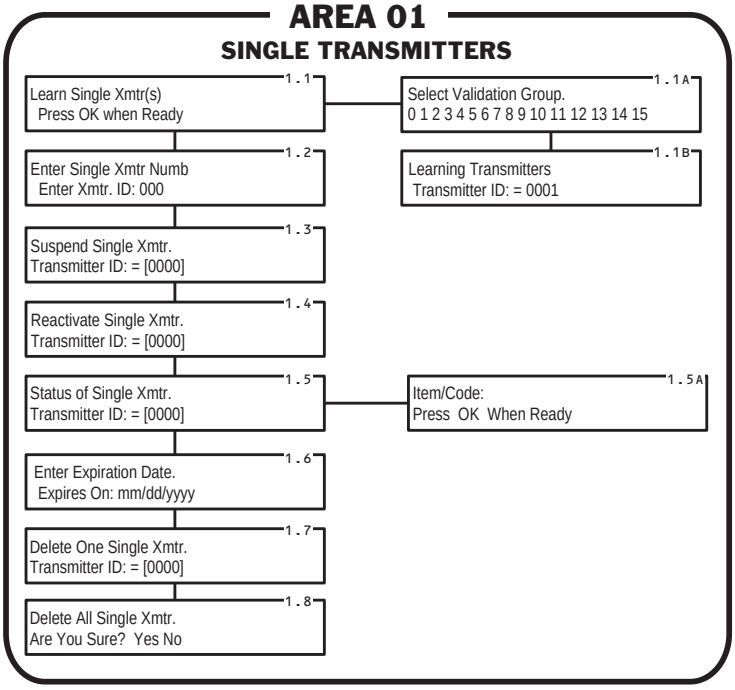
1. Install and connect the AM/II as previously described.
2. Fill out the Programming Worksheet (P/N 211677).
3. Enter program mode (Hold the * key for 5 seconds or press Esc on programming computer).
4. Set date and time (standard time) in Time and Calendar Area 20.
5. If the system is going to be networked, Area 22 Network Address must be set. (If AccessBase is used, this is the only local programing step needed.)
6. Determine the button configurations and enter them in Button Schedule Area 11.
7. Program any time zones in Time Zone Area 13.
8. Program the door access in Door Schedules Area 12.
9. Program the validation groups in Validation Group Area 10.
10. Set all additional system options in the System Setup Area 22.
11. Program all single transmitters using Single Transmitters Area 01.
12. Program all block coded transmitters using Block Area 02.
13. Program all MGT safety edge obstacle transmitters using Obstacle Transmitter Area 03.
14. Program all “MagicWand” transmitters using Magic Wand Xmtr Area 04.
15. Program all keypad entry codes using Entry Code Area 05.
16. Program all block card codes using Block Card Codes Area 06.
17. Program the relay output options using Relay Setup Area 21.
18. Program the facility and site codes (if used) using Facility/Site Codes Area 23.
19. Set any remote accessory device address and options using Configure Remote Devices Area 25.
20. If using the Model AE-1 or AE-2 telephone entry module, program the telephone entry settings using Telephone Entry Setup Area 27.
21. If using the Model AE-1 or AE-2 telephone entry module, program the telephone and directory numbers and names using Telephone Entry Numbers Area 07.
22. Setup the ACCESS OUT terminals if connecting to an external access control panel using the Configure Access Out Area 26.
23. Examine the system, single transmitter, block transmitter, entry code and block card reports for a system programming overview. Use the System Reports/Utilities Area 30 to view (using a terminal, computer or printer) the reports.
24. Test the system and adjust the red RADIO RANGE knob to determine the optimum range of the receiver.



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

❶ Use [⇑] or [⇓] to scroll to "Learn Single Xmtr(s)" and press [OK].
❷ Use [⇐] or [⇒] to choose a validation group for the transmitter. Press [OK] when desired selection is blinking.
❸ 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

❶ Use [⇑] or [⇓] to scroll to "Enter Single Xmtr Numb".
❷ Enter the transmitter ID# to suspend and press [OK].
❸ Use [⇑] or [⇓] to select "Suspend Single Xmtr" and press [OK].

To suspend additional transmitters, repeat Steps 1-3.

Reactivating Single Transmitters

❶ Use [⇑] or [⇓] to scroll to "Enter Single Xmtr Numb".
❷ Enter the transmitter ID# to reactivate and press [OK].
❸ Use [⇑] or [⇓] to select "Reactivate Single Xmtr." and press [OK].

To reactivate additional transmitters, repeat Steps 1-3.

Status of Single Transmitters

❶ Use [⇑] or [⇓] to scroll to "Enter Single Xmtr Numb".
❷ Enter the transmitter ID# for status and press [OK].
❸ Use [⇑] or [⇓] to select "Status of Single Xmtr." and press [OK].

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

Deleting One Single Transmitter

❶ Use [⇑] or [⇓] to scroll to "Enter Single Xmtr Numb".
❷ Enter the transmitter ID# to delete and press [OK].
❸ Use [⇑] or [⇓] to select "Delete Single Xmtr." and press [OK].

To delete additional transmitters, repeat Steps 1-3.

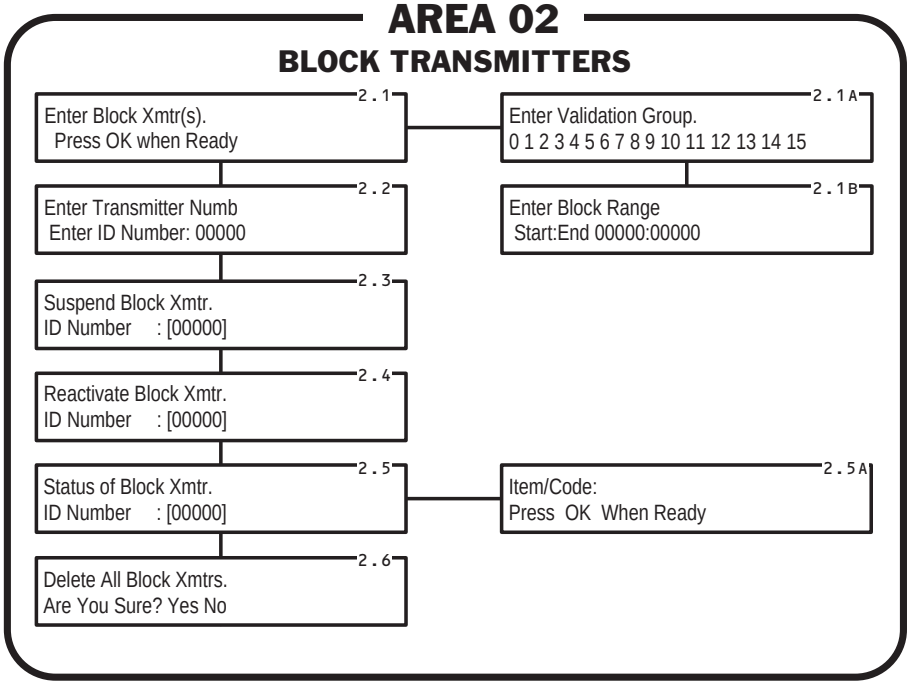
Deleting All Single Transmitters

❶ Use [⇑] or [⇓] to scroll to "Delete All Single Xmtr."
❷ Use the [⇐] and [⇒] keys to select "YES".
❸ Press [OK] to delete **all** single transmitter's from the system.

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

❶ Use [⇑] or [⇓] to scroll to "Enter Block Xmtr(s)".
❷ Use [⇐] or [⇒] to choose a validation group for the transmitter block. Press [OK] when desired selection is blinking.
❸ 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

❶ Use [⇑] or [⇓] to scroll to "Enter Transmitter Numb".
❷ Enter the transmitter ID# to suspend and press [OK].
❸ Use [⇑] or [⇓] to select "Suspend Block Xmtr" and press [OK].

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

Reactivating Block Transmitters

❶ Use [⇑] or [⇓] to scroll to "Enter Transmitter Numb".
❷ Enter the transmitter ID# to reactivate and press [OK].
❸ Use [⇑] or [⇓] to select "Reactivate Block Xmtr." and press [OK].

To reactivate additional transmitters, repeat Steps 1 & 2.

Status of Block Transmitters

❶ Use [⇑] or [⇓] to scroll to "Enter Transmitter Numb".
❷ Enter the transmitter ID# for status and press [OK].
❸ Use [⇑] or [⇓] to select "Status of Block Xmtr." and press [OK].

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

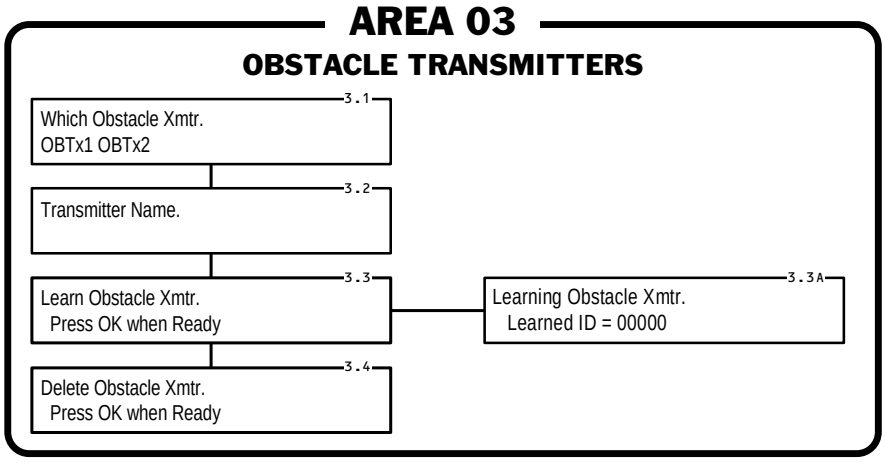
Deleting All Block Transmitters

❶ Use [⇑] or [⇓] to scroll to "Delete All Block Xmtrs"
❷ Use the [⇐] and [⇒] keys to select "YES".
❸ Press [OK] to delete **all** block transmitter's from the system.

AREA 03

OBSTACLE TRANSMITTERS

Area 03 is used to enter, delete and define names for Model MGT obstacle transmitters.



Each of the following activities are performed in programming Area 03. From the main menu, use [⇑], [⇓] or enter "03" on the keypad to scroll to "Obstacle Transmitter(s), Enter Program Area 03" and press [OK]. Press [✱] when finished to return to the main menu.

Naming Obstacle Transmitters

❶ Use [⇑] or [⇓] to scroll to "Which Obstacle Xmtr".
❷ Use [⇐] or [⇒] to select "OBTx1" or "OBTx2" (obstacle transmitter 1 for Channel C, obstacle transmitter 2 for Channel D). Press [OK] when desired selection is blinking.
❸ Enter the transmitter name and press [OK].

To name the other obstacle transmitter, repeat Steps 1-3.

Learning Obstacle Transmitters

❶ Use [⇑] or [⇓] to scroll to "Which Obstacle Xmtr".
❷ Use [⇐] or [⇒] to select "OBTx1" or "OBTx2" (obstacle transmitter 1 for Channel C, obstacle transmitter 2 for Channel D). Press [OK] when desired selection is blinking.
❸ Use [⇑] or [⇓] to scroll to "Learn Obstacle Xmtr." and press [OK].
❹ Activate MGT obstacle transmitter, display will show the learned ID#.

To learn the other obstacle transmitter, repeat Steps 1-4.

Deleting Obstacle Transmitters

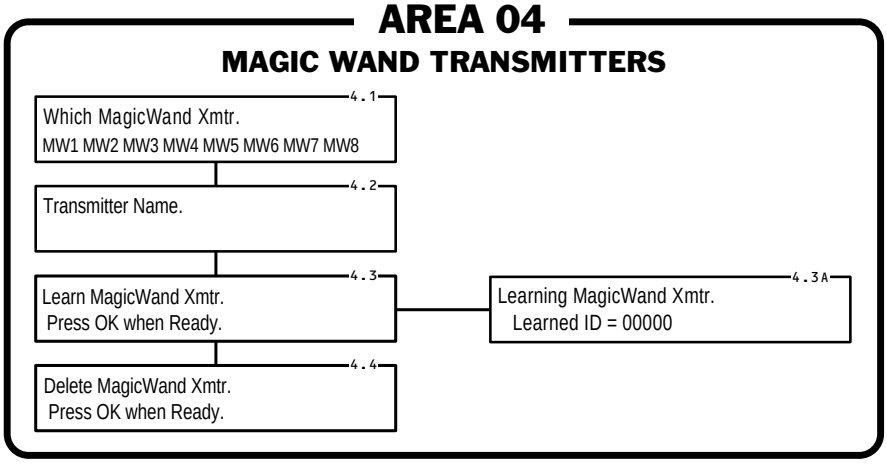
❶ Use [⇑] or [⇓] to scroll to "Which Obstacle Xmtr".
❷ Use [⇐] or [⇒] to select "OBTx1" or "OBTx2" (obstacle transmitter 1 for Channel C, obstacle transmitter 2 for Channel D). Press [OK] when desired selection is blinking.
❸ Use [⇑] or [⇓] to scroll to "Delete Obstacle Xmtr." and press [OK].

To delete the other obstacle transmitter, repeat Steps 1-3.

AREA 04

MAGIC WAND TRANSMITTERS

Area 04 is used to enter, delete and define names for Model MDT-4 transmitters used as "magic wands" by maintenance personnel.



Each of the following activities are performed in programming Area 04. From the main menu, use [⇑], [⇓] or enter "04" on the keypad to scroll to "Magic Wand Xmtr(s), Enter Program Area 04" and press [OK]. Press [✱] when finished to return to the main menu.

Naming Magic Wand Transmitters

❶ Use [⇑] or [⇓] to scroll to "Which MagicWand Xmtr".
❷ Use the [⇐] and [⇒] keys to choose "MW1 MW2 MW3 MW4 MW5 MW6 MW7 MW8" for Magic Wand transmitter 1-8. Press [OK] when desired selection is blinking.
❸ Enter a name for the selected transmitter and press [OK].

To name additional transmitters, repeat Steps 1-3.

Learning Magic Wand Transmitters

❶ Use [⇑] or [⇓] to scroll to "Which MagicWand Xmtr".
❷ Use the [⇐] and [⇒] keys to choose "MW1 MW2 MW3 MW4 MW5 MW6 MW7 MW8" for Magic Wand transmitter 1-8. Press [OK] when desired selection is blinking.
❸ Use [⇑] or [⇓] to scroll to "Learn MagicWand Xmtr" and press [OK].
❹ Activate the MDT-4 transmitter by pressing any transmitter button, display will show the learned ID number.

To learn additional Magic Wand transmitters, repeat Steps 1-4.

Deleting Magic Wand Transmitters

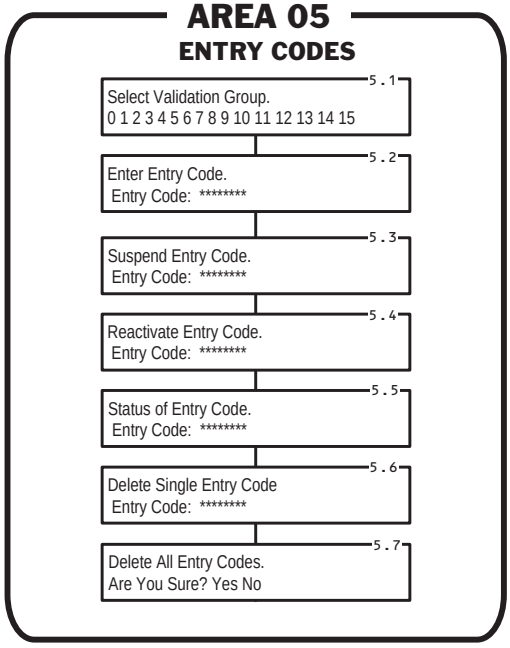
❶ Use [⇑] or [⇓] to scroll to "Which MagicWand Xmtr".
❷ Use the [⇐] and [⇒] keys to choose "MW1 MW2 MW3 MW4 MW5 MW6 MW7 MW8" for Magic Wand transmitter 1-8. Press [OK] when desired selection is blinking.
❸ Use [⇑] or [⇓] to scroll to "Delete MagicWand Xmtr" and press [OK].

To delete additional magic wand transmitters, repeat Steps 1-3.

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.*

❶ Use [⇑] or [⇓] to scroll to "Select Validation Group".
❷ Use [⇐] or [⇒] to choose a validation group for the entry code. Press [OK] when desired selection is blinking.
❸ 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

❶ Use [⇑] or [⇓] to scroll to "Suspend Entry Code".
❷ Enter the entry code to suspend and press [OK].

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

Reactivating Entry Codes

❶ Use [⇑] or [⇓] to scroll to "Reactivate Entry Code".
❷ Enter the entry code to reactivate and press [OK].

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

Status of Entry Codes

❶ Use [⇑] or [⇓] to scroll to "Status of Entry Code".
❷ 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

❶ Use [⇑] or [⇓] to scroll to "Delete Single Entry Code".
❷ Enter the entry code to delete and press [OK].

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

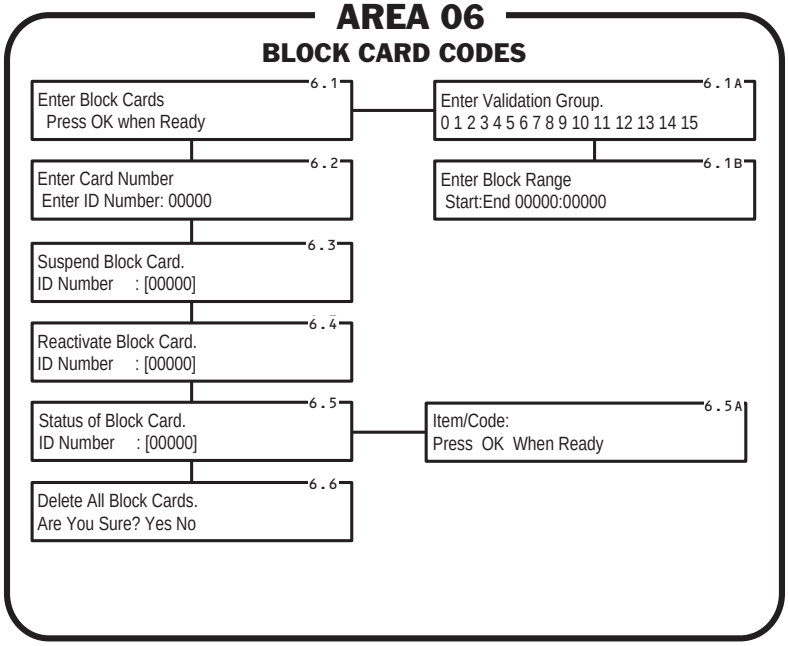
Deleting All Entry Codes

❶ Use [⇑] or [⇓] to scroll to "Delete All Entry Codes".
❷ Use [⇐] or [⇒] to select "YES".
❸ Press [OK] to delete **all** entry codes from the system.

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

❶ Use [⇑] or [⇓] to scroll to "Enter Block Cards".
❷ Use [⇐] or [⇒] to choose a validation group for the transmitter block. Press [OK] when desired selection is blinking.
❸ 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

❶ Use [⇑] or [⇓] to scroll to "Enter Card Number".
❷ Enter the card number to suspend and press [OK].
❸ Use [⇑] or [⇓] to select "Suspend Block Card" and press [OK].

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

Reactivating Block Card Codes

❶ Use [⇑] or [⇓] to scroll to "Enter Card Number".
❷ Enter the card number to reactivate and press [OK].
❸ Use [⇑] or [⇓] to select "Reactivate Block Card" and press [OK].

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

Status of Block Card Codes

❶ Use [⇑] or [⇓] to scroll to "Enter Card Number".
❷ Enter the card number for status and press [OK].
❸ 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.

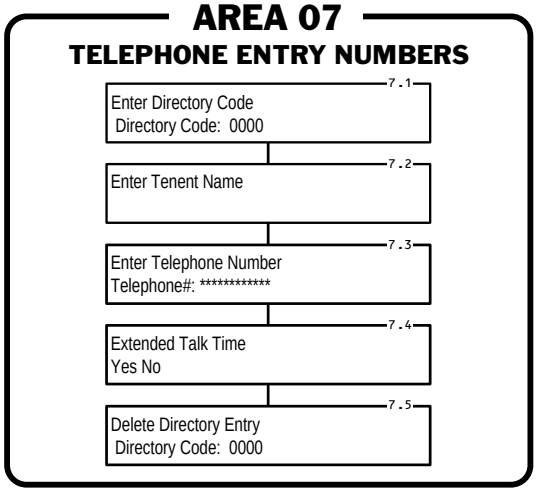
Deleting All Block Card Codes

❶ Use [⇑] or [⇓] to scroll to "Delete All Block Cards"
❷ Use the [⇐] and [⇒] keys to select "YES".
❸ Press [OK] to delete **all** block card codes from the system.

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. (A Model AE-1 or AE-2 telephone entry module is required to use these functions.)



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.

☞ *NOTE: The AE-1 or AE-2 Telephone Entry Module must be installed to use these functions.*

Entering Tenant Names & Numbers

❶ Use [⇑] or [⇓] to scroll to "Enter Directory Code".
❷ Enter the tenant's directory code number and press [OK].
❸ Enter the tenant's name (up to 24 characters, but only the first 16 (AE-1) and the first 20 (AE-2) can be displayed on the current models), and press [OK].
❹ Enter the tenant's telephone number and press [OK].
❺ Use [⇐] or [⇒] to choose "YES" or "NO" for "Extended Talk Time". Press [OK] when the desired selection is blinking.

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

Deleting Directory Entries

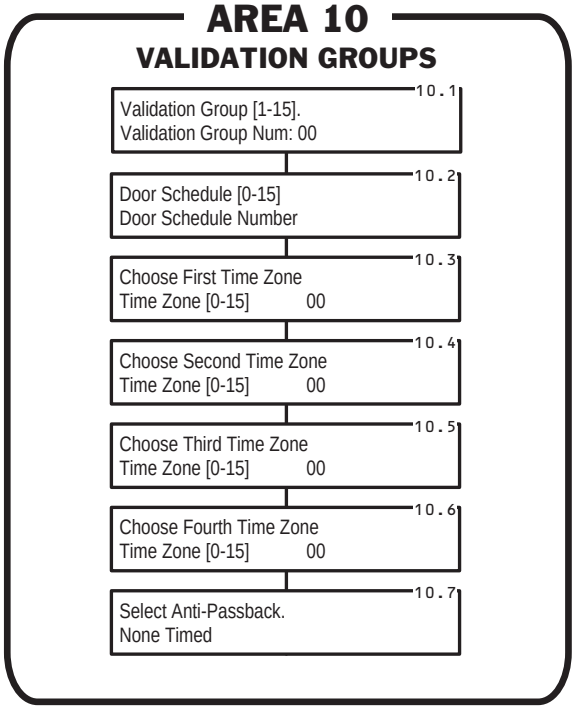
❶ Use [⇑] or [⇓] to scroll to "Enter Directory Code".
❷ Enter the tenant's directory code number to delete and press [OK].

To delete additional tenant entries, repeat Steps 1 & 2.

AREA 10

VALIDATION GROUPS

Area 10 is used to program door schedules, time zones and anti-passback selection for each of the 15 validation groups.



Each of the following activities are performed in programming Area 10. From the main menu, use [⇑], [⇓] or enter "10" on the keypad to scroll to "Validation Groups, Enter Program Area 10" and press [OK]. Press [✱] when finished to return to the main menu.

☞ *NOTE: Door schedules, time zones and button schedule should be set before programming the validation groups. When a validation group is programmed, it aquires the button schedule that is currently set.*

Configuring Validation Groups

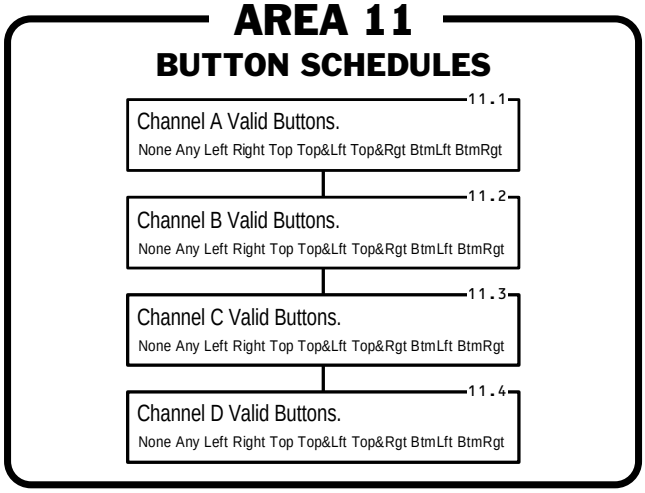
❶ Use [⇑] or [⇓] to scroll to "Validation Group [1-15]".
❷ Enter the number of the validation group to program and press [OK].
❸ Unit displays: "Door Schedule [0-15]". Enter 0-7 to select a door schedule for the validation group selected and press [OK]. (Door schedule 0 allows access to all four relay channels.)
❹ Unit displays: "Which Time Zone [0-15]". Enter 0-15 to select a time zone for the validation group selected and press [OK]. (Time zone 0 allows access at any time.)
❺ Use [⇐] or [⇒] to choose "None" or "Timed" for "Select Anti-Passback" for the validation group selected. When the desired selection is blinking, press [OK].

To program additional validation groups, repeat Steps 1-5.

AREA 11

BUTTON SCHEDULES

Area 11 is used to program which transmitter buttons activate which relay channel. When a validation group is programmed, it will acquire the current button schedule.



Each of the following activities are performed in programming Area 11. From the main menu, use [⇑], [⇓] or enter "11" on the keypad to scroll to "Button Schedule, Enter Program Area 11" and press [OK]. Press [✱] when finished to return to the main menu.

☞ *NOTE: Set the button schedule before programming any validation groups. When validation groups are programmed, they aquire the current button schedule.*

Setting the Channel "A" Button Schedule

❶ Use [⇑] or [⇓] to scroll to "Channel A Valid Buttons"
❷ Use [⇐] or [⇒] to choose which transmitter button(s) will activate relay channel "A". Press [OK] when the desired selection is blinking.

Setting the Channel "B" Button Schedule

❶ Use [⇑] or [⇓] to scroll to "Channel B Valid Buttons"
❷ Use [⇐] or [⇒] to choose which transmitter button(s) will activate relay channel "B". Press [OK] when the desired selection is blinking.

Setting the Channel "C" Button Schedule

❶ Use [⇑] or [⇓] to scroll to "Channel C Valid Buttons"
❷ Use [⇐] or [⇒] to choose which transmitter button(s) will activate relay channel "C". Press [OK] when the desired selection is blinking.

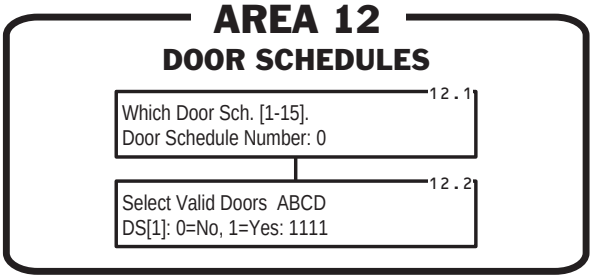
Setting the Channel "D" Button Schedule

❶ Use [⇑] or [⇓] to scroll to "Channel D Valid Buttons"
❷ Use [⇐] or [⇒] to choose which transmitter button(s) will activate relay channel "D". Press [OK] when the desired selection is blinking.

AREA 12

DOOR SCHEDULES

Area 12 is used to program which of the four relay channels can be activated by each of the fifteen door schedules. Each validation group can use one of the fifteen door schedules.



Each of the following activities are performed in programming Area 12. From the main menu, use [⇑], [⇓] or enter “12” on the keypad to scroll to “Door Schedule, Enter Program Area 12” and press [OK]. Press [✱] when finished to return to the main menu.

Setting the Door Schedules

❶ Use [⇑] or [⇓] to scroll to “Which Door Sch. [1-15]”. Enter 1-15 and press [OK].

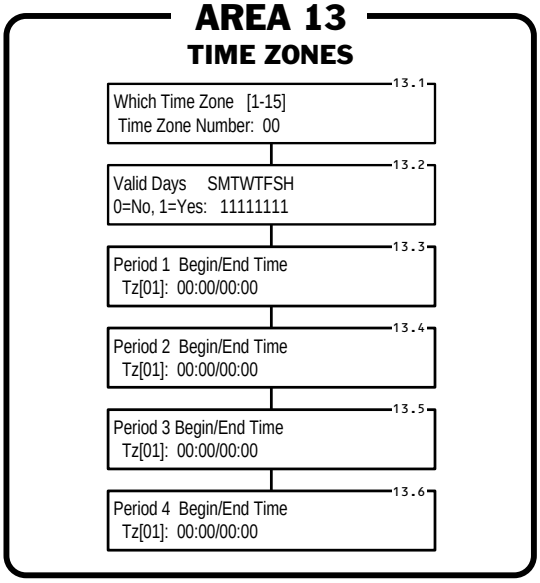
❷ Each door schedule has selectors for relay channels A, B, C & D.
0 = NO (door schedule cannot activate relay channel)
1 = YES (door schedule can activate relay channel)
Use [⇐] or [⇒] to choose which selector to change and enter a “0” to disable or “1” to enable the relay access for that door schedule. Press [OK] when finished.

To set more door schedules, repeat Steps 1 & 2.

AREA 13

TIME ZONES

Area 13 is used to program the 15 time zones. Days of operation, four time periods and a holiday enable can be programmed for each time zone. Each validation group can use one of the 15 time zones.



Each of the following activities are performed in programming Area 13. From the main menu, use [⇑], [⇓] or enter "13" on the keypad to scroll to "Time Zones, Enter Program Area 13" and press [OK]. Press [✱] when finished to return to the main menu.

Setting the Time Zones

❶ Use [⇑] or [⇓] to scroll to "Which Time Zone [1-15]".

❷ Enter the number of the time zone to program and press [OK].

❸ Unit displays: "Valid Days SMTWTFSH"
Each time zone has selectors for active days of the week and holidays.
0 = NO (time zone cannot activate any relays on this day)
1 = YES (time zone can activate relays on this day)
Use [⇐] or [⇒] to choose which selector to change and enter a "0" to disable or "1" to enable the time zone for that day. Press [OK] when finished.

☞ *NOTE: Holiday dates are set in Area 20 "Time and Calendar".*

❹ Unit displays: "Period 1 Begin/End Time". Enter the starting and ending times (24 hour format: 1pm=13:00) for this time period. The time zone selected will have access between the time periods entered. Press [OK].

❺ Unit displays: "Period 2 Begin/End Time". Enter the starting and ending times (24 hour format: 1pm=13:00) for this time period. The time zone selected will have access between the time periods entered. Press [OK].

❻ Unit displays: "Period 3 Begin/End Time". Enter the starting and ending times (24 hour format: 1pm=13:00) for this time period. The time zone selected will have access between the time periods entered. Press [OK].

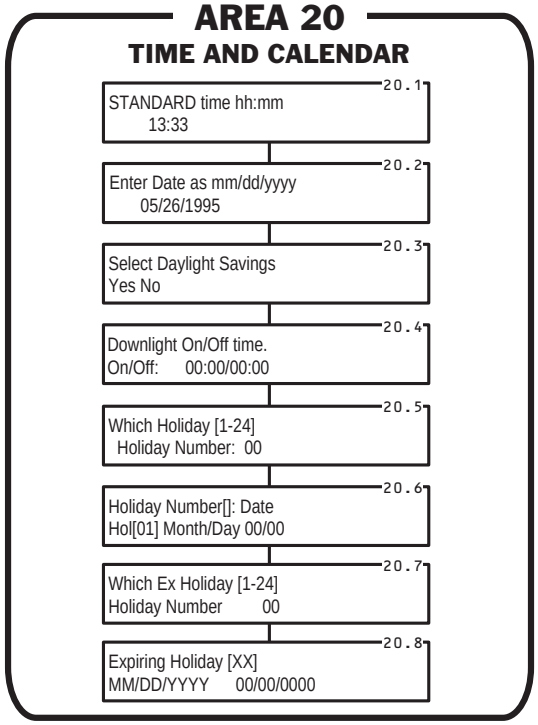
❼ Unit displays: "Period 4 Begin/End Time". Enter the starting and ending times (24 hour format: 1pm=13:00) for this time period. The time zone selected will have access between the time periods entered. Press [OK].

☞ *NOTE: Setting all four periods beginning and ending times to 00:00 allows 24-hour access for that time zone (same as using time zone "0" in a validation group.*

AREA 20

TIME AND CALENDAR

Area 20 is used to set the date and time, select daylight savings adjustment, program keypad downlight times and program the 24 possible holiday dates.



Each of the following activities are performed in programming Area 20. From the main menu, use [⇑], [⇓] or enter "20" on the keypad to scroll to "Time and Calendar, Enter Program Area 20" and press [OK]. Press [✱] when finished to return to the main menu.

Setting the Time

❶ Use [⇑] or [⇓] to scroll to "STANDARD time hh:mm"
❷ Enter the current standard time in HH:MM 24-hour format (1pm=13:00)
HH=hours (00-23)
MM=minutes (00-59)
Press [OK] after entering the time.

Setting the Date

❶ Use [⇑] or [⇓] to scroll to "Enter Date as mm/dd/yyyy"
❷ Enter the current date in the mm/dd/yyyy American format:
mm=month (01-12)
dd=day (01-31)
yyyy=year (1995-2089)
Press [OK] after entering the date.

Daylight Savings Option

❶ Use [⇑] or [⇓] to scroll to "Select Daylight Savings".
❷ Use [⇐] or [⇒] to select "Yes" or "No" for daylight savings time adjustment. When the desired response is blinking, press [OK].

Setting Keypad Downlight Time

❶ Use [⇑] or [⇓] to scroll to "Downlight On/Off time".
❷ Enter an on and off time for the downlight on Model AM-KP keypads. Enter the time in HH:MM 24-hour format (1pm=13:00).

Setting Holiday Dates

❶ Use [⇑] or [⇓] to scroll to "Which Holiday [1-24]"
❷ Enter the holiday number and press [OK].
❸ Enter the date of the holiday in mm/dd format:
mm=month (01-12)
dd=day (01-31)
Press [OK].

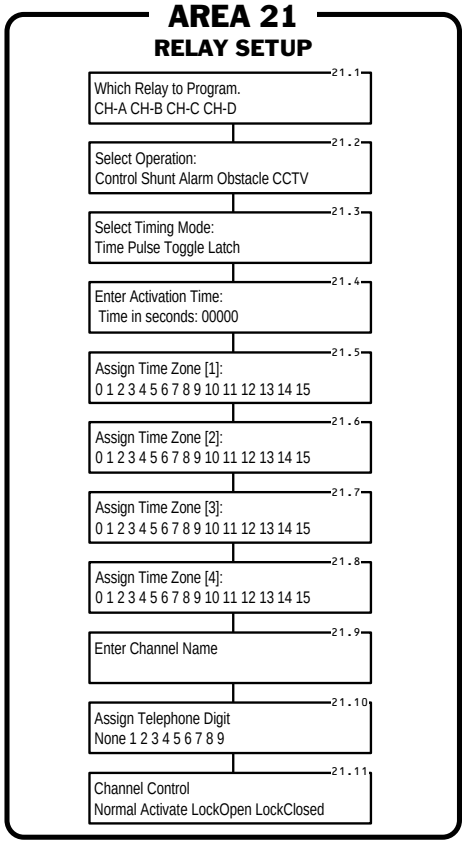
To add additional holidays, repeat Steps 1-3.

Setting Expiring Holiday Dates

❶ Use [⇑] or [⇓] to scroll to Ex Holidays.
❷ Enter date of holiday in mm/dd/yyyy
mm=month (01-12)
dd=day (01-31)
yyyy=(1999, etc.)

AREA 21

RELAY SETUP



Area 21 is used to program the four relay channels. Each channel can be given a name and programmed for type of operation. The contact action and timing, the selection of which telephone digit and which time zone will cause activation are also programmed.

Relay Timing Options

Each relay can be programmed for timed, pulse, toggle or latching modes of operation. With the timed option, the length of activation time can be set.

Timed Operation

Timed operation makes the relay stay activated for the length of time that it is programmed.

Pulse Operation

Pulse operation causes the relay to activate for just 1/4 second each time it is triggered.

Toggle Operation

Toggle operation causes the relay to engage with the first activation and disengage with the next activation.

Latching Operation

Latching operation causes the relay to stay engaged after activation until it is reset by pressing ACCESS button for the relay channel on the AM/II.

☞ *NOTE: If relay channels "C" & "D" are used for obstacle outputs. If they are set to latch, they will only latch when a trouble signal is sent from an MGT safety edge transmitter. When the relays are set to latch, a normal obstacle signal will cause the relays to operate in the timed mode.*

Each of the following activities are performed in programming Area 21. From the main menu, use [⇑], [⇓] or enter "21" on the keypad to scroll to "Relay Setup, Enter Program Area 21" and press [OK]. Press [✱] when finished to return to the main menu.

Relay Programming

❶ Use [⇑] or [⇓] to scroll to "Which Relay to Program".

❷ Use [⇐] or [⇒] to select "CH-A CH-B CH-C CH-D" relay to program. Press [OK] when desired selection is blinking.

❸ Unit displays: "Select Operation:". Use [⇐] or [⇒] to select "Control Shunt Alarm Obstacle CCTV" for the relay. Press [OK] when desired selection is blinking.

☞ *NOTE: Relays "A" & "B" can only be programmed as control relays. The CCTV option can only be used if the Model AE-1 or AE-2 Telephone Entry module is installed.*

❹ Unit displays: "Select Timing Mode:". Use [⇐] or [⇒] to select "Time Pulse Toggle Latch" for the relay. Press [OK] when desired selection is blinking.

❺ Unit displays: "Enter Activation Time:". Enter the time in seconds for the relay to activate. Press [OK].

❻ Unit displays: "Assign Time Zone [1]:". Use [⇐] or [⇒] to select a time zone to cause the relay to activate automatically during the time zone. (Time zone "0" allows normal activation). Continue for time zones 2,3, and 4. Press [OK] when desired selection is blinking.

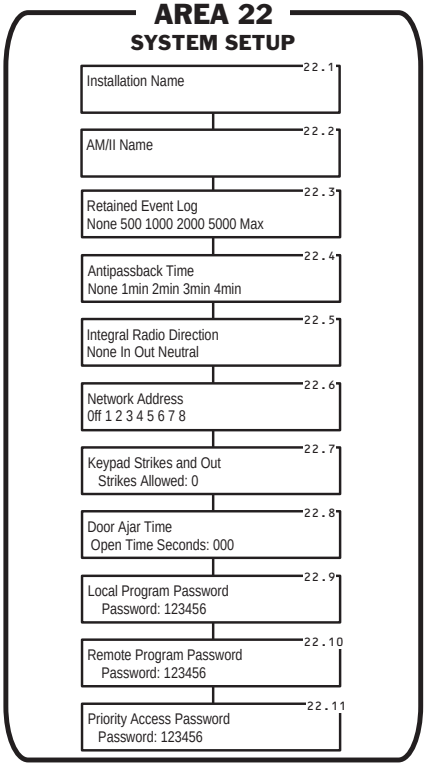
❼ Unit displays: "Enter Channel Name". Enter a name/location for the relay channel for the event log. Press [OK].

❽ Unit displays: "Assign Telephone Digit". Use [⇐] or [⇒] to select which telephone digit (1-9) will activate the relay.

☞ *NOTE: This option can only be used if the Model AE-1 or AE-2 Telephone Entry module is installed.*

❾ Unit displays: "Channel Control". Use [⇐] or [⇒] to activate, lock open or lock close the relay selected.

To program the other relays, repeat steps 1-8.



AREA 22

SYSTEM SETUP

Area 22 is used to program a variety of system functions. These functions should be set before programming the other areas. Passwords, system names, event log and anti-passback timing, and many other system settings are programmed in this area.

Each of the following activities are performed in programming Area 22. From the main menu, use [⇑], [⇓] or enter "22" on the keypad to scroll to "System Setup, Enter Program Area 22" and press [OK]. Press [✱] when finished to return to the main menu.

Setting Installation and Unit Names

❶ Use [⇑] or [⇓] to scroll to "Installation Name".
❷ Enter the location name for the installation event log (up to 24 characters) and press [OK].
❸ Use [⇑] or [⇓] to scroll to "AM/II Name".
❹ Enter the unit name for the installation event log (up to 24 characters) and press [OK].

Setting Event Log Limits

❶ Use [⇑] or [⇓] to scroll to "Retained Event Log".
❷ Use [⇐] or [⇒] to select "None 500 1000 2000 5000 Max". Press [OK] when desired selection is blinking.

Setting Anti-Passback Time

❶ Use [⇑] or [⇓] to scroll to "Antipassback Time".
❷ Use [⇐] or [⇒] to select "None 1min 2min 3min 4min". Press [OK] when desired selection is blinking.

Setting Intregral Radio Direction

❶ Use [⇑] or [⇓] to scroll to "Integral Radio Direction".
❷ Use [⇐] or [⇒] to select "None In Out Neutral". Press [OK] when desired selection is blinking. Select "IN", it is the only functioning option at this time.

Setting Network Address

❶ Use [⇑] or [⇓] to scroll to "Network Address".
❷ Use [⇐] or [⇒] to select "OFF" or 1-8 for the network address. Press [OK] when desired selection is blinking. After pressing [OK], press the reset button.

☞ *NOTE: Resetting the unit assures network activation. After reset, the network LED will be blinking.*

Setting Keypad Strike Outs

❶ Use [⇑] or [⇓] to scroll to "Keypad Strikes and Out".
❷ Enter the number of keypad attempts allowed (1-7) before keypad lockout and press [OK].

Setting Door Ajar Time

❶ Use [⇑] or [⇓] to scroll to "Door Ajar Time".
❷ Enter the time in seconds that all doors are allowed to be open after access without causing an alarm. Press [OK].

Setting Local Password

☞ *NOTE: The local password must be six digits long. Include any leading zeros when entering the code.*

❶ Use [⇑] or [⇓] to scroll to "Local Program Password".
❷ Enter the new six-digit password and press [OK].

Setting Remote Password

☞ *NOTE: The remote password must be six digits long. Include any leading zeros when entering the code.*

❶ Use [⇑] or [⇓] to select "Remote Program Password".
❷ Enter the six-digit password and press [OK].

✘ ***CAUTION: Write the new passwords down and keep them in a safe place. Programming access is impossible without the proper password. If you forget the password, call Linear Technical Services for instructions for resetting the passwords to the factory default.***

Setting Priority Access Password

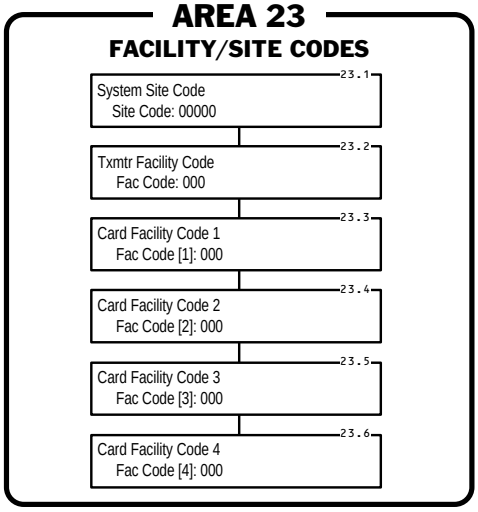
☞ *NOTE: The priority access password must be six digits long.*

❶ Use [⇑] or [⇓] to select "Priority Access Password".
❷ Enter the six digit password and press [OK].

AREA 23

Facility/Site Codes

Area 23 is used to program the system site code, the transmitter facility code and the four card facility codes. Facility and site codes are used in networked installations and when the AM/II is connected to an external access control system.



Each of the following activities are performed in programming Area 23. From the main menu, use [⇑], [⇓] or enter "23" on the keypad to scroll to "Facility/Site Codes, Enter Program Area 23" and press [OK]. Press [✱] when finished to return to the main menu.

System Site Code

❶ Use [⇑] or [⇓] to scroll to "System Site Code".
❷ Enter the five-digit "System Site Code" and press [OK]. The custom system site code number for entry cards is determined by Linear at the time of the block coded transmitter order.

Transmitter Facility Code

☞ *NOTE: The Transmitter Facility Code is only used with block coded transmitters.*

❶ Use [⇑] or [⇓] to scroll to "Txmtr Facility Code".
❷ Enter the three-digit transmitter facility code and press [OK]. The transmitter facility code for the block of transmitters is labeled on the transmitter master carton. The custom facility code number is determined by Linear at the time of the block coded transmitter order.

Card Facility Codes

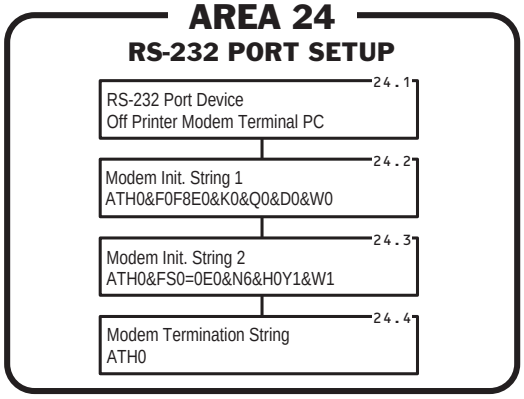
☞ *NOTE: The Card Facility Codes are only used with block coded entry cards. The card facility code for the block of entry cards is labeled on the cards' master carton.*

❶ Use [⇑] or [⇓] to scroll to "Card Facility Code 1".
❷ Enter the three-digit card facility code for code #1 and press [OK].
❸ Use [⇑] or [⇓] to scroll to "Card Facility Code 2".
❹ Enter the three-digit card facility code for code #2 and press [OK].
❺ Use [⇑] or [⇓] to scroll to "Card Facility Code 3".
❻ Enter the three-digit card facility code for code #3 and press [OK].
❼ Use [⇑] or [⇓] to scroll to "Card Facility Code 4".
❽ Enter the three-digit card facility code for code #4 and press [OK].

AREA 24

RS-232 PORT SETUP

Area 24 is used to set the RS-232 port to function for a printer, modem, terminal or PC. The modem initialization and termination strings are also set in Area 24.



Each of the following activities are performed in programming Area 24. From the main menu, use [⇑], [⇓] or enter "24" on the keypad to scroll to "RS-232 Port Setup, Enter Program Area 24" and press [OK]. Press [✱] when finished to return to the main menu.

Setting RS-232 Device

❶ Use [⇑] or [⇓] to scroll to "RS-232 Port Device".

❷ Use [⇐] or [⇒] to select "Off Printer Modem Terminal PC" for the RS-232 device. Press [OK] when desired selection is blinking.
Choose "Off" if nothing is connected to the port.
Choose "Printer" if the port is connected to a printer.
Choose "Modem" if the port is connected to a modem.
Choose "Terminal" if the port is connected to a data terminal or a PC running a terminal program.
Choose "PC" if the port is connected to a PC to receive raw standard transaction string data for further processing.

Changing Modem Initialization Strings

☞ *Modem initialization string #1 is sent to the modem first, then string #2 is sent. The termination string is sent to hangup the modem. The default modem strings are set for the Linear's Model AM-MOD modem. The strings my need to be changed if a different modem is used.*

❶ Use [⇑] or [⇓] to scroll to "Modem Init. String 1".

❷ Edit the initialization string #1 as required by your modem. Press [OK].

❸ Use [⇑] or [⇓] to scroll to "Modem Init. String 2".

❹ Edit the initialization string #2 as required by your modem. Press [OK].

Setting Modem Termination String

❶ Use [⇑] or [⇓] to scroll to "Modem Termination String".

❷ Edit the termination string as required by your modem. Press [OK].

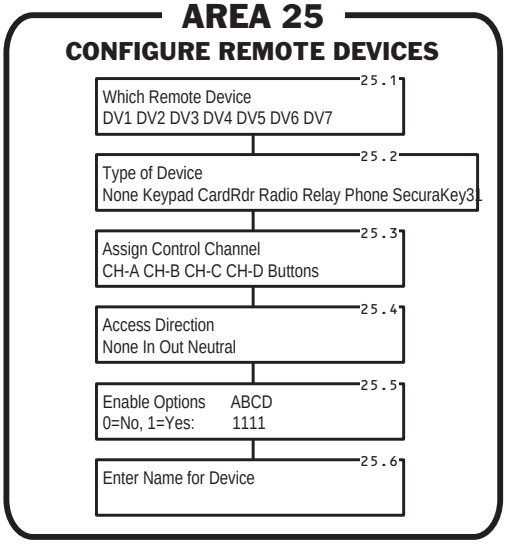
AREA 25

CONFIGURE REMOTE DEVICES

Area 25 is used to set the seven remote device addresses to the type of device connected to the AM/II. The remote devices can be keypads, card readers, remote radio receivers, control relays, and telephone entry modules. A relay channel can be assigned to each device and four options can be selected for each device.

AM-KP OPTIONS	
OPTION "A"	0 = KEYPAD BEEPS OFF 1 = KEYPAD BEEPS ON
OPTION "B"	0 = KEYPAD DOWNLIGHT TIMING OFF 1 = KEYPAD DOWNLIGHT TIMING ON
OPTION "C"	0 = KEYPAD DOWNLIGHT ALWAYS OFF 1 = KEYPAD DOWNLIGHT ALWAYS ON
OPTION "D"	0 = KEYPAD BEEPS OFF 1 = KEYPAD BEEPS ON

AM-CRI OPTIONS	
OPTION "A"	0 = TBD 1 = TBD
OPTION "B"	0 = TBD 1 = TBD
OPTION "C"	0 = TBD 1 = TBD
OPTION "D"	0 = TBD 1 = TBD



AM-RRR OPTIONS	
OPTION "A"	0 = TBD 1 = TBD
OPTION "B"	0 = TBD 1 = TBD
OPTION "C"	0 = TBD 1 = TBD
OPTION "D"	0 = TBD 1 = TBD

AM-RPR OPTIONS	
OPTION "A"	0 = TBD 1 = TBD
OPTION "B"	0 = TBD 1 = TBD
OPTION "C"	0 = TBD 1 = TBD
OPTION "D"	0 = TBD 1 = TBD

Each of the following activities are performed in programming Area 25. From the main menu, use [⇑], [⇓] or enter "25" on the keypad to scroll to "Configure Remote Devices, Enter Program Area 25" and press [OK]. Press [✱] when finished to return to the main menu.

Remote Device Programming

❶ Use [⇑] or [⇓] to scroll to "Which Remote Device".

❷ Use [⇐] or [⇒] to select [DV1] to [DV7]. Press [OK] when desired device selection is blinking.

☞ *NOTE: Device [DV7] is reserved for the Model AE-1 or AE-2 telephone entry module.*

❸ Unit displays: "Type of Device". Use [⇐] or [⇒] to select "None Keypad CardRdr Radio Relay Phone" for the selected device address. Press [OK] when desired selection is blinking.
Use "Keypad" for Model AM-KP keypad.
Use "CardRdr" for Model AM-CRI card reader interface.
Use "Radio" for Models AM-RRR & AM-RPR radio receivers.
Use "Relay" for Model AM-RLY relay interface.
Use "Phone" for Model AE-1 or AE-2 telephone entry interface ([DV7] only).
Use "SecuraKey31" for SecuraKey devices.

☞ *NOTE: Relays "A" & "B" can only be programmed as control relays. The CCTV option can only be used if the Model AE-1 or AE-2 Telephone Entry module is installed.*

❹ Unit displays: "Assign Control Channel". Use [⇐] or [⇒] to select relay channel A-D that the device will activate. Press [OK] when desired selection is blinking.

❺ Unit displays: "Access Direction". Select "None In Out Neutral" to match the direction of access that the remote device permits. Press [OK] when desired selection is blinking.

❻ Unit displays: "Enable Options ABCD"
Each remote device has selectors for four function options (A-D).
0 = NO (option disabled)
1 = YES (option enabled)
See the tables above. Use [⇐] or [⇒] to choose which selector to change and enter a "0" or "1". Press [OK] when finished.

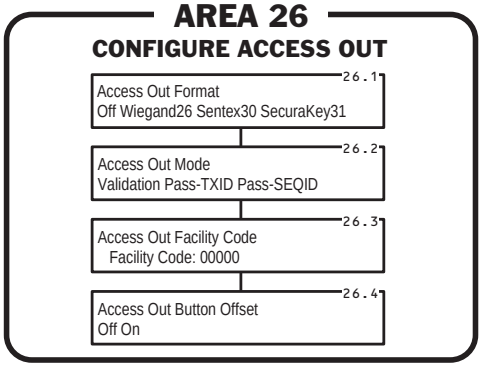
❼ Unit displays: "Enter Name for Device". Enter a name/location for the remote device. Press [OK].

To configure additional remote devices, repeat Steps 1-7.

AREA 26

CONFIGURE ACCESS OUT

Area 26 is used to setup the access out terminals when connecting the AM/II to an external access control system. The access out format, data mode, facility code and button offset can be programmed in this area.



Each of the following activities are performed in programming Area 26. From the main menu, use [⇑], [⇓] or enter “26” on the keypad to scroll to “Access Out Format, Enter Program Area 26” and press [OK]. Press [✱] when finished to return to the main menu.

Access Out Application Note

The format of the data that is sent to an external access control panel through the ACCESS OUT terminals is programmable in Area 26. Currently the AM/II can send Wiegand26, SecuraKey31 or Sentex30 format data.

Three different data structures can be selected for each format. Each selects which data is sent out.

VALIDATION: If this option is selected, data will only get sent from the ACCESS OUT terminals when media is granted access by the AM/II. The data sent is the Access Out Facility Code and the media ID number.

PASS-TXID: If this option is selected, data will always get sent from the ACCESS OUT terminals when any media is decoded, regardless if access is granted by the AM/II. The data sent is the Access Out Facility Code and the media ID number.

PASS-SEQID: If this option is selected, data will always get sent from the ACCESS OUT terminals when any valid transmitter is decoded, regardless if access is granted by the AM/II. The data sent is the Access Out Facility Code and the transmitter sequence number.

Access Out Setup

☞ *NOTE: Refer to the Advanced Programming Bulletin (P/N 210516) for expanded details on programming the AM/II to activate other access control panels.*

❶ Use [⇑] or [⇓] to select “Access Out Format”.

❷ Use [⇐] or [⇒] to select “Off Wiegand26 Sentex30 SecuraKey31” for the access out data format. Match the format with the type of access control panel connected to the ACCESS OUT terminals. Press [OK] when desired selection is blinking.

❸ Unit displays: “Access Out Mode”. Use the [⇐] and [⇒] keys to select “Validation Pass-TXID Pass-SEQID” for the Access Out Mode. Press [OK] when desired selection is blinking. See Advanced Programming Bulletin for details.

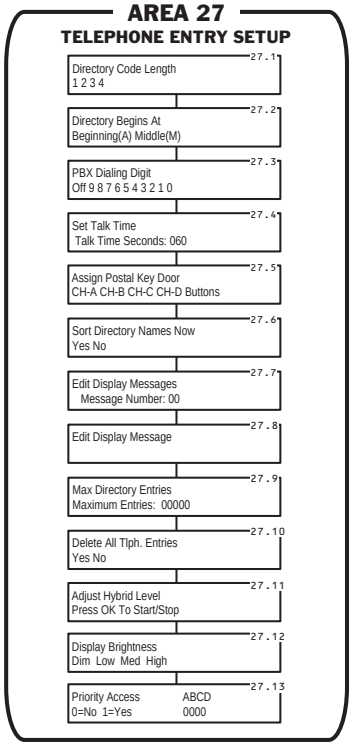
❹ Unit displays: “Access Out Facility Code”. Enter the three-digit facility code and press [OK]. This code must be the same code as programmed into the access control panel connected to the ACCESS OUT terminals.

❺ Unit displays: “Access Out Button Offset”. Use the [⇐] and [⇒] keys to select “Off On” for the Access Out Button Offset. Select “ON” if separate buttons on the same transmitter are intended to control two different devices. Press [OK] when desired selection is blinking.

AREA 27

TELEPHONE ENTRY SETUP

Area 27 is used to configure the telephone directory entries by length, starting display point, PBX dialing digit and sorting. (A Model AE-1 or AE-2 telephone entry module is required to use these functions.)



Each of the following activities are performed in programming Area 27. From the main menu, use [⇑], [⇓] or enter "27" on the keypad to scroll to "Telephone Entry Setup, Enter Program Area 27" and press [OK]. Press [✱] when finished to return to the main menu.

☞ *NOTE: The Model AE-1 or AE-2 Telephone Entry Module must be installed for these programming steps to function.*

Configuring Directory

❶ Use [⇑] or [⇓] to scroll to "Max Directory Entries". Enter the maximum number of directory entries expected. Press [OK].
❷ Use [⇑] or [⇓] to scroll to "Directory Code Length".
❸ Use [⇐] or [⇒] to select 1-4 for the number of directory digits. Press [OK] when desired selection is blinking.
❹ Unit displays: "Directory Begins At". Use [⇐] or [⇒] to select "Beginning(A) Middle(M)" for where the directory display starts at. Press [OK] when desired selection is blinking.
❺ Use [⇑] or [⇓] to scroll to "Sort Directory Names". Use [⇐] or [⇒] to select "YES" or "NO" to sort the names. Press [OK] when desired selection is blinking.
❻ Use [⇑] or [⇓] to scroll to "Assign Postal Key Door". Use [⇐] or [⇒] to select the relay channel that the postal key will activate. Press [OK] when desired selection is blinking.

Setting PBX Dialing Digit

❶ Use [⇑] or [⇓] to scroll to "PBX Dialing Digit".
❷ Use [⇐] or [⇒] to select "OFF" or 0-9 for the number the AE-1 or AE-2 will dial before dialing a tenant's telephone number. Press [OK] when the desired selection is blinking.

Setting Talk Time

❶ Use [⇑] or [⇓] to scroll to "Set Talk Time".
❷ Enter the length of talk time allowed up to 255 seconds (default is 60 seconds). Press [OK].

Editing Display Messages

❶ Use [⇑] or [⇓] to scroll to "Edit Display Messages".
❷ Enter the message number to be edited (1-40) and press [OK].
❸ Unit displays: "Edit Display Message". Customize display message for your needs and press [OK].

Deleting All Telephone Entries

❶ Use [⇑] or [⇓] to scroll to "Delete All Tlph. Entries".
❷ Use [⇐] or [⇒] to choose "Yes" or "No". Press [OK] when desired selection is blinking. **All** directory entries will be deleted.

Adjusting the Speaker/Microphone Balance

This adjustment is factory set and normally does not need changing.

❶ With the AE-1or AE-2 telephone entry module connected to the active phone line, attach an AC voltmeter to the AE-1's or AE-2's speaker.
❷ Use [⇑] or [⇓] to scroll to "Adjust Hybrid Level". Press [OK].
❸ Adjust the AE-1's or AE-2's HYBRID LEVEL control for a *minimum* voltage reading on the voltmeter.
❹ Press [OK] when finished.

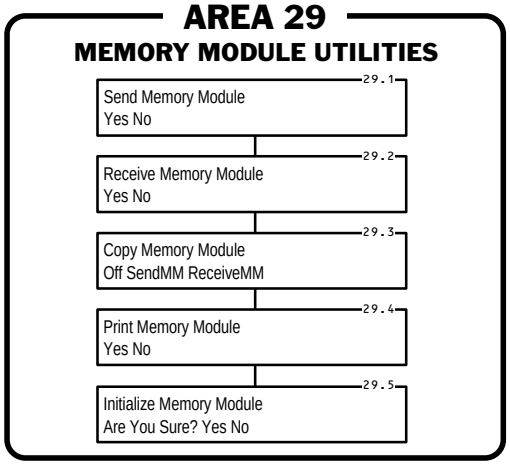
Set Priority Access Function

❶ Use [⇐] or [⇒] to select relay to access and replace 0 with a 1.
❷ Press [OK] when finished.

AREA 29

MEMORY MODULE UTILITIES

Area 29 is used for system service and maintenance. The contents of the AM/II's memory module can be copied to a PC or to another AM/II using this area. The memory contents can also be printed or initialized (erased) using this area.



Each of the following activities are performed in programming Area 29. From the main menu, use [⇑], [⇓] or enter "29" on the keypad to scroll to "Memory Module Utilities, Enter Program Area 29" and press [OK]. Press [✱] when finished to return to the main menu.

Sending Memory Module

Before sending the memory module contents, set the protocol to "XMODEM" in the receiving computer's communication program. Connect the computer to the AM/II RS-232 port directly or use the Model AM-MOD modem for remote telephone connection.

❶ Use [⇑] or [⇓] to scroll to "Send Memory Module".
❷ Use [⇐] or [⇒] to select "Yes". Press [OK].
❸ Unit displays: "Begin File Transfer". You have one minute to begin receiving the memory file. Instruct the receiving computer's software to receive (download) the binary file.
❹ When the transfer is finished, the AM/II will display: "File Transfer Complete".

Receiving Memory Module

Before receiving the memory module contents, set the protocol to "XMODEM" in the sending computer's communication program. Connect the computer to the AM/II RS-232 port directly or use the Model AM-MOD modem for remote telephone connection.

❶ Use [⇑] or [⇓] to scroll to "Receive Memory Module".
❷ Use [⇐] or [⇒] to select "Yes". Press [OK].
❸ Unit displays: "Begin File Transfer". You have one minute to begin sending the memory file. Instruct the sending computer's software to send (upload) the binary file.
❹ When the transfer is finished, the AM/II will display: "File Transfer Complete".

Copying Memory Module

Before copying the memory module contents to another AM/II, connect the two units together using the Model A2A cable. ***Set both unit's RS-232 port device settings to "Off".***

❶ Use [⇑] or [⇓] to scroll to "Copy Memory Module" on both units.
❷ Use [⇐] or [⇒] to select "ReceiveMM" on the receiving unit. Press [OK].
❸ Use [⇐] or [⇒] to select "SendMM" on the sending unit. Press [OK].
❹ When the transfer is finished, the AM/II will display: "File Transfer Complete". Press [OK] to continue.

Printing Memory Module

❶ Use [⇑] or [⇓] to scroll to "Print Memory Module".
❷ Use [⇐] or [⇒] to select "Yes". Press [OK]. The contents of the memory module will be sent to the AM/II's RS-232 port.

Initializing Memory Module

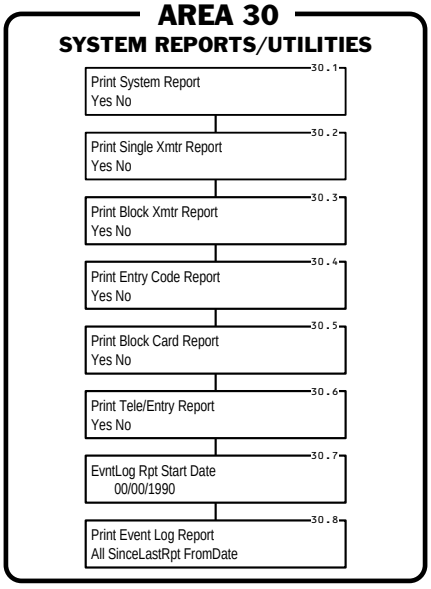
✘ ***WARNING: Initializing the memory module will erase all programmed data.***

❶ Use [⇑] or [⇓] to scroll to "Initialize Memory Module".
❷ Use [⇐] or [⇒] to select "Yes". Press [OK]. The contents of the memory module will be **completely** erased and the default values restored.

AREA 30

SYSTEM REPORTS/UTILITIES

Area 30 is used to print the various system reports. Reports can be sent to a printer on viewed on-line with a PC. System configuration, single transmitter, block transmitter, entry code, block card code, telephone entry and event log reports are available.



Each of the following reports can be sent to a printer or viewed on a computer display or terminal. Connect the output device to the AM/II's RS-232 port before selecting the report option.

Each of the following activities are performed in programming Area 30. From the main menu, use [⇑], [⇓] or enter "30" on the keypad to scroll to "System Reports/Utilities, Enter Program Area 30" and press [OK]. Press [✱] when finished to return to the main menu.

Printing System Report

❶ Use [⇑] or [⇓] to scroll to "Print System Report".
❷ Use [⇐] or [⇒] to select "Yes". Press [OK].

Printing Single Transmitter Report

❶ Use [⇑] or [⇓] to scroll to "Print Single Xmtr Report".
❷ Use [⇐] or [⇒] to select "Yes". Press [OK].

Printing Block Transmitter Report

❶ Use [⇑] or [⇓] to scroll to "Print Block Xmtr Report".
❷ Use [⇐] or [⇒] to select "Yes". Press [OK].

Printing Entry Code Report

❶ Use [⇑] or [⇓] to scroll to "Print Entry Code Report".
❷ Use [⇐] or [⇒] to select "Yes". Press [OK].

Printing Block Card Report

❶ Use [⇑] or [⇓] to scroll to "Print Block Card Report".
❷ Use [⇐] or [⇒] to select "Yes". Press [OK].

Printing Telephone Entry Report

❶ Use [⇑] or [⇓] to scroll to "Print Tele/Entry Report".
❷ Use [⇐] or [⇒] to select "Yes". Press [OK].

Printing Event Log

❶ Use [⇑] or [⇓] to scroll to "EvntLog Rpt Start Date".
❷ Enter the date for the start of the event log and press [OK].
❸ Use [⇑] or [⇓] to scroll to "Print Event Log Report".
❹ Use [⇐] or [⇒] to select "All", "SinceLastRpt" or "FromDate". Press [OK] when the desired selection is blinking.
"All" = prints everything in the event log.
"SinceLastRpt" = prints everything in the event log that occurred since the last time the event log was printed.
"FromDate" = prints all events from the date entered in Step 2 to the present.

OPERATION OVERVIEW

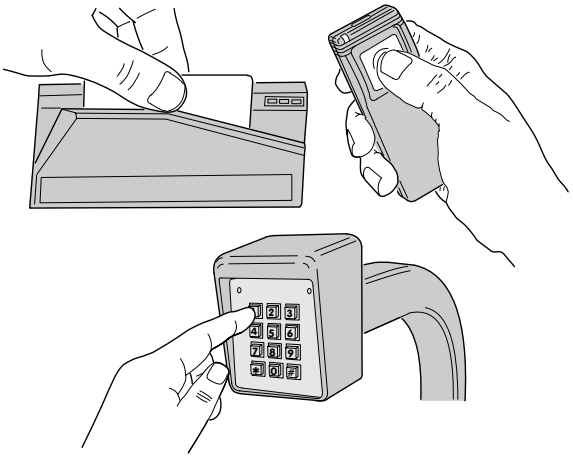
Standard Operation

When a valid transmitter, entry code or card code is detected by the system, the control will activate the programmed relay output. If the AM/II is connected to a printer, a message is sent giving the code number, the time of activation, device and network number and relay activated.

The system's clock has built-in battery backup to keep the time accurate during power loss. The time is displayed in 24-hour format.

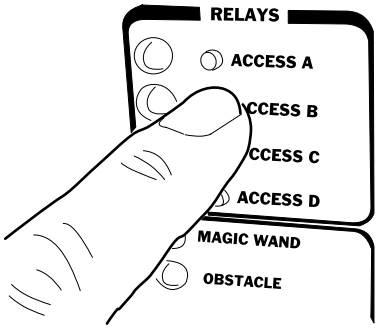
Suspending media codes allows the system administrator to deny a user's access without removing their information from the system's memory. Reactivating the media code allows the user to again have access.

Transmitters, cards and entry codes that are lost, stolen or need to be exchanged can be manually deleted from the system.



Manual Operation

The access outputs can be manually activated from the ACCESS buttons on the AM/II. This is useful for maintenance personnel during setup and testing. Pressing any of the access buttons will latch its corresponding relay output and light its LED indicator. Pressing the button again will unlatch the relay output and turn off the LED.



MANUAL OPERATION

Magic Wand Transmitters

Up to eight MDT-4 four-button transmitters can be programmed as "Magic Wand" transmitters. They allow maintenance personnel to remotely lock the relay outputs open or closed for Channels A & B. When service is being performed on a gate, maintenance personnel will want to lock an output closed to prevent users from activating the device. With a Magic Wand transmitter, the device can be disabled remotely without having to disconnect the operator from the AM/II.

When service is being performed on a door with a door strike, maintenance personnel might want to lock an output open to constantly unlock the door during service.

When programmed as a Magic Wand transmitter, the MDT-4 buttons function as follows:

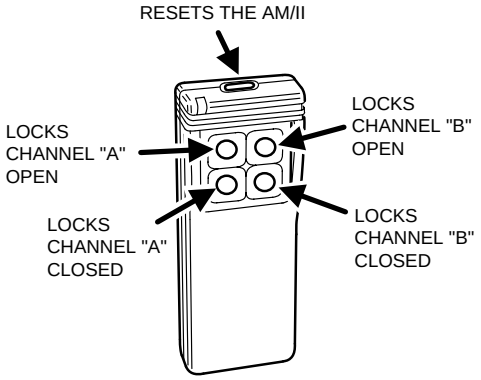
WHITE BUTTON: Locks Channel A open (relay activated).

GREEN BUTTON: Locks Channel B open (relay activated).

YELLOW BUTTON: Locks Channel A closed (relay de-activated).

RED BUTTON: Locks Channel B closed (relay de-activated).

TOP BUTTON: Resets the AM/II.



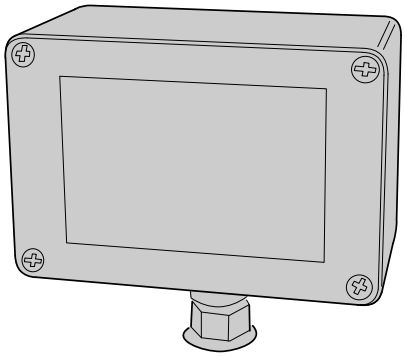
MAGIC WAND TRANSMITTER

Obstacle Transmitters

One or two MGT safety edge transmitters can be used with the AM/II. Obstacle transmitters #1 and #2 can be programmed to activate any of the four relays.

When a safety edge connected to an MGT transmitter is triggered, the appropriate output relay will activate, causing the operator to perform an "obstacle cycle".

The MGT safety edge transmitters are fully supervised. Every hour they automatically send a status report to the AM/II. If the MGT has a low battery or the cover is tampered with, unique signals will be sent to the receiver. Trouble is indicated by a flashing OBSTACLE light on the AM/II. If the relay output is set to latch, it will latch only when there is trouble (it will be a timed output with a normal obstacle signal). The systems LCD display will state what the trouble is. If connected, the printer will log the trouble. To clear the trouble indication, press # and 1.



MODEL MGT OBSTACLE TRANSMITTER

SPECIFICATIONS

Outputs

RELAY Four form “C” relays (N.O. & N.C.) rated at 3 amps, 30 volts, programmable output style and duration.

RS-232 One RS-232 port for connection to a local line printer, PC for transaction logging and modem for remote programming.

LCD DISPLAY Integral 2 line by 24 character backlit display for local programming and transaction monitoring. Adjustable display contrast.

LED INDICATORS Front panel indicators for all input and output activity for easy on-site troubleshooting.

Inputs

RF 318 MHz super-heterodyne receiver. MegaCode format. Adjustable 20 dB attentuator for controlling radio range.

OPEN REQUEST Contact closure to ground activates corresponding output relay.

DOOR SENSE Normally closed input to sense door status.

KEYPAD Integral 17 key silicone rubber keypad for local programming. Push buttons for manual control of relays.

Hardware

AC INPUT POWER 14 to 24 V

DC INPUT POWER 12 to 35 V

OPERATING TEMPERATURE Electronics: -30 to +65° C
Display: 0 to +40° C (Frozen display will not affect system operation)

MEMORY All data memory is non-volatile EEPROM with data retention in excess of ten years. Memory is housed in a removable module for easy transfer to another AM/II unit.

CLOCK/ CALENDAR Built-in battery backed-up clock/calendar.

Construction

CONNECTIONS Plug-on, screw terminal block.

DIMENSIONS 8.5" high, 9.75" wide, 2.25" deep.

WEIGHT 3.5 Lbs.

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LINEAR LIMITED WARRANTY

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 !!!

Linear radio controls provide a reliable communications link and fill an important need in portable wireless signalling. 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.