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# User/Installation Manual



**PHONEAIRE WIRELESS TELEPHONE ENTRY  
MODEL 16-1050  
WITH PUSH TO TALK  
(PTT) TECHNOLOGY**



**“Your Partner in Access Control”**

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# TWO-YEAR LIMITED WARRANTY

## This Warranty applies to:

American Access Systems PhoneAire systems

## What is Covered:

Any defects in materials or workmanship

## Coverage Period:

Two years from date of purchase

## What We Will Do:

If your American Access Systems™ (AAS) product is defective and returned within two years of purchase, we will repair, or at our option, replace the unit at no charge to you. If we repair your AAS Product, we may use new or reconditioned parts. If we choose to replace your AAS product, we may replace it with a new or reconditioned unit of the same or similar design. The repair or replacement unit is warranted for (a) Ninety days (b) the remainder of the original two-year warranty period, whichever is longer.

## Limitations:

Implied warranties, including those of fitness for a particular purpose and merchant ability (an unwritten warranty that the product is fit for ordinary use,) are limited to two years from the date of purchase. AAS will not pay for loss of time, inconvenience, loss of use of your AAS product, service calls, or property damage caused by your AAS product or its failure to operate, or any other incidental or consequential damages. Some States do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages, so the above exclusions or limitations may not apply to you.

## What We Ask You To Do:

To receive warranty service for your AAS product, you must provide proof of the date of purchase. Contact the original dealer or installer of the product and return your AAS product along with the receipt to them. If you have problems locating the dealer or installer, contact American Access Systems at (303) 799-9757, and we will direct you to an AAS authorized dealer or distributor. If you ship your AAS product, you must prepay all shipping charges. We suggest that you retain your original packing material in the event you need to ship your AAS product. Upon return, include your name, address, phone number, proof of date of purchase, and a brief description of the operating system problem.

## What This Warranty Does Not Cover:

The warranty does not cover defects resulting from accidents, damage while in transit, alterations, unauthorized repair, failure to follow installation and operating instructions, misuse, fire, flood, or acts of God. Nor do we warrant you AAS product to be compatible with any particular external device or peripheral. If your Warranty has expired on your AAS product, or if you product is NOT covered, contact your dealer or installer for advice on whether we will repair your AAS product and other repair information, including estimated repair costs and additional charges that may be incurred. We, at our option, may replace, rather than repair your AAS product with a new or similar design if the damage to the unit is severe or extensive.

This is the only Warranty we offer on this product, and it sets forth all of our responsibilities regarding your AAS product. There are no other express Warranties.

## State Law Rights:

This Warranty gives you specific legal rights, and you may also have other rights which vary from State to State.



SECURITY BRANDS INC



## FCC Requirements

1. This equipment complies with Part 68 of the Federal Communications Commission Rules. On the inside panel of this equipment is a label that contains, among other information, the FCC registration number, Facility Interface code (FIC) and Service Order Code (SOC). This information must be provided to the telephone company.

Registration No: US: AAAOT01B30027

FIC: 02LS2

SOC: 9.0Y

USOC: RJ11C

2. This device complies with Part 15 of the FCC rules. Operation is subject to the following conditions: 1) This device may not cause harmful interference and 2) This device must accept any interference received, including interference that may cause undesired operation. Modification of the device by the user may cause the device to operate in violation of the FCC Rules.

3. The REN is used to determine the quantity of devices that may be connected to the telephone line. Excessive RENs on the telephone line may result in the devices not ringing in response to an incoming call. Typically, the sum of RENs should not exceed five (5.0). To be certain of the number of devices that may be connected to a line (as determined by the total RENs) contact the local telephone company.

4. An FCC-compliant telephone and modular plug is provided with this equipment. This equipment is designed to be connected to the telephone network or premises wiring using a compatible modular jack which is Part 68 compliant. See installation instructions for details.

5. If this equipment causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. But, if advance notice is not practical, the telephone company will notify the customer as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe it is necessary.

6. The telephone company may make changes in its facilities, equipment, operations, or procedures that could affect the operation of the equipment. If this happens, the telephone company will provide advance notice in order for you to make necessary modifications in order to maintain uninterrupted service.

7. If trouble is experienced with the PhoneAire units please contact American Access Systems, Inc. at 1-800-541-5677. If the equipment is causing harm to the network, the telephone company may request you to remove the equipment from the network until the problem is resolved.

8. No repairs are to be made by you. Repairs are to be made only by American Access Systems, Inc. or its licensees. Unauthorized repairs void registration and warranty.

9. This equipment cannot be used on public coin service provided by the telephone company. Connection to Party Line Service is subject to state tariffs. (Contact the state public utility commission, public service commission or corporation commission for information.)

## DOC Requirements

### Equipment Attachment Limitations

Notice: This equipment meets telecommunications network protective, operational and safety requirements as prescribed in the appropriate Terminal Equipment Technical Requirements Document(s). This is confirmed by marking the equipment with the Industry Canada certification number. The Department does not guarantee the equipment will operate to the users' satisfaction.

Before installing this equipment, users should ensure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection. The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations.

Repairs to certified equipment should be coordinated by a representative designated by the supplier. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment.

Users should ensure for their own protection that the electrical ground connections of the power utility, telephone lines and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas. Caution: Users should not attempt to make such connections themselves, but should contact the appropriate electric inspection authority, or electrician, as appropriate.

Notice: The Ringer Equivalency Number (REN) assigned to each terminal device provides an indication of the maximum number of terminals allowed to be connected to a telephone interface. The termination on an interface may consist of any combination of devices subject only to the requirement that the sum of the Ringer Equivalency Numbers of all the devices does not exceed five.

## PARTS CHECKLIST

Parts that are included in the box include the following items. If any of the items is missing, contact American Access Systems (AAS).

Qty	Description
1	16-1050 Control Station Transmitter (w/2keys)
1	16-1050 Receiver Unit
1	12VAC Adapter
4	1/4"-20 X 1/2" carriage bolts
4	1/4"-20 hex nuts

If any of the above items are missing from this box, contact American Access Systems

### Tools Needed For Basic Installation

- Wire nuts or appropriate terminals/connectors
- Wire strippers
- Wire cutters
- 3/8" drive ratchet with 6" extension and 7/16" socket
- Digital or Analog multi-meter
- Drill

## BEFORE PROCEEDING

To take full advantage of the 24 month limited warranty, you must be registered with American Access Systems. Please read the enclosed warranty statement, (pg 2), fill out the warranty registration card provided and send it to:



SECURITY BRANDS INC

The American Access Systems (AAS) unit is a fully digital, wireless telephone entry system featuring Push to Talk (PTT) technology. The heavy gauge, powder-coated transmitter enclosure with stainless steel faceplate, mounts directly to a pedestal or can be surface mounted.

The receiver is contained by of a weather-tight, baked enamel enclosure that mounts directly to the side of the home or main building. The "No Phone Line" entry system allows the use of an existing telephone line. There is no need for an additional "dedicated" phone line.



# INSTALLATION IDEAS

## Residential Installs

### Three typical installation methods:

- Mount in a basement or mechanicals room.
  - Run a chase wire with antenna outside use antenna extension kit.
  - Drill hole in the wall for antenna chase
  - Mount antenna no more that 25 feet from the receiver unit
  - Mount Antenna line-of-sight to the gate unit.
- Mount receiver unit on the front of house.
  - Mount unit at a position where homeowner can access unit while still being "Line-of-Sight" to the gate
  - Run the telephone wire from the unit to the telephone line junction box
- Structure is on a property that has a rising terrain or mound that prevents the fence from being visible
  - Use the antenna extension kit on one or both sides of the installation to achieve "Line of Sight" between the units communication

Antenna Extension installation

Tips on mounting the antenna

Commercial Installs

Make a visual map of installation types/considerations:

- Normal mode
- PBX mode

# INSTALLATION

## Mounting the Units

The tools and instruments needed to install the PhoneAire and a Parts Checklist are shown on page 7. Make sure you have all the tools listed before you begin. It's a good idea to make sure to check off the items enclosed with the unit. If any parts are missing from the package, contact American Access Systems immediately. It's also a good idea to keep a couple of Antenna Extension Kits with you.

### Important Note:

It is highly recommended that you perform a "loose install" of all PhoneAire equipment to position, align and test that the system works properly before doing a "hard install." It's also recommended that you read all of the instructions before proceeding to help assure the best possible installation.

The PhoneAire system antennas have a range of up to 3500 feet line-of-sight. Transceiver antennas must be line-of-sight with no obstructions. You may need to move the receiver unit around to find the best location for the installation. The following are examples of antenna obstructions to avoid:

- Metal buildings
- Wrought iron and steel fencing and gates
- Stucco walls
- Large panels on trucks and trailers
- Brickwork and rock walls
- Rock outcroppings
- Heavily wooded areas
- High voltage and overhead wire
- "Invisible Fence" dog runs
- Signs
- Other equipment operating in the 2.4GHz frequency range

**An optional Antenna Extension Kit may be needed to insure optimum line-of-sight location of the Transmitter and Receiver or for various types of installations. It's a good idea to keep a few Kits with you in case you need to add one.**

**Important: Never remove the pigtail antenna cable from the radio module (located on the backside of main circuit board). If you must remove the main circuit board unbolt the antenna connector from housing.**

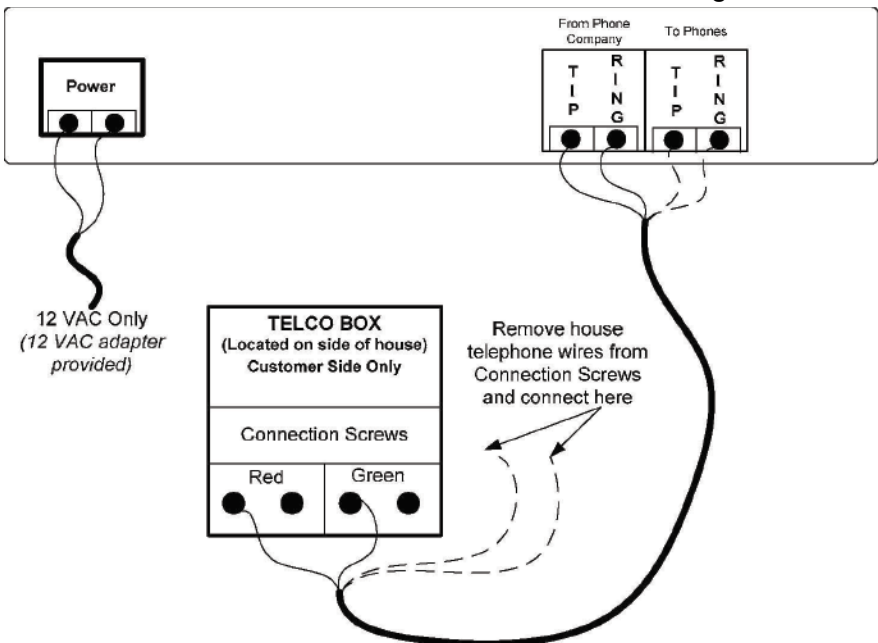
## Installation Steps

- NOTE: MAKE ALL WIRING CONNECTIONS BEFORE TURNING ON THE POWER. (Refer to the Connection Schematics)**  
A 12VAC adapter is included to power the PhoneAire gate unit. Use 12 AWG stranded wire between the 12VAC adapter and the POWER terminal block on the PhoneAire gate unit.
- For a solar power installation, connect 12 AWG stranded wire between the battery and the POWER terminal block on the PhoneAire gate unit.
- For gate activation, connect the gate control wires to Relay A, common and normally open. Use stranded wire of the gauge recommended by the gate operator manufacturer.
- Wire secondary equipment (such as a pedestrian gate) to Relay B.

## Wiring the Receiver Station

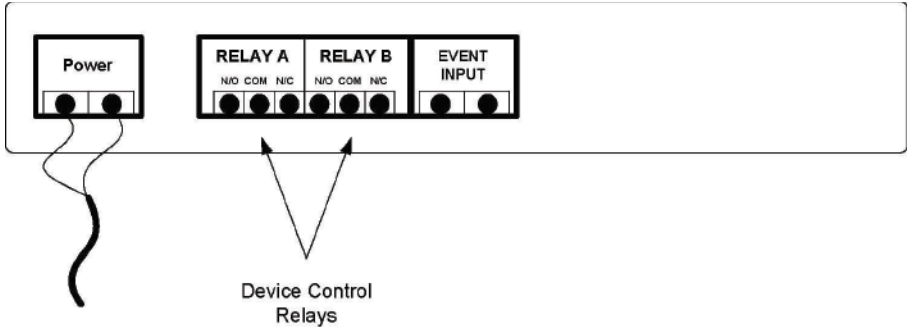
- The PhoneAire receiver unit must be located in "line of sight" from the gate transmitter unit for the best performance. You may need to move the receiver unit around a bit to various locations to find the position that works best for the particular installation. An optional antenna extension kit is available from AAS.
  - A 12VAC adapter is included to power the PhoneAire receiver unit. Use 12 AWG stranded wire between the 12VAC adapter and the POWER terminal block on the PhoneAire receiver unit.
- NOTE: 12VAC adapters are NOT approved for outdoor use. 12VAC adapters must be installed in a weatherproof enclosure. The receiver unit will operate on 12 volts AC only.**
- The PhoneAire is designed to go inline with the incoming phone line (See page 6). At the Telephone Company (Telco) box on the side of the building, disconnect the connections between the phone company and the house.
  - Run 4 conductor 22 AWG twisted shielded wires between the Telco box and the PhoneAire receiver unit. Connect 2 wires between the Telco box phone company tip and ring, to the "FROM CO" terminal block on the PhoneAire receiver unit.
  - Connect the other 2 wires at the Telco box to the terminals going into the house phones, and the other end of the 2 wires to the "TO PHONES" terminal block on the PhoneAire receiver unit. Note: On the PhoneAire receiver unit circuit board is a manual bypass switch that can be used to disconnect our unit from the telephone line.
  - The PhoneAire can also be installed to a PBX or Key phone system. Connect two wires from an UNUSED CO port of the PBX system to the "To Phones" terminal block on the PhoneAire circuit board. Then move jumper from Normal to PBX then press and release the HW RESET button on the circuit board (refer to Page 14.)**
  - Proceed to wire the Transmitter Station
  - When all of the connections are complete, and before you complete the "hard install", refer to the Operating Section of this Manual (page X) and check that the system is working properly

## PhoneAire 16-1050 Receiver Station Connection Diagram





## PhoneAire 16-1050 Transmitter Station Connection Diagram



12 VAC or VDC

(12 VAC Adapter Provided )

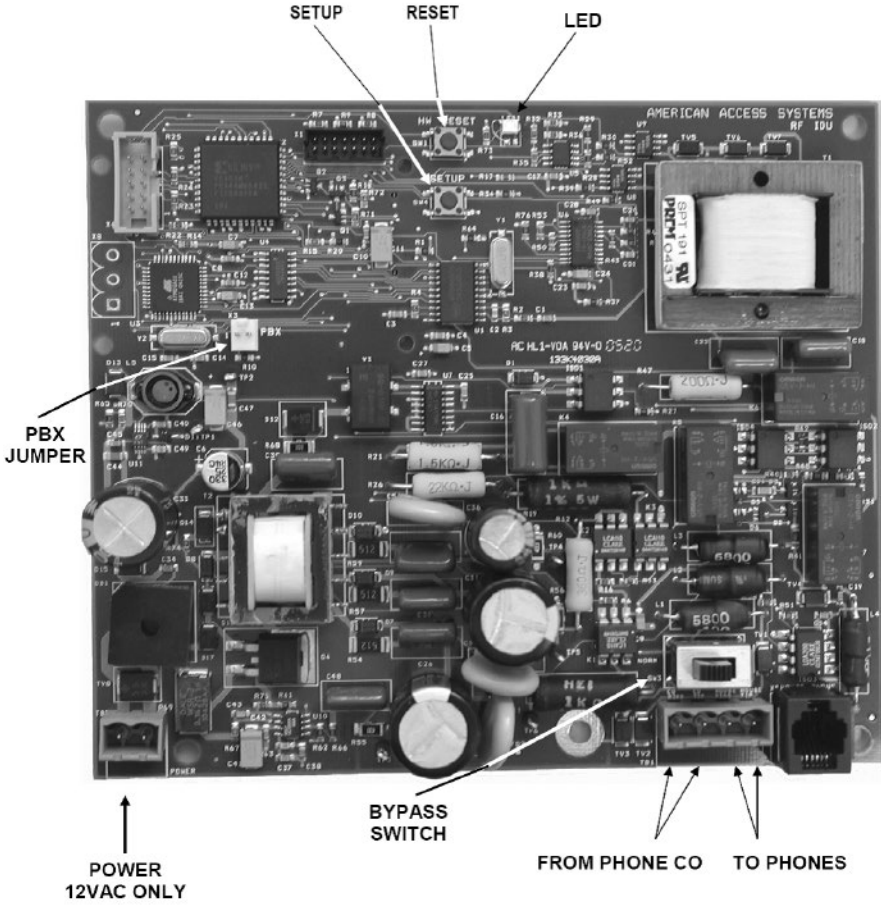
### Wiring the Transmitter Station

The installation is common to most keypad installations. Two wires for power and two wires for the device ("gate") control are needed. Power is 12 volts AC or DC only and must be able to handle a 1.5 amp load.

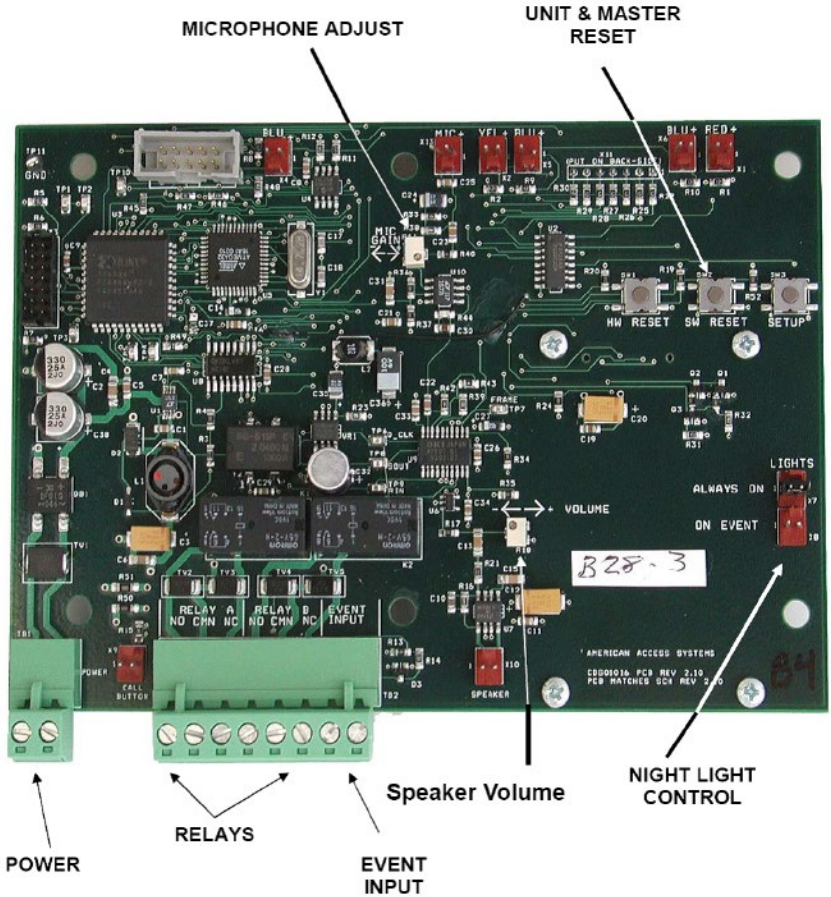
1. Connect the primary device to be controlled to the unit's primary relay control leads.
2. Connect the Green lead to Earth Ground.
3. Again, before supplying power to the unit, refer to the appropriate wiring diagram to double-check all connections. When you are sure you have the unit wired correctly, apply power to the unit.
4. If this is the FIRST TIME POWER UP, the unit will perform a self-diagnostics routine. After each test has passed, the unit will respond with a three tones. The unit will then flash the LED's 3 times while it is performing a memory setup.
5. Once all the tests have passed and the unit is set up correctly, you will hear a "GOOD TONE" (an oscillating high tone) from the unit. If the unit does not perform as above, quickly shut off power to the unit and contact your distributor or American Access Systems.

**NOTE: The unit will perform a self-diagnostics routine only during first-time power up. After first-time power up, the unit will sound a "GOOD TONE" (an oscillating high tone) each time power is applied.**

# 30-029 Receiver Circuit Board



# 30-028 Transmitter Circuit Board



## **Mounting the Transmitter to an AAS gooseneck pedestal (18-001) or double height gooseneck (18-003)**

Locate the four carriage bolts and four hex nuts found inside the shipping box. With the keypad face open, place the unit against the pedestal flange, insert the four carriage bolts from the back of the unit and tighten the hex nuts from the inside. Wrench-tighten the hex nuts securely. Do not over tighten.

### **General Operating Instructions**

#### **Receiving Calls – Allowing Access**

The PhoneAire system with Push-To-Talk (PTT) technology is easy to use. It works much the same as a two-way radio or a cellular telephone with an intercom feature.

- A visitor arrives at the gate Transmitter and presses the "Push to Call" button
- A distinct ring tone (different than the regular telephone company ring tone) is heard at the telephone inside of the home or building.
- Person inside of the building lifts the telephone handset and speaks. (A short tone burst will be heard over both ends of the telephone line indicating the system is now in the intercom mode) The telephone line voice will be heard through the speaker at the gate
- Person requesting gate entrance then presses and holds the button to reply. A short tone burst again will be heard on both sides of the line indicating to both parties that the person at the gate is speaking in the intercom mode.
- The guest announces his/her arrival and requests access, and then releases the button to turn the intercom mode back over to the telephone inside of the home or building.
- The person inside of the home or building answers and either grants access (presses \*\* or \*) on the telephone keypad) or continues with the conversation before granting access to the premises.

#### **Call Waiting**

- If the telephone is already in use when the call button at the gate is pressed, a ring tone (similar to the regular telephone "call waiting tone") will be heard, indicating the gate station is calling.
- To place the central office telephone line on hold press, the "#" key within 15 seconds of the first call waiting ring tone. The control station will respond with a short tone burst and establish intercom mode between the receiver and the control station.
- The "#" key can be used to switch back and forth between the regular telephone line and gate intercom mode. However, the gate control station will only stay on hold for 15 seconds before it resets to idle mode.
- If the regular telephone tries to ring the receiver while in the gate access intercom mode, the same call waiting tone will be heard. To switch to the incoming call press the "#" key to answer the telephone. Press the "#" key again, to return to the gate intercom mode

#### **Calling the Gate**

- The indoor telephone handset can call the gate control unit to establish data mode allowing the user to program a number of features or to communicate with the gate. While in the data mode, voice communication is not possible except if the intercom mode is entered.
- Simply lift the receiver and press "# 9" within 15 seconds. The gate unit will respond with a GOOD TONE and establish contact with the gate. \* establishes data mode. If call-waiting occurs while in the data mode the data mode connection will be cancelled. Once the user has answered the incoming call, the user must hang up the receiver and call the gate again ["# 9"] to re-establish the data mode. The "#" key cannot be used to get back to data mode in the same fashion that is used to switch between call-waiting and "talking" to the gate.

## Intercom (Audio) Mode

- Once the data mode communication is established, the receiver phone is connected to the receiver unit in data mode only. It is now possible to send Commands to control the gate from the telephone handset. Again, audio is not present. To establish audio (intercom mode) between the phone and gate unit press “\* 3”
- Otherwise, to activate relay A press “\*1” or “\*\*\*”. To activate relay B press “\*2”. A single beep will be heard after the relay has been activated. To toggle the latch mode press the star key followed by the pound key (“\*#”).
- The control station will respond to the toggle-latch-mode command with a single beep if the gate is latched open, and a double beep if the gate is latched closed.
- To toggle call forward press “\*4”. The control station will respond with one single tone if enabled and two single tones if disabled.
- To toggle the sleep mode press “\*9”. The control station will respond to the toggle-sleep-mode command with a single beep if the unit is put into sleep mode, and a double beep if the unit is not in sleep mode.
- Since sleep mode and latch mode are mutually exclusive, trying to activate either mode while the other is active will cause an ERROR TONE.
- To toggle the one-shot enable feature press “\*5”. The control station will respond to the toggle-one-shot-enable command with a single beep if the one-shot code is enabled, and a double beep if the one-shot code is disabled. Hanging up the phone terminates intercom mode. Intercom mode is also terminated after five minutes of inactivity (i.e. five minutes after the last gate command, or five minutes after it is started if no gate commands are entered.)
- **Notes:**
  - Intercom mode and use of the keypad are mutually exclusive: if you are in the middle of entering a four-digit code on the keypad (i.e. after the first numeric key is pressed, and until the operation finishes), the call button will not work and the receiver cannot call the gate.
  - If the call button has been pressed, or the receiver has called the gate, the keypad will not work until the system is back in idle mode.
  - The remote open mode for the event input will work while the unit is in all modes except program mode.

## Indoor Command Code(S) Reference

**Press #9 then enter any of the following:**

- \*\* - Toggle A Relay
- \*# - Latch A Relay
- \*1 - Toggle A Relay (again)
- \*2 - Toggle B Relay
- \*3 - Activate the intercom
- \*4 - Toggle Call Forward Mode (enable/disable)
- \*5 - Toggle One Shot (enable / disable)
- \*9 - Toggle Sleep (enable / disable)

## Access and Function Codes

The PhoneAire can be programmed with up to 500 (4-digit) ACCESS codes. However, there are two different types of codes, Access Codes and Function Codes. Although the number of Access Codes may vary, the number of Function Codes is always 4.

FUNCTION CODES	
"MASTER CODE"	The MASTER CODE is a programmable four-digit code used for gaining access to the program mode. It does not activate the control relays. The factory default MASTER code is 1 2 5 1. It is suggested that you change the default 1 2 5 1 to one of your choice. It is the "password" to the unit. Keep the new MASTER code in a safe place.
"LATCH CODE"	The LATCH CODE is a programmable four-digit code used to toggle relay A. This code will be used to hold open a device connected to Relay A such as a gate or door.
"SLEEP CODE"	The SLEEP CODE is a programmable four-digit code which when entered, will disable all codes. When the "SLEEP CODE" is entered again the unit will be enabled. An override code is provided.
"ONE SHOT CODE"	The ONE SHOT CODE is a programmable four-digit code that disables itself after one use. The user can enable this code for reuse using the keypad or telephone.



## Good Tones and Error Tones

The PhoneAire unit will sound a tone each time a key is pressed. The " \* " key serves as the clear key and a double tone will be heard any time the " \* " key is pressed.

A "GOOD TONE" is represented by an oscillating high tone. An "ERROR TONE" is represented by a single low tone.

The Red and Yellow LED'S

- Two colored LED's are in the face of the unit. The red LED illuminates during the duration of the relay(s) activation period. The yellow LED illuminates while the unit is in the program mode.
- During memory erasure or setup the LED's will flash.

## Resetting the Unit

Your unit provides two very distinct types of resets, a Master Reset, and a Unit Reset. It is important to understand when to use each.

- A MASTER Reset should be done in the event that you lose or forget your MASTER code or, if the unit is in the Latch or Sleep mode and the Latch or Sleep code is lost or forgotten. When a Unit Reset is performed, the MASTER code is reset to the factory default -- 1 2 5 1. This reset will not affect codes and other unit programming. It simply resets the MASTER code to 1 2 5 1.
- A Unit Reset is provided should it ever become necessary to completely reset the PhoneAire back to the initial factory defaults. Be careful ... Unit RESET will DELETE ALL ACCESS & FUNCTION CODES and the MASTER code will be set back to 1 2 5 1. All coding and programming is also lost when a Unit Reset is completed.

## Master Reset

**(Refer to the 30-028 Circuit Board Transmitter Schematic)**

Follow these steps precisely. If you make an error, the unit will ERROR and you will have to start over. Open the face plate of the unit to access the circuit board.

- Press and hold down SW RESET button on the circuit board.
- Press and release HW RESET button. Unit will beep continually.
- Release SW Reset button.
- Unit will issue one tone.
- Press \*\*\* on keypad.
- Unit will beep continually.
- Press and release HW RESET button.
- The unit will issue three GOOD TONE's and the MASTER code will be reset to 1 2 5 1.
- If you previously were in the sleep or latch mode, the unit will return to the idle state.

## Unit Reset

**(!!!! WARNING: ALL CODES WILL BE DELETED FROM MEMORY !!!!)**

**(Refer to the 30-028 Circuit Board Transmitter Schematic)**

Follow these steps precisely. If you make an error, the unit will ERROR and you must start over.

- Press and hold down the SW RESET button on the circuit board. At the same time, press and then release the HW RESET button. Unit will begin to beep repeatedly.
- Release SW RESET button and enter " # \* # ". The unit will sound a GOOD TONE.
- Enter 1 2 5 1 on the keypad. The unit will flash the LED's several times and then again will begin to beep repeatedly.
- Press and release HW RESET button.
- The unit will issue three GOOD TONE's and the MASTER code will be reset to 1 2 5 1.
- The PhoneAire is now completely reset to factory defaults.

## Idle Mode

The Idle mode is the normal operating mode. When in the Idle mode the unit is ready to accept data from the keypad. You will have approximately 4 seconds between key presses. If time is exceeded, you will receive an ERROR TONE.

## The Program Mode

The Program Mode is the mode of operation you use to enter, delete, or change access codes or set specific features of the unit.

The Program Mode is accessed by entering the "MASTER CODE" from the keypad. You will receive a GOOD TONE and the yellow LED will light, indicating that you are in the Program Mode. You then will have approximately 30 seconds between key presses. If this time is exceeded, you will receive an ERROR and be exited from the program mode. **The \* and # Keys**

The \* and # keys serve specific functions while in the Idle or Program mode. The \* key is always the clear key and a double beep will be heard any time the \* is pressed. You should use this key if you make an entry error. The # key also serves as the clear key in the idle mode. In the program mode however, it serves as the exit key and will at any time when depressed, exit you from the program mode.

## Programming the Gate

To access the program mode, enter the MASTER CODE. If the MASTER code is valid the yellow LED will come on and the individual will be prompted with a GOOD TONE to enter a number corresponding to a SUB-MODE. Remember: MASTER Code will not activate control relay. (MASTER CODE) + (Number corresponding to Sub-Mode). Once in the program mode, the individual will have 30 seconds between key presses or the unit will ERROR and exit the program mode. A person desiring to exit the program mode may do so by simply pressing the # key at any time. There are 10 different SUB-MODES to choose from. They are as follows:

SUB-MODE Description	
1	Program Access Codes (Relay A)
2	Delete Codes
3	Change MASTER Code
4	Set Sleep Code Latch Code and/or Call Forwarding
5	Set One Shot Code
6	Set Relay Output Time
7	Program Access Codes (Relay B)
8	Enable / Disable "3 Strikes-You're Out"
9	Program Event Input
0	Erase Memory

### Sub-Mode 1 (Program Relay A Access Codes)

To program new Relay A access codes enter the following:

**(MASTER CODE) + 1 + (NEW CODE) + (NEXT NEW CODE) etc, then ( # ) to exit program mode**

Select any 4-digit code you wish. If you receive an ERROR TONE after entry, the new code is already being used. Select another 4-digit code. The unit will respond with a GOOD TONE with the acceptance of each new Relay A code. You may continue entering Relay A codes until you finish (Press #), or the memory becomes full. You will automatically be exited from the program mode if the memory reaches capacity. When memory is full you will not be able to enter this Sub-Mode and will receive an ERROR if entry is attempted.

### Sub-Mode 2 (Delete Codes)

To delete codes enter the following:

**(MASTER CODE) + 2 + (CODE TO BE DELETED)**

You can delete any Access or Function code that you wish with the exception of the MASTER CODE. If the code you wish to delete is not found in memory, the unit will respond with an ERROR and wait for another code to be entered. A GOOD TONE will be sounded once the code has been found and deleted. You may continue deleting codes until you finish (Press #).

### Sub-Mode 3 (Change MASTER Code)

To change your MASTER code, enter the following:

**(Current MASTER CODE) + 3 + (new MASTER CODE)**

Select any 4 digit MASTER code you wish. If you receive an ERROR TONE it means the code you have entered is already in use; select another code. The unit will respond with a GOOD TONE when the new MASTER Code is accepted, and you will be exited from the program mode. MAKE SURE TO WRITE THE NEW MASTER CODE DOWN.

## Sub-Mode 4 (Set Sleep Code & Latch Code and/or Call Forwarding)

EXPLANATION: The sleep code used to disable all Relay A and function codes from the keypad. It also turns shuts off the CALL button on the intercom. This feature is most commonly used in applications where no entry is desired after hours. Relay B codes will still be valid from the keypad. By connecting both relays in parallel, managers may be assigned Relay B codes and still gain access. While in the SLEEP MODE, the yellow and red LED's will flash approximately once every 3 seconds. To initialize the system back to normal, simply reenter the sleep code. Should you lose or forget your Sleep code and the unit is in the Sleep mode see the Unit Reset instructions on pages 19 and 20.

**NOTE: You can also toggle the sleep code with the telephone. (See intercom operating instructions.)**

**To program or change your sleep code enter the following:**

**(MASTER CODE) + 4 + 1 + SLEEP CODE**

You can select any 4 digit sleep code you wish. If you receive an ERROR, you must select another code as it is already in use. The unit will respond with a GOOD TONE with the acceptance of the new Sleep Code and you will be exited from the program mode.

## Set Latch Code

The Latch Code toggles the state of the main relay (A) of the circuit board. The red LED will light if the relay is in the latched position. The latch code is useful in applications when the gate is desired to hold open. If the operator's close circuit is controlled by loops, timers, etc., they will be overridden by the latched state of the relay and the gate will hold open. An "OPEN-OVERRIDE" circuit must exist in the operator equipment in order to utilize this function. If your gate cycles when this code is entered, your operator is not set up to utilize this function. Your local dealer or distributor should be able to assist you if you have any specific questions.

**To program or change your latch code enter the following:**

**(MASTER CODE) + 4 + 2 + LATCH CODE**

You may select any 4 digit latch code you wish. If you receive an ERROR, you must select another code as it is already in use. The unit will respond with a GOOD TONE with the acceptance of the new Latch Code and you will be exited from the program mode. When the latch code is entered the RED Led will light and the gate will hold open. When the latch code is entered again the RED Led will go off and the gate will close. NOTE: On gates with a timer to close the "TIMED DURATION" starts when the latch code is released.

## Call Forwarding

Call Forwarding is located under Sub Mode 4 with Sleep and Latch modes as follows:

**Sub Mode 4 (Call Forwarding)**

**To program or change the phone number dialed, enter:**

**(MASTER CODE) + 4 + 3 (\*status) + 2 + (Phone Number - 7, 10, or 11 digits)**

**To disable Call Forwarding:**

**(MASTER CODE) + 4 + 3 (\*status) + 0**

**To enable Call Forwarding enter:**

**(MASTER CODE) + 4 + 3 (\*status) + 1**

**\*status: Single beep = enabled**

**Double beep = disabled**

**Notes:**

- Pressing \* will clear the phone number digits entered
- Pressing # will "enter" the phone number. A GOOD TONE will sound if 7, 10, or 11 digits have been entered when # is pressed. If not, an ERROR TONE will sound and call-forwarding will be disabled if it was enabled.
- Digits can be entered until # is pressed. Any digits over 11 will be discarded and a bad beep will sound when # is pressed
- Call forwarding can only be enabled when a valid phone number has been entered.



## Sub-Mode 5 (Set One Shot Code)

EXPLANATION: This Mode is used to program a One-Shot Code, and to enable it or disable it.

After the 5 is pressed the enable/disable status is heard (one beep = enabled, two beeps = disabled) followed by a GOOD TONE.

To disable the one-shot code enter:

**(MASTER CODE) + 5 (\*status) + 0**

To enable the one-shot code enter:

**(MASTER CODE) + 5 (\*status) + 1**

To change the one-shot code enter:

**(MASTER CODE) + 5 (\*status) + 2 + (ONE-SHOT CODE)**

To change the relay the one-shot code activates enter:

**(MASTER CODE) + 5 (\*status) + 3 + (RELAY #)**

The Relay number corresponds to which relay to set. 1 = Relay A, 2 = Relay B.

## Sub-Mode 6 (Set Relay Output Times)

To set or change relay output times enter the following:

**(MASTER CODE) + 6 + (RELAY #) + (RELAY OUTPUT TIME) in seconds**

The Relay # corresponds to which relay to set. 1 = Relay A, 2 = Relay B. Your output time is set on both relays from the factory at approximately 1/2 seconds "00". If a longer output time is desired, enter a two digit number corresponding to the number of seconds between "00" and "99". By entering "00" the output time is set to approximately 1/2 seconds which is ideal for most operators.

## Sub-Mode 7 (Program Relay B Access Codes)

To program new Relay B access codes enter the following:

**(MASTER CODE) + 7 + (NEW CODE) + (NEXT NEW CODE) etc ( # to exit)**

You may select any 4-digit code you wish. If you receive an ERROR TONE after entering a code it indicates that code is being used. Select another code. The unit will respond with a GOOD TONE as the unit accepts each new Relay B code. Continue entering Relay B codes until you finish (Press #), or the memory becomes full.

You will automatically be exited from the program mode if the memory reaches capacity. When memory is full you will not be able to enter this Sub-Mode and will receive an ERROR TONE if entry is attempted.

## Sub-Mode 8 (Enable/Disable 3 Strikes-You're Out)

EXPLANATION: This feature is desirable to keep unwanted persons from successively entering codes until they "hit" a programmed access code. By selecting this function you enable a 90-second lock out period if 3 incorrect codes are entered successively within a 3 minute period. When this occurs, the LED's will flash and a high pitched alarm will be generated from the unit for 30 seconds. The unit will then shutdown for 1 minute.

To toggle the 3 strikes-you're out feature enter the following:

**(MASTER CODE) + 8 (\*current state) + (MASTER CODE)**

**\* Current state single beep = 3 strikes enabled -- double beep = 3 strikes disabled**

After you have selected mode 8, the unit will respond with a single or double tone. A single tone indicates that the 3 Strikes-You're Out feature is enabled. A double beep indicates that the 3 Strikes-You're Out feature is disabled. The unit will then issue a GOOD TONE and wait for the MASTER code. If you wish to toggle the 3 Strikes You're Out state, enter the MASTER code. If you do not wish to toggle the state, enter # to exit.

## Sub-Mode 9 (Program Event Input)

The Event Input allows the user to tie in an external device to control specific functions of the unit. The Event Input can be programmed 5 different ways.

- **REMOTE INACTIVE:** Relay A codes may be made inactive by an external switch. When inactive all relay A codes will be disabled. The relay B, program, and function codes will still be accessible to the end user.
- **ARMING CIRCUIT:** This is normally used to allow access in parking situations. An external vehicle detector may be connected to the input. Relay A codes would only become active on the presence detect of a vehicle. If an entry attempt to activate relay A is made while the input is not activated, entry will be denied. The relay B, program, and function codes will still be accessible to the end user.
- **REMOTE OPEN:** A relay may be activated using a pushbutton or switch. The relay to activate is user selectable. This function operates even when the unit is in sleep, latch, or program mode.
- **NIGHT LIGHT:** This will turn on the unit night light for 60 seconds using a relay connected to a loop detector, electric eye, motion sensor, etc. You must move the Lights jumper from On to Event to use this output. See circuit board layout on page 7 for location.
- **DISABLE:** Disables the Event Input.

To program the Event Input as Remote Inactive enter the following:

(MASTER CODE) + 9 (\*current mode) + 1

To program the Event Input as an Arming Circuit enter the following:

(MASTER CODE) + 9 (\*current mode) + 2

To program the Event Input as Remote Open enter the following:

(MASTER CODE) + 9 (\*current mode) + 3 + (\*Relay to Activate)

To PROGRAM the Event Input as NIGHT LIGHT enter the following:

(MASTER CODE) + 9 (\*current mode) + 4

To DISABLE the Event Input enter the following;

(MASTER CODE) + 9 (\*current mode) + 0

\*Current Mode \*Relay to Activate

Single beep = Remote Inactive Mode Enabled. 1 = Relay A

Double beep = Arming Circuit Mode Enabled. 2 = Relay B

Triple beep = Remote Open Mode Enabled

GOOD TONE Only = Event Input Disabled

After you have selected Sub-Mode 9, the unit will respond with tones as described above. This tells you the current mode the event input is programmed as (See \*Current Mode above). If you do not wish to toggle the state, enter # to exit. If you are programming the event input as a Remote Open input, you will be prompted for which relay to activate on an event. Enter the correct relay as stated above (\* + Relay to activate).

## Sub-Mode 0 (Erase all codes)

To erase all access & function codes, (except the MASTER code), enter the following:

(MASTER CODE) + 0 + (MASTER CODE)

When the sequence is entered correctly, the LED's will flash several times and the unit will generate a GOOD TONE when the memory has been cleared. If the above sequence is not validated by the unit you will receive an ERROR TONE and immediately be exited from the program mode.

IMPORTANT NOTE: It should not generally be necessary to erase all the codes from memory unless the codes are forgotten and are occupying needed memory. A good log and maintenance of access codes should prevent this from ever needing to be done.

## TROUBLESHOOTING

Pressing call button at the gate results in get 1-1/2 rings, then an ERROR TONE.	Unit can not find house unit. Either move units closer, different locations, or add an antenna extender.
Pressing call button at the gate results in 3 rings and then ERROR TONE	Units are communicating but no phone line is present. Make sure the Telco phone line is correctly connected, and that bypass switch is in normal. If it's supposed to be in PBX make sure it is.
Gate unit can be powered from 12VAC transformer or 12VDC battery	House unit should be powered from 12VAC transformer.
Voice connection is noisy	Check to make sure power wires are not next to antenna cables. Check all antenna connections to make sure they are tight. If on solar power, try turning off the charger to see if signal is clearer
MIC gain (labeled MIC Gain on board) potentiometer on gate unit can be adjusted to try to increase half duplex center point.	Increasing MIC gain makes it easier for the person inside to hear the person outside. Decreasing MIC gain lets the person outside hear the person inside better.
Speaker volume pot (labeled Volume on board), increases the loudness of the gate unit speaker.	The unit is not as loud as the hardwired, and if you increase the volume too much the unit will get a lot more cutting out of voice on both sides.



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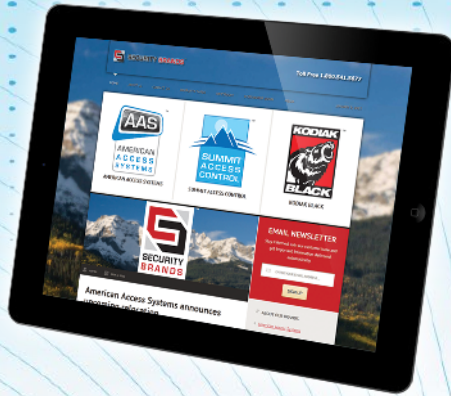
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