



**THIS PRODUCT MUST BE INSTALLED IN ACCORDANCE WITH THE APPLICABLE INSTALLATION CODE BY A PERSON FAMILIAR WITH THE CONSTRUCTION AND OPERATION OF THE PRODUCT AND THE HAZARDS INVOLVED**

**CE PRODUIT DOIT ÊTRE INSTALLÉ SELON LE CODE D'INSTALLATION PERTINENT, PAR UNE PERSONNE QUI CONNAÎT BIEN LE PRODUIT ET SON FONCTIONNEMENT AINSI QUE LES RISQUES INHÉRENTS**

## **I. Introduction**

This manual is for installation and programming of the **AOR-24/AOR-32** Area of Refuge Command Unit. For instructions on programming individual Talkaphone Area of Refuge Emergency Phones, please refer to the Installation & Operation Manual For Emergency/Information Phones.

This manual will guide you through the installation of this product and provide comprehensive operating instructions. Please read this instruction manual completely and thoroughly before installing this product.

## **II. Contents**

Before beginning installation, make sure you have all the included components. Each **AOR-24/AOR-32** includes:

<b>Qty.</b>	<b>Part Number</b>	<b>Description</b>
1	AOR-24	24-Line Area of Refuge Command Unit
4		12VDC, 4.5Ah Backup Battery
1		Audible and Visual Indicator of Incoming Area of Refuge Emergency Phone
1	AOR-TR32	Trim Ring for Flush Mounting (Optional)
12		10-24 Screw for Flush Mount Trim Ring Assembly

### **III. Technical Requirements**

General:

115-230 VAC, 50-60Hz power source

Maximum impedance between the Talkaphone Area of Refuge Emergency Phones and the AOR-24 is 25 Ohms. Maximum cable length will vary with gauge (See Frequently Asked Questions, p.10).

For Local Mode Only

No external phone line (i.e. POTS line) is required.

For Remote Mode or Day/Night Mode

Three (3) dedicated POTS lines (i.e. analog telephone lines or analog PBX lines).

If connected to a PBX, the extension(s) must provide:

1. At least 24 Volts at 20 mA off-hook (no current is drawn on-hook)
2. Either a disconnect pulse (voltage drop at end of call) or 30-seconds or silence after hang-up (no re-order or howler feature)

If connected to a POTS line, there must be no special features, such as hook-flash, call-waiting, auto-redial when busy or voicemail. If the telephone company has activated any such features, contact them to have these features turned off.

### **IV. Installation**

1. Remove Area of Refuge Command Unit from packaging carton and inspect for possible damage during shipment. If the unit is damaged, or any of the components are missing, contact your Talkaphone Co. distributor immediately. Do not discard any hardware or packing material before you are certain you have all the items listed above, and the unit is installed and functioning correctly.
2. Remove the packaged front cover door handle from the telephone compartment and install to the outside surface of the unit using the provided screws.
3. Remove the packaged 9-volt battery from the telephone compartment and install into the Phone. This battery is only for the programming in the 4-Line Phone.

4. Remove the telephone by sliding it upwards  $\frac{1}{2}$  [in] then lifting away from the unit and out of the compartment. This will expose a mounting location within the telephone compartment.
5. After installation, reinstall the telephone within its compartment by holding the phone against the rear surface of the compartment and sliding  $\frac{1}{2}$  [in] downward. If the phone will not slide downward into locking position, the 6-32 screws located behind the phone may need to be adjusted. Loosen the screws  $\frac{1}{4}$  turn by hand and repeat step 8. Likewise, if the telephone slides correctly downward but does not feel secure in place, tighten the nuts  $\frac{1}{4}$  turn by hand and repeat step 8. Plug phone and power connections back into phone in the correct order.
6. Remove the three (3) Phillips screws from the left side of the unit which secure the hinged front cover shut.
7. Carefully open the hinged front cover taking care there are no loose items which may have shifted during transportation.
8. The **AOR-24/AOR-32** may be either surface mounted onto a wall or flush mounted into a wall.



**NOTE:** For flush mounting units, **AOR-24** and **AOR-32** units should be ordered with the available **AOR-TR32** Flush Mount Trim Ring (sold separately).



**NOTE:** Conduit knockouts exist on the rear, top, and bottom sides of the enclosure for access to power and communication lines. Determine the method of bringing in these power and communication lines **before** mounting the enclosure.



**NOTE:** Whenever possible, it is best to keep the maximum clearance possible between analog phone lines and alternating current. Running phone lines too close to hot VAC lines will produce undesired effects on the phone line.

9. For mounting the unit directly to the surface of an interior wall,
10. The **AOR-24/AOR32** has four (4) surface mounting keyholes. These keyholes are visible upon product arrival. The first of the two remaining keyholes is located behind the built in telephone. To remove the built in telephone,

disconnect the incoming power cord and telephone wires. Take care to keep these wires in the correct order.

11. For Flush Mounting the Unit

The **AOR-24/AOR-32** has four(4) 7/32 [in] knockouts located on the top, bottom and sides which can be used for either mounting the unit within a wall. or to fasten the available AOR-TR32 Flush Mount Trim Ring. This trim ring may be installed in contact with the closed cover without inhibiting the functionality of the hinge.

12. Secure the **AOR-TR32** to the **AOR-24/AOR-32** unit in the desired location using the provided 10-24 screws. This trim ring may be installed in contact with the closed cover without inhibiting the functionality of the hinge.

13. Installation of Strobe/Siren

Mount the strobe/siren assembly on a wall in an appropriate location per the instructions packaged with the strobe/siren assembly.

14. Three (3) outgoing low voltage power lines from the strobe/siren assembly must be wired to the Black, Red/white, and Orange lead wires from the relays located at the top interior of the **AOR-24/AOR-32**. Same color wires from the strobe/siren and the **AOR-24/AOR-32** should be connected together.

15. Installing Phone lines

Bring in analog phone lines through conduit knockouts located on the rear, top, or bottom sides of the unit. Always try to separate power lines from communication lines as much as possible to reduce undesired effects on the phone line.

16. The **AOR-24/AOR-32** supports up to twenty-four (24) or thirty-two (32) emergency analog phones divided into three (3) or four (4) banks of eight (8). Each bank consolidates up to eight (8) Area of Refuge Emergency Analog Phones lines and can connect to either its own incoming POTS line or phone built into the **AOR-24/AOR-32** unit.

17. Attach the incoming Emergency Phone lines to the correct pins on the 66-block as indicated on the diagram found beside the punch-down block. The connections are NOT polarity sensitive. If a telephone (POTS) line or PBX line is to be used in addition to the phone built into the enclosure, punch down the incoming phone line to the Telco "IN" positions of the same bank on the punch down block.

18. Local Mode

In Local Mode, pressing the button on any of the Talkaphone Area of Refuge Emergency phones will cause the built in touch-tone telephone to ring.

19. Remote Mode

In Remote Mode, pressing the button on any of the Talkaphone Area of Refuge Emergency phones will cause them to access a phone line to dial out. For this configuration, connect an outside phone(s) line to the “IN” position(s) on the punch down block.



**NOTE:** See Technical Requirements, page 2, for outside phone line requirements.

20. Day/Night Mode

Day/Night Mode is primarily used when a facility has a guard on-site during the day but not at night. It may also be used in any situation where the guard station is not always manned. When a Talkaphone Area of Refuge Emergency Phone calls and the **AOR-24/AOR-32** is in Day/Night mode, it will ring the Command Unit’s built in local handset phone first, ring it a second time if no one answers the first time, then if no one answers the second time it will dial a remote number. If no one should answer the remote number, it will re-ring the local phone and continue this cycle until either the phone is answered or times out (see Emergency Phone manual for information on setting the time-out.) When a guard leaves for the night, she can enter the code \*36\* to configure the consolidator to ring the remote phone first and then switch to the local phone (see Software Programming, page 6). For Day/Night Mode connect an outside phone line(s) to the “IN” position(s) on the punch down block. This programming must be done for each of the consolidators (3 consolidators for the AOR-24)



**NOTE:** See Technical Requirements, page 2, for outside phone line requirements.

21. Sharing a Phone Line

Another telephone instrument (e.g. fax, modem, standard telephone, etc.) can share the outside phone line(s) with the **AOR-24/AOR-32** by connecting the outside phone line(s) to the “IN” position(s) on the punch down block and connecting the telephone instrument sharing the line to the “OUT” position(s). Be sure to set each consolidator in the **AOR-24/AOR-32** not to answer before

your other device picks up (or, if sharing with a standard telephone, be sure to allow enough rings for the person answering the phone to pick up).



**WARNING:** The other device sharing the line should never be emergency equipment of any kind

22. Once the correct configuration of for the **AOR-24/AOR-32** has been determined and appropriately wired. Connect incoming 115-230 VAC 50-60Hz power wiring to the power supply board located in the bottom compartment of the unit. The LINE, NEUTRAL, and GROUND terminals are located on the left side of the board.



**WARNING:** The order in which 115-230 VAC 50-60Hz or backup batteries is connected does not matter. However, once either the batteries are connected OR the 115-230 VAC 50-60Hz line is energized, THE UNIT WILL BECOME “HOT” ENERGIZED.

23. Connect the backup batteries.  
The batteries and their corresponding connections to the wiring harness are labeled. Starting with the battery that is labeled with the numbers 3 and 4, place the battery on the lowest battery shelf and connect the matching leads from the wiring harness.
24. Next locate the battery that is labeled with the numbers 5 and 6. Place this battery on the second shelf from the bottom and connect the matching leads from the wiring harness.
25. Now locate the battery that is labeled with the numbers 7 and 8. Place this battery on the third shelf from the bottom and connect the matching leads from the wiring harness.
26. Place the final battery, labeled with the numbers 9 and 10, on the top battery shelf and connect the matching leads from the wiring harness.
27. The batteries connect to the power supply board by inserting the connector onto the header pins located on the bottom right of the power supply board which the 115-230 VAC 50-60Hz power supply was connected. Although the pins are polarized, ensure correct polarity when connecting the backup batteries. Red-positive & Black-negative.



**It is the installer's obligation to ensure compliance with all national, regional, and local regulations**

### **Programming Instructions**

To program the **AOR-24/AOR-32** Command unit, each bank of 8 Talkaphone Area of Refuge Emergency phones must have their own internal consolidator programmed. To program each internal consolidator, call it by either dialing the phone number of the line connected to that bank's Telco "IN" port or by lifting the selecting the appropriate line of the built in handset. In either case, the consolidator will respond with three beeps. Each consolidator will respond to all programming requests in one of two ways:

1 Beep	Command completed successfully
2 Beeps	Error(s) detected

If you hear two beeps, enter the code again. If you hear two beeps a second time, hang up and try again.

#### **Remote Mode**

In Remote Mode, if a standard telephone company phone line is being utilized via the Telco "IN" connection, the consolidator does not need to be programmed. Move on to Programming the Talkaphone Area of Refuge Emergency Phones.

If a PBX line is being connected to the Telco "IN" port, the consolidator must be programmed for PBX mode:

1. Call the consolidator (listen for 3 beeps)
2. Enter Guard Access Code: \*31\*\*
3. Program the Consolidator for a PBX line: \*39\*2\*
4. Move on to Programming the Talkaphone Area of Refuge Emergency Phones

#### **Local Mode**

1. Pick up the built in handset and select the press the phone line corresponding to the bank of phones/consolidator to be programmed (listen for 3 beeps)
2. Enter Guard Access Code: \*31\*\*
3. Program the consolidator for Local Mode: \*37\*
4. Move on to Programming the Talkaphone Area of Refuge Emergency Phones

#### **Day/Night Mode**

1. Call the consolidator or pick up the built in handset and select the press the phone line corresponding to the bank of phones/consolidator to be programmed (listen for 3 beeps)
2. Enter Guard Access Code: \*31\*\*
3. Program the consolidator for Day/Night Mode: \*63\*
4. Program the consolidator to call either:  
     Local first, then Remote: \*35\*  
     Remote first, then local: \*36\*
5. If a PBX line is being connected to the Telco "IN" port enter the PBX code: \*39\*2\*
6. Move on to Programming the Talkaphone Area of Refuge Emergency Phones

**Programming the Emergency/Information Phones**

Once each Consolidator has been programmed, each Talkaphone Area of Refuge Emergency Phone must be programmed individually. A call can be routed to the desired phone port by entering the following code:

\*4X\*      Routes to Emergency phone in port jack number X (X=1-8)

For details on programming the Talkaphone Area of Refuge Emergency phones, refer to the Installation & Operation Manual for Emergency/Information phones. (Note: if the Consolidator is in Remote Mode or Day/Night Mode and your remote phone line is a PBX extension, be sure to program the emergency phones for Mode 2. See Emergency Phone Manual, pages 11 and 15 for more information on Modes).

Code Summary

Command	Function
*31* ...[up to 8 digits]*	Guard Access Code entry for phone programming <b>(Default Code is *31**)</b>
*30* ...[up to 8 digits]*	Master Access Code entry to change Guard Access Code or Master Access Code <b>(Default Code is *30*12345678*)</b>
*30*14725836*	Resets Consolidator programming to factory defaults
*32* ...[up to 8 digits]*	Programs and stores a new Master Access Code
*33* ...[up to 8 digits]*	Programs and stores a new Guard Access Code
*34* ...[up to 2 digits]*	Sets number of rings before consolidator picks up when it is dialed
*62*	Remote Mode (default)





**Area of Refuge Command Unit**  
**Installation Instructions**  
**Model AOR-24/AOR-32**

*37*	Local Mode
*63*	Day/Night Mode
*35*	In Day/Night Mode, call LOCAL PHONE then TELCO IN
*36*	In Day/Night Mode, call TELCO IN then LOCAL PHONE
*39*...[1 or 2]*	Program the type of phone line in the TELCO IN *39*1* for ordinary phone lines (default) *39*2* for PBX lines
*4...[1-8]*	Routes to emergency phone in phone jack number 1-8

## **V. Operating Instructions**

### **1. General Information**

When a push button on the Talkaphone Area of Refuge Emergency Phone is pressed it will automatically either ring the local phone or dial out using the phone line connected to the Telco "IN" port according to how the particular consolidator which it is connected is programmed. If the phone line is being shared with another device (see page 5, sharing a line), the consolidator will seize the line on behalf of the emergency phone.

When a call comes in to the **AOR-24/AOR-32**, an LED will light indicating which phone is calling in. If a call is already being answered, any other calls which come in will cause the appropriate LED to blink to indicate they are awaiting an open line. As soon as the initial call has been completed, any calls that were waiting will be put through in the order in which they were placed.

### **2. Calling Talkaphone Area of Refuge Emergency Phones through the Area of Refuge Command Unit**

To call from a remote phone, dial the telephone number of the Consolidator. To call from the local phone, simply pick up the phone and select the phone line corresponding to the appropriate consolidator. In either case, you will hear 3 beeps when the consolidator is ready.

Enter the code to route to an Emergency Phone, \*4X\* where X= phone jack number 1-8. There will be a short pause and then the Emergency Phone will answer with a series of tones.

For more information on Emergency/Information Phones, consult the Emergency/Information Phone manual.

### **3. Answering the Emergency/Information Phones**

When a call comes in on either the local phone or a remote phone, the consolidators are effectively transparent. That is, there will exist an open line of communication to the Area of Refuge Emergency Phone from the moment the call is answered.

**VI. Frequently Asked Questions**

1. **If I have more than one consolidator can I connect them to the same phone line either in parallel or in series (using a “daisy chain”)?** Each consolidator requires its own phone line or local phone. (Exception: A multi-line local phone, connected to the LOCAL port will allow multiple consolidators to be connected in parallel.)
2. **What kind of cable do I need to run from the Emergency Phones to my Consolidator?** We strongly recommend twisted, shielded pairs with the shield connected to earth ground only at the consolidator end. The resistance on the line is not to exceed 25 ohms. The following chart shows distances and recommended wire gauges:

Distance from EC-8 to Emergency/Information Telephone	Recommended Wire Gauge
0 - 500 feet	24 G
501 - 750 feet	22 G
751 - 1,000 feet	20 G
1,001 - 1,800 feet	18 G
1,801 - 3,000 feet	16 G
3001 - 5,000 feet	14 G

Distance from EC-8 to Local Phone	Recommended Wire Gauges
0 - 1000 feet	24 G
1001 - 1500 feet	22 G
1501 - 2000 feet	20 G
2001 - 3,600 feet	18 G
3,601 - 5,000 feet	16 G
5,001 - 8000 feet	14 G

3. **I am using a consolidator in “local” mode. Do I need to program a phone number into my Emergency Phones?** You must enter a phone number (see Emergency/Information Phone Manual, page 8) even though your Talk-A-Phone unit is not using this number to connect to the local phone. We recommend the number 1234567.
4. **If I made some mistakes during programming is there a way to reset the programming?** If you have forgotten your access code, you may reset the programming on that consolidator to factory default by entering \*30\*14725836\*. Note: you will NOT have to reprogram your individual Emergency/Information Phones.

5. **Does the consolidator remember its programming if I unplug it?** Yes. All memory is non-volatile and does not require a back-up battery.
6. **My consolidator is not at my desk where the calls come in. Is there a way to make the LED's remote so I can see who is calling?** Although the LED's cannot be made remote, Emergency/Information phones can be purchased with the "V" option which allows a location identifying message to be recorded into the phone. This message is then played as soon as the call is answered. This ensures that no matter what phone answers the call (local or remote) the location will be immediately announced.

Another option is to purchase an EB-100 or EB-200 Base Station. These devices will display a 6 digit code (e.g. 122806 for 1228 Main St. 6<sup>th</sup> floor) as soon as the call has been answered.

7. **Are the Emergency Phones powered by the Area of Refuge Command Unit?** Yes.



**VII. Basic Trouble-Shooting**

**Note: Please also read the Trouble-Shooting Guide in the Emergency Phone Manual.**

<b>Problem</b>	<b>Possible Causes</b>
My unit does not function at all. I cannot call it or call out with it.	<ol style="list-style-type: none"> <li>1. The power supply is not properly connected (check the power LED).</li> <li>2. The phone wires are not properly connected.</li> <li>3. Your unit has been struck by lightning or another very high voltage source. Contact Talk-A-Phone's Service Department.</li> <li>4. There isn't enough power on the line (see Technical Requirements, page 3).</li> <li>5. You may have accidentally plugged a PBX line or phone company line into the Local port. If so, contact Talk-A-Phone technical support.</li> </ol>
I hear noise on the line.	<ol style="list-style-type: none"> <li>1. You are not using twisted, shielded wire. Fluorescent lights, elevator machinery and many other devices can produce noise on your wires if they are not properly twisted and shielded. (See FAQ #2 for wiring requirements.)</li> </ol>
The Local Phone rings briefly but then when I pick up I hear three beeps.	<ol style="list-style-type: none"> <li>1. The Emergency/Information phone that called in was not programmed with a phone number (see FAQ #3, page 9)</li> </ol>
When I call an Emergency Phone through the EC-8, I cannot communicate with the person at the other end.	<ol style="list-style-type: none"> <li>1. The Emergency Phone was not programmed to automatically go "live" after being called. It is in programming mode. You can activate it for a single call or for all future calls by entering your guard code (*4**) followed by either *5* for a single call or *78* for all future calls. (See Emergency Phone Manual, page 9 for more information.)</li> </ol>
The consolidator will not accept my Access Code	<ol style="list-style-type: none"> <li>1. You are using a touch-tone phone on a PBX that is not giving the consolidator the appropriate tones.</li> <li>2. Someone has changed the Access Code. You can reset all codes to factory default by entering *30*14725836* (see FAQ #4, page 9).</li> </ol>