



POTTER ELECTRIC SIGNAL COMPANY LLC
5757 PHANTOM DRIVE, SUITE #125 P.O BOX 42037
HAZELWOOD, MO 63042
TEL : 314-595-6900 FAX : 314-595-6999
http://www.pottersignal.com

INSTALLATION MANUAL and USER'S GUIDE System Model EBP-407C

Patent No.: U.S 6,255,946 B1

*The EBP-407C is a High Quality Annunciator System with
Entry & Exit Chime and Dual Counter.*

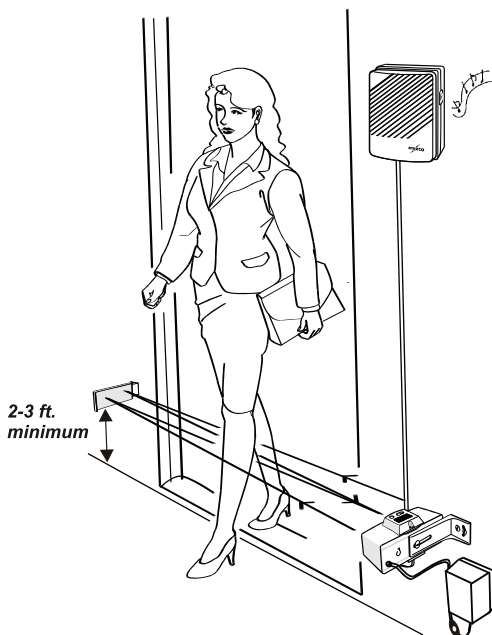
1.0 DESCRIPTION

The EBP-407C annunciator system is designed with superior dual counter active-infrared technology. The invisible infrared beam is designed to trigger a pleasant chime sound and register a count on the digital counter when the beam is interrupted. The infrared signal differentiates among Entries and Exits making it an efficient device. The system counts the number of people that enter the facility and sounds a pleasant "ding dong" chime upon entering and a single "ding" sound when exiting. Each event is counted, recorded and registered by the built-in digital counter and can be viewed and compared later in Entry/Exit modes.

2.0 FEATURES

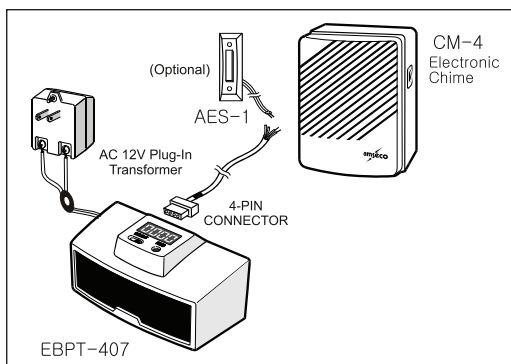
- * Microprocessor driven system
- * Independent Entry/Exit counters
- * 22ft. detection range across doorway
- * Resettable 4-digit digital counter (up to 9999)
- * Distinctive Entry/Exit chime sound
- * Electrically Erasable Memory feature (EEPROM) will maintain entry/exit counts when the power is OFF, or during power outages (unless the RESET button is pushed to reset both counters to zero)
- * Right-Entry or Left-Entry installation feature
- * Selectable detection range 10ft min. 22ft max
- * Adjustable chime sound level output
- * Can be expanded using additional chimes (CM-4)
- * Door bell feature using optional call button (AES-1)

WARNING:
DO NOT INSTALL THE INFRARED
TRANSCIVER UNDER 2 ft.



3.0 COMPLETE KIT PARTS LIST

One (1) Infrared Transceiver with dual counter
One (1) Electronic Chime with volume control
One (1) Reflector
One (1) Power transformer (12V AC 20VA)
One (1) 6-foot power cord with in-line switch
One (1) 26ft. 4/conductor chime wire (AWG-24)
Mounting Brackets
Mounting Screws and Washers

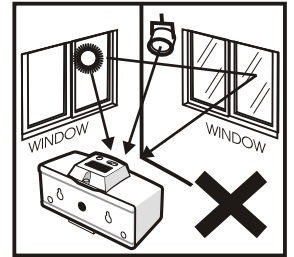
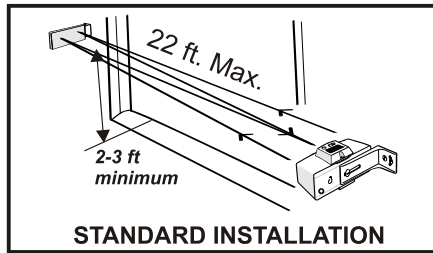
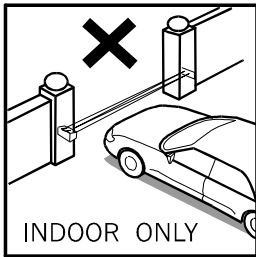


4.0 PLANNING THE INSTALLATION

It is important that before starting the installation, you carefully read the installation instructions, and spend time planning the installation. Although installation of the system is not difficult, there are a number of steps that must be done correctly for the system to operate properly. We suggest that the following conditions to be followed:

IMPORTANT INSTALLATION CONDITIONS:

1. **Mount the Infrared Transceiver, Chime, and Reflector to a firm surface.**
2. **The Infrared Transceiver should be mounted at a level where it can be reached for counter reset.**
3. **Mount the Infrared transceiver and reflector NOT TO EXCEED THE 22FT. MAXIMUM DETECTION RANGE across doorway.**
4. **DO NOT mount the unit facing directly into the sun light or bright lights. It may reduce the operating distance.**
5. **Use only the transformer 12V AC 20VA and wire size specified in this instructions.**
6. **DO NOT install the Infrared Tranceiver under 2 ft. above the floor.**



RECOMMENDED INSTALLATIONS

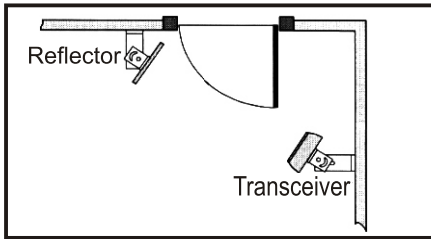


Fig. A Transceiver and reflector using two brackets

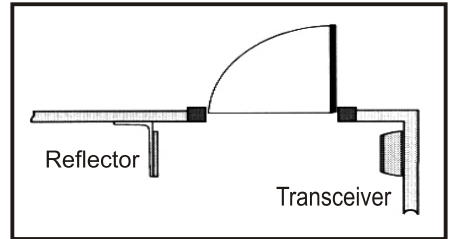


Fig. B Direct wall mount transceiver

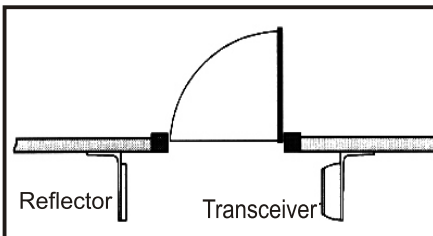


Fig. C Transceiver and reflector on one bracket

INSTALLATION NOT RECOMMENDED

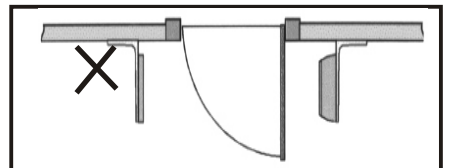
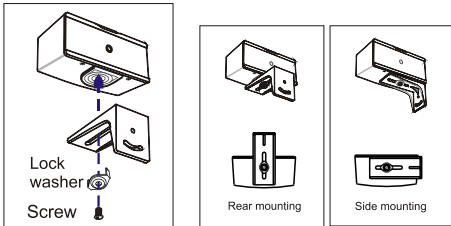
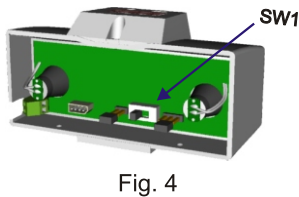
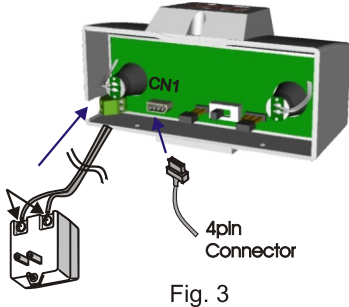
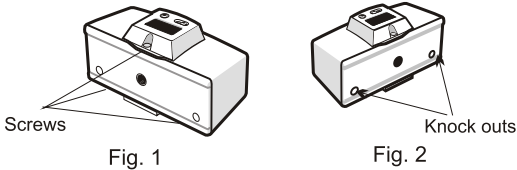


Fig. D

5.0 INSTALLING THE INFRARED TRANSCEIVER



1. Select a suitable location for the infrared transceiver.
2. Remove the 2-bottom screws and 1-top screw from the transceiver and remove the back cover (Fig. 1).
3. Remove a knock-out from the back of the transceiver back plate to feed the power wires and 4-conductor cable thru(Fig. 2).
4. Using the 6-ft power cord with in-line switch, connect the pre-stripped wires to the 12V AC 20VA transformer terminals. Strip the insulation on the opposite ends of the wires back approximately 1/4inch, and insert into transceiver terminals labeled 12V AC input (Fig. 3).

DO NOT PLUG TRANSFORMER INTO AC OUTLET AT THIS TIME. The transformer MUST BE plugged in during the alignment procedure.

Prevent excess wires from lying across the floor, as you may trip over them. If necessary, use cable ties to keep The wires safely out of the way.

5. Connect the chime 4-pin connector to CN1 on the transceiver (Fig. 3).
6. Make sure the **5.1 transceiver settings** hereinbelow: The Left or Right entry switch must be properly placed depending on where the transceiver is installed. (Fig. 4: Factory set for left hand side entry as you enter the Location.)
7. Install the transceiver mounting bracket(s)to the intended position. Then close the transceiver back plate and secure it using the screws provided, and secure the transceiver to the bracket (Fig. 5).

5.1 TRANSCEIVER FEATURE SETTINGS

AC : 12VAC input

CN1 Chime output

(-) : ground output
 (+V) : 12VDC output
 (OC) : (-) signal when Exit
 (IC) : (-) signal when Enter

JP1: Blocked Infrared beam warning

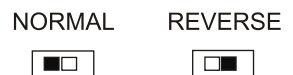
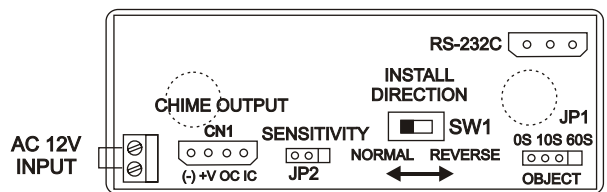
Selectable Jumper: OFF/10sec./60sec
 When the infrared beam is blocked for 10 seconds (factory setting) the receiver will chime continuously until the blockage is removed.

JP2: Sensitivity (Detection Range)

JP2 ON = Min. 10ft infrared beam across doorway.
 JP2 OFF = Max. 22ft. infrared beam across doorway (factory setting).

SW1: Travel Direction Switch.

Normal (Transceiver on LEFT) or Reverse (Transceiver on RIGHT)
 Factory setting NORMAL with this setting the transceiver should be installed on the left hand side as you enter the location.



6.0 INSTALLING THE CHIME



Fig. 6

CHIME WIRING CHART

WIRE COLOR	CHIME TERMINALS
BLACK	(-)
RED	+12V
ORANGE	EXIT
BROWN	ENT.

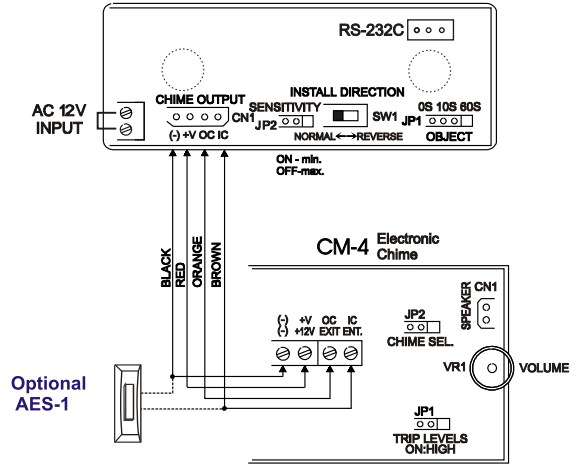


Fig. 7

1. Select a suitable location for the chime.
2. Remove the screw from the bottom front cover of the chime. (Fig. 6).
3. Using the 26ft-4 conductor wire, strip the insulation back approximately 1/4 inch and insert the stripped end of the wires into the chime terminals (Fig. 7).
4. Make sure the 6.1 CHIMESSETTINGS hereinbelow, and secure the chime to the wall using the screws.

6.1 CHIME FEATURES AND SETTINGS

CN1 Speaker Connector

2-pin connector for connecting the speaker

Terminal Block

(-) : Ground input terminal

+12V :+12V DC input terminal

EXIT :Triggers the EXIT chime

ENT : Triggers the ENTRY chime

JP1: Trip Levels

Selectable Jumper: ON (positive) / OFF (negative)



ON

OFF

JP1 ON = thechime can only be triggered with a positive (+) signal.

JP1 OFF = the chime can only be triggered with a negative (-) signal.

(Factory Setting)

JP2: Chime Sound Selector

JP2 ON = High frequency (factory setting)

JP2 OFF = Low frequency

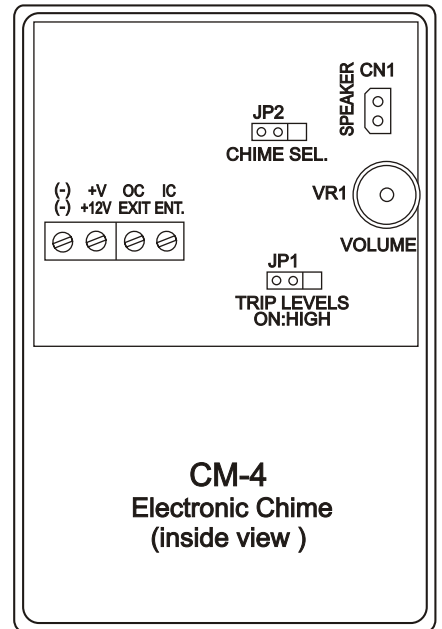


ON

OFF

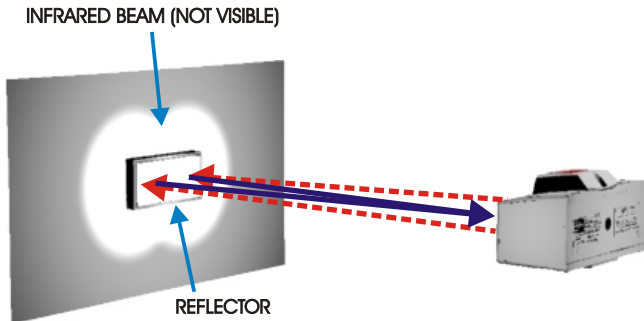
VR1: Volume Control

The chime volume can be increased or decreased.

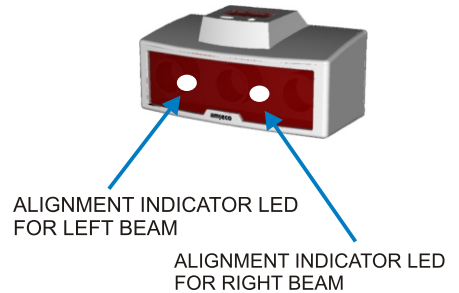


7.0 INSTALLING THE REFLECTOR

FOR PROPER OPERATIONS IT IS THE MOST IMPORTANT THAT YOU ALIGN THE REFLECTOR PROPERLY. THE SYSTEM WILL NOT FUNCTION OR GENERATE REPEATED CHIMES UNLESS THE REFLECTOR AND THE TRANCEIVER ARE PRECISELY ALIGNED.



THE REFLECTOR AND THE TRANCEIVER MUST PRECISELY FACE DIRECTLY TO RECEIVE BOTH OF THE REFLECTED INFRARED BEAMS.



IT IS NOT ALIGNED PROPERLY UNLESS BOTH OF THE ALIGNMENT LEDs LIGHT UP.

1. Make sure that the infrared transceiver is installed firmly facing the intended direction where the reflector is to be installed.
2. Plug in the transformer to power the unit.

THE CHIME MAY CONTINUOUSLY SOUND AFTER A WHILE DURING THE ALIGNMENT PROCEDURE UNTIL THE SYSTEM IS PROPERLY ALIGNED. HOWEVER THIS IS AN INDICATION OF MISALIGNMENT, NOT THE DEFECT.

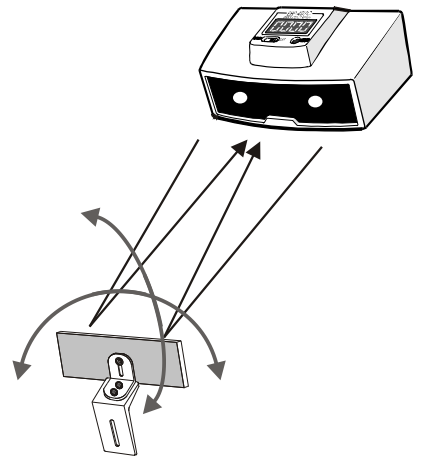
3. Assemble the bracket to the reflector with proper mounting screws provided together. **THE USE OF IMPROPER SCREWS MAY DAMAGE THE REFLECTOR.**

DO NOT SECURE THE BRACKET TO THE WALL AT THIS STAGE, WHICH MAY MAKE ALIGNMENT OF THE REFLECTOR DIFFICULT.

4. Hold the reflector in front of the infrared transmitter and adjust the angle slowly **SO THAT BOTH OF THE ALIGNMENT INDICATOR LED LIGHT UP.**

If it is difficult to make both of the alignment LEDs ON then start at the closer distance and then move slowly behind to the Intended installation position maintaining the angle.

5. Secure the reflector in place making sure the alignment LED' s stay ON.



8.0 OPTIONAL EXTERNAL PUSH-BUTTON (AES-1)

Normally Open Switch: activates the chime when pressed .

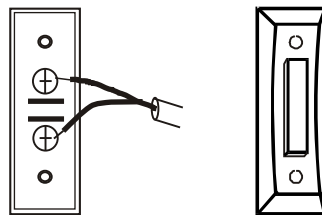
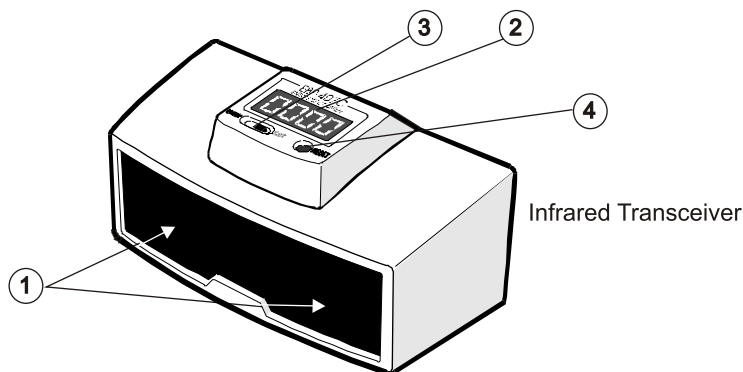


Fig. 8

1. Select a suitable location for the chime push-button.
2. Loosen the screws from the back of the unit (refer to Fig. 8).
3. Connect two wires to the terminals of the AES-1.
4. Connect the opposite end of the same wires to chime terminals labeled (-) and ENT. (Fig. 7)
5. Using the screws provided secure the unit to a flat surface.

9.0 TRANSCEIVER WITH COUNTER



TRANSCIEVER

1. LED' s : Visual indicators (2 red LED' s) light-up when the infrared transceiver is properly aligned.
2. DIGITAL COUNTER: Displays the 4-digit easy viewing counter.
3. ENTRY/EXIT SWITCH: Displays the " ENTRY " counter only.
Displays the " EXIT " counter only.
4. RESET BUTTON: Resets both ENTRY and EXIT counters to zero.

TROUBLE SHOOTING

Problem	Probable Cause	Solution
Chime is not activated when the beam is intercepted.	1. Power may be off. 2. The chime connector may be loose 3. The chime volume control may be set Too low.	Plug-in the transformer. Check the chime wire connection.
The chime sounds continuously.	1. The infrared beam is blocked. 2. Alignment may be off.	Clear the infrared beam pathway. Refer to owners manual alignment procedure
The chime dings once when entered and twice when exit.	1. The transceiver left-right entry switch is in the wrong position.	Refer to transceiver installation instructions.
Digital Counter displays the wrong characters.	1. Transceiver may be locked.	Unplug the power transformer, then plug it back in.

SPECIFICATION

Part No/Model	EBP-407C	CM-4
Description	Infrared transceiver	Electronic Chime
Detection method	Active Infrared	-
Sensitivity (Detection Range)	10ft. JP2=ON	-
	22ft. JP2=OFF (factory setting)	-
Entry Detection Mode	Sw1 Selectable Right Entry or Left Entry (factory setting : Left Entry)	-
Blocked Infrared Beam Warning	Jp1 selectable : OFF / 10sec. / 60sec. (factory setting : 10sec)	-
Chime Sound dB Output	-	0 ~ 85dB
Counter Memory	EEPROM	-
Light Source	Infrared pulse beam 950mm	-
Terminal (-)	Ground output	Ground input
Terminal (+V)	12V DC 1A output	12VDC input
Terminal (OC)	Exit output(-) TR output 1A	Exit signal input
Terminal (IC)	Entry output(-) TR output 1A	Entry signal input
Wiring distance between transceiver and chime.	-	100ft. (30m) AWG#22 164ft. (50m) AWG#20 262ft. (80m) AWG#18
Power Consumption : Standby : on activation	120mA. (AC) 1Amp (AC)	20mA. (DC) 300mA. (DC)
Installation location	Indoor	Indoor
Power Input	12VAC / 20VA	12VDC / 10VA
Operating temperature	14°F ~ 122°F (-10°C ~ 50°C)	14°F ~ 122°F (-10°C ~ 50°C)
Dimension : (W x H x D) inch(mm)	2-7/16(62) x 2-23/32(69) x 5(127)	3-35/64(90) x 1-1/2(38) x 4-59/64(125)
Weight : Pound (gr)	0.44 (200)	0.3564(162)
Total Weight and Dimension	Carton Weight : 3.3572(1526gr)	Carton Dimension : 12-1/4 x 4-9/64 x 10-5/8

2010.08.23