INSTALLATION GUIDE
PI-460 PET IMMUNE PIR
AND TRANSMITTER

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PLEASE READ THE QUALIFICATION AND WARRANTY STATEMENTS AT THE END OF THIS GUIDE.

1. PRODUCT DESCRIPTION

The PI-460 PIR is part of Capricorn's ProVisor line of security products. ProVisor transmitters ship pre-coded with one of over 8 million unique codes. Some of the PI-460's features are:

- Uses an Electronics Line Ltd. model 2600 PIR.
- Pet immune to 40 lb.
- Supervision transmission every 66 minutes.
- Long life lithium battery (up to 3 years in a normal installation).

2. RF TESTING

Always check the PI-460's signal level prior to permanent installation. Read the later sections to determine an appropriate location for the detector.

Once you pick a location, put the panel in the Transmitter Range Test mode and set the PI-460 for its walk test mode (see Section 7). Temporarily place the PI-460 at the selected location. Use masking tape to hold (hang) the unit in position if needed. Do not hold it in your hand. Sometimes a small change in transmitter location can overcome a marginal signal.

Once the PI-460 is installed and its ID is learned, you can check signal quality with either the Transmitter Range Test function or the Installer System Test function.

3. PET IMMUNITY GUIDELINES

The detector is designed to eliminate false alarms caused by animals (up to 40 lb.), small rodents, and random flying birds.

The weight of an animal should only be used as a general guide. Other factors such as the length and color of the animal's fur also affect the immunity level.

For maximum pet immunity follow these recommendations:

1. Mount the center of the detector at 6½ feet (2m) with the vertical adjustment set to "-4" on the circuit board.
2. Set the pulse count to 2 (jumper on pins 2 and 3).
3. Do not aim at stairways that can be climbed by an animal.
4. Avoid locations where an animal can come within 6' of the detector by climbing on furniture, boxes, or other objects.
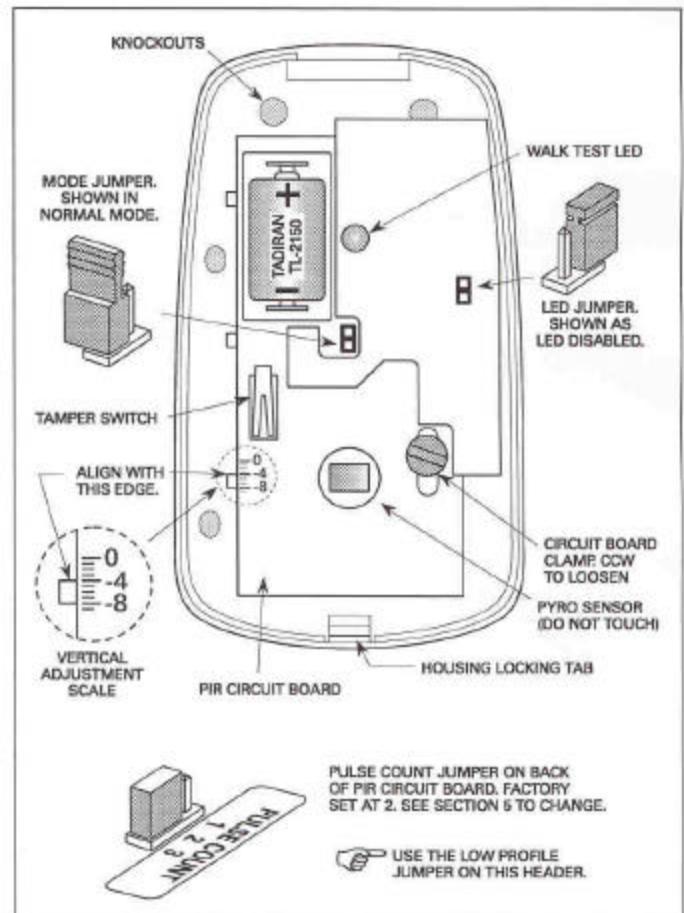
4. LOCATION AND INSTALLATION

Choosing a Location:

1. Mount the detector on a firm, stable surface.
2. Pick a location where an intruder will most likely "cross" the detector's coverage. PIRs are most sensitive to movement across their coverage rather than toward or away from it.

3. Select a mounting height and vertical adjustment to suit your application. See Sections 3 and 5.
4. Do not aim the detector at objects that may change temperature quickly such as heating/cooling vents or windows subject to direct sunlight.
5. When high background temperatures are expected, aim the detector at the coolest part of the room. The detector senses the difference between that temperature and a moving body.

Mounting: (see illustration below)

1. Press the tab on the bottom of the housing and remove the front cover. Note: For added security, run the supplied screw into the tab after the housing is snapped back together.
2. Release the circuit boards from the back housing by removing the circuit board clamp (turn CCW). Lift out the boards.

   ☞ Static electricity can damage electronic components. Always touch a grounded, bare metal surface before working with the PI-460.

3. Determine which mounting knockouts are needed then remove their plastic web with a small screwdriver or pocket knife. Mount the back with the supplied hardware. Never leave empty holes in the back where insects might enter and cause faulty operation.
4. Select a pulse count with the header on the back of the PIR circuit board. See Section 5.
5. Reinstall the circuit boards. Replace the board clamp, set the vertical adjustment, then tighten the clamp.

Component Locations
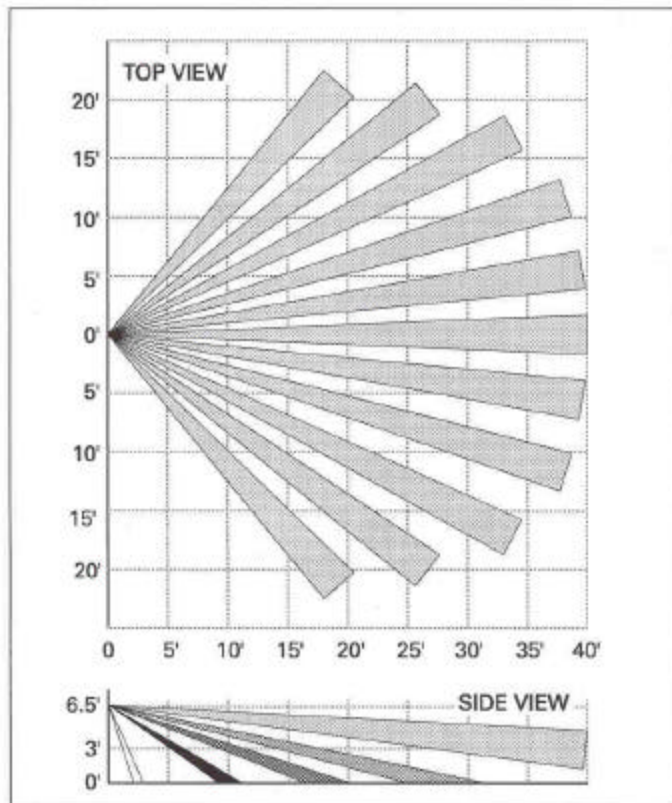
5. PIR SETUP

1. Insert the battery.

☞ Note: Lithium batteries that have been in storage can exhibit a voltage delay when first installed and may appear to be low. Pressing the tamper switch several times will restore the battery to full voltage.

2. Warm-up time: The detector needs to stabilize for the first 90 seconds after the battery is installed.

3. Pulse Count: A pulse counter determines the number of beams that need to be tripped before an alarm is transmitted. Choose the jumper setting for the desired count from the table. Use "1" count for pattern walk testing (Section 7).

Jumper Position	Count
Pins 1 and 2 (use for walk test)	1
Pins 2 and 3	2
Removed (store on single pin)	3

4. Vertical Adjustment: Position the PIR circuit board by loosening the board clamp and sliding the board up or down to the required setting. The detector's coverage is 40' by 40' when the board is set at "0". Slide the PCB board towards the "-8" position to decrease the coverage area and bring the beams closer to the mounting wall.

Lens Coverage

6. TRANSMIT DELAY TIMER

☞ After the PI-460 trips and transmits an alarm signal, there must be a six minute "quiet" period with no movement in the front of the detector. The PI-460 will then re-arm and can transmit again.

To disable the timer for installation testing, see Section 7 next.

The delay timer extends the battery's life by preventing repeated RF transmissions as people move about in front of the detector.

7. PATTERN WALK TESTING

Placing the PI-460 in its walk test mode overrides the 6 minute delay timer. To check the beam coverage:

1. Open the housing and set the pulse count jumper to 1 (pins 1 and 2) so the PI-460 transmits whenever a beam is entered.

2. Place the Mode jumper across its 2 header pins to enable walk test.

☞ The PI-460 automatically switches out of its walk test mode after 4 minutes. You can reset the mode by removing and replacing the mode jumper.

3. Place the LED jumper across its 2 header pins. This makes the LED bright enough to be viewed through the lens on the front cover. Note: The LED lights dimly during normal RF transmissions when the jumper is removed.

☞ Battery life will decrease if the jumper is not removed at the end of testing. **Note: The LED will NOT automatically switch out after 4 minutes.**

4. Replace the cover.

5. Check the entire area by slowly walking across the detector's field of view. Each time a beam is entered, the LED will blink twice (about one second apart). After the second blink, pause for 3 seconds before moving to the next beam.

6. When you are through, set your pulse count choice and **REMOVE BOTH MODE AND LED JUMPERS** (store each over a single header pin).

8. PROGRAMMING

Refer to the panel's installation manual for information on Zone Types, Input Types and learning transmitter ID's. The ID can be learned by pressing and releasing the tamper switch.

9. BATTERIES

⚠ Dispose of batteries properly. They are a fire and explosion risk! Do not disassemble, recharge, or incinerate.

The PI-460 uses a Tadiran TL-2150 lithium battery (3.6V). **We recommend that the installing company replace the battery since it is not available through normal consumer outlets.**

The battery condition is reported during all RF transmissions.

A tamper report is sent when the case is opened. Remember to acknowledge the report at the keypad so the trouble condition will clear when the case is closed.

10. CUSTOMER TESTING AND EDUCATION

No electronic product can perform better than the care and maintenance it receives. Capricorn recommends that each installing company offer a periodic service and maintenance agreement to the end user.

☞ To avoid unnecessary phone calls from your customers, show them how to test the PI-460. Put the system into the User Test mode and demonstrate the 6 minute delay timer. **Record your testing instructions in the back of their User's Manual.**

Discuss the battery information in Section 9 with your customer and encourage them to call you for service when the battery needs to be replaced.

Customers should be told what action to take if any part of their system fails during normal operation or during routine testing.

Complete testing of all parts of the system should be performed no less than once per month. In some cases, more frequent tests may be appropriate for your customer. Only the on-site installing personnel can make this determination.

11. SPECIFICATIONS

- Pet immunity: Up to 40 lb.
- Size: 4.5" H x 2.6" W x 1.8" D
- Color: White
- Battery: Tadiran TL-2150, 3.6V, 1/2AA.
- Battery Life: 3 years in normal residential installation
- Operating temperature range: 32° to 120° F

UNDERSTANDING RADIO FREQUENCY DEVICES

Although radio transmission links have proven themselves by providing dependable communication, both customer and installer need to understand their limitations and restrictions before using the system. Refer to each system's Installation Manual for additional RF information.

The system's radio reception may be changed when electronic devices, home computers, large appliances, mirrors, foil wallpaper, etc., are added or moved within the home. Have your customer notify you if they have any concerns when making changes of this nature.

Some of the areas you should be aware of are:

1. Transmitters have limited power and therefore limited range because they must comply with FCC Rules and Regulations as Part 15 devices.
2. Batteries must be replaced when indicated by low battery transmissions.
3. Periodic testing will reveal any new source of interference or a failure of the system.
4. Receivers may be blocked by other signals occurring near their operating frequency.
5. The receiver can only respond to one transmitter at a time.

IMPORTANT

Before using this product, read both the Installer Qualifications statement and the product Warranty and its limitations of remedies which follow. If you do not agree with what they say, promptly return this product. Use of this product indicates that you have accepted the terms of the warranty.

INSTALLER QUALIFICATIONS

The product(s) described in this flyer should be installed only by a qualified, adequately trained **security installer** who is familiar with this class of product.

Correct installation and customer education is vital to the proper operation of a security system. It is the responsibility of the purchaser of this equipment to insure that any individual who places this product into service is fully trained and qualified.

The on-site installer/dealer, in consultation with the end user, must make the necessary decisions on system configuration and protection level. The installer must take care to follow industry accepted installation practices and procedures as well as comply with local and state regulations.

Please call Capricorn's Technical Services Department at 800-438-3750 if you have questions concerning this product. The general knowledge required for proper installation of any security product should be obtained from local, state or regional training/licensing classes, classes provided by security industry associations and/or on the job apprenticeship at established installing companies. Business insurance coverage for your installations should be obtained through your local agent or through agents recommended by security industry associations.

LIMITED WARRANTY

Capricorn Electronics, Inc. warrants that this product of its manufacture will be free from defects in material and workmanship under normal use and service for 24 months from the date of manufacture. The warranty expiration date is printed on the label inside the product.

THIS WARRANTY EXTENDS ONLY TO WHOLESALE CUSTOMERS WHO BUY DIRECT FROM CAPRICORN ELECTRONICS, INC. OR THROUGH ITS NORMAL DISTRIBUTION CHANNELS. CONSUMERS SHOULD INQUIRE FROM THEIR SELLING DEALER AS TO THE NATURE AND EXTENT OF THE DEALER'S WARRANTY, IF ANY.

Capricorn Electronics, Inc's obligation under this warranty is limited to repairing or replacing, without charge, any part or parts which shall be returned to its factory, transportation charges prepaid, prior to the warranty expiration date and which upon examination shall disclose to the manufacturer's satisfaction to have been originally defective.

This warranty shall not apply to any of the manufacturer's products which have been subject to misuse, negligence or accident or which have been repaired or altered outside of the manufacturer's factory.

There are no obligations or liabilities on the part of the manufacturer for consequential damages arising out of or in connection with the 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 the warranty expiration date.

Purchaser is on notice that Capricorn Electronics, Inc. does not represent that this product will in every case provide adequate warning or protection or prevent personal injury or property loss. An alarm is not insurance or a guarantee that there will be no risk of burglary, robbery, or fire or that no personal injury or property loss will occur. **CAPRICORN ELECTRONICS, INC., THEREFORE, SHALL NOT BE LIABLE FOR ANY DAMAGES, EITHER CONSEQUENTIAL OR INCIDENTAL, ARISING FROM THE USE, INSTALLATION, SERVICING OR MAINTENANCE OF THE PRODUCT. CAPRICORN ELECTRONICS, INC. SHALL NOT BE LIABLE FOR ANY PERSONAL INJURY, PROPERTY LOSS OR ANY OTHER LOSS BASED ON THE CLAIM THAT THE PRODUCT FAILED TO GIVE WARNING OR FOR ANY COSTS FOR PROVIDING REPLACEMENT EQUIPMENT DURING PERIODS OF MALFUNCTION OR REPAIR.**

The above Capricorn Electronics, Inc. warranty is a limited warranty and is the only warranty made between Capricorn Electronics, Inc. and purchasers. It supersedes and is in lieu of all other warranties expressed or implied, and of all other liabilities or obligations on the part of Capricorn Electronics, Inc. In no event shall the liability of Capricorn Electronics, Inc. exceed the purchase price of the product. Some states do not allow the exclusion of implied warranties and, therefore, the exclusions may not apply to you. This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

FCC REGULATIONS

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two 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.

WARNING: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.