

Air-Wave TX

INDOOR/ OUTDOOR SENSOR TRANSMITTER (TD-21U)

Air-Wave TX INSTALLATION INSTRUCTIONS

Please read this manual carefully before installation.

FEATURES

- Can be installed on the wall.
- Weatherproof structure(IP54) for indoor and outdoor applications.
- Over 8 million codes possible, eliminates interference from neighbors.
- Powered by a 9V alkaline battery(not included).
- Supervised low battery.
- LED indicator for verifying detection and low battery status.

1 CAUTION

- 1. Harsh environments**
When using the Air-Wave TX outdoors in severe conditions such as extreme temperatures, rapid temperature change, high humidity, steam or smog malfunction may occur.
- 2. Impact/Shock**
Impact or Shock can cause severe damage or break the Air-Wave TX.
- 3. Light/Moving object**
Direct light or moving objects in front of the Air-Wave TX can cause false alarms.
- 4. Electric Devices**
Mounting the Air-Wave TX less than 3ft(1m) away from electronic devices such as TV's Radios, PC's or Microwaves may result in malfunction.
- 5. Tampering**
Any changes or modifications not expressly approved by OPTEX could void the users authority to operate the equipment (See FCC note under section 13 COMPLIANCE in this manual).

6. Transmission range

- Transmission range may decrease under the following conditions:
- Either Air-Wave TX or receiving unit installed on a metal surface.
 - Presence of a steel door, reinforced concrete or other metal obstructions between Air-Wave TX and receiving units.
 - Places near strong radio sources such as broadcast stations or substation.

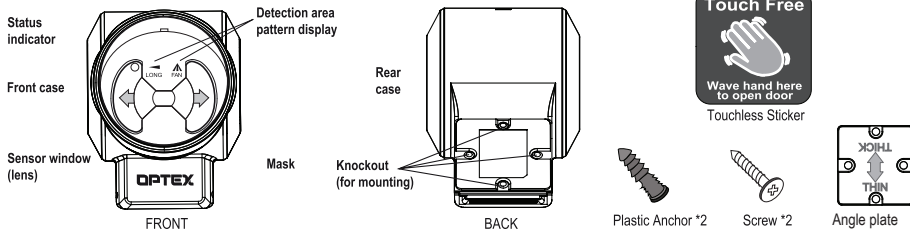
7. Battery replacement

Replace battery every 2 years. Use only 9V alkaline battery.

8. Cleaning

Harsh cleaners such as paint removers or benzene may ruin the surface. Use a soft wet cloth and mild soap to clean.

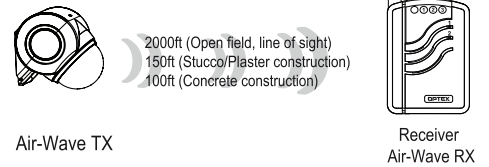
2 PARTS IDENTIFICATION



Note: When you recycle this product, please disassemble product and recycle according to state law.

3 TRANSMISSION RANGE (REFERENCE)

Transmission range must be changed according to the environment. Please check if system works properly on the site.

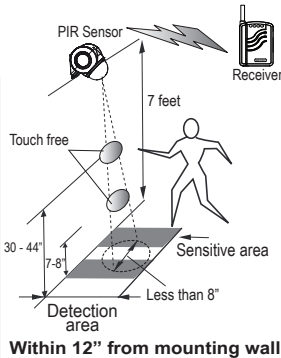


4 DETECTION AREA PATTERN

See Chart Below for approximate detection area dimensions based on mounting height.

Area Pattern

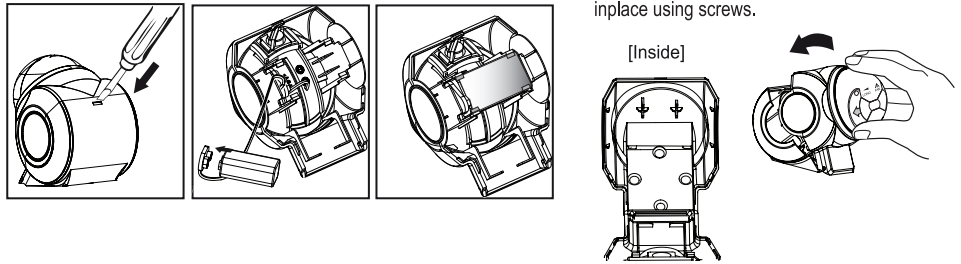
Height	Area Width X Depth
6' (1.8m)	10" X 7" (0.26m) (0.18m)
7' (2.1m)	12" X 8" (0.30m) (0.20m)
8' (2.4m)	14" X 9" (0.35m) (0.23m)



5 INSERT THE BATTERY

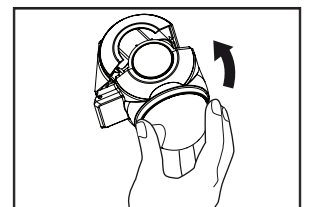
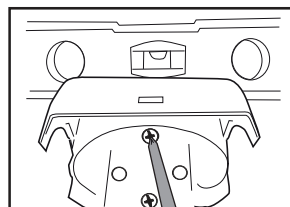
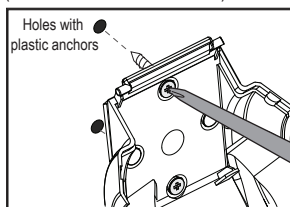
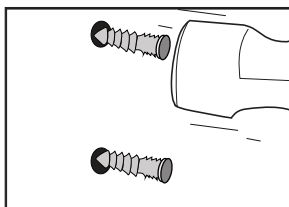
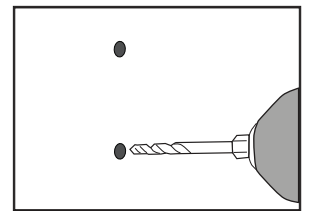
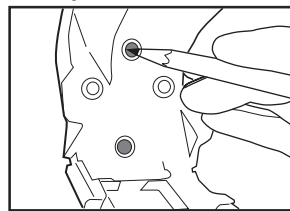
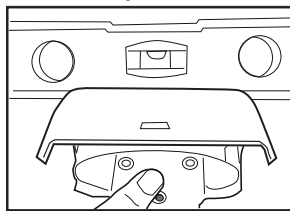
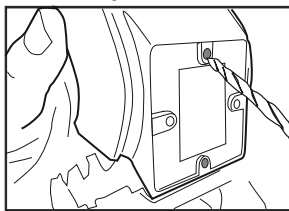
How to set the battery inside the sensor

1. Use a screwdriver to open the casing.
2. Attach the connector to the battery.
3. Fasten the battery with the battery clamp hook.
4. Remove the knockouts of the rear cover and fix the rear cover in place using screws.
5. Close the casing.

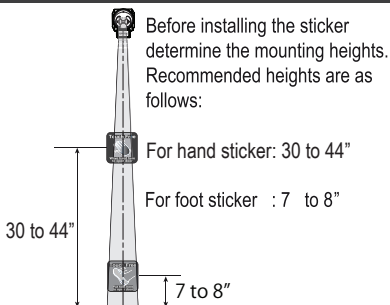


6 INSTALLATION

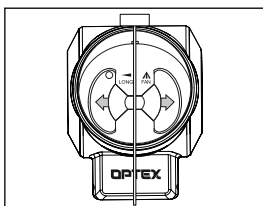
1. Drill two 1/8" mounting holes on back of housing.
2. Hold housing at desired mounting location ensuring it is level.
3. Mark the center of the two mounting holes.
4. Drill holes at the 2 marks using a 3/16" drill bit.
5. Knock in the two plastic anchors.
6. Install housing with supplied screws. (DO NOT FULLY TIGHTEN)
7. Ensure housing is level and tighten screws.
8. Close the sensor casing.



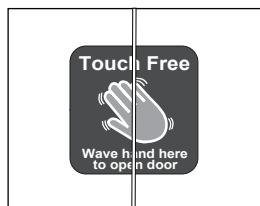
6 INSTALLATION



9. Hang a plum bob in line with the center of the sensor housing to identify center line of detection area.



10. Affix the Touch Free sticker at desired height & centered on the plumb line.

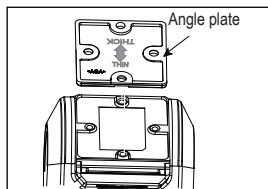


11. Make sure the sensor is detecting when you wave your hand in front of the sticker.

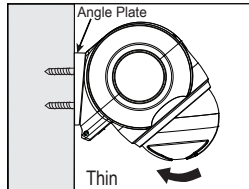
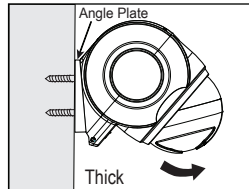


7 ADJUSTMENT FOR AREA DEPTH

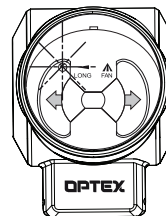
If the detection area is too deep or too shallow, install the included Angle plate at the back side of the housing as necessary.



When installing Angle plate, thick portion at top decrease depth. Thin portion at the bottom increase depth.



8 LOW BATTERY



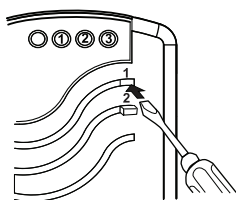
- When the Battery is low, the status indicator starts to flash. When this occurs replace the battery.
- Low Battery can cause false activations.
- There is no need to readjust the Air-Wave TX or the receiver after replacing batteries.

9 TEACH TRANSMITTER CODES TO RECEIVER "TEACH MODE"

Follow these steps to program the transmitter to the receiver. Refer to Receiver Manual for Zone Options-

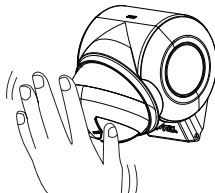
1. Preparation

- Press switch 1 of the receiver until the power indicator starts flashing.
- Press switch 2 to select the zone you wish to assign to the sensor.



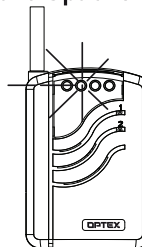
2. Activation

- Wave your hand in front of the Air-Wave TX to trigger it.
- Verify that the receiver has learned successfully by observing the zone indicators of the receiver. Zone indicators should have stopped flashing and remain continuously on.



3. Verification

- After teaching all the transmitter codes (if you have multiple transmitters), return the receiver to normal operating status.
- Make sure that the receiver operates correctly with all the transmitters.



Note:

Cover the Air-Wave TX until you are ready to teach the receiver. Unwanted detection can cause the Air-Wave TX to be assigned to the wrong zone and override the data of other transmitters.

10 TROUBLESHOOTING

1. The system is not operating.

Check the transmitter.

Does the status indicator light up when you wave your hand in the detection area of the Air-Wave TX?	→	If not, check to see whether the battery is inserted correctly. Otherwise try a new battery.
Is the status indicator flashing?	→	Is the detection area setting appropriate? If not, fix the setup.
Is the status indicator flashing?	→	The battery is old. Replace the battery.

Check the receiver.

Is the power indicator of the receiver lit?	→	Is the receiver on? Check the wiring, power switch and connection.
The receiver does not respond to the Air-Wave TX.	→	The Air-Wave TX is not properly recognized by the receiver. Teach the receiver correctly.
The zone indicator of the receiver is on, but nothing happens.	→	The receiver has not been properly setup. Refer to the receiver's manual and verify the setting.
Is there anything blocking the transmission?	→	Relocate the receiver and/or the Air-Wave TX. Metal objects can shorten the effective transmission range.

2. The system is not operating correctly.

A particular zone is malfunctioning.	→	This is probably the transmitter's problem. Check the Air-Wave TX using this zone.
Does direct sunlight or light from automobiles enter the sensor window?	→	Reorient the Air-Wave TX to avoid such light sources.
Is the Air-Wave TX installed on a stable platform?	→	Relocate the Air-Wave TX to a stable platform.
Is there anything that may cause rapid temperature change in the detection area? (e.g. stove)	→	Remove any objects that may cause rapid temperature change from the detection area.
Is there anything that may cause rapid temperature change of the Air-Wave TX? (e.g. air conditioner)	→	Relocate the Air-Wave TX elsewhere.
Before contacting the supplier!	→	Remove the battery, then reinsert the same batteries and verify the Air-Wave TX's operation again.

- If the above solutions do not work, please contact your supplier for services.

13 COMPLIANCE

FCC ID : DC9TD-20U
The changes or modifications not expressly approved by the OPTEX could void the user's authority to operate the equipment. To comply with the FCC RF exposure compliance requirements, this device and its antenna must not be co-located or operating in conjunction with any other antenna or transmitter. Note: This equipment has been tested and found to comply with the limits for a Class B Digital Device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction, may cause harmful interference to radio communication. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures. (1) Reorient or relocate the receiving antenna. (2) Increase the separation between the equipment and receiver. (3) Connect the equipment into an outlet on a circuit different from that to which the receiver is connected. (4) Consult the dealer or an experienced radio/TV technician for help.

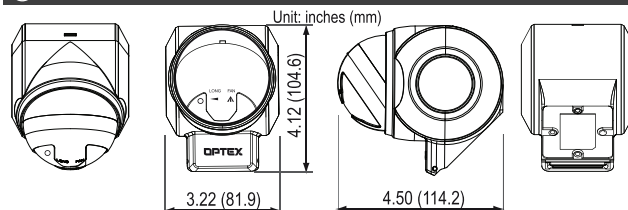
IC : 4012A-00000TD20U
Operation is subject to the following two conditions. (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.
To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that permitted for successful communication.

11 SPECIFICATIONS

Product Series	Prowave Air-Wave TX
Product Name	Indoor/ Outdoor Sensor Transmitter
Model Number	TD-21U
Detection Method	Passive Infrared
Detection Range	6 - 8 feet (1.8 - 2.4m)
Status Indicator	Red LED
Power Source	9V Alkaline Battery (Not Included)
Battery Life	Approx. 2 years [250 times per day at 70°F (20°C)]
Frequency	418MHz
Operating Temperature	15°F ~ 120°F (-10°C ~ +50°C)
Installation Location	Outdoor / Indoor
Weight	6.3 oz (180g)
Accessories	Mounting Screw x 2 Plastic Anchor x 2, Angle Plate x 1 Touchless Sticker for hand

Specifications may change without notice

12 DIMENSIONS



14 WARRANTY

1. This product is warranted under normal use for 2 years from the Lot. number. The Lot. number is printed on the sticker on back side of sensor. The first 2 digits stands for year and the second 2 digits are week of manufacturing. If you have questions, call to your sales representative.
2. The warranty is not applicable when below circumstances will be found:
 - Mechanical or electrical modification(s) are made to the product or it is otherwise altered manually.
 - The product is already been serviced at place(s) other than the manufacturer.
 - It is determined that the product malfunction has resulted from improper use or from an accident. Physical damage will not be covered.
 - No copy of the dated sales receipt has been submitted together with the product to be serviced.



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