



WIRELESS 2000 Annunciator System

INDOOR/ OUTDOOR SENSOR TRANSMITTER

TD-20U INSTALLATION INSTRUCTIONS

Please read this manual carefully before installation.

① CAUTION

1. Harsh environments

Do not use the TD-20U outdoors under severe conditions as out of warranted temperature, rapid temperature change, high humidity, steam, or smog. This may cause the unit to malfunction.

2. Impact/Shock

Impact or Shock can cause severe damage or break the TD-20U.

3. Light/Moving object

Direct light or moving objects in front of the TD-20U can cause false alarms.

4. Electric Devices

Use the TD-20U at least 3ft(1m) away from any electronic devices such as TVs, Radios, PCs, Microwave ovens or any other devices with an electric motors. This may cause the unit to malfunction.

5. Tampering

Any changes or modifications not expressly approved by OPTEX could void the user's authority to operate the equipment.

FEATURES

- Compatible with RC-20U(Chime Box W/Relay), TR-20U(Repeater) and any receiver of WIRELESS 1000 series.
- 50ft. Long range & 17ft. fan pattern selectable.
- Can be installed on the wall, ceiling and desktop.
- 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.

6. Transmission range

Transmission range may decrease under the following conditions:

- Either TD-20U or receiving unit installed on a metal surface.
- Presence of a steel door, reinforced concrete or other metal obstructions between TD-20U and receiving units.
- Places near strong radio sources such as broadcast stations or substation.

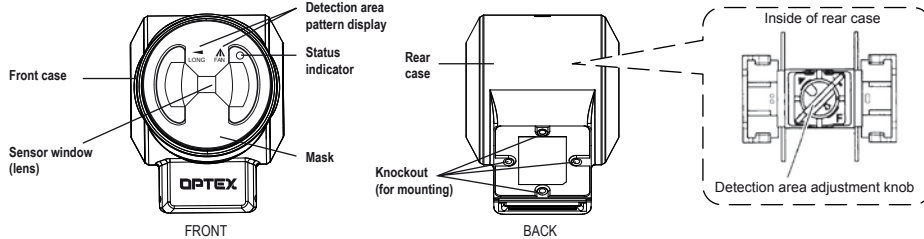
7. Battery replacement

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

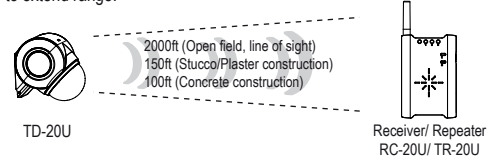


Note: When you recycle this product, please disassemble product and recycle according to state law.

③ TRANSMISSION RANGE (REFERENCE)

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

In the case of insufficient transmission range, use TR-20U (Repeater unit) to extend range.

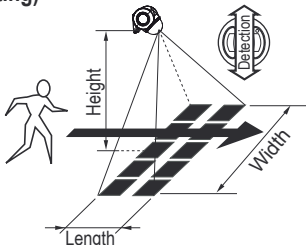


④ DETECTION AREA PATTERN

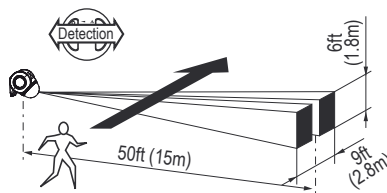
Selecting the appropriate detection area pattern for the TD-20U enhances its detection ability and immunity against false alarms. The TD-20U is shipped to you in the fan pattern setting, but you can easily select either fan or long range. Select the long range detection area for Drive-Up announcer applications.

Fan Pattern(Default setting)

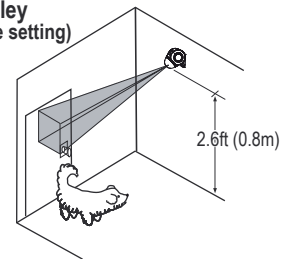
| Height | Area | |
|------------|-------------|--------------|
| | Width | Length |
| 8ft (2.5m) | 7ft (2.1m) | 1ft (0.3m) |
| 10ft (3m) | 8ft (2.5m) | 1.3ft (0.4m) |
| 13ft (4m) | 11ft (3.4m) | 1.6ft (0.5m) |
| 17ft (5m) | 14ft (4.2m) | 2ft (0.6m) |



Long Range



Pet Alley (Long range setting)



How To Choose the detection area pattern

1. Use a screwdriver to open the casing.



2. Choose from the two detection area patterns by pointing the arrow to either



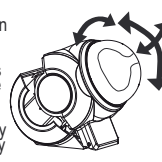
"F: fan pattern"



"L: long range."

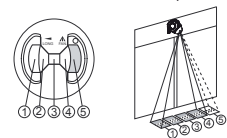


3. Turn the mask to the optimal position for the detection area pattern you have chosen. This mask is adjustable clockwise/counterclockwise (±90°), horizontally (±5°) and vertically (±45°).



NOTE:

If there is an area within the fan-pattern detection area that you do not want to include, mask part of the lens with a tape.



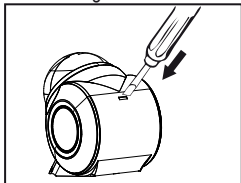
⑤ INSTALLATION HINT

| Fan Pattern | Front View |
|-------------|--|
| 1) | Over a doorway |
| 2) | Mounted on a wall, looking across a doorway |
| 3) | Mounted on a counter, looking across a doorway |

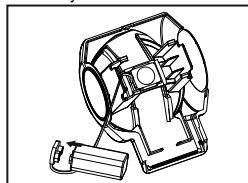
| Long Range | Front View |
|------------|--|
| 1) | To cover the area straight ahead or for short range coverage |
| 2) | For covering the right or left side |
| 3) | Mounted on a counter, looking across a doorway |

⑥ INSTALLATION

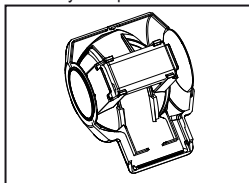
1. Use a screwdriver to open the casing.



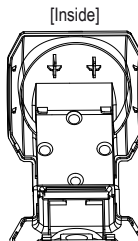
2. Attach the connector to the battery.



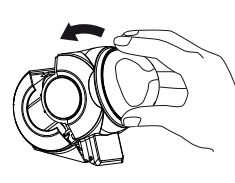
3. Fasten the battery with the battery clamp hook.



4. Remove the knockouts of the rear cover and fix the rear cover in place using screws.

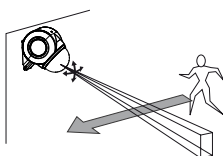


5. Close the casing.

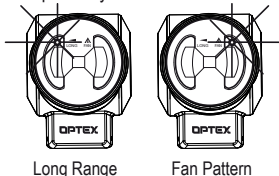


⑦ CONFIRMATION

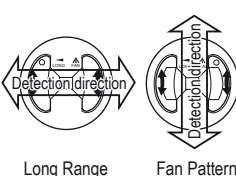
1. Actually walk and make sure that the detection area covers the intended area.



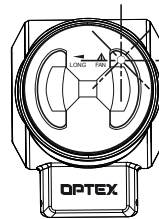
2. Verify that the status indicator agrees with the detection pattern you chose.



3. Verify that the movement direction and detection direction area are the same.



⑧ LOW BATTERY



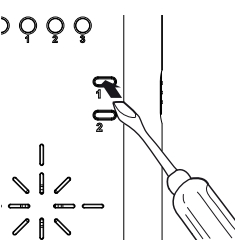
- When the power is low, the status indicator starts to flash. Replace the battery in such cases, even if it is less than a year old.
- Low power may become the cause of false alarm.
- There is no need to readjust the TD-20U or the receiver after replacing batteries.

⑨ TEACH TRANSMITTER CODES TO THE RECEIVER "TEACH MODE"

The receiver must be taught this transmitter code before use. Refer to the receiver's manual for details.

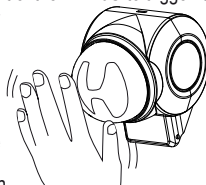
1. Preparation

- 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.



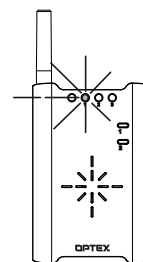
2. Activation

- Wave your hand in front of the TD-20U 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 TD-20U until you are ready to teach the receiver. Unwanted detection can cause the TD-20U 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 walk in front of the TD-20U? | → | 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. |
| | → | 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 TD-20U. | → | The TD-20U 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 TD-20U. 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 TD-20U using this zone. |
| Are there small animals in the area? | → | Refer to the Pet Alley section in ④ DETECTION AREA PATTERN. |
| Does direct sunlight or light from automobiles enter the sensor window? | → | Reorient the TD-20U to avoid such light sources. |
| Is the TD-20U installed on a stable platform? | → | Relocate the TD-20U 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 TD-20U? (e.g. air conditioner) | → | Relocate the TD-20U elsewhere. |
| Before contacting the supplier! | → | Remove the battery, then reinsert the same batteries and verify the TD-20U's operation again. |

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

⑪ 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 ID : 4012A-00000TD20U

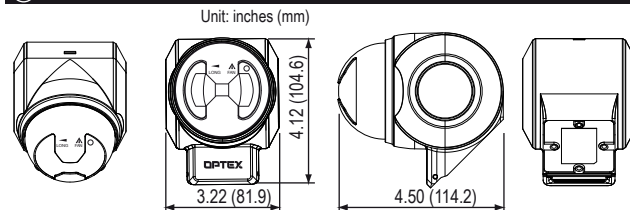
Operation is subject to the following two conditions. (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device. To reduce potential radio interference to other users, the antenna type and its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

⑫ SPECIFICATIONS

| Model | TD-20U |
|-----------------------|--|
| Description | Indoor/ Outdoor Sensor Transmitter |
| Detection Method | Passive Infrared |
| Detection Area | 50ft (15m) Long Range / 17ft (5m) Fan Pattern |
| Angle Adjustment | ± 45° Vertically & ± 5° Horizontally or ± 5° Vertically & 45° Horizontally |
| Status Indicator | Red LED |
| Power Source | 9V Alkaline Battery |
| 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 |

Specifications may change without notice

⑬ DIMENSIONS



⑭ WARRANTY

1. This product is warranted under normal use for 2 years from the date of purchase. If the product proves to be defective, return it with a copy of your dated sales receipt for repairs or replacement without charge.
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.
 - No copy of the dated sales receipt has been submitted together with the product to be serviced.



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