RC-20U INSTALLATION INSTRUCTIONS

Please read this manual carefully before installation.

1. CAUTION AND WARNING

WARNING
1. Harsh environments
   Do not use the RC-20U outdoors, severe conditions as out of warranted temperature, rapid temperature change, high humidity, or steam. This may cause the unit to malfunction.
2. Tampering
   Any changes or modifications not expressly approved by OPTEX could void the user’s authority to operate the equipment.
3. Adaptor
   Do not use any other AC adaptor except what is included.

CAUTION
1. Impact/Shock
   Impact or Shock can cause severe damage or break the RC-20U.
2. Electric Devices
   Use RC-20U at least 3ft (1m) away from electronic devices such as TVs, Radios, PCs, Microwave ovens, or any other devices with an electric motors. This may cause the unit to malfunction.
3. Transmission range
   Transmission range may decrease under the following conditions:
   - Either transmission units or RC-20U installed on a metal surface.
   - Presence of a steel door, reinforced concrete or other metal obstructions between transmission units and RC-20U.
   - Places near strong radio sources such as broadcast stations or substations.
4. Cleaning
   Do not use the RC-20U outdoors, severe conditions as out of warranted transmission units and RC-20U.

4. INSTALLATION

Wall Mounting
Use the mounting screw on a wall. Leave some length of the screw out for mounting hole of the RC-20U.

Terminal connection
Any device with a zero voltage input terminal can be connected to this terminal. This may include electronic locks, emergency sounding devices, and automatic reporting equipment.

Remove the connection terminal cover.
Use the terminal marked “COM-N.O.” for N.O. devices and “COM-N.C.” for N.C. devices.
Remove knockouts according to wiring needs.
Close the connection terminal cover.

5. POWER CONNECTION

Use only the power adaptor supplied with the product.

6. TRANSMISSION RANGE (REFERENCE)

Transmission range must be changed according to environment. Please check if system works properly for the site. In the case of insufficient transmission range, use TR-20U (Repeater unit) to extend range.

1. 100ft (Concrete construction)
2. 150ft (Stucco/Plaster construction)
3. 1400ft (Open field, line of sight)
4. 2000ft (Open field, line of sight)

7. FEATURES

- Compatible with TD-20U (Indoor/Outdoor Sensor Transmitter), TS-10U (Hand-Held Transmitter), TR-20U (Repeater), TC-10U (Door/Window Transmitter) and any transmission units of WIRELESS1000 series.
- Identifies 4 zones by 3 different tones and LED lights (3 normal zones + 1 continuous zone).
- Able to learn 12 transmission codes (Each zone can learn 3 transmitters maximum).
- Automatic “Learning” function facilitates to preset transmission codes to RC-20U.
- Over 5 million codes possible, eliminates interference from neighbors.
- Latches into alarm with “Continuous mode” function.
- Programmed “Utility Output Mode” to inactivate chime tone (applicable for zone 3).
- Adjustable duration for terminal output.
- Low battery indicator to recognize transmission units’ battery status.
- Powered by a 9VDC adaptor (Included).

8. TRANSMISSION CODES TO RC-20U “LEARN MODE”

Each transmitter has a unique transmitter code which can be automatically learned by RC-20U. The RC-20U’s zones must be taught to respond to the appropriate transmitter. (No transmitter is taught on default setting.)

Activate “LEARN MODE”

A) The RC-20U automatically starts in “LEARN MODE” if no transmitter code has been programmed. OR
B) Press and hold switch 1 until the power indicator starts to flash.

Teach the transmitter code to RC-20U

Activate the transmitter you wish to teach the receiver.
The corresponding zone indicator flash rapidly at intervals of 1 sec according to the related transmitter.

Erasing codes from RC-20U’s memory.

1) Hold down switch 1 until the power indicator starts to flash.
2) Press switch 2 until the appropriate zone indicator is lit.
3) Press switch 1 to erase. The zone indicator will start to flash.
   (Note: All programming in that particular zone will be erased.)
4) Press switch 2 a few times until the power indicator stops flashing and remains lit.

Erasing all codes from RC-20U. (Return to the factory default)
To erase all programming, turn on power while holding switch 1.
1. **VOLUME ADJUSTMENT**

This adjustment is applicable for zone 1 to 3 as a group and zone 4 independently.

There are volume setting from Level 0 to 4. (Default setting for zone 1-3 is level 3, for zone 4 is level 4.)

- Press switch 2 for 1 time to activate "VOLUME ADJUSTMENT MODE" for zone 1-3 or hold switch 2 for 5 seconds for zone 4. (Power indicator goes OFF and zone indicators display the current setting.)

2. **TERMINAL OUTPUT DURATION ADJUSTMENT**

2 modes can be set according to the application.

<table>
<thead>
<tr>
<th>Mode</th>
<th>Zone 1 Chime tone 1</th>
<th>Zone 2 Chime tone 1</th>
<th>Zone 3 Chime tone 1</th>
<th>Zone 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Terminal output</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time duration according to setting</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Press switch 1 twice within 2 seconds to activate “TERMINAL OUTPUT DURATION MODE” (zone indicators display the current setting).

3. **TROUBLESHOOTING**

1. **The system is not operating**

Check the transmitter.

- Does the status indicator light up when you trigger the transmitter? Check to see whether the battery is inserted correctly. If the battery is old, replace it with a new one.
- Is the status indicator of the transmitter flashing? The battery is old. Replace the battery.

Check the receiver.

- Is the power indicator of the RC-20U lit? Is the receiver on? Check the wiring and connection.
- Have all the transmitter codes been taught correctly? Reconnect the receiver and the RC-20U. Metal objects can shorten the effective transmission range.
- Is the volume setting correct? Is the volume set to "0"? If so, readjust the volume.

If after 10 LOW BATTERY INDICATION, the zone indicator of the RC-20U is on, but the volume setting is not correct, then the transmitter codes for which the battery has been depleted can be relearned.

- Are there other high power appliances using the same electrical power outlet? Please connect the RC-20U to a different electrical outlet.
- Is the volume setting correct? Follow directions in LOW BATTERY INDICATION.

2. **The system is not operating correctly.**

The RC-20U does not learn the transmitter codes.

- Check whether the transmitter codes have already been learned in a different zone. If so, erase the memory and teach again.

The RC-20U gets reception in the wrong zone.

- Erase memory in the zone in which the RC-20U responds and teach using the correct zone.

The RC-20U does not respond to some of the transmitters.

- You may have taught multiple transmitter codes in the same zone. Teach the transmitter codes for which there is no response received using an empty zone.

A certain zone seem to malfunction.

- This probably the transmitter’s problem. Check the transmitter that corresponds to that zone.

Before contacting the supplier!

- Go through the setups again after turning on the power while holding down switch 1.

4. **LOW BATTERY INDICATION**

Zone indicator start slow flashing and sound a chime followed by 2 beeps whenever the corresponding transmitters have low battery. Any operation cannot be done until one of the operations below are conducted.

1) Replace transmitter’s batteries.
2) Press switch 2. RC-20U will not need to relearn transmitter after replacing the batteries.

Note: Check low battery status at the corresponding transmitter in case several units are learned in 1 channel.

5. **SPECIFICATION**

- **Model:** RC-20U
- **Description:** Chime Box w/Relay Receiver
- **Power Source:** 9V DC (Exclusive AC Adaptor)
- **Power Consumption:** 8W Max. (Including AC Adaptor 120V, 60Hz)
- **Chime Tone:** 3 Tone & Continue Zone (Selectable)
- **Volume:** Adjustable: 0~80dB, 5 levels
- **Relay output:** Form C* MAX 1A, 50VAC/24VDC
- **Output timer:** selectable: ON/15/30/60sec
- **Utiliy output mode:** Power Indicator: Green
- **Status Indicator:** Green: Normal, Red: X
- **Frequency:** 415MHz
- **Operating Temperature:** 15° F ~ 105° F (-10°C ~ +40°C)
- **Relay Temperature:** 15° F ~ 105° F (-10°C ~ +40°C)
- **Installation Location:** Indoor
- **Weight:** 6.0 oz (170g)
- **Accessories:** Mounting Screw x 1, AC Adaptor

6. **DIMENSIONS**

- **Unit:** inches (mm)
- **Height:** 7.1 (188)
- **Width:** 5.3 (134)
- **Depth:** 2.5 (63)
- **Weight:** 3.5 (88)

7. **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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**IC:** 4012A-000000T2D0U
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.

**COMPLIANCE**

- FCC 47 C.F.R. 15, 18
- IC: 4012A-000000T2D0U
- C-UL: c22.2 no. 367
- UL: 5916470
- C-UL: 5916470
- CE: 5916470
- GS: 5916470
- VDE: 5916470
- CCC: 5916470
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**Specifications may change without notice.**

- **Temperature:** 5.3 (134)
- **Weight:** 3.5 (88)
- **Dimensions:** 7.1 (188)
- **Relay:** 30 SEC.
- **Status:** 60 SEC.
- **Volume:** 5 SEC.
- **Output Mode:** NO OUTPUT
- **Normal Operation Status:** 1 SEC.