

RCB-TS2A-TH

Thermostatic On/Off Remote Control for Millivolt Valve

Installation and Operating Instructions

IF YOU CANNOT READ OR UNDERSTAND THESE INSTALLATION INSTRUCTIONS, DO NOT ATTEMPT TO INSTALL OR OPERATE

This wireless thermostatic on/off/ remote control transmitter is designed to be used with **millivolt valve** gas appliances or **ELECTRONIC IGNITION** gas appliances. It can be operated thermostatically or manually from the transmitter or turned on and off manually from the receiver

CONTENTS OF KIT

Description	Quantity
Transmitter	1
RCB-TS2A-TH Thermostat remote control Transmitter	1
Receiver Box	1
White Color Wall Cover Plate and Slide Button	1
Wiring Assembly – 18” Inches	1
Installation Instructions	1
#6 3/4 Screws (for Wall Cover Plate and Remote control)	4
#6 3/4 Screws (for fireplace system control covers)	2
Plastic wall anchors (for installing transmitter)	2

NOTE: Due to the sensitive temperature monitoring components in the transmitter, it is necessary to allow the transmitter to stabilize to room temperature before accurate room temperature are displayed, If the transmitter is activated from a severe cold condition allow 15 minutes for accurate temperature reading to appear on the LCD.

WARNING

Important Safety Information

- Read this manual thoroughly prior to installing, programming or operating any remote control.
- This remote control system is designed for use with a millivolt or 24V gas valve system. Do not use this remote control system on applications with voltages above 24 Volts AC/DC and 1 amp current.
- This remote control system requires two (2) “AAA” and four (4) “AA” alkaline batteries to power the transmitter and receiver.
- **Turn appliance OFF (at the appliance or remote receiver) if you are away from your house for a long period of time.**

FEATURES/SPECIFICATIONS

- Easy Operate Manual Adjustment and Thermostat Control
- Battery Powered Transmitter and Receiver
- Low battery Indication
- Select Between °C and °F display
- Child Proof Lock-out
- 16 Security Codes
- Quick Disconnect Wiring Assembly

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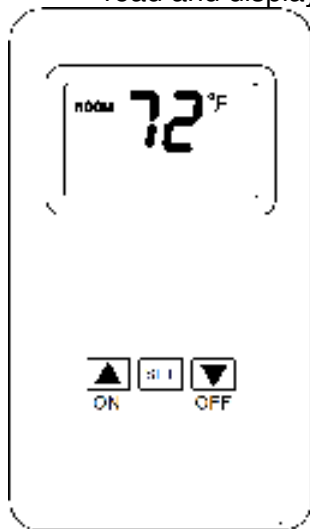
Turn appliance OFF and allow to cool before installing or servicing. **DO NOT** connect 110-120 VAC wiring to the millivolt gas control valve. The remote operator must be installed exactly as outlined in these instructions. Read all instructions completely before attempting installation. Follow instructions carefully during installation. Any modification of components will void the warranty and may cause a fire hazard.

RCB-TS2A-TH Transmitter:

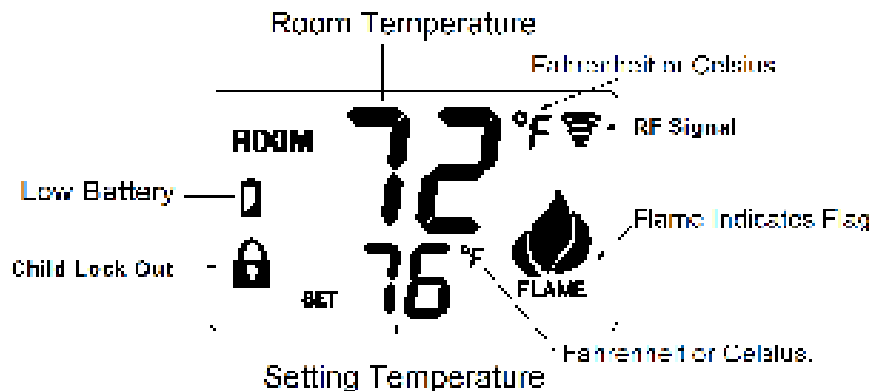
Installing Batteries:

The remote transmitter uses two (2) “AAA” batteries. To install batteries:

1. Press down the battery door and remove the battery door.
2. Install uses two (2) “AAA” batteries as indicated on transmitter.
3. Close the battery door by snapping in place.
4. The batteries should be replaced when the low battery indicator display in LCD.
5. When both batteries are installed, the transmitter will initialize for 1 seconds and then read and display room temperature, it is ready for use.



RCB-TS2A-TH Transmitter



LCD - Liquid Crystal Display

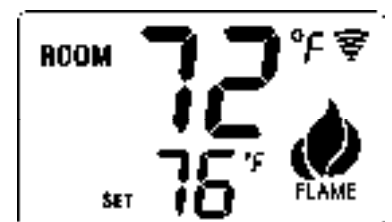
KEY SETTINGS:

Manual Mode:

1. Press the “ON/▲” button once to turn on the appliance.
2. Press the “OFF/▼” button to turn it off.
3. Press “ON/▲” + “OFF/▼” button at same time for 1 second to select between °C and °F display.

Thermostatic Mode:

1. Press the “SET” button to enter the thermostatic mode. “SET” icon and setting temperature will appear on the lower LCD screen
2. In thermostatic mode, press the ON/▲ button to increase the set temperature or press the OFF/▼ button to decrease the set temperature.
3. Once the setting is completed, the transmitter will automatically turn on the fireplace when the room temperature is below the set temperature with 1 degree, and turn off the fireplace when the room temperature is above the set temperature with 1 degree.
4. There will be a slight delay in the response of the unit (on/off) to a temperature. Room temperature is monitored every 3 minutes.
5. Press the “SET” button again to exit the thermostatic mode (Return to Manual Mode). The “SET” temp icon will disappear on the lower LCD display. The transmitter will be in the manual on/off mode

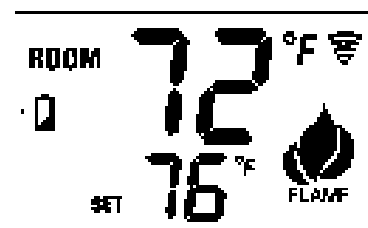


Low-battery detection:

1. When the 2 batteries voltage of remote less than 2.0V, the low battery icon will appear on the LCD screen.

It need to change two (2) "AAA" batteries before the battery is too weak for normal operation.

Low Battery

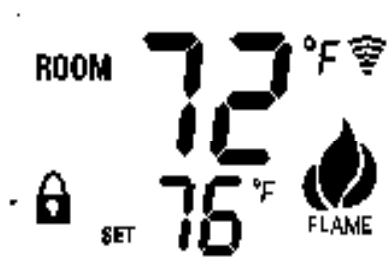


TURN THE UNIT OFF BEFORE REPLACING BATTERIES.

Child-proof protection:

1. Press and hold "SET" and "OFF/ [down arrow]" button at same time for 3 seconds to activate child-proof mode. The LOCK ICON will appear on the LCD screen. The buttons will deactivated.
2. The remote control button will not work until child-proof mode is deactivated by pressing and hold "SET" and "OFF/ [down arrow]" button at same time for 3 seconds again to exit child-proof mode.

Child Lock Out



Transmitter Wall Bracket

The transmitter can be hung on a wall using the **Wall Bracket** provided. If the **Wall Bracket** is installed on a solid wood wall, drill 1/8" pilot holes and install with the screws provided. If it is installed on a laster/wallboard wall, first drill two 1/4" holes into the wall. Then use a hammer to tap in the two plastic wall anchors flush with the wall; then install the screws provided.

Transmitter

The remote control operates, on RF (radio frequency) signals that are sent by the TRANSMITTER (remote) to the RECEIVER that operates the appliance. It is recommended that the TRANSMITTER always be located within the 30-foot operating range, preferably in the same room in which the appliance is located.

Make sure that the wires do not contact the appliances any place other than at the terminals. Exposure to temperatures higher than 250°F(105°C) may cause the receiver to malfunction or cause a fire hazard.

Receiver:

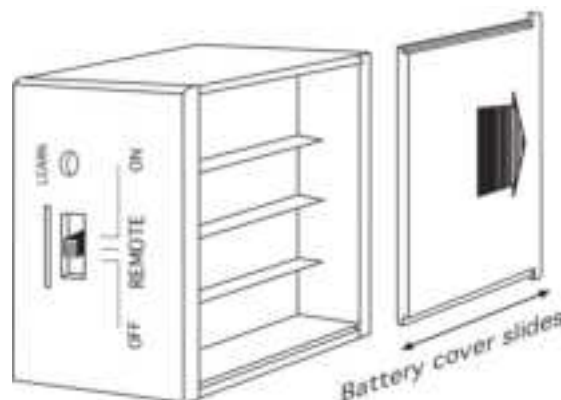
Begin by installing (4) AA-size batteries. Slide open the battery cover on receiver. It is recommended that ALKALINE batteries always be used for this product. Be sure the batteries are installed with the (+) and (-) ends facing the correct direction. Close battery cover

The remote receiver has a 3-position slide switch for selecting the mode of operation
ON/REMOTE/OFF

1) **ON:** will manually turn ON the appliance.

2) **REMOTE:** will allow use of remote transmitter. If the system does not respond to the transmitter on initial use, check the battery positions in the remote. If that does not work, see **the LEARNING TRANSMITTER TO RECEIVER** section.

3) **OFF:** will manually turn OFF the appliance.



It is recommended that the slide switch be placed in the OFF position if you will be away from your home for an extended period of time.

NOTE: This product is designed for use with an attended hearth appliance or fire feature. Adults must be present when the Control System is operating. DO NOT program or thermostatically set this Control to operate a hearth appliance or fire feature when Adults are not physically present. Furthermore, DO NOT leave the hearth appliance or fire feature burning unattended; it may cause damage or serious injury. If an Adult is going to be away from the hearth appliance or fire feature for any length of time, then the handheld/wall mount, receiver/control module and application should be in the “OFF” position.

This remote control system must be installed exactly as outlined in these instructions. Read all instructions completely before attempting installation. Follow instructions carefully during installation. Any modifications of this remote control or any of its components will void the warranty and may pose a fire hazard.

Do not connect any gas valve or electronic module directly to 110-120VAC power. Consult gas appliance manufacturer's instructions and wiring schematics for proper placement of all wires. All electronic modules are to be wired to manufacturer's specifications.

The following wiring diagrams are for illustration purpose only. Follow instructions from manufacturer of gas valve and/ or electronic module for correct wiring procedures. Improper installation of electric components can cause damage to electronic module, gas valve and remote receiver.

Installation

The remote receiver can be either wall-mounted in a standard plastic switch box (not metal) or placed on or near the fireplace hearth. Preferably, the remote receiver should be wall-mounted in a plastic switch box, as this will protect its electronic components from the heat produced by the gas appliance. **The remote receiver should be kept away from temperatures exceeding 130° F. Battery life is also significantly shortened if batteries are exposed to temperatures 130°F or higher.**

Before installation make sure the remote receiver slide switch is in the OFF position.

Wall Mount

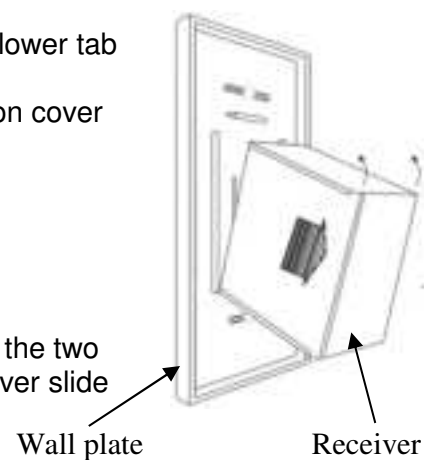
When wall mounting the remote receiver, longer wires (not included) are required to connect to the gas valve or electronic module. These wires must: Be at least 18 Gauge (AWG). Be no longer than 20-feet Have no splices

To attach wall cover plate to receiver box:

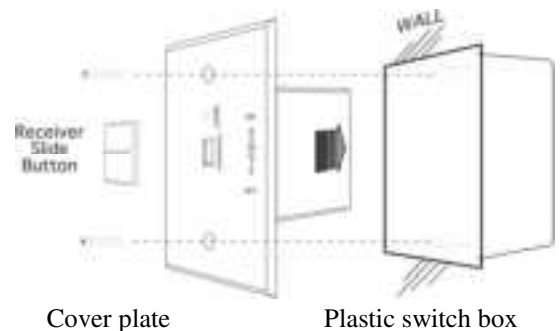
1. Position the receiver as shown in diagram to the right with lower tab on wall cover

Plate into groove of receiver (Make sure the LEARN hole on cover plate properly Aligns with remote receiver)

2. Pull receiver up and snap into top tab of cover plate.
3. Position the wall cover plate so the word ON is facing up.
4. Install the remote receiver into the plastic switch box using the two Long screws provided. Push the slide Button over the receiver slide

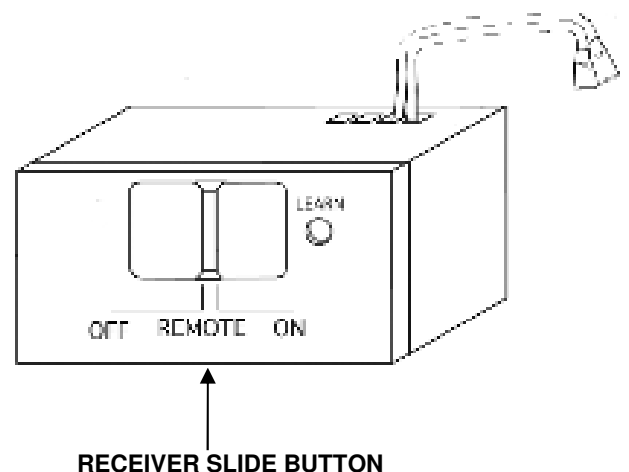


NOTE: The remote receiver will only respond to the transmitter when the 3-position slide button on the remote receiver is in the REMOTE position. If the system does not respond to the battery transmitter on initial use, see LEARNING TRANSMITTER TO RECEIVER, and recheck battery positions in the remote receiver.



Hearth Mount

The remote receiver can be placed on the fireplace hearth or under the fireplace behind the control access panel. Use the wires attached to the remote receiver to connect to the gas valve or the electric module (piggyback connectors have both male and female terminals for flexibility). Be sure that the connectors do not touch each other or other bare metal surfaces; this will cause the appliance to turn ON. The connectors may be wrapped with electrical tape to prevent this.

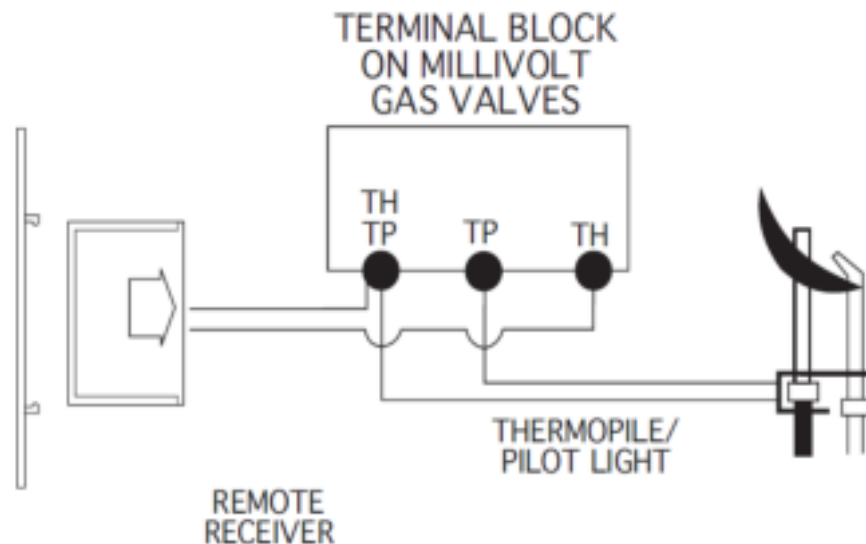


WIRING INSTRUCTIONS

A qualified electrician or a gas technician who is familiar with the gas appliance and gas valves that will be operated by this remote should install the remote control system. Incorrect wiring connections **WILL** cause damage to the gas valve or electronic module operating the gas appliance and may also damage the remote receiver.

WIRING MILLIVOLT VALVES

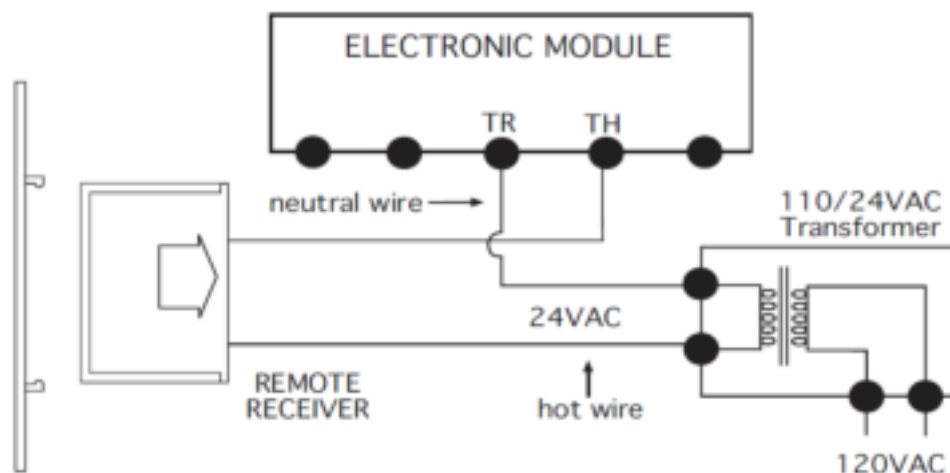
Connect one wire from the receiver to the TH terminal on the gas millivolt valve, Connect the other wire from the receiver to the TH/TP terminal on the gas millivolt valve (**see below wiring diagram**)



WIRING ELECTRONIC SPARK IGNITIONS

The receiver can be connected, in series, to a 24VAC transformer to the TR (transformer) terminal on the ELECTRONIC MODULE. Connect the hot wire from the 24VAC transformer to either of the wire terminals on the remote receiver. Connect another wire between the other receiver wire terminal and the TH (thermostat) terminal on the **ELECTRONIC MODULE** (**see below wiring diagram**)

WIRING ELECTRONIC SPARK IGNITIONS





New Remote System Testing

1. FOR MILLIVOLT VALVES TESTING



Light your gas appliance following the lighting instructions that came with the appliance. **Confirm that the pilot flame is ON**; it must be in operation for the main gas valve to operate.

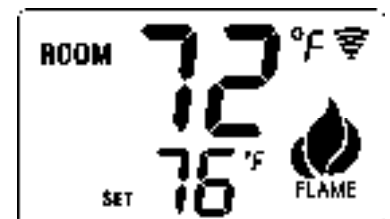
1. Slide the 3-position button on the receiver to **ON** position. The main gas flame (i.e., the fire) should ignite.
2. Slide the button to **OFF**. The flame should extinguish (**the pilot flame will remain ON**).
3. Slide the button to **REMOTE** (the center position), Then:

Manual Mode:

1. Press the “ON/  ” button to turn on the appliance, the main gas flame should ignite.
2. Press the “OFF/  ” button to turn off the appliance, the flame should extinguish (**the pilot flame will remain on**).

Thermostatic Mode:

1. Press the “**SET**” button to enter the thermostatic mode. “SET” icon and setting temperature will appear on the lower LCD screen
2. In thermostatic mode, press the ON/  button to increase the set temperature or press the OFF/  button to decrease the set temperature.
3. Once the setting is completed, the transmitter will automatically turn on the fireplace when the room temperature is below the set temperature with 1 degree and turn off the fireplace when the room temperature is above the set temperature with 1 degree (**the pilot flame will remain on**)
4. There will be a slight delay in the response of the unit (on/off) to a temperature. Room temperature is monitored every 3 minutes.
5. Press the “**SET**” button again to exit the thermostatic mode (Return to Manual Mode). The “SET” temp icon will disappear on the lower LCD display. The transmitter will be in the manual on/off mode





2. FOR ELECTRONIC IGNITION SYSTEMS TESTING

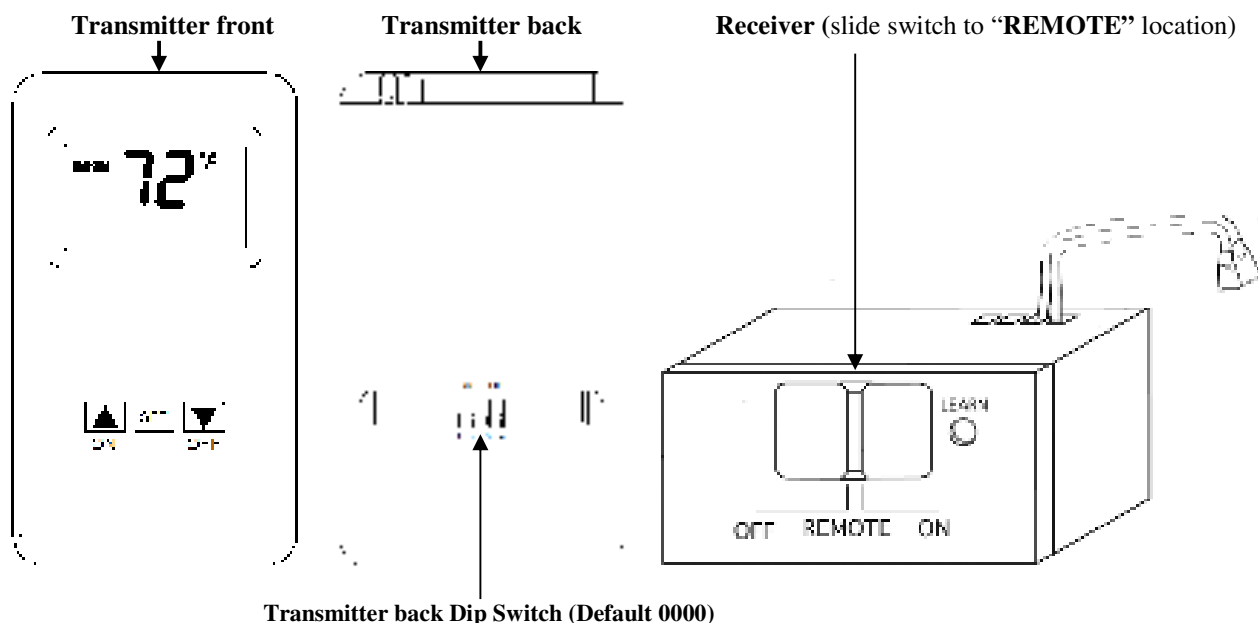
1. Slide the 3-position button on the remote receiver to the **ON** position. The spark electrode should begin sparking to ignite the pilot (the pilot may ignite after only one spark). After the pilot flame is lit, the main gas valve should open and the main gas flame should ignite.
2. Slide the button to **OFF**. The main gas flame and pilot flame should BOTH extinguish.
3. Slide the button to **REMOTE** (the center position), Then:
 - 1) Press the ON button on the transmitter to change the system to ON. The spark electrode should begin sparking to ignite the pilot. After the pilot is lit, the main gas valve should open and the main gas flame should ignite.
 - 2) Press the OFF button on the transmitter to OFF. The main gas flame and pilot flame should BOTH extinguish.
 - 3) Press the SET button on the transmitter to change the system to the thermostatic mode. Set the SET temperature to at least 1 degree above the room temperature. With this manual setting the system flame will ignite in a few seconds. Set the SET temperature to at least 1 degree below the room temperature and the system flame will extinguish in a few seconds. Thereafter, it should continue to cycle to on and off thermostatically approximately every three minutes as the ROOM temperature changes, but only when the temperature differential between ROOM and SET temperatures differ at least 1 degree.

GENERAL INFORMATION

Learning Remote Transmitter to Receiver:

(Manufactory have done the default (DIP) Switches setting learning, User can skip learning if not change the (DIP) Switches setting Security Codes)

1. When finish install batteries to Transmitter and Receiver, the transmitter privacy (DIP) Switches are preset at the factory. Setting the 4 bits DIP switches on transmitter to select a new security code.
2. Put the receiver slide switch to “**REMOTE**” location. Using a small screwdriver or end of a paper clip gently press and hold the “**LEARN**” button on the receiver for about 3 second, then the receiver will emit an audible 3 “beep” sounds
3. After the receiver emits 3 “beep” sounds. Press the transmitter “ON/  button” or “OFF/ ” button and release at once. The receiver will emit several beeps indicating that the transmitter’s code has been accepted into the receiver.
4. If you are unsuccessful in matching the security code on the first attempt repeat step 1-3



5. When successful in matching the transmitter and receiver, can operate the transmitter key to control the receiver.

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Do not use two (2) or more remote control systems in the same area with the same dip switch settings, as they will communicate with each other. This may cause the appliances to malfunction. It need to User setting new DIP Switch Security Codes

TROUBLESHOOTING

Symptom	Causes	Action
Battery icon on LCD on transmitter.	Low Battery	Replace batteries.
LCD Display is blank	Low Battery	Check battery installation and replace batteries.
Receiver emits the beep in every minute	Receiver Low Battery	Replace batteries.
Appliance does not come on.	1. DIP (Privacy) switch setting on transmitter does not match receiver	1. Make sure the transmitter is matched to the receiver.
	2. Transmitter measures temperature exceeding 99 degrees and shows "HI" on LCD display.	2. Move transmitter to a cooler place and wait until temperature drops below 99 degree.
	3. Distance between the transmitter and receiver is more than 30 feet	3. Make sure the operating distance is less than 30 feet
Receiver cannot receive signal.	1. Receiver is installed in an enclosure	1. Make sure the receiver is not inside a tight enclosure.

FCC Statement

1. 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.

(2) This device must accept any interference received, including interference that may cause undesired operation.

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

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 instructions, may cause harmful interference to radio communications. 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:

Reorient or relocate the receiving antenna.

Increase the separation between the equipment and receiver.

Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

Consult the dealer or an experienced radio/TV technician for help.

To comply with RF exposure requirements, a minimum separation distance of 20mm must be maintained between the user's body and the handset, including the antenna.