

SKYTECH

Model: 3002

INSTALLATION AND OPERATING INSTRUCTIONS

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

INTRODUCTION

This SKYTECH remote control system was developed to provide a safe, reliable, and user-friendly remote control system for gas heating appliances. The system can be operated thermostatically or manually from the transmitter. The system operates on radio frequencies (RF) within a 20-foot range using non-directional signals. The system operates one of 1,048,576 security codes that are programmed into the transmitter at the factory; the remote receiver's code must be matched to that of the transmitter prior to initial use.

Review **COMMUNICATION SAFETY** under the **TRANSMITTER SECTION** and **THERMO SAFETY** under the **REMOTE RECEIVER SECTION**. These signal/temperature safety features shut down the appliance when a potentially unsafe condition exists.

The transmitter operates on (2) AAA-size 1.5V batteries. It is recommended that **ALKALINE** batteries always be used for longer battery life and maximum operational performance. **IMPORTANT:** New or fully charged batteries are essential for proper operation of the multi-function transmitter. Insert (2) AAA-size 1.5 V batteries into the battery compartment on the back of the transmitter, positioning the (+) and (-) ends of the batteries as indicated on the casing. When the batteries are inserted, figure #2 (with similar numbers) will display.

Note: If a LOW battery icon appears on the screen, check the position of the batteries.

CAUTION: Due to the sensitive temperature-monitoring components in the transmitter, it may be necessary to allow the transmitter to stabilize to room temperature before accurate room temperatures are displayed on the screen. If the transmitter is activated from a severe cold condition, it can take up to fifteen minutes for accurate temperature readings to appear.

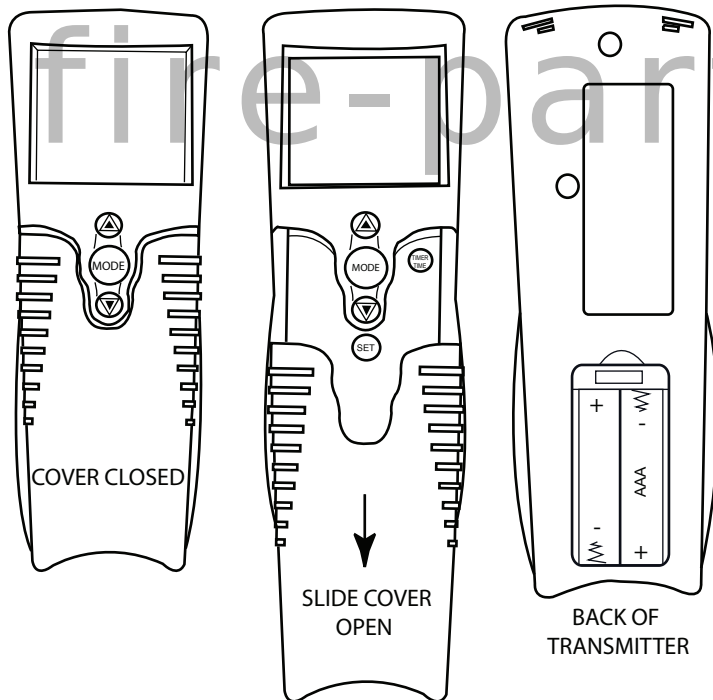


Fig. 1 Transmitter Front and Back Views

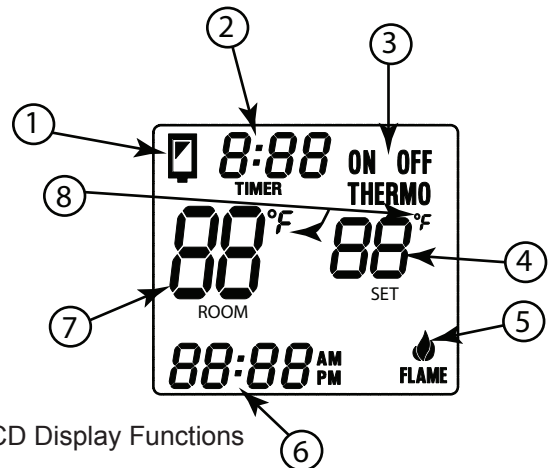


Fig. 2 LCD Display Functions

LCD DISPLAY FUNCTIONS

- BATTERY ICON** - Symbol means battery power is low. Replace batteries within 2-weeks.
- TIMER**- Indicates time remaining before system shuts OFF, when timer-programmed; 9-hour maximum setting.
- MODE**- Indicates operation MODE of system. ON indicates the system is manually ON. OFF indicates the entire system is turned OFF and THERMO indicates the system will automatically cycle ON/OFF, depending on the SET temperature.
- SET**- Indicates desire SET room temperature for THERMO operation.
- FLAME** – Indicates burner/valve in ON position.
- CLOCK** – Indicates the current time in AM/PM
- ROOM** – Indicates CURRENT room temperature.
- °F** indicates degrees Fahrenheit (°C indicates degrees Celsius).

BASIC TRANSMITTER FUNCTIONS

To understand the operation of the transmitter, press and release the MODE button (Fig. 3) until the LCD screen reads OFF in the display (Fig. 4).

Step 1: Press the MODE button one time to manually turn **ON** the appliance (Fig. 5).

Step 2: Press the MODE button a second time to put the to put the system in **THERMO** mode (Fig. 6).

Step 3: Press the MODE button a third time to turn the appliance back **OFF** again as show in (Fig. 4).

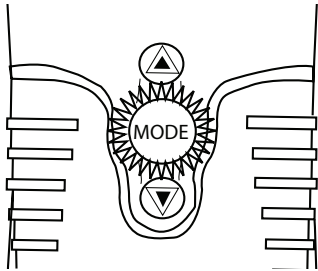


Fig. 3 Mode Button

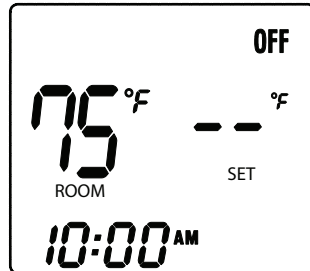


Fig. 4 OFF Mode

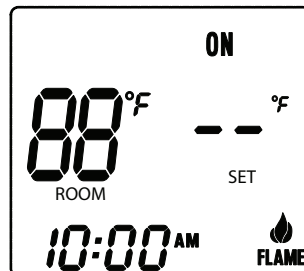


Fig. 5 Manual ON

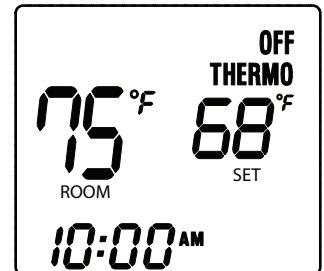


Fig. 6 Thermo Mode

SETTING UP THE TRANSMITTER

Slide down the lower section of the cover on the front of the transmitter to expose the "SET" buttons (Fig. 1). The slide cover protects the SET buttons from being changed accidentally. Close the cover after completing the following settings/programming.

Blinking numbers on the LCD display indicate the system is awaiting user input, such as using the UP and DOWN buttons to program a new setting. If no change is made to flashing digits within 15-seconds, the system will complete the procedure last programmed and reset the display to its normal state.

SETTING THE CLOCK

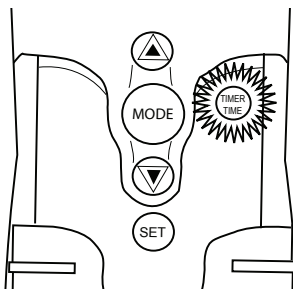


Fig. 7 Timer/Time Button

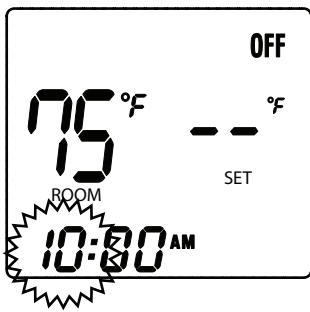


Fig. 8 Setting Hours

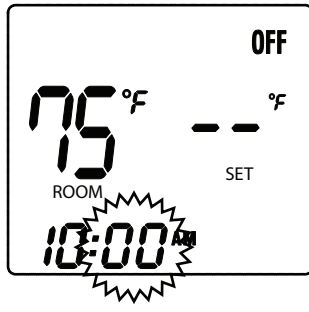


Fig. 9 Setting Minutes

1. Press and hold the TIMER/TIME button on the transmitter for more than 2-seconds (Fig. 7). The hour digit(s) will begin blinking (Fig. 8)..
2. Press the UP or DOWN button until the desired hour is displayed in AM or PM.
3. After setting the desired hour, press and release the TIMER/TIME button again to set the minutes; the minute digits will begin blinking (Fig. 9)..
4. Press the UP or DOWN button until the desired minutes are displayed.
5. Press and hold the TIMER/TIME button again for more than 2-seconds. The time digits will cease blinking, indicating the clock has been successfully set. You may also press the SET button on the transmitter to stop the time digits from blinking and set the time.

SETTING °F / °C SCALE

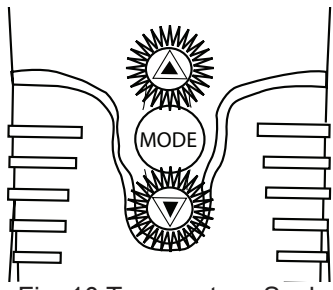


Fig. 10 Temperature Scale

The factory setting for temperature is °F. To change this setting to °C, first press and hold the UP and DOWN buttons on the transmitter at the same time (Fig. 10). Follow this same procedure to change from °C back to °F. When changing between the °F and °C scales, the temperature in the SET frame defaults to the lowest temperature (45° F, or 6° C). The highest SET temperature is 99° Fahrenheit (32° Celsius).

REMOTE RECEIVER

The remote receiver operates on (4) AA-size 1.5V batteries. It is recommended that **ALKALINE** batteries be used for longer battery life and maximum microprocessor performance. **IMPORTANT:** New or fully charged batteries are essential for proper operation of the remote receiver.

The remote receiver houses the microprocessor that responds to commands from the transmitter to control system operation. It emits one beep when it receives an ON or OFF command manually, but no beep when cycling on and off automatically in THERMO mode. The remote receiver has a 3-position slide switch (Fig. 11) for selecting the ON/REMOTE/OFF mode of operation:

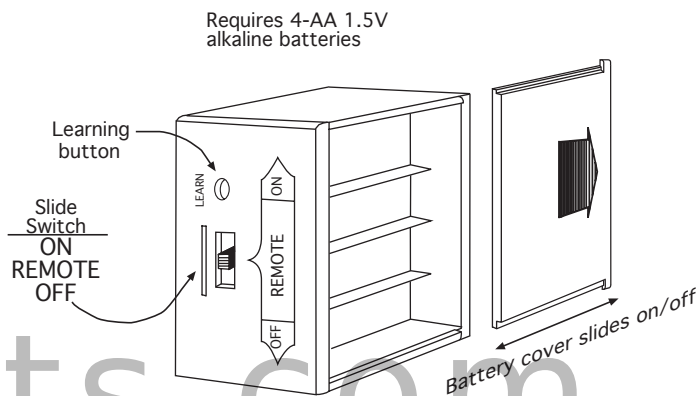


Fig. 11 Remote Receiver

- With the slide switch in the ON position (toward the LEARN button), the system will remain **ON** until the slide switch is placed in the **OFF** or **REMOTE** position.
- With the slide switch in the REMOTE position (centered), the system will only operate if the remote receiver receives commands from the transmitter.
- With the slide switch in the OFF position (away from the LEARN button), the system is **OFF**.
- It is suggested that the slide switch be placed in the OFF position if you will be away from your home for an extended period of time. If the remote receiver is mounted out of children's reach, placing the slide switch in the **OFF** position also functions as a safety "lock-out" by both turning the system off and rendering the remote receiver inoperative.

INSTALLATION PRECAUTIONS

WARNING

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 the SKYTECH remote control or any of its components will void the warranty and may could cause 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.

NOTE: The remote receiver will only respond to the transmitter when the 3-position slide button on the remote receiver is in the (middle) REMOTE position. If the system does not respond to the battery transmitter on initial use, see LEARNING TRANSMITTER TO RECEIVER section, and re-check 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 or louvers. Position where the ambient temperature inside the receiver case does not exceed 130°F. **NOTE:** The black *Slide Button* (included) should be installed on the receiver for Hearth Mount applications.

WIRING INSTRUCTIONS

A qualified electrician or a gas technician who is trained with gas appliances 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

The remote receiver must be connected to the millivolt valve at the **TH & TH/TP** (thermostat) terminals on the terminal block on the millivolt gas valve. Connect 18 gauge stranded or solid wires from the remote receiver to the gas valve.

Operation of the remote receiver is similar to that of a thermostat in that both turn the gas valve ON and OFF based on input signals. A thermostat's input signals are different temperatures. The remote receiver's input signals come from the transmitter.

Connect one black wire to the **TH** terminal and the other black wire to the **TH/TP** terminals on the millivolt gas valve. Normally it does not matter which wires go to which terminal (Fig. 14).

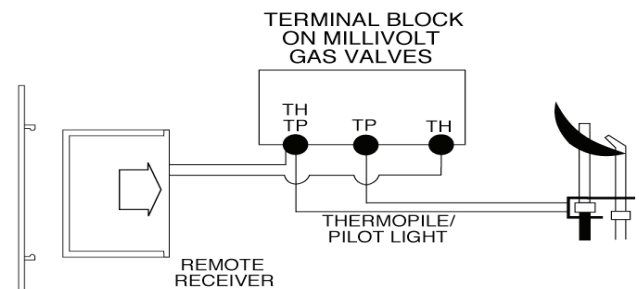


Fig. 14 Millivolt Gas Valve Wiring

WIRING ELECTRONIC SPARK IGNITIONS

The remote control 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 (not included) between the other receiver wire terminal and the **TH** (thermostat) terminal on the **ELECTRONIC MODULE** (Fig. 15).

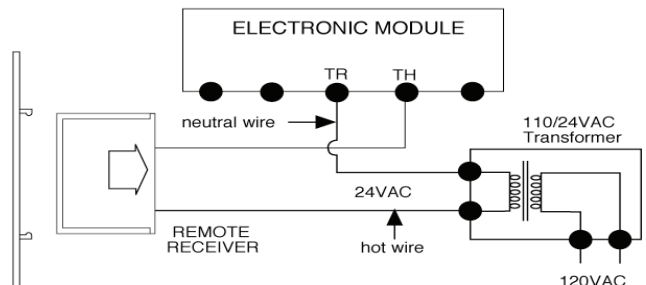


Fig. 15 Electronic Spark Wiring

LEARNING TRANSMITTER TO RECEIVER

Each transmitter uses a unique security code. It will be necessary to press the **LEARN** button on the receiver to accept the transmitter security code upon initial use, if batteries are replaced, or if a replacement transmitter is purchased from your dealer or the factory. In order for the receiver to accept the transmitter security code, be sure the slide button on the receiver is in the **REMOTE** position; the receiver will not LEARN if the slide switch is in the **ON** or **OFF** position. The **LEARN** button is located on the front face of the receiver; inside the small hole labeled LEARN. Using a small screwdriver or end of a paperclip gently press and release the black LEARN button inside the hole. When you release the LEARN button the receiver will emit an audible "beep". After the receiver emits the beep press the transmitter **MODE** button and release. The receiver will emit several beeps indicating that the transmitter's code has been accepted into the receiver.

The microprocessor that controls the security code matching procedure is controlled by a timing function. If you are unsuccessful in matching the security code on the first attempt, wait 1-2 minutes before trying again – this delay allows the microprocessor to reset its timer circuitry – and try up to two or three more times.

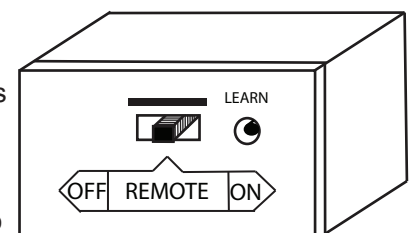


Fig. 16 Learning

SYSTEM CHECK

MILLIVOLT VALVES

Light the gas appliance following the lighting instructions that came with the appliance. Confirm that the pilot flame is **ON**; and the control knob on the gas valve is in the **ON** position for the main gas valve to operate.

- Slide the 3-position button on the remote receiver to the **ON** position (Fig. 16). The main gas flame (fire) should light.
- Slide the button to **OFF**. The flame should extinguish (the pilot flame will remain ON).
- Slide the button to **REMOTE** (the center position), and then press the **MODE** button on the transmitter to change the system to **ON**. The main gas flame should ignite.
- Press the **MODE** button on the transmitter to change the system to **OFF**. The flame should extinguish (the pilot flame will remain on).
- Press the **MODE** button on the transmitter to change the system to **THERMO**. Advance the SET temperature on the transmitter to a temperature of at least 2°F (1°C) above the ROOM temperature displayed on the LCD screen. With this manual setting, the normal thermostatic cycle is overridden and the system flame will ignite. Place the SET temperature to at least 2°F (1°C) below the room temperature and the system flame will extinguish in a few seconds. Thereafter, it should continue to cycle on and off thermostatically approximately every two minutes as the ROOM temperature changes, but only when the temperature differential between ROOM and SET temperatures differ at least 2°F (1°C). (The 2°F differential is the factory setting.)

ELECTRONIC IGNITION SYSTEMS

Light the gas appliance following the lighting instructions that came with the appliance. Confirm that the pilot flame is **ON**; and the control knob on the gas valve is in the **ON** position for the main gas valve to operate.

- 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.
- Slide the button to **OFF**. The main gas flame and pilot flame should **BOTH** extinguish.
- Slide the button to **REMOTE** (the center position), and then press the **MODE** 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.
- Press the **MODE** button on the transmitter to **OFF**. The main gas flame and pilot flame should **BOTH** extinguish.
- Press the **MODE** button on the transmitter to change the system to **THERMO**. Advance the SET temperature on the transmitter to a temperature at least 2°F (1°C) above the ROOM temperature displayed on the LCD screen. With this manual setting the normal thermostatic cycle is overridden and the system flame will ignite. Place the **SET** temperature at least 2°F (1°C) below the room temperature and the system flame will extinguish in a few seconds. Thereafter, it should continue to cycle ON and OFF thermostatically approximately every two minutes as the ROOM temperature changes, but only when the temperature differential between ROOM and SET temperatures differ at least 2°F (1°C). (The 2°F differential is the factory setting.)

GENERAL INFORMATION

TRANSMITTER

TRANSMITTER OPERATING DISTANCE

The SKYTECH 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 20-foot operating range, preferably in the same room in which the appliance is located.

THERMO UPDATING FEATURE IN TRANSMITTER

This SKYTECH remote control has a THERMO UPDATING Feature built into its software. The THERMO UPDATING Feature operates in the following manner, but only in the THERMO and PROGRAM MODES:

The transmitter normally reads the ROOM temperature every 2 minutes; checking the ROOM temperature against the SET temperature by sending a signal to the receiver.

COMMUNICATION SAFETY FEATURE IN TRANSMITTER

This SKYTECH series remote controls have a COMMUNICATION – SAFETY function built into the software. It provides an extra margin of safety when the TRANSMITTER is out of the normal 20-foot operating range of the receiver. The COMMUNICATION – SAFETY feature operates in the following manner for all *OPERATING MODES*: ON/THERMO/OFF.

At all times and in all *OPERATING MODES*, the transmitter sends an RF signal every fifteen (15) minutes, to the receiver, indicating that the transmitter is within the normal operating range of 20-feet. Should the receiver NOT receive a transmitter signal every 15 minutes, the IC software, in the RECEIVER will begin a 2-HOUR (120-minute) countdown timing function. If during this 2-hour period, the receiver does not receive a signal from the transmitter, the receiver will shut down the fireplace being controlled by the receiver. The RECEIVER will then emit a series of rapid “beeps” for a period of 10 seconds. Then after 10 seconds of rapid beeping, the RECEIVER will continue to emit a single “beep” every 4 seconds until a transmitter signal is again received. The intermittent 4 second beeping will go on for as long as the receiver’s batteries last which could be in excess of one year.

To “reset” the RECEIVER and operate the fireplace system, you must press the MODE button on the transmitter. The word ON must display on the LCD screen. By turning the system to ON, the COMMUNICATION SAFETY operation is overridden and the system will return to normal operation depending on the MODE selected at the transmitter. The COMMUNICATION SAFETY feature will reactivate should the transmitter be taken out of the normal operating range or should the transmitter’s batteries fail or be removed.

ADDITIONAL PROGRAMMING FEATURES OF THE TRANSMITTER

SETTING THE DESIRED ROOM TEMPERATURE

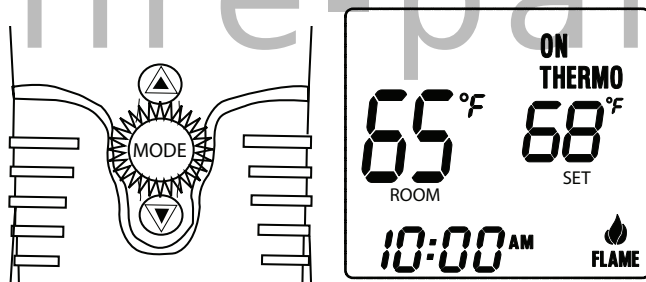


Fig. 17 Thermo ON

This remote control system can be thermostatically controlled when the transmitter is in THERMO mode (**THERMO** must be displayed on the screen). To set the DESIRED room temperature, press the MODE button to place transmitter into THERMO mode (Fig. 17), then press the UP or DOWN button to select desired room temperature. The highest SET temperature is 99° F (32° C); the lowest SET temperature is 45° F (6° C).

OPERATIONAL NOTE: TO CONSERVE BATTERY POWER, CHANGES IN ROOM TEMPERATURE ARE AUTOMATICALLY UPDATED EVERY TWO MINUTES TO THE TRANSMITTER.

The Thermo Mode on the transmitter operates the appliance whenever the ROOM TEMPERATURE varies a certain number of degrees from the SET TEMPERATURE. This variation is called the “SWING” or TEMPERATURE DIFFERENTIAL. The normal operating cycle of an appliance may be 2-4 times per hour depending on how well the room or home is insulated from the cold or drafts. A smaller “swing number” increases the number of cycles so the room temperature is more constant. A larger “swing number” decreases the number of cycles, which saves energy, in most cases. The factory setting for the “swing number” is 2. This represents a temperature variation of +/- 2° F (1° C) between SET temperature and ROOM temperature, which determines when the fireplace will be activated. The “SWING” number values are: 1=+ 1° F (.5° C), 2= + 2° F (1° C) and 3 = + 3° F (1.6 C).

SETTING THE TEMPERATURE SWING (TEMPERATURE DIFFERENTIAL)

1. To change the temperature “SWING” setting (1-3), press the TIMER/TIME and DOWN buttons simultaneously (Fig. 18) to display the current “SWING” setting in the SET TEMP frame. The letter “S” will display in the ROOM TEMP frame on the LCD screen.
2. Press the UP or DOWN button to change the temperature differential or “SWING” (1-3). See above for 1-3 “SWING” temperature valves.
3. To store the “swing number press the SET button or allow 15 seconds to lapse, and the new “swing number’ will be automatically programmed.

MANUAL CHECK OF “ SWING” OR TEMPERATURE DIFFERENTIAL

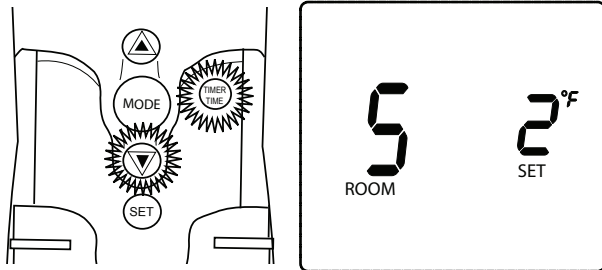


Fig. 18. Setting Swing Temperature

The operation of the factory set “THERMO SWING” can be checked by adjusting the SET temperature 2° F above or below the room temperature. This will cause the system to turn ON or OFF. Normally the system will only respond to temperature changes every two minutes. Manually changing the SET temperature will activate the system in less than 10 seconds. IF the “SWING” is changed, then a new room temperature differential will respond. Factory setting of “SWING” temperature is 2° F.

SETTING THE COUNTDOWN TIMER

This remote control system can operate with a built-in countdown timer when the transmitter is in the ON or THERMO modes only (THERMO or ON must be displayed on the screen).

1. Press and release the TIMER/TIME button on the transmitter. The word TIMER will appear and 0:15 minutes will begin blinking on the screen (Fig. 19).
2. Press the UP or DOWN button on the transmitter to begin advancing through each of the countdown time options. Available countdown times are 15 minutes, 30 minutes, 45 minutes, 1 hour, 1 hour 30 minutes, 2 hours, 2 hours 30 minutes, and each additional half-hour up to nine (9) maximum hours.
3. To set the TIMER press the SET button on the transmitter if the system is **ON**. It will remain ON until the time has expired. If the system is in the THERMO mode, it will cycle on and off, as the room temperature requires until the “time” has expired.

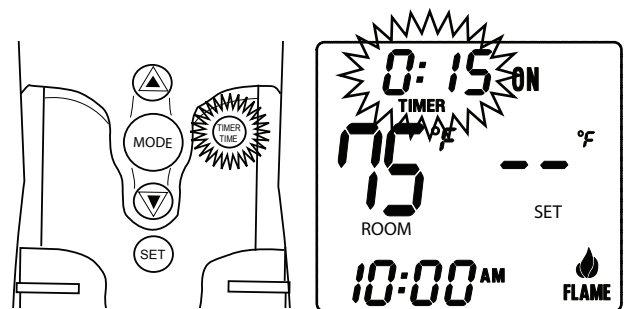


Fig. 19 Setting Timer

OPERATIONAL NOTE: When the timer is used in the THERMO mode, the THERMO operation will resume when the “time” has expired.

LOW BATTERY INDICATOR

A low battery icon will be visible in the upper left corner of the LCD screen when battery power has dropped significantly (Fig. 20). At this time, approximately two weeks of battery power remains until the transmitter may experience partial or complete loss of functions.

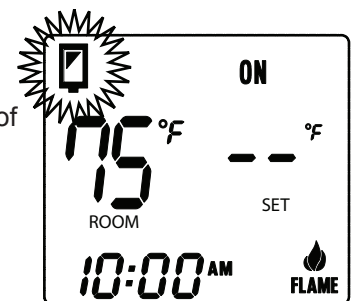


Fig. 20 Low Battery Sign

CHILDPROOF “LOCK-OUT” – (CP)

This SKYTECH remote control includes a CHILDPROOF “LOCK-OUT” feature that allows the user to “LOCK-OUT” operation of the appliance, from the TRANSMITTER.

SETTING “LOCK-OUT” – (CP)

1. To activate the “LOCK-OUT” feature, **press and hold** the UP and TIMER/TIME buttons, together, for 5 seconds. The letters **CP** will appear in TEMP frame on the LCD screen (Fig. 21).
2. To disengage the “LOCK-OUT”, press and hold the UP and TIMER buttons, together for 5 seconds or more, and the letters **CP** will disappear from the LCD screen and the transmitter will return to its normal operating condition.

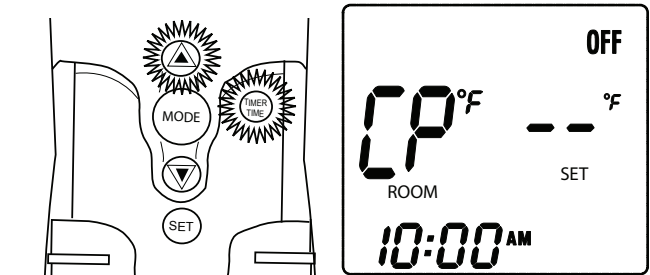


Fig. 21 Child Protection (CP)

NOTE: If the appliance is already operating in the ON or THERMO MODES, engaging the “LOCK-OUT” will not cancel the operating MODE. Engaging the “LOCK-OUT” prevents only the manual operation of the TRANSMITTER. If in the auto modes, the THERMO operation will continue to operate normally. To totally “LOCK-OUT” the operation of the TRANSMITTER’S operating signals; the transmitter’s MODE must be set to **OFF**.

BATTERY LIFE

Life expectancy of alkaline batteries should be at least 12-months. Check and replace all batteries annually. When the Transmitter no longer operates the receiver from a distance it did previously (i.e., the transmitter’s range has decreased) or the remote receiver does not function at all, the batteries should be checked. It is important that the remote receiver batteries are fully charged, providing a combined output voltage of at least 5.3 volts. The length of the wire between the remote receiver and the gas valve directly affects the operating performance of the remote system. The longer the wire, the more battery power is required to deliver signals between the remote receiver and the gas valve. The Transmitter should operate with as little as 2.5 volts of battery power, measuring at the (2) 1.5-volt batteries.

TROUBLE SHOOTING

Should you encounter problems with your fireplace system, the problem may be with the fireplace itself or it could be with the SKYTECH remote control. Review the fireplace manufacturer’s operation manual to make sure all connections are properly made. Then check the operation of the SKYTECH remote in the following manner:

1. Make sure receiver batteries are installed properly. If one battery is installed backward, receiver will not operate in remote mode. Be sure battery output is 2.5 volts or more. (Slide switch is independent of battery condition.)
2. Be sure the transmitter’s batteries are properly installed and that the battery output is 2.5 V or more.
3. Check to make sure the transmitter is communicating with the receiver.
 - If the receiver beeps when the MODE button is depressed on the transmitter they are communicating.
Note: The receiver only beeps in ON & OFF modes. No beeping occurs from ON to Thermo mode.
 - If the receiver does not beep when the MODE button is depressed on the transmitter, you will need to “learn” (teach) the receiver the code of the transmitter. See page 5 Learning Transmitter to Receiver section.
4. Make sure the transmitter is within the 15 to 20-foot range of the receiver.
5. Positioning of the receiver is important. If the receiver is “enclosed” in a metal surround, the operation of the receiver may be affected as noted below. Reposition the receiver to improve operating range. It is suggested that a heat shield be installed to protect the receiver from extreme heat. If the receiver is “enclosed” in a metal surround, this can:
 - Cause the RF signal to get lost and not communicate with the receiver.
 - Cause the working distance to be shorter than normal.

SPECIFICATIONS

BATTERIES: Transmitter 3V (2) ea. AAA 1.5V, Alkaline

Remote Receiver 6V (4) ea. AA 1.5 Alkaline

FCC ID No.'s: transmitter –(K9L3002TX); receiver – (K9L3002RX)

Operating Frequency: 303.8MHZ

Canadian IC ID No.'s: transmitter – 2439-3002TX; receiver – 2439A-3002RX

FCC REQUIREMENTS

NOTE: THE MANUFACTURER IS NOT RESPONSIBLE FOR ANY RADIO OR TV INTERFERENCE CAUSED BY UNAUTHORIZED MODIFICATIONS TO THIS EQUIPMENT. SUCH MODIFICATIONS COULD VOID THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT.

**FOR TECHNICAL
SERVICE, CALL:**

U.S. INQUIRIES
(888) 672-8929 or
(260) 459-1703

CANADIAN INQUIRIES
(877) 472-3923

Website: www.skytechsystem.com

MANUFACTURED EXCLUSIVELY FOR SKYTECH II, INC

fire-parts.com