# TH-1030 INSTALLATION AND OPERATING INSTRUCTIONS

## **INTRODUCTION**

This SUPER STAR remote control transmitter was developed to convert a standard SUPER STAR ON/OFF remote control systems Models 1001, 1001D, 1410, 1315, and 1315G to a ON/OFF/THERMO remote control systems for use on heater rated gas heating appliances. Its battery operation allows the system to operate independently of household current. The system operates on radio frequencies with non-directional signals. The SYSTEMS operating range is approximately 20 feet. The system operates on one of 255 security codes which can be set on the transmitter.

TRANSMITTER



The transmitter operates on (2) AAA-size 1.5V batteries and (1) 12V battery. 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 and (1) 12V battery 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, the screen at right (with similar numbers) will display.

**Note:** If a LOW battery icon appears on the screen, check the position of the batteries; a reversed battery will activate the LOW battery icon.

**Note:** 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.

LCD - Liquid Crystal Display





- 1. LOW- Battery power is low. Replace batteries within two weeks.
- 2. TIMER- Indicates time remaining before system shuts off, when timer-programmed; 9-hour maximum setting.
- 3. **MODE** Indicates operation MODE of system. ON indicates the system is on, either manually or thermostatically. THERMO indicates the system will automatically cycle on/off, depending on programmed SET temperature. OFF indicates the entire system is turned off.
- 4. SET- Indicates desire SET room temperature for THERMO operation
- 5. FLAME Indicates burner/valve in operation.
- 6. CLOCK Indicates the current time in AM/PM
- 7. ROOM Indicates CURRENT room temperature.
- 8. <sup>o</sup> Findicates degrees Fahrenheit ( <sup>o</sup>C indicates degrees Celsius).

### **FUNCTIONS**

To operate the system, press the MODE button on the transmitter to select the operational MODE desired.

- ON indicates the system is on, either manually, timed or thermostatically
- THERMO indicates the system will automatically cycle ON/OFF, depending on
- programmed set temperature.
- OFF indicates the entire system is turned off.



#### BUTTON SETTINGS



#### SETTING THE CLOCK



#### SETTING º F/ºC SCALE

Flip open the plastic cover on the front of the transmitter to expose the "SET" buttons. The flip cover protects the SET buttons from being changed accidentally. Close the cover after completing the following settings/ programming.

Flashing numbers on the 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.

- 1. Press and hold the TIME button on the transmitter for more than two seconds. The hour digit(s) will begin flashing.
- 2. Press the UP or DOWN button until the desired hour is displayed in AM or PM.
- After setting the desired hour, press and release the TIME button again to set the minutes; the minute digits will begin flashing.
- 4. Press the UP or DOWN button until the desire minutes are displayed.
- 5. After setting the desired hour and minutes press the SET button on the transmitter to stop the minutes digits from flashing and the time is set.

The factory setting for temperature is  ${}^{\circ}$  **F**. To change this setting to  ${}^{\circ}$  **C**, first press and hold the UP button on the transmitter, then press the DOWN button. Follow this same procedure to change from  ${}^{\circ}$  **C** back to  ${}^{\circ}$  **F**. When changing between the  ${}^{\circ}$  **F** and  ${}^{\circ}$  **C** scales, the temperature in the SET frame defaults to the lowest temperature (45° F, or 6° C).

#### SETTING DESIRED ROOM TEMPERATURE



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

# <u>OPERATIONAL NOTE:</u> TO CONSERVE BATTERY POWER, CHANGES IN ROOM TEMPERATURE ARE ONLY UPDATED EVERY TWO MINUTES.

The Thermo Mode on the transmitter operates the appliance when ever 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. 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.

#### 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 (**THERMO or ON must be displayed on the screen**).

- 1. Press and release the TIMER button on the transmitter. 0:15 will begin to flash in the timer box on the screen.
- 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 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.

**OPERATIONAL NOTE:** When the timer is used in the THERMO mode, the THERMO operation will discontinue when the "time" has expired.

#### LOW/BATTERY INDICATOR



The word LOW outlined by a battery on the left side of the LCD screen will appear when battery power has dropped significantly. At this time, approximately two weeks of battery power remains until the transmitter may experience partial or complete loss of functions. NOTE: A reversed battery will activate the LOW battery icon.

#### THERMO UPDATING FEATURE -TRANSMITTER - (T/S -TX)

This SUPER STAR 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 MODE:

The transmitter normally reads the ROOM temperature every 2 minutes checking the ROOM temperature against the SET temperature then sends a signal to the receiver.

# **INSTALLATION INSTRUCTIONS**

#### WARNING

This remote control transmitter must be installed only on a Skytech remote control system that is installed on a heater rated gas appliance. It is not intended for use with non-heater rated gas appliances. This transmitter is to 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 be 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.

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**

- 1. This SUPER STAR 1030<sup>TH</sup> transmitter will convert a standard SUPER STAR 1001, 1001D, 1410, 1315, or 1315G basic ON/OFF remote control system which uses the 1 to 255 security code system to a ON/OFF/THERMO remote control system.
- 2. Make sure the remote receiver switch is in the OFF position.
- 3. Check the remote control receiver label on the side or back of the receiver for the system **SECURITY: (CODE).** This CODE number could be any number from 1 to 255.
- 4. Record the CODE number. Now you are ready to match the transmitter to the system SECURITY: (CODE) of the receiver.

#### MATCHING SECURITY CODES



- 1. Open the flip cover on the transmitter and locate the small hole marked CODE. Using a small paper clip or sharp end of a pencil, depress the button in the small hole.
- 2. When the small button 's depressed the LCD screen will clear, then a number will appear at the bottom of the LCD screen. This is the code of the transmitter.
- 3. Use the UP or DOWN keys to set the number to the code that you recorded from the receiver.
- 4. When the correct code is set, use a paper clip pr sharp end of a pencil and depress the small button in the hole marked CODE.
- This completes the matching of the security codes of the transmitter and the receive
  Follow the SYSTEM CHECK next in these instructions.

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### SYSTEM CHECK MILLIVOLT VALVES

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.

- Slide the 3-position button on the remote receiver to the ON position. The main gas flame (i.e., the fire) should ignite. •
- Slide the button to OFF. The flame should extinguish (the pilot flame will remain on).
- Slide the button to REMOTE (the center position), 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 a 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. Set 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 to 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**

- 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), 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 ianite.
- 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 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. Set 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 to 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).

#### **TIMER**

The countdown timer will operate in either the manual ON or THERMO mode. Once the appliance is in an operating mode, set the countdown timer to turn off in 15 minutes. The timer function will allow operation to continue until the countdown "time" on the LCD screen expires. After 15 minutes elapses, the system should turn OFF.

If you have any problems with operation, recheck you connections and ensure transmitter batteries are fully charged. If no problem is found, contact the dealer where you purchased your appliance/remote control.

# **GENERAL INFORMATION**

#### THERMO FUNCTION

When the transmitter is in the THERMO mode, it should be kept away from direct sources of heat such as fireplaces, incandescent lighting and direct sunlight. Leaving the transmitter in direct sunlight, for example, will cause its heat-sensing diode to read the room temperature higher than it actually is; if in THERMO mode, it may not turn on the appliance even if the ambient ROOM temperature is below the SET temperature.

#### **BATTERY LIFE**

Life expectancy of alkaline batteries in the SUPER STAR 1030TH should be at least 12 months. Check all batteries annually. When the Transmitter or Wall 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 or Wall Transmitter should operate with as little as 9.0 volts battery powe Measuring at the 12 volt battery.

#### TROUBLE SHOOTING

If you encounter problems with your fireplace system, the problem may be with the fireplace itself or it could be with the SKYTECH remote 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:

- Make sure the batteries are correctly installed in the RECEIVER. One reversed battery will keep receiver from operating properly.
- Check battery in Transmitter to make sure contacts are touching (+) and (-) ends of battery. Bend metal contacts in for tighter fit.
- Be sure RECEIVER and Transmitter are within 20' -25' operating range.
- Keep RECEIVER from temperatures exceeding 130 degrees F. Battery life decreased when ambient temperatures are above 130 degrees F.
- If RECEIVER is installed in tightly enclosed metal surround, the operating distance will be shortened. Reposition RECEIVER into "free air" space.

#### FREQUENCY (DISTANCE) ADJUSTMENT PROCEDURE (Transmitter)

- Due to handling/shipping of remote control, especially the TRANSMITTER, the TRANSMITTER may require a frequency (distance) adjustment to return the normal operating distance of 20' -25'. Follow instructions below to make the adjustment: Check batteries level, replace batteries if low.
- 1. Remove the (2) screws holding the back panel on the TRANSMITTER and remove the back pane
- 2. Using a small screwdriver, (eyeglass screwdriver works best) turn the adjustment screw clockwise no more than 1degree –2 degrees. Just a slight movement of this screw should improve the operating distance. If turning clockwise does not fix the problem, return screw to original position and turn 1 degree- 2 degrees counter-clockwise. This procedure is like tuning your radio, too much adjustment will cause complete loss of frequency match between the transmitter and receiver. You should not have to turn the adjustment screw more than 5 degrees, 1/8 turn, in either direction to improve operating distance. Note: adjustment screw location.
- 3. Reinstall the TRANSMITTER back panel and reinstall the screws.

#### **SPECIFICATIONS**

BATTERIES: Transmitter 3V- (2)ea. AAA 1.5V Alkaline batteries, and (1) 12v Alkaline battery Operating Frequency: 303.8MHZ FCC ID No: transmitter –JA7YH-1030; Canadian ISC ID No: transmitter –(XXXXX);

Caution:

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