



**SKYTECH**  
PRODUCTS GROUP

## Model: MRCK

### INSTALLATION AND OPERATING INSTRUCTIONS

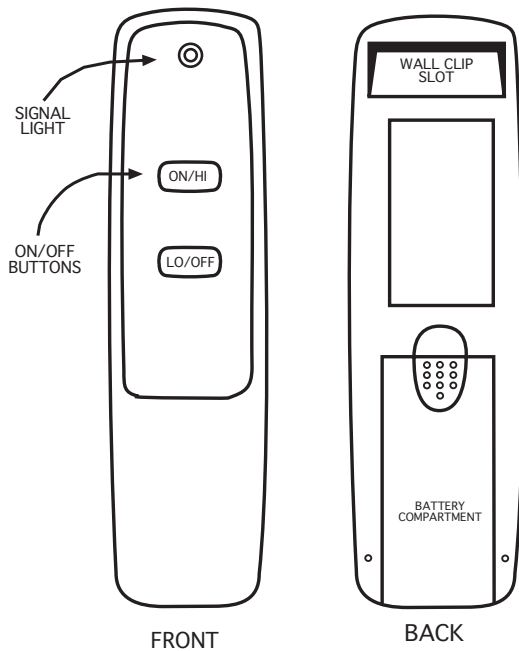
**DESCRIPTION:** SINGLE-FUNCTION WIRELESS REMOTE CONTROL SYSTEM  
FOR OPERATING HI/LOW SERVO MOTOR

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

### INTRODUCTION

This remote control system was developed to provide a safe, reliable, and user-friendly remote control system for gas heating appliances. The system is operated manually from the transmitter. The system operates on radio frequencies (RF) within a 20-foot range using non-directional signals. The system operates on one of 255 security codes that are programmed into the transmitter at the factory; the remote receiver must learn the transmitter code prior to initial use.

### TRANSMITTER



This remote control SYSTEM offers the user a battery-operated remote control to power a DC servo motor such as those used with gas valves used in some decorative gas logs, gas fireplaces and other gas heating appliances.

The servo motor circuit uses the battery power from the receiver to operate a servomotor. The circuit has reversing polarity software, which reverses the positive (+) and negative (-) output of the receiver's battery power to drive the servo motor forward/backward (HI/LO FLAME). The servo motor is controlled by the remote transmitter.

The transmitter operates on a 12V battery (A-23). Before using the transmitter install the 12-volt battery in the battery compartment.

It is recommended that ALKALINE batteries always be used for longer battery life and maximum operational performance.

The transmitter has ON/HI and LO/OFF functions that are activated by pressing either button on the face of the transmitter. When a button on the transmitter is pressed, a signal light on the transmitter illuminates to verify that a signal is being sent. Upon initial use, there may be a delay of three seconds before the remote receiver will respond to the transmitter. This is part of the system's design. If the signal light does not illuminate, check the position of the transmitter's battery.

### POWER SETTING – MRCK

The electronics in the remote control system have the capability of "powering" two different types of DC-powered components. If any operational problems are noted contact Skytech Systems, Inc.

The RECEIVER comes from the factory programmed to provide continuous DC voltage (4.5 VDC to 6.0 VDC) to a servo-motor

## REMOTE RECEIVER

### IMPORTANT

The remote receiver (right) operates on (4) 1.5V AA-size 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 to proper operation of the remote receiver as a servo motor's power consumption is substantially higher than standard remote control systems.

**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. The remote receiver houses the microprocessor that responds to commands from the transmitter to control system operation.

### FUNCTIONS

- With the slide switch in the REMOTE position, the system will only operate if the remote receiver receives commands from the transmitter. Upon initial use or after an extended period of no use, the ON/HI button may have to be pressed for up to three seconds before activating servomotor. If the system does not respond to the transmitter on initial use, see LEARNING TRANSMITTER TO RECEIVER section.
- With the slide in the OFF position, the system is off.
- Move slide switch to ON position for manual operation. Manual ON will move the servomotor to ON/HI position and stop motor after five seconds. Manual OFF will move the servomotor to LO/OFF position and stop after five seconds.
- 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. Placing the slide switch in the OFF position also functions as a safety "lock out" by both turning the system OFF and rendering the transmitter inoperative.

**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.

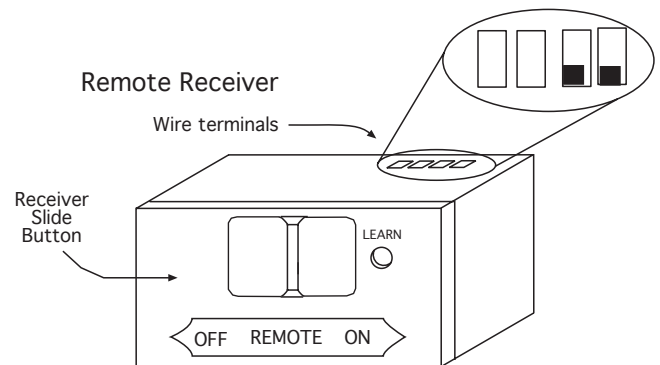
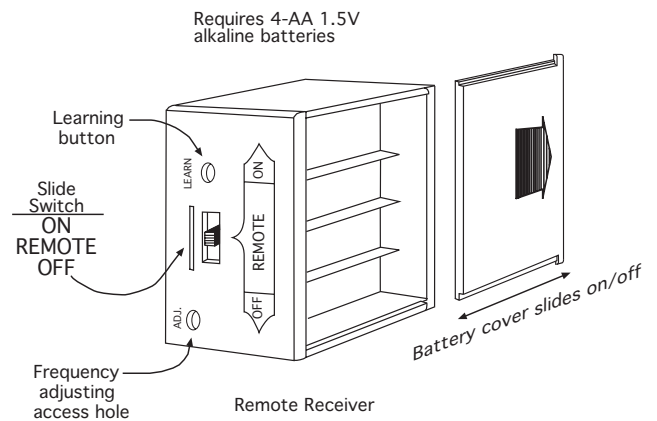
## INSTALLATION INSTRUCTIONS

### WARNING

DO NOT CONNECT REMOTE RECEIVER DIRECTLY TO 110-120VAC POWER. THIS WILL BURN OUT THE RECEIVER. FOLLOW INSTRUCTIONS FROM MANUFACTURER OF GAS VALVE FOR CORRECT WIRING PROCEDURES. IMPROPER INSTALLATION OF ELECTRIC COMPONENTS CAN CAUSE DAMAGE TO GAS VALVE AND REMOTE RECEIVER.

### INSTALLATION

Keep receiver in a cool location. Battery life is also significantly shortened if batteries are exposed to high temperatures. Make sure the remote receiver switch is in the OFF position. For best results it is recommended that 18 gauge stranded wires should be used to make connections and no longer than 20-feet.

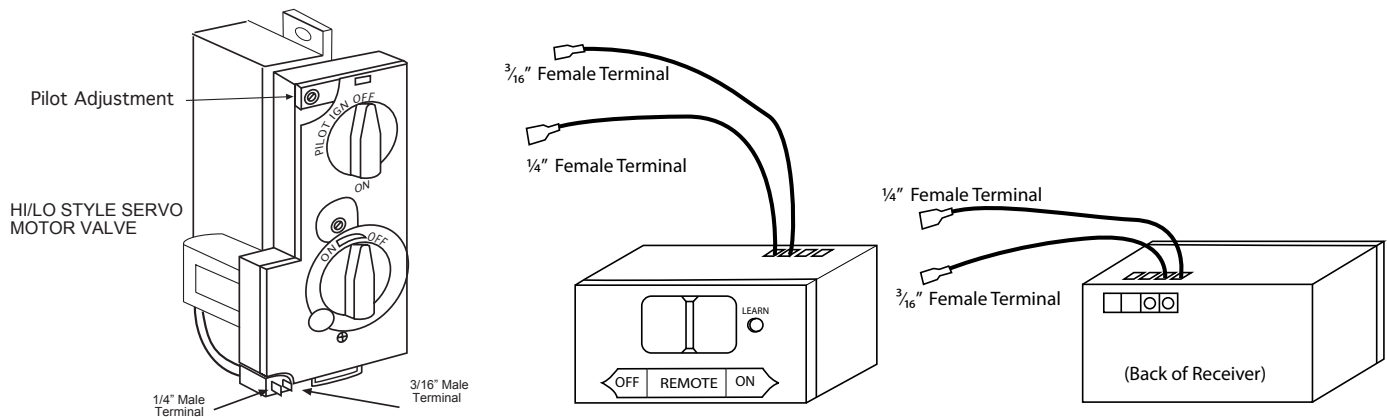


## **WIRING INSTRUCTION**

### **CONNECTING THE RECEIVER TO A HI/LOW SERVO MOTOR STYLE VALVE SYSTEM**

1. Connect the BLACK 18 gage stranded wire with the 1/4" female terminal from the receiver to the 1/4" male terminal on the valve servomotor.
2. Connect the Black 18 gage stranded wire with the 3/16" female terminal from the receiver to the 3/16" male terminal on the valve servomotor.
3. After receiver wires are connected to the valve servo motor terminals make sure the receiver shield is located over the receiver and then locate the receiver in an area that will not exceed the 120° F.
4. Depending on the product that this remote control system is used on the 1/4" female terminal and wire from the receiver and the 3/16" female terminal and wire may need to be cut to a shorter length. This can be done by removing the (2) wires from the receiver cutting them to the desired length then reinstalling them into the same connections on the receiver.
5. The receiver can be mounted on the side of a valve kit. NOTE: Always mount the receiver to side of the valve kit away from the fire.

**IMPORTANT NOTE:** Operation of these controls is dependent on which wire is attached to which terminal. If operation of control does not correspond to operating buttons on transmitter, reverse wire installation at the receiver or at the control. Up to 6 VDC of power is provided at the receiver terminal.



## **GENERAL INFORMATION**

### **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 the black LEARN button inside the hole and release the button. When you release the LEARN button the receiver will emit a "beep". After the receiver emits the beep press any button on the transmitter 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.

## **TRANSMITTER WALL CLIP**

The transmitter can be hung on a wall using the clip provided. If the clip is installed on a solid wood wall, drill 1/8" pilot holes and install with the screws provided. If it is installed on a plaster/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.

## **OPERATION**

1. This remote control will operate the gas valves servomotor to turn the gas valve from full OFF to full ON.
2. When the ON button is depressed the transmitter is sending a continuous RF signal to the receiver. The receiver then sends a continuous 6 volts of power to the servomotor. The servomotor turns to open the gas flow to the burner then to full ON.
3. When the OFF button is depressed the transmitter is sending a continuous RF signal to the receiver. The receiver then sends a continuous 6 volts of power to the servomotor. The servomotor turns to close the gas flow to the burner then full OFF.
4. The remote control will only work with the hand held transmitter. The receiver slide switch is only for positive OFF or REMOTE operation.

**NOTE:** Extensive use of the SERVO MOTOR setting will reduce the receiver's battery life significantly.

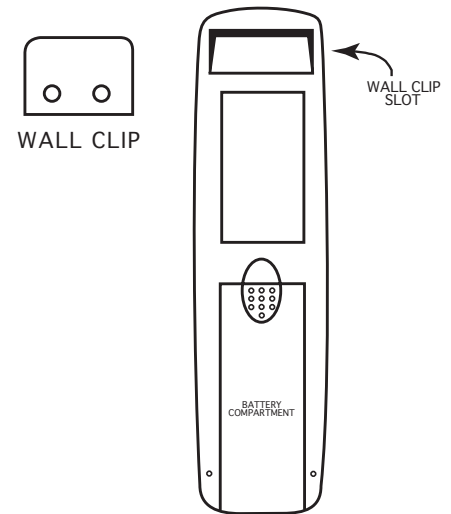
## **BATTERY LIFE**

Life expectancy of the alkaline batteries in the SR-1001 can be up to 12 months depending on use of the servo function. Check all batteries annually. When the transmitter no longer operates the remote 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 combined output voltage of at least 5.0 volts. The transmitter should operate with as little as 9.0 volts battery power. NOTE: Extensive use of the SERVO MOTOR setting will reduce the receiver's battery life significantly.

## **TROUBLE SHOOTING**

If you encounter problems with your fireplace system, the problem may be with the fireplace itself or it could be with the MRCK (SR-1001) remote system. Review the fireplace manufacturer's operation manual to make sure all connections are properly made. Then check the operation of the remote in the following manner:

1. Make sure the batteries are correctly installed in the RECEIVER. One reversed battery will keep receiver from operating properly.
2. Check battery in TRANSMITTER to ensure contacts are touching (+) and (-) ends of battery. Bend metal contacts in for tighter fit.
3. Be sure RECEIVER and TRANSMITTER is within 20 to 25-foot operating range.
4. **Clear Codes:** Memory in the receiver might be full if the learn button is pressed too many times. If this happens it will not allow any more codes to be learned and no audible beep will be heard. To clear memory, place the receiver slide switch into the REMOTE position. Press the learn button and release after 10 seconds. You should hear three (3) long audible beeps indicating all codes have cleared. You can now "learn" the transmitter to the receiver as described in the General Information Section.
5. Keep RECEIVER from temperatures exceeding 120° F. Battery life shortened when ambient temperatures are above 115° F.
6. If RECEIVER is installed in tightly enclosed metal surround, the operating distance will be shortened.



## **SPECIFICATIONS**

BATTERIES: Transmitter 12V - (A23)  
Remote Receiver 6V - 4 ea. AA 1.5 Alkaline  
FCC ID No.'s: transmitter - K9L1001; receiver - K9L330IRX

Operating Frequency: 303.8 MHZ      Canadian ISC ID No.'s: transmitter - 2439 102 728; receiver – 2439A-3301RX

### **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  
(855) 498-8324 or (260) 459-1703

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(877) 472-3923

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