

**Included in this Kit:**

- (1) LRF120VPR1L Receiver
- (1) 3-Button Transmitter with Light
- (1) Long Range Antenna LRA340 **See PAGE 3 FOR SETUP**

Available accessories:

- Wireless Outdoor Keypad KP340-DRC
- 3-Button Waterproof Transmitter KF340-3L-WP
- Rechargeable Transmitter GKF-WPTX-3L
- 3-Button Keyfob Transmitter KF340-3

The LRF120VPR1L is an RF receiver operating at a fixed frequency of 340 MHZ. It operates from 120VAC and provides one polarity reversing output for use with a four/six lead AC motor. The receiver is not designed to operate with any existing hand or drum switch. The receiver is equipped with a manual toggle switch. An additional latching output is available for connecting to a 120VAC light. Up to twelve, three-button keyfob transmitters can be used to activate the receiver's relay. The receiver has a terminal block for connecting the power and relay contacts. Each transmitter has a unique address that is transmitted when a button is pressed. A "program" button is provided on the receiver to program the transmitter(s) address into the receiver's memory. An LED on the receiver indicates the receiver's programming status and illuminates when the receiver is energized. The receiver is encased in a waterproof enclosure. The operating range is approximately 500 ft. Operating temperature range is 0°F to 160°F.

Polarity Reversing Output: The transmitter has two buttons assigned to the motor output. The up (^) button runs the motor in one direction and the down (v) button runs the motor in the opposite direction. The reversing function accomplished by reversing the phase on two of the four motor connections at the receiver output.

Manual Switch: The receiver is equipped with a manual switch. This switch replaces any hand or drum switch previously connected to the motor.

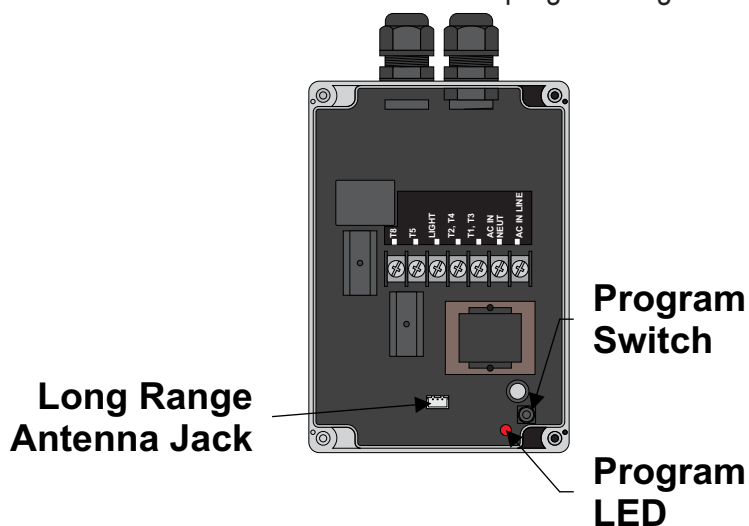
Light Output: The light output is activated using the "B" button on the transmitter. Press button "B" once to latch this output on. Press button "B" again to turn the light output off. The light function is active at all times and does not require the power up sequence to be performed.

Maximum Ratings: Power for the receiver can be in the range of 100VAC to 132VAC. The relay contacts are rated at 20 Amps.

Programming Instructions

Each transmitter has its own unique internal address along with the data as to which button is pressed and transmitted. The receiver needs to be programmed to respond only to the specific transmitter it is intended to operate with. The following steps configure the receiver to operate with a particular transmitter. Up to 12 transmitters can be programmed to one receiver. Please read the entire programming procedure before starting. When the receiver enters program mode, all previous transmitter addresses that were programmed will be erased from the receiver's memory.

1. Locate the pushbutton labeled "PROGRAM" on the receiver. Press and hold this button until the red LED next to the program button illuminates (approximately 3 seconds). The receiver is now in the transmitter program mode. Release the button. At this point all previously programmed transmitter addresses are erased from the receiver's memory.
2. To configure the receiver for a latching output, go to Step 4.
3. To configure the receiver for momentary output, press and release the UP button on the transmitter and verify that the red program LED extinguishes and then illuminates (blinks once). Proceed to Step 5.
4. To configure the receiver for latching output, press and release the DOWN button on the transmitter and verify that the red program LED extinguishes and illuminates (blinks once).
5. Repeat previous step for additional transmitters that will operate with this particular receiver. The red LED on the receiver will extinguish and illuminate (blink) once for the first transmitter being programmed, twice for the second, three times for the third, etc. The receiver will not respond to transmitters that have already been programmed. The first transmitter that is programmed determines the receiver's relay operating mode.
6. The receiver will return to normal mode if no transmitter buttons are pressed for 5-seconds. The red LED on the receiver will blink rapidly, then extinguish. The receiver is now in the normal mode of operation. This completes the programming instructions. The receiver will retain all of its programming even when power is removed.

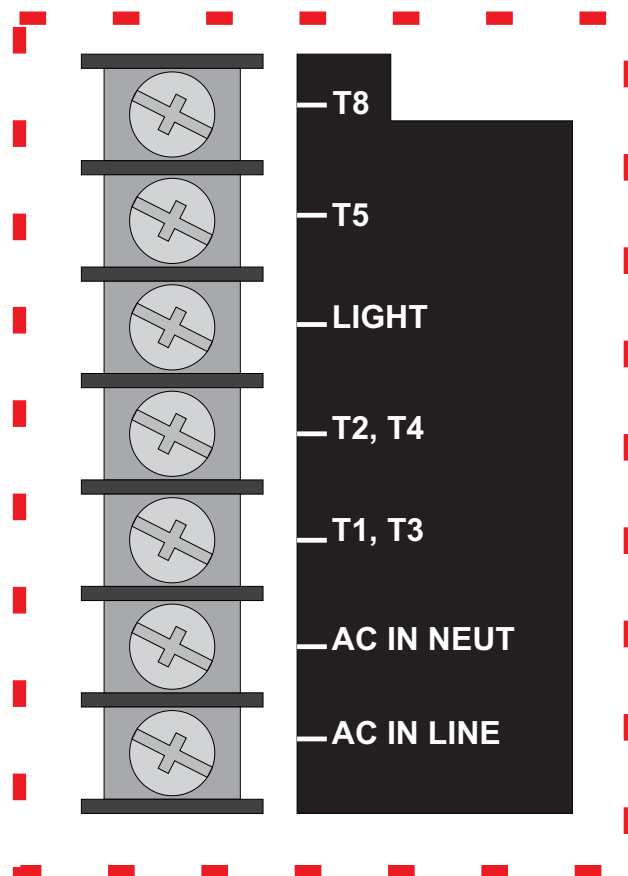


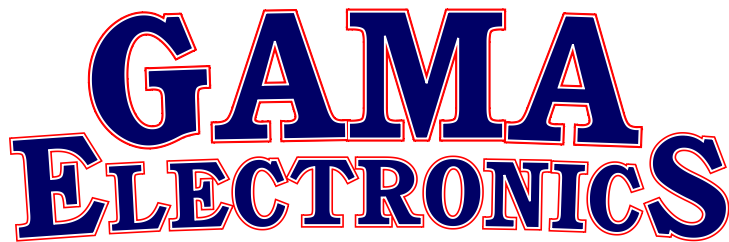
Wiring Instructions

Prior to this, verify that there is no power at any of the motor terminals.

1. Disconnect or turn off the circuit breaker to remove power (if a hand or drum switch is connected to the motor it will need to be disconnected). Takes notes before disconnecting the switch in the unlikely event it will need to be reconnected.
2. See motor connections using the tables on pages 4 and 5 for terminal connections specific to the motor.
3. 120VAC power is connected to the line and neutral terminal of the receiver.

NOTE: After completing the installation, if the motor goes the wrong direction, simply swap the wires connected to T5 and T8 on the receiver. The motor will now rotate in the correct direction. The 120VAC light connects between “common” and “light” terminals on the receiver.





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LRF120VPR1L

Instruction Manual

Common Motor Connections

Standard Motor with "T" numbers

Match the T number to the T number in the receiver.

Standard Motor with Colored

Wires

Use blue wire nuts to connect the receiver to motor wires.

Blue and Orange - T1, T3

White and Yellow - T2, T4

Black - T5

Red - T8

A.O. Smith/Balder Motors with L1,

L2 Terminals and Colored Wires

Use blue wire nuts to connect the receiver to motor wires.

L1 - T1, T3

L2 - T2, T4

Black - T5

Red - T8

Century/MagneTek Motors with

Terminals

Terminal 1 - T1, T3

Terminal 6 - T2, T4

Terminal 5 - T5

Terminal 8 - T8

Eastbay Motors with Terminals

Terminal E - T1, T3

Terminal D - T2, T4

Terminal A - T5

Terminal B - T8

Century AC/A.O. Smith C426 &

C523 Motors with Terminals and

Colored Wire

Note: Motor wires brown and orange must be connected to terminal 3.

Terminal 1 - T1, T3

Terminal 6 - T2, T4

Terminal 5 - T5

Motor Red - T8. Use blue wire nut to connect the receiver to motor wire

Century AC/A.O. Smith C926 with

Color Wires

Black - T1, T3

Blue - T2, T4

Yellow - T5

Red - T8

Leeson/Ace Motors with Terminals

Terminal 1 - T1, T3

Terminal 2 - T2, T4

Terminal 5 - T5

Terminal 3 - T8

Marathon/GE Motors with

Terminals and Colored Wires

Use blue wire nuts to connect the receiver to motor wires.

Terminal 1 - T1, T3

Motor Yellow & White - T2, T4

Motor Red - T5

Terminal 2 - T8

Emerson Motors with Terminals

Terminal 3 - T1, T3

Terminal 1 - T2, T4

Terminal 4 - T5

Terminal 2 - T8

AO Smith/ Regal Beloit Motor

Black - T1

White - T2

Red - T8

Orange - T5

Elite Pointed Motor

Orange - T1, T3

Black - T5

White - T2, T4

Red - T8

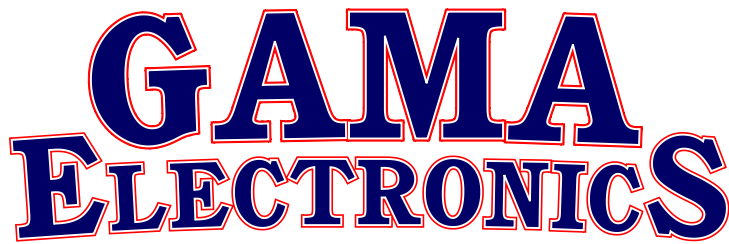
Regal Belott 52A105379AA

Red - T8

Black - T5

2 - T2, T4

1 - T1, T3



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Instruction Manual

Common Motor Connections (cont)

Regal Belott C56AD36B17

Red - T8
Black - T5
L1 (Blue) - T2, T4
L2 (White) - T1, T3

Marathon Motor 5KC42JN0214

(3/4 HP) & 5KC49PN0216 (1 HP)

Red - T8
(2) Black - T5
White - T1, T3
Orange (1) - T2, T4

Baldor Motor CPI2000

8 - T8
5 - T5
1 - T2, T4
No Connection - T1, T3
J - Neutral in Receiver
4 - Neutral in From AC Power
Source
Line of Receiver to Line of AC
Power Source

Baldor Type LC, DV

1 Blue/3 Orange - T1, T3
2 White/ 4 Yellow - T2, T4
8 Red - T8
5 Black - T5

Leeson Type (with protector)

M6C17FB10; Regal Beloit with

Type K Protector; Powerfist

8703050

T8 - T8
T5 - T5
T2, T4 - T2, T4
T1, T3 - No Connection (Receiver)
P2, T3 - Neutral from AC Input
P1 - Neutral from AC Input

A.O. Smith 7-181021-20

Blue/Orange 1 - T1, T3
Red 2 - T5
Black 4 - No Connection
5 - T8
Yellow/White - T2, T4

A.O. Smith C56A31B17 &

C56B05B17

Red - T8
Black - T5
L2 - T2, T4
L1 - T1, T3

Leeson M6K17F61A, Marathon

7PJ56C17F5945

Red - T8
Black - T5
Yellow/White - T2, T4
Orange/P2 - Neutral on Receiver
P1 - Neutral AC Input
No Connection - T1, T3

Dayton 6K719L (Thermal Protection)

T8 - T8
T5 - T5
T4, T2 - T2, T4
T3, P2 - Neutral
P1 - Neutral AC Input
No Connection - T1, T3

Magnetek 8-181021-20

T8 - (2) Motor Red
T5 - (5) Motor White
T2, T4 - (1) Motor Black (Orange/Blue)
T1, T3 - (6) Motor Orange (White/Yellow)

Marathon 5KC49TN0063Y,

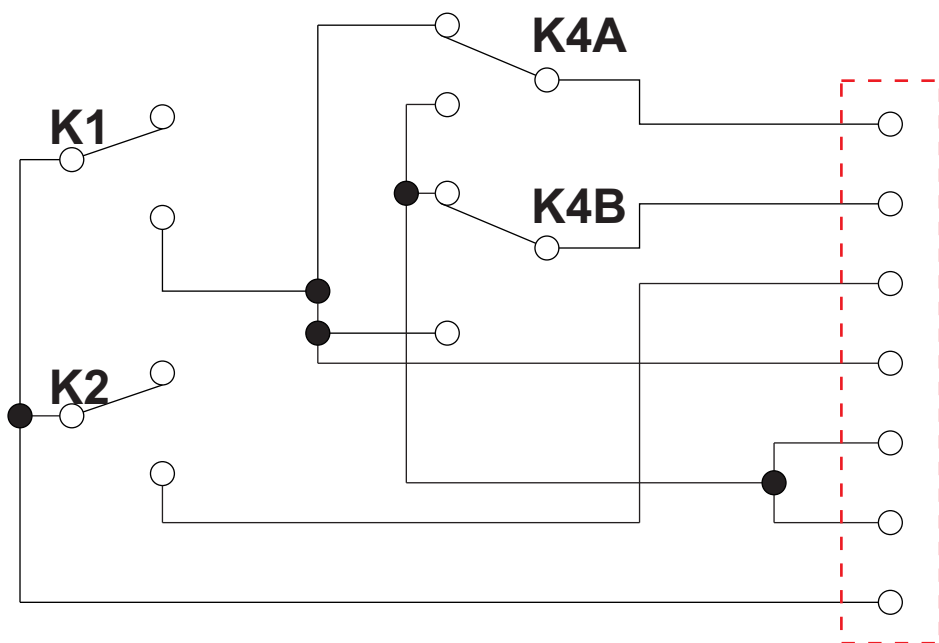
5KCP35KNB057AS

T8 - Red T8
T5 - Black T5
T2, T4 - Yellow T4, White T2
T1, T3 - No Connection
Neutral - Brown P2 Orange T3
AC Input Neutral - Purple P1

WEG Motor with Protection

T8 - Red (8)
T5 - Black (5)
T2, T4 - Blue (1) Orange (3)
T1, T3 - No Connection
Neutral - White (2) Brown (7/P2)
AC Input Neutral - Yellow (4)

Schematic



Relays shown in off position

Truth Table

K1 = Up or Down
K4 = Up
K2 = Light (Latch
On/Latch Off)

T8

T5

LIGHT

T2, T4

T1, T3

AC IN NEUT

AC IN LINE

120VAC IN

Troubleshooting

All remote-control systems shipped by GAMA Electronics are 100% functionally tested just prior to shipment.

If your RF remote control system does not work out of the box, stops working or functions intermittently please take the following steps to resolve common issues. Please note that you must be 2-3 feet away from the receiver when operating the remote control. Operating within 2-3 feet may result in no operation or intermittent operation.

1. Replace the A23 12V Battery in the transmitter

- The remote control can activate during shipping and drain the battery that is installed in the control. We send a replacement battery with the system if this occurs.

2. Check the voltage supply at the receiver

- The receiver is designed to function at 10-15VDC. Voltage on the (+) and (-) terminals on the control should be within this range.

3. Reprogram the remote control

- If the system is non-functional try to reprogram the remote control. The program may not have taken during the programming process or the program button may have been pressed. If the program button is pressed the memory of the remote controls programmed to the receiver are erased.

4. Listen and look for functionality on the receiver.

- The LED that is used for programming the system will illuminate when the receiver is activated. You will also hear a “click” when the internal relays engage. If you can see the LED illuminate and you hear the relay “click” the issue is most likely in the wiring or device being controlled.

5. Add a long-range antenna

- If the receiver is in an area that is averse to the reception of an RF signal, such as near a motor or in a metal casing, a long-range antenna may solve the issue. Connect the antenna per the instructions on page 3 and mount the antenna in an exposed area away from any motor.