GAMA Electronics, Inc.

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RF Receiver Model RF120VPRDC Instruction Manual

Overview.
The RF120VPRDC is an RF receiver operating at a fixed frequency of 340 MHz. The receiver operates from 120VAC input power and provides a polarity reversing output for use with certain AC powered winches. Winch suppliers such as Harbor Freight and Northern Tool offer winches that operate from a 120 VAC power source which is rectified to operate a DC motor. Below is a list of the manufacturers and the corresponding winch model numbers that the RF120VPRDC remote control will operate with:

Harbor Freight, Chicago Electric Winch Model 96127, 1,500 Pound.

Northern Tool, WARN Winch Model 80010, 1,000 Pound.

Northern Tool, WARN Winch Model 85330, 1,500 Pound.

Northern Tool, Dutton Lainson Model 25046, 4,000 Pound.

Northern Tool, Dutton Lainson Model SA5015AC, 1,200 Pound.

Northern Tool, Dutton Lainson Model SA9015AC, 2,700 Pound.

Northern Tool, Superwinch Model AC1500, 1,500 Pound.

Northern Tool, Superwinch Model AC1,000, 1,000 Pound.

Keeper Winch, Model KAC1500, 1,500 Pound.

Northern Tool, Model 54129, 1,500 Pound.

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 at least 100 feet.

Polarity reversing output:
The transmitter has two buttons assigned to the motor output. The up (^) button runs the motor in one direction and down (v) button runs the motor in the opposite direction. A toggle switch is mounted on the receiver and provides manual control of the output in case the transmitter is not available.

Maximum ratings:
Power for the receiver can be in the range of 100 to 132VAC. The relay contacts are rated at 20 Amperes, 1HP. Operating temperature range - 0^{o} F to 160^{o} F.

Dimensions:
Receiver dimensions are approximately 5.75" L x 4" W x 2.5" H.

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Input/output Wiring:
Refer to the RF receiver terminal block nameplate when installing the AC input voltage and DC output to the winch. The 120 VAC Line is terminated to the "AC LINE IN', the 120 VAC input Neutral is terminated to the "AC IN NEUT" terminal. Both green ground wires from the AC input to the receiver and winch should be connected with a wire nut. The switch pendent on the winch must be disconnected from the cable. There are 4-wires of the cable that are terminated to the switch pendent which are wired to the bridge rectifier, these wires must be removed from the switch and installed on the receiver. The red wire from the switch is terminated to the "DC IN POS" terminal. The black wire is terminated to the "DC IN NEG" terminal on the receiver. The other two wires from the switch pendent are terminated to the "MOTOR 1" and "MOTOR 2" terminals on the receiver. **Note: The wire colors from the bridge rectifier may be different than referenced above. Locate the bridge rectifier and document the colors terminated to the rectifier so they are correctly connected to the receiver terminal block.**

Programming instructions:
Each keyfob transmitter has its own unique internal address that is transmitted whenever a button on the keyfob is pressed. The receiver needs to be programmed to respond only to keyfob transmitters it is intended to operate with. The following steps configure the receiver to operate with a keyfob transmitter(s). Up to twelve keyfob transmitters can be programmed to one receiver. Please read the entire programming procedure before starting. Prior to programming the receiver, verify that the receiver is connected to the input power. 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 5 seconds). The receiver is now in the transmitter program mode. Release the blue button. All previously programmed transmitter addresses are erased from the receiver's memory.

2. Press any switch on the keyfob transmitter and verify that the red LED on the receiver extinguishes and then illuminates (blinks once). Release the button.

3. Within 5-seconds of Step 2, press a switch on the next transmitter to be programmed. The red LED on the receiver will extinguish and illuminate one time for the first transmitter being programmed, twice for the second, three times for the third, four times for the fourth etc. The receiver will not respond to transmitters that have already been programmed.

4. After 5-seconds of no switch being pressed on the transmitter(s) the receiver will return to normal operation. 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 its programming even when power is removed.