

| REV | DESCRIPTION | DATE |
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| - | ORIGINAL RELEASE | 01/11/99 |

Transmitter: Installation drawing C-10305
Pistol Grip Transmitter: Installation drawing C-10306

| NEXT HIGHER ASSEMBLY | DESCRIPTION | | | |
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| | 418MHz RADIO SYSTEM | | | |
| <p>WARNING: P-Q Controls, Inc. products are intended as general purpose switches. They are NOT safety devices and as with any general purpose devices, malfunctions may occur. If P-Q products are used to initiate an operation where false operation could be dangerous, POINT-OF-OPERATION GUARDING DEVICES must be installed and maintained to meet all appropriate OSHA and ANSI machine safety standards. P-Q Controls, Inc. shall not accept responsibility for installation, application or safety of systems.</p> |  | P-Q Controls, Inc. 95 Dolphin Rd. Bristol, CT 06010 PHONE: (860) 583-6494 FAX: (860) 583-6011 | Document No: <p style="text-align: center;">26799</p> | Rev: <p style="text-align: center;">-</p> |
| | | | Sheet: <p style="text-align: center;">1 of 2</p> | Scale: <p style="text-align: center;">N/A</p> |
| | Title: <p style="text-align: center;">OPERATORS MANUAL 418MHz RADIO SYSTEM</p> | | | |
| | Originator: <p style="text-align: center;">F</p> | Check: | Project Engineer: | |



Each transmitter is factory preset to a unique address and configured for a specific RF frequency (418 MHz). As the transmitter address is fixed, the receiver must be configured to match. The address, which is also the serial number, and the RF frequency can be found on labels on the back of the case and at the bottom of the battery compartment. Each switch position on the transmitter activates a corresponding output on the receiver board. The Pistol Grip style transmitter also incorporates a trigger mounted transducer for use in controlling the receiver's analog output. See the receiver's installation drawing for details on this output.

The only serviceable item in the transmitter is the battery. If the receiver will not link or drops out repeatedly after a few seconds of operation, the battery should be replaced. Use a 9 V Alkaline or Lithium battery. Lithium batteries are superior for temperatures below -20°C (-4°F). The battery will last for 20 to 30 hrs of actual operation. The transmitter will automatically turn itself off after 4 seconds of inactivity. This translates to weeks of operation in typical applications.

Receiver: Installation drawing D-10307

The receiver is also factory preset to a unique address and configured for a specific RF frequency (418 MHz). Check to confirm that the transmitter and receiver address and frequency match. The address can be changed to match the transmitter if necessary. The DIP switches on the board can be adjusted to match the 16 bit transmitters address. Each output stage on the receiver board can be activated by its corresponding switch position on a transmitter. Refer to the receiver's installation drawing for the electrical specs on these outputs.

Receiver Enclosure

The receiver board must be housed in the enclosure provided or in a dry area. Condensate drain holes, 1/8" dia, are recommended at the lowest surface of the enclosure. We recommend that all entry holes for power, output and antenna wires be made at the bottom surface. If silicone RTV is used inside the enclosure, a non corrosive type such as Dow Corning RTV738 is recommended. Standard silicone RTV can be used if the enclosure is left open until it fully cures. Acetic acid, which is released by standard silicone RTV during cure, can cause severe circuit corrosion.

Antenna: PQ P/N B-10309-QW or B-10309-HW

For best performance, the above referenced antennas should be used. The receiver antenna should be connected to the BNC jack on the receiver board using 50 Ω coaxial cable. When installing a radio on a machine for the first time, the antenna should be located initially on the center of the cab roof. This location provides an adequate ground plane and good results on most vehicles. Once the system is operated with this antenna location and performance documented, the antenna can be moved to a more convenient location. In general a location with line of sight to the operator will work well. If performance in any location is less than that on the cab roof, another location should be tried.

Applications Assistance

P-Q controls applications engineers will be happy to assist you with the installation of your RF control system. Please feel free to call or FAX if you have any questions.