



800/846-9659 www.Equalizersystems.com
AutoLevel® AutoAir™

RF Remote Control System

Installation, Operation & Specifications

!!! Warning: Read entire instructions and all precautions prior to installing, using or troubleshooting this equipment

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EQUALIZER SYSTEMS RF Remote Control System

Warning: Modification of any factory-supplied item may result in the denial of all warranty claims. Call Equalizer Technical Support prior to any modifications.

Danger: With any hydraulic application, holding position on a cylinder must be done with safety in mind. Failure in the system may cause the leg(s) to retract or extend on its own. When working under or near the coach, always use jack stands of appropriate rating to support the weight of the coach.

Qualified technicians must perform the remote control installation according to the instructions. It is assumed that the reader is familiar with hydraulic, mechanical and electrical systems in addition to workplace safety.

GENERAL SAFETY PRECAUTIONS

- If all remote control operating instructions and/or operation safety precautions are not understood, contact Equalizer Systems immediately. Failure to do so may result in serious bodily injury and/or property damage.
- Discontinue remote control use immediately if any unexplained and/or improper operation occurs. Contact EQUALIZER SYSTEMS at (800) 846-9659.
- Inspect hydraulic system before operation. Do not operate system if you suspect damage, wear, or any abnormal condition.
- Keep this instruction manual in tow vehicle at all times.
- Do not interface after-market control systems with Equalizer Systems products.

Equalizer Systems manufactures dedicated control systems for its products (i.e. electric and hydraulic lifting and leveling systems). These control systems have been designed and tested for use with specific Equalizer Systems products. Equalizer control systems are the only control systems authorized for use with Equalizer products. DO NOT attempt to interface after-market equipment with Equalizer products. To do so may result in serious bodily injury and/or property damage.

REMOTE CONTROL OPERATION PRECAUTIONS:

- Read this instruction manual and become familiar with all safety precautions, notes, details and operating instructions prior to operation.
- Be aware of the location and condition of the remote control transmitter at all times. Accidental activation of switches may cause unintended operation.
- Turn the remote control transmitter 'OFF' when not in use. Turn 'OFF' the receiver box during transit. .
- The remote control system should only be used when the trailer is in full view of the operator. Do not operate remote control unit with anyone near the area in which the jacks operate.

INSTALLATION INSTRUCTIONS

All Equalizer Systems hydraulic and electric systems rely on an adequate +12 VDC source and an adequate Ground. Both of these wires should be minimum 4-gauge. This is especially true with your RF remote control. Avoid headaches! Ensure the integrity of your +12 VDC and Ground connections prior to installation.

INSTALLATION INSTRUCTIONS FOR NEW HYDRAULIC SYSTEM

1. The receiver box should be mounted to the coach, allowing easy access to the control switches. Although the receiver box is weather tight, it should be mounted in a location that offers protection from the elements. Be sure to use appropriate mounting hardware when securing box. (Note length of harness when selecting mounting location.)
2. Route and secure the wire harness to the receiver box from the hydraulic pump. Plug the 6-pin connector from the harness to the plug on the receiver box.

INSTALLATION INSTRUCTIONS FOR ADD-ON HYDRAULIC SYSTEM

Equalizer Systems manufactures dedicated control systems for its products (i.e. electric and hydraulic lifting and leveling systems). These control systems have been designed and tested for use with specific Equalizer Systems products. Equalizer control systems are the only control systems authorized for use with Equalizer products. DO NOT attempt to interface this RF remote controller with non-Equalizer products. To do so may result in serious bodily injury and/or property damage.

1. The receiver box should be mounted to the coach, allowing easy access to the control switches. Although the receiver box is weather tight, it should be mounted in a location that offers some protection from the elements. Be sure to use appropriate mounting hardware when securing box. (Note length of harness when selecting mounting location.)
2. Route and secure the wire harness to the receiver box from the hydraulic pump.
3. Disconnect the existing 4-pin (black) plug from the switch and connect the 4-pin (black) plug from the receiver to the pump.
4. Connect the black wire with the ring connector to the ground stud on the side of the pump assembly. Ensure this stud on the pump assembly is properly attached to the negative post on the battery via minimum 4-gauge wire.

Note: Steps 5 & 6 are not required for single jack system.

5. Remove the white wire with the spade connector from the coil on the pump manifold. This wire will be abandoned. Connect the white wire from the receiver box to this coil. Remove or tape the white wire to prevent any shorts or damage to the system.
6. Remove the brown wire with the spade connector from the coil on the pump manifold. This wire will be abandoned. Connect the brown wire from the receiver box to this coil. Remove or tape the brown wire to prevent any shorts or damage to the system.

INSTALLATION INSTRUCTIONS FOR ADD-ON EL PAC ELECTRIC SYSTEM

The installation of the RF Remote Control on an El Pac Electric gearbox system requires that the El Pac system be of the newest version. This means that the system must utilize the Trombetta solenoid and the switchgear must have a rocker style switch. This system is not compatible with the 'older style' rotary switch El Pac systems.

1. The receiver box should be mounted to the coach, allowing easy access to the control switches. Although the receiver box is weather tight, it should be mounted in a location that offers some protection from the elements. Be sure to use appropriate mounting hardware when securing box. (Note length of harness when selecting mounting location.)
2. Route and secure the wire harness to the receiver box from the electric EL PAC gearbox.
3. Disconnect the existing switchgear from the Trombetta solenoid. This consists of a Red, Green & Blue wire.
4. Connect the new harness pigtail (#6539) to the Trombetta solenoid. Red attaches to the Battery +12volt terminal. The Green and Blue wires connect to the spade terminals (if your unit runs backwards, simply reverse the green and blue wires).
5. Connect the black wire (with 5/16 eyelet) from the remote control harness (#6639) to the Battery -12volt (ground) terminal on the Trombetta solenoid.
6. Attach all of the plugs into the corresponding mating connectors.

It is imperative for the El Pac electric jack system is installed correctly prior to installation of the RF Remote Control. The Trombetta solenoid must be connected in accordance with the El Pac instruction manual.

OPERATION

Read all safety precautions in this manual prior to operation

The hand held remote contains a red LED for visual status of the battery power. Any time a button is pressed during normal operation the LED will flash to indicate power.

Jack Deployment (Extension)

1. Turn hand held remote and receiver box to the 'ON' position.
2. Press and hold the DOWN button until the jack(s) reach the desired height. Dual leg systems may be operated individually or in pairs, by pressing the buttons for Left/Right or Both. Never operate the legs simultaneously in opposite directions.
3. Turn hand held remote 'OFF.' (The remote has a built-in automatic shut off timer for safety. After 3 minutes of inactivity, the remote will power down (sleep mode). To reactivate remote, cycle the ON/OFF switch once and power will be restored.)

Jack Stowage (Retraction)

1. Turn the hand held remote and receiver box to the 'ON' position.
2. Press and hold the UP button until the jack(s) are stowed for transit. Dual leg systems may be operated individually or in pairs, by pressing the buttons for Left/Right or Both. Never operate the legs simultaneously in opposite directions.
3. Turn hand held remote and receiver box to the 'OFF' position. It is imperative that the receiver box be turned 'OFF' to prevent any possible operation during transit.

Manual Override

The receiver box contains switches that control power and extension/retraction of the jack(s). The extend/retract switch can be used in the event the hand held remote is lost, damaged or inadequate battery power.

PROGRAMMING THE REMOTE CONTROL

The remote that came with the receiver was programmed at the factory. If you need to add an additional remote, or replace a remote, follow these steps.

1. Turn the power switch to both the receiver and the remote control to ON.
2. Unplug the connector between the receiver and the pump. It does not matter which end of the harness is disconnected.
3. Wait 10 seconds and re-connect the plug.
4. Within 5 seconds, push and hold any button on the remote control. Hold until the pump runs.
5. Release the button on the remote control. Your receiver has been programmed to receive signals from your transmitter.

PARTS LIST

PART #	DESCRIPTION
#2434	Single RF Transmitter (replacement or additional)
#2424	Double RF Transmitter (replacement or additional)
#6639	Harness, RF System – Single Leg
#6604B	Harness, RF System – Dual Leg
#7362	Complete System – Single Leg
#7361	Complete System – Dual Leg
#7363	Complete System – El Pac 1 & 2

SPECIFICATIONS

RECEIVER

INPUT POWER.....9 – 16 VOLTS DC (12VDC Nominal) 10A MAX

OUTPUTS:

CURRENT.....5 AMPS DC MAX. PER OUTPUT
SINGLE.....4ea. MOMENTARY RELAYS
DUAL.....6ea. MOMENTARY RELAYS

INPUTS.....RF SIGNAL & WIRED

FREQUENCY.

RANGE:

TYPICAL.....50 FEET
CLEAR FIELD.....100 FEET

CODES

NUMBER.....OVER 250,000,000
TYPE.....DIGITAL ROLLING CODES
ENROLLING.....SELF-LEARNING

TRANSMITTER

FREQUENCY.....433 MHZ

BATTERY.....3 Volt LITHIUM COIN STYLE (CR2032)

CYCLES.....50,000 2-SECOND PRESSES (APPROX)

CODES.....250,000,000 DIGITAL ROLLING CODES

TRANSMISSION TIMEOUT.....NO TIMEOUT

LOCKOUT TIMER.....3 MINUTES

STATUS LED:

BLINKING.....BATTERY OK (with button depressed)
NO LIGHT.....BATTERY LOW

FCC Compliance and Advisory Statement: This hardware device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: 1) this device may not cause harmful interference, and 2) this device must accept any interference received, including interference that may cause undesired operation. This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed or used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: 1) reorient or relocate the receiving antenna; 2) increase the separation between the equipment and the receiver; 3) connect the equipment to an outlet on a circuit different from that to which the receiver is connected; 4) consult the dealer or an experienced radio/TV technician for help. Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. Where shielded interface cables have been provided with the product or specified additional components or accessories elsewhere defined to be used with the installation of the product, they must be used in order to ensure compliance with FCC regulations.

FCC ID NUMBER-IVS1800EQLTX

Canadian DOC Statement: This digital device does not exceed the Class B limits for radio noise emissions from digital apparatus specified in the interference-causing equipment standard entitled "Digital Apparatus," ICES-003 of the Department of Communications. This device complies with RSS-310 of Industry Canada. Operation is subject to the following two conditions: 1) this device may not cause interference, and 2) this device must accept any interference, including interferences that may cause undesired operation of the device.

Canadian IC Number – 6265A-18EQLTX (Transmitter)

Canadian IC Number – 6265A –1000R (Receiver)

Equalizer Systems Limited Warranty Policy

RV or Vehicle Manufacturer Installed Systems or Components:

1. Only warranty claims with prior written or verbal authorization from Equalizer Systems will be recognized, all other claims will be denied.

2. Equalizer Systems warrants RF Remote Control system components for a period of one year from the date of original sale. This warranty covers defects in material and workmanship only. Equalizer Systems is not liable for any damage due to abuse, neglect, misuse, negligence, misapplication, error of operation, accidental or purposeful damage or damage due to an “act of God” such as, wind or rain damage, flood, lightning or other natural occurrence of the like. Equalizer Systems limited warranty is applicable to the Equalizer Systems components only and does not apply to the vehicle, apparatus or property to which it is attached. Warranty parts will be shipped at no charge if the repair is authorized by an Equalizer Systems representative. Purchased components used in authorized warranty repairs will be reimbursed at the original purchase price.

3. Labor and freight expenses due to warrantable parts defects or workmanship will be reimbursed for a period of one year from the date of original sale of the vehicle. Freight expenses will either be prepaid by Equalizer Systems or reimbursed at the UPS Ground rate only. Any additional shipping charges or requirements are the obligation of the vehicle owner or service center performing the warranty repair. The owner or service center’s obligation may include overseas shipping charges, border fees, brokerage fees and any other additional fee of the like.

4. Warranty labor will be reimbursed only for claims that have prior written or verbal authorization from an Equalizer Systems representative. Warranty labor compensation is required to correspond with the “Warranty Parts Replacement Time Guideline” published by Equalizer Systems. Any warranty repair not listed on this guideline will require prior authorization from an Equalizer Systems representative. A reasonable time allowance will be determined by the Equalizer Systems representative. Any warranty repair that is not listed on this guideline that is performed without prior authorization will be denied without exception. Time associated with learning about the repair or excessive diagnostic and installation time will not be reimbursed. Warranty labor will be reimbursed at the authorized service center’s published shop rate if the rate is reasonable for that region. Overtime labor will not be reimbursed without exception.

RV or Vehicle Manufacturer Installed Systems or Components (continued):

5. Labor, parts and freight credit (if applicable) will be sent after the parts are tested and the warranty claim is validated. Returned parts that are found to be in normal operating condition are not warrantable and will be charged to the owner or service center. Equalizer Systems reserves the right to charge back the service center for labor claim payments previously submitted if the installation of the warranted part is found to be inadequate at a later date.
6. Claims will be denied if the date submitted is greater than 30 days from the repair date.
7. Prior authorization is required before parts may be sent back to Equalizer Systems. A Return Authorization Number required for items to be accepted.
8. Complete systems are not warranted unless authorized by an Equalizer Systems representative. There are absolutely no exceptions to this clause.
9. This warranty begins upon the original sale date of the vehicle and is transferable, with limitation, to subsequent owners upon furnishing the original sale date of the vehicle and proof of purchase. Only the remainder of the three year parts warranty is applicable. Warranty labor and freight are only applicable to original owner of the vehicle.
10. Equalizer Systems is not liable for loss of time, manufacturing costs, labor material, loss of profits, direct or indirect damages incurred by the vehicle manufacturer.
11. Excessive warranty labor resulting from inadequate access to the Equalizer Systems product will not be reimbursed.
12. Equalizer Systems will not pay a markup on warranty parts unless required by law.
13. Travel expenses, hotel, telephone, fuel or any other expenses of the like are not covered under warranty.

Replacement Parts:

1. Replacement parts are warranted under the same guidelines listed above for the remainder of the original warranty or 90 days, whichever is longer. Proof of warranty repair date and original vehicle purchase date are required.
2. No additional warranties, expressed or implied, are authorized by Equalizer Systems
3. This warranty voids all previous issues. Questions concerning this warranty should be directed to:

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