

**RON FRANCIS**  
*Wiring*

**MS-44**  
**Safe & Sound**  
**Disconnect Switch**

This kit has been designed to operate up to "SEVEN" functions via the four button remote transmitter. We have PRE-WIRED the receiver to control the disconnect solenoid using channel "1". You may use the remainder of the channels for opening doors, trunk release or operating power windows with additional relays if needed.

**IMPORTANT: The instructions below pertain to the installation and wiring of the disconnect solenoid only! The manufacture has supplied an instruction booklet that should be read before adding any additional devices to this system. Questions pertaining to wiring the disconnect solenoid should call Ron Francis Wiring at 800-292-1940. Questions pertaining to wiring additional devices into this system or a non-functioning unit should be directed to Spal USA tech support line at 800-454-7725.**

The master disconnect solenoid will carry 110 amps of continuous load. Some vehicles' alternators are capable of producing a higher amperage output. In most vehicles this will happen only for a very short period of time and will not affect this product.

**Receiver mounting**

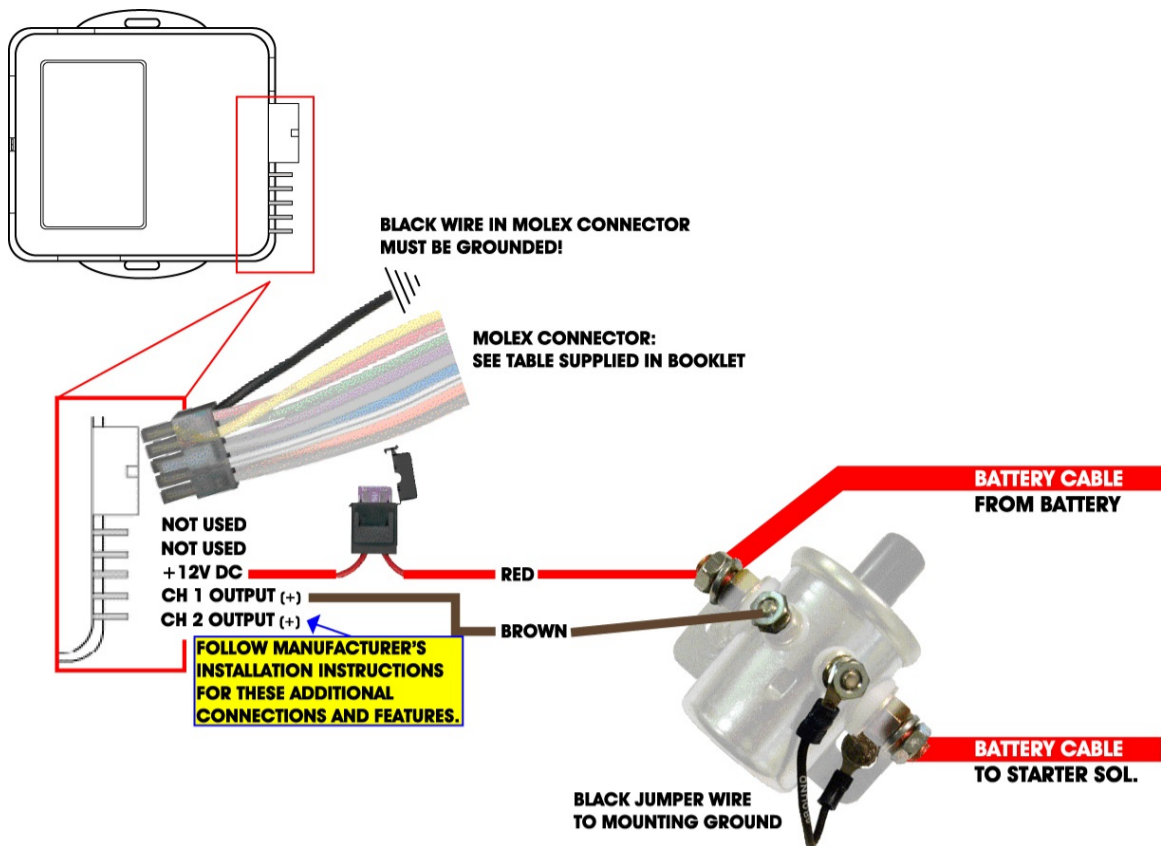
The receiver "must" be mounted "inside" the vehicle to avoid moisture from entering the unit. Use the small mounting tabs located on the side of the unit or double sided tape to mount the unit. **DO NOT DRILL ANY HOLES IN THE CASING TO MOUNT THE UNIT! IMPORTANT: Do not ground the antenna lead!**

**Solenoid mounting**

**The electric master disconnect solenoid should be mounted as close as possible to the path of the positive battery cable running between the battery and starter solenoid. The disconnect solenoid is WATER RESISTANT not WATER PROOF. For this reason, when mounting the solenoid, choose a location carefully to limit exposure as much as possible. The solenoid must be mounted with the black solenoid internal shaft cover facing down.**

**NOTE: Running from one of the "small" wire studs on the solenoid is a short black jumper wire. This wire as well as the solenoid itself must be connected/mounted to a GOOD GROUND source. Failure to do so will prevent the unit from operating.**

**OVER** 



**Be sure to DISCONNECT the NEGATIVE battery cable BEFORE connecting any wires to the solenoid or wiring the receiver!**

### Battery Cable Connections

The two large solenoid studs accept a 3/8 battery cable ring terminal (not provided). Cut the battery cable allowing enough excess to reach the solenoid stud terminals. Install the ring terminals on the cable using the correct crimp tool, or solder the terminal onto the cable. The cable from the battery can be connected to either of the large 3/8 terminals on the solenoid.

**Note: The installation of the battery cable ring terminals is an important procedure. Failure to make these connections properly can cause electrical system damage.**

### Receiver wiring

**Be sure you have read the instruction booklet supplied with this system before continuing.**

The fused red positive 12 DC wire and the brown channel one (1) wire to the solenoid have been plugged into the receiver. Note that the red wire has an inline fuse holder containing a 35 amp fuse. This is too high of a rating if just controlling the disconnect solenoid itself. A 10 amp fuse is all that is needed. Since most customers will be adding additional devices to this system, review the installation instructions supplied with these devices for the proper total fuse rating. Connect the red wire direct to the battery cable side of the disconnect as shown in the drawing. Connect the brown wire to the remaining small terminal on the disconnect solenoid. Plug in the white Molex 10 pin connector into the receiver. Connect the black #1 wire running from the connector to a GOOD ground. Connect the red #6 wire running from the connector to a fused battery hot all the time circuit.

This is all the wiring that is needed to allow the receiver to control the disconnect switch. The additional wires supplied are for adding in other devices to the receiver. **BE SURE TO ALWAYS DISCONNECT THE NEGATIVE BATTERY CABLE BEFORE ADDING OTHER DEVICES TO THE RECEIVER.** **NOTE:** The receiver will draw 10.5 nA (nano amps) in the stand by mode.

### Back-Up Toggle Switch Installation

The toggle switch supplied will actuate the master disconnect solenoid by moving the switch lever in either direction. After a click is heard from the solenoid, let the switch lever return to its relaxed position. The switch mounting location should be hidden in an area of the vehicle so the disconnect solenoid can be used as an anti-theft system.

Connect the red wire to the LARGE stud on the solenoid (the one that the positive battery cable is connected to) and run the other end to the toggle switch. Using the blue insulated ring terminal supplied, cut the wire to length and connect it to the center pole on the switch. Run the brown wire from the switch to the small stud on the solenoid. Cut the wire to length and connect it to the same stud as the brown wire running from the module. **NOTE: Pre-installed on the switch is a jumper wire running between both outer poles.**

### Operation

The transmitter is designed to operate within 25 feet of the vehicle. The operating range may be extended to a longer distance or limited to a shorter distance depending on various different factors, receiver mounting location, outside transmitter radio interference or transmitter battery power. When operating the unit push and hold button #1 on the transmitter for at least one second. Failure to do so will not operate the disconnect solenoid.