

MSD[®] IGNITION INSTALLATION INSTRUCTIONS

MSD Digital Shift Light PN 89631

Parts Included:

1 - Shift Light	2 - Washers
1 - Mounting Bracket	1 - Brass Screw
1 - GMR Pickup, PN 8918	1 - Parts Bag

WARNING: When installing the Shift Light disconnect the battery cables. When disconnecting, always remove the negative cable first and install it last.

IMPORTANT: Do NOT connect to the coil (-) terminal. The supplied GMR pickup must be used when installing the Digital Shift Light unless the rpm signal is coming from the tach output of an MSD Ignition or aftermarket ECU. Damage to the DSL will occur if connected to a high voltage trigger source.

PROGRAMMING

By pressing the two buttons simultaneously, you get the Shift Light into the different programming modes.

RPM: To adjust the rpm, press the two buttons until the rpm shows. Notice that all of the numbers flash. Adjust the rpm then push the two buttons again to move to the next mode. The rpm can be set up to 16,000 rpm. Once you go over 9,900 rpm, the display will show 1,000 indicating 10,000 rpm and higher.

Cylinder Count: The display will read CY and allow you to select between one to 12-cylinder engines using the Up/Down buttons. On single cylinder two stroke or four stroke applications that fire every revolution (waste spark systems) the shift light should be programmed for two cylinder operation for correct operation. Please call our Powersports Tech line, at (888) 258-3835, if you need help with calibration.

Intensity: Control the intensity of the LED and read out. Hold the buttons until LuL displays. Use the buttons to select from 9 (brightest) to 0 to turn off the shift light.

Self: Self mode will walk through all of the settings programmed into the light. It will first show the rpm shift value for the shift light, the cylinder count and light intensity. Start the test mode by pushing either button once Self is displayed. To reset the Self mode, push either button when SELF is displayed, or turn the power Off.

Each time the DSL is powered on, the LED will display the program values that are set.

INSTALLATION

The Shift Light installs easily with the GMR Pickup or through the tach output terminal of an MSD Ignition Control or aftermarket ECU. It will accept a trigger signal rated from 0-24 volt amplitude. **Never connect the Green Wire directly to the coil negative terminal.**

If an ignition control or aftermarket ECU are not being used, the GMR pickup must be connected.

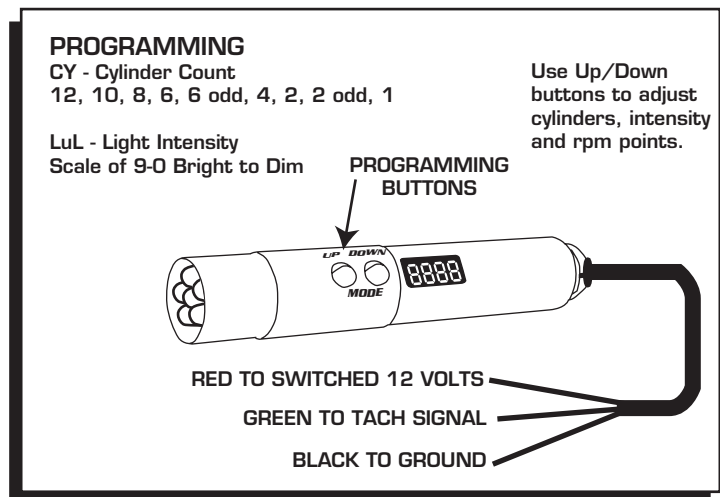


Figure 1 Digital Shift Light Wiring and Programming.

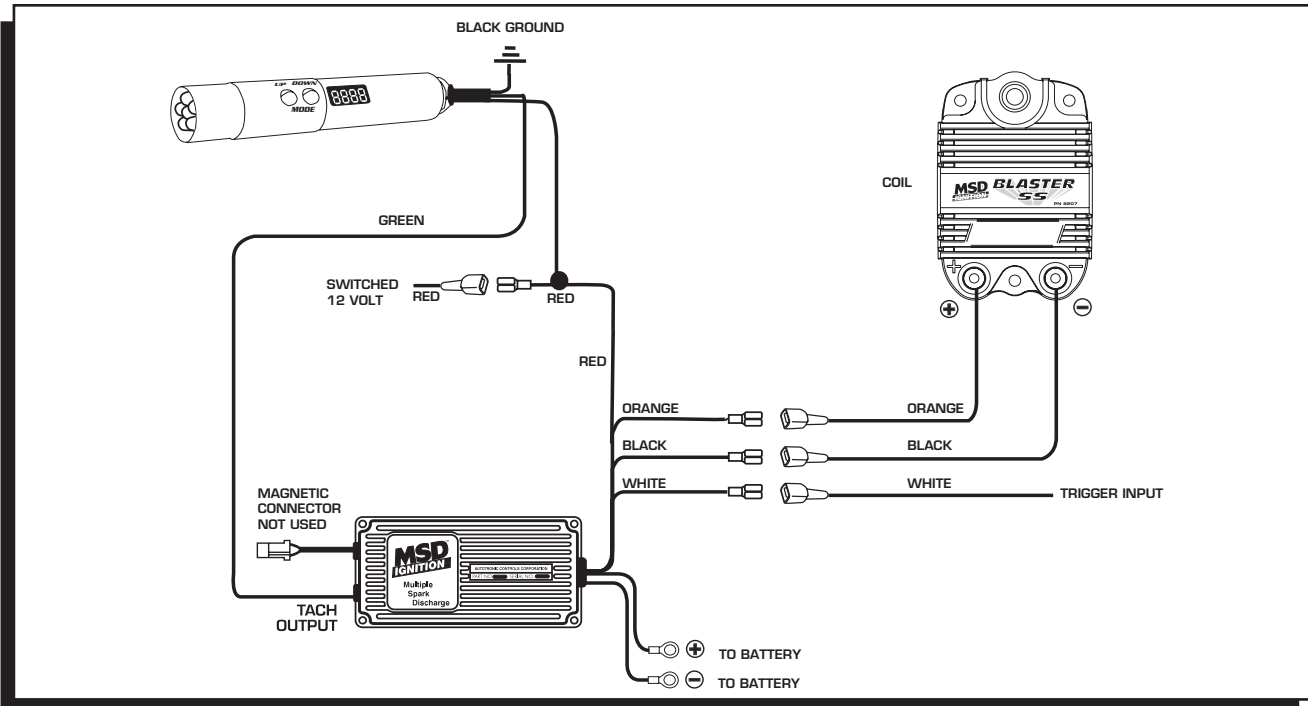


Figure 2 Installing with an MSD Ignition.

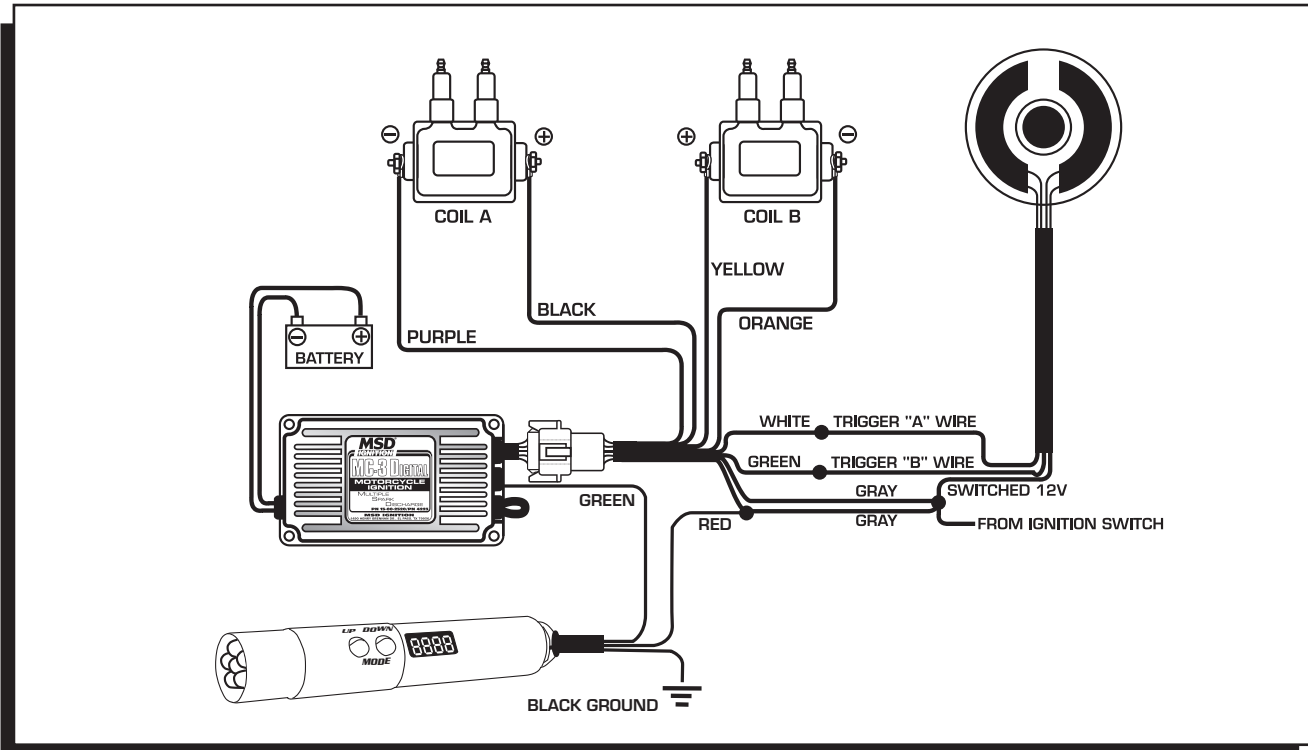


Figure 3 Installing with an MSD Motorcycle Ignition.

GMR PICKUP INSTALLATION

The MSD GMR pickup can be used with inductive or capacitive ignition types to provide an rpm signal of 30% duration when the ignition coil fires. Two washers are provided with the pickup and must be installed in one of two positions depending on the type of ignition driving the coil. For late model applications, it is recommended to have a wiring schematic of the vehicle's ignition system. **On some motorcycle and ATV applications, the stock coils do not produce a long enough pulse. In these cases, loop the coil wire through the GMR pickup twice (Figure 4).**

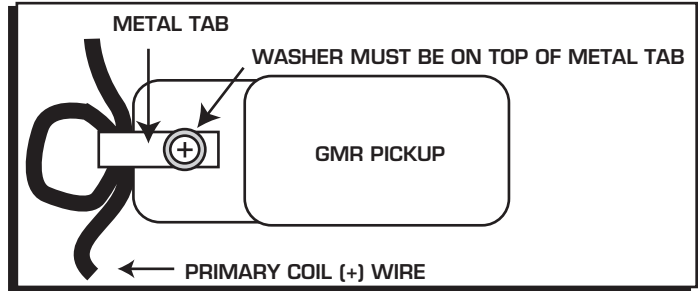
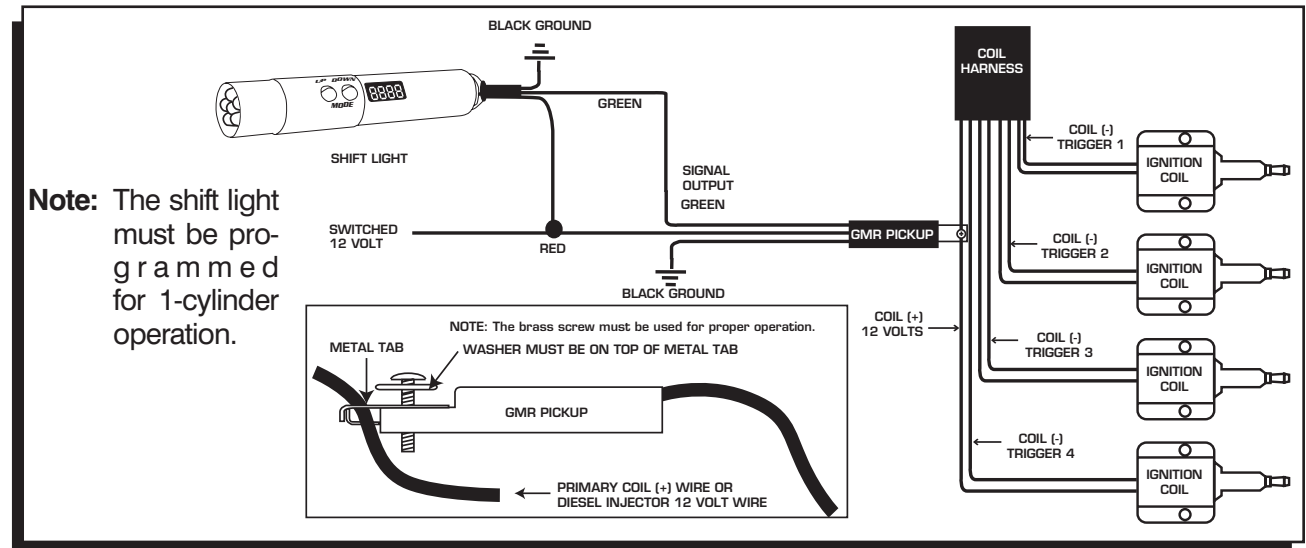
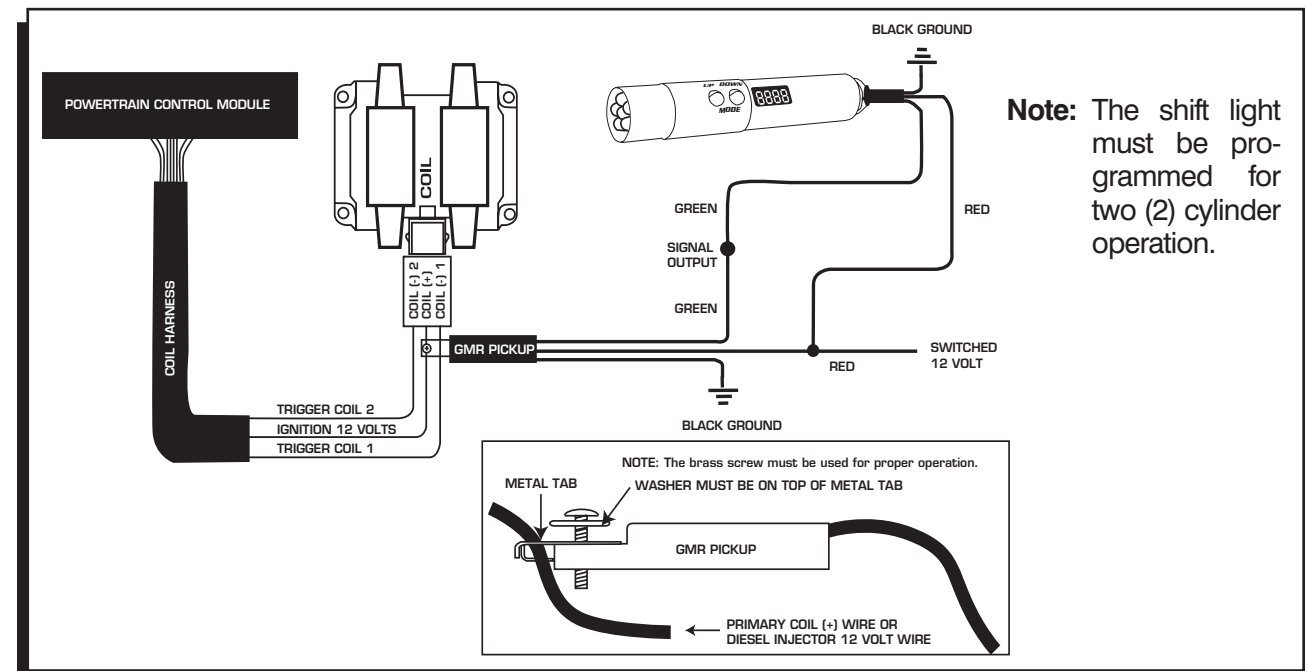


Figure 4 Looping Coil Wire.



Note: The shift light must be programmed for 1-cylinder operation.

Figure 5 Installation on an Inductive Coil-Per-Cylinder Ignition System.



Note: The shift light must be programmed for two (2) cylinder operation.

Figure 6 Installing to an Inductive Coil Pack.

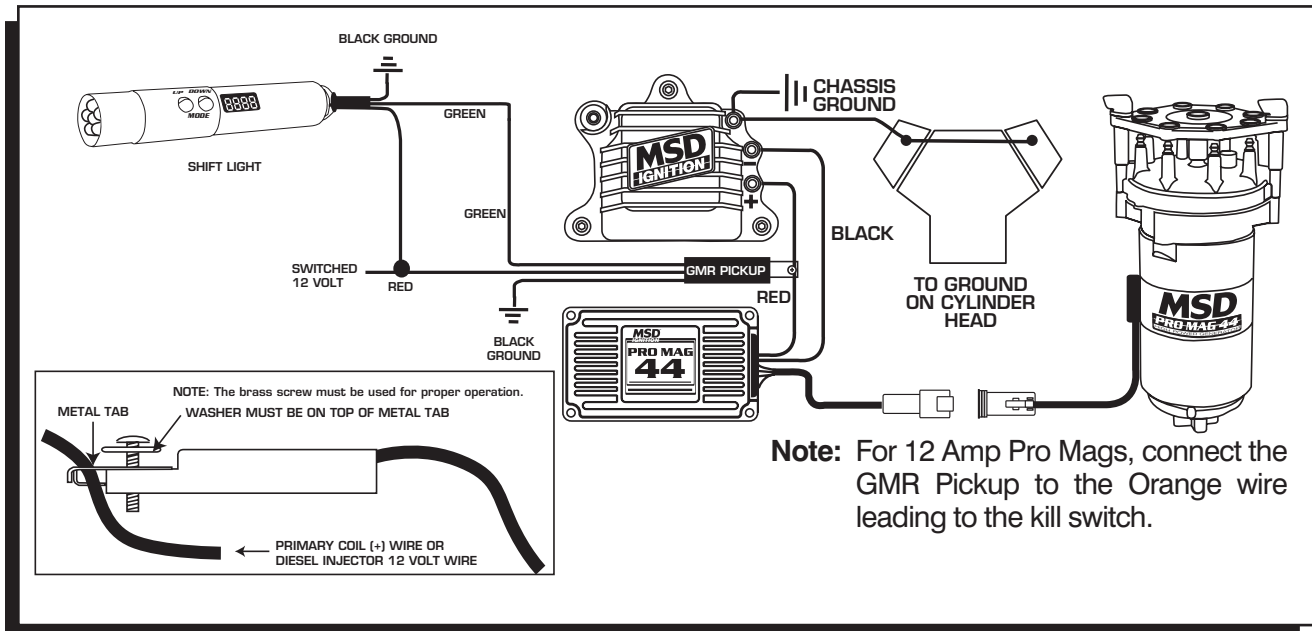


Figure 7 Wiring the Pro Mag 44 Electronic Points Box.

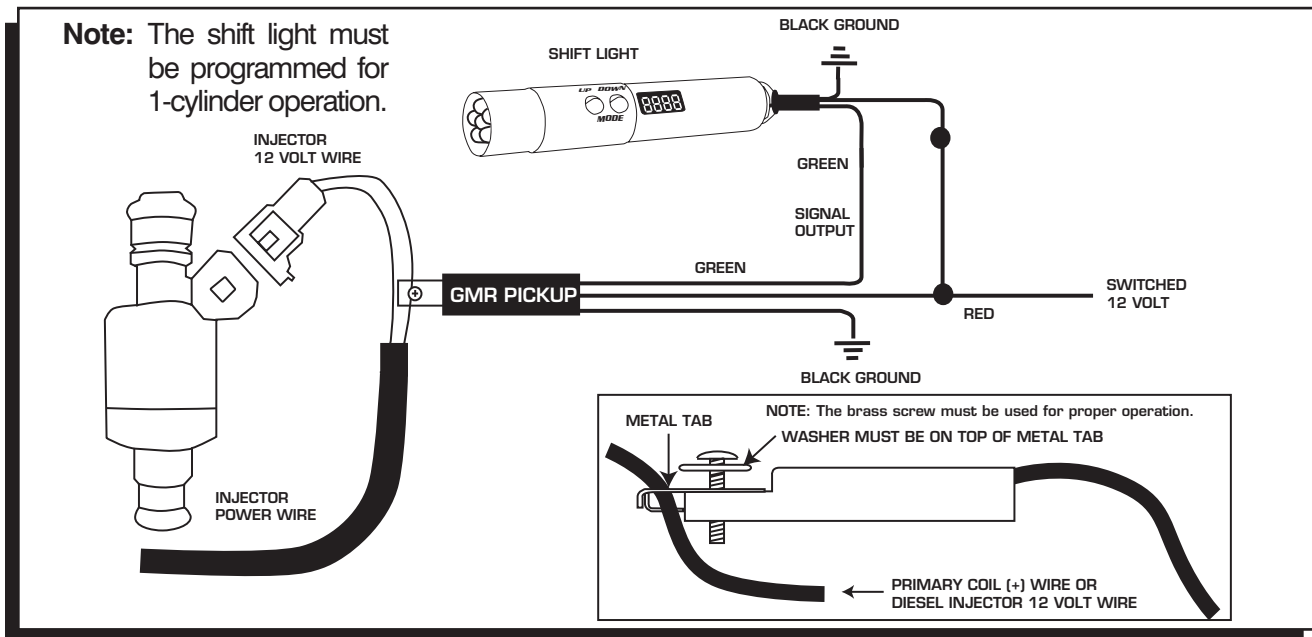


Figure 8 Installation to a Diesel Injector.

Service

In case of malfunction, this MSD component will be repaired free of charge according to the terms of the warranty. When returning MSD components for service, Proof of Purchase must be supplied for warranty verification. After the warranty period has expired, repair service is charged based on a minimum and maximum charge.

All returns must have a Return Material Authorization (RMA) number issued to them before being returned. To obtain an RMA number please contact MSD Customer Service at (915) 855-7123 or fax a request to (915) 857-3344. Send the unit prepaid with proof of purchase to the attention of: **MSD Ignition, Customer Service - RMA #, 12120 Esther Lama, Dock 5, El Paso, Texas 79936.**

When returning the unit for repair, leave all wires at the length in which you have them installed. Be sure to include a detailed account of any problems experienced, and what components and accessories are installed on the vehicle.

The repaired unit will be returned as soon as possible after receipt, COD for any charges. (Ground shipping is covered by warranty). All units are returned regular UPS unless otherwise noted. For more information, call the MSD Customer Service Line (915) 855-7123. MSD technicians are available from 7:00 a.m. to 6:00 p.m. Monday - Friday (mountain time).