

MALLORY SUPER-MAG VI AND VII ELECTRONIC MAGNETO SYSTEM

INSTALLATION

Mount the magneto, control box, and coil on the car. Make sure the coil is mounted with the secondary terminal down. Connect the wiring as shown in the enclosed wiring diagram.

VERY IMPORTANT: The wire that connects the coil (-) terminal to "engine ground" **MUST** be connected to the cylinder block or head. **DO NOT** just connect it to the frame, even if the frame is bare metal and the engine uses solid mounts. This single wiring detail causes the vast majority of "strange mag problems". Don't let it happen to you. Connect the coil (-) terminal directly to the cylinder block or head.

OPERATION

The battery on the back of the box is unplugged for shipping. Once the system is installed and wired, plug the battery into the harness at the back of the box.

Static timing the magneto:

The mag can be static timed two ways: Using a cut-away distributor cap or using a Mallory P/N 28355E Static Timer.

Static timing using a cut-away distributor cap:

Note which cap terminal is #1, then put the cut-away distributor cap in place of the normal distributor cap. Rotate the engine by hand in the normal direction until the crankshaft is at the desired ignition timing point on #1 cylinder, 30 degrees BTDC, for example. Loosen the mag band clamp and rotate the mag to align the leading edge of the rotor blade with the leading edge of the #1 cap terminal, as shown in the enclosed diagrams. Timing is close enough to start the engine. Tighten the band clamp, start the engine, check and adjust timing with a timing light. Make sure to securely tighten the band clamp when finished setting timing.

Static timing using Mallory P/N 28355E Static Timer:

Disconnect the Red-Brown-Green 3-wire harness at the mag, then plug the Static Timer into the mag. Rotate the engine by hand in the normal direction until the crankshaft is at the desired ignition timing point on #1 cylinder, 30 degrees BTDC, for example. Turn on the Static Timer and rotate the mag as needed until the Static Timer just stops beeping, with the mag rotor pointing at the #1 cylinder distributor cap terminal.

Rev Limiter setting and operation:

There are two rev limiters built into the box, one for staging, one for upper limit. There is a 2-wire harness on the front of the box with purple and white wires. The stage limit is activated by connecting these wires together. This can be done with a switch under the clutch pedal, a pushbutton, a relay activated by a transbrake, etc. The stage limit switches are then set to the desired launch RPM. When activated, the stage limit will randomly interrupt sparks to limit engine RPM to the value set on the stage switches. The upper limit switches are normally set to a value a few hundred RPM above the maximum RPM experienced on a run, to limit engine RPM in the event of drivetrain breakage. To set the switches, loosen the screws on the top of the box and slide the "RPM CONTROL" cover plate to the left. The stage and upper limit switches are labeled; each limit is set to a "thousands" value and a "hundreds" value. The "thousands" switches use "A" for 10,000; "B" for 11,000; "C" for 12,000; "D" for 13,000; "E" for 14,000; and "F" for 15,000. The "hundreds" switches simply use 0-9 to set hundreds of RPM. Both sets of switches come set at "A" and "0", indicating a 10,000 RPM limit. Both sets of switches can be set in increments of 100 RPM from 1,000 to 15,900 RPM.

NOTE: Next to the stage limit switches, there are two small switches labeled "BOTH SWITCHES OFF FOR OPTICAL MODULE INPUT". These switches are only switched "ON" when a crank trigger is being used. They are always left "OFF" when the optical module in the top of the mag is used.

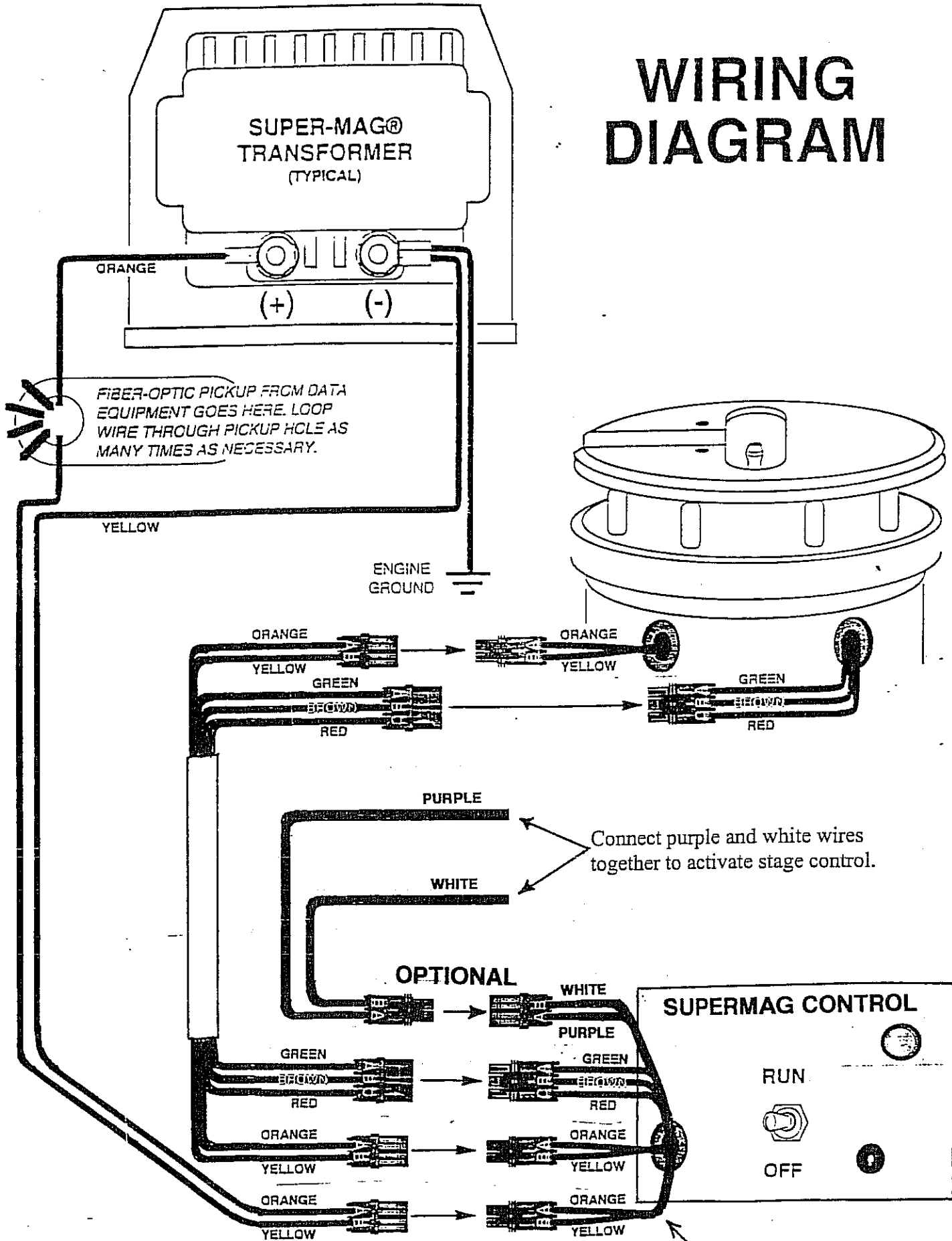
Battery charging and battery condition light:

The battery charger plugs into the front of the box to recharge the battery. A fully charged battery has about 2 hours of running time; enough to last a race weekend, providing the box switch is turned "OFF" promptly after every run. The charger can stay plugged in indefinitely; the battery can't be overcharged. To be conservative, at least recharge the battery at the end of each day's racing. **IMPORTANT:** The box **WILL NOT** power up with the charger plugged in. The charger **MUST** be disconnected from the box before the car can be started.

The light on the front of the box indicates battery condition when the switch is in the "RUN" position.

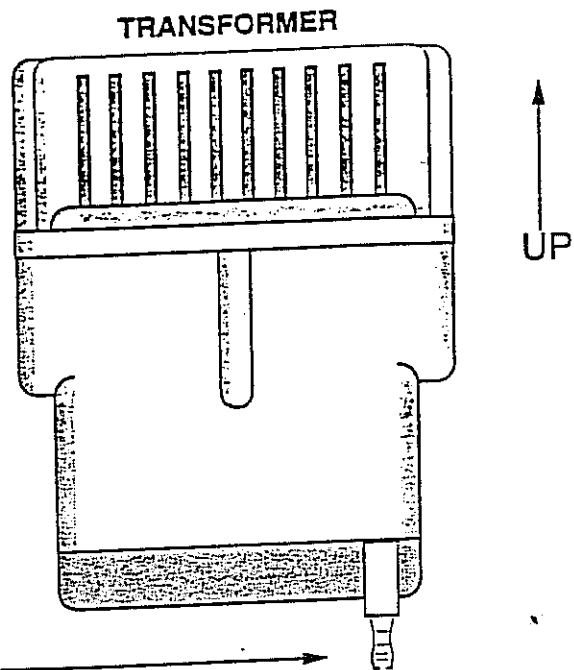
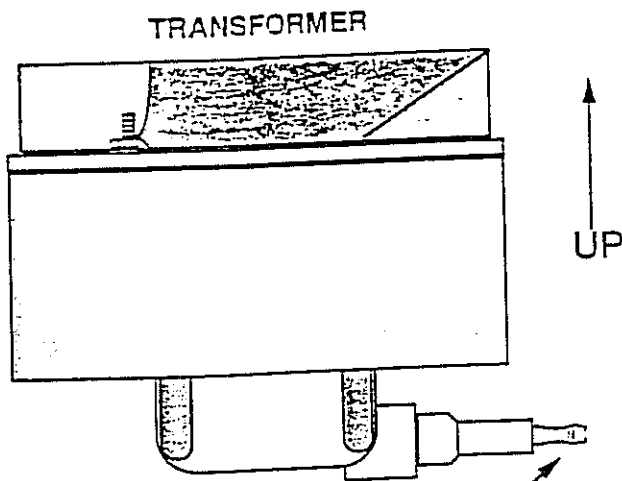
Green: Good battery charge. Red: Battery is low; it will run the car for a pass, but plug in the charger as soon as possible. Light out: Make sure the battery is plugged in at the back of the box (it's unplugged for shipping); make sure the charger is unplugged from the box. If the light is still out with the switch in the "RUN" position, the battery must be charged before the car can be started. **NOTE:** If the light changes from "Red" to "Out" as the car is staging, go ahead and make the pass. There's enough to reserve at that point to run the car for a pass and performance will not be affected.

WIRING DIAGRAM



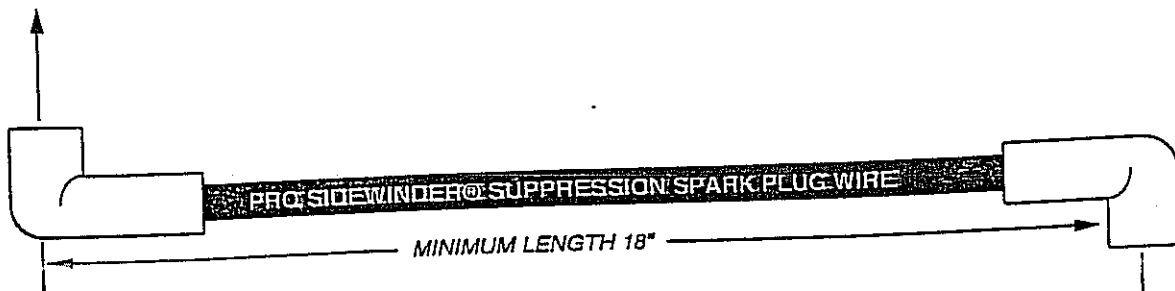
Orange/Yellow harnesses coming out of the box are interchangeable.

SECONDARY WIRING DIAGRAM



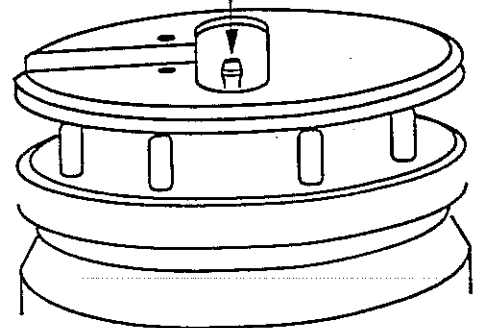
TO PREVENT INTERNAL DAMAGE TO TRANSFORMERS, THE TRANSFORMER MUST BE MOUNTED WITH THE HIGH VOLTAGE TERMINAL COMING FROM THE BOTTOM AND POSITIONED SUCH THAT IT DOES NOT COME CLOSER THAN 2.5" FROM THE NEAREST METALLIC SURFACE.

TO TRANSFORMER HIGH VOLTAGE TERMINAL



SPIRAL CORE SUPPRESSION SPARK PLUG WIRE MUST BE USED BETWEEN THE TRANSFORMER (COIL) AND THE DISTRIBUTOR CAP. MINIMUM LENGTH 18" REQUIRED. PRO SIDEWINDER® SPARK PLUG WIRE IS HIGHLY RECOMMENDED. WHEN RUNNING DUAL IGNITION SYSTEMS, BOTH TRANSFORMER (COIL) WIRES MUST BE SPIRAL CORE SUPPRESSION SPARK PLUG WIRE EVEN IF THE SECOND IGNITION IS NOT ELECTRONIC.

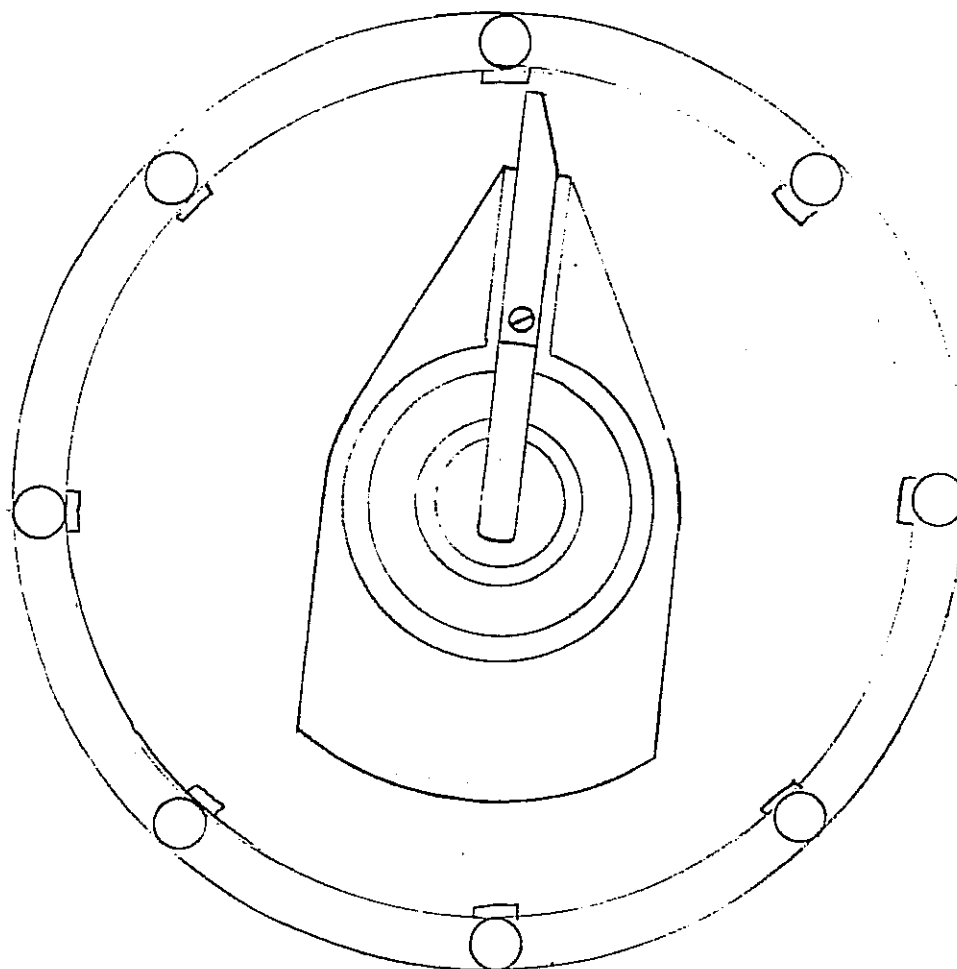
SUGGESTION: USE PRO SIDEWINDER® REPLACEMENT WIRE KIT PART NO. 919; 4 FT. LENGTH OF WIRE WITH EXTRA BOOTS AND TERMINALS.



Static timing using a cut away cap:

Note which cap terminal is #1, then put cut away cap in place of normal cap. Set engine at ignition timing point on #1 cylinder, 30 BTDC, for example. Loosen band clamp and rotate mag to align leading edge of rotor blade with leading edge of #1 cap terminal, as shown. Timing is close enough to start. Tighten band clamp enough to start engine, check and adjust timing with a timing light.

#1 cap terminal

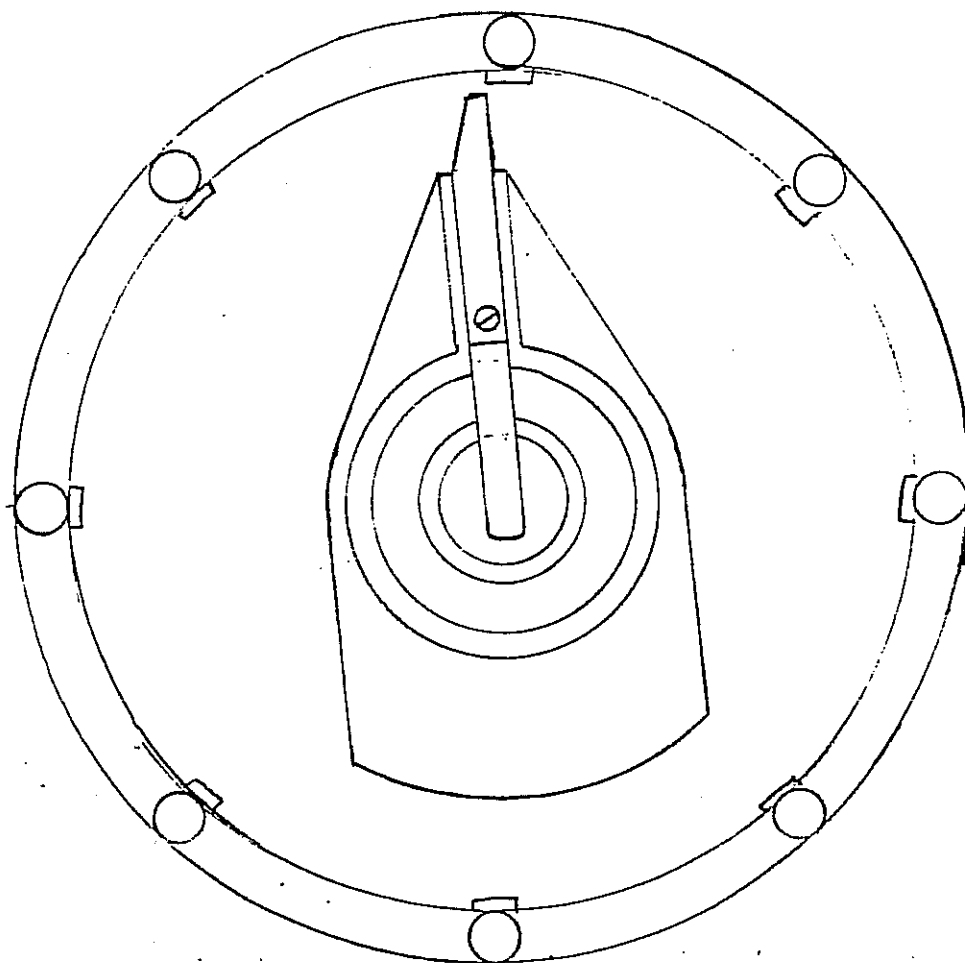


Left – Hand Mag (Chrysler Rotation)

Static timing using a cut away cap:

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#1 cap terminal



Right – Hand Mag (Chevy Rotation)