



# **ULTIMA IGNITION MODULE & KIT**

## **#53-60 Ignition Module #53-61 Ignition Module Kit**

*Fits Big Twin 1970-1998, Sportster 1971-1997, Carb only models  
This is "Race only" single fire high performance ignition*

**READ FIRST:** If you don't know how to install this unit or are not familiar with it don't try it! If you can not identify all components without instructions you should seriously consider letting a qualified mechanic install this unit. These instructions are a guide for experienced mechanics not beginners.

1. Disconnect battery.
2. Mark location of timing plate in relation to inside of cam cover. This will give a starting point for timing on new module. Remove old ignition if applicable (see manual) Clymer, Haynes.
3. If your bike is not equipped with timing rotor M/W# 53-528 OEM#32402-83 you must buy one (included in kit). Also a single fire coil is needed (included in kit) M/W# 53-632. Any single fire coil rated 2-4 ohms can be used. NO SOLID CORE PLUG WIRES (copper, silver) they will damage the unit.
4. Install module: helpful hints, early model nose cones, i.e. Shovel Heads, the hole for the wire may need to be drilled out. Align with previously scripted mark for timing. Use lockwashers for stand offs for correct clearance of cover plate. Run wire loom.
5. Connect wires, see wiring diagram. Tape unused wires, green or brown. 12v to tach (brown) will damage module. Set timing. 1996 and later should not be timed 20° BTDC as the OEM module, but at 35° BTDC. Use this mark when using timing light. If VOES switch is not used you must ground VOES wire (green) while timing. Refer to manual for correct identification of timing marks. At start up and timing, set spark advance in middle position.

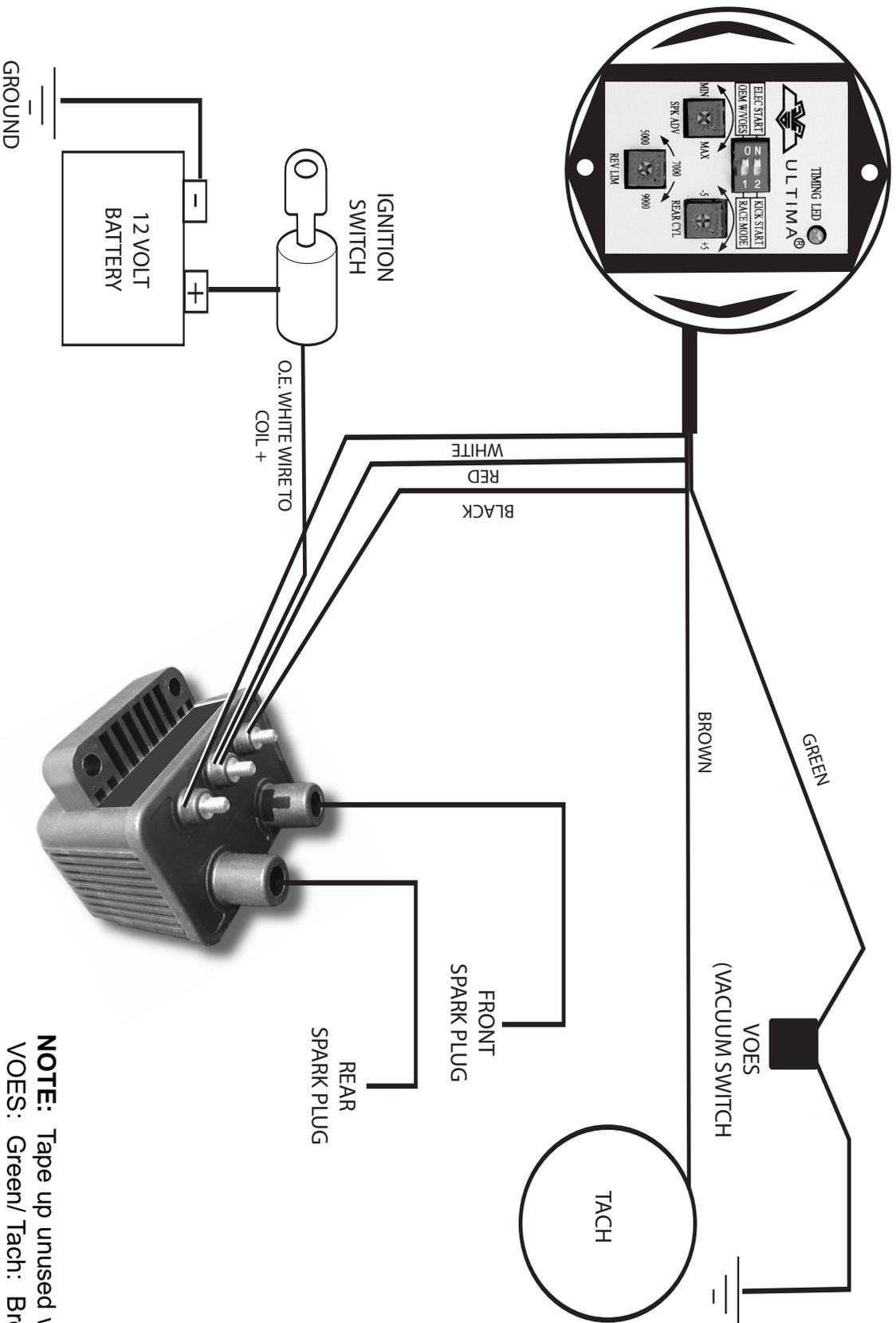
### **FUNCTION SWITCHES**

- LED timing indicator light: When out, shows TDC. When ignition is on, LED will light up. When engine is cranking LED will blink.
- Electric Start/Kickstart: Set accordingly.
- VOES/Race mode: VOES switch lets the motor run smoother and improves gas mileage. If you don't use it or add one tape up green wire and switch to race. VOES switch to use, M/W# 53-652.
- Spark advance: High compression motors should use race mode and 93 octane or better gas. Changing from VOES to race changes advance curves. A good rule of thumb is if the engine knocks when throttle is applied in high gear, turn back spark advance curve until it stops engine knock.
- RPM limiter: Set at desired RPM to cut engine power.
- Rear Cylinder: This is for racing and should be set at a dyno. +/-5°. Rear cylinder timing is achieved through this adjuster. Most should dial to middle setting and leave alone.

After all switches are set, install cover with supplied gasket and feel the increased performance of a solid state single fire ignition. Again, we remind you, if you don't feel confident about installing this unit, let a qualified mechanic do it and be assured you are getting the best performance and gas mileage possible.

**REVISED: 7/25/06**

# Midwest Part# 53-60/61



**NOTE:** Tape up unused wires.  
VOES: Green/ Tach: Brown  
12v to Brown will damage unit.