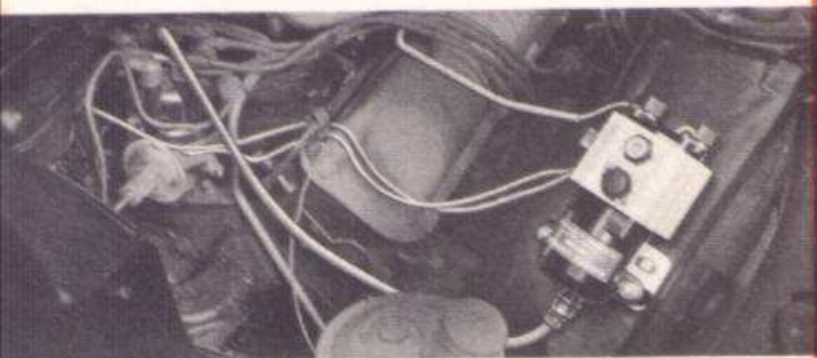
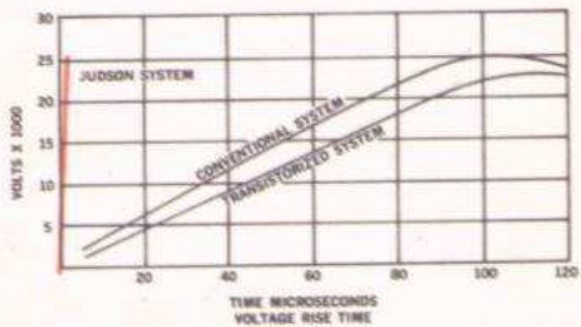
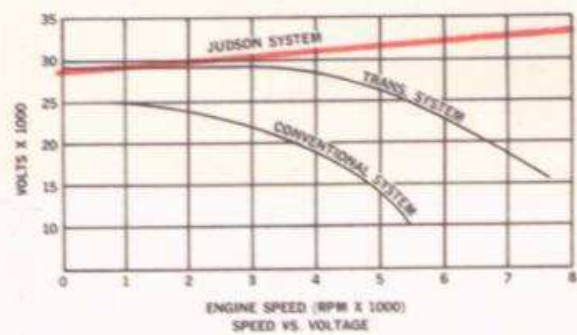
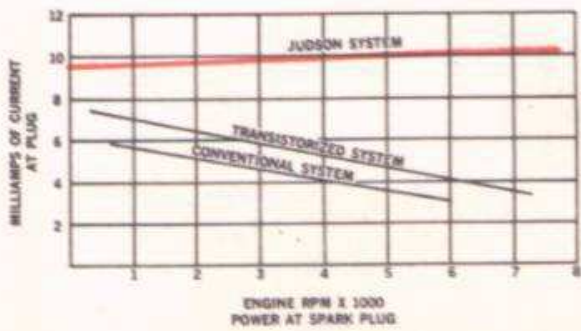


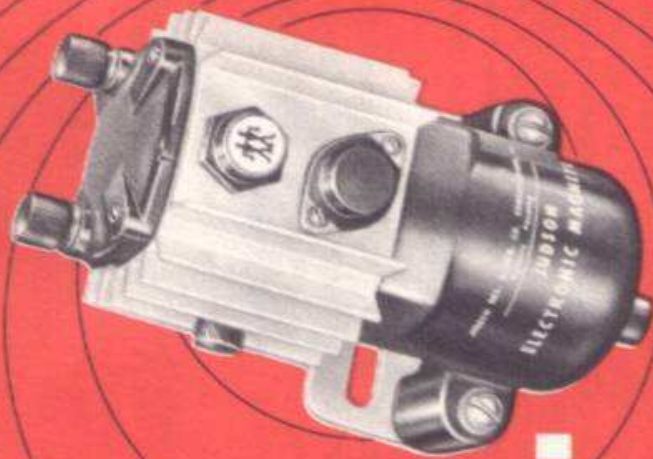
THE JUDSON ELECTRONIC MAGNETO...



THE ULTIMATE IN ELECTRONIC IGNITION



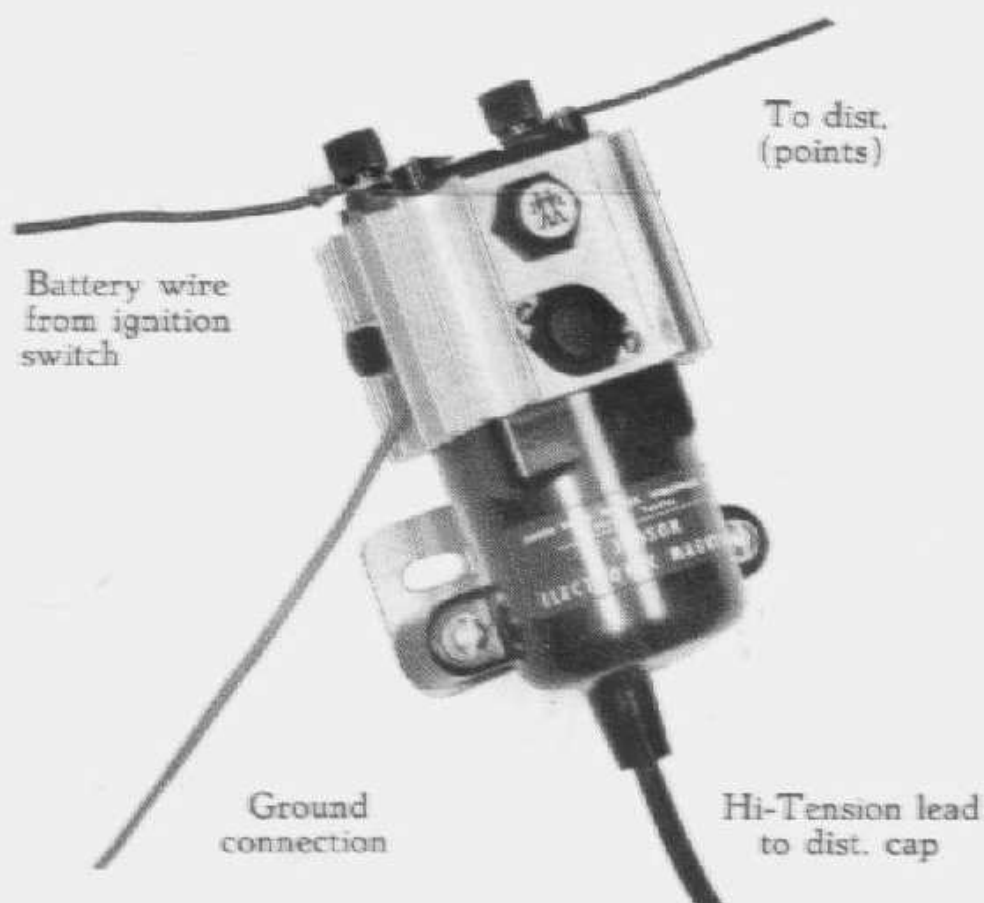
The only electronic ignition system that can be installed without a wiring diagram.



Here it is.....

Installation Instructions

JUDSON ELECTRONIC MAGNETO



Same unit is used on both 6 volt and 12 volt systems. Installation procedure is exactly the same for both negative ground and positive ground systems. The difference is in the magneto itself, not its connection. Do not install a standard negative ground unit on an engine having a positive ground. Units for positive ground systems as required on British engines and some American engines manufactured prior to 1956 are stamped on the front "positive ground".

Before installing the electronic magneto, we recommend that the breaker points in the ignition distributor be examined and replaced if worn or pitted. Adjust the point clearance to manufacturer's specifications using a cam dwell indicator. The ignition timing should also be set to manufacturer's specifications. Spark plugs should be examined and must be replaced if worn or corroded. Set spark plug gap to engine manufacturer's specifications and make sure that plugs are inserted tightly into head.

Do not remove the condenser from the ignition distributor as our circuit is designed to use it.

INSTALL ELECTRONIC MAGNETO AS FOLLOWS AND AS ILLUSTRATED ON FRONT COVER ON ALL AUTOMOBILES MANUFACTURED BY GENERAL MOTORS, FORD MOTOR CO., 1960 OR LATER MODEL CHRYSLER PRODUCTS, 1962 OR LATER MODEL STUDEBAKER AND AMERICAN MOTORS V-8 ENGINES ONLY.

1. — Remove original ignition coil.
2. — Mount Judson Electronic Magneto in same place as original coil was mounted. If this is not possible, install electronic magneto on firewall or fender well as close to ignition distributor as possible. Extra lengths of high tension cable and primary wire are included with the kit in the event that the magneto cannot be mounted in the same location as the original coil. Two contact clips are also included for the high tension wire where it is inserted into the electronic magneto and ignition distributor.
3. — Insert new high tension cable from center of ignition distributor to socket of electronic magneto using brass contacts on both ends of wire.
4. — Connect point wire from distributor to terminal on electronic magneto marked "DIST". If wire is too short, extend it with primary wire and sleeve connector furnished by removing $\frac{1}{4}$ " insulation from both wires and inserting wires into sleeve. Sleeve is then compressed or crimped with pliers and wrapped with insulation tape.
5. — Connect battery wire from switch originally fastened at coil to terminal on electronic magneto marked "BAT". If too short extend as previously instructed (there may be two wires on this one terminal).
6. — Connect short piece of primary wire from side of magneto to engine. If possible, make this ground connection from magneto to one of the screws holding the vacuum advance mechanism to the ignition distributor.

INSTALLATION IS COMPLETE

NOTE: The Judson Electronic Magneto produces a higher pressure arc than does the standard ignition system. Because of this the high tension wire if old, faulty or weak, will break down with our system. This gives the impression of magneto failure but it is the high tension wire that is breaking down resulting in faulty ignition. In other words, the high tension wire is marginal and although it will function with the coil, it breaks down with our system because of the increased current. With some high tension resistance "wire" (carbon granules) this happens gradually and gives the impression of magneto failure. The car will stall, is difficult to start and misses.

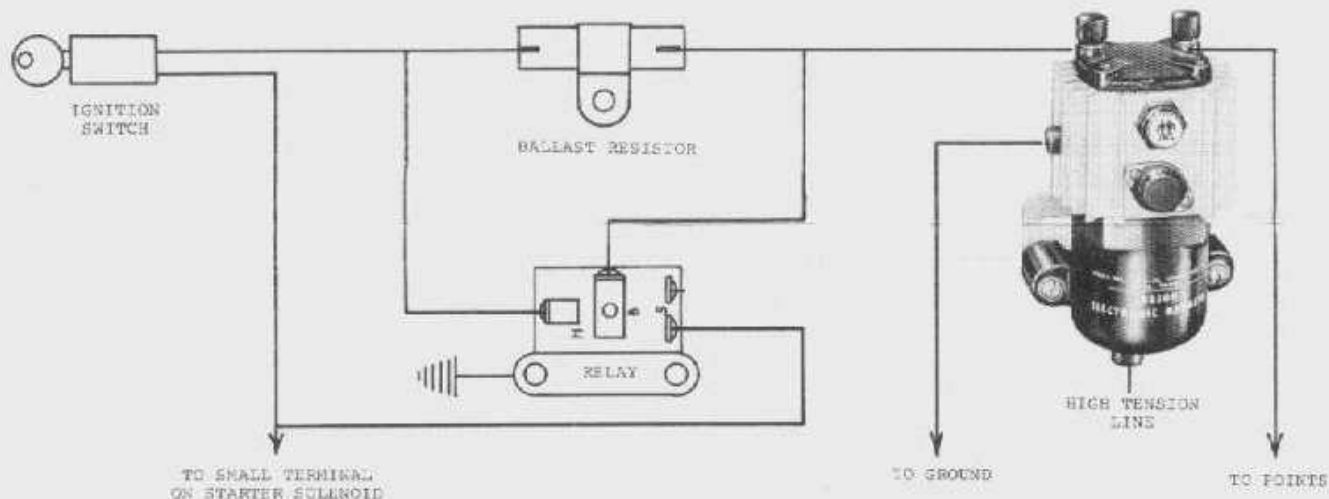
If car is two years or more old and equipped with radio resistance type spark plug wire, it should be replaced with either new radio resistance wire or standard copper high tension ignition wire.

IMPORTANT

If the Judson Electronic Magneto is being used to replace an ordinary transistorized ignition system, the original ballast or resistance wire must be replaced or reconnected.

INSTALLATION PROCEDURE FOR ALL 12 VOLT EUROPEAN CARS, MOST MARINE ENGINES AND ANY OF THE FOLLOWING AUTOMOBILES WHICH DO NOT HAVE A RESISTOR OR RESISTANCE IN THE LINE FROM THE IGNITION SWITCH TO THE COIL: CHECKER, HUDSON, WILLYS, RAMBLER (6 cylinder), STUDEBAKER (prior to 1962) AND SOME CHRYSLER PRODUCTS MANUFACTURED PRIOR TO 1960.

Do not install a ballast or relay on any six (6) volt system.



TEST PROCEDURE TO DETERMINE IF BALLAST AND RELAY SHOULD BE INSTALLED IN CIRCUIT

With the magneto installed and the engine running at idle, a volt meter connected from the "BAT" terminal on the magneto to the side of the aluminum case of the magneto (ground) should show a reading of 7 to 9 volts. If the volt meter shows 12 to 14 volts, a ballast resistor and relay must be installed as noted above.

On automotive engines use Delco ballast resistor No. 1957154 which can be purchased at any General Motors dealer. Marine engines use Mopar ballast resistor No. 2444142 which can be purchased at your Chrysler marine engine dealer. Ballast resistor can be fastened to the magneto mounting plate with one of the mounting screws. Ballast resistors become very hot in operation and should be kept clear of wires and hoses.

Relay can be purchased at any automotive supply store or dealer as a headlight relay.

In the event that the ballast resistor and relay are not readily available locally, they may be ordered directly from Judson Research & Mfg. Co. Price for the ballast resistor is \$1.25 and for the relay \$2.75. These prices are postpaid and shipment can be made immediately from stock.

EUROPEAN 12 VOLT CARS

When making the installation on a small displacement European engine with a 12 volt system (late model Volkswagen, Porsche, Volvo, MG, Austin Healey, Triumph, Peugeot, Alfa, etc.) install a ballast resistor only in the line from the ignition switch (wire to terminal on electronic magneto marked "BAT"). A relay is required on these vehicles only if operated in sub-zero temperature or if difficult starting is encountered.

BOSCH 12 VOLT SYSTEMS

The standard negative ground unit is required and a ballast resistor should be used on most systems. Ballast resistor is required on Porsche 912 but not on Porsche 911. Late model Mercedes vehicles already have a ballast resistor in the circuit. Do not install a ballast resistor on any 6 volt Bosch system.

LUCAS SYSTEMS

All Lucas ignition systems as used on British cars up to the 1967 models require a positive ground electronic magneto and a ballast resistor must be installed on the 12 volt Lucas system. A ballast resistor and a relay is furnished with all positive ground units. Do not install a ballast resistor or relay on a Lucas 6 volt system.

VOLVO AND SAAB

These Swedish cars use an armored cable from the ignition switch to the coil. When installing the Electronic Magneto it is necessary to remove the original coil from the fire-wall and pry off the coil from the cable flange which exposes the battery lead from the switch. The original distributor wire is connected to the terminal on the magneto marked "DIST". A ballast resistor must be installed in the line between the ignition switch and the magneto.

TACHOMETER

If vehicle is equipped with an electric or electronic tachometer, it is connected to the same terminal on the electronic magneto as it was on the original coil. No adjustments are required. The Judson Electronic Magneto will pulse or operate all electric tachometers that are operated by a standard coil.

TEST EQUIPMENT

Standard ignition test equipment including a strobe light for timing and a cam dwell indicator for point setting can be used with this system. The normal connections and test procedures are followed. This system does not, however, produce a normal pattern on an ignition scope.

The high voltage pattern will be reversed when checking the Judson Electronic Magneto on a standard ignition scope. This is a normal characteristic of our system and is due to the difference in waveform across the plug. It does not mean the system is reversed. Some makes of ignition scopes have a polarity reversing switch for the high voltage pattern and on these scopes the output can be observed. The primary pattern of the Judson Electronic Magneto will show a square wave on the scope with normal polarity as against an oscillating spike for a standard coil.

The Judson Electronic Magneto can only be evaluated in operation on the engine as an integral part of the entire ignition system.

Input voltage on a 12 volt system should be 7 to 9 volts (if less check resistor or resistance wire from ignition switch). On a 6 volt system input voltage should be 6 volts.

RADIO INTERFERENCE

The electronic magneto is furnished with a length of copper high tension wire to connect the electronic magneto and the ignition distributor. If radio interference is encountered, replace this copper wire with radio resistance wire.



JUDSON RESEARCH & MFG. CO.
CONSHOHOCKEN, PA.