INSTALLATION INSTRUCTIONS
MSD Universal Adjustable Timing Control, PN 8782

Note: Read these instructions completely before attempting any installation.

Parts Included:
1 - Adjustable Timing Control, PN 8782
1 - Cable Assembly, PN 54701
1 - Cable Assembly, PN 8860
1 - Control Knob and Cable
1 - 3/8" Snap Bushing
1 - 2-pin Weathertight Connector
2 - Plastic Coil Spacers
4 - 5/8" Self Tapping Screws
4 - Faston Tabs, 45° Angle
2 - Machine Screws and Nuts
6 - Lockwashers
1 - Wiring Parts Bag

MOUNTING
Mount the Timing Control on a reasonably flat surface away from direct engine heat sources. Make sure the wires and harness can reach their connections. Using the unit as a template, mark the locations of the mounting holes. Remove the unit and use an 1/8" bit to drill the four holes. Use the four self tapping screws to mount the unit.

MOUNTING THE CONTROL KNOB
The Control Knob should be mounted within easy reach of the driver. Also, make sure the wiring harness reaches the Timing Control. Clean the surface where the Knob will be mounted, peel the tape and press the Knob firmly onto the dash.

Find an area to pass the wiring harness through the vehicle cowling into the engine compartment. If no holes are available, drill a 3/8" hole and install the supplied snap bushing to seal the passenger compartment. After pushing the harness through to the engine compartment, install the 2-pin Weathertight connector onto the wires (Figure 1). It does not matter which wire goes into which socket.

Figure 1 Control Knob Harness.
CYLINDER PROGRAMMING

The 8782 Timing Control is programmed for 8-cylinder operation at the factory, but can be programmed for 4 or 6-cylinder operation. To program the unit, remove the single phillips screw holding a round cover on the side of the unit. Inside there is a RED, BLUE and a WHITE wire loop. Cut a section out of the wire loop for your application:

6-Cylinder: Cut the RED loop.
4-Cylinder: Cut the RED and BLUE loops.
Do not cut the WHITE loop.

WIRING

Before attempting any wiring, find which diagram illustrates your vehicle’s ignition system. The 8782 Timing Control may be triggered by breaker points, electronic ignitions or a magnetic pickup.

In the installation, it may be necessary to use the supplied wire splice devices. Figure 3 shows the correct procedure for these splices.
BREAKER POINTS OR FACTORY AMPLIFIER

1. Remove the coil wires and install the RED and BLACK coil spacers to the coil terminals (RED on (+) side, BLACK on (-) side).
2. Install the original coil wires to the outside of the spacers using the supplied machine screws and nuts (Figure 4). If you have a tachometer or any other device installed to the negative side of the coil, leave the wires attached to the coil terminal.

3. Attach the 54701 Harness to the Timing Control. Connect the BLACK wire to ground.
4. Connect the WHITE wire to the outside of the coil negative spacer.
5. Connect the ORANGE wire to the coil negative terminal.
6. Connect the RED wire to the outside of the coil positive spacer.
7. Connect the VIOLET jumper to the coil positive terminal and the other end to the battery positive terminal. **No current will be drawn when the key is OFF.**

MAGNETIC PICKUP

1. If triggering from a magnetic pickup, it is necessary to program the Timing Control. This is done by cutting the WHITE wire loop. To do this, remove the round cover over the cylinder programming wire loops. Cut a section out of the WHITE wire, refer to Figure 2.
2. Remove the wire from the positive side of the coil only and install the RED coil spacer (Figure 5). Install the original wire to the outside of the coil spacer.
3. Connect the wires of the Timing Computer as shown in Figure 5. Even though the VIOLET wire is connected to the battery, **no current is drawn unless the key is ON.**
4. Connect the magnetic input connector to the distributor. If you are using an MSD Distributor, the supplied PN 8860 Harness will directly connect. For other distributors, the connector needs to be cut off from the wires and the supplied splices should be used.

5. The magnetic pickup is polarized, so the wires of the distributor must be connected to the Timing Control in the correct way. The VIOLET wire from the MSD is positive, the GREEN wire is negative. The polarity of wires on some other distributors are shown in Figure 6.

![Diagram of Wiring with a Magnetic Pickup](image)

**Figure 5** Wiring with a Magnetic Pickup.

<table>
<thead>
<tr>
<th>Make</th>
<th>Negative(-)</th>
<th>Positive(+)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chrysler</td>
<td>Black</td>
<td>Orange</td>
</tr>
<tr>
<td>Ford</td>
<td>Purple</td>
<td>Orange</td>
</tr>
<tr>
<td>GM</td>
<td>Green</td>
<td>White</td>
</tr>
</tbody>
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**Figure 6** Magnetic Pickup Distributor Polarity.

**Note:** If the engine seems to run rough, the polarity of the wires are probably incorrect. Reverse the connections of the distributor wires and start the vehicle again or check the timing with the wires installed both ways. The most retarded timing reading is the correct polarity connection.
GM HEI, INTERNAL COIL DISTRIBUTORS

There are three style large cap HEI distributors. To identify which wiring diagram fits your application, remove the distributor cap and rotor and locate the ignition module at the base of the housing. Count the number of terminals on both ends of the module. GM used a 4, 5 and 7-pin module in these distributors.

4-Pin Module Installation
For this installation, the original ignition module must be removed.

1. Remove the original ignition module. Install the PN 8861, the short 2-wire harness, into the original 2-wire connector into the distributor. The VIOLET connects to the GM WHITE and the GREEN connects to the GM GREEN (Figure 7).

2. Using the original retaining screws, secure the harness with the supplied hold down clamps and route the cable out the distributor through the notch in the base. Install the supplied grommet. Install the rotor and cap.

3. Connect the PN 8860 Harness to the magnetic pickup connector of the 8782 and the other end to the harness coming out of the distributor (Figure 9).

Figure 7 Removing the HEI 4-Pin Ignition Module.

Figure 8 Wiring a GM HEI 4-Pin Module Distributor.
4. Connect the BLACK wire of the 8782 to ground. Install the supplied BLACK jumper to the GRD terminal of the cap and the other end to ground.
5. Connect the ORANGE wire to the C- terminal of the cap.
6. Connect the VIOLET jumper to the B+ terminal of the cap and the other end to the positive terminal of the battery.
7. Connect the RED wire of the 8782 to the heavy PINK or RED wire of the cap connector. The WHITE wire is not used.

**GM HEI, 5 or 7-Pin**

This installation is for HEI distributors with a 5 or 7-pin ignition module. This module does not have to be removed.
1. Disconnect the connectors from the distributor cap. Connect the supplied BLACK jumper to the GRD terminal of cap and the other end to ground (Figure 9).
2. Connect the ORANGE wire of the 8782 to the C- terminal of the distributor cap.

3. Connect the RED jumper to the RED wire of the 8782. Connect the other ends to the key connector with the heavy PINK or RED wire and the other end into the B+ terminal of the distributor cap connector.
4. Connect the WHITE wire to the C- terminal, the BROWN wire, of the distributor cap connector.
5. Connect the VIOLET jumper from the battery positive terminal to the B+ terminal of the distributor cap.
6. Connect the BLACK wire of the 8782 to ground.

**GM HEI, EXTERNAL COIL**

1. Install the supplied harness, PN 54701, to the Timing Control then locate the ignition coil.
2. Splice the RED wire of the harness into the PINK wire coming from the BLACK connector of the coil (Figure 10).
3. Locate the WHITE wire coming from the Black coil connector. Cut this wire and connect the ORANGE wire of the harness to the coil side of the WHITE wire. Connect the other end of the WHITE wire (which leads to the distributor) to the WHITE wire of the harness.
4. Connect the BLACK wire to ground.

**FORD TFI IGNITION**

1. Disconnect the factory coil retainer (Figure 11).
2. Connect the RED wire to the coil positive terminal of the factory coil harness.
3. Connect the WHITE wire to the coil negative terminal of the factory coil harness.
4. Connect the ORANGE wire to the coil negative terminal.
5. Connect the VIOLET jumper to the battery positive terminal and the other end to the coil positive terminal.
6. Connect the Black wire to ground.
**OPERATION**

The control knob should be turned to the 15° (full clockwise) position. It is a good idea to check the ignition timing to be sure that is at the factory specification. If the ignition timing is retarded from the factory specification when the control knob is at the full 15° position, it should be reset to specs.

When driving, as ping occurs, turn the knob counterclockwise just until the ping disappears. As conditions such as changing altitude, loads and fuel quality occur, use the control knob to match the timing as needed to remove the engine ping. When the control knob is at 15°, the ignition timing is at the factory specification where you will receive the best fuel economy.

**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.

Send the unit prepaid with proof of purchase to the attention of: Customer Service Department, Autotronic Controls Corporation, 1490 Henry Brennan Drive, El Paso, Texas 79936.

When returning the unit for repair, leave all wires at the length in which you have them installed. Cutting wires close to the unit will void your warranty. 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. For more information, call the MSD Customer Service Line 1 800-213-3083. MSD technicians are available from 8:00 a.m. to 5:00 p.m. Monday - Friday (mountain time).

**Limited Warranty**

Autotronic Controls Corporation warrants MSD Ignition products to be free from defects in material and workmanship under normal use and if properly installed for a period of one year from date of purchase. If found to be defective as mentioned above, it will be replaced or repaired if returned prepaid along with proof of date of purchase. This shall constitute the sole remedy of the purchaser and the sole liability of Autotronic Controls Corporation. To the extent permitted by law, the foregoing is exclusive and in lieu of all other warranties or representations whether expressed or implied, including any implied warranty of merchantability or fitness. In no event shall Autotronic Controls Corporation be liable for special or consequential damages.