TACHOMETER INTERFACE INSTRUCTIONS

MFK1165 & MFK1165G3

To Interface 4 or 6 Cylinder Tachometers to V8 Engines

Thank you for purchasing a product manufactured by Marks 4WD Adaptors. The following instructions are intended as a guide.

The MFK1165 tachometer interface module is designed to make operative the original vehicle 4 or 6-cylinder coil driven tachometer. A signal obtained from the V8 coil (negative side) is used for this purpose. The Jumper on the printed circuit board labelled LK5 must be set in the coil position for this application.

The MFK1165G3 tachometer interface module is designed to make operative the original vehicle 4 or 6-cylinder coil driven tachometer. A signal obtained from the LS1/LS2 computer is used for this purpose. The Jumper on the printed circuit board labelled LK5 must be set in the coil position for this application.

The MFK1165G3N tachometer interface module is designed to make operative the original vehicle 4 or 6-cylinder Nissan digital tachometer found in the following models: GU 2.8ltr, 3ltr, and 4.2ltr diesel models, 4.5ltr and 4.8ltr petrol models. A signal obtained from the LS1/LS2 computer is used for this purpose. The Jumper on the printed circuit board labelled LK5 must be set in the Hall position for this application.

**LK2 Jumper**

The LK2 jumper must remain off while testing. It should only be fitted after the tachometer is operating correctly. If you install the Jumper and the tacho stops working remove it and leave it off.

We have found when running a Nissan 4.2ltr EFI diesel tachometer that the jumper needed to be left off.

**LK2 Jumper**

When all is well fit the LK2 jumper.

**LK6 Jumper LS1-LS2**

This jumper puts a pull up resistor into the input circuit of the interface. It is only required when fitting a late model drive by wire LS1 or the E38 LS2 ECM.
INSTRUCTIONS

1. Remove the cover from the interface box.

CALIBRATION JUMPER LAYOUT

<table>
<thead>
<tr>
<th>Engine Type</th>
<th>Cylinder Type</th>
<th>LK1</th>
<th>LK2</th>
<th>LK3</th>
<th>LK4</th>
<th>LK5</th>
</tr>
</thead>
<tbody>
<tr>
<td>6CYL EN-</td>
<td>4CYL TACHO</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>COIL</td>
</tr>
<tr>
<td>V8 ENGINE</td>
<td>4CYL TACHO</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
<td>COIL</td>
</tr>
<tr>
<td>V8 ENGINE</td>
<td>6CYL TACHO</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
<td>COIL</td>
</tr>
<tr>
<td>LS1/LS2 V8</td>
<td>6CYL TACHO</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>COIL</td>
</tr>
<tr>
<td>LS1/LS2 V8</td>
<td>NISSAN GU</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>HALL</td>
</tr>
<tr>
<td>SINGLE</td>
<td>NISSAN GU</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
<td>HALL</td>
</tr>
</tbody>
</table>
The following chart shows all of the output ratios versus the input.

<table>
<thead>
<tr>
<th>IN-</th>
<th>LK3</th>
<th>LK4</th>
<th>Multi-</th>
<th>LK1</th>
<th>Divide</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>OFF</td>
<td>OFF</td>
<td>2</td>
<td>OFF</td>
<td>4</td>
<td>MULTIPLEX</td>
</tr>
<tr>
<td>1</td>
<td>OFF</td>
<td>ON</td>
<td>3</td>
<td>OFF</td>
<td>4</td>
<td>MULTIPLEX</td>
</tr>
<tr>
<td>1</td>
<td>ON</td>
<td>OFF</td>
<td>6</td>
<td>OFF</td>
<td>4</td>
<td>MULTIPLEX</td>
</tr>
<tr>
<td>1</td>
<td>ON</td>
<td>ON</td>
<td>7</td>
<td>OFF</td>
<td>4</td>
<td>MULTIPLEX</td>
</tr>
<tr>
<td>1</td>
<td>OFF</td>
<td>OFF</td>
<td>2</td>
<td>ON</td>
<td>6</td>
<td>MULTIPLEX</td>
</tr>
<tr>
<td>1</td>
<td>OFF</td>
<td>ON</td>
<td>3</td>
<td>ON</td>
<td>6</td>
<td>MULTIPLEX</td>
</tr>
<tr>
<td>1</td>
<td>ON</td>
<td>OFF</td>
<td>6</td>
<td>ON</td>
<td>6</td>
<td>MULTIPLEX</td>
</tr>
<tr>
<td>1</td>
<td>ON</td>
<td>ON</td>
<td>7</td>
<td>ON</td>
<td>6</td>
<td>MULTIPLEX</td>
</tr>
</tbody>
</table>

**MFK1165 Tachometer Interface**

1. Connect the brown wire from the tachometer interface to the negative side of the coil.
   
   **NOTE:** Chevy HEI distributors have a tachometer output terminal next to the ignition B+ terminal.

2. Locate the original tachometer wire from the vehicle engine loom. This wire is normally connected to the negative side of the ignition coil. Connect the blue wire from the tachometer interface to this wire.

3. Connect the red wire to ignition B+.

4. Connect the green or black wire to a reliable earth B-.

**MFK1165G3 LS1/LS2 Tachometer Interface**

1. Connect the brown wire from the tachometer interface to the tachometer output wire on the ECU. In our LS1 harness the wire is brown this wire is connected to the pin 10 on plug J2. In our LS2 harness (E38 ECU) the wire is brown/red this wire is connected to the pin 48 on plug X1.

2. Locate the original tachometer wire from the vehicle engine loom. This wire is normally connected to the negative side of the ignition coil. Connect the blue wire from the tachometer interface to this wire.

3. Connect the red wire to ignition B+.

4. Connect the green or black wire to a reliable earth B-.
MFK1165G3N LS1/LS2 Tachometer Interface

1. Connect the brown wire from the tachometer interface to the tachometer output wire on the ECU. In our LS1 harness the wire is brown; this wire is connected to the pin 10 on plug J2. In our LS2 harness (E38 ECU) the wire is brown/red, this wire is connected to the pin 48 on plug X1.

2. Connect the blue wire from the tachometer interface to the original tachometer wire in the vehicle ECU harness. The wire is in the 24pin plug that connects the ECU harness to the dash harness, it’s the middle of the three plugs located just above the clutch pedal. The wire is yellow/black.

ZD30 and TB45

The 24 pin harness plug, number M52 located above the clutch pedal contains a number of wires which you will need to connect to. See the following illustrations and instructions. The M52 plug is on the left in the photo above. Note: Some tachometers may require the fitting of the output jumper (LK2) for the tachometer to work.
3. Connect the red wire to ignition B+.
4. Connect the green or black wire to a reliable earth B-.
Tachometer Wiring TD42 ECU

1. Connect the Yellow/Violet wire pin 5 to the tachometer output wire in the new GM harness. When fitting the interface we found that for correct tachometer operation the output jumper LK2 had to be left off.
VEHICLES FITTED WITH A/C CONTROL UNIT

1. Most vehicles are equipped with air conditioning; these vehicles are fitted with an electronic device that turns the A/C compressor off when the engine is idling. The A/C control device uses the signal from the ignition to detect engine RPM. In some vehicles the A/C control unit robs the tacho of signal and prevents it from working. In this instance it is necessary to connect the tacho interface after the A/C control device.

2. To do this, connect the original tacho wire (located under the bonnet) to the negative side of the ignition coil.
   **NOTE:** Chevy HEI distributors have a tachometer output terminal next to the ignition B+ terminal.

3. Locate the tacho wire at the instrument cluster and cut it, you now have two wires one from the ignition coil and one leading to the tacho.

4. Connect the brown wire from the tachometer interface to the wire that leads to the negative side of the coil.

5. Connect the blue wire from the tachometer interface to the wire that leads to the tacho.

6. Connect the red wire to ignition B+.

7. Connect the green or black wire to a reliable earth B-.

MOUNTING

1. Mount the tachometer interface in a convenient location away from direct heat, dust, and moisture.
The components supplied in the kit are designed for specific type of conversions. Modifications to any components without the written consent from Marks 4WD Adaptors will void any possible warranty or return privileges. Should you have any further questions that are not covered in the instruction sheet, please contact our sales department for assistance.

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