## INSTALLATION INSTRUCTIONSstepmotor movment95m/m TACHOMETER w/warning & peakWHITE/AMBER RED/BLUE LED DISPLAYFor diesel engine

## **D1 BEFORE YOU START**

- 1. Read instructions completely before installation. NOTE: It may be necessary to reprogram your radio,
- Install tachometer only when engine is cool and clock, etc. after reconnecting the battery. ignition is off.
  Make sure mounting location does not impair visibility of
- 3. Make sure all necessary tools, materials, and interfere with driving. Also check behind the mounting parts are on hand. location for any wiring or components before drilling.
- Refer to your vehicle's service manual for the location 7. When connecting electrical wire, install crimp terminals of tachometer sensor port, vacuum system, and/or and make wire splices as needed. ALWAYS insulate wire charging system.
  splices with electrical tape to prevent shorting.
- 5. Disconnect negative (-) battery cable before installing 8. Follow all necessary safety procedures for protection. tachometer.

## **D2 ENGINE RPM RANGE SWITCH SELECTION**

- 1. Use the switches < 1.2.3.4.5.6.7.8.9.0> to adjust the **RPM** into an approximate range.
- 2. Switch toward <0.9.8.7.6.5.4.3.2.1.> to narrow the range. Switch toward <1.2.3.4.5.6.7.8.9.0.> to widen the range.

### **D3 MOUNTING**

You can mount your tachometer on or under the dashboard or on the center console according to your personal choice. Determine best position for good visibility before drilling screw holes.

## **4 TACHOMETER CONNECTION**

- 1. Connect power wire (RED) to +12V battery wire.
- Connect power wire (WHITE) to a switched +12V circuit at fuse box, or splice into any vehicle harness wire which is energized ONLY when ignition key is ON (RUN) position.
- Secure lead wires along their route to prevent damage from sharp edges, moving parts or hot engine components.
- tion key is 6. Turn on ignition. DO NOT START ENGINE tachometer pointer should rotate to minimum or "0" when ignition
- Connect power wire(BLACK) to ground, negative (-) is turned on. battery terminal or a good chassis ground.
   7. Start and run engine
  - 7. Start and run engine. REV engine several times and
- Connect power wire (ORANGE) to panel lights circuit verify tachometer indication changes as rpm increases at fuse box, or splice into any vehicle harness wire connected to the panel lights circuit.
  verify tachometer indication changes as rpm increases and decreases. Make sure tachometer pointer operation is smooth and even.



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□5 **IMPROTANT:** Tachometer signal wire connections vary with vehicle make, model, and ignition type.

Typical tachometer signal source locations are shown in the accompanying illustrations.

Always consult the service manual for the vehicle you working on to ensure proper connection.



Use the VR roll, which is enclosed in our accessory pack, to adjust to the accurate RPM.

It is recommended to connect with a RPM standard gauge in order to adjust the RPM.

### **CONTROL BOX OPERATION INSTRUCTIONS**

Please remove the gauge power wire harness or turn off gauge power before connecting the control box wire harness with the connector in the back of the gauge. After connecting the control box with the gauge together, the control box can be operated. If connecting the control box and the gauge together while the gauge power is on, it may be possible to damage them.

There are five setting modes in this gauge, **Backlight color Mode**, **Peak Mode**, **Warning Mode**, **Sound Mode**, and **Backlight Brightness Mode**. In any time when the gauge is in the normal mode, the Backlight color Mode can be operated by pressing <UP> or <DOWN>. Press <SET> to enter into the Peak Mode. Press <MODE> to enter into the Warning Mode, the Sound Mode and the Backlight Brightness Mode in sequence.

#### 1. Backlight color Mode:

- 1) There are three different color LED backlight display in one gauge: White, Amber Red and Blue.
- 2) Press <UP> or <DOWN> to select a backlight color.

#### 2. Peak Mode:

- 1) Press <SET> to enter into the Peak Mode. The PEAK light and word will be ON when you are in the Peak mode. "PEAK" will be also shown on OLED screen.
- 2) When the peak value is displayed, press <MODE> to clear the previous peak value.
- 3) After 10-second of no button activity or press <SET>, the gauge will return to the normal mode. When the PEAK light is not flashing, the gauge is in the normal mode.

#### 3. Warning Mode:

There are two warning values for users to set in this gauge, High-Warning 1 value and High-Warning 2 value. Press <MODE> to enter into the Warning Mode from the normal mode. When the gauge is in the Warning Mode, the High-Warning 1 setting can be programmed. After that, press <SET> to enter into the High-Warning 2 setting mode. Indeed, press <SET> to shift in these two setting modes.

#### High-Warning Mode 1

- When the needle and warning lights are flashing, the High Warning 1 value can be set. In the meantime, OLED screen will also show <u>"WARN 1"</u>. Press <UP> to move the needle clockwise while press <DOWN> to move the needle counterclockwise.
- 2) Hold either <UP> or <DOWN> to move the needle in major increments in their representative directions.
- 3) To shift to the next setting, press <SET> to enter into *the High-Warning Mode 2* or press <MODE> to enter into the Sound Mode.
- 4) The gauge will return to the normal mode after 10-second of no button activity or press <MODE> for three times.

\* NOTE: If the High-Warning 1 value is higher than the High-Warning 2 value, the High-Warning 2 value will be inactivated automatically. Indeed, only the High-Warning 1 will be operated.

#### High-Warning Mode 2

- When the needle light is flashing and warning light is ON, the High Warning 2 value can be set. <u>"WARN 2"</u> will also be shown on the OLED screen. Press <UP> to move the needle clockwise while press <DOWN> to move the needle counterclockwise.
- 2) Hold either <UP> or <DOWN> to move the needle in major increments in their representative directions.
- To shift to the next setting, press <MODE> to enter into the Sound Mode or press <SET> to return to the High-Warning Mode 1.
- 4) The gauge will return to the normal mode after 10-second of no button activity or press <MODE> for three times.

\* \* NOTE: If the High-Warning 2 value is lower than the High-Warning 1 value, the High-Warning 1 value will be inactivated automatically. Indeed, only the High-Warning 2 will be operated.

#### 4. Sound Mode:

There are four different sounds setting in the Sound Mode. The sequence of these setting modes is **Opening Warning Sound Mode**, **Key Sound Mode**, **High-Warning 1 Sound Mode**, and **High-Warning 2 Sound Mode**.

Press <MODE> twice to enter into the Sound Mode from the normal mode. If the gauge is in the Warning Mode, only press <MODE> once to enter into the Sound Mode. When the gauge is in the Sound Mode, the Opening Sound Mode setting can be programmed. After that, press <SET> to enter into the different sound setting in sequence.

#### **Opening Sound Mode**

- When the faceplate backlight is flashing, the gauge is in the Opening Sound Mode which you can see <u>"SD. SCAN ON/</u> <u>OFF</u>" on the OLED screen. Then press <UP> or <DOWN> to turn on or off the sound. When the PEAK Blue light is on, the sound is on, vice versa, when the PEAK Blue light is off, the sound is off.
- 2) When the Opening Sound is on, you will hear two beep sounds when the gauge is opening.
- 3) To shift to the next setting, press <SET> to enter *into the Key Sound Mode* or press <MODE> to enter into the Backlight Brightness Mode.
- 4) The gauge will return to the normal mode after 10-second of no button activity or press <MODE> twice.

#### Key Sound Mode

1) When the control box LED is flashing, the gauge is in the Key Sound Mode. You can also see "SD. KEY ON/OFF"