



Defi-Link Display VSD CONCEPT
Operation Manual

Nippon Seiki Co., Ltd.

Before Installation(for installation personnel)

Warning

Be sure to follow all instructions in this manual to ensure safe installation and operation of the product. Carefully consider the installation location and driver's operation of the product before installation. Be sure not to install the unit where it could fall. Improper installation or operation could cause the product to fall and damage the vehicle or cause serious danger by impeding driving.

Do not disassemble or modify this product. Such actions can not only damage or destroy the product but will also void the warranty.

Ensure that the vehicle will remain stationary and turn off the engine before installing this product. Failure to do so could result in a fire, and could make the vehicle move during installation.

Do not perform installation of this product immediately after the engine has been switched off. The engine and exhaust system are extremely hot at this time and can cause burns if touched.

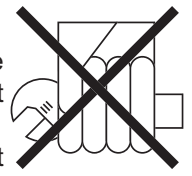
Remove the key from the ignition and disconnect the negative (-) battery terminal prior to installation of this product. Failure to do so could result in a fire caused by an electrical short circuit.

Take care not to install this product in a way that interferes with safety equipment such as seat belts and air bag systems or vehicle operation equipment such as engine controls, steering wheel or brake systems. Interference with normal operation of the vehicle can result in an accident or fire.

Ensure that the wiring of this product does not have an adverse impact on the other wiring of the vehicle. Any controlling devices or other electronic components of the vehicle could be damaged.

Use a solderless connector or similar device for wiring connections and make sure connections are insulated. In areas where there could be tension or sudden impacts on the wiring, safeguard the wiring with corrugated tubing or other shock absorbent material. Accidental shorts can cause fires.

Please keep children and infants away from the installation area. Children may swallow small parts or be injured in other ways.



disassemble/
modify

Caution

This product is designed for use on 12V vehicles. Do not install this product on vehicles with 24V systems. Wear gloves to avoid burns when soldering and cuts when working with wiring.

When the negative (-) battery terminal is disconnected, equipment such as clocks and audio components having internal memory may lose their memory data. Follow the operation manual of each component to reset data after installation of this product.



Confirmation

After installation is complete, return this operation manual to the customer along with the warranty.

About Installation and Operation(for customer and installation personnel)

Warning

Please have this product installed by the retail store or dealer where it was purchased. Installation by the customer will void the warranty.

In order to ensure safe driving, check the information on this display only for short periods of time. Looking at the display for long periods of time could distract adequate attention from the road and result in an accident.

Discontinue use of this product if nothing is displayed, water gets into the unit, or smoke or a strange odor comes from the unit. If such a condition occurs, contact the sales outlet or installation personnel as soon as possible.

Continued use while the condition exists could result in an accident or fire.

Do not operate during driving.

Caution

Information other than speed and engine speed is not displayed if this product is not connected to Defi-Link System. The speedometer and tachometer display of this product are for reference purposes only. Please drive according to the indication of vehicle's originally equipped instruments.

This product can be used only on 3, 4, 5, 6, and 8 cylinder vehicles with 4 cycle engine. It cannot be used on diesel vehicles.

When this product is linked to Defi-Link System, connect the LINK connector of D.C.Unit and the METER OUTPUT1 connector of Defi-Link Control Unit II(or the METER connector of Defi-Link Control Unit) with the meter wire. Misconnection could damage the product.

When this product is linked to Defi-Link system, the tachometer signal must be input to Defi-Link Control Unit II(or Defi-Link Control Unit). Set the number of cylinders of Defi-Link Control Unit II(or Defi-Link Control Unit).

Data on boost and intake manifold pressure cannot be displayed.

When this product is linked to Defi-Link System, be sure to follow the instructions for Defi-Link Control Unit II(or Defi-Link Control Unit).

Do not pull the wires out of connectors by forcefully. The connectors may be broken and the wires may be cut. When pulling out the wires, press the lock firmly and unclip the locks of connectors.

Installation (for installation personnel)

⚠ Warning

Carefully read the "Before Installation" and "About Installation and Operation" sections of the manual concerning installation and operation. Then install the product properly and safely. Installation in an unsuitable location or improper installation can result in the product falling from its position or damage to the vehicle.

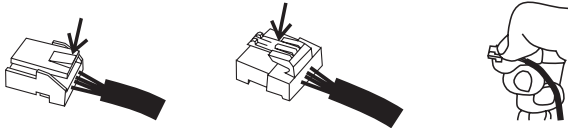
⚠ Caution

When installing the display, be sure to follow the instructions for Defi-Link Control Unit II(or Defi-Link Control Unit).

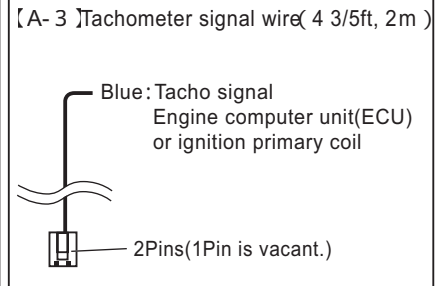
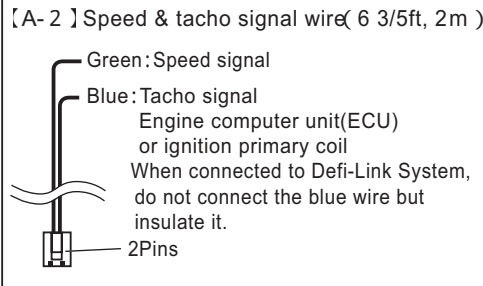
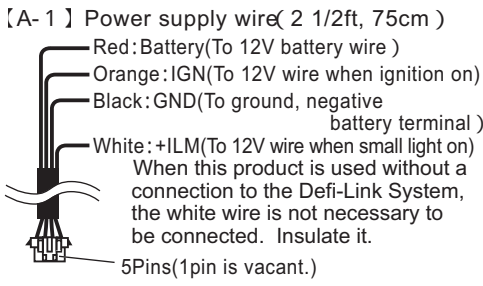
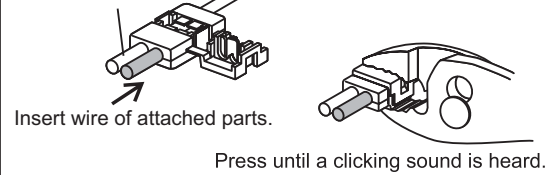
STEP 1 Wiring

⚠ Caution

Do not pull the wires out of connectors forcefully. The connectors and the wires may be broken. When pulling out the wires, press the lock firmly and unclip the locks of connectors.

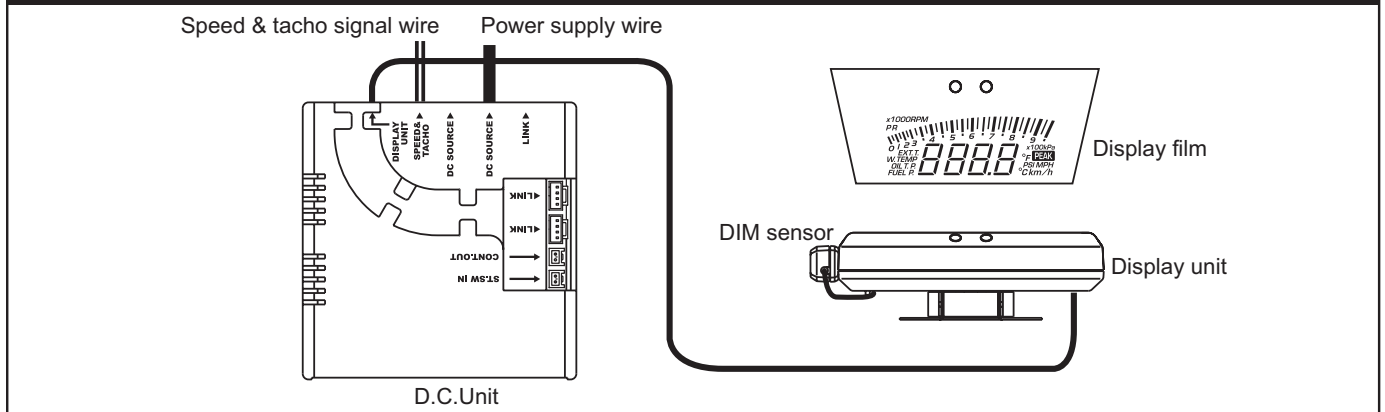


How to branch signal wire using solderless connector wire from vehicle



When the Defi-Link Display VSD CONCEPT is used WITHOUT a connection to the Defi-Link System

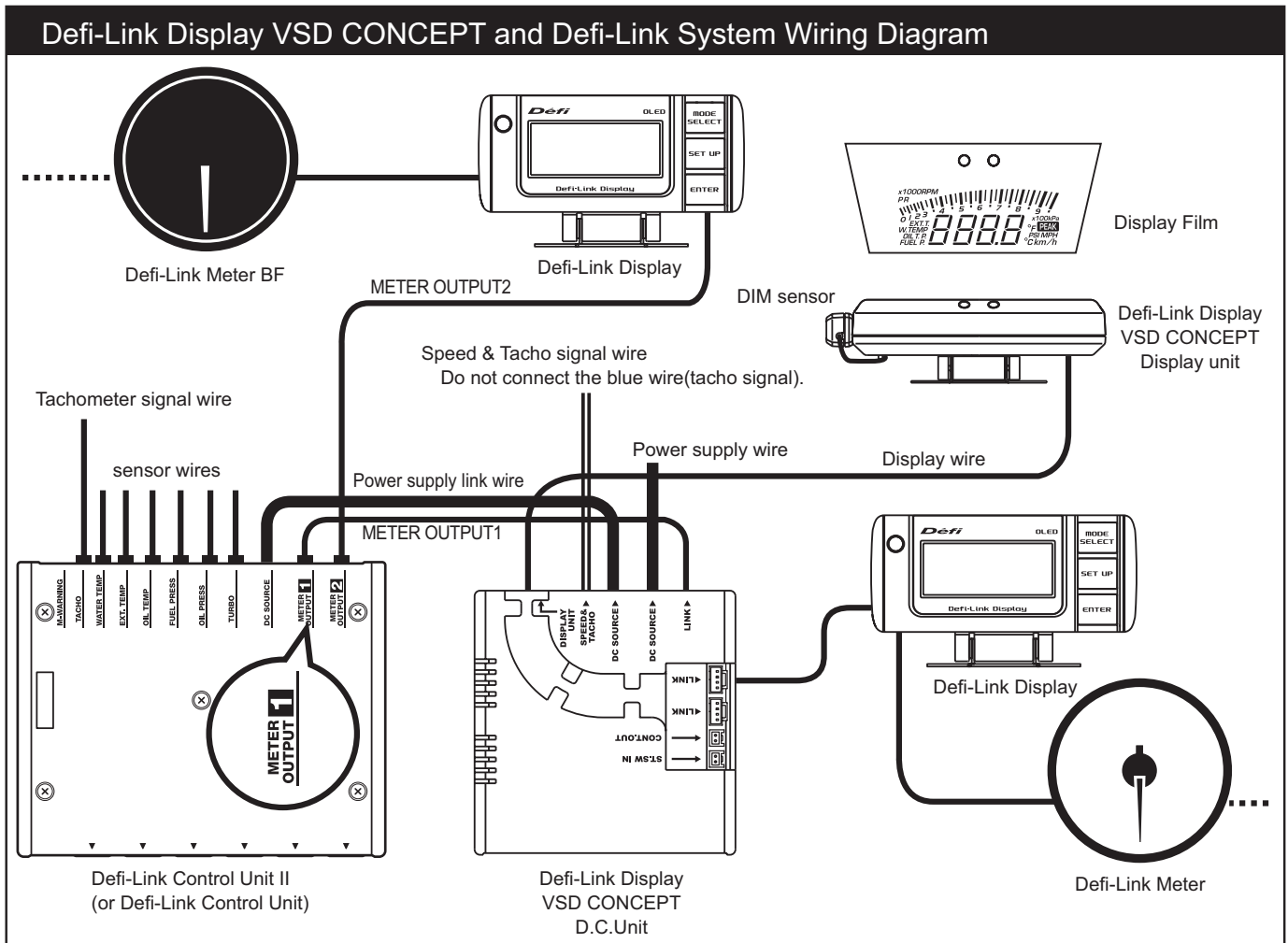
Defi-Link Display VSD CONCEPT Wiring Diagram



- 1 : Connect the power supply wire to the wiring of vehicle.(A-1)
- 2 : Connect the other side of the power supply wire to DC SOURCE of D.C.Unit.
There are two DC SOURCE connectors. Both connectors are usable.
- 3 : Connect the speed & tacho signal wire (green & blue wires) to speed and tacho signal wire of the engine computer unit (ECU) with solderless connectors.(A-2)
- 4 : Connect the other side of the speed & tacho signal wire to SPEED&TACHO of D.C.Unit.
In the case where this product is connected to Defi-Link System afterward, connect the white wire of the power supply wire to the illumination wire (12V wire when small lamp is on) and then connect the tacho signal wire to Defi-Link Control Unit II (or Defi-Link Control Unit).

When the Defi-Link Display VSD CONCEPT is used WITH a connection to the Defi-Link System

These procedures are applicable on condition that Defi-Link Control Unit II(or Defi-Link Control Unit) and the power supply wire have been installed.



- 1 : Disconnect the previously connected power supply wire from Defi-Link Control Unit II(or Defi-Link Control Unit).
- 2 : Connect the disconnected power supply wire to DC SOURCE of D.C.Unit.
There are two DC SOURCE connectors. Both connectors are usable.
- 3 : Connect DC SOURCES of Defi-Link Control Unit II(or Defi-Link Control Unit) and D.C.Unit using the attached power supply link wire.
- 4 : In the case where a meter wire is already connected to METER OUTPUT 1 of Defi-Link Control Unit II(or METER of Defi-Link Control Unit), disconnect the meter wire.(If METER OUTPUT1 of Defi-Link Control Unit II is not in use, skip the next procedure and go to 6.)
- 5 : Connect the disconnected meter wire to LINK of D.C.Unit.
There are three LINK connectors. All three connectors are usable.
- 6 : Connect METER OUTPUT 1 of Defi-Link Control Unit II and LINK of D.C.Unit using the attached meter wire.(Connect METER of Defi-Link Control Unit and LINK of D.C.Unit with the attached meter wire.)
There are three LINK connectors. All three connectors are usable.
- 7 : Connect the attached tachometer signal wire(blue) to the tacho signal wire of engine computer unit (ECU) using the attached solderless connector. In the case where a tachometer signal wire(blue) is already connected to Defi-Link Control Unit II(or Defi-Link Control Unit), skip this procedure. Leave the tachometer signal wire(blue) and go to 9.
- 8 : Connect the other side of tachometer signal wire to TACHO of Defi-Link Control Unit II(or Defi-Link Control Unit).
Be sure to connect the tachometer signal wire(blue) to TACHO of Defi-Link Control Unit II(or Defi-Link Control Unit). If it is connected to only D.C.Unit, the engine speed will not be displayed.
- 9 : Connect the green wire of speed & tacho signal wire(speed signal) to the speed signal wire of engine computer unit(ECU) using the attached solderless connector.
The blue wire of the speed & tacho signal wire is not necessary to be wired. Insulate and bind up the wire so as not to interfere with driving.(A- 2)
- 10 : Connect the other side of the speed & tacho signal wire to SPEED & TACHO of D.C.Unit.

STEP 2 Check Wiring

- 1 : Connect the display wire of Defi-Link Display VSD CONCEPT to DISPLAY UNIT of D.C.Unit.
- 2 : Check that all the wires are properly connected.
- 3 : Turn on the ignition of vehicle and make sure the display is lighted. (The display looks inverted on the display unit.)
- 4 : If the display is lighted, go to the next step. If not, go back to STEP1(WIRING) and rewire.

STEP 3 Applying the Display Film

Warning

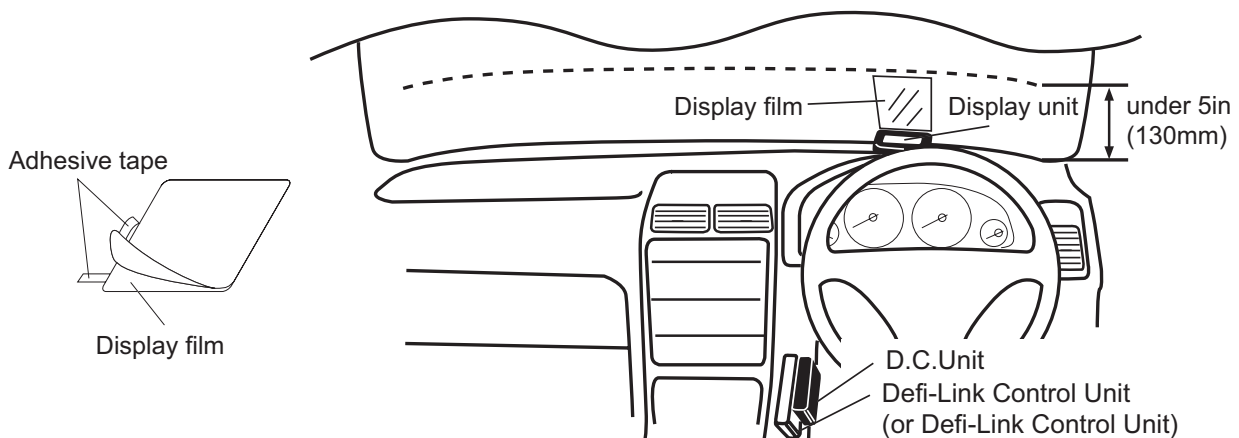
Display must be projected on the bottom 5in(130mm) of the windshield. Consult with customer about the place of display projection. Attach the display unit in a location which will not hinder driving. Comply with the law concerning vehicle safety in your district.

The display is viewable even without the display film. The transmittance of the display film is about 45%. We are not responsible for any damage or problems arising from the use of the display film applied on the windshield. Please follow the local regulations as for attaching the display film.

- 1 : Wipe off tarnish and stain on the windshield.
- 2 : Position the display unit and the display film in place. Mark a corner of display film with adhesive tape.
- 3 : Separate the display film from the backing paper using adhesive tape as shown in the following figure.
- 4 : Spray a mixture of water(150ml:5oz) and mild detergent(1 or 2drops) on the windshield and the display film. Attach the film to the windshield in a longitudinal direction.

Dismount the display unit for a time to protect it from getting wet. Spread a towel on the instrument panel.

- 5 : Gently squeeze out water and air bubbles under the film using a spatula. Wipe extra water with tissue.



Do not expose D.C.Unit and Defi-Link Control Unit II(or Defi-Link Control Unit) to direct sunlight.

STEP 4 Installation of Display Unit and DIM Sensor

Warning

Improper installation could cause the product to fall and damage the vehicle or cause serious danger by impeding driving.

- Attach the display unit in a location which will not hinder driving.
- Make sure that both the display unit and D.C.Unit are firmly attached.

Confirmation

When leaving car under the direct sunlight, cover the display unit with a white cloth. It prevents the unit from deterioration. Before attaching units using double-sided tape, make sure they are clean.

1 : Tighten temporarily the bracket A and the display unit using a Phillips screwdriver and adjust the rotative direction.(B- 1)

Bracket A can be attached to the display unit in any direction(upside down, front/back). Determine the location of the display unit where the display is the most clearly projected on the windshield.

2 : Tighten temporarily Bracket B and the display unit to adjust the angle using an Allen wrench.(B-2)

3 : Identify the location and angle the display unit on the instrument panel. Then fully tighten Bracket A where the display is clearly projected on the windshield.

4 : Connect the DIM sensor to the connector on the backside of display unit.

5 : Dismount the display unit from Bracket B. Attach Bracket B on the instrument panel using double-sided tape. Bend Bracket B fitting to the form of instrument panel. Set Bracket B using sheet-metal screws(commercially available).

6 : Fit the display unit into Bracket B and fully tighten.

7 : Attach the DIM sensor to the side of display unit towards the direction of movement using double-sided tape.(B- 3)

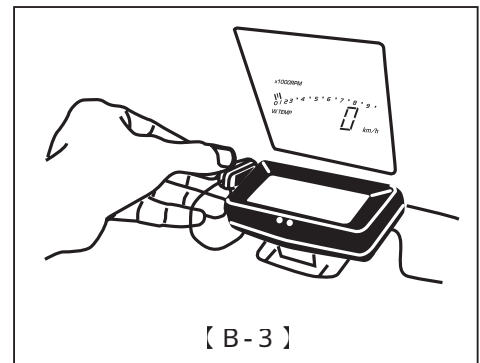
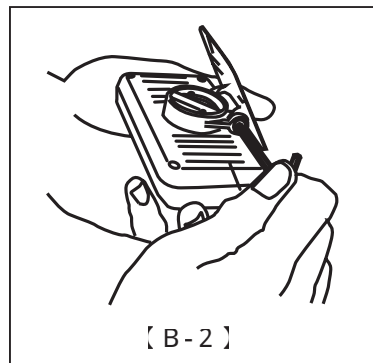
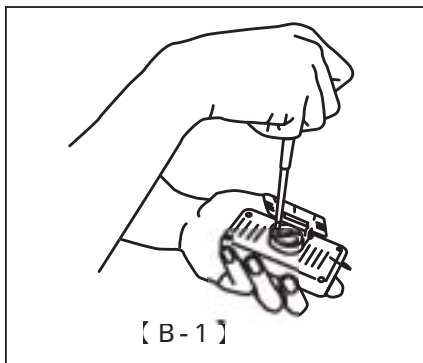
To perceive the anterior brightness, the sensor must not be interrupted by wipers and things.



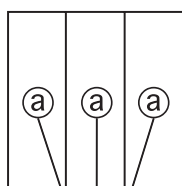
Bracket A



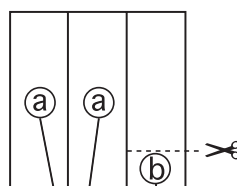
Bracket B



Use double-sided tape as follows:

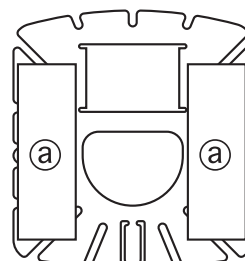


D.C.Unit



Bracket B

DIM sensor



Bracket B



DIM sensor

After the installation is done, the next step is the set-up of functions. Please refer to the backside of this manual. The quick reference chart for the set-up is printed on the inside of the package.

Trouble Shooting(for customer and installation personnel)

Warning

If operation of the product seems unusual, inspect the product to confirm that there is no malfunction. If an operational problem has occurred, it could result in an accident.

In addition to a general inspection of the product, use the following table to confirm proper operation of the unit. If the operational problem does not appear in the following table, contact the installation personnel.

Condition	Possible Cause	Corrective Action
Does not display.	Wiring of the power supply wire or the display wire is improper.	Check wiring as per instructions in this manual.
The engine speed is not displayed correctly.	Wiring of the tachometer signal wire is wrong. Setting of the number of cylinders is wrong(D.C.Unit/Defi-Link Control Unit II/Defi-Link Control Unit). LINK of D.C.Unit and METER OUTPUT2 of Defi-Link Control Unit II are connected. The tachometer signal wire is not connected to Defi-Link Control Unit II or Defi-Link Control Unit (in the case that the product is connected to the Defi-Link System).	Check wiring as per instructions in this manual. Check the number of cylinders as per instructions in this manual, Defi-Link Control Unit II manual, or Defi-Link Control Unit manual. Connect LINK of D.C.Unit and METER OUTPUT1 of Defi-Link Control Unit II using the meter wire. Connect the tachometer signal wire to Defi-Link Control Unit II(or Defi-Link Control Unit).
The speed is not displayed correctly.	Wiring of the speed signal wire is wrong. Setting of the speed pulse is wrong.	Check wiring as per instructions in this manual. Check the speed pulse as per instructions in this manual.
The auto dimmer mode is on, but the display is dark or the brightness of the display doesn't change.	The DIM sensor is not connected. The front of the DIM sensor is obstructed. The manual dimmer mode is selected in the setting of the illumination control.	Connect the DIM sensor as per instructions in this manual. Attach the DIM sensor in a position without any obstruction which interrupts the front of the sensor. Reset the illumination control setting as per instructions in this manual.
Does not carry out the closing mode.	The wiring of the red line of the power supply wire is wrong.	Check wiring as per instructions in this manual.
The product is connected to the Defi-Link System, but the speed is not recorded.	The REC button is pressed when the vehicle is stopped.	Press the REC button when the vehicle is moving.
Switching of the unit illumination is not interlocked with switching of the vehicle illumination.	The condition is normal.	Switching of D.C.Unit illumination is interlocked with turning on/off the ignition.

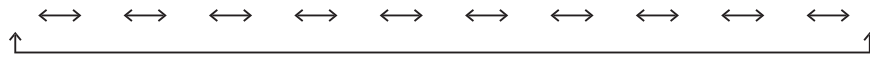
Operation(for customer)

1.Set-Up Mode(Screen for setting units and display data parameters)

Confirmation

Be sure to make preparatory settings. The unit will not operate properly without settings being made. Set up while the vehicle is stopped.

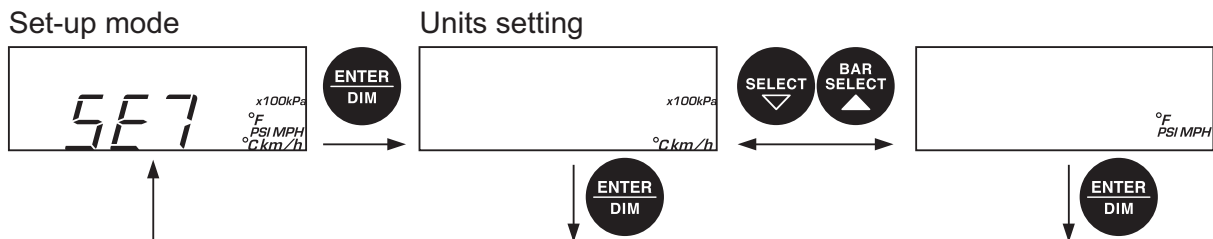
When changing the factory settings shown below, pressing the SET UP(ENTER) button for more than 2 seconds after the opening mode has completed will bring up the setting mode for units. In set-up mode, the item to be set changes each time the SELECT or BAR SELECT buttons are pressed. When adjustment of a particular setting is needed, press the ENTER button. To quit the set-up mode, press the SET UP(ENTER) button for more than 2 seconds.



Item	Factory Setting	Item	Factory Setting
Units	kPa、 、 km/h	Bar Display	ON
Speed Pulse	4	Warning Buzzer	ON
③Number of Cylinders	4	⑨Auto Warning	ON
Warm-Up	Water Temp. 40 (104 F)/ Oil Temp. 60 (140 F)	Illumination Control	Manual
		Control Out	Water Temp. 80 (176 F)/ Oil Temp. 100 (212 F)
Special Display	ON		
Tachometer Warning	1 7 0 0 0、 2 }		

Setting of Units

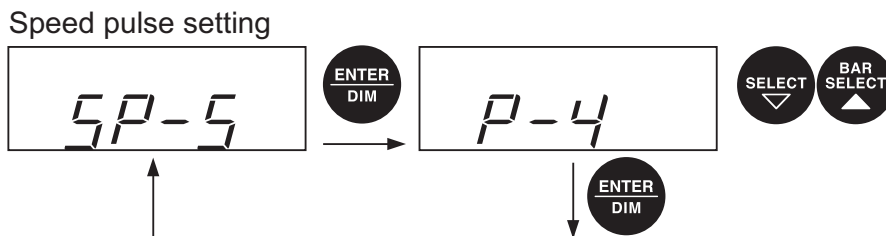
Press ENTER button when the following figure is displayed. Use SELECT/BAR SELECT button to select units (kPa、 、 km/h or PSI、 °F、 MPH), then press ENTER to set the desired units.



Setting of Speed Pulse

Press ENTER button when the following figure is displayed. Use SELECT/BAR SELECT button to select the speed pulse number, then press ENTER button to set the selection.

2 ↔ 4 ↔ 8 ↔ 16 ↔ FREE(Free pulse setting)



<Speed pulse number>The speed pulse number differs by model of vehicle. Consult your local car dealer if you are not certain of the speed pulse number for your vehicle.

<Free pulse setting>For vehicles having a speed pulse outside 2, 4, 8, 16 pulse, the speed pulse can be set by switching to the "FREE" screen by pressing and holding the ENTER button for more than 2 seconds. After the screen changes to pulse set screen(SET.P blinks), press ENTER button while the vehicle is moving at 60km/h or 40MPH.

Ask fellow passengers to set up. Do not set up at the wheel.

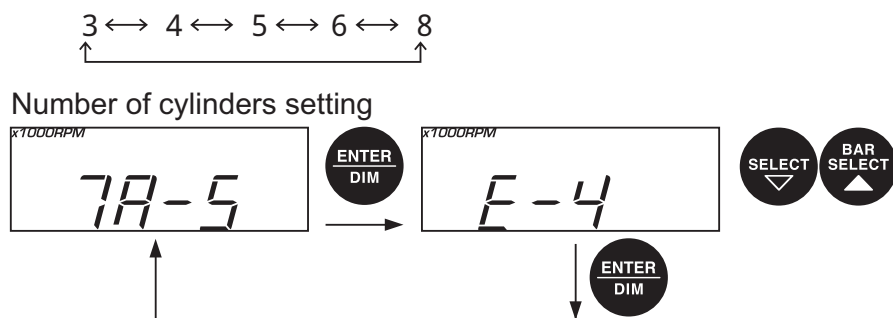
It may be unable to be adapted for some models of vehicle.



NOTE: The pulse free setting needs to be done again if units are changed.

Setting of Number of Cylinders

Press ENTER button when the following figure is displayed. Use SELECT/BAR SELECT button to select the number of cylinders, then press ENTER button to set the selection.

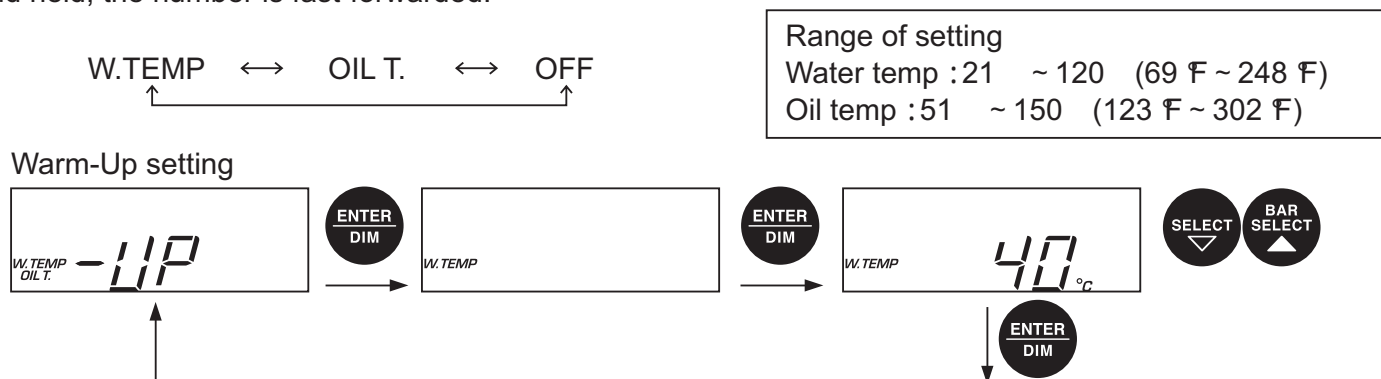


Set 2 rotary engine at 4 cylinders and 3 rotary engine at 6 cylinders.

NOTE: If the Defi-Link Display VSD CONCEPT is linked with the Defi-Link System, the setting of Defi-Link Control Unit II(or Defi-Link Control Unit) is prioritized.

Setting of Warm-Up

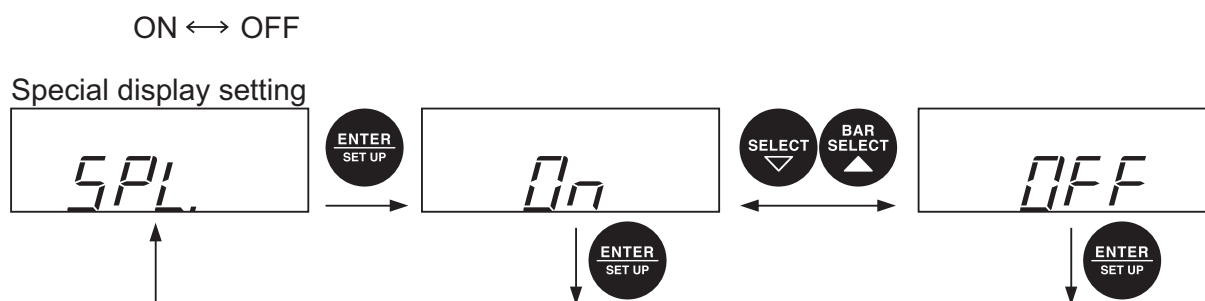
Press ENTER button when the following figure is displayed. Use SELECT/BAR SELECT button to select water temperature, oil temperature, or OFF. Then press ENTER button to set the selection. Use SELECT/BAR SELECT button to set the desired temperature. If SELECT/BAR SELECT button is pressed and held, the number is fast-forwarded.



NOTE: This function operates when the Defi-Link Display VSD CONCEPT is linked with the Defi-Link System and the temperature sensor is connected.

Setting of Special Display

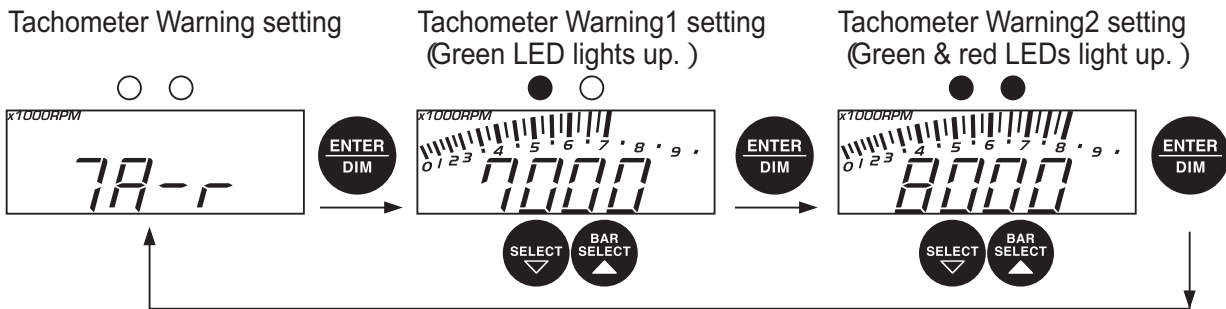
If ON is selected, the engine speed is displayed in digital when speed is 0km/h or 0MPH for more than 10 seconds. Press ENTER button when the following figure is displayed. Use SELECT/BAR SELECT button to select ON or OFF.



Setting of Tachometer Warning

Press ENTER button when the following figure is displayed. Green LED is lighted up. Use SELECT/BAR SELECT button to set the desired warning1 value. Press ENTER again. Green and red LEDs are lighted up. Use SELECT/BAR SELECT button to set the desired warning2 value. If SELECT/BAR SELECT button is pressed and held, the number is fast-forwarded.

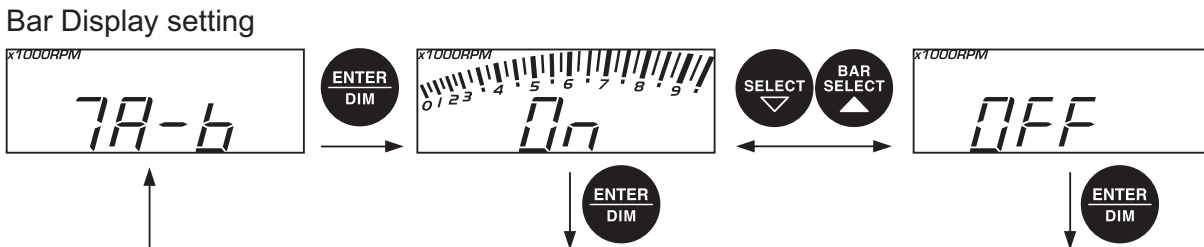
Range of setting
Tachometer Warning 1 :1,000RPM ~ 9,900RPM
Tachometer Warning 2 : larger value than warning1 ~ 9,900RPM



NOTE: If the Defi-Link Display VSD CONCEPT is linked with the Defi-Link System, the tachometer warning2 cannot be set. The setting value of the tachometer warning of Defi-Link Control Unit II(or Defi-Link Control Unit) is applied as a tachometer warning2. Please set up the tachometer warning of Defi-Link Control Unit II(or Defi-Link Control Unit) higher than the tachometer warning1 value. If the value is set lower than the warning1, the warning1 will be invalid.

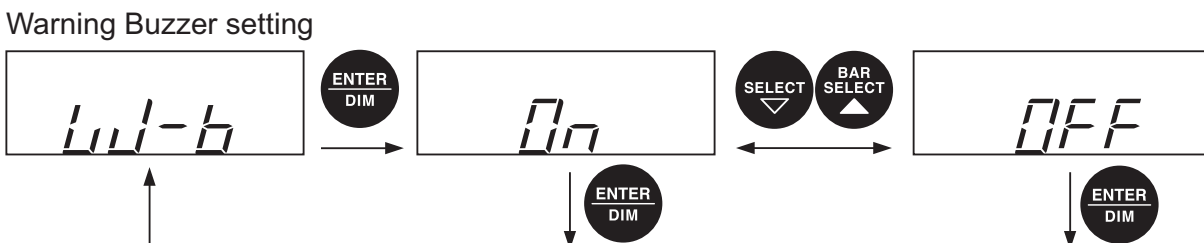
Setting of bar display

Press ENTER button when the following figure is displayed. Use SELECT/BAR SELECT button to select ON or OFF of the bar display.



Setting of Warning Buzzer

Press ENTER button when the following figure is displayed. Use SELECT/BAR SELECT button to select ON or OFF of the warning buzzer.

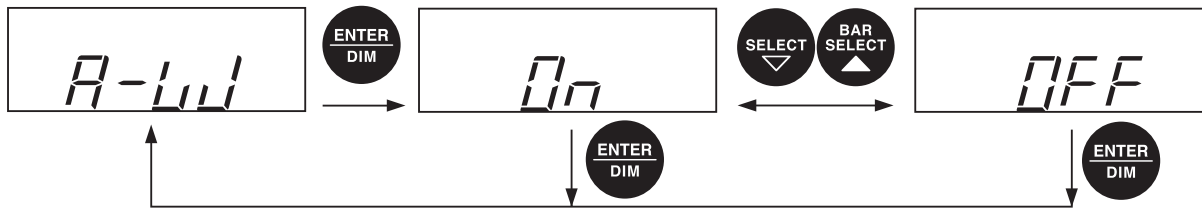


NOTE: If the Defi-Link Display VSD CONCEPT is linked with the Defi-Link System, the warning buzzer of Defi-Link Control Unit II cannot be absorbed.

Setting of Auto Warning

Press ENTER button when the following figure is displayed. Use SELECT/BAR SELECT button to select ON or OFF of the auto warning function.

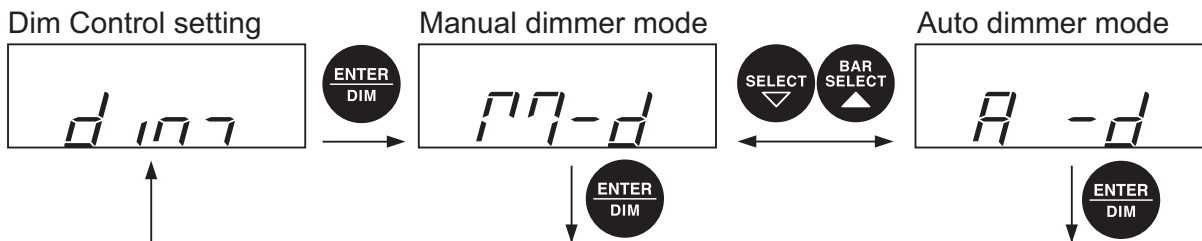
Auto warning setting



NOTE: This function operates when the Defi-Link Display VSD CONCEPT is linked with the Defi-Link System.

Setting of Illumination Control

Press ENTER button when the following figure is displayed. Use SELECT/BAR SELECT button to select auto or manual of the dim control mode.



When the auto dimmer mode is on, the brightness of the display is adjusted automatically. Press ENTER to Select one from three stages of brightness in the auto dimmer mode during the real mode or the peak mode. When the manual dimmer mode is on, the brightness of the display can be set manually at 5 stages in the real mode or the peak mode.

Setting of Control Output

Press ENTER button when the following figure is displayed. Use SELECT/BAR SELECT button to select water temperature, oil temperature, or OFF. Then press ENTER button to set the selection. Use SELECT/BAR SELECT button to set the desired temperature. If SELECT/BAR SELECT button is pressed and held, the number is fast-forwarded.

W.TEMP ↔ OIL T. ↔ OFF

Range of setting

Water temp 21 ~ 120 (69 F ~ 248 F)

Oil temp 51 ~ 150 (123 F ~ 302 F)

Control Output setting

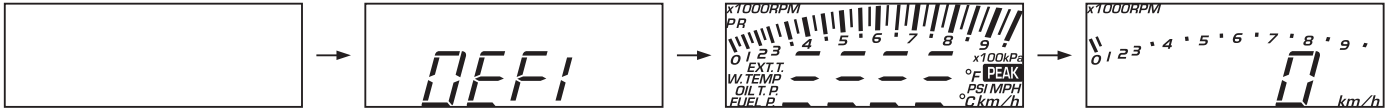


NOTE: This function operates when the Defi-Link Display VSD CONCEPT is linked with the Defi-Link System and the temperature sensor is connected.

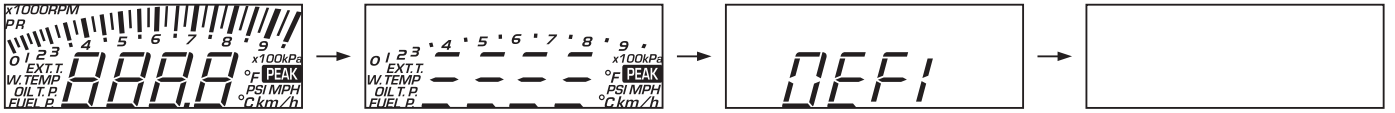
2. Opening and Ending Mode

Opening and ending modes are performed after the ignition key is turned on and off.

Opening mode



Ending mode



3. Operation Mode

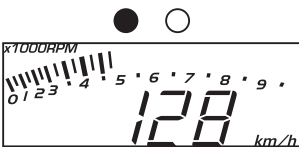
Illumination control

When the auto dimmer mode is selected in the setting of illumination control, the brightness of display is adjusted automatically depending on the outside light. The brightness can be selected from three stages by pressing the DIM(ENTER) button. When the manual dimmer mode is selected, the brightness of display is fixed. The brightness can be selected from five stages by pressing the DIM(ENTER) button.

	BRIGHT ← → DARK	
Auto dimmer mode	A-L 3 → A-L 2 → A-L 1	
Manual dimmer mode	M-5 → M-4 → M-3 → M-2 → M-1	

When the Defi-Link Display VSD CONCEPT is used WITHOUT a connection to the Defi-Link System

Real Mode



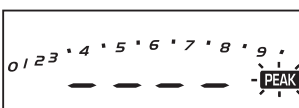
The actual vehicle speed is displayed digitally and the engine speed is displayed in the bar section. When the engine speed exceeds the warning value set as the tachometer warning1 in the setting of tachometer warning, the green LED lights up. When it exceeds the tachometer warning2, the green and red LEDs blink.

Peak Mode



Pressing the PEAK button during Real Mode will bring up Peak Mode. Recorded peak values for speed and engine speed will be displayed. Pressing the PEAK button again during Peak Mode will return to Real Mode.

Peak Reset Mode



During either Real Mode or Peak Mode, the peak values will be reset by pressing and holding the PEAK button for more than two seconds.

Special Display Mode



If Special Display Mode is turned on in the setting of special display and speed is 0km/h or 0MPH for more than 10 seconds in Real Mode, special display will start. In this mode, the engine speed is displayed digitally. When speed is more than 0km/h or 0MPH or when any button of D.C.Unit is pressed, the display will return to Real Mode.

When the Defi-Link Display VSD CONCEPT is used WITH a connection to the Defi-Link System

For operations through shown below, refer to the Operation Manual for Defi-Link Control Unit II(or Defi-Link Control Unit).

Real Mode



The actual data on current speed, engine speed, oil pressure, fuel pressure, oil temperature, water temperature, and exhaust temperature is displayed in this mode. Each time the SELECT/BAR SELECT button is pressed, the displays of the digital and bar section will change in the following order. Data without sensors connected cannot be selected.

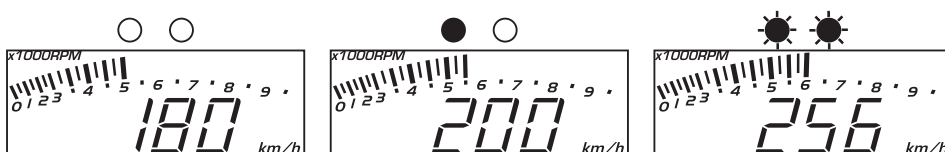


Digital Display Section Speed → Water temp. → Oil temp. → Oil press. → Exhaust temp. → Fuel press.



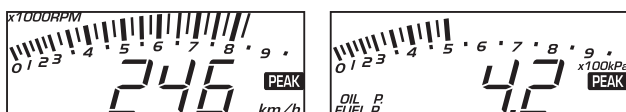
Bar Display Section Engine speed → Oil press. → Fuel press.

NOTE: If "MPH, °F, PSI" is selected in the setting of units, data other than the engine speed is not displayed.



When the engine speed exceeds the warning value set as the tachometer warning1 in the setting of tachometer warning, the green LED lights up. When it exceeds the tachometer warning2, the green and red LEDs blink. The tachometer warning2 cannot be set in the setting of tachometer warning.

Peak Mode



By pressing the PEAK button of Defi-Link Control Unit II(or Defi-Link Control Unit) during Real Mode, Peak values are displayed. Displayed data will be changed by pressing SELECT/BAR SELECT button. Pressing the PEAK button again during Peak Mode will return to Real Mode.



Digital Display Section Speed Maximum → Speed Minimum → Engine speed → Water temp.
 Fuel press. ← Exhaust temp. ← Oil press. ← Oil temp. ←

Note)When displaying the speed minimum value, the unit(km/h or MPH) blinks and the minimum value recorded in Rec Mode is displayed.

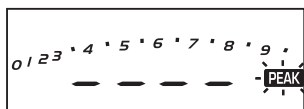


Bar Display Section Engine speed → Oil press. → Fuel press.

NOTE: If "MPH, °F, PSI" is selected in the setting of units, data other than the engine speed is not displayed.

NOTE: When connected to the Defi-Link System, the PEAK button of the D.C.Unit is unavailable.

Peak Reset Mode



When the UP button of the Defi-Link Control Unit II is pressed in Peak Mode(or when the PEAK button of the Defi-Link Control Unit is pressed and held for more than two seconds in any of Real Mode, Peak Mode or Warning Mode), the peak values will be reset.

NOTE: When connected to the Defi-Link System, the PEAK button of the D.C.Unit is unavailable.

Special Display Mode



If Special Display Mode is turned on in the setting of special display and speed is 0km/h or 0MPH for more than 10 seconds in Real Mode, special display will start. In this mode, the engine speed is displayed digitally. When speed is more than 0km/h or 0MPH or when any button of D.C.Unit is pressed, the display will return to Real Mode.

Warning Set Mode

Engine Speed

Oil Temp.

Boost



Examples of display

Pressing the WARN SET button of Defi-Link Control Unit II(or pressing the SELECT button of Defi-Link Control Unit) will bring up Warning Set Mode. To set the warning value, please refer to the operations manual of Defi-Link Control Unit II(or Defi-Link Control Unit).

Warning Mode

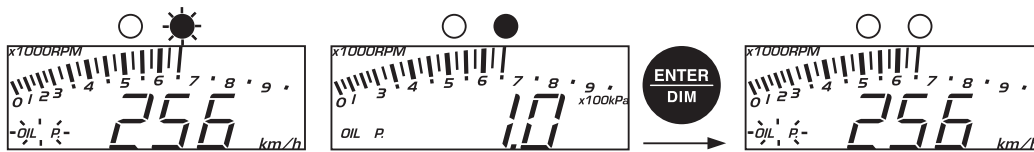
When current values exceed the values set as warnings by using Defi-Link Control Unit II(or Defi-Link Control Unit) and when disconnection or short circuit of sensor wires or sensors are detected, the screen indicates the warning.

Priority is given to the tachometer warnings over other warnings.

Warnings on boost and intake manifold pressure are not indicated.

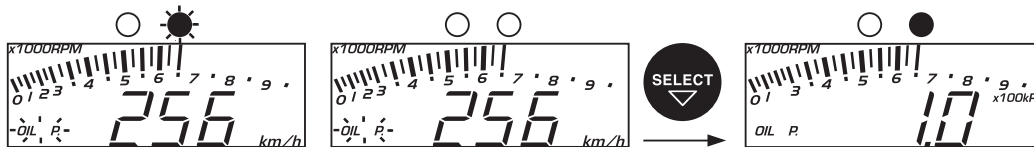
The warning on oil pressure is not indicated while the vehicle speed is under 10km/h(6MPH).

I)If the auto warning mode is turned ON in the setting of auto warning



When a current value exceeds the set value, the red LED and the name of the data blink. A buzzer sounds at the same time if warning buzzer is turned on. One minute later, the red LED and the name of the data stop blinking and start lighting and the current warning value is displayed. When several values exceed the warning set values, the latest warning is indicated. Pressing the ENTER button will return to the last display before the indication of warnings. If the value still exceeds the set value, the name of the data will continue to blink.

II)If the auto warning mode is turned OFF in the setting of auto warning



When a current value exceeds the set value, the red LED and the name of the data blink. A buzzer sounds at the same time if warning buzzer is turned on. One minute later, the red LED goes out, the buzzer is stopped, and the name of the data blinks faster. The red LED lights up and a buzzer sounds again if the warning data is selected to display in the digital display section by using the SELECT button. When several values exceed the warning set values, the name of data which is being displayed in the digital display section light up and other names blink.

Self-Diagnosis Function



Disconnection(open)

This display means that a wire disruption, disconnection or improper wiring connection has occurred at the sensor or in the sensor wire.



Short circuit

This display means that a short circuit has occurred somewhere at the sensor or in the sensor wire.



Serial error

This display means that communications between Defi-Link Display VSD CONCEPT and the Defi-Link system have been interrupted.



Setting Error of number of cylinders

"x1000RPM" blinks if the number of cylinders of Defi-Link Control Unit II(or Defi-Link Control Unit) is not set or if the METER OUTPUT2 connector of Defi-Link Control Unit II and the LINK connector of D.C.Unit is connected by error.

Rec Mode



When the vehicle is moving at the speed of 1km/h(1MPH) or more, connected sensor data and the speed data are recorded for a maximum of 3 minutes by pressing the REC button of Defi-Link Control Unit II(or Defi-Link Control Unit). "R" is displayed during recording. Data displayed in the digital and bar display section can be changed by pressing SELECT/BAR SELECT button.

NOTE: Even if REC button is pressed in vehicle's stopped condition, the vehicle speed data cannot be recorded and Rec Mode will turn to Play Mode.

Play Mode



When the vehicle speed is 0km/h(0MPH), recorded data are displayed by pressing the PLAY button of Defi-Link Control Unit II(or by pressing the PLAY/REC button of Defi-Link Control Unit during Peak Mode). "P" is displayed during playing of data. Data displayed in the digital and bar display section can be changed by pressing SELECT/BAR SELECT button.

NOTE: Once pause, fast-forward or rewind is performed with Defi-Link Control Unit II(or Defi-Link Control Unit), the recorded speed data cannot be played back. To play back the speed data, Play Mode needs to be started over again. Operation needs to be performed in vehicle's stopped condition. If the PLAY button is pressed in vehicle's running condition, speed data will not be played back but Play Mode will turn to Rec Mode.

Warm-Up Mode



This Warm-Up Mode is available when either a water temperature sensor or an oil temperature sensor is connected to Defi-Link Control Unit II (or Defi-Link Control Unit) and the setting of Warm-Up is completed. After Opening Mode, Warm-Up Mode starts if the sensor data is below the set value. During this mode, leftmost digital segments are lighted in order. If the displayed data is changed by pressing the SELECT button during this mode, the unit of temperature blinks(/ °F). When the temperature reaches the set value, Warm-Up Mode is completed and returns to Real Mode.

Control Output

This Control Output function is available when either a water temperature sensor or an oil temperature sensor is connected to Defi-Link Control Unit II (or Defi-Link Control Unit) and the setting of Control Output is completed. When the temperature reaches the set value, the Control Output signal is read out to the terminal of CONT. OUT of D.C.Unit.

⚠ Caution

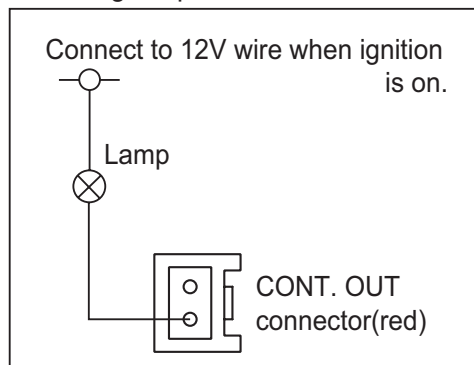
Do not connect anything to the CONT. OUT connector unless this function is used.

Load current of the Control Output is less than 300mA.

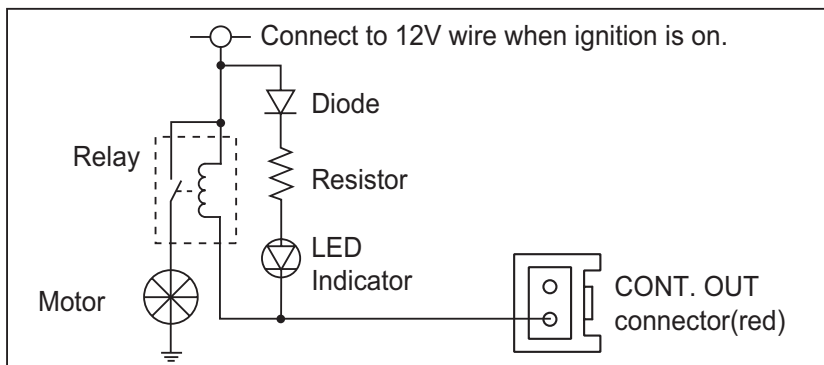
When the special display is performed, the Control Output signal is not read out.

Any damages to other products connected to the CONT. OUT connector is not covered by the warranty.

a) Example on direct hookup of a warning lamp



b) Example of how to connect a motor by using a relay and how to load a LED indicator



<i>SE7</i> <small>x100kPa °F PSI/MPH °C/km/h</small>	→ SET: Setting of units "kPa, , km/h" or "PSI, °F, MPH"
<i>SP-5</i>	→ SPEED SET: Setting of speed pulse
<i>P-4</i>	→ PULSE-4: Select the proper speed pulse from 2, 4, 8, and 16.
<i>FREE</i>	→ FREE: Set speed pulse other than 2, 4, 8, or 16.
<small>x1000RPM</small> <i>7R-5</i>	→ TACHO-SET: Setting of number of cylinders
<small>x1000RPM</small> <i>E-4</i>	→ ENGINE-4: Select the proper number of cylinders from 3, 4, 5, 6, and 8.
<small>W.TEMP DILT.</small> <i>-UP</i>	→ WARM-UP: Setting of warm-up function
<i>SPL.</i>	→ SPECIAL: Choose ON or OFF of special display.
<small>x1000RPM</small> <i>7R-r</i>	→ TACHO-REV: Setting of warning value for engine speed
<small>x1000RPM</small> <i>7R-b</i>	→ TACHO-BAR: Choose ON or OFF of bar display.
<i>WJ-b</i>	→ WARNING-BUZZER: Choose ON or OFF of buzzer sound.
<i>A-WJ</i>	→ AUTO-WARNING: Choose ON or OFF of auto warning display.
<i>di n7</i>	→ DIMMER: Choose AUTO or MANUAL of illumination control.
<i>A -d</i>	→ AUTO-DIMMER: Auto dimmer control
<i>n7-d</i>	→ MANUAL-DIMMER: Manual dimmer control
<i>A-L3</i>	→ AUTO-LEVEL3: Select one from three levels of brightness in auto dimmer mode.
<i>n7-3</i>	→ MANUAL-3: Select one from five levels of brightness in manual dimmer mode.
<i>[-0</i>	→ CONTROL-OUT: Setting of control output function
<i>OPEN</i>	→ OPEN: Disconnection of wire and/or sensor is detected.
<i>Sho7</i>	→ SHORT: Short circuit of wire and/or sensor is detected.
<i>Err.</i>	→ ERROR: Serial error is detected.

Refer to the operation manual for the details.