

# FCG-X fan control gauge-x

User's Guide

(No-002)

Kit Contents



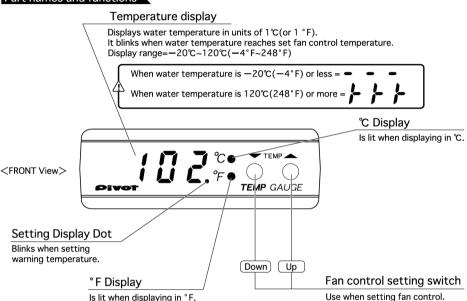








## Part names and functions



Setting the Fan Control

I !\ note When the fan kick-in temperature is set lower than the default kick-in temperature, the fan control works at the set temperature of the FCG-X, but when the set temperature is higher, the default temperature setting takes precedence.

- ① By pressing either of the fan control setting switches while the temperature display is on the Setting Display Dot will start to blink and the previous fan control setting will be displayed.
- ② Continue to press the switch to set the desired temperature. By pressing it one time, the temperature goes up or down in 1°C or 1°F units. By continuously holding down a switch the temperature will change rapidly.
- ③ Upon reaching the desired temperature setting, stop pressing. The FCG-X will return to its normal display in about two seconds. (Settings Completed)

1 To check the temperature, press one of the fan control setting switches once.

When newly installing or when battery has been changed, etc. the unit will return to factory settings, please check and change if necessary.

To return to the original setting, set the temperature under  $60^{\circ}$ C (140 °F)or over 120 °C (248 °F). "Off" will appear in the display and the fan control function will be off.

Cars with 2 electrical fans kick-in sequentially at 5 degrees lower than setting.

### Features

### ■Seguential Fan Control

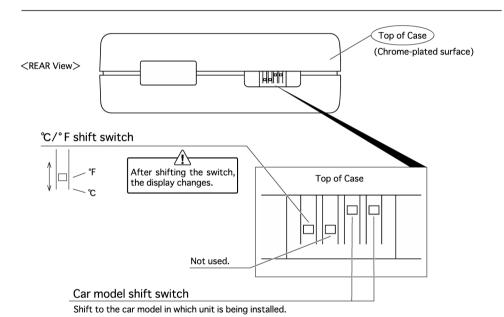
This unit makes it possible to change the kick-in temperature of the electrical fan, helping you prevent overheating and loss of power with its stable control. Also, for cars with 2 electrical fans you can set one of them to kick in sequentially from 5°C apart to give you stable control over your water temperature and also a highly precise water temperature display.

## ■No piping necessary / Precise Temperature Display

By simply connecting to your car's water temperature sensor signal, the water temperature will be accurately displayed.

### ■Dual display

Choose display in °C or °F.



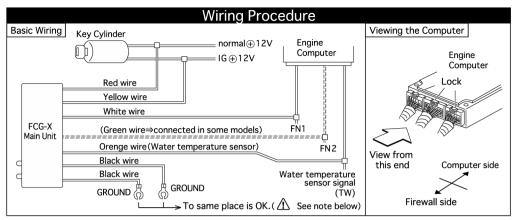
## HOW TO SET FOR YOUR CAR MODEL

SWITCH	Top of Case	Top of Case	Top of Case	Top of Case
MODEL OF CAR (The MAKER)	TOYOTA MATSUDA	NISSAN SUBARU	HONDA	MITSUBISHI

MARNING Make sure to shift this switch to the car model being used.

## -/! Caution -

Due to the smallness of the  $^{\circ}$ C/ $^{\circ}$ F shift switch and the Car Model shift switch be careful to use something with a sharp point ( precision screwdriver, toothpick etc). (Be careful not to push too hard and force the switch into the FCG-X)



## √!\ Installation Warnings

- 1. Unless checking the connection, it is advisable to work with the minus  $\bigcirc$  terminal of the battery disconnected so as not to cause an electrical short.
- 2. Connect each part securely. (Imperfect connection may cause a malfunction.)
- 3. Insulate each connection securely. (A short circuit may cause a malfunction to you car or FCG-X.)
- 4. When laying wires be extra careful not to cut any wires or create short circuits.

## Connection procedure

Securely connect all wires coming out of the FCG-X Main Unit.

Red wire = Connect to (+) 12v wires that run to Key switch off.

Yellow wire = Connect to 12v wires that run to Kev Switch on.

Black wire = Screw into still plate of car body to obtain earth. Blue wire = Screw into still plate of car body to obtain earth.

Please follow the !\ Warnings below:



- ①For some car models, the blue wire should be connected to the engine computer main unit grounding screw (Diagram=Main Unit Earth). If the grounding screw is specified in the [Table of Diagram for Water Sensor Signal Wiring by Car Model], make sure to connect to that screw. (For stable and accurate display readings).
- ②If not specified, the black and blue wires can be connected to the same screw. However, do not link them in the middle to form one wire. (In order to make display and fan control settings.)

White wire = Connect to electrical fan signal of engine computer. (Please see wiring for your model of car.)



Depending on the model of car, you may have to use the white extension wire to connect to a designated spot other than the engine computer. For details see [Table of Wiring by Model

Green wire = For some model cars connect to the electrical fan signal 2 of the engine computer. (Please see[Table of Wiring by Model of Carl)



Car models that need connection of the green wire are those which show an FN2 site in the wiring chart [Table of Wiring by Model of Car]. If there is no such site in wiring chart, there is no need for the green wire. It can be cut and bound out of the way after insulating the tip.

Orange wire = Connect to water temperature sensor of engine computer (TW in diagram) (Please see engine computer for your model of car.)

## How to use the Wire Connectors

※ If soldering is possible, please do so.









1 Peel off about 10mm of the vinyl cover at connection point.

Peel off about 10 mm of the vinyl cover at the end of the wire to be connected. ③ Twist the uncovered

 Close tightly with wire connector.

\*Use a crushing tool to press the wire connector. If you do not have such a tool, use pliers or such to fold and crush the connector together for a secure contact. \*Loose connections can cause wire to come apart, so please make sure the

Be sure to insulate and secure with vinvl electrical tape.



Troubleshooting \*\*Please make the following checks before seeking repair.

Trouble	Possible causes	Possible solutions	
No display with key on.	Contact failure of red wire. Contact failure of yellow wire. Contact failure of black wire.	Check the wire connections or conditions.	
Temperature is not displayed.  (Display appears or )	●Contact failure of orange wire.	Check the wire connections or conditions.	
Temperature display suddenly changes.  (Ex.) Suddenly changes from 80℃ to 100℃	The electrical charge is unstable at connection point of red, yellow or black wires.	Change the point of connection.	
Electric fan doesn't work even if it reaches set	•Contact failure of white wire.	Check the wire connections or conditions.	
temperature.	•Set temperature is OFF	Check the temperature setting.	
Electric fan starts to work before it reaches the set temperature.	When the set temperature is higher than the default temperature, the default setting takes precedence.	Check the default temperature setting and then re-set the temperature.	
comperature.	Cars that have the green wire connected to the FN2 kick-in sequentially at 5 degrees lower than set temperature.		



In the following cases, the temperature may exceed the set temperature; this is not a malfunction.

- 1. When the set temperature is too low. (Approx. less than 85°C)
- 2. When the external temperature is high.
- 3. When air flow to radiator or cooling is poor, as in traffic congestion or while stopped.

## PIVOT CORPORATION

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