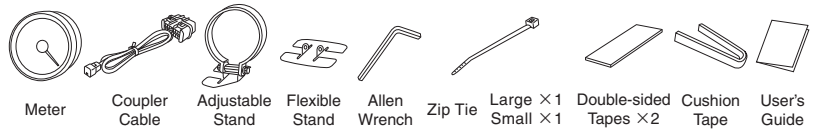


Multi Gauge for MINI **X3M**

USER'S GUIDE

Thank you for purchasing PIVOT "X3M". Please read these instructions carefully before installing or using this device. Please do not lose this user's guide, as you will held liable for the cost of reissuing it.

Check the contents



<p>⚠ CAUTION Improper use or disregard of these warnings may result in the injury or death of people.</p> <p>Do not work in areas where there is excessive exhaust Due to vehicle exhaust emission poisoning or fire may result in a damage to humans.</p> <p>Please securely fasten the product to a stable place It is very dangerous if, while in use, the product falls off and interferes with braking.</p> <p>Do not crush the cable Please be careful that the cable does not get crushed by the seat rail or car door steel plate, nor cut by any sharp steel plate as this may cause a poor connection or an electric short leading to fire or other danger.</p> <p>Do not operate while driving Operating or checking the display during driving may cause an accident; please use with the utmost consideration for safety.</p>	<p>⚠ NOTE Improper use or disregard of these warnings may cause injury to persons, damage the product and other things.</p> <p>This product is for DC12V cars; Installation cannot be carried out on cars with other voltage batteries.</p> <p>Do not, in any manner, process, take apart, or make changes to this product</p> <p>Make sure to replace all screws and parts to their original place Just after installation do not exert any strong force on the product When double-sided tape is used for an installation be warned that when hot the tape temporarily loses adhesiveness.</p> <p>Do not install the product in any place subject to high temperature or any place where water may be splashed Do not install the product in a place where it will cause distraction</p>
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- ⚠**
- The display will not be proper if the ECU being used is not the standard one or if a sub-computer is being used, even in compatible car models.
 - Cannot be used in combination with products that use another company's diagnostic monitoring connectors.
 - For details about using in combination with other PIVOT products please see our Web Site at http://pivotjp.com/information/obd_conjunction-e.html.

COMPATIBLE CAR MODELS

NEW MINI (Cars that are after model changes are not compatible.)

Vehicle	Model Year	Model	
ONE	H13.10~H19.1	GH-RA16	Compatible
COOPER		GH-RA16	
COOPER S		GH-RE16	
COOPER CB		GH-RF16	
COOPER S CB		GH-RH16	
COOPER	H19.2~	ABA-MF16	Incompatible
COOPER S		ABA-MF16S	

FEATURES

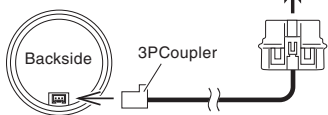
- Designed exclusively for MINI.....Compatible with specialized MINI format data , Coupler cables for MINI , Band holder for MINI.
- NO need for hassling with pipes and wires.....Coupler connection to the diagnostic monitoring connector for easy-installation.
- Easy-to-install.....Easy-installation with specialized stand and double-sided tape.
- Easy-to-read Multi-gauge Display.....Three types of data display plus shift lamp function in just one meter .
- Stepping Meter.....Stepping Motor Drive brings you a High-Performance Display with No Hunching or Overshooting.
- White Illumination.....Easy-to-read white illumination.

CONNECTING THE COUPLER

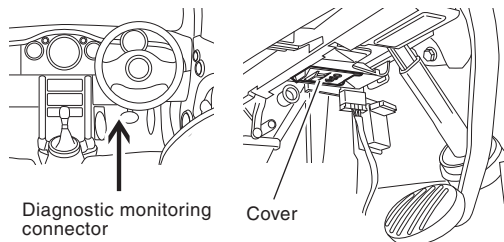
With the engine running, insert the coupler to the connector on the car.

※Installing while the engine is stopped may cause the unit to work improperly.

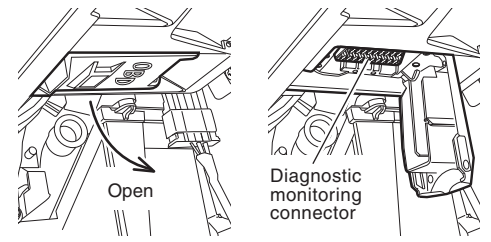
※When inserting, make sure that the diagnostic monitoring connector is placed in the proper direction.



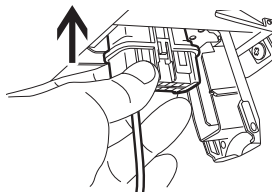
1. Locate the diagnostic monitoring connector position.



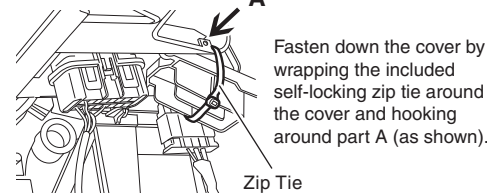
2. Open the cover.



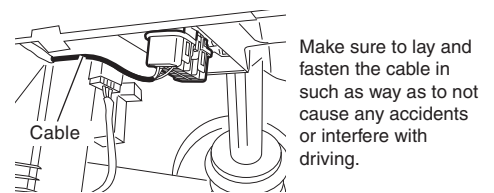
3. Completely insert the coupler.



4. Fasten the cover.



5. Fasten the cable.



FASTEN THE METER



For Single-meter Cars

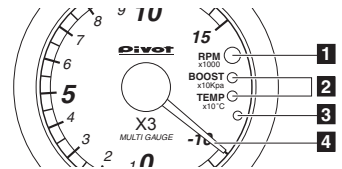
We suggest installing our meter to the right side of the standard Tachometer using the provided adjustable stand. However it can be placed anywhere you desire and may be used in conjunction with meter hoods and installed as a regular type meter.

※For installation on the dashboard, please use the provided flexible stand.

A. When using the provided Adjustable Stand			
<p>Install on the right of the Tachometer using the provided double-sided tape.</p>	<p>1. Insert the meter into the band holder ① Tighten the left screw so that the band can move slightly. ② Tighten the right side screw slightly, insert the meter and lightly fasten it into place.</p>	<p>2. Fastening to the right-side of the Tachometer ① Making sure that all dirt and oil has been removed, fasten the double-sided tape to the bottom of the stand, remove the green paper from the other side of the tape and fasten it to the desired location. ② Adjust the meter to the desired angle and tighten the right side screw.</p>	
For Dual-meter Cars		B. Installation with the Cushion Tape	
<p>Since there is no space available to the right of the Tachometer, we suggest using the provided flexible stand and install to a place on the dashboard or to another desired open spot.</p>	<p>Cushion Tape Panel</p>	<p>Wrap the cushion tape around the base of the meter and forcibly insert into the 60mm hole in the panel.</p>	

PART NAMES AND FUNCTIONS

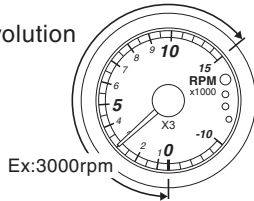
- 1 Shift Lamp**
Lamp comes on at set point to notify of the shift point.
- 2 Mode Lamp**
The lamp for the current mode will light up.
- 3 Switch**
Use to switch modes and make settings.
- 4 Needle**
Shows the current values and settings displays.



DISPLAYS FOR X3M

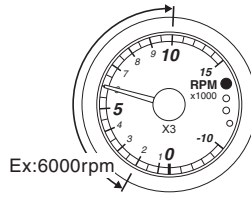
1. Engine Revolution

Display Range :
0 - 15000rpm



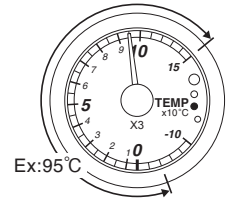
2. Shift Lamp

Setting Range :
2000 - 10000rpm



3. Water Temp

Display Range :
-40°C - 150°C

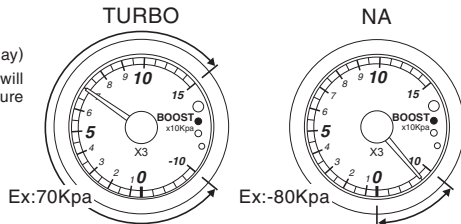


4. BOOST

(Absolute Pressure Display)

Normal aspiration cars will only display minus pressure (-100Kpa to 0)

Display Range :
-100 - 150Kpa



Opening Demo → Display → Stop

Engine start will display the opening demo one time, and will stop when key is switched OFF.

Illumination (Dial Lighting)

Dial will normally remain illuminated while in operation.

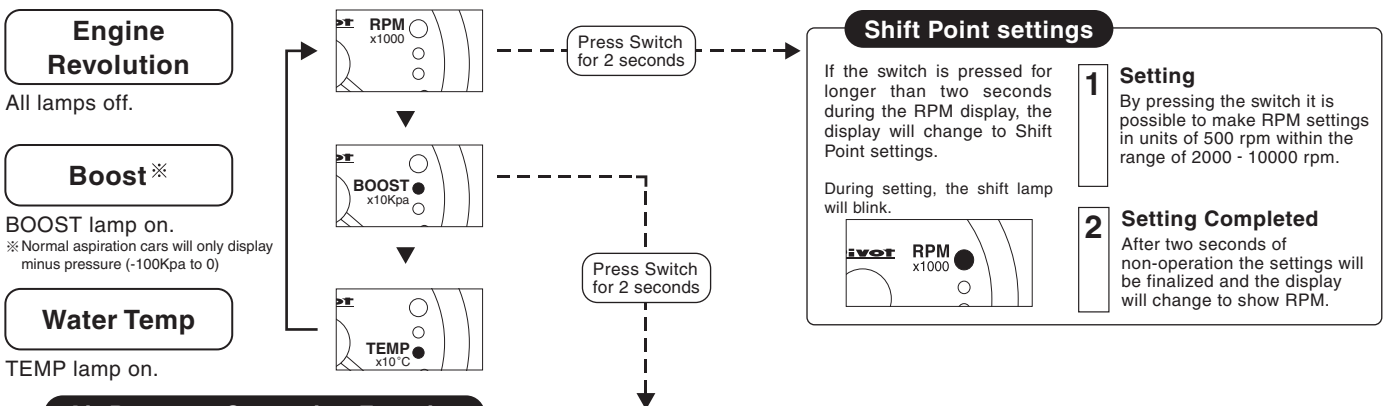


Note that only after installation the unit must judge the type of car model being used and hence it may take up to 40 seconds for the display to come on. Normally it may take up to 15 seconds to display and up to 15 seconds to turn off after the engine has been turned off.

BASIC OPERATIONS

※After installing this product, there is no need to make any car model settings.

With Engine start, after the opening operation, each pressing of the switch will change the display.



Air Pressure Correction Function

In the following cases, no correction is necessary.

- When the display of the ideal absolute pressure (including altitude pressure differences) is desired.
- When using in an area where altitude is low (under 200m).

Due to characteristics of the car sensor, the boost display for the X3M has an [Absolute Pressure Display] which takes in altitude differences. This is preferable to the normal gauge which shows relative pressure without taking into account differences in pressure due to altitude. But because of this, a difference will be exhibited between a standard gauge and the X3M. In order to correct this error, it is possible to enter the altitude for the area in which the unit is being used and the difference will automatically be adjusted.

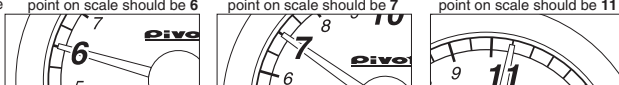
How to make Air Pressure Corrections

Pressing the switch for longer than two seconds during the BOOST pressure display will open the pressure correction function.

- Entering the Altitude**
Press the switch to move the needle to the correct altitude.
- Completing the Correction**
If the switch is not touched for more than two seconds, the correction will automatically occur.

※ Enter the altitude by rounding up or down to the next unit on the scale (x100).

Correction Example If the altitude is 630 m = point on scale should be 6 If the altitude is 680 m = point on scale should be 7 If the altitude is 1120 m = point on scale should be 11

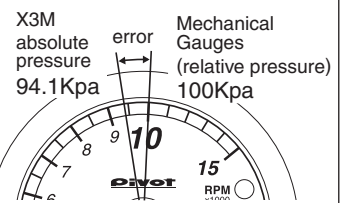


Example of error in Display

If 100Kpa at an altitude of 500 m.

! Check a map or the Internet for the altitude of the area where you are using the unit.

Reference :
<http://lab.uribou.net/II2h/>



Differences in Mechanical Gauge (relative pressure) Display by Altitude

※ Ex: 100Kpa (according to ICAO standards)

Altitude(m)	100	200	300	400	500	600	700	800
Difference with X3M display (Kpa)	-1.2	-2.4	-3.6	-4.7	-5.9	-7.1	-8.2	-9.4
X3M Display	98.8	97.6	96.4	95.3	94.1	92.9	91.8	90.6

About absolute pressure and relative pressure

Normal boost meters have been designed following mainstream mechanics and until now have displayed only [Relative Pressure] which does not include differences in pressure due to altitude. The X3M allows the user to see [Absolute Pressure], which includes the differences in pressure due to altitude and this more accurate information allows for better and more suitable engine control.

TROUBLESHOOTING

Please note that for some models of car in which the Boost display has been stated to be impossible, the display will work but the values shown will not be accurate nor correct.

Trouble	Possible Causes	Possible Solutions
Does not work with Engine start.	Poor connection of coupler.	Check the coupler connections or conditions.
	The unit has been installed into an incompatible car model.	Please check the list of compatible car models.
The displayed values are different from the standard meter.	Due to the ECU information received, the displayed values on this product may differ from those of standard or other meters.	
The boost pressure display is different from the standard or other gauge.	This product's boost meter reads absolute pressure and may differ from a meter using relative pressure. (For details about the basic operations please see the section entitled "Air Pressure Correction Function")	