

meter Vision unify controu unit

Instruction Manual

Introduction

TRUST CO., LTD. would like to thank you for purchasing this product.

Please be sure to read this instruction manual completely before using this product.

Always keep this instruction manual in a place which can be easily accessed.

This product is designed for off-road use only.

Observe all local traffic laws and do not use this product while operating a motor vehicle.

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Saftey & Handling Precautions

In order to use this product safely, installation and operation must be performed correctly.

Please read the safety precautions in this manual carefully and the instruction manual of the vehicle to which this product is to be installed.

Only proceed to installation after the contents of this manual have been fully understood.

Carefully pay attention and understand the following notations during installation to prevent any bodily injury or damage to the product, vehicle or property.

WARNING	Ignoring this indication and handling it incorrectly can result in death or serious injury.
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1 IMPORTANT	Observe this precaution in order to use this product properly.
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(j) FOLLOW	This is information you should know in order to use the production properly.
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A WARNING

- Personal injury or death could result due to misuse or improper handling of this product. Pay close attention to this installation manual as well as the vehicle's manual in order to properly operate and manage this product.
- Check and make sure there are no flammable items underneath the vehicle prior to commencing installation. Automobile exhausts can reach temperatures high enough to ignite flammable materials such as dry grass, creating the danger of a fire.
- Only have the engine running when necessary. Due to the exhaust gasses emitted from the exhaust, carbon monoxide poisoning may occur in a closed garage or warehouse. Take precautions to work in a well ventilated area, especially when the engine is running.
- To prevent injury or burns, fire or malfunction of the vehicle, only a competent mechanic who received specialized training should install and wire this product.
- Due to the risk of an accident, vehicle malfunction or fire if this product suddenly falls off during driving. Take into consideration vibrations that will occur under normal driving conditions before installing this product.
- The incorrect use of tools such as soldering irons and nippers may cause injury, burns etc. Please carefully read the instruction manual for each tool and use it properly after observing the precautions stated by the manufacturer.
- After completing the installation, please be sure to check that there are no obstructions to pedal operation or around the seat or foot area. If empty cans or tools are caught under the pedals, operation may become impossible, causing a life-threatening situation.
- Do not install this product near the deployment area of the air bag. Doing so may cause the product to become a projectile upon deployment of the airbag, which could lead to serious injury or death.
- \cdot Never operate this product while driving. There exists the danger of causing unexpected accidents due to inattentive driving.
- When transferring ownership of the vehicle that this product is installed in, be sure to inform the new owner and provide this instruction manual and warranty card for future use.

Saftey & Handling Precautions

A CAUTION

- Do not disassemble or modify this product in any way. Not only will it cause failure, it will not be covered by warranty.
- Do not wire incorrectly or short circuit. There is a risk of damaging not only this product but also the vehicle's electrical system. Trust will not bear any responsibility in these circumstances.
- We cannot assume any responsibility for damage related to the work of installing this product, so please work carefully.
- Please do not install this product in places with high humidity, dust or high temperatures such as in or around heater ports.
- Do not install this product in places subject to electric interference.
 This includes areas such as ignition signal or radio. Also, please do not use this product in places where powerful radio waves are generated.
 Noises due to radio waves etc. may cause malfunction of this product.
- Before commencing any wiring work, be sure to remove the key from the key cylinder and remove the negative terminal on the battery. There is a risk of short-circuiting when working with an active power source. Also, this is dangerous.
- Insulate by winding vinyl tape or similar on spliced wires which have been connected by soldering.
- \cdot Make sure to affix wire harnesses with a tie wrap or similar to ensure that they does not come off.

1 IMPORTANT

- This product is intended for off-road vehicles which may never be driven on a public road.
- This product is only compatible with 12V vehicles.
- By removing the negative battery terminal, some of the vehicle's memory contents may be deleted. This includes things such as the clock, audio, navigation system, electric seat, etc. Please check the operation manual of each product before performing any work. After completing the installation, please set again according to the instruction manual of each product.

(i) FOLLOW

- Since this product is a precision instrument, it is very important not to drop or expose to strong impact.
- When cleaning this product, wipe with a dry cloth. In cases where
 product has become severely soiled, please wipe with a cloth immersed
 in a small amount of water and firmly squeezed. Never use benzene
 thinners on this product, as the case and paint will deteriorate.
- Please understand that this product and this instruction manual may be changed or revised without notice.
- Please contact the authorized distributor that this product was purchased from for any inquiries regarding its use. Any warranty claims made by customers who purchased outside of the authorized dealer network will not be accepted.

Components

Components

• When unpacking the product, please check whether there are any differences in contents or in quantity.

• Also check that there are no differences between the serial number stated in the warranty card and the the main body.

In the unlikely event that there is difference, please contact the authorized retailer where the product was purchased.





Components

sirius vision Kit





Component Names



sirius control unit MODE Button UP Button SELECT Button DOWN Button Main Harness Connector (female)

Handling Precautions

The glass panel portion of the sirius vision may be damaged if strong force or pressure is applied. Please handle with care.

Also, be careful not to hit the edge of the glass strongly, as it may chip.



When handling the panel part or changing the angle of the meter, etc., always support by the main case and treat the glass panel with care as to not apply any force or pressure.



Whenever removing a meter from the double-sided tape, do not pull the main body with excessive force, as this could damage the swing adjustment mechanism. Please use extreme care when separating the adhesive body. A strong string such as fishing line may be used, but be careful not to damage the vehicle's panels.



Installation Diagram





Sensor Installation Diagrams

Boost Sensor

(Using the 3 way joint and 4mm hose)



Temperature Sensor

(Using a radiator adaptor - sold separately)





Fuel Pressure Sensor

(Using a three-way tee block and hose unions - sold separately)



*Make sure to secure the hose with a hose clamp or similar

Installation

Installation

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Installing the meter stand

There is a threaded hole for mounting the base on the bottom side of the meter body. Refer to the figure below and affix the stand to the base with the provided cap bolt.



The screw hole surface on the lower side of the meter body is the same rectangular groove as the meter stand mounting surface. When installing, tighten the cap bolt after ensuring that the mating surface of the meter pedestal fits properly in this groove.



Tighten the bolt to the proper torque specifications using a hexagonal wrench.

Torque: 0.5 to 0.6 N • m (5 to 6 kgf • cm)





Firmness of the head swing can be adjusted by tightening the three screws on the bottom of the stand.





PIN#	Function	Class	Color	[PIN#	Function	Class	Color
1		+5V	RED		18			
2	BOOST	Signal	WHITE		19	FYDANG		вт
3		Ground	BLACK		20	(*May b	e used for	
4		+5V	RED		21	tuture upgra	ided teature	es)
5	OIL PRESS	Signal	WHITE		22	—	—	Ι
6	1	Ground	BLACK		23		+5V	RED
7		+5V	RED		24	AUX PRESS	Signal	WHITE
8	FUEL PRESS	Signal	WHITE		25		Ground	BLACK
9		Ground	BLACK		26	METER	+12V	RED
10		+5V	WHITE		27		Ground	BLACK
11	WATER TEMP	Ground	BLACK		28	Winetelled at time	CAN Hi	PINK
12		+5V	WHITE		29	of shipping	CAN Lo	LIGHT BLUE
13		Ground	BLACK		30	—	—	-
14	AUX TEMP 2	+5V	WHITE		31		ILLUMINATION	WHITE
15		Ground	BLACK		32	VEHICLE POWER SUPPLY	IG	RED
16		+5V	WHITE		33	*Installed at time	CONT +	ORANGE
17		Ground	BLACK		34		GND	BLACK

Installation

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Installation

Feed sensor wiring harness through the vehicle's firewall by using the service holes.



Unlock the main harness connector.

The lock is released by slightly pushing the pin, indicated by the arrow in the figure below, until it clicks. When the lock is released, the pin will remain in the unlocked position.



Refer to the pin position diagram and make sure that all connections are correct when inserting the terminal inside the connector. Installing pins incorrectly could result in damage to the unit.



View with the lock pin facing DOWN

When inserting pins into the connector, be careful not to damage the seal part inside the connector housing as shown in the figure below.



Please check carefully that the pins are firmly inserted in the connector. If a pin is not inserted completely, pin on the connector cannot be locked. This will result in a poor contact and the device may not operate properly.



Installation

The pins can be checked to make sure that they are firmly inserted in the connector completely by viewing from the front side of the connector. Refer to the figure below and check that the pins are correctly inserted.





Confirm the pin is inserted completely. If pins are not inserted completely, the lock pin will not operate properly

If a sensor is not connected, the DIGITAL display on the sirius vision will display as "---". In the case of a sirius meter, the needle will point below the the lowest value on the meter face.

After the pins are inserted correctly, proceed to set the pin lock on the connector.





Applying a strong force (such as striking with a hammer, piercing with a sharp pointed object such as a screwdriver, pulling with a plier, etc.) can result in the locking mechanism becoming damaged.

If if isnt able to be locked, check to make sure that the pin is inserted correctly in the connector housing again.

Installing the Control Unit

When choosing the mounting location of the control unit, make sure to affix it properly to reduce the risk of it becoming loose during driving. Install in an area that does not obstruct driver visibility or impede driving operation.

The Control Unit should be mounted on a flat surface. Mounting on a curved surface may increase the risk of the unit becoming loose during driving.

When using the included double-sided tape, cut the shape according to the bottom of the control unit. Please refer to p.61 for cutting dimensions.



Securely affix the wiring with a cable tie or similar. Please ensure that steering and/or pedal operation are not hindered and that there isn't the possibility of severing or disconnection of wire due to interference with any moving parts.



Installation

When using double sided tape, wipe off any oil and dirt to ensure a robust bond.

※ Please do not use any organic solvents such as paint thinner. It may cause discoloration or deformation on the applied surface/part.



Power Supply Harness Wiring

Wiring Preparation

Please remove the negative terminal of the battery before wiring the power supply harness.

Please note that depending on the type of equipment (car navigation system, audio, etc.) currently installed in the vehicle, data (such as time and date) may be erased.

Also, depending on the vehicle, an error may occur by shutting off the battery power supply. Always consult the vehicle instruction manual prior to installation.



Wiring

Wiring of the power supply harness should be performed correctly according to the wire color with reference to the figure below. Wiring the red wire and yellow wire to the ignition power supply or wiring the constant power supply and ignition power supply in reverse may cause a malfunction.

Be careful not to short-circuit during wiring, as it may cause damage to the internal circuit.



Power supply wiring examples on the vehicle side:

- From audio equipment wiring
- From key ignition cylinder
- From ECU

When wiring, please refer to the wiring diagram of the vehicle and be careful not to damage other wiring.

Installation

Connecting the Control Unit and Meters

Meter (meter, vision) connection

Connect the communication harness of the main harness to the connector on the back of the meter.

Please check carefully, as the connectors have top and bottom sides.



Meter (unify) connection

There are two connectors for connecting the communication harness on the back of the sirius unify.

You can connect and route the attached link harness by curving it as the illustration below.

If the link harness is hard and difficult to bend due to cool temperature etc., it can be warmed with a drier to make it soft and easier to bend. Connect the communication harness of the main harness to the branch connector.

Please check carefully, as the connectors have top and bottom sides.



Linking Multiple Meters

Connect the communication harness of the main harness to the link cable. You can add meters by connecting cables.



After completing the final check to ensure that all wiring is correct and connections are secure, reinstall the negative terminal to the battery.



Installation

Installation

Meter Installation

When using double sided tape, wipe off any oil and dirt to ensure a robust bond.

※ Please do not use any organic solvents such as paint thinner. It may cause discoloration or deformation on the applied surface/part.



Adjust the included double-sided tape to the base and cut it to the size of your choice and paste it. Refer to p. 60 for cutting dimensions.



If it becomes difficult to peel off the meter from the bonded surface, please use a strong fishing line or similar to separate the adhesive. Twisting by force could break or damage the the main body.







Operation



PEAK Value Display/Clear

The PEAK function stores and displays the maximum value (peak value) measured by the meter connected to the controller up to the present time. In real time display, pressing the MODE button once will turn on and display every meter's PEAK values.

Displaying and Clearing PEAK values for all meters.



When the needle is blinking, this indicates that PEAK Values are being displayed. When the numerical display and the PEAK indicator are blinking, this indicates that PEAK Values are being displayed.

 To return to real time display, press the MODE button or meters will automatically return to real time value display after 10 seconds.
 To clear all meter's PEAK Values, press and hold the the MODE button.



Clear the selected item's PEAK Value

• Each time the SELECT button is pushed, the different items are repeatedly switched in the above order.

• While selecting items, the needle will blink on the meter and the PEAK indicator and PEAK values will blink on the vision.

Pushing the SELECT button will move to the next item in order.
 For details on screen display of non-dedicated items (AUX TEMP, AUX PRESS etc.,) please refer to p.38.

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 Pushing and holding the SELECT button will clear the selected item's PEAK Value. After clearing the selected item's PEAK Value, it will return to PEAK Value select menu.

Push to MODE button to return to all meter PEAK Value display menu.

• If no button is pushed for 10 seconds or if MODE is pushed once more, it will automatically return to real time display.

If the ITEM value being displayed is the same on the meter and vision (eg: TURBO on meter and TURBO on vision) they will be selected on both displays and thus will blink on both the meter and vision.

Non-dedicated Items (PEAK)

Non-dedicated items will display as below in the PEAK Value's menu. ** Values in the diagram below are for reference purposes only.



WARNING display and setting

The WARNING function acts to notify when the measured item value exceeds the set value. In real time display, push and hold MODE button to enter all meters WARNING values.

Go to all meter WARNING Values



The scale light turns red with the WARNING value, indicating that the WARNING value is being displayed.

The WARNING indicator flashes with the WARNING value, indicating that the WARNING value is being displayed.

• When all meters WARNING values are displayed, if there is no operation for 10 seconds, it will automatically return to real time display.

Displaying individual items WARNING Values

When all meter WARNING values are displayed, pressing the SELECT button will set the item-specific WARNING value. Select items individually with the SELECT button.



 While selecting each item, the scale flashes quickly in red on the meter, and the WARNING indicator and WARNING value blink rapidly on the vision.

Push the SELECT button to move to the next item.

* For details on screen display of non-dedicated items (AUX TEMP, AUX PRESS etc.,) please refer to p.38.



If the item value being displayed is the same on the meter and vision (eg: TURBO on meter and TURBO on vision) they will be selected on both displays and thus will blink on both the meter and vision. The WARNING value of the selected item is increased or decreased by pushing the UP and DOWN buttons.

When increasing or decreasing values, pushing and holding the button incrementally increases the amount of change in value, resulting in faster numerical change.



Interrupt warning function

The interrupt warning function works when multiple sensors are connected to the sirius vision,

and an item other than the one currently being displayed enters the warning range. In this case the display $% \left({\left[{n_{\rm s}} \right]_{\rm s}} \right)$

will enter WARNING display mode.

In this mode, the vision will continue to show the current displayed item, but in addition the name of the item in warning range and the WARNING indicator will flash.

If more than one item has reached the WARNING range, then all those item names will blink.

Example: When the display item is set to "TURBO" and "WATER.T" reaches the WARNING area



When "OIL.T" also reaches the WARNING range from the above mode.



WARNING indicator • item name (WATER.T, OIL.T) • unit (°C) flashes

Non-dedicated Items (Interrupt Warning)

Non-dedicated items are displayed as follows. * Values in the diagram below are for reference purposes only.



WARNING indicator and volt unit (V) will blink



WARNING indicator and pressure unit (kPa) will blink



Operation

Brightness Settings

This function can adjust the brightness of meter / vision respectively. Also, independent brightness setting can be preformed when headlights are ON / OFF.

Brightness Setting Mode

When all meters WARNING is displayed, press the MODE button again to enter brightness setting mode.

 In brightness setting mode, the meter blinks in white and the vision flashes the GReddy logo and bar display section. Press the UP button to increase the brightness, and press the DOWN button to decrease the brightness.

• You can switch from meter and vision by pressing the SELECT button.

• Pushing the MODE button or not pushing any buttons at all for 10 seconds will return to real time display.



Brightness can be set separately for when the headlights are on (nighttime) and off (daytime). (Vehicle's illumination signal must be wired correctly in Control Unit)

• When you want to set the light brightness at night, please adjust the brightness with the vehicle's light switch on.

• When you want to set the light brightness during the day, please adjust the brightness with the vehicle's light switch off.



Operation

Display Item Settings (digital / bar)

In this mode, you can change the items displayed on sirius vision. Press the UP button or DOWN button to change the display. It is also possible to set the digital numerical display and the bar display to show these values.

Move to display item setting (digital numerical display)

When sirius vision is connected to the controller, push the SELECT in real time mode to select displayed item.

• Pushing the MODE button or not pushing any buttons at all for 10 seconds will return to real time display.



For the IGN VOLTS, AUX PRESS, AUX TEMP 1 & 2 refer to the diagram below.

% When sensors for the corresponding parameters are connected, general use inputs (V) & (AUX) will be displayed as below in addition the GReddy logo.

% The values for IGN VOLTS and AUX PRESS are for reference purposes only. To differentiate between AUX TEMP 1 and AUX TEMP 2, the numbers 1 or 2 will be displayed.



• Press the SELECT button to confirm the item change and select the digital display of the next meter. The sirius vision (up to 3 units) connected to the controller is circulated and selected.

• Pushing the MODE button or not pushing any buttons at all for 10 seconds will return to real time display.



Operation

Display Item Settings (bar view portion)

When sirius vision is connected to the controller, push and hold the SELECT in real time mode to select bar display item.

• Pushing the MODE button or not pushing any buttons at all for 10 seconds will return to real time display.



For the IGN VOLTS, AUX PRESS, AUX TEMP 1 & 2 refer to the diagram below. * In addition to the GReddy logo display and units of measurement (C*, kPa, etc) as below, the bar level corresponding to the selected item value will be displayed.

** The values for IGN VOLTS and AUX PRESS are for reference purposes only. To differentiate between AUX TEMP 1 and AUX TEMP 2, the numbers 1 or 2 will be displayed.



 Press the SELECT button to confirm the item change and select the bar display section of the next meter. Up to 3 sirius vision units may be connected to one control unit, in the case where more than one vision is connected, the next vision unit will be selected in a circular pattern.

• Pushing the MODE button or not pushing any buttons at all for 10 seconds will return to real time display.



Operation

Opening / ending action ON / OFF switching function

Opening and ending action can be selected.

During ON/OFF setting, all meters will blink 3 times to indicate the function is on, and blink 2 times to indicate the function is off.



Factory Reset Function

The sirius meter series includes a factory reset function which will revert to all settings to the same as that of time of shipping.

Once the factory reset function is activated all meters will blink quickly 3 times.



Specifications

Displayed items max/min range and brightness

The lower and upper limits of the displayable items on each meter of the sirius meter / vision, and the default illumination brightness are as follows.

sirius meter

	Display Value Range	WARNING Initial Value	Remarks
Boost	-0.99 ~ 2.5 (kPa)	1.20 (kPa)	
Water Temp	0 ~ 120 (°C)	100 (°C)	
Oil Temp	20 ~ 140 (°C)	120 (°C)	
Oil Press	0 ~ 10.0 (kPa)	1.0 (kPa)	*Lower Limit Warning
Fuel Press	0 ~ 6.0 (kPa)	1.5 (kPa)	*Lower Limit Warning
Brightness	Daytime Light Intensity 7	Nighttime Light Intensity 3	

sirius vision

	VALUE DISPLAY RANGE	WARNING Initial Value	COMMENTS
Boost	-0.99 ~ 2.5 (kPa)	1.20 (kPa)	
Water Temp	0 ~ 120 (°C)	100 (°C)	
Oil Temp	20 ~ 140 (°C)	120 (°C)	
Oil Press	0 ~ 10.0 (kPa)	1.0 (kPa)	*Lower limit Warning
Fuel Press	0 ~ 6.0 (kPa)	1.5 (kPa)	*Lower limit Warning
AUX Temp 1/2	20 ~ 140 (°C)	120 (°C)	
AUX Press	0 ~ 10.0 (kPa)	1.0 (kPa)	*Lower limit Warning
Volts	9 ~ 18.0 (V)	10.0 (V)	*Lower limit Warning
Duinhtenne	Daytime Light Intensity	Nighttime Light Intensity	
Brightness	7	2	

Power Consumption

Power consumption at the control unit when powered off is as below.

sirius control unit

Dark current

approx. 0.2(mA)

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Range of motion











Specifications

Troubleshooting

Problem	Cause	Solution		
All systems non-functional	Power supply wiring issues (contact failure, miswiring, etc.	Refer to "Installation - Power Harness Wiring" in this instruction manual. Confirm that wiring of each power supply and ground wire has been correctly performed. Also check the wiring on the vehicle (IGN, cont, illumination, ground) with a tester, etc.		
Needle does not move (meter) () is displayed (vision)	Sensors are not connected or have become disconnected.	Check whether the sensor wiring connector has become scratched or broken. If damage		
Numeric values do not change		sensor. Please contact your GReddy dealer.		
Needle points out of range (meter)	Sensor is not connected or has become damaged.			
After the opening action, gauge goes dicrectly to ending action	Power supply wiring is incorrect. (IGN power supply and constant power supply wiring are incorrect, etc.)	Refer to "Installation - Power Harness Wiring" in this instruction manual. Confirm that wiring of each power supply and		
Power turns off without peforming the closing action	Power supply wiring is incorrect. (IGN and Cont power are bundled together, etc.)	continuous wires have been performed correctly.		
A humming noise emmited from the guage	During operation, a humming noise can be heard emmiting from the gauge.	These guages emit a small operating sound which is normal and presents no problem. If abnormal operation is observed, please consult your GReddy dealer.		
Control Unit is powered but will not power the gauge	The communication harness is not properly connected or there is a poor connection between branch harnesses.	Check that the communication harness and the branch harnesses are correctly inserted in the connector on the back of the gauge or have not become disconnected.		
Terminal not inserted in main harness connector	The connector is locked or there is a foregn object lodged in the connector.	Check that the pin lock has been released and there are no foreign materials inside the connector.		

About After-Sales Service

- If you have any questions about this product, please contact the authorized distributor which sold the unit. Please note that products purchased outside the TRUST distributor network will not be covered under warranty.
- · Please keep and safeguard the attached product warranty card.
- The serial number on the main body is required when our company provides any after-sales service. Please be aware that it may not be possible to receive repair service etc. if the serial number has been deliberately peeled off, is unreadable due to contamination, number modification etc.
- If the serial number described in the warranty included in the enclosed package differs from the product number attached to the main body at the time of purchasing this product with a new one, please take a moment to contact the authorized distributor which sold the unit.
- Sirius series products are guaranteed free of manufacturing defects for a period of 1 year from the original date of purchase. Please keep your receipt and contact the authorized distributor which sold the unit for any warranty inquiries.

Appendix

sirius vision for embedded installation



sirius meter for embedded installation



Appendix

sirius unify for embedded installation



Dimensions



Appendix

Double-sided tape cutting dimensions (meter pedestal)



Double-sided tape cutting dimensions (control unit))



Bottom dimension (pedestal, control unit)



Appendix

Discover other gauges and dashboards on our website.