e-manage

Support Tool

GReddy e-Manage Support Tool v1.10

Instruction Manual

GReddy

Please read this instruction manual carefully, and proceed with the installation ONLY if you fully understand this manual_ Make sure to pay attention to all the "Important!" 'Warning!" and "Caution!" messages through out the manual.

Important!

This product is legal for sale or use in California only on vehicles which may never be driven on a public highway.
This product is only for vehicles with 12V (battery) systems.

Warning!

Installation and use of this product should only be performed by a trained specialist, who is very familiar with the automobile's mechanical, electrical, and fuel management systems, if installed by untrained person, it may cause damage to the unit as well as the vehicle.

When using a soldering iron or other tools for installation, make sure you read and understand the tool's user manual. Ms-use of these tools can cause serious injuries.

Never tune the E-manage while the vehicle is moving.

Never tune the e-Manage on public highways. This can be dangerous to you and others on the road.

When tuning and operating the vehicle in a garage, make sure that the garage is equipped with a proper ventilation system.

After installation and tuning, make sure to clean up every thing that would interfere the driver. Wires, tools, and laptop computer may interfere with the driver and cause accidents.

Avoid open sparks, flames, or operation of electrical device near flammable substances.

Make sure there are no leaks in the fuel system and that all of the connections are secure.

1. Important Information

Improper tuning of the e-Manage can cause damage to the engine.
GReddy Performance Products Inc. will not take an responsibility
of damage caused by improper installation or tuning .
Tuning should be performed only by a technician who full
understand the vehicle's fuel management and ignition timing
requirement for the engine being tuned.
Always s use a proper air/fuel ratio meter when tuning the e-Manage.
Installation of this product requires modification of the vehicle's
electrical system.
When making wire connections, be sure to remove the key from the
ignition, and disconnect the negative terminal of the battery.
Never short out the system. It can damage the unit as well as
the vehicle's electrical system.
Read and fully understand the wiring diagram before making any
wire connection.
When connecting the connector, push it in all the way until you hear
them click in together.
The communication cable is not a repairable item, so please take
care of it. When disconnecting from the PC (laptop), pull holding the
connector. Never pull on the cord.

Please
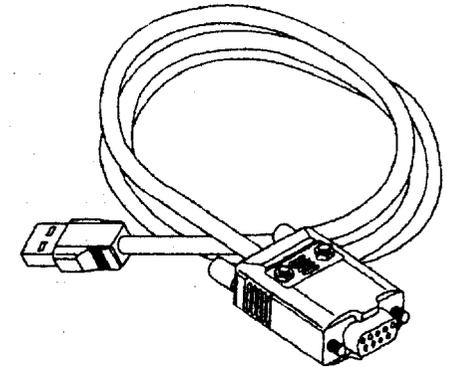The product and the instruction manual are subject to change
without notice.

2. Parts List

Please
Check the parts list and make sure you have received all the items
in the list.

CD ROM x 1   Communication Cable x 1

Instruction Manual x 1

2

3

This product will allow the tuner to program GReedy e-Manage functions, by linking the e-Manage and a WindowsR◯ based PC. This product is only for the vehicles equipped with GReddy e-Manage.

Features :

Air Flow Adjustment Map
This 16 x16 (rpm x throttle position) table is used to fine-tune the input signal of the Air Flow Meter or MAP Sensor to the ECU for fuel enrichment.

Upgrade Injectors
Controls upgrade injectors. (up to 150% larger than factory)

Upgrade Airflow meters
Controls upgrade Airflow meters.

Boost limiter cut feature
Eliminates factory boost limiter.

Anti Engine Stall feature
This is used to stabilize the rough idle due to turbo compressor surge, Blow-off valve vented out to the atmosphere or use of a high lift camshaft.

VTECR Setting
This is used to set the VTEC setting without going in to the Main Unit.

Map Trace feature
This allows the tuner to pin point the current location on any map table.

Real Time Display feature
This allows the tuner to monitor the engine condition in real time.

Real Time Communication
This allows the PC and e-Manage to communicate at real time. Any changes made on the computer screen is sent to e-Manage with in 2-3 sec.

Data Logging feature
This allows the tuner to view the data recorded and saved during the real-time mode in graph form.

Security Setting feature
This allows the tuner set up a password to apply a security lock to the data in the main unit.

Optional Parts:

Harness Kit (Injector control)
This harness is used when controlling main injectors or sub injectors

Harness Kit (Ignition Timing Control)
This harness is used when controlling the ignition timing.

GReddy Pressure Sensor
GReddy pressure sensor can be used for the scale of each Map table. This is used when the factory system exceeds the Air Flow Meter or MAP sensor capacity.

Before installation of the software, please make sure that the PC is set up correctly. This product will only operate on WindowsR 95, 98, Me, or 2000, that meets the requirements listed below.

System Requirements
IntelR PentiumR 166MHz or faster processor
At least 32MB of RAM (e4MB recommended.)
A hard drive with at least 50MB of free space.
A SVGA monitor (800x600) and a16bit (high color) display
A 3.5inch 1.44MB floppy disk drive
A CD-ROM drive
Serial port with RS-232C D-Sub 9 pin connector (male)

Important
If the Serial port is not D-Sub 9 pin connecter (male), an adapter will be necessary to connect the communication cable.
For computers that are not equipped with a Serial port, a USB to Serial adapter is required Do not use USB to USB cable.

If your computer meets the requirement listed above, the basic features of this program will operate, but to use the "Real Time Monitor" feature requires the following.

Required to use the "Real Time Monitor"
IntelR Pentium R 266MHz or faster processor
At least 128MB of random-access memory (RAM)

As for the setup and installation of the WindowsR , please refer to the "Getting Started" manual included in the WindowsR Software.

Basic PC Operation

This system will basically operate the same as any other WindowsR based software, such as changing window size, closing window, mouse operation, quitting, and etc. For further information, please refer to the "Getting Started" manual included with the WindowsR Software.

Please Note

The Support Tool v1. 10 software has a Main Unit (e-Manage) Update v1.20 program that will automatically detect and update an old version unit when the Main Unit is linked With the PC.
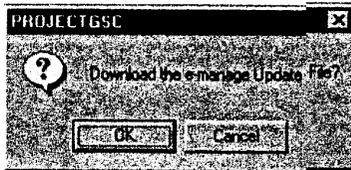
Follow the instructions listed below to install the Support Tool software.

Software Installation

1 . Turn Personal Computer "ON"
2. Insert the Support Tool CD-ROM in the CD-ROM drive. This software is a self installing software, so installation will begin soon as the CD-ROM is inserted. Follow the instruction on the screen.
3. After the installation is complete, GReddy e-Manage short cut icon will appear on the desktop.

Important

If the self installation fails
Depending on the computer's settings, it will not allow self installation. When this happens double click the "setup. exe" in the "DISK1 " folder in the CD-ROM to install the software.
If the program does not operate properly
Uninstall the program, and reinstall the program.
If communication feature does not operate
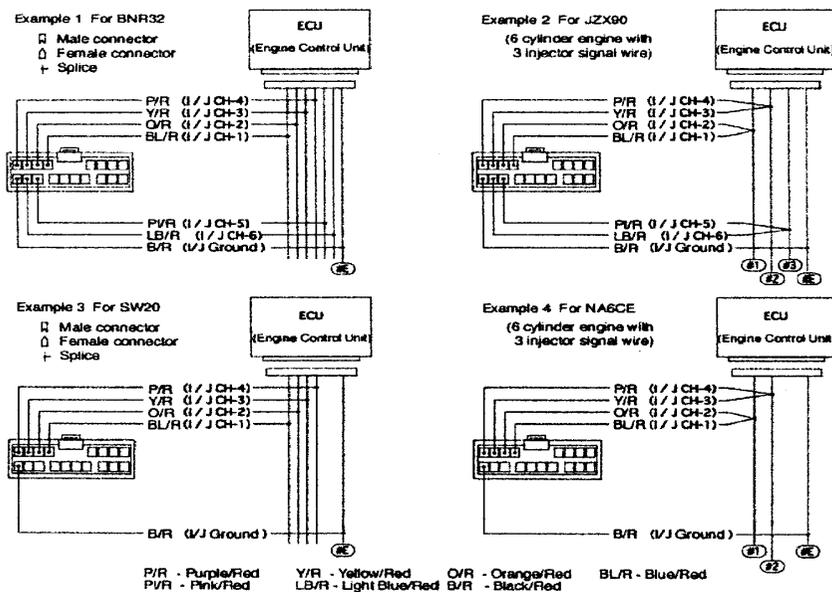Uninstall the program, and reinstall the program.

To uninstall

1. Click on the "ADD/REMOVE PROGRAM' in the "CONTROL PANEL".
2. From "ADD/REMOVE PROGRAM' list, select "GReddy e-Manage Support Tool", then click on "ADD / REMOVE" button.
3. Click "OK"
4. When it return to the "ADD/REMOVE PROGRAM' window click "OK' to go back to "CONTROL PANEL".
5. Close the "CONTROL PANEL" window.

Wire diagram for Injector Signal

Please read the instructions included with the Injector Harness kit, and proceed with the wiring only if you fully understand the instructions.

Connect to the vehicle's Injector signal wires. Refer to the 'Vehicle Specific ECU wire location chart" at the end of this manual for the proper location of each wire. Make sure that you connect same number of wires as the engine's cylinder number. (Excludes Rotary engines)

For Rotary engines, you can only wire the primary or secondary injector signal or both.

Example 1 For BNR32
- ◻ Male connector
- ◊ Female connector
- ⊢ Splice

ECU (Engine Control Unit)

P/R (I / J CH-4)
Y/R (I / J CH-3)
O/R (I / J CH-2)
BL/R (I / J CH-1)

PI/R (I / J CH-5)
LB/R (I / J CH-6)
B/R (I/J Ground)

Example 2 For JZX90
(6 cylinder engine with 3 injector signal wire)

ECU (Engine Control Unit)

P/R (I / J CH-4)
Y/R (I / J CH-3)
O/R (I / J CH-2)
BL/R (I / J CH-1)

PI/R (I / J CH-5)
LB/R (I / J CH-6)
B/R (I/J Ground)

Example 3 For SW20
- ◻ Male connector
- ◊ Female connector
- ⊢ Splice

ECU (Engine Control Unit)

P/R (I / J CH-4)
Y/R (I / J CH-3)
O/R (I / J CH-2)
BL/R (I / J CH-1)

B/R (I/J Ground)

Example 4 For NA6CE
(6 cylinder engine with 3 injector signal wire)

ECU (Engine Control Unit)

P/R (I / J CH-4)
Y/R (I / J CH-3)
O/R (I / J CH-2)
BL/R (I / J CH-1)

B/R (I/J Ground)

P/R - Purple/Red   Y/R - Yellow/Red   O/R - Orange/Red   BL/R - Blue/Red
PI/R - Pink/Red   LB/R - Light Blue/Red   B/R - Black/Red

Important
If the vehicle does not have the same number of injector signal wire as the number of the engine's cylinder number, group 2 wires in to one. See the diagram above.

Wire diagram for Sub Injector Signal

When using the I/J CH-A, I/J CH-B for sub injectors, set the jumper JP5 and JP6 in the e-manage main unit to "1-2" from "Open".

(For low resistance injectors)
I/J CH-A or CH-B — Dropping Register — Fuse (5~10A) — Battery + terminal

(For high resistance injectors)
I/J CH-A or CH-B — Fuse (5~10A) — Battery + terminal

Important
If the vehicle does not have the same number of injector signal wire as the number of the engine's cylinders, group 2 wires in to one.
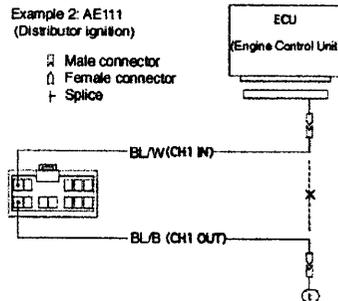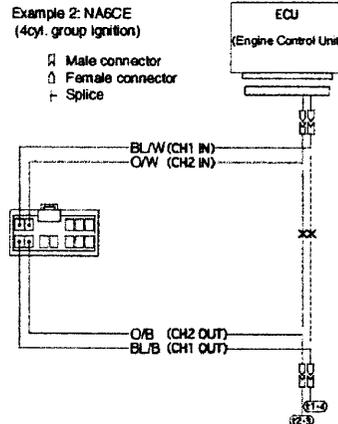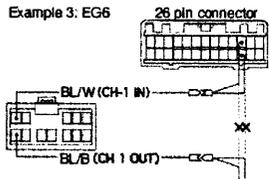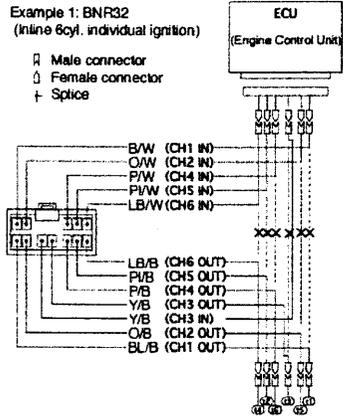
Wire diagram for Ignition Signal

Please read the instructions included with the Ignition Harness Kit, and proceed with the wiring only if you fully understand the instructions.

Connect to the vehicle's ignition signal wires. Refer to the "ECU wire location chart" in this manual for the proper location of each wire. Connect the ignition channel wire in the engine's firing order.

e-manage I/G Channel	CH-1	CH-2	CH-3	CH-4	CH-5	CH-6
3, 4, 6, 8 cylinder distributor	t					
Inline 4 cylinder group ignition	t1,4	t2,3				
Horizontally opposed 4 cylinder	t1,2	t3,4				
Inline 4 cylinder individual ignition	t1	t3	t4	t2		
Horizontally opposed 4 cylinder	t1	t3	t2	t4		
Inline 6 cylinder group ignition	t1,6	t5,2	t3,4			
V6 group ignition	t1,4	t2,5	t3,6			
Inline 6 cylinder individual ignition	t1	t5	t3	t6	t2	t4
V6 individual ignition	t1	t2	t3	t4	t5	t6
13B (FC3S, JC3SE)	tT	tL				
20B (JCESE)	tT			tL		
13B (FD3S)	tT1	tT2	tL			

Important
Make sure that wires are connected in the firing order and jumper setting is correct. Improper wiring and setting can damage the ignition coil.

Example 1: BNR32
(Inline 6cyl. individual ignition)

⊓ Male connector
∩ Female connector
⊢ Splice

ECU
(Engine Control Unit)

B/W (CH1 IN)
O/W (CH2 IN)
P/W (CH4 IN)
PI/W (CH5 IN)
LB/W (CH6 IN)

LB/B (CH6 OUT)
PI/B (CH5 OUT)
P/B (CH4 OUT)
Y/B (CH3 OUT)
Y/B (CH3 IN)
O/B (CH2 OUT)
BL/B (CH1 OUT)

Example 3: EG6   26 pin connector

BL/W (CH-1 IN)

BL/B (CH 1 OUT)

Example 2: NA6CE
(4cyl. group ignition)

⊓ Male connector
∩ Female connector
⊢ Splice

ECU
(Engine Control Unit)

BL/W (CH1 IN)
O/W (CH2 IN)

O/B (CH2 OUT)
BL/B (CH1 OUT)

Example 2: AE111
(Distributor ignition)

⊓ Male connector
∩ Female connector
⊢ Splice

ECU
(Engine Control Unit)

BL/W (CH1 IN)

BL/B (CH1 OUT)

* On Honda EG type vehicles,
the bottom third pin from the
right on the 26 pin is also an
ignition signal. Group the 2
wire together.

Important
On Honda, set the jumper pins JP1 and JP2 to 2-3.
After wiring, if the tachometer, or not firing occurs, set the jumper
pin JP2 to 2-3 (especially on Toyotas)

Starting the application
1. With the IG key in "OFF" position, connect the PC, and
   e-Manage using the Communication Cable. D-Sub 9pin connector to
   PC and USB to the e-Manage.
2. Turn the IG key to the "ON" position, then double click on
   the e-Manage short cut icon on tile desktop.
3. When the application opens, you see the following.

Please
Use only the provided communication cable. If a different cable is
used, it might damage the PC or/and the e-Manage.
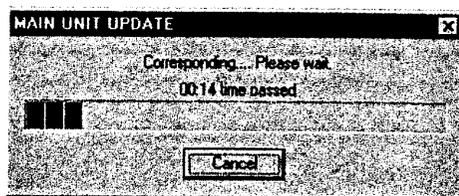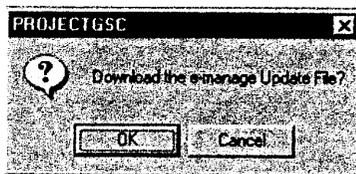

Download the communication Program (Main Unit Update)
1. Always disconnect the 12 pin connector on the main unit.
2. Check and make sure that the status bar is displaying "ONLINE". If it
does not show "ONLINE", Check the COM port setting.
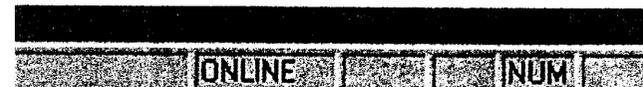
3. The program will automatically detect a unit will old system program. When the update window shows up on the screen,, click "OK" to start downloading the update. Download will take about 2 min.

PROJECTGSC
Download the e-manage Update File?
[OK] [Cancel]

MAIN UNIT UPDATE
Corresponding... Please wait.
00:14 time passed
[Cancel]

Please

Do not disconnect the communication cable during the communication. PC and the e-Manage will not function properly.

4. When the updating is complete, the following window will pop up. Turn the IG key to "OFF" position and click "OK".

PROJECTGSC
Main Unit update complete.
Turn off Main Unit
[OK]

Important

The updated program will confirm once the unit is turned "OFF". When the unit is turned back "ON", the following message will come up. "The data in the Main Unit was lost! Please export data." this shows that the unit was properly updated.

5. This completes the update of the communication program. If the 12 pin connector was disconnected, please reconnect it back.
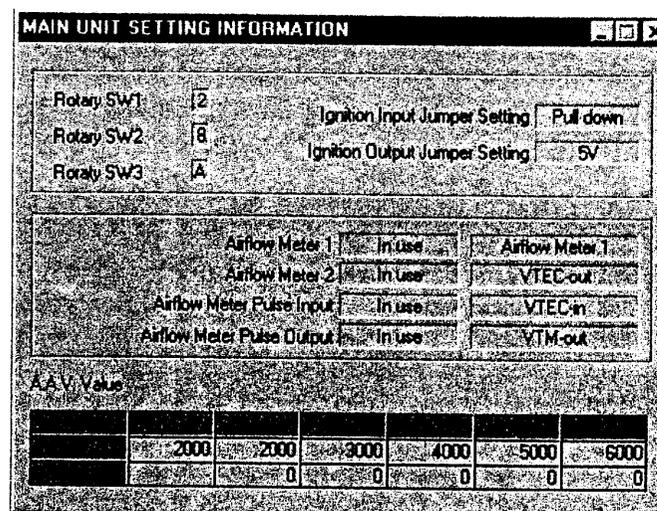
Main Unit Setting Information Confirmation

1. Turn the IG key to "ON" position and check to make sure that the status bar is displaying "ONLINE". If it does not show "ONLINE", Check the COM port setting.

2. To confirm the Main Unit Setting Information, select the "Main Unit Setting Information" in the "Setting" or click on the "Main Unit Setting Information" icon.
   * Changes can not be made in this window.

MAIN UNIT SETTING INFORMATION

Rotary SW1	2
Rotary SW2	8
Rotary SW3	A

Ignition Input Jumper Setting | Pull down
Ignition Output Jumper Setting | 5V

Airflow Meter 1 | In use | Airflow Meter 1
Airflow Meter 2 | In use | VTEC-out
Airflow Meter Pulse Input | In use | VTEC-in
Airflow Meter Pulse Output | In use | VTM-out

A.A.V Value

	2000	2000	3000	4000	5000	6000
	0	0	0	0	0

For the Rotary switches I - 3 setting information please refer to the e-Manage manual.
For the Ignition Input Jumper Setting, refer to the "Wire diagram for Ignition Harness" on page ___ .
Air Flow Meter 1   - - - - - - - - Used for Hot wire, flap type airflow meters, or MAP sensors
Air Flow Meter 2 - - - - - - - - Used for GTR(Skyline), or VTEC
Airflow Meter Pulse Input- - - Used for Karman type airflow meters or VTEC
Airflow Meter Pulse Output - Used for Karman type airflow meters or VTEC
A.A.V. Value - - - - - - - - Displays the Main Unit's AAV settings.

Parameter Setting

This window allows you to change Airflow Meters, Injectors, set the Throttle, aThrottle, and select which map to use.

To read the program in the Main Unit, select the "Import Data" in the "Communication" menu bar or click on the "Import Data" icon.

' To show the Parameter Setting, select the "Parameter Setting" in the "Settings" menu bar or click on the "Parameter Setting" icon.

Parameter Setting

Air Flow Meter Change

When the Airflow meter or MAP sensor is upgraded, check the Sensor Type from the 'Vehicle Specific ECU wire location chart", and select it from the pull down menu.
The Airflow Type programmed with the Main unit's rotary switch will display as "Main Unit Setting" in the pull down menu.

* When the airflow meter is upgraded, the airflow signal value will change. Make sure to check Air/Fuel Ratio with a proper equipment to ensure proper fuel mixture.

GReddy Pressure Sensor

Choose this box when an optional GReddy pressure sensor will be used for the scale of each Map tables.
This function is used when the system exceeds the Air Flow Meter's capacity. The factory ECU will continue to read off the Air Flow Meter, but the e-Manage system will work off the GReddy pressure sensor.
In the Sub Injector Map, the injectors can be controlled by rpm and the GReddy pressure sensor signal.

Absolute Pressure Sensor Change

This function is used when the system exceeds the factory MAP Sensor capacity. The factory ECU will continue to read off the factory MAP sensor, but the e-Manage system will use the calculated absolute pressure from the factory and GReddy pressure sensor.

* Use Absolute Pressure Sensor when setting the vacuum as "O" value.

* Use Relative Pressure Sensor when setting atmospheric pressure as "O" value.

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