Safety Messages

Your safety and the safety of others is very important. We have provided important safety messages in this manual and on the HRC CBR1000RR. Please read these messages carefully.

A safety message alerts you to potential hazards that could hurt you or others. Each safety message is preceded by a safety alert symbol ⚠ and one of three words, **DANGER, WARNING,** or **CAUTION**.

These mean:

⚠ DANGER — **You WILL be KILLED or SERIOUSLY HURT if you don't follow instructions.**

⚠ WARNING — **You CAN be KILLED or SERIOUSLY HURT if you don't follow instructions.**

⚠ CAUTION — **You CAN be HURT if you don't follow instructions.**

Each message tells you what the hazard is, what can happen and what you can do to avoid or reduce injury.

Damage Prevention Messages

You will also see other important messages that are preceded by the word **NOTICE**.

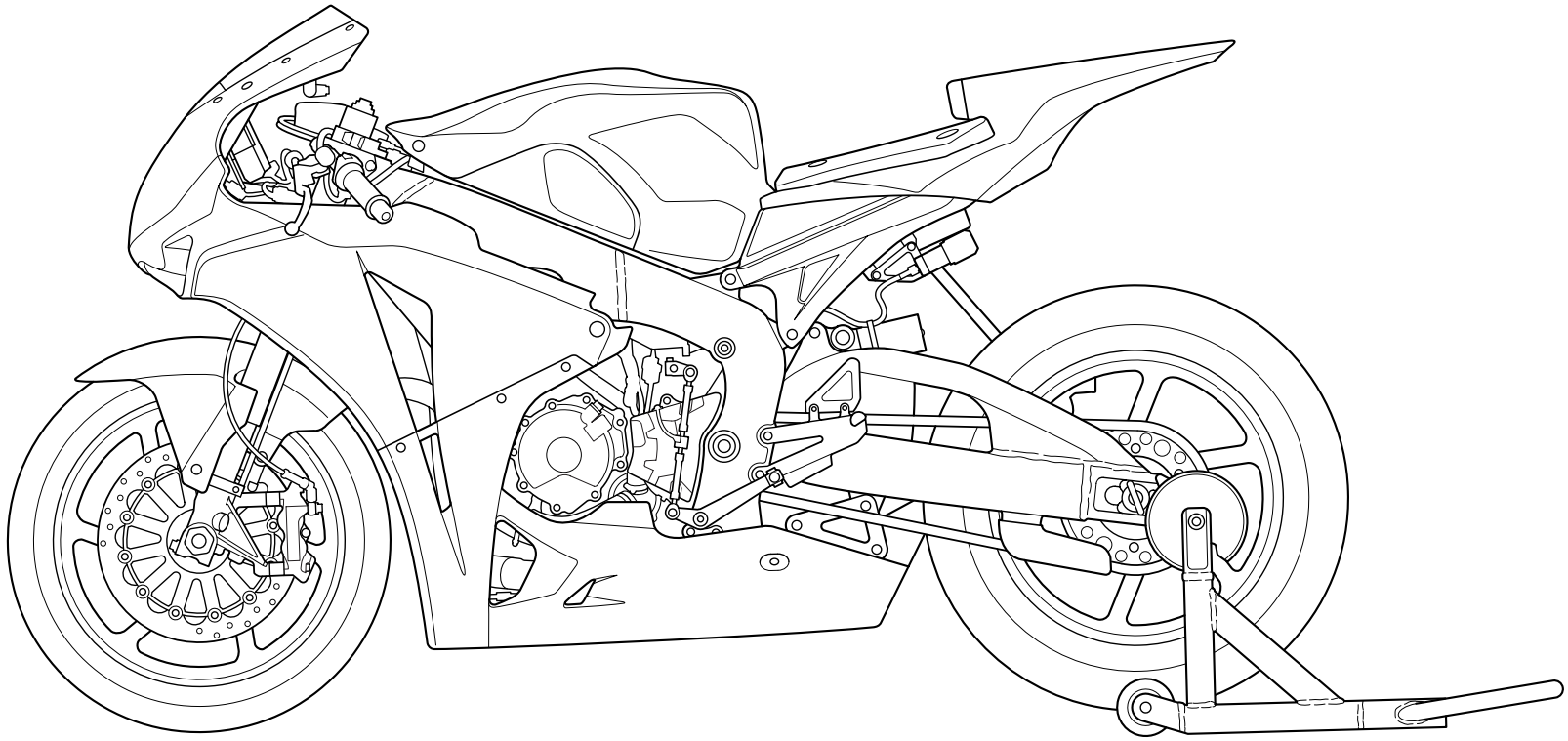
This word means:

NOTICE — Your HRC CBR1000RR or other property can be damaged if you don't follow instructions.

The purpose of these messages is to help prevent damage to your HRC CBR1000RR, other property, or the environment.

HRC CBR1000RR

PGM-FI Setting Tool Manual



Important Information

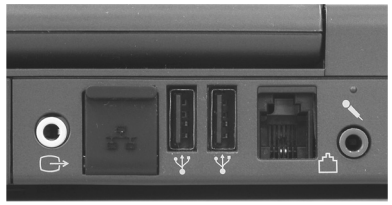
- This setting tool is sold as is without warranty, and the entire risk as to quality and performance is with the buyer.
- This kit is designed and manufactured to enhance the performance of the CBR1000RR, and as is stated in the CBR1000RR racing kit set-up manual, should be used only in an organized racing or competitive event upon a closed course which is conducted under the auspices of a recognized sanctioning body or by permit issued by the local governmental authority having jurisdiction.
- This kit is not suitable for use with any other parts.
- Before using this tool, replace the PGM-FI/IGN unit and throttle body with the racing kit.

This manual covers the PGM-FI setting procedure by PC communications.

PGM-FI Setting

System requirements and communication attachment

1.System requirements
- IBM AT compatible PC
- OS: Windows 2000/XP/VIsta
- CPU: Pentium 200MHz or higher (recommended)
- Main memory: 32MB or more (recommended)
- Display: 1024 x 768 or higher resolution (recommended)
- CD-ROM: CD-ROM drive is required (The product is provided with a CD-R)
- Serial port: Serial port is required (to communicate with the ECU)
  If the serial port is not equipped, use USB-RS232C adaptor or USB type serial I/F unit

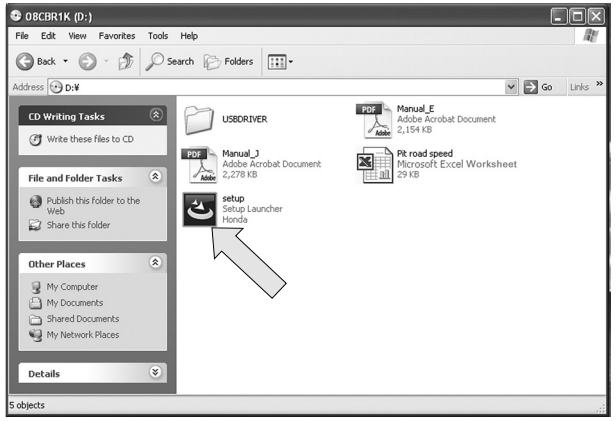


2.The attachment
- UNIT, ASSY SERIAL I/F: 38880-NL3-750
- UNIT, ASSY SERIAL I/F (USB): 38880-NL9-C00

Use USB driver included in Set-up CD-ROM, or download it from HRC web site (http://www.honda.co.jp/HRC/).

Software Install

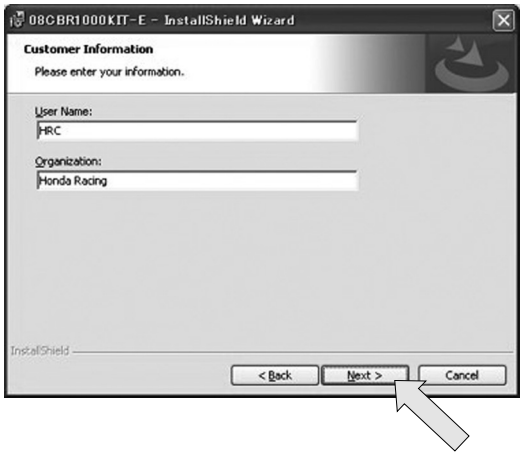
1. Put the CD-ROM in the CD-ROM drive and click on the CD-ROM icon.
2. In the window that appears, double-click “setup.exe” to install the application.



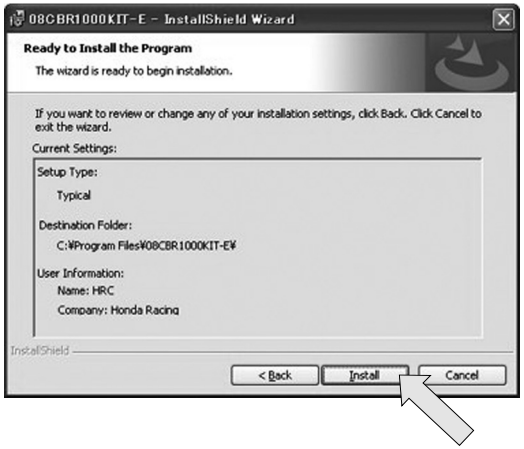
3. In the window that appears, click "Next" to continue the setup.

NOTE:
- Exit all other programs before starting installation.

4. The customer Information window appears.
   Click “Next.”

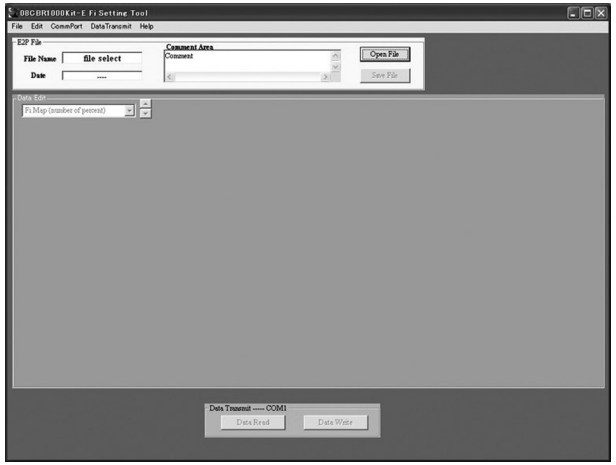


5. Confirm the folder and name etc. for installing the application, then click “Next.”



6. A window like below will appear and the installation will be continued.

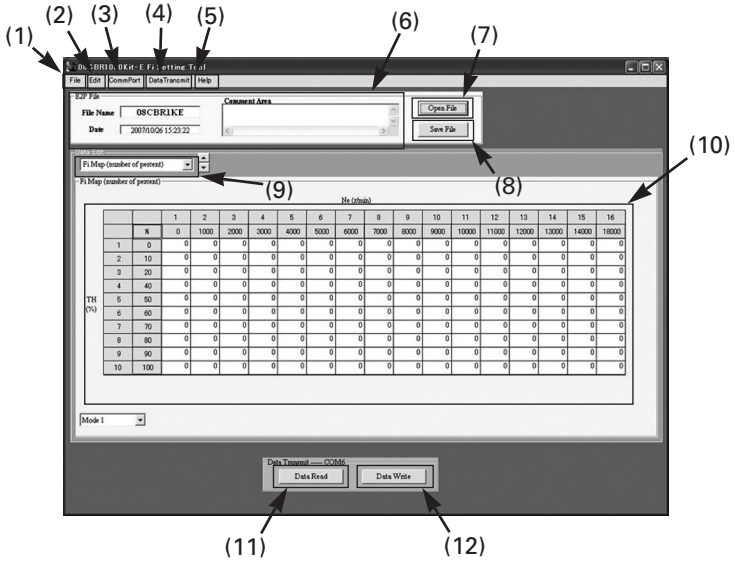
7. Now, installation is completed.
   Click “Finish” and Launch the setting tool program.



8. After the installation is completed, make a shortcut of program.
   Use this shortcut putting on the desktop etc.

Operation

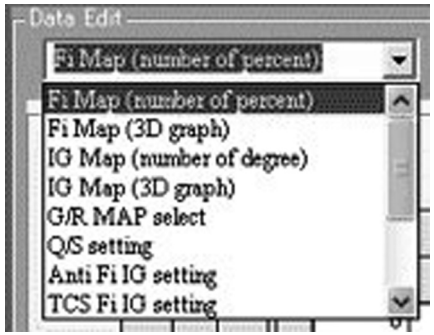
Functional Descriptions
When you start up the setting tool, a window like below will appear.

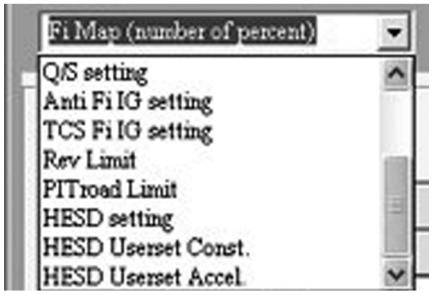


(Note: The figure above, designed for explanation purposes, differs from the actual screen you will see.)

No.	Name	Function
(1)	File menu	Reading and writing the saved setting data.
(2)	Edit menu	Map display edit (activated at Fi Map/IG Map).
(3)	Comm Port	Selects communication port (default: COM 1).
(4)	Data Transmit (read/write)	Transfers setting data from ECU. Transfers setting data to ECU.
(5)	Help	Displays setting tool version.
(6)	File information display	Displays information on the setting file.
(7)	Open File	Reads in setting data saved before.
(8)	Save File	Saves setting data you have changed.
(9)	Data Edit Selector	Selects an item to change.
(10)	Data display area	Displays setting data.
(11)	Data Read	Transfers setting data from ECU.
(12)	Data Write	Transfers setting data to ECU.

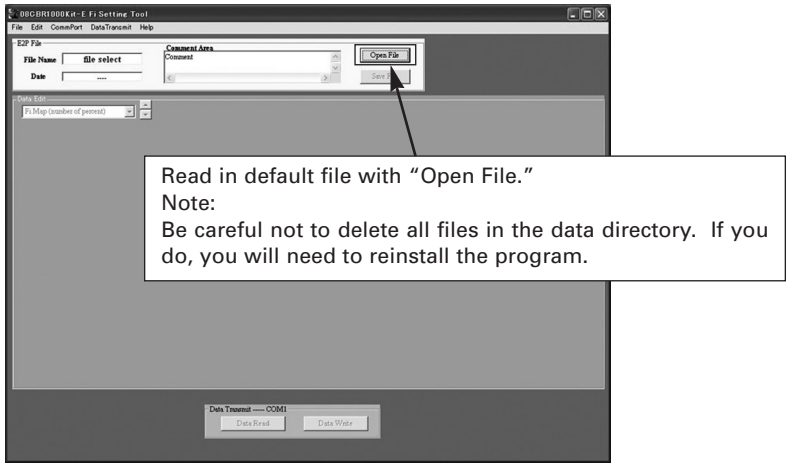
Before you begin
• About the pull-down menu
Data Edit Selector (No. 9 in the previous table) is a pull-down menu.





Click "▼" as shown in the figure above and a menu will appear below.
Items to edit can be changed here.
The highlighted item will be selected.

- When you started up the application for the first time, you will not see the following display.



When you start up the program next time, it will automatically open the last file you used.

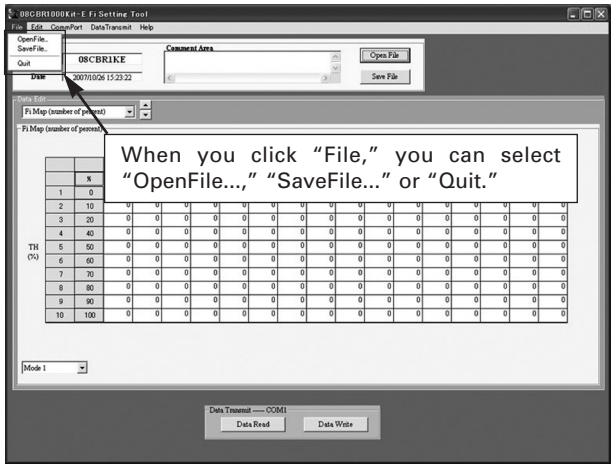
NOTICE

In case the default file is not displayed with "Open file," refer to troubleshooting No.4.

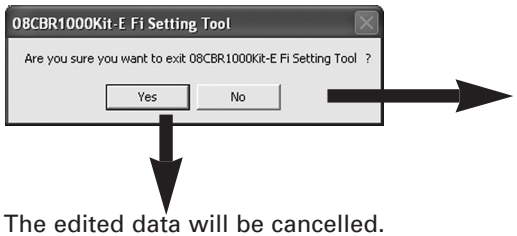
- Double start-up error

When you double start-up the setting tool, the following message will appear. Click OK to cancel the start-up.

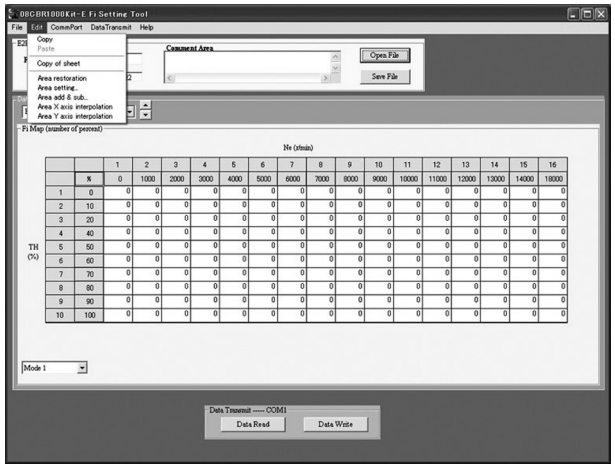
- File Menu



“OpenFile...”	Same function as for the “Open File” button. Loading the data file.
“SaveFile...”	Same function as for the “Save File” button. Writing the edited data to the data file.
“Quit”	Same function as for the “Quit” button. Before quitting, save the edited data using the "Save File" button. If you quit without saving, the edited data will be cancelled.

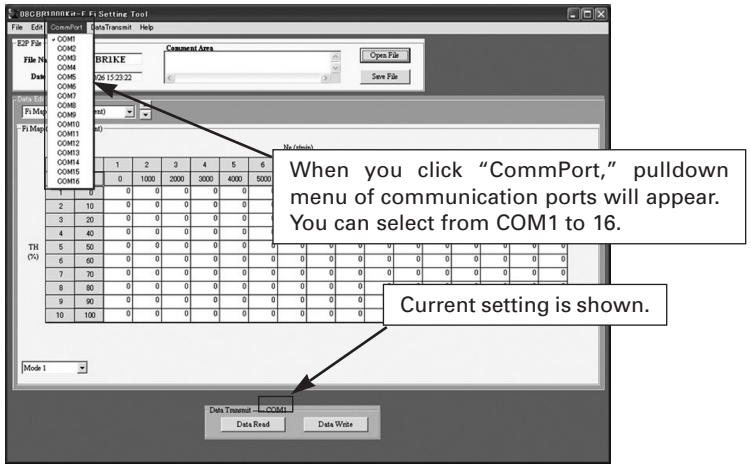


• Edit Menu

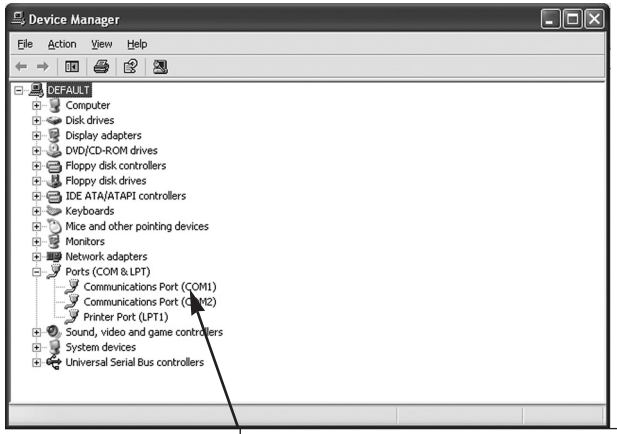


"Copy"	Copies cell blocks.
"Paste"	Pastes cell blocks.
"Copy of sheet"	Copies cell blocks (Windows clipboard copy).
"Area restoration"	Restores cell blocks.
"Area setting..."	Data setting of the cell block.
"Area add & sub..."	Adjusting cell block data.
"Area X axis interpolation"	Perform the x axis interpolation.
"Area Y axis interpolation"	Perform the y axis interpolation.

• Checking communication port (COM port)

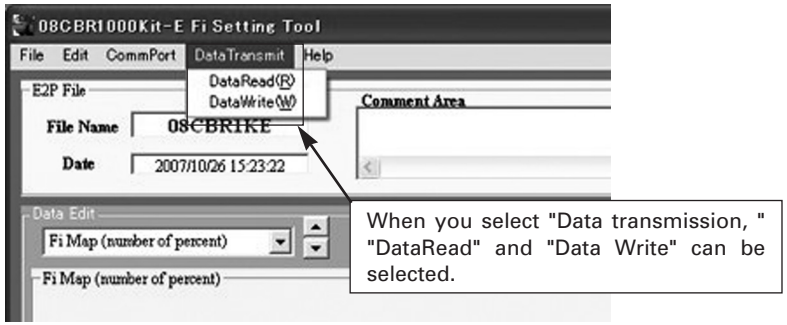


Checking system property



Access your PC systems to check the communication port setting. The port setting should agree with that of the setting tool.
If the communication port (COM1) is marked with "X," communication is not possible.

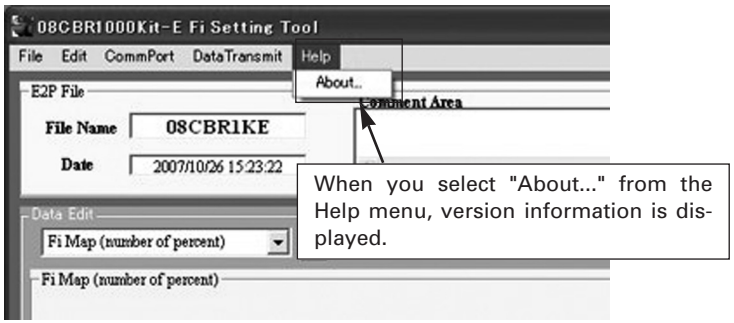
• Data Transmit Menu



"DataRead" The same function as the "Data Read" button. Load the data from the ECU.

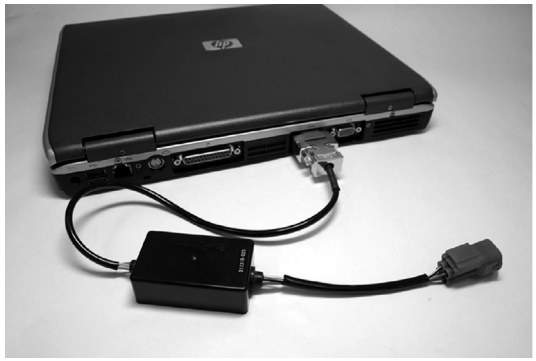
"DataWrite" The same function as the "Data Write" button. Write the edited data into the ECU.

• Help Menu

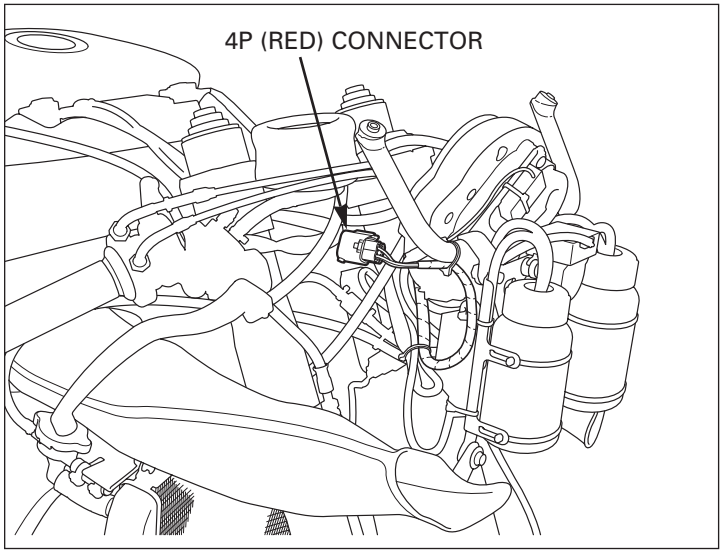


Connection with the Vehicle

1. Connect the “UNIT, ASSY SERIAL I/F: 38880-NL3-750” or “UNIT, ASSY SERIAL I/F (USB): 38880-NL9-C00” to the serial-port or USB port of your PC.



2. Connect red connector to the communication connector (4P red connector) near the combination meter as shown.

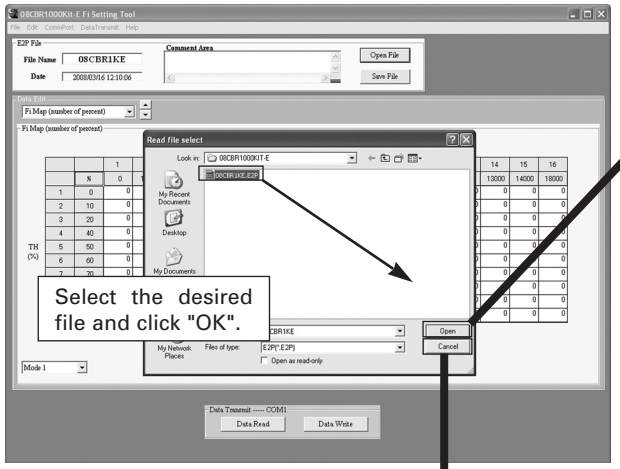


Note:
• Do not drive your vehicle with the setting cord attached.

Use the setting cord only when you change settings.

File Operation

Opening a File
Click "Open File" and the window for reading files will open.
Select the desired file and click OK to load the file.



Open Button

When reading is correct:
Open the setting tool window.

When a reading error occurs.

If the specified E2P file is not found, the above message appears.

If the incorrect model year data is opened, the above message appears.
Refer to troubleshooting No.5.

Cancel Button

If the process of Open File is aborted, above message is appeared.
Click “OK” to continue.

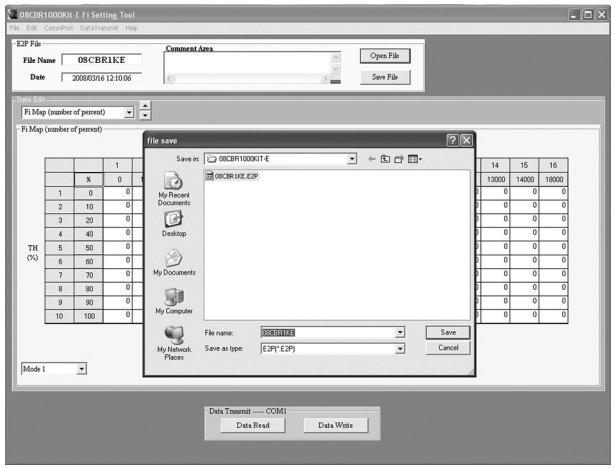
If the file format error is occurred while reading the E2P file, above message is appeared.
Refer to troubleshooting No.6.

Note:
- Displayed file “08CBR1KE.E2P” is default data.
- If you become confused about settings, return to the standard setting by replacing the setting data with the default data “08CBR1KE.E2P.”
- Some setting datas are included in the CD-ROM. We recommended to use these data.

Save a File

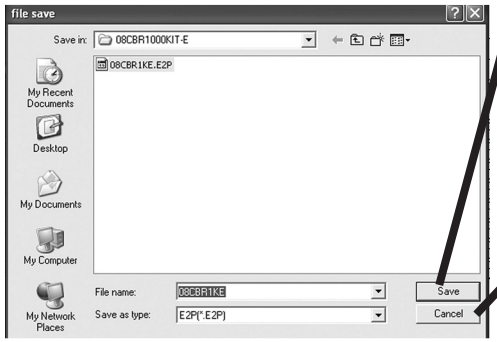
When you click “Save File,” a list of files already saved will appear and request you to input the file name.
Type a file name and click OK to save your file.

Note:
- The number of characters you may use for a file name is limited to 8 or less.



Notes when typing in a file name

Note:
- When typing a file name, be sure to put the cursor before ".e2p." If you omit the extension (.e2p), you cannot open it. (It will not be listed.)



Save Button

When the file is saved correctly:

The above message appears.

When the file saving error occurs:

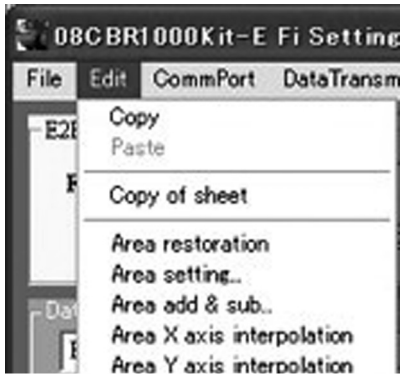
If you use more than 8 characters for a file name, the above message appears. To continue “Save File,” click “OK” and type in a file name with 8 or less characters.

Cancel Button

If the Save File process is aborted, the above message appears. Click “OK” to continue.

Edit Menu

1. Copy
Copies cell blocks.
Only available for Fi Map (percentage) and IG Map (degrees) displays.

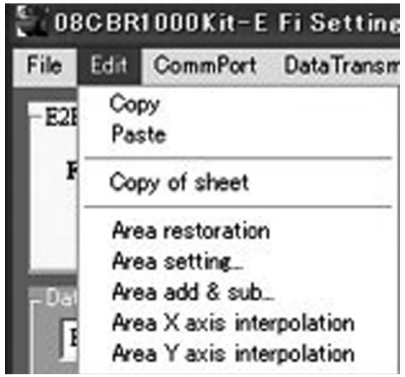


Copies cell block units for pasting data.

1. Use your mouse to drag and highlight an area on the MAP sheet.
2. Click "Copy" on the "Edit" menu. The selected area will be copied. (Right click "Copy" has the same function.)

NOTE:
- Only data areas may be copied.
- Cell blocks cannot be copied to a Windows clipboard.
- Cell blocks cannot be copied by shortcut (Ctrl+C).

2. Paste
Pastes cell blocks.
Only available for Fi Map (percent) and IG Map (degree) displays.



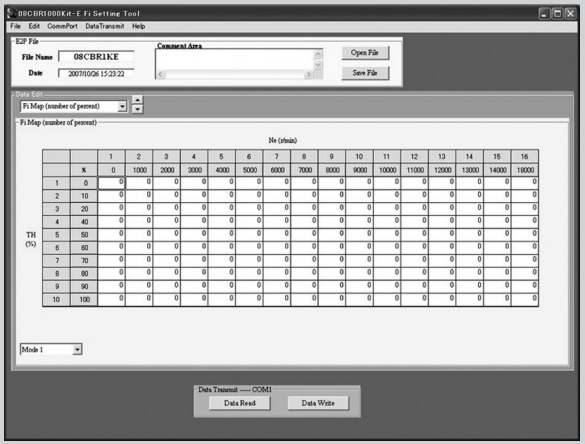
Pastes copied cell block data.

1. Use your mouse to click and highlight the paste start cell.
2. Click "Paste" on the "Edit" menu. The selected data will be pasted.

Note:
- Data must be copied before it can be pasted.
- Copied data cannot be pasted in a MAP sheet other than the one it was copied in.
- Data may only be pasted in a data area.
- Shortcut (Ctrl+V) may be used to paste copied data.
- Data cannot be pasted from the Windows clipboard.
- A single copy may be used for multiple pastes.

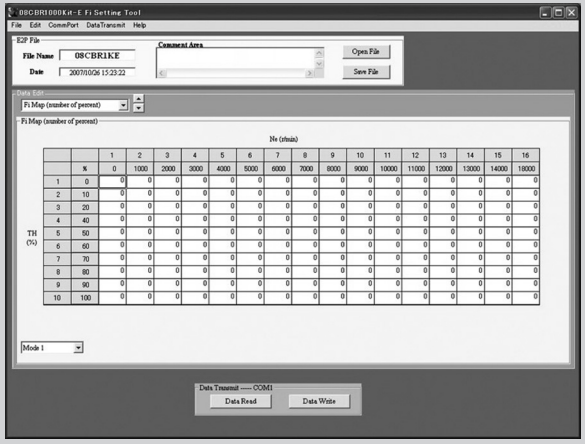
2.1. Available Target for Pasting
Data copied on the Fi Map display cannot be pasted on the IG Map display.
Data copied on the IG Map (percentage) display cannot be pasted on the Fi Map (degrees) display either.

Perform copy on Fi Map (percentage) display



Change to IG Map display

IG Map (degrees) display



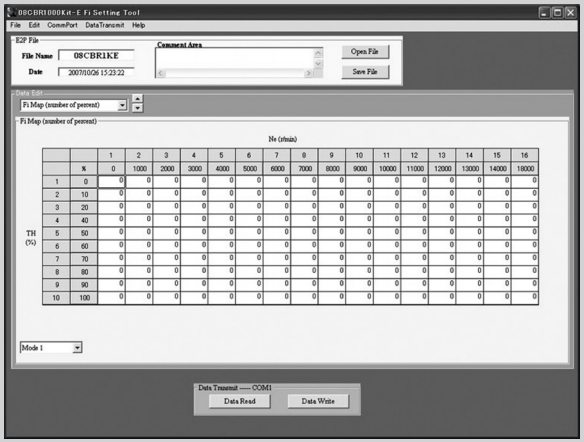
Paste

Copy data at
Fi Map Display

Paste error message

Data copied can be made on the same map display between the different mode.

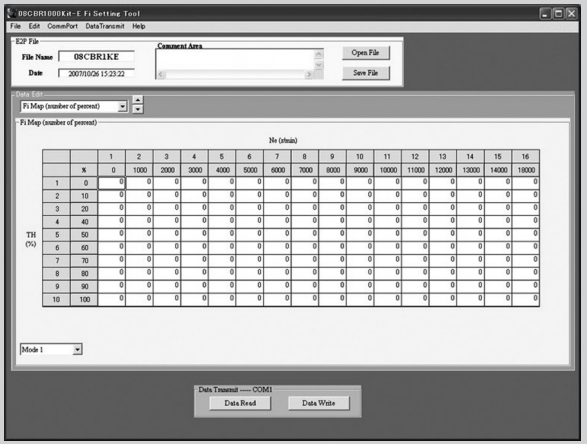
Perform copy on mode 1 Fi Map (percentage) display



Paste

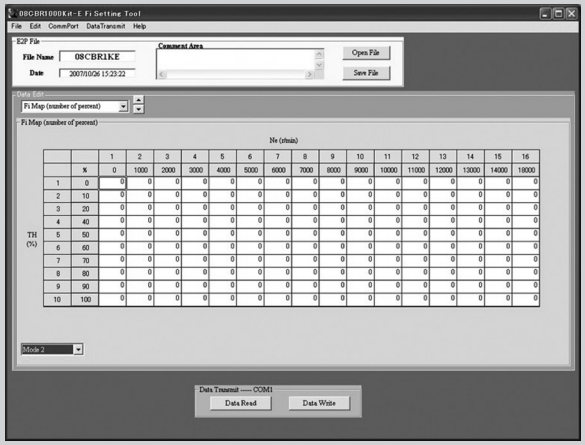
Mode 1

Perform paste on mode 1 Fi Map (percentage) display



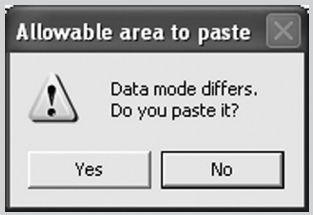
Change to mode 2 display

Mode 2 Fi Map (percentage) display



Paste between different mode

Mode 1 to mode 2



Alert for different mode paste.

Yes (Y)
Do paste

No (N)
Do not paste

3. Copy of sheet
Copies a sheet of cell blocks.
Only available for Fi Map and IG Map displays.

Copies cell block units for pasting data.
1. Use your mouse to drag and highlight the area on the MAP sheet.
2. Click "Copy of sheet" on "Edit" menu. The specified area will be copied. Right click "Copy of sheet" performs the same function.

Note:
- Only data areas may be copied.
- "Copy of sheet" is not the same as "Copy" on the "Edit" menu. It refers to the entire screen.
- The sheet-copied data cannot be pasted using the "Edit" menu "Paste" command or by the shortcut (Ctrl+V).
- Copied data will be copied to the Windows clipboard and can be pasted in other applications.

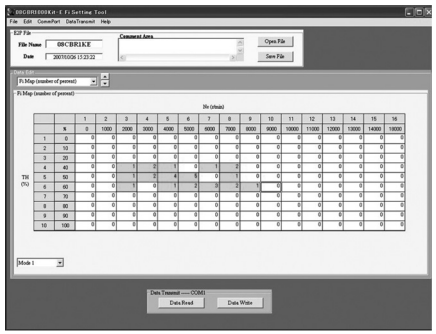
4. Area restoration
4.1. Restore Cell Blocks
Restores cell blocks.
Only available for Fi Map and IG Map displays.

- Returns the data in the specified area to the initial value.
- The initial value is the data at the time of reading from the E2P file. (If you save the file, the initial value will be the data after saving).

1. Use your mouse to drag on the MAP sheet.
2. Click "Area restoration" on the "Edit" menu. The data in the specified area will be returned to the initial value. (Right click "Area restoration" has the same function.)

Note:
- Only data areas may be restored.
- Area restoration can be performed only while editing an Fi Map (percentage) or an IG Map (degrees).

4.2. Retention data for area restoration



If the edited data differs from the retention data, it is displayed in green.
If the input value is the same as the retention data, it is displayed in white.

Fi/IG Map (degrees)

Comparing

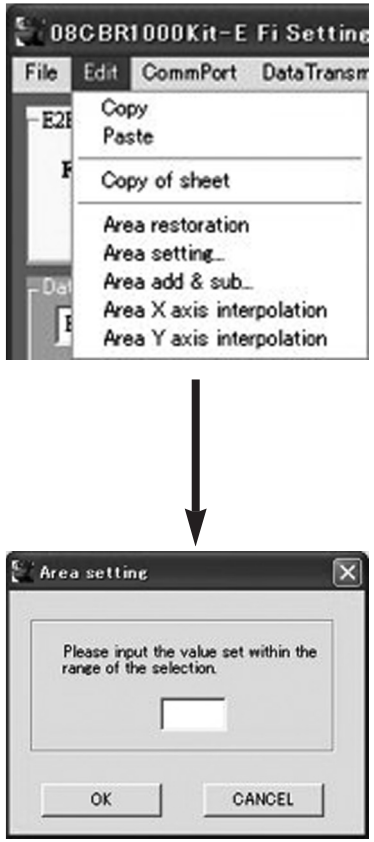
Retention data for area restoration

Update

Update and fix the retention data at the time of processing mentioned below.
1. Running the setting tool
2. Opening the E2P file
3. Saving the E2P file
4. Writing the data into the ECU
5. Reading the data from the ECU

5. Area setting

Sets the cell block data.
Only available for Fi Map and IG Map displays.

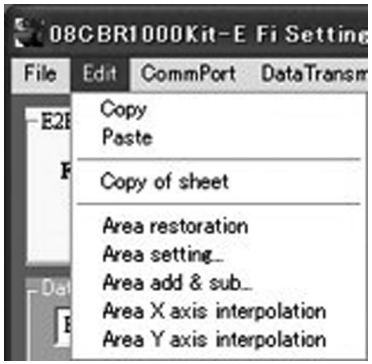


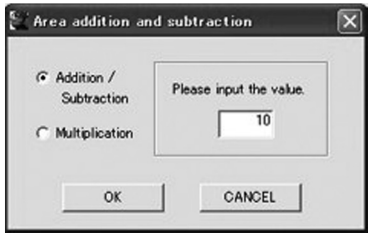
- Set all cell data in the specified area as input data.

1. Use your mouse to drag and specify an area on the MAP sheet.
2. Click "Area setting..." on the "Edit" menu and open the Area setting dialogue (Right click "Area setting..." has the same function).
3. Input the setting data in the text box.
4. Click the OK button to change the data in the specified area.

- Only data areas can changed.
- If the setting data exceeds the upper limit, the upper limit will be set.
- If the setting data is less than the lower limit, the lower limit will be set.

6. Area add & sub
Adds and subtracts cell block data.
Only available for Fi Map and IG Map displays.





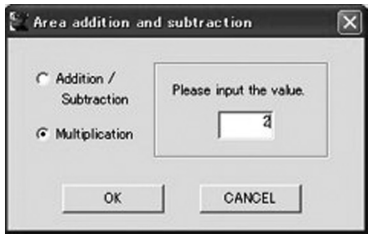
• Area addition
Adds 10 to all setting data in specified area (However, cells which become more than the upper limit will remain at the upper limit).

• Area subtraction
Subtracts 10 from all setting data in specified area (However, cells which become less than the lower limit will remain at the lower limit).

• Add and subtract data in the specified area.

1. Use your mouse to drag and specify an area on the MAP sheet.
2. Click "Area add & sub..." on the "Edit" menu and open the "Area add & sub" dialogue (Right click "Area add & sub..." has the same function).
3. Select the processing button from the "Processing" options.
4. Input the value in the text box.
5. Click the "OK" button to execute the change.

Note:
- The add and subtract functions can be applied only to data areas.
- If the setting data is more than the upper limit, the setting data will remain at the upper limit.
- If the setting data is less than the lower limit, the setting data will remain at the lower limit.
- For the subtraction, input a minus value.



• Area multiplication
Multiplies by 2 to all setting data in specified area (However, cells which become more than the upper limit will remain at the upper limit).

7. Area X axis interpolation
Interpolates cell block data.
Only available for Fi Map (number of percent) and IG Map (number of degree) displays.

Interpolates cell block data in the specified area.
1. Use a mouse to drag and specify an area on the MAP sheet.
2. Click "Area X axis interpolation" on "Edit" menu (Right click "Area X axis interpolation" has the same function).

NOTE:
- Only data areas may be interpolated.
- Interpolation for Y axis cannot be performed with the X axis function.

1	2	2	4
1	2	3	2
1	1	1	2
1	1	1	1

Drag area

1	2	2	4
1	2	3	2
1	1	1	2
1	1	1	1

Interpolation for X axis

1	2	3	4
1	1	2	2
1	1	2	2
1	1	1	1

7.1. The interpolating calculation
The calculation is the same for both the area X axis interpolation and the area Y axis interpolation.

1000	1500	3500	4000
1	0	0	12

1000	1500	3500	4000
1	3	10	12

When the base point=1, terminal point=12:
12 – 1 = 11 difference
11 / (4000 – 1000) – 0.003666..... increment value

(2) 1 + (1500 – 1000) x increment value = 2.8333..... interpolated value
(3) 1 + (3500 – 1000) x increment value = 10.16666..... interpolated value

1000	1500	3000	4000
1	0	0	12

1000	1500	3000	4000
1	3	8	12

When the base point=1, terminal point=12:
12 – 1 = 11 difference
11 / (4000 – 1000) – 0.003666..... increment value

(2) 1 + (1500 – 1000) x increment value = 2.8333..... interpolated value
(3) 1 + (3000 – 1000) x increment value = 8.3333..... interpolated value

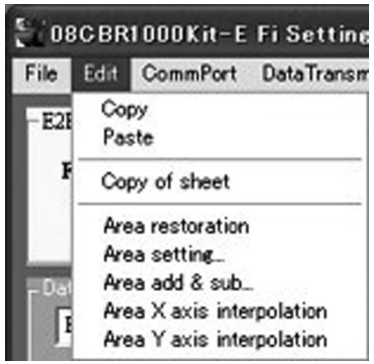
1000	1500	3000	4000
12	0	0	1

1000	1500	3000	4000
12	10	5	1

When the base point=12, terminal point=1:
12 – 1 = 11 difference
11 / (4000 – 1000) – 0.003666..... increment value

(2) 12 + (1500 – 1000) x increment value = 10.166.... interpolated value
(3) 12 + (3000 – 1000) x increment value = 4.6666..... interpolated value

8. Area Y axis interpolation
Interpolates cell block data.
Only available for Fi Map and IG Map displays.



• Interpolates cell block data in the specified area.

1. Use your mouse to drag and specify an area on the MAP sheet.
2. Click "Area Y axis interpolation" on the "Edit" menu (Right click "Area Y axis interpolation" has the same function).

Note:
• Only data areas may be interpolated.
• Interpolation for the X axis cannot be performed with the Y axis function.

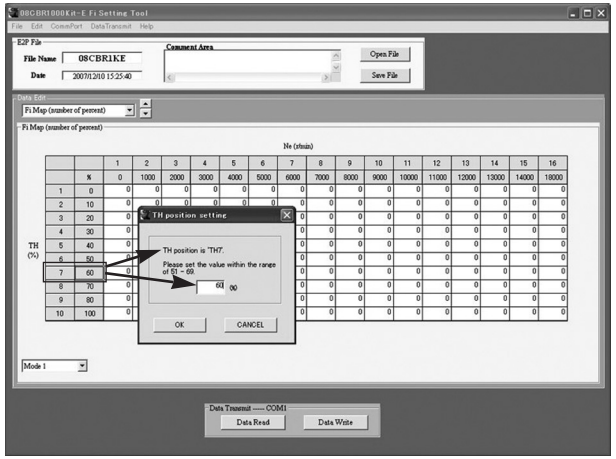
1	2	2	4
1	2	3	2
1	1	1	2
1	1	1	1

1	2	2	4
1	2	3	2
1	1	1	2
1	1	1	1

1	2	3	4
1	1	2	2
1	1	2	2
1	1	1	1

Changing Settings

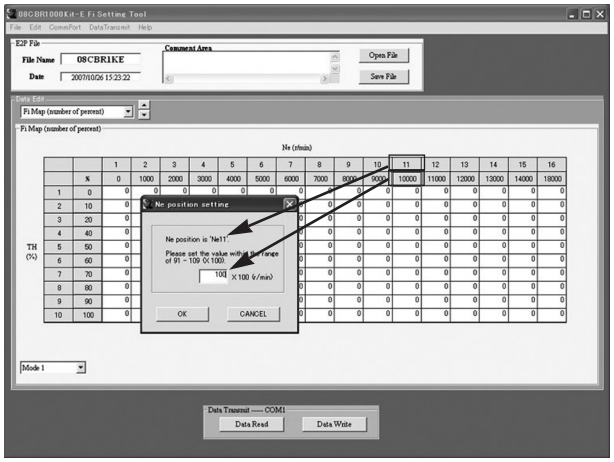
1. Changing TH Segmentation
You can change the TH position.



If you click TH segmentation, 60% for example, the window as shown above will appear. You can change 9 points excluding both ends (0% and 100%).
Input the new value, then click “OK” to enter your change.
The range in which you can make changes is only within the values as indicated in the window (in the above example: 51 to 69%)
To cancel a change, click "CANCEL Key."

TH position setting is used in common for both Mode1 and Mode2.
When the TH segmentation is set in either mode, it will be reflected to both modes.
Therefore set up the position before set up each Map value.

2. Changing Engine Speed Segmentation
You can change engine speed segmentation.

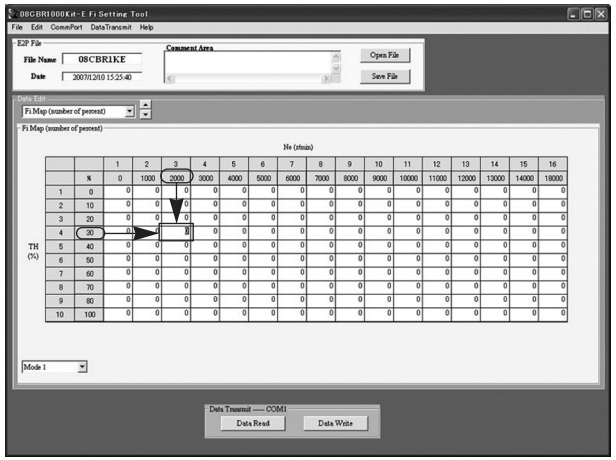


Engine speed segmentation can be changed like the TH segmentation.
For example, if you click on 10,000 min^{-1} (rpm), the window as shown above will appear.
You can change 14 points excluding both ends (0 min^{-1} (rpm) and 18,000 min^{-1} (rpm)).

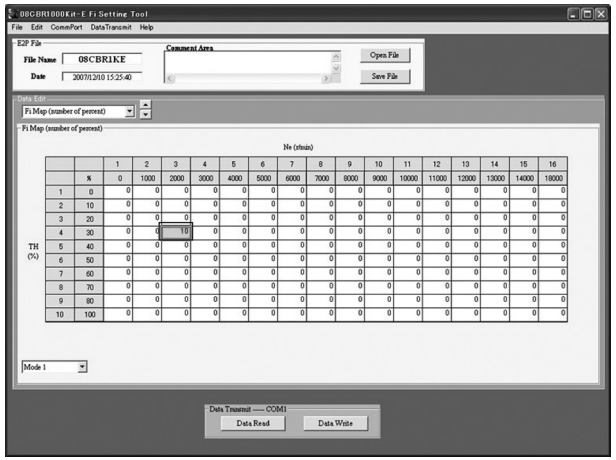
Input the new value, then click “OK” to enter your change.
The range in which you can make changes is only within the values as indicated in the window.
Indicated unit is 100 (r/min). In the example above, input 91 to 109 to set the rpm between the 9,100 to 10,900 min^{-1} (rpm).
To cancel a change, click "CANCEL Key."

TH position setting is used in common for both Mode1 and Mode2.
When the TH segmentation is set in either mode, it will be reflected to both modes.
Therefore set up the position before set up each Map value.

3. Changing air-fuel ratio (map display)
When you select “Fi Map,” a screen like below will appear.
In order to change data, click on the point where the TH position and the engine speed meet.

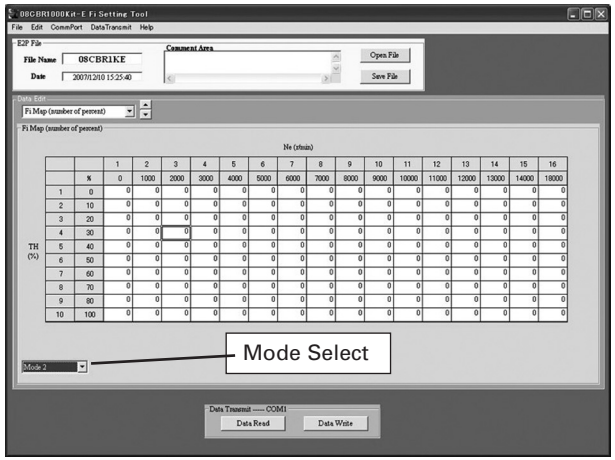


You may change values in the range from –30% to +30%.
To make change, press the “Enter” key or move to another cell.

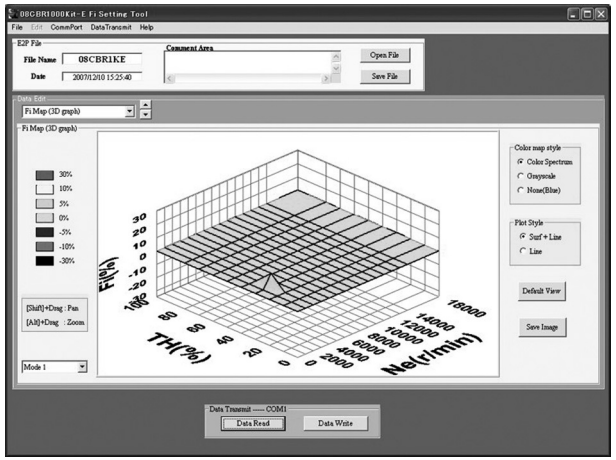


The cell color will change to green.
The green cell can be restored by selecting the “Area restoration” menu.

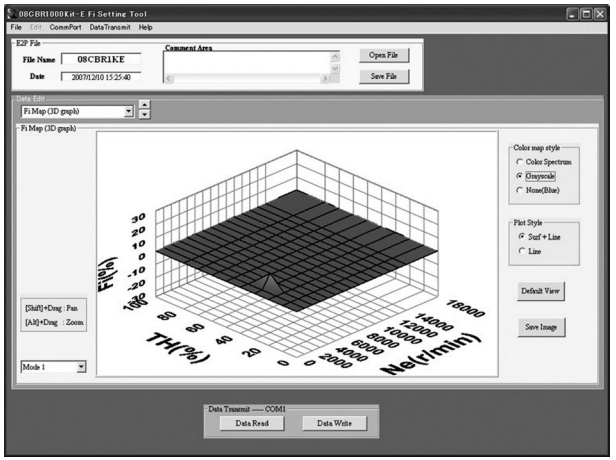
Two independent map data can be set by switching Modes.
However, the setting value of the position is used in common for both Mode1 and Mode2.



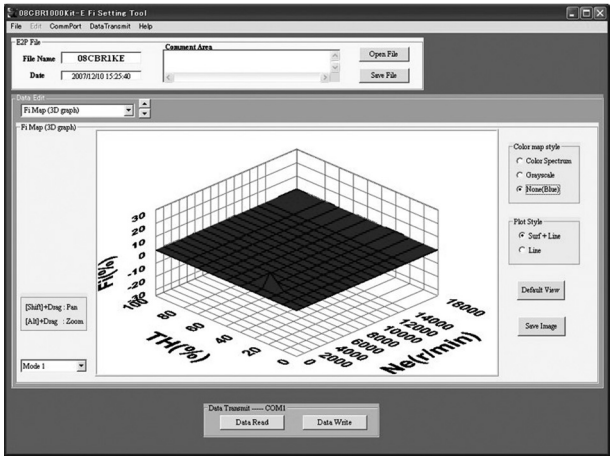
3.2. “Fi Map (3D graph)”
When you select “Fi Map (3D graph),” a screen like below will appear.
You can change the graph color and graph size by referring to the instruction on both sides of graph as shown.



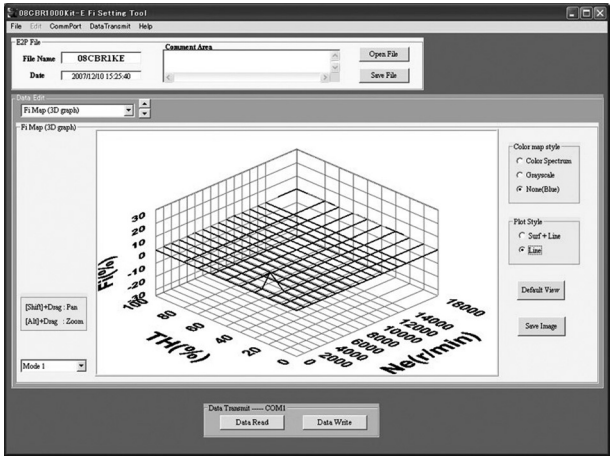
Grayscale:
Display with grayscale (cannot select PilotStyle Line).



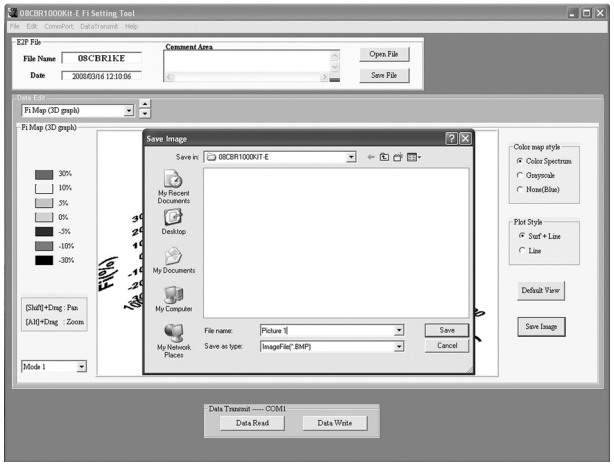
Single color:
Display with single color (blue).



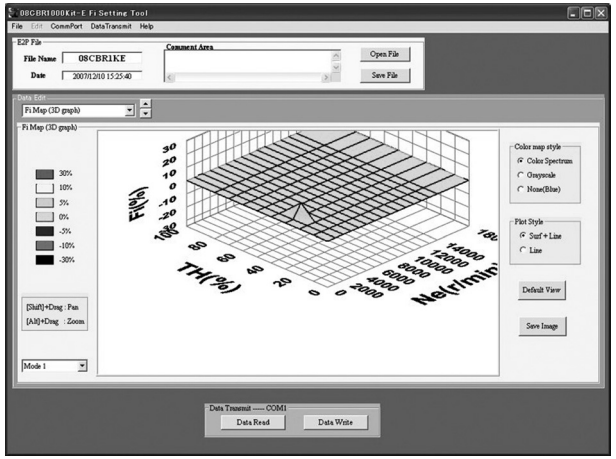
Line:
Display with lines only (Color map style will automatically vanish).



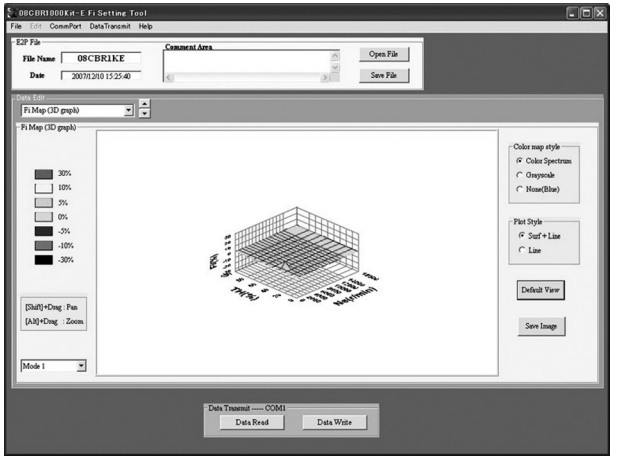
Save image:
Image of the displayed 3D graph is saved as a full color BIT MAP image.



Drag:
Drag the graphic using while pressing the [Shift] key ([Shift]+Drag).



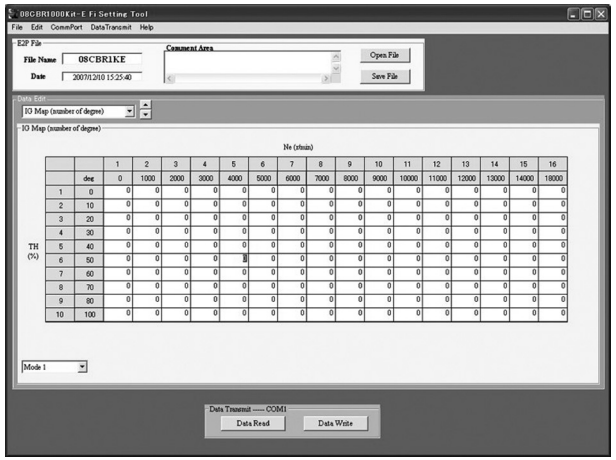
Zoom in/out:
Zoom the graphic in or out while pressing the [Alt] key ([Alt]+Drag).



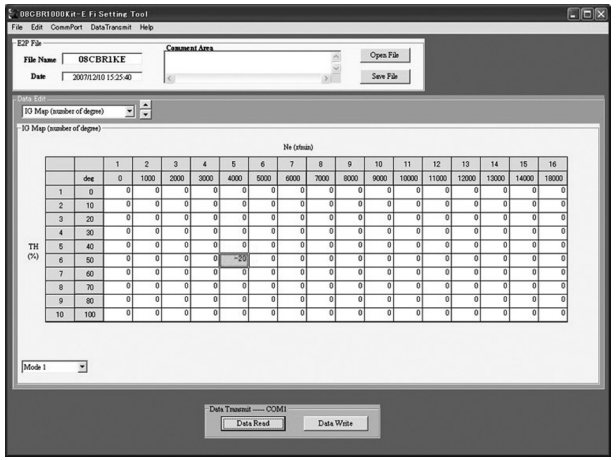
Ignition Timing Change

1. Changing ignition timing on IG Map

When you select “Ignition Map, a screen like below will appear. In order to change data, click on the point where the TH opening and engine speed meet.



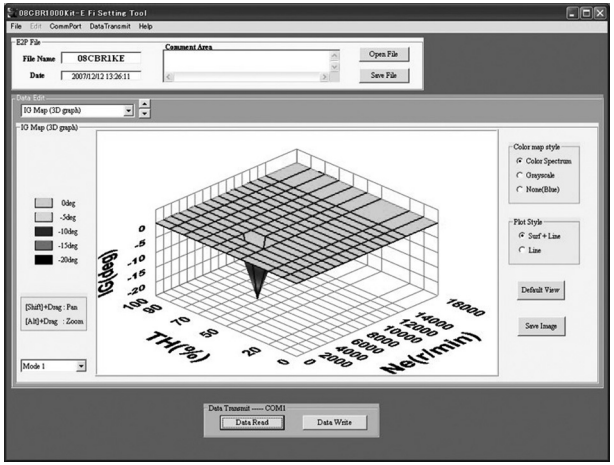
You may change values in the range from 0 to –20.
To make a change, press the “Enter” key or move to another cell.



The cell color will change to green.
The green cell can be restored by selecting the “Area restoration” menu.

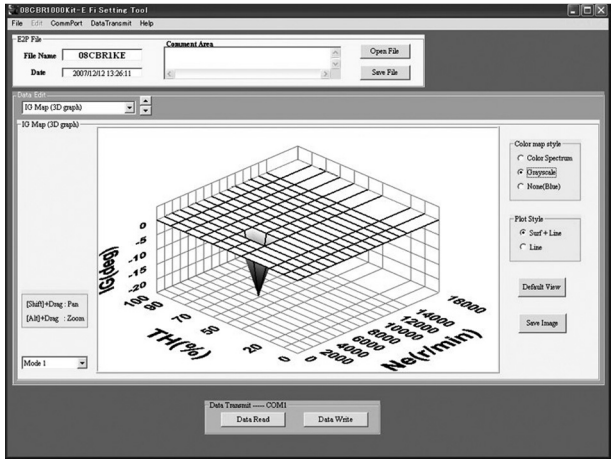
1.2. IG Map (3D Graph)

When you select “IG Map (3D graph)”, a screen like below will appear.
You can change the graph color and graph size by referring to the instructions on both sides of graph as shown.

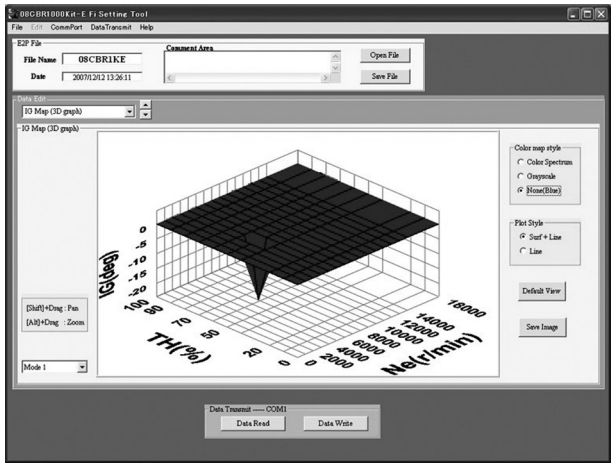


Select Mode to change Mode of a graph to be displayed.

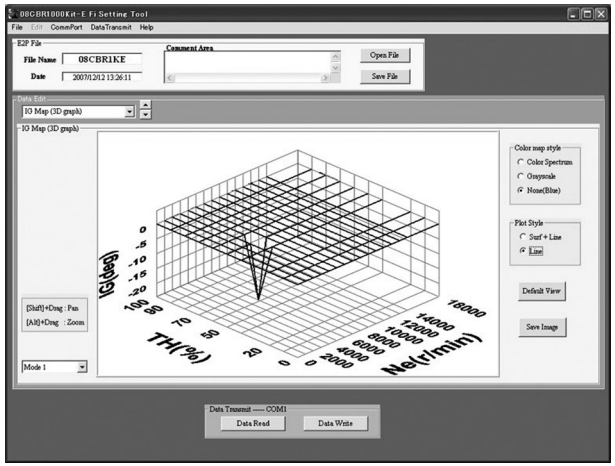
Grayscale:
Display with grayscale (cannot select PilotStyle Line).



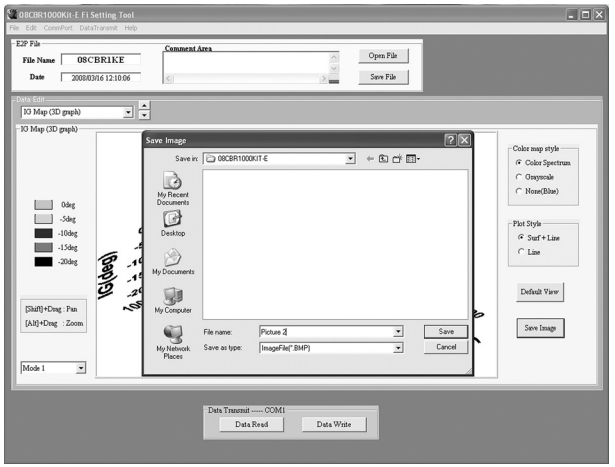
Single color:
Display with single color (blue).



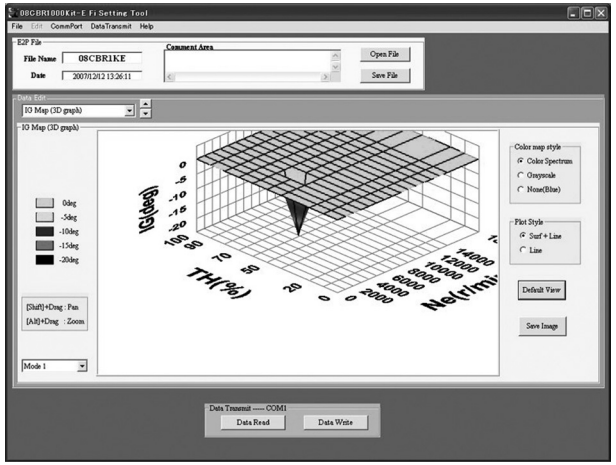
Line:
Display with lines only (Color map style will automatically vanish).



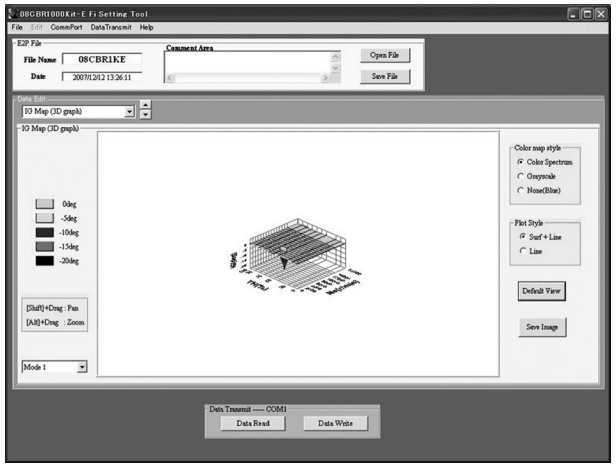
Save image:
Image of the displayed 3D graph is saved as a full color BIT MAP image.



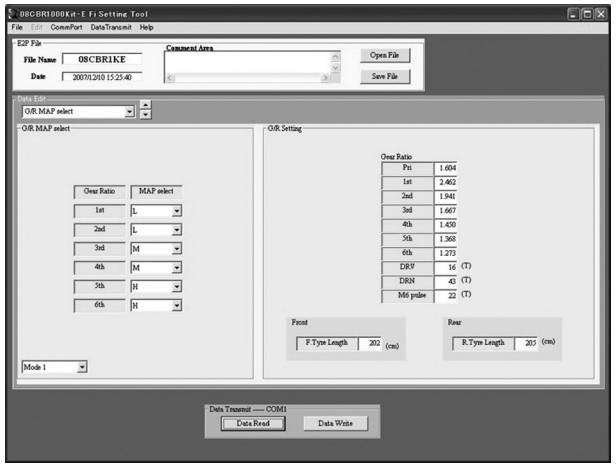
Drag:
Drag the graphic using while pressing the [Shift] key ([Shift]+Drag).
Rotate a graph by only Dragging.
Click “Default View” to return to the standard position.



Zoom in/out:
Zoom the graphic in or out while pressing the [Alt] key ([Alt]+Drag).



1.3. Gear Gear Specific MAP Selection (G/R MAP IG select)
Ignition timing can individually be set for each gear ratio.
To set, select the MAP used.



To set from 1st to 6th gear, basically specify L, M or H.
Multiple specifications of the same MAP are available, but the order L to H cannot be changed.
Perform setting for each item within the range mentioned below.

	H	M	L
1st	O	O	O
2nd	O	O	O
3rd	O	O	O
4th	O	O	O
5th	O	O	–
6th	O	O	–

H: Full Power Mode
M: Mild Power Mode (reduced power mode)
L: Low Power Mode (lowest power available)

Change setting mode using the mode selector.
The mode 1 and mode 2 setting data can be stored individually.

G/R Setting
You may input each data within the indicated range below.
You cannot input a value outside the indicated range.
Input primary reduction gear ratio and each gear ratio for GearRatio (Primary) to GearRatio (6th).
Input the number of teeth of the drive and driven sprockets for GearRatio (DRV) and GearRatio (DRN), and the number of teeth of the M6 gear picked up by the speed sensor for M6 pulse.
Input tire diameter (cm) for Front and Rear tire Length.

Item	Accuracy	Range
GearRatio (Pri)	0.001	1.000 – 3.000
GearRatio (1st)	0.001	1.000 – 3.000
GearRatio (2nd)	0.001	1.000 – 3.000
GearRatio (3rd)	0.001	1.000 – 3.000
GearRatio (4th)	0.001	1.000 – 3.000
GearRatio (5th)	0.001	1.000 – 3.000
GearRatio (6th)	0.001	1.000 – 3.000
GearRatio (DRV)	1	13 – 20
GearRatio (DRN)	1	35 – 50
M6pulse	1	20 – 30
Front tire length	1	150 – 250
Rear tire length	1	150 – 250

The new values should meet the conditions stated below:

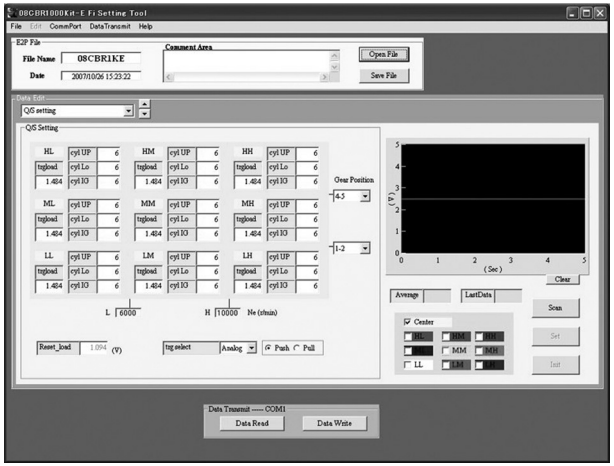
3.000 ≥ 1st > 2nd > 3rd > 4th > 5th > 6th ≥ 1.000

The setting mode cannot be changed on gear ratio setting.

Press the "Enter key" after you put in a new value.

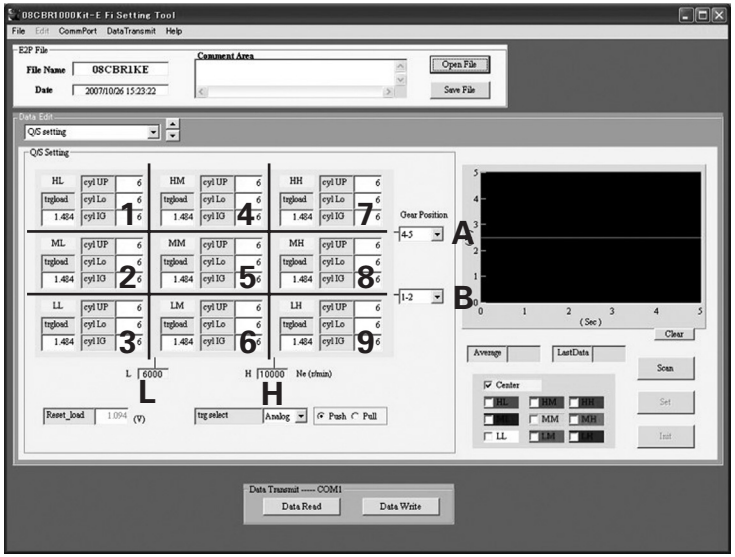
Quick Shift Setting

The quick shift is a device by which the shift up change in the state to open the throttle without squeezing the clutch lever.
There are two ways to gearshift using the quick shift.
Analog mode uses the horn switch, and the SW mode uses the quick shifter unit of the gearshift rod.
The system setting is done by setting the fuel cut-off cycle by upper and lower injectors and the ignition cut-off cycles by ECU at the each gear position and each engine rotation.



Trg load (trigger loading):	Threshold to measure shift force with sensor, and to switch ignition and fuel cut-off. (When the set force is detected, the switch is ON).
cyl UP (cycle Upper):	The number of cutting cycle of upper injector settings.
cyl Lo (cycle Lower):	The number of cutting cycle of lower injector settings.
cyl IG (cycle Ignition):	Cutting cycle of ignition.
Gear Position:	Distribution setting of gear.
Ne:	Distribution setting of engine speed.

The cyl UP (Upper injector), cyl Lo (Lower injector) and ignition cut-off cycle are set in the condition in the table below.



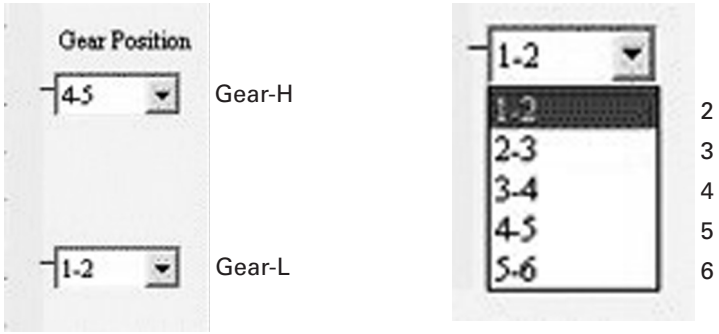
Gear position setting
- Set section 2, 5 and 8 gear positions at the setting window “A.”
- Set section 2, 5 and 8 gear positions at the setting window “B.”

Engine rev setting
- The engine rev of section 1, 2 or 3 is below the setting value in the setting window “L.”
- The engine rev of section 4, 5 or 6 is between the setting value in the setting window “L” and “H.”
- The engine rev of section 7, 8 or 9 is above the setting value in the setting window “H.”

Setting can be done within the following ranges.
A out of range value cannot be input.

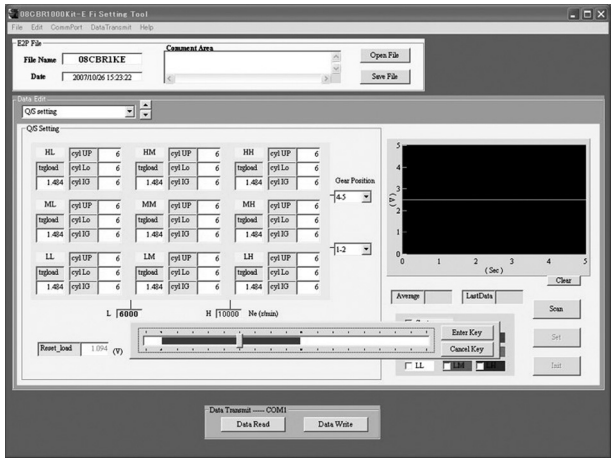
Item	Accuracy	Range
Trgload	5/256	0.020 - 4.961
cyl UP	1	0 - 16
cyl Lo	1	0 - 16
cyl IG	1	0 - 16
Gear position	-	2 - 6
Ne	100	1,000 - 18,000

The setting of gear position is selected and set under the following conditions.



Gear-H > Only Gear-L position can be selected.
Gear-H = Gear-L position cannot be selected.
Gear-H < Gear-L position cannot be selected.

When you click in the Ne frame, a scale for the Ne value setting will appear as shown below.



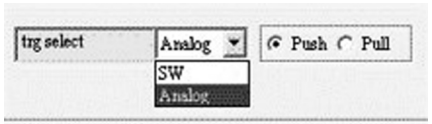
The above figure shows L of Ne is clicked.
The Ne value of “L” changes into the bold-faced type and the value is changed.
Choose a point to change with your mouse or left/right arrow keys.
Press the "Enter key" after you put in a new value.
To cancel the change, click "Cancel Key."

The Ne setting value cannot be input without the following range.

1,000 min^{-1} (rpm) ≤ L < H ≤ 18,000 min^{-1} (rpm)

The Ne value can be set above range, but we recommended that the minimum Ne value is above 3,000 min^{-1} (rpm).

Select whether the shift setting with the quick shifter unit of the change rod (analog) or with the horn switch (SW) on the trg select.



The item that can be set SW and Analog respectively is as follows.

Trg select	SW	Analog
cyl UP	O	O
cyl Lo	O	O
cyl IG	O	O
Trgload	X	O
Gear position	O	O
Ne-L	O	O
Ne-H	O	O
Push/Pull	X	O
A/D communication	X	O

SW: Both the ignition and the injection are cut while the horn switch is being pushed.

Analog: Both the ignition and the injection by the change pedal shift are cut.

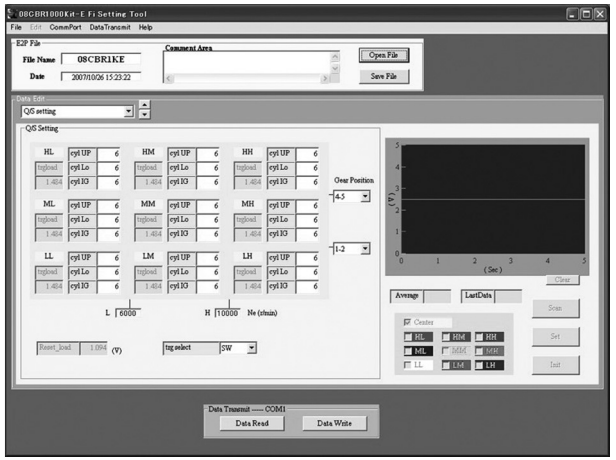
Ne-L: Setting of low rotation side engine rotational speed.

Ne-H: Setting of high rotation side engine rotational speed.

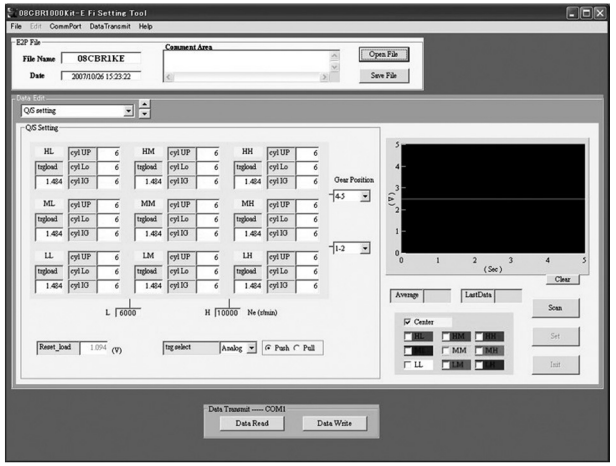
Push/pull: Setting whether to use foot shifter by compression side and pull side either.
Push: racing pattern
Pull: Street pattern

A/D communication: Analog/Digital communication
Analog/Digital communication allows the monitoring of the shift by displaying the analog output of the shift sensor in digital.

When trg select: SW is selected



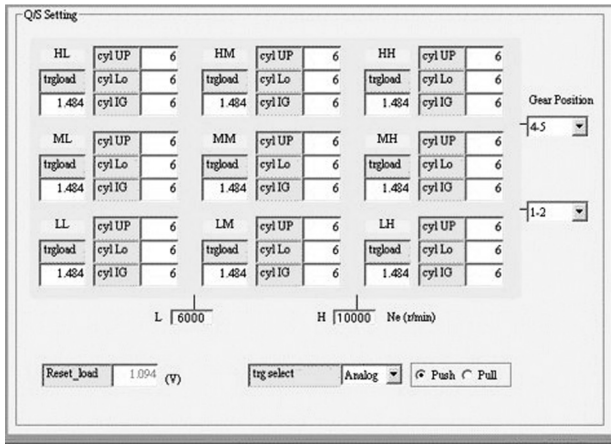
When trg select: Analog is selected

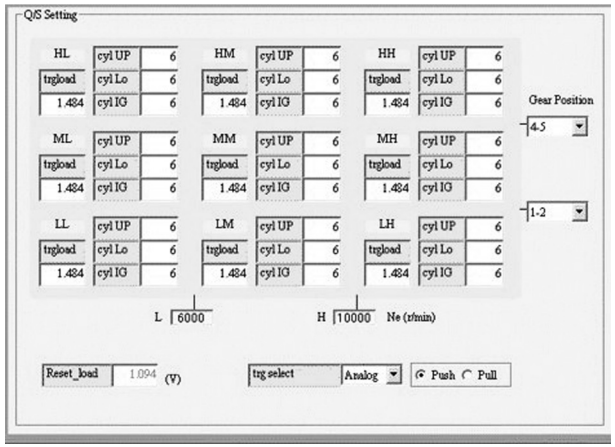


Trgload setting
Each trgload can be set in the range 0.020 to 4.961 (V) by 5/256 (approx. 0.020) step.
Since the relationship between trgload and Reset_load is as follows, when Reset_load becomes out of the range at trgload setting, it will be automatically recalculated.

When Push is selected : Reset_load < trgload
When Pull is selected : Reset_load > trgload

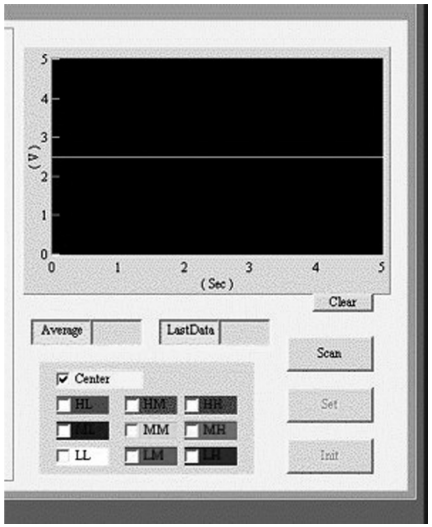
- Reset_load can not be input directly.
  Set up it by Set and Init operation after "A/D communication."





When switching Push/Pull, a message of "Some setting data has been changed" will be displayed.
Reset_load value will be automatically recalculated within the range.

A/D communication



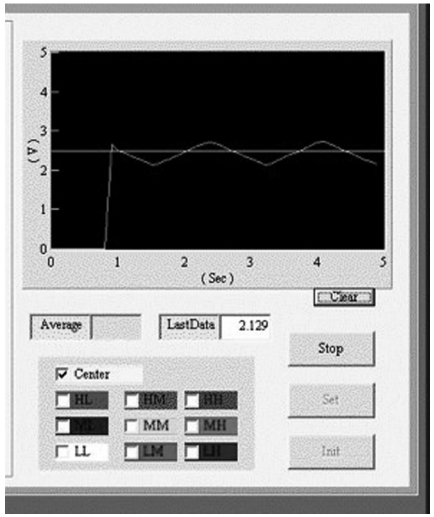
Clear: Already displayed waveform graph will be cleared.
Scan: Scanning of A/D communication will start and the value by 100ms will be displayed as a graph.
Set: The average of the latest 50 points of the scanning result will be set as Average.
Init: Reset_load will be set by Average value.
Average: The average of the scanning result will be displayed.
LastData: The latest data value under scanning by 100ms will be displayed.

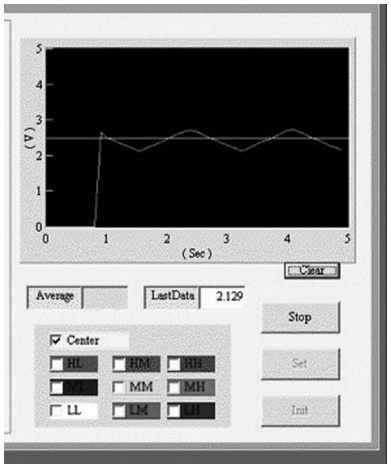
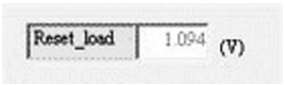
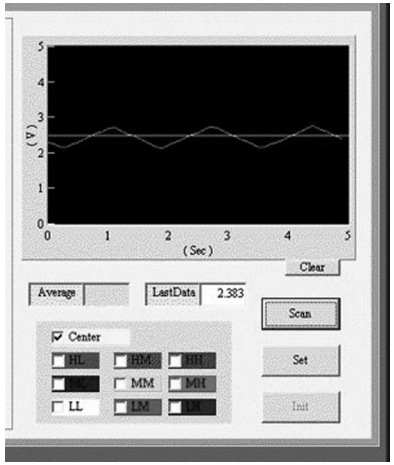
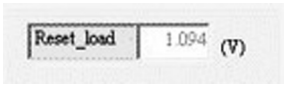
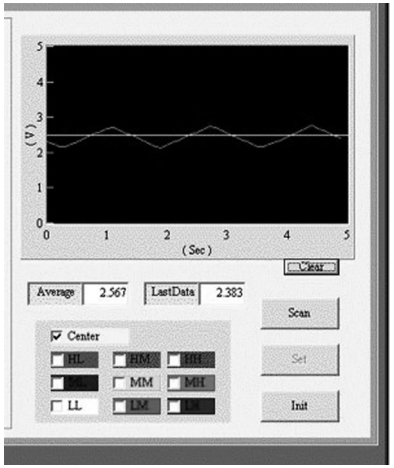
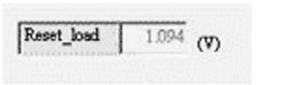
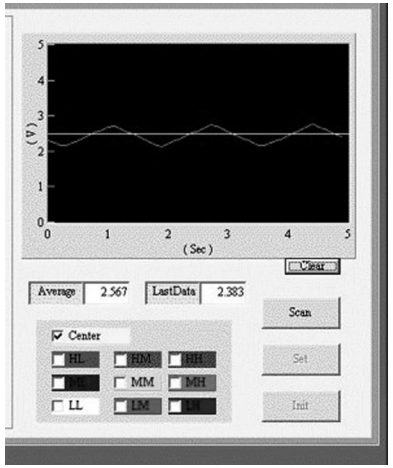
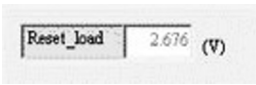
Turn off the engine stop switch.

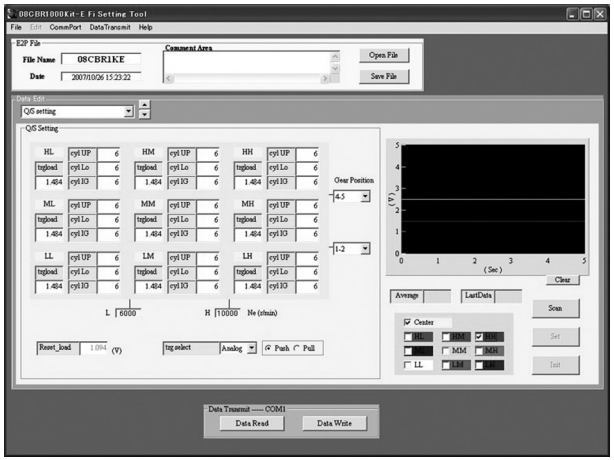
Turn on the engine switch and press “OK” or “Enter” within 2 seconds.

Scanning will start.

When scanning doesn't start, refer to the troubleshooting No.3.



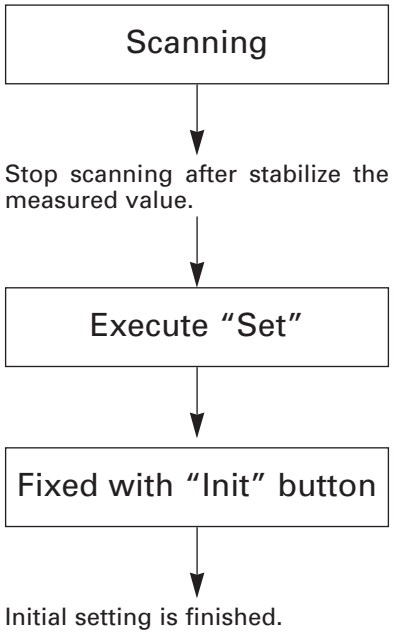
Scanning	Scanning stopped	Average setting Reset_load check	Reset_load will be updated
 	 	 	 
Scanning will start and the measured value will be displayed as a graph. The latest measured value will be displayed on LastData as needed. By operating a pedal, press "Stop" button on the proper value.	Click “Stop” to stop scanning. Then “Set” button will be effective.	Scanned Average will be displayed. When Reset_load is updated by Average calculation by pressing Init, Reset_load will be displayed in yellow. (It is not updated at this time.)	Reset_load will be set by the following calculation by pressing Init button. “When Push is selected” Reset_load = Average + 0.1V “When Pull is selected” Reset_load = Average - 0.1V



The voltage line of checked trigger will be displayed (Only HH is checked to display the line in the above example).
The voltage value of the line is the setting value of trgload.
All line can be displayed. However, when trgloads are the same, color display is given in an order of priority HH, HM, HL, MH, MM, ML, LH, LM, LL.

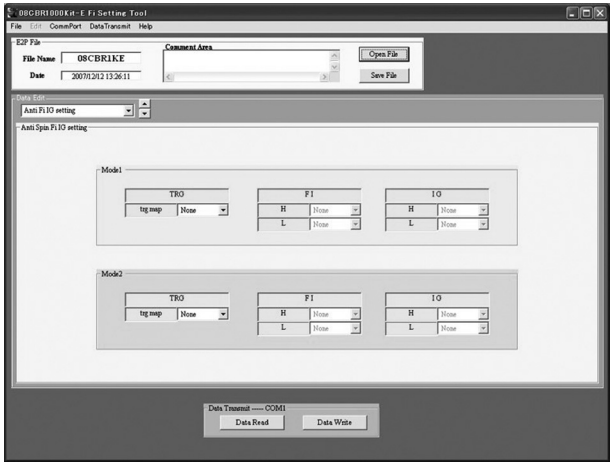
Outline of the Initial setting by A/D communication

Note:
- Execute initial setting after set-up your machine.



Anti Fi IG setting

Slipping is detected from the rapid change of the engine rev.
Anti Fi IG cuts the ignition and fuel injection to prevents the wheel spin based on this information.



The Anti Fi IG setting can be done to mode 1 and mode 2.

Select each map for Anti Spin setting.
For TRG/Fi/IG, each Mode can independently select the following maps.

Both the Fi and IG, the setting can be done according to the amount of slipping of the rear wheel.

H: Rear wheel slipping is high
L: Rear wheel slipping is low

TRG Setting

Least:	Insensitive	Activated by small change
Medium:	Normal	
Most:	Sensitive	Activated by large change
None:	Not applicable	

When TRG is None (not applicable), FI/IG of the same Mode will automatically become None and it won't be able to be set.

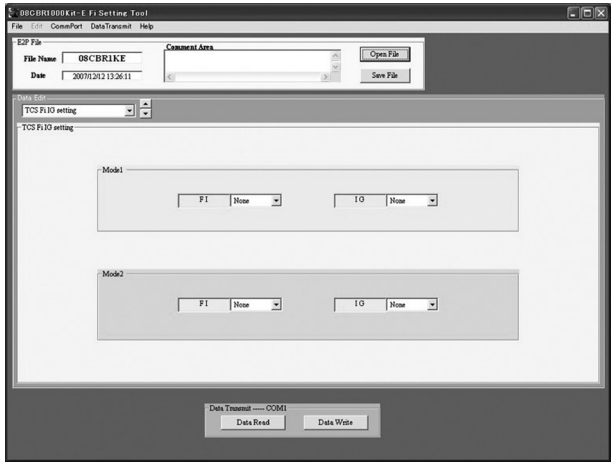
Change value setting

Little:	Small
More:	Medium
Most:	Large
None:	Not applicable

TCS Fi IG setting

The TCS Fi IG becomes effective when the front and rear wheel sensors are installed.

The ECU detects the wheel spin from the rotation difference of the front and rear wheel.
The ECU controls the FI and IG, and reduces the engine power to prevent the wheel spin.



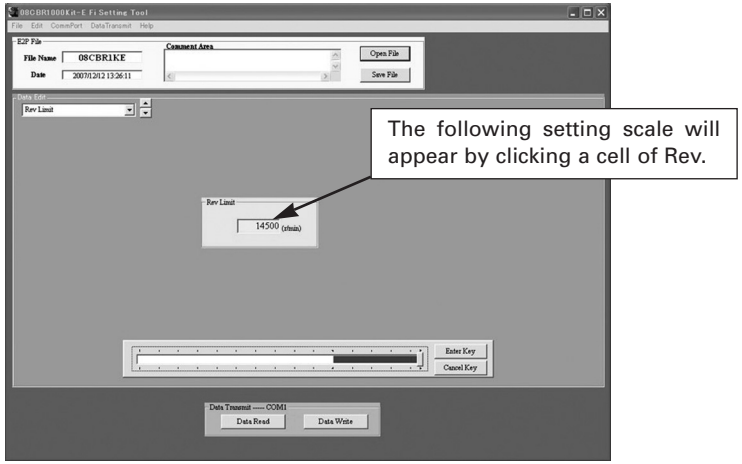
The TCS Fi IG setting can be done to mode 1 and mode 2.

Select each map for TCS setting.

Little: Weak
More: Normal
Most: Strong
None: Not applicable

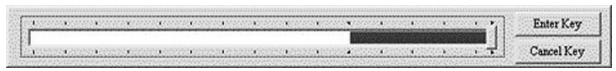
Rev limit control (Rev Limit setting)

The Engine rev limit can be set in the range 10,000 to 14,500 min^{-1} (rpm).

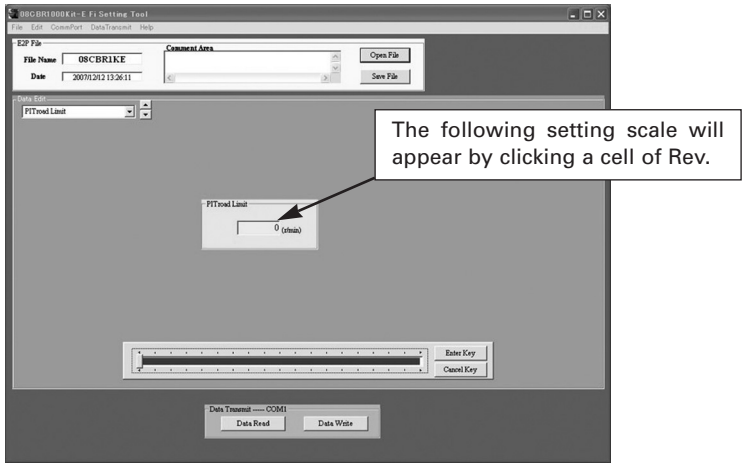


Values only within the scale can be changed.

Use the mouse or right and left arrow keys to change.
The setting map will be reflected to the Map by pressing “Enter” key.
Click “Cancel” key to cancel the change.

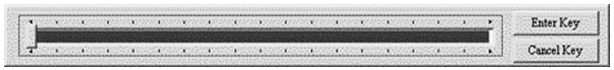


Pit Road Speed Limiter
Select "PITroad Limit" from the pull down menu of the data edit selector.
When you click the cell of rev, a scale as shown below will appear.



Set the ignition cut engine speed as follows:
The Pit road Limit can be set between 0 to 18,000 min^{-1} (rpm).

Choose a point to change with your mouse or left/right arrow keys and press the "Enter key" after you put in a new value.
To cancel the change, click "Cancel Key."



Engine Speed Calculation

Engine Speed = Vehicle speed (km/h) x 1,000/60/Tire circumference x Primary ratio x Transmission ratio x Final ratio

Example: (cross ratio transmission, final ratio 16/43)
4.926 rpm = 60 km/h x 1,000 ÷ 60 ÷ 2.0 x 1.604 x 2.286 x 2.687

The actual engine speed changes depending on the circumference of the tire and other factors.
We recommend you measure the actual speed of the vehicle and then set the engine speed 200 min^{-1} (rpm) lower than the calculated value.
The pit road speed list is included in the CD-ROM (Microsoft Excel file).
Use the tire circumference values in the list as a reference value.
Measure each tire's actual circumference and recalculate the vehicle speed.

Primary ratio:

Gear teeth	Ratio
46/79	1.717

Transmission ratio:

	NLR transmission		MFL-R10 transmission	
	Gear teeth	Ratio	Gear teeth	Ratio
1st	14/32	2.286	14/32	2.286
2nd	17/33	1.941	18/32	1.778

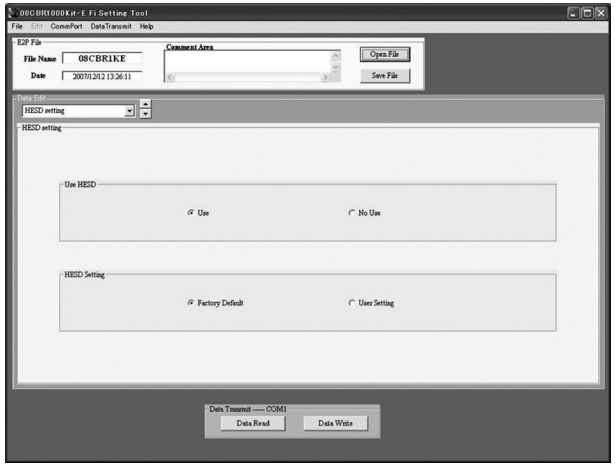
HESD (Honda Electric Steering Damper) Setting

The CBR1000RR's HESD can be adjusted by using the ECU setting tool.
You can also change the damper mode to "Factory setting" (default) or "User setting." the damper mode to "Factory setting" (default) or "User setting."

Start up the ECU Setting Tool.
Click the data edit selector window. A pulldown menu appears as shown below.
Select "HESD setting" in the pulldown menu.
When you select the "HESD setting," the following window appears.

If you want to use HESD, click the "Use" radio button. If you don't want to use HESD, click the "Not use" radio button.
If you want to use your own setting, click the "User setting" radio button.

When you select the "Use", next select HESD setting.
If you use factory setting, click "Factory default".
If you use user setting, click "User setting" radio button.



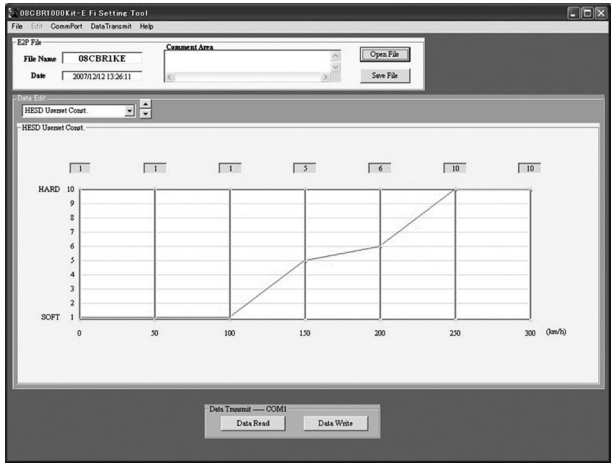
Use HESD
[Use] To use HESD
[NoUse] To not use HESD

HESD Setting
[FactoryDefault] To use the factory default setting
[UserSetting] To use HESD UsersetConst or HESD UsersetAccel setting values

Constant Speed HESD Setting

After you select "Use" and "User setting" in the HESD setting menu, next select "HESD Userset Const." in the data edit selector pulldown menu.
You can change the steering damper damping while moving at a constant speed (but not while accelerating or slowing).

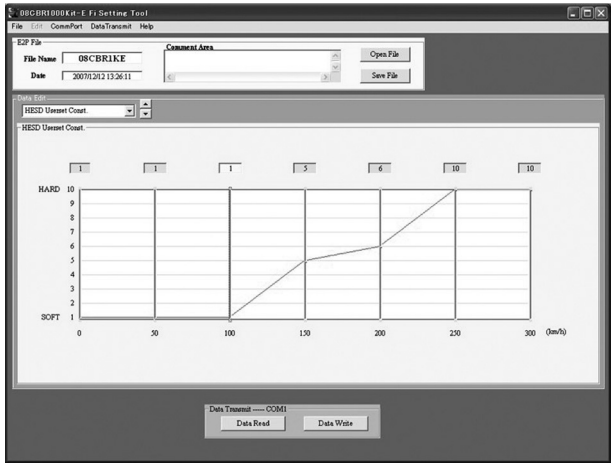
Adjustable range: 1 to 10



UserSetting can be set as follows:
– UseHESD = Use
– HESD Setting = UserSetting

When you open the edit display without setting the above items, the following error massage is appears.
Even if you click "OK" after setting HESD, the setting values will not transfer to the ECM.

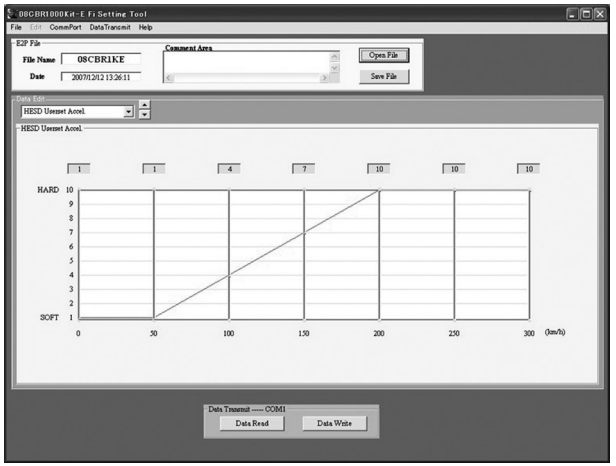
Click the desired vehicle speed value.
The adjustable area's color changes.
Use the left/right arrow keys to make changes.



Acceleration HESD Setting

After selecting "Use" and "User setting" in the HESD setting menu, next select "HESD Userset Accel." in the data edit selector pulldown menu.
Use this window to change the steering damper damping at acceleration.
The damping is decreased when you decrease the setting value.

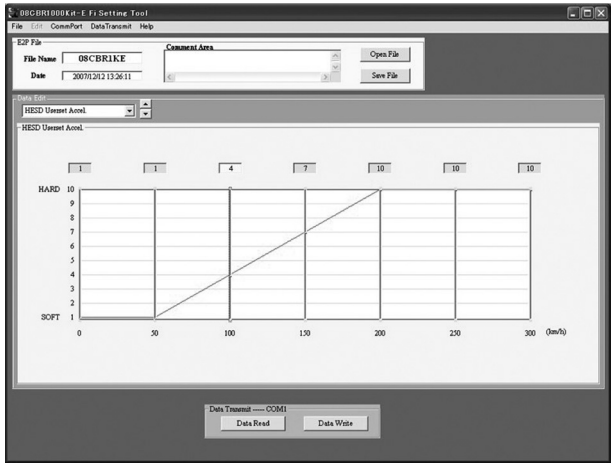
Adjustable range: 1 to 10



UserSetting can be set as follows:
– UseHESD = Use
– HESD Setting = UserSetting

When you open the edit display without set the above items, following error massage appears
Even if you click "OK" after setting the HESD, the values will not transfer to the ECM.

Click the desired vehicle speed.
The adjustable area's color changes.
Use the left/right arrow keys to make changes.



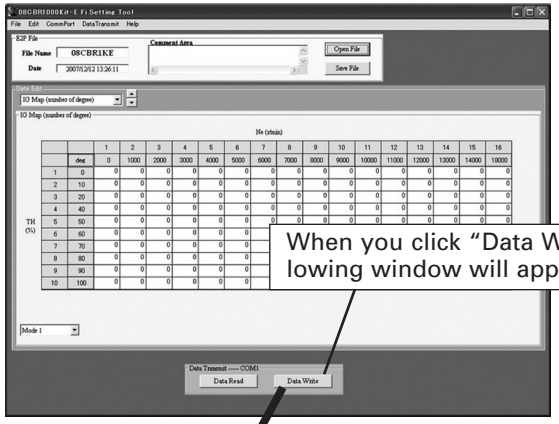
Actual vehicle speed is changed by the radius of your tires and the final drive ratio.
The calculated vehicle speed may differ from actual vehicle speed because the vehicle speed is picked up from the countershaft with the vehicle speed sensor.

Please set the setting values as follow:
A: Setting value at "not at acceleration and deceleration"
B: Setting value at "acceleration "

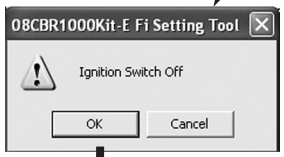
$A \leqq B$

Transferring Setting Data

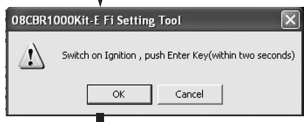
Transmitting data (PC to ECU)
Save file before transmitting the data.



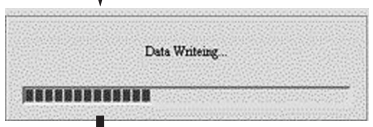
When you click “Data Write,” the following window will appear.



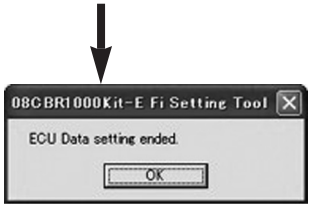
Turn the engine stop switch OFF, click “OK.”
The following window will appear.



Turn the engine stop switch ON, click “OK” or press “Enter” key within 2 seconds.



Indicates the data transfer is taking place.



If the communication is correctly completed, the following window will appear. Turn the engine stop switch OFF.

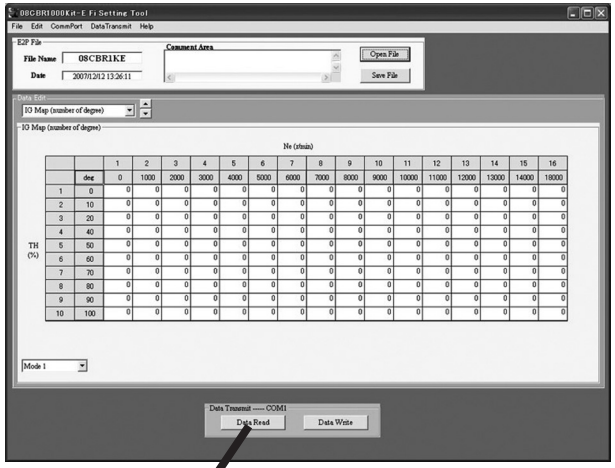
If communication could not be performed correctly, the following window will appear.
Check the connection and communication settings and retry communication clicking “Data Write” again.

If communication does not occur correctly within 2 seconds, the following window will appear.
Recheck the connection and communication setting.
Turn the engine stop switch ON, click “OK” within 2 seconds again to transfer the setting data.

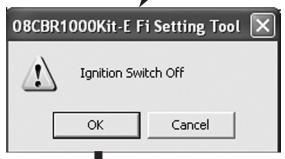
When the data of the different year type is written, the following window will appear.

After transferring the setting data, disconnect the UNIT, ASSY SERIAL I/F from the vehicle.

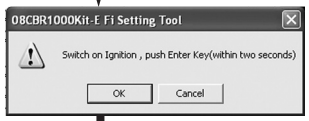
Transmitting data (ECU to PC)



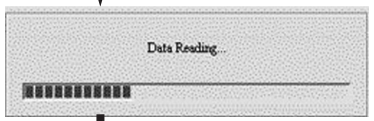
When you click “Data Read,” the following window will appear.



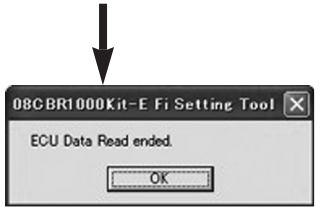
Turn the engine stop switch OFF, click “OK.”
The following window will appear.



Turn the engine stop switch ON, click “OK” within 2 seconds.



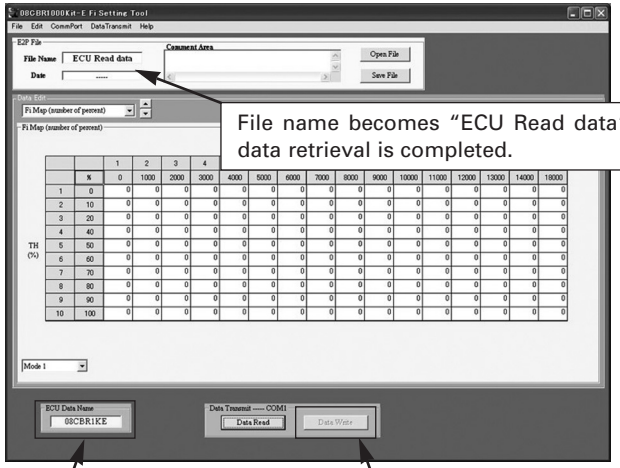
Indicates data is transferring.



If communication is correctly completed, the following window will appear. Turn the engine stop switch OFF.

Receiving data (ECU to PC)

By clicking “Data Read”, you can retrieve setting data from the ECU.
Follow the same procedures used for Data Write and the screen will appear as below.



File name becomes “ECU Read data” when the data retrieval is completed.

Contents of the display will change to the setting data in ECU and its file name will be displayed here.

Note 1:
In this state, “Data Write” cannot be performed.
Note 2:
If you save or change the data once, you will be able to transmit into ECU.

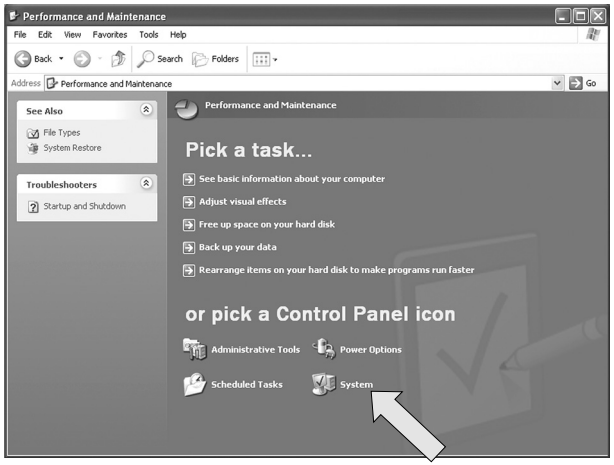
No.	State	Cause	Action to take
1	Unable to install	Don't know how to operate	*refer to 1
		CD-ROM drive is not recognized	Make the drive recognized and try installation again
		Defect of CD-ROM (deep scratch, etc.)	Please contact HRC service.
2.	Unable run the tool	Unsupported OS	This tool runs on windows 98/Me/2000/XP.
3.	Unable to communicate with ECU	The serial port setting incorrect	*refer to 2
		Power supply of ECU is turned off.	Check power supply
			Check battery condition
		Communication cable connection is defective	Check connection. (Refer to the page on connection with the vehicle.)
		Timing of transmission is not proper	Press the return key within two seconds after turning the main switch OFF and ON to transmit data (Refer to the page on data transmission)
		Cannot transport data reading from ECU.	Default setting cannot transfer the reading data. Save data, and transfer again (see Receiving data).
4.	Default file is not displayed when starting up first	A same problem is occurs with the English version.	*refer to 3
5.	Wrong ECU data	Different model year's E2P data is opened.	Check model year, select the correct model year file.
		Does not match setting tool display and vehicle's model year.	Check vehicle's model year, select the correct setting tool display (08CBR1KE only).
6.	Wrong file format	Broken reading E2P file.	Please contact HRC service.
7.	Edit menu can not be selected	Open a display other than Fi Map (number of percent) and IG Map (number of degree)	Only available for Fi Map and IG Map displays.
8.	Data was copied, but the pasting was not completed.	Copy by "Copy of sheet"	Use "Copy" menu.
		Copy by shortcut (Ctrl+C)	Copy cannot be performed by shortcut (Ctrl+C), use "Copy" on the "Edit" menu

No.	State	Cause	Action to take
9.	Unable to input data	Input data outside scope of the setting range	Displays mentioned below cannot accept data outside scope of the setting range. Check the input range and set. –Fi Map –IG Map –G/R Setting –Q/S Setting
10.	Unable to input value within setting range for GearRatio setting	Does not input data in ascending sequence for each gear.	Setting value should meet conditions stated below: 3.000≥1st>2nd>3rd>4th>5th>6th≥1.000
11.	Setting value of HESD Userset is not transferred to the ECU	Set Use HESD: – NoUse or HESD setting – FactoryDefault on HESD setting display	Set Use HESD: – Use and HESD Setting – UserSetting on HESD setting display
12.	Segmentation is changed	Make change segmentation in other mode	Fi map (percentage) and IG map (percentage) can be set individually. The position setting is common for both mode 1 and mode 2. The position setting is set in either mode, it will reflect to both mode.

*1: CD-ROM drive

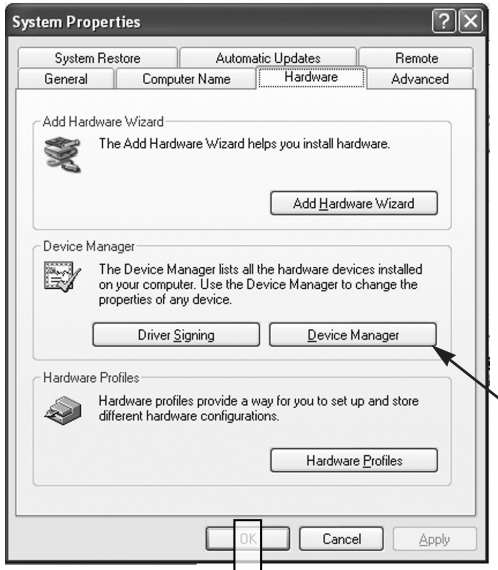
If you click on the My Computer icon, a window will appear.
Click CD-ROM drive in the window and installation will start.
If there is no CD-ROM icon displayed in the window, your PC might not be equipped with a CD-ROM drive or is not recognizing one.
Consult the instruction manual of your PC to confirm this.

*2: How to check serial port

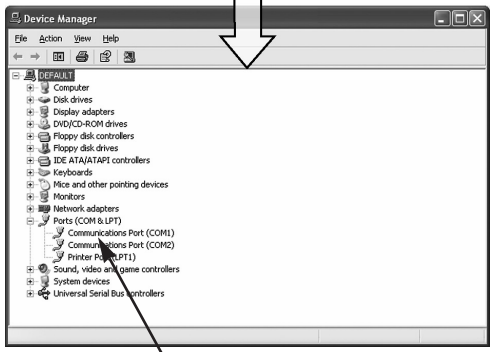


Open Control panel, and click “System.”

Windows XP
System Properties window will open.

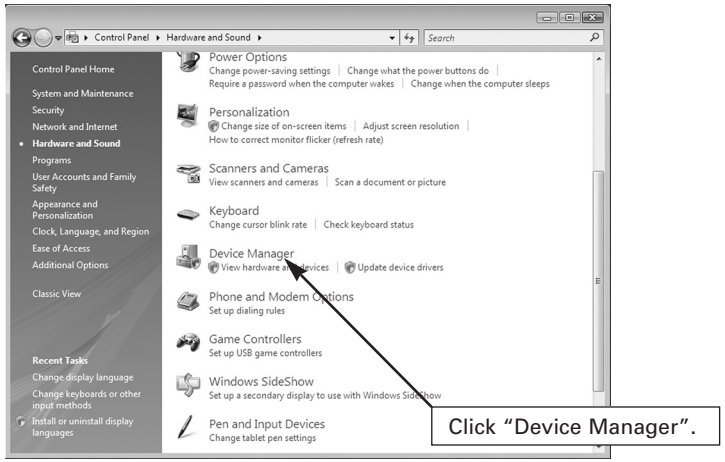


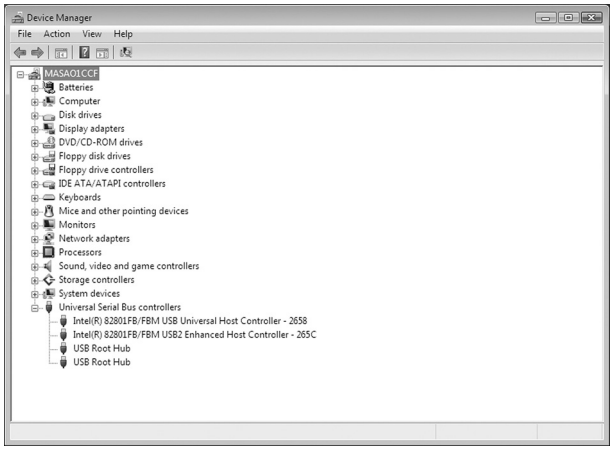
Click “Device Manager”.



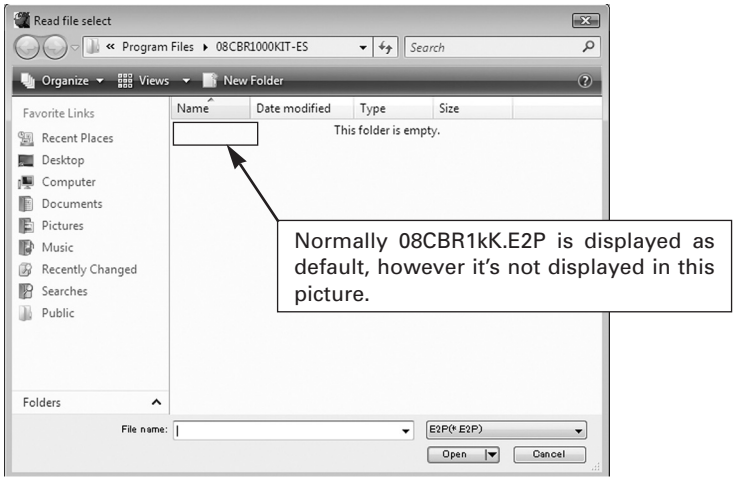
Unable to communicate when the “x” mark is appeared on the communication port (COM1). Also unable to communicate if the COM port is differ from tool setting.

Windows Vista
Open control panel.

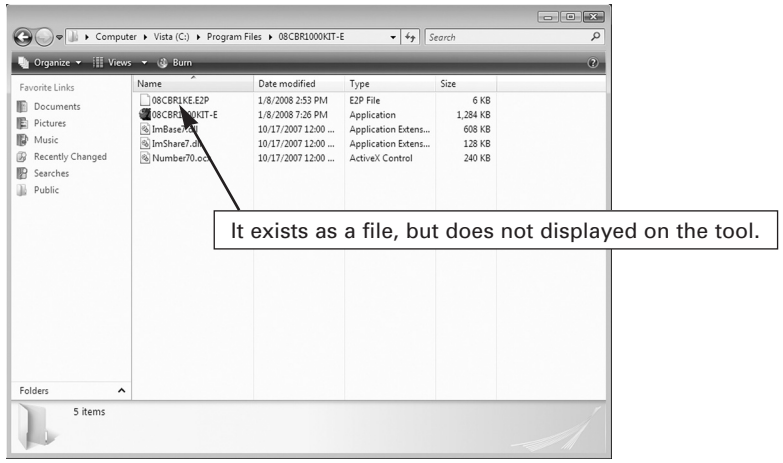




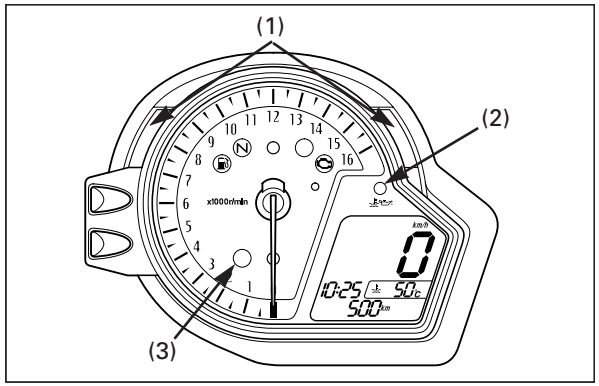
*3: In case you open "Open File" when starting up for the first time.



Countermeasure : Open Setting Tool. Open the directory. Change the file name.



Select "08CBR1KE.E2P" and change the file name (for example: change the file name "08CBR1KE.E2P" to "08CBR1K1.E2P"
The file name is not acceptable if the name includes 8 letters or less.
Now you can open the file.



(1) SHIFT-UP INDICATOR
(2) TEMPERATURE/OIL INDICATOR
(3) PIT LOAD SPEED LIMIT INDICATOR

Combination Meter Function

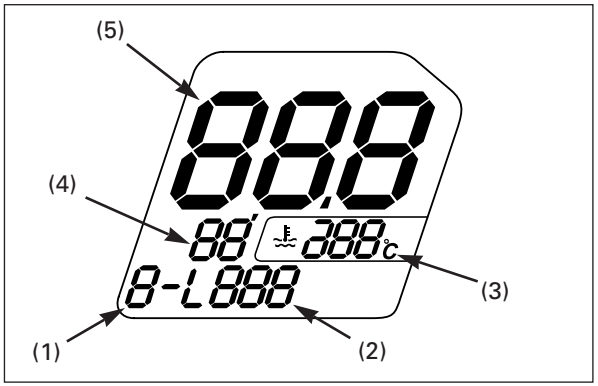
The racing kit combination meter has the following functions:

- Lap time recording and indication
- Coolant temperature indication and maximum temperature recording
- Temperature/oil/HESD warning indication
- Fuel pulse indication

Shift-up Indicator

When the engine revs exceed the setting value, the shift-up indicator illuminates or flashes.

The shift-up indicator can be set in range between 4,000 – 15,500 min^{-1} (rpm).



(1) SESSION NUMBER (2) LAP NUMBER
(3) COOLANT TEMPERATURE
(4) LAP TIME (MIN.) (5) LAP TIME (SEC.)

Lap Time Indicator

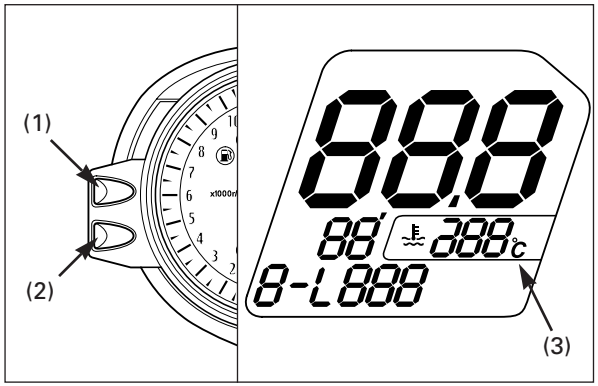
GO mode:

When the engine stop switch is set on RUN, the combination meter is in the "STOP" mode.

When the combination meter receives the LAP marker signal (when the passing switch is pressed) or when engine revs exceed 5,000 rpm, the lap time indicator system enters the "GO" mode.

In the "GO" mode, the combination meter records the session number, lap number, each lap time and maximum coolant temperature in each lap.

During vehicle operation, the combination meter displays the current session number, lap number, lap time and coolant temperature in each lap.



(1) "A" BUTTON
(2) "B" BUTTON
(3) COOLANT TEMPERATURE INDICATION

During vehicle operation, the coolant temperature indication shows real time temperature.

The coolant temperature can be indicated between 35 – 132˚C (95 – 270˚F).

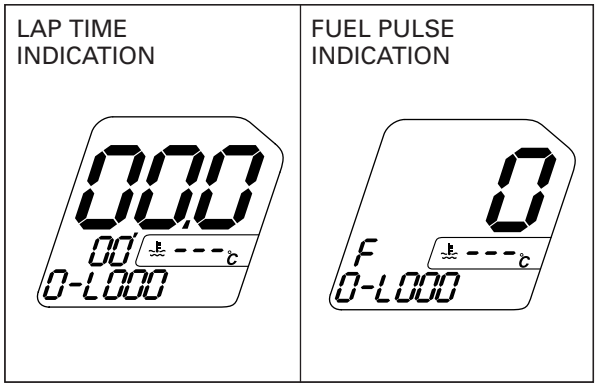
The temperature lower than 35˚C (95˚F), the indication is "–".

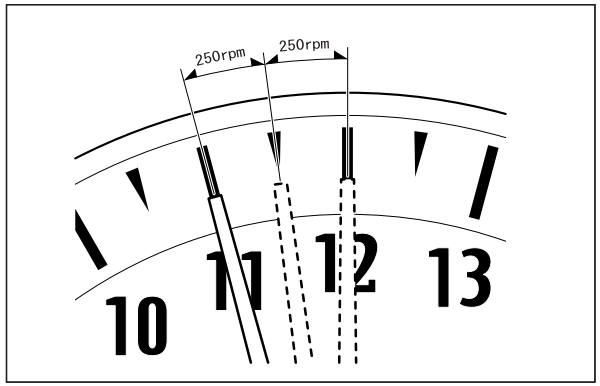
The temperature more than 132˚C (270˚F), the maximum temperature stays and blinking.

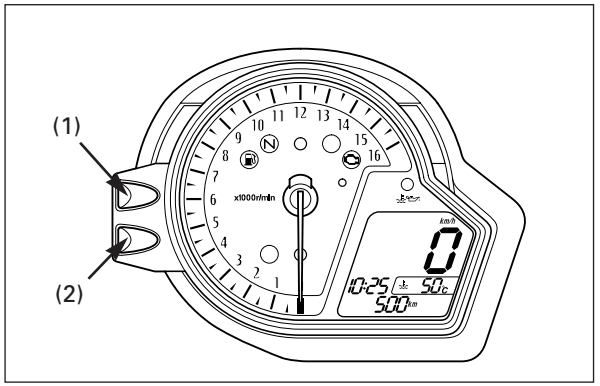
When the lap count is entered, indicate previous lap's maximum temperature about 5 seconds, then return to the real time indication.

Temperature indication change:

1. Turn the engine stop switch RUN while pressing the "B" button.
   The temperature unit starts blinking and change mode.
2. Change unit by pressing the "A" button.
3. After determine you wish to indicate, press "B" button.







(1) "A" BUTTON
(2) "B" BUTTON

Lap Time Data Reading
The lap data can be stored up to 199 laps.
When the stored data exceeds 199 laps, the oldest data is overwritten by the current lap data.

STOP mode:
If you wish to read out data for each lap, make sure the combination meter is in "STOP" mode by pressing the "A" button.
When the engine stop switch is set on RUN or the "A" button is pressed under the "GO" mode, the combination meter enters the "STOP" mode.
The stored lap data and fuel pulse can be read out in this mode.
The indication can be changed by pressing the "A" and "B" button simultaneously.

Stored lap data is displayed from lap 1 to the latest lap by pushing the 'RESET" button.
When the "A" button is pressed, the next stored data is displayed.
When the "B" button is pressed, the previous stored data is displayed.
If the "A" or "B" button is pressed and held, the lap time data will be advanced or returned.
When you wish to reset the lap data, press both the "A" and "B" buttons simultaneously for more than two seconds.

How to set the shift-up indicator
1. Turn the engine stop switch to RUN while pressing the "A" button until the combination meter initial action finishes. The needle indicates the current setting.

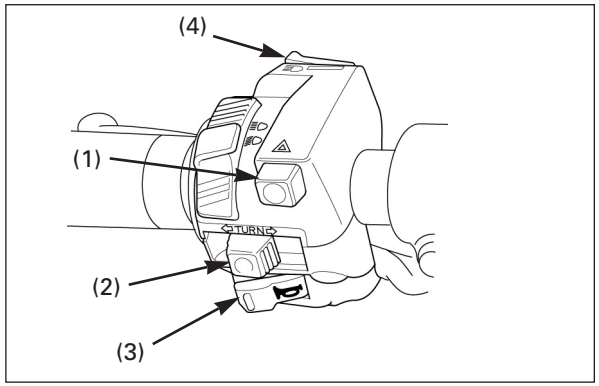
2. Align the needle to the desired rpm by pressing the "B" button. Each time the button is pressed, the needle setting increases 250 rpm. Press and hold the button for more than one second to increase the setting 1,000 rpm.
   If the maximum setting value (15,500 min^{-1} (rpm)) is exceeded, the needle returns to 4,000 min^{-1} (rpm).
   After determine the illuminating rev., press the "A" button.

3. Press the "B" button and select a illuminating or flashing pattern.

   - Illuminating pattern and brightness (3 patterns)
   - Flashing pattern and brightness (6 patterns)

4. After the shift-up indicator setting is finished, press the "B" button. The combination meter returns to its normal indication mode (the tachometer needle returns to 0).

When the tachometer or speedometer input signal is detected, or not accessed for more than 30 seconds during setting, the setting value is cancelled and returns to the normal indication mode.



(1) HAZARD SWITCH (MODE SWITCH)
(2) HORN SWITCH (POWER SHIFTER)
(3) TURN SIGNAL SWITCH (PIT ROAD SPEED LIMIT)
(4) PASSING SWITCH (STOP WATCH)

Left Handlebar Switch Function

On this machine, the switches on the left handlebar function as follows:

Hazard switch:	Mode switch function
Horn switch:	Power shifter function
Turn signal switch:	Pit road speed limiter
Passing switch:	Stop watch function (lap time)

Mode Switch:
When the hazard switch is OFF, the ECU setting is in Mode 1 and the switch is ON in Mode 2.
See page 20 for mode select.

Quick Shift Switch:
Pushing the switch activates both the ignition and fuel injection cut-off systems.
See page 27 for quick shift setting.

Pit road Speed Limiter:
While pushing the turn signal switch to the right or left, the pit road speed limiter is activated.
The pit road speed limiter is deactivated when you turn the turn signal switch off.
See page 37 for pit road speed limit setting.

Stop Watch:
When the switch is pushed, the stop watch is started.

Memo