

Ninja ZX-6R
Ninja ZX-10R
Ninja ZX-10R ABS



Kawasaki FI Calibration Tool Instruction Manual

IMPORTANT

This manual provides how to change the fuel injection amount, sub-throttle opening, and ignition timing of the racing ECU for the '09 ~ '11 Ninja ZX-6R, '11 Ninja ZX-10R. This manual instructs the dealing method briefly for the mechanic and being familiar with the personal computer (PC).

As for the basic knowledge, refer to the base Service Manual for the Ninja ZX-6R and ZX-10R.

ZX600R9F/RAF/RBF:	P/No. 99924-1417-03
ZX1000JBF/KBF:	P/No. 99924-1443-01

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How to Use This Manual

Whenever you see symbols, heed their instructions! Always follow safe operating and maintenance practices.

DANGER

DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.

WARNING

WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION

CAUTION indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

NOTICE

NOTICE is used to address practices not related to personal injury.

This manual contains four more symbols which will help you distinguish different types of information.

NOTE

- *This note symbol indicates points of particular interest for more efficient and convenient operation.*

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1. Kawasaki FI Calibration Tool Outline

1.1 System Function

Kawasaki FI Calibration Tool (FI Tool) is developed to modify the mapping of the racing machine to gain operating conditions suitable for the course and the rider's skill. The following are the available setting functions.

Table 1 FI Tool Function

Functions	Model Name	'11 ZX-10R (ZX1000J/K)	'09 ~ '11 ZX-6R (ZX600R)
1) Adjust the injected fuel rate at acceleration		-30 % ~ +30 %	-30 % ~ +30 %
2) Adjust the injected fuel rate of #1 and #4 cylinders		–	-30 % ~ +30 %
3) Adjust the injected fuel rate of #2 and #3 cylinders		–	-30 % ~ +30 %
4) Adjust the injected fuel rate of all cylinders		-30 % ~ +30 %	–
5) Adjust the injected fuel rate of primary and secondary injector		-20 % ~ +20 %	-10 % ~ +10 %
6) Adjust the ignition timing		-15° ~ +5°CA	-15° ~ +5°CA
7) Adjust the sub-throttle opening angle		-50 % ~ +50 %	-45 % ~ +45 %
8) Adjust the all injected fuel rates of all cylinders and operating area simultaneously		-30 % ~ +30 %	-30 % ~ +30 %
9) Adjust the value of engine over revolution limiter		-1000 ~ +300 rpm	0 ~ +300 rpm
10) Set the fuel cut or not at deceleration		Use or Not Use	Use or Not Use
11) Set the exhaust device controlled or not		–	Controlled or Full Open Fixed
12) Set the Auto Shifter Ignition Cut Length		Controlled or not, set Ig. Cut Time by gear range	Controlled or not, set Ig. Cut Time by gear range
13) Set the Pit Road RPM Limit		Controlled or not, set Upper Limit RPM by gear range	Controlled or not, set Upper Limit RPM by gear range
14) Revolution increase/decrease of outside shift indicator		Controlled or not, set the revolution	Controlled or not, set the revolution
15) Gear ratio of Kit Transmission		Use or not use, set the gear ratio	Use or not use, set the gear ratio
16) Set the rev spike controlled or not		Use or not use, set the revolution	–
17) Set the launch controlled or not		Level 1 ~ 10	–
18) Set the traction control		Mode or set the sensitivity	–

Note: CA shows rotating angle of crankshaft.

Note: On set the Auto Shifter (12) ZX-6R has both cut time settings by ignition cut length or fuel cut.

1.2 Personal Computer (PC) Requirement

The Kawasaki FI Calibration system operates on a Personal Computer (PC) having a serial communication port or USB port with the racing electronic control unit (ECU) on the motorcycle through an interface box (I/F Box).

Table 2 PC Requirement

Items	Recommendation
Operating System	Windows 7 32 bit version, Vista, XP (US version, Japanese version)
CPU	Pentium 150 MHz or faster
Memory	64 MB or more
Hard Disk Drive	2 MB or more of free space
Display Resolution	1024 x 768 pixels or more, more than 256 colors
Port Connector	USB (Less than Ver.2.0)
Other	Equipped with a mouse or a pointer equivalent to mouse

NOTE

- *Even if the recommended PC is used, the Kawasaki FI Calibration Tool program could not operate correctly depending on the other applications installed to the PC.*
- *If your PC does not equip 9-pin connector, use a suitable RS232C-USB adapter. Some adapter cannot be communicated correctly depending on its specification.*

1.3 System Configuration

The Kawasaki FI Calibration tool kit consists of (1) Racing ECU, (2) Racing Main Harness or Standard Main Harness plus Racing Sub-harness (only ZX-6R), (3) Racing I/F Box, and (4) FI Tool Program. The FI Tool Program must be installed to your PC.

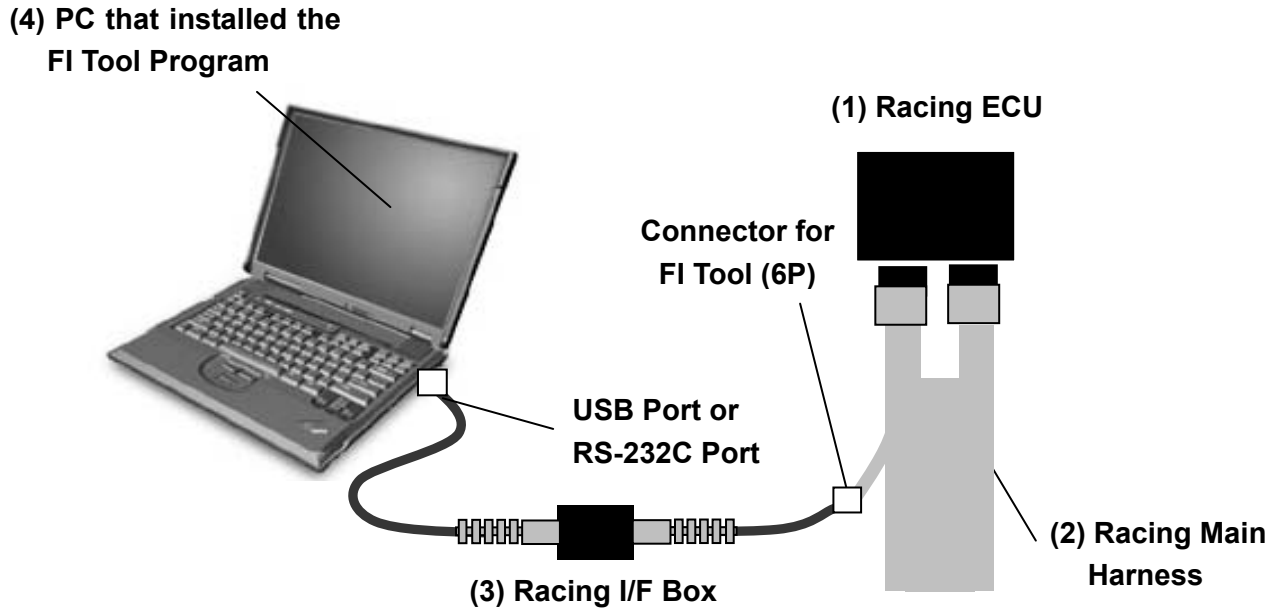


Fig. 1 FI Tool Kit Connection

Table 3-1 FI Tool Kit for ZX-10R

ECU	Racing ECU: 21175-0737
I/F BOX	Racing I/F-BOX (for USB Port): 26031-0999 (for RS-232C Serial Port): 26031-0025 or 26031-0240
Harness	Racing Main Harness: 26031-1219
Shift SW	Contact type of SW can be used. Recommend the Shift Sensor made by Battle Factory or Dynojet.
FI Tool Program	CD

NOTE

- The racing ECU does not operate excluding the combination with the racing main harness (26031-0999). The standard main harness cannot be used.
- The racing ECU can be installed on both KIBS (ABS) equipped/non-equipped motorcycles by using the racing main harness. However, the ABS does not work with the racing ECU. Be aware that the ABS stops functioning and drive carefully when the racing ECU is installed on your KIBS (ABS) equipped motorcycle.
- In circuit racing on the KIBS (ABS) equipped motorcycle without the racing ECU, remember the followings:
 The ABS is designed to prevent wheel lock when the brakes are suddenly applied in straight running
 The ABS is not designed to shorten the braking distance, so that the braking distance can be longer in the ABS equipped motorcycle than in the ABS non-equipped motorcycle on slippery , rough, or downhill road surface. Drive with extreme care on such road conditions.

⚠WARNING
ABS cannot protect the rider from all possible hazards and is not a substitute for safe riding practices. Be aware of how the ABS system operates and its limitations. It is the rider's responsibility.

Table 3-2 FI Tool Kit for ZX-6R

Generator Type	Optional Generator	Original Generator
ECU	Racing ECU: 21175-0248	
I/F-BOX	Racing I/F-Box (for USB Port): 26031-0999 (for RS-232C Serial Port): 26031-0025 or 26031-0240	
Harness	Racing Main Harness: 26031-0790	(1) Racing Main Harness: 26031-0789 (2) Racing Sub-harness: 26031-0327 and Standard Main Harness (for US Model): 26031-0793
Shift SW	Contact type of SW can be used. Recommend the Shift Sensor made by Battle Factory or Dynojet.	
FI Tool Program	CD	

NOTE

- Racing sub-harness (26031-0327) doesn't operate excluding the combination with the above-mentioned standard main harness (26031-0793).
- For '10 - '11 ZX-6R, the sub-harnesses (26031-0327 and 0955) are necessary to connect the standard main harness and the ECU.

2. Installation Procedure of FI Tool Program

2.1 Installing Procedure of FI Tool

NOTE

- Before installing the new FI Tool Program to the PC in which old version Program is installed, save the old .est files as back-up and then un-install the previous Program.

2.1.1 For Windows XP

- (1) Start up the PC.
- (2) Insert the CD with the FI Tool program installed into the drive.
- (3) Select “Start”, “Program”, and “Explore”. (The program is usually started automatically.)
- (4) Click **FITool10Mk** on the explore to display the screen shown in Fig.2.

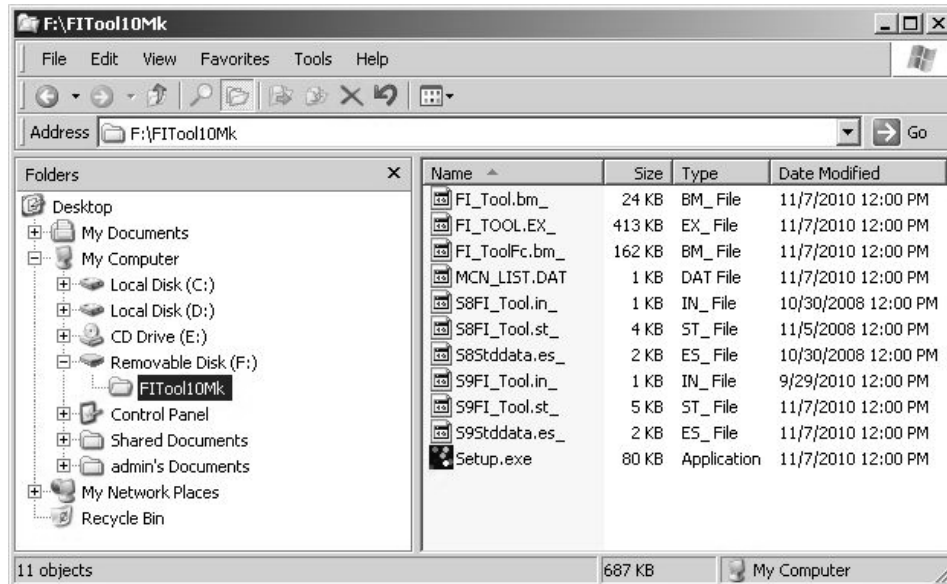


Fig.2 Explore

- (5) Right-click **FITool10Mk** on the screen shown in Fig.2 and copy and paste it to the appropriate folder. After saving the folder, remove the CD from the drive.
- (6) Execute **Setup.exe** to start the Setup program.
- (7) Then the screen shown in Fig.3 appears.

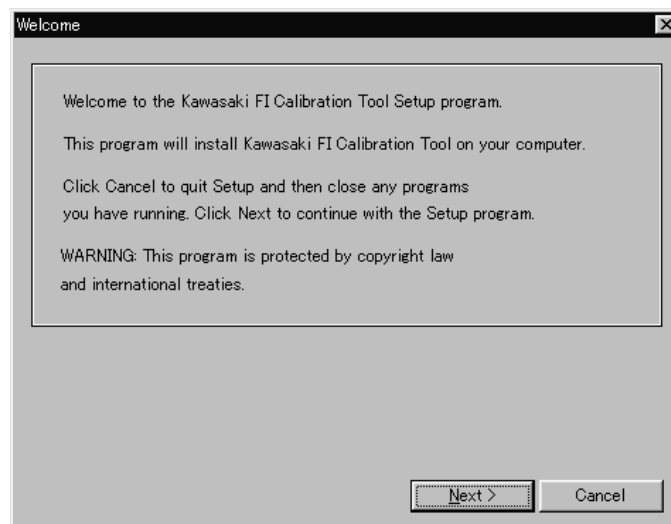


Fig. 3 Start Up of Installer

Click **Next** to install the Program. Click **Cancel** to stop installing procedure.

(8) The Product License Agreement screen shown in Fig.4 appears.

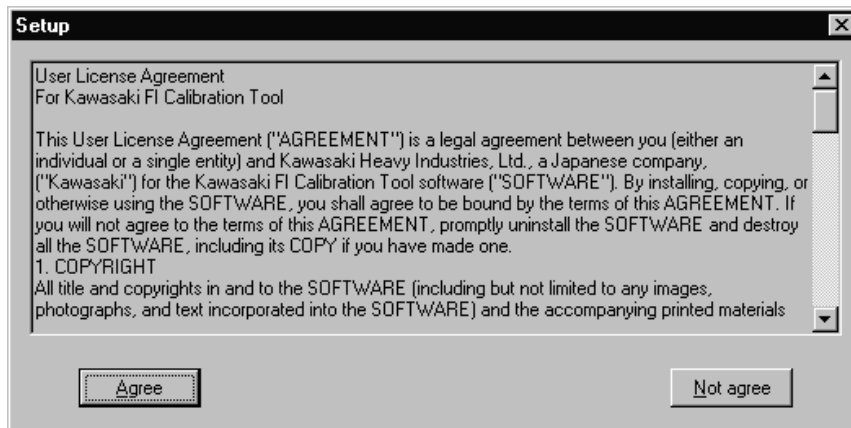


Fig. 4 Product License Agreement

Click **Agree** when you agree to the Product License Agreement. Click **Not agree** when you do not agree to the Product License Agreement. Then the installing procedure is stopped.

(9) Next the Serial Information screen shown in Fig.5 appears.

Enter the information in both columns.

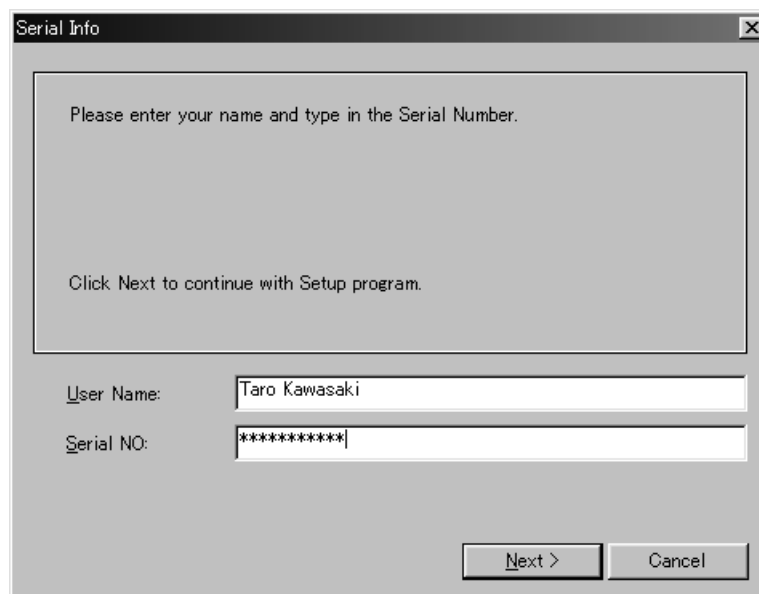


Fig. 5 User Information Registration / Authentication (Sample)

The Serial No is informed to you from the dealer.

The default settings of **User Name** and **Serial No** are vacant.

If you omit any of them, **Next** button is grayed out.

When the Serial No is wrong, an error message shown in Fig.6 appears on the screen. Input the correct Serial No in the column.



Fig. 6 Error Message

Click **Next** to install the Program. Click **Cancel** to stop the installing procedure.

(10) The destination folder selection screen shown in Fig.7 appears.

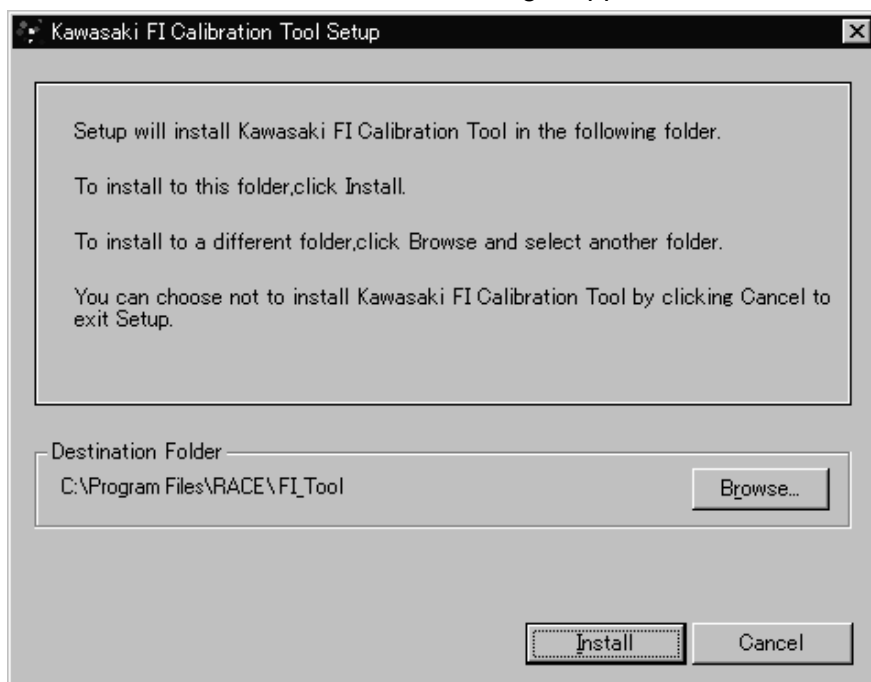


Fig. 7 Choosing Destination Folder

Choose the destination folder. The default setting is **C:\Program Files\RACE\FI_Tool**. Click **Install** to start the installing procedure. Click **Cancel** to stop the installing procedure.

If you want to install the Program to another folder, click the **Browse** to display the **Choose Folder** screen shown in Fig.8. Then choose the folder.

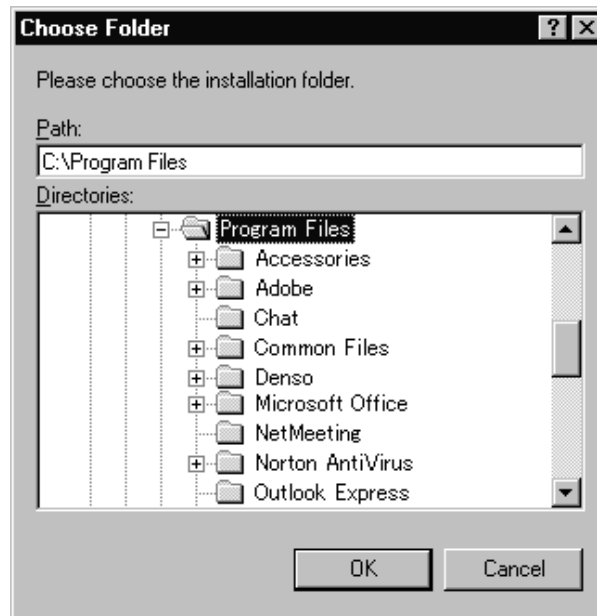


Fig. 8 Choose Folder

After choosing folder, click **OK**.

(11) After the **Kawasaki FI Calibration Tool** program is installed, the screen shown in Fig.9 appears.



Fig. 9 Installing Finish

If the destination folder has a file that has the same name of the file to be copied and whose time stamp is newer than that for the file to be copied, the dialog screen shown in Fig. 10 appears and the file cannot be copied. However, the installing procedure is normally finished because the destination folder has the new data file with newer time stamp.

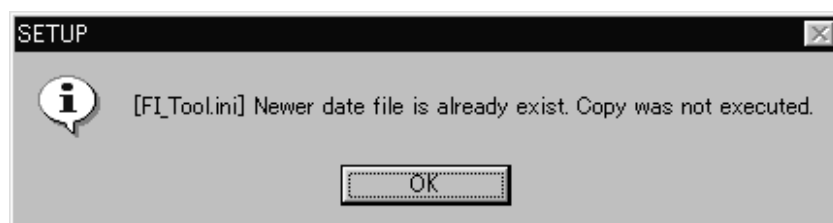


Fig. 10 Message Dialog when overwriting was not performed

(12) Click **OK** button to finish the installing. The shortcut icon for **Kawasaki FI Calibration Tool** program is registered on both the Desktop and the Start Menu.

Click **Cancel** during the installation operation to quit the installing.

(13) Before starting **Kawasaki FI Calibration Tool**, restart your PC.

2.1.2 For Windows Vista or Windows 7 32-bit version

The following procedures are for Windows Vista. The procedures for Windows 7 32-bit version are about the same as those for Windows Vista.

- (1) Start up the PC.
- (2) Insert the CD with the FI Tool program installed into the drive.
- (3) Select “Start”, “Program”, “Accessory”, and “Explore”. (The program is usually started automatically.)
- (4) Click **FITool10Mk** on the explore to display the screen shown in Fig.11.

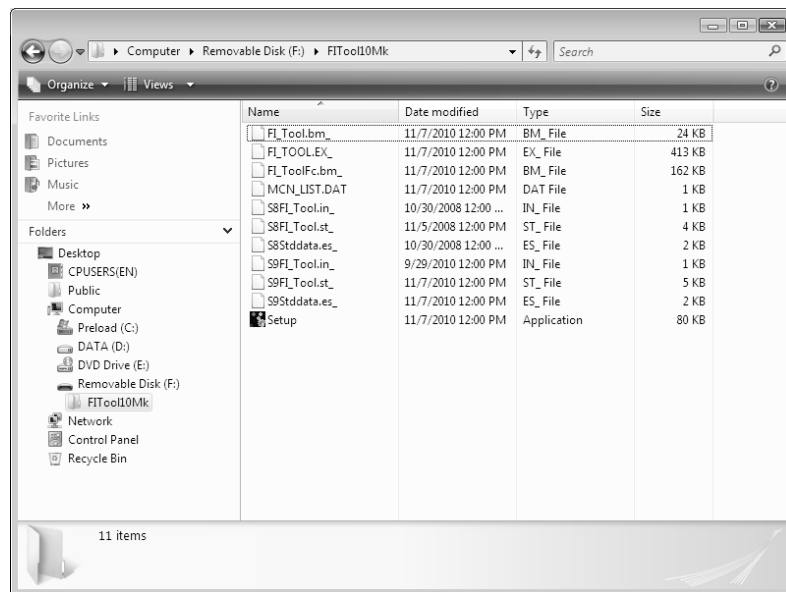


Fig.11 Explore

- (5) Right-click **FITool10Mk** on the screen shown in Fig.11 and copy and paste it to the appropriate folder. After saving the folder, remove the CD from the drive.

(6) Execute **Setup.exe** to start the Setup program.

NOTE

○ *If user account control is displayed, click **Yes**.*

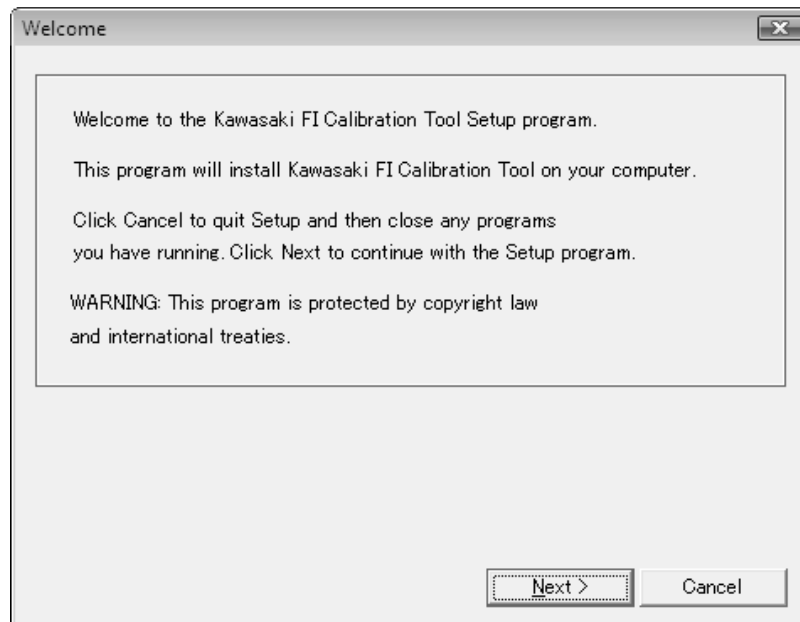


Fig. 12 Setting Screen of Installer Program

Then the screen shown in Fig.12 appears.

Click **Next** to install the Program. Click **Cancel** to stop installing procedure.

(7) The Product License Agreement screen shown in Fig.13 appears.

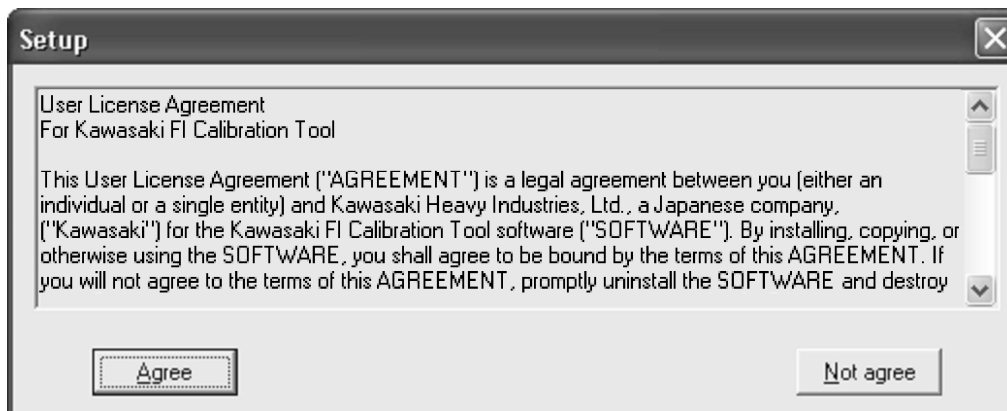
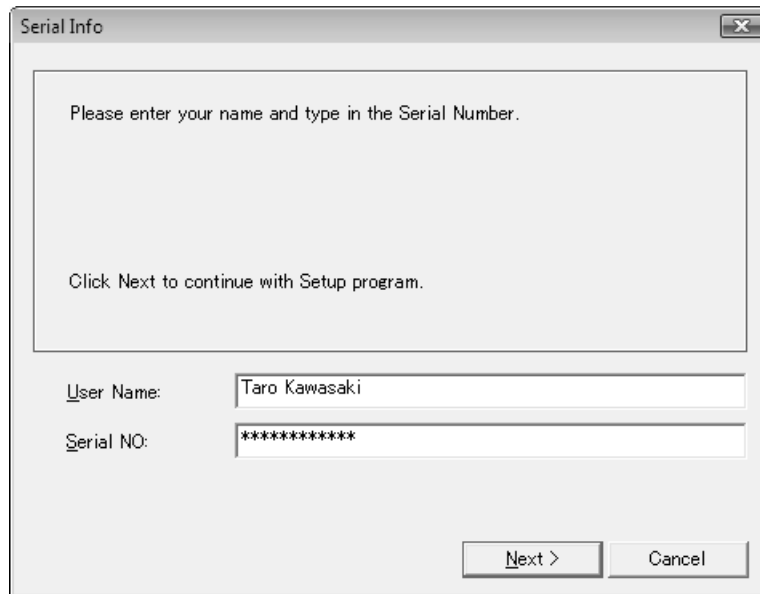


Fig. 13 Product License Agreement

Click **Agree** when you agree to the Product License Agreement. Click **Not agree** when you do not agree to the Product License Agreement. Then the installing procedure is stopped.

- (8) Next the Serial Information screen shown in Fig.14 appears.
Enter the information in both columns.



The image shows a dialog box titled "Serial Info". Inside the dialog, there is a text area with the following text: "Please enter your name and type in the Serial Number." and "Click Next to continue with Setup program." Below the text area, there are two input fields. The first is labeled "User Name:" and contains the text "Taro Kawasaki". The second is labeled "Serial NO:" and contains a series of asterisks "*****". At the bottom right of the dialog, there are two buttons: "Next >" and "Cancel".

Fig. 14 User Information Registration / Authentication (Sample)

The Serial No is printed on the CD of FI Tool Program.
The default settings of **User Name** and **Serial No** are vacant.
If you omit any of them, **Next** button is grayed out.

When the Serial No is wrong, an error message shown in Fig.15 appears on the screen.
Click **OK** and input the correct Serial No in the column.

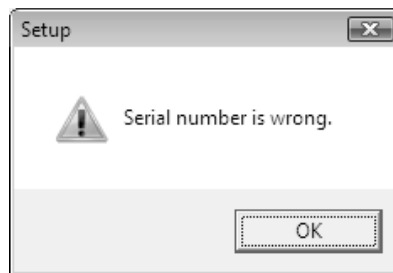


Fig. 15 Error Message

Click **Next** to install the Program. Click **Cancel** to stop the installing procedure.

(9) The destination folder selection screen shown in Fig.16 appears.

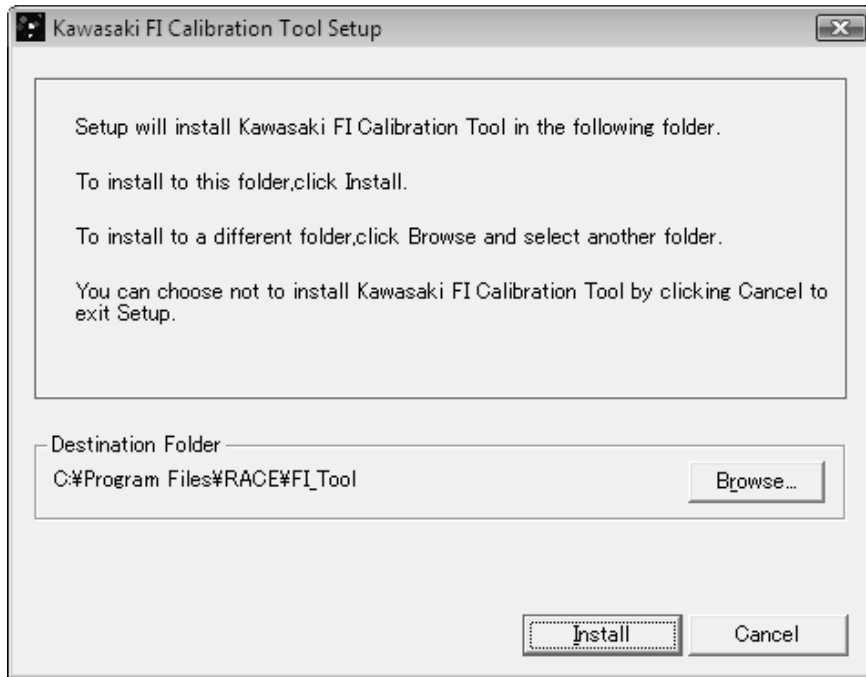


Fig. 16 Choosing Destination Folder

Choose the destination folder. The default setting is **C:\Program Files\RACE\FI_Tool**.
Click **Install** to start the installing procedure. Click **Cancel** to stop the installing procedure.

If you want to install the Program to another folder, click the **Browse** to display the **Choose Folder** screen shown in Fig.17 Then choose the folder.

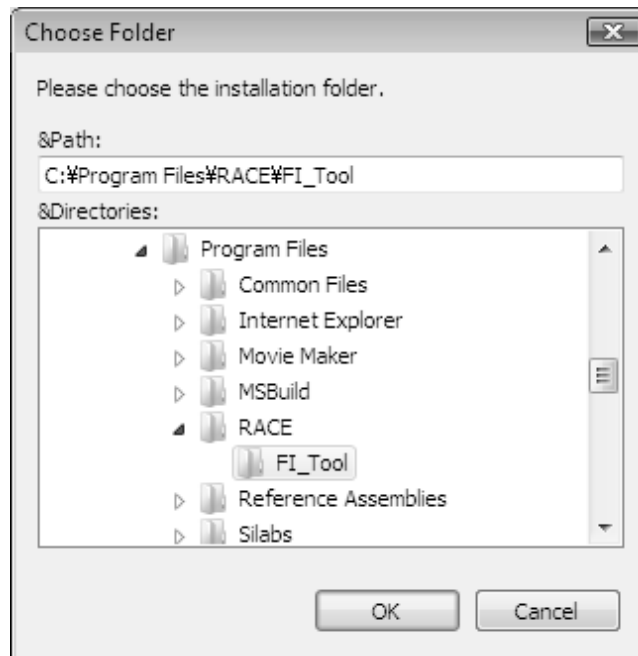


Fig. 17 Choose Folder

After choosing the folder, click **OK**.

(10) After the **Kawasaki FI Calibration Tool program** is installed, the screen shown in Fig.18 appears.

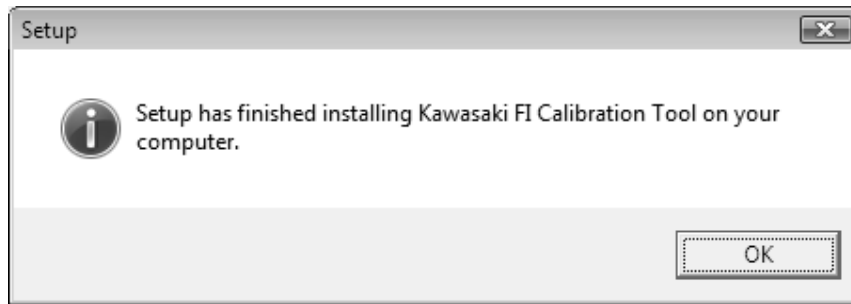


Fig. 18 Installing Finish

(11) Click **OK** button to finish the setup. After the installing is finished, the shortcut icon for **Kawasaki FI Calibration Tool** program is registered on both the Desktop and the Start Menu. Click **Cancel** during the setup operation to quit the installing.

(12) Before starting **Kawasaki FI Calibration Tool**, restart your PC.

2.2 File Structure of FI Tool

- Files to be copied into a destination folder

FI_Tool.exe	Program file
FI_Tool.bmp	256-color splash screen file
FI_Tool FC.bmp	Full-color splash screen file
MCN_LIST.DAT	
Setup.exe	Uninstall file for execution

- Files to be copied into the ZXT00J folder under the destination folder

FI_Tool.ini	Setting file for FI_Tool.exe of ZXT00J
FI_Tool.stz	ZXT00J Configuration File

- Files to be copied into the ZXT00J Work Folder

Standard_data.est	Data file for only ZXT00J
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- Files to be copied into the ZX600R folder under the destination folder

FI_Tool.ini	Setting file for FI_Tool.exe of ZX600R
FI_Tool.stz	ZX600R Configuration File

- Files to be copied into the ZX600R Work Folder

Standard_data.est	Data file for only ZX600R
-------------------	---------------------------

NOTE

- When over-installing under the condition that the folders of old models are existed in the designated folders and in each folder the setting file is existed, those folders of old models are added in the machine select list.

2.3 Uninstalling Procedure of FI Tool

2.3.1. For Windows XP

Uninstalling operation can be executed on the **Add/Remove** service application in the **Control Panel**.

- (1) Open the **Control Panel** screen from **My Computer** or **Explorer** screen.



Fig. 19 Control Panel

Then click the **Add/Remove** icon.

- (2) Add/Remove Programs Properties screen shown in Fig.20 appears.

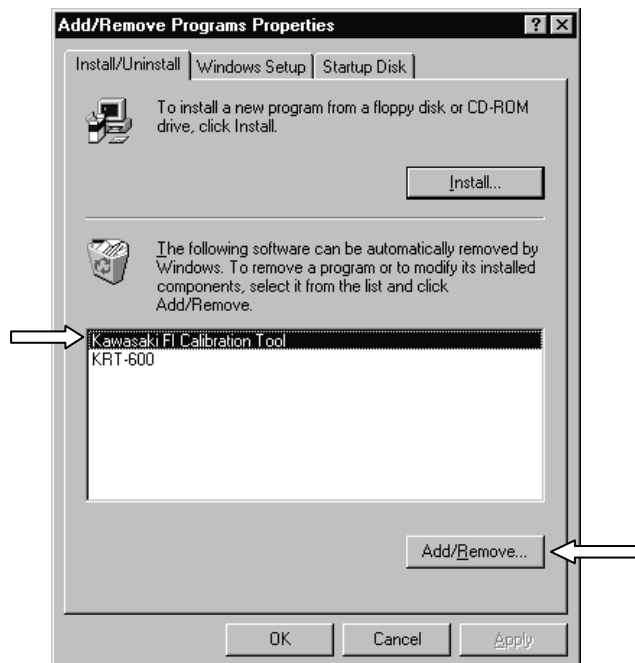


Fig. 20 Add/Remove Programs Properties Screen

Click **FI Calibration Tool** and then click **Add/Remove** to start the uninstalling program.

(3) The screen shown in Fig.21 appears.



Fig. 21 Uninstall Starting Screen

(4) Click **Yes** to start the uninstalling procedure. After the uninstallation is completed, Uninstall Completion screen shown in Fig.22 appears.



Fig. 22 Uninstall Completion Screen

If you tried to delete the program but you couldn't do it due to some reason (ex. the program is starting), the dialog shown in Fig.23 appears. In such case, delete the files remaining in the screen folder by yourself.

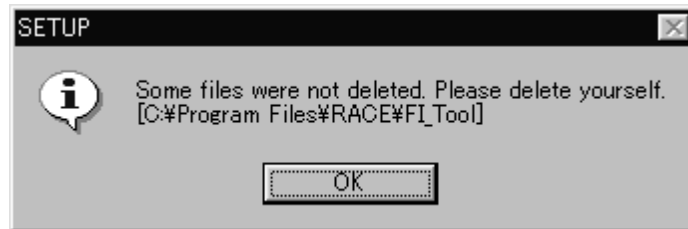


Fig. 23 Message Dialog when some files were not deleted

(5) Click **OK** button to complete the uninstalling procedure.

NOTE

○ *In this step, setup.exe is left in the FI Calibration Tool folder, but it will be deleted when you start the PC next time.*

2.3.2. For Vista or Windows 7 32-bit version

The following procedures are for Windows Vista. The procedures for Windows 7 32-bit version are about the same as those for Windows Vista.

Uninstalling operation can be executed on the **Uninstall a program** service application in the **Control Panel**.

- (1) **Open the Control Panel screen from start menu.**

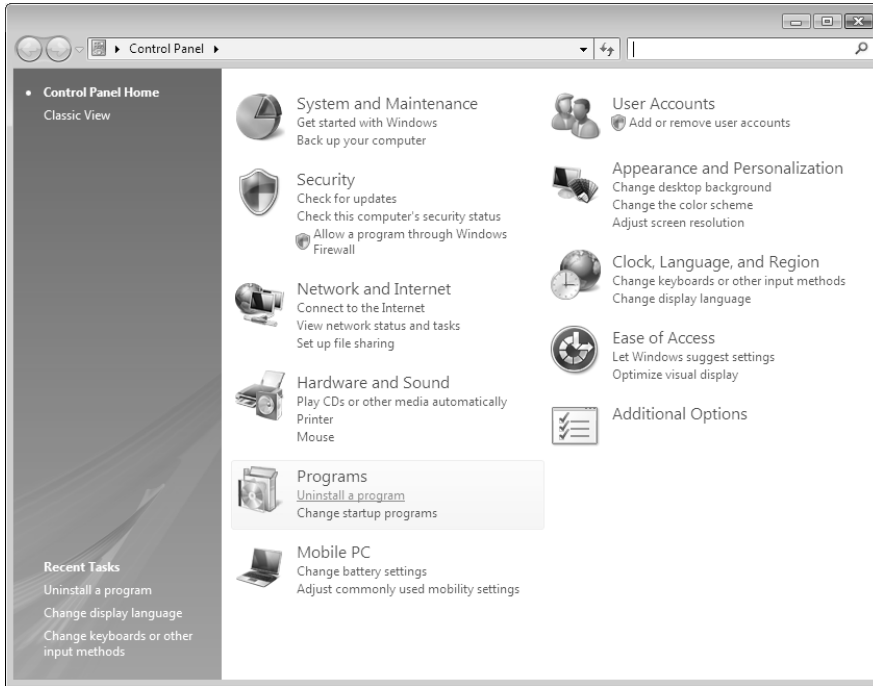


Fig. 24 Control Panel

Then click the **Uninstall a program** icon.

- (2) **Uninstall or change a program screen shown in Fig.25 appears.**

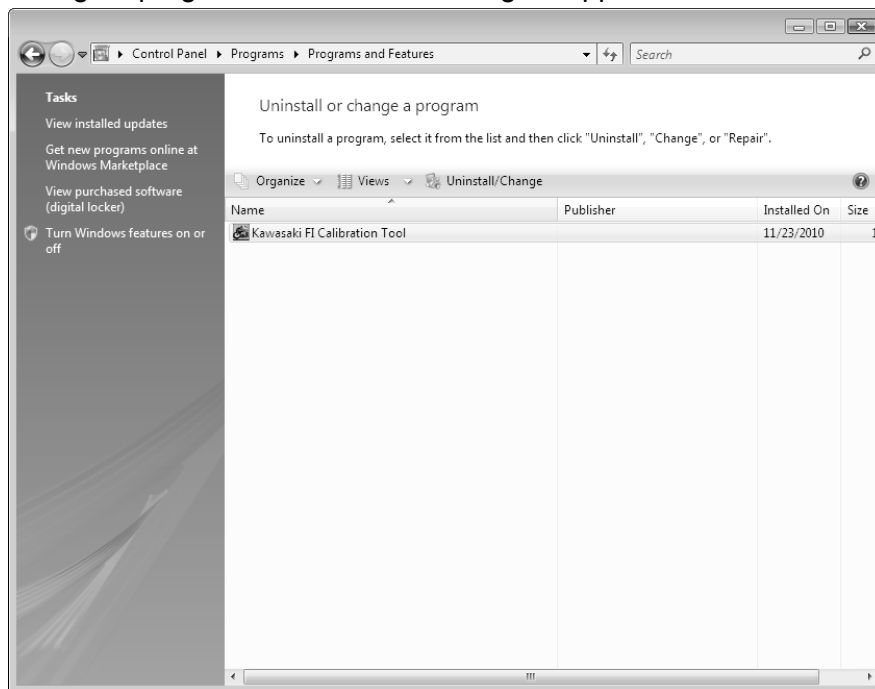


Fig. 25 Uninstall or change a program screen

Click **FI Calibration Tool** and then click **Uninstall/Change** to start the uninstalling program.

(3) The screen shown in Fig.26 appears.

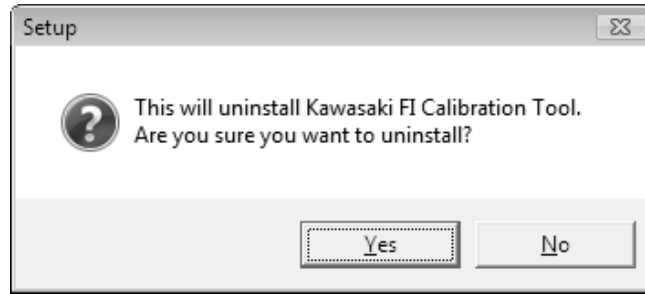


Fig. 26 Uninstall Starting Screen

(4) Click **Yes** to start the uninstalling procedure. After the uninstallation is completed, Uninstall Completion screen shown in Fig.27 appears.

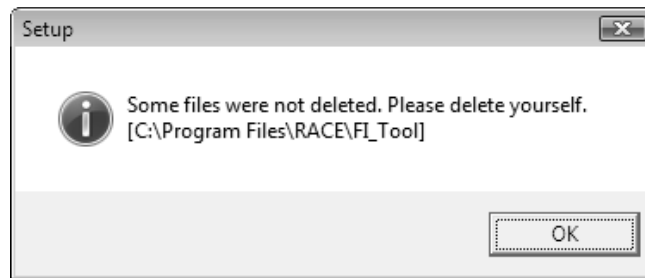


Fig. 27 Uninstall Completion Screen

(5) Click **OK** to complete the uninstalling procedure.

NOTE

○ *In this step, setup.exe is left in the FI Calibration Tool folder. Delete the setup.exe file in the setup folder by hand.*

2.4 Installation Procedure of Racing I/F BOX driver (USB version)

The driver software must be installed to use the I/F-BOX(J926031-0025) USB version. To use the RS-232C version (J926031-0025 or J926031-0240), driver installation is not necessary.

2.4.1 For Windows XP

- (1) Double-click **CP210x_Drivers.exe** on the explorer screen.
- (2) The installer program is started and the screen shown in Fig.28 appears.

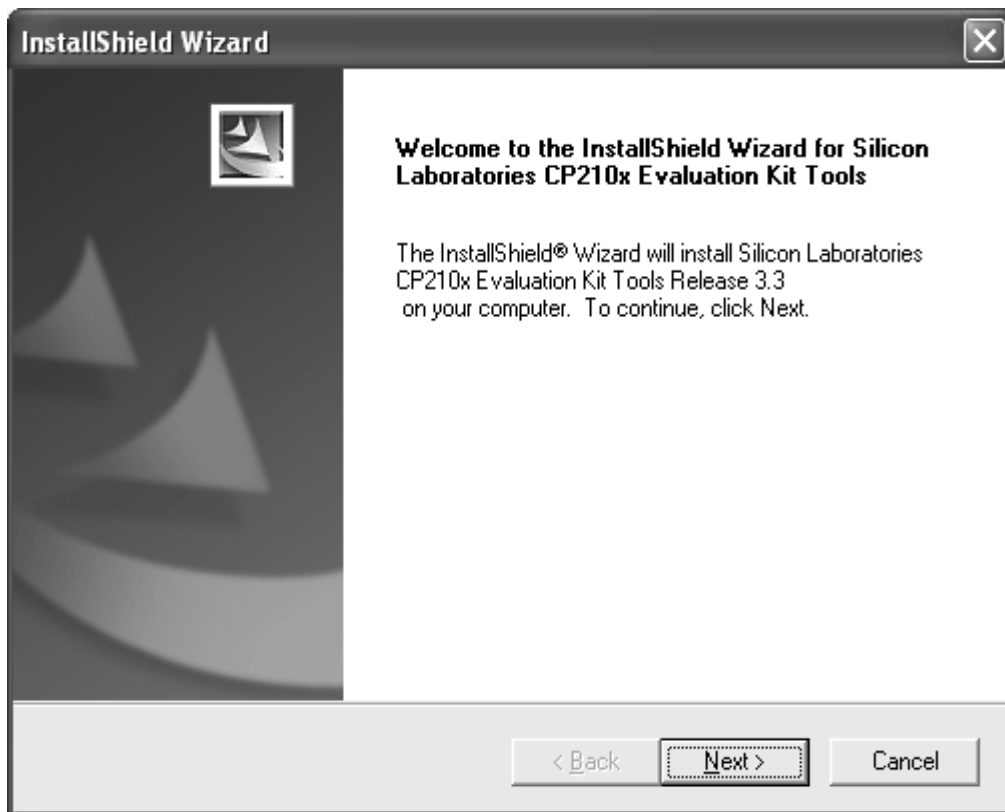


Fig. 28 Installer program start-up

Click **Next** to proceed installation and click **Cancel** to stop installation.

- (3) The "License Agreement" screen shown in Fig.29 appears. Click **Yes** to proceed with installation and click **No** to stop installation.



Fig. 29 Licence Agreement

(4) The "Choose Destination Location" screen shown in Fig.30 appears. **C: \SiLabs\MCU\CP210x** is selected by default.

NOTE

○ *Do not change the destination folder.*

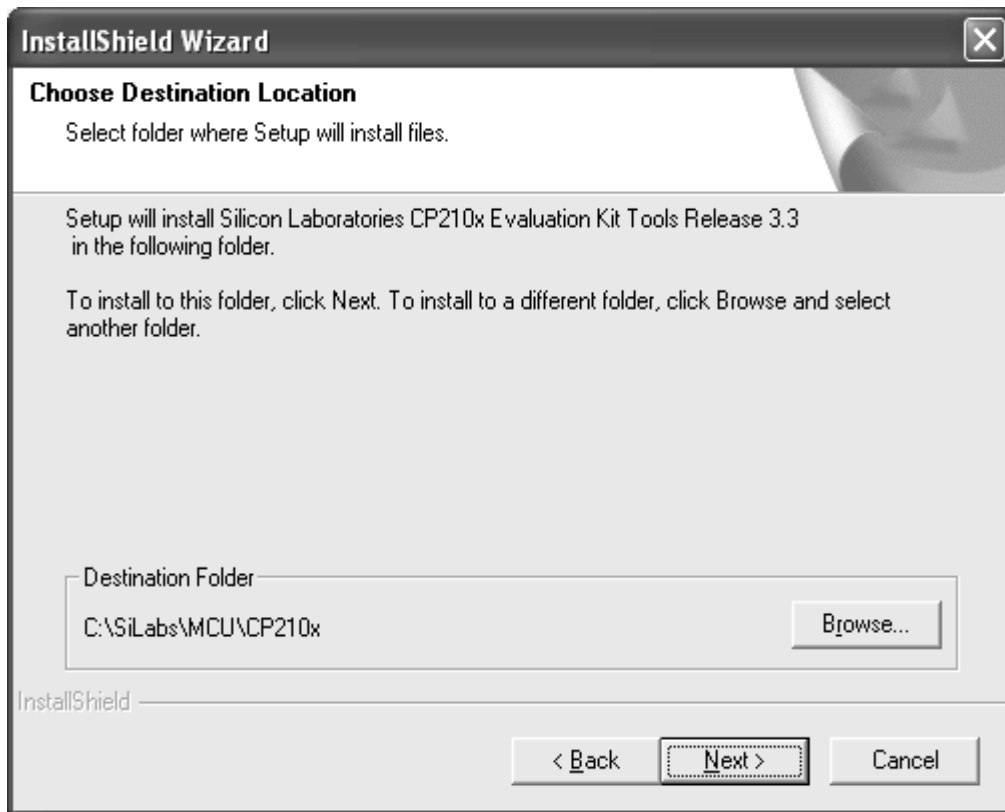


Fig. 30 Choose Destination Location

Click **Next** to proceed with installation and click **Cancel** to stop installation.

(5) Click **Finish** to complete installation normally.

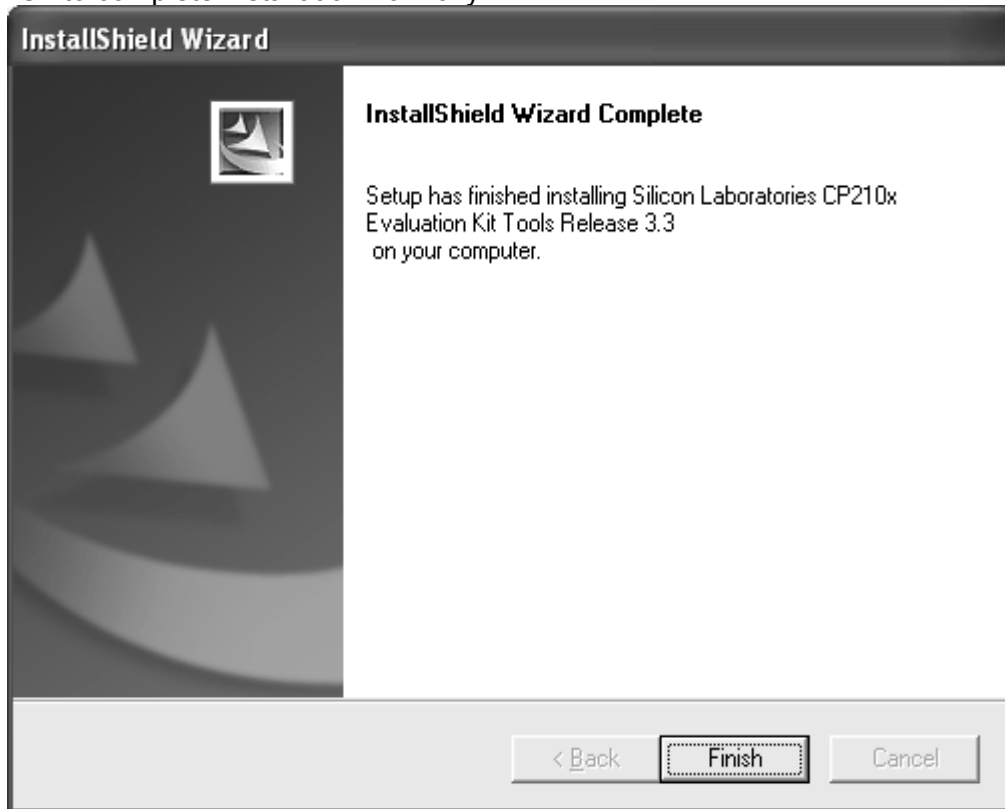


Fig. 31 Installation complete

- (6) Connect the USB cable of the racing I/F BOX(J926031-0025) to the PC with the USB driver installed.
- (7) The search wizard of new hardware is started automatically as shown in Fig.32. As software search is not necessary, select **"No, not this time"**.



Fig. 32 New Hardware search wizard

(8) Click **Next** and the new hardware shown in Fig.33 appears. Select “**Install from a list or specific location (Advanced)**”.

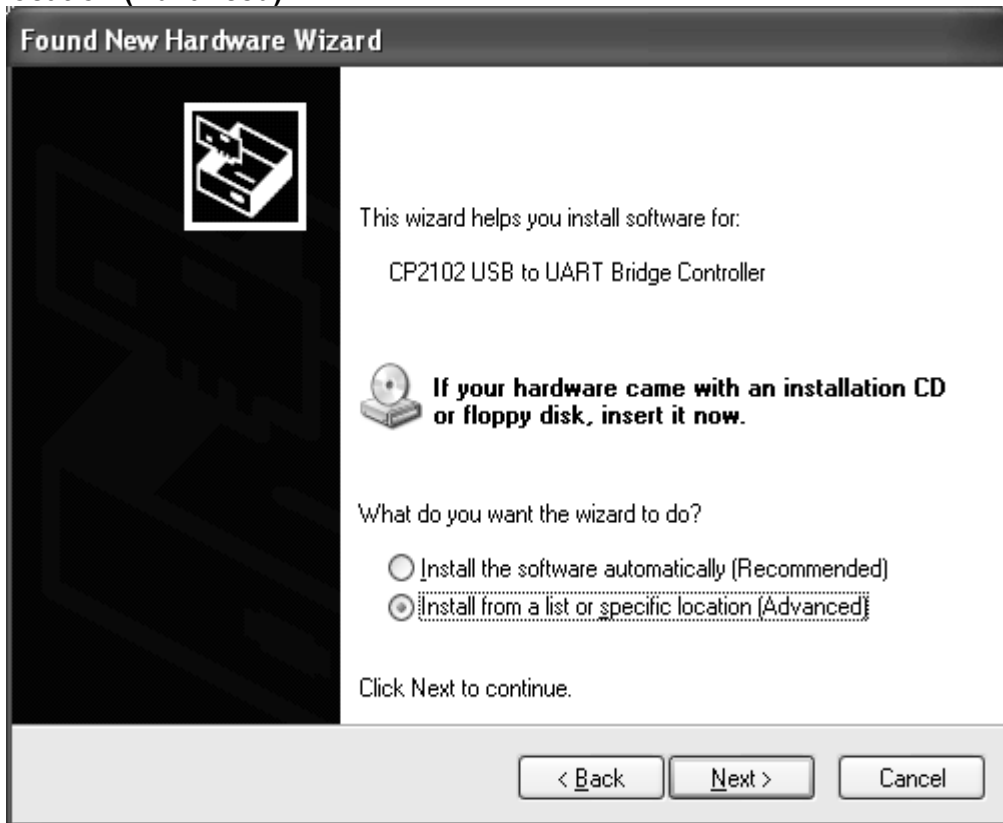


Fig. 33 New Hardware search wizard

- (9) Click **Next** to display the screen shown in Fig.34 Select "**Search for the best driver in these locations**" and input "**C: \SiLabs\MCU\CP210x\WIN**" in the blank directly or click **Browse** to select the folder. If you have installed the driver in a folder different from default setting, select the changed folder.

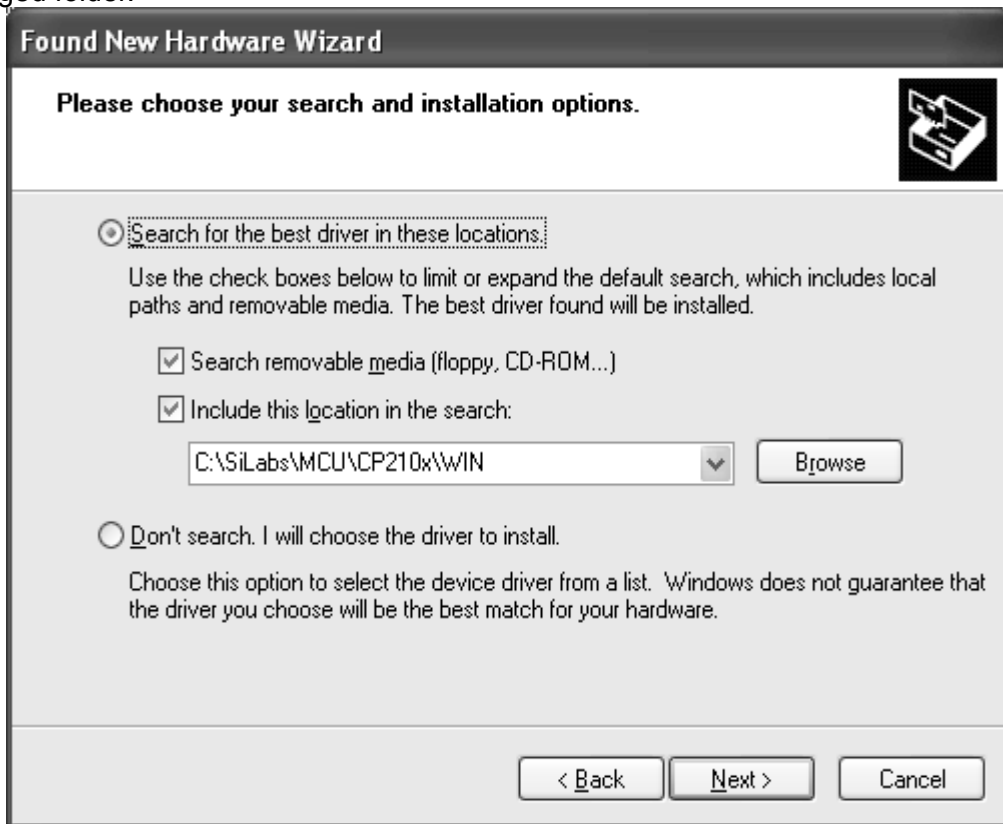


Fig. 34 New Hardware search wizard

- (10) Click **Next** to start installation of the driver. When the installation is completed, the screen shown in Fig.35 appears. Click **Finish** to complete installation normally.



Fig. 35 Installation complete

- (11) After the installation has been completed, the screen of new hardware is started automatically again as shown in Fig.36. The software search is not necessary. Select "**No, not this time**".



Fig. 36 New Hardware search wizard

- (12) Click **Next** and the new hardware shown in Fig.37 appears. Select **“Install from a list or specific location (Advanced)”**.

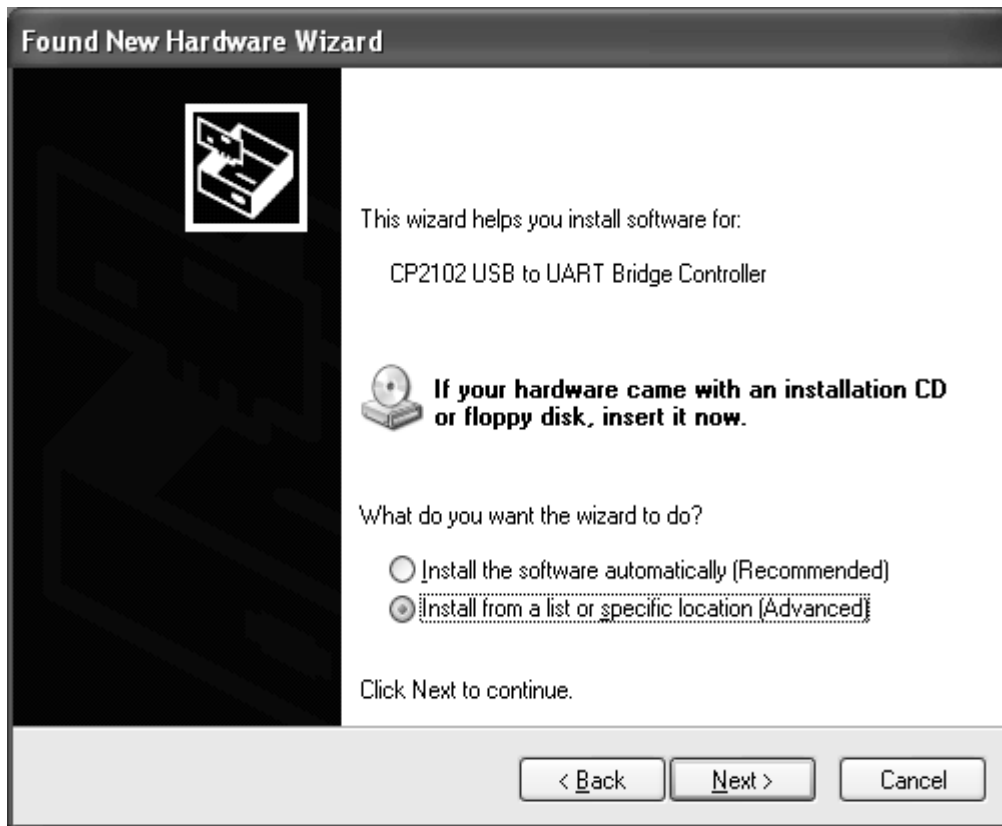


Fig. 37 New Hardware search wizard

- (13) Click **Next** to display the screen shown in Fig.38. Select "**Search for the best driver in these locations**" and input "**C: \SiLabs\MCU\CP210x\WIN**" in the blank directly or click **Browse** to select the folder. If you have installed the driver in a folder different from default setting, select the changed folder.

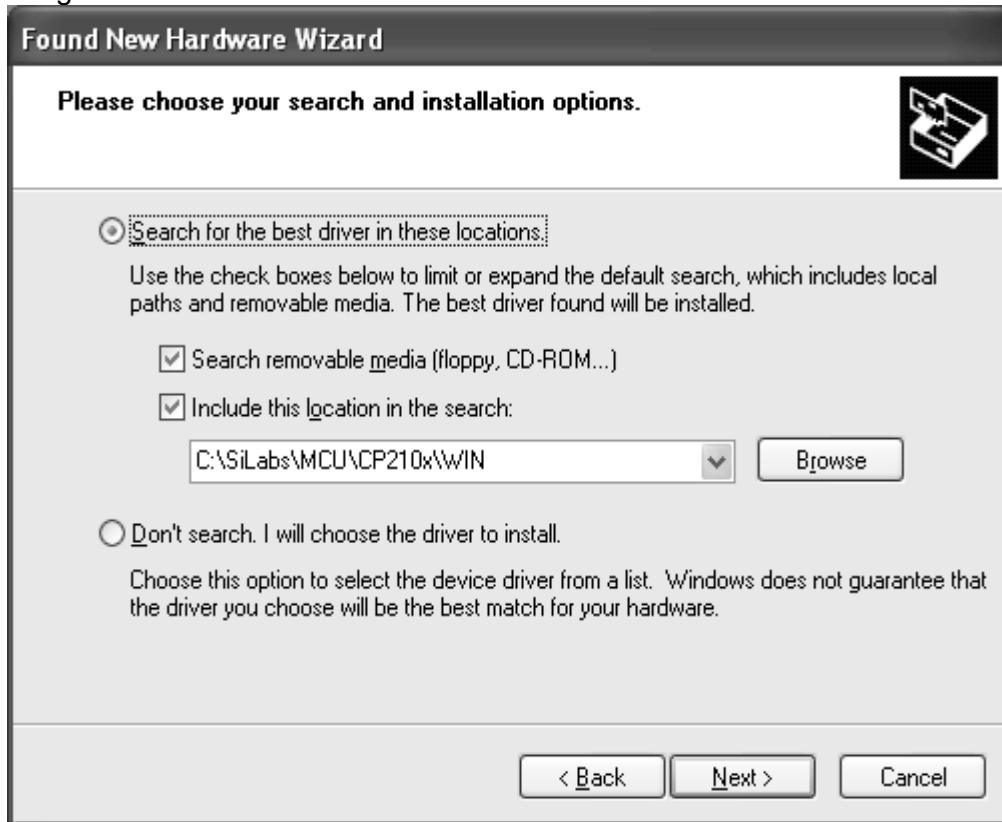


Fig. 38 New Hardware search wizard

- (14) Click **Next** to start installation of the driver. When the installation is completed, the screen shown in Fig.39 appears. Click **Finish** to complete installation normally.



Fig. 39 Installation complete

2.4.2 For Windows Vista

- (1) Double-click **CP210x_Drivers.exe** on the explorer screen.

NOTE

○ *If user account control is displayed, click Yes.*

- (2) The setup program is started and the screen shown in Fig.40 appears.

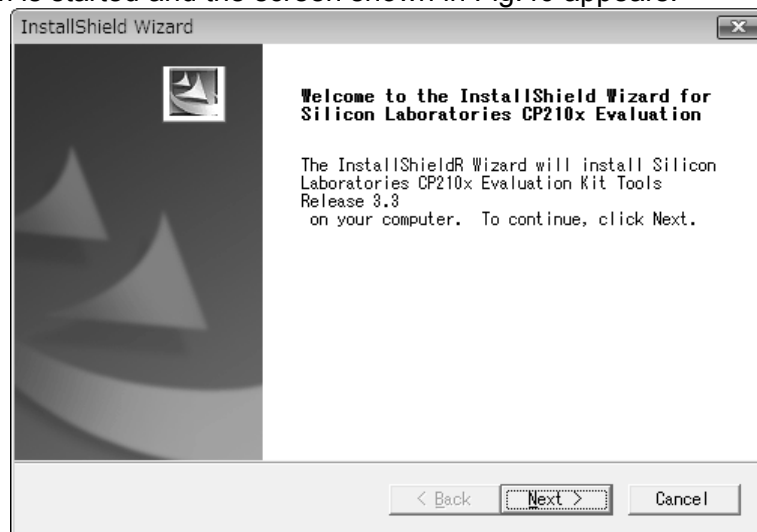


Fig. 40 Installer program start-up

Click **Next** to proceed with installation and click **Cancel** to stop installation.

- (3) The "License Agreement" screen shown in Fig.41 appears. Click **Yes** to proceed with installation and click **No** to stop installation.



Fig. 41 Licence Agreement

- (4) The "Choose Destination Location" screen shown in Fig.42 appears. **C:\%SiLabs%\MCU\CP210x** is selected by default.

NOTE

- *Do not change the destination folder.*

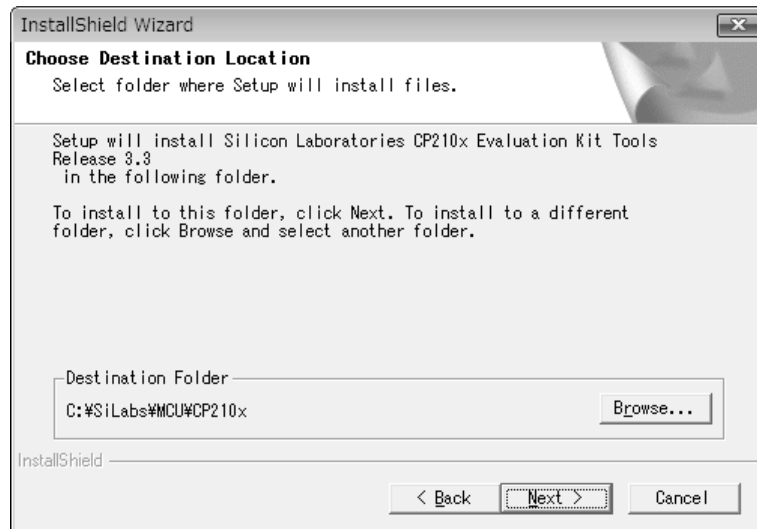


Fig. 42 Choose Destination Location

Click **Next** to proceed with installation and click **Cancel** to stop installation.

(5) Click **Finish** to complete installation normally.

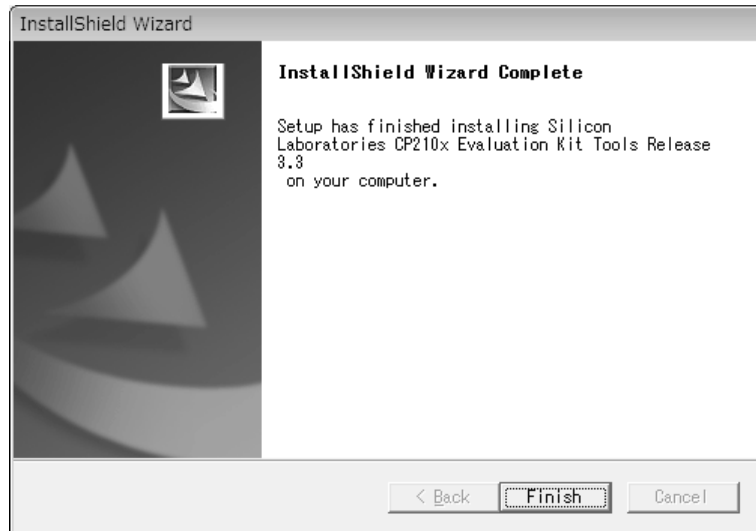


Fig. 43 Installation complete

(6) Connect the USB cable of the racing I/F BOX(J926031-0025) to the PC with the driver installed.

(7) The search wizard of new hardware is started automatically as shown in Fig.44 appears. Select "**Locate and install driver software (recommended)**".

If user account control is displayed, click **Next**.

NOTE

○ *If user account control is displayed, click **continue**.*

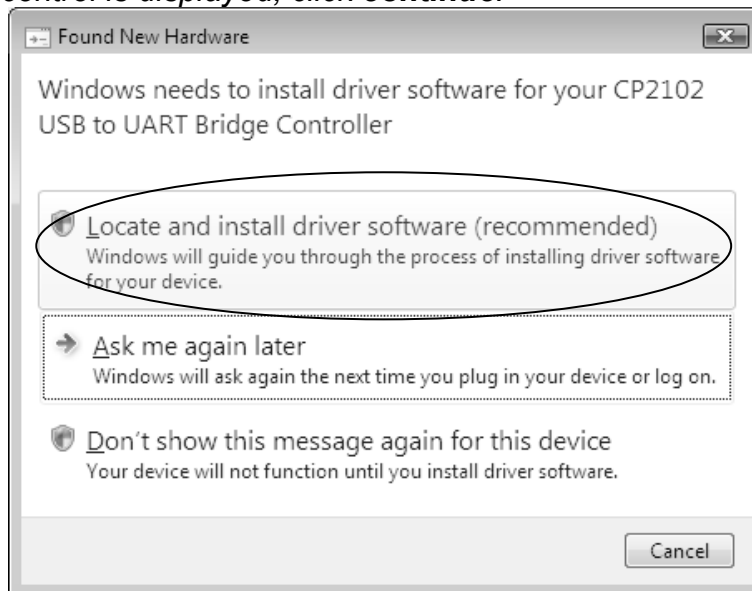


Fig. 44 New Hardware search wizard

(8) The screen shown in Fig.45 appears. Select **"I don't have the disc. Show me other options."**.

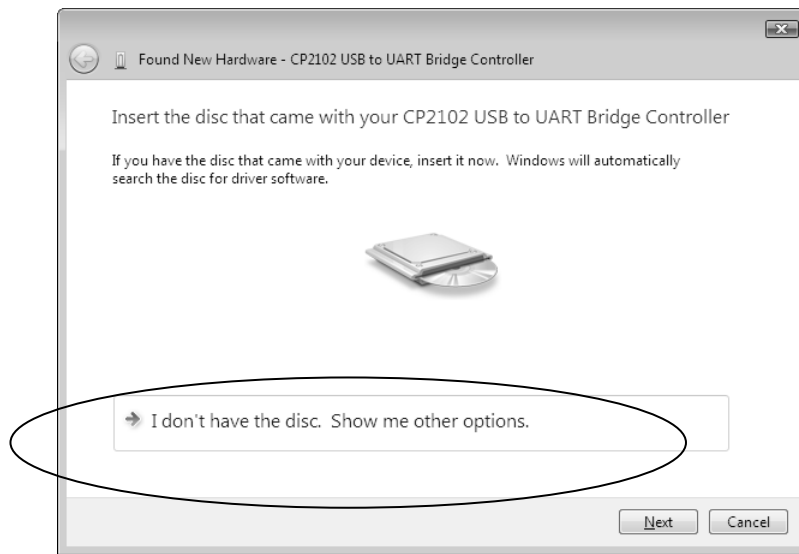


Fig. 45 New Hardware search wizard

(9) Click **Next** and the screen shown in Fig.46 appears. Select **"Browse my computer for driver software (advanced)"**.

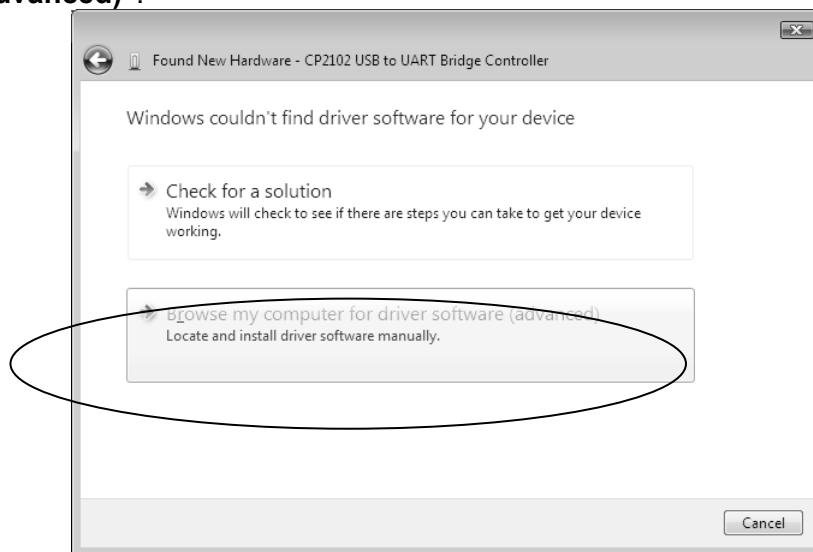


Fig. 46 New Hardware search wizard

- (10) The screen shown in Fig.47 appears. Select "**Search for driver software in this location:**" and input "**C:\SiLabs\MCU\CP210x**" in the blank directly or click **Browse** to select the folder. Also Check the box next to "**Include subfolders**". If you have installed the driver in a folder different from default setting, select the changed folder.

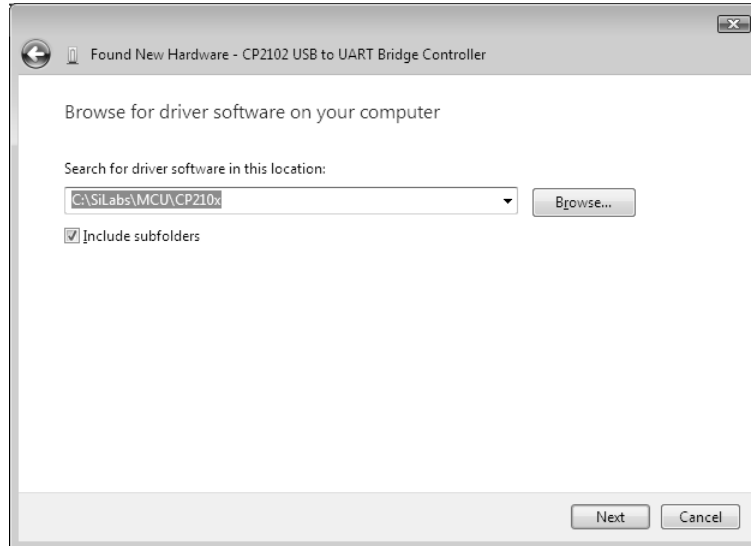


Fig. 47 New Hardware search wizard

- (11) Click **Next** to start installation of the driver. When the installation is completed, the screen shown in Fig.48.
Click **Finish** to complete installation normally.

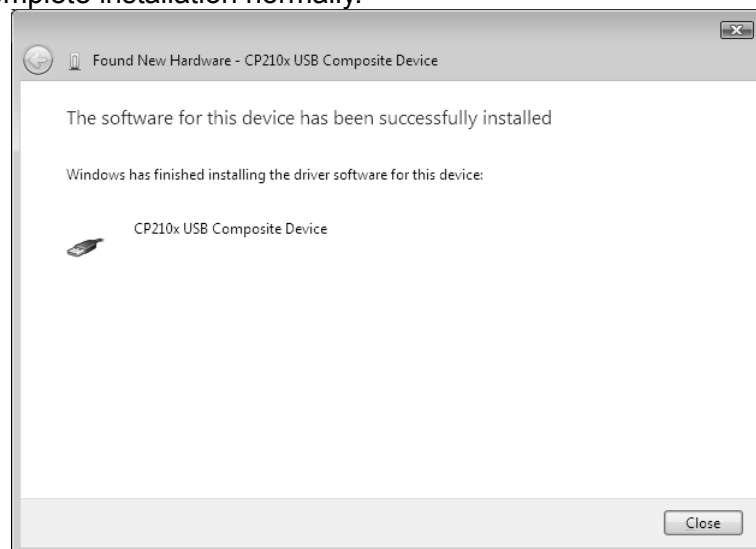


Fig. 48 Installation complete

(12) After the installation has been completed, the search wizard of new hardware is started automatically and the screen shown in Fig.49 appears. Select **"I don't have the disc. Show me other options"**.

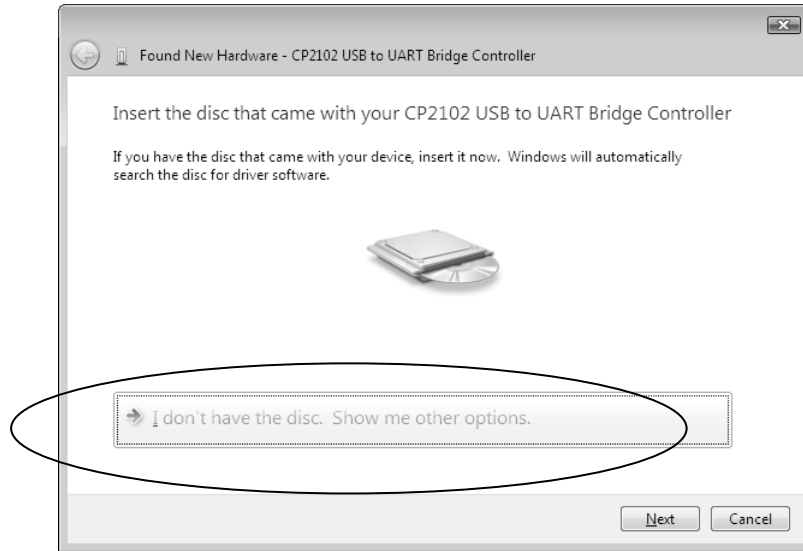


Fig. 49 New Hardware search wizard

(13) Click **Next** and the screen shown in Fig.50 appears. Select **"Browse my computer for driver software (advanced)"**, then click it.

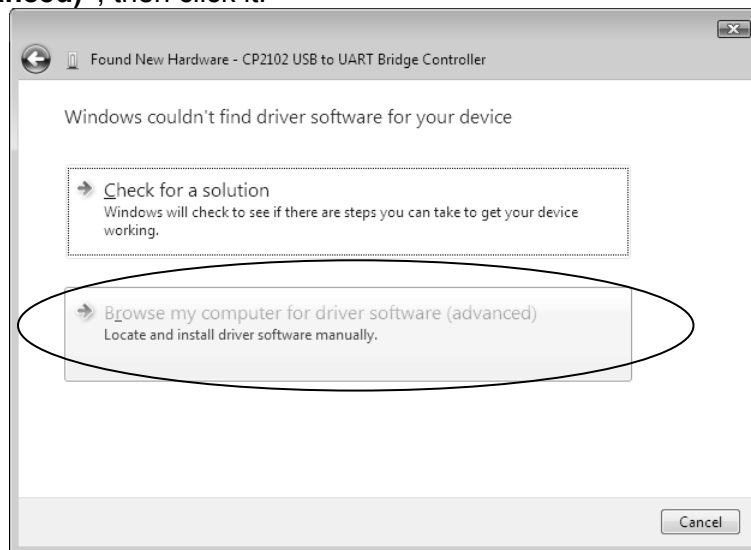


Fig. 50 New Hardware search wizard

- (14) The screen shown in Fig.51 appears. Select **"Search for driver software in this location:"** and input **"C: \SiLabs\MCU\CP210x"** in the blank directly or click **Browse** to select the folder. Also Check the box next to **"Include subfolders"**. If you have installed the driver in a folder different from default setting, select the changed folder.

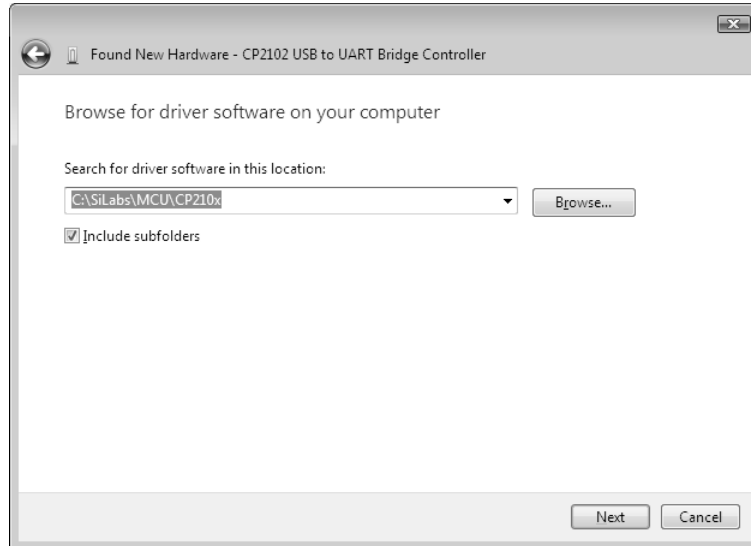


Fig. 51 New Hardware search wizard

- (15) Click **Next** to start installation of the driver. When the installation is completed, the screen shown in Fig.52 appears. Click **Close** to complete installation normally.

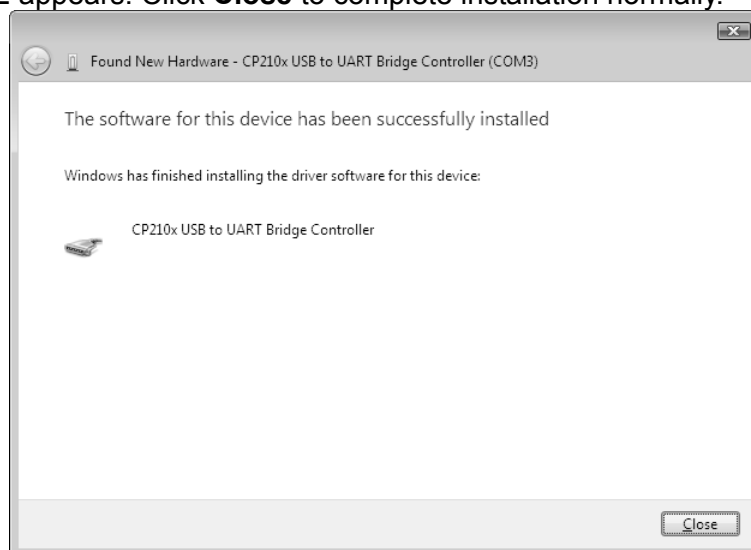


Fig. 52 Installation complete

2.4.3 For Windows 7 32-bit version

NOTE

○ *Correct operation is not guaranteed in Windows 7 64-bit version.*

- (1) Double-click **CP210x_Drivers.exe** on the explorer.

NOTE

○ *If user account control is displayed, click **Yes to agree the change.***

(2) The installer is started and the screen shown in Fig.53 appears.

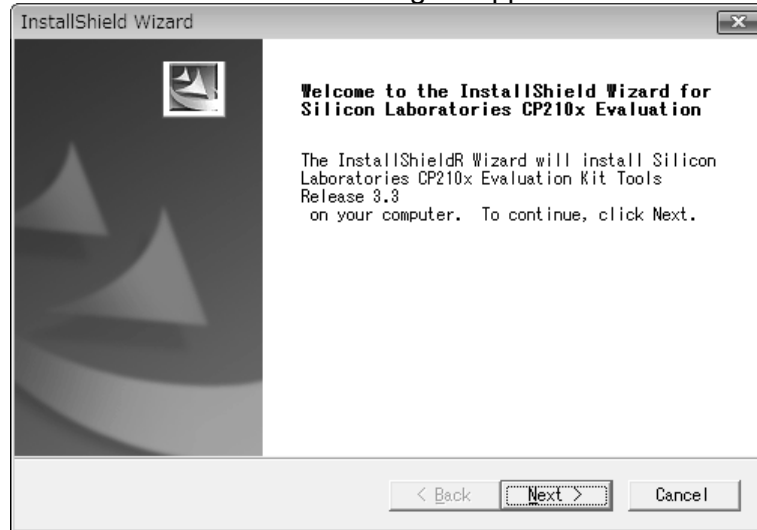


Fig. 53 Installer program start-up

Click **Next** to proceed with installation and click **Cancel** to stop installation.

(3) The "License Agreement" screen shown in Fig.54 appears. Click **Yes** to proceed with installation and click **No** to stop installation.

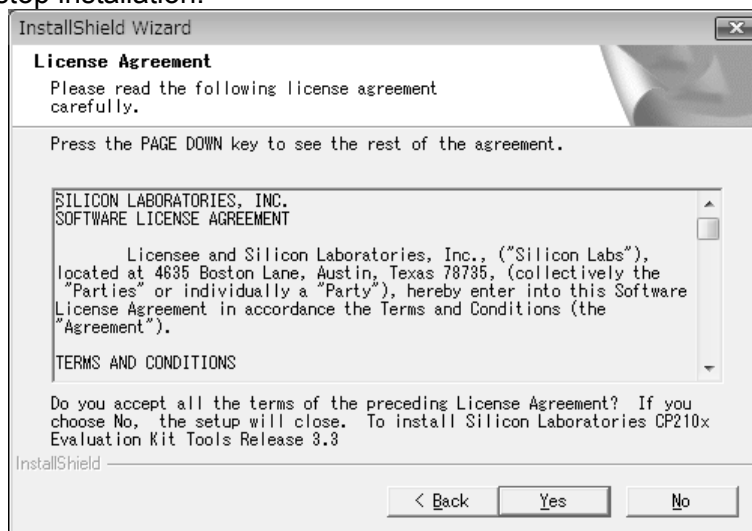


Fig. 54 Licence Agreement

(4) The "Choose Destination Location" screen shown in Fig.55 appears. **C:\SiLabs\MCU\CP210x** is selected by default.

NOTE

○ *Do not change the destination folder.*

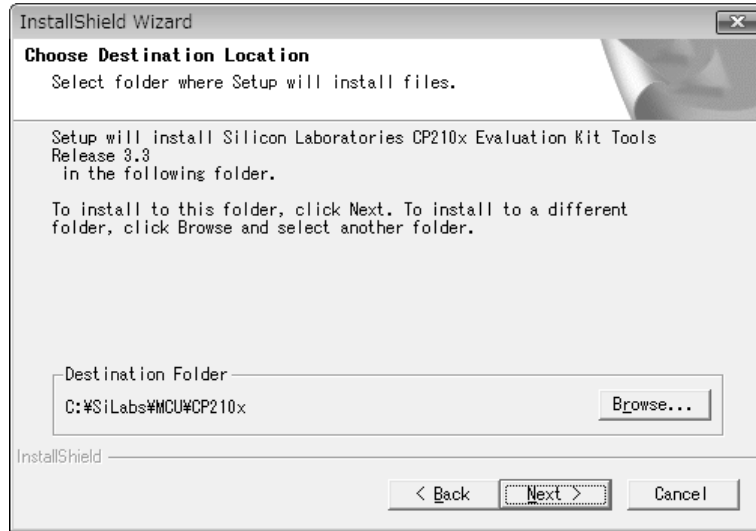


Fig. 55 Choose Destination Location

Click **Next** to proceed with installation and click **Cancel** to stop installation.

(5) Click **Finish** to complete installation normally.

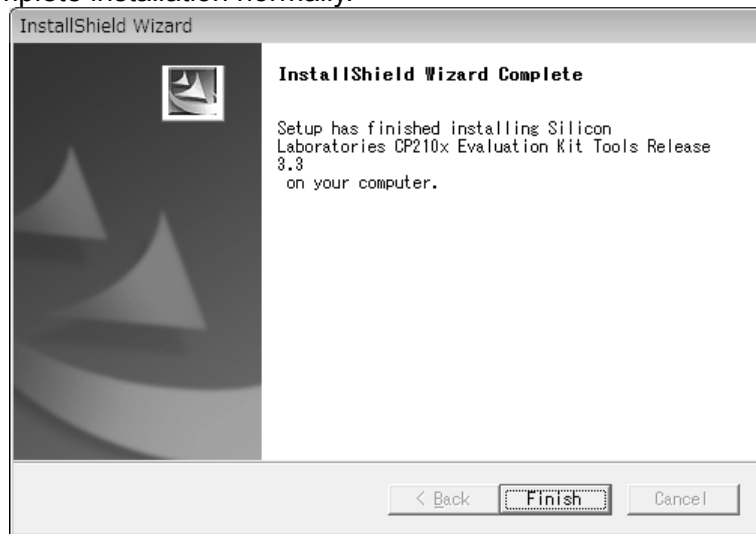


Fig. 56 Installation complete

(6) Connect the USB cable of the racing I/F BOX(J926031-0025) to the PC with the driver installed.

- (7) Open the control panel screen from **My Computer** or **Explorer** screen. Select **"View devices and printers"** from **"Hardware and Sound"**.

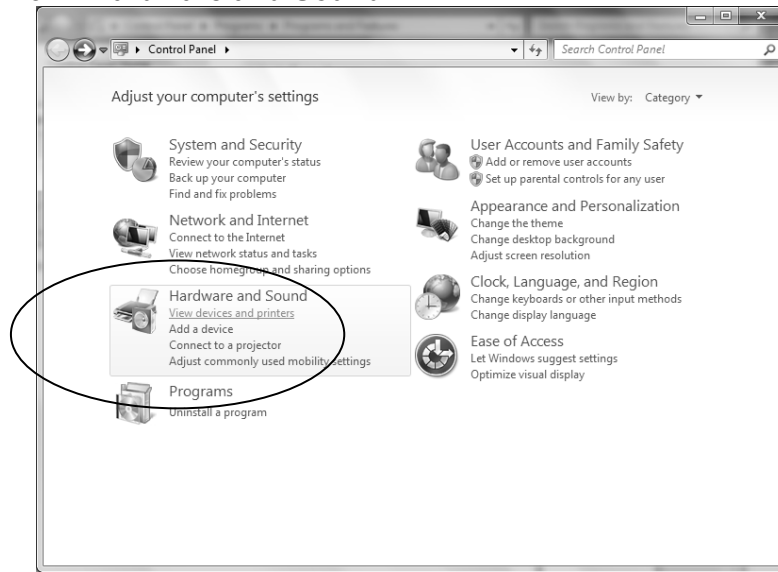


Fig. 57 Control Panel screen

- (8) The screen shown in the Fig.58 appears, Double-click the unspecified **"CP2102 USB to UART Bridge Controller"**.

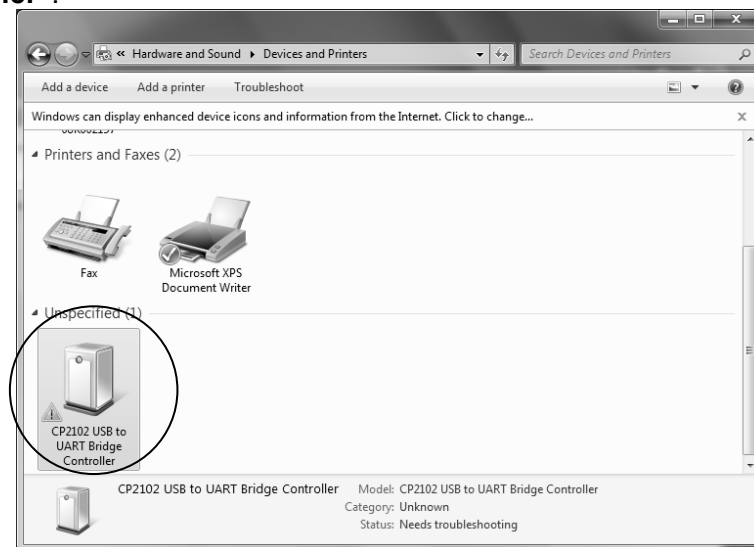


Fig. 58 Control Panel screen

(9) The "CP2102 USB to UART Bridge Controller Properties" screen shown in Fig.59 appears.

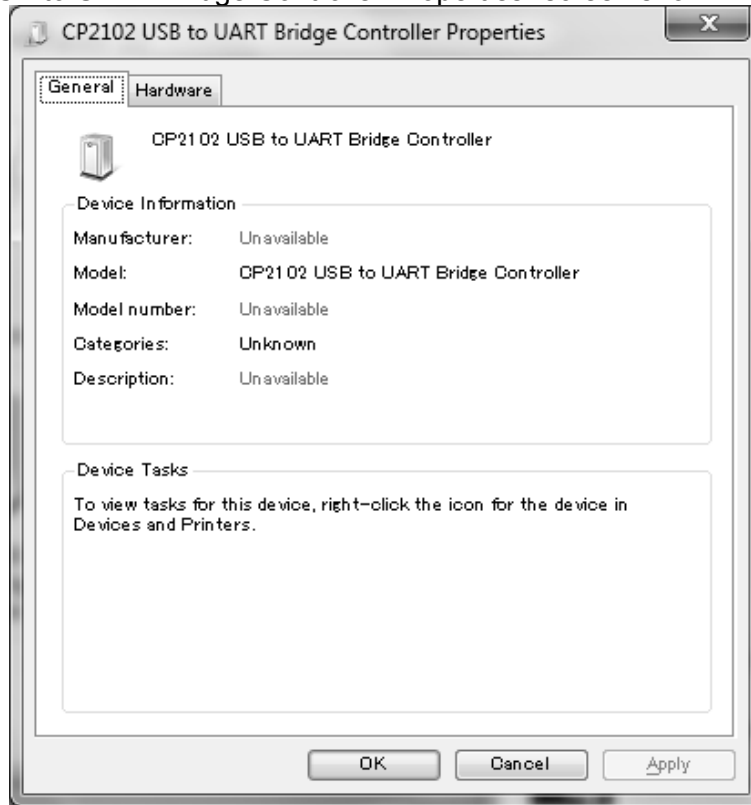


Fig. 59 Controller Properties

(10) Select the "Hardware" tab and click the "Properties".

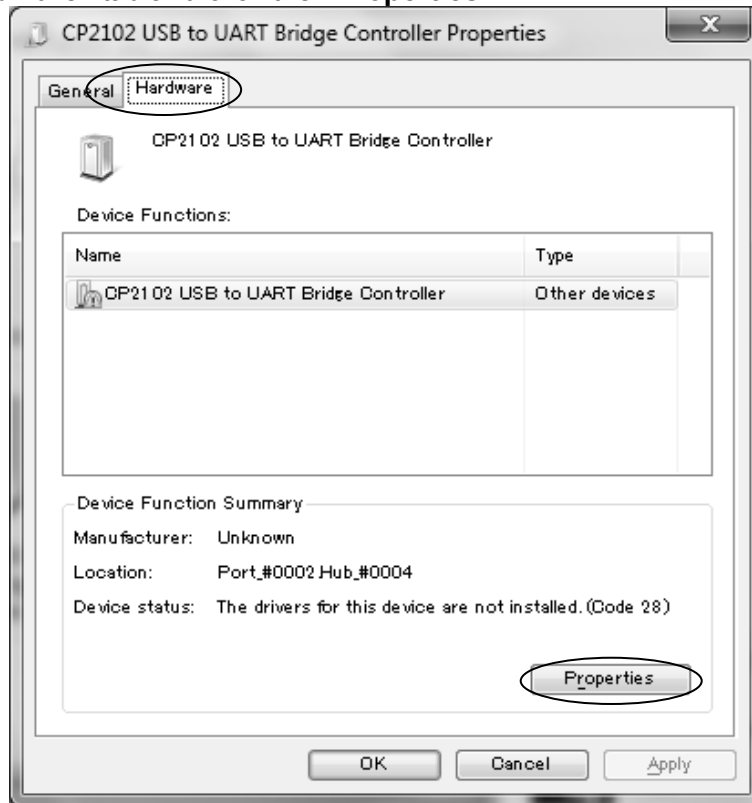


Fig. 60 Controller Properties

(11) The screen shown in the Fig.61 appears, click the **"Change settings"**.

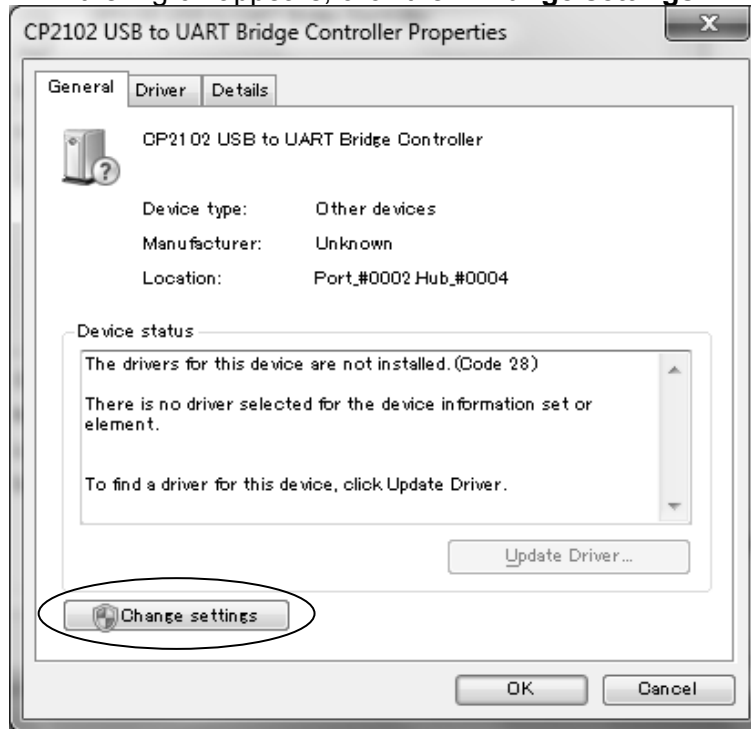


Fig. 61 Controller Properties

(12) The properties screen shown in Fig.62 appears. Click the **"Update Driver"**.

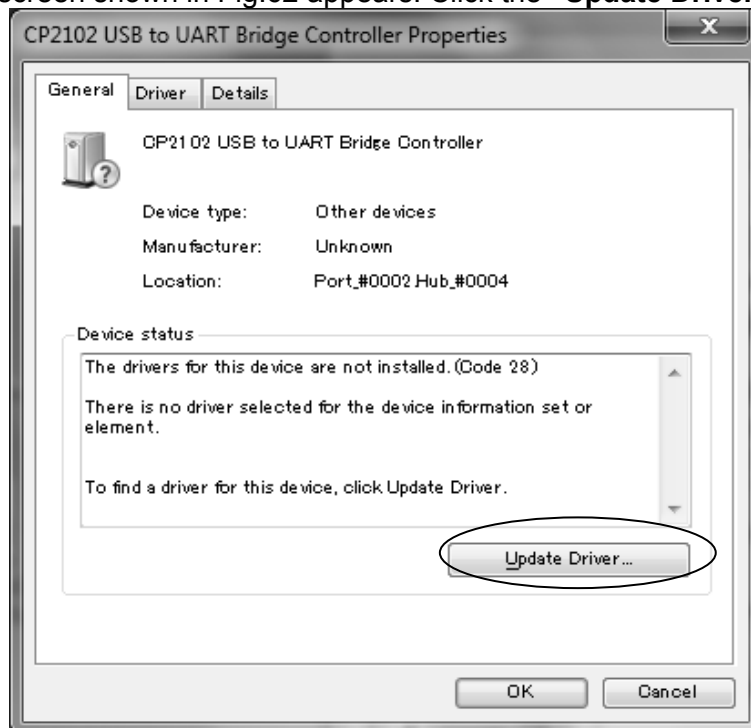


Fig. 62 Controller Properties

(13) The screen shown in Fig.63 appears. Select "**Browse my computer for driver software**", then click it.

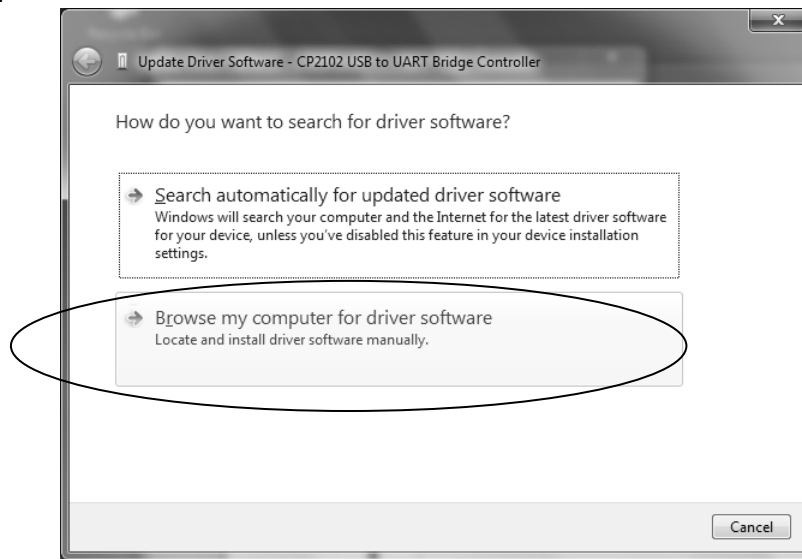


Fig. 63 Update Driver Software

(14) The screen shown in Fig.64 appears. Select "Search for driver software in this location:" and input "**C: \SiLabs\MCU\CP210x\WIN**" in the blank directly or click **Browse** to select the folder. Also Check the box next to "**Include subfolders**". If you have installed the driver in a folder different from default setting, select the changed folder.

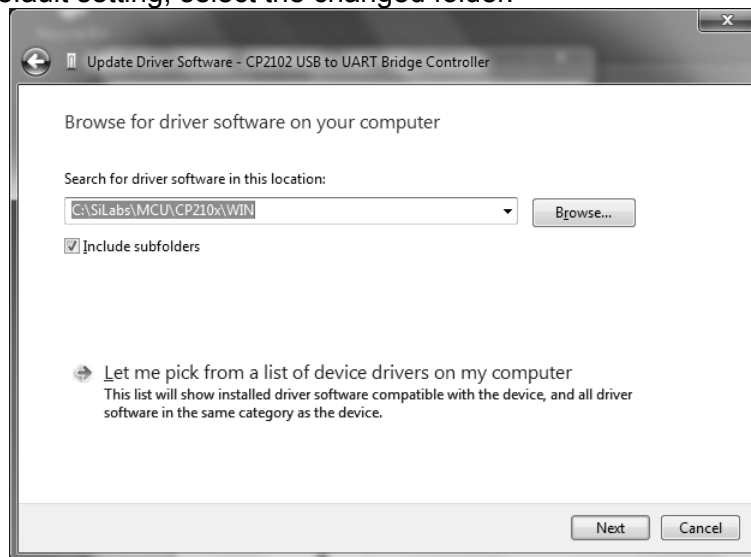


Fig. 64 Update Driver Software

(15) Click **Next** to start installation of the driver. When the installation is completed, the dialog box shown in Fig.65 appears. Click **Close** to complete installation normally.

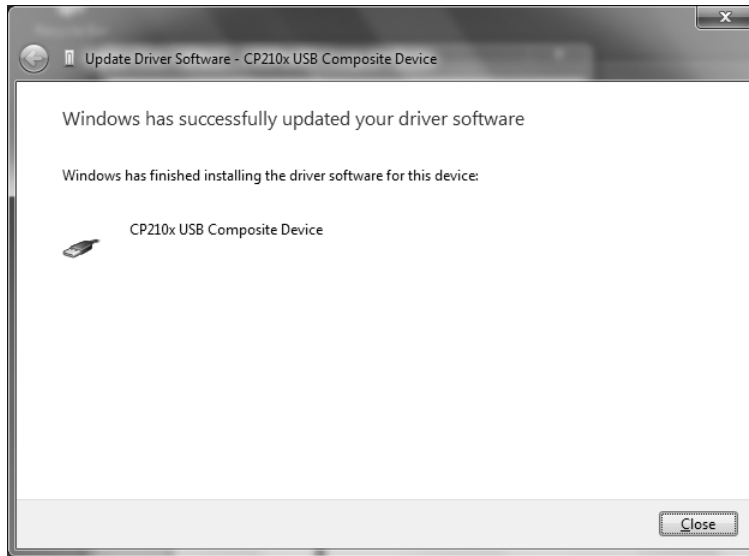


Fig. 65 Update Driver Software

(16) Return to the **"Devices and Printers"** in the control panel. Double-click the unspecified **"CP2102 USB to UART Bridge Controller"** in the control panel.

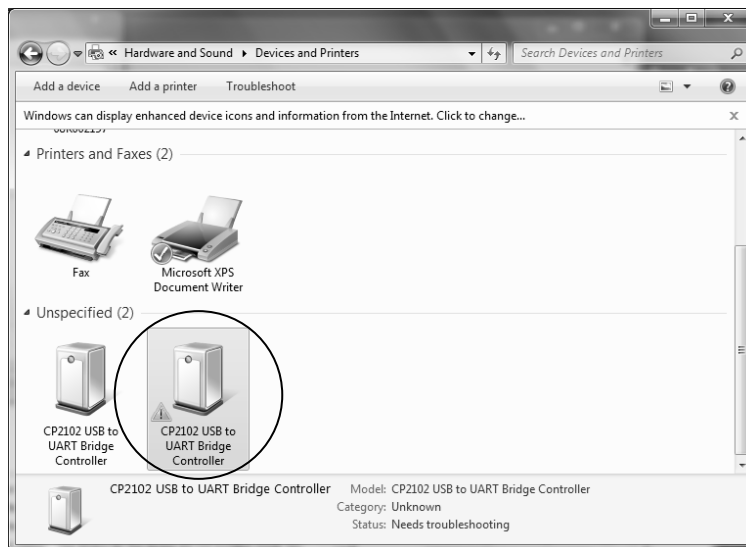


Fig. 66 Devices and Printers

(17) The "CP2102 USB to UART Bridge Controller" screen shown in Fig.67 appears.

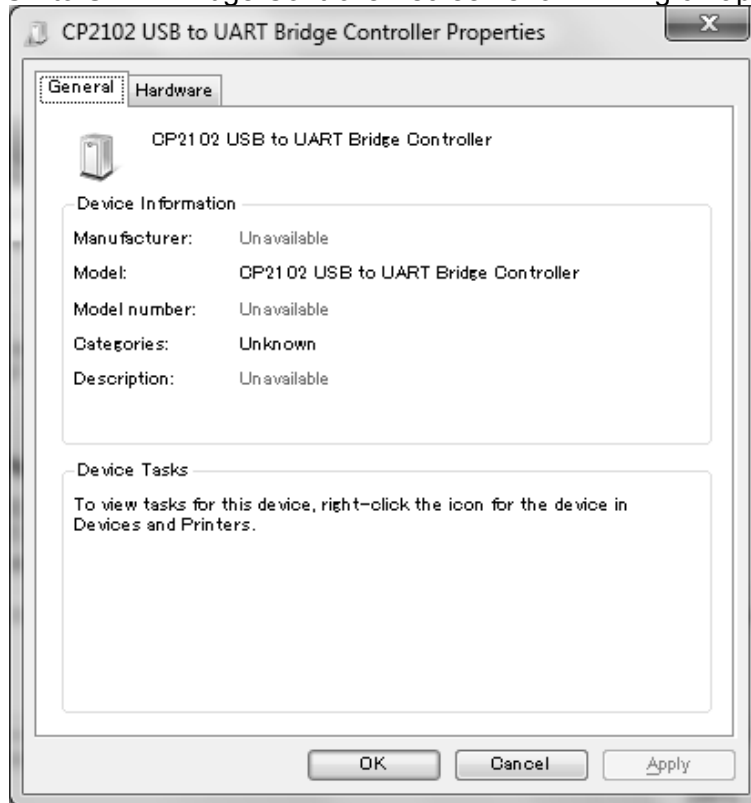


Fig. 67 Controller Properties

(18) Select the "Hardware" tab and click the "Properties".

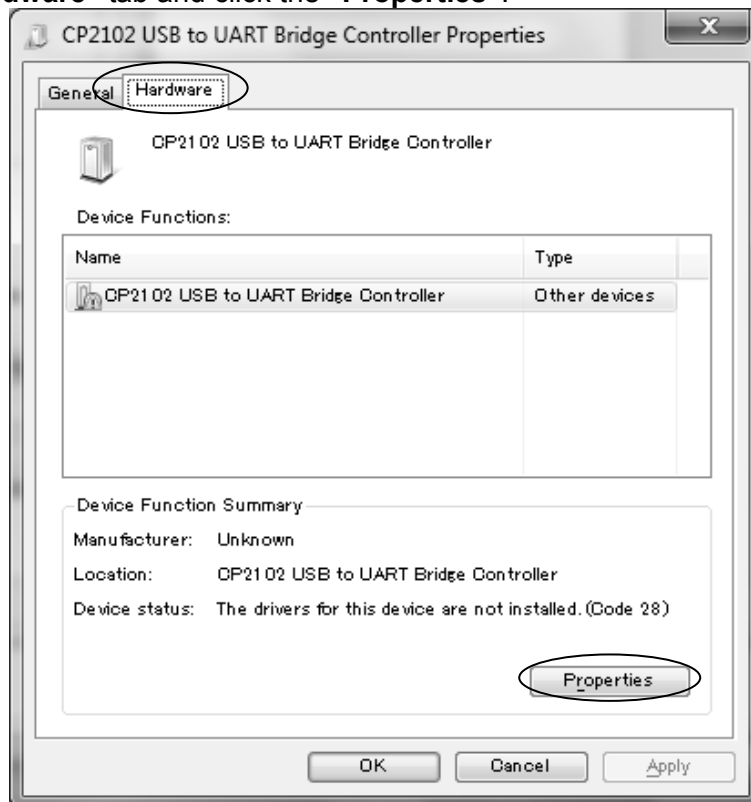


Fig. 68 Controller Properties

(19) The properties screen shown in the Fig.69 appears, click the **"Change settings"**.



Fig. 69 Controller Properties

(20) The properties screen shown in Fig.70 appears. Click the **"Update Driver"**.

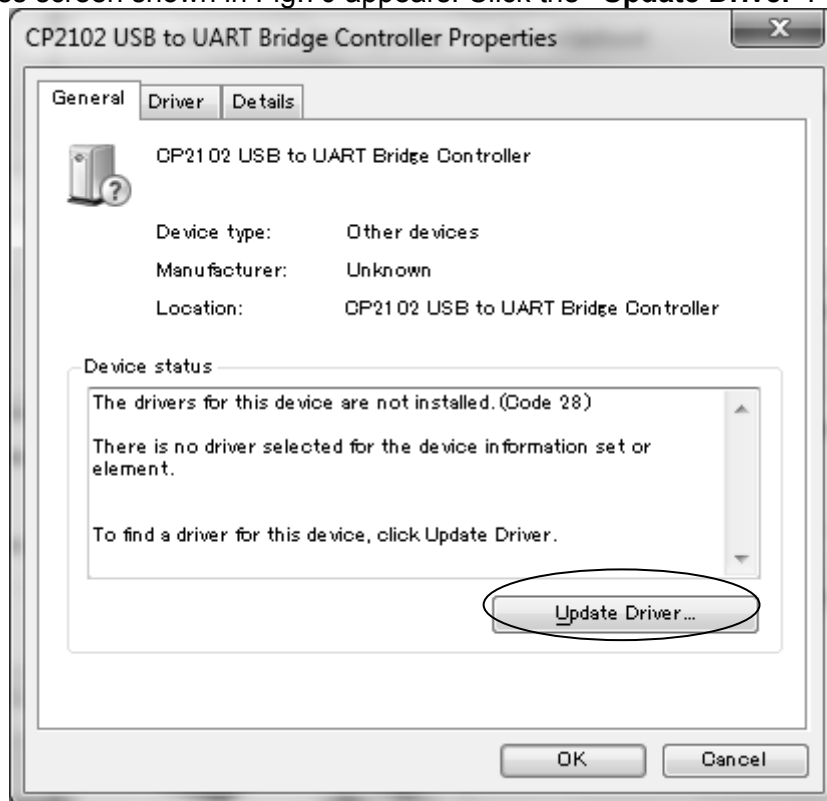


Fig. 70 Controller Properties

(21) The screen shown in Fig.71 appears. Select "**Browse my computer for driver software**", then click it.

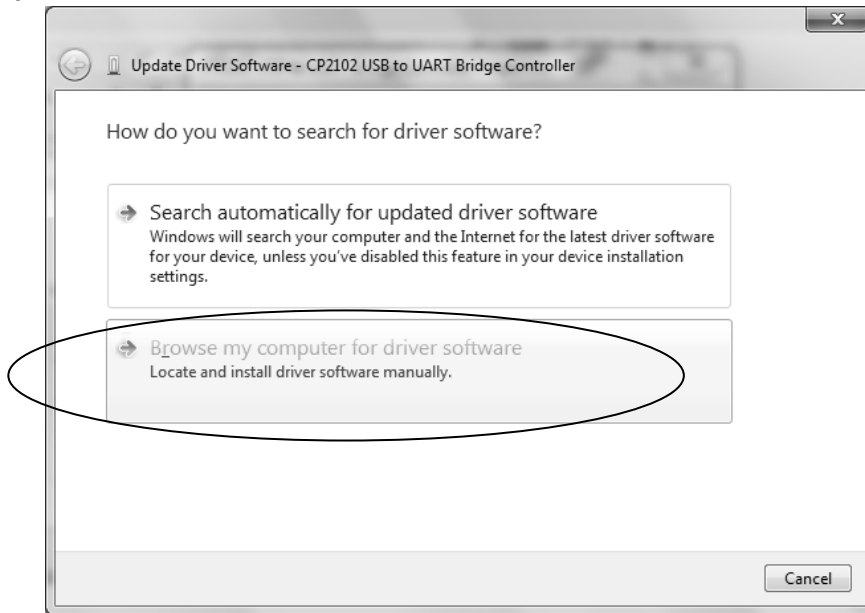


Fig. 71 Update Driver Software

(22) The screen shown in Fig.72 appears. Select "**Search for driver software in this location:**" and input "**C: \SiLabs\MCU\CP210x\WIN** " in the blank directly or click **Browse** to select the folder. Also Check the box next to "**Include subfolders**". If you have installed the driver in a folder different from default setting, select the changed folder.

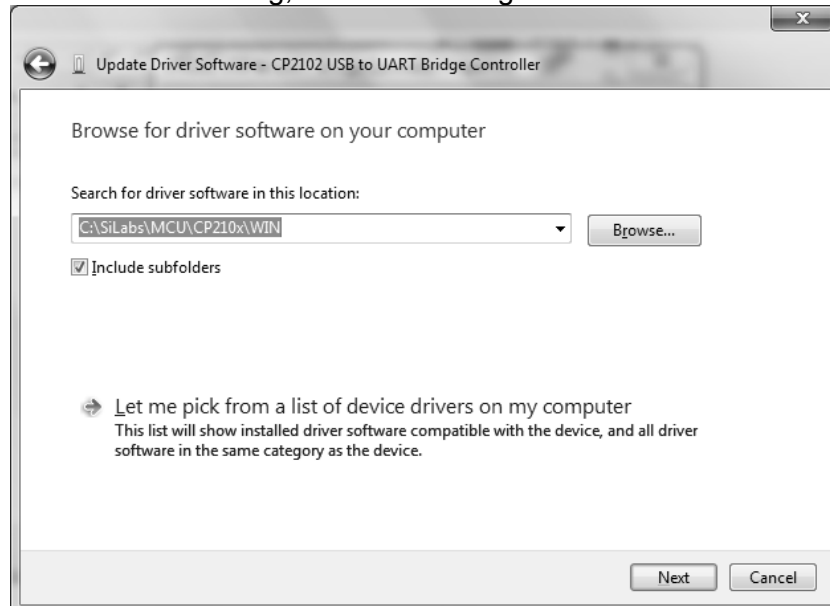


Fig. 72 Update Driver Software

(23) Click **Next** to start installation of the driver. When the installation is completed, the screen shown in Fig.73 appears. Click **Close** to complete installation normally.

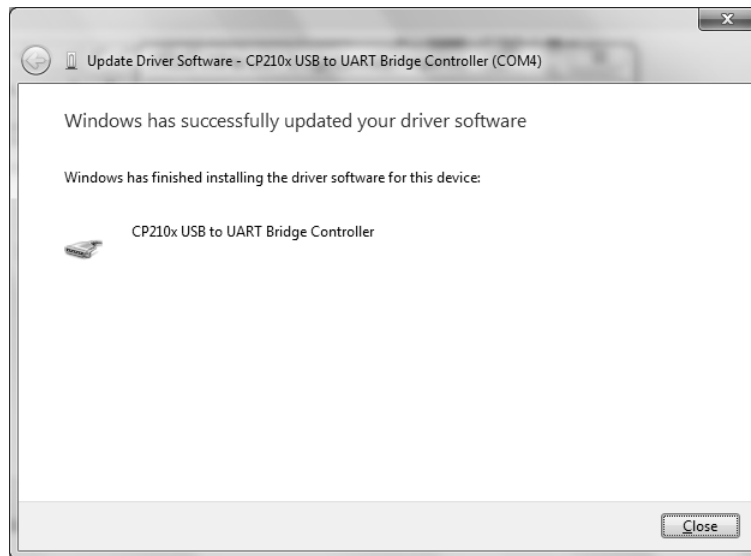


Fig. 73 Installation complete

(24) Return to the "**Device and Printers**" in the control panel. When the marks disappear on the two **unspecified "CP2102 USB to UART Bridge Controller"**, the installation has been completed normally.

COM4 is the assigned port in Fig.74. The port number differs depending on the OS.

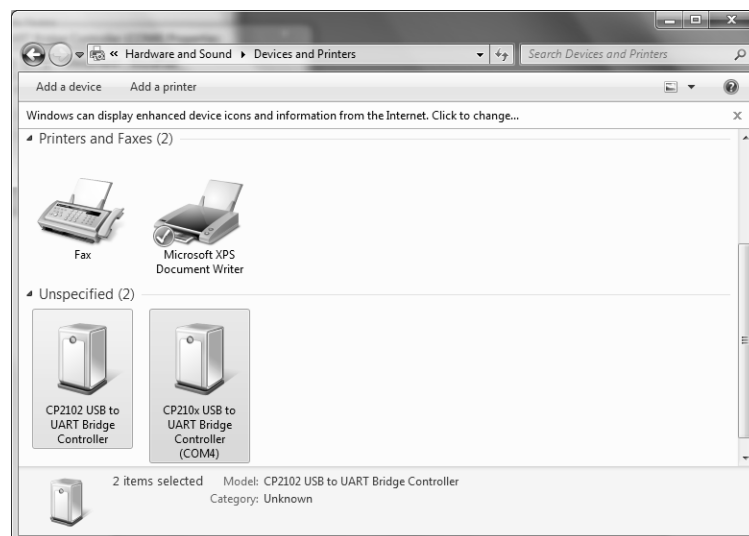


Fig. 74 Devices and Printers

2.5 Uninstallation Procedure of Racing I/F BOX driver (USB version)

2.5.1 For Windows XP

- (1) Click **Add or Remove Programs** in the control panel.
- (2) Change or Remove Programs shown in Fig.75 appears.

Select "**CP210xUSB to UART Bridge Controller**" and click **Change/Remove**.

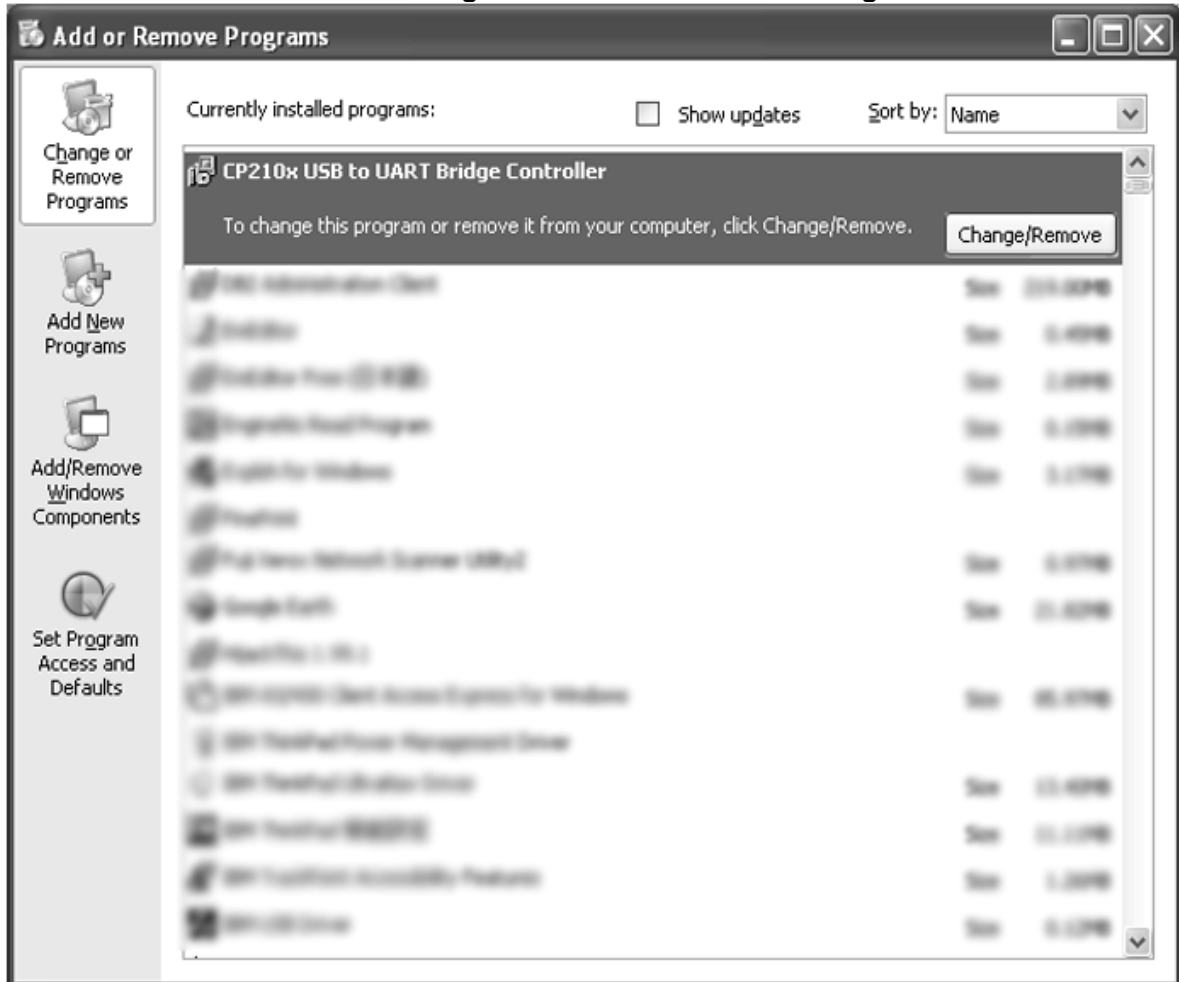


Fig. 75 Add or Remove Programs

(3) The notification screen shown in Fig.76 appears.

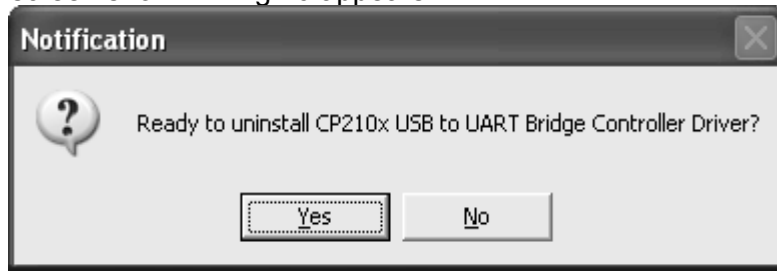


Fig. 76 Confirmation of uninstallation

(4) Click **Yes** to start uninstallation. When the uninstallation is completed, the screen shown in Fig.77 appears. Click **OK**.



Fig. 77 Driver uninstallation Complete

(5) Return to ADD or Remove Programs and select "**Silicon Laboratories CP210x Evaluation Kit Tools Release 3.3**" and click "**Change/Remove**".

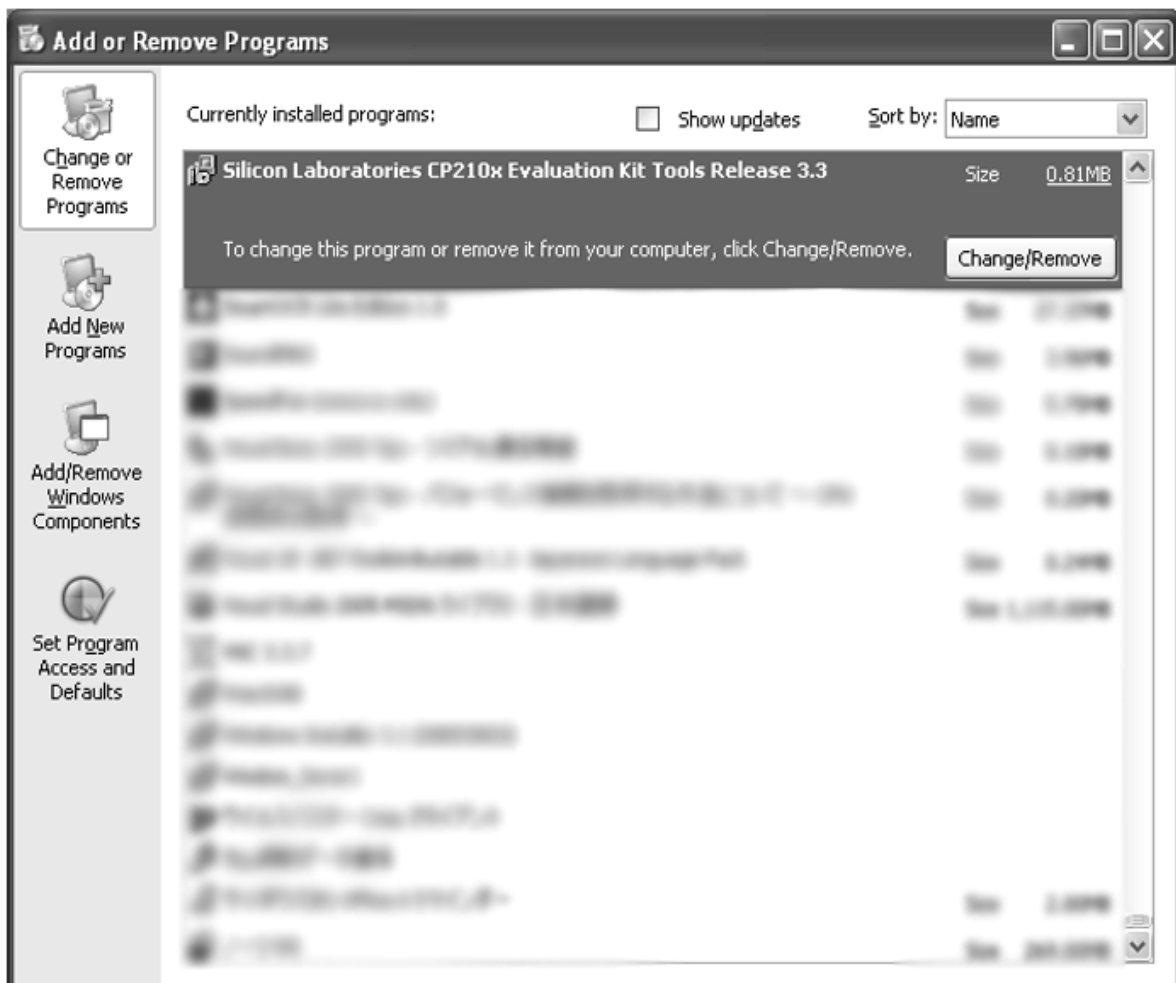


Fig. 78 Add or Remove Programs

(6) Click **“Change/Remove”** to display the screen shown in Fig.79. Select **“Remove”**.



Fig. 79 Uninstallation Screen

(7) Click **Next** to display the screen shown in Fig.80.

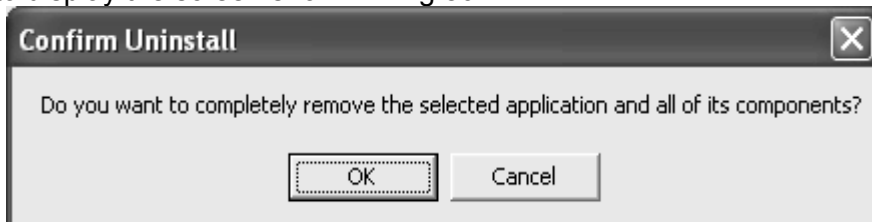


Fig. 80 Confirmation of uninstallation

(8) Click **OK** to start uninstallation. When the uninstallation is completed, the screen shown in Fig.81 appears. Click **Finish**.

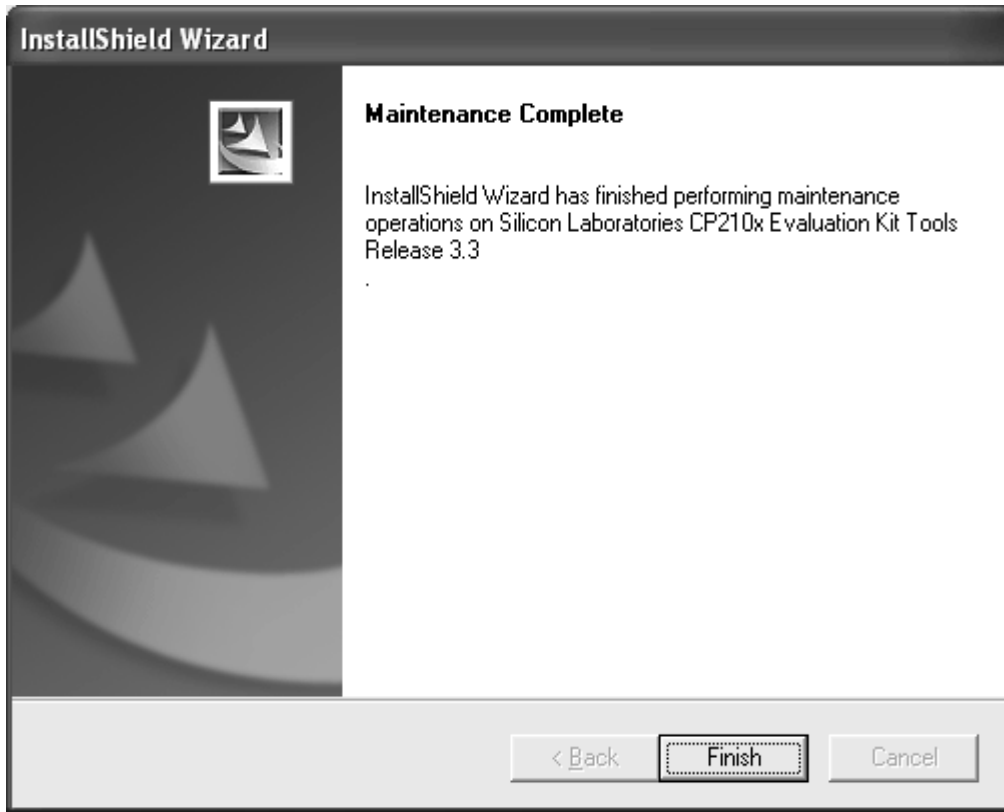


Fig. 81 Uninstallation Complete

2.5.2 For Windows Vista or Windows 7 32-bit version

The following procedures are for Window Vista. The procedures for Windows 7 32-bit version are the same as those for Windows Vista.

(1) Select uninstall program in the control panel.

- (2) The "Uninstall or change a program" screen in Fig.82 appears.
Select "CP210x USB to UART Bridge Controller" and double-click it or click "Uninstall/Change".

NOTE

- If user account control is displayed, click **Continue (Yes/Windows7)**.

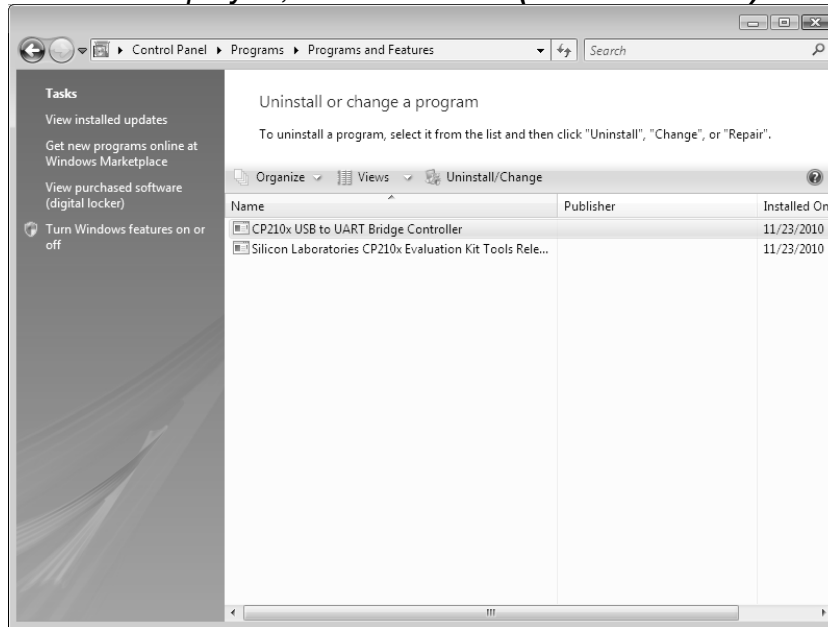


Fig. 82 Uninstall or change a program

- (3) Start up the uninstaller then the screen shown in the Fig.83 appears, Click **Yes**.

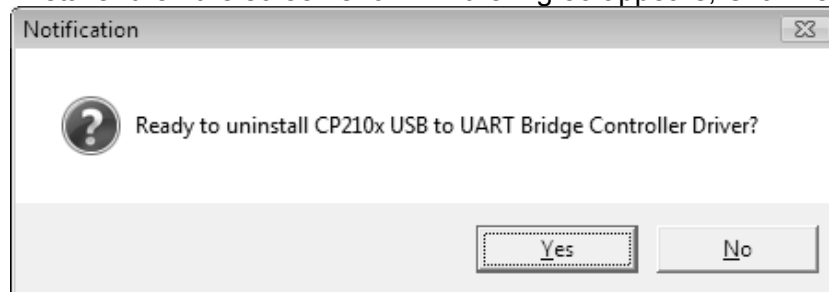


Fig. 83 Confirmation of uninstallation

(4) The uninstallation is started. When the uninstallation is completed, the screen shown in Fig.84 appears. Click **OK**.

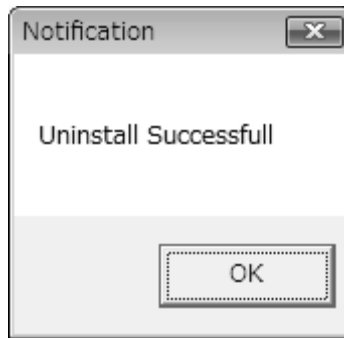


Fig. 84 Confirmation of uninstallation

(5) Return to the **"Uninstall or change a program"** and select **"Silicon Laboratories CP210x Evaluation Kit Tools Release 3.3"** and double-click it or click **"Uninstall/Change"**.

NOTE

○ *If user account control is displayed, click **Next (Yes/Windows7)**.*

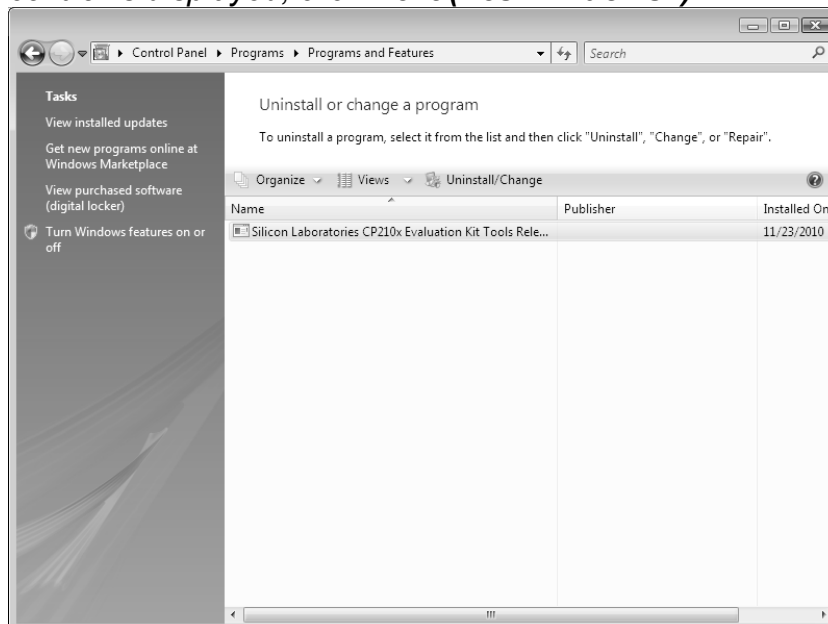


Fig. 85 Uninstall or change a program

(6) Select **Remove** in the screen shown in Fig.86.

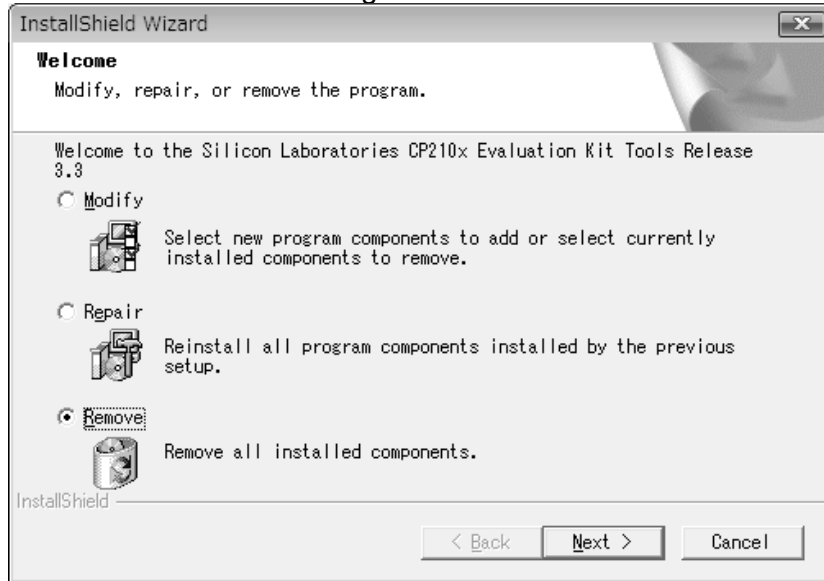


Fig. 86 Uninstallation Screen

(7) Click **Next** to display the screen shown in Fig.87.

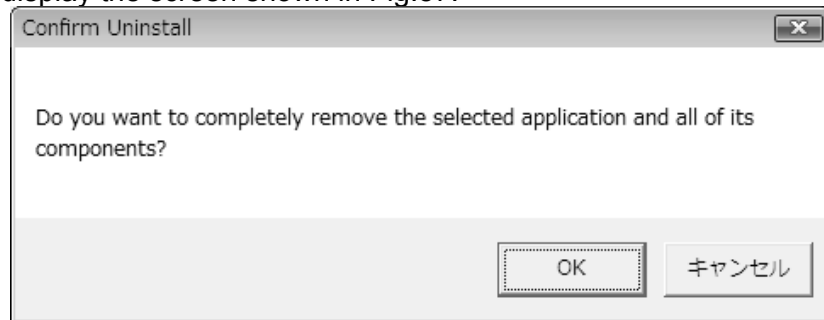


Fig. 87 Confirmation of uninstallation

(8) Click **OK** to start uninstallation. When the uninstallation is completed, the screen shown in Fig.88 appears. Click **Finish**.

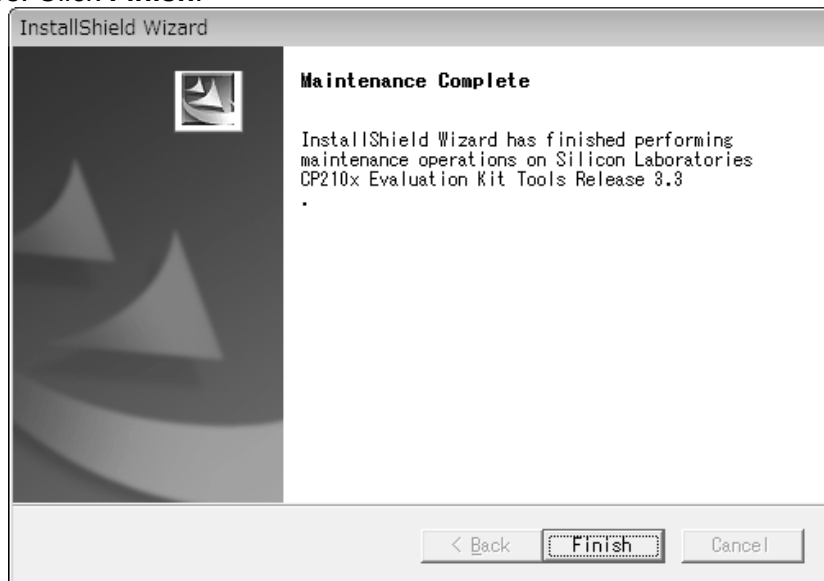


Fig. 88 Uninstallation Complete

3. Operating the Program

This chapter explains how to use the mapping functions set in each model. The screens shown below are for Windows XP's. The procedures for Windows Vista and Windows 7 32-bit version are the same as those for Windows XP.

3.1 Starting

- (1) Double-click the shortcut icon **Kawasaki FI Calibration Tool** on the Desktop screen or click the **Kawasaki FI Calibration Tool** in Program Menu on Start Menu.

Then Machine Select screen shown in Fig.89 appears.

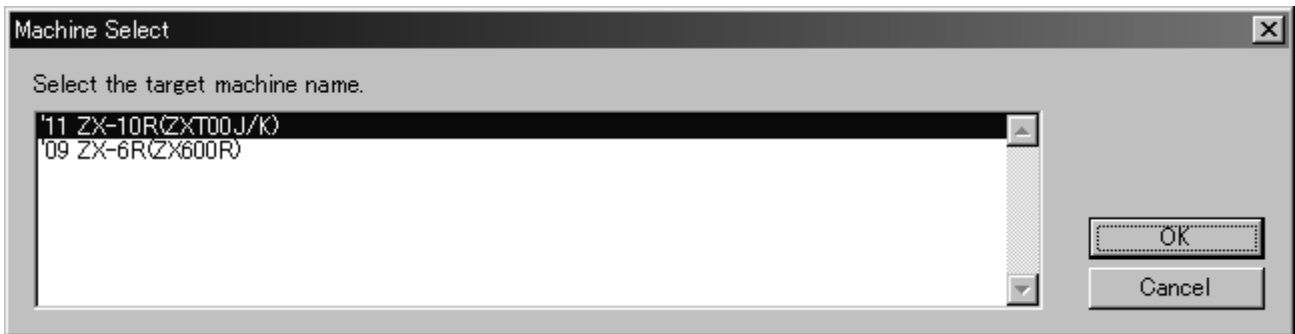


Fig. 89 Machine Select Screen

Click the target machine name, then click **OK**.

If you want to stop starting the program, click **Cancel**.

This window only appears right after starting the program when installed initially. From next time the same target model is automatically viewed.

Refer to the **3.6 Changing the Target Machine** to change target models.

- (2) At the initial screen shown in Fig.90 load the data file (EST file) to be edited.

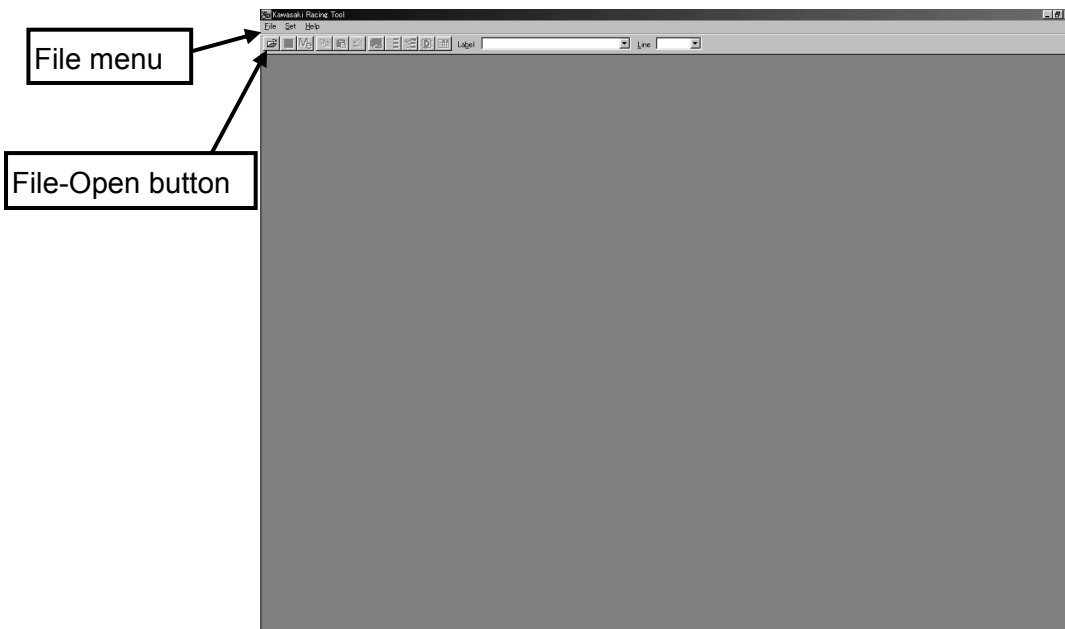


Fig. 90 Initial Screen

- (3) Go to the pull-down **File** menu and select **Open**, or click the **File - Open** button (left end) on the toolbar. At this dialog only the data file (EST file) can be loaded.

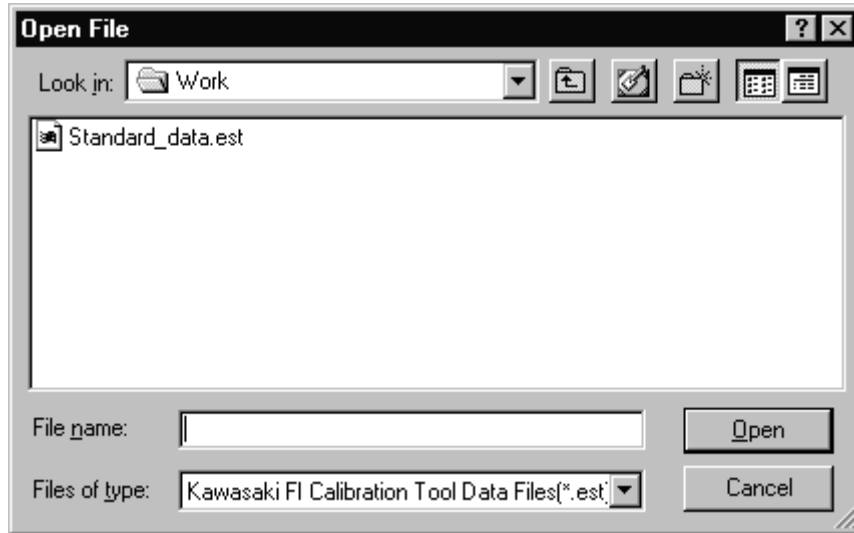


Fig. 91 Open Dialog

- (4) Select the data file (EST file) to be edited in the Open File dialog and click the **Open**. The Select Map Group dialog shown in Fig.92 appears. ('11 ZX-10R only)
Then select the map to be edited and click the **OK**.

F Map (Full Power):

The highest engine power output is achieved. The rider can feel the full throttle response of the engine.

M Map (Middle Power):

The throttle response is less sharp compared to the F Map.
Depending throttle application full power can be accessed temporarily.

L Map (Low Power):

About 60% of the highest engine power output is achieved. The throttle response is mildest among the three modes.

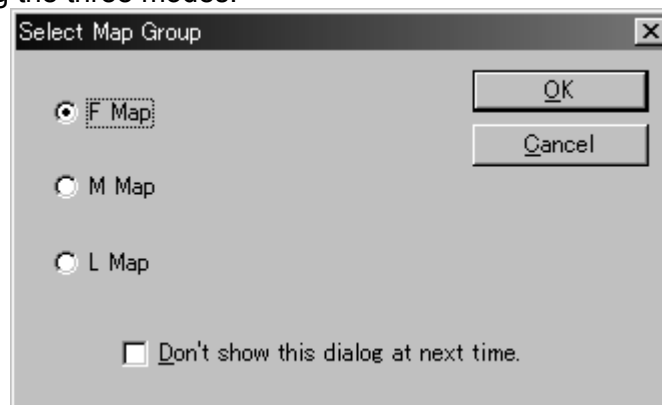


Fig. 92 Select Map Group Dialog

- (5) The Menu Dialog shown in Fig.93 appears. (As for the models other than '11 ZX-10R, select the data file (EST file) to be edited in the Open File dialog and click the **Open** to display this screen.)

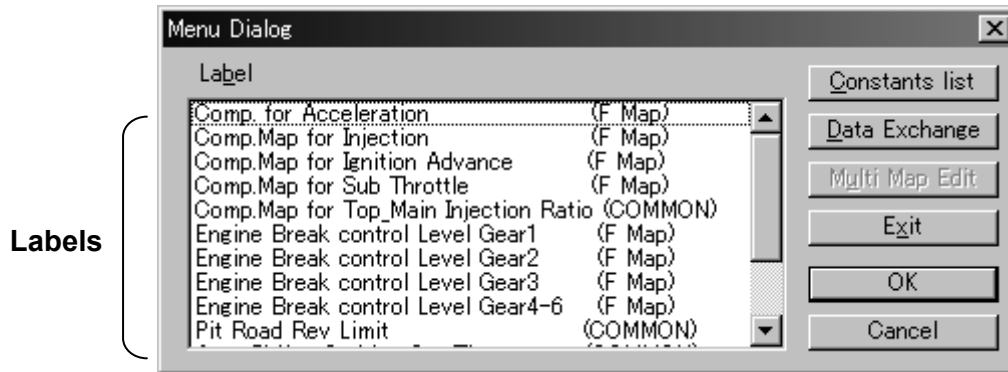


Fig. 93 Menu Dialog

- (6) Select the mode to be edited in the Menu dialog.

The modes that can be used are as follows:

<Map Edit> Mode

In this mode you can edit the **Map**.

Select and click one **Label** in the Menu dialog and click the **OK** or **Enter (Return)** key, or double click one **Label**, to display the Map Edit screen.

<Setting Values Edit> Mode

In this mode you can edit the **Constants List**.

Click the **Constants list** to display the Constants List Setting Dialog.

<ECU Data Exchange> Mode

Click the **Data Exchange** in the Menu dialog to display the Data Exchange Dialog. Select this mode when you want to load the data in the ECU or write the edited data in the ECU.

<Multi Map Edit> Mode

Click the **Multi Map Edit** in the Menu dialog to display the Multi Map Edit Setting Dialog.

The Multi Map Edit can be used for the “**Comp. Map for Injection No.1 and No.2**” and map edit for all cylinders can be carried out at the same time.

3.2 Each Map Edit Method

3.2.1 Map Edit

Select one Label in the Menu dialog and click the **OK**, or double click one Label to display the Map Edit Screen shown in Fig.95.

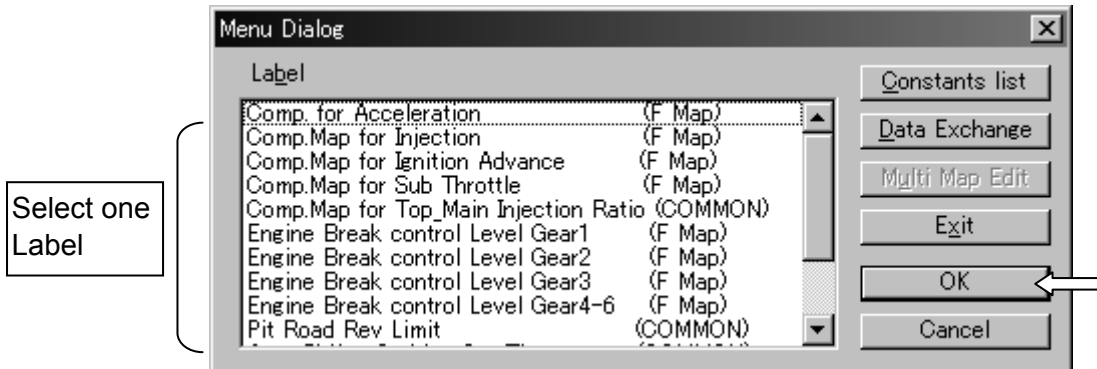


Fig. 94 Menu Dialog

In the Map Edit Screen, the Map to be edited will be displayed as the two-dimensional graph (MAP) and the table (TABLE).

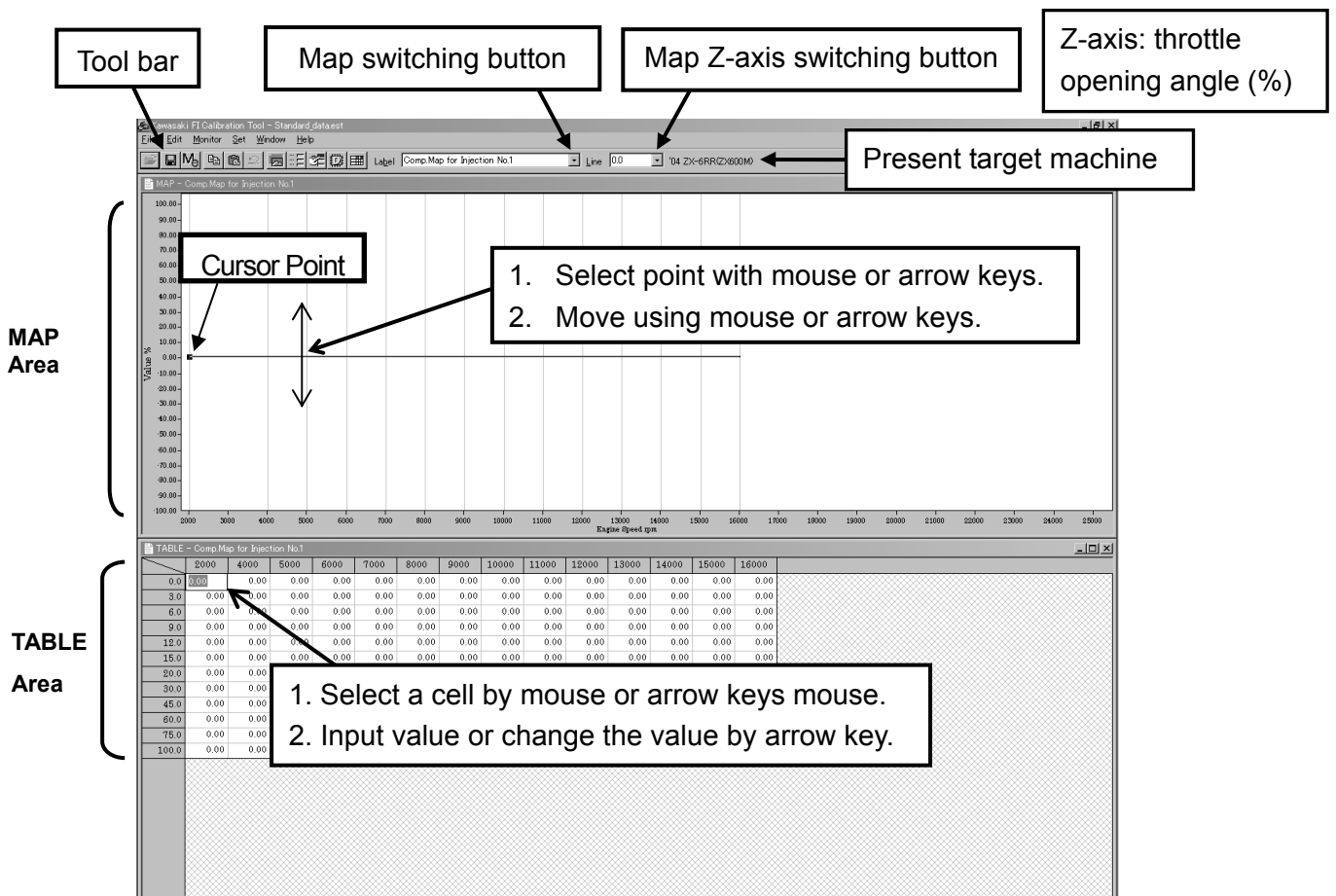


Fig. 95 Map Edit Screen (Compensation Map for Injection No.1 is shown as a sample.)

NOTE

- If you have closed the GRAPH or TABLE, open the Menu dialog by clicking the Menu button of the Tool bar and select the subject Map.
- If you switched the subject Map using Map switching button, only the display switches. When editing the subject Map, switch the Map by selecting the editing point of the Graph or Table area of the subject Map.

Data Edit can be carried out either in the **MAP** or **TABLE** area and edit each area as follows:

[Editing method on the MAP area]

Click a point on the graph to select the graph and the editing point of the engine rpm that is the nearest position to the clicked point.

Drag & drop of the graph data: Press down the left button of the mouse to select the editing point. After that, move the editing point up or down. Then, the data will be changed to the possible setting value nearest to the release point. (The direction of the engine rpm cannot be changed.)

Key allocation when a point on the line is selected

→ (or {Shift} + →): Switches the selected point to the right-side rpm

← (or {Shift} + ←): Switches the selected point to the left-side rpm

↑ (or {Page Up}): Increases the graph data by an LSB* at the selected point

↓ (or {Page Down}): Decreases the graph data by an LSB* at the selected point

{Shift} + ↑ (or {f·2}):

Switches the selected graph area (line number) to another (Active row is moved down in the TABLE)

{Shift} + ↓ (or {f·3}):

Switches the selected graph area (line number) to another (Active row is moved up in the TABLE)

*LSB: Least Significant Bit

NOTE

- The data displayed in hexadecimal. The lowest of the hexadecimal number change one step.

[Editing on the TABLE area]

Each value on the table can be directly edited by selecting the cell with mouse and putting value by key strokes. The values in the data are always changed to the nearest values that are possible to set. The values in the CPU are managed in hexadecimal data.

Key allocation when a cell in the table is selected

{Shift} + →: Switches the selected cell to the right-side rpm

{Shift} + ←: Switches the selected cell to the left-side rpm

{Shift} + ↑: Switches the selected cell to the upper-side cell

{Shift} + ↓: Switches the selected cell to the lower-side cell

{Page Up}: Increases value in the selected cell by an LSB*

{Page Down}: Decreases value in the selected cell by an LSB*

{Ctrl} + {Shift} + arrow: Increases the selected cells to the arrow direction

{Enter}: Defines data

*LSB: Least Significant Bit.

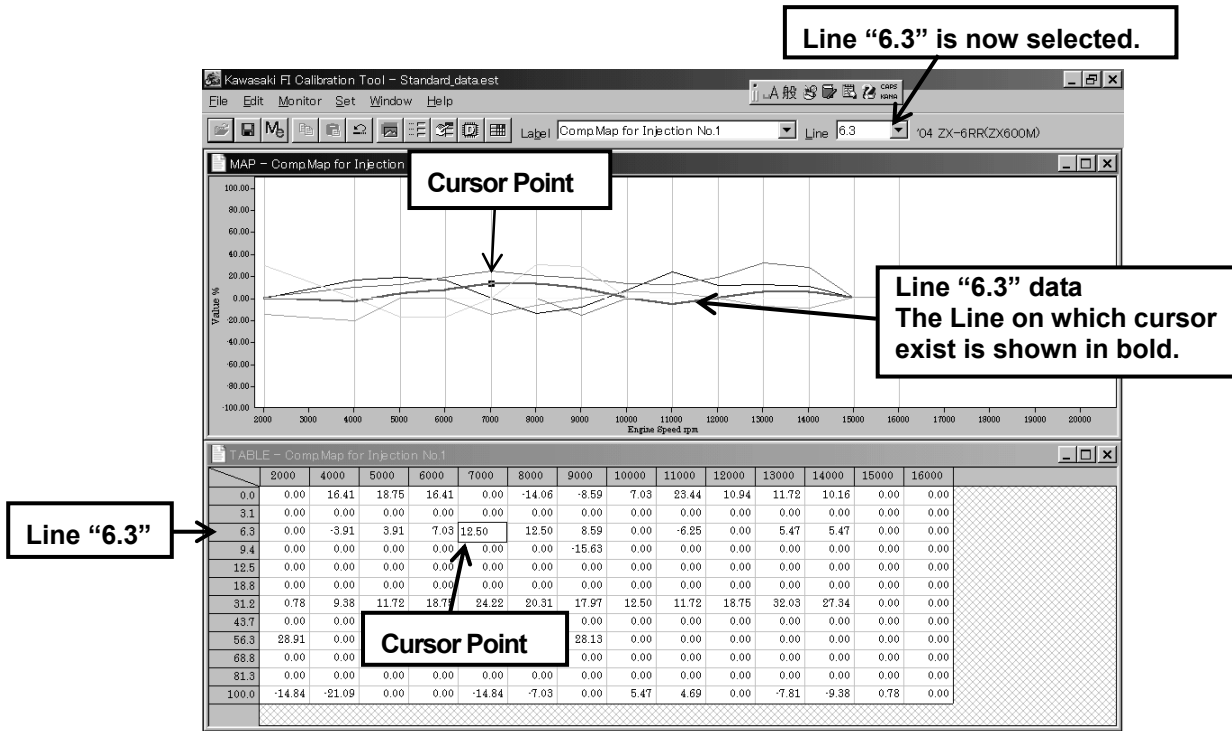


Fig. 96 Map Edit Screen (Compensation Map for Injection No.1 is shown as a sample.)

If a value out of the range is entered on the graph or table, the error message shown in Fig. 97 will appear and the possible maximum or minimum value will be set.

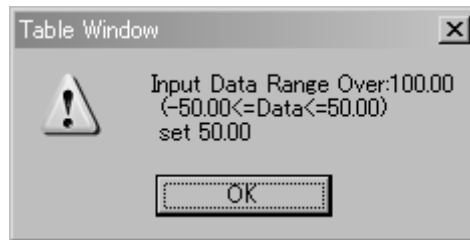


Fig. 97 Error Message

3.2.2 Map Axis Edit

In the TABLE area the axis data (Engine Revolution and Throttle Opening) can be edited by keying in the data directly after selecting the cell by mouse or keystrokes. The data is always exchanged to the nearest available setting value.

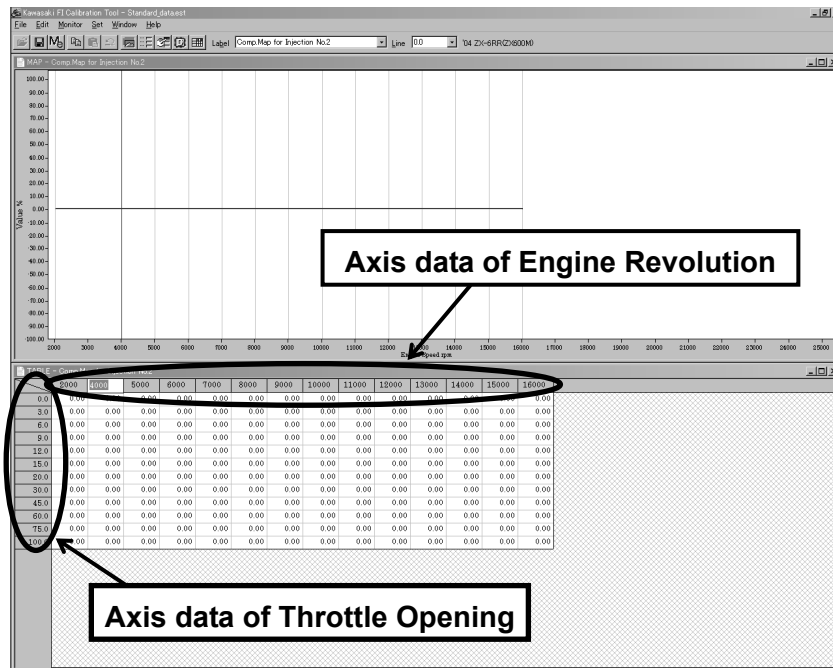


Fig. 98 Map Axis Editing (Original Axis Data)

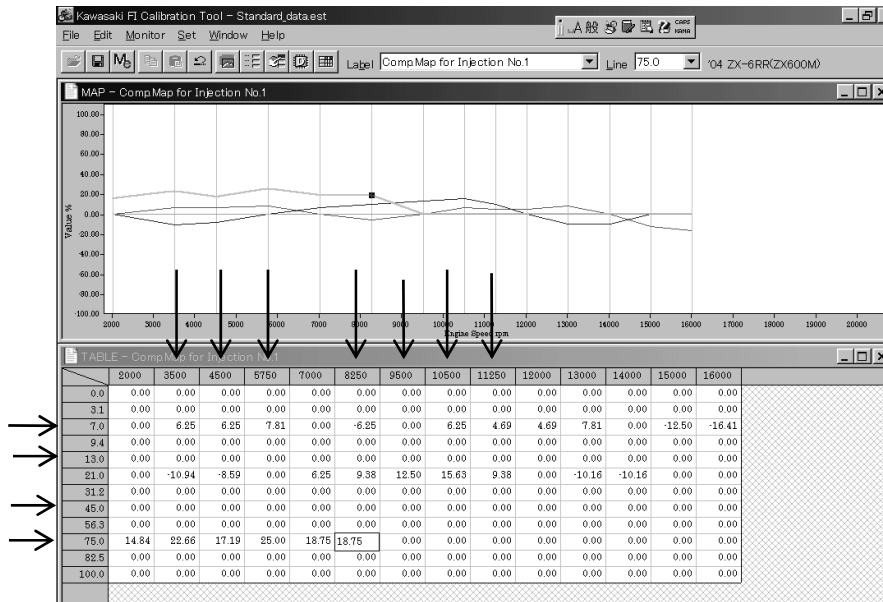


Fig. 99 Map Axis Editing (Sample Screen After Changing the Axis Data)

NOTE

- The data on the engine revolution axis must be set in a value always larger than the left neighbor value and smaller than the right neighbor. If an irregular value is input, the data will be changed automatically within the possible range.
- The data on the throttle opening axis must be set in a value always larger than the upper neighbor value and smaller than the lower neighbor. If an irregular value is input, the data will be changed automatically within the possible range.

If a value out of the possible range is input to both ends of the axis data, the error message will appear and the maximum or minimum possible setting value will be set automatically.

NOTE

- The axis data is commonly used by all the maps. Note that the axis data change is applied to other maps.
- When you move from an Axis Data cell of Throttle Opening to a cell of adjusting data by key operation, the cell that was selected before editing the Axis Data will be selected.

3.2.3 Multi Map Edit

The Multi Map Edit can edit both the “Comp. Map for Injection No.1” and “Comp. Map for Injector No.2” at the same time, and map edit for all cylinders can be carried out at the same time.

Click the **Multi Map Edit** in the Menu dialog (The '11 ZX-10R does not have this function.).

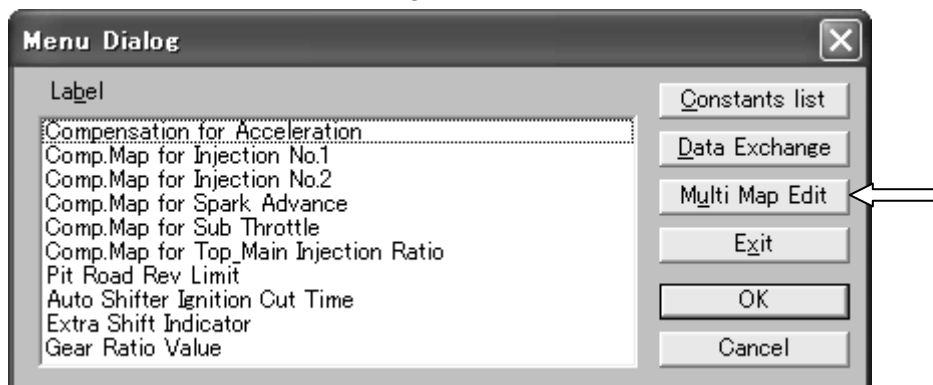


Fig. 100 Menu Dialog

Then the Multi Map Edit dialog shown in Fig.101 appears.



Fig. 101 Multi Map Edit Dialog

Click the **OK** to display the Multi Map Edit screen. The method of Multi Map Edit is same as the methods of Map Edit and Map Axis Edit mentioned above.

Quit the Multi Map Editing Mode

Click the **Individual Edit** in the Multi Map Edit dialog to quit the Multi Map editing mode and display the Map Edit screen set for the #1 Map.

Or, click a Map menu other than the Multi Map in the Menu dialog to display the Map Edit screen for the selected Map

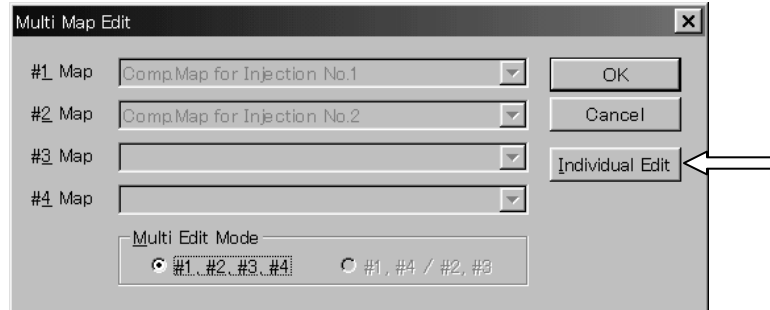


Fig. 102 Multi Map Edit Dialog

NOTICE

Never edit the Multi Map setting by selecting the axis data in the Table editing area, or the axis data could be broken and the program could close.

NOTE

- When selecting Multi Map editing mode, #2 Map data is overwritten with the #1 Map data.
- When both the Map area and Data area are closed in the Multi Map editing, the Multi Map edit mode is automatically quitted.

3.2.4 Individual Value Edit

In this Mode you can edit the values.

Click the **Constants list** on the Menu Dialog to display the Setting Values Edit screen.

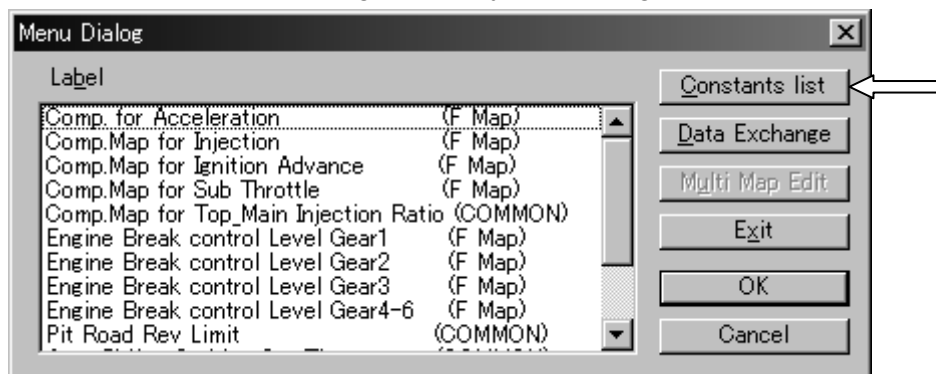


Fig. 103 Menu Dialog

Then Fig.104 appears.

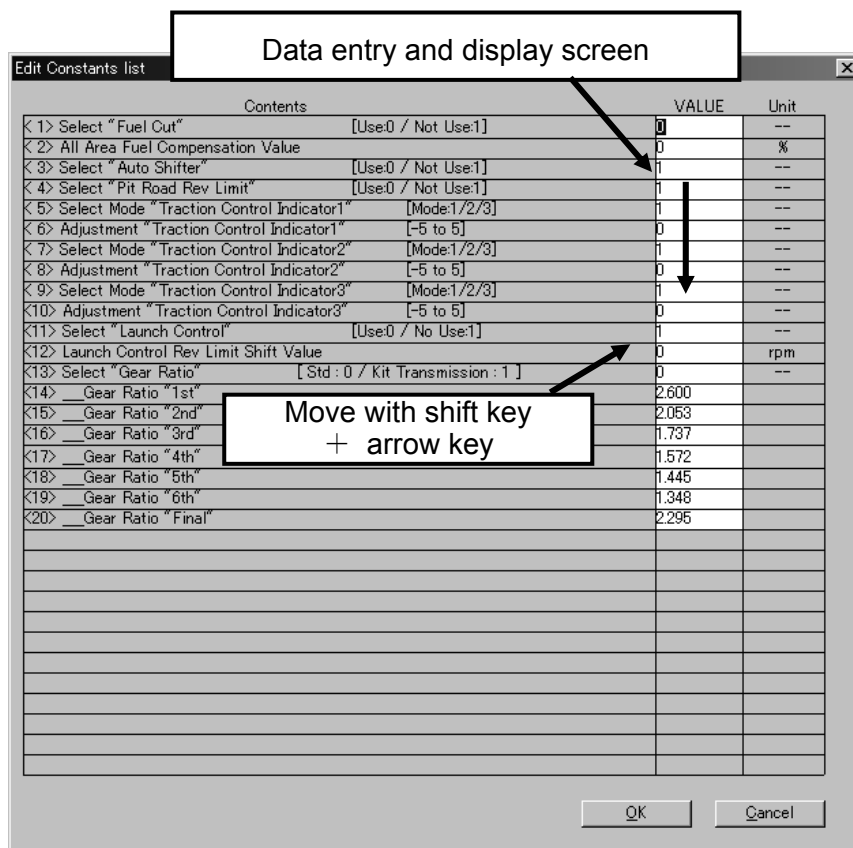


Fig. 104 Edit Constants List

Key allocation when a cell in the table is selected

- {Shift} + ↑: Switches the selected cell to the upper-side cell
- {Shift} + ↓: Switches the selected cell to the lower-side cell
- {Page Up}: Increases values in the selected cell by an LSB
- {Page Down}: Decreases values in the selected cell by an LSB
- {Enter}: Defines the data

Input the value and press Enter.

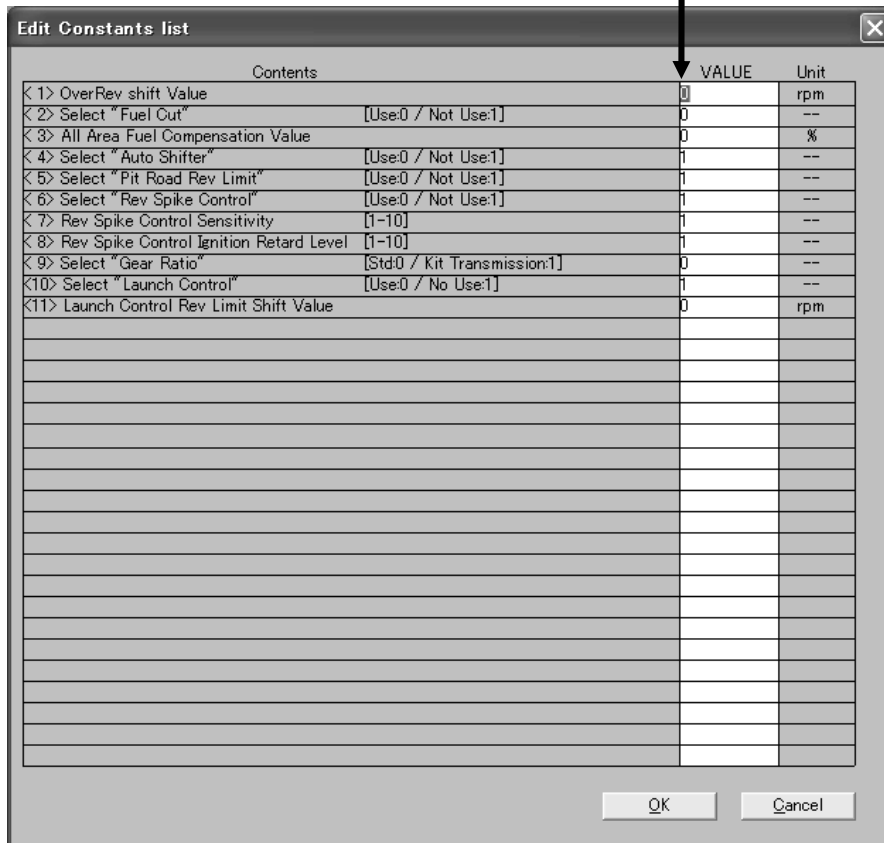


Fig. 105 Edit Constants List (Setting Data Sample)

If a value out of the possible range is input to both ends of the axis data, the error message will appear and the maximum or minimum possible setting value will be set automatically.

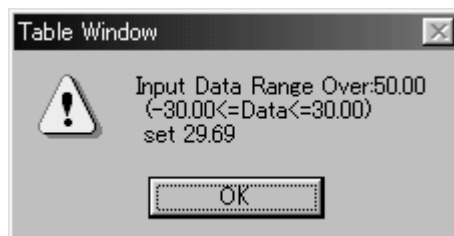


Fig. 106 Error Message

NOTE

- When the Fuel Compensation Value is 0 %, the injected fuel quantity is controlled by the Base Map. And the Base Map is calculated by water temperature, air temperature, intake air pressure, throttle position, atmospheric air pressure, and etc.
- The intermediate values of the Map are calculated linearly.

NOTICE

When changing the Map, change the values gradually by checking the engine conditions (knocking noise, etc.) or measuring the Air/Fuel ratio.

3.3 Changing ECU Data

The data flow between ECU and PC is shown in Fig.107.

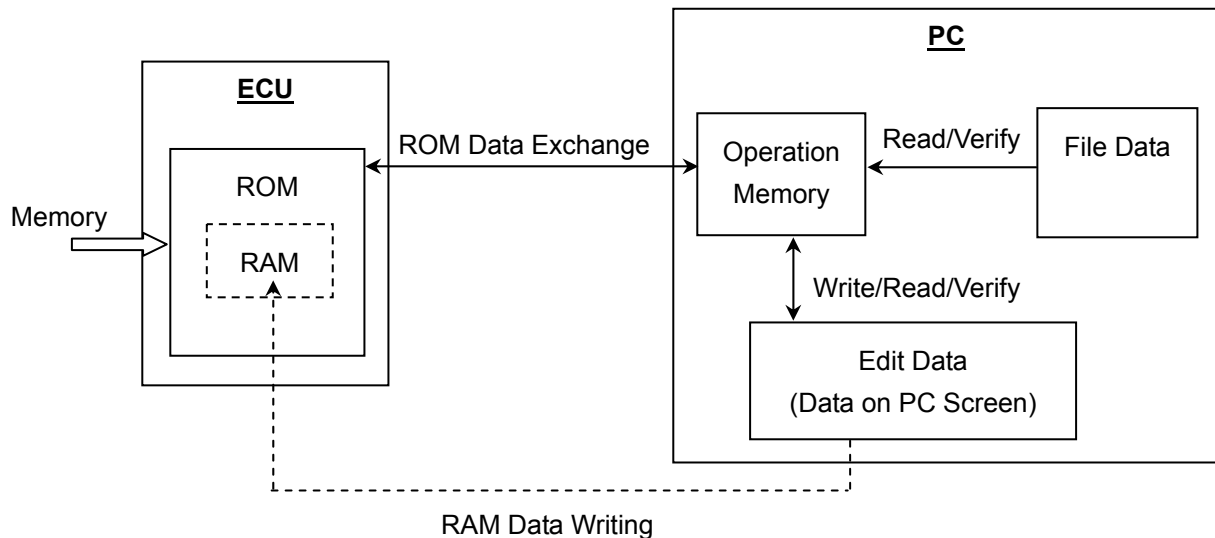


Fig. 107 The Data Flow between ECU and PC

The racing ECU has two kinds of ECU data exchange methods.

(1) ROM data exchange:

All data can be exchanged collectively and it takes about one minutes depending on PC performance.

In case of ROM data exchanging, even if the ignition switch turns off, the data will not be erased.

But the data cannot be exchanged when the engine is running. (Use ROM data exchange for normal circuit riding.)

(2) RAM data exchange:

The data can be exchanged instantaneously with the limitation of exchanging items. Exchanging data is possible while the engine running, however the data is erased when the ignition switch is turned off. (Use RAM data exchange for a temporary setting adjustment in chassis-dynamo and the like.)

Operation method of ROM data exchange

Click the **Data Exchange** button in the Menu dialog

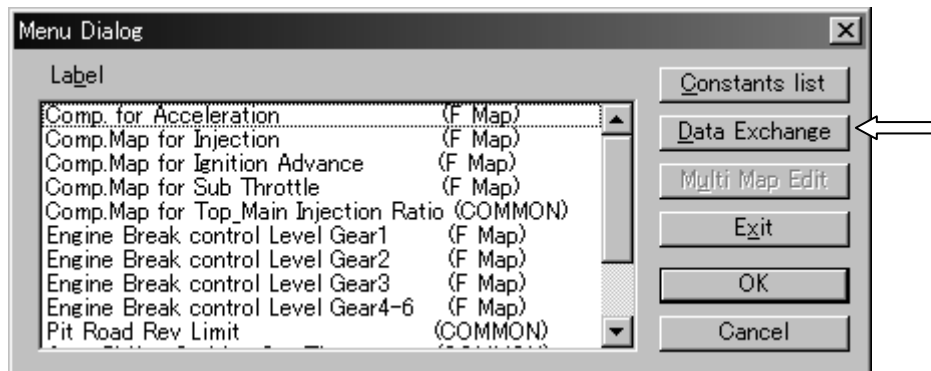


Fig. 108 Menu Dialog

Data Exchange screen is displayed as shown in Fig.109.

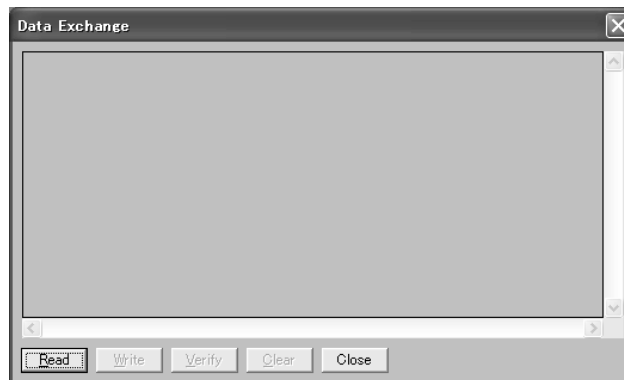


Fig.109 Data Exchange Dialog

In case of ROM data exchange, the data on the PC screen cannot be written directly to ECU. It is necessary to transfer the data temporarily to the operation memory in the PC (see Fig.107).

The buttons “Read”, “Write” and “Verify” on the screen are intended mainly for the operation memory. The operation content is displayed on the screen by pressing each button.

Then the Data Exchange screen shown in Fig.110 appears.

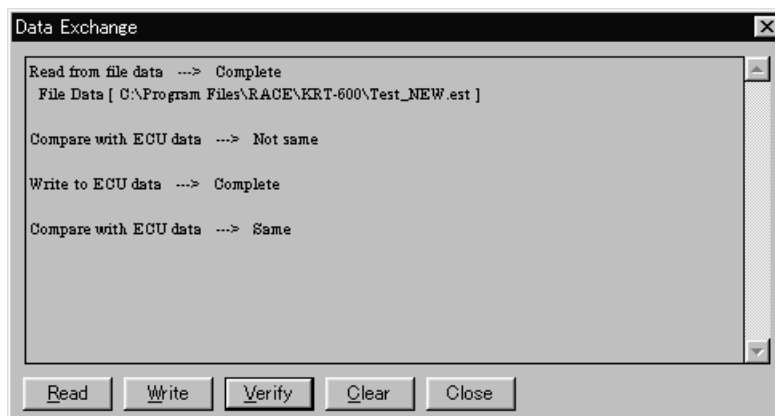


Fig. 110 Data Exchange Dialog

The use and operation for each button is as follows:

[Read]

Click this button to read the data into the PC operation memory. (In case of no data in PC memory, **Read** is a must.)

You can read data from the following three data sources:

Read from ...

- ECU Data: read the ECU data into the PC memory (when Monitor is in the Start condition, the display is grayed out.)
- Edit Data: read the editing data into the PC memory
- File Data: read the (*.EST) data into the PC memory

[Write]

Click this button to write the data in the PC operation memory into the ECU or editing area. There are two addresses to write.

Write to ...

- ECU: write the data into ECU RAM (when Monitor is in the Start condition, the display is grayed out.)
- Edit: write the data into the editing area as editing data

[Verify]

Click this button to select the data to be compared with the read data.

Compare with ...

- ECU Data: compare with ECU data (when Monitor is in the Start condition, the display is grayed out.)
- Edit Data: compare with edit data
- File Data : compare with data in a data file (*.est)

When the read data is same as the selected data, **Same** appears on the status indication area, and when they are different, **Not same** appears.

[Clear]

Click this button to clear the data in the operation memory on the PC.

[Close]

Click this button to finish the data change (clear the operating memory) and close the Data Exchange screen.

NOTE

- *In case of writing the editing data into the ECU, **Read** the editing data into the operation memory. Then **Write** the data in the operation memory into the ECU.*
- *After writing the data into the ECU, confirm the data in the PC is the same with the data in the ECU by using the **Verify** function. The data may be written into the ECU incorrectly according to the communication conditions.*
- *The ECU memory is rewritable 65,500 times at maximum. If it exceeds this limit, error message **NOT Writing** will appear and replace the ECU with a new one.*
- *Be careful the present editing data will be lost, if you select **Edit**.*
- *Write the data into ECU after confirming that the Ignition is turned on and the fuel pump and sub throttle valve are stopping.*

NOTICE

When operating the data into the ECU, wait until the fuel pump and the sub throttle valve stops. Then execute next operation or turn off the ignition switch.

Operation method of RAM data exchange

The map and the edited content of each setting value can be written to ECU RAM when the engine is running.

[Edited data exchange when the engine is running]

After the data edit, the selected data by Shift + Enter will be sent to the ECU.

NOTE

- *The data is sent to the ECU by 1 point (1 cell). If you select some cells, the data of the selected cells are sent to the ECU.*
- *The sent data is valid while the engine is running. As the data is not memorized in the ECU save the edited data in the PC.*
- *The map axis data cannot be changed. Change the map axis data in ROM.*

3.4 Other Functions

3.4.1 Monitoring Function

In this mode, the data inside the racing ECU can be displayed during engine operation.

Go to the pull down **Monitor** menu and select **Monitor** or click **Monitor** icon on the toolbar. The Monitor dialog shown in Fig.111 appears.

(This window can be resident)

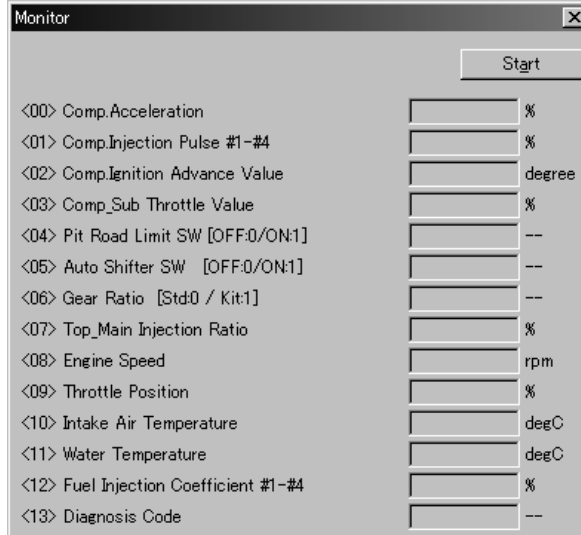


Fig. 111 Monitor Dialog (in case of '11 ZX-10R)

Start : Click this button to start communicate. When communication starts, the button name will change to **Stop**.

Stop : When this button is clicked during exchange process, the exchange process finishes and this button name will change to **Start**.

Pressing **Enter (Return)** key can change the screen from Monitor dialog screen to main window. To set the data inside the racing ECU, which can be monitored from the Monitor dialog, go to the pull down **Monitor** menu and select **Item set**, or click **Set Item** icon on the toolbar. After the dialog shown in Fig.112 appears, select the item that you want to set.

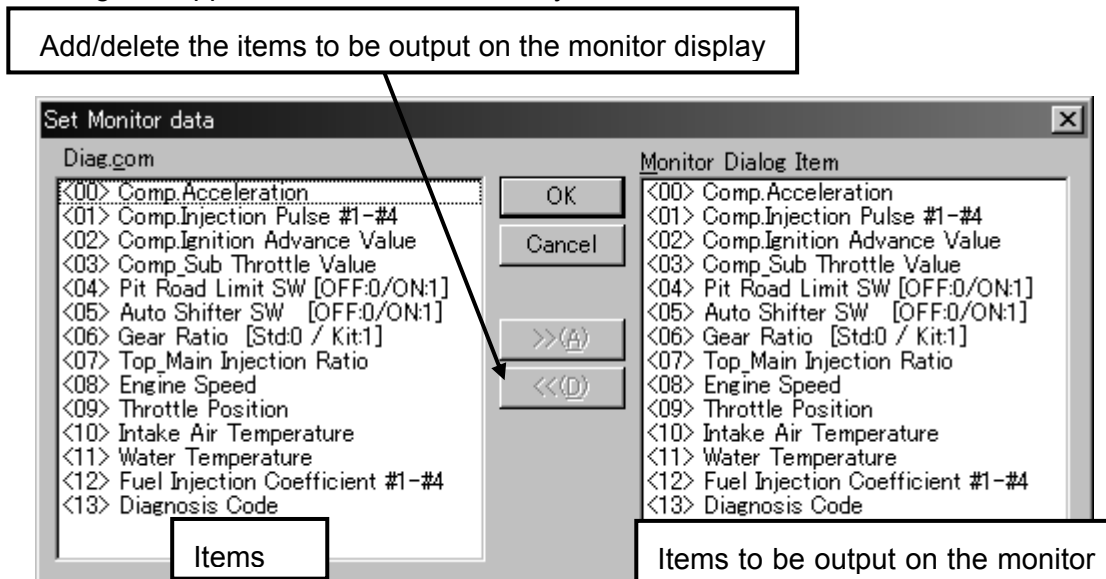


Fig. 112 Set Monitor Data

Setting Monitor dialog items

- >>(A): Add items selected from the list to the Monitor Dialog Item area
- <<(D): Delete items from the Monitor Dialog Item area

3.4.2 Title Editor (Memo) Function

You can record the title (memo) for each edit data.

Go to the pull-down **Set** menu to click **Title**. The Title Editor dialog shown in Fig.113 appears. You can set the mode with the mouse or directly edit the data with keystroke.

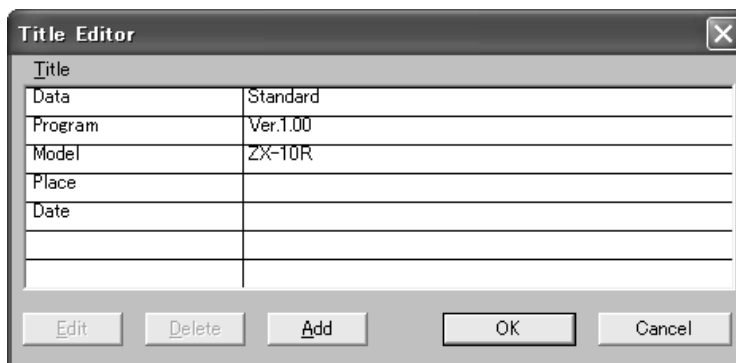


Fig. 113 Title Editor Dialog

3.4.3 Default Folder Setting Function

In this function, you can set the default folder when **File Open** is carried out.

Go to the pull down **Set** menu to click **Directory**. The Directory dialog shown in Fig.114 appears.

Directly enter the folder name by keystroke or use the Browsing function in the folder search dialog to select the folder from the existing folders.

Use the full path name to write in the File Path.

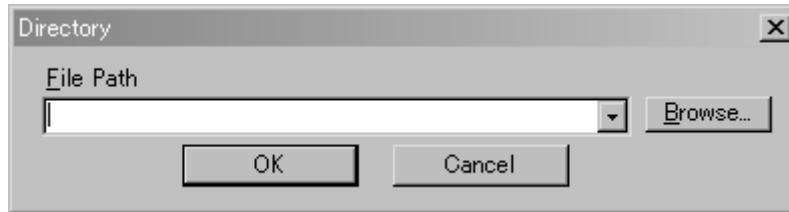


Fig. 114 Directory Dialog

3.5 File Saving

You can save the data.

After editing the Map, click **File** and next click **Save**.

Put the name in the column and then click the **Save**.

NOTE

- *The file extension is .est. When saving the extension is attached automatically.*
- *If you change the extension, you cannot open the file.*
- *When saving the data you can record the title (memo). Refer the 3.4.2 section.*

3.6 Changing the Target Machine

You can change the editing data according to the target machine. To change the target machine, go to the pull down **Set** menu and click **Machine Select**. Then the Machine Select dialog shown in Fig.115 appears.

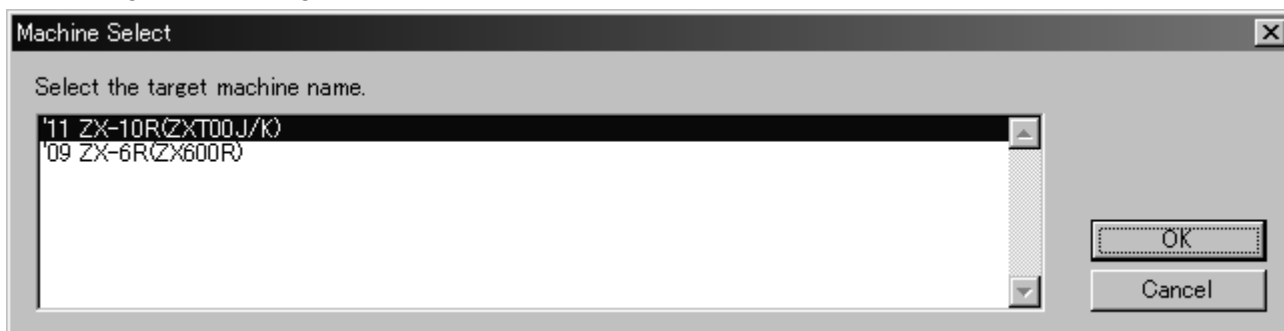


Fig. 115 Machine Select Dialog

After you select the machine that you want to set by mouse operation or key operation, click **OK**. Then the machine change confirming dialog shown Fig.116 appears.



Fig. 116 Machine Change Confirming Dialog

Clicking **OK** can change the target machine from next starting.

NOTE

- *Selecting Cancel in the Fig.115 or Fig.116 cannot execute the machine changing.*

3.7 Changing Map Group

This function is correspond to the map mode selection adopted in '11 ZR-10R (ZX1000J/K). Each mode in the meter can be set individually.

This dialog can also be displayed by selecting **"Set"** and **"Select Map Group"** from the pull down menu or clicking the **Select Map Group** icon in the upper right corner of the screen.

If you do not want to display this dialog at start-up, click check box next to **"Don't show this dialog at next time"**.

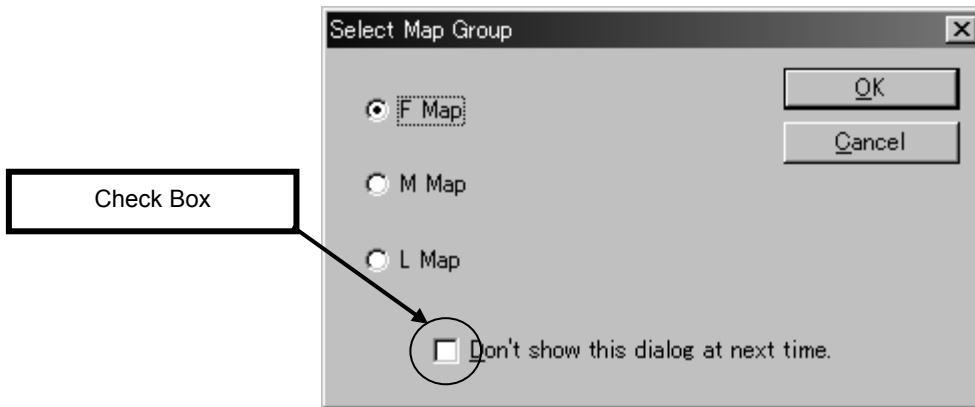


Fig. 117 Select Map Group Dialog

In the Menu dialog, (COMMON) is for common setting among all modes, and (F Map), (M Map), and (L Map) can be set individually for each mode.

When you want the same setting in all modes, set the same values in all modes.

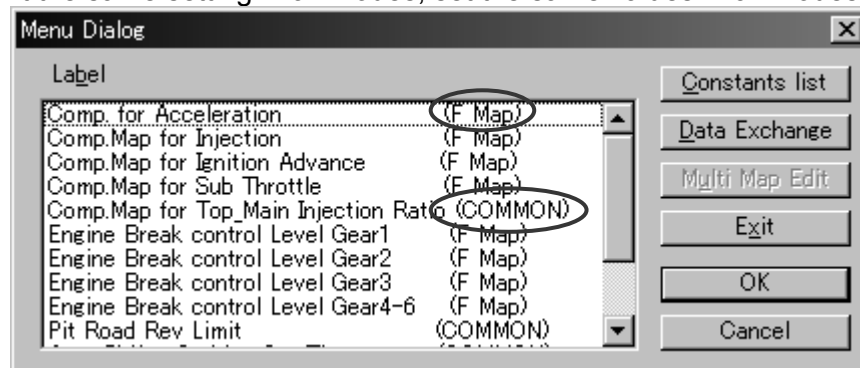


Fig. 118 Menu Dialog

3.8 New Usable Functions

3.8.1 Plural Cells Data Selecting

You can select the plural cells. This is useful when copying the data to excel file or changing the data simultaneously. (See Fig.119).

Select the start point [Click (Left button)], and select the end point (**{Shift} + Click (Left button)**) or (**{Shift} + {Ctrl} + arrow key**).

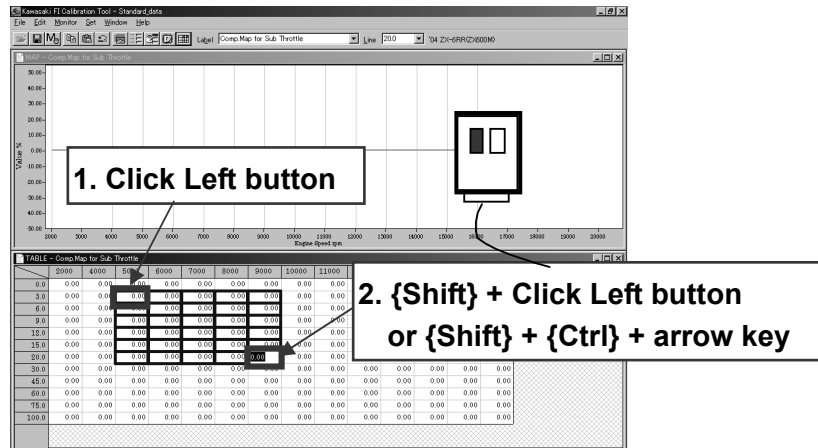


Fig. 119 Data Selecting Method

3.8.2 Plural Cells Data Copying

You can copy the selected data to Excel file by using Windows clipboard.

Copy: **{Ctrl} + {C}** or [Pull down menu] → [Edit] → [Copy]

Paste: **{Ctrl} + {V}** or [Pull down menu] → [Edit] → [Paste]

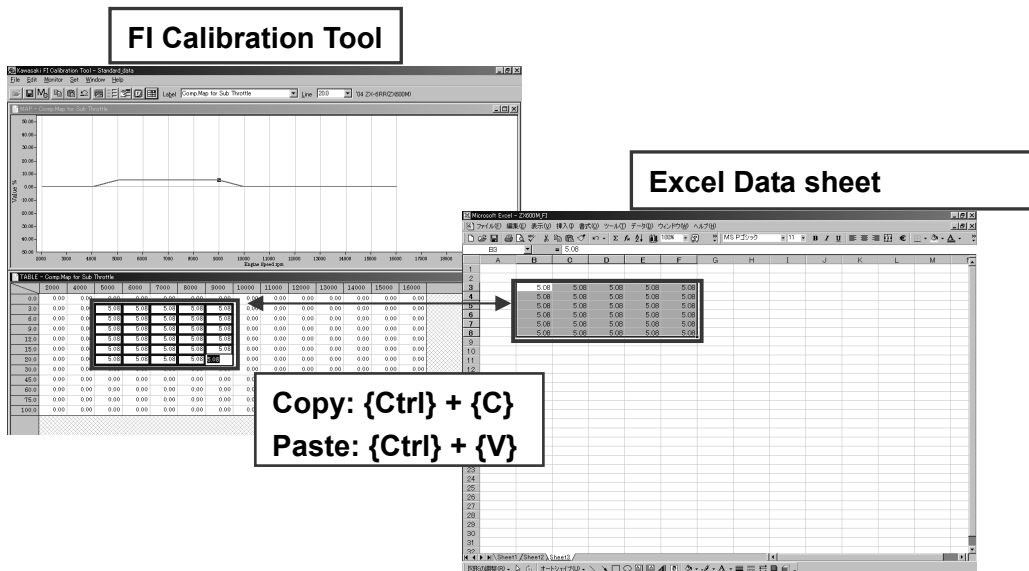


Fig. 120 Data Copying Method

3.8.3 Plural Cells Data Changing Method

You can change the value of plural cells simultaneously.

Firstly select the area according to the procedure 3.8.1.

A cursor is on end point, therefore directly input the value + **{Enter}** or press **{Page Up}** / **{Page Down}** key.

One **{Page Up}** increases 0.78 points and one **{Page Down}** decreases 0.78 points.

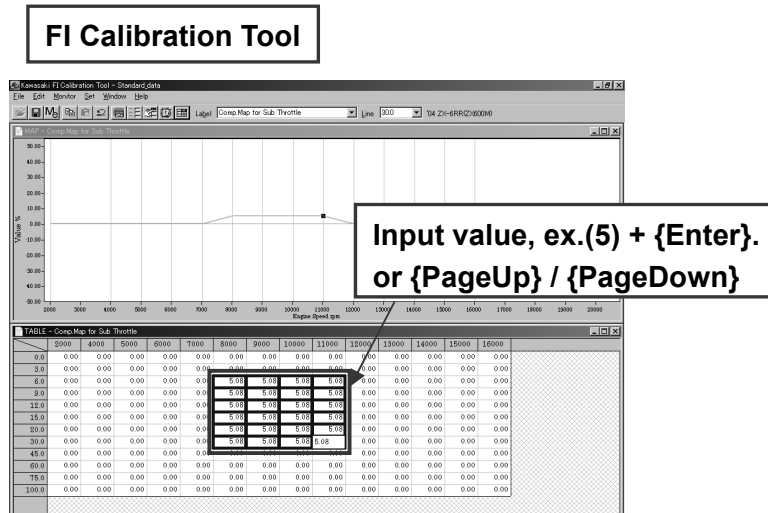


Fig. 121 Data Changing Method

3.9 Pull Down Menu

3.9.1 File

Open	Ctrl + O	Loads data file
Close		Closes the loaded file
Save		Names the file and saves it
Menu	F1	Displays the Menu dialog
Exit	Alt + F4	Finishes FI Tool Program

3.9.2 Edit

Undo	Ctrl + Z	Cancels the data edit
Copy	Ctrl + C	Temporarily copies the data in cell into clipboard
Paste	Ctrl + V	Paste the data in the clipboard
Multi Map Edit		Displays the Multi Map Edit setting dialog
Individual Edit		Finishes the Multi Map Edit

3.9.3 Monitor

Monitor		Displays the Monitor dialog
Start		Starts the Monitor Communication
Stop		Finishes the Monitor Communication
Item set		Displays the Monitor Item Setting Dialog

3.9.4 Set

RS-232C	Displays the RS-232C setting dialog
Title	Displays the Title setting dialog
Constants list	Displays the Constants list setting dialog
Data Exchange	Displays the Data Exchange setting dialog
Directory	Displays the Directory setting dialog
Machine Select	Displays the Machine Select dialog
Select Map Group	Displays the Select Map Group dialog

3.9.5 Window

Open	Opens Map or Table window
Cascade	Cascades two or more windows
Title	Titles two or more windows
All	Switches the graph mode on the Map screen between All and Single
Monitor Dialog	Moves the cursor to the Monitor dialog
MAP-*****	Displays the active windows list
TABLE-*****	Displays the active windows list

3.9.6 Help

Tool box	Displays the Tool Bar dialog
About Kawasaki FI Calibration Tool	Displays the Version dialog

3.10 Tool Bar (Icon)

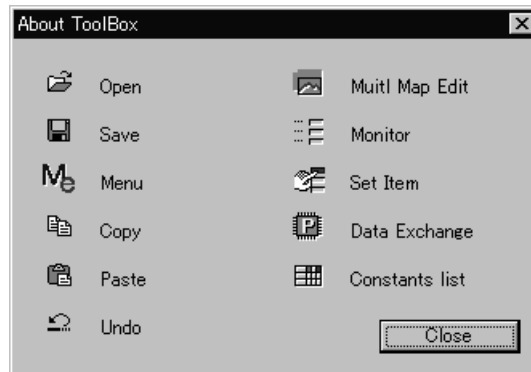


Fig. 122 Tool Bar Exposition Dialog

Explanation from the left side

- Open the file (File - Open)
- Save the file (File - Save)
- Open the Menu dialog (File - Menu)
- Copy (Edit - Copy)
- Paste (Edit - Paste)
- Undo (Edit - Undo)
- Open the multi edit dialog (Edit - Multi Map Edit)
- Open the Monitor dialog (Monitor - Monitor)
- Open the Set Monitor Data dialog (Monitor - Item set)
- Open the Data Exchange setting dialog (Set - Data Exchange)
- Open the Constants list setting dialog (Set - Constants list)

4. Connecting Method

4.1 '11 ZX-10R

4.1.1 With Racing Main Harness Connecting Method

- (1) Remove the Standard Main Harness and install the Racing Main Harness (J926031-0999).
- (2) Replace the standard ECU with Racing ECU (J926031-0737).
- (3) Connect the 6-pin connector of Racing I/F Box to the 6-pin connector of Racing Main Harness.

NOTE

- *When the racing ECU (J926031-0737) and the racing main harness (J926031-0999) are installed, part of the function of the exhaust butterfly valve actuator, radiator fan, and side stand, etc stop functioning. Drive with extreme care.*
- *The racing ECU does not operate excluding the combination with the racing main harness (J926031-0999). The standard main harness cannot be used.*
- *The racing ECU can be installed on both KIBS (ABS) equipped/non-equipped motorcycles by using the racing main harness. However, the ABS does not work with the racing ECU. Be aware that the ABS stops functioning and drive carefully when the racing ECU is installed on your KIBS (ABS) equipped motorcycle.*

4.1.2 FI Tool Program Setting Method

(1) The editable items in the FI Tool Program

The editable items in the FI Tool Program are as follows:

Item	Mode	Action
Comp. for Acceleration	3 Modes	regulates the rate of fuel injection at acceleration
Comp.Map for Injection	3 Modes	regulates the rate of fuel injection at normal operation (For all cylinders)
Comp.Map for Ignition Advance	3 Modes	regulates the ignition timing
Comp.Map for Sub Throttle	3 Modes	regulates the sub-throttle valve opening
Comp.Map for Top_Main Injection Rate	—	regulates the rate of primary and secondary fuel injection simultaneously
Engine Brake Control Level Gear1	3 Modes	regulates the engine brake effectiveness (1st gear)
Engine Brake Control Level Gear2	3 Modes	regulates the engine brake effectiveness (2nd gear)
Engine Brake Control Level Gear3	3 Modes	regulate the engine brake effectiveness (3rd gear)
Engine Brake Control Level Gear4-6	3 Modes	regulates the engine brake effectiveness (4th - 6th gear)
Pit Road Rev Limit	—	regulates the pit road RPM limit
Auto Shifter Ignition Cut Time	—	regulates the ignition cut time at auto shifting
Auto Shifter Ignition Cut Delay Time	—	regulates the ignition cut delay time at auto shifter switching
Shift Lamp Rev	—	regulates the lightning RPM of the shift indicator
Over Rev Shift Value	—	sets the off-set value from the standard Over Rev Limiter

The editable items in the Constants List are as follows:

Item	Action
Select "Fuel Cut"	sets the Yes or Not of Fuel Cut at decreasing the speed
All Area Fuel Compensation Value	regulates the rate of fuel injection for all operating ranges (applied to all cylinders)
Select "Auto Shifter"	sets the Yes or Not of Auto Shifter control
Select "Pit Road Rev Limit"	sets the Yes or Not of Pit Road RPM control
Select Mode "Traction Control Indicator1"	sets the traction control mode 1 (standard)
Adjustment "Traction Control Indicator1"	sets the adjustment value of the traction control mode 1
Select Mode "Traction Control Indicator2"	sets the traction control mode 2 (standard)
Adjustment "Traction Control Indicator2"	sets the adjustment value of the traction control mode 2
Select Mode "Traction Control Indicator3"	sets the traction control mode 3 (standard)
Adjustment "Traction Control Indicator3"	sets the adjustment value of the traction control mode 3
Select "Launch Control"	sets the Yes or Not of Launch control
Launch Control Rev Limit Shift Value	sets the off-set value from the standard Launch Control Rev Limiter
Select "Gear Ratio"	sets the Yes or Not of Gear Ratio when using the kit transmission
Gear Ratio "1st"	sets the 1st gear ratio
Gear Ratio "2nd"	sets the 2nd gear ratio
Gear Ratio "3rd"	sets the 3rd gear ratio
Gear Ratio "4th"	sets the 4th gear ratio
Gear Ratio "5th"	sets the 5th gear ratio
Gear Ratio "6th"	sets the 6th gear ratio
Gear Ratio "Final"	sets the final gear ratio

(2) Individual items and setting methods of FI Tool Program

<i>NOTICE</i>
<p>When changing the setting, change the values gradually by checking the engine condition (whether the engine is knocking or not) or measuring the Air/Fuel ratio. If there is something wrong with the engine, return the changed value to the original value. Do not make a significant change in values.</p>

Fuel injection setting

- The rate of fuel injection suitable for the engine power characteristics can be adjusted by changing the fuel map.
- Change the **Comp. Map for Injection** to adjust the fuel injection in the limited range of the throttle opening and RPM.
- Change the **Comp. for Acceleration** to change the feeling in acceleration.
- Change the **Comp. Map for Primary and secondary Injection Rate** to change the ratio of top/main injector.
- Change the **All Area Fuel Compensation Value** To change the rate of fuel injection for all operating ranges.
- **Select “Fuel Cut”=0** to use the fuel-cut system at deceleration. **Select “Fuel Cut”=1** when the fuel-cut system is not used.

NOTICE

Always select “Fuel Cut”=0 when your motorcycle is equipped with the standard muffler or other manufacturer’s catalytic muffler to protect catalyst.

Ignition timing setting

- The engine power characteristics can be adjusted by changing the ignition timing.
- To adjust the ignition timing, change the map of the **Comp. Map for Ignition Advance**.
The map is for the throttle opening and speed and can corrects the advanced/retarded ignition.

Sub-throttle Valve opening setting

- Engine power characteristics can be adjusted by adjusting the sub-throttle valve opening.
- Change the map of the **Comp. Map for Sub Throttle** to adjust the sub-throttle valve opening.
The map is for the throttle opening and speed and the throttle opening of the appropriate point can be corrected.

Engine brake setting

- The engine brake efficiency can be controlled
When the fuel-cut is canceled at deceleration (fuel injection is continuing during deceleration) by selecting “Fuel Cut”=1, the engine brake efficiency on each gear can be adjusted by setting the **Engine Brake Control Level Gear1 ~ Engine Brake Control Level Gear4-6**. There are 10 levels (1 - 10) for setting. The engine brake power becomes the weakest at 10 level.

NOTICE

Change the levels gradually while checking the engine brake efficiency for safety.

Over Rev limiter setting

- The over rev limiter setting can be adjusted.
- The over rev limiter values can be adjusted by each gear by changing the **Over Rev Shift Value** (-1 000 ~ +300 rpm)

Auto shifter setting

- Drivers can shift up without declutching by the auto shifter system.
- **Select “Auto Shifter”=0** with the auto shifter switch attached on the racing main harness.
The ignition cut time can be set by the **Auto Shifter Ignition Cut Time**, and the ignition cut delay time can be set by **Auto Shifter Ignition Cut Delay Time**.
- If the setting of the **Auto Shifter Ignition Cut Time** is too shorter, shift up becomes harder, and if the setting time is too long, the recovery shock from the ignition becomes bigger
Adjust the setting time to suit your own riding style.

Pit road rev limiter setting

- The pit road rev limiter regulates the speed during pit road riding.
- **Select “Pit Road Rev Limit”=0** and turn the pit road rev limiter switch on.
- The speed limit can be set by each gear by the **Pit Road Rev Limit**. Set the values according to the regulation.

Shift indicator setting

- The blinking rev of the shift indicator on the meter or externally-connected shift indicator can be set by the **Shift Lamp Rev** by each gear.
- The blinking rev of the shift indicator cannot be set by the meter switch when the racing ECU is installed.

Launch control setting

- The launch control helps the rider make a stable start by keeping the engine revolution at the fixed level in starting.
- This control functions under the condition that **Select “Launch Control”** on Constant List is set to “0”.
Shift into 1st when the motorcycle is at a stop. When the engine revolution exceeds 5000 rpm the system is automatically activated and the engine revolution is limited near 8000rpm. The launch control is deactivated when shifting up to 2nd.
The rev limit can be adjusted by adjusting clutch-meet rev set in **Launch Control Rev Limit Shift Value**.
- When the externally-connected shift indicator is installed, the indicator blinks while the system is operating.

Setting for Kit Transmission use

- When using the kit transmission, it is necessary to change the gear ratio (reduction gear ratio). If the gear ratio is incorrect, the engine could burn out or break down.
- When installing the kit transmission, set the **Select “Gear Ratio”** on Constants List to 1, input the gear ratio values in all the 1st to 6th and Final gear.

	A(STD)	B	C	D	E	F	G
1st	2.533 (15 / 38)	2.385 (13 / 31)	2.429 (14 / 34)	2.313 (16 / 37)	2.600 (15 / 39)		
2nd	2.053 (19 / 39)	1.947 (19 / 37)	2.111 (18 / 38)	2.000 (18 / 36)			
3rd	1.737 (19 / 33)	1.789 (19 / 34)	1.750 (16 / 28)	1.714 (21 / 36)			
4th	1.524 (21 / 32)	1.550 (20 / 31)	1.571 (21 / 33)				
5th	1.381 (21 / 29)	1.444 (18 / 26)	1.400 (20 / 28)	1.429 (21 / 30)			
6th	1.304 (23 / 30)	1.381 (21 / 29)	1.348 (23 / 31)	1.273 (22 / 28)	1.238 (21 / 26)	1.250 (24 / 30)	1.318 (22 / 29)

	STD
Final	2.294 (17 / 39)

Traction control (S-KTRC) setting

- The traction control level can be selected and fine adjustment to each level is possible.
- Arbitrarily setting is possible to S-KTRC mode indicator (1/ 2/ 3) displayed on the meter.
- **Select Mode “Traction Control Indicator1”** corresponds to “1” displayed on the meter.
Select Mode “Traction Control Indicator2” corresponds to “2” displayed on the meter.
Select Mode “Traction Control Indicator3” corresponds to “3” displayed on the meter.
- For the meter display “1” set in the **“Select Mode Traction Control Indicator1”** of **“Adjustment Traction Control Indicator1”**, 11 levels (-5 ~ +5) adjustments are possible.
For the meter display “2” and “3”, 11 levels (-5 ~ +5) adjustments are also possible.

⚠ WARNING
In switching the traction control (S-KTRC) it is necessary to close the throttle completely on the standard ECU. However, there is no limitation of the throttle opening on the racing ECU. Be careful that the operating method differs depending on the ECU.

- The traction control setting/adjustment range and setting guide are as follows:

	Indicator1 1	Indicator2 2	Indicator3 3
Select Mode "Traction Control Indicator" Standard setting of the traction control	Level 1~3	Level 1~3	Level 1~3
Adjustment "Traction Control Indicator" Adjustment range from the standard setting	-5~+5	-5~+5	-5~+5

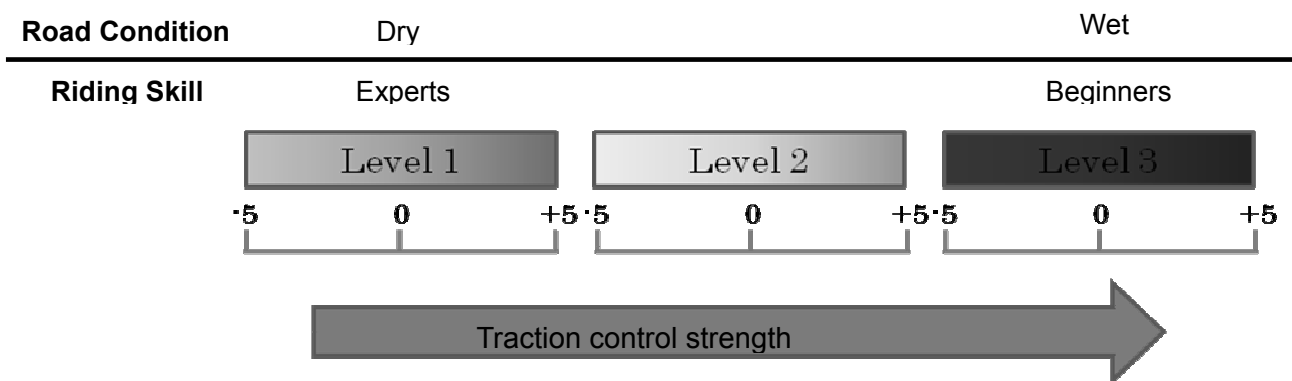


Fig. 123 Traction control operation

Various setting combinations are possible. For example, set the meter display 1, 2 = Dry, meter display 3 = wet. Set the same condition to all modes.

The examples are as follows:

【Example 1】

- Meter display 1 = Traction level1, Adjustment -3
- Meter display 2 = Traction level1, Adjustment +2
- Meter display 3 = Traction level3, Adjustment -1

Item	
Select Mode "Traction Control Indicator1"	1
Adjustment "Traction Control Indicator1"	-3
Select Mode "Traction Control Indicator2"	1
Adjustment "Traction Control Indicator2"	+2
Select Mode "Traction Control Indicator3"	3
Adjustment "Traction Control Indicator3"	-1

【Example 2】

Meter display 1 ~ 3 = Traction level1, Adjustment +2

Item	
Select Mode "Traction Control Indicator1"	1
Adjustment "Traction Control Indicator1"	2
Select Mode "Traction Control Indicator2"	1
Adjustment "Traction Control Indicator2"	2
Select Mode "Traction Control Indicator3"	1
Adjustment "Traction Control Indicator3"	2

Power Mode setting

- The following 8 items have individual maps corresponding to F, M, L. Other than the these 8 items have a common map to F, M, L.
 - Comp. for Acceleration
 - Comp.Map for Injection
 - Comp.Map for Ignition Advance
 - Comp.Map for Sub Throttle
 - Engine Brake Control Level Gear1
 - Engine Brake Control Level Gear2
 - Engine Brake Control Level Gear3
 - Engine Brake Control Level Gear4-6
- The maximum 3 map settings are possible without rewriting data of ECU. You can set all modes to the same setting.

⚠WARNING

In switching the power mode, it is necessary to close the throttle completely on the standard ECU. However, there is no limitation of the throttle opening on the racing ECU. Be careful that the operating method differs depending on the ECU.

(3) Monitoring Items

The details of monitoring items are as follows:

Item	Content
Comp. Acceleration	ECU calculating result in the running condition at monitoring based on the setting value of Compensation for Acceleration
Comp. Injection Pulse #1-#4	ECU calculating result in the running condition at monitoring based on the setting value of Comp. Map for Injection (applied to all Cylinders)
Comp. Ignition Advance Value	ECU calculating result in the running condition at monitoring based on the setting value of Comp. Map for Spark Advance
Comp_Sub Throttle Value	ECU calculating result in the running condition at monitoring based on the setting value of Comp. Map for Sub Throttle
Pit Road SW[OFF:0/ON:1]	Condition of Pit Road RPM Limit SW at monitoring
Shifter SW[OFF:0/ON:1]	Condition of Shifter SW at monitoring When "Select Auto Shifter" is set 0 (Used), you can monitor
Top_Main Injection Ratio	ECU calculating result in the running condition at monitoring based on the setting value of Comp. Map for Primary and Secondary Injection Ratio
Engine Speed	Engine Speed at monitoring
Throttle Position	Throttle Opening at monitoring
Intake Air Temperature	Intake Air Temperature at monitoring
Water Temperature	Water Temperature at monitoring
Fuel Injection Coefficient #1-#4	ECU calculating result in the running condition at monitoring based on the setting value of Comp.Map for Injection and All Area Fuel Compensation Value
Diagnosis Code	Diagnosis Code on sensors at monitoring Refer to the Service Manual for Diagnosis Code information

(4) CAN(Controller Area Network) Data

The racing ECU(P/No. 21175-0737) sends the data in the running condition to the CAN bus. The data shown in the table 4 can be calculated by using the data logger which can use the CAN bus.

Communication Specification	ISO11898-compliant
Communication speed	500 kbps
Identifiers standard	11 bit
Terminations	unnecessary
Battery Voltage	10 V or more

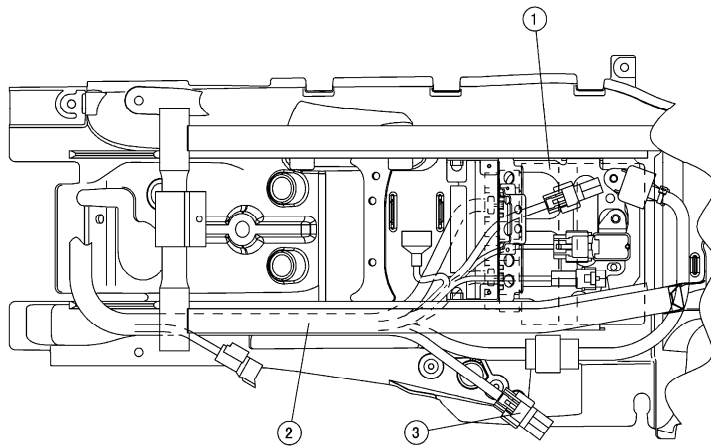
Table 4 CAN Data

ID (Standard Format)		Transmission period [ms]	DATA								Data Specification						
MESSAGE ID 11bit 0~7FF [HEX]	Item		D0	D1	D2	D3	D4	D5	D6	D7	SIZE [bit]	Minimum	Maximum	Resolving power	Unit		
0x100	Engine Speed etc	10	Engine Speed								16	0	20000	1	r/min		
					Throttle Position [%]						8	0	128	100/128	%		
												-	-	-	-	-	
0x120	Temperature	200	Water Temperature								16						
					Intake Air Temperature							16	0	360	1	°C	
0x121	Gear Position/ Clutch SW	10	Gear Position								8	0	6	1	0:N		
				Clutch SW							1	0:SW-OFF 1:SW-ON					
				Spare							7	-	-	-	-		
0x222	Modes	20	POW Mode								2	1:Mode F 2:Mode M 3:Mode L					
			TC Mode								3	1:Mode 1 2:Mode 2 3:Mode 3 4:OFF					
											3	-	-	-	-		
0x3E0	Information of Motorcycle 1	10	Front Wheel Speed								16	0	400	400/32768	km/h		
					Rear Wheel Speed							16	0	400	400/32768	km/h	
									Shifter SW				1	0:OFF 1:ON			
													7	-	-	-	-
									Pit Road SW				1	0:OFF 1:ON			
													7	-	-	-	-
0x3E1	Information of Motorcycle 2	50	Diagnosis Code 1								16	-	-	-	-		
					Diagnosis Code 2							16	-	-	-	-	
									Diagnosis Code 3				16	-	-	-	-
										Battery Voltage			16	0	18.75	18.75/1024	V

4.2 '09 - '11 ZX-6R

4.2.1 Connect the Racing Main Harness

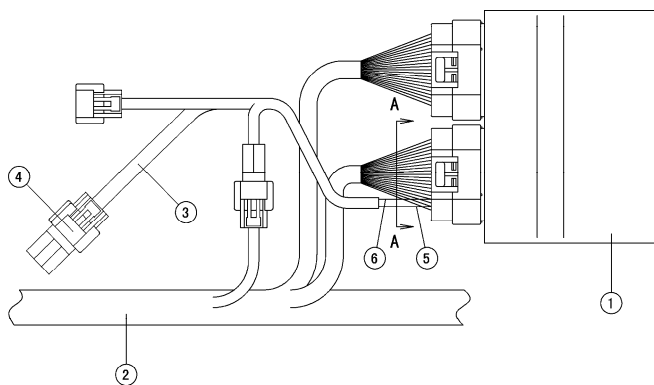
(1) With Racing Main Harness



1. Replace the ECU with Racing ECU.
2. Replace the Standard Main Harness with Racing Main Harness.
3. Connect to the Racing I/F Box.

Fig.124 Connecting Method (The figure shows '07 ZX-6R)

(2) With Racing Sub-Harness and Standard Main Harness



1. ECU
2. Standard Main Harness
3. Racing Sub-Harness
4. Connect to the Racing I/F Box
5. Red lead of Sub-Harness
6. White / Green lead of Sub-Harness

For '10 - '11 ZX-6R, Sub-Harness is necessary to connect Main Harness and Racing Sub-Harness.

Fig.125 Connecting Method

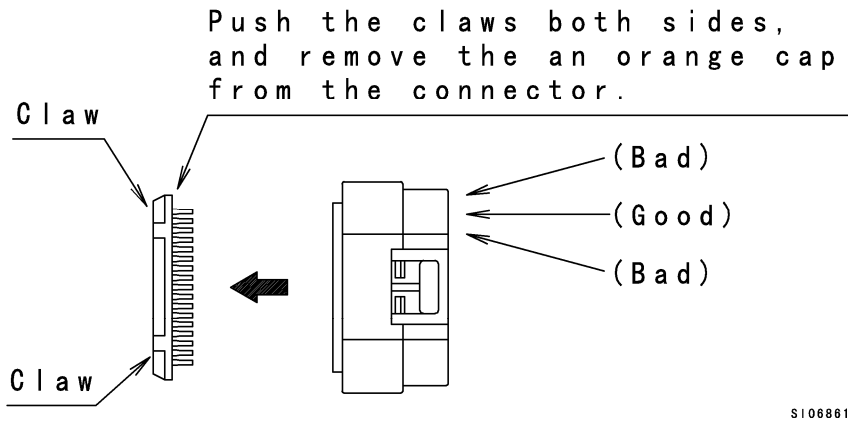
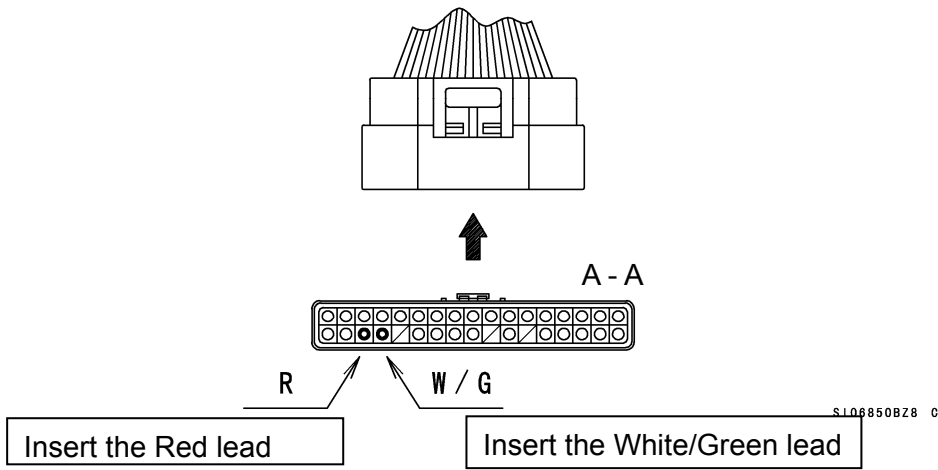


Fig. 126 Inserting Method of Racing Sub-Harness

- Replace the ECU with Racing ECU.
- Connect the Sub-harness connectors between Main Harness and Racing ECU.
- Connect the Racing I/F Box to the Racing Sub-Harness.

NOTE

- From '10 - '11 ZX-6R, the Sub-harnesses (26031-0327 and 0955) are necessary to connect the standard Main harness and the ECU.

4.2.2 FI Tool Program Setting Method

(1) The editable items of FI Tool Program

Refer to the information on '11 ZX-11R in 4.1.2 except for the transmission setting.

ZX-6R has the items which cannot be set such as the traction control. As for the function differences, refer to the table 1. The CAN is not set in ZX-6R.

(2) Kit Transmission

- Set **Select "Gear Ratio" [Std: 0 / Kit Transmission :1]** to "1" of the FI Tool Program and input the gear ratio values which are selected from the following the chart.

For '09 - '11 ZX-6R, input the original gear ratio.

Ex. Select 1st to 6th gear as AAAAAA combination.

Select each gear ratio from the chart.

	A	B	C
1st	2.714 (14/38)	2.643 (14/37)	2.571 (14/36)
2nd	2.200 (14/33)	2.167 (18/39)	2.125 (16/34)
3rd	1.850 (20/37)		
4th	1.600 (20/32)	1.650 (20/33)	
5th	1.421 (19/27)	1.500 (20/30)	1.458 (24/35)
6th	1.300 (20/26)	1.391 (23/32)	1.346 (26/35)

Therefore, the input gear ratio values are as shown below.

1st	2nd	3rd	4th	5th	6th
2.714	2.200	1.850	1.600	1.421	1.300

Input the gear ratio values to the Constants List.

Select "Auto Shifter Direction" [Plus : 0 / Minus : 1]	0	--
Select "Extra Shift Lamp" [Use : 0 / Not Use : 1]	1	--
Select "Gear Ratio" [Std : 0 / Kit Transmission : 1]	0	--
Gear Ratio "1st"	2.714	--
Gear Ratio "2nd"	2.200	--
Gear Ratio "3rd"	1.850	--
Gear Ratio "4th"	1.600	--
Gear Ratio "5th"	1.421	--
Gear Ratio "6th"	1.300	--

(From Fig. 104 Constants List Setting Dialog)

4.3 Racing I/F Box

4.3.1 Caution Items when using the Racing I/F Box

(1) Caution when using the Racing I/F Box

1. When connecting/detaching the I/F Box to/from the connector of the motorcycle, keep the ignition switch turned off.
2. Do not use the I/F Box except setting usage of the motorcycle ECU.
3. Never connect the I/F Box with connectors other than the specified connectors.
4. Never run the motorcycle with I/F Box and the PC connected to the ECU.
5. Install the connector for the terminal protection in the motorcycle connector, except when you connect the I/F Box.
6. Never use the I/F Box near the place where a strong magnetic field, such as near the televisions and the radios, is generated and static electricity is generated.
7. Do not touch the terminal of the I/F Box connector directly, and do not keep the I/F Box in the place where static electricity is generated.

(2) System Requirements of I/F Box

1. Rated Voltage: 12 V
2. Operation Voltage: 8 ~16 V
3. Ambient Temperature: 5 ~ 35°C

4.3.2 Caution when communicating between FI Tool program and ECU

Confirm the serial communication port of PC before using the FI Tool program.

It is necessary to match the communication port of the FI Tool program with the PC side.

NOTE

- *If the serial communication port of the FI Tool program does not match with the PC side, the ECU data cannot be changed.*

(1) For Windows XP

- Connecting method of I/F BOX

When using J926031-0999, connect the USB cable of the I/F BOX to the PC with the USB driver installed.

When the PC has serial ports and J926031-0025 or J926031-0240 are used, connect the RS-232C cable to the serial port on PC.

- Confirmation method of the communication port

Open the Property of the System in the control panel. Click **Device Manager** on **Hardware** tab to open the Device Manager screen shown in Fig.127. The communication port is shown on the port (COM&LPT) of the device manager. (COM1 in Fig.127)

When “?” mark or “x” mark is displayed on the communication port, the communication between the FI Tool program and PC cannot be done.

Cancel “?” mark or “x” mark by referring the PC Instruction Manual or Help function of the Windows.

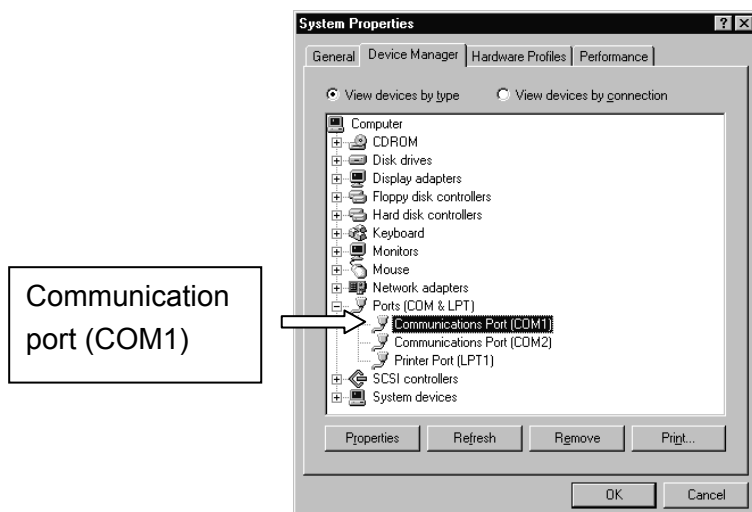


Fig. 127 Device Manager of System Property

- Setting Method of the FI Tool program

Select the **RS232C** in the toolbar **Set** of the FI Tool program.

When the Dialog is opened, select the **Port** on the PC side and click **OK**. (If the communication port is **COM1**, select the **Port1**.)

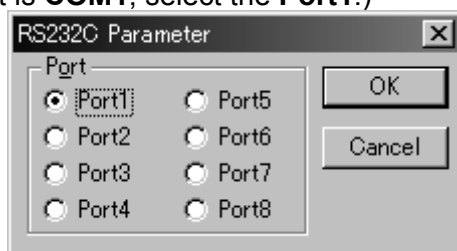


Fig. 128 Setting Method of the FI Tool Program

(2) For Windows Vista

- Connecting method of I/F BOX

When using J926031-0999, connect the USB cable of the I/F BOX to the PC with the USB driver installed.

When the PC has serial ports and J926031-0025 or J926031-0240 are used, connect the RS-232C cable to the serial port on PC.

- Confirmation method of the communication port

Click the **Hardware and Sound** in the control panel to display the Hardware and Sound screen. Click **Device Manager** to display the Device Manager screen shown in Fig.129. (If user account control is displayed, click the Continue.)

When “?” mark or “x” mark is displayed on the communication port, the communication between the FI Tool program and PC cannot be done. Cancel “?” mark or “x” mark by referring the PC Instruction Manual or Help function of the Windows.

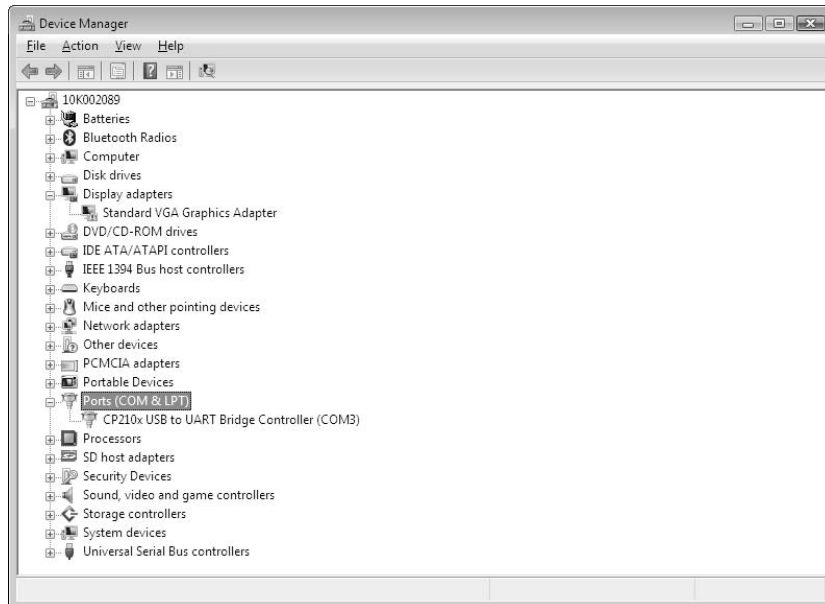


Fig. 129 Device Manager of System Property

- Setting Method of the FI Tool Program

Select the **RS232C** in the toolbar **Set** of the FI Tool program.

When the Dialog is opened, select **Port** on the PC side and click **OK**. (If the communication port is **COM3**, select the **Port3**.)

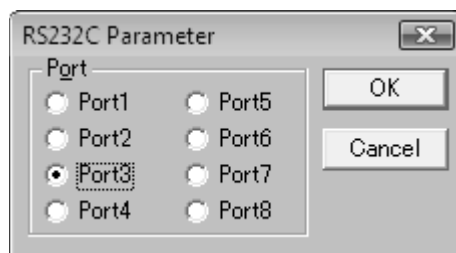


Fig. 130 Setting Method of the FI Tool Program

(3) For Windows 7 32 -bit version

- Connecting method of I/F BOX

When using J926031-0999, connect the USB cable of the I/F BOX to the PC with the USB driver installed.

When the PC has serial ports and J926031-0025 or J926031-0240 are used, connect the RS-232C cable to the serial port on PC.

- Confirmation method of the communication port

Click **Start** button and input 「**Device Manager**」 directly on the blank of the program and file search shown in Fig.131. Select **Device Manager** from the search results to display the device manager screen.

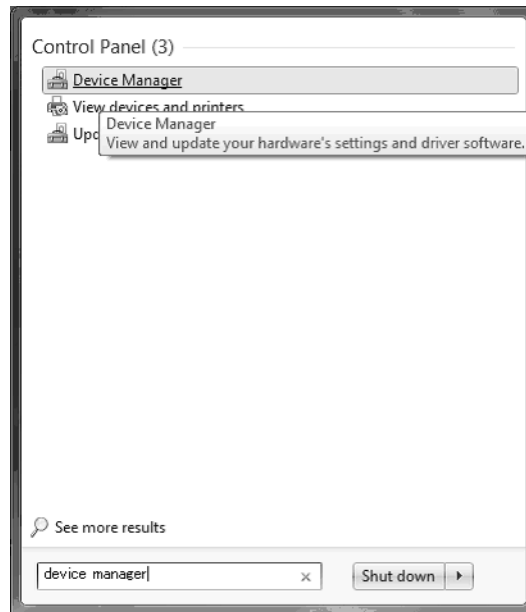


Fig. 131 Search of Programs and Files

When “?” mark or “x” mark is displayed on the COM4, the communication between ECU and PC cannot be done.

Cancel “?” mark or “x” mark by referring the PC Instruction Manual or Help function of the Windows.

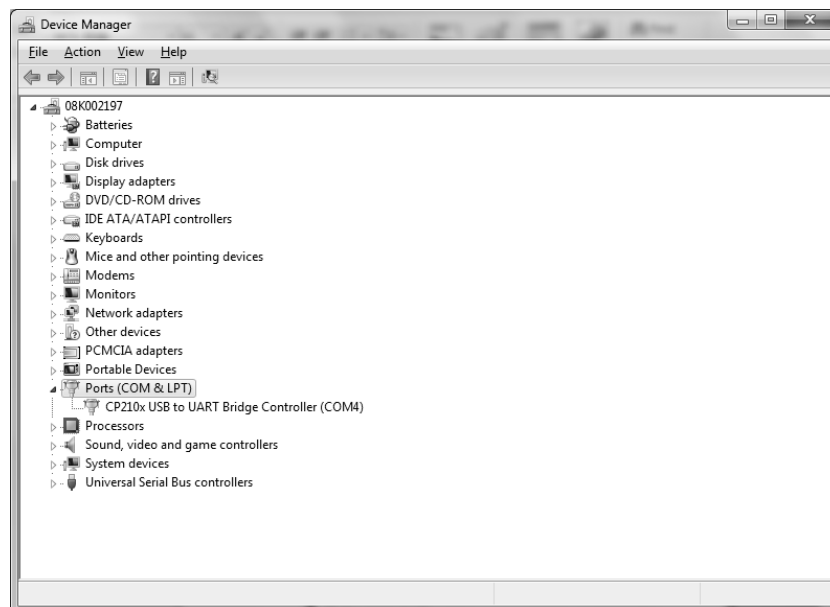


Fig. 132 Device Manager of System Property

- Setting Method of the FI Tool Program

Select the **RS232C** in the toolbar **Set** of the FI Tool Program.

When the Dialog is opened, select **Port** on the PC side and click **OK**. (If the communication port is **COM4**, select the **Port4**.)

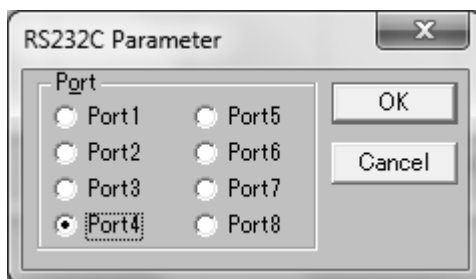


Fig. 133 Setting Method of the FI Tool Program

4.4 Troubleshooting

Refer the below table when you have troubles.

Table 5 Troubleshooting

NO.	Trouble	Cause	Countermeasure
1	Program cannot be installed.	Operating method not understood	Read manual carefully and understand it.
2	Program does not work.	PC does not match with required specifications.	Select suitable PC. Available OS is Windows XP, Windows Vista, Windows 7 32 bit version. (JP/US version)
3	PC cannot communicate with ECU.	Incorrect connection of communication cable	Confirm connection (Refer to the connecting method.).
		Incorrect setting of serial port.	Confirm setting of serial port. Change to correct serial port again. (Refer to 4.3.2)
		Incorrect setting of USB driver	Uninstall the USB driver. Reinstall it with the this manual.
		ECU is not powered ON.	Confirm ignition switch is turned ON.
4	Cannot write data to ECU or read data from ECU. (Data Exchange function does not work.)	The Engine is running.	Perform Data Exchange when engine is not running but ignition switch is ON.



KAWASAKI HEAVY INDUSTRIES, LTD.
Motorcycle & Engine Company

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