

EVC

ELECTRONIC VALVE CONTROLLER

EASY WRITER

EVC EasyWriter Manual



Installation should be performed by a professional. Prior to installation and use, thoroughly read the instruction manual. Retain this instruction manual for later reference.

Revision History

Revision Date	Contents
2011/8/20	Create New (Ver3-1.01)

Introduction

Thank you for purchasing the HKS EVC and EVC EasyWriter.

The EVC EasyWriter is a data editing tool for the EVC.

The EVC data can be edited using this software.


Please read the following instructions carefully to understand the functions effectively and in a safe manner.

- This manual indicates items you need to pay attention to in order to install this product safely and lists precautions to avoid any possible damage and/or accidents.
- Please contact your dealer for purchasing consumable parts and lost or missing part.
- To use this product on the public road, follow the necessary procedures if there are any regulations for a tuned vehicle.
- HKS will not be responsible for any damage caused by incorrect use or use after modification and/or dismantling of this product.
- To use this product on the public road, follow the necessary procedures if there are any regulations for a tuned vehicle.
- This product was designed for installation and use on a factory vehicle or a vehicle using other HKS products. The performance and/or safety cannot be guaranteed if this product is installed onto other vehicles than mentioned above.
- This product is applicable for any vehicle that operates on a DC12V negative ground.
- The specifications of this product, including installation are subject to change without prior notice.
- This manual is subject to revise without prior notice.

Warnings for safety

The symbols indicated below depict the warning levels.

 **Warning** There may be risk of severe injury or death.

 **Caution** There may be risk of injury.
There may be risk of fire damage to the vehicle.

 **Warning**

- Do not attempt to tune the vehicle on the street.
- Always tune on a dynamometer.

 **Caution**

- Be extremely careful not to input wrong values.
- There is a risk of damaging the engine.
- HKS will not be held responsible for any damages.
- The driver should not attempt to use the EasyWriter while driving.
- There may be risk of causing an accident.

Software usage consent

This software is intended only for those who have accepted the following terms and agreements.
Read the following agreement and proceed upon approval.

1. EVC EasyWriter software requires a permit for usage

2. Copyright Copyright is property of HKS Co. Ltd.

3. Rights

- 1) User is allowed to install on only one computer system per software purchased.
- 2) This software may not be transferred or lent to any third party other than what is indicated in 3).
- 3) Software may be transferred to another party only if the following requirements are met.
 - All contents including but not limited to the Software Usage Agreement, instruction manual, and all software are transferred to the new user.
 - The original user must delete all copies of the program on the original computer (s).
 - The new user must agree to this contract.
 - If the software is upgraded to a newer version, and any previous versions are saved, all older versions of the software must be transferred to the new user.
- 4) This agreement is effective from the date the EVC EasyWriter is installed.

4. Reproduction and modification

- 1) The EVC EasyWriter disk and documents included are not to be reproduced (copied) or modified in any way.
- 2) The user and/or any third party person (s) may not edit, change, disperse, or disassemble the program or hardware. Failure to comply will void all warranty claims.
- 3) Reproduction of all or any part of this manual without written consent from HKS Co. Ltd. is prohibited unless stated by law.

5. Disclaimer

HKS Co. Ltd. will not be held responsible for any damages caused to the vehicle (s) or to the computer (s) by use of this software. HKS Co. Ltd. cannot guarantee that this product will suit the users' needs, nor guarantee that the program will be error-free. HKS Co. Ltd. will not be held responsible for any damages inflicted directly or indirectly by use of this program. HKS Co. Ltd. will not be held responsible for any conflict or dispute that may arise between the user and a third party as a result of using this program.

System Requirements

- Pentium 200MHz or higher processor (Pentium 3 or higher recommended)
- Windows 98SE, ME, 2000, XP (Windows XP recommended)
- 32MB of RAM (128MB or higher for Windows 98, 256MB or higher for other Operating Systems)
- 20MB or higher available hard disk space
- SVGA resolution or better monitor
- Mouse or other pointing device
- USB to Serial Adaptor: RS-232C connector
- * For North American markets, we recommend: ATEN (IO GEAR) USB to Serial Adapter, model number UC232A
- Internet Accessible

※ This program may not function in some computers even if it meets system requirements due to incompatibility reasons.

※ Windows 98SE, ME, 2000, and XP Operating Systems are products of Microsoft Corporation.

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1. Connecting the Communication Adaptor

Warning

- Make sure to work on the vehicle in a well-ventilated area to prevent possible explosion or fire.
- Do not mount the unit where it can distract driving.
- Do not install this product on a 24V vehicle. It is designed for use on a 12V vehicle.
- Make sure to remove the cable from the negative terminal of the battery to avoid possible damage to other electronics during installation.
- Make sure to hold connectors when removing them to avoid possible damage to other electronic parts caused by disconnections or by a short circuit.
- Stop using the product if any unusual conditions are noticed; it may cause a fire or an electrical shock. Consult an authorized dealer immediately.

Caution

- Do not install this product by yourself unless you know how to use the tools and equipment necessary to safely perform service operations on your vehicle.
- Do not modify, disassemble and/or remodel this product and any of its attached parts.
- Handle the parts with caution at all times.
- Avoid allowing oil and/or water from entering the unit. It may cause damage to the engine.
- Install the unit away from excessive heat or water to avoid possible malfunction and damage to the engine.
- Do not tie or bundle a vehicle fuel line with any of the other hoses and/or harnesses. It may cause severe damage to the vehicle.
- Make sure all connections and wiring are not disconnected, short circuited or incorrect. It may cause an electrical shock or damage to the vehicle.
- Connect the ground wire onto a good chassis ground. If not, it may cause damage to the vehicle.

1. Removal of Battery Terminal

- (1) Disconnect the negative terminal from the battery.

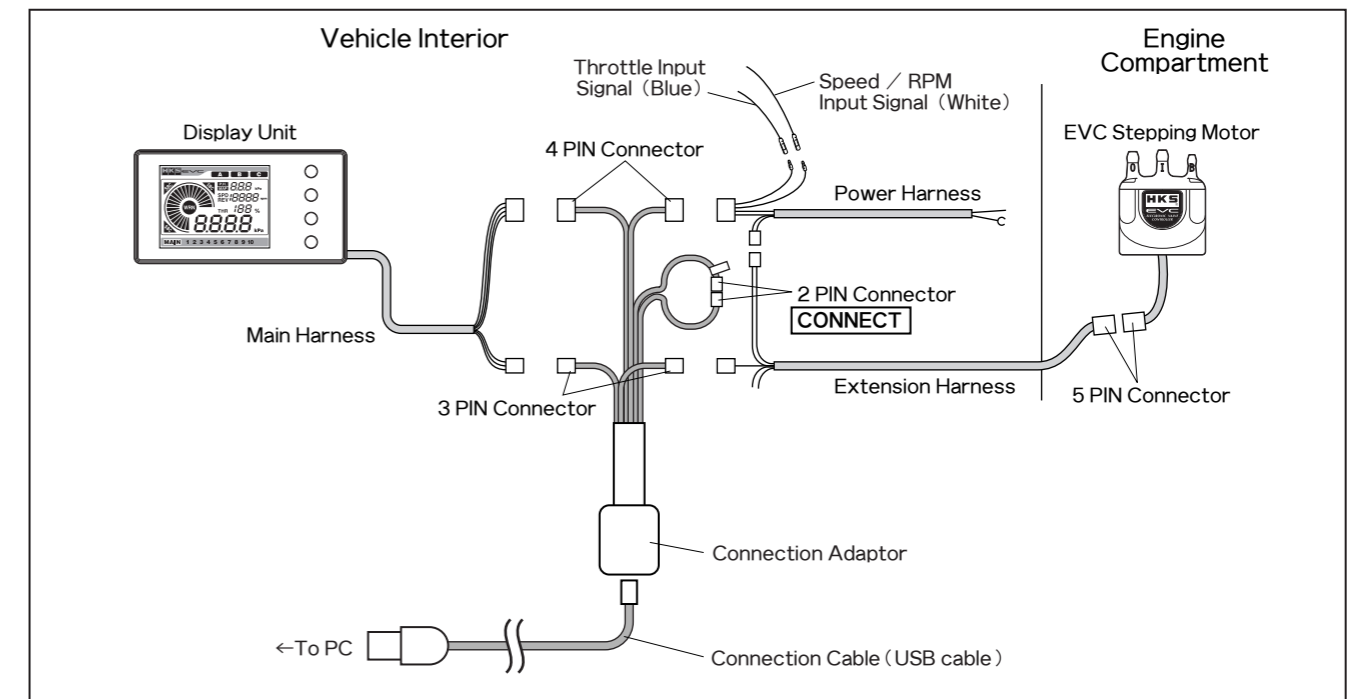
2. Wiring Connection Layout

- (1) With consideration to the harness lengths, determine the appropriate wiring connection layout and mounting in regards to the display unit and stepping motor.

Advice

- Leave some slack for the harness to avoid tension during engine movement.
- Do not install any components in high temperature areas.

- (2) Connect wires as shown below. Connect 2 pin connectors (blue) of the communication adaptor. If these aren't connected, it may cause improper performance of a vehicle.



- (3) Reinstall all removed factory parts.

- (4) Reconnect the negative battery cable to the battery terminal.

2. Installation

The following is the procedure to install the EasyWriter software. Easy Writer software ver1.11 is required. If it's already installed, skip to page 8.

To update the version 1.10, download the update file from HKS' website.

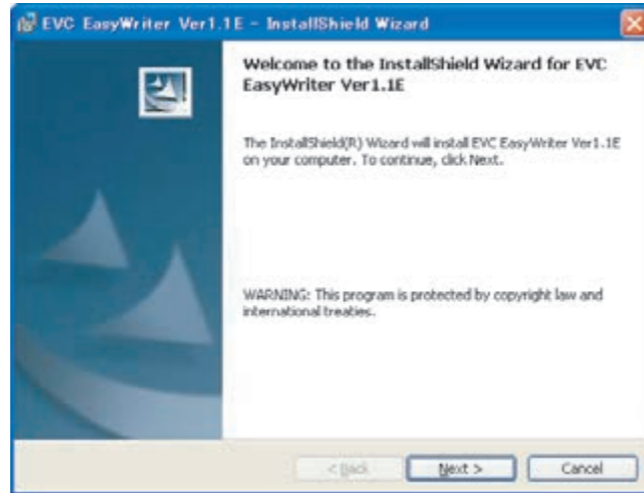
2-1. Installation of the EasyWriter software

- (1) Download the EasyWriter Software from HKS' website.

Advice

EasyWriter ver1.11 is required. When downloading the EasyWriter ver. 1.10, download the update file as well.

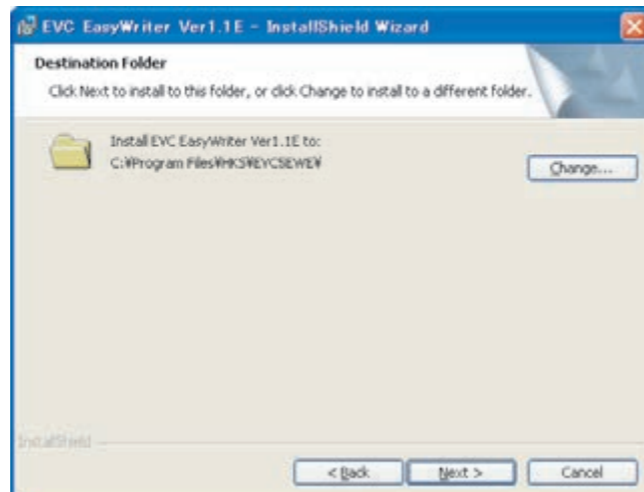
- (2) Decompress the downloaded file. Double click the "EVC EasyWriter ver1.1.msi" file in the folder to start the installer.
 When the window on the right appears, click "Next" to go to the next step.



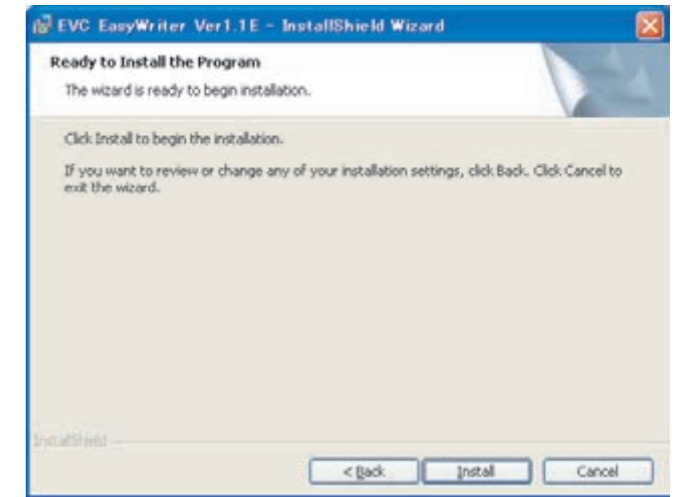
- (3) Read the agreement carefully and accept to go to the next step.



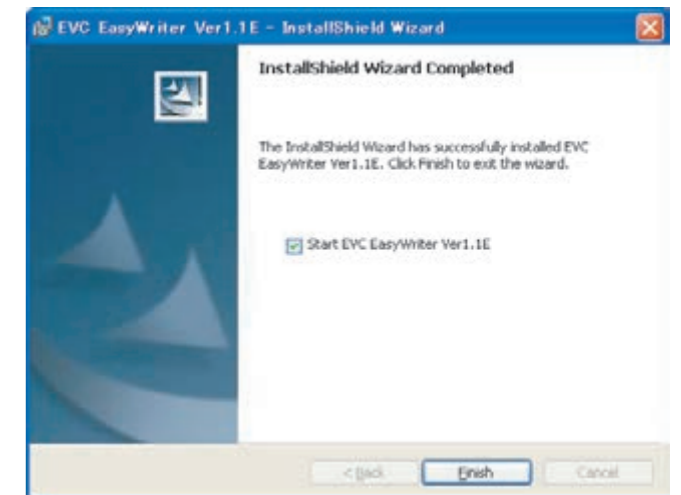
- (4) Select the folder to install files. Click "Next" if it is ok.



- (5) When a screen like the one right appears, click the "Install" button to begin the installation.



- (6) When installation is completed, the window on the right appears.
 Click "Finish" without placing a check mark to "Start EVC Easy Writer Ver1.1."



- (7) Double click the downloaded EasyWriter update file (setup.zip) to decompress the file.

- (8) Double click "setup.exe" to start installation of the update file.

Installation of the EasyWriter software is completed.

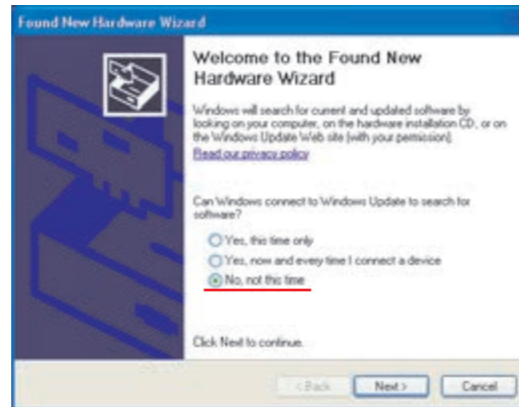
To start the EasyWriter software, click on the icon on the desktop or select Start→Programs→HKS→EVC EasyWriterVer1.1→EVC EasyWriterVer1.1

2-2. Installation of the USB driver

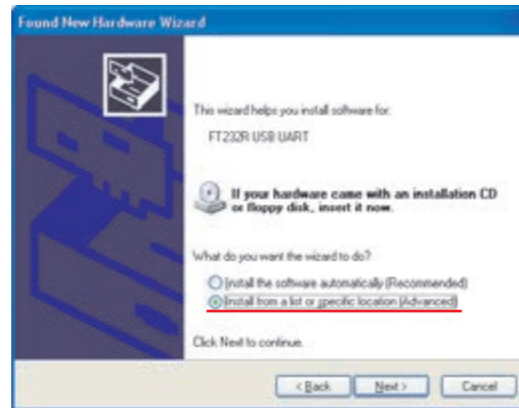
- (1) Download the USB driver from HKS' website.
- (2) Decompress the downloaded file.
 - Save the folder (USB-RS232C_driver) to the desktop or somewhere easily accessible.
- (3) Turn the ignition on; then turn the power of the EVC on.
 - Make sure not to start driving a vehicle.
- (4) Insert the communication cable (USB cable) to the PC's USB port.

- (5) When the window on the right appears, place a check mark on "No connection at this time." Click "Next."

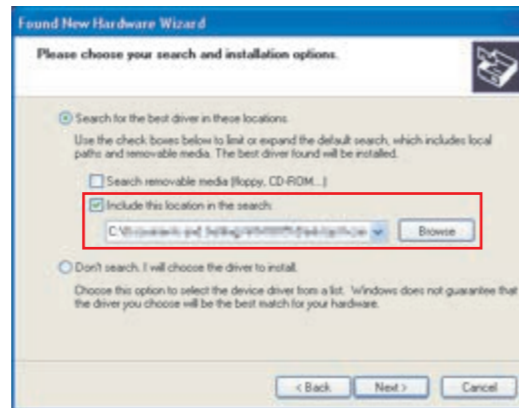
● If this driver is installed automatically, the following procedures are not necessary to follow.



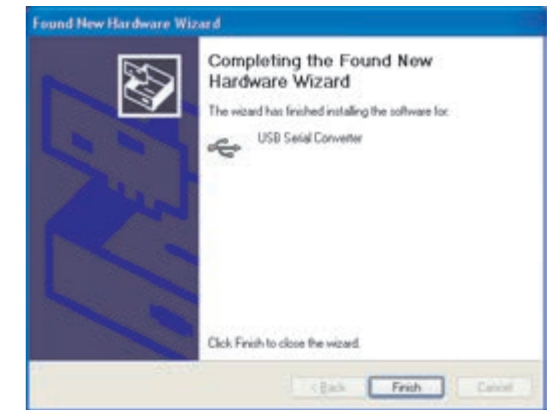
- (6) When the window on the right appears, place a check mark on "Install from a list or certain place (Details)." Click "Next."



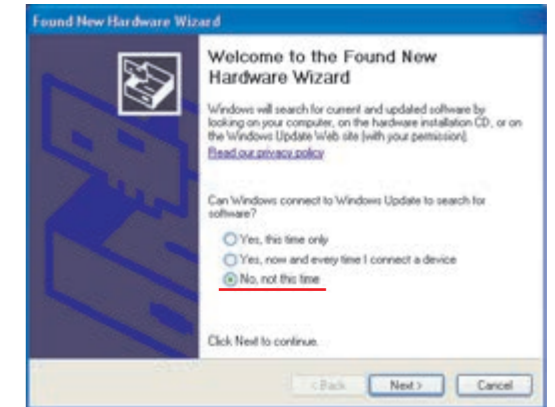
- (7) When the window on the right appears, place a check mark on "Include the following:" Click "Next."



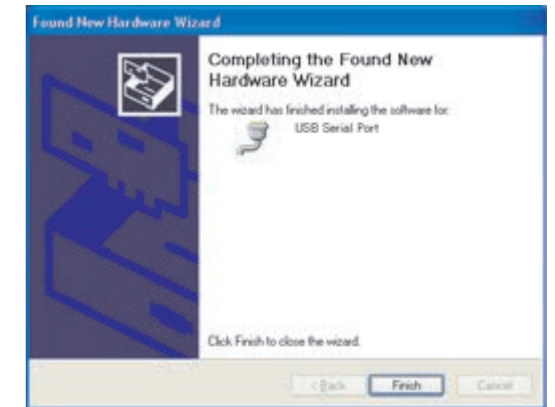
- (8) When the window on the right appears, click "Finish."



- (9) When the window on the right appears again, place a check mark on "Install from a list or certain place (Details)." Click "Next." Repeat the procedure (6) to (8) to proceed with installation.



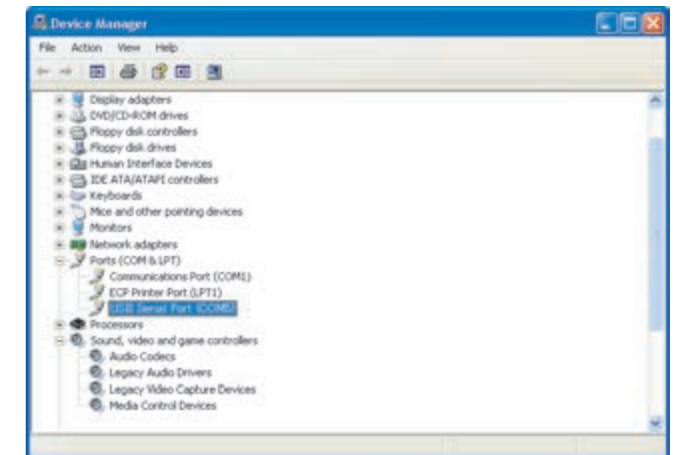
- (10) When the window on the right appears, click "Finish." The window is closed, and the USB driver's installation is completed.



- (11) Start up the EasyWriter. Make sure the installation is properly done.

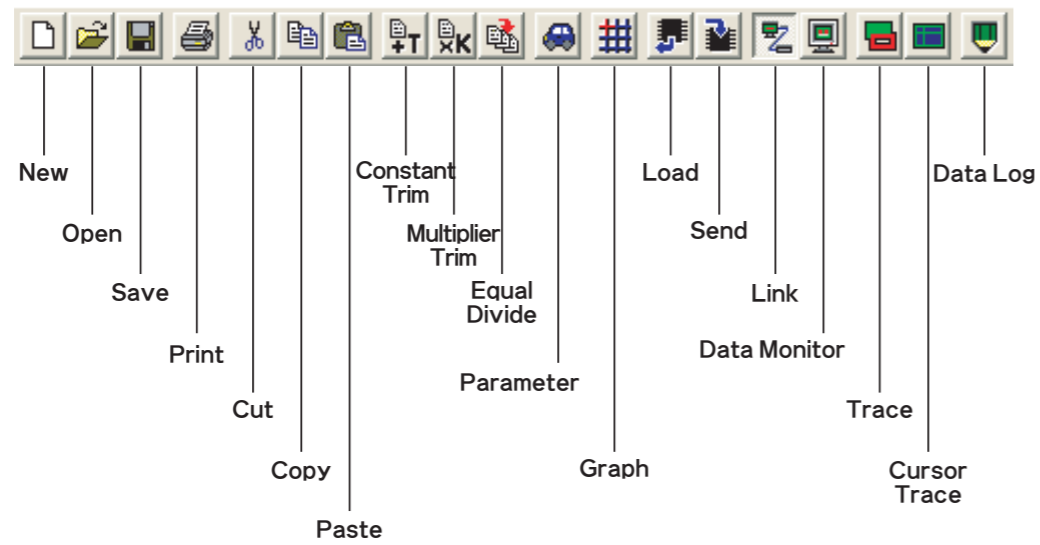
Advice

The communication port is stored as "USB Serial Port" in the port under the device manager. To find this port, open the Start menu, click the Control panel; then, select the System. The property of System appears; then, select the Hardware tab, and click the Device Manager. You can find "USB Serial Port" on the Port folder. The window on the right shows the USB serial port as "COM5." (Windows XP)

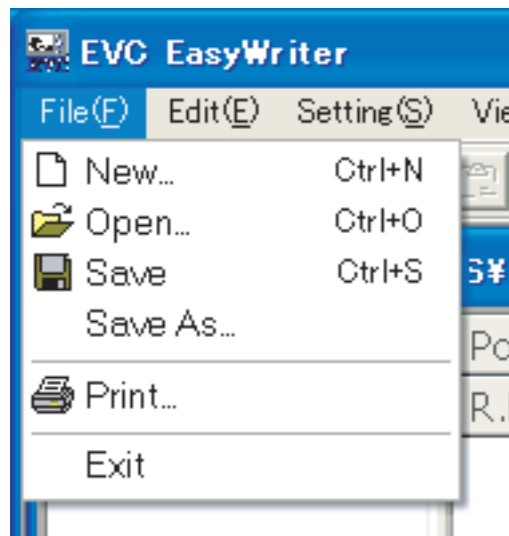


3. Icon

After starting up the EVC EasyWriter program, the main window will be displayed. Below are functions of each icon.



4. File

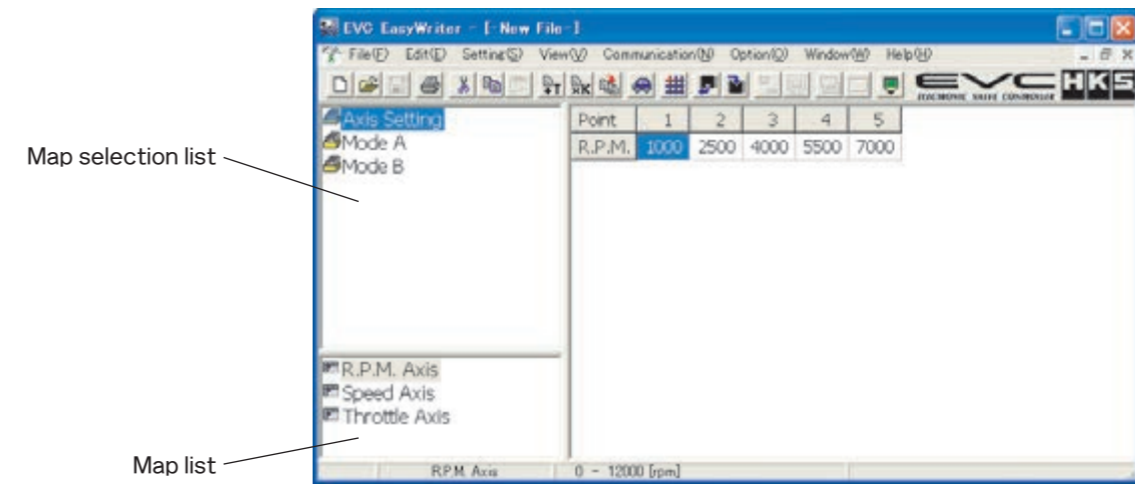


New	Display a new map window. When a new map is created, the boost correction map is set to 0 and all offset maps are set to 100 by default.
Open	Display a file selection dialog box. EasyWriter files have a file extension of ".EV5"
Save	Overwrite and save data that is being edited.
Save As	Name and save data that is being edited.
Print	Print the map on the screen.
Exit	Close the Easy Writer.

5. Edit

Select "New" or "Open" to display a map window.

※This software cannot edit the C mode map. Edit of the C mode map must be done by the EVC.



5-1. □ Selecting a Map

- Switch maps by selecting an item on the selection list or map list. The light colored map is an invalid map. Change parameters to make it valid.

5-2. □ Editing a Map

- Select a cell on the map to edit. To select multiple cells, click and hold the left mouse button at the starting point and drag the mouse over cells to edit. (Click and drag) This also can be done by moving the cursor with the Arrow keys while holding the SHIFT key. Editing can be done only for the selected cells.
- Enter the value using numerical keys. If multiple cells are selected, the input values will be entered in all selected cells.
- Pressing the "Page Up" key or scrolling up with the mouse's scroll wheel will increase the value in the cell selected. Pressing the "Page Down" key or scrolling down with the mouse's scroll wheel will decrease the value in the cell selected.

※If map values are changed while linking to the EVC, those values will not apply.

To apply changed values to the EVC, make sure to perform [Communication→Send All Data] ().

5-3. Edit Function



①	Undo	Undo the action that was just performed. The value before editing is basically the value when the map was selected. If the file is saved after editing, then the new value will be saved. Also, if a different map is selected, the undo function will no longer work.
②	Cut	Cut the selected range and copy it to the clipboard. The value in the range becomes "0."
③	Copy	Copy the selected range to the clipboard.
④	Paste	Paste the data copied to the clipboard to the selected cell (focus will shift to the top left of the selected cell).
⑤	Constant Trim	Add the input value to the value of the selected range.
⑥	Multiplier Trim	Multiply the input value to the value of the selected range.
⑦	Equal Divide	Average out the selected range by referring to the 4 neighboring cell values.

※Right click on the map to display the same menu.

※The edited values will display in red.

If the axis is changed, the map will automatically adjust to that axis.

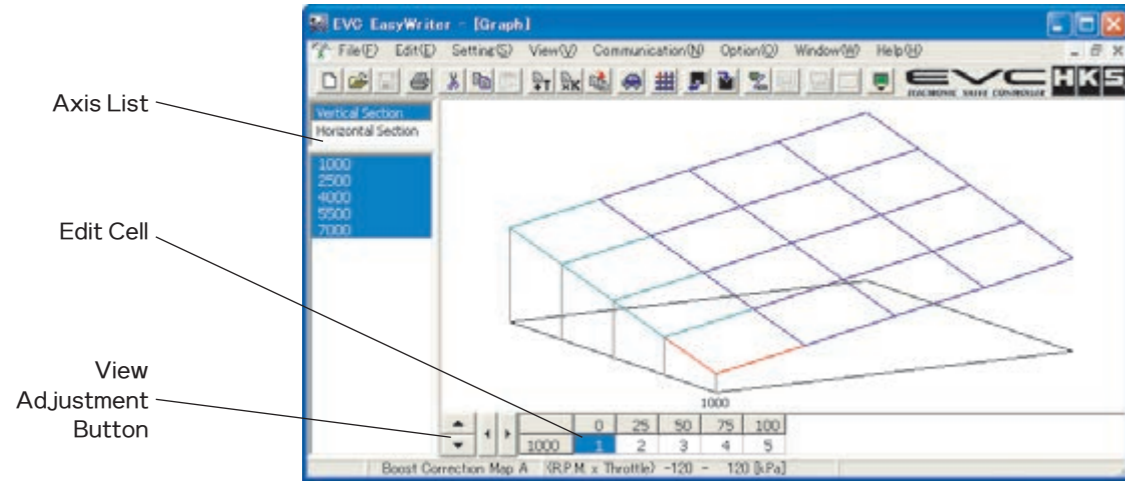
※If map values are changed while linking to the EVC, those values will not apply.

To apply changed values to the EVC, make sure to perform [Communication→Send All Data] ().

6. Graph

6-1. □ Display Graph

- Select the "Graph" icon to display the graph window. The graph window will always show the graph of the map.
- The list on the left of the graph window is the axis of the map. The data of the axis will display on the bottom cell of the graph when an axis is selected from the list. This cell can be edited similar to map editing.
- Adjust the view angle using the 4 view adjustment buttons on the bottom left of the window.

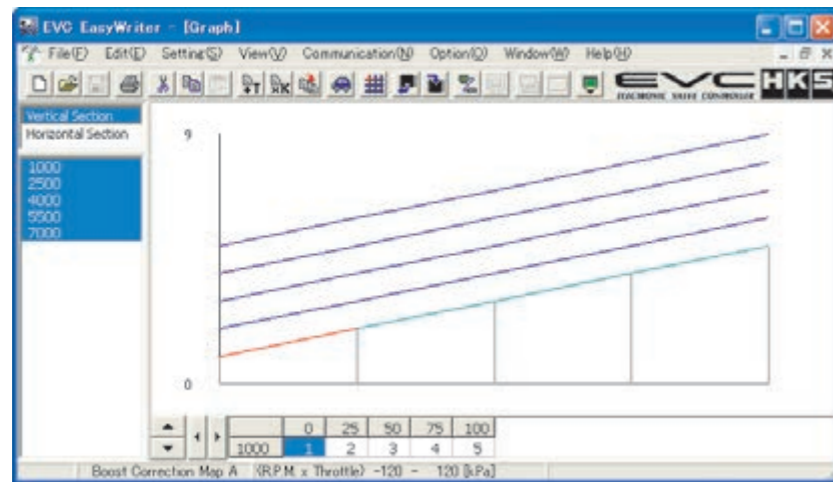


6-2. □ Edit Graph

- Right click the graph to display a two-dimensional view of the graph. This graph is the cross section of the axis selected from the axis list.
- Right click again for graph edit mode. Then use the left click to edit directly onto the graph.
- Right clicking once more switches back to the three-dimensional graph.

※If map values are changed while linking to the EVC, those values will not apply.

To apply changed values to the EVC, make sure to perform [Communication→Send All Data] ().



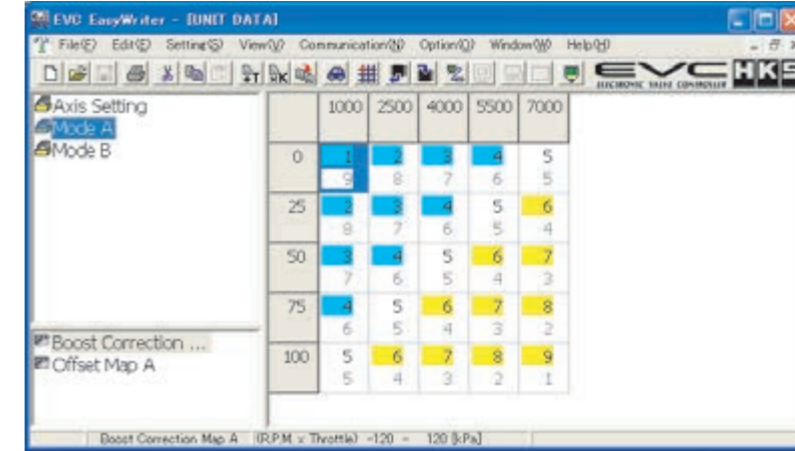
7. Display/Option Function

7-1. □ Map Display

- Choose a size in the menu sub-directory between 1 (smallest) to 5 (largest). The default setting is at 3.

7-2. □ Display Comparison File/Paste from Comparison File

- Select "Display Comparison File" to open a dialog selection of the file (s) to be compared.
- Select the comparison file to display as shown below.



- The top section of each cell indicates the edit map and the bottom indicates the comparison file map.
- Yellow-colored cells indicate that the edit map value is greater than the comparison map value. Conversely, light blue-colored cells indicate that the edit map value is less than the comparison map value. White-colored cells indicate that the values are equal.

This function is simply a comparison of values on the maps. These values will be displayed regardless of the axis values being used on the edit map and comparison map.

"Display Comparison File" cannot be used together with "Trace".

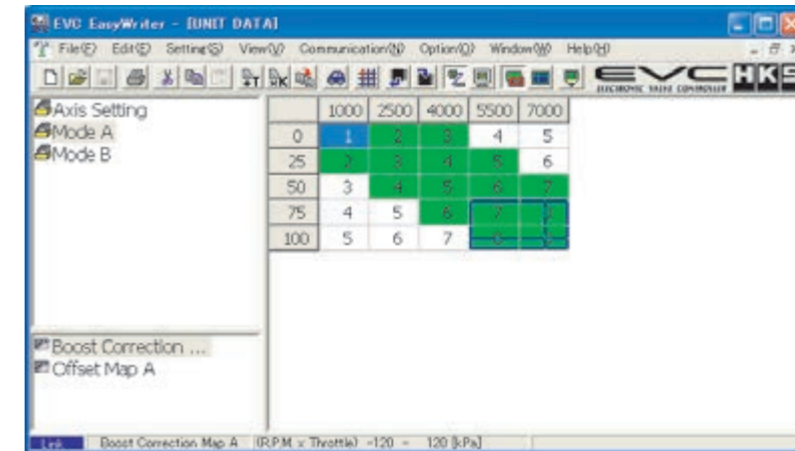
- "Paste from Comparison" can be used in "Display Comparison File".
- Select "Paste from Comparison" to paste the comparison data onto the edit map.

7-3. □ COM Port

- Select COM1 - COM6 from the "COM Port" sub-directory.
- Make sure the "COM Port" is set according to the serial port that the cable is connected to.

7-4. □ Trace

- Select a display time from the "Trace" sub-directory. Unless "Constant Display" is selected, the trace marker will disappear chronologically from the oldest mark to newest mark.
- There are 4 selections for the time setting.



7-5. □ CursorTrace

- Select a trace cursor range from the "Cursor Trace" sub-directory. There are two selectable ranges: "1" or "4", where "1" is the cell where the trace marker intersects (1x1 cell), and "4" is the complete trace mark (2x2 cell).

8. Communication

8-1. Load All Data

- Select "Load All Data" to load all maps and parameters stored on the EVC to the EasyWriter. If a file is already open, a dialog will appear asking if you would like to save before closing. Select "Yes" to save or "No" not to save. After loading is complete, it will switch to link mode automatically.
- ※Loading cannot be performed if the initial setup is not complete or during the first few seconds of powering on the EVC.**

8-2. Load Parameter

- Select "Load Parameter" to load all parameter data from the EVC.
- ※Loading cannot be performed if the initial setup is not complete or during the first few seconds of powering on the EVC.**

8-3. Send All Data

- Select "Send All Data" to send all map and parameter data edited from the EasyWriter. After sending is complete, it will switch to link mode automatically.
- ※Cannot send data for a few seconds after the EVC is powered ON.**
- ※Cannot send data if the parameter settings "Pressure Unit", "Exhaust Bypass Type", "Standard Maximum Boost", "Correction Coefficient" and "Initial Boost Setting" are different from the unit.**

8-4. Send Parameter

- Select "Send Parameter" to send all parameter data to the EVC.
- ※Loading cannot be performed if the initial setup is not complete or during the first few seconds of powering on the EVC.**
- ※Cannot send data if the parameter settings "Pressure Unit", "Exhaust Bypass Type", "Standard Maximum Boost", "Correction Coefficient" and "Initial Boost Setting" are different from the unit.**


8-5. Data Lock

- If "Data Lock" is properly set, a data lock number is required to communicate with the EVC. In order to communicate with the EVC, input the correct data lock number that matches the number stored on the EVC.
- ON : Sets the data lock on the EVC. The program will prompt the user via a text field to input the data lock number twice.
 - to avoid input errors. Type the correct data lock number twice and click OK.
- OFF : Cancels the data lock on the EVC. The program will prompt the user via a text field to input the data lock number to confirm. Click OK to complete the process.

8-6. All Reset

- This function will reset all data including the EVC data lock setting.
- All saved settings and data will be deleted as well.

8-7. Data Monitor

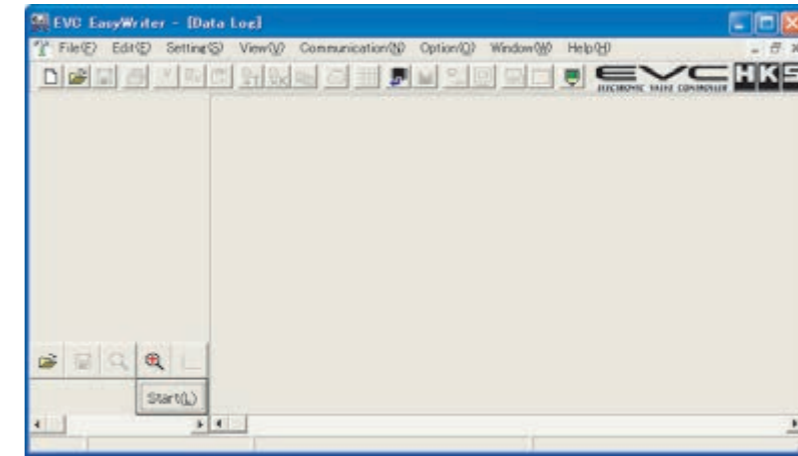
- Click on the Data Monitor icon  to display a data monitor window which monitors the input and output signals of the EVC.
- ※Cannot use the data monitor function if "Load All Data" is not performed.**
- The window size of the Data Monitor window can be adjusted.
- Change font size using the "Font Size" menu. If the "Screen Size" is set to Auto, it will automatically change the window size with respect to font size. The program will save the data monitor size settings.






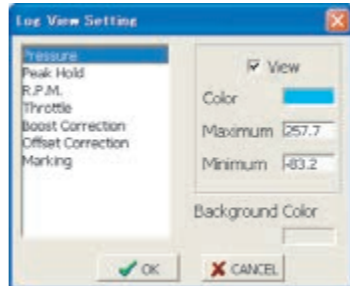

Data Monitor	
Settings	
Pressure	-60.0 kPa
Peak Hold	0.0 kPa
R.P.M.	800 rpm
Throttle	5 %
Boost Correction	1 kPa
Offset Correction	100 %

9. Data Log Function

9-1. Data Log

- Click the Data Log icon  to display a data log window as shown below.

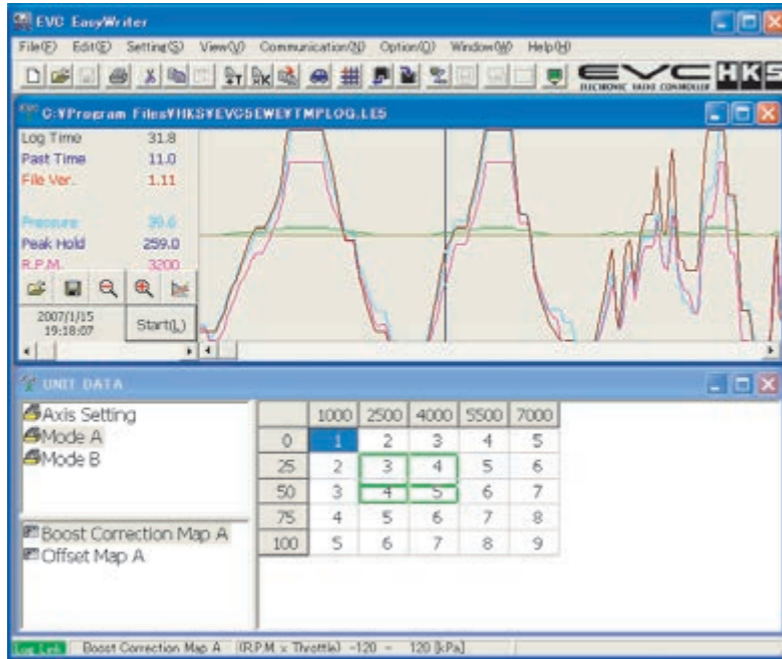


	Open Log File	Display a list of log files to open. Files that can be opened will have a file extension of ".LE5".
	Save Log File	Save all the log data being displayed. Saved files will have a file extension of ".LE5". The data log file can also be saved as a text file by selecting ".txt" in the "Save As Type" section of the save dialog window.
	Minimize	Minimize the time axis display of the log data.
	Maximize	Maximize the time axis display of the log data.
	Display Setting	<p>Open a log display setting window as shown below. Select display settings in this data log window.</p>  <ul style="list-style-type: none"> • Select display settings in this data log window. • The display/hide, color, maximum/minimum range of an item can be displayed by selecting an item from the list on the left. • To change the color of the display, click on the "Color" panel to open a dialog box to list the available colors. • Input values in the "Maximum" and "Minimum" column to set the desired maximum and minimum display area. • To change the color of the background, click on the "BackgroundColor" panel to open a dialog box to list the available colors. • Click OK to complete setup.
	START	<p>Display the data monitor window and start logging. The parameters displayed in the log monitor window will be the parameters logged. Place markings by pressing the space bar on the keyboard while logging.</p> <p>※Data logging will not start unless the "Load All Data" process is completed.</p>

- Press the ESC key to finish logging.

9-2. □ Log Link

- "Log Link" function can only be used when the map window and data log window are both open.
- The trace marker can be displayed on the data log window as shown below.
- The trace marker will be colored green in this instance.

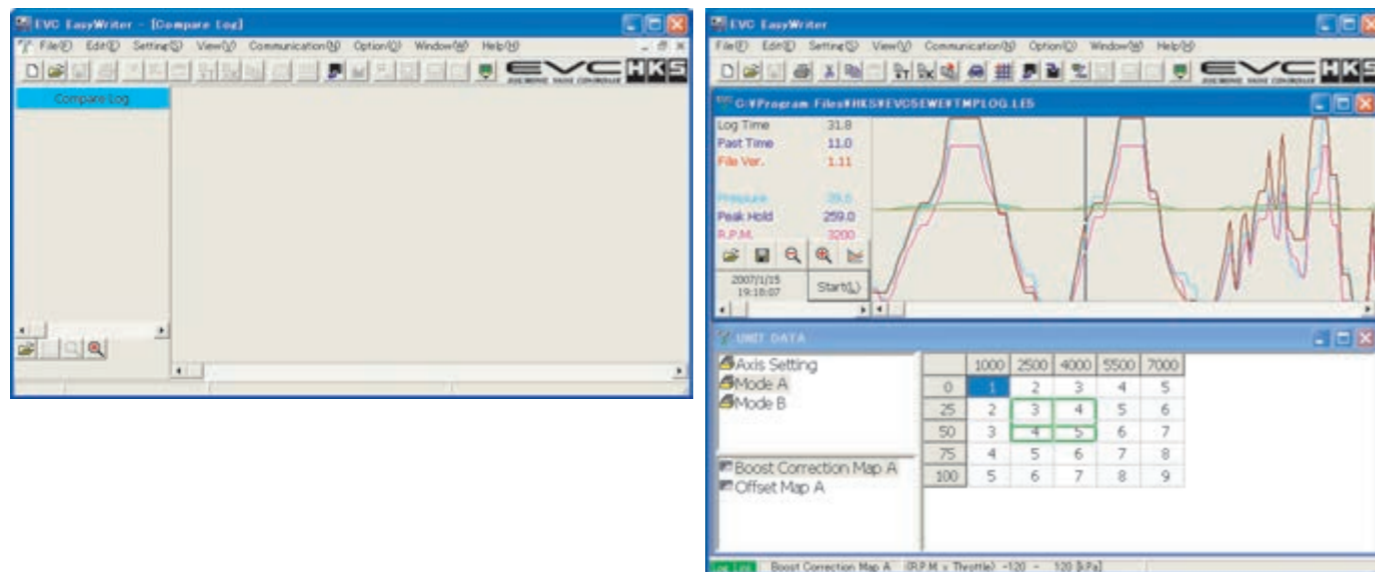


Make sure the correct data is selected. This function will execute even for log data that is not recorded in the display window.

"Log Link" and "Link Mode" cannot be used together.

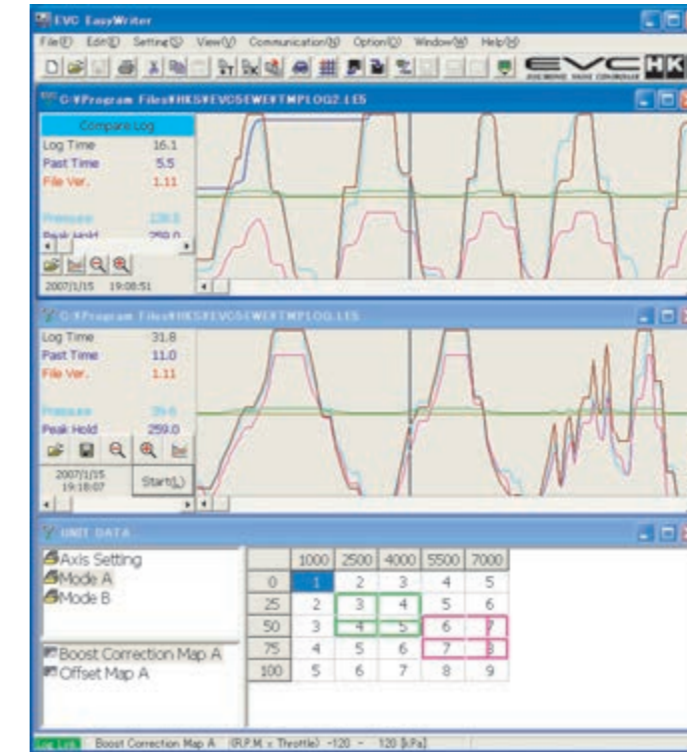
9-3. □ Comparison Log

- Select "Comparison Log" to display a data log window as shown below. The log data can be compared by opening both the data log window and comparison log window.
- The log can be controlled by the buttons on the bottom left of the window. The buttons starting (from left to right) are "Open Log File", "Display Setting", "Minimize", and "Maximize". Refer to "8-1. Data Log" for details of each button.



Opening the map, data log, and comparison log windows together and executing the "Log Link" function will display what is shown below:

In addition to the log link, a purple-colored trace marker will be displayed for use with the comparison log.



10. Other

10-1. □ Help

- Select "EasyWriter Ver1.1 HELP" to display help information of the EasyWriter.
- For details on the EVC, refer to the instruction manual.

10-2. □ About

- Select "About" in the help files to display a dialog box with current version information. EasyWriter version, display version, and valve version can be confirmed.
- However, the display version and valve version will only be viewable with the EVC connected.

11. Initial Setup

Initial Setup encompasses the selection of the pressure unit, bypass type, target boost, and recording the boost characteristics of the vehicle to the EVC. Initial Setup is required when first using the unit, or after the "All Reset" function has been performed.

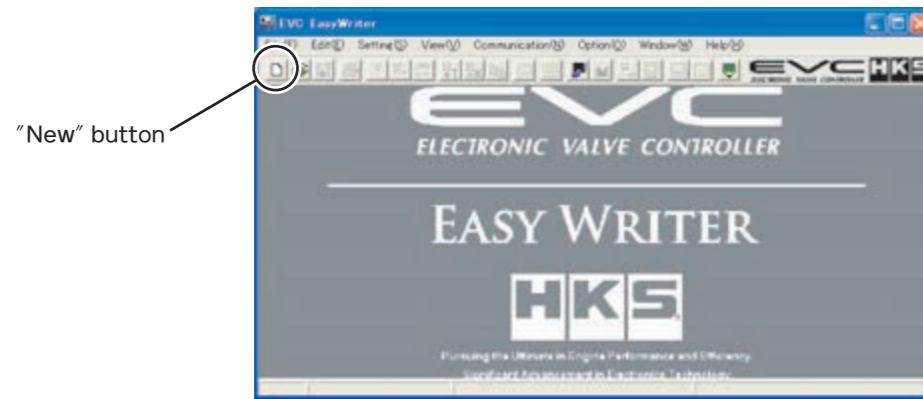
※Setting with the EVC unit connected is recommended for first-time users.

There are some Initial Setup parameters that can only be adjusted with the EVC unit connected.

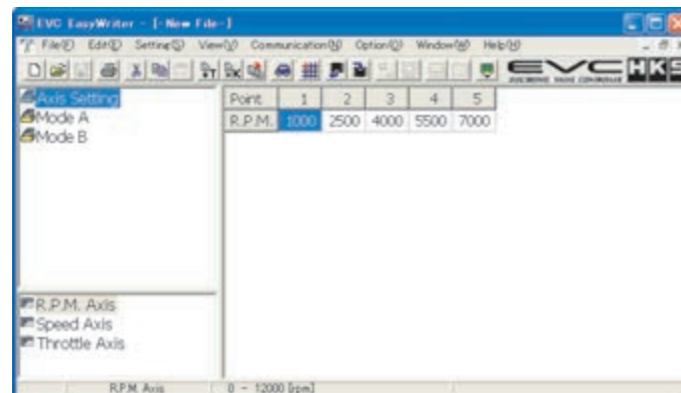
When performing Initial Setup on the EVC unit, refer to the EVC users manual.

11-1. Starting up the EasyWriter

- A screen shown below will display at startup. Select "New" from the file menu or click the ["New" button] ().

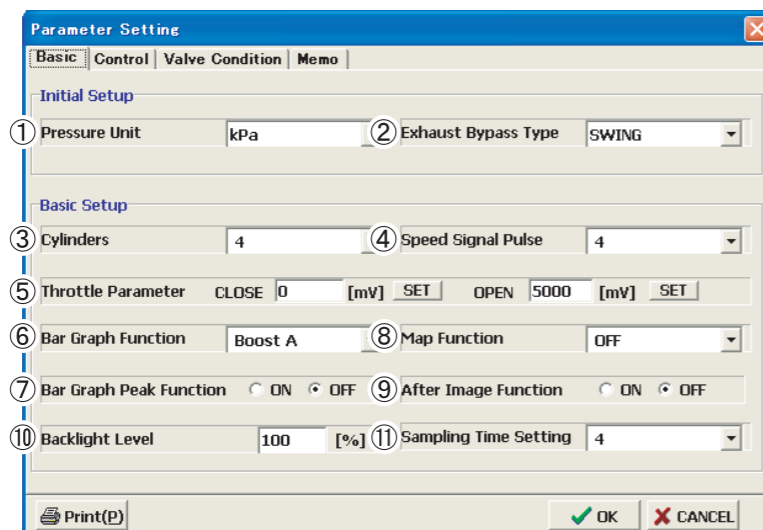


See below for the screen after selecting "New".



11-2. Parameter Setting

- Open the parameter setting screen by pressing the blue car icon button () or by selecting Settings Parameter from the setting menu.



Select an initial setting item on the parameter setting window.

※The initial setup item can only be edited after new data is created.

After initial setup is complete, the parameters cannot be changed.

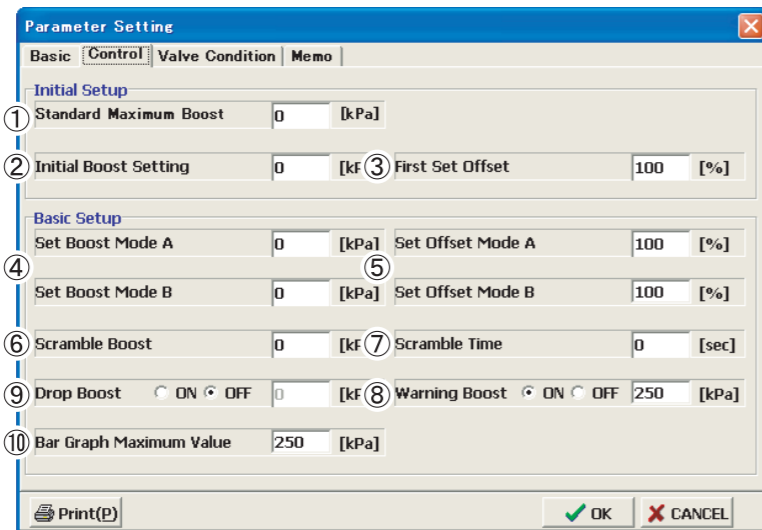
<input type="checkbox"/> 1	Pressure Unit	Select the pressure unit used for boost display. Select from "kPa" or "PSI"
<input type="checkbox"/> 2	Exhaust Bypass Pipe	Select bypass type used to control boost. Select from "SWING" type or "POPPET" type. SWING : Commonly known as actuator type. POPET : Commonly known as wastegate type.

Perform basic setup next.

<input type="checkbox"/> 3	Cylinder	Select number of cylinders to use the RPM signal input. Select from one of the following: 1, 2, 3, 4, 6, or 8 cylinders.
<input type="checkbox"/> 4	Speed Pulse	Select the speed pulse to use the speed signal input. Select "2" for most NISSAN vehicles. (May not apply to all NISSAN vehicles) Select "4" for most NON-NISSAN vehicles. (May not apply to all vehicles)
<input type="checkbox"/> 5	Throttle Parameter	Sets the voltage output of the throttle sensor when the throttle is fully open and fully closed. Perform only when the ignition is in the ON position and the engine is stopped. Input closed voltage value by pressing the SET button to the right of CLOSE. Perform this procedure with the engine at idle and your foot off the gas pedal. Input open voltage value by pressing the SET button to the right of OPEN. Perform this procedure with gas pedal fully depressed. ※For vehicles equipped with electronic throttle control systems (drive-by-wire), the throttle may not fully open (100%) while the engine is stopped and the ignition is in the ON position.
<input type="checkbox"/> 6	Bar Graph Function	Select bar graph display data of the EVC display. Select from one of the following: Boost A, Boost B, Speed, RPM, or Throttle.
<input type="checkbox"/> 7	Bar Graph Peak Function	Function that displays the peak value on the bar graph. If the bar graph drops, a cell depicting peak boost will remain. If Boost A or Boost B was selected, only positive boost will be displayed.
<input type="checkbox"/> 8	Map Function	Select ON/OFF for the boost correction map and type of signal used. OFF : No boost correction settings made. Control through maximum boost pressure and offset only. Throttle : Boost correction from throttle position. RPM : Boost correction from RPM. Speed : Boost correction from vehicle speed. RPM + Throttle : Boost correction from a three-dimensional map of RPM and throttle position. Speed + Throttle : Boost correction from a three-dimensional map of vehicle speed and throttle position.
<input type="checkbox"/> 9	After Image Function	Select ON/OFF to display the maximum boost for about 3 seconds on the EVC digital display (large).
<input type="checkbox"/> 10	Backlight Level	Adjusts the level of brightness of the EVC display. Default setting is set to 100%. Select a number from 0 ~ 100% in 1% increments. ※EasyWriter can control brightness of "Backlight A" only.
<input type="checkbox"/> 11	Sampling Time Setting	Only change this setting when boost is not stable. Default setting is set to 4. Select from 1 ~ 5.

11-3. □Parameter Setting

□ Switch to the control window.



Start from initial setup.

※The initial setup can only be edited after new data is created.

After initial setup is complete, the parameters cannot be changed.

※Cancel the initial setup on the EasyWriter for users that do not know the initial setup values or for vehicles that have never completed initial setup. Use the instruction manual to perform initial setup on the EVC unit.

<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> Standard Maximum Boost	If known, set the maximum boost value, after installing the EVC. □ If maximum boost is set, the same value will be entered automatically for the initial boost setting and boost setting mode A/B. ※For vehicles equipped with a variable solenoid valve, the maximum boost will be lower after the EVC is installed.
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> Initial Boost Setting	Set target boost. The initial value when creating new data is 0kPa or 0PSI. Make sure to input a value, for it cannot be changed after initial setup. After setup of maximum boost, the maximum boost value will be entered A value lower than the maximum boost cannot be entered. Maximum setting value is 250kPa if the unit is set to "kPa". Maximum setting value is 36.0PSI if the unit is set to "PSI".
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> Initial Offset	If the target boost cannot be reached, increase or decrease the initial offset to achieve target boost. The boost will increase if the set value is increased and the boost will decrease if the set value is decreased regardless of bypass type being used. ※Setup using the EVC is recommended, as the EasyWriter does not know if the initial boost is off-target.

※EasyWriter cannot input the value larger than 250kPa(36.0PSI) to "Standard Maximum Boost" and "Initial Boost Setting." To input the value larger than 250kPa(36.0PSI), input must be done using the EVC.

Perform basic setup next.

<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> 4 Mode A/B Boost Setting	Sets the target boost for each mode A/B. Maximum setting value is 250kPa if the unit is set to "kPa". Maximum setting value is 36.0PSI if the unit is set to "PSI".
<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> 5 Offset A/B	Makes fine adjustments to the target boost for mode A/B. Select from 1 ~ 199%. A higher value correlates to higher boost, and a lower value correlates to lower boost, regardless of bypass type.
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> 6 Scramble Boost	Setting used to boost over the set maximum boost pressure for a limited time. If the set value is higher, the vehicle will make more power. However, this can increase the risk of damaging the engine. Be extremely careful when using this function. Value set in scramble boost will be the value that will be added to the maximum set value. Maximum setting value is 120kPa if the unit is set to "kPa". Maximum setting value is 17.0PSI if the unit is set to "PSI".
<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> 7 Scramble Time	Sets the amount of time the scramble boost is active. If the time is set too long, it will increase the risk of damaging the engine. Be extremely careful when setting this function. Maximum set value is 60 seconds.
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> 8 Boost Warning	If boost pressure reaches the boost warning value, the EVC will drop boost to factory levels. If "Drop Boost" function is ON, it will drop the pressure by the amount entered. Select ON if to turn this function on. Select OFF to turn this function off. Maximum setting value is 250kPa if the unit is set to "kPa". Maximum setting value is 36.0PSI if the unit is set to "PSI".
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> 9 Drop Boost	Sets the amount of boost pressure that will be dropped when boost reaches the boost warning value. Maximum setting value is 120kPa if the unit is set to "kPa". Maximum setting value is 17.0PSI if the unit is set to "PSI".
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> 10 Bar Graph Maximum Value	Sets the maximum value of the data set for the bar graph function. Setting range is as follows. Boost A□: 0 ~ 250 kPa or 0.0 ~ 36.0 PSI Boost B□: 0 ~ 250kPa or 0.0 ~ 36.0PSI Speed□ : 0 ~ 500km/h RPM□ : 0 ~ 12,000rpm Throttle□ : 0 ~ 100%

※EasyWriter cannot input the value larger than 250kPa(36.0PSI) to A and B mode boost settings. To input the value larger than 250kPa(36.0PSI), input must be done using the EVC.

※EasyWriter cannot input the boost setting value and offset value of the C mode. Setting boost value and offset value of the C mode map must be done by the EVC.

This ends the Initial Setup process.

Click OK on the parameter setting window to close.

※Select [Communication→Send All Data] () to send all settings to the EVC.

※Sending all initial setup data can only be performed after the EVC is first powered on, or after resetting all data on the EVC.

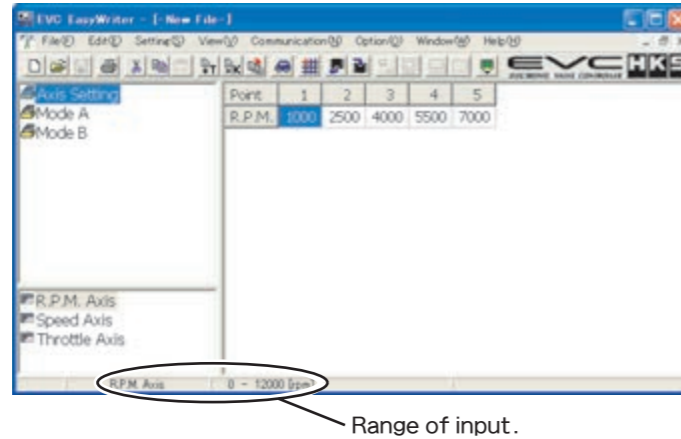
Backing up all data onto a PC is recommended. When doing so, it is convenient to type notes/comments about the vehicle application and specifications, as well as setting information in the memo tab within the Parameter Setting screen.

12. Basic Setting

- After completing initial setup and after sending data to the EVC, try to load all data and make sure all the settings are correct in the parameter setting screen.
- Click OK and close the parameter screen after confirmation. It will automatically send data because the link to the EVC will be in the ON position.
- After sending data, start up the data monitor to make sure the RPM, speed, and throttle are displayed correctly.

The settings below are not used if the map function is OFF in the parameter setting.

12-1. Axis Setting



Set the axis used in the map function.

If using a lower RPM than the minimum value of the axis, the minimum value will be used for the axis. For example, if minimum RPM on the axis is 1000RPM, it will use this 1000RPM value even if actual RPM value is lower than 1000.

If using a higher RPM than the maximum value of the axis, the maximum value will be used. The entered axis values will display on the axis from left to right, smallest to largest.

- ※ If axis values are changed while linking to the EVC, those values will not apply. To apply changed values to the EVC, make sure to perform [Communication→Send All Data] ().

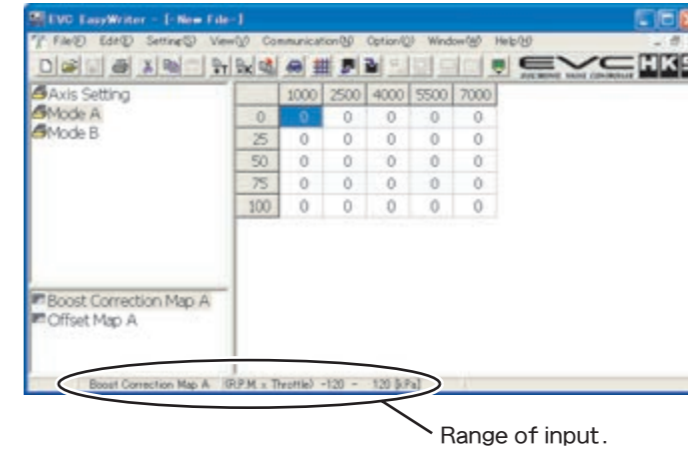
If the axis is changed, the map will automatically adjust to that axis.

The possible enterable range for each axis is displayed at the very bottom of the main window.

<input type="checkbox"/> RPM Axis <input type="checkbox"/>	Can be divided into 5 sections between 0 ~ 12000RPM.
<input type="checkbox"/> <input type="checkbox"/> Speed Axis <input type="checkbox"/>	Can be divided into 5 sections between 0 ~ 500km/h. ※Choose a realistic number for the maximum axis. Fine adjustments will become difficult if an excessively large value is entered.
<input type="checkbox"/> Throttle Axis <input type="checkbox"/>	Can be divided into 5 sections between 0 ~ 100%.

12-2. Boost Correction Map

- ※ EasyWriter cannot edit the boost correction map of C mode. Edit must be done by the EVC.



Correction will be performed according to the boost correction value of the throttle position, RPM, and speed in addition to the set boost in Mode A/B. For example, if the set boost for Mode A is 100kPa, and Boost Correction A is 10kPa, then the target will be 110kPa.

- ※ By inputting a positive value, it may surpass the boost setting for Mode A/B so be careful.

※ Correction will be performed using the axis selected in the map of the parameter setting.

Default will be set to 0kPa or 0.0PSI. Make slight changes to figure out the correction value.

The possible enterable value range is displayed at the very bottom of the main window.

- 120~120kPa if the unit is set to "kPa".
- 17.0~17.0PSI if the unit is set to "PSI".

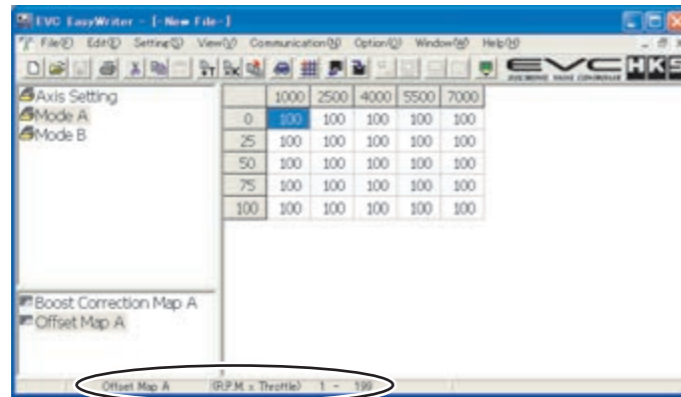
- ※ Do not excessively widen the gap of the grid. It may result in unstable boost control.

- ※ EasyWriter cannot input the value less than -120kPa(-17.0PSI). To input the value less than -120kPa(-17.0PSI), input must be done using the EVC.

- ※ If map values are changed while linking to the EVC, those values will not apply. To apply changed values to the EVC, make sure to perform [Communication→Send All Data] ().

12-3. Offset Map

※EasyWriter cannot edit the offset map of C mode. Edit must be done by the EVC.



Range of input.

This offset is used to make fine adjustments to the set boost in Mode A/B relative to throttle position, RPM, or speed. For example, if the set boost for Mode A is 120%, and Boost Correction A is 20%, then the target will be 140%. The boost will increase if the set value is increased and the boost will decrease if the set value is decreased regardless of bypass type being used.

※Remember the offset value will be over or under the set value.

※Correction will be performed using the axis selected in the map function of the parameter setting.

All default values are set to 100%. Make slight changes to figure out the correction value. The enterable value range will be displayed at the bottom of the main window. Select from 1 ~ 199%.

※Do not widen the gap of the grid. It may result in unstable boost control.

※If map values are changed while linking to the EVC, those values will not apply.

To apply changed values to the EVC, make sure to perform [Communication→Send All Data] ().

13. EasyWriter Version Updates

Updates to the EasyWriter software (when available) can be downloaded from the EasyWriter version update page of the HKS website.

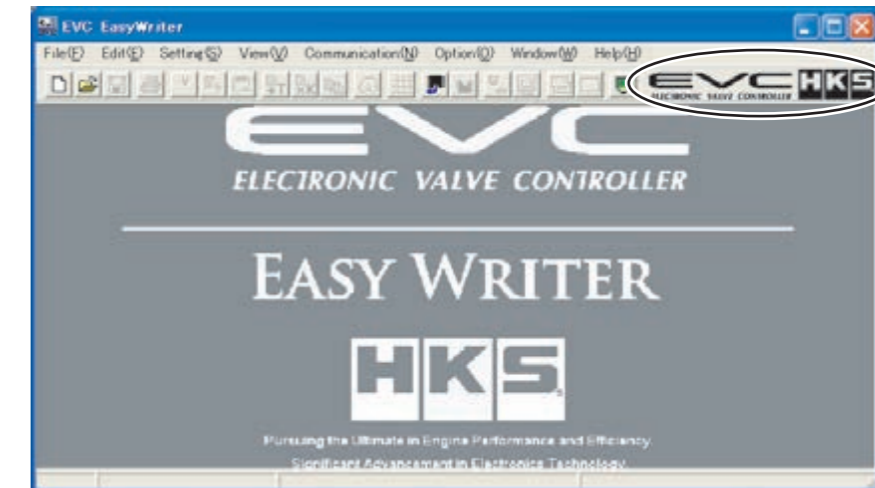
Address: <http://www.hks-power.co.jp/easywriter/>

This page can also be accessed from the EVC product detail page of the HKS website.

If the computer is connected to an internet source, double click the logo on the top right of the window to be routed to the HKS website.

※The program will not automatically check for version updates. The user will need to periodically check for updates.

※Any monetary charges incurred through the use of the internet to update this software is the user's responsibility.



Double click to access the version update page.

※The EasyWriter software must be installed on the computer in order to perform version updates. Version update files are not complete software installation files.

The downloaded update file (s) will be zipped (compressed); it will need to be uncompressed before use. Use a Windows data compression utility to uncompress the file and run the setup executable file.

If a data compression utility is not installed on the computer, see the following instructions:

※Close all other applications before updating.

WindowsXP or ME

Double-click the downloaded file and one file will appear in the compressed folder. Double-click this file to begin setup and follow instructions.

Windows98SE or 2000

Download and install a data compression utility and install it on the computer. Follow instructions on how to uncompress compressed files. Double-click the uncompressed file to begin setup and follow instructions.

Start the EasyWriter program after the update process is completed. Verify the version by clicking [Help→About].

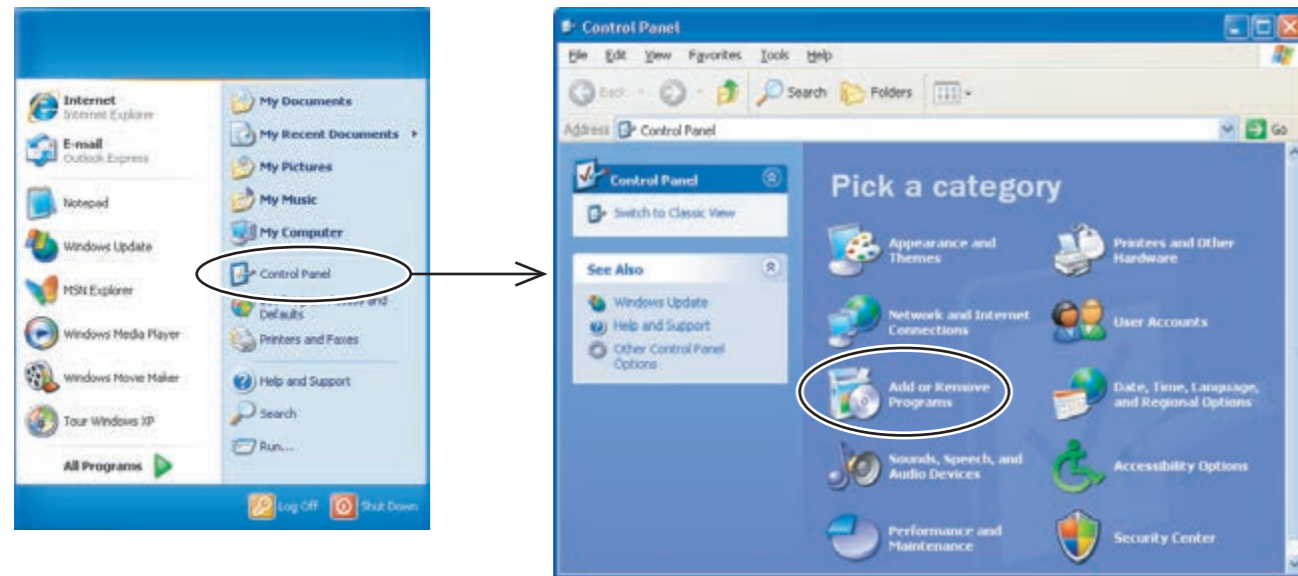
※This software cannot be updated to a previous version once updated to a newer version.

※All update installations will overwrite previous versions, even when updating to the same version.

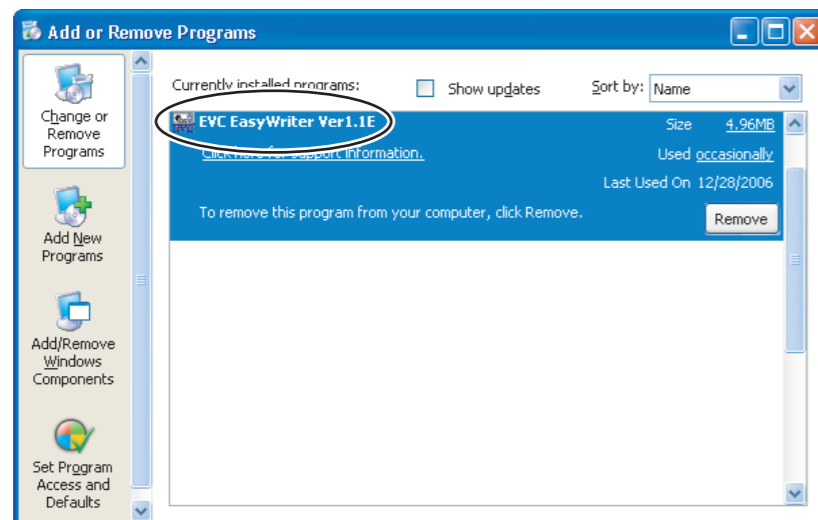
※Windows 98SE, ME, 2000, XP is a product of Microsoft Corporation.

14. Uninstalling the EasyWriter

Click the Windows START button on the bottom left of the screen and select Control Panel.
Proceed by selecting "Add or Remove Programs".



Select the "EVC EasyWriter Ver1.1" from the list in "Change or Remove Programs" and click "Remove".



※If the default installation path was selected during original installation, manually delete all files located in "C: / Program Files / HKS / EVC5EW".

If the files are not deleted, problems may occur during re - installation of the program.

※Windows and Windows 98SE, ME, 2000, XP is a product of Microsoft Corporation.



<http://www.hks-power.co.jp/>

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