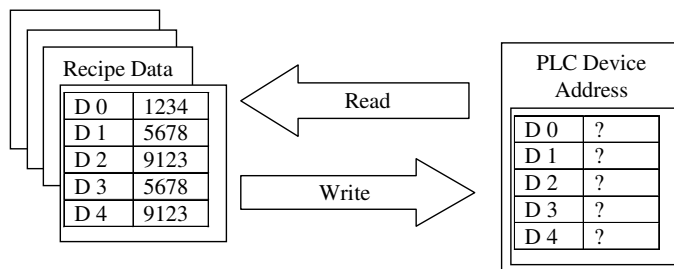




Recipe Function

1 What is the Recipe function?

The Recipe function keeps device address data in the HMI or CF Card and copies the data to PLC device addresses when the trigger device is turned ON. The benefit of the Recipe function is that you don't need to enter parameters manually. For example, if you have 2 kinds of parameters, and you want to switch one or the other one, you need to enter the parameters every time when you switch the parameters, but if you can use the Recipe function, you just need to enter the parameters in WindO/I-NV2 software once and just switch the recipes



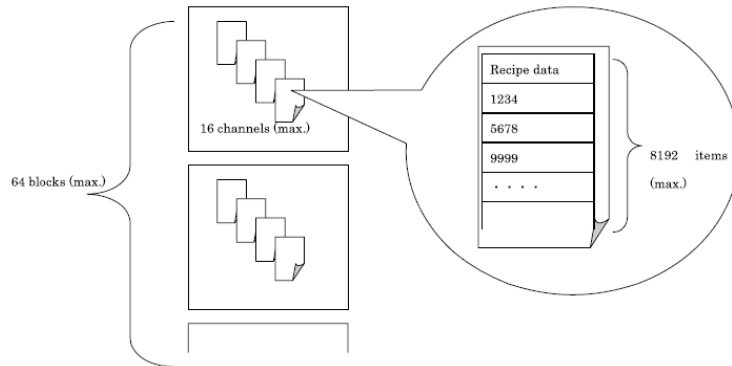
2 When do you need this function?

If you have the following issues, the Recipe function may help:

1. Your machine manufactures more than one product, and it requires different parameters for each product.
2. Your machine requires a lot of parameters, so you need to enter the parameters manually from HMI or PLC programming software.

3 Data Structure of Recipe Data

The Recipe consists of a maximum of 64 blocks, and each block has 16 channels. 16 channels in a block share the same trigger device address. (Use each bit for each channel.)



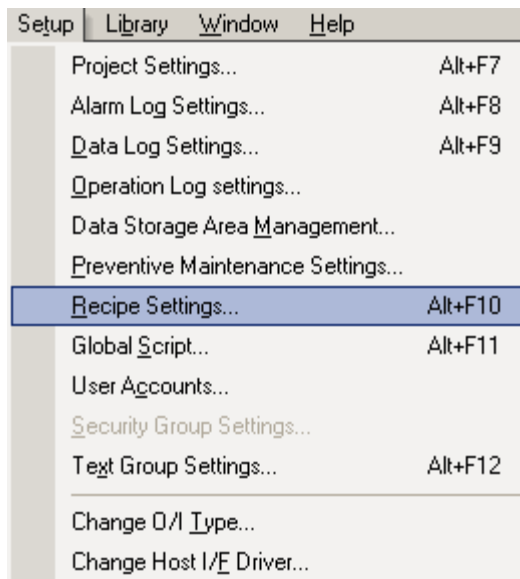
Block No.	Channel No.	Trigger Device	Recipe Data
Block 1	Channel 1	LDR 0-0	Data 0 – 8192
	Channel 2	LDR 0-1	Data 0 – 8192
	Channel 3	LDR 0-2	Data 0 – 8192
	...		
	Channel 16	LDR 0-15	Data 0 – 8192
Block 2	Channel 1	WM 0-0	Data 0 – 8192
	Channel 2	WM 0-1	Data 0 – 8192
	Channel 3	WM 0-2	Data 0 – 8192
	...		
	Channel 16	WM 0-15	Data 0 – 8192
...
Block 15	Channel 1	WM 100-0	Data 0 – 8192
	Channel 2	WM 100-1	Data 0 – 8192
	Channel 3	WM 100-2	Data 0 – 8192
	...		
	Channel 16	WM 100-15	Data 0 – 8192

4 Configuration

The following steps explain how to configure the operation log function.

4.1 Configuration Screen

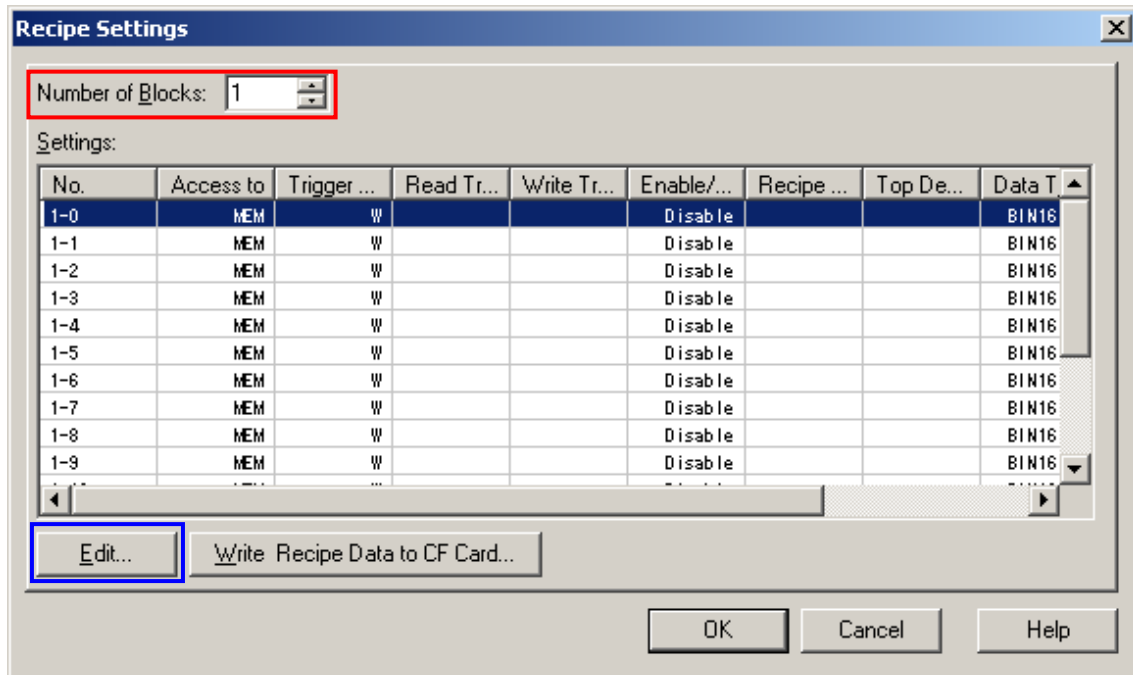
Go to the “Setup” menu and select “Recipe Settings”.



4.2 Enable the function

A “Recipe Settings” dialog box allows you to configure this function.

You need to set “**Number of Blocks**” to enable this function, then select one of the channels and click “**Edit**” to configure the recipe file.



4.3 Channel Settings

You need to check “Enable” to use the channel and enter “Top Device” which is the 1st device address of the Recipe data table. (See below)

In this channel tab, you need to specify a device address, the number of device addresses and data type.

The screenshot shows the 'Individual Settings' dialog box with the 'Channel' tab selected. The 'Block No.' is 1 and 'Channel No.' is 0. In the 'Enable/Disable' section, the 'Enable' radio button is selected. The 'Recipe Name' is 'Recipe0001'. The 'Top Device' is 'D 0'. The 'Data Type' is 'BIN16(+)'. The 'Number of Data' is 10. The 'Display Type' has 'Decimal' selected. The 'OK', 'Cancel', and 'Help' buttons are at the bottom.

Top Device

Recipe Data table

Device Address	Data	Data Type
D 0	1234	BIN16(+)
D 1	5678	
D 2	9123	
D 3	4567	
D 4	8912	

Number of Data

Data Type:

Data Type depends on what value you want to use in the Recipe file.

If the Data Type is “BIN16(+)”, you can use 0 through 65535. If it is “BIN16(+/-)”, you can use -32768 through 32767.

Number of Data:

How much data you want to use in the Recipe.

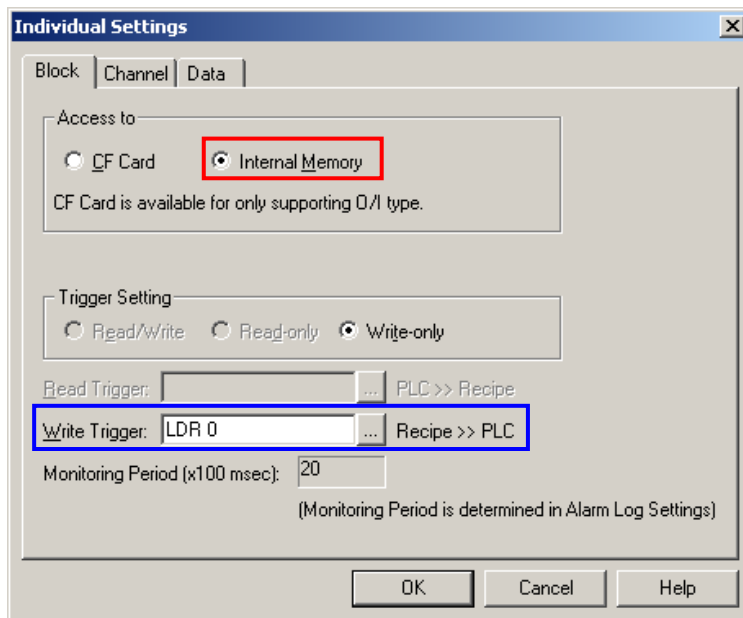
4.4 Block Settings

You need to configure block settings. If you want to use the CF Card, go to “Block Settings for CF Card”. If not, go to “Block Settings for Internal memory”.

Block Settings for Internal memory

By selecting “**Internal Memory**” in “Access to” group and set a device address to “**Write Trigger**”. The “**Write Trigger**” is used for executing this recipe. Each recipe data has a trigger bit, and the trigger bit is contained in the “**Write Trigger**” device.

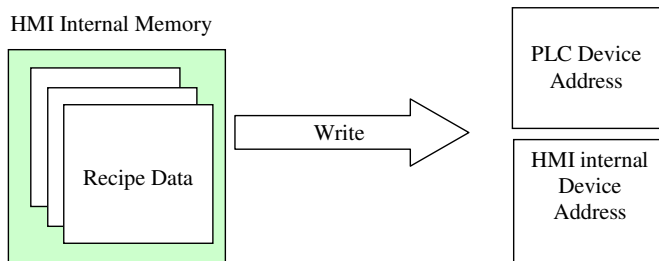
For example, if you set LDR 0(HMI internal Data Register) for the “**Write Trigger**”, the trigger bit of the channel 1 in this block is LDR 0 – 0(1st bit of LDR 0).



Trigger Setting:

If you use Internal Memory for Recipe Data, you can only copy the Recipe Data to PLC or HMI internal device, so you can not renew the Recipe Data. If you use the CF Card, PLC or HMI internal device data can be copied to the Recipe Data on the CF Card.

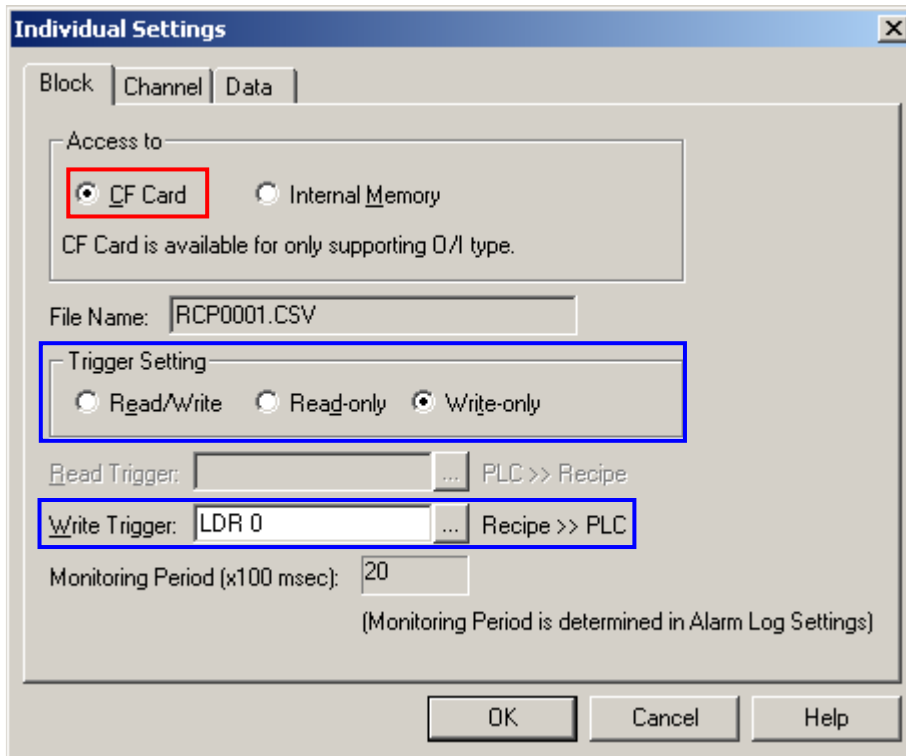
Read/Write Direction:



Block Settings for CF Card

Check “CF Card” in “Access to” group and select “Trigger Setting”, and set a device address to “Read Trigger” and “Write Trigger”. These properties are used for executing a recipe. Each recipe data has a trigger bit, and the trigger bit is part of them.

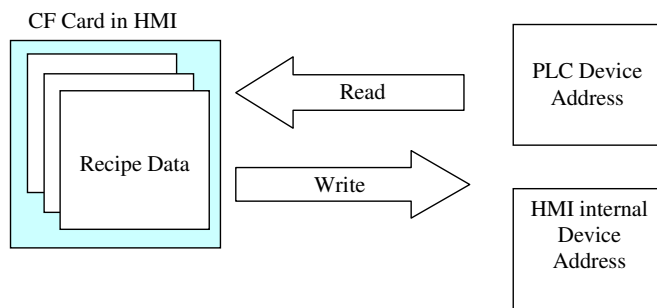
For example, if you set LDR 0(HMI internal Data Register) for the “Write Trigger”, the trigger bit of the channel 1 in this block is LDR 0 – 0(1st bit of LDR 0).



Trigger Setting:

If you can use CF Card, PLC or HMI internal device data can be copied to the Recipe Data in the CF Card and/or the Recipe data can be copied to PLC or HMI internal device too. You need to choose one of the directions and set the trigger devices for each direction.

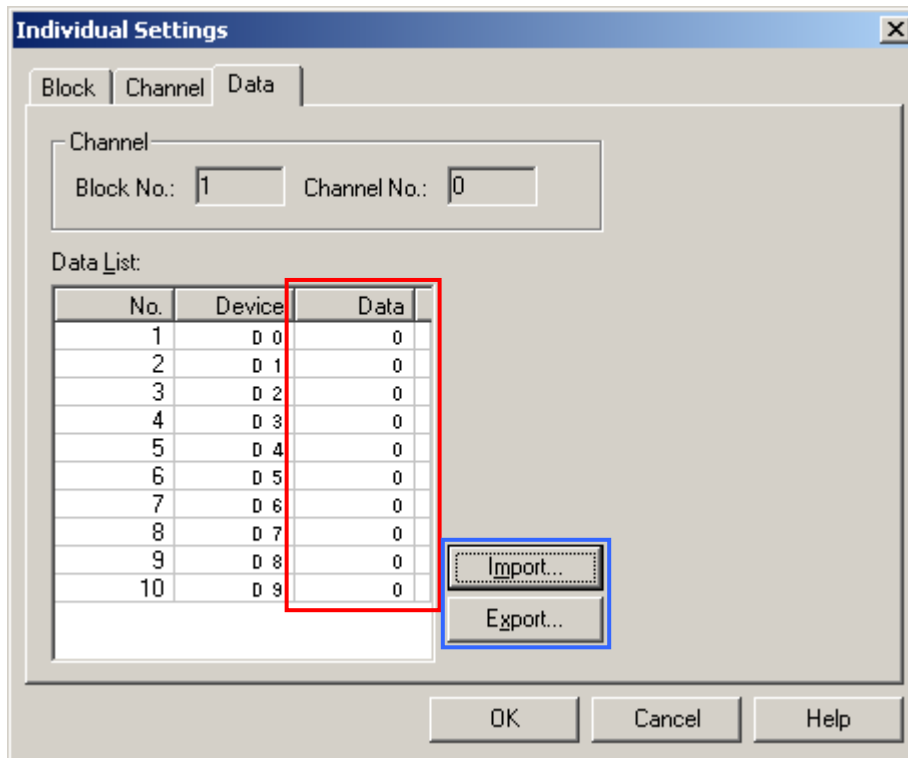
Read/Write Direction:



4.5 Recipe Data Settings

There are two ways to enter recipe data.

1. You can set “Recipe Data” in a data tab
2. You can “export” the data as a CSV file, modify it with spreadsheet software and “import” it to WindO/I-NV2 software.



4.6 Download the program to HMI

After you finish configuring the recipe function, download program to the HMI. To test the recipe function, you need to add bit buttons to turn on the trigger device of the recipe.

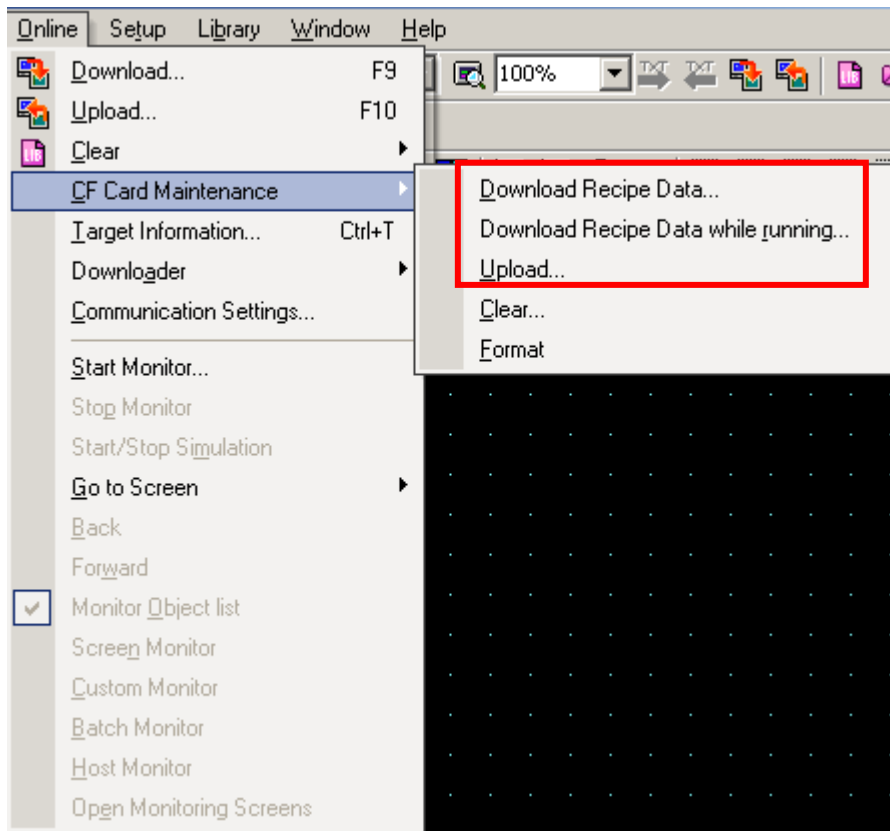
The next chapter, explains how to upload/download the recipe files in the HMI without downloading/uploading the entire program.

5 Recipe Data - Upload/Download

You can upload/download Recipe data in a CF Card without downloading the entire program. If you use “Internal Memory” to store the Recipe data, you can not change recipe data unless you download the entire project.

5.1 Using WindO/I-NV2 Software

If Recipe data is stored on a CF Card, you can download/upload Recipe data from the CF Card using WindO/I-NV2 Software.



Download Recipe Data

1. “Online” -> “CF Card Maintenance” -> “Download Recipe Data”.
2. “Online” -> “CF Card Maintenance” -> “Download Recipe Data while running”.

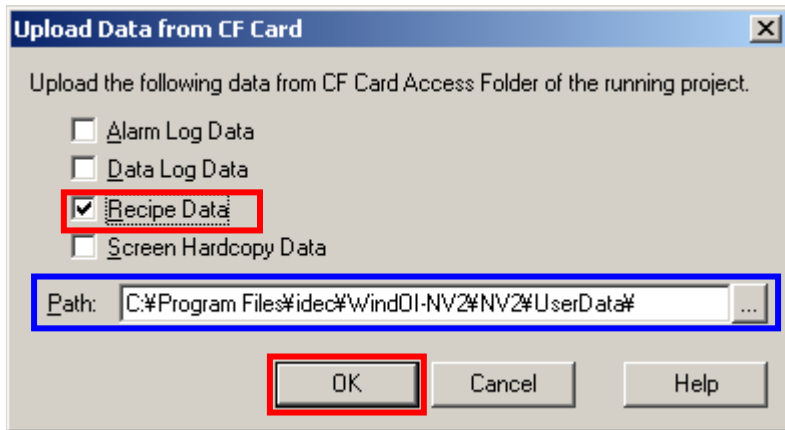
If you select “Download Recipe Data”, the HMI will be in Data Transfer Mode, so it stops operating and restarts. If you select “Download Recipe Data while running”, HMI will not change to the Data Transfer Mode, so it keeps running while Recipe data is downloaded.

Upload Recipe Data

“Online” -> “CF Card Maintenance” -> “Upload”.

To upload Recipe data, use “Upload Data from CF Card” dialog box.

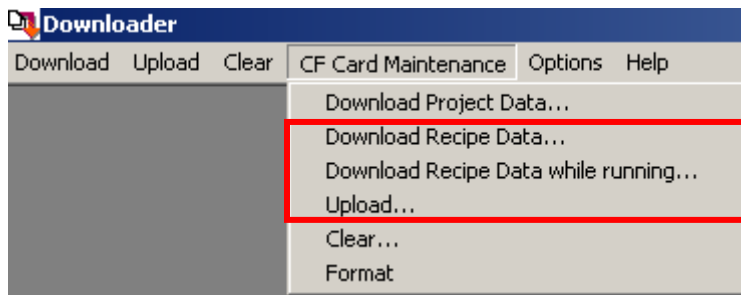
This dialog box allows you to upload various data from a CF Card. If you just want to upload Recipe data only, check “Recipe Data”, set a [file path](#), and click OK.



5.2 Using Downloader Software

If you install WindO/I-NV2 software, Downloader software is also installed on your computer, or you can get this software from IDEC web site free of charge. .

To upload/download Recipe data from a CF Card using Downloader software, go to “CF Card Maintenance” and select functions below.



Download Recipe Data

1. “CF Card Maintenance” -> “Download Recipe Data”.
2. “CF Card Maintenance” -> “Download Recipe Data while running”.

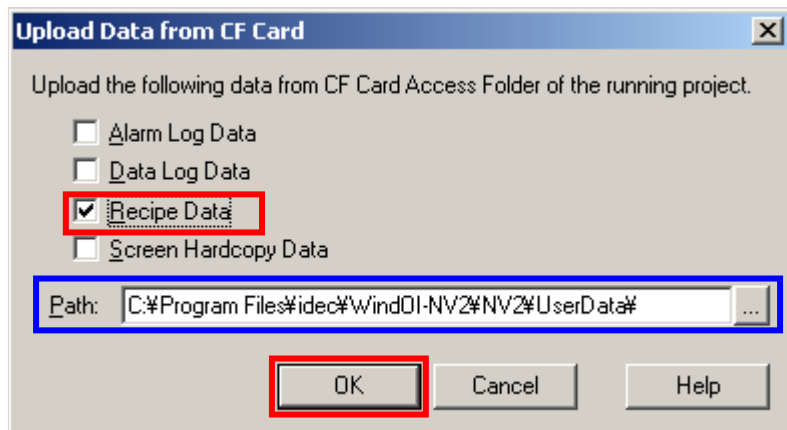
If you select “Download Recipe Data”, the HMI will be in Data Transfer Mode, so it stops operating and restarts. If you select “Download Recipe Data while running”, HMI will not change to Data Transfer Mode, so it keeps running while Recipe data is downloaded.

Upload Recipe Data

“CF Card Maintenance” -> “Upload”.

To upload Recipe data, use the “Upload Data from CF Card” dialog box.

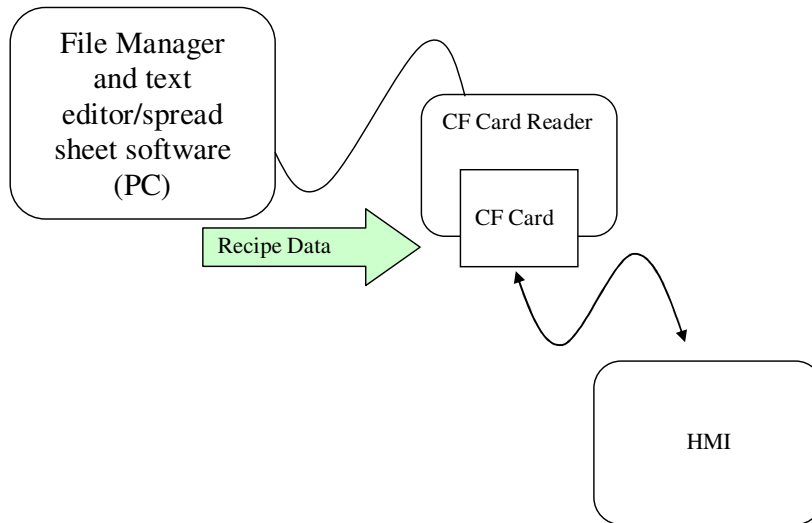
This dialog box allows you to upload various data from a CF Card. If you just want to upload Recipe data only, check “Recipe Data”, set a file path, and click OK.



5.3 Using CF Card Reader and File Manager

You can copy Recipe data from/to a CF Card using CF Card Reader (Memory Card Reader) and file manager software. Recipe data files are stored under “\HGDATA01\Recipe” folder.

Recipe data files are saved into the folder in a CSV file format, so you can open them using a Text Editor or spreadsheet software.



File Names

You can check which recipe file is related to which recipe number in recipe settings. To check the file name, open the “Block” tab in “Individual Settings” dialog box. (To open this tab, refer to 4.Configuration.)

Note: File Name in the Individual Settings dialog box only appears if you set “CF Card” as “Access to”.

Individual Settings [X]

Block | Channel | Data

Access to

CF Card Internal Memory

CF Card is available for only supporting D/I type.

File Name:

Trigger Setting

Read/Write Read-only Write-only

Read Trigger: ... PLC >> Recipe

Write Trigger: Recipe >> PLC

Monitoring Period (x100 msec):

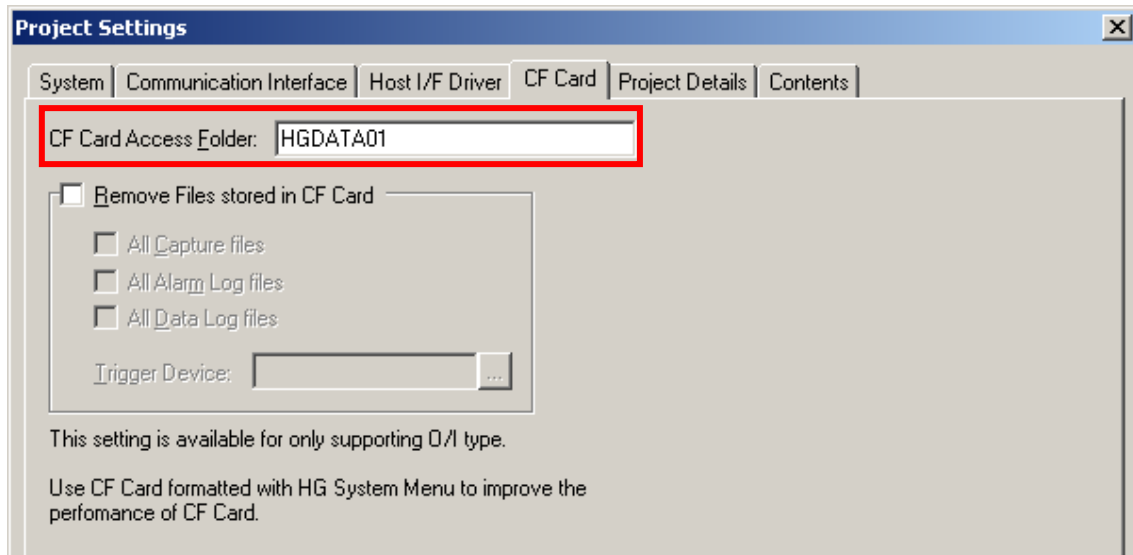
(Monitoring Period is determined in Alarm Log Settings)

OK Cancel Help

CF Card Access Folder

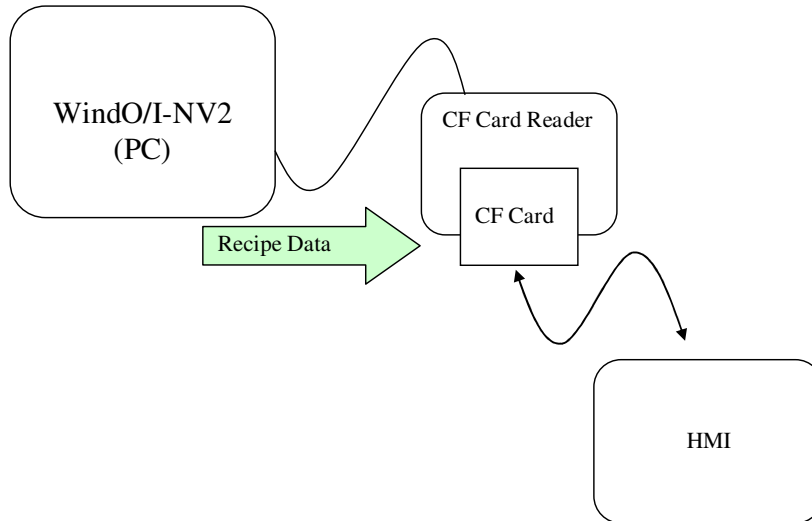
“HGDATA01” folder name may be different if changed.

You can change the “**CF Card Access Folder**” name from “Project Settings” -> “CF Card”.



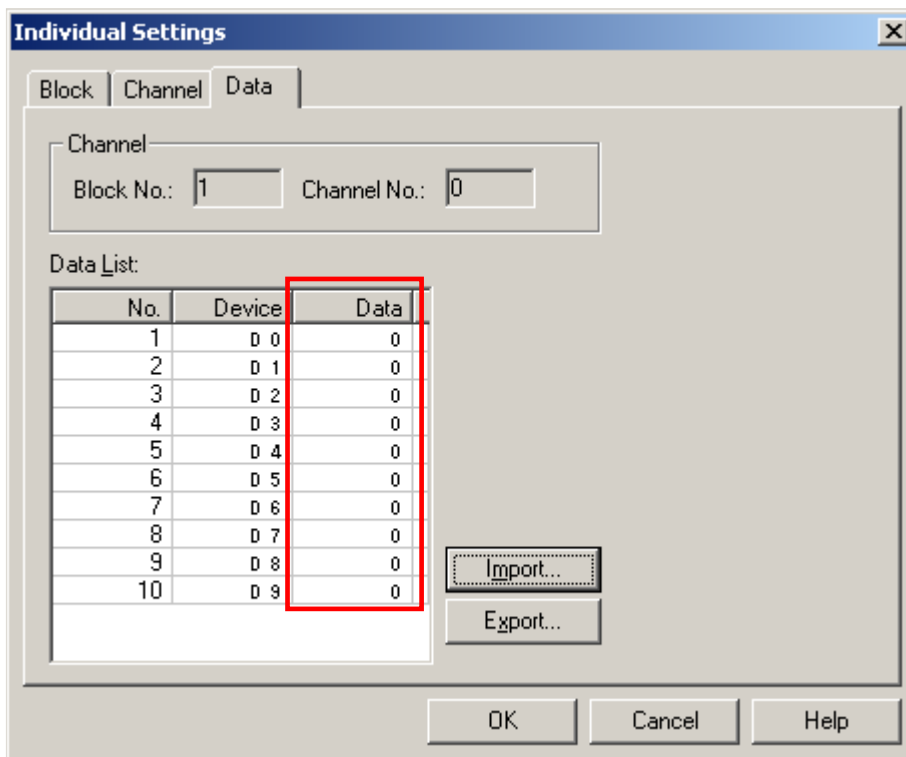
5.4 Using CF Card Reader and WindO/I-NV2 software

If you change Recipe data in WindO/I-NV2 software and you have a CF Card Reader in your PC, you can write Recipe data to the CF Card using WindO/I-NV2 software.



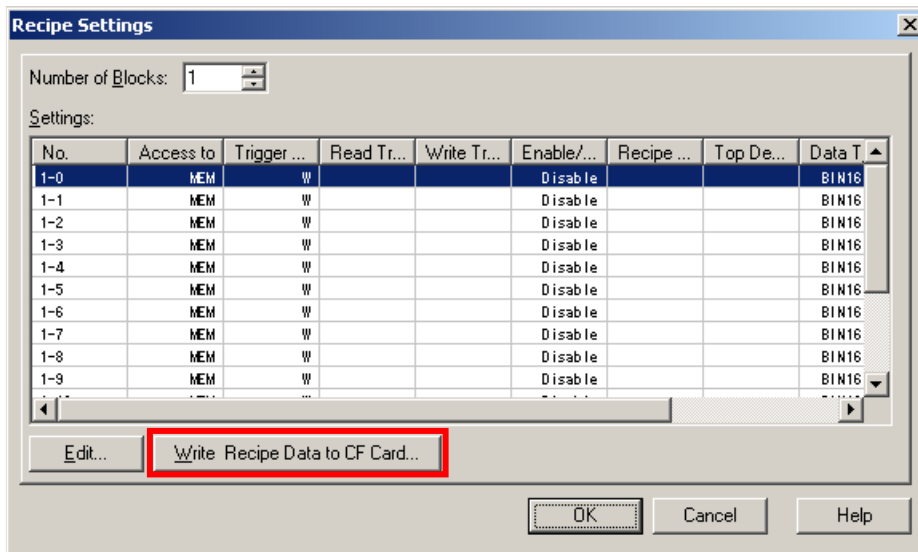
Step1. Modify Recipe data

Modify Recipe data in “Data” tab on “Individual Settings” dialog box.



Step2. Write Recipe data to CF Card

Click “Write Recipe Data to CF Card” in “Recipe Settings” dialog box.



Step3. Select CF Card Drive

Select CF Card Drive and click “OK”. WindO/I-NV2 software writes the all Recipe data to a CF Card.

