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# Connection to A·B Control Logix

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This instruction shows how to connect the V series unit to Control Logix/1756 system Logix 5550 processor made by Allen-Bradley.

For the use of the unit, refer to [Notes on Safe Use of MONITOUCH] and [Chapter 1, Hardware Specification] in the “Hardware Specification.” For details on display creation, refer to “Reference Manual.”

**◆◆ Notes ◆◆**

**Take notes as shown below when you use the V6 series unit.**

**Use the V-SFT whose version is latter than Ver.1.2.21.0**

**The V6 series unit whose STSTEM PROG. VER is latter than Ver.1.480 is available for Control Logix.**

**Confirm both of the versions in order to use this PLC.**

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# 1. Communication Setting

The recommended communication settings for PLC are as follows.

[Serial Port]

Mode : System  
 Baud Rate \* : 19200  
 Data Bits \* : 8  
 Parity \* : None  
 Stop Bits \* : 1  
 Control Line : No Handshake

[System Protocol]

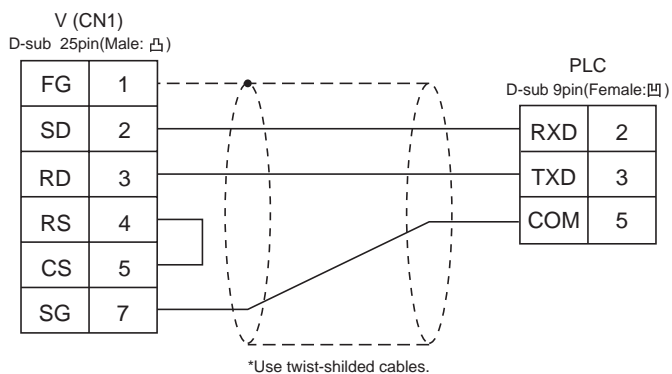
Protocol : DF1 Point to Point  
 Station Address : 0  
 NAK Receive Limit : 3  
 ENQ Transmit Limit : 3  
 ACK Timeout : 50  
 Embedded Responses : Autodetect  
 Error Detection : BCC  
 Enable Duplicate Detection : checked

The settings marked \* must accord with the [Comm. Parameter] setting of V-SFT.

# 2. Wiring

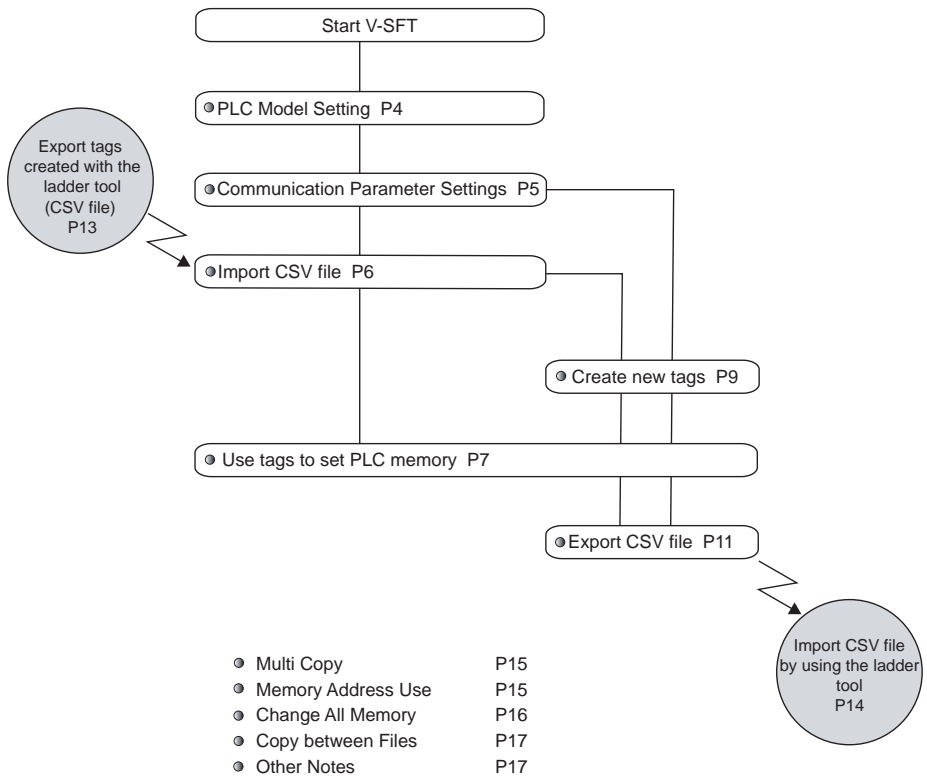
Use RS-232C port located the front of Logix 5550 processor module in order to connect the V series unit to A·B Control Logix.

Wiring Diagram : RS-232C



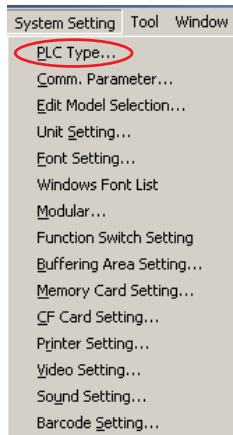
# 3. Screen Configuration on V-SFT

In order to connect the unit to A-B Control Logix, create variables (tags) by using the PLC ladder tool and take them into V-SFT. In addition, use the tag names to specify PLC memory address. The procedure to create a display on V-SFT is shown in the diagram below.

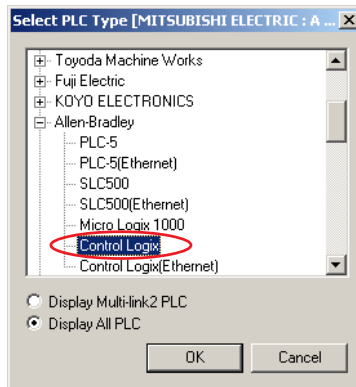


## ● Select PLC Type

1. From the menu bar, go to [System Setting], and click on the [PLC Type...]. The [Select PLC Type] dialog comes up.

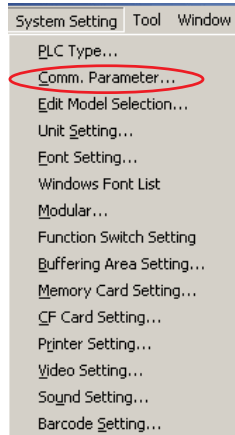


2. Select [Control Logix] under the [Allen-Bradley] and click on the [OK] button.

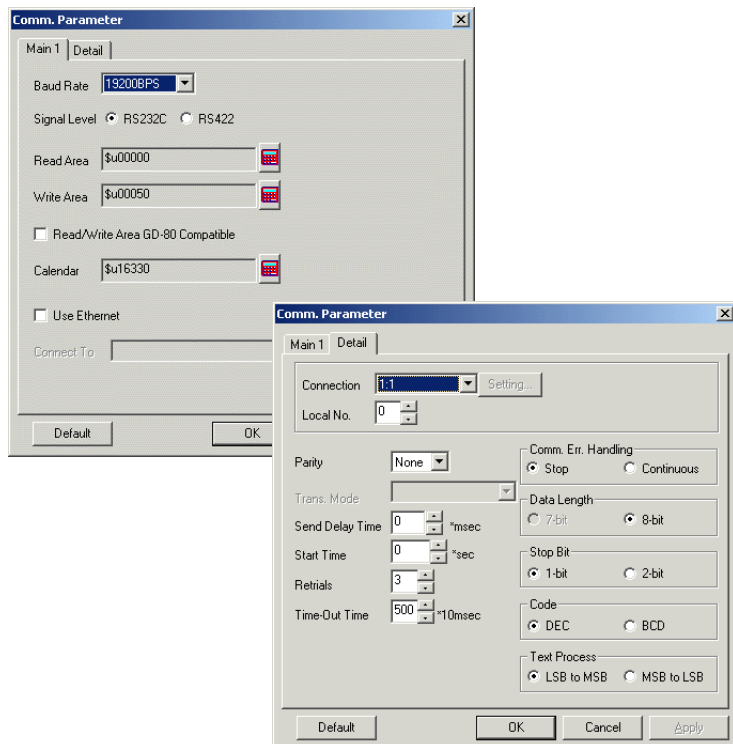


## Communication Parameter Settings

1. From the menu bar, go to [System Setting], and click on the [Comm. Parameter]. The [Comm. Parameter] dialog comes up.



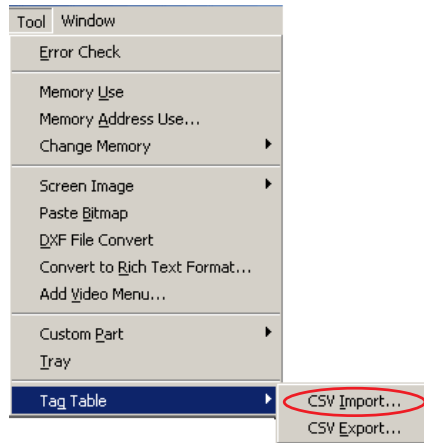
2. Make communication parameter settings to communicate with the PLC.



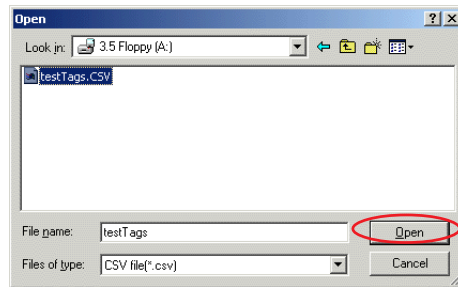
The [Comm. Parameter] settings must accord with the settings on the side of the ladder tool. (See page 2.) If the settings are incorrect, it is impossible to establish the communication.

## ● Import CSV File

1. From the menu bar, go to [Tool], to [Tag Table], and click on the [CSV Import...]. The [Open] dialog comes up.



2. Select a CSV file exported from the ladder tool, and then click on the [Open] button.



Import of CSV file is complete.



There are four data types which are possible to communicate with V series.

SINT : 1byte data

INT : 1word data

DINT : 2 word data

REAL : floating point data

Four tags as shown above and Alias are taken in, and they are displayed on V-SFT when a CSV file is imported.

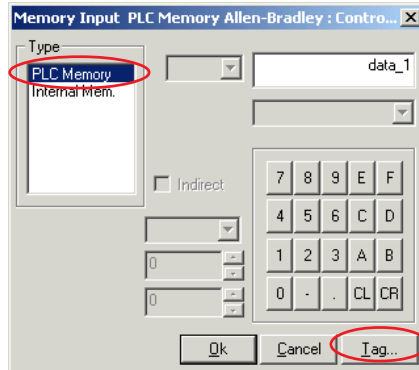
Set [SINT] as the data type in array because V series communicates with the PLC in the word.

## ● PLC Memory Settings

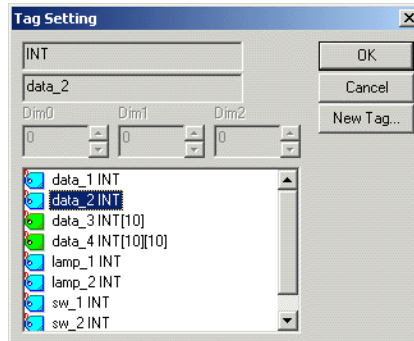
The way to set PLC memory at the time of display creation is shown below.

### Specify PLC Memory in the word

1. Display the [Memory Input] dialog.  
Select [PLC Memory] as the [Type].

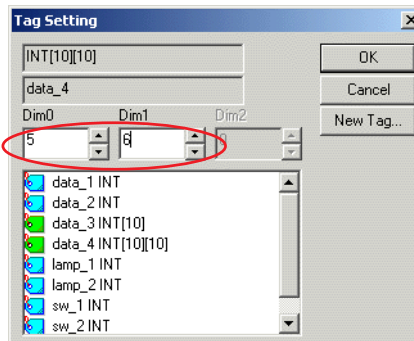


2. Click on the [Tag...] button.  
The [Tag Setting] dialog comes up.
3. All tags set with the ladder tool are displayed.  
Click a tag you will use.

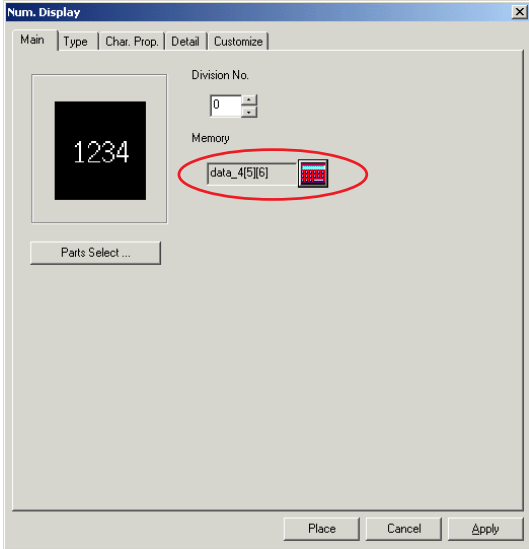
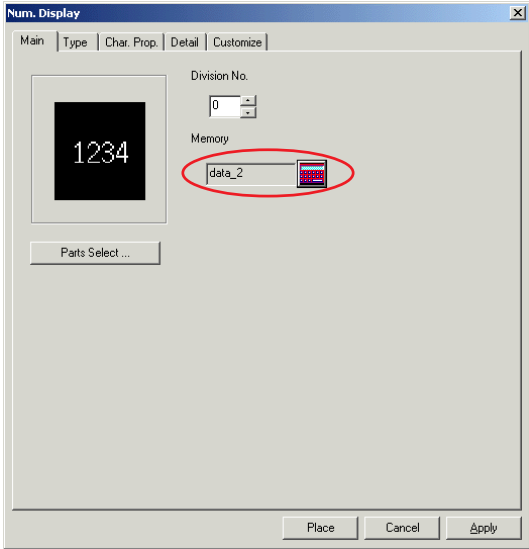


If memory is used in succession when you use Relay Mode, Sampling, etc., use a tag which is set in array.

Set the number of dimensions for array [Dim0-2] if tags are defined in array.



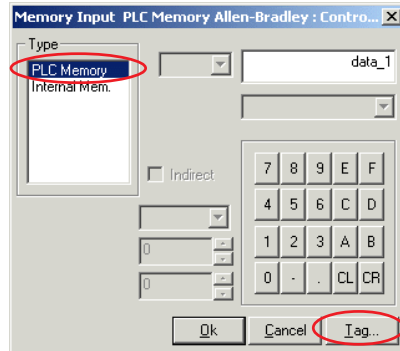
- 4. Click the [OK] button in order to close the dialog. The tag you selected comes up.



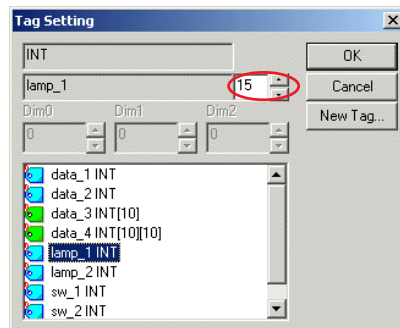


### Specify PLC Memory in the bit

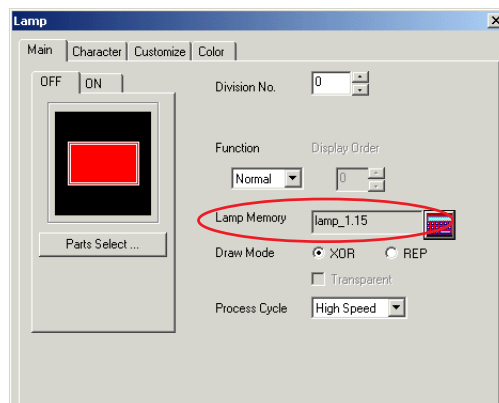
1. Display the [Memory Input] dialog.  
Select [PLC Memory] as the [Type].



2. Click the [Tag...] button.  
The [Tag Setting] dialog comes up.
3. All tags set with the ladder tool are displayed.  
Click a tag you will use.
4. There is a box to specify bits on the right side of a tag name. Set a bit number in this box.



5. Click the [OK] button in order to close the dialog.  
The tag you selected is displayed.

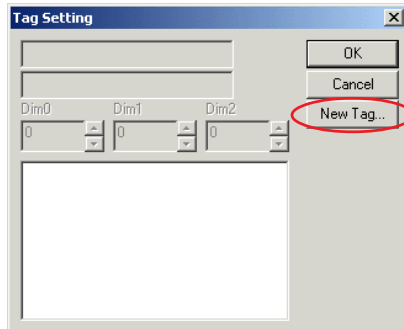


## ● Create New Tags

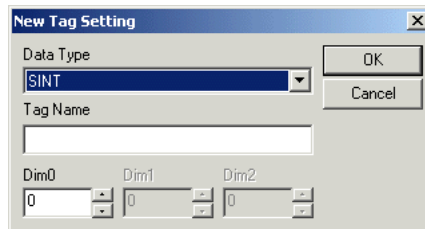
It is possible to create new tags on V-SFT.

Use the [New Tags...] dialog to create new tags if you add tags in CSV file which is read from the ladder tool, or if you create display data before ladder is created.

1. Display the [Tag Setting] dialog.
2. Click on the [New Tag...].



Make necessary settings to create a new tag after the [New Tag Setting] dialog is displayed.



### Data Type

- SINT : 1byte data
- INT : 1word data
- DINT : 2 word data
- REAL : floating point data



Make sure to set the number of dimensions for array when the [SINT] are set as a data type.

**Tag Name** (The maximum number of characters is 40.)

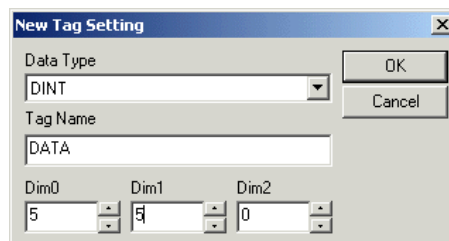
Input names for each variables in the box.

**Dim0/1/2** (The number of dimensions for array: 0 to 1024)

Use the boxes to make settings for dimensions if tags are set in array.

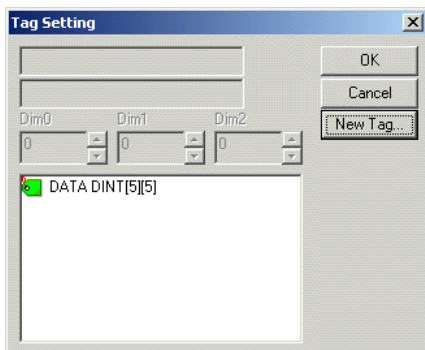
It is possible to set the [Dim1] when you input a number except 0 into the [Dim0].

It is possible to set the [Dim2] when you input a number except 0 into the [Dim1].



3. Click on the [OK] button after the settings as shown before are complete.

The registered tag is displayed in the bottom box, and you can make memory setting.

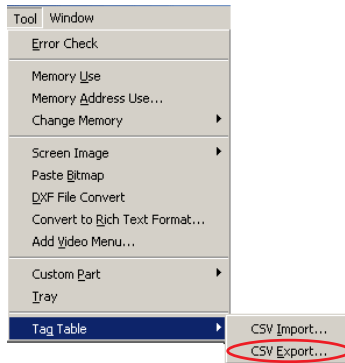


Be sure to perform the following operations so that tags which are added newly on V-SFT are reflected to the ladder tool.

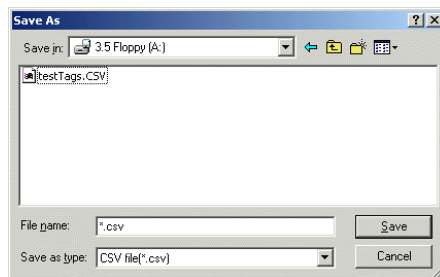
1. Perform [CSV Export] on V-SFT. (Refer to page 12.)
2. Perform [IMPORT] for a CSV file which is created in the process of 1 by using the ladder tool. (Refer to page 14.)

## Export CSV File

1. From the menu bar, go to [Tool], to [Tag Table], and click on the [CSV Export].



2. The [Save As] dialog is displayed.  
Input a file name, and click on the [Save] button.



Export of CSV file is complete.



CSV files which are exported on V-SFT must be imported with the ladder tool. (Refer to page 14.)

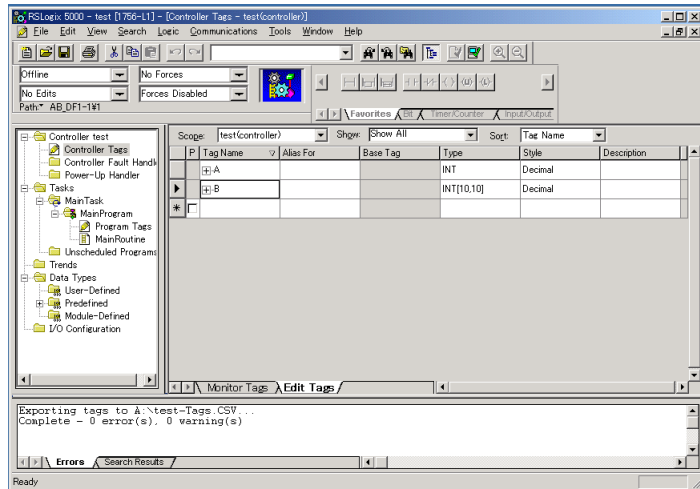


## Use the Ladder Tool to Export Tags

Tags that are created with the ladder tool must be exported by using CSV file in order to use them on V-SFT.

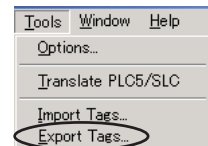
The procedure to export tags is shown below briefly.

1. Use RSLogix 5000 to set tags.

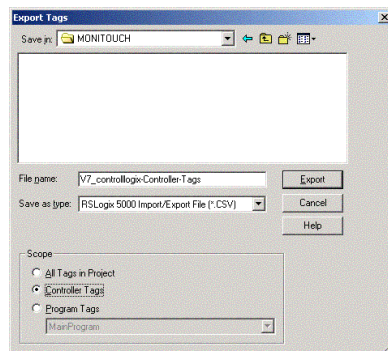


It is necessary to set tags in the [Controller Tags] in order to communicate with V series by using them. Tags set in the [Program Tags] are not available on V-SFT.

2. Select [Export Tags...] under the [Tool].  
The [Export Tags...] dialog is displayed.



3. Input a file name, and then click on the [Export] button.



All operations for Export are complete.  
Perform [CSV Import] on V-SFT.

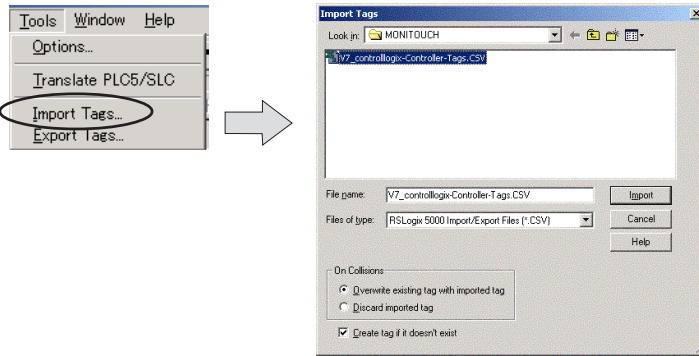


## Use the ladder tool to Import Tags

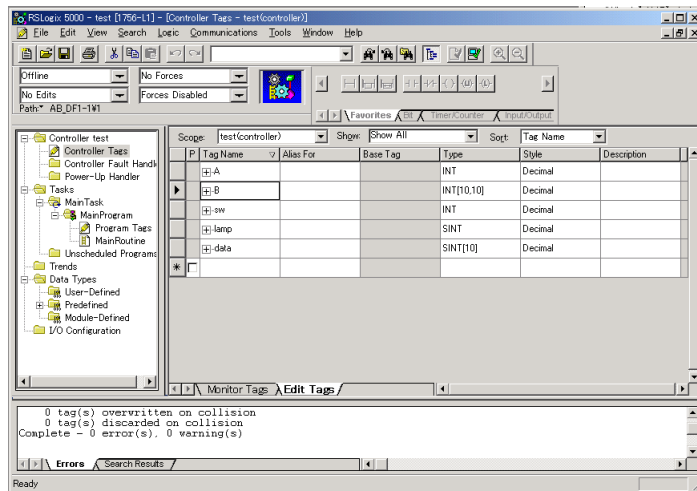
CSV file of Tags must be imported so that tags which are created on V-SFT are used in the ladder tool.

The procedure to import tags is shown below briefly.

1. Start RSLogix 5000.
2. Select [Import Tags... ] under the [Tool].  
The [Import Tags...] dialog is displayed.



3. Select the exported file on V-SFT, and then click on the [Import].  
The imported tags are added in the [Controller Tags].



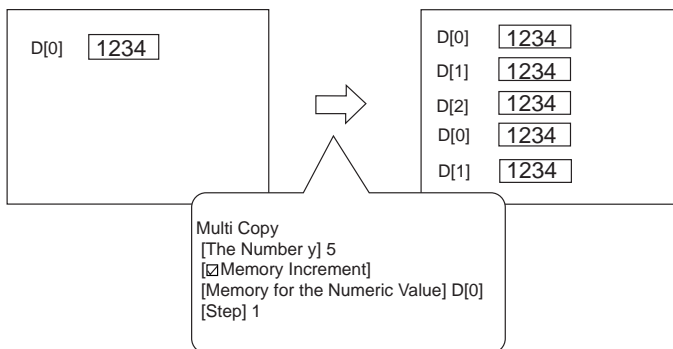
## ● Multi Copy

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It is possible to use the function of memory increment in the [Multi Copy] command when tags are set in array.

Memory for the numeric value is displayed from the top memory of the array if your settings for memory increment in [Multi Copy] exceed the greatest number of array.

**When D[3] is set as a Tag**



## ● Memory Address Use

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All the used memory in a screen data is displayed.

Memory list can be viewed only in cross-reference format.

1. Select [Memory Address Use] under the [Tool].
2. The [Memory Address Use] dialog is displayed.
3. Select either Word or Bit as the [Display Type].
4. Set the range of tags to display in the [Start] and [End] boxes.  
If you select Word as the [Display Type] in the process of 3, and select a tag which is not set in array, the setting for [End] is not available.
5. Click the [OK] button.  
All the memory which is used currently is displayed.

In case of searching other range of data memory successively, go to [Display] on the menu bar, and click on the [Find Range Setting...].  
After that, repeat the processes from 2 to 5.

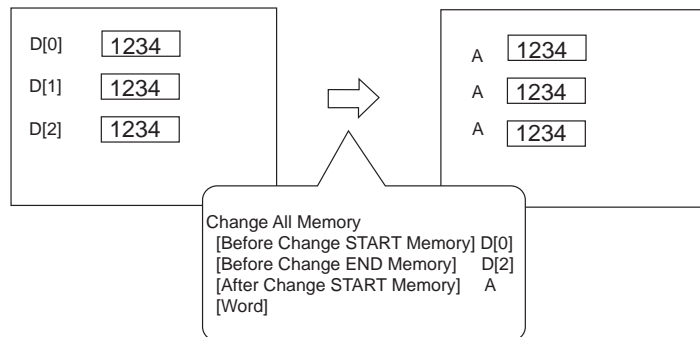
## ● Change All Memory

It is possible to change all the used tags in a display.

1. Select [Change All Memory] under the [Tool].  
The [Change All Memory] dialog is displayed.
2. Click on [Change] button after setting the following memory numbers:  
[Before Change Start Mem. No.], [Before Change End Mem. No.],  
and [After Change Start Mem. No.].  
All memories in a display are changed.

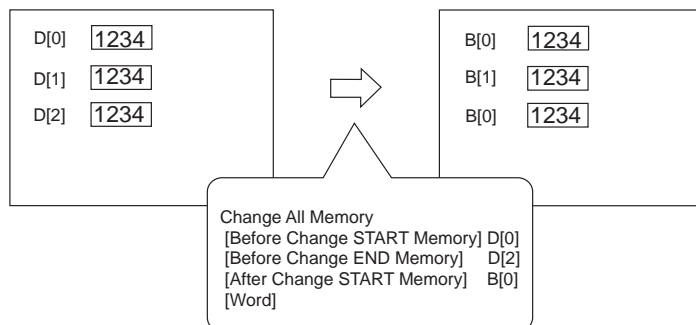
If you select a tag in [After Change Start Mem. No.] which is not set in array when you select a tag of array in [Before Change Start/End Mem. No.], the tags are changed to a same tag after executing [Change]. (See the diagram below.)

Change the tag of D[3] to that of A



Memory for the numeric value is displayed from top memory of array if tags which are selected in [After Change Start Mem. No.] are less than the number of array for a tag which is prechanged. (See the diagram below.)

Change the tag of D[3] to that of B[2]

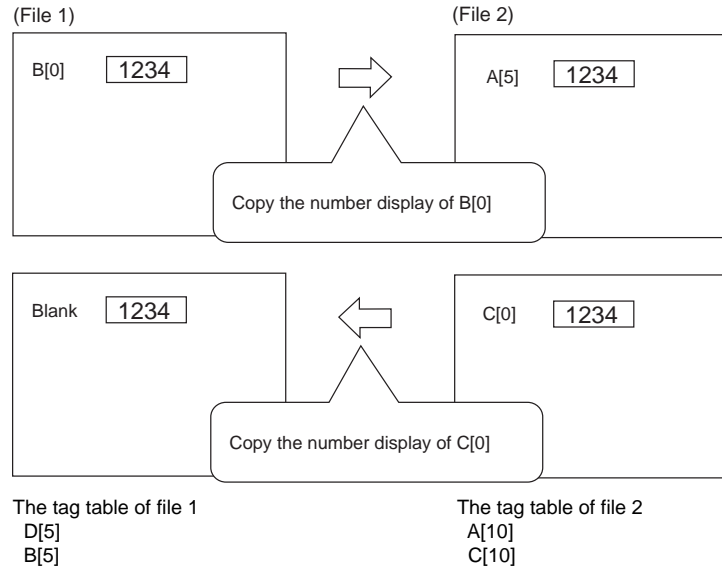




## ● Copy between Files

If parts with PLC memory are copied between files that have different tag tables, memory is set in accordance with a tag table of a file located in the place where tags are pasted.

Make sure to reset memory.



If parts with PLC memory are copied from files which are created by different PLC types, memory is displayed as [???]. Make sure to reset memory.

## ● Other Notes

### Connecting in Multi-link 2

Each V series unit must use the same tag table to connect in multi-link 2 by using Control Logix.

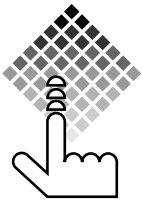
Using different tag tables leads to malfunction.



For details on Multi-link 2, see the supplement of "Multi-link 2."

### Simulator

Simulator is not available due to using this PLC.



**MONITOUCH**

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