

Rockwell (Allen-Bradley)SLC500 Series (Serial) PLC Connection**Communication Setting Sample**

GP Setup		PLC Setup	
Communication Rate	19200bps	Baud Rate	19200bps
Data Length	8bits	_____	
Stop Bit	1bit	_____	
Parity	Even	Parity	Even
Control	ER Control	_____	
Communication Format	RS-232C	_____	
_____		Communication Driver	DF1 HALF-DUPLEX SLAVE *1
_____		Duplicate Packet Detection	DISABLE *1
_____		Error Detection	BCC *1
_____		Control Line	NO HANDSHAKING *1
Unit No.(DH GP) *2	0	Station Address	0

*1 Will not operate with any other settings.

*2 Setup the Station Address and the GP Unit No. (DH GP) address to the same value (address set as decimal values). It is unnecessary to setup the DH PLC address.

Communication Settings [PLC]

Two programs are required for SLC500 PLC communication settings.

1. RSLinx – Software to connect PLC and PC with RSLogix500 installed
(Ver.2.41.00 is used in this sample.)
2. RSLogix500 – Ladder Software
(Ver.5.20.00 is used in this sample.)

* Communication Settings on RSLogix500

Please connect PLC and PC with RSLinx before creating a ladder.

(Contact Rockwell Automation, Inc. for more details.)

- 1) Start up RSLogix500.
- 2) Select the CPU type.

Select Processor Type

Processor Name: UNTITLED

1747-L552B	5/05	CPU	-	32K	Mem.	OS501	Series C
1747-L551B	5/05	CPU	-	16K	Mem.	OS501	Series C
1747-L553	5/05	CPU	-	64K	Mem.	OS501	
1747-L552	5/05	CPU	-	32K	Mem.	OS501	
1747-L551	5/05	CPU	-	16K	Mem.	OS501	
1747-L553	5/05	CPU	-	64K	Mem.	OS500	
1747-L552	5/05	CPU	-	32K	Mem.	OS500	
1747-L551	5/05	CPU	-	16K	Mem.	OS500	
1747-L543C	5/04	CPU	-	64K	Mem.	OS401	Series C
1747-L542C	5/04	CPU	-	32K	Mem.	OS401	Series C
1747-L541C	5/04	CPU	-	16K	Mem.	OS401	Series C
1747-L543	5/04	CPU	-	64K	Mem.	OS401	
1747-L542B	5/04	CPU	-	32K	Mem.	OS401	
1747-L541	5/04	CPU	-	16K	Mem.	OS401	

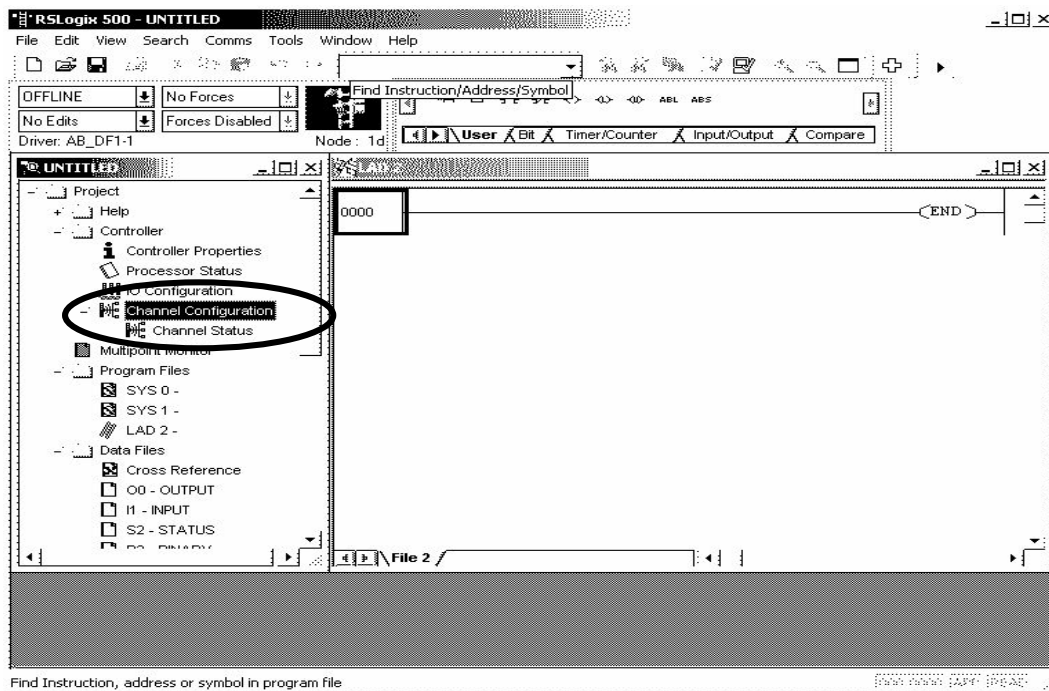
Communication settings:

Driver: AB_DF1-1 Processor Node: 1 Reply Timeout: 10 (Sec.)

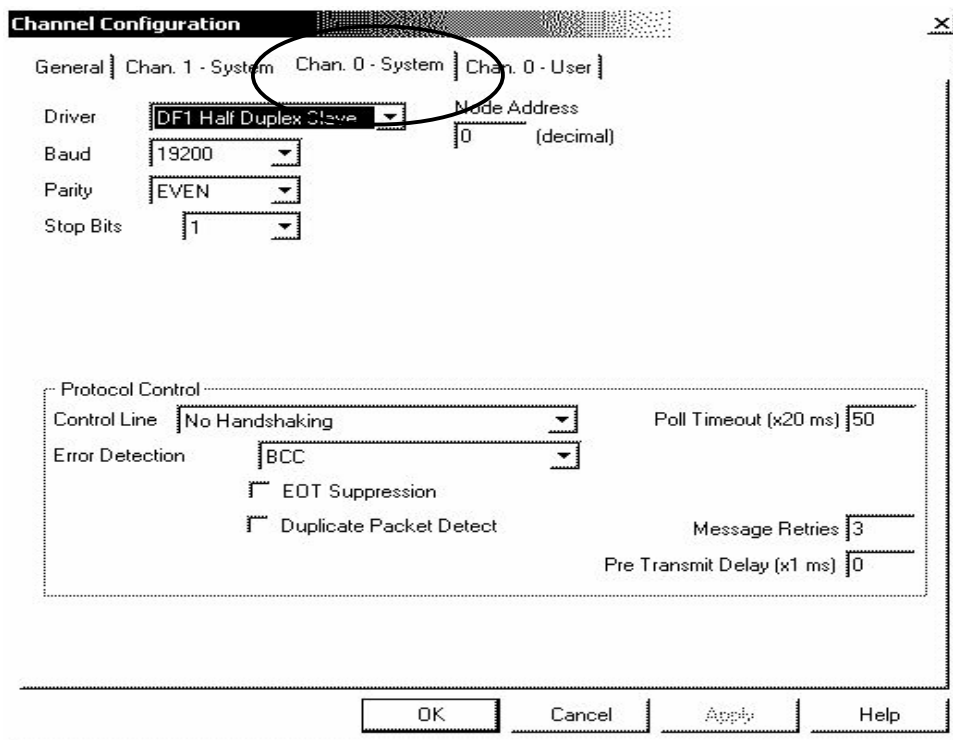
Decimal (=1 Octal) Who Active..

Communication Settings can be left by default.

3) Click [Channel Configuration].



4) A dialog box will appear. Then double-click the [Channel 0] tab and set the channel.



Setting Item	Setting Detail	Remark
Baud Rate	19200bps	
Parity	Even	
Communication Driver	DF1 Half-Duplex	
Duplicate Packet Detection	Disable	System cannot be operated with other settings.
Error Detection	BCC	System cannot be operated with other settings.
Control Line	No Handshaking	System cannot be operated with other settings.
Station Address	0 to 255	Set with the same address as DH GP Address of GP.

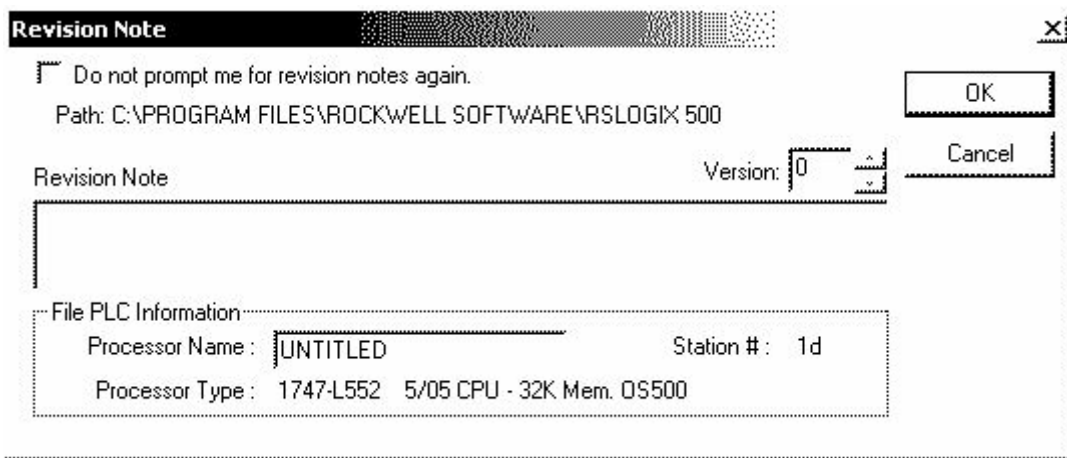
* Other settings can be left by default.

5) Click the [OK] button after complete the settings.

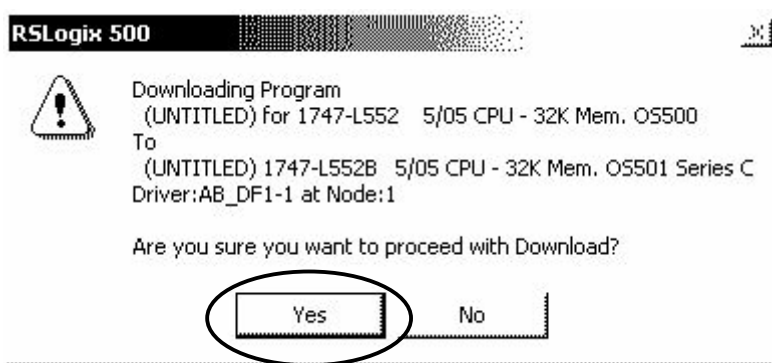
6) Download the driver settings. Click [OFFLINE] and select [Download...].



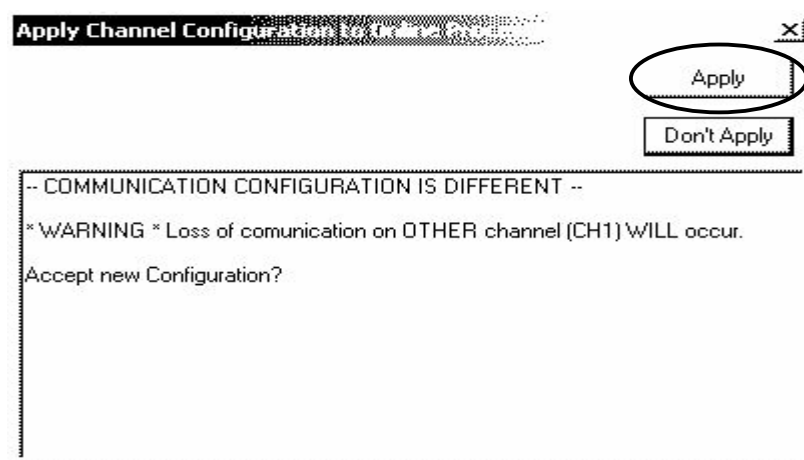
7) The dialog box as below will be displayed, and then click the [OK] button.



8) The following alert dialog box will appear, and then click [Yes].

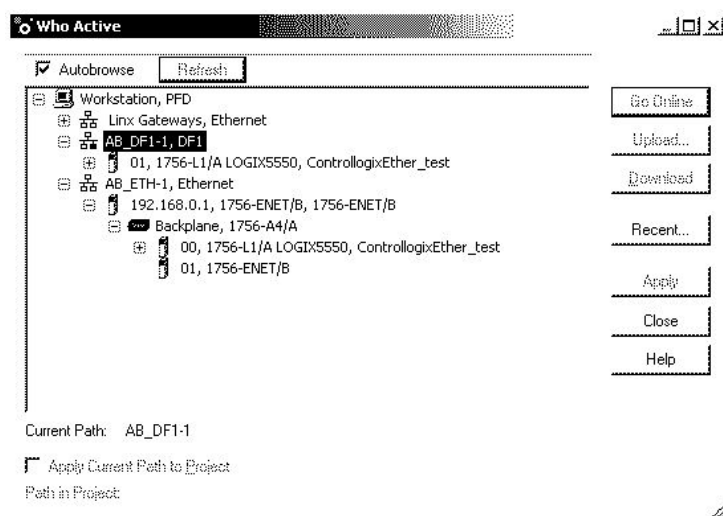


9) The below dialog box warning "Loss of communication on CURRENT channel (CH0) will occur." will be displayed, and then click [Apply].



The port settings for SLC500 are completed.

Confirm that RSLogix recognizes SLC500 Series before downloading the project file.

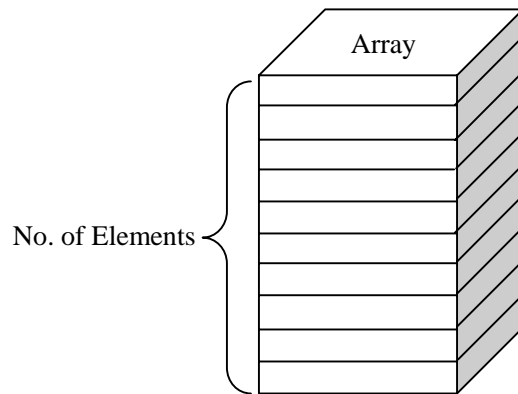


(RSLogix / Who Active screen)

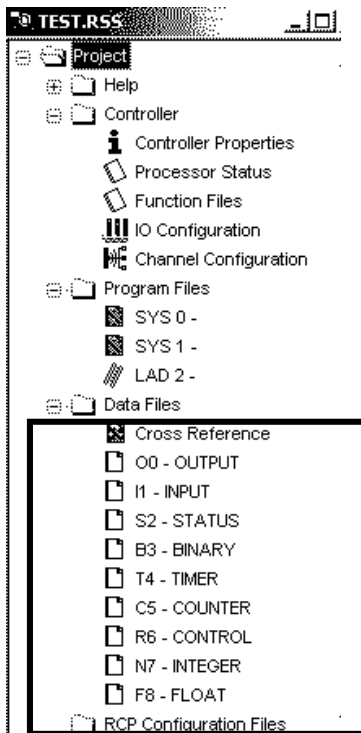
Assigning Addresses

With Rockwell PLC, the required arrays and number of elements are assigned on RSLogix500.

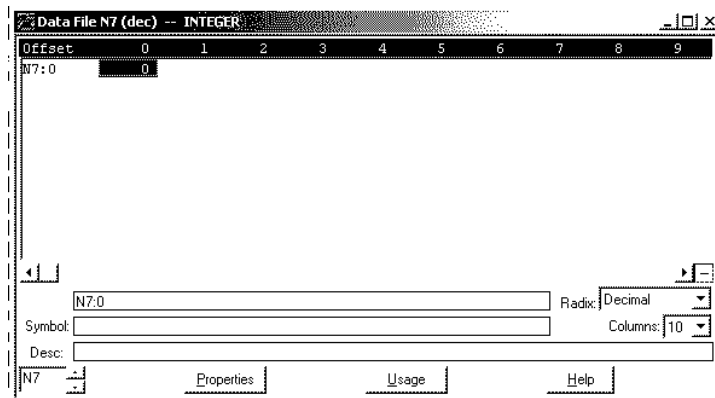
If you connect it to GP/GLC without assigning here, a host communication error will occur.



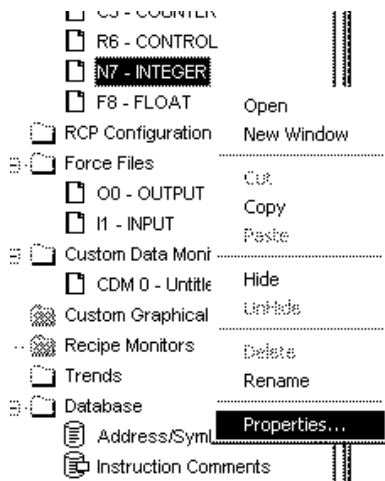
[File Type]



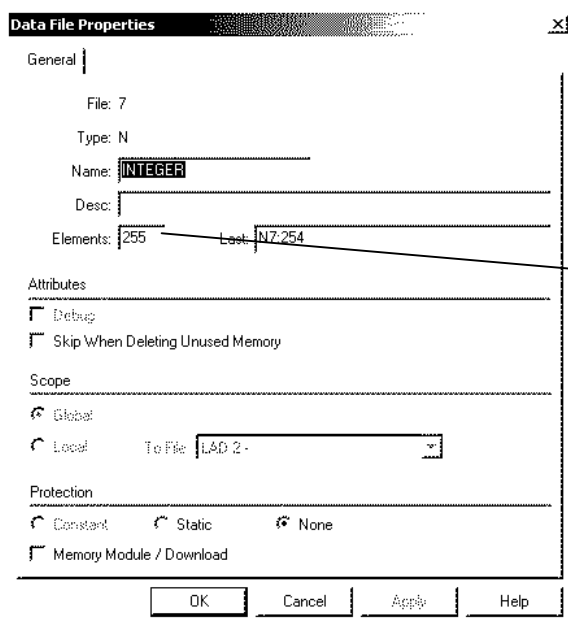
The project file has array types and array numbers as left.



Only one element exists by default. Because N array to which the system start address is assigned needs 20 elements, it is necessary to increase elements.



To increase these elements, start setting as left.



Enter the number of required elements.

* N7 needs at least 20 elements to assign the system start address.

Data File N7 (dec) -- INTEGER

Offset	0	1	2	3	4	5	6	7	8	9
N7:150	0	0	0	0	0	0	0	0	0	0
N7:160	0	0	0	0	0	0	0	0	0	0
N7:170	0	0	0	0	0	0	0	0	0	0
N7:180	0	0	0	0	0	0	0	0	0	0
N7:190	0	0	0	0	0	0	0	0	0	0
N7:200	0	0	0	0	0	0	0	0	0	0
N7:210	0	0	0	0	0	0	0	0	0	0
N7:220	0	0	0	0	0	0	0	0	0	0
N7:230	0	0	0	0	0	0	0	0	0	0
N7:240	0	0	0	0	0	0	0	0	0	0
N7:250	0	0	0	0	0	0	0	0	0	0

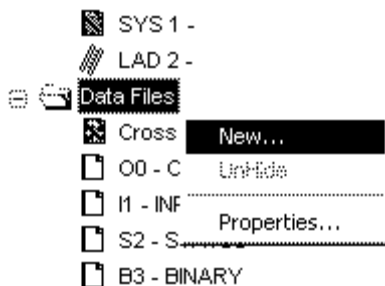
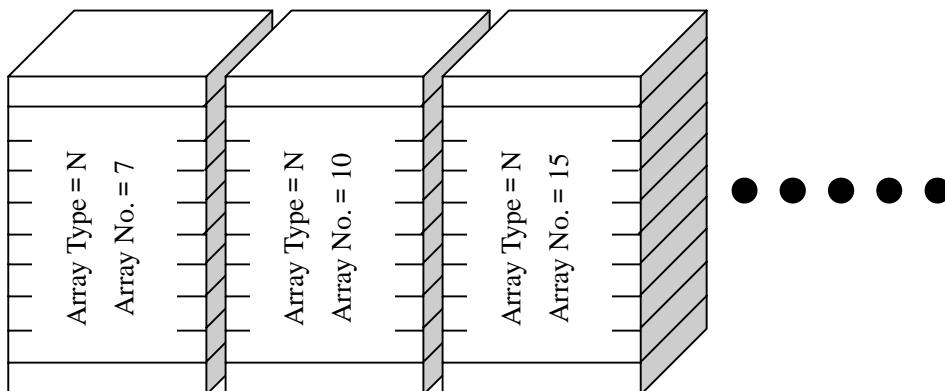
N7:254
 Symbol:
 Desc:
 N7 Properties Usage Help

As you can see left, 255 elements have been created in N7.

[Creating New Array]

It is possible to create multiple arrays with Rockwell PLC.

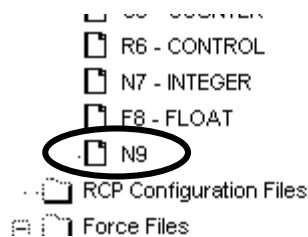
e.g.)



To start creating new arrays, follow as left.

The 'Create Data File' dialog box is shown with the following fields and annotations:

- File:** 9 (Annotated: Specify the array number.)
- Type:** Integer (Annotated: Select the array type.)
- Name:** (Empty field)
- Desc:** (Empty field)
- Elements:** 255 (Annotated: Enter the number of the required elements.)
- Attributes:**
 - ☐ Debug
 - ☐ Skip When Deleting Unused Memory
- Scope:**
 - ☒ Global
 - ☐ Local To File: 2
- Protection:**
 - ☐ Constant
 - ☐ Static
 - ☒ None
 - ☐ Memory Module / Download
- Buttons:** OK, Cancel, Help



N9 has been newly created with 255 elements.

Following this way, create arrays and elements towards each array type.

Duplication of array numbers following array type is not allowed. For example, you cannot create such as N15, B15.