Allen Bradley PLC connection procedure

(RSLogix 500 Version 3.1.9, RSLinx Version 2.1)

- <u>Step 1 5:</u> RSLinx start up procedure (Sheet 2 to 6)
- <u>Step 6 11:</u> (SLC 5/03, 5/04 PLC's using the 1747-CP3 serial cable) (Sheet 7 to 9)
- <u>Step 12 16:</u> (SLC 5/01, 5/02, 5/03 PLC's using the 1747-PIC box) (Sheet 10 to 12)
- Step 17 19: RSLogix 500 start up procedure (Sheet 13 to 16)



SLC5/04



RSLinx Setup procedure

Step 1: Start **RSLinx Version 2.1** using the Microsoft Window 'Start' button

Note: Always start RSLinx first.

Make sure the computer cable is <u>NOT</u> plugged into the front of the SLC500 (RS232 port – serial cable or DH-485 port if a PIC cable is being used).

		🔚 RSLinx 🔹 🕨	🇞 Backup & Restore Utility
🗐 WinZip	🔚 Rockwell Software 🔹 🕨		🤣 RSLinx Online Reference
Microsoft PowerPoint		1	🇞 RSLinx Service Control Panel
			💫 RSLinx
			C Shortcuts
Favorites			🗑 Uninstall RSLinx 2.1
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If you receive <u>either</u> of the following error messages when starting RSLinx, it means that you have some other program running that currently has control of the COM port (usually COM1). Simply hit OK, and then close any program that might be using the COM port to continue.



Step 2: This screen shows that RSWho is open and no communication driver is currently being used.
 Go to step 3 if RSWho is not already open.



This screen shows that RSWho is open and **RS232 DF1** communication driver is currently being used.

Go to step 4 if RSWho is already open.



This screen shows that RSWho is open and **DH-485 (PIC box)** communication driver is currently being used. *Go to step 4 if RSWho is already open.*

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🖻 🖁 🖉 🕲 🖉 😢		
Autobrowse Refresh	Not Browsing	
⊡ झि Workstation, BINHN किक्कि Linx Gateways, Ethernet किक्कि AB_PIC-1, DH-485	Linx AB_PIC-1 Gatewa DH-485	
For Help, press F1	CAP NUM 02/07/00	02:59 PM //

Step 3:If RSWho is not open as shown below,
Select 'Communication → RSWho' to open it.
Skip this step if RSWho is open (see step 2)

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Step 4: Select 'Communication → Configure Drivers'



This screen shows that no communication driver is currently configured.

Configure Drivers		
Available Driver Types:	✓ <u>A</u> dd New	<u>Close</u> Help
Configured Drivers:		
Name and Description	Status	Configure
		Startup
		Start
		Stop
		Delete

Note: If you already have some drivers listed above, select and delete them to free up your COM port.

If you encounter any issues while deleting any drivers such as:



- Make sure that the cable is not plugged into the computer.
- Close RSWho window.
- After RSWho is close, now try to select and delete the driver.

Step 5: Select Driver from 'Available Driver Types' and press 'Add New' button

Ethernet to PLC-5/SLC-5/5820-El	Add New	<u>L</u> iose <u>H</u> elp
Allen-Bradley 1784-KTC(X) devices PEC-5 (DH+) Emulator	Status]
SLC 500 (DH485) Emulator 1784-KT /KTX(D)/PKTX(D)/PCMK		Configure
1747-PIC / AIC+ Driver 1784-PCC (PCMCIA for ControlNet)		Star <u>t</u> up
DF1 Polling Master Driver DF1 Slave Driver		Step
		Delete
		Delete

Note: Typical Driver's used:

- RS-232 DF1 Devices for SLC 5/03, 5/04 PLC's using the 1747-CP3 serial cable
- 1747-PIC / AIC+ Driver for SLC 5/01, 5/02, 5/03 PLC's using the 1747-PIC box.

Go to Step 6 if RS-232 DF1 driver is selected. Go to Step 12 if 1747-PIC / AIC+ driver is selected.

RS-232 DF1 Driver

Step 6: If RS-232 DF1 driver is selected. Press 'OK' for default name.

Add New RSLinx Driver	×
Choose a name for the new driver. (15 characters maximum)	OK
AB_DF1-1	Cancel

Step 7: Make sure you have the cable (1747-CP3) plugged into the front of the SLC500 (RS232 port) and plugged into your computer. If so, simply press the '**Auto-Configure**' button. The Auto-Configure will automatically detect the settings of Channel Zero of the SLC500 processor.

Configure Allen-Bradley DF1 Communications Device					
Device Name: AB_DF1-1					
Comm Port: COM1 Device: SLC-CH0/Micro/PaneView					
Baud Rate: 19200 Station Number: 00 (Decimal)					
Parity: None 💌 Error Checking: CRC 💌					
Stop Bits: 1 Protocol: Full Duplex					
Auto-Configure Auto Configuration Successful!					
Use Modem Dialer Configure Dialer					
Ok Cancel <u>D</u> elete <u>H</u> elp					

<u>Step 8:</u> The device window should show SLC-CH0/Micro/PanelView and the Auto Configuration was successful. If so, press 'Ok'.

If you see any error, please verify that you are using the correct cable and the cable is securely plugged into the RS-232 port of your computer and the SLC-500 processor.

<u>Step 9:</u> After successfully configuring your COM port to use the DF1 driver, you should see the following screen (make sure under Status, it says Running)

Configure Drivers		
Available Driver Types:		
RS-232 DF1 Devices	▼ Add New	
Configured Drivers:		
Name and Description	Status	
AB_DF1-1 DH485 Sta: 0 COM1: RUNNING	Running	Configure
		Startup
		<u>S</u> tart
		Stop
		Delete
1		

Step 10: You can close the above window by pressing '**Close**' button. Click on the AB_DF1, DH485 driver and you should see your computer and the SLC500 icon as shown below.

🗞 Rockwell Software RSLinx Gateway - [R	5Who - 1]		
💑 <u>File E</u> dit <u>V</u> iew <u>C</u> ommunications <u>S</u> tation	<u>D</u> DE/OPC <u>W</u> indow <u>H</u> elp		_ 8 ×
🖻 🔠 🎜 🐻 🛍 🜬 🕺			
Autobrowse Refresh	Browsing - node 0 found		
Image: Workstation, BINHLAPTOP Image: Linx Gateways, Ethernet Image: Linx Gateways, Ethernet <td< td=""><td>00 01 DF1-COM1 CPMDEM01</td><td></td><td></td></td<>	00 01 DF1-COM1 CPMDEM01		
For Help, press F1		NUM 02/0	11/00 03:08 PM //

If you see an 'X' on top of the processor icon, (as shown below), that indicates that the computer is not communicating with the processor. Please verify that you are using the correct cable (1747-CP3) and the cable is securely plugged into the RS-232 port of your computer and the RS-232 port of the SLC-500 processor and the communication driver is correct.

You must correct the problem and clear the 'X' before going to the next step.



Step 11:You can minimize RSLinx but DO NOT close it since RSLogix500requires Rslinx running for upload/download or going online.

Go to Step 17.

1747-PIC / AIC+ Driver

<u>Step 12:</u> If 1747-PIC / AIC+ driver is selected. Press '**Ok**' for default name.

Add New RSLinx Driver	×
Choose a name for the new driver. (15 characters maximum)	OK)
AB_PIC-1	Cancel

<u>Step 13:</u> Make sure you have the cable (1747-PIC) plugged into the front of the SLC500 (DH485, RJ45 phone jack port) and plugged into your computer. If so, simply press the '**Ok**' button.

Configure Allen-Bradley PIC Communications Device	
Device Name: AB_PIC-1	
Comm Port: COM1 Station Number (Dec.): 00	
1/0 Port: 3f8 🚽 Max. Station Number (1-31): 31	
Interrupt: 4	
Baud Rate: 19200 💌	
Ok Cancel <u>D</u> elete <u>H</u> e	elp

<u>Step 14:</u> After successfully configuring your COM port to use the PIC driver, you should see the following screen (make sure under Status, it says Running)

Configure Drivers		
Available Driver Types:		Close
	► <u>A</u> dd New	
Confirmed Drivery		
Configured Divers.	Chabin	_
AB_PIC-1 DH485 Sta: 0 COM1: RUNNING	Running	Con <u>fig</u> ure
		Startup
		Start
		Stop
		Delete

Step 15: You can close the above window by pressing '**Close**' button. Click on the AB_PIC, DH485 driver and you should see your computer and the SLC500 icon as shown below.



If you see an 'X' on top of the processor icon, (as shown below), that indicates that the computer is not communicating with the processor. Please verify that you are using the correct cable (1747-PIC) and the cable is securely plugged into the RS-232 port of your computer and the DH485, RJ45 phone jack port of the SLC-500 processor and the communication driver is correct.

You must correct the problem and clear the 'X' before going to the next step.



<u>Step 16:</u> You can minimize RSLinx but **DO NOT close it since RSLogix500** requires RSLinx running for upload/download or going online.

Go to Step 17.

RSLogix 500

<u>Step 17:</u> Start **RSLogix 500 Version 3.1.9** using the Microsoft Window 'Start' button.

		🔚 RSLogix 500 English 💦 🕨 🕨	n 🛷 Help
🗐 WinZip	🔚 Rockwell Software 💦 🕨 🕨		🐔 Installed Products Release Notes
Microsoft PowerPoint			🐮 RSLogix 500 English
Con a			🗋 Sample Files
Programs			C Shortcuts
Image: Image			🎡 UnInstall RSLogix 500 English
Documents			
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RSLogix 500 start up screen will appear.

RSLogix 500	
<u>F</u> ile <u>V</u> iew <u>C</u> omms <u>T</u> ools <u>W</u> indow <u>H</u> elp	
OFFLINE Image: No Forces No Edits Image: Forces Disabled	→ □ ∃ E B E <> -> -> ->->->->->->->->->->->->->->->
Driver: AB_DF1-1 Node : 10	
For Help, press F1	XREF 0:0000 APP READ

<u>Step 18:</u> Select 'File \rightarrow Open' from the pull down menu. Open the project folder then select the appropriate project from the list. Press the 'Open' button.

Open/Import SL	C500 Program		? ×		
Path: C:\Prog	Path: C:\Program Files\Rockwell Software\RSLogix 500 English\Project				
Look jn: 🦳	Project	- 🗈 🗹	<u>→</u>		
CPM30SHI CPM30SHI CPM30SHI CPM30SHI CPM60_PL CPM60_PL CPM60_PL CPM60_PL CPm60_PL	DW.RSS DW_BAK294.RSS DW_BAK295.RSS .C.ACH .rss .C_test.ACH .ach	CPMDEM01_rss CPMDEM01_B CPMDEM01_B CPMDEM01_B CPMDEM01_B Curing.ach Curing.ach Ic500dmo.ach	AK263.RSS AK264.RSS AK265.RSS		
File <u>n</u> ame:	Cpmdemo1.rss		<u>O</u> pen		
Files of <u>t</u> ype:	RSLogix (*.RSS,*.ACH, *.S	LC) 🔽	Cancel <u>H</u> elp		
Schema: File PLC Inform Processor Processo	RSLogix 113 : File 113 nation Name : CPMDEM01 r Type : 1747-L541 5/04	St CPU - 16K Mem. OS40	ation # : (2 Dec))1		
Revision Note		Ve	rsion: 240 💽		
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	<u>E</u> EPROM	W/FRON	TE PRODUCTS MA IT FEED DRAWER	ACHINE AND	
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Processor S	ation	DUMMY	DUMMY		DUMMY
Select Driver, processor addr	eve etc			XBEE 2:0000	APP BEAD /

<u>Step 19:</u> Select 'Comms → System Comms'

This screen shows that **RS232 DF1** communication driver is currently being used.

Communications		×	
Autobrowse Refresh	Not Browsing	ОК	
⊡		Cancel	
	00 01 DF1-COM1 CPMDEM01	<u>O</u> nline	To go ONLINE with the processor
			To SAVE program from processor to computer
		Ownload	To LOAD program from computer to processor
	<u> </u>		
Current Selection		Beolu Timeout:	
Server: RSLinx API I	Driver: AB_DF1-1	10 (Sec.)	
Node: 1 Decimal (=1 Octal)	Type: SLC500	Apply to Project	

- Select AB_DF1-1, DH-485
- Select processor that you want to connect to. (Example: CPMDEMO1)

This screen shows that RSWho is open and **PIC box DH-485** communication driver is currently being used.

Communications		×	
Autobrowse Refresh	Browsing - node 1 found	OK	
, Workstation, BINHN 器 Linx Gateways, Ethernet		Cancel	
AB_PIC-1, DH-485	00 01 RSI-PIC CUBERNEW	<u>O</u> nline	To go ONLINE with the processor
		<u>U</u> pload	To SAVE program from processor to computer
			To LOAD program from computer to processor
Current Selection Server: RSLinx API	Driver: AB_PIC-1	Reply Timeout:	
Node: 1 Decimal (=1 Octal)	Type: SLC500	Apply to Project	

- Select AB_PIC-1, DH-485
- Select processor that you want to connect to. (Example: CUBERNEW)
 - <u>Note:</u> It is recommended to use this method for getting Online, Uploading, or Downloading with the processor.
 - Press the '**Online**' Button
 - Press the '**Upload**' Button
 - Press the '**Download**' Button