# How to setup and run RSLogix Emulation (SLC 500, Micrologix 1000)

Monday, April 07, 2014 11:12 AM

## **Original Instructions:**

http://www.plcdev.com/book/export/html/622

### **Download Links:**

<u>http://www.ab.com/programmablecontrol/plc/micrologix/downloads.html</u> \*NO! <u>http://www.rockwellautomation.com/support/plc/micrologix.page</u>

#### **RSLink Lite**

http://www.rockwellautomation.com/resources/downloads/rockwellautomation/zip/support/drives/RSLinxClassicLitev2.57.exe

#### **RSLogix Micro Starter Lite**

http://files.rockwellautomation.com/Public/Micro\_Lite\_830.zip

#### **RSLogix 500 Emulator**

http://mms.rockwellautomation.com/idc/groups/multi\_media/documents/multimedia/rsemulate500.zip

#### Setup RSLinks: (Taken from original instructions)

- 1. Under the Communications menu select Configure Drivers.
- 2. Under the Available Drivers Types select the SLC 500 (DH485) Emulator driver and click the Add New button.
- 3. You can give the driver a name but I just leave it at the default of EMU500-1.
- 4. Leave the configuration options as Station Number 00 and click OK.

Your driver should now be running and look like the picture below.

Configure Drivers		? 🔀
Available Driver Types:		Close
SLC 500 (DH485) Emulator driver	▼ Add New	Help
Configured Drivers:		
Name and Description	Status	
EMU500-1 SLC 500 (DH485) Emulator Sta:00	Running	Configure
		Startup
		Start
		Stop
		Delete
	i i i	

Close the Configure Drivers dialog box and close RSLinx. Actually RSLinx is now running in the background and you'll probably see its little icon in the system tray.

### Setup RSLogix Micro Starter Lite:

Create a new program.

Sel	ect Processor <sup>-</sup>	Гуре			•
	Proc	essor Name: TEST			
	Bul.1763	MicroLogix	1100	Series B	
	Bul.1763	MicroLogix	1100	Series A	
	Bul.1761	MicroLogix	1000	Analog	3
	Bul.1761	MicroLogix	1000	DH-485/HDSlave	
	Bul.1761	MicroLogix	1000		2
		. An a sheat water and the second		and the second s	



The next very important step is to verify the project with the Edit > Verify Project menu item. This will compile the project and get it ready for the emulator.

🏨 RSLogix Micro Starter Lite - TES					
File	Edit	View	Search	Comms	Tools
D	Ur	ndo		Ctrl+Z	рģ
	Redo Cut			Ctrl+Y	
				Ctrl+X	- 閂)
No	Сору			Ctrl+C	
Div	Paste			Ctrl+V	
1	Delete		Del		
	Insert		Ins		
	Append				
	Insert Rung				11
	Append Rung				
	Verify File			3	
	Verify Project				- K
	Q	uick Key	/ Mode	Ctrl+E	
- P	e vanne	21 N	Name and	1 mar 1	A WAY

Save the project as something like Test.RSS in an easy place to find like My Documents.

## **RSEmulator 500**

The emulator lets us test our work by running a virtual PLC. We'll be able to download our program to it and run it in a very similar fashion to a real PLC. Start the emulator with the *START > All Programs > Rockwell Software > RSLogix Emulate 500 > RSLogix Emulate 500* shortcut. The emulator is pictured below. I know. It doesn't look like much but it gets the job done.

🗾 RSLogix Emulate500 - C:\DOCUMENTS AND S 🖃 🗖 🔀				
File Settings Ladder	Help			
2 2 b	-	RUN HUT TST ONE	SCN	
Press ALT to choose com	mands		11.	

Select *File > Open* and open the RSLogix project you created earlier (I named mine TEST.RSS). In the dialog box that pops up put the Station # as 1 and click *Ok*.

RSLogix Emulate500 - TEST	
Main File # 2 Start Rung 0 End Rung -1	Debug File # 0 Start Rung 0 End Rung -1
Station # 1 Decimal (1 Octal) V Restore Mode on Start	Priority 40
Ok _	Cancel Help

Believe it or not but the emulator is now ready. Leave it running and go back to your project in RSLogix Micro.

## **Testing the Ladder Logic:**

In RSLogix Micro Starter select the *Comms > System Comms* menu item. The following dialog box will pop up.

Communications				
Autobrowse Refresh	Browsing - node 1 found	OK		
🖃 🔜 Workstation, GROUCHO	Address Device Type Online Name Status	Cancel		
⊡ 🚠 Linx Gateways, Ethernet ⊡ 🚠 EMU500-1, DH-485	Solution Pro 00 Workstation Pro 01 MicroLogix 1000 TEST Pro	Help		
UU, Workstation,		Online		
		Upload		
		Download		
<	<			
Current Selection Server: RSLinx API Node: 1 Decimal (=1 Octal)	Driver: EMU500-1	eply Timeout: 10 (Sec.)		
	Apply	to Project		

In the left hand pane, drill down and select the 01, MicroLogix 1000, TEST processor. Yours might look a little different if you selected different hardware or gave the processor a different name. For good measure make sure *Apply to Project* is checked and then click on *Download*. When prompted to go Online click on Yes.

If successful you'll see the ladder picture spinning round on the online toolbar. To scan the ladder logic put the processor into Run mode by clicking on the arrow to the right of mode status (REMOTE PROGRAM).



To test the ladder logic, change the input state by right clicking on the address and selecting toggle bit.



You will see the instruction go green indicating it is true and it will make the output instruction turn green also indicating the output is turned on. That's it! You get all that for the cost of a download. Now break out the manuals and start learning about all the different instructions.