

Hardware

20 Port Serial Switch

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Purpose: To illustrate the basics of connecting to DLI's 20 Port Serial Switch, and how to automate control via Comm Center.

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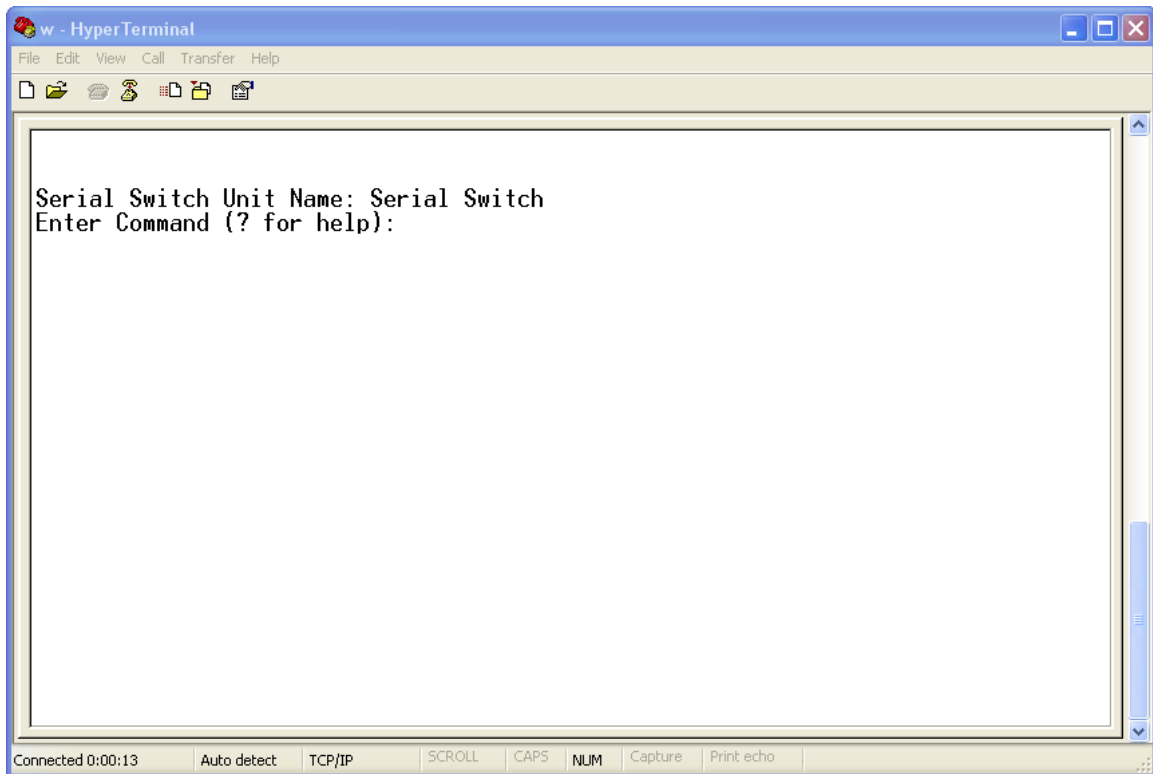
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1) Basic Connections / Commands – Connecting to the 20 port serial switch is very simple with Hyperterminal. Simply use a straight through cable to connect the console port to a serial port on your PC. If you are connecting with a cellular modem like the AirLink Raven XT, you will use a null modem cable.

To connect instruments use the cable opposite from what you would normally use to connect to a laptop / EnivdasFW logger. Example, for a TEOM use a null modem cable.

Open Hyperterminal and begin your connection. If you are using a COM port, the default baud rate is 9600. If you are using a cellular modem, be sure that you know the IP address of the modem and the port forwarding to the serial cable.

When connected you will see a blank screen. Type a tilde (~), wait about a second and type another tilde. Then you should see a screen like this:



? will give you a list of commands. The list and an explanation follows:

```
Serial Switch Unit Name: Serial Switch
Enter Command (? for help):

      DLI SS20 v. 2.0.2
Valid commands:
A-T    Toggle the specified port
Z      Turn on all ports (for broadcast)
W      Turn off all ports
U      Change Baud Rate
V      Show port settings
Y      Change Port or Unit Name
1      Toggle delay requirement between tildes (~)
X, Esc Exit this menu

Enter Command (? for help):
```

A or B or ... or T – Toggle the Specified port – This will allow you to turn on and off the labeled ports on the switch. Ports are as follows:

	A	B	C	D	E	F	G	H	I	J
Console	K	L	M	N	O	P	Q	R	S	T

Z – Turn on all ports – This command will turn on all ports to allow the command to be sent to all connected devices.

W – Turn off all ports – This command will turn off all the ports. No commands will be sent to devices.

U – Change the baud rate – This only changes the baud rate of the menu. The default is 9600. This will need to be the same speed as all the devices connected to the ports if using Comm Center to poll.

V – Show port settings – This will display the On / Off status of all ports.

Y – Change Port or Unit Name – Allows you to name the ports. Will not be used by any applications.

1 – Toggle delay requirement – If you want faster access to your menu, you can turn off the requirement for a delay between ~. Be aware that automated commands that transmit two tildes WILL trigger the menu.

X – Exit – Exit the menu and begin transmitting commands to devices.

2) Automated Polling with Comm Center – After configuring the connection parameters in Comm Center (Sockets / Leased / Telephone), you will need to use the password field to enter the Serial Port Switch Commands.



The Envista ARM Setup Sta Password field can accept multiple commands with designated wait times.

- Commas separate commands
- Brackets indicate pause time in seconds
- Carets allow for Control-Commands
- Anything else is a string

A recommended string to communicate with a device on port J would be:

~, [1], ~, [0.5], W, [0.5], J, [0.5], X

In this command:

- ~, [1], ~ sends ~ ~ to access the menu switch.
- [0.5], W waits for the menu to respond and turns OFF all ports
- [0.5], J waits for the menu to respond and turns ON port J
- [0.5], X waits for the menu to respond and Exits the menu

After these commands sent to the switch, all commands will be sent to port J.

3) Additional Notes

- Opening multiple ports is not beneficial. The commands are sent to all ports and the first port to respond occupies the communication.
- DLI website: <http://www.digital-loggers.com/>
- Product manual: <http://www.digital-loggers.com/ss20manual.pdf>
- Product URL: <http://www.digital-loggers.com/ss20.html>