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April 23, 2006

Thunder Eagle® SP-100 SignPrinter® Interface Instructions

1) Background

- a. The SP-100 (SignPrinter Interface) is an easy to use Ethernet to serial data converter using a Newport iServer web server and a pc board with a power supply and connectors to make network connections plug and play.
- b. The SP-100 has one each of an RJ-11 connector for the led signboard, three DB9 connectors (for a printer, email/paging out, and data in, and a screw terminal wire connector).
- c. The power supply is 12VDC. A power led shows that the unit has power.
- d. The SP-100 is designed to be a smart interface between the FipsSender software and remote led signboards and printers.
- e. A strobe light will flash when a message is sent to page Z of the led signboard.
- f. A software menu driven timer has been added to turn off the strobe light a preset time after activation.

2) Setup SP100

- a. Power up the SP100 and make sure the power led and the Ethernet status leds light. If the Ethernet port is not connected to a network, it is normal for the Ethernet status light to go out.
- b. Run the iConnect software on your PC. See www.thuneagle.com/login WebServer configuration information for details concerning the iServer software.
- c. Connect the SP100 to the same network as the PC, or use a crossover cable for direct connection. NOTE: The PC and the iServer MUST be on the same network for programming.
- d. Enter the MAC address for the iServer, which appears on a label on the SP100, into the iConnect software. Assign an IP address to the SP100 and click the Send IP button on the iConnect software.
- e. In about 30 seconds a message should appear asking you to test the iServer. Click OK and then click the View Webpage button.
- f. The iServer homepage should appear. Click the update button.
- g. Click the configuration button.
- h. Enter the configuration password 12345678 and press ok.

3) Setup SP100

a. The SP100 configuration screen is as follows:

CONFIGURATION

Serial Communication

Baud Rate: 9600 Data Bits: 8 bits Parity: none Stop Bits: 1 bit

Flow Control: none Transceiver: RS-232 Modbus/TCP: disable

End Character(Hex): 0A Forward End Char: enable Timeout: 0000 msec

Serial Port Password: disable 1234abcd

Terminal Server

TCP/UDP: TCP Server Type: slave Number of Connections: 1 Local Port: 02000

Connection Control: not used Connection Timeout: 00000 X 10 msec

Remote Access(Tunneling)

Remote Access: disable Remote IP Address: 0.0.0.0 Remote Port: 02000

Save Reset

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b. The host configuration is as follows:

Baud: 9600
 Data Bits 8
 Parity None
 Stop Bits 1
 Flow Control None
 Transceiver RS232
 Modbus/TCP Disable
End Character 0A (that is zero A)
 Forward End Character Enable
 Timeout 0000
 Serial Port Password Disable
 TCP/UDP TCP
 Server Type Slave
Number Connections 1
 Local Port 2000
 Connection Control Not Used
 Timeout 0000
 Remote Access Disable
 Remote IP Address 0.0.0.0
 Remote Port 2000

c. Check the system

- 1) Connect one end of the supplied RJ11 cable to the led signboard and the other end of the cable into the signboard connector in the SP100 in the rear of unit
- 2) Press the program/test button on the SP100. All of the leds and the strobe should begin to flash. A test message should appear on the led signboard. If the test message does not appear on the signboard, open the SP100 and reverse the DB9 transmit jumpers (from 1-2 to 2-3) and (2-3 to 1-2) for the led signboard. Try the test/program button again and make sure the test message appears on the led signboard.
- 3) Press the reset button to stop the lights from flashing.
- 4) Connect an Ethernet cable to the SP100 and make sure the green Ethernet status light comes on.
- 5) Try to ping the SP100 from another computer on the network (start/run/cmd and ping xxx.xxx.xxx.xxx and return).
- 6) Send a message from the FipsSender to the SP100 and make sure it appears on the led signboard.
- 7) If you want to add a printer to the SP100, connect the printer to the rear of the SP100. A female/female db9 gender adapter may be required. Press the last email/page button on the SP100 and the last alert should print out.
- 8) Note: You can access the iServer from a web browser by typing in the IP address of the SP100. You can change all configurations of the iServer from the web browser. The password for the Access Control (password and IP address change) is 00000000 (eight zeros). Sometimes you need to first access the configuration menu (pw 12345678) and then return to the main menu before the iServer will let you access the Access Control area.

d. SignPrinter® Strobe TimeOut Timer

- 1) This feature was added to version 1.004 of the SP100 firmware to turn OFF the strobe light XX number of seconds after activation. Firmware version 1.004 MUST be loaded into the SignPrinter® to use this feature.
- 2) There are two menu driven features: a) enable/disable the timer (default is disabled) and, b) set the duration from one second to 18 hours.
- 3) To place the SignPrinter in programming mode: a) Connect a serial cable between the program port of the SignPrinter® and your pc/workstation. Bring up Hyperterminal
Start/Programs/Accessories/Communication/Hyperterminal The settings are 9600/8/1/None and NO flow control. Make sure, under ascii settings, that the 'add carriage returns to incoming lines' is checked.
- 4) Press and hold in the SignPrinter® program button during power up. All leds will come on and the menu should appear on the pc/workstation. Adjust the printer jumpers inside the SignPrinter® if a null modem cable is needed.

- 5) Press C to see current settings.
- 6) To activate the timer, press menu option 1 and select enable. Then press menu option 2 and select hours, minutes and seconds for the strobe timer.
- 7) Press C to verify your settings. Press E to end the set up mode. Most of the leds should go off.
- 8) Press the test button and verify that the strobe light goes off at about your preset time. (There is up to a 15 second variance from the setting depending on other features running in the SignPrinter.)