

ComBlock Assembly

COM5003B TCP-IP GATEWAY

- > COM1010 Convolutional Encoder
- > COM1002 BPSK Digital Modulator
- > COM1001 BPSK Demodulator
- > COM1009 Convolutional Decoder, K=7
- > COM5003B TCP-IP GATEWAY

Configuration

IP address to send data: 172.16.1.128

IP address to receive data: 172.16.1.129

FEC: K=7, rate 1/2

8 Mbit/s BPSK modulation (limited by the COM-1009 maximum throughput)

4 Mbit/s throughput for payload data.

Interface between modulator and digital demodulator is unsigned

Interpolation is enabled at the modulator

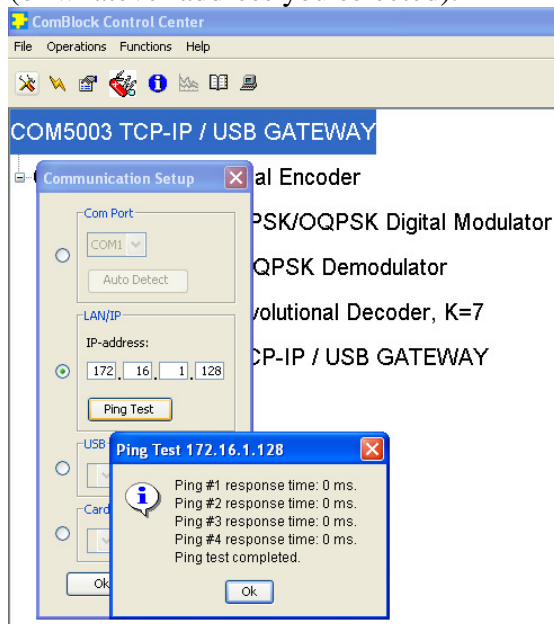
AFC disabled at the demodulator

HDLC enabled

CheckList

Step 1 Ping the transmit side

Using the Comblock control center, ping the transmit COM-5003 at address 172.16.1.128 (or whatever address you selected).



Problems configuring the COM-5003? Please see the basic settings document 5003_5003.pdf located in the 'Basic Settings' folder of the ComBlock CD-ROM.

Step 2 Ping the receive side

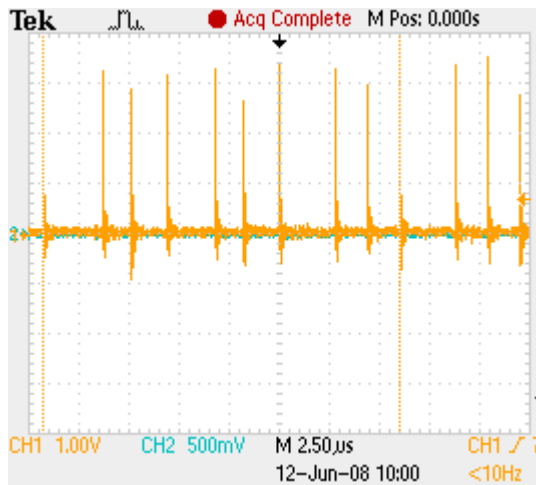
Ping the receive COM-5003 at address 172.16.1.129 (or whatever address you selected).

Step 3 Demodulator lock status

Using an oscilloscope, verify that the COM-1001 demodulator is locked. TP1 is at logic high (3.3V), thus indicating demodulator lock.

Step 4 Received HDLC frame markers

Using an oscilloscope, verify that the receive COM-5003 detects the 0x7E HDLC flags at TP8. As no payload data is being transmitted, the data stream consists of empty HDLC frames (consecutive 0x7E HDLC flags). TP8 should show nearly periodic pulses spaced 2 μ s (8-bit) apart in the average.



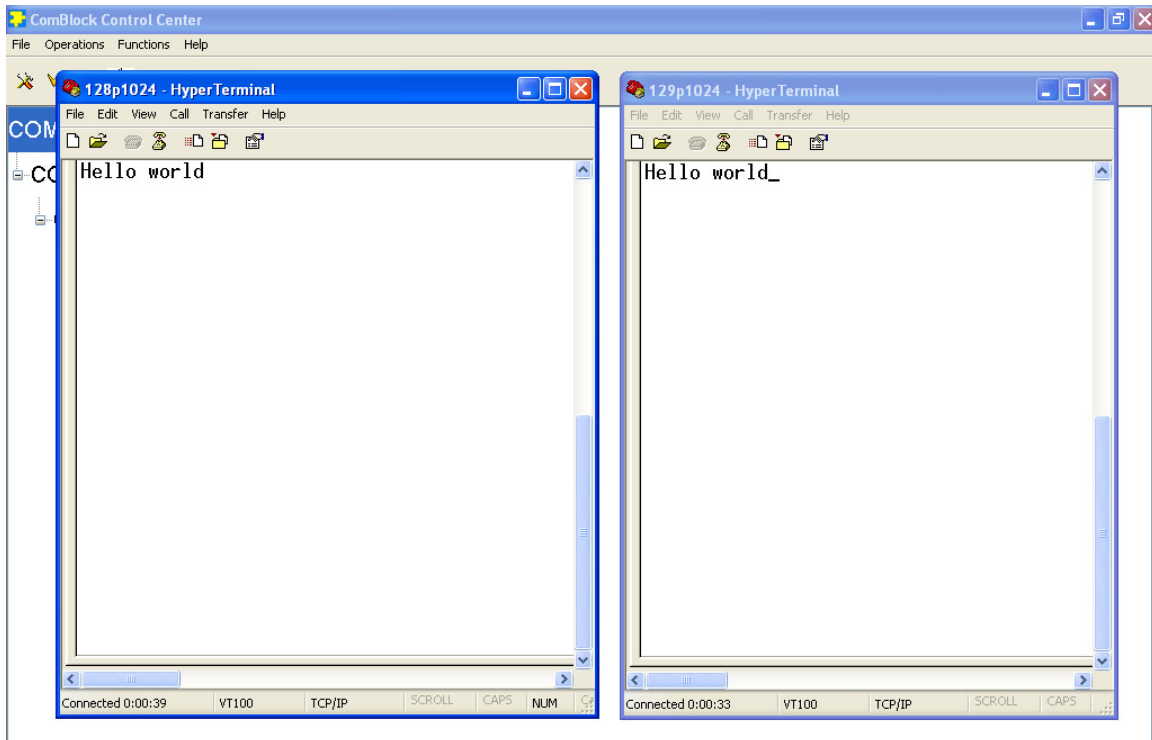
Step 5 End to end communication. Type text.

Start two instances of the Hyperterminal program and connect them to the transmit COM-5003 and receive COM-5003 respectively. Both use port 1024 for data transfers.

Need help configuring Hyperterminal? Please see the basic settings document 5003_5003.pdf located in the 'Basic Settings' folder of the ComBlock CD-ROM.

Type text on the hyperterminal window connected to the transmit COM-5003.

The text will appear in the other hyperterminal window after transiting through the complete ComBlock assembly.



Step 6 End to end text communication. Send text file.

A utility to send a file is available within the ComBlock Control Center, under the “Functions” menu. But first, make sure to close the sending Hyperterminal to release the IP port. Highlight the first COM-5003 and send a text file. The file should be received by the Hyperterminal at the other end of the link.

Note: make sure the file you are sending is composed of visible characters. A .txt file generally is.