Technical Bulletin

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Number: 30   LAN Interface Module – LIF-100

The LIF-100 LAN Interface Module is used to connect either the NC-100 or IRC-2000-2 to a local Ethernet.
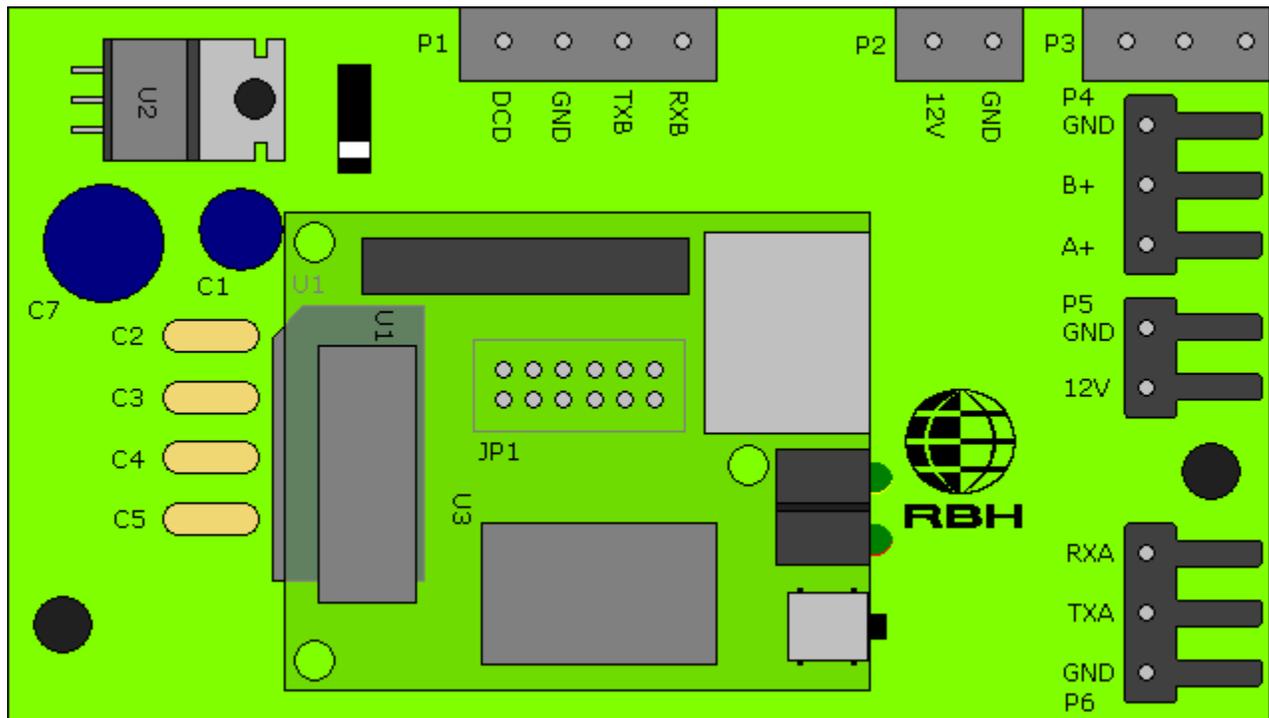

IRC-2000-TCP

The interface board is connected to the IRC board through connectors P1, P2, & P3. Connect power to P5. Additional IRC boards can be connected through P4 (*RS-485*). The Ethernet is connected to the upper board and is programmed through P6.

NC-100-TCP

The interface board is connected to the NC-100 via wires from P1 & P2. Power the NC and connect it to other NC's as you would normally. The Ethernet is connected to the upper board and is programmed through P6.

Status LEDs
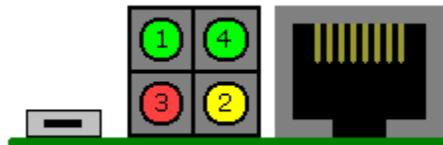
1. Serial Port (*Channel 1*) Status - Light solid green to indicate Channel is *idle*. Blinks green to indicate Channel 1 is connected to the network and *active*.

2. Serial Port (*Channel 2*) Status - Light solid yellow to indicate Channel is *idle*. Blinks yellow to indicate Channel 2 is connected to the network and *active*.

3. Diagnostics - Blinks or lights solid red in combination with the green (*Channel 1*) LED to indicate diagnostics and error detection.

    Red solid, green (*Channel 1*) blinking:

    > 1x EPROM checksum error
    > 2x RAM error
    > 3x Network controller error
    > 4x EEPROM checksum error
    > 5x Duplicate IP address on the network*
    > 6x Software does not match hardware*

    Red blinking, green (*Channel 1*) blinking:

    > 4x Faulty network connection*
    > 5x No DHCP response received*

4. Network Link Status - Lights solid green to indicate network port is connected to the network.

Non-fatal error

Programming

To program the interface module you can use a terminal or a PC running a terminal emulation program (*e.g. HyperTerminal*).

Connect your PC's serial port to P6 of the interface using a null modem type connection.

TX => Black (RX - Pin2)
RX => Red (TX - Pin3)
Gnd => White (Gnd - Pin5)
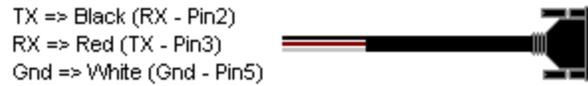
In HyperTerminal set the parameters of the COM port as shown below:
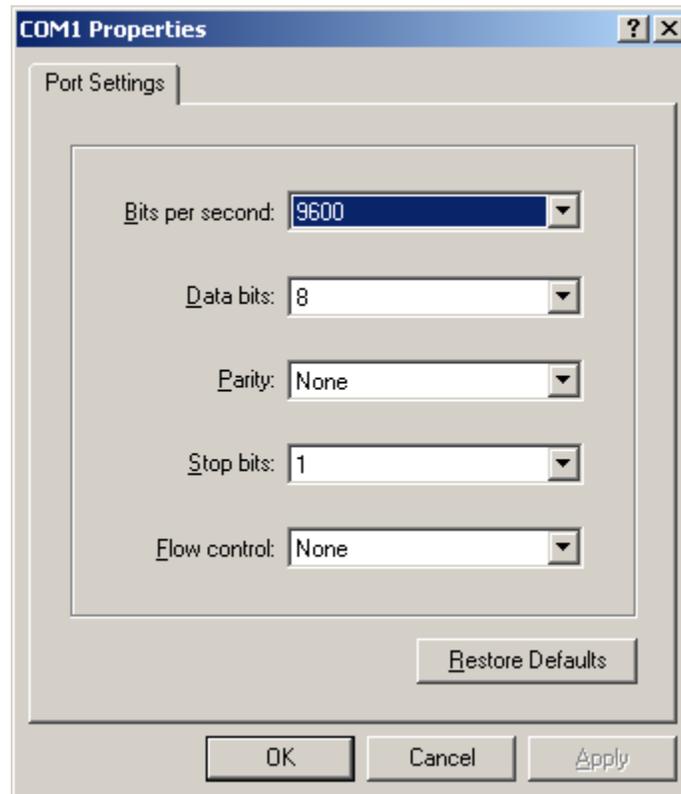
To enter Setup (*configuration*) Mode, cycle the power (*power off and back on*). After power-up, the self-test begins and the Diagnostic and Status LEDs start blinking. You must enter three lowercase "x" characters within one second after powering up in order to start the configuration mode.

Note: *The easiest way to enter Setup Mode is to:*
1) *First press and hold the reset button beside the LEDs,*
2) *Then hold down the "x" key on your keyboard,*
3) *Then release the reset button.*
4) *When the connection messages come up on the screen, release the "x" and press 'Enter'.*

Server Configuration

When you are in Setup Mode select **0** to configure the Device Server's basic parameters.

IP Address

Enter your IP address here.

Set Gateway IP Address

(Y)es or (N)o.

Gateway Address

Enter your gateway address here.

Netmask: Number of Bits for Host Part

Note: Class A is 24-bits, Class B is 16-bits, Class C is 8-bits.
(*255.0.0.0 is class A, 255.255.0.0 is class B, 255.255.255.0 is class C*)
255.255.254.0 is 9-bits
255.255.252.0 is 10-bits
255.255.248.0 is 11-bits
255.255.240.0 is 12-bits

Change telenet config password

Since the Telenet connection isn't being use this setting should be left at (N)o.

Serial Channel (*Port*) Configuration

Select **1** or **2** to configure the Device Server's channel-specific parameters.

Baudrate

For channel 1 enter a baud rate of 9600 (*channel 1 is the programming channe*l).

For channel 2 enter the baud rate to match the DIP switch setting on the panel (*enter 57,600 for the DIP switch setting for 56k on the IRC2000-2*).

I/F Mode

Enter 4C for RS-232, 8-bit, no parity, 1 stop bit.

Flow

Enter 00 for no flow control.

Port No.

Enter port number (*e.g. 3001 for channel 1 and 3002 for channel 2*). **The port number for channel 2 is entered into the network's Com settings.**

Connect Mode

Enter C0 for "Accept unconditional".

All other settings should be set to 0 by simply pressing enter until you get back to the configuration menu.

Exit Configuration Mode

Select **8** to exit the configuration mode without saving any changes, or select **9** to exit and save all changes. All values are stored in nonvolatile memory, and the Device Server resets