Section 1-6

FAX Telnet

In this section of the class we will connect to the FAX Ethernet ports and go through the important screens of the FAX GUI and a TELNET session. Also ways that these can be used to troubleshoot will also be discussed.

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Front Ethernet port is a shipped as DHCP Server (Not for connecting to your LAN). To connect make sure the PC is set for DHCP in IP properties.

Default IP address of 192.168.117.88. Type this address into web browser of your choice – GatesAir prefers Firefox. Internet Explorer seems to have issues displaying all of the screens, may need to clear cache

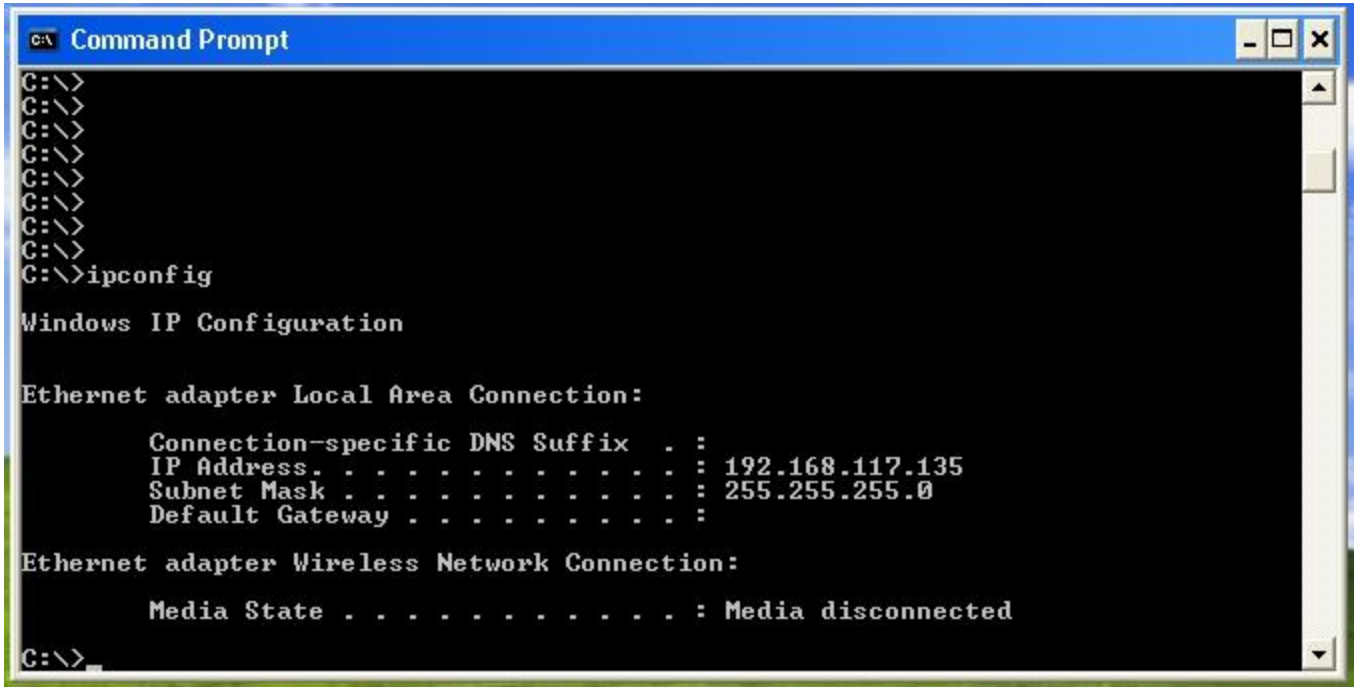
Can get GUI or Telnet session via either Ethernet port

Old Logins in () circa August 2013

There are 5 possible logins: netadmin (admin) (password: harris (admin)) for changing the other four logins. The default logins from factory are admin (harris or gates) (password: admin (harris or gates)) and user2,3,4 (password pass2,3,4).

No control when logged in as netadmin

All screens can viewed without logging in – no control/config changes can be made

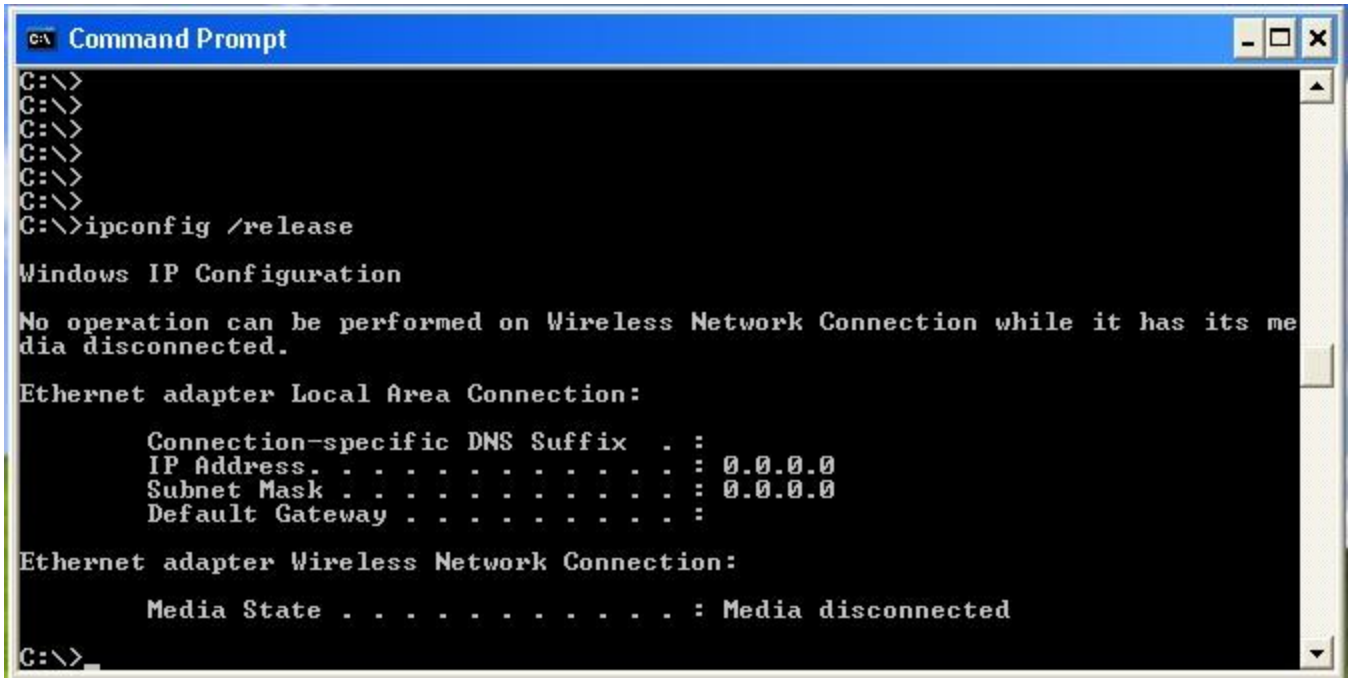


To open a telnet session, depending on the version of windows, open Command Prompt window.

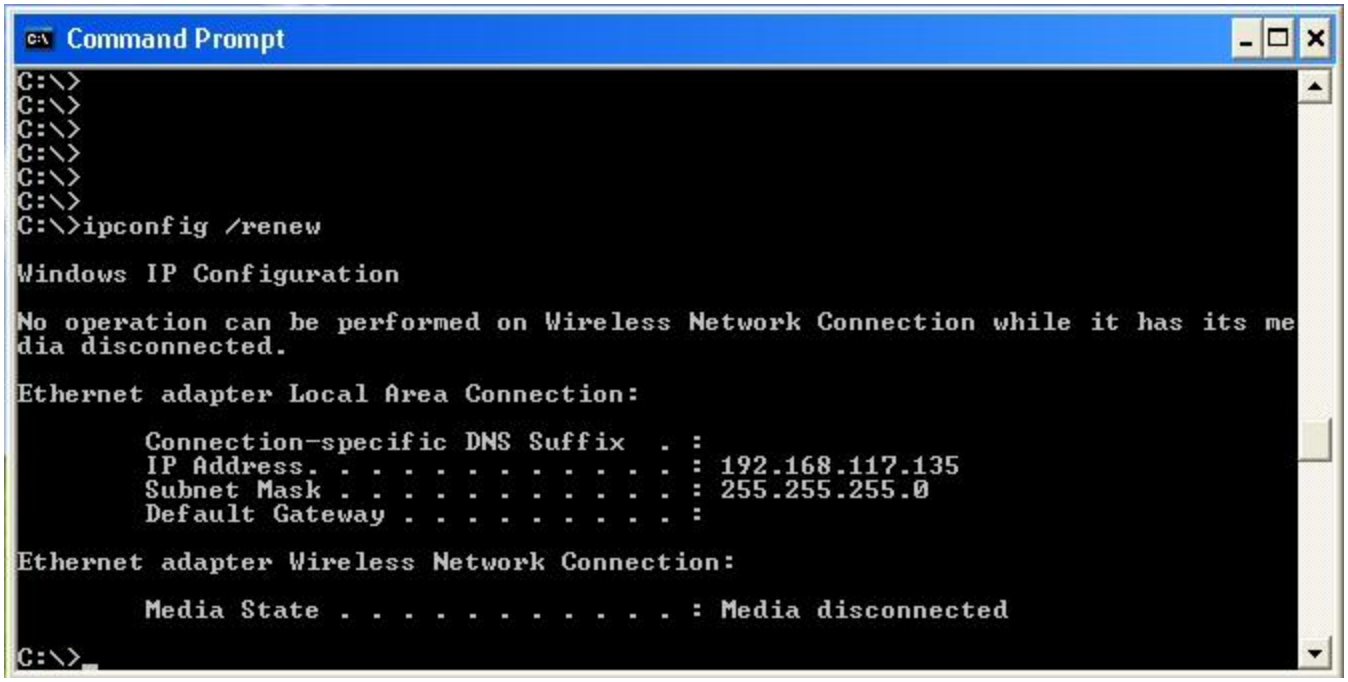
Sometimes the computer will not allow a telnet session and IPCONFIG is a command that can be used to releases and renew your IP address.

Above window shows ipconfig screen, this shows that the transmitter has assigned the computer address 192.168.117.135, this may vary on each transmitter.

It may also show an ip address of your wireless, do not confuse them

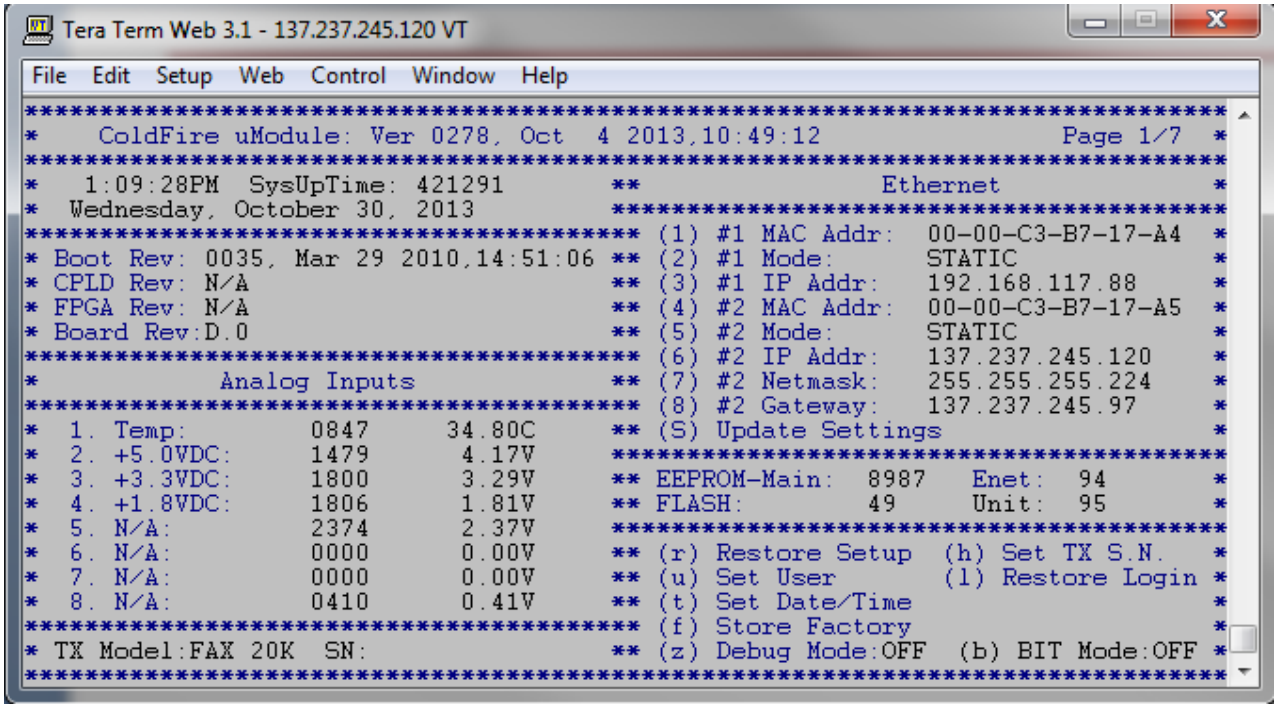


Above window shows the ipconfig /release. The IP address is now empty on the wired ethernet adapter.



Above window shows the ipconfig /renew. The IP address is now populated on the wired ethernet adapter.

Use these commands if first unable to get a telnet session to open.



Telnet screen 1. To open a telnet session use the following command from Command Prompt window:

telnet 192.168.117.88; Password – harris (harrismfg-old) (admin-OLDER) Can use terminal program such as Teraterm Pro

Top line shows Coldfire µModule Software version (this will be the version that is upload from .s19 file obtained from GatesAir Service website) with its release date

Also shows current Date/Time

Next box shows code revs and Board Rev is Control/Display Board

Numbers and letters in () are commands that can be used for config or control of transmitter

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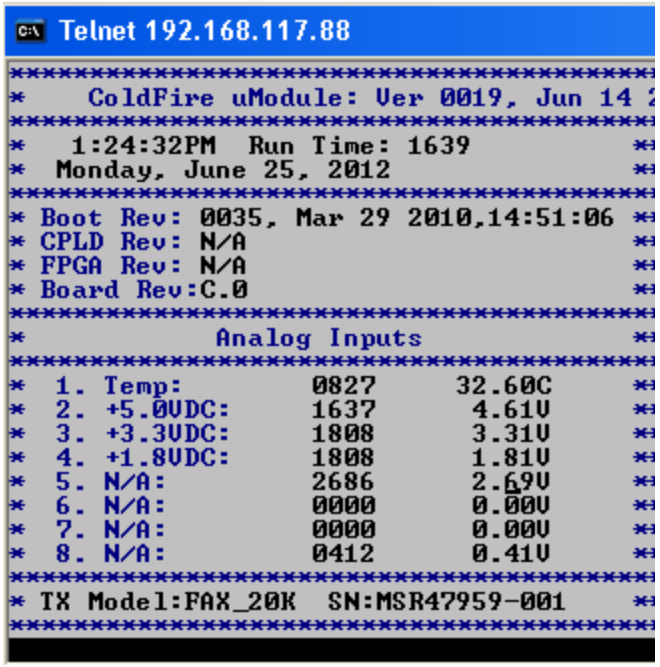

Telnet Session (left half of page 1)

Analog Inputs:

1. Temp: Rear Temp on Power Supply Interface
2. +5.0VDC: 5 volts from main power supplies
3. +3.3VDC: On Control/Display (Sheet 7)
4. +1.8VDC: On Control/Display (Sheet 14)

Bottom line shows Model and serial number of transmitter

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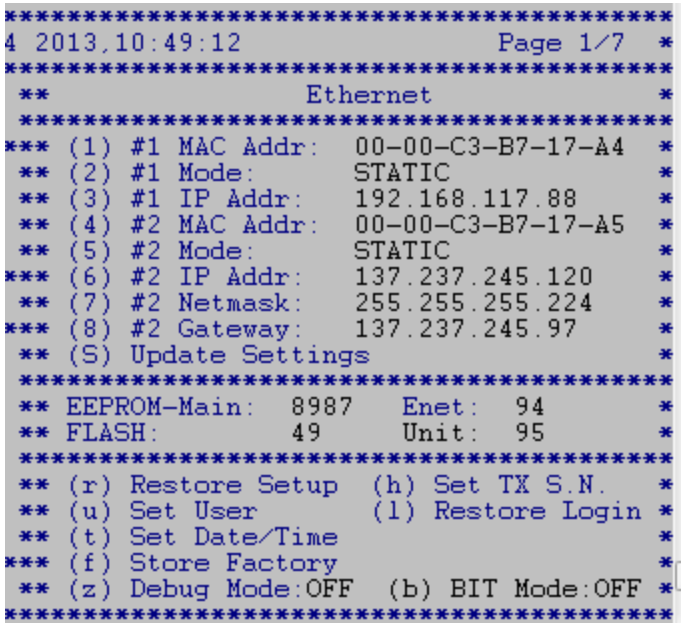

Telnet Session (right half of page 1)

#1 is front Ethernet port MAC, Mode, IP address settings.

#2 is rear Ethernet port MAC, Mode, IP address, netmask and gateway settings

EEPROM-Main: Number of writings Enet: Number of writings

FLASH: Number of writings Unit: Number of writings

(r) – Restores factory defaults settings. A config file should be saved prior to doing this as all settings will be overwritten back to pre-test defaults.

(u) – Set User

(t) – Sets system Time/Date

(f) – Stores the factory default settings

(z) – Debug Mode (factory use)

(h) – Set TX S.N. (factory use)

(l) – Restore Login – restores the logins to the factory defaults (anything entered after installation at site will be lost)

(b) – Bit Mode on/off (factory use)

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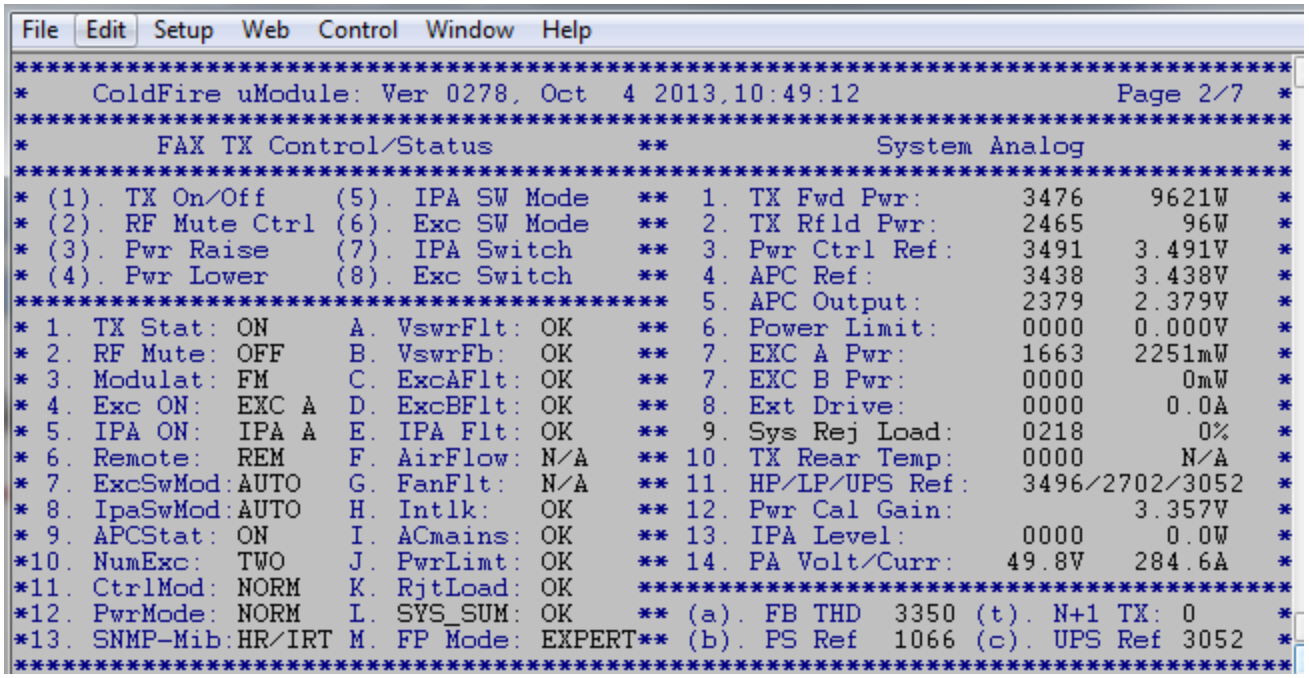

Page 2: FAX Control/Status Page for the complete System

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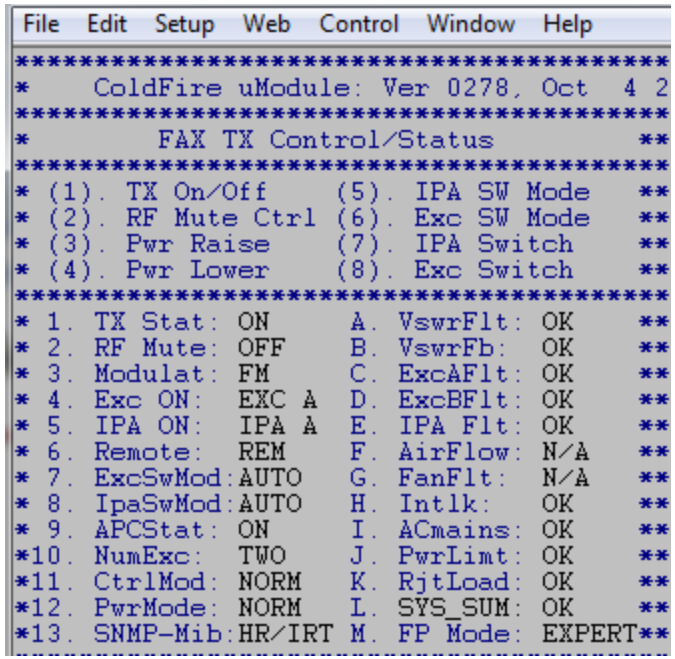

Telnet Session (left half of page 2)

(1) – Turns Transmitter OFF or ON

(2) - Mutes or Un-mutes transmitter

(3) - Raises RF power out

(4) - Lowers RF power out

(5) - Sets IPA switching mode to Manual/Auto

(6) - Sets Exciter switching mode to Manual/Auto

(7) -Switches IPA between A/B

(8) - Switches Exciter between A/B

1.– 13. and A. – L. are status indicators, see the led's on System Interface or Multi-Unit Interface board

Status F & G are power block only so they have an N/A

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```
*****************************************
 2013,10:49:12                Page 2/7  *
*****************************************
**             System Analog             *
*****************************************
**  1. TX Fwd Pwr:      3480    9688W    *
**  2. TX Rfld Pwr:     2467      96W    *
**  3. Pwr Ctrl Ref:    3503   3.487V    *
**  4. APC Ref:         3445   3.454V    *
**  5. APC Output:      2381   2.378V    *
**  6. Power Limit:     0000   0.000V    *
**  7. EXC A Pwr:       1670   2246mW    *
**  7. EXC B Pwr:       0000      0mW    *
**  8. Ext Drive:       0000     0.0A    *
**  9. Sys Rej Load:    0218       0%    *
** 10. TX Rear Temp:    0002      N/A    *
** 11. HP/LP/UPS Ref:   3496/2702/3052   *
** 12. Pwr Cal Gain:            3.357V    *
** 13. IPA Level:       0000     0.0W    *
** 14. PA Volt/Curr:   49.8V    284.3A    *
*****************************************
** (a). FB THD  3350 (t). N+1 TX: 0      *
** (b). PS Ref  1066 (c). UPS Ref 3052   *
*****************************************
```

(a). VSWR Foldback threshold. Should not be set unless factory service is consulted

(b). Power Supply reference – 0=44 VDC;1550=52 VDC, should not be set here, set on tx lcd via “SETUP”

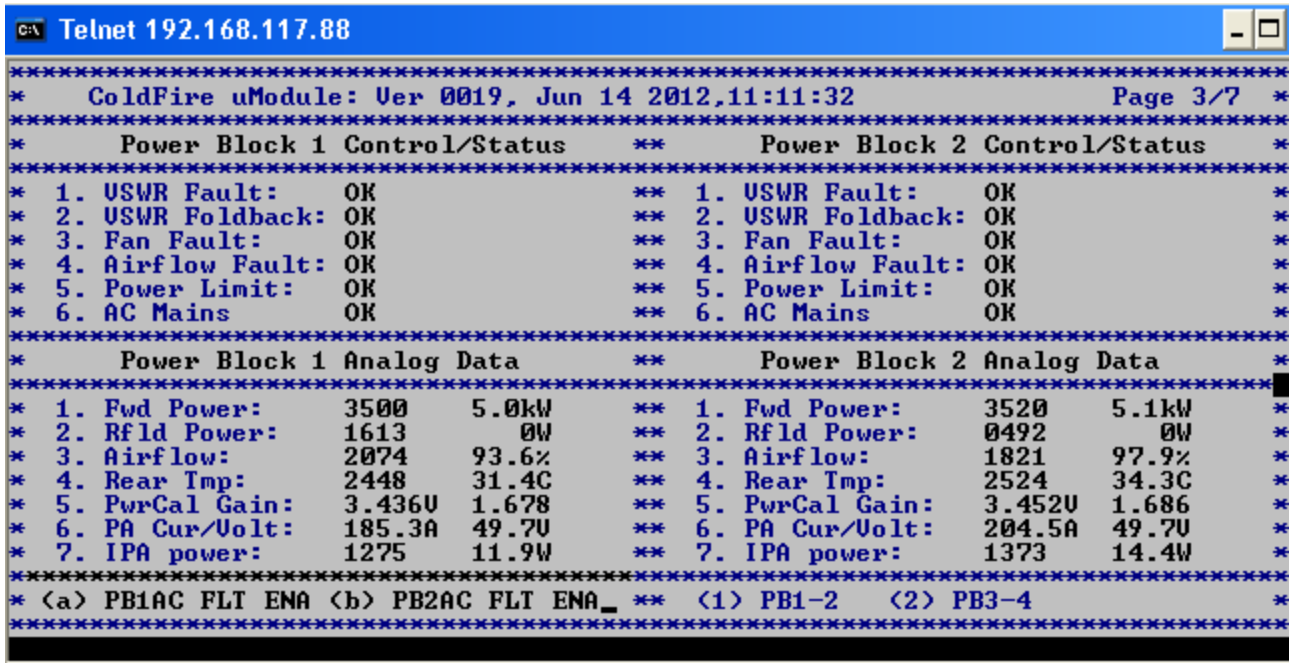
(t). N+1 TX sets the N for the transmitter

(c). UPS Reference sets power level reference for UPS mode. If UPS/Generator cannot handle full tx power this should be set 2500≈1/4 power Remote Input J1-8

Telnet Session (right half of page 2)

This screen shows DAC/ADC Value and real value for each item listed.

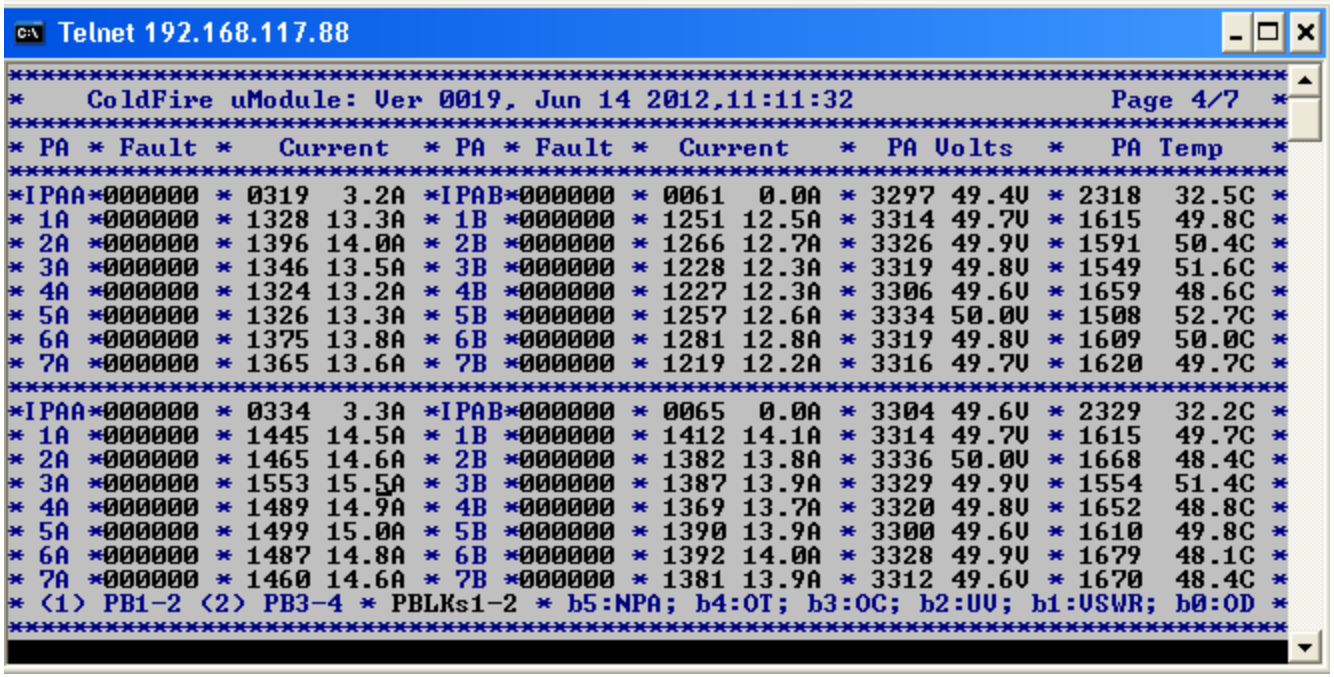
1. Transmitter forward power from output directional coupler
2. Transmitter reflected power from output directional coupler
3. Pwr_Ctrl_Ref: Voltage at TP5 on System Interface Board see “PWR_CTRL_REF” Sheet 5 APC Circuitry (1 count= ≈1 mV) from Mirco Module and is set by which mode tx is in HP/LP/UPS. Raise/Lower Power changes this ref voltage
4. APC Ref: Voltage buffered from Forward Power Detector in APC circuit
5. APC output: APC voltage that drives transmitter interface to Exciter TP42 on System Interface. Typically will be 2.7 VDC when calibrated. See “APC_CONTROL” on System Interface Board Sheet 5. Voltage will be slightly lower on exciter reading.
6. Power Limit – Not Displayed unless limit is hit ≤110 % TPO
7. Exciter A power – Calibrated from voltage source from exciter
8. Exciter B power – Calibrated from voltage source from exciter
9. Sys Rej Load: Shown as percentage that reject load was calibrated, either 1 power block or 1 cabinet; Power detector on fan control board (FAX20/30/40 Only)
10. TX rear temp is measured on power supply interface board and is the hot air temperature that is exhausted out rear of power block (see power block temp for FAX20/30/40)
11. HP/LP/UPS Reference is DAC value that the “Pwr_Ctrl_Ref” will be set to in each mode.
12. Pwr Cal Gain Software setting
13. IPA Level – Only shown on Power Block
14. PA Volt/Current – Voltage is the main power supply voltage set by “PS Ref” – Current is total DC current of all power blocks



Page 3: Shows Status of Power Blocks 1 & 2, if FAX30 or FAX40 then pressing (2) shows Power Blocks 3 & 4.

No commands on this page.

Powercal Gain: This is set in the power block calibration procedure using the buttons on the System Interface Board. This must not be touched once power is calibrated.



Page 4: Shows Meters from each IPA and PA module. Also shows the 6 fault bits (b0-b5) from each PA. (1) and (2) Switch between Power Blocks in FAX30/40.

b0 – Overdrive

b1 – VSWR at PA Module

B2 – Under-voltage

b3 – Over-current

B4 – Over-temperature

b5 – Module removed from slot

Order on telnet screen: b0/b1/b2/b3/b4/b5

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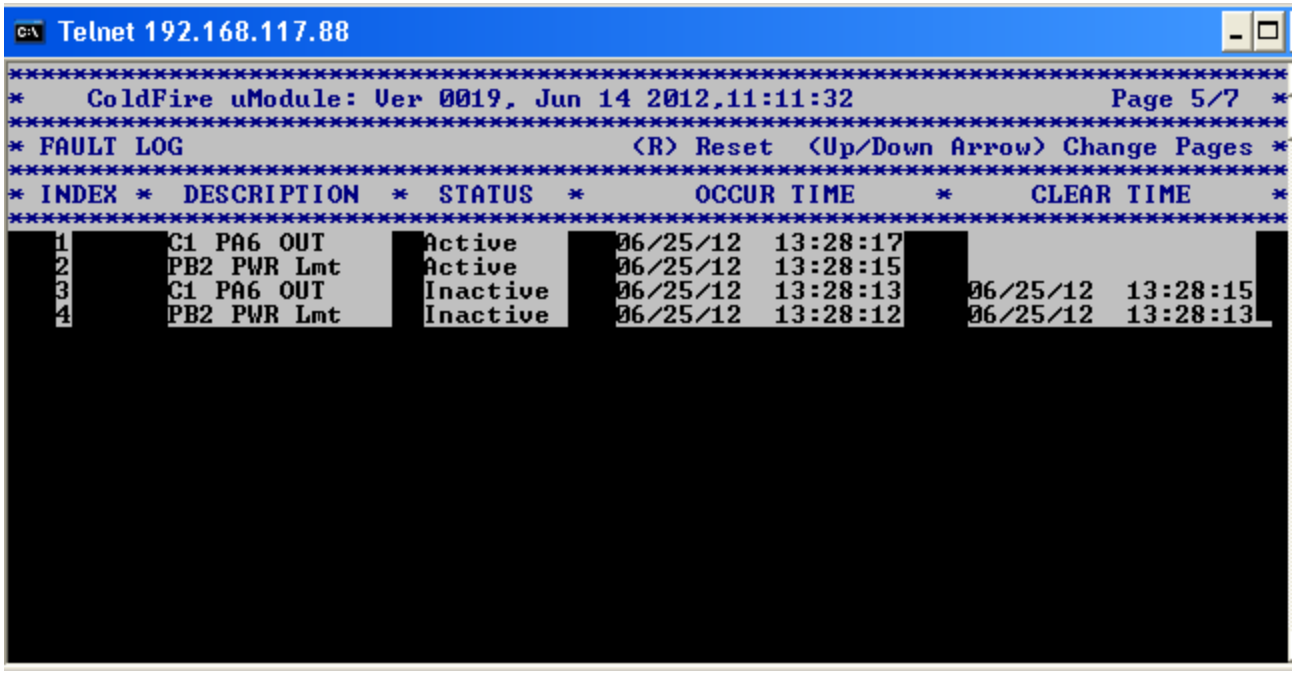
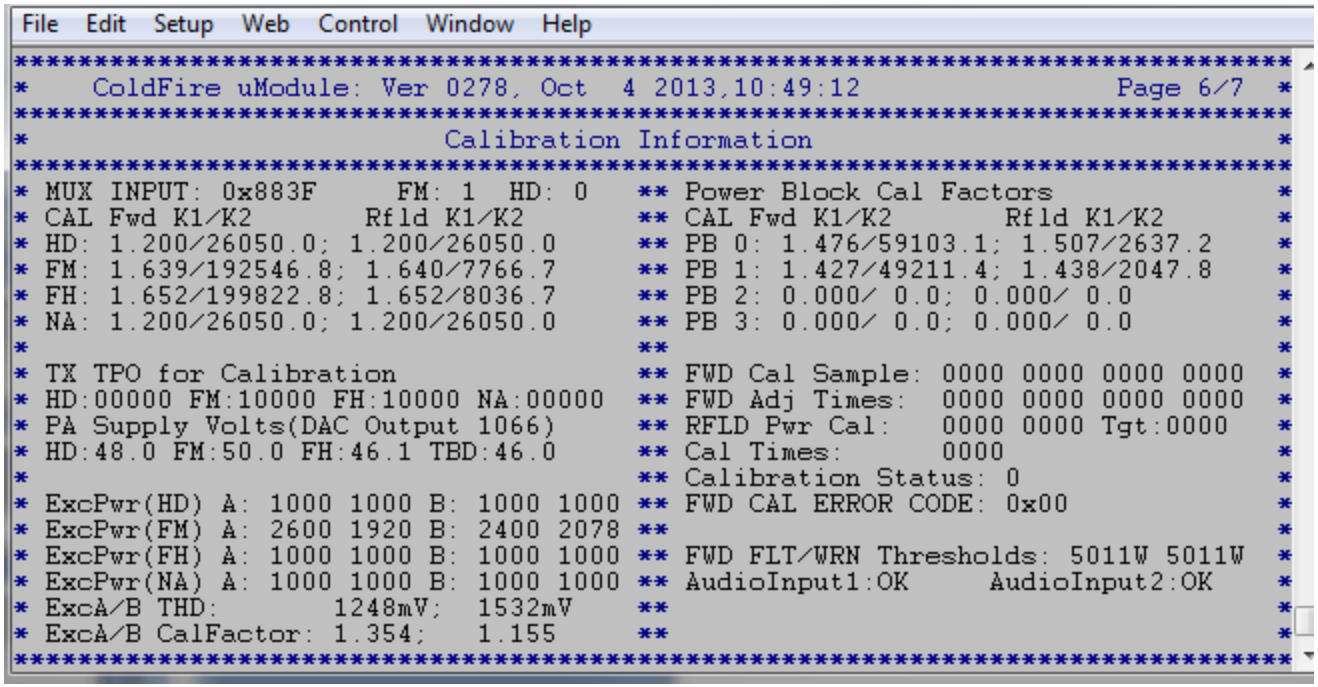


Page 5: Telnet Event Log

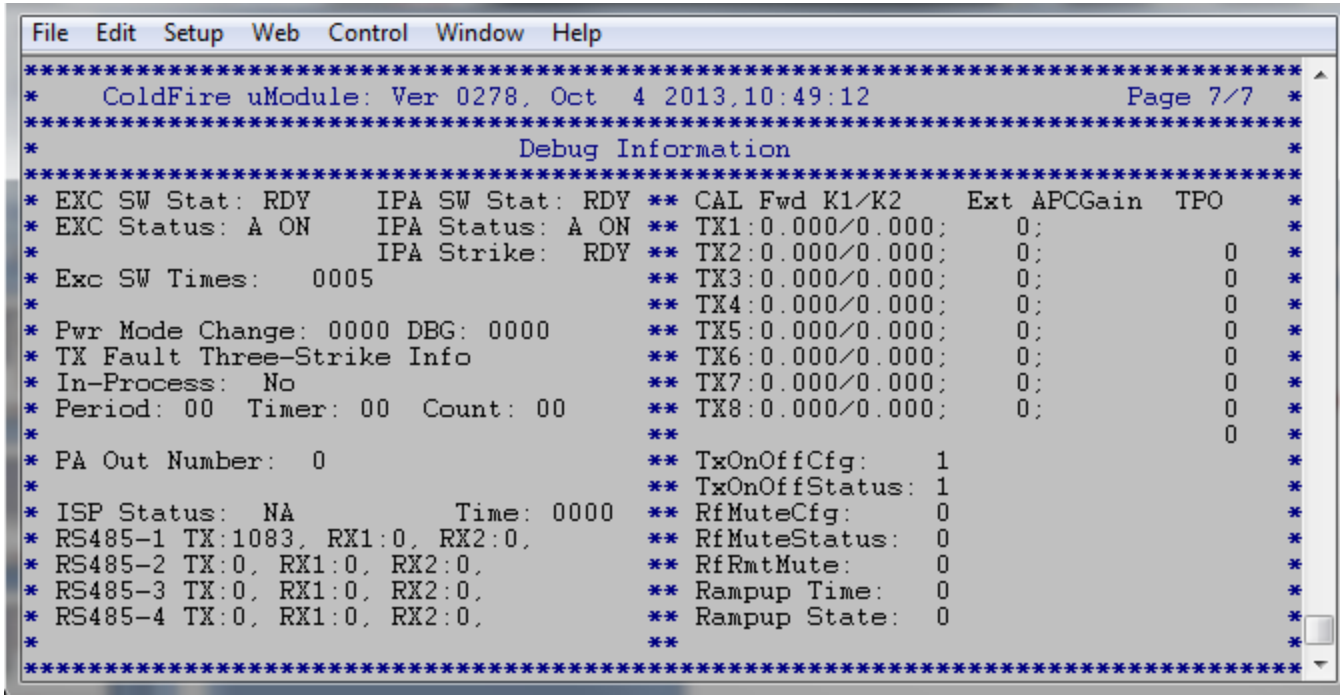
(R) – Clears fault log

UP/Down Arrow pages through the log

Shows both Active faults as well as faults that have cleared.



Page 6: Telnet Calibration Parameter Screen



Page 7: Telnet Debug Screen