Polar Station NetRS Receiver and Iridium Modem Configuration

508 Beth Bartel October 27, 2009 [Iridium](#), [Polar Programs](#), [Trimble NetRS](#) 2422

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Iridium Modem

- A3LA-SA Remote Modem:
    - <u>AT&F0</u>: Reset to factory defaults
    - <u>AT&D0</u>: Ignore DTR input
    - <u>AT&K0</u>: No flow control
    - <u>AT+IPR=6,0</u>: Set baud rate to 19200 and disable Autobaud feature
    - <u>ATS0=1</u>: Answer on first ring
    - <u>ATQ1</u>: Quiet mode
    - <u>AT&W0</u>: Write settings to memory register 0
    - <u>AT&V</u>: View current configuration if desired

- A3LA-MPT Base Modem:
    - <u>AT&F0</u>: Reset to factory defaults
    - <u>AT&D0</u>: Ignore DTR input
    - <u>AT&K0</u>: No flow control
    - <u>AT+IPR=6,0</u>: Set baud rate to 19200 and disable Autobaud feature
    - <u>AT&W0</u>: Write settings to memory register 0
    - <u>AT&V</u>: View current configuration if desired

NetRS GPS Receiver

UNAVCO Polar standard configuration settings for Iridium-equipped sites are listed below. Individual settings may vary depending on specific application and/or project PI request.

Commonly modified settings are highlighted in red.

As of April 2009, UNAVCO uses NetRS Firmware 1.1-5 for Polar applications.

- Receiver Status:
    - <u>Identity</u>: Set System Name

- Satellites:
    - <u>GPS Enable/Disable</u>: All Enabled
    - <u>WAAS Tracking</u>: Off

       <u>Data</u>: N/A

- Data Logging:
    - <u>Primary Session</u>: ENABLED
        - Select Session: 60min, Enabled: Checked
        - Schedule:
            - Continuous Logging: Checked
            - File Durations: 60 minutes
        - Data Format: T00
        - T00 Options:
            - Measurement Interval: 30 Sec
            - Position Interval: 5 min
            - Smooth Code Phase: NOT Checked
            - Smooth Carrier Phase: NOT Checked
        - File Naming:
            - 'S' (The Session Identifier) is: a
        - Directory Options:
            - Create Per-Day Subdirectories: Checked
    - <u>Secondary Session</u>: NOT ENABLED
        - Select Session: 1Hz_1hr, Enabled: NOT Checked
        - Schedule:
            - Continuous Logging: Checked
            - File Durations: 60 minutes
        - Data Format: T00
        - T00 Options:
            - Measurement Interval: 1 Sec
            - Position Interval: 5 Min
            - Smooth Code Phase: NOT Checked
            - Smooth Carrier Phase: NOT Checked
        - File Naming:
            - 'S' (The Session Identifier) is: b
        - Directory Options:
            - Create Per-SessionId Subdirectories: Checked
    - <u>AutoDelete</u>:
        - Reserved Space: AutoDelete: NOT Checked. (AutoDelete may be desirable for certain applications; consult UNAVCO).
        - Session Pools: None Defined
    - <u>Power Saving</u>:
        - Power Down Between Sessions Mode: No
        - Failsafe Wakeup Alarm: Yes, for 10 minutes every 24 hours

- Receiver Configuration:
    - <u>Antenna</u>: Enter site-specific antenna parameters
    - <u>Clock Steering</u>: Enabled
    - <u>Multipath</u>: Disabled
    - <u>L2C Tracking</u>: Disabled

Masks:
    Elevation Mask: 7
    PDOP Mask: 99
One Pulse Per Second: Disabled
Reference Frequency: Internal
Configuration Files: **After receiver has final configuration, create a configuration file named "NAME_config_mm-dd-yy.txt" and download copy to a separate computer.**
Shutdown Voltage: 10.680
System Reset: N/A

- Internet:
    Ethernet:
        Static IP:
            IP Address: 192.168.1.2
            MTU: 1500
            Netmask: 255.255.255.0
            Gateway: 192.168.1.1
    HTTP:
        HTTP Standard Port 80: Enabled
        HTTP Alternate Port 8080: Disabled
        HTTPS Standard Port 443: Enabled
        HTTPS Alternate Port 8443: Disabled
    IP Filtering: Disabled
    FTP:
        Anonymous FTP: Enabled without Delete
        Named FTP: Disabled
        Administration FTP: Disabled
        FTP Server Port: Use Standard Port
    NTP Client: Disable using NTP time servers

- I/O Configuration:
    Port Configuration, Serial Port 2: ENABLED
        Service: PPP
        Baud: 19200
        Flow Control: None
        Parameters for PPP mode:
            Local IP Address: **192.168.xx.2** (xx is two digit number, unique to each site)
            Remote IP Address: **192.168.xx.1** (xx is two digit number, unique to each site)
            Connection: Direct
    Port Configuration, Serial Port 4: ENABLED (optional)
        Service: Met-Tilt
        Baud: 19200
        Parity: None
        Flow Control: None
        Parameters for Met-Tilt mode:
            Command: 0R0

Schedule: 30 minutes
Reference Station: N/A
Client Authentication: N/A
Port Advertising: Disabled
PPP Dialout: N/A

- Security:
  Access:
  System Controls: Unrestricted
  GPS Controls: Unrestricted
  File Access: Unrestricted
  Accounts: N/A
  Change Password: N/A

- Firmware: 1.1-5

- Programmatic Interface: N/A