ptf 3207A

Quick Start Guide

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Getting Started

Carefully unpack the contents of the box and check that all items are present and undamaged:

ptf 3207A Chassis ☐

AC mains cord (1 per module) ☐

Antenna and mounting kit ☐

Antenna Cable ☐

Module B Module A

Rear View of two Module Unit

Rear View of single Module Unit

Connections

Ethernet, RJ45

Antenna Input, 50 ohm, TNC

Ext Input, BNC

10MHz, 13dBm, 50 ohm, Output, BNC

1PPS, 5V TTL, 50 ohm, Output, BNC

IRIG B 120 (1kHz am), 50 ohm, BNC

RS 232 / Alarm Contact, Mini D type connector

AC Mains connector

AC mains fuses (both neutral and live fused)

Step 1.

Using the supplied mounting kit, install the antenna in a location with a good view of the sky. The importance of this step cannot be overstressed, having a good clear view of the sky and the GNS satellites is a prerequisite in order to obtain good performance from the unit.

Step 2

Connect one end of the supplied antenna cable to the antenna, and the other end to the unit's antenna input.
Note: the center conductor of the cable is used to additionally supply the 5V DC power to the antenna.

Step 3

Connect AC mains inptu power to the unit using the supplied AC mains cord. Upon power connection the fault LED will flash at a rapid rate indicating that the unit is initializing. During this period the unit operating system is being loaded and initial self tests are being performed. After approximately 30 seconds the front panel will illuminate and display the main status screen choices.

NOTE: If no key is pressed on the front panel keypad within 10 seconds, the last selected default screen will be displayed.

To re-display the main status screen choices after a status screen is displayed, simply press the "MAIN" key.

Selecting the required status display.

When in the main status screen choice display, pressing the keypad forward/backward arrows will scroll forward/backward respectively through the status screen choices. Pressing the up/down arrow keys will page up/down through the status screen choices. Once the required choice is highlighted, pressing enter will select the highlighted status screen as the new default, and will switch the display to the selected choice.

Status Display Short Cut Keys

As an alternative to highlighting the required status screen choice, the number of the required screen can be pressed on the front panel keypad and the required status screen will be displayed. Similarly, when any of the status screens are being displayed, pressing a number on the front panel keypad will switch the display to the status screen represented by the number pressed.

Step 4 Using the Ethernet interface.

In order to use the Ethernet functions, the unit may connected directly to a computer (with a crossover cable) or to a local area network. By default, the unit is set to DHCP mode and will be automatically allocated an IP address by the network DHCP server.

If there is no DHCP server on the network, or if the unit is connected directly to a computer via a cross over cable, it will be necessary to set the DHCP mode to OFF and enter an appropriate static IP address, and netmask.

To determine the allocated IP address in DHCP mode select IP address status screen and the allocated address and netmask will be displayed.

To disable DHCP and enter a static IP address and netmask it is necessary to use the unit menus.

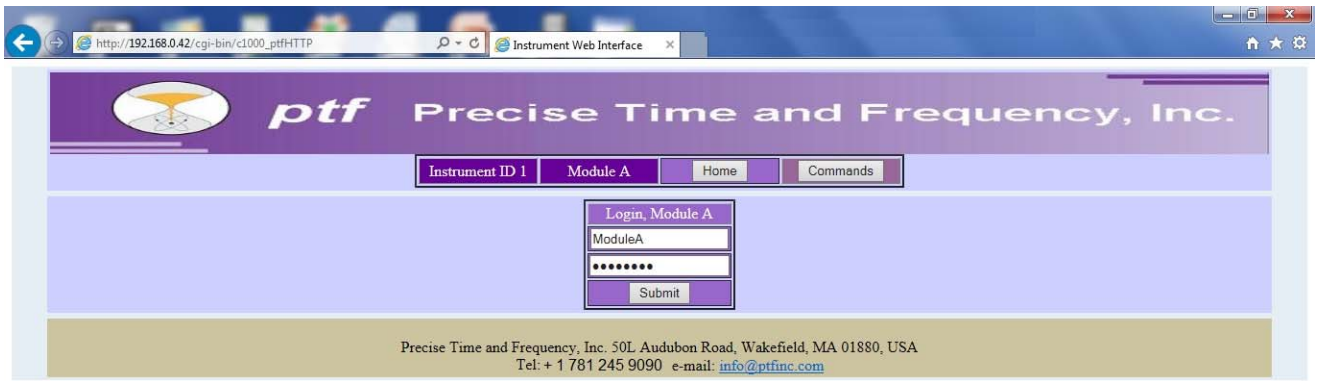
Press the MENU key on the front panel keypad and using the forward/backward arrows scroll down to the DHCP menu item. Once it is highlighted, press ENTER and the mode may be edited by using the forward arrow to select OFF. Once OFF is highlighted, press ENTER and the selection will be stored (and saved in non-volatile memory)

Next scroll to IP Address, enter the required address, and similarly for Netmask, and Gateway.
NOTE: The IP address, Netmask, and Gateway values cannot be changed when DHCP is selected to ON.

Web Interface

To verify the Ethernet connection is setup, open a web browser on a computer connected to the local area network, and enter the IP address of the unit, e.g. http://192.168.0.42 (where 192.168.0.42 is the address allocated or entered). If the Ethernet connect is functioning correctly the unit will serve up an initial web page.

The default login password is ptf_pwd



Telnet Interface

To access the telnet interface, open a telnet client on a local computer.

Note: on windows 7 operating systems, control panel > programs >
Turn windows features on/off > Telnet Client
Accessories
Command Prompt

Start the command console (Start > Programs >)

at the command prompt (C:\) type telnet[SPACE]192.168.0.42[ENTER]
where 192.168.0.42 is the IP address of the unit.

The unit will respond with :

C\ ptf login:

enter the user name admin followed by [ENTER]
the unit will respond with

C\. password:

Enter the unit password (default is ptf_pwd) followed by [ENTER]

The system will respond with the initial telnet screen which shows the instrument layout, the module letter designation and the session ID number, see below;

```
ptf login: admin
Password:
GNSS receiver ptf3207A version 1.02 module
Command format is MNN where:
M=module ID (A,B,or C dependent on module)  NN=Command numeric identifier
Example: A01<ENTER>  for entering values type M01<SPACE><VALUE><ENTER>
For a menu list on a specific module type M<SPACE>HELP<ENTER>
        =====================================================
      /  __   __               3207A/8A                 /|
    /   /_/  /_/                                       / |
  /    Rcv2  Rcv1                                     /
/                                                    /   /
==========================================================  /
|   Module A         |    Module C         |   Module B    | /
|                    |                     |               |/
===========================================================
Additional Commands

STATUS (example: A STATUS)
Session id is 10
Instrument ID Number is 001
```

To see the commands available type ?[ENTER]

```
?
Help menu for module A

Name        Cmd# Value                 Name        Cmd# Value
RCVR1-MODE  A01  Survey                RCVR1-AVGS  A02  30
RCVR1-LAT   A03  +42.517491-L          RCVR1-LON   A04  -71.045384-L
RCVR1-HGT   A05  +13.370000-L          RCVR1-CAB   A06  15.00
RCVR2-MODE  A07  Survey                RCVR2-AVGS  A08  30
RCVR2-LAT   A09  +42.517316-L          RCVR2-LON   A10  -71.045464-L
RCVR2-HGT   A11  +2.600000-L           RCVR2-CAB   A12  15.00
TIME        A13  17:52:33-L            DATE        A14  10/03/2014-L
TIME-MODE   A15  Local                 T-OFFSET    A16  +00:00
DST         A17  Off                   DST-TYPE    A18  USA
DATE-FORM   A19  USA                   1PPS-SRCE   A20  Rcvr-1
SRCE-SEL    A21  Manual                BAUD-RATE   A22  57600
IP(v4)      A23  192.168.000.042-L     NMASK(v4)   A24  255.255.240.000-L
GWAY(v4)    A25  192.168.000.001-L     DHCP        A26  On
SNMP-MGR    A27  192.168.000.001       TNET-T/OUT  A28  0
WEB-T/OUT   A29  0                     STATUS      A30
LOGOUT      A31                        INSTR-ID    A32  1
SHOWPTF     A33  +0                    SNMP-MGR    A59  192.168.000.001
```

Format of command entry is :
3 character command, space, new value[ENTER] << sets new value
or
3 character command, space, help[ENTER] << displays additional help for the command
or
3 character command[ENTER] << displays current value

Example:
A01[SPACE]fixed[ENTER] << sets the positioning mode to fixed

Note: There are some special commands that can be entered using just the command name e.g. STATUS[ENTER]. These can be easily identified as they do not have a value in the value column.

Step 5 Serial Interface

The serial interface operates in exactly the same way as the telnet interface, with the same command format and responses.

To connect to the serial interface, connect a 3 wire cable to the RS232 connector pins Rx, Tx and Ground and the other end to a serial output on you computer.

Default baud rate is 57600, and the format is, 8 data, no parity, 1 stop, no hardware handshaking.

Step 6 Initialization

The first time the unit is powered on in a new location, it will first check that the current almanac is up to date and if not re-load it, it will then search for satellites and lock on (or "track") them, then once it is tracking at least 4 satellites it will begin to self-survey its position.

Once position is acquired, the unit will load current time and begin to lock the internal oscillator to the incoming reference.

During these phases the front panel status will be as follows:

Initialization Phase	Front Panel Lock LED	Front panel Fault LED	
Initial satellite acquisition	Extinguished	Flashing Amber	
Initial satellite lock	Extinguished	Flashing Amber	
Self survey	Extinguished	Flashing Amber	
Internal oscillator lock	Flashing green	Illuminated Amber	
Internal oscillator locked	Solid green	Extinguished	<< Normal operation

With a good view of the sky and good satellite reception this phase can be as short as 30 minutes, however with a poor view of the sky, or with poor satellite reception this phase can take up to several hours - patience is required !

Subsequent initialization after short (less than a few days) interruptions to power is much faster, typically a couple of minutes provided there is good satellite reception.

Step 7 Further Support

For further help and support please contact Precise Time and Frequency, Inc.

Hours are 8:00 a.m. to 5:00 p.m. Mondays to Fridays, Eastern US Time.

By telephone: +1 781 245 9090

By e-mail: service@ptfinc.com

Web: www.ptfinc.com/support/ptf3207A.htm