



# Asentria®

## **User's Manual Installation and Operation Guidelines**

### **TeleBoss™ 820 Telecom Site Controller**

---

Version 2.06.460

Asentria Corporation  
1200 North 96<sup>th</sup> Street  
Seattle, Washington, 98103  
U.S.A.  
Tel: 206.344.8800  
Fax: 206.344.2116  
[www.asentria.com](http://www.asentria.com)

# TeleBoss™ 820 Telecom Site Controller

## User's Manual – Installation and Operation Guidelines

For firmware version 2.06.460 STD  
Release Date: December 13, 2010

### Changes In This Version of the User Manual

- None - this is the initial manual for the new TeleBoss 820.

### Conventions used in this manual

- Commands are printed in this format: **COMMANDS** (Arial font, caps, bold, black) although commands used in the unit are not case-sensitive.
- Setting Keys are printed in this format: **setting.key** (Courier New font, bold, blue) but any key values displayed are in normal type.
- **Red type** indicates a safety or security warning.
- [Hyperlinks to other sections in the manual are displayed in Arial font, blue, underline.](#)
- Screen shots of menus are all taken from the command line interface. Web interface shots are not displayed in the manual at this time.
- Some settings can only be changed with a Setting Key (no command line menu or web interface options). These are noted throughout Setup Menu section of the manual by **Setting Key: <name of key>** with a description of the key and allowable values.

© 2010 Asentria Corporation. All rights reserved.

The content of this manual is provided for informational use only, and is subject to change without notice. Examples, data, and names used in this manual are examples and fictitious unless otherwise noted. No part of this document may be reproduced or electronically transmitted without permission from Asentria Corporation.

TeleBoss 820 and T820 are trademarks of Asentria Corporation.

# Table of Contents

<b>Quick Start</b> .....	<b>1</b>
<b>What's Included</b> .....	<b>1</b>
Hardware Needed .....	1
Information Needed .....	1
<b>Connecting</b> .....	<b>1</b>
Cables and Power.....	1
Power Requirements .....	1
Accessing the Command Line via a Serial Connection.....	1
Accessing the Command Line via the Asentria OmniDiscover program.....	2
<b>Network Setup</b> .....	<b>2</b>
via OmniDiscover connection: .....	2
via serial connection: .....	2
Testing Network Connectivity .....	2
<b>What is a TeleBoss 820</b> .....	<b>3</b>
<b>The Basics</b> .....	<b>3</b>
Communication Methods .....	3
Data Storage .....	3
Remote Access .....	3
Audit Log .....	3
<b>Parts Identification</b> .....	<b>4</b>
Features and Accessories .....	4
LEDs, Ports, DIP Switches and Buttons .....	4
<b>Getting Connected</b> .....	<b>7</b>
<b>Power-Up Sequence</b> .....	<b>7</b>
<b>Default Passwords</b> .....	<b>7</b>
<b>The Status Screen</b> .....	<b>7</b>
<b>Setup Menu</b> .....	<b>9</b>
<b>Overview</b> .....	<b>9</b>
<b>Option Types</b> .....	<b>9</b>
<b>Web Interface</b> .....	<b>10</b>
<b>Main Setup Menu</b> .....	<b>10</b>
Network Settings .....	11
Serial Settings .....	15
Modem Settings .....	17
Security Settings .....	18
General Settings .....	21
Audit Log Settings.....	24
<b>Features and How To Use Them</b> .....	<b>25</b>
<b>Upgrading the T820</b> .....	<b>25</b>
<b>Setting Keys</b> .....	<b>26</b>
<b>Securing a TeleBoss 820</b> .....	<b>27</b>
<b>Telnet/TCP Connections</b> .....	<b>29</b>
<b>Default Router</b> .....	<b>30</b>
<b>Passthrough</b> .....	<b>31</b>
<b>Customizable Command Prompt</b> .....	<b>32</b>
<b>Command Reference</b> .....	<b>33</b>
<b>User Interface Commands</b> .....	<b>33</b>
<b>Setup Commands</b> .....	<b>33</b>
<b>System Commands</b> .....	<b>34</b>
<b>Numeric Commands</b> .....	<b>34</b>
<b>Usage Commands</b> .....	<b>35</b>
<b>Appendices</b> .....	<b>37</b>
<b>User Rights Table</b> .....	<b>37</b>
<b>Control Characters</b> .....	<b>38</b>
<b>Internal Modem Guidelines</b> .....	<b>39</b>
<b>Canadian Department of Communications</b> .....	<b>40</b>
<b>Warranty Information</b> .....	<b>42</b>



## Quick Start

### What's Included

This chapter is a brief guide to help get your TeleBoss 820 (T820) up and running quickly.

#### Hardware Needed

- Asentria TeleBoss 820
- 15VDC power adaptor (Included)
- Ethernet cable (Included)
- RJ45 M-M unshielded serial cable and RJ45/DB9 straight thru adapter (Included)
- Computer with DB9 RS-232 Serial port and terminal emulation software

#### Information Needed

- IP address(es) to assign to the T820
- Subnet mask
- Default router IP or gateway router IP address if on a WAN (Optional)

### Connecting

#### Cables and Power

1. Connect the RJ45 serial cable and DTE adaptor together, and connect the RJ45 end to serial port I/O 2 of the T820, and the DB9 end to COM1 of a computer with a terminal emulator.
2. Connect the attached ground wire securely to an appropriate earth ground (this is essential).
3. Connect the Ethernet cable into the RJ45 jack labeled ETH1.
4. Connect the power supply to the unit (see Power Requirements section).

#### Power Requirements

The T820 is configured with a power jack for connecting the 15VDC power adaptor shipped with the unit.

#### Accessing the Command Line via a Serial Connection

1. Connect to I/O 2 with a serial terminal emulation program at 19200 baud, 8N1.
2. Enter **STATUS** or **?** and press <Enter>. You will be presented with a status screen similar to the following.

```
TeleBoss 820 2.06.460 STD - Status
Site Name      : 820-420009995
Serial Number  : 820009995      Eth 1      : STATIC
Date          : WED 12/08/2010  IP Addr   : 0.0.0.0
Time         : 11:13:07         MAC Addr  : 00:10:A3:60:0A:EF
Memory       : 32768K          Eth 2      : STATIC
Duplex       : FULL           IP Addr   : 0.0.0.0
Modem        : Yes           MAC Addr  : 00:10:A3:60:0A:F0
-----
Port   Baud/Etc.  Recs    Bytes    Full Wrap Name
IO1   : 19200,8N1 00000000 00000000 0% OFF I/O 1
IO2   : 19200,8N1 00000000 00000000 0% OFF I/O 2

COMPLETE
>
```

When the Status screen appears, the unit is successfully connected and ready for use.

# TeleBoss 820 User Manual

---

## Accessing the Command Line via the Asentria OmniDiscover program

1. From the Asentria website (<http://www.asentria.com/docsandsoftware/productManuals.aspx>), or the Documentation and Utilities CD, download the OmniDiscover program. This program will allow you to locate Asentria devices on your network (ie: the T820) by MAC address, and allow you to assign the network settings directly over the network, thus eliminating the need for the serial port connection as described above.
2. Open the OmniDiscover program. It will immediately display all Asentria devices on the network. Right clicking on the line for this unit displays three options: Setup, Telnet and Web.

**Setup** opens another window where the IP Address, Subnet Mask, and Gateway (router) can be configured (see below). Press "OK" and these will be assigned to the unit and displayed in the previous window. (Select this option to configure the network settings for the first time.)

**Telnet** opens a connection to the device using your default Telnet client.

**Web** opens an HTTP connection to the T820 using your default browser.

3. Once the network settings have been assigned, the T820 command line can be accessed via any Telnet client or HTTP web connection.

Contact [Asentria Technical Support](#) for any questions or assistance with OmniDiscover.

## Network Setup

### via OmniDiscover connection:

1. See the description of how to use [OmniDiscover](#) as described above.

### via serial connection:

1. Access the Main Setup Menu by typing **SETUP** and pressing <Enter>.
2. Select the Network Settings branch.
3. Select A) Ethernet Settings and select the Ethernet interface that corresponds to the one on the back panel that you plugged your network cable into.
4. Enter an IP address, subnet mask and--if necessary--a router address.
5. Toggle NAT on/off as desired.
6. Press <ESC> to go back one level in the menu tree, or <CTRL + C> to exit the Main Setup Menu and return to the command prompt.

## Testing Network Connectivity

1. Verify that the network router is available to the unit by typing the command **PING <IP\_address>**. A router is always a good candidate to test pings. The following screenshot is an example of a successful ping test.

```
ping 192.168.100.59
PING 192.168.100.59 (192.168.100.59): 56 data bytes
64 bytes from 192.168.100.59: icmp_seq=0 ttl=128 time=8.0 ms
64 bytes from 192.168.100.59: icmp_seq=1 ttl=128 time=0.7 ms
64 bytes from 192.168.100.59: icmp_seq=2 ttl=128 time=1.8 ms
64 bytes from 192.168.100.59: icmp_seq=3 ttl=128 time=0.8 ms
64 bytes from 192.168.100.59: icmp_seq=4 ttl=128 time=0.7 ms

--- 192.168.100.59 ping statistics ---
5 packets transmitted, 5 packets received, 0% packet loss
round-trip min/avg/max = 0.7/1.7/8.0 ms
```

2. Press <CTRL + C> to stop the ping testing. If <CTRL + C> is not pressed, the unit will continue pinging attempts indefinitely.
3. If there is an error message or no response from the router, first check the network settings and connection, then consult your System Administrator or [Asentria Technical Support](#).
4. Using a Telnet client, connect to the IP address assigned to the unit.

## What is a TeleBoss 820

### The Basics



Fig 1: TeleBoss 820 front panel

The T820 is an economical yet powerful remote device management system which can collect and forward text records such as those used by Call Accounting and Telemanagement billing applications. These records are collected by the T820 from PBX serial ports. The T820 can also make a pass-through connection directly to devices connected on one of its serial ports, and can also connect you via Telnet to other devices on the same remote network as the T820.

#### Communication Methods

The T820 has a diverse selection of communication methods available for different applications. The following methods can be used to either access the command processor or provide a pass-through connection to devices attached to the serial ports. All methods of connecting to the unit can be secured via password for protection of data and hardware.

- RS-232 serial
- Telnet
- Standard modem serial

Data may be retrieved from or through the T820 by any of the following methods:

- Serial or modem connection to command processor (using Line or Zmodem) or pass-through
- Inline Mode (data in I/O 1, data out I/O 2)
- Telnet to command processor or pass-through
- Telnet real-time sockets
- FTP push (automatic delivery to FTP server)
- FTP get (manual retrieval from FTP server)

#### Data Storage

Basic data storage in the T820 is accomplished in a database of three files – FILE1, FILE2, and AUDIT. FILE1 and FILE2 are typically associated with Serial Port I/O 1 and Serial Port I/O 2 respectively, although either serial port can store to either FILE1 and FILE2, or both. AUDIT is a log file generated from the Audit Log Settings menus per the parameters set there. The number of records stored in each these three files can be displayed using the **DIR** command on any connection to the command processor, including FTP.

#### Remote Access

The T820 can provide an administrator transparent access to devices connected to the serial ports of the unit via pass-through connections or through the login menu in the web interface, Telnet and modem connections. This sort of access can be used to configure, maintain, or manipulate devices that would normally have no remote access.

#### Audit Log

The T820 has the capability to log many types of administrative events, from DIP switch changes to login attempts. These Audit Log entries are stored in a file and can be viewed through the Audit Log section of the setup menu, via the **TYPE AUDIT** command, or through FTP.

# TeleBoss 820 User Manual

---

## Parts Identification

### Features and Accessories

#### Standard Equipment

The base T820 comes with the following standard on-board equipment:

- AC Power Input
- Logging database for CDR or other text records
- 2 – RJ45 DTE serial I/O ports
- 2 – 10/100Mb Ethernet interfaces
- 1 – MMC memory I/O slot
- 1 – SensorJack port (not used for anything)
- Internal lithium coin-cell type battery backup\*/\*\*

\* Battery backup preserves clock operation when power is not present. Data records and settings are stored in non-volatile memory and therefore do not require battery backup.

\*\* **CAUTION: THERE IS A RISK OF EXPLOSION IF THE BATTERY IS REPLACED BY AN INCORRECT TYPE. DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS.** The instructions are that lithium batteries can be recycled, and you should contact a recycling organization in your area for details.

In addition to the above components, the standard unit is shipped the following accessories:

- This product manual on the Documentation and Software CD
- RJ45 M-M unshielded serial cable and an RJ45/DB9 adapter for each serial port
- RJ45 Ethernet cables for each Ethernet port
- Power supply adapter.

#### Options

Each of the following components is optional and may be installed on a T820:

- On-board 56K dialup modem

The T820 may come with any of the following accessories as well, depending on the configuration or order:

- Modem cable if that option is ordered

### LEDs, Ports, DIP Switches and Buttons



Fig 2: T820 Front panel

#### LEDs – Front Panel

##### PWR (Power)

The Power LED is green and has two operational states. During the boot up cycle, it will blink once every second until the boot sequence is complete. During normal operation, it is steady on with a blink every 5 seconds.

##### MDM (Modem)

The MDM LED lights solid green whenever the modem is connected and blinks when the modem is dialing out.

##### ALM (Alarm)

This LED is reserved for future use.



# TeleBoss 820 User Manual

## 25% - 75% - 100%

The T820 has three LEDs to indicate file full status. A blinking percentage full LED indicates the database has less than the amount indicated by that LED, but more than the previous. A solid lit LED indicates the database percentage is at or over the value for that LED.

## LEDs – Back Panel

Each RJ45 port on the back panel has two LEDs associated with it – one on the Right of the port, one on the Left of the port.

### Ethernet Ports (ETH1 and ETH2)

- Right – Lights solid red when an Ethernet cable is connected to the port and an active Ethernet network. The LED is off when the cable is disconnected from the network, or the Ethernet port.
- Left – Flashes yellow/green when network data (TCP packets) is being transmitted or received across the port. When no data is actually being transmitted or received, this LED is off.

### Serial I/O Ports 1 & 2

- Right – Lights solid green when a correctly configured cable from another device is connected to it. Otherwise this LED remains off. As the I/O Port receives or transmits data, this LED will flash red.
- Left – Lights solid green when power is applied to the T820, regardless of whether a cable is connected to the I/O Port or not.

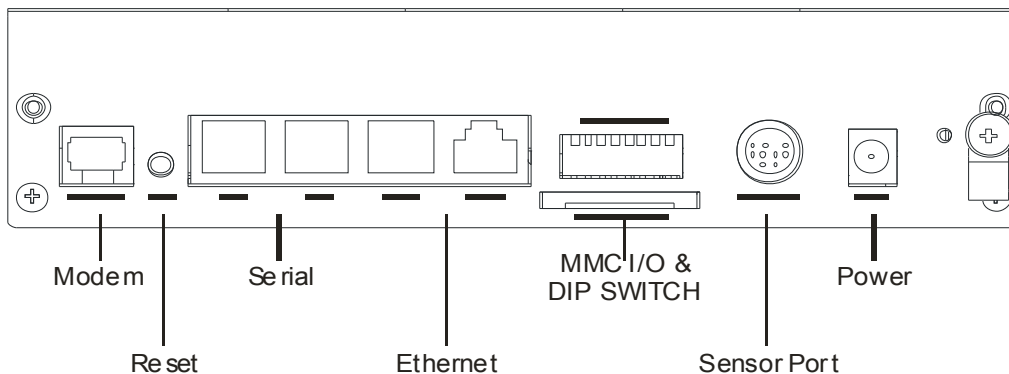


Fig 3: T820 Back panel

The above drawing shows the T820 configured (from right to left) with a grounding wire lug, AC power jack, 9-pin mini-DIN SensorJack port (not used), bank of 8 DIP switches, MMC memory I/O card slot, two RJ45 Ethernet ports, two RJ45 RS232 serial ports, Reset button, and one RJ11 POTS modem port.

## Ports

### Sensor Port

The T820 does not support any Asentria Type2 EventSensors connected to the Sensor Port. There should be a label covering this port.

### Memory I/O

The slot labeled Memory I/O is reserved for future use. Eventually T820's may be upgraded using a MultiMedia Card (MMC) in this slot.

### Ethernet

The Ethernet 10/100Mb interfaces are standard RJ45. Either of these standard connectors will connect the T820 to an Ethernet hub or switch. Refer to the [Telnet/TCP Connections](#) section in the Features chapter for further information regarding a number of different types of telnet connection options. LEDs by each Ethernet connection on the back panel flicker when packets are being transmitted/received on that port.

# TeleBoss 820 User Manual

---

## Serial Ports

Each of the two serial ports is configured as a DTE port using an RJ45 connector. This is the standard recommended pinout for EIA/TIA-561 for 8 pin RJ45 connector:

PIN1 =RI =RING INDICATOR, INPUT to the T820  
PIN2 =DCD =CARRIER DETECT, INPUT to the T820  
PIN3 =DTR =DATA TERMINAL READY, OUTPUT from the T820  
PIN4 =SIGNAL GROUND  
PIN5 =RXD =RECEIVED DATA, INPUT to the T820  
PIN6 =TXD =TRANSMITTED DATA, OUTPUT from the T820  
PIN7 =CTS =CLEAR TO SEND, INPUT to the T820  
PIN8 =RTS =REQUEST TO SEND, OUTPUT from the T820

The DB9 female cable end which mates with the serial port connectors of connected devices will often have a pair of screw-down cable screws. These cable screws should be used to assure a solid connection of the cable with the device.

Default settings for the serial ports are 19200-baud, 8-bit word length, no parity, and one stop bit (19200, 8N1). Use the internal setup menu to adjust these settings.

## Internal Modem

If a dialup POTS modem is installed, an RJ11 (typical U.S. phone) connector is used. A POTS (analog) dialup phone line is inserted into this connector. The modem installed within this unit is FCC certified. For further information, consult the [Internal Modem Guidelines](#) appendix or the serial number label on the bottom of the T820.

## DIP Switches

The bank of 8 DIP switches on the back panel of the T820 are used to control the baud and parity settings of I/O2, to set the operational mode for I/O2, and to put the unit into "boot load mode" where it can be forced to load a new application (firmware image). The following table shows how to set the various DIP switches to obtain certain settings:

I/O 2 Baud	SW1	SW2
2400	OFF	OFF
9600	ON	OFF
19200	OFF	ON
115200	ON	ON
I/O 2 Word, Parity	SW3	
8N1	OFF	
7E1	ON	
I/O 2 Mode	SW4	
Command Mode	OFF	
Data Mode	ON	
Boot Load Mode	SW8	SW1 thru SW7
No Forced App Reload (Default)	OFF	X (don't care)
Forced Application Reload	ON	ON

➤ **Note:** Boot Load Mode can only be set by flipping ALL DIP switches to the ON or UP position. This is not a setting that can be configured via internal menu settings, or Setting Keys.

➤ **Note:** For settings that can be set either via DIP switch, internal menu settings, or Setting Keys, the T820 always pays attention to the last setting, regardless of how it was done. So if the internal setting for I/O2 Mode is Command, and someone flips SW4 to the ON or UP position, the Mode is immediately set to Data.

## Buttons

The only button on the T820 is the Reset button located on the back panel next to the left of serial port I/O 2.

## Getting Connected

### Power-Up Sequence

On startup, the T820 goes through the following boot sequence in approximately 55 seconds:

- 1) The power LED flashes once each second for 45 seconds.
- 2) Power LED will then blink once every 5 seconds as a "heartbeat" while the T820 is powered on.

### Default Passwords

The T820 uses a very flexible system for managing users, passwords, and access rights. By default, the following fifth user profiles are enabled. Note that if a password is defined without a user name, the profile is defined just by the user name. All of the default profiles are password-only. All passwords are masked: \*\*\*\*\*

The default settings are configured to low security for your convenience in setup. It is highly recommended that you change these passwords and record them in a secure location.

User	Password	Login To
User1	SMDR	Command processor
User2	SUPER	Command processor
User3	ACCESS1	Passthrough/File 1
User4	ACCESS2	Passthrough/File 2
User 11	Username: admin Password: password	Command processor

### The Status Screen

The T820 Status screen is the unit's one-stop informational source. Most of the information that a user would need to know about the unit is available through this display. This section outlines this data and highlights why it is useful.

```
TeleBoss 820 2.06.460 STD - Status
Site Name      : 820-420009995
Serial Number  : 820009995      Eth 1      : STATIC
Date           : WED 12/08/2010 IP Addr     : 0.0.0.0
Time          : 11:13:07       MAC Addr    : 00:10:A3:60:0A:EF
Memory        : 32768K         Eth 2      : STATIC
Duplex        : FULL          IP Addr     : 0.0.0.0
Modem         : Yes           MAC Addr    : 00:10:A3:60:0A:F0
-----
Port   Baud/Etc.  Recs    Bytes    Full Wrap Name
IO1   : 19200,8N1 00000000 00000000 0% OFF I/O 1
IO2   : 19200,8N1 00000000 00000000 0% OFF I/O 2

COMPLETE
>
```

**TeleBoss 820** indicates that this product is the T820, followed by **2.06.460**, the currently loaded firmware version.

**Site Name** is the identifier assigned to each T820 by the end user in the General Settings menu.

**Serial Number** is the factory-assigned, unique serial number for this T820.

**Date** and **Time** display the current date and time.

**Memory** indicates the amount of flash memory configured for storage of data.

# TeleBoss 820 User Manual

---

**Duplex** controls the echo settings for the command processor. Full duplex causes the T820 to echo all characters sent to the remote device. Half duplex turns off character echo.

**Modem** indicates whether the optional internal modem is installed.

**Eth 1** and **Eth 2** displays STATIC, or DHCP, depending on which mode each of the two Ethernet interfaces is configured for.

**IP Add** and **MAC Add** immediately following Eth 1 and Eth 2 are the network IP address assigned to each Ethernet card, and that cards MAC address. The MAC address of both Ethernet cards can also be found on the unit's serial number label.

The default serial port names of **I/O 1, 2, etc** are displayed for the two installed serial ports along with the following information:

**Baud/Etc.** displays the baud rate, word length, parity, and stop bit settings for each installed serial port.

**Recs** shows the number of carriage return-delimited records stored within the file associated with each serial port.

**Bytes** displays the amount of storage allocated for the above records.

**Full** is a rough percentage indicator of how much data is stored in a particular file.

**Wrap** indicates the ON/OFF status of whether file wrapping is enabled on a particular port. When ON, a unit that is 100% full will overwrite the oldest buffered records with new ones.

**Name** displays the target name, which is an optional name given to the device connected to the port. This target name can be configured in the Serial Settings menu for each port.

## Setup Menu

### Overview

This section displays screen shots and descriptions taken from the command prompt menu system. However, the menu structure and options are the same as the web interface.

The Setup menu contains all of the configuration options available on the T820. It is organized in a logical tree structure with all settings classified under the following groups:

```
TeleBoss 820 - Main Setup Menu
A) Network Settings
B) Serial Settings
C) Modem Settings
D) Security Settings
E) General Settings
F) Audit Log Settings

Enter your Selection:
```

Each section in this chapter will go over one of the above setup branches, outlining the options within.

Press either <ESC> or <Enter> to go back one level in the menu tree, or <CTRL + C> to exit any menu and return to the command prompt.

Since this product allows for multiple simultaneous command processors, two administrators could conceivably change the same option at the same time, but due to the multitasking nature of the T820, the changes are processed in the order received.

The T820 processes setup changes in real time. In other words, the unit begins to implement changes to its configuration as soon as they are entered. There is no need to exit a setup menu or reboot the unit to apply changes. The exception to this rule is IP-specific network settings. Changes to these settings are implemented only after all open Telnet command processors are closed.

### Option Types

#### String entry

There are several different types of inputs employed within the setup menu. The most common is the string type entry:

```
A) Site Name [Test Site]
```

When selected, this setting will provide a prompt requesting a new value. You may press <Enter> or <ESC> to abort the option entry or press <SPACE> and <Enter> to delete the current value and leave it blank. Some numerical or required settings will not allow you to leave an option blank, so pay attention to the unit's response when attempting to delete a setting's value.

#### Toggle

The second most common option type is the toggle type option:

```
A) Enable Web Interface [OFF]
```

When selected, this option will not prompt for a new value. It will simply cycle to the next available option in its list. This switch type is typically used for options with two or three choices. Most often it is in an ON/OFF form, but could be a series of options such as "NONE", "1", and "2".

# TeleBoss 820 User Manual

---

## Option list

The option list type is similar to the toggle type in that it has a list of options to choose from:

```
TeleBoss 820 - Serial Port 2 Baud Rate
A) 300
B) 600
C) 1200
D) 2400
E) 4800
F) 9600
G) 19200
H) 38400
I) 57600
J) 115200
```

After selecting an option, you are immediately returned to the previous menu. The new value will be displayed to the right of the setting name, letter, or number.

## Web Interface

The T820 has a built-in HTTP web server that can be used to configure the unit from anywhere the unit can be accessed on the network or Internet. Once you have enabled it through the network section of the setup menu, simply connect to ***http://<IP address of T820>***. See [Web Interface Settings](#) menu for further description.

Upon connection, you will be greeted by a login screen. Log in with your Login ID (Username) and Password. These are the same credentials you would use to log into the command prompt. Once logged in, the General Status screen will be displayed, with a menu bar across the top of the page that displays the same menu options as the command prompt menu system. From here, you can alter any setting in the same way you could via the prompt.

## Main Setup Menu

```
TeleBoss 820 - Main Setup Menu
A) Network Settings
B) Serial Settings
C) Modem Settings
D) Security Settings
E) General Settings
F) Audit Log Settings
```

[Network Settings](#) contains settings for network communication, the Web Interface, FTP, and more.

[Serial Settings](#) contains settings pertaining to the function of each serial port.

[Modem Settings](#) contains modem init settings and modem-specific security options.

[Security Settings](#) contains all user profiles, RADIUS configuration, and general security settings.

[General Settings](#) contains the site name, answer string, confirmation prompt, date/time, and other general settings.

[Audit Log Settings](#) allows for configuration and displaying of the Audit Log.

# TeleBoss 820 User Manual

---

## Network Settings

The Network Settings menu contains all of the options pertaining to network communication.

```
TeleBoss 820 - Network Settings
A) Ethernet Settings
B) Default Router                [ ]
C) Name Resolution Settings
D) Telnet Duplex                [ FULL ]
E) Inactivity Timeout          [ 0 ]
F) Web Interface Settings      [ ON ]
G) FTP Settings
H) Real-Time Socket Settings
  Note: Changes to IP Address, Subnet Mask, or Router
        Address will not take effect until any open
        Telnet command processor sessions are ended.
```

[Ethernet Settings](#) displays the menu where you can configure each of the two Ethernet interfaces.

**Default Router** displays the configured default router (gateway) for the unit. Refer to the [Default Router](#) section in the Features chapter for more information.

[Name Resolution Settings](#) allows you to configure the IP addresses of up to two Domain Name Servers (DNS).

**Telnet Duplex** controls whether characters typed on a Telnet command line interface connection are echoed on your terminal screen or not. Full duplex causes the unit to echo all characters. Half duplex turns off character echo. Default setting is Full.

**➤ Note:** The Telnet Duplex setting has nothing to do with the “duplex” configuration of the network interface itself.

**Inactivity Timeout** sets the number of minutes (0 - 255) before a network connection with no activity will be terminated. A setting of 0 means an inactive connection will not be terminated. Default setting is 0.

[Web Interface Settings](#) displays the Web Interface Settings menu where you can toggle the web interface ON or OFF, set the session timeout (0 - 65535 minutes), and set the TCP port number for the web connection.

[FTP Settings](#) displays the FTP Settings menu, where you can configure automatic FTP pushes of buffered data.

[Real-Time Socket Settings](#) displays the Real-Time Socket Settings menus where you can configure real-time socket settings for each file of buffered data. Real-Time Sockets are used to collect data on TCP port 2201 from a serial port in real-time, while buffering data if the network connection goes down.

## Ethernet Settings

Ethernet Settings displays the following menu where each of the two installed Ethernet cards can be configured:

```
TeleBoss 820 - Ethernet Settings
A) Ethernet 1
B) Ethernet 2

Enter your Selection: a

TeleBoss 820 - Ethernet 1 Settings
A) Mode                [ STATIC ]
B) IP Address          [ 0.0.0.0 ]
C) Subnet Mask        [ 255.255.255.0 ]
D) Router Address     [ 0.0.0.0 ]
E) NAT                [ ON ]
```

# TeleBoss 820 User Manual

---

➤ **Security Note:** If the T820 is going to be exposed to the Internet, make sure to use the other security features available within the unit to prevent unauthorized access to your network. Also shutdown unsecure connections such as Telnet and FTP.

**Mode** toggles between STATIC or DHCP – whichever is appropriate for this Ethernet port. Default setting is STATIC.

**IP Address** is the network address assigned to this Ethernet card. Default setting is 0.0.0.0

**Subnet Mask** sets the network subnet mask provided by the network administrator. Default setting is 255.255.255.0

**Router Address** sets the router address provided by the network administrator. Default setting is 0.0.0.0

**NAT** is an ON/OFF toggle to enable Network Address Translation. Default setting is ON.

➤ **Note:** The T820 does not heed changes to network configurations while you are connected to a command processor via Telnet or web interface. Changes, including population of the candidate default router set, are pended until all network-based command processor sessions have ended. Open FTP and RTS connections will fail if these settings are changed during an open connection.

## Name Resolution Settings

```
TeleBoss 820 - Name Resolution Settings
A) DNS Server 1           [0.0.0.0]
B) DNS Server 2           [0.0.0.0]
C) DNS Mode               [MANUAL]
```

**DNS Server 1 / 2** are the IP addresses of Domain Name Servers that you may want to configure so that you can use host names rather than IP addresses in functions where name resolution may be needed, such as; RTS push hosts, network time servers, etc. Default setting for each DNS Server is 0.0.0.0.

**DNS Mode** toggles between MANUAL, ETH1-DHCP and ETH2-DHCP. Default setting is MANUAL.

## Web Interface Settings

```
TeleBoss 820 Web Interface Settings
A) Enable Web Interface   [ON]
B) Web Session Timeout    [30]
C) Web Connection Port    [80]
```

**Enable Web Interface** is an ON/OFF toggle to enable the T820's internal web server. Default setting is ON.

**Web Session Timeout** sets the number of minutes (0 - 65535 minutes) a connection may remain idle before expiring. A setting of 0 means the connection will never automatically expire. Default setting is 30.

**Web Connection Port** is the TCP port through which the web connection is made. Default setting is Port 80.

Connect using **http://<IP address of T820>**. You will be greeted by a login screen. Log in with your Login ID (Username) and Password. These are the same credentials you would use to log into the command prompt. Once logged in, the General Status screen will be displayed, with a menu bar across the top of the page that displays the same menu options as the command prompt menu system.



# TeleBoss 820 User Manual

---

## FTP Settings

```
TeleBoss 820 - FTP Settings
A) FTP Push Enable           [OFF]
B) FTP Server Address       []
C) Username                  [Default FTP Username]
D) Password                  [*****]
E) Account                   []
F) Directory                 []
G) Minutes Between Push Attempts [1440]
H) Select Files to Push
I) Remote File Names
```

**FTP Push Enable** toggles between OFF and REGULAR. Default setting is OFF.

**FTP Server Address** is the IP address or host name of the FTP server to push to. (Max length 64 chars)

**Username / Password** defines the login credentials that are able to access the remote FTP server. (Max length Username is 126 chars) (Max length Password is 31 chars)

**Account** is a third login option used only on some FTP servers. Consult your network administrator to see if this is necessary. (Max length 126 chars)

**Directory** is the path used to transfer the file(s). The file(s) is transferred to the root login directory if this option is left blank. (Max length 253 chars)

**Minutes Between Push Attempts** sets the number of minutes (1 to 9999) between FTP push attempts. Default setting is 1440 minutes.

**Select Files to Push** displays the FTP File Selection menu where you can select which files are pushed by toggling ON or OFF. Default setting for all is ON, except for Audit Log, which is OFF.

```
TeleBoss 820 - FTP File Selection
A) Data File 1               [ON]
B) Data File 2               [ON]
C) Audit Log                 [OFF]
```

**Remote File Names** displays the FTP File Names menu where you can give each file a name other than the default name, and/or prepend a date, time, and/or unique sequence # to the file name.

```
TeleBoss 820 - FTP File Names
A) Include Date in Filename  [OFF]
B) Include Time in Filename  [OFF]
C) Include Sequence #s in Filename [OFF]
D) Data File 1               [FILE1]
E) Data File 2               [FILE2]
```

**Include Date/Time in Filename** is an ON/OFF toggle to enable the addition of the file transfer date and/or time to the beginning of the name of each transferred file of data. Default setting is OFF.

**Include Sequence #s in Filename** is an ON/OFF toggle to enable the addition of a unique sequence number to the beginning of the name of each transferred file of data. This ensures that no two transfers will have the same file name. Default setting is OFF.

**Data File *n*** are text-entry fields where the name each data file will have on the remote server (not including any date, time, or sequence numbers) can be configured.

# TeleBoss 820 User Manual

---

Once FTP Push has been configured, entering the **PUSHTEST** command will test the connectivity to the FTP server and write a “log in” and “log out” entry to the Status File in the directory you configured. No data is pushed with this command. Connection data displayed on the terminal screen is useful if the connection fails.

An immediate push of data can be done using the **PUSHNOW** command.

## Real-Time Socket Settings

```
TeleBoss 820 - Real-Time Socket Setup
A) FILE1
B) FILE2

Enter your Selection: a

TeleBoss 820 - FILE1 Real-Time Data Socket Setup
A) Real-Time Socket Mode           [LISTEN]
B) Show Answer String on Connection [ON]
C) Require Xon to Start Data Flow   [OFF]
D) Idle Connection Close Timer     [0]
E) Close Socket When File Empty     [OFF]
F) Real-Time Socket Push Hostname/IP []
G) Real-Time Socket Push Port Number [3000]
H) Real-Time Socket Push Retry Timer [5]
```

**Real-Time Socket Mode** can be toggled to LISTEN, PUSH, and OFF. When set to LISTEN, this functions like traditional real-time sockets on TCP port 2201. When set to PUSH, the unit tries to make a TCP connection on the TCP port specified in G) Real-Time Socket Push Port Number. As long as a connection exists, the unit sends all data in the specified file on the connection as data become available. Default setting is LISTEN.

**Show Answer String on Connection** is an ON/OFF toggle to enable the prompt indicating successful connection to the Real-Time Socket (RTS) port. Default setting is ON.

**Require Xon to Start Data Flow** is an ON/OFF toggle to enable the Xon/Xoff data flow control requirement. Default setting is OFF.

**Idle Connection Close Timer** sets the number of seconds (0 – 255) to wait before disconnecting an idle connection. A setting of 0 means the connection will never automatically close. Default setting is 0.

**Close Socket When File Empty** is an ON/OFF toggle to set whether or not the T820 will automatically terminate the RTS connection when the file for this port has been emptied. Default setting is OFF.

**Real-Time Socket Push Hostname/IP** sets the hostname or IP address of the server where the unit will push the data if the RTS Mode is set to Push. (Max length is 64 chars)

**Real-Time Socket Push Port Number** sets the TCP port number the RTS push should use. Default setting is port 3000.

**Real-Time Socket Push Retry Timer** sets the number of minutes (1 – 255) to wait before retrying an RTS push that has previously failed. Default setting is 5 minutes.

# TeleBoss 820 User Manual

---

## Serial Settings

```
TeleBoss 820 - Serial Settings
A) 1-I/O 1 Settings
B) 2-I/O 2 Settings
```

➤ **Note:** Both serial ports can be set to function in Data mode, and I/O 2 can also be set to function in one of two other modes: Command and Inline. Default is Command Mode. Therefore the I/O 2 Settings menu has all the options of I/O 1, plus a few others that I/O 1 does not have. Those options that are exclusive to I/O 2 will be indicated as such below.

```
TeleBoss 820 - Serial Settings
A) 1-I/O 1 Settings
B) 2-I/O 2 Settings

Enter your Selection: b

TeleBoss 820 - Serial 2
A) Target Name                [I/O 2]
B) Baud Rate                  [19200]
C) Data Format                 [8N1]
D) Handshaking               [NONE]
E) Wrap Around               [OFF]
F) Record Stamping
G) Character Masking         [ON]
H) Store Data To             [2]
I) Duplex                    [FULL]
J) Inactivity Timeout        [0]
K) Port Mode                 [COMMAND]
L) Inline Mode Handshaking   [XON/XOFF]
M) Strip Sent Pass-Through LFs [OFF]
N) Strip Received Pass-Through LFs [OFF]
O) Disable Serial Setup via DIP Switch [OFF]
P) Multiline Record Settings [OFF]
Q) Data Type                 [ASCII]
R) Change ETX to CR/LF      [OFF]
```

**Target Name** is the name given to the device connected to the other end of each port. Default setting is I/O n. (Max length is 24 chars)

**Baud Rate** displays a selection menu for baud rates available for the port. These values range from 300 baud to 115200 baud. Default setting is 19200.

**Data Format** toggles settings for word length, parity, and stop bit settings. The available options are: 8N1, 7E1, 7O1, 7N1, and 8O2. Default setting is 8N1.

**Handshaking** is a toggle item with the following options: None, Xon/Xoff, Both, and DTR. Default setting is None.

**Wrap Around** is an ON/OFF toggle to set whether the incoming data will wrap (overwrite) the oldest data in the file should it become full. Default setting is OFF.

**Record Stamping** displays a menu that allows you to select whether the Date/Time and/or the Unit ID are pre-pended to each incoming data string. Default setting for Date/Time and Unit ID is OFF.

**Character Masking** is an ON/OFF toggle to enable the character mask. The character mask allows you to block most non-printing ASCII characters. Specifically, the following ASCII character values are blocked: 0, 1, 4-9, 11, 12, 14-31, and 128-255. Default setting is ON.

# TeleBoss 820 User Manual

---

**Store Data To** displays a menu that allows you to toggle ON/OFF the files to which incoming data on this port should be stored, if any.

**Duplex (Port 2 only)** toggles between Full and Half. Full duplex causes the unit to echo all characters sent to the connected terminal when in Command mode. Half duplex turns off character echo. Default setting is FULL.

**Inactivity Timeout (Port 2 only)** is the time (1 - 255 minutes) before a serial connection with no activity will be terminated. A setting of 0 means an inactive connection will not be terminated. Default setting is 0.

**Port Mode** sets the port function. This is set to DATA for I/O 1 and cannot be changed. This can be toggled between COMMAND, DATA, and INLINE for I/O 2. COMMAND allows for serial command processor access, DATA configures the port as an inbound data port just like I/O 1, and INLINE causes the unit to perform a direct connection between I/O 1 and I/O 2.

**Inline Mode Handshaking (Port 2 only)** toggles the handshaking method used during Inline mode operation. Available options are XON/XOFF, DTR, and Both. Default setting is XON/XOFF.

**Strip Sent Pass-Through LFs** is an ON/OFF toggle to enable the stripping of linefeeds on pass-through data *sent out* of the T820. Default setting is OFF.

**Strip Received Pass-Through LFs** is an ON/OFF toggle to enable the stripping of linefeeds on pass-through data *received* by the T820. Default setting is OFF.

**Disable Serial Setup via DIP Switch** is an ON/OFF toggle to disable the DIP switches. Default setting is OFF.

[Multiline Record Settings](#) displays the Multiline Record Settings menu.

**Data Type** toggles between ASCII and Binary to indicate the type of data being collected on this port. Default setting is ASCII.

**Change ETX to CR/LF** is an ON/OFF toggle to set whether ETX characters in the incoming data should be converted to CR/LF characters. Default setting is OFF.

## Multiline Record Settings

```
TeleBoss 820 - Serial Port 1 Multiline Record Settings
A) Multiline Record Enable          [OFF]
B) Blank Line Count                 [0]
C) Complex Multiline Detection      [OFF]
```

The T820 has the ability to monitor incoming serial data for multi-line records (individual records that are broken into multiple lines with carriage returns). If the records are separated by a specific number of blank lines, this basic configuration menu will suffice. If a more complex delineation scheme is used, enable Complex Multiline Detection.

**Multiline Record Enable** is an ON/OFF toggle to enable multiline record detection. Default setting is OFF.

**Blank Line Count** sets the number of blank lines that must come between records. Default setting is 0.

**Complex Multiline Detection** displays settings for detecting complex multiline records. Default setting is OFF.

```
TeleBoss 820 - Serial Port 1 Complex Multiline Record Settings
A) Complex Multiline Record Enable      [OFF]
B) Start Field 1 Character Position      [0]
C) Start Field 1 Text                    []
D) Start Field 2 Character Position      [0]
E) Start Field 2 Text                    []
F) Collect Lines Before Start Record    [0]
G) End Detection                         [FORMULA]
H) Line Count                            [0]
I) End Field 1 Character Position        [0]
J) End Field 1 Text                      []
K) End Field 2 Character Position        [0]
L) End Field 2 Text                      []
```

**Complex Multiline Record Enable** is an ON/OFF toggle to enable advanced multiline detection. Default setting is OFF.

**Start Field *n* Character Position** sets the character position used to define the beginning of the multiline field. This option is used with "Count" method record end detection.

**Start Field *n* Text** sets the text used to determine the beginning of the multiline field. This option is used with "Formula" method record end detection.

**Collect Lines Before Start Record** sets the number of blank lines that are between each record.

**End Detection** toggles between FORMULA, COUNT, and BLANKS to set the method of detecting the end of each record. Default setting is FORMULA.

**Line Count** is the number of lines to meter each record at. This option is used with "BLANKS" record end detection.

**End Field *n* Text/Character Position** is the counterpart to start the text or character position option. This option sets the end delimiter for multiline records.

## Modem Settings

The Modem Settings menu displays a sub-menu for configuring the optional internal 56K modem.

```
TeleBoss 820 - Modem Settings
A) Dialup Modem

Enter your Selection: a

TeleBoss 820 - Dialup Modem Settings
A) Data Format           [8N1]
B) Duplex                [FULL]
C) Init String          [ATM1]
D) Inactivity Timeout   [0]
E) Upon Modem Connect Go Directly To [LOGIN]
F) TAP Init String      [ATM0]
G) TAP Uses 8N1 Data/Parity/Stop    [0]
```

**» Note:** If the optional 56K dialup modem is not installed in the T820, this menu is displayed, but changing any of the settings will not do anything.

**Data Format** toggles settings for word length, parity, and stop bit settings. The available options are: 8N1, 7E1, 7O1, and 7N1. Default setting is 8N1.

# TeleBoss 820 User Manual

---

**Duplex** controls the echo settings for the modem command processor. Full duplex causes the T820 to echo all characters sent to the remote device. Half duplex turns off character echo. Default setting is FULL.

**Init String** sets the user-defined modem initialization string. This string is sent to the modem before important factory modem initialization settings, so certain settings in this init string may be overridden. Default setting is ATM1. (Max length 126 chars) Note: Make sure to enter 'AT' at the beginning of this initialization string.

**Inactivity Timeout** sets the number of minutes (0 – 255) to wait before disconnecting an idle modem connection. A setting of 0 means the connection will never automatically expire. Default setting is 0.

**Upon Modem Connect Go Directly To** toggles through a list of actions to control what a user sees directly after connecting via modem. LOGIN requires the user to login with username and password, and will then take them to a command prompt. A serial port (I/O1, I/O2 ) redirects a modem user directly to that serial port upon connecting. In this passthrough mode, the command processor of the T820 is transparent. Default setting is LOGIN.

**TAP Init String** is the user-defined modem initialization string used only when the modem is making an alphanumeric modem callout. Default setting is ATM0. (Max length 126 chars) Note: Make sure to enter 'AT' at the beginning of this initialization string.

**TAP Uses 8N1 Data/Parity/Stop** toggles between 1, to force the TAP initialization string data/parity/stop settings to 8N1, and 0 to not force this setting. Default setting is 0.

## Security Settings

```
TeleBoss 820 - Security Settings
A) Security Mode [USER PROFILES]
B) Specific Security Settings
C) General Security Settings
```

The Security Settings menu displays options for specific and general security settings.

**Security Mode** is hard coded to USER PROFILES so selecting this option will not do anything other than return the same menu. (Other Asentria products feature a security mode for RADIUS).

**Specific Security Settings** displays the [User Profile Security Settings](#) menu where twelve individual User Profiles can be configured along with Authentication Settings.

[General Security Settings](#) displays a menu with options that apply to **every** user of this T820.

## Specific Security Settings – User Profile Security Settings

```
TeleBoss 820 - User Profile Security Settings
A) User 1: User1/*****/COMMAND/FILE1
B) User 2: User2/*****/COMMAND/FILE1
C) User 3: User3/*****/PASSTHROUGH/FILE1
D) User 4: User4/*****/PASSTHROUGH/FILE2
E) User 5:
F) User 6:
G) User 7:
H) User 8:
I) User 9:
J) User 10:
K) User 11: admin/*****/COMMAND/FILE1
L) User 12:
M) Authentication Settings
```

[User n](#) displays the configuration menu for each user profile.

 **Note:** User 11 is preconfigured in the unit, for use by SitePath.

# TeleBoss 820 User Manual

---

[Authentication Settings](#) displays a menu of global authentication options.

➤ **Note:** Passwords are case sensitive and are masked in all menus and while typing them from the command line, for security reasons. If a user without permissions accesses the User Profile Settings menus, they will see all fields in this menu either masked or with no data in them. If they select an option, a message will be displayed that says: “You do not have permission to change this setting.”

➤ **Note:** When configuring a new User Name, and an invalid or duplicate User Name is entered, the T820 responds as follows:

```
Invalid Entry.  
Press any key to continue...
```

➤ **Note:** When configuring a new password, the T820 will ask you to re-enter the password. If the second entry of the password does not match the first, the T820 responds as follows:

```
Invalid Entry - Confirm Password does not match.  
Press any key to continue...
```

## User Setup Menu

```
TeleBoss 820 - User Setup Menu  
A) Enable This User Access           [ON]  
B) User Name                         [User1]  
C) Password                          [*****]  
D) Allow User Connection via         [LMTFR]  
E) Upon Login then Go To            [COMMAND]  
F) File Access Pointer               [FILE1]  
G) Set Pass-through Pointer To      [I/O 1]  
H) Pass-through Permissions  
I) After PT, ESC Takes User To      [MENU]  
J) Setup/Status Rights               [MASTER]  
K) File Release Permissions  
L) File Delete Permissions
```

**Enable This User Access** is an ON/OFF toggle to enable access for this user profile.

**User Name / Password** sets the username and/or password for this profile. (Max length for each is 31 chars)

**Allow User Connection via** displays a menu allowing you to toggle ON or OFF access via Local (Console Port), Modem, Telnet, FTP, and Real-Time Socket. These are abbreviated: LMTFR and default setting for all is ON.

**Upon Login then Go To** toggles the action this user will be directed to upon logging in, with the following options: Command, Menu, and Passthrough as shown here:

### Command

```
TeleBoss  
Password: *****  
READY  
>
```

## Menu

```
TeleBoss 820 Version 2.06.460 at 820-820009999  
  
1. Pass-Through to I/O 1  
2. Pass-Through to I/O 2  
P. 820 Command Prompt  
M. 820 Setup Menu  
S. 820 Status Menu  
X. Exit (end connection)
```

## Passthrough

```
TeleBoss  
Password: *****  
Connected to I/O 1
```

**File Access Pointer** toggles through each of the data files on the unit (FILE1, FILE2) to set what data file the user has access to when logging in to the command processor. Default setting is FILE1.

**Set Access/Pass-through Pointer To** is in effect if the “Upon Login then Go To” action is set to Passthrough. This option toggles the serial port the user will be routed to. Default setting is I/O 1.

**Pass-through Permissions** is in effect if the “Upon Login then Go To” action is set to Menu. This option displays a menu showing all serial ports, and toggles ALLOW or DENY for each port as needed. If a port is set as ALLOW, then that serial port is displayed in the Menu after the user logs in. If a port is set as DENY, then that serial port is not displayed in the Menu. Default setting for all ports is ALLOW.

**After PT, ESC Takes User To** sets the action this user can perform when they exit out of a pass-through connection. Default setting is Menu.

**Setup/Status Rights** toggles through the actions available to the user if they are given access to the command prompt. Options are MASTER, NONE, VIEW, ADMIN1, ADMIN2, and ADMIN3. See the [User Rights Table](#) for more information on each access level. Default setting is MASTER.

**File Release / Delete Permissions** displays a menu showing both data files and Audit Log, and toggles ALLOW or DENY for each as needed. Default setting for all is ALLOW.

## Authentication Settings

```
TeleBoss 820 - Authentication Settings  
A) Local Command Requires Password [OFF]  
B) Modem Callin Requires Password [OFF]  
C) TCP/IP Port 23 Requires Password [ON]  
D) TCP/IP Port 210x Requires Password [OFF]  
E) TCP/IP Port 220x Requires Password [OFF]  
F) Username and/or Password Required [PASSWORD ONLY]
```

Authentication Settings set parameters for passwords and security that are required for **every** user who attempts to log into the T820.

**Local Command Requires Password** is an ON/OFF toggle to set whether a password for I/O 2 users is required. Default setting is OFF.

**Modem Callin Requires Password** is an ON/OFF toggle to set whether a password for modem users is required. Default setting is OFF.



# TeleBoss 820 User Manual

---

**TCP/IP Port 23 Requires Password** is an ON/OFF toggle to set whether a password for Telnet (port 23) users is required. Default setting is ON.

**TCP/IP Port 210x Requires Password** is an ON/OFF toggle to set whether a password for pass-through (port 210x) users is required. Default setting is OFF.

**TCP/IP Port 220x Requires Password** is an ON/OFF toggle to set whether a password for Real-Time Socket (port 220x) users is required. Default setting is OFF.

➤ **Note:** When any of the above options is set to OFF, users connecting via that method are automatically granted all access.

**Username and/or Password Required** toggles between: PASSWORD ONLY, USERNAME/PASSWORD (PW), or PASSWORD(PW)/USERNAME. Default setting is PASSWORD ONLY.

## General Security Settings

```
TeleBoss 820 - Global Password/Security Settings Menu
A) Show Username/Password Prompt      [OFF]
B) Globally Allow Access via          [MTFR]
C) Button Tap Allows Console Access   [ON]
```

Global Password/Security Settings set security options that are required for **every** user who attempts to log into the T820.

**Show Username / Password Prompt** is an ON/OFF toggle to set whether a prompt for logging in is displayed. Default setting is OFF.

**Globally Allow Access via** displays a menu allowing you to toggle ON or OFF access via Modem, Telnet (ports 23, 200x, 210x), FTP, and Real-Time Socket. These are abbreviated: MTFR. Default setting for all is ON.

**Button Tap Allows Console Access** is an ON/OFF toggle to give access to a user who has forgotten their log on credentials. This is an insurance policy against locking yourself out of the unit. When set to ON, the user can tap the Reset button 5 times quickly (1-2 times per second), at which point the front-panel LEDs will flash briefly for several seconds, giving the user immediate Console access (via I/O 2) using the default MASTER username and password. Refer to the [Securing a TeleBoss 820/Button Unlock](#) section for more details about this. Default setting is ON.

## General Settings

```
TeleBoss 820 - General Settings
A) Site Name                        [820-820009995]
B) Answer String                    [TeleBoss]
C) Escape Key                       [27]
D) Confirmation Prompt              [ON]
E) Time Stamp Format                 [HH:MM]
F) Date Stamp Format                 [MM/DD]
G) Space After Date/Time Stamp      [ON]
H) Prompt                           []
I) Date/Time Setup                  []
J) Legacy Settings                  []
K) Joinable Pass-through            [ON]
```

**Site Name** sets the name assigned to this T820. This name is displayed at the top of the Status screen. The name should be unique for clarity. (Max length 40 chars) Default setting is "820 - <serial number>"

**Answer String** sets the string that is presented when a user connects to the T820 via Telnet or modem. (Max length 31 chars) Default setting is TeleBoss.

# TeleBoss 820 User Manual

---

**Escape Key** is the decimal ASCII character code of the key you must press three times to escape from pass-through or other transparent modes. Default is 27, the <ESC> key.

**Confirmation Prompt** is an ON/OFF toggle to set whether a confirmation prompt (*Are you sure (y/n)?*) is displayed when the commands **DEFAULT** or **COLDSTART** are issued. If there is no response within 30 seconds, the T820 will cancel the command. Default is ON.

**Time Stamp Format** toggles through three options for how time stamps are formatted: HH:MM, HH:MM:SS, or Blank. Default setting is HH:MM.

**Date Stamp Format** toggles through four options for how date stamps are formatted: MM/DD, MM/DD/YY, MM/DD/YYYY, or Blank. Default setting is MM/DD.

**Space After Date/Time Stamp** is an ON/OFF toggle to set whether a space is appended to the end of the Date/Time stamp. Default setting is ON.

**Prompt** sets the character(s) or settings values displayed as the command line prompt. Refer to the [Customizable Command Prompt](#) section in the Features chapter for more information. (Max length 63 chars)

[Date/Time Setup](#) displays the System Date/Time menu where you can manage the clock, daylight savings control, and configure a networked time server.

[Legacy Settings](#) displays a menu for configuring legacy products that may be connected to the T820.


**Joinable Pass-through** is an ON/OFF toggle to allow or disallow multiple user pass-through sessions. ON allows more than one user to connect on a pass-through session. OFF does not allow more than one concurrent pass-through session, and those attempting to join after the first user is connected will receive a "port in use" error message. Default setting is ON.

## Date/Time Settings

```
TeleBoss 820 - System Date/Time
A) Current Date                [12/08/2010]
B) Current Time                [09:53:39]
C) Adjust for Daylight Savings [ON]
D) GMT Difference (hours)      [8]
E) GMT Difference Direction    [BEHIND]
F) Enable Time Protocol       [OFF]
G) Time Servers
```

**Current Date** sets the date. The unit automatically calculates the day of the week to display on the Status screen.

**Current Time** sets the time (24 hr clock).

 **Note:** The date and time settings are maintained by means of an internal battery backup when power is removed from the T820.

**Adjust for Daylight Savings** is an ON/OFF toggle that allows automatic daylight savings time updating.

A brief explanation of daylight savings time (effective 2007): On the second Sunday in March, clocks are set ahead one hour at 2:00 a.m. local standard time, which becomes 3:00 a.m. local daylight time. On the first Sunday in November, clocks are set back one hour at 2:00 a.m. local daylight time, which becomes 1:00 a.m. local standard time.

**GMT Difference (hours)** sets the number of hours the current time zone is offset from GMT. Valid input ranges from 0 to 12. Default setting is 8 hours.

**GMT Difference Direction** sets whether you are east (ahead) or west (behind) of GMT. For example, Pacific time (GMT-8) is behind and Tokyo time (GMT +9) is ahead. Default setting is BEHIND.

# TeleBoss 820 User Manual

---

**Enable Time Protocol** toggles between OFF, SIMPLE, and NTP.

**SIMPLE** - With network time set to SIMPLE the unit attempts to contact the configured time servers (see Time Servers setting below) periodically, attempting to query each using Simple Network Time Protocol (SNTP),

Time, and Daytime protocols, in that order. Once a response is received for any protocol, the unit sets the system clock to the new time, updates the real time hardware clock (RTC), then the network time process dies. The interval for checking network time is hard-coded to 12 hours plus or minus a random several hours.

**NTP** - With network time set to Network Time Protocol (NTP), the NTP daemon is kept running at all times. Unlike the SIMPLE setting, with NTP the clock is not immediately set as soon as a time server is contacted. Rather, the NTP daemon utilizes various algorithms to set the time in an accurate and robust manner. Since the NTP daemon updates the system time asynchronously, the current time is stored in the RTC every 30 minutes while it is running. Note that if you change the clock manually, it may be a period of an hour or more before NTP resets it.

**Time Servers** displays a menu where the hostname or IP address of six time-servers can be configured. (Max length 64 chars) The T820 uses the following servers by default:

- time.nist.gov - 192.43.244.18 - Boulder, CO
- time-b.nist.gov - 129.6.15.29 - Gaithersburg, MD

## Legacy Settings

```
TeleBoss 820 - Legacy Settings
A) Release Compressed          [OFF]
B) Autodelete After Polling    [OFF]
C) Wait for NEXT               [OFF]
D) Omit END DATA              [OFF]
E) Line Tag                    [OFF]
F) Release Mode                [LINE]
G) CBB DLE Stuffing           [OFF]
H) CBB Retransmits            [5]
I) CBB Timeout                 [15]
Note: These settings are for support of older systems and
      should NOT be used for new implementations. We do
      not guarantee that these settings will be present in
      future versions or products.
```

**Released Compressed** is an ON/OFF toggle to enable release of data in a compressed or uncompressed format. Default setting is OFF.

**Autodelete After Polling** is an ON/OFF toggle to enable the deletion of data from the call record database once it has been polled. Default setting is OFF.

**Wait for NEXT** is an ON/OFF toggle that causes the unit to wait for the NEXT command before sending data once the RL command has been issued. Default setting is OFF.

**Omit END DATA** is an ON/OFF toggle that causes the unit to send or omit the string "END DATA" when a command processor poll is complete. Default setting is OFF.

**Line Tag** is an ON/OFF toggle that adds or omits the serial number line tags on each line of stored data. Default setting is OFF.

**Release Mode** toggles the following modes of releasing stored data: LINE, XMODEM, and CBB. Unless your application specifically uses XMODEM or CBB, leave this set to the default setting of LINE.

**CBB DLE Stuffing / Retransmits / Timeout** are specific configuration options for polling via Compressed Binary Block (CBB) mode. CBB is a release method included for compatibility and is not otherwise documented in this manual.

## Audit Log Settings

The Audit Log is a record of a variety of actions that occur within the T820.

```
TeleBoss 820 - Audit Log Settings
A) List Audit Log File
B) Clear Audit Log File
C) Enable Audit Log File           [ON]
D) Maximum File Size             [128]
E) Store Reset Events           [ON]
F) Store Command Entry          [ON]
G) Store Output Activity         [ON]
H) Store Password Failures      [ON]
I) Store Logins/Disconnects     [ON]
J) Store Pass-through Activity   [ON]
K) Store Inactivity Timeouts    [ON]
L) Store Polling Activity       [ON]
M) Store DIP Switch Changes     [ON]
```

**List Audit Log File** displays the contents of the Audit Log file, if any records exist.

**Clear Audit Log File** purges the records within the Audit Log file. Records in the Audit Log File are deleted immediately when this option is selected, so make sure you want to do this before selecting.

**Enable Audit Log File** is an ON/OFF toggle to enable Audit logging. Default setting is ON.

**Maximum File Size** is the maximum number of KB the Audit Log can reach before overwriting the oldest records. Available options are 0, 64, 128, 256, 512, and 1024. Default setting is 128.

The remaining options are ON/OFF toggles to enable logging of the action described. Default settings for all is ON.

## Features and How To Use Them

### Upgrading the T820

Save the update file (820-2.06.460-std-a71-plain.udf) to a directory on your PC or an FTP server. FTP upgrades can be done in either of two ways: by using the T820's FTP client to get the update file, or sending the update file from another host to the T820's FTP server. Following are the instructions for both methods.

» **Note:** Before upgrading it is always a good idea to make a copy of the Setting Keys file in your T820, in case settings are lost during the upgrade. This usually does not happen, but it's better to be safe than sorry.

#### **T820 as FTP server method:**

- 1) Make an FTP connection to the T820 using a username and password that has MASTER rights.
- 2) Type **HASH** at the ftp prompt. (This is optional - it just creates hash marks (###) while the file is transferring so you can see something happening.)
- 3) At the next ftp prompt type: **put drive:\directory\  
For example: put C:\upgrades\820-2.06.460-std-a71-plain.udf**
- 4) Hash marks will now appear to show you that the file is transferring. When the transfer is complete you will be returned to an ftp prompt.
- 5) Type: **BYE** at the ftp prompt. The unit still has to process this file, which takes about 5 minutes, at which time the unit will reboot. When the unit detects the update file and begins processing it. Wait until the unit reboots before proceeding.
- 6) After the T820 reboots, connect to it and either check the top line of the Status screen, or type **VER** at the command line. You should see that the unit is now upgraded to the new version.
- 7) Check your settings to be sure none have been lost. If they have, reload the Setting Keys file.

#### **T820 as FTP client method:**

From the command line type: **xf f get <update filename> <host> <username>**

(note: you can type 'xf' at the command prompt to get usage for this command.)

Here is an actual session:

```
➤ xf f get 820-2.06.460-std-a71-plain.udf 10.10.5.32 anonymous
Receiving 820-2.06.460-std-a71-plain.udf via FTP
Anonymous's password:
.....
COMPLETE

<and the update starts here>
```

## Setting Keys

Setting Keys (SK) provide a flat file, human readable, means of setting and retrieving settings within the unit. Setting Keys are commonly used to clone settings across multiple units or in automated processes.

Setting Keys is abbreviated when used on the command line as **SK**. Following are commands when working with the Setting Keys File from the command line of the unit.

**SK [KEY=*value*]** allows for reading or setting a single Setting Key. If the value portion of the command is omitted, the T820 will report back the value stored in that key. If the value is given, it will be stored in the key.

**SK GET [X|A [CUSTOM] [*filter*]** initiates a download of unit settings. This listing can be retrieved either by Xmodem or plain ASCII using the X and A attributes, respectively. The unit will prompt for the download transfer method. The CUSTOM tag may be used to retrieve only the settings that are not set to factory defaults. A filter may be applied to limit the keys output to just the branch specified. For example, to retrieve an ASCII listing of all network settings, use the command: **SK GET NET**

**SK SET [X|A]** puts the unit in bulk Settings Keys upload mode. Any of the settings retrieved by **SK GET** can be manipulated and uploaded with new values. The unit will process settings in any order or number; not all settings need to be uploaded each session. As with **SK GET**, both ASCII and Xmodem transfer methods may be used to upload settings to the unit. These transfer methods are indicated by using the X and A attributes, respectively. The T820 monitors for invalid Setting Keys and will notify you after the upload if any invalid data was received.

When using **SK SET** in ASCII mode, the data uploaded must end with a line consisting of the word "END" followed by a return.

**SK HERE** allows you to set or get individual keys interactively. Typing just the key name will cause the value to be displayed. Typing the key name plus a new value will set that key. The unit will keep prompting for a new key or key/value pair until you press <Esc> or <Enter>.

**SK LOG** displays a list of any errors generated during an SK Set.

Setting Keys can also be retrieved and loaded via FTP.

**FTP> GET SKALL FILENAME.TXT** retrieves all of the Setting Keys for the unit, similar to the **SK GET A** command described above.

**FTP> GET SKCUSTOM FILENAME.TXT** retrieves any settings that are not set to factory default, similar to the **SK GET A CUSTOM** command described above.

**FTP> PUT FILENAME.TXT SKALL** and **PUT FILENAME.TXT SKCUSTOM** load the settings in FILENAME.TXT onto the T820.

Upon successful completion of loading the settings FTP will respond with "226 - Transfer complete". If there is a problem in the Setting Keys file then FTP will respond with "226 - Transfer complete; errors in setting key file! Type Get SKLOG to view"

**FTP> GET SKLOG** retrieves the Setting Keys log as described above.

## Securing a TeleBoss 820

This section discusses all facets of security that must be considered when installing a TeleBoss 820. For adequate security, you must consider the following:

- [Security mode](#)
- [Telnet/FTP](#)
- [RTS \(Real Time Sockets\)](#)
- [Web UI \(User Interface\)](#)
- [Button unlock](#)

### **Security mode**

The security mode ( `sec.mode` ) tells the unit how to control users' access to it. By default, the only security mode for the T820 is User Profiles mode and it cannot be changed. With User Profiles you can restrict by what methods a user can connect, as well as whether the user receives "Username:" and/or "Password:" when prompted for those items. Be careful to always preserve a way to access the unit as a MASTER user (that is, a user with rights=MASTER). This is the user with full access to configure all settings and invoke all commands. Ensure, before you log out, that you have a MASTER user configured and that you don't forget its password.

If you are logged into the unit, you can put traffic on any network to which the unit is connected. For example, pinging a host on the network, FTP-ing to it, or Telnet-ing to it. Therefore good security comes from making it so no unauthorized persons have access to the unit.

### **Telnet/FTP**

Keep in mind that like SNMP, login credentials (and all application content) are transmitted in the clear for Telnet and FTP, so anyone eavesdropping on the network could gain unauthorized access to the unit. Therefore, to tighten security on Telnet, either do not use it, or forbid it (with `sec.connectvia`).

### **RTS (Real Time Sockets)**

Out of the box the T820 allows connections to TCP port 220x unauthenticated. Therefore, unauthorized access to FILEx data is possible unless you tighten RTS via the authorization controls in the User Profiles security mode. Remember that just like SNMP, Telnet, and FTP, any login credentials you require for RTS connections are passed in the clear, so anyone eavesdropping on the network could gain unauthorized access. Alternatively, you can forbid RTS connections altogether with the `sec.connectvia` setting.

### **Web UI (User Interface)**

The T820 supports HTTP. Like SNMP, Telnet, and FTP, HTTP is vulnerable to eavesdropping. Therefore to tighten security, do not use it if not necessary.

### **Button unlock**

With the Button Unlock feature, you can regain access to a unit that you have been locked out of. This is meant as an insurance policy against the only other resort to locking yourself out, which is returning the unit to Asentria.

When this feature is set to ON (default setting), the user can tap the Reset button 5 times quickly (1-2 times per second), at which point the front-panel LEDs will flash briefly for several seconds, giving the user immediate command line access via I/O 2 using the default MASTER username and password.

These are the settings that are defaulted by this process:

`sec.mode` (reset to USER PROFILES)

`sec.consolereq` (reset to OFF)

`sec.connectvia` (reset to every method of connecting)

"admin/password/MASTER" credentials for the user profile appropriate to the product

# TeleBoss 820 User Manual

---

If you do not want the Button Unlock feature enabled, for example in environments where physical access is not assumed to be trusted with access, then be sure to turn it off (`sk sec.button.unlock=OFF`), or set the Button Tap Allows Console Access in the [Security Settings/General Security Settings](#) menu to OFF.

If you lock yourself out and gain access again with the Button Unlock feature, remember to reconfigure the settings that were defaulted by the Button Unlock feature to maintain your prior security configuration.



## Telnet/TCP Connections

The T820 provides support for Telnet/TCP connections via two internal Ethernet interfaces. Refer to the [Ethernet Settings](#) menu for information on how to configure these.

All Telnet connections are TCP connections but not all TCP connections are Telnet connections. A Telnet connection is made to the T820 by using the Telnet protocol and by specifying a TCP port address. 'Telnet' refers to a TCP connection made on port address 23, which specifies that characters are supposed to be handled a certain way. The T820 supports Telnet connections and also supports some custom assigned port numbers to facilitate certain connection features.

The following information assumes that you know how to run your computer to establish and use Telnet/TCP connections and only require the specific information relating to the T820 features. Port numbers below include "x" where "x" is the corresponding T820 file or port number. (ie; 2101 refers to the telnet passthrough connection made on serial port 1.)

- **Port Address 200x**: A connection to port 200x is just like a regular Telnet connection to port 23, except it sets the default file for retrieving data or the default port when the **BYPASS** command is given.
- **Port Address 210x** : A connection to port 210x routes you directly to the device connected to the corresponding serial (I/O) port. A banner message will be displayed indicating you are connected to that I/O port. To disconnect from this access mode press the <ESC> key twice. Refer to the Passthrough section in this chapter for more information.
- **Port Address 220x**: A connection to port 220x is referred to as a Real-Time Socket. These are sockets that are dedicated to exporting data from file "x" in the T820. If there is any data already stored in a particular file, it will first be transferred out of the T820 to the user or machine initiating the connection. After all the data currently in the file is transferred out, any data that is coming into the T820 will be immediately transmitted out and across this connection. Refer to the [Real-Time Socket Settings](#) menu for information on how to configure these.

## Default Router

The Default Router setting allows you to select the default router (gateway) for the T820. This tells the T820 which router to use if a packet is not on any of the LANs defined on the network port. The default router is selected from the routers defined for the Ethernet ports.

### More information for advanced users:

The Default Router setting allows you to select the default router (gateway) for the unit. The unit uses a routing table to determine how to send any outbound IP frame. Each entry in the routing table tells the unit how to send a frame whose destination address matches a rule in the routing table. Routing table entries are examined from most-restrictive to least-restrictive, so the default routing table entry is the last entry in the table since it is the least restrictive. It is the catch-all route: it tells the unit how to send a frame when it doesn't know how else to send it. The only routes on the unit are network interface routes, any static routes you configure, and the default route. Network interface routes tell the unit how to send a frame bound for a machine on one of the unit's local networks (subnets). These routes are automatically configured when you configure the address of a network interface. If an outbound frame is destined for a machine off all local networks then it is sent according to what the default route specifies. The default route specifies the default router to use for these frames.

Each network interface has a router setting which you can configure; this is the machine on that interface to which frames will be sent if they do not route to the local network of that interface. However the unit uses only one of those configured routers at a time - - the default router setting specifies which router the unit will use at a time. As you configure router settings the unit will choose a default router for you. This is available for you to see (and override) via this `net.default.router` setting. The values you may choose for this setting (i.e., router addresses) are:

- the set of routers which you have specified for Ethernet
- that which is determined by dynamic network interfaces, represented as "DYNAMIC".

**>> Note:** DYNAMIC is a possible value for the default router, but is not applicable for the T820 since features which would require dynamic routing (PPP, wireless modem, etc.) are not supported.

### Values

Values are dotted-quads.

### Key syntax

`net.default.router`

## Passthrough

Passthrough (also known as “Bypass”) is a bi-directional communication link for either a modem or Telnet connection through the T820 to a device attached to a serial port. Pass-through is useful for configuring or maintaining devices connected to the T820 without having to be in the same physical location.

Passthrough to a serial port is available on TCP ports 210*n* where ‘*n*’ is the number of the serial port.

Passthrough to a serial port is available via modem using the **BYPASS*n*** command where ‘*n*’ is the number of the serial port.

To terminate a passthrough session, press the Escape Key three times.

Following is a table showing what passthrough sub-features/behaviors are applicable to the T820 and a detailed description of each sub-feature below the table.

Sub-feature	T820
<b>Bypass command</b>	<b>Yes</b>
<b>Adjustable end sequence pause</b>	<b>Yes</b>
<b>End sequence for network passthrough</b>	<b>3 escapes (via login menu) or 1 escape (via bypass command)</b>
<b>End sequence for modem passthrough</b>	<b>1 escape (via bypass command)</b>
<b>Joinable sessions</b>	<b>Yes</b>
<b>Buffered pass-through</b>	<b>No</b>

### **Bypass command**

The command **BYPASS*n***, where ‘*n*’ is the number of the serial port, is used on a modem passthrough connection.

### **Adjustable end sequence pause**

This feature means you can control the minimum amount of time between entering escape characters that the unit will register as an authentic escape sequence. That is, you can set this to 1/4 second, meaning that in order to escape passthrough, you must enter the escape sequence with at least 1/4 second between each escape. The point is to make the unit disregard escape sequences that happen from the pass-through data itself, which is assumed to travel across the link without pauses between the escape characters. The sys.pt.endpause setting controls this.

### **Joinable sessions**

Up to 3 pass-through sessions can be joined in that they all connect to the same serial port. Data arriving on the serial port gets passed through to all parties, and data arriving from any one party gets passed through to the connected serial port as well as the other parties.

### **Buffered pass-through**

Buffered pass-through is where upon connecting to a passthrough session, the first thing the unit does is dump all data that has been buffered in that port's database file, instead of connecting to the port right away. Once all data from that file is output then unit connects you to the port. If no data has been buffered (or this feature is turned off) then the unit initially connects you to the port. This option is not available on the T820.

By default the unit provides passthrough access to anyone and can be further defined in the [User Profile Settings](#) menus. Various settings control its behavior, as discussed above with each sub-feature.

## Customizable Command Prompt

This feature allows the prompt in the command processor to be customized, and includes the ability to embed one or more settings values in the prompt. A customized command prompt can help simplify administration of units, particularly where multiple units are involved.

The command prompt setting is available in the General setup menu section, and via the Setting Key `sys.prompt`. The setting can contain up to 64 characters, but the prompt itself is limited to 30 characters; any additional characters are truncated.

In addition to specifying plain text to be included in the command prompt, setting values can be embedded using a special syntax: `$(setting_key_name)`. If this construct is used, the value of the specified Setting Key replaces the construct. If the Setting Key is not accessible for any reason (invalid key, insufficient user access level, etc), "ERROR" is displayed instead.

**» Note:** In the T820 the above syntax only supports the `sys.sitename` Setting Key; all others return "ERROR".

To make the system prompt blank, set `sys.prompt` to a null value (i.e. "`sk sys.prompt =`").

### Examples:

Set prompt to be ">"

Via Setup menu: Enter new prompt: >  
Via Setting Key: sk `sys.prompt` = >

Set prompt to be "Site Name"

Via Setup menu: Enter new prompt: TeleBoss (or whatever the site name is)  
Via Setting Key: sk `sys.prompt` = `$(sys.sitename)` "

Set prompt to be "System Date and Time>"

Via Setup menu: The date and time entered via the Prompt option do not change as the actual date and time progress. What you enter here will always be displayed as the prompt, until you change it. If you want the date/time prompt to change with the system clock, then change it via the Setting Key entry describe below.  
Via Setting Key: sk `sys.prompt` = `$(sys.clock.date)` `$(sys.clock.time)`>

## Command Reference

### User Interface Commands

» **Note:** The HELP command can give helpful context sensitive information for most commands.

Command	Summary	Syntax	Description
<b>BYE</b>	Disconnect from unit	BYE	Disconnect a processor session.
<b>EXIT</b>	Exit command processor	EXIT	Ends the console session.
<b>HELP</b>	Show help menu	HELP [ <i>command</i> ]	Displays a list of commands or context sensitive help for a specific command.
<b>PING</b>	Ping IP address	PING <i>target_address</i>	Performs a standard network ping function on the specified IP address.
<b>RESTART</b>	Restart unit	RESTART	Reset the system, same as pressing the physical reset button.
<b>STATUS</b> or ?	Display status screen	STATUS or ?	Display the status screen

### Setup Commands

Command	Summary	Syntax	Description
<b>BYPASS</b>	Access serial ports	BYPASS [ <i>port_number</i> ]	Provide pass-through terminal access between the user and the input port.
<b>SK</b>	Set/get key	SK [ <i>KEY</i> [= <i>value</i> ]]	Set or get a single key See Setting Keys for more information.
<b>SK GET</b>	Read keys	SK GET [ <i>X</i>   <i>A</i> [ <i>CUSTOM</i> ] [ <i>filter</i> ]]	SK GET initiates a download of Setup menu options. See Setting Keys for more information.
<b>SK HERE</b>	Manage individual keys	SK HERE	SK HERE allows you to set or get individual keys interactively. See Setting Keys for more information.
<b>SK LOG</b>	Show SK error log	SK LOG	SK LOG outputs a list of any errors generated during an SK set. See Setting Keys for more information.
<b>SK SET</b>	Set keys	SK SET [ <i>X</i>   <i>A</i> ]	SK SET puts the unit in bulk settings key upload mode. See Setting Keys for more information.
<b>SETUP</b>	Enter setup menu	SETUP	Opens the setup menu.

## System Commands

Command	Summary	Syntax	Description
<b>COLDSTART</b>	Cold boot unit	COLDSTART	Resets the same settings as the DEFAULT command and then reboots the unit.
<b>DEFAULT</b>	Restore factory defaults	DEFAULT	Resets all settings to factory default values, except does not change the following settings: <ul style="list-style-type: none"> <li>• IP address</li> <li>• Subnet mask</li> <li>• Router address</li> <li>• Serial port baud rate and data format</li> </ul> Does not affect record data
<b>PUSHNOW</b>	Initiate an immediate FTP push of data	PUSHNOW	Initiates an immediate FTP push of data
<b>PUSHTEST</b>	Test connectivity to the FTP server	PUSHTEST	Tests connectivity to the FTP server
<b>TYPE</b>	Print Audit Log file contents	TYPE AUDIT	Print the contents of the Audit Log.
<b>VER</b>	Print unit version	VER	Displays unit hardware and software versions as well as the product and version build.

## Numeric Commands

The T820 supports numeric (Ctrl-B) commands as follows:

Numeric (Ctrl-B) Word		Numeric (Ctrl-B) Word	
00	PRT (partition)	59	TAG
01	RL (release)	59,1	TAG OFF
02	NEXT	59,2	TAG ON
06	RESEND	62	RLMODE
09	BYE	62,1	LINE
20	COUNT	62,2	CBB
21	FREE	62,3	CBB
25	CLEAR	62,4	XMODEM
29	BYPASS	63	CRC
39	ZERO	63,1	CRC OFF
50	DEFAULT	63,2	CRC ON
53	COMPRESS	68	DUPLEX
53,	COMPRESS ON	68,1	DUPLEX HALF
53,2	COMPRESS OFF	68,2	DUPLEX FULL
54	WAIT		
54,1	WAIT OFF		
54,2	WAIT ON		

## Usage Commands

Usage for certain functions ([SK](#) and [XF](#)) can be displayed by simply entering the function command without any arguments, as shown below:

### SK

```
>SK
Usage:
sk key[<operator>[value]] |
  get [x|a][ filter|custom|@] |
  set [x|a] |
  here |
  help |
  log |
  shortcut [filter|custom|@]
Where key:
segment1.segment2....
where segment:
  word | word[index] | word.index
  where word:
    defined by factory or scripting dictionaries
  where index:
    number | 'all'
where referenced as:
  static: referring to one value
  indexed: referring to multiple values depending on index(es)
  enumerated: referring to a finite set of values
Where operator:
=: write value
@: read/write access levels
#: read key possible values where enumerated
$: read key restriction class
%: read key instance count where indexed
+: read eventsensor index instance set
-: reset to default value
Where shortcut:
g: get a
c: get a custom
s: set a
?: get a status
Examples:
sk get: read all keys and be prompted for transfer method
sk get a: read all keys at terminal
sk get x: read all keys via xmodem transfer
sk set: write keys and be prompted for transfer method
sk set a: write keys at terminal, delimit with 'end' on line by itself
sk set x: write keys by transferring a file of them via xmodem to the unit
sk get a custom: read non-default keys at terminal
sk get a net: read all net keys at terminal
sk g: same as 'sk get a'
sk s: same as 'sk set a'
sk c: same as 'sk get a custom'
sk ?: same as 'sk get a status'
sk here: perform key operations in interactive interface
sk help: display this help screen
sk <key>: read a key setting value
sk <key>=<value>: write a key setting value
sk <key>@: read key access levels
sk <key>@<read level,write level>: write key access levels
sk get a @: read all access levels at terminal
sk <indexed-key>^: read the next key instance of an indexed key
sk log: output log of last 'set' operation
sk serial.i-: reset all settings under index branch 'serial' to default
sk net-: reset all settings under non-indexed branch 'net' to default
sk event.sensor[16]-: reset all settings for eventsensor 16 to default
>
```

## **XF**

>**XF**

Usage: XF [X|Y|Z|T|F|S|A] GET|PUT [filename] [host] [user] [directory]

>



## Appendices

### User Rights Table

The following tables contain the rights available to each access level within the user profiles.

#### Command Permissions

Command	None	View	Admin1	Admin2	Admin3	Master
			X	X	X	X
BYE	X	X	X	X	X	X
COLDSTART						X
DEFAULT						X
DELETE			X	X	X	X
DIR		X	X	X	X	X
EXIT	X	X	X	X	X	X
FTP		X	X	X	X	X
GET		X	X	X	X	X
HELP	X	X	X	X	X	X
MODEMTALK						X
PING			X	X	X	X
RELOADALL	X	X	X	X	X	X
RESTART			X	X	X	X
RZ			X	X	X	X
SET			X	X	X	X
SETUP			X	X	X	X
SK		X	X	X	X	X
STATUS, ?		X	X	X	X	X
SUPPORT		X	X	X	X	X
TESTTIME		X	X	X	X	X
TYPE		X	X	X	X	X
VER		X	X	X	X	X

#### Setup Menu Permissions

Settings	View	Admin1	Admin2	Admin3	Master
Most settings	View	X	X	X	X
Authentication				View	X
Passwords					X
Audit log	View	View	View	X	X

## Control Characters

Some of the following control characters may be used in various functions within the T820.

Char	Dec	Hex	Control Key	Control Action
NUL	0	00	^@	Null
SOH	1	01	^A	Start of heading
STX	2	02	^B	Start of text
ETX	3	03	^C	End of text
EOT	4	04	^D	End of transmission
ENQ	5	05	^E	Enquiry
ACK	6	06	^F	Acknowledge
BEL	7	07	^G	Bell
BS	8	08	^H	Backspace
HT	9	09	^I	Horizontal tab
LF	10	0A	^J	Line feed
VT	11	0B	^K	Vertical tab
FF	12	0C	^L	Form feed
CR	13	0D	^M	Carriage return
SO	14	0E	^N	Shift Out
SI	15	0F	^O	Shift In
DLE	16	10	^P	Data link escape
DC1	17	11	^Q	XON
DC2	18	12	^R	Device control 2
DC3	19	13	^S	XOFF
DC4	20	14	^T	Device control 4
NAK	21	15	^U	Negative acknowledge
SYN	22	16	^V	Synchronous idle
ETB	23	17	^W	End transmission block
CAN	24	17	^X	Cancel
EM	25	19	^Y	End of medium
SUB	26	1A	^Z	Substitute
ESC	27	1B	^[	Escape
FS	28	1C	^\	File separator
GS	29	1D	^]	Group Separator
RS	30	1E	^^	Record Separator
US	31	1F	^_	Unit Separator

## Internal Modem Guidelines

The internal modem supplied with this product complies with Part 68 of the FCC Rules and Regulations. The labeling on the modem provides the FCC Registration number and the Ringer Equivalence Number (REN) for the modem. This information is also listed below. You must provide, upon request, this information to your telephone company.

The REN is useful to determine the quantity of devices you may connect to a telephone line and still have all of these devices ring when the number is called. In most, but not all areas, the sum of the RENs of all devices connected to one line should not exceed five (5.0). To be certain of the number of devices you may connect to a line, as determined by the REN, you should contact the local telephone company to determine the maximum REN for your calling area.

If the modem causes harm to the telephone network, the telephone company may temporarily discontinue your service. If possible, they will notify you in advance. If advance notification is not possible, you will be notified as soon as possible.

Your telephone company may make changes in its facilities, equipment, operations or procedures that could affect proper functioning of your equipment. If they do, you will be notified in advance to give you an opportunity to maintain uninterrupted telephone service.

If you experience trouble with the modem, contact Asentria at (206) 344-8800 for information on obtaining service or repairs. The telephone company may ask you to disconnect the device from the network until the problem has been corrected or until you are sure that the device is not malfunctioning.

This device may not be used on coin service lines provided by the telephone company (this does not apply to private coin telephone applications which use standard lines). Connection to party lines is subject to state tariffs.

<b>Modem</b>	<b>FCC ID</b>	<b>REN</b>
2400 Baud Modem	EUD-5U9-BRI4480	0.8B
33.6K Baud Radicomm Modem	406CHN-31735-PT-E REN 1.1B	1.1B
33.6K Baud OmniModem	6KMUSA-34184-MME REN 0.9B	0.9B
33.6K Baud MultiModem	AU7-USA-46014-MD-E	0.1B

## Canadian Department of Communications

NOTICE: The Canadian Department of Communications Label identifies certified equipment. This certification means that the equipment meets certain telecommunications network protective, operational and safety requirements. The Department does not guarantee the equipment will operate to the user's satisfaction.

Before installing this equipment, users should ensure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection. In some cases, the company's inside wiring associated with a single line individual service may be extended by means of a certified connector assembly (telephone extension cord). The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations.

Repairs to certified equipment should be made by an authorized Canadian maintenance facility designated by the supplier. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment.

Users should ensure for their own protections that the electrical ground connections of the power utility, telephone lines and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas.

Caution: Users should not attempt to make such connections themselves, but should contact the appropriate electric inspection authority, or electrician, as appropriate.

The Load Number (LN) assigned to each terminal device denotes the percentage of total load to be connected to a telephone loop, which is used by the device, to prevent overloading.

The termination of a loop may consist of any combination of devices subject only to the requirement that the total of the Load Numbers of all the devices does not exceed 100. The load number of this unit is five.

This digital apparatus does not exceed the Class A limits for Radio noise emissions from digital apparatus set out in the interference-causing equipment standard entitled "Digital Apparatus", ICES-003 of the Department of Communications.

---

AVIS: - L'étiquette du ministère des Communications du Canada identifie le matériel homologué. Cette étiquette certifie que le matériel est conforme à certaines normes de protection, d'exploitation et de sécurité des réseaux de télécommunications. Le Ministère n'assure toutefois pas que le matériel fonctionnera à la satisfaction de l'utilisateur.

Avant d'installer ce matériel, l'utilisateur doit s'assurer qu'il est permis de le raccorder aux installations de l'entreprise locale de télécommunication. Le matériel doit également être installé en suivant une méthode acceptée de raccordement. Dans certains cas, les fils intérieurs de l'entreprise utilisés pour un service individuel à ligne unique peuvent être prolongés au moyen d'un dispositif homologué de raccordement (cordon prolongateur téléphonique interne). L'abonné ne doit pas oublier qu'il est possible que la conformité aux conditions énoncées ci-dessus n'empêche pas la dégradation du service dans certaines situations. Actuellement, les entreprises de télécommunication ne permettent pas que l'on raccorde leur matériel à des jacks d'abonné, sauf dans les cas précis prévus par les tarifs particuliers de ces entreprises.

Les réparations de matériel homologué doivent être effectuées par un centre d'entretien Canadien autorisé désigné par le fournisseur. La compagnie de télécommunications peut demander à l'utilisateur de débrancher un appareil à la suite de réparations ou de modifications effectuées par l'utilisateur ou à cause de mauvais fonctionnement.

Pour sa propre protection, l'utilisateur doit s'assurer que tous les fils de mise à la terre de la source d'énergie électrique, des lignes téléphoniques et des canalisations d'eau métalliques, s'il y en a, sont raccordés ensemble. Cette précaution est particulièrement importante dans les régions rurales.

Avertissement. - L'utilisateur ne doit pas tenter de faire ces raccordements lui-même; il doit avoir recours à un service d'inspection des installations électriques, ou à un électricien, selon le cas.

L'indice de charge (IC) assigné à chaque dispositif terminal indique, pour éviter toute surcharge, le pourcentage de la charge totale qui peut être raccordée à un circuit téléphonique bouclé utilisé par ce dispositif. La terminaison du circuit

# TeleBoss 820 User Manual

---

bouclé peut être constituée de n'importe quelle combinaison de dispositif, pourvu que la somme des indices de charge de l'ensemble des dispositifs ne dépasse pas 100. L'indice de charge de cet produit est 5.

Cet appareil numérique respecte les limites de bruits radioélectriques applicables aux appareils numériques de Classe A prescrites dans la norme sur le matériel brouilleur : "Appareils Numériques", NMB-003 édictée par le ministre des Communications.

## Warranty Information

Asentria Corporation hereby warrants that it will, as the buyers sole remedy, repair or replace, at its option, any part of the T820 which proves to be defective by reason of improper materials or workmanship, without charge for parts or labor, for a period of 12 (twelve) months. This warranty period commences on the date of first retail purchase, and applies only to the original retail purchaser.

To obtain service under this warranty, you must obtain, by telephone, postal letter, or email, a return authorization number from Asentria Technical Support. This authorization number may be obtained by contacting Asentria Technical Support at the address and/or phone number below. The defective unit is to be returned to Asentria with shipping prepaid, and the return authorization number must be clearly marked on the outside of the package containing the defective unit.

The dealer's bill of sale or other satisfactory proof of the date of purchase may be required to be presented in order to obtain service under this warranty.

This warranty applies if your T820 fails to function properly under normal use and within the manufacturer's specifications. This warranty does not apply if, in the opinion of Asentria Corporation, the unit has been damaged by misuse; neglect; or improper packing, shipping, modification, or servicing by other than Asentria or an authorized Asentria Service Center.

In no event shall Asentria Corporation be liable for any loss, inconvenience or damage, whether direct, incidental, consequential or otherwise, with respect to the T820. Asentria Corporation's liability shall be limited to the purchase price of the T820. No warranty of fitness for purpose, or of fitness of the T820 for any particular application is provided. It is the responsibility of the user to determine fitness of the T820 for any particular application or purpose.

This warranty gives you specific legal rights. These rights may vary from state to state, as some states do not allow limitations on liability.

You may request information on how to obtain service under this warranty by contacting Asentria Technical Support at the address and phone number below:

### **Asentria Technical Support**

1200 North 96th St.

Seattle, WA 98103

206.344.8800

[support@asentria.com](mailto:support@asentria.com)

[www.asentria.com](http://www.asentria.com)