



Silex Technology America

SX-570/580 CONSOLE COMMANDS

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1 Introduction and command console access information

The Silex technology SX-570 and SX-580 embedded servers support a sophisticated command-line oriented console for configuration and management. The console includes some features that are not available through other configuration methods. The console can be accessed via TELNET, the server's serial data port, the server's dedicated configuration console port, the server's Linux console port using the 'console' utility, or through the console page on the internal web server. The general configuration procedure is the same regardless of which method is used, unless specifically noted.

In the descriptions below, the capitalized portions of commands indicates the minimum portion of the command token that must be entered for the command to be recognized.

The console accepts multiple commands for some functions. The following can be used interchangeably:

SEt, DEFine, CHange	Set a value
DEl, CLear, PUrge	Remove a value

2 Network Commands

This group of commands configures network parameters.

2.1 SH NW

Displays summary network information

sample output:

```
Local> sh nw

WiFi Mode = INFRASTRUCTURE
WiFi SSID: SQRT

Current rate = 72 Mbps
WiFi FW Ver = Host 31010233, Radio 30000582
Authentication type= OPEN SYSTEM

Encryption is Disabled
AP MAC Address = 64 AE 0C 01 86 C0
Signal Quality = Excellent (100%)
Connected to SSID SQRT on channel 3
```


2.2 SET NW CHannel

Sets wireless LAN channel number

```
SET NW CHannel n
```

NOTE: The actual channels available depends on the radio installed in the unit and the current mode of operation.

This value is only used in the ad-hoc or AP mode. It is ignored in infrastructure mode. The default channel number is 11.

SH NW CHANNEL displays the currently configured channel number.

2.3 SET NW DISCONN

This command sets the wireless disconnect timer setting.

```
SET NW DISCONN nn
```

nn is a time period in seconds. The range for nn is 0-255. When the radio loses connection to the AP, it attempts to re-establish the connection for the specified time (in seconds) before it sends a disconnect message to the SX-570 controller. If the timer value is set to zero, autonomous roaming is disconnected and the radio will not automatically scan for a new suitable AP to which to connect. The factory default value is 4 seconds.

SH NW DISCONN shows the currently configured disconnect timer setting.

2.4 SET NW DIV

This enables or disables the software automatic antenna selection support in the radio on the module.

```
SET NW DIV [ DISable | ENable ]
```

The default value is disabled.

SH NW DIV will show the current setting of the automatic antenna selection option.

NOTE: This function is not available in firmware versions earlier than V1.14.

2.5 SET NW Mode

Sets wireless LAN mode

```
SET NW MOde  [Infrastructure | Ad-Hoc | AP]
```

SH NW MODE will display the current wireless mode.
The default mode is Ad-hoc.

2.6 SET NW RAdio

Sets the wireless LAN Radio Mode

```
SET NW RAdio  [ 802.11a-n | 802.11b-g-n | 802.11a-b-g-n]
```

This command is only useful for the SX-580. The SX-570 only supports 802.11b-g-n mode (2.4GHz). For the SX-580, the radio can be configured to use all frequencies, or only the 2.4GHz frequencies (802.11b-g-n) or only the 5GHz frequencies (802.11a-n). For the SX-580, the default value is 802.11a-b-g-n.

SH NW RADio will display the currently configured radio mode.

2.7 SH NW RATE

Shows the current wireless link rate.

```
SET NW RAdio  <mode>  
  
Current rate  = 72 Mbps
```

This is an instantaneous value subject to change.

2.8 SET NW RTS

Sets WLAN RTS threshold

```
SET NW RTS      n
              n = 1-3000  (default = 2432)
```

This sets the packet size at which the 802.11 RTS handshake is used for transmission.

SH NW RTS will display the currently configured value.

2.9 SET NW SCAN

This command allows the channels to be scanned for access points to be specified.

```
SET NW SCAN <channel list> [ DISable | ENable ]
              (default = all channels ENABLED)
```

By default, the unit will scan all available channels on each band (802.11b-g-n and/or 802.11a-n) which is enabled. With this command, the scan can be restricted so that only certain channels are scanned. If DISable is specified after the channel list, then those channels will be set not to be scanned. If ENable is specified after the channel list, the channels will be flagged to be scanned.

SH NW SCAN will show which channels are currently set to be scanned.

NOTE: Disabling a channel for scan is not supported in currently available firmware versions. Even if set disabled with this command, all channels will be scanned.

2.10 SH NW SQ

Displays the current signal quality seen on a wireless network link.

sample output:

```
Signal Quality = 97
Signal Strength = -57
Noise Level    = -96
```

The Signal Quality value is a scaled value from 0 to 100 indicating the relative strength of the wireless link. The Signal Streother values is the current RSSI value computed for the connection.

2.11 SET NW SSID

Sets the target wireless LAN SSID

```
SET NW SSid <name>
      User defined (default = printer)
```

2.12 DEL NW SSID

Sets the wireless LAN SSID to the null string

```
DEL NW SSid
```

2.13 SET NW WIRED

Sets the wired Ethernet PHY mode.

```
SET NW WIRED [AUTO | 10BASE | 100BASE | FD10BASE | FD100BASE]
```

If AUTO is selected, the Ethernet PHY will negotiate with the device on the other end of the link to determine the highest performance mode both sides can support. If any other setting is selected the half duplex or full duplex mode selected will be used with no negotiation. This may be required for some fixed speed Ethernet hubs which do not support negotiation.

The default setting is AUTO.

SH NW WIRED will display the current setting of the PHY mode.

NOTE: This function is not available in firmware versions earlier than V2.01.

2.14 SET NW WLIF

Sets the radio network interface enable.

```
SET NW WLIF [UP | DOWN]
```

UP puts the radio state in a normal operating mode. DOWN disables the wifi radio so it produces no RF output and does not receive any data, and on the SX-580 it also disables the Bluetooth radio..

Note: This function is volatile, and the radio is enabled if the module is reset.

NOTE: This function is not available in firmware versions earlier than V1.14.

2.15 SH NW WLLIST

Display wireless LAN networks visible to the module. Only access points which are broadcasting their SSID will be displayed. 'Hidden' access points will not be visible.

```
SH NW WLLIST
```

```
"OFFICE-2F"    00:80:92:01:02:03  -40  1  11ng  AP      WPA2-PSK  AES
"MeetingRoom1" 00:80:92:04:05:06  -82  13 11ng  AP      WPA-EAP   TKIP
"Suzuki"       00:80:92:07:08:09  -53  6   11ng  Ad-Hoc  OPEN      NONE
"DiningHall"   00:80:92:0A:0B:0C  -63  11 11g   AP      WPA2-PSK  TKIP/AES
```

NOTE: This function is not available in firmware versions earlier than V1.14.

3 Network Security Commands

This group of commands configures network security parameters

3.1 SET NW AUTHtype

Sets WLAN Authentication type

```
SET NW AUTHtype [OPEN | SHARED | TLS | TTLS | LEAP | PEAP | EAP-FAST | PSK]
```

The default setting is Open System.

Note: Only OPEN is valid in ad-hoc mode

Note: only OPEN and PSK are valid in AP mode.

SH NW AUTHtype will show the currently configured value.

3.2 DEL NW CERT

Removes any authentication certificates that have been loaded into the module.

```
DEL NW CERT.
```

Deletes any host certificates or client certificate/private keys currently configured on the module. . This includes dynamically provision EAP-FAST PACs. This returns the certificate settings to the factory default condition (nothing present).

3.3 SET NW ENC

Sets the wireless LAN Encryption Mode.

```
SET NW ENC [Disable | 128 | WPA | WPA2 | WPA2-WPA ]
```

Supported modes are Disabled (none) 128 bit WEP, WPA (TKIP) and WPA2 (AES). WPA2-WPA mode supports either AES or TKIP encryption in WPA systems. The default setting is Disabled (no encryption).

NOTE: Ad-hoc mode supports only Disable or WEP.

NOTE: AP mode does not support WEP.

SH NW ENC will show the currently configured encryption mode.

3.4 SET NW ID

Sets Authentication User ID This may include the realm, separated by a '@' character.

```
SET NW ID <user id>
```

SH NW ID will show the currently configured value.

The default user ID is "anonymous".

Note: The default realm is a null (blank) string

3.5 SET NW KEY#

Selects WLAN WEP key entry

```
SET NW KEY#    n  
              n = 1-4    (default = 1)
```

3.6 SET NW KEYNUM

Selects WLAN WEP key entry (same as SET NW KEY#)

```
SET NW KEYNUM    n
                 n = 1-4    (default = 1)
```

3.7 SET NW KEYVAL

Sets the currently selected WLAN WEP key entry to the hex value given.

```
SET NW KEYVAL <key>
              key=10 or 26 hex characters (default=<null>)
```

3.8 SET NW PW

Sets the password used for the 802.1x EAP authentication, if enabled.

```
SET NW PW    <password>
             (default = anonymous)
```

3.9 SET NW PEAPGTC

Test command to force PEAP to use GTC in phase 2 of the authentication handshake.

```
SET NW PEAPGTC [ENable | DISable]
```

This command is only valid if the authentication type is set to PEAP. This is intended for protocol testing, and should generally be left disabled for normal operation.

The default value is DISable.

SH NW PEAPGTC will display the current setting of this configuration item.

3.10 SET NW PEAPMSchap

Test command to force PEAP to use MSCHAP in phase 2 of the authentication handshake.

```
SET NW PEAPMSchap [ENable | DISable]
```

This command is only valid if the authentication type is set to PEAP. This is intended for protocol testing, and should generally be left disabled for normal operation.

The default value is DISable.

SH NW PEAPMSchap will display the current setting of this configuration item.

3.11 SET NW PEAPV0

Test command to force PEAP to use the version 0 protocol.

```
SET NW PEAPV0 [ENable | DISable]
```

This command is only valid if the authentication type is set to PEAP. This is intended for protocol testing, and should generally be left disabled for normal operation.

The default value is DISable.

SH NW PEAPV0 will display the current setting of this configuration item.

3.12 SH NW PKCERT

Show client certificate information.

```
SH NW PKCERT
```

If a client certificate is configured in the unit, this command displays a raw hex dump of the client certificate.

3.13 SET NW PKPASS

Sets the password for a private key password file to be loaded into the unit.. This value must be set before the key file is loaded, or the file will not be able to be decrypted properly.

```
SET NW PKPASS <passphrase>  
(default = null string)
```

3.14 SET NW REALM

Sets the realm portion of the 802.1x EAP authentication ID

```
SET NW REALM <realm>
```

The default realm is the null string.

This may also be set with the ID command by appending the realm after a '@' character. SH NW REALM will display the currently configured ID realm.

3.15 SET NW SSCCITY

Sets the city location for a self signed certificate to be generated.

NOTE: This value is volatile, it will be lost when the unit is reset or power cycled.

```
SET NW SSCCITY <city string>  
(default = Salt Lake City)
```

3.16 SET NW SSCCOMNAME

Sets the common name for a self signed certificate to be generated.

NOTE: This value is volatile, it will be lost when the unit is reset or power cycled.

```
SET NW SSCCOMNAME <common name string>  
(default = MACaabbccddeeff, where aabbccddeeff is the MAC address of the unit)
```

3.17 SET NW SSCCOUNTRY

Sets the country location for a self signed certificate to be generated.

NOTE: This value is volatile, it will be lost when the unit is reset or power cycled.

```
SET NW SSCCOUNTRY <country string>  
(default = US)
```

3.18 SET NW SSCGEN

Generate a self signed certificate using the current SSC parameters. The certificate and associated private key will be stored as the active client key and certificate for this unit. Any previous private key and local certificate will be deleted by this action.

```
SET NW SSCGEN
```

3.19 SET NW SSCKEYSIZE

Sets the key size (in bits) for a self signed certificate to be generated. The value must be 1024 or 2048.

NOTE: This value is volatile, it will be lost when the unit is reset or power cycled.

```
SET NW SSCKEYSIZE n  
(default = 1024)
```

3.20 SET NW SSCORGNAM

Sets the organization name for a self signed certificate to be generated.

NOTE: This value is volatile, it will be lost when the unit is reset or power cycled.

```
SET NW SSCORGNAM <organization name string>  
(default = silex technology america)
```

3.21 SET NW SSCORGUNIT

Sets the organizational unit for a self signed certificate to be generated.

NOTE: This value is volatile, it will be lost when the unit is reset or power cycled.

```
SET NW SSCORGUNIT <organizational unit string>  
(default = silex)
```

3.22 SET NW SSCSTATE

Sets the state location for a self signed certificate to be generated.

NOTE: This value is volatile, it will be lost when the unit is reset or power cycled.

```
SET NW SSCSTATE <state string>  
(default = UT)
```

3.23 SET NW WPAPSK

Sets the WPA PSK pass phrase or hex key. This value is only used if the authentication mode is WPA-PSK. The argument to this command is either a pass phrase of 8-63 characters, or exactly 64 hex characters representing the 256 bit PSK value.

```
SET NW WPAPSK <key>
```

4 WPS Network Configuration

These commands configure the unit network parameters using WPS.

4.1 SET NW WPSPINCODE

Generate a WPS PIN code value.

```
SET NW WPAPINCODE
```

This command generates a random WPS pin code value.

NOTE: This function is not available in firmware versions earlier than V2.01

4.2 SH NW WPSPINCODE

Display the current (last generated) WPS PIN code value.

```
SH NW WPAPINCODE
```

NOTE: This function is not available in firmware versions earlier than V2.01

4.3 SET NW WPSPBC

Execute the WPS-PBC procedure.

```
SET NW WPAPBC
```

NOTE: This function is not available in firmware versions earlier than V2.01

4.4 SET NW WPSPIN

Execute the WPS-PIN procedure.

```
SET NW WPSPIN
```

NOTE: This function is not available in firmware versions earlier than V2.01

4.5 SET NW APWPSPBC

Execute the WPS-PBC procedure when the unit is in Access Point mode

```
SET NW APWPAPBC
```

NOTE: This function is not available in firmware versions earlier than V2.01

4.6 SET NW APWPSPIN

Execute the WPS-PIN procedure when the unit is in AccessPoint mode.

```
SET NW APWPSPIN
```

NOTE: This function is not available in firmware versions earlier than V2.01

4.7 SET NW APWPSPCCancel

Cancel the WPS configured status when the unit is in Access Point mode.

```
SET NW APWPAPCC
```

NOTE: This function is not available in firmware versions earlier than V2.01

4.8 SH NW APWPSCStatus

Display the WPS configured status when the unit is in Access Point mode.

```
SH NW APWPSCS
```

NOTE: This function is not available in firmware versions earlier than V2.01

5 AP mode DHCP server

These commands configure the optional DHCP server in AP mode. These commands are valid only in AP mode.

5.1 SET DHCPS

Sets the radio network interface enable.

```
SET DHCPS [ENable | DISable]
```

The default value is disabled.

5.2 SH DHCPS

Show information about the DHCP server configuration.

```
SET DHCPS  
DHCP Server is Disabled
```

5.3 SET DHCPS Address

Sets the range of IPV4 addresses for the DHCP server to use.

```
SET DHCPS Address <a.b.c.d> <e.f.g.h>
```

<a.b.c.d> is the low address in the range to be used, and <e.f.g.h> is the high address of the range. The high address must be higher than the low address. The addresses between the two values, inclusive, will be available for lease from the DHCP server.

5.4 SET DHCPS SUBnet

Sets the IP subnet mask for the DHCP server to use.

```
SET DHCPS SUBnet <a.b.c.d>
```

5.5 SET DHCPS Router

Sets the gateway router address for the DHCP server to use

```
SET DHCPS Router <a.b.c.d>
```

5.6 SET DHCPS LEase

Sets the lease time for addresses provided by the DHCP server.

```
SET DHCPS LEase <dd hh:mm>
```

The default value is disabled.

6 Wireless Network Roaming Control

6.1 SET NW BGSCAN

Sets wireless background scan interval in seconds

```
SET NW BGSCAN <seconds>
```

SH NW BGSCAN will display the currently configured background scan interval.

6.2 SET RM

Enable or disable custom roaming control.

```
SET NW RM [EN | DIS ]
```

SH NW RM will display the current custom roaming parameter settings.

6.3 SET RM SCAN NORM

Sets normal wireless background scan interval in seconds

```
SET NW RM SCAN NORM <seconds>
```

This value is only valid if custom roaming is enabled. This defines the background scan interval when the current connection has normal receive quality, above the low threshold defined.

6.4 SET RM SCAN LOW

Sets low quality link background scan interval in seconds

```
SET NW BGSCAN <seconds>
```

This value is only valid if custom roaming is enabled. This defines the background scan interval when the current connection has low receive quality, below the low threshold and above the critical threshold defined.

6.5 SET RM THRESH LOW

Sets the value for defining a low connection strength

```
SET RM THResh LOW <RSSI>
```

This value is only valid if custom roaming is enabled. This defines the level at which a connection is considered low quality. The <RSSI> value can be a negative value greater than -95, in which case it represents an absolute RSSI value as seen by the radio. The <RSSI> value can also be a positive value, in which case it is interpreted as the distance above the noise floor – absolute low value = noise_floor + <RSSI>.

6.6 SET RM THRESH CRITICAL

Sets the value for defining a critically low connection strength

```
SET RM THResh CRITical <RSSI>
```

This value is only valid if custom roaming is enabled. This defines the level at which a connection is considered critically low quality. The <RSSI> value can be a negative value greater than -95, in which case it represents an absolute RSSI value as seen by the radio. The <RSSI> value can also be a positive value, in which case it is interpreted as the distance above the noise floor – absolute low value = noise_floor + <RSSI>.

7 Wireless to Ethernet Client Bridging Configuration

NOTE: No bridging function is available firmware releases earlier than V1.14.

7.1 SET NW BRACCess

Enables or disables access to the wireless module configuration via the wired Ethernet interface in bridge mode.

```
SET NW BRACC [ENable | DISable ]
```

If enabled, the attached client device can access the module configuration functions, such as the console or web interface, via the Ethernet interface when bridging is enabled. If disabled, this access is not available.

The default setting is TBD.

NOTE: This function is not available in firmware versions earlier than V1.14.

7.2 SET NW BRCLONE

Copies currently attached client MAC address to static bridge address.

```
SET NW BRCLONE
```

See SET NW BRCLADDR below for details on the static bridge address..

7.3 SET NW BRCLADDR

Sets the MAC address to use for static bridge mode.

```
SET NW BRCLADDR <MAC address>
```

In static bridge mode, the address given is used as the radio MAC address for the wireless interface. In auto mode, this value is ignored. This address can also be set with the SET NW BRCLONE command.

<MAC address> may be in the format aa:bb:cc:dd:ee:ff or aa-bb-cc-dd-ee-ff.

SH NW BRCLADDR will show the currently configured static bridge MAC address.

The default value is 00-00-00-00-00-00.

7.4 SET NW BRIDGE

Enables or Disables the Ethernet to Wireless LAN client bridge mode of operation.

```
SET NW BRIDGE [ENable | DISable ]
```

The default value is disabled.

7.5 SH NW BRIDGE

Displays information about the current bridge configuration.

```
SH NW BRIDGE  
Bridge mode is disabled.
```

7.6 SET NW BRSTATIC

Enables or disables the static MAC bridge mode of operation.

```
SET NW BRSTATIC [ENable | DISable ]
```

If enabled, the wireless interface uses the client MAC address configured (see SET NW BRCLADDR). If disabled, the wireless interface waits for a packet to be received from the wired interface, and uses that as the client MAC address.

The default setting is disabled.

7.7 SET NW BRWIRE

Enables or disables access to the wireless module configuration via the wired Ethernet interface.

```
SET NW BRWIRE [ENable | DISable ]
```

If enabled, the attached client device can access the module configuration functions, such as the console or web interface, via the Ethernet interface. If disabled, this access is not available.

The default setting is enabled.

8 Port Commands

8.1 Serial Port Commands

In the following commands, S1 is used as a stand in for any available serial port. If S2 is enabled for data port usage, it can also be used instead. If a command is port specific, it will be so noted.

8.1.1 SH PORT

Shows Port parameters

sample output:

Port	Q-Size	Type	Attributes
*S1	0	serial	115200 N 8 1 XON/XOFF RS232

8.1.2 SET PORT S1 CH

Sets the size of a character on the serial port

```
SET PORT S1 CHarsize [7 | 8]
    (default = 8)
```

8.1.3 SET PORT S2 CONsole

Enable or disable console mode on serial port 2

```
SET PORT S2 CONsole [ENable | DISable]
```

The default is enabled. This command is only valid on serial port 2.

8.1.4 SET PORT S1 CONSTR

This command sets the console mode string for the unit. If the serial port is in Trap mode, then if the string defined by this command is seen in the serial port input stream, then the serial port will enter console mode. In this mode, data from the serial port is sent to an instance of the configuration console task, and output from the configuration task is sent to the serial port. This allows the data serial port to be used to configure the unit. If no string is defined, then this feature is disabled, and the data serial port cannot be used for configuration. The maximum length of the string is 31 bytes.

If non printing characters are desired in the string, then the value should be prefixed with “\x” and each byte should be defined with two hex characters. The binary equivalent of the two hex characters will be used when scanning the input for a match.

The value given does not take effect until the unit is reset. The default value of this string depends upon the particular product.

```
SET PORT S1 CONSTR
```

This version of the command clears the string definition.

```
SET PORT S1 CONSTR +++
```

This version of the commands sets the console mode string to “+++”.

```
SET PORT S1 CONSTR \x1B1B
```

The version of the command sets the console mode string to be two successive escape characters.

8.1.5 SH PORT S1 CONSTR

Show the current value of the console mode string for the unit.

If non printing characters are contained in the string, the string will be displayed prefixed with “\x” and each byte will be displayed as two hex characters. If nothing is displayed, the console mode string is not currently defined.

```
Local> SET PORT S1 CONSTR  
+++
```

```
Local> SET PORT S1 CONSTR  
\x1B1B
```

8.1.6 SET PORT S1 DTR

Set the DTR mode on serial port 1

```
SET PORT S1 DTR [CONN | HI | LOW]
```

If GPIO2 is set for special function, it drives the DTR0 signal on serial port 1. This command configures how the pin is to be driven.

If set to CONN, the pin will be set high if there is an active network link, and low if the network link is done.

If set to HI, the DTR signal will be set high.

If set to LOW, the DTR signal will be set low.

If GPIO2 is set as a GPIO pin, this value has no effect.

This command is only valid on serial port 1.

8.1.7 SET PORT S1 FLOW

Set serial port flow control to NONE, XON/XOFF, or CTS

```
SET PORT S1 FLOW [ NOne | XOn-xoff | CTS ]  
(default = None)
```

8.1.8 CLEAR PORT S1 JOB

This command aborts the currently active job on the port specified. If the remote host is still connected, any further data received will be discarded.

```
CL PORT S1 JOB
```

8.1.9 SET PORT S1 LATENCY

Sets serial port latency value in milliseconds. If non-zero, when characters are received on the serial port, the driver waits this many milliseconds more to see if additional characters will be received before sending the data to the network.

```
SET PORT S1 LAT <ms>  
(default = 25ms)
```

SH PORT S1 LATency will display the currently configured value.

8.1.10 SET PORT S1 PARITY

Set serial port parity to NONE, EVEN, ODD

```
SET PORT S1 Parity <parity>
      (Default = None)
```

8.1.11 SET PORT S1 SPeed

Sets serial port baud rate.

```
SET PORT S1 SPEED <baudrate>
      (default = 115200)
```

Options for <baudrate> are 300, 600, 1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200, 230400, 460800, 921600 and 3000000.

8.1.12 SH PORT S1 STATus

Shows status information about the serial port

```
Local> sh port s1 stat
```

```
Port    S1    status = On-line
```

```
Serial Device
```

```
3 bytes transmitted, 0 bytes received
```

```
0 framing errors, 0 parity errors, 0 overrun errors, 0 buffer overruns, 0 breaks
```

8.1.13 SET PORT S1 STOP

Sets serial port stop bits per character.

```
SET PORT S1 STOP [1 | 2]
      (default = 1)
```

8.2 ECable Port Commands

For products that support the silex E-Cable application, which provides automatic connection between the port and a remote host, the following commands are available.

8.2.1 SET PORT S1 ECABLE

Enable or disable E-Cable operation.

```
SET PORT S1 ECABLE [ENable | DIsable]
    (default = DISabled)
```

8.2.2 SH PORT S1 ECABLE

Show the current E-Cable settings.

```
SH PORT S1 ECABLE

E-Cable mode TCP
E-Cable destination 192.168.5.28:3000
Attempt connection every 5 seconds
```

8.2.3 SET PORT S1 ECADDR

Set primary E-Cable destination IP address.

```
SET PORT S1 ECADDR <dest-addr>
    (default = 0.0.0.0)
```

This is the primary network address of the target host for data received on the I/O port. The address may be entered as an IP address, or, if DNS is enabled, as a symbolic host address. If set to zero, no data will be sent.

8.2.4 SET PORT S1 ECCONN

This parameter applies only in TCP mode. If the TCP connection is broken, or cannot be established, this parameter defines the time to wait before attempting to re-establish the connection. The time units depend on the ECTMMSEC parameter below. The valid range is 1-255.

```
SET PORT S1 ECCONN n
      (default = 30)
```

8.2.5 SET PORT S1 ECLPORT

This parameter applies only in UDP mode. This is the port number of the local UDP port on the server to which remote hosts can send data intended for the I/O port. Only data from hosts whose IP address is configured as the primary or one of the optional secondary addresses will be accepted and passed to the I/O port – unless the primary and all secondary addresses are zero, in which case data from any host will be accepted. A port number of zero will disable reception.

```
SET PORT S1 ECLPORT n
      (default = n)
```

8.2.6 SET PORT S1 ECNHOST

This parameter applies only in UDP mode. This value sets the maximum number of remote hosts to which data can be sent, and from which data will be accepted. If the value is changed, all currently configured secondary host information will be erased. The valid range is 1-255.

```
SET PORT S1 ECNHOST n
      (default = 1)
```

8.2.7 SET PORT S1 ECPORT

Set primary E-Cable port address. Along with the primary IP address, this defines the remote destination for data received on the I/O port. If zero, no data will be sent.

```
SET PORT S1 ECPORT n
      (default = 0)
```

8.2.8 SET PORT S1 ECRADDR

This parameter applies only in UDP mode. This sets the primary or a secondary E-Cable destination IP address. This is the network address of the target host for data received on the I/O port. If zero, no data will be sent. If the index value is zero, the primary address is set (same as the ECADDR parameter). If not zero, the valid range is 1:(n-1), where n is the ECHNOST value configured. If n is one only the primary address can be set.

```
SET PORT S1 ECRADDR index a.b.c.d
      (default = 0.0.0.0)
```

8.2.9 SET PORT S1 ECRPORT

This parameter applies only in UDP mode. This sets the primary or a secondary E-Cable destination port number. Along with the corresponding network address this defines the destination for data received on the I/O port. If zero, no data will be sent. If the index value is zero, the primary port is set (same as the ECPORTR parameter). If not zero, the valid range is 1:(n-1), where n is the ECHNOST value configured. If n is one only the primary port can be set.

```
SET PORT S1 ECPORTR index n
      (default = 0)
```

8.2.10 SET PORT S1 ECTMMSEC

This parameter applies only in TCP mode. This determines the units for the connection timer set with the ECCONN parameter. If enabled, the timer is in units of 10 milliseconds (20-2550 msec). If disabled, the timer is in units of seconds (1-255 seconds).

```
SET PORT S1 ECTMMSEC [ENable | DISable]
      (default = DISable)
```

8.2.11 SET PORT S1 ECUDP

Enable or disable E-Cable UDP operation. If disabled, TCP is used for network I/O. If enabled UDP is used.

```
SET PORT S1 ECUDP [ENable | DISable]
      (default = DISabled)
```

8.3 SH SERVER QUEue

Displays the I/O job queue for each port.

```
Local> sh server que
```

```
Port S1 status = On-line  
# Type Source  
The queue is empty
```

9 Server Information Commands

9.1 SH SERIAL

Displays the serial number of the unit

sample output:

```
Serial number is 9047595
```

9.2 SH SERVER

Shows Server parameters

```
SH SERVer  
  
Silex SX-580 Serial # 2000560  
Address: 00-80-92-01-29-F3 Name: SDS1E86B0 Number: 0  
Identification: Network Serial Server  
  
Enabled Characteristics:  
Ethernet link Down
```

9.3 SH SERVER CO

Shows Server network statistics

sample output:

Seconds Since Zeroed:	163	Frames Sent, 1 Collision:	26
Bytes Received:	72950	Frames Sent, 2+ Collision:	5
Bytes Sent:	18726	Send Failures:	0
Frames Received:	752	Send Failure Reasons:	0
Frames Sent:	181	Receive Failures:	503
Multicast Bytes Rcv'd:	64474	Receive Failure Reasons:	1
Multicast Bytes Sent:	2406	Unrecognized Destination:	0
Multicast Frames Rcv'd:	626	Data Overrun:	0
Multicast Frames Sent:	11	User Buffer Unavailable:	0
Frames Sent, Deferred:	2014	System Buffer Unavailable:	1

9.4 SET SERVER DEscription

Sets the server description string

```
SET SERVER DEscription <description-string>
```

9.5 SH SERVER FWVER

Shows the firmware version string

```
Local> sh server fwver
```

```
BB3-1.09t (2012.05.22)
```

This command shows just the firmware version string, without the additional information shown by SH VERSION.

9.6 SH SERVER MODEL

Shows Server model name

```
Local> sh server model
```

```
SX-580
```

This shows the server model name, without the other information displayed by SH SERVER.

9.7 SET SERVER NAME

Sets server node name

```
SET SERVER NAME <name>  
(default = "SDS_XXXXXX", where XXXXXX are the last 6 hex digits of the MAC  
address)
```

9.8 SH SERVER STATISTICS

Shows information about print jobs received.

```
Local> sh server sta
```

```
LPD Statistics:  
Currently 0 jobs are waiting for the peripheral  
0 connections have been made  
0 data files have been printed  
0 data bytes have been printed  
0 control files have been received  
0 print job commands have been received
```

9.9 SH SNMP

Shows the state of the SNMP protocol enable

sample output:

```
SNMP is Enabled
```

9.10 SET SNMP CONTACT

Set system contact string

```
SET SNMP CONTACT <string>  
(default = <null>)
```

9.11 SET SNMP GETCOMM

Get Community Name

```
SET SNMP GETCOMM <string>  
(default = "public")
```

9.12 SET SNMP LOCATION

Set the system location string

```
SET SNMP LOCATION <string>  
(default = <null>)
```

9.13 SET SNMP SETCOMM1

Set Community 1 Name

```
SET SNMP SETCOMM1 <string>  
(default = "internal?")
```


9.14 SH VErSION

Shows the print server's firmware version

```
SH VER

Silex SX-580
Firmware Ver. BB3-1.09t (2012.05.22)
Boot Ver. 1.2
64Mbit Flash

Protocols supported:
  SNMP TCP/IP
  DHCP
```

9.15 Zero

Clears and resets the network statistic counters

10 Service Commands

Logical I/O services are associated with each physical port. I/O is routed through the service, which may perform modifications on the data stream based on its settings.

10.1 SH SERVI

Show service configuration.

```
Local> sh servi

# Service          Port  FIL  BOT  EOT  DEL  OPT  PROT
* 1 SDS1E86B0_S1_A S1    0    1    1    0    B    IP
  2 SDS1E86B0_S1_B S1    0    1    1    0    B    IP
```

The '*' indicates the default service for the I/O port.

10.2 SET SERVI <service name> BOT

Set beginning of transmission (BOT) string index for service

```
SET SERVI <service name> BOT nn
```

The string indicated will be sent at the beginning of a connection to the service indicated. The default is the NULL string.

10.3 SET SERVI <service name> EOT

Set end of transmission (EOT) string index for service

```
SET SERVI <service name> EOT nn
```

The string indicated will be sent at the end of a connection to the service indicated. The default is the NULL string.

10.4 SH SERVI STRings [*string_num*]

Defines the BOT and EOT strings used in services. If *string_num* is provided then the specific string definition and expansion is displayed. If *string_num* is not provided, then all string definitions (but not their expansions) are displayed.

sample output:

```
10: \FF\04\FF\05\FF\06\FF\08
```

10.5 SET SERVI <service name> Filter

Set filter index for service

```
SET SERVI <service name> Filter nn
```

SH FILter shows the available filters on the unit.

10.6 SH SERVI FILTERS

Shows filter settings

```
Local> sh servi fil

# Service Name          Filter
1 SDS1E86B0_S1_A       0: No Filter
2 SDS1E86B0_S1_B       0: No Filter
```

10.7 SET SERVI <service name> FMS

Set filter 1 (text replacement filter) match string index. If the index is zero, the default string of <LF> (line feed) is used.

```
SET SERVI <service name> FRM nn
      (default = 0 )
```

10.8 SET SERVI <service name> FRS

Set filter 1 (text replacement filter) replace string index. If the index is zero, the default string of <CRLF> (carriage return-line feed) is used.

```
SET SERVI <service name> FRS nn
      (default = 0 )
```

10.9 SET SERVI <service name> IP

Enable or disable all IP based jobs (lpd, raw tcp, etc.) on the service.

```
SET SERVI <service name> IP [ENable | DIsable]
      (default = enabled for service 1 and 2, disabled for all others)
```

10.10 SET SERVI <service name> NAmE

Change the service name

```
SET SERVI <service name> NAmE <newname>
```

10.11 SET SERVI <service name> PORT

Set the output port associated with a service.

```
SET SERVI <service name> PORT <portname>
      (default = "S1")
```

10.12 SET SERVI <service name> PRIORITY

Set priority for service if multiple service try to transmit data at the same time. Higher priority services are serviced first.

```
SET SERVI <service name> PRIORITY nn
      (default = 10)
```

10.13 SH SERVI PRI [*service_num*]

This shows the priority of a specific service. If *service_num* is not provided, the priority of all services is listed.

10.14 SET SERVI <service name> QUEUE

If enabled, and if a raw TCP port is defined, the server will queue jobs sent to that port. If disabled, jobs will be rejected if the server is currently busy with another job.

```
SET SERVI <service name> QUEUE [EN | DIS]
      (default = disabled)
```

10.15 SET SERVI <service name> RECEIVE

Set receive only mode for a service. This option is rarely required, but some host applications do not operate properly if data is received back from the serial device.

```
SET SERVI <service name> RECEIVE [ENABLE | DISABLE]
      (default = disabled)
```

10.16 SET SERVI <service name> TCP

Set raw TCP port for service. If port number is zero, raw TCP is disabled on that service.

```
SET SERVI <service name> TCP nn
      (default = 9100 for service 1, 3001 for service 2)
```

10.17 SH SERVI SUMmary [*service_num*]

Shows the basic parameters for a specific service. If *service_num* is not provided, parameters for all services are displayed.

Note: The command SH SERVI is equivalent to SHOW SERVI SUM

11 String Commands

These commands configure strings used with services and service filters.

11.1 SET STRing

Set service string table entry. (Note, String 1-11 can not be set or changed).

```
SET STRing <string #> "value"
```

Hex values can be entered as two hex digits in the string with the prefix '\'. One string can reference another string with two binary characters. The first is \FF, and the second is the string index of the referenced string.

11.2 CL STRing

Clears the service string table entry.

```
CL STRing <string #>
```

11.3 SH STRing [*string_num*]

Defines the BOT and EOT strings used in services. If *string_num* is provided then the specific string definition and expansion is displayed. If *string_num* is not provided, then all string definitions (but not their expansions) are displayed.

sample output:

```
1:
2: \1BE
3: \04
4: \1B%-12345X
5: @PJL
6: ENTER LANGUAGE=
7: PCL\0A
8: POSTSCRIPT\0A
9: \FF\04\FF\05\FF\06\FF\07
10: \FF\04\FF\05\FF\06\FF\08
11: \0C
```

11.4 SH FILters

Shows the available filters which can be used to modify a job stream.

sample output:

```
#      Filter
0      No Filter
1      Text Substitution
2
3      Text to PostScript
4      PostScript Tagged Binary
```

12 TCP/IP Commands

12.1 SH IP

Display TCP/IP settings

```
Local> sh ip

IP is enabled
Boot method   DHCP
IP address    192.168.5.40      (192.168.5.235)
```

Subnet Mask	255.255.255.0	(255.255.255.0)
IP gateway	192.168.5.1	(0.0.0.0)
Boot tries	3	
Timeout	1 min	
Keepalive	1 min	

Service	Port	TCP port
SDS1E86B0_S1_A	S1	9100
SDS1E86B0_S1_B	S1	3001

12.2 SET IP ACcess

Allow or disallow access to a block of remote addresses

```
SET IP ACcess [EN | DI | ALL] aa.bb.cc.dd ee.ff.gg.hh
```

This command modifies the IP access list. If ALL is selected, the access list is cleared and all hosts are allowed access.

If ENable is selected, then an entry for the range given by the two IP addresses is added to the list. Only hosts with an IP address within the range of one of the entries in the access list are allowed to connect to the unit.

If DIisable is selected, if the two addresses match the range values of an entry in the access list, that entry is removed and hosts in that range will not longer be allowed access to the unit, unless another entry allows it.

SET IP RANGE is an alternate form of this command, with the same syntax and function.

SH IP ACcess will display the current access list settings.

12.3 SET IP ADDRESS

Set server IP address

```
SET IP ADDRESS aa.bb.cc.dd
```

If the IP address acquisition method is static, this command sets the IP address to be used. This is also the fall back address for Auto mode, if a DHCP address is not received.

The default address is 169.254.111.111.

12.4 SET IP BANNER

Enable or disable printing of job banner on LPD jobs

```
SET IP BAnner [ENable | DIsable]
      (default = disable)
```

12.5 SET IP BOot

Number of times to try DHCP to acquire an address.

```
SET IP BOot    n
      (default = 3)
```

In Auto mode, the DHCP client will attempt the number of times specified to acquire an IP address. If it does not succeed after that number of times, the module will initialize with the fallback static IP address (SET IP ADddress) configured.

12.6 SET IP DIsable

Disable IP based configuration and serial I/O protocols

```
SET IP DIsable
      (default = enable)
```

This command will render the unit more or less inaccessible. The system IP stack will still come up and respond to pings, but network to serial I/O applications and configuration applications will be unavailable.

12.7 SET IP ENable

Enable IP based protocols

```
SET IP [ENable | DIsable]
      (default = enable)
```

Sets the unit for normal operation.

12.8 SET IP FTIme

If enabled, the IP timeout is measured in seconds. If disable, the IP timeout is in minutes.

```
SET IP FTime    [ENable | DIsable]
               (default = disable)
```

12.9 SET IP FTP

Enable or disable the FTP protocol

```
SET IP FTP      [ENable | DIsable]
               (default = disable)
```

NOTE: Currently available firmware releases do not support FTP.

12.10 SET IP HTTP

Enable or disable the HTTP protocol

```
SET IP HTTP     [ENable | DIsable]
               (default = enable)
```

12.11 SET IP HTTPS

Enable or disable the HTTPS protocol

```
SET IP HTTPS    [ENable | DIsable]
               (default = disable)
```

NOTE: Currently firmware releases do not support HTTPS.

12.12 SET IP KEepalive

Set interval at which gratuitous ARP packets are sent in minutes.

```
SET IP KEepalive n
               (default = 5 min)
```

12.13 SET IP LPD

Enable or disable the LPD protocol

```
SET IP LPD    [ENable | DIsable]
              (default = enable)
```

12.14 SET IP MMethod

Set method of getting IP address

```
SET IP MMethod [ AUTO | DHCP | STATIC ]
              (default = AUTO)
```

DHCP will wait to acquire an address via DHCP.

STATIC will bring the IP stack up immediately with the configured IP static address.

AUTO will attempt to get an address via DHCP, but if it fails it will use the configured static IP address.

12.15 SET IP NTP

Enable or disable the NTP protocol

```
SET IP NTP    [ENable | DIsable]
              (default = enable)
```

12.16 SET IP PRObe

Enable or disable TCP connection probes (TCP Keepalive packets)

```
SET IP PRObe  [ENable | DIsable]
              (default = disable)
```

12.17 SET IP REtry

Enable or disable LPD retry on incomplete job

```
SET IP REtry  [ENable | DIsable]
              (default = disable)
```

12.18 SET IP ROuter

Set the default router address

```
SET IP ROuter    aa.bb.cc.dd
                (default = 0.0.0.0)
```

SET IP GATeway is an optional command which performs the same function.

12.19 SET IP STATus

Sets user defined IP status string

```
SET IP STATus <status-string>
```

This command defines an arbitrary string. If defined, the string will be appended to LPD status request responses.

SH IP STATus will display the current status string.

12.20 SET IP SUBnet

Set the IP subnet mask

```
SET IP SUBnet    aa.bb.cc.dd
                (default = 0.0.0.0)
```

12.21 SET IP TCP

Enable or disable the raw TCP (9100) protocol

```
SET IP TCP      [ENable | DIsable]
                (default = enable)
```

12.22 SET IP TELnet

Enable or disable the TELNET protocol

```
SET IP TELnet  [ENable | DIsable]
                (default = enable)
```

12.23 SET IP TFTP

Enable or disable the TFTP protocol

```
SET IP TFTP [ENable | DIsable ]  
(default = enable)
```

12.24 SET IP Tlmeout

Set TCP Inactivity timeout.

```
SET IP Tlmeout n  
(default = 1 minute)
```

This command sets inactivity timeout for IP to I/O port transfers via TCP, RFC2217, or LPD. If no data is received within the time specified, the connection will be closed and the port released to accept new connections.

If fast timeout (SET IP FTlme) is enabled, the value given is in seconds, otherwise it is defined in minutes.

12.25 SET IP Wlndow

This command is present, but has no effect on the SX-570/580 platform.

```
SET IP Wlndow nn  
(default = 10240)
```

SH IP Wlndow will display the currently configured value.

12.26 SET SXUPTP

The SX-570/580 can act as a Silex USB Device Server if the SXUPTP application is enabled. This application provides the necessary interface between the Silex USB Device Server host software and the USB port on the SX-570/580. This command enables or disables this option.

```
SET IP SXUPTP [ENable | DIsable]  
(default = disable)
```

SH IP SXUPTP will display the current value of this flag.

NOTE: This function is not available in firmware versions earlier than V1.14.

13 DNS Commands

13.1 SH DNS

Display current DNS configuration settings

```
Local> sh dns

DNS is Enabled
Domain name:
Primary DNS server: 0.0.0.0
Secondary DNS server: 0.0.0.0
```

13.2 SET DNS DISable

Disable DNS support

```
SET DNS DIS
```

13.3 SET DNS DOMain

Set the desired DNS domain string

```
SET DNS DOMain <domain-name>
```

13.4 SET DNS ENable

Enable DNS support

```
SET DNS EN
```

13.5 SET DNS PRImary

Set the IP address for the primary DNS server to reference.

```
SET DNS PRImary a.b.c.d
```

13.6 SET DNS SECondary

Set the IP address for the secondary DNS server to reference.

```
SET DNS SECondary a.b.c.d
```

14 GPIO Control

The SX-570/580 have 11 GPIO signals available, numbered 0-10. Refer to the product specification for details of the GPIO definitions and available functions.

14.1 SET GPIO DIR

Set a single GPIO direction control

```
SET GPIO DIR [IN | OUT] <gpio-number>
```

This command sets an individual GPIO pin to be an input or an output pin. This setting is ignored for pins set for special function mode, the special function determines the pin direction.

NOTE: the direction bit configuration is not changed by a configuration reset to default.

14.2 SH GPIO DIR

Display GPIO direction configuration

```
Local> sh gpio dir
```

```
GPIO Direction
```

```
-----
```

```
0 [SPCL]
1 [SPCL]
2 [OUT]
3 [OUT]
4 [OUT]
5 [OUT]
6 [OUT]
7 [OUT]
8 [OUT]
9 [OUT]
10 [OUT]
```

14.3 SET GPIO DIRM

Sets all direction control bits

```
SET GPIO DIRM <bit-mask>
```

<bit-mask> is an 11 bit mask expressed as 3 hex digits. This value should be in the range 00-7FF. The mask is encoded as follows:

10	9	8	7	6	5	4	3	2	1	0
GPIO10	GPIO9	GPIO8	GPIO7	GPIO6	GPIO5	GPIO4	GPIO3	GPIO2	GPIO1	GPIO0

A value of 1 sets the corresponding GPIO line to be an output. A value of 0 sets the GPIO line to be an input. For example, a hex value of 80 sets GPIO7 as an output, all other GPIO signals are inputs. The direction is not affected for any bits configured for a special function.

NOTE: the direction bit configuration is not changed by a configuration reset to default.

14.4 SH GPIO DIRM

Shows all direction control bits

```
Local> sh gpio dirm
```

```
GPIO direction mask=7fc
```

14.5 SET GPIO SPECIAL

Sets a single special function control bit.

```
SET GPIO SPECIAL [EN | DIS] <gpio-num>
```

This command enables or disables the special function of the GPIO signal specified. See the product specification for the special functions, if any, associated with each GPIO pin.

<gpio-num> must be in the range 0-10..

NOTE: the special function bit configuration is not changed by a configuration reset to default.

14.6 SH GPIO SPECial

Shows the current setting of the GPIO special function configuration

```
Local> sh gpio special
```

```
GPIO Special Functions
```

```
-----
```

```
GPIO #0 is special
GPIO #1 is special
GPIO #2 is normal
GPIO #3 is normal
GPIO #4 is normal
GPIO #5 is normal
GPIO #6 is normal
GPIO #7 is normal
GPIO #8 is normal
GPIO #9 is normal
GPIO #10 is normal
```

14.7 SET GPIO SPECM

Sets all special functions control bits

```
SET GPIO SPECM <bit-mask>
```

<bit-mask> is an 11 bit mask expressed as 3 hex digits. This value should be in the range 00-7FF. The mask is encoded as follows:

10	9	8	7	6	5	4	3	2	1	0
GPIO10	GPIO9	GPIO8	GPIO7	GPIO6	GPIO5	GPIO4	GPIO3	GPIO2	GPIO1	GPIO0

A value of 1 enables the special function on the corresponding GPIO signal, a value of 0 disables the special function. For example, a hex value of 80 sets GPIO7 for special function, all other GPIO signals for general use.

NOTE: the special function bit configuration is not changed by a configuration reset to default.

14.8 SHow GPIO SPECM

Shows GPIO special functions control bits as a mask value

```
SH GPIO SPECM  
GPIO special function mask = 03
```

14.9 SET GPIO DATA

Sets all data out control bits

```
SET GPIO DATA <bit-mask>
```

<bit-mask> is an 11 bit mask expressed as 3 hex digits. This value should be in the range 00-7FF. The mask is encoded as follows:

10	9	8	7	6	5	4	3	2	1	0
GPIO10	GPIO9	GPIO8	GPIO7	GPIO6	GPIO5	GPIO4	GPIO3	GPIO2	GPIO1	GPIO0

Each GPIO output bit is set to the corresponding value in the mask. If a GPIO signal is set as an input, the value is set but has no effect. If a GPIO signal is set for a special function, the bit value given is ignored. For example, a hex value of 80 sets the GPIO7 to a 1 (high), all other GPIO signals to 0 (low), except those set as special functions..

NOTE: the default output bit value on power up or reset is 0 for all GPIO signals.

14.10 SHOW GPIO DATA

Shows the current state of the GPIO signals.

```
Local> sh gpio data
```

```
GPIO Data In
```

```
-----
```

```
GPIO #0 [1]
```

```
GPIO #1 [0]
```

```
GPIO Data Out
```

```
-----
```

```
GPIO #2 [0]
```

```
GPIO #3 [0]
```

```
GPIO #4 [0]
```

```
GPIO #5 [0]
```

```
GPIO #6 [0]
```

```
GPIO #7 [0]
```

```
GPIO #8 [0]
```

```
GPIO #9 [0]
```

```
GPIO #10 [0]
```

15 Firmware Update

These commands set up the unit for performing an update of the server firmware.

15.1 SET LOAd XModem

Initiate firmare update via the serial console using the XModem protocol. The server will reset after the firmware update is completed.

```
SET LOAd XModem
```

NOTE: This function is not available in firmware versions earlier than V1.14.

16 Power Management

16.1 SET POWER LEVEL

Sets the server power profile.

```
SET POWER LEVEL nn
```

nn = 0 for High power and 1 for Low power.

In High power mode, the radio runs in maximum performance mode, and the control processor runs at its maximum frequency (484MHz).

In Low power mode, if in station mode the radio runs in power save mode. In AP mode, the radio always runs in maximum performance mode.

The SHow POWER command will display the currently configured power level.

NOTE: With the available firmware releases, the control processor does not run at a lower frequency in Low power mode.

17 Other Commands

17.1 SET DEFAULT

Set parameters to factory defaults

17.2 EXIT

This command exits the current configuration console session.

```
EXIT
```

17.3 SH FATAI

Shows fatal error log (if there's any)

sample output:

```
No saved errors
```

17.4 CL FATAI

Clears the fatal error log

17.5 SH FREE

Shows the amount of heap and configuration memory available

sample output:

```
2 bytes of heap available  
Index 2, 6320 bytes  
6320 bytes configuration memory available
```

17.6 HElp <command>

This is for getting help on the console commands. You can just type help, or type help and then a command to display instructions on specific commands.

Sample output:

EXIT/^D	Exit program
HElp	Information on available commands
INitialize	Reset unit
CLear/PUrge/DElete	Remove configuration item
SAVE	Save configuration to NV memory
SET/DEFine/CHange	Modify unit parameters
SHow	Display unit parameters
ZERO	Zero statistical counts

Type 'HElp <cmd>' for more information

17.7 INIT

This command instructs the server to do a soft reset when the next exit command is executed.

```
INIT
```

17.8 SET PAssword

Sets the server access (read) password

```
SET PAssword <password>  
(default = "ACCESS")
```

17.9 SAVE

This command saves the current configuration to non-volatile memory. Without this command, the configuration is not saved unless an "EXIT" command is performed.

```
SAVE
```

17.10 SH TESt

Sends configuration data in ASCII to the serial port

```
SH TESt
```