Simline 2

Operation via a Terminal Emulation Program
(e.g. HyperTerminal)

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1.0 Overview

This document aims to provide a brief guide to operation of the Simline 2 via a terminal emulation program e.g. HyperTerminal.

The Simline 2 is supplied with a Windows configuration program for simple setup of required telephone numbers and other more advanced features. In certain circumstances it may be preferable to control the Simline 2 via a terminal emulation program such as HyperTerminal.

For a detailed explanation of the features described please refer to the user guide supplied with your Simline 2.

2.0 Settings for HyperTerminal

Speed:	19200
Bits:	8
Parity:	None
Stop bits:	1
Flow Control:	Xon/Xoff

3.0 Commands

Once connected to the Simline 2 via HyperTerminal type **?** ↵

This will display the hardware version, firmware version, ports available and commands, as shown below:-

```
********************************
***    I - SIMULATOR 2 POD    ***
********************************
Hardware version 1.02
Firmware Version 5.06

Ports available>
                Serial comms  - enabled
                BRI S0 port 1 - enabled
                BRI S0 port 2 - enabled
Commands>
                Global settings    - IG
                S0 Port settings  - IPx
                Save settings      - SAVE
                Load settings      - LOAD
                Default settings   - DEFAULT
```

4.0 Global Settings

To display Global Settings type: **IG↵**

```
***          IG - POD GLOBAL SETTINGS          ***
*****************************************************
Unallocated number          NG0 - 3000
User busy                   NG1 - 3001
No user responding          NG2 - 3002
No answer                   NG3 - 3003
Call rejected               NG4 - 3004
Out of order                NG5 - 3005
No channel available        NG6 - 3006
Temporary failure           NG7 - 3007
Incompatible destinationþ   NG8 - 3008
Other cause number          NG9 - 3009
Other cause value           VG0 - 16  (0-127)
Loopback                    NGA - 4000
Exchange_prefix             NGB - 5000
Use exchange prefix         SEP - NO    (YES/NO)
DL idle release delay       TDI - 0 (x 1sec (0-999,0=OFF))
PH idle release delay       TPI -  0 (x 1sec (0-999,0=OFF))
DL release after call delay TCD -  0 (x 0.05sec (0-9999,0=OFF))
DL to PH deactivation delay TDP -  0 (x 0.1sec (0-9999,0=OFF))
PS1 mode                    PS1 - NOR   (OFF/NORmal/REStricted)
Remove TEI on deactivation  TRD - NO    (YES/NO)
```

4.1 Selecting Call Clearing Cause Values

This feature enables the user to test the response of an ISDN terminal to a range of clearing causes issued by the network. The Simline 2 will momentarily connect to a call and then clear with a user selectable clearing cause value for test purposes.

Unallocated number	NG0 - 3000
User busy	NG1 - 3001
No user responding	NG2 - 3002
No answer	NG3 - 3003
Call rejected	NG4 - 3004
Out of order	NG5 - 3005
No channel available	NG6 - 3006
Temporary failure	NG7 - 3007
Incompatible destination	NG8 - 3008
Other cause number	NG9 - 3009
Other cause value	VG0 - 16 (0-127)

Example: If you wish your terminal to receive the cause ‘Temporary Failure’ (Cause value 41) then simply dial 3007.

4.2 Loopback Mode

If you wish to test just one terminal connected to the Simline 2, dial **4000** from the terminal and the call will be automatically answered by the Simline 2 as if it had been routed to another terminal. While the call is connected, the Simline 2 loops any data sent from the terminal back to the terminal.

4.3 Exchange prefix

This allows an extra 10 digits to be added to the beginning of the telephone number dialled for each B channel. This can be useful for simulating International telephone numbers.

To enter the number type: **NG (then your required number)**
To switch the exchange prefix feature on type: **SEP YES.↵**

Exchange_prefix	NGB - 5000
Use exchange prefix	SEP - NO (YES/NO)

5.0 Port Settings

To configure port 1, type: **IP1.↵**

*** IPx - S0 PORT 1 SETTINGS ***
****

Number mode	SNMx - SINGLE
Originating CLI	SOCx - ON
Originating subaddress	SOSx - ON
Destination CLI	SDCx - ON
Destination subaddress	SDSx - ON
Low layer compatibility	SLCx - ON
High layer compatibility	SHCx - ON
Single number	(SINGLE) NPx0 - 2222
Dual number 1	(DUAL) NPx1 – 2221
Dual_number 2	(DUAL) NPx2 - 2222
Last digit MSN number	(LDMSN) NPx3 - 222X
Full_MSN_number 1	(FNMSN) NPx4 - 2220
Full_MSN_number 2	NPx5 - 2221
Full_MSN_number 3	NPx6 - 2222
Full_MSN_number 4	NPx7 - 2223
Full_MSN_number 5	NPx8 - 2224
Full_MSN_number 6	NPx9 - 2225
Full_MSN_number 7	NPxA - 2226
Full_MSN_number 8	NPxB - 2227
Full_MSN_number 9	NPxC - 2228
Full_MSN_number 10	NPxD – 2229

Note: 'x' in all codes above = port number '1' or '2'

5.1 Example 1 - Changing the Numbering Mode on Port 1

To change to Dual numbering Mode type: **SNM1 DUAL.↵**

To change to Full Number MSN type: **SNM1 FNMSN.↵**

To change to Last Digit MSN type: **SNM1 LDMSN.↵**

To change back to Single Number Mode type: **SNM1 SINGLE↵**

5.2 Turning On & Off Supplementary Services On Each Port

Type the abbreviated code for the required service as shown below followed by (space) ON or OFF (as required).

Originating CLI	SOCx - ON
Originating subaddress	SOSx - ON
Destination CLI	SDCx - ON
Destination subaddress	SDSx - ON
Low layer compatibility	SLCx - ON
High layer compatibility	SHCx – ON

5.3 Example 2 - Changing the telephone number on IP2 for single number operation

Type: **ip2↵** (only required to check current value)

Type: **NP20 123456↵**

To check if the number has been altered, type: **ip2↵**

5.4 Example 3 - Switch off supplementary service 'originating CLI on port 1'

Type: **ip1↵** (only required to check current setting)
Type: **SOC1 off↵**
To check if the setting had been modified type: **ip1↵**

6.0 Using the Protocol Trace Feature

To turn the protocol trace on type: **trace all on**
To turn the trace off type: **trace all off**

7.0 Saving Settings

Changes you make will only remain while the Simline 2 is plugged into the mains. If you wish to save the changes just type: **save↵**

This will be confirmed with a 'Configuration Saved' message.

9.0 Restoring the Default Configuration

To restore the default settings type: **default↵**

9.0 Load

If during a connection you wish to revert back to settings you previously saved type: **load↵**

10.0 Firmware Upgrades

10.1 Firmware Upgrade Using Simline 2 Windows Configuration Software

From the Windows start menu select **Programs**, **PDS** then **Simline** to launch the control software. When the software identifies the connected Simline 2, select **Upgrade** then **Pod Firmware**.

A window will appear to warn you that old firmware will be erased before new firmware can be loaded. Click **OK** to continue.

The Simline 2 software will now automatically look in the **C:\Program Files\PDS\PDS Simline** folder and display all available **.pfu** files. Select the **Simulator 2** file with the highest version number.

The Pod Firmware Upgrade status window will indicate each stage of the upgrade procedure. When completed, a window will open asking you to power cycle the pod and then click **OK**.

10.2 Firmware Upgrade Using Terminal Emulation Software

Connect Simline 2 to your PC via the Serial port.

Run terminal emulation software such as HyperTerminal.

Serial port settings for terminal software should be:

Baud	19200
Data bits	8
Parity	none
Stop bits	1
Flow control	XON/XOFF

Apply power to the Simline 2 and within 3 seconds type an '**a**' character on the PC keyboard.

This will invoke the Boot monitor program that will send a sign on string as follows:

Welcome to AMD's EMon 186!

er 88mon:

The first stage is to erase the FLASH memory that is used by the application program. To do this type the following:

XA

The following will be displayed:

Erasing flash sector at X0000… etc

If no errors are reported then re-program application firmware by:

Select **Transfer** then **Send Text File**.

Select files of type: **All files** and then select to **Look in**: (the known location of the file).

The last Simline software CD loaded on to the PC host will automatically install the upgrade file in the location below:

C:\Program Files\PDS\PDS Simline

Select the Simulator **2 *_**.pfu** file with the highest version number and click **Open**.

HyperTerminal will indicate Transferring hex file and the upgrade will commence.

The Simline 2 will automatically sense the arrival of new data and will reprogram the flash memory. When finished this message will be displayed: **Device Programmed Successfully**.

If any errors are reported please repeat this procedure before seeking advice

Now re-power the Simline 2. To reset defaults, from the Command Prompt type: **Default↵** and then **Save↵**.

Note: Remember XON/XOFF flow control is required.