About G.SHDSL testing

The HST-3000's optional G.SHDSL testing feature enables users to emulate an STU-R, STU-C, and Ethernet terminal equipment (TE) to turn up and troubleshoot G.SHDSL circuits, and the service over the circuit. Using the optional IP suite or optional on-board web browser, the HST-3000 can also validate a data connection over the network.

The capabilities of the G.SHDSL feature include the following:

- Both remote and central office (exchange) modem emulation
- Ethernet TE emulation to verify service on the premises LAN
- Various physical line and EOC standards
- User EOC messages
- Network layer and PPP emulation and authentication
- IP layer routing
- ATM loopback
- ATM F5 loopback
- ATM BERT capability
- IP ping
- Web browser
- "In-line" STU-R TE replacement "through" mode
- Supports 2-wire or 4-wire interface

Quick tour

The following section describes the status indicators and connectors applicable to G.SHDSL.

Status LEDs

These indicators report the status of the application. The function of each LED is described in Table 6.

Table 6 Status LEDs

LED	Function
Sync	A two-color LED that reports the status of modem synchronization. – Flashing green indicates that the modems are training. – Solid green indicates that the modems have synchronized. – Solid red indicates a synchronization error has occurred.
Data	A two-color LED that reports the status of the data connection. – Flashing green indicates that the data connection is not yet established. – Solid green indicates that a data connection has been established with the network (so that the HST-3000 may send and receive data on the network). – Solid red indicates that a data connection error.
Error	A two-color LED that reports modem errors. – Solid red indicates an error condition.
Alarm	A two-color LED that indicates alarm conditions. – Solid red indicates a local alarm condition. – Solid amber indicates a remote alarm condition.

Table 6 Status LEDs (Continued)

LED	Function
Lpbk	The loop back LED indicates a loopback condition. – Solid amber indicates that a local loopback has been achieved.
Batt	Indicates the battery status. – The Batt LED is off when the battery has a useful charge. – Solid green indicates the AC adapter is plugged in. – Solid red indicates the battery is approximately 20 percent or below of full charge. – Flashing red indicates approximately five minutes of use remains. When this happens, the battery should be charged or replaced immediately. – Solid amber indicates the battery capacity indicator (“gas gauge”) needs to be reset. For information about replacing or charging the battery, see the *HST-3000 Base Unit User’s Guide*.

Connectors

The connectors for G.SHDSL are located on the right side of the SIM, as shown in Figure 1.

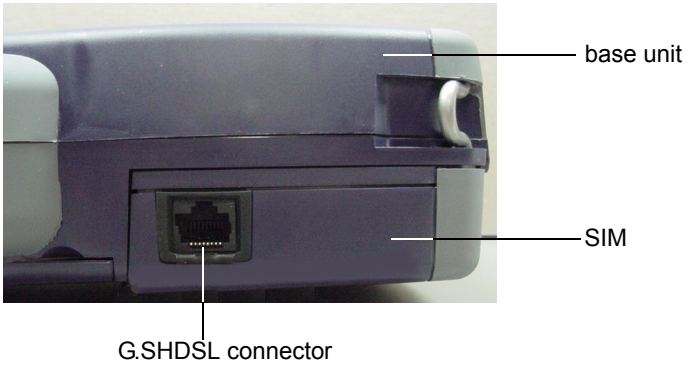

Figure 1 G.SHDSL connector

Use the 8-pin modular jack (G.SHDSL connector) for connection to G.SHDSL circuits. If you are using through mode, connect an Ethernet cable to the Ethernet jack on the top panel.

WARNING: ELECTRICAL SHOCK

Electrical shock may result in serious injury or death. Use care when connecting to telecommunications circuits, to be sure that you do not come in contact with exposed conductors or power mains. Connect TNV signals to TNV ports only.

The connector uses pins 4 and 5 for 2-wire G.SHDSL and the first pair of 4-wire G.SHDSL. The second pair for 4-wire uses either 1 and 2 or 3 and 6.

Sealing current terminator

The sealing current terminator, HST3000-SC, is an optional accessory available for DSL service. It is used when sealing current or wetting current must be terminated. Typically this occurs in an all-digital environment, but is not typical in DSL since the equipment (NT1 or telephone) provides termination.

The LED on the module indicates presence of sealing current. Place the module in-line, using the provided test cable.

The module is designed to terminate voltages under 80 volts, anything over 80V may make the module act erratic (LED flicker, go dim, etc.)

NOTE:

It is not recommended leaving the sealing current terminator on the line in the presence of a repeater because the module oscillates and could cause signal integrity issues effecting HST test results.

CAUTION: DAMAGE TO MODULE

Placing the sealing current terminator on a line with voltage over 150 volts may damage the unit.