Quick Start
Guide

HP 37718A/19A Communications Performance Analyzer

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HP Part No. 37718-90002

First edition, 09/98

Printed in U.K.

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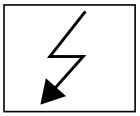

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HP 37718A/19A Communications Performance Analyzer

About This Book

The Quick Start Guide demonstrates the basic operation of the instrument.

This guide tells you how to select the displays that you want and how to use them to modify the instrument functions.

This guide also tells you about the front panel key functions, the indicators and the connectors.

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Getting Started

This chapter shows you how to select and change displays

Getting Started

Getting Started shows you how to select displays and use them to change the instrument settings. Getting started includes the following:

- How to select single or multiple windows
- How to obtain the required display using the display select keys, TRANSMIT ; RECEIVE ; RESULTS ; GRAPH ; OTHER
- How to modify the display information, using ↓ ↑ → and ← and the display softkeys or pop-up menus
- How to use the other front panel keys
- How to interpret the front panel status indicators
- How to connect to external equipment

Introducing the HP 37718A/19A Front Panel

Front panel keys and a display provide the operator interface to the HP 37718A/19A.

The display has two states, multiple (four), or a single window.

In the multiple window state, the active window is indicated by a different color to the three inactive windows.

Selecting Displays

The default display is a multiple page window. The displayed pages are: *Transmitter Output, Receiver Input, Results,* and either *Graph* or *Other* (Function).

TRANSMIT Allows control of the settings associated with the generated signal.

RECEIVE Allows control of the settings associated with the received signal.

RESULTS Allows control of the test timing and graph storage and displays the selected measurement results.

GRAPH Allows management of the stored graphical results.

OTHER Allows control of Stored Settings, Settings Control, Floppy Disk, Logging, Remote Control, Time & Date, Miscellaneous (Keyboard Lock, Beep on Received Error, Suspend Test on Signal Loss, Graph Storage Resolution), Options (a list of Options fitted) and Option Enable, Self Test, Trigger Output, Calibration, and Color Control.

Selecting Multiple or Single Windows

To select a single page window, press one of the display keys - TRANSMIT, RECEIVE, RESULTS, GRAPH or OTHER to make the required page active, then press SINGLE WINDOW.

To return to a multiple page window, press MULTIPLE WINDOW.

Example: To view the transmit page in a single window, press TRANSMIT to make the transmit window active.

Use SINGLE WINDOW to view the transmit page.

To change the page displayed in the single window, use one of the display keys RECEIVE, RESULTS, GRAPH or OTHER.

When you return to a multiple window, the current page will become the active page in the multiple window.

Moving Around Multiple Windows

To make another of the displayed pages in a multiple window display active, press the display selection key for that page.

Example: The *Transmitter Output* page is active.

To make the *Receiver Input* page active. Press RECEIVE.

Similarly, press RESULTS, OTHER or GRAPH to make the page you want active. Note that the *Other* and *Graph* pages use the same (bottom right) window pane.

Changing the Displayed Folder

Some windows displayed with the TRANSMIT , RECEIVE and RESULTS keys contain folders. These folders can be selected with the ➡ and ⬅ keys.

For example, the TRANSMITTER OUTPUT display below has three folders, MAIN SETTINGS, STRUCTURED PAYLOAD and TEST FUNCTION. In this example MAIN SETTINGS is selected

.

Example:

To change the folder from MAIN SETTINGS to STRUCTURED SETTINGS.

Press ➡

Changing the Instrument Settings

Settings that can be changed are displayed in a different color to the settings that are fixed. A highlighted cursor marks the current setting that can be changed.

Move the highlighted cursor about the display with ↓ ↑ → and ←

The selections available for the highlighted setting appear in a menu at the bottom of the display, in this case **RS232** **HP IB** **DISK** **PARALLEL** A selection is made with the relevant display key immediately below the menu.

When a field has more than five choices, as in SPEED shown here, a softkey labelled **MORE** is provided.

When **MORE** is selected the remainder of the menu is revealed.

Pop-up Menu Selection

A menu selection is available as an alternative to any group of soft keys. Display the menu with [SET]. and use [↑] and [↓] to make the selection.

To change to the new value, press [SET] . To exit the display without making the change, press [CANCEL].

Example:

Pop-Up Keypad

The Pop-Up keypad display can be used to enter alphanumeric file and directory names, File descriptors and Disk labels.

1. Press [SET] to obtain the pop-up keypad.
2. Use [←] [→] to move across the rows and [↑] [↓] to move up and down the columns.
3. Choose the character required and press [SET]. Repeat until the name is entered.
4. Choose END and press [SET] to return to the original display.

Making Selections with Pictorial & Graphic Displays

In some cases selection is simplified with a pictorial or graphic "map" display. This facility is available where the display has a ⊞ symbol beside the setting. These displays are obtained in the same way as the pop-up menus using the SET key. Some of these displays include menus which allow the settings to be changed.

NOTE

Details of the pictorial display depend on the optional modules fitted to the instrument.

Transmitter Output SDH Payload Mapping

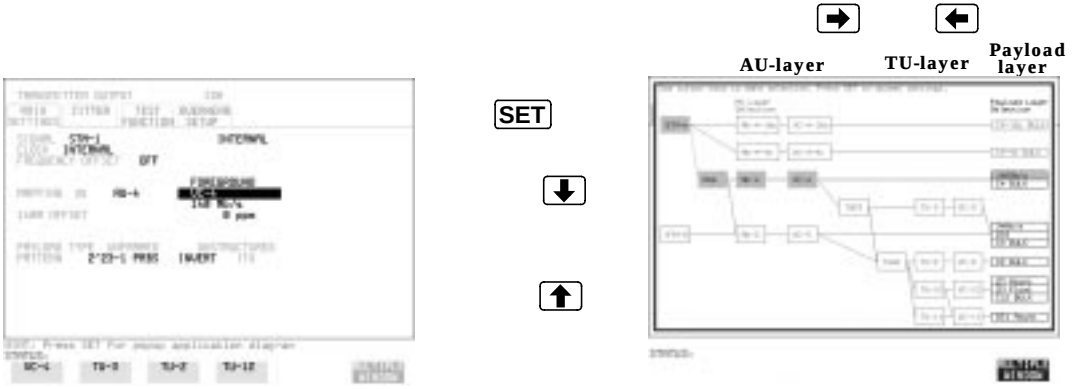
With the cursor in the MAPPING field, press SET to display the payload map.

To change between AU- layer, TU-layer and Payload layer selections, use ← and →.

To select the mapping you want, use ↑ and ↓.

To change to the new value, press SET. To exit the map display without making the change, press CANCEL.

Example:



Using with a Monitor

For ease of viewing at a distance, the instrument display may be presented on a monitor. The monitor should be connected to the HP 37718A/19A front panel VGA connector.

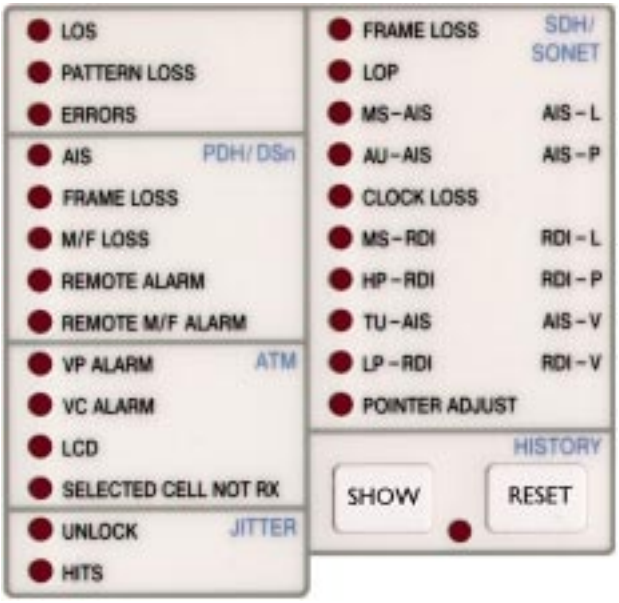
Using the Other Front Panel Keys

SMART TEST	Tests and scans payloads, signal structures, alarms and bit errors to attempt to configure the instrument to receive the incoming signal. Allows fast access to commonly used features.
RUN/STOP	Terminates the current test period or starts a new test period. The indicator above the key is on when a test period is in progress.
SINGLE	Adds a single bit error to the output data pattern each time the key is pressed.
LOCAL	Returns the instrument from Remote to Local control. The indicator above the key is on when the instrument is under Remote control.
PRINT NOW	The selected measurement results are logged, immediately, to the selected printer.
PAPER FEED	The paper in the internal printer is advanced.

CAUTION

Do not press **PAPER FEED** while loading a new roll of paper in the printer. A paper jam could result and disable the printer. Wait until the paper is fed through the printer mechanism before pressing **PAPER FEED**.

Monitoring Status



Displaying Status History (Option 002 shown above)

The Status indicators on the front panel convey information regarding the current status of the instrument. If an alarm has occurred during the current Test Period, the HISTORY indicator is on. To view which alarms have occurred, press and hold **SHOW**. When **SHOW** is released the status indicators return to displaying the current status.

SHOW — When pressed and held, the Status indicators display alarms that have been set during the current Test Period. This continues until **SHOW** is released at which time the current status is displayed. The HISTORY indicator is on to signify that an alarm has occurred during the current Test Period.

RESET — Resets the history store such that the historical and present status are the same. This can also be achieved by starting a new Test Period.

General Alarm Indicators

LOS	No data transitions at the input port.
PATTERN LOSS	The received data pattern is not in synchronization with the internally generated reference data.
ERRORS	A measured error has occurred. The indicator will remain lit for 100 ms.

PDH / DSn Alarm Indicators

These are active when a PDH / DSn signal is received

AIS	The All Ones AIS signal is detectable in the presence of a 1 in 10^{-3} error rate.
LOS	Frame alignment lost or out of alignment condition.
M/F LOSS	Multiframe alignment lost.
REMOTE ALARM	Remote alarm, x-bit or yellow alarm bit is set.
REMOTE M/F ALARM	Remote Multiframe Alarm bit is set.

SDH Alarm Indicators

These are active when an SDH signal is received.

FRAME LOSS	Loss Of Frame has been detected.
LOP	Loss of pointer has been detected.
MS-AIS	Multiplexer Section AIS has been detected.
AU-AIS	Path AIS has been detected.
CLOCK LOSS	The transmitter clock is not synchronized to the selected reference.
MS-RDI	Multiplexer Section RDI (FERF) has been detected.
HP-RDI	Path RDI (FERF) has been detected.
TU-AIS	TU Path AIS has been detected.
LP-RDI	TU Path RDI (FERF) has been detected.
POINTER ADJUST	A pointer change in the foreground signal has been detected.

SONET Alarm Indicators

These are active when an SONET signal is received.

FRAME LOSS	Loss Of Frame or Severely Errored Frame has been detected. Status message on bottom of display states which has occured.
LOP	Loss of Pointer has been detected.
AIS-L	Line AIS has been detected.
AIS-P	STS Path AIS has been detected.
CLOCK LOSS	The transmitter clock is not synchronized to the selected reference.
RDI-L	Line Remote Defect Indication (RDI) has been detected.
RDI-P	STS Path RDI has been detected.
AIS-V	Virtual Tributary path AIS has been detected.
RDI-V	VT path RDI has been detected.
POINTER ADJUST	A pointer change in the foreground has been detected.

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About This Edition

This is the 1st edition of the 37718-90002 manual. It documents the product as of September 1998. Edition dates are as follows:

1st Edition, Sept 1998

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