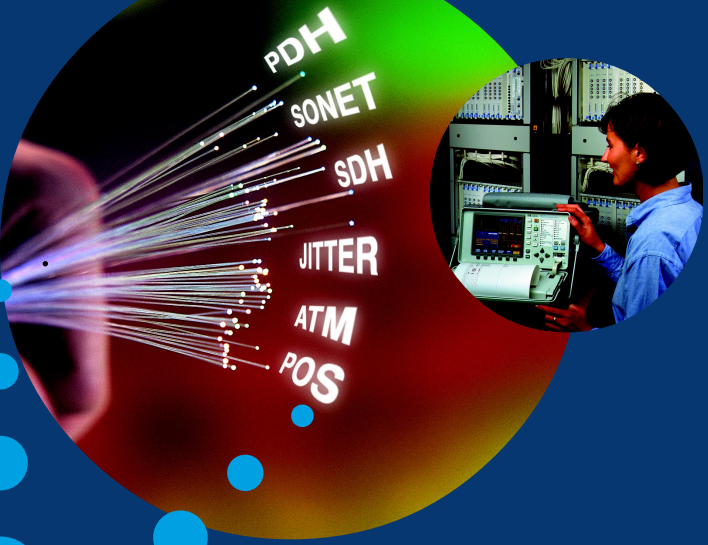

Quick Reference Guide

OmniBER 718

Agilent Technologies

Agilent
OmniBER 718
TRANSMIT
RECEIVE
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LOS
PATTERN LOSS
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Introduction

Use this book to quickly access the main instrument functions and tasks.

Setting the Interfaces	Setting the Transmit Interfaces
Setting PDH Transmit Interface	TRANSMIT [PDH/DSn] MAIN SETTINGS
Setting SDH Transmit Interface	TRANSMIT [SDH] MAIN SETTINGS
Setting Jitter Transmit Interface	TRANSMIT [SDH] JITTER **OR** TRANSMIT [PDH/DSn] JITTER
Setting Wander Transmit Interface	TRANSMIT [SDH] JITTER **OR** TRANSMIT [PDH/DSn] JITTER
Setting SDH THRU Mode	TRANSMIT [SDH] MAIN SETTINGS SIGNAL [THRU MODE]
Setting PDH THRU Mode (DS1/DS3 only)	TRANSMIT [PDH/DSn] MAIN SETTINGS DS1/DS3 [THRU MODE]
Setting ATM in the Transmitter	TRANSMIT [SDH] MAIN SETTINGS MAPPING [ ] [ ] [ATM] TRANSMIT [PDH/DSn] MAIN SETTINGS MAPPING [ ] [ ] [ATM]set ATM in the Receiver first
Setting POS in the Transmitter	TRANSMIT [SDH/SONET] MAIN SETTINGS MAPPING [ ] [ ] [POS]
Setting TCM in the Transmitter	TRANSMIT [SDH] MAIN SETTINGS TCM PATH [ ]

Setting the Receive Interfaces

Using Smart Test	Smart Test [RUN TEST]
Setting PDH Receive Interface	RECEIVE [PDH/DSn] MAIN SETTINGS
Setting SDH Receive Interface	RECEIVE [SDH] MAIN SETTINGS
Setting Jitter Receive Interface	RECEIVE [SDH] JITTER **OR** RECEIVE [PDH/DSn] JITTER
Setting ATM in the Receiver	RECEIVE [SDH] MAIN SETTINGS MAPPING [ ] [ ] [ATM] RECEIVE [PDH/DSn] MAIN SETTINGS MAPPING [ ] [ ] [ATM]
Setting POS in the Receiver	RECEIVE [SDH/SONET] MAIN SETTINGS MAPPING [ ] [ ] [POS]
Setting TCM in the Receiver	RECEIVE [SDH] MAIN SETTINGS TCM PATH

Selecting Test Features

Selecting and Using Overhead Features

Using Transmit Overhead Setup	TRANSMIT [SDH] OVERHEAD SETUP
Using Receive Overhead Monitor	RECEIVE [SDH] OVERHEAD MONITOR
Setting Overhead Trace Messages	TRANSMIT [SDH] OVERHEAD SETUP SETUP [TRACE MESSAGES]
Generating Overhead Sequences	TRANSMIT [SDH] TEST FUNCTION TEST FUNCTION [SDH] [SEQUENCES]
Using Receive Overhead Capture	RECEIVE [SDH] TEST FUNCTION TEST FUNCTION [SDH] [O/H CAPTURE]
Setting TCM APId Messages	TRANSMIT [SDH] OVERHEAD SETUP SETUP [TCM MESSAGE]
Using Transmit Overhead BER Test Function	TRANSMIT [SDH] TEST FUNCTION TEST FUNCTION [SDH] [OVERHEAD BER]

Selecting and Using Signal Features

Adding Frequency Offset to the SDH Signal	TRANSMIT [SDH] MAIN SETTINGS CLOCK [INTERNAL] FREQUENCY OFFSET [ON]
Adding Frequency Offset to the PDH Signal	TRANSMIT [PDH/DSn] MAIN SETTINGS FREQUENCY OFFSET [<select>]
Setting up Signaling Bits	TRANSMIT [PDH/DSn] MAIN SETTINGS SIGNAL [2Mb/s] PAYLOAD TYPE [PCM30] STRUCTURED STRUCT'D SETTINGS 2M CAS ABCD BITS [<select>]
Setting Transmit Structured Payload/Test Signal	TRANSMIT [SDH] STRUCT'D PAYLOAD **OR** TRANSMIT [PDH/DSn] STRUCT'D SETTINGS
Setting Receive Structured Payload/Test Signal	RECEIVE [SDH] STRUCT'D PAYLOAD **OR** RECEIVE [PDH/DSn] STRUCT'D SETTINGS
Connecting A Telephone Handset	TRANSMIT [SDH] STRUCT'D PAYLOAD TEST SIGNAL [64 kb/s] HANDSET [<select>] TRANSMIT [PDH/DSn] STRUCT'D SETTINGS TEST SIGNAL [64 kb/s] HANDSET [<select>]
Setting Transmit N X 64 kb/s Structured Payload/Test Signal	TRANSMIT [SDH] STRUCT'D PAYLOAD TEST SIGNAL [Nx64kb/s] TRANSMIT [PDH/DSn] STRUCT'D SETTINGS TEST SIGNAL [Nx64kb/s]
Setting Receive N X 64 kb/s Structured Payload/Test Signal	RECEIVE [SDH] STRUCT'D PAYLOAD TEST SIGNAL [Nx64kb/s] RECEIVE [PDH/DSn] STRUCT'D SETTINGS TEST SIGNAL [Nx64kb/s]

Selecting and Using Signal Features (cont'd)

Inserting an External PDH Payload/Test Signal	TRANSMIT [SDH] STRUCT'D PAYLOAD 2M PAYLOAD [INSERT 2Mb/s] TRANSMIT [PDH/DSn] STRUCT'D SETTINGS 2M PAYLOAD [INSERT 2Mb/s]
Dropping an External Payload/Test Signal	RECEIVE [SDH] STRUCT'D PAYLOAD 2M PAYLOAD [DROP 2Mb/s] RECEIVE [PDH/DSn] STRUCT'D SETTINGS 2M PAYLOAD [DROP 2Mb/s]
Adding Errors & Alarms at the SDH Interface	TRANSMIT [SDH] TEST FUNCTION TEST FUNCTION [SDH] [ERR & ALARM]
Adding Errors & Alarms to the PDH Interface/PDH Payload	TRANSMIT [SDH] TEST FUNCTION TEST FUNCTION [PDH PAYLD] [ERR & ALARM]
Using FEAC Codes in OmniBER	TRANSMIT [PDH/DSn] TEST FUNCTION
Setting PDH Spare Bits	TRANSMIT [SDH] TEST FUNCTION TEST FUNCTION [PDH PAYLD] [SPARE BITS]
Adding Pointer Adjustments	TRANSMIT [SDH] TEST FUNCTION TEST FUNCTION [SDH] [ADJUST PTR]
Using Pointer Graph Test Function	RECEIVE [SDH] TEST FUNCTION TEST FUNCTION [SDH] [PTR GRAPH]

Selecting and Using Signal Features (cont'd)

Generating Automatic Protection Switch Messages	TRANSMIT [SDH] OVERHEAD SETUP SETUP [APS MESSAGES]
Inserting Data Communications Channel	TRANSMIT [SDH] TEST FUNCTION TEST FUNCTION [SDH] [DCC INSERT]
Dropping Data Communications Channel	RECEIVE [SDH] TEST FUNCTION TEST FUNCTION [SDH] [DCC DROP]
Setting ATM Transmitter Scrambling	TRANSMIT [SDH] ATM SETTINGS SETUP [CONV SUBLAYER] SCRAMBLING [<select>] TRANSMIT [PDH/DSn] ATM SETTINGS SETUP [CONV SUBLAYER] SCRAMBLING [<select>]
Setting ATM Receiver Scrambling	RECEIVE [SDH] ATM SETTINGS SETUP [CONV SUBLAYER] SCRAMBLING [<select>] RECEIVE [PDH/DSn] ATM SETTINGS SETUP [CONV SUBLAYER] SCRAMBLING [select>]
Setting up an ATM Foreground Signal	TRANSMIT [SDH] ATM SETTINGS SETUP [FOREGROUND] TRANSMIT [PDH/DSn] ATM SETTINGS SETUP [FOREGROUND]
Receiving an ATM Signal	RECEIVE [SDH] ATM SETTINGS SETUP [HEADERS/PAYLOAD] RECEIVE [PDH/DSn] ATM SETTINGS SETUP [HEADERS/PAYLOAD]

Selecting and Using Signal Features (cont'd)

Setting up ATM Errors and Alarms	TRANSMIT [SDH] TEST FUNCTION TEST FUNCTION [ATM] TRANSMIT [PDH/DSn] TEST FUNCTION TEST FUNCTION [ATM]
Setting ATM Policing Function	RECEIVE [SDH] ATM SETTINGS SETUP [POLICING] RECEIVE [PDH/DSn] ATM SETTINGS SETUP [POLICING]
Setting POS Transmitter HDLC Framing	TRANSMIT [SDH/SONET] POS SETTINGS HDLC FRAMING <SELECT>
Setting POS Transmitter Scrambling	TRANSMIT [SDH/SONET] POS SETTINGS SCRAMBLING <SELECT>
Setting POS Transmitter HDLC FCS	TRANSMIT [SDH/SONET] POS SETTINGS HDLC FCS <SELECT>
Setting POS Transmitter IP Header	TRANSMIT [SDH/SONET] POS SETTINGS SETUP [IP HEADER] <SELECT>
Setting POS Transmitter Packet Size/Gap	TRANSMIT [SDH/SONET] POS SETTINGS SETUP [PACKET SIZE/GAP] <SELECT>

Selecting and Using Signal Features (cont'd)

Setting up POS Transmitter IP Address	TRANSMIT [SDH/SONET] POS SETTINGS SETUP [IP ADDRESS] <SELECT>
Setting up POS Transmitter IP Payload	TRANSMIT [SDH/SONET] POS SETTINGS SETUP [IP PAYLOAD] <SELECT>
Setting POS Errors and Alarms	TRANSMIT [SDH/SONET] TEST FUNCTION TEST FUNCTION [POS]
Setting POS Receiver HDLC Framing	RECEIVE [SDH/SONET] POS SETTINGS HDLC FRAMING <SELECT>
Setting POS Receiver Descrambling	RECEIVE [SDH/SONET] POS SETTINGS DESCRAMBLING <SELECT>
Setting POS Receiver HDLC FCS	RECEIVE [SDH/SONET] POS SETTINGS HDLC FCS <SELECT>
Setting up POS Receiver payload	RECEIVE [SDH/SONET] POS SETTINGS PAYLOAD <SELECT>

Making Measurements

Using Overhead BER Test Function	RECEIVE [SDH] TEST FUNCTION TEST FUNCTION [SDH] [OVERHEAD BER]
Test Timing	RESULTS RESULTS [TIMING CONTROL]
Making SDH Analysis Measurements	RESULTS RESULTS [SDH] [ERROR ANALYSIS]
Making PDH Analysis Measurements	RESULTS RESULTS [PDH PAYLOAD] [ERROR ANALYSIS]
Measuring Jitter	RESULTS RESULTS [JITTER]
Measuring Frequency	RESULTS RESULTS [SDH] [FREQUENCY]
Measuring Optical Power	RESULTS RESULTS [SDH] [OPTICAL POWER]
Measuring Round Trip Delay	RESULTS RESULTS [PDH PAYLOAD] [TRIP DELAY]
Measuring Service Disruption Time	RESULTS RESULTS [SRVC DISRUPT]

Making Measurements (cont'd)

Performing an SDH Tributary Scan	TRANSMIT [SDH] TEST FUNCTION TEST FUNCTION [TRIB SCAN] RESULTS RESULTS [SDH TRIB SCAN]
Performing an SDH Alarm Scan	RESULTS RESULTS [SDH ALM SCAN]
Performing a PDH Alarm Scan	RESULTS [PDH ALM SCAN]
Measuring Jitter Tolerance	TRANSMIT [PDH/DSn] JITTER JITTER [TOLERANCE]
Measuring Jitter Transfer	TRANSMIT [PDH/DSn] JITTER JITTER [TRANSFER FN]
Measuring ATM Source Disruption	RESULTS RESULTS [SRVC DISRUPT]
Measuring ATM Results	RESULTS RESULTS [ATM PAYLOAD]
Measuring POS Results	RESULTS RESULTS [POS PAYLOAD]

Storing, Logging and Printing

Saving Graphics Results to Instrument Store	RESULTS [TIMING CONTROL] GRAPH STORAGE [1 MIN RESOL'N]
Recalling Stored Graph Results	GRAPH TEXT RESULTS STORE STATUS
Viewing the Bar Graph Display	GRAPH GRAPH RESULTS
Viewing the Graphics Error and Alarm Summaries	GRAPH TEXT RESULTS
Test Period Logging	OTHER FUNCTION [LOGGING] TEST PERIOD LOGGING [ON]
Logging Results to Centronics Printer	OTHER FUNCTION [LOGGING] SETUP [DEVICE] LOGGING PORT [PARALLEL]
Logging Results to HP-IB Printer	OTHER FUNCTION [LOGGING] SETUP [DEVICE] LOGGING PORT [GPIB]
Logging Results to Internal Printer	OTHER FUNCTION [LOGGING] SETUP [DEVICE] LOGGING PORT [INTERNAL]

Storing, Logging and Printing (cont'd)

Logging Results to RS-232-C Printer	OTHER FUNCTION [LOGGING] SETUP [DEVICE] LOGGING PORT [RS232]
Logging Results Content	OTHER FUNCTION [LOGGING] SETUP [CONTENT]
Logging Results Period	OTHER FUNCTION [LOGGING] SETUP [PERIOD]

Using Instrument and Disk Storage

Storing Configurations in Instrument Store	OTHER FUNCTION [STORED SETTINGS]
Storing Current Configurations on Disk	OTHER FUNCTION [FLOPPY DISK]
Setting up a Title for Configurations in Instrument Store	OTHER FUNCTION [STORED SETTINGS]
Recalling Configurations from Instrument Store	OTHER FUNCTION [STORED SETTINGS]
Formatting a Disk	OTHER FUNCTION [FLOPPY DISK] DISK OPERATION [DISK] [FORMAT]
Labeling a Disk	OTHER FUNCTION [FLOPPY DISK] DISK OPERATION [DISK] [LABEL]
Managing Files and Directories on Disk	OTHER FUNCTION [FLOPPY DISK] DISK OPERATION [FILE]
Adding Descriptors to Disk Files	OTHER FUNCTION [FLOPPY DISK] DISK OPERATION [DISK]
Saving Graphics Results to Disk	RESULTS [TIMING CONTROL] GRAPH STORAGE [DISK]
Saving Data Logging to Disk	OTHER FUNCTION [FLOPPY DISK] DISK OPERATION [SAVE]
Recalling Configuration from Disk	OTHER FUNCTION [FLOPPY DISK] DISK OPERATION [RECALL] FILE TYPE [CONFIGURATION]

Using Instrument and Disk Storage (cont'd)

Recalling Graphics Results from Disk	OTHER FUNCTION [FLOPPY DISK] DISK OPERATION [RECALL] FILE TYPE [GRAPHICS]
Copying Configuration from Instrument Store to Disk	OTHER FUNCTION [FLOPPY DISK] DISK OPERATION [FILE] [COPY] [FROM:] [CONFIGURATION]
Copying Configuration from Disk to Instrument Store	OTHER FUNCTION [FLOPPY DISK] DISK OPERATION [FILE] [COPY] [TO:] [CONFIGURATION]
Copying Graphics Results from Instrument Store to Disk	OTHER FUNCTION [FLOPPY DISK] DISK OPERATION [FILE] [GRAPHICS]
Deleting a File on Disk	OTHER FUNCTION [FLOPPY DISK] DISK OPERATION [FILE] [DELETE] [DELETE FILE] NAME [<select>]
Deleting a Directory on Disk	OTHER FUNCTION [FLOPPY DISK DISK OPERATION [FILE] [DELETE] [DELETE DIRECTORY]
Renaming a File on Disk	OTHER FUNCTION [FLOPPY DISK] DISK OPERATION [FILE] [RENAME]
Creating a Directory on Disk	OTHER FUNCTION [FLOPPY DISK] DISK OPERATION [FILE] [CREATE DIRECTORY]

Selecting and Using "Other" Features

Coupling Transmit & Receive Settings	OTHER FUNCTION [SETTINGS CONTROL] TRANSMITTER AND RECEIVER [COUPLED]
Suspending Test on Signal Loss	OTHER FUNCTION [MISCELLANEOUS] SUSPEND TEST ON SIGNAL LOSS [ON]
MS-REI Results Enable	OTHER FUNCTION [MISCELLANEOUS] MS-REI RESULT ENABLE
Inband DS1 Loopcode 156MTS Compatibility	OTHER FUNCTION [MISCELLANEOUS] INBAND DS1 LOOPCODE 156MTS COMPATIBILITY
Setting Time & Date	OTHER FUNCTION [TIME & DATE]
Enabling Keyboard Lock	OTHER FUNCTION [MISCELLANEOUS] KEYBOARD LOCK [ON]
Enabling Beep on Received Error	OTHER FUNCTION [MISCELLANEOUS] BEEP ON RECEIVED ERROR [ON]
Setting Error Threshold Indication	OTHER FUNCTION [COLOR CONTROL]

Selecting and Using "Other" Features (cont'd)

Dumping Display to Disk	OTHER FUNCTION [LOGGING] SETUP [DEMAND] LOG ON DEMAND [SCREEN DUMP]
Setting Screen Brightness and Color	OTHER FUNCTION [COLOR CONTROL]
Running Self Test	OTHER FUNCTION [SELF TEST]
Selecting Trigger Output	OTHER FUNCTION [TRIGGER OUTPUT]

In This Guide

Instructions on how to quickly select main instrument functions.

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