

MN9320A

Optical Channel Drop Unit



*Independent Test Access Tool for Comprehensive
DWDM Measurements*

Access to DWDM Channels and Traffic at One Location

The technique of Dense Wavelength Division Multiplexing is well established and adopted worldwide as a means of increasing the traffic-carrying capacity of a fiber. Optical cross connects, and wavelength routing and translation now make a typical network far more complex in construction. Identification of an individual channel and verification of the data passing over it during installation, commissioning, and routine maintenance as part of a Service Level Agreement (SLA) is becoming more critical. The MN9320A Optical Channel Drop Unit is a test instrument that scans the DWDM optical signal and displays all those channels in the form of a bar graph. Any channel can be selected from this display and fed to the output port which can then be connected to an analyzer such as the Anritsu MP1570A for data validation and testing. Wherever the integrity of a DWDM signal must be verified, the MN9320A can be used.

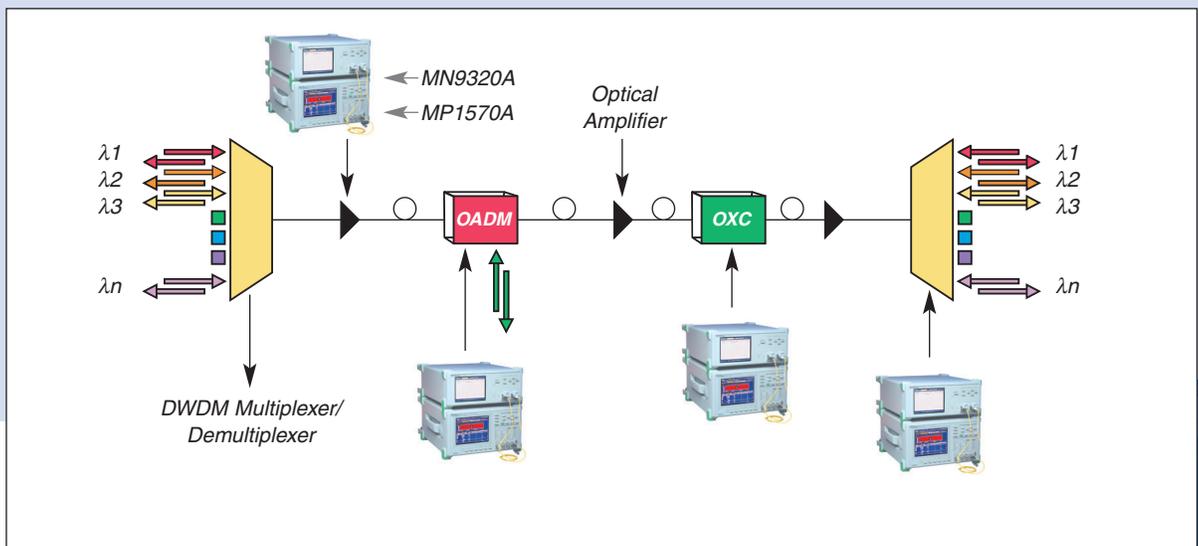
Product Features

Independent DWDM signal access for channels of 50 GHz spacing or higher-up to data rates of 10 Gbps.

- Provides DWDM channel access to any BER tester
- Measurement of channel wavelength and power
- ± 10 pm wavelength accuracy (typical)
- Optical output protection mode
- ITU-T 50 GHz, 100 GHz, or custom grid capability

Proof of conformance to a customer SLA, isolation of points of failure or performance degradation in a DWDM network can be achieved by connecting the MN9320A to a monitor point in the network and connecting it to an analyzer such as the Anritsu MP1570A. Any DWDM channel signals can then be directed to the input of the BERT for analysis.

Data at rates of up to 10 Gbps and at a spacing as close as 50 GHz are easily handled by the MN9320A.



Functional and Simple to Use

- Single-button operation
- Channel table shows wavelength and optical power
- Any channel can be dropped
- Filter design prevents data corruption at 10 Gbps

Access to Individual Channels on a DWDM System

The optical filter design of the MN9320A is specifically intended to access (i.e. drop) an individual channel from a DWDM signal for analysis such as SONET/SDH, BER, Q-Factor, etc. The unique optical filter design combines a wide, flat top and steep sides with very strong adjacent channel rejection, ideally suited for high data rates, up to 10 Gbps.

Channel Power and Wavelength Measurement

The MN9320A provides accurate measurement of individual channel powers and wavelengths. Wavelength is measured in scan mode.

Automatic Channel and Grid Detection

The MN9320A enables the user to select a particular power level above which DWDM channels are expected. The unit will then scan and determine the wavelength and channel power of all channels in the measurement range. Results are then presented in tabular or bar graph format. The user can also save a custom grid based on the wavelengths measured. The new custom grid is stored for future use.

Easy Channel Grid Management

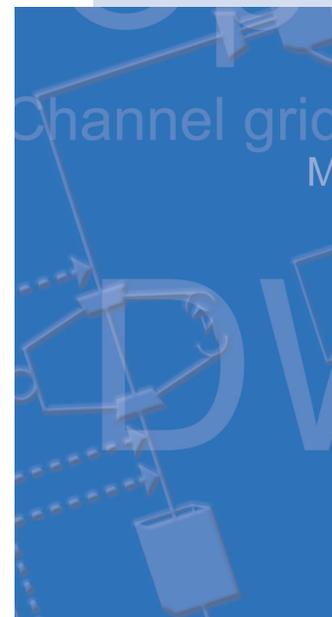
The MN9320A understands that channels are arranged in a grid, and that not all grids are the same. The user interface makes it easy to manage wavelengths based on standard ITU-T grids as well as custom grids. Removing and inserting channels can easily modify existing grids, creating new ones appropriate for the task at hand. Custom grids are easily stored and recalled, reducing measurement time and operator skill levels.

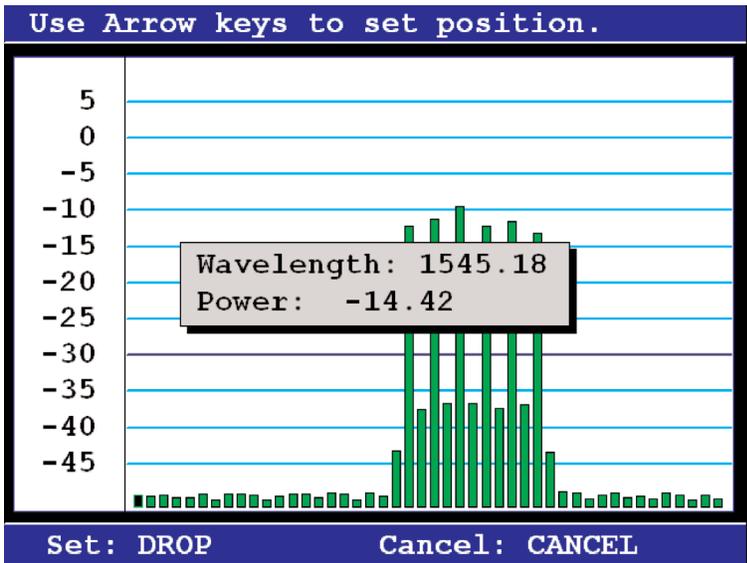
Optical Output Protection Mode

Any network data analyzer is an expensive test tool, yet the receiver can be easily damaged by the application of a high input power. The MN9320A offers a unique output protection mode to prevent this expensive mistake. When enabled, the unit has a preset level above which the output port will not activate. This level can be changed by the user.

Incredible Wavelength Accuracy

The optical components within the MN9320A are of the highest quality, providing wavelength accuracy of typically ± 10 pm so you can be sure it goes back to the same spot, time after time.





Anritsu MN9320A Optical Channel Analyzer

Setup Channels M

Current System

Position Units:

Power Units:

Output Protection:

Channel Grid:

Search Threshold:

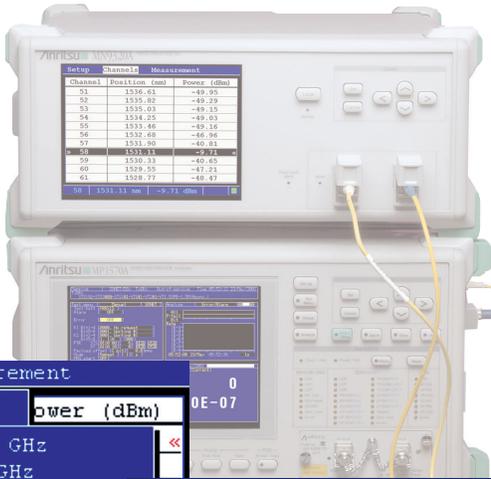
Scan Range Start:

Scan Range End:

Configuration Name:

Press SET To Change

73 1540.16 nm



Channel	Output	Channel	Power (dBm)
» 15	FGH	T 100 GHz	0E-07
16	ABC	T 50 GHz	
16		Load Custom Grid	
18		Save Current Grid	
18		Delete Custom Grid	
20			
21		1560.61	
21		1559.79	
23		1558.98	
23		1558.17	
25		1557.36	

Channel: 15 | 1565.50 nm |

Channel	Position (nm)	Power (dBm)
» 28	1554.94	-7.38
30	1553.33	-4.7
31	1551.72	-8.4
33	1550.92	-22.8
33	1550.12	-4.4
36	1548.52	-6.7

Channel: 28 | 1554.94 nm | -7.38 dBm

Setup Channels M

Units - Channel Position

Units - Power

Output Protection

Output Protection

Channel Search Threshold

Custom Configuration

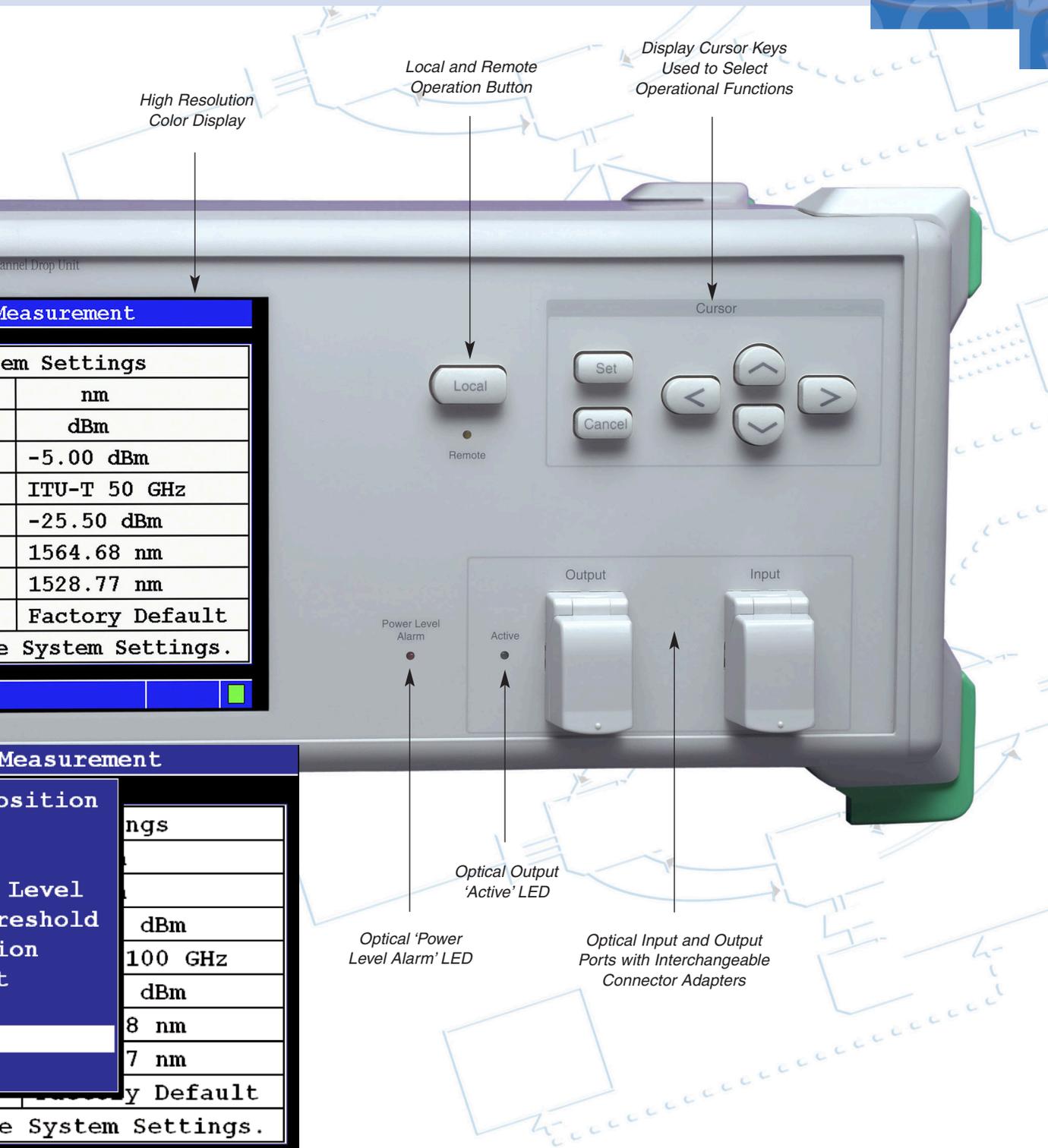
Scan Range - Start

Scan Range - End

System Help

Shut Down

Press SET To Change



High Resolution Color Display

Local and Remote Operation Button

Display Cursor Keys Used to Select Operational Functions

Channel Drop Unit

Measurement

System Settings

nm
dBm
-5.00 dBm
ITU-T 50 GHz
-25.50 dBm
1564.68 nm
1528.77 nm
Factory Default
System Settings.

Measurement

Position

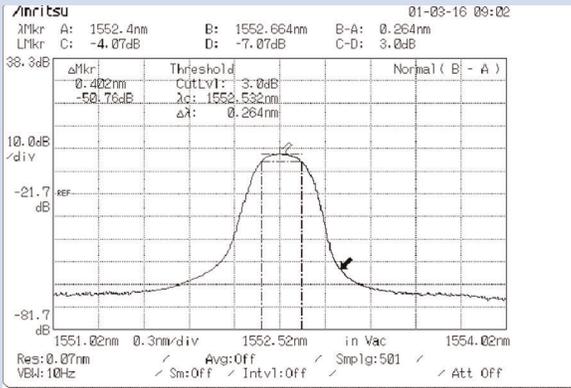
ngs
dBm
100 GHz
dBm
8 nm
7 nm
Factory Default
System Settings.

Optical 'Power Level Alarm' LED

Optical Output 'Active' LED

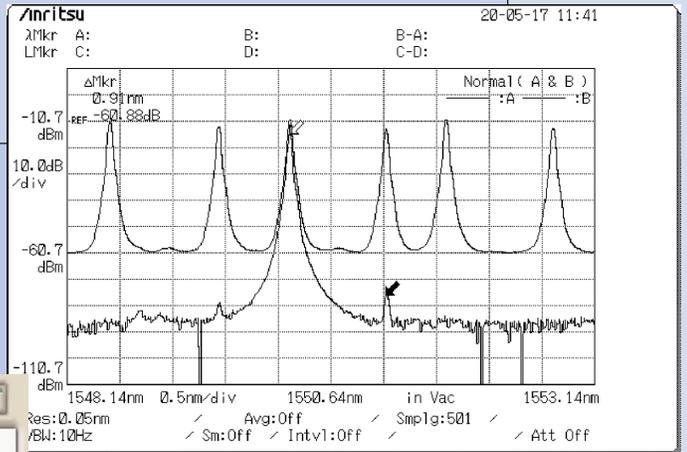
Optical Input and Output Ports with Interchangeable Connector Adapters

"Not only is the MN9320A a useful measurement tool, it's an insurance policy that will protect your expensive analyzer"

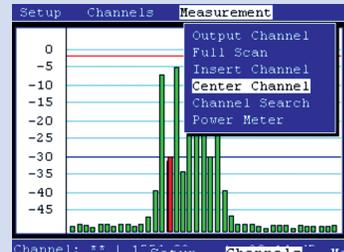
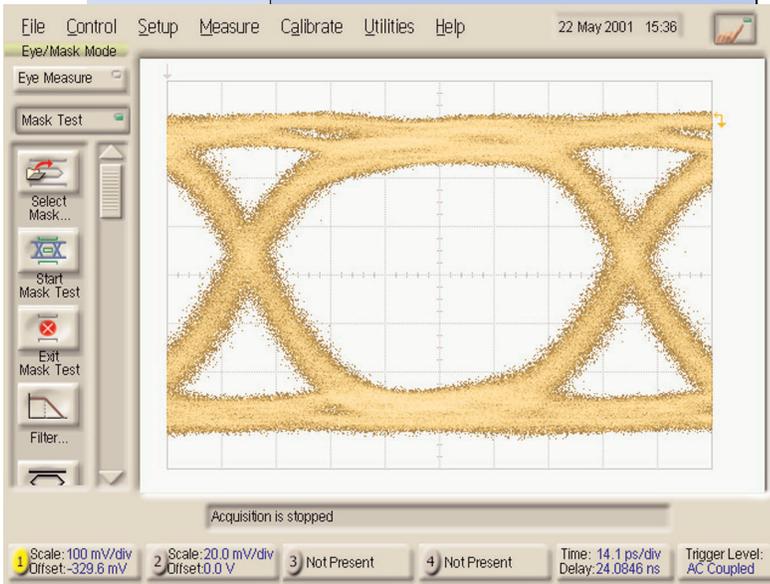


To avoid corruption of high data rate traffic within the channel, a filter shape with steep sides and a flat top is required.

The filter technology used in the MN9320A provides superb shape for 10 Gbps traffic and minimal cross-talk between adjacent channels.



The eye diagram demonstrates that the optical filter in the MN9320A has little or no effect on a 10 Gbps signal.



Channel	Position (nm)	Power (dBm)
18	1563.05	-49.54
18	1562.23	-49.49
20	1561.42	-49.50
21	1560.61	-49.32
21	1559.79	-49.57
23	1558.98	-49.05
23	1558.17	-49.25
25	1557.36	-49.12
26	1556.56	-46.70
26	1555.75	-39.41
28	1554.94	-7.55

Use Cursor keys to change value.

Channel
 Search

Specifications

MN9320A Optical Channel Drop Unit

Optical Performance

Wavelength range	1528 to 1565 nm
Channel drop mode	
- Channel spacing	50 GHz and higher
- Data rate	Up to 10 Gbps
Wavelength accuracy	±20 pm guaranteed, ±10 pm typical
Wavelength repeatability	±10 pm non-additive to wavelength accuracy
ORR @ 0.4 nm	>40 dBc typical
Filter full width @ 3 dB	0.2 nm
@ 20 dB	0.6 nm
Maximum input power	+20 dBm
Input power measurement range	-50 to +10 dBm
Power meter accuracy	±0.5 dBm for -40 to +10 dBm
Insertion loss	8 dB max, <6 dB typical
Display	Color STN 6" FVGA
External interfaces	RS-232, 115 KBps, 200 KBps
EMC	EN 61326: 1998 STD
Safety	EN 61010-1: 1993
Dimensions and mass	320(W) x 133(H) x 350(D) mm, 11 kg
Power	115 VAC, 7.0 A, 50/60 Hz, or 230 VAC, 4.0 A, 50/60 Hz, auto-selecting (Typical load: <1.5A [115 VAC]; <1.0A [230 VAC])
Temperature range	
- Operation	0° to 50° C
- Storage	-40° to +70° C

Ordering Information

Please specify the model or order number and quantity when ordering.

Model Number	Description	Remarks
MN9320A	Mainframe 'C' band Optical Channel Drop Unit* Standard accessories supplied with this unit: User's Guide AC power cord Protective front cover	
MN9320A-01	Options <i>Optical Channel Drop Unit with:</i> SC/UPC connectors	
MN9320A-02	ST/UPC connectors	
MN9320A-03	HMS-10/A connectors	
760-218	Application parts Hard carry case	With storage for power cord, optical patch cords, User's Guide, and other accessories
J0617B	Replaceable connector (FC)	
J0618D	Replaceable connector (ST)	
J0618E	Replaceable connector (DIN)	
J0618F	Replaceable connector (HMS-10/A)	
J0619B	Replaceable connector (SC)	

* Equipped with FC/UPC connectors



Discover What's Possible™

ANRITSU COMPANY
1155 East Collins Boulevard
Richardson, TX 75081

<http://www.us.anritsu.com>

SALES & SUPPORT

UNITED STATES

Tel: 1-800-ANRITSU
Fax: 972-671-1877

CANADA

Tel: 1-800-ANRITSU
Fax: 613-828-5400

SOUTH AMERICA

Tel: 55-21-527-6922
Fax: 55-21-537-1456

JAPAN

Tel: 81-3-3446-1111
Fax: 81-3-3442-0235

ASIA-PACIFIC

Tel: 65-282-2400
Fax: 65-282-2533

EUROPE

Tel: +44 (0)1582-433433
Fax: +44 (0)1582-731303

Copyright © 2002 Anritsu Company
Specifications subject to change without notice.
Other brand and product names may be trademarks
or registered trademarks of their respective owners.

January 2002
P/N : 80401-00128 Rev.1
Printed in USA

