OFI 2100 Product description

OFI 2100 Physical Characteristics

JDSU's industry leading OFI 2100 family is designed as a one-box solution for the professional installation, turn-up and maintenance of Coarse WDM optical networks. The OFI 2100 tests multiple wavelength frequencies and power levels at one press of the FOX button. It easily manages and reports test results. The OFI 2100 reduces installation time and saves money by reducing costly re-work during system turn-up.

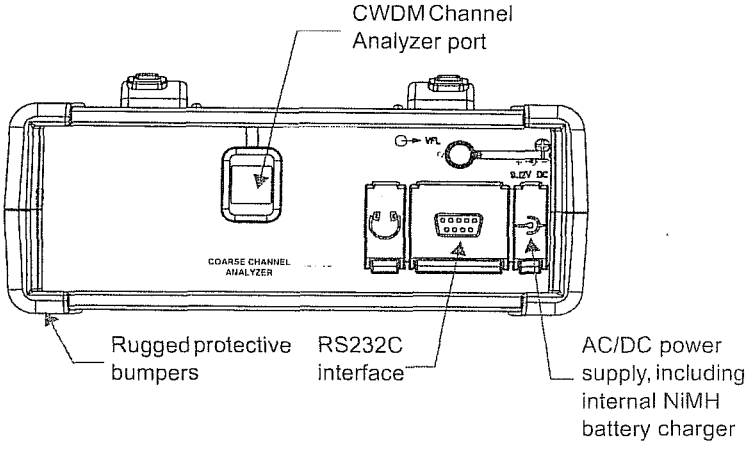

Fig. 1 OFI 2100 with CCA function

In addition to the CWDM Channel Analyzer port, the following options can be simultaneously housed in the OFI 2100 chassis:

- +10 to -70dBm standard Power Meter
- Bi-directional insertion loss tester
- ORL meter
- Length measurement function
- Visual Fault Locator

User Interface

CWDM Configuration and Channel Plan

CWDM Configuration

The user selects the CWDM tab in order to enter this measurement function.

The main menu provides access to the following:

- The acquisition parameters: " sweep " and " Average ", in order to configure the acquisition process.
- The " Splitter " attenuation in order to take the monitor port IL into account (in dB or %, define in system setup).
- The channel detection threshold ("Thresh."), in dBm.
- The channel plan selection (" Used Plan ").
- The capability to configure a new channel plan, or to modify existing one ("Plan Conf").

The right and left arrows allow movement from one parameter to the other; the up and down arrows either change the parameter or validate the function (e.g. PlanConf).

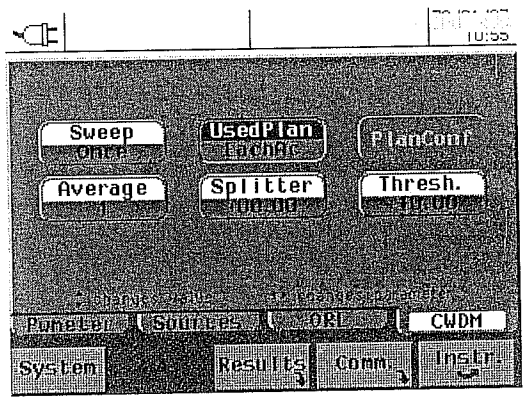

Fig. 2 CWDM Configuration

Channel Plan Configuration

1 The user selects the channel plan to be created or modified.

2 The right and left arrows move to "PlanConf". Access to the configuration menu is found with the up and down arrows.

3 The "Mode" select provides 3 different configuration formats: Regular, ITU-T and Manual.

4 The "Back" key exits the configuration mode with automatic saving of the changes.

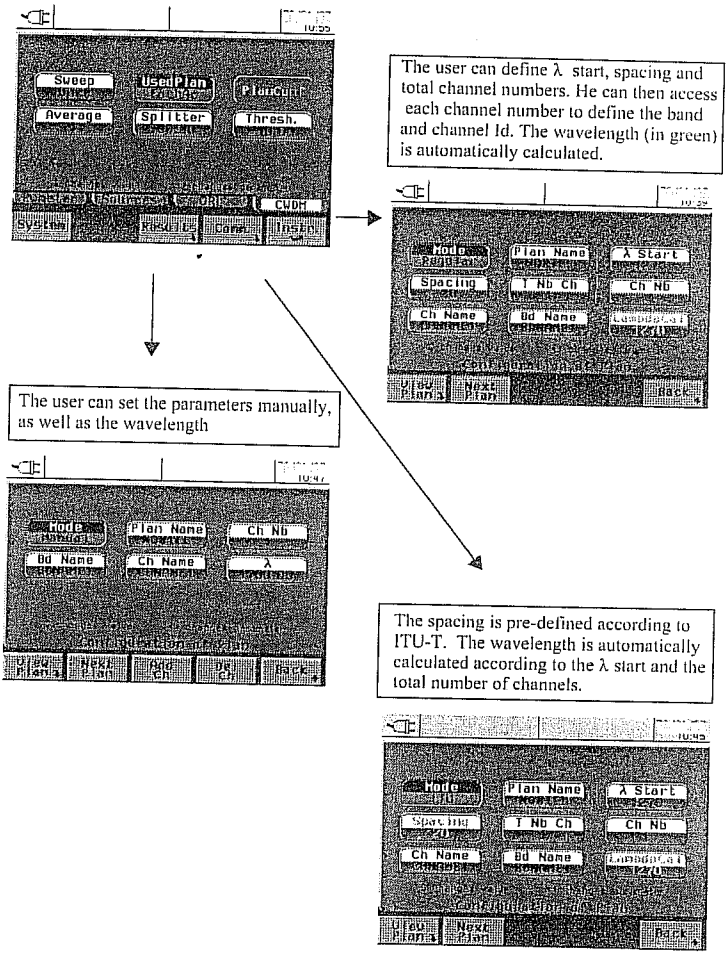

Fig. 3 Channel Plan Configuration

The user has access to the table format of the configuration using the "View Plan" function. The "Return ConfPl" goes back to the configuration settings. The "Exit Plan" saves the plan configuration and returns to the main menu.

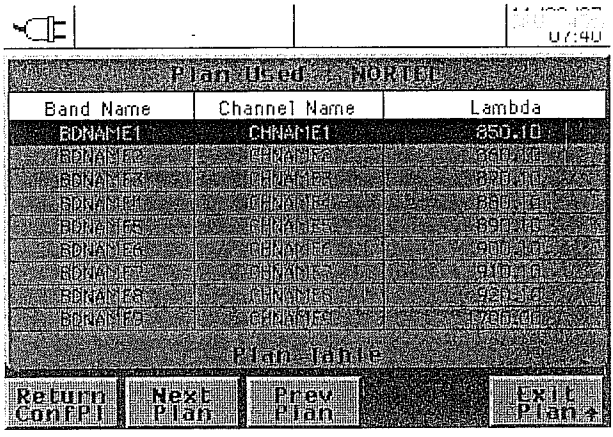

Fig. 4 Table format of the configuration

Acquisition and Results 1 Under the " CWDM " tab, the first " Fox " key press will access the following menu:

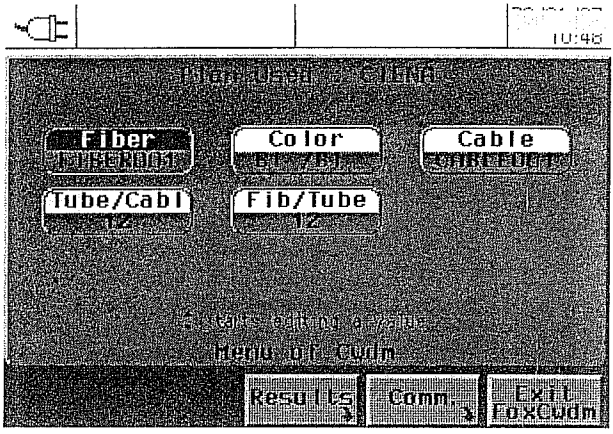

Fig. 5 CWDM menu

The user will define the cable/fiber parameters of the CWDM system to be measured.

2 The second " Fox " key press will start the measurement according to the defined/selected plan.

After a one second acquisition time, the results table provides:

- The Band Id (according to the selected Plan)
- The channel Id (according to the selected Plan)
- The grid wavelength (according to the selected Plan, nm)
- The measured wavelength (nm)
- The wavelength deviation between measured and grid ones (nm)
- The Power measured (dBm)
- The Power margin according to a defined threshold (dB)
- The Composite power

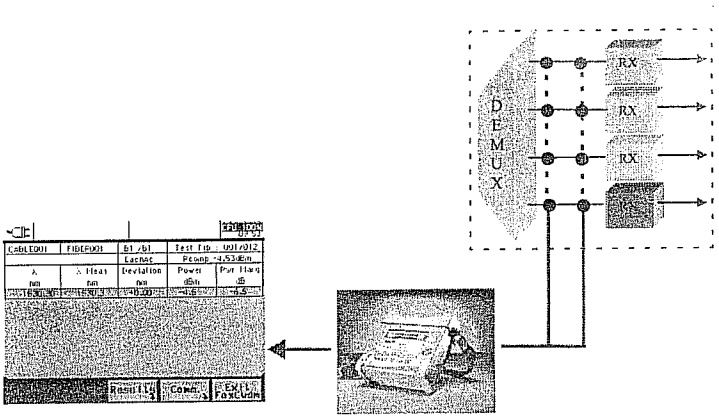

Fig. 10 DEMUX/Receiver measurements

Technical specifications

General Specifications

Weight	4.8 lbs
Size	8x8x3 inches
Display	5.7 inch color display (1/4 VGA)
Power supply battery,	dry batteries, NiMH rechargeable
	AC/DC adapter
Operation time	> 8 h (NiMH accumulator)
Operation temperature	-10 to +50°C
Storage temperature	-20 to +70°C
Print and data export	via RS 232
CE Conform	Yes
Transportation case	included

CWDM Channel Analyzer Function

Preliminary specifications of the CWDM Channel Analyzer function at 25°C

Optical Parameter	Unit	Data
Wavelength range	nm	1260-1640
Channel number	-	Up to 18
Channel spacing/ Spectral resolution	nm	From 4.8
Absolute wavelength accuracy	nm	+/- 1
Relative wavelength accuracy	nm	+/- 0.5
Dynamic range	dB	50
Power levels	dBm	+5 to -45
Maximum composite power	dBm	+ 18
Maximum power per channel	dBm	+ 10 [1]
Channel power accuracy	dB	+/- 0.5
Channel power repeatability	dB	+/- 0.3 [2]
Polarization dependant loss	dB	< 0.5
Scanning time	s	1
Storage memory size		Up to 1000 fibers
Alarms on thresholds		Yes
Channel plan generation with band/ channel id		Yes

1. accept an input power of +5dBm without becoming saturated and +10dBm without being damaged.
2. Does not include PDL