MP-SERIES
USB OPTICAL POWER METER

Miniature USB optical power meter with FiberChekPRO™ integration

USER MANUAL

ZP-PKG-0529
REV 1

JDSU

Notice

Every effort was made to ensure that the information in this document was accurate at the time of printing. However, information is subject to change without notice, and JDSU reserves the right to provide an addendum to this document with information not available at the time that this document was created.

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Trademarks

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Tested Equipment

All pre-qualification tests were performed internally at JDSU, while all final tests were performed externally at an independent, accredited laboratory. This external testing guarantees the unerring objectivity and authoritative compliance of all test results. JDSU's Commerce and Government Entities (CAGE) code under the North Atlantic Treaty Organization (NATO) is 0L8C3.

FCC Information

Electronic test equipment is exempt from Part 15 compliance (FCC) in the United States.

European Union

Electronic test equipment is subject to the EMC Directive in the European Union. The EN61326 standard prescribes both emission and immunity requirements for laboratory, measurement, and control equipment. This unit has been tested and found to comply with the limits for a Class A digital device.

Independent Laboratory Testing

This unit has undergone extensive testing according to the European Union Directive and Standards.

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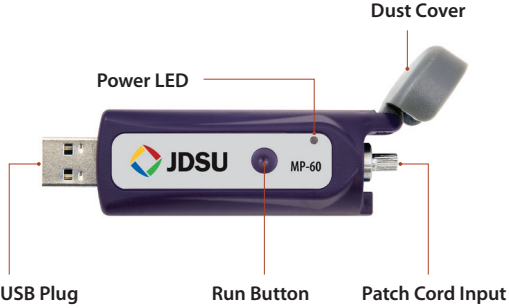
OVERVIEW

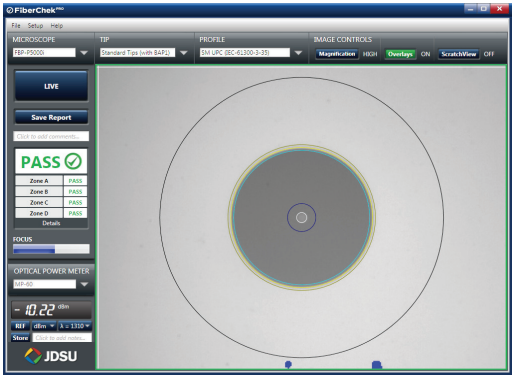
The **MP-series Optical Power Meter (OPM)** is a small form- factor device that measures optical power via a USB 2.0 connection to a PC/laptop. This unique device is used in conjunction with FiberChekPRO software, allowing the user to take stand alone Optical Power Measurements and also integrate the measurements with fiber inspection and certification. In addition, it can also function as a stand-alone device with a unique power measuring software. Its size, functionality and ease-of-use make the MP-series an extremely useful and practical tool when testing optical power levels, and the simple, straightforward and intuitive software interface offers a well-organized digital solution to both fiber inspection and test procedures.

Hardware Features



Software Features

FiberChekPRO integrates OPM functionality with fiber end face inspection, analysis and archiving. Using this program for inspection also requires a JDSU digital microscope. Further information on the fiber inspection and analysis capabilities can be found in the FiberChekPRO user manual. This manual primarily focuses on the functions associated with the MP-series hardware and the USB Power Meter.



SOFTWARE INSTALLATION

System Requirements *(Minimum)*
- 50 MB of hard drive space for software

1. Insert the software installation disk into your CD drive.

2. Follow the setup wizard for FiberChekPRO:

a. At the ***Welcome*** screen, click **Next >** to continue

b. At the ***Licence Agreement***, select ***"I Accept the Agreement,"*** then **Next >**

c. At ***Destination Location***, click **Next >**

d. At the ***Select Components*** menu, check all the components you want to install, and make sure the box next to **PDF-PseudoPrinter** is checked and click **Next >** to continue

e. At ***Select Additional Tasks***, check ***"Create a Desktop Icon,"*** then **Next >**

f. Select **Install**

g. At the ***Information*** screen, click **Next >** to continue

h. At the ***Completing Wizard*** screen, click **Finish** to complete installation

OPERATION PROCEDURES

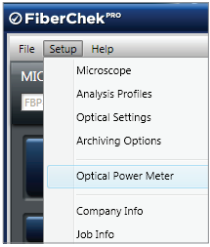
Hardware Recognition

Upon installing FiberChekPRO, the computer will automatically recognize any MP-series OPM devices that are connected to the USB input. If multiple devices are connected, simply open additional applications accordingly.

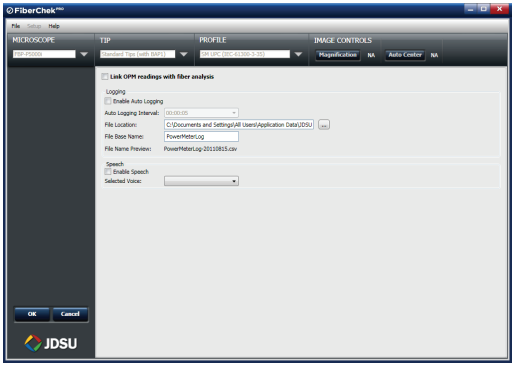
JDSU USB OPMs Compatible with FiberChekPRO

	MP-series	FI-series
Connects with PC	Yes	Yes
Connection type	USB 2.0	USB 2.0
Fiber connector input	2.5 mm and 1.25 mm	2.5 mm and 1.25 mm
On-screen display	No	Yes
On-board data storage	No	Yes
Power source	USB	2 x AA batteries
User interface	FiberChekPRO	FiberChekPRO (also LCD)

Software Controls for OPM



The Optical Power Meter menu allows you to configure options when using a USB-enabled JDSU OPM, such as the FI-series or MP-series.



- Checking the box next to **Link OPM readings with fiber analysis** allows you to associate power meter readings with a fiber analysis *(see pg 10 for more details)*.
- The **Logging** section allows you to setup an automatic log of power meter readings and specify a time interval at which the OPM will take a power meter reading.
- The **Speech** function allows you to have the power meter readings read audibly to you.

Controls

The power reading is displayed below the device drop-down menu. Users can select the measurement type (dBm, dB, mW) and wavelength (780, 820, 980, 1300, 1310, 1480, 1490, 1550, 1625 nm) from the blue drop-down menus.

The **REF button** allows users to measure a relative power (attenuation) in a link loss test, which is measured in dB. Simply press the REF button on the software to "zero out" the reading in dB for a reference measurement.

NOTE: *A reference can also be achieved by holding down the physical button on the MP-series device for 3 seconds. An audible tone will confirm when the reference has occurred.*

The **λ button** allows users to select the desired wavelength for testing.

The **STORE button** allows the user to capture the reading and comments in an .CSV log. The log location can be specified in the Setup/Optical Power Meter menu. The Notes field allows you to add comments about the stored reading.

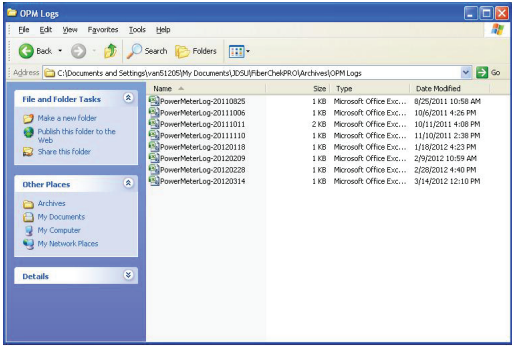
NOTE: *You can also log by briefly pressing the button on the USB OPM device.*

You can also integrate power meter readings into your inspection reports. To enable this, first go to the Setup/Optical Power Meter and check the box that states **Link OPM readings with fiber analysis** and click **OK**. Once this is set up, follow these steps:

1. Run an analysis on the fiber end face.
2. Insert the fiber end into the OPM and take measurement.
3. Press the **Store** button (you may store multiple power readings).
4. Press the **Save Report** button.

REPORTS

Archived logs can be opened by either browsing to the defined path:



Default path for Windows XP:

C:\Documents and Settings**pc username**\My Documents\JDSU\FiberChekPRO\Archives\OPM Logs

Default path for Windows 7:

C:\Users**pc username**\Documents\JDSU\FiberChekPRO\Archives\OPM Logs

Each archived log includes the following data:

- Date
- Time (hour:minute:second)
- Power Reading
- Units (dB, dBm, mW)
- Wavelength
- Frequency
- Notes (input by the user)

MP-60 Specifications

Dimensions	86 x 25 x 19 mm (3.4 x 1.0 x 0.8 in)
Weight	14 g (0.5 oz)
USB type	USB 2.0
Connector input	Universal 2.5 mm and 1.25 mm connectors
Measurement types	dB, milliwatt, dBm
Power source	USB port on PC or laptop
Display range	–65 to +10 dBm
Max. permitted input level	+10 dBm
Intrinsic uncertainty[1]	±0.20 dB (±5%)
Linearity[1] **(–50 to +5 dBm)**	±0.06 dB
Standard wavelength settings	850, 1300, 1310, 1490, 1550 nm
Wavelength range	780 to 1650 nm
Wavelength and modulation	270 Hz, 330 Hz, 1 kHz, 2 kHz
1300, 1310, 1490, 1550 nm	–50 to +10 dBm
850 nm	–45 to +10 dBm
Warranty	1 yr

MP-80 Specifications

Dimensions	86 x 25 x 19 mm (3.4 x 1.0 x 0.8 in)
Weight	14 g (0.5 oz)
USB type	USB 2.0
Connector input	Universal 2.5 and 1.25 mm connectors
Measurement types	dB, milliwatt, dBm
Power source	USB port on PC or laptop
Display range	–50 to +26 dBm
Max. permitted input level	+23 dBm
Intrinsic uncertainty[1]	±0.20 dB (±5%)
Linearity[1] **(–50 to +5 dBm)**	±0.06 dB
Standard wavelength settings	980, 1310, 1480, 1550 nm
Wavelength range	780 to 1650 nm
Wavelength and modulation	270 Hz, 330 Hz, 1 kHz, 2 kHz
1310, 1550 nm	–35 to +23 dBm
980 nm	–30 to +23 dBm
Warranty	1 yr

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