



UPM 100

USB Power Meter

Function and Specifications

Table of Contents

I.	Introduction.....	3
II.	Device Overview.....	4
III.	OpTest for Windows.....	5
IV.	inSpec for Windows.....	9
V.	Technical Support.....	12

I. Introduction

The UPM 100 USB Power Meter allows test technicians to measure absolute power and dB insertion loss on fiber optic cables when used in conjunction with an approved laser or LED light source. The UPM 100 power meter is lightweight and simple to connect to Windows and Android devices to save live readings and attach them to fiber endface images, if necessary.

It is important to note that dB loss and absolute power readings can be affected by dirt or defects on fiber endfaces. It is imperative that test technicians have a full understanding of inspection and cleaning procedures when testing fiber optic networks. ODM offers training classes to test technicians on a regular basis. To contact ODM about training, sales, or technical support, see section V: Technical Support (Page 12).



Auto-analyzed images from VIS 400 using inSpec software

II. Device Overview



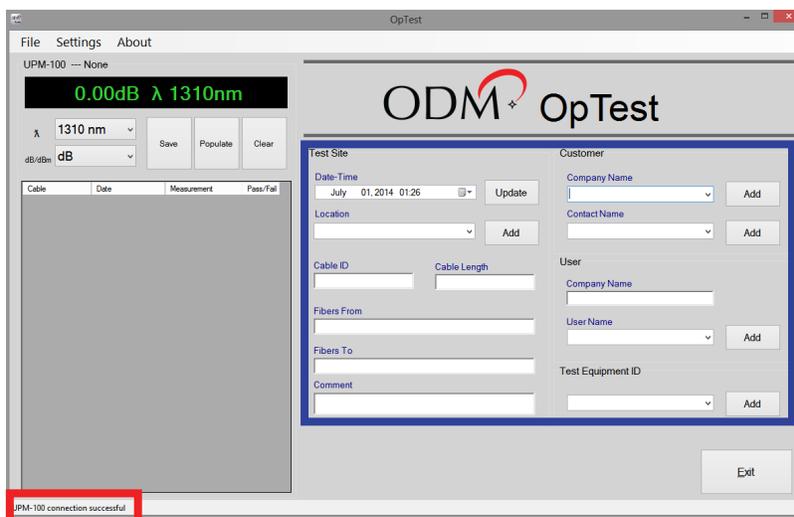
Specifications

	UPM 100-02	UPM 100-03	UPM 100-04
Wavelength range	850nm to 1625nm	850nm to 1625nm	850nm to 1625nm
Measurement range	+3 to - 60dBm	+3 to -70dBm	+23 to -45 dBm
Resolution	0.01dB	0.01dB	0.01dB
Absolute Accuracy*	+/-0.25dB	+/-0.25dB	+/-0.25dB
Detector type	Ge	InGaAs	Filtered inGaAs
Optical interface	Universal 2.5mm (Order 1.25mm or screw-on adapters separately)	Universal 2.5mm (Order 1.25mm or screw-on adapters separately)	Universal 2.5mm (Order 1.25mm or screw-on adapters separately)
Tone Identification	2kHz incoming signal, audible alert	2kHz incoming signal, audible alert	2kHz incoming signal, audible alert
Storage	External storage on PC	External storage on PC	External storage on PC
Data Transfer	USB 2.0	USB 2.0	USB 2.0
Dimensions	3.75"L x .75"W x .75"H	3.75"L x .75"W x .75"H	3.75"L x .75"W x .75"H
Weight	.05 lb	.05 lb	.05 lb

*Accuracy measured at -10dBm and 25-degrees Celsius, all other specifications are at 25-degrees Celsius

III. OpTest for Windows

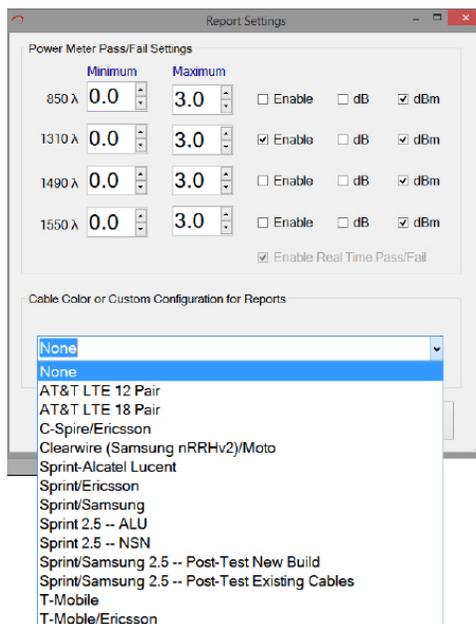
The OpTest software for devices running Windows Vista, 7, and 8 will allow the user to fully control the measurement settings of the UPM 100.



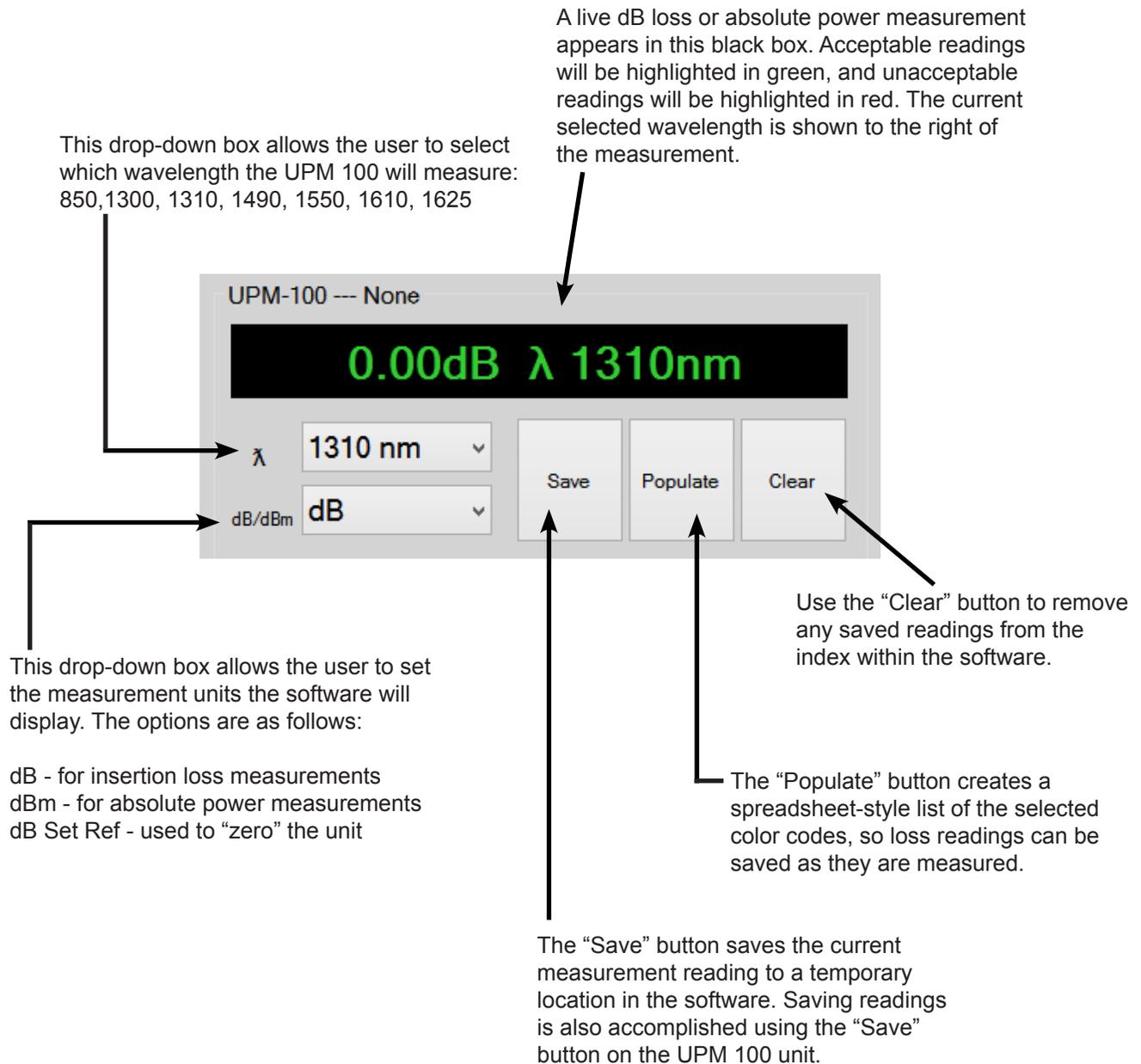
When the OpTest software is open and the UPM 100 is successfully connected to the computer, a message reading “UPM - 100 connection successful” (outlined in red above) will appear in the bottom left corner of the OpTest window.

Users will fill out all of the Test Settings (outlined in blue above) before exporting their readings. All of this information will be included in the closeout report.

Before beginning dB loss tests, the appropriate dB loss budget and color codes should be set in the software. Click Settings>Report Settings to access the window shown below. Click “Enable” next to the wavelength to be tested, use the Minimum and Maximum fields to set your loss budget, and select a cable color configuration (if applicable). Click “OK” to return to the OpTest main screen.



Most of the functions of the UPM 100 will be controlled from within the OpTest software. Look to the left side of the window to view the power meter user interface.



Clicking File>Export to Excel creates a full report with all test settings, report settings, and dB loss measurements included. See next page.

Depending on the values entered in the Report Settings window, the Pass/Fail column will indicate whether the saved reading is good or bad.

Clicking "Save" enters the current measured value into the list. The blue highlighted row indicates where the next reading will be saved.

The "Populate" button enters the selected color codes into the spreadsheet.

If a failing or incorrect reading is saved by mistake, users can click the incorrect row and save another reading over it.

File Settings About

UPM-100 ---

4.47dB λ 1310nm

λ 1310 nm

dB/dBm dB

Save Populate Clear

Cable	Date	Measurement	Pass/Fail
S1/Orange	7/1/2014 4:02 PM	4.47dB λ 1310nm	Pass
S1/Yellow			
S1/Purple			
S1/Red			
S1/Blue			
S1/Green			
S2/Orange			
S2/Yellow			
S2/Purple			
S2/Red			
S2/Blue			
S2/Green			
S3/Orange			
S3/Yellow			
S3/Purple			
S3/Red			
S3/Blue			
S3/Green			



OpTest Report

Customer Name	Contact Name	Testing Company	Tester's Name
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Test Location	Date/Time
	7/2/2014 8:37 AM

Cable ID	Cable Length	Fibers From	Fibers To
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Comments	Pass/Fail
	1550 Min/Max: 0dBm /4dBm Enabled

Test Equipment Model	Test Equipment ID
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UPM 100-02

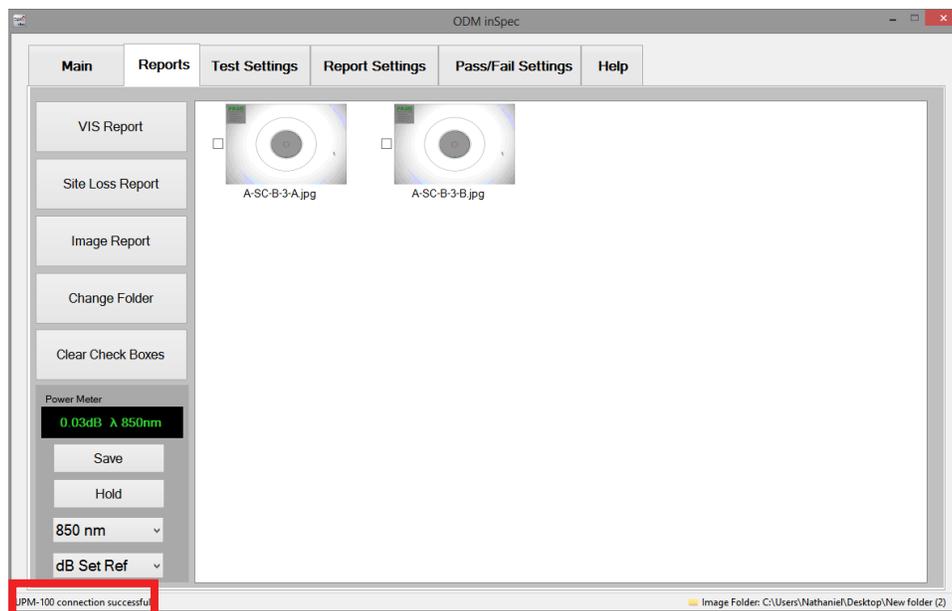
UPM 100 Test Data

Loc #	Comment	Pass/Fail	850nm	Unit	1310nm	Unit	1490nm	Unit	1550nm	Unit
1	Alpha-Black-Sp	Pass							0.62	dB
2	Alpha-Red-Sp	Pass							0.45	dB
3	Alpha-Blue	Pass							0.13	dB
4	Alpha-Orange	Pass							0.52	dB
5	Alpha-Green	Pass							0.98	dB
6	Alpha-Brown	Pass							1.49	dB
7	Alpha-Slate	Pass							0.60	dB
8	Alpha-White	Pass							0.43	dB
9	Beta-BrownSlate-Sp	Pass							0.52	dB
10	Beta-GreenBrown-Sp	Pass							0.55	dB
11	Beta-Yellow	Pass							0.23	dB
12	Beta-Violet	Pass							0.58	dB
13	Beta-Rose	Pass							0.44	dB
14	Beta-Aqua	Pass							0.18	dB
15	Beta-BlueOrange	Pass							0.19	dB
16	Beta-OrangeGreen	Pass							0.44	dB
17	Gamma-AquaBlue-Sp	Pass							0.94	dB
18	Gamma-RoseAqua-Sp	Pass							1.35	dB
19	Gamma-SlateWhite	Pass							1.50	dB
20	Gamma-WhiteRed	Pass							0.99	dB
21	Gamma-RedBlack	Pass							0.30	dB

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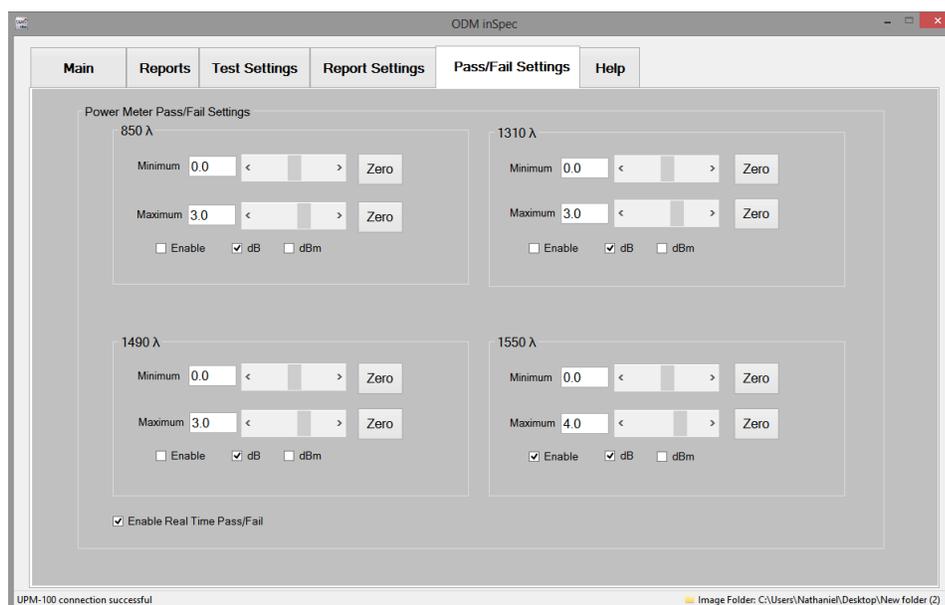
IV. inSpec for Windows

The inSpec software for devices running Windows Vista, 7, and 8 will allow the user to fully control the measurement settings of the UPM 100 and save dB loss or absolute power measurements directly to their fiber endface images.



When the inSpec software is open and the UPM 100 is successfully connected to the computer, a message reading “UPM - 100 connection successful” (outlined in red above) will appear in the bottom left corner of the inSpec window.

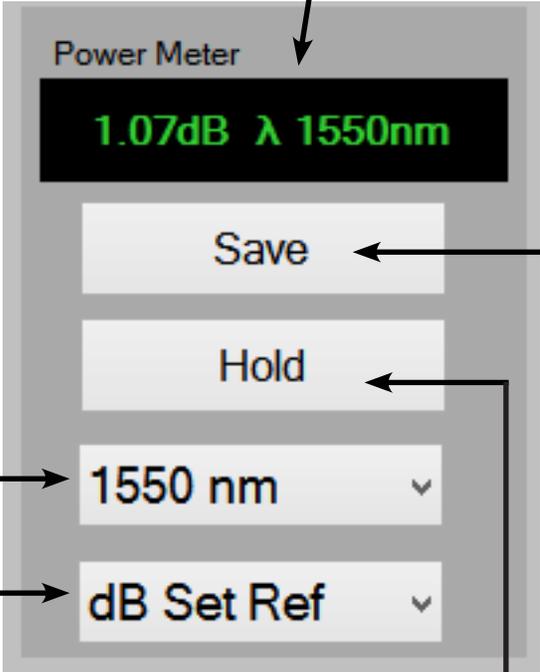
Before beginning dB loss tests, the appropriate dB loss budget should be set in the software. Navigate to the “Pass/Fail Settings” tab to access the window shown below. Click “Enable” next to the wavelength to be tested, then use the Minimum and Maximum fields to set your loss budget. Return to the “Reports” tab to begin testing.



Most of the functions of the UPM 100 will be controlled from within the inSpec software. Look to the bottom left side of the window to view the power meter user interface.

This drop-down box allows the user to select which wavelength the UPM 100 will measure: 850, 1300, 1310, 1490, 1550, 1610, 1625

A live dB loss or absolute power measurement appears in this black box. Acceptable readings will be highlighted in green, and unacceptable readings will be highlighted in red. The current selected wavelength is shown to the right of the measurement.



Clicking the "Save" button will save the current measurement to the fiber endface image(s) selected in the "Reports" tab of inSpec.

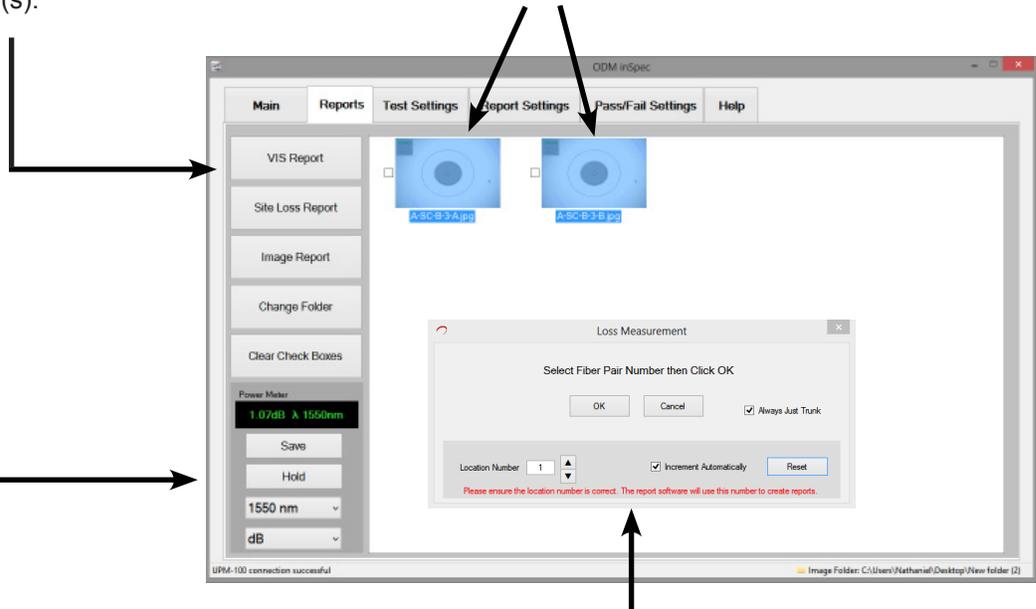
The "Hold" button will freeze the current measurement on screen. When clicked, the text on this button will change to "Read." When "Read" is clicked, the measurement will return to a live reading.

This drop-down box allows the user to set the measurement units the software will display. The options are as follows:

- dB - for insertion loss measurements
- dBm - for absolute power measurements
- dB Set Ref - used to "zero" the unit

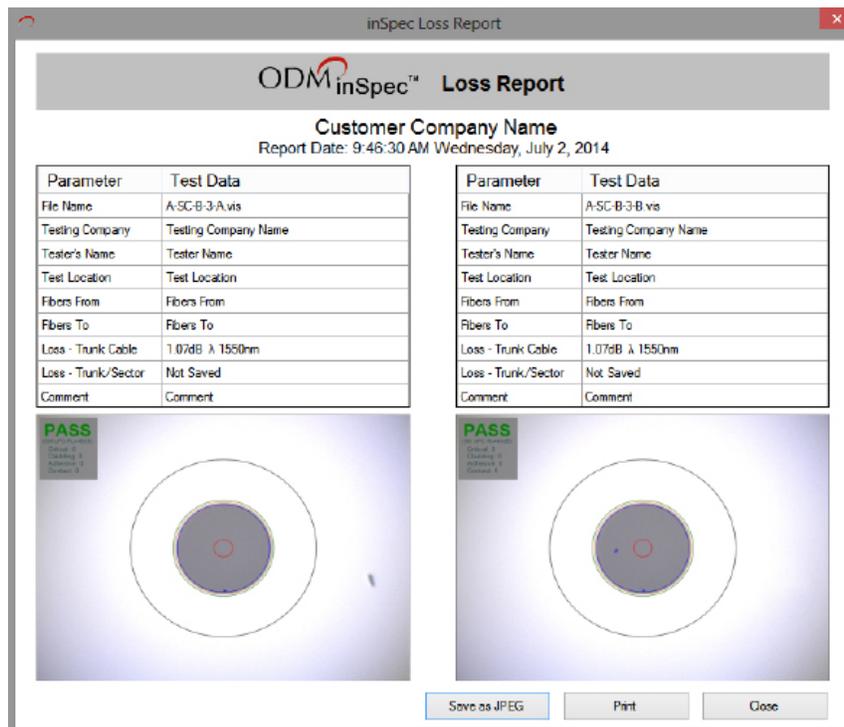
The "VIS Report" button allows the user to view a full report of the selected image(s).

To save measurements to endface images, select one or two images using the check boxes or by holding the Ctrl key on the keyboard while selecting the images.



Use the "Save" and "Hold/Read" buttons to obtain and save a passing measurement.

The Loss Measurement box pops up when the "Save" button is pressed. Use this box to choose the location to which the loss reading will be saved. When "Always Just Trunk" is selected, the measurement will be saved as a trunk reading only.



V. Technical Support

If you need technical assistance or have specific questions about any procedures or guidelines in this guide, please contact our technical support team:

During Business Hours

8AM to 5PM Eastern Standard Time

Please call us at 603-524-8350

Evenings/Weekends

Email us at tech.support@odm-inc.com

Please include your phone number and we will contact you.

On YouTube

Visit our [YouTube](#) page for helpful videos

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