



M-7679 R-PAC QUICK REFERENCE GUIDE

PROTECTION, AUTOMATION AND CONTROL SYSTEM FOR RECLOSER, SWITCH, SECTIONALIZER AND ADVANCED DISTRIBUTION AUTOMATION APPLICATIONS.

Setting up, Loading and Reviewing Oscillography waveforms



Required Tools:

- PC running Windows 7® or higher
- S-7600 IPScom Communications Software

Latest version of IPScom software can be downloaded from:

<https://beckwithelectric.com/products/s-7600/>

Required Documentation:

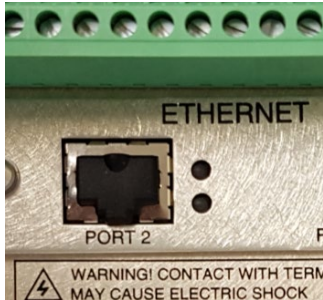
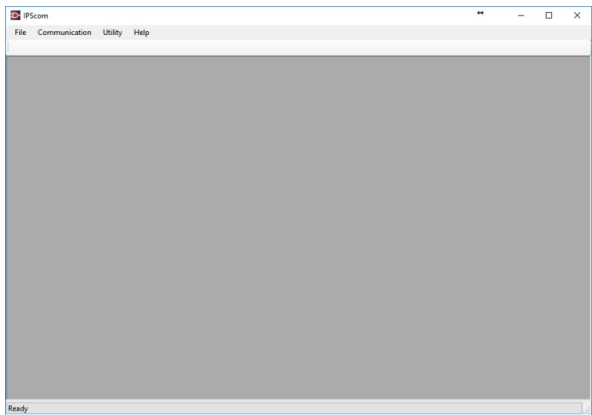
- M-7679 Instruction Book
- M-7679 Application Guide
- Communications and Cybersecurity A.G.

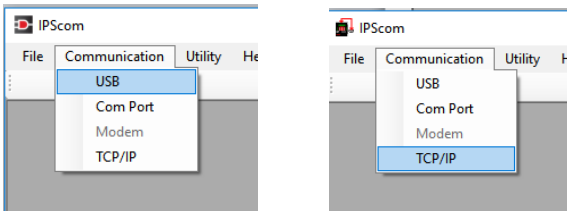
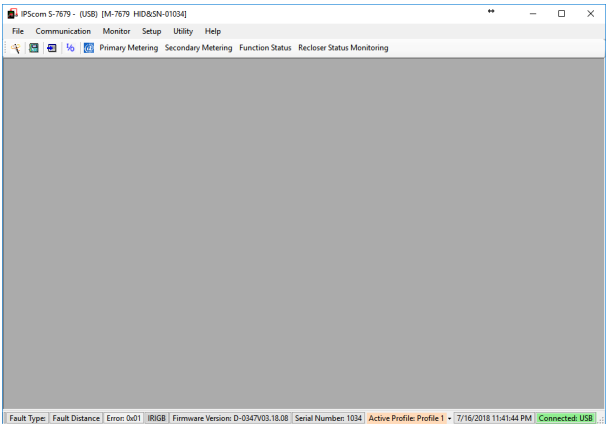
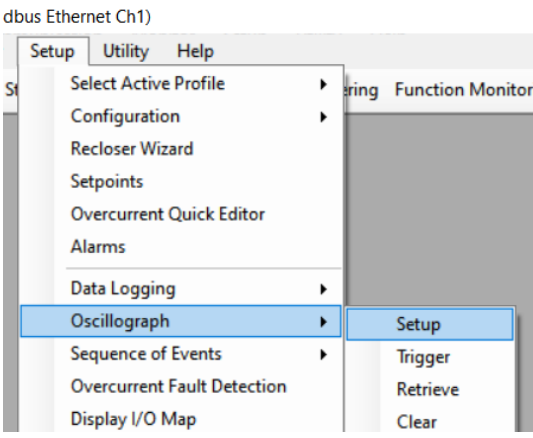
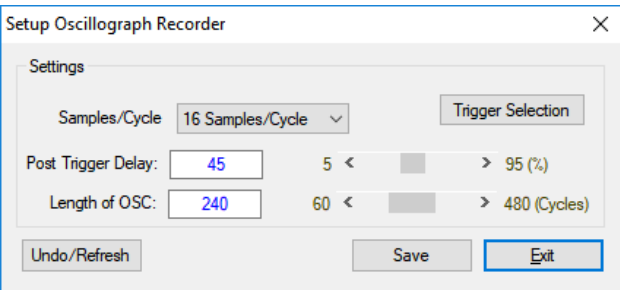
Latest version of M-7679 Instruction Book can be downloaded from:

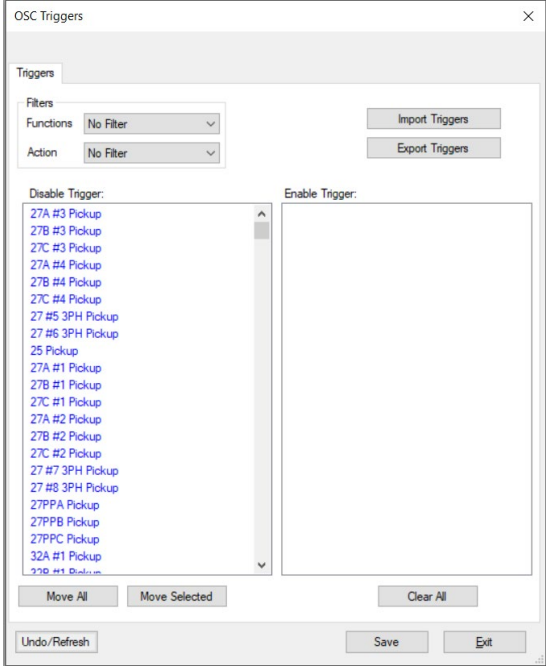
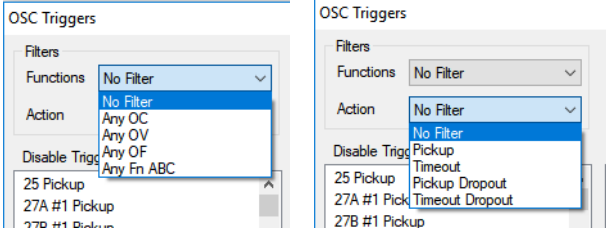
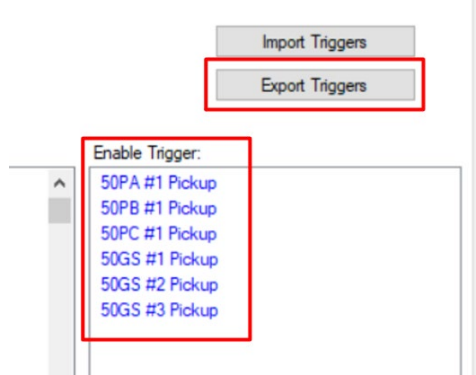
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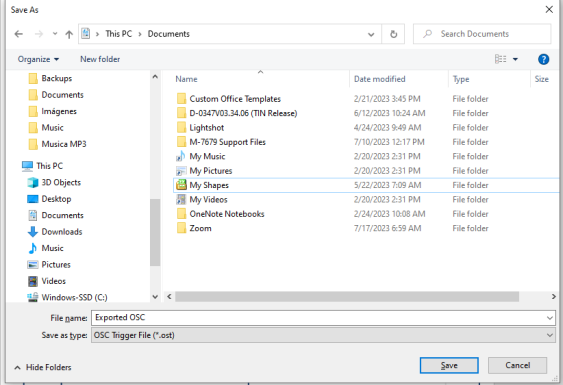
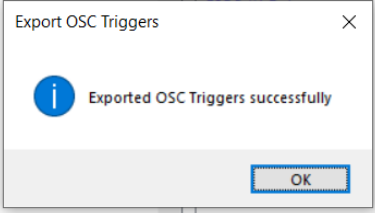
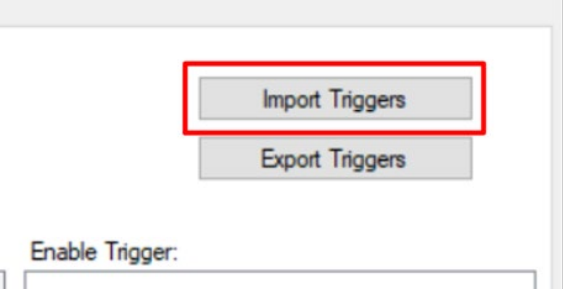
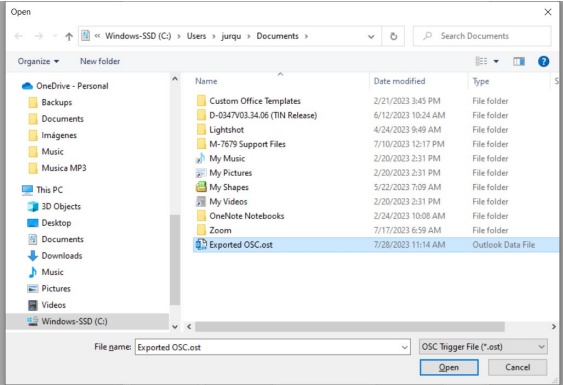
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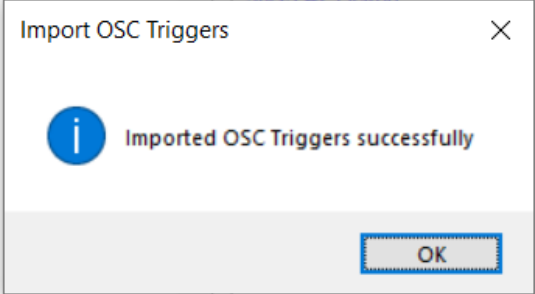
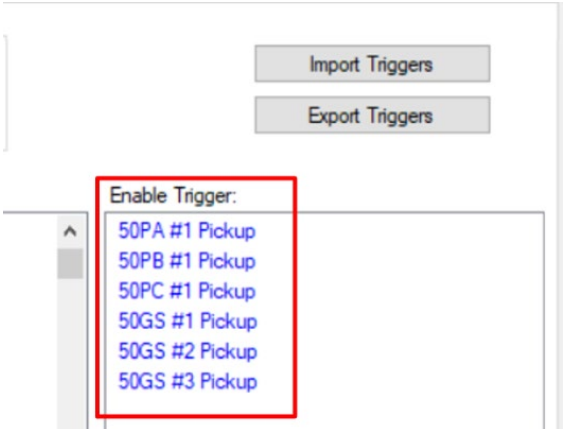
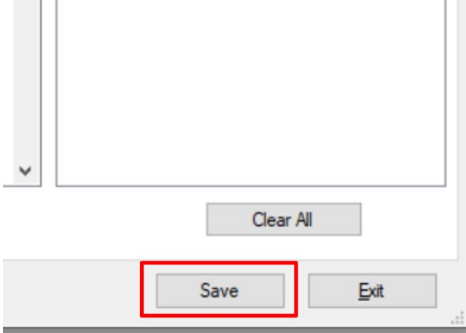
Setup Oscilloscope

1	Plug the communications cable into the host computer port (Ethernet or USB).	 
2	Ensure the control is energized and plug the corresponding cable into the port on the control.	 
3	Start IPScom Software by double-clicking the corresponding shortcut.	
4	IPScom will display the IPScom Main dialog screen.	

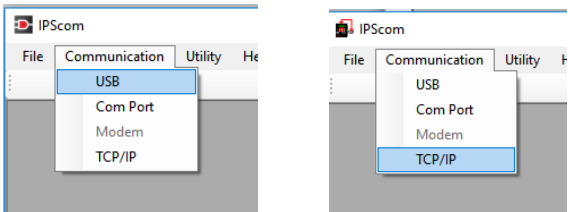
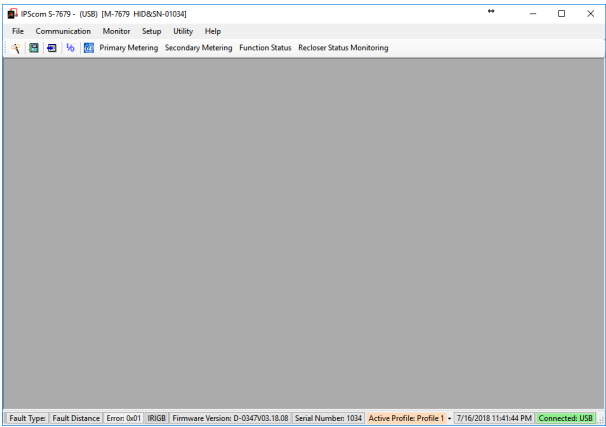
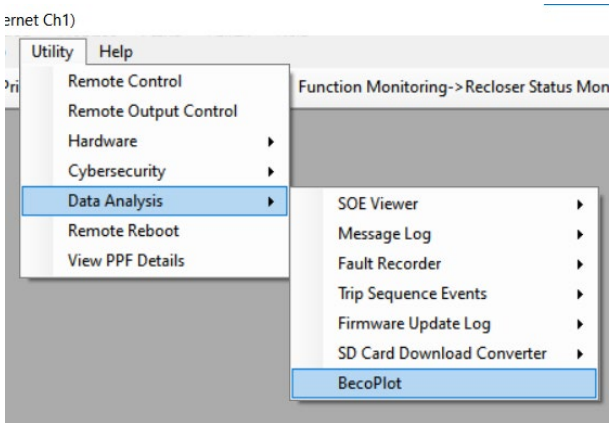
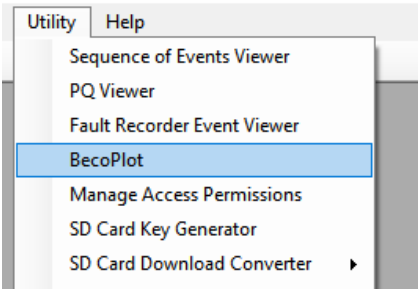
5	Connect to the M-7679 R-PAC using USB or TCP/IP modes.	
6	Once the connection has been established, IPScom will display the connected version of the IPScom Main Screen .	
7	Go to Setup / Oscillograph / Setup	
8	IPScom will display the Setup Oscillograph Recorder screen which allows the user to set the number of samples per cycle, the post trigger delay, the length (in cycles) of the Oscillograph record and triggering designations to be made.	

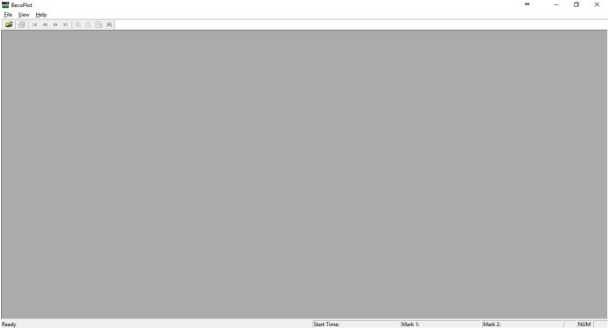
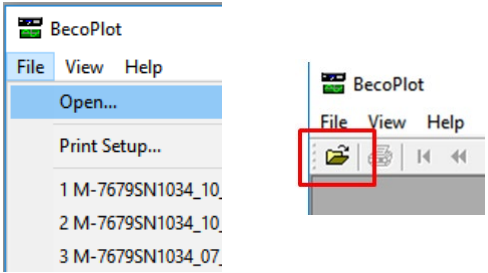
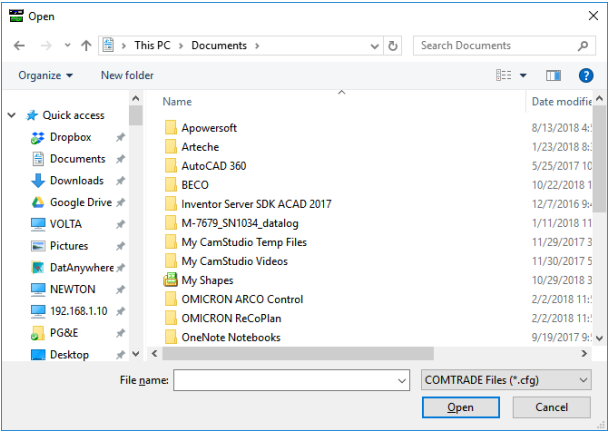
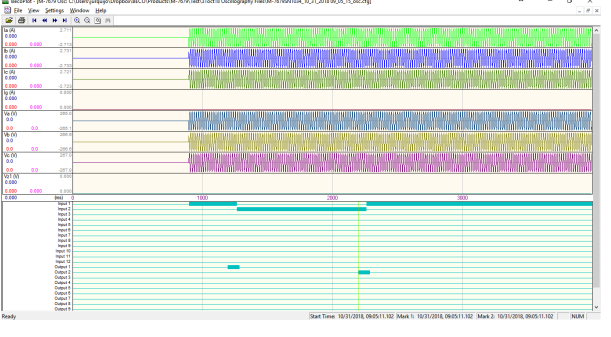
9	When user selects Trigger Selection button, IPScom will show the OSC Triggers screen, which allows the user to choose the signals that will trigger an Oscillograph record. Just drag the desired signal from list on the left to the right column and press Save when finished.	
10	The trigger list can be filtered to display specific Functions or Actions.	
11	The user has the option to both Import and Export a list of preset triggers. To export a list of triggers, build the desired triggers selection in the right column and subsequently choose the Export Triggers option.	

12	IPScorn will display a Save As dialog screen. Choose the destination folder, assign a name to the triggers file and select Save .	
13	IPScorn will display a confirmation message. The triggers file is now saved.	
14	To import an existing list of triggers, choose the Import Triggers option.	
15	IPScorn will display the Open dialog screen. Choose the desired triggers file and click on Open button.	

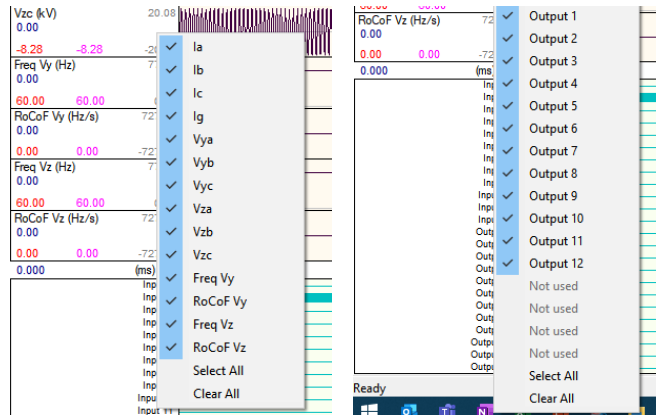
16	IPScm will display a confirmation message.	
17	The triggers contained in the imported file are now loaded into the Enable Trigger (right side) column of the screen.	
18	After populating the Enable Trigger column with the desired triggers, select Save and the OSC Triggers screen will automatically close. The selected triggers are now programmed into the unit.	
End of Procedure.		

Loading and Reviewing Oscillography waveforms

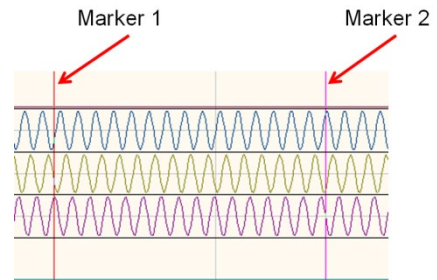
1	Connect to the M-7679 R-PAC using USB or TCP/IP modes.	
2	Once the connection has been established, IPScom will display the connected version of the IPScom Main Screen.	
3	In connected mode, open BecoPlot . This can be found in Utility / Data Analysis / BecoPlot . BecoPlot Analysis Software operates in conjunction with all IPScom Communications Software and allows the user to plot and view relay data contained in Comtrade formatted files (*.cfg).	
4	BecoPlot can also be accessed in File mode (not connected to a unit). Open IPScom and go to Utility / BecoPlot .	

5	IPScorn will open BecoPlot in a separate window.	
6	Go to File / Open or select the Open icon in the Toolbar.	
7	IPScorn will display the Open dialog screen. Choose the desired *.cfg file and click on Open button.	
8	BecoPlot will display the saved data in a graphic screen. The Oscillograph Recorder provides comprehensive data recording of voltages, currents and status input/output signals for all the monitored wave forms. The Oscillograph recorder stores 100 records of up to 480 cycles each regardless of the sampling rate (at 16, 32, 64 or 128 samples per cycle).	

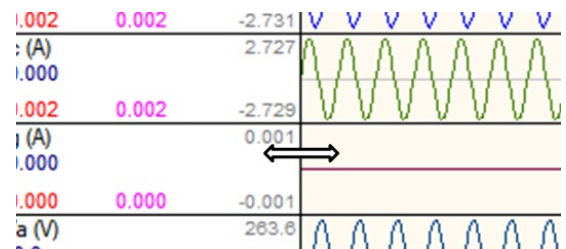
9 Right-Click menus are available to allow filtering the data results. Using Right-Click on any analog wave form allows the user to select the desired analog signals to display in the graph. Also, Right-Click on any digital signal will display the digital filter, which allows user to select the desired digital signals to display in the graph. For user convenience, both the analog and digital sections offer **Select All** and **Clear All** options. These features allow users to easily choose or deselect all available items in the analog and digital categories, streamlining the selection process.



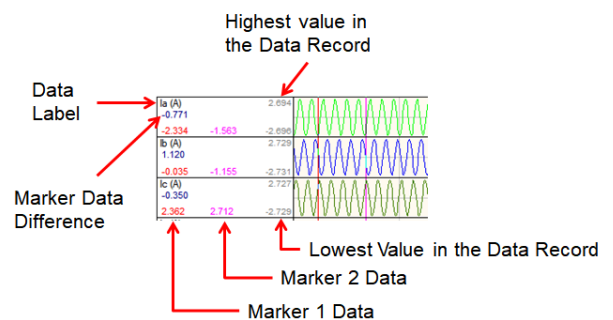
10 **BecoPlot** includes two user selectable markers. The first is positioned by double clicking on the plotted wave form area. The second is positioned by pressing and holding the **SHIFT** key and then double clicking on the plotted wave form area.

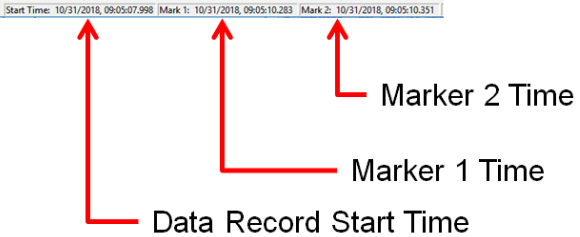


11 It is also possible to drag the two markers from the left end of the graph, when the two sided arrow appears.



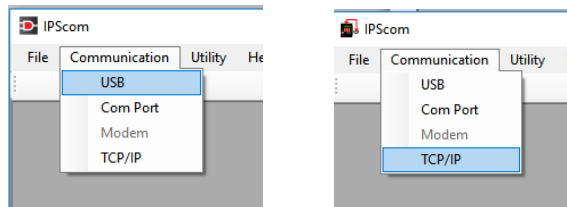
12 The left side box includes information related to the corresponding signal and the two markers.



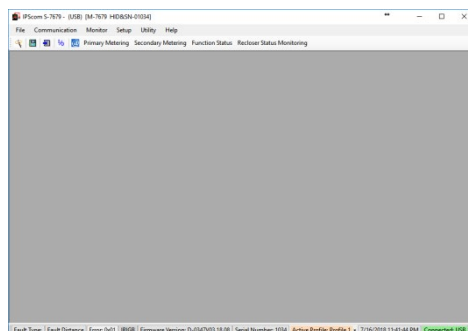
13	The bottom Toolbar of BecoPlot also displays the Data Record start time, and both Marker 1 & 2 times.	 Start Time: 10/31/2018, 09:05:07.998 Mark 1: 10/31/2018, 09:05:10.283 Mark 2: 10/31/2018, 09:05:10.351 Marker 2 Time Marker 1 Time Data Record Start Time
End of Procedure.		

Trigger Oscilloscope Recorder

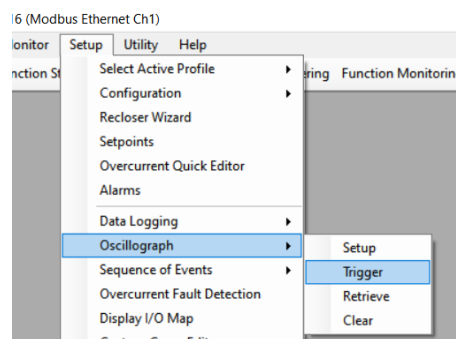
- 1 Connect to the M-7679 R-PAC using USB or TCP/IP modes.

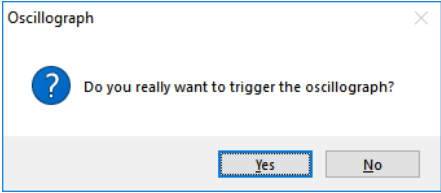
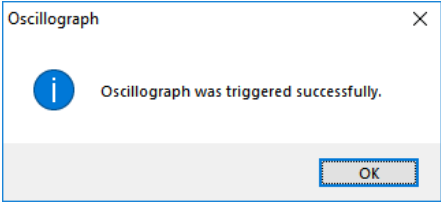


- 2 Once the connection has been established, IPScom will display the connected version of the IPScom Main Screen.



- 3 Go to **Setup / Oscilloscope / Trigger**



4	IPScom will display an Oscilloscope Trigger confirmation screen.	 The dialog box is titled 'Oscilloscope' and contains a question mark icon followed by the text 'Do you really want to trigger the oscilloscope?'. At the bottom, there are two buttons: 'Yes' and 'No'.
5	Select Yes . IPScom will display an “Oscilloscope was triggered successfully” confirmation screen. Select OK. IPScom will return to the Main screen and the Oscilloscope record will be saved in the internal memory of the M-7679 R-PAC unit.	 The dialog box is titled 'Oscilloscope' and contains an information icon followed by the text 'Oscilloscope was triggered successfully.'. At the bottom, there is an 'OK' button.
End of Procedure.		



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