

USER MANUAL

PC-MAESTRO

PC Application Software for MAESTRO



gentec-eo

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WWW.GENTEC-EO.COM

WARRANTY

The Gentec-EO MAESTRO Single Channel Laser Power, Energy and Power/Energy Meter carries a one-year warranty (from date of shipment) against material and/or workmanship defects, when used under normal operating conditions. The warranty does not cover damages related to battery leakage or misuse.

Gentec-EO Inc. will repair or replace, at Gentec-EO Inc.'s option, any MAESTRO that proves to be defective during the warranty period, except in the case of product misuse.

Any attempt by an unauthorized person to alter or repair the product voids the warranty.

The manufacturer is not liable for consequential damages of any kind.

Customers must fill in and mail the warranty card in order to activate the warranty.

In case of malfunction, contact your local Gentec-EO distributor or nearest Gentec-EO Inc. office to obtain a return authorization number. The material should be returned to:

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CLAIMS

To obtain warranty service, contact your nearest Gentec-EO agent or send the product, with a description of the problem, and prepaid transportation and insurance, to the nearest Gentec-EO agent. Gentec-EO Inc. assumes no risk for damage during transit. Gentec-EO Inc. will, at its option, repair or replace the defective product free of charge or refund your purchase price. However, if Gentec-EO Inc. determines that the failure is caused by misuse, alterations, accident or abnormal conditions of operation or handling, you will be billed for the repair and the repaired product will be returned to you, transportation prepaid.

SAFETY INFORMATION

Do not use the MAESTRO if the device or the detector looks damaged, or if you suspect that the MAESTRO is not operating properly.

Appropriate installation must be done for water-cooled and fan-cooled detectors. Refer to the specific instructions for more information. Wait a few minutes before handling the detectors after power is applied. Surfaces of the detectors get very hot and there is a risk of injury if they are not allowed to cool down.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy. If not installed and used in accordance with the instructions, it may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, try to correct the interference by taking one or more of the following steps:

- Reorient or relocate the receiving antenna.
- Increase the distance between the equipment and receiver.
- Connect the equipment to an outlet that is on a different circuit than the receiver.
- Consult the dealer or an experienced radio/TV technician for help.

Caution: Changes or modifications not expressly approved in writing by Gentec-EO Inc. may void the user's authority to operate this equipment.

SYMBOLS

The following international symbols are used in this manual:



Refer to the manual for specific Warning or Caution information to avoid any damage to the product.



DC, Direct Current

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1 PC-MAESTRO

1.1 Introduction

The PC-MAESTRO features a simple and intuitive way to watch and controls the readings from a MAESTRO Laser Power & Energy Meter. For a current MAESTRO user, it will be very easy to find every option available and to navigate within the new software to obtain the correct measurement. For a new user, it will also be easy to find his way in the software since it is designed to fit Microsoft's new user interface standards.

1.2 Specifications

The following specifications are based on a one-year calibration cycle, an operating temperature of 18 to 28°C (64 to 82°F) and a relative humidity not exceeding 80%.

Table 1-1 List of Specifications

	<i>Power meter specifications</i>
Power Range	4 pW to 30 kW
Power Scales (photo diode head)	300pW, 1nW, 3nW, 10nW, 30nW, 100nW, 300nW, 1μW, 3μW, 10μW, 30μW, 100μW, 300μW, 1mW, 3mW, 10mW, 30mW, 100mW, 300mW, 1W, 3W
Power Scales (thermal head)	<u>16 scales</u> : 300uW, 1mW, 3mW, 10mW, 30mW, 100mW, 300mW, 1W, 3W, 10W, 30W, 100W, 300W, 1kW, 3kW, 10kW, 30kW
Pyroelectric in power mode range (UM-B)	100μW, 300μW, 1mW, 3mW, 10mW, 30mW, 100mW, 300mW
Monitor Accuracy	±0.25 % ±5 μV best scale ¹
Statistics	Current value, Max, Min, Average, Std Dev., RMS stability, PTP stability, Time
Data Storage	*.acq file for acquisition and statistics log file *.maestro file for PC-MAESTRO settings file
	<i>Energy meter specifications</i>
Energy Range	2fJ to 30kJ
Energy Scales (photo diode head)	300fJ, 1pJ, 3pJ, 10pJ, 30pJ, 300pJ, 1nJ, 3nJ, 10nJ, 30nJ, 100nJ, 300nJ, 1μJ, 3μJ, 10μJ, 30μJ, 100μJ, 300μJ, 1mJ, 3mJ, 10mJ, 30mJ
Energy Scales (thermal head)	3mJ, 10mJ, 30mJ, 100mJ, 300mJ, 1J, 3J, 10J, 30J, 100J, 300J, 1kJ, 3kJ, 10kJ, 30kJ
Accuracy ²	1.0 %±50 μV < 6 kHz 2%±50 μV 6kHz to 10 kHz
Default Trigger Level	2 %

¹ The 5μV offset can introduce an error into low power measurements with low sensitivity detectors. It is essential to use the Zero Offset to re-zero the Maestro before making a measurement in these conditions. It is always good practice to use the Zero Offset.


² Including linearity, detector dependent.

SOFTWARE TRIGGER LEVEL	0.1% to 99.9%, 0.1% resolution
Transfer Rate	No missing points throughput serial frequency : 300 Hz For higher repetition rate, please use directly the MAESTRO MAESTRO specification: ³ - 2 kHz for data acquisition in the real time full screen display, no missing point - 1.3 kHz for data acquisition in real time with time stamp, no missing point - 2 kHz in statistics mode, no missing point From 2 kHz to 10kHz the MAESTRO will send the latest energy pulse every 500µs. (corresponding to a subsampling at 2 kHz).
Frequency Measurement	Accurate frequency measurement up to 14kHz 0-1000 Hz: 0.1% accuracy 1000-2000 Hz: 0.5% 2000-14000 Hz: 1%
Statistics	Current value, Max, Min, Average, Std Dev., RMS stability, PTP stability, Time, Pulse #.
	General Specifications
Serial Communication	USB RS-232 NOT AVAILABLE : Ethernet
Data Displays	Real Time, Scope, Averaging, Statistics, Digital Tuning Needle, Histogram
User input correction factors	1 multiplier and 1 offset (7 digits floating point)
Internet Upgrades	Downloadable link
No missing point throughput serial frequency (power and energy)	300 Hz
Size	4.39 MB
Average RAM allocation	9 to 23 MB
PC Recommended Requirement	Dual Core Processor 3 Gb of RAM
Operating System Compatibility	Windows 7 Windows Vista Windows XP (not officially supported)

³ In a full size statistic's windows, no scope display and no serial communication.


2 QUICK START PROCEDURE

1. Open the MAESTRO monitor and follow the instructions to make a measurement.
2. Install the PC-MAESTRO software on a PC.
3. Connect the MAESTRO monitor to the PC with the appropriate USB cable.
 - a. Verify that the MAESTRO is not in SOLO2 Serial Compatibility or Binary Mode Measurement and that it is configured to use the USB port. (In the MAESTRO monitor, go to "Home" menu ▶ "Set Device" ▶ "Serial Commands")
4. Start the PC-MAESTRO software.
5. Press the *Connection* button on the top left corner of the main window.
6. Choose the appropriate graphic for your measurement:

- a.  Real time with bar graph display

- b.  Scope display

- c.  Needle display

- d.  Averaging display

- e.  Histogram display

- f.  Statistics display

7. Change the measurement and display options in the appropriate tabs.

3 MAIN USER INTERFACE

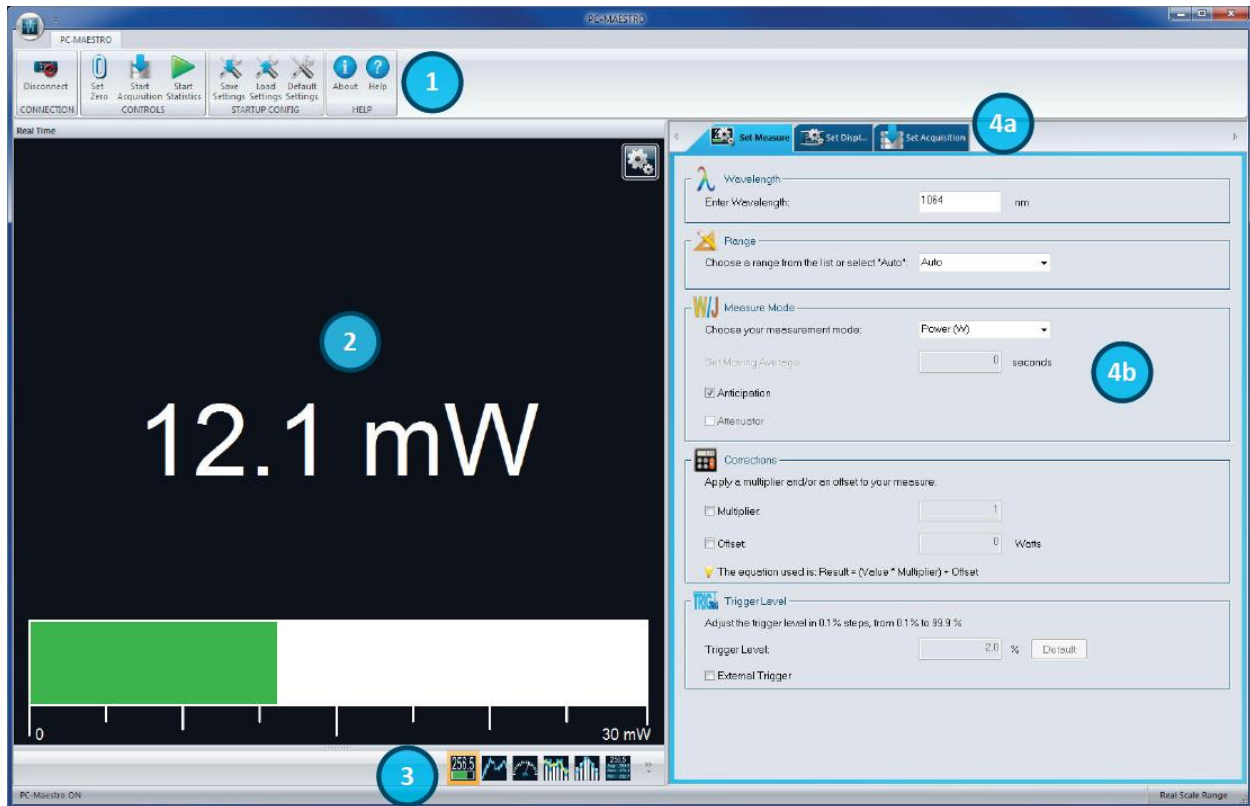


Fig. 3-1 PC-MAESTRO user interface

- 1 **The Main Controls:** All the main functions of the PC-MAESTRO are controlled using this tab ribbon. The functions are separated by categories: *Connection*, *Controls*, *Startup Config* and *Help*
- 2 **Graphical Display panel:** This section of the software displays the value in the user's selected display mode. Only one display at a time is allowed.
- 3 **Graphical Display selector:** At any time, it is possible to change the type of display by selecting the desired graphic.
- 4a **Setup Panel - Selector Tabs:** Choose the desired set of controls using the setup panel tabs.
- 4b **Setup Panel - Controls:** This section contains the different options that allow to control the display, measurement and acquisition parameters.

3.1 The Main Controls



Fig. 3-2 PC-MAESTRO Main Controls

At any time, to give more space to your signal values and less to the ribbon, you can minimize the ribbon by right clicking on it and choosing “Minimize the ribbon”.



Fig. 3-3 The PC-MAESTRO with and without the Main Controls ribbon

3.1.1 CONNECTION menu

3.1.1.1 Automatic Connect/Disconnect button



Fig. 3-4 CONNECTION menu

This button is used to automatically connect or disconnect a MAESTRO from a PC. There is no need to make a port selection, *the PC-MAESTRO will automatically find a connected MAESTRO or any available ports on the PC and will connect to it.*



Warning

If a USB Bluetooth adapter is present on a PC, it is possible that the connection will take longer. Some USB Bluetooth adapters use the same virtual port as the PC-MAESTRO, but the delay for verifying the connection to the Bluetooth port is longer than the traditional serial port.

3.1.2 CONTROLS menu



Fig. 3-5 CONTROLS menu

3.1.2.1 “Set Zero” button



This button adjusts the zero on the detector head. Please refer to the MAESTRO user manual for more information on how this feature works.

3.1.2.2 “Start/Stop Acquisition” button



This button starts and stops the acquisition to a logging file. The different options for the acquisition can be made in the *Set Acquisition* tab. The MAESTRO must be connected to start the acquisition.



Tips

To save statistics at the end of the acquisition file, please check “ <i>Save statistics to the acquisition file</i> ” in the Statistics option tab
Changing the duration settings of the acquisition will automatically change the duration settings of the statistics.
The acquisition produces an “*.acq” file which can be directly drag-and-dropped to an already opened Microsoft Excel sheet or Notepad.
A new acquisition will not concatenate the new data with the old one, it will erase old data and save only the new one.

3.1.2.2.1 Set your Acquisition parameters in Power Mode



In Power Mode, you can use the “Set Acquisition” tab to choose the sample rate and duration of an acquisition. The sample rate is defined as a specific number of measurements in a fixed interval (for example: 3 measurements/minute or 100 measurements/hour). The total duration can also be set in seconds, minutes, hours and/or days. The filename for data logging, the file location and the option to add a timestamp to each value can also be set using this menu.

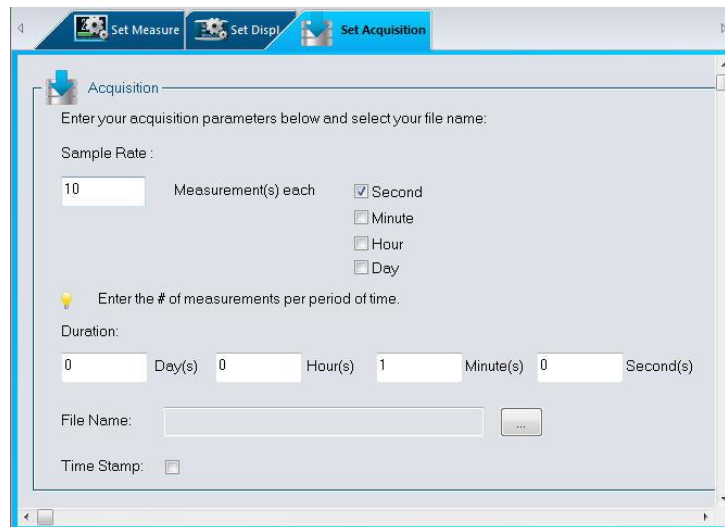


Fig. 3-6 Acquisition settings options in Power mode

3.1.2.2.2 Set your Acquisition parameters in Energy Mode



In Energy Mode, you can use the “Set Acquisition” tab to choose the sample rate and duration of an acquisition. The sample rate is defined to measure 1 pulse every X pulses (for example: 1 measurement every 10 pulses). The total duration is also set in a specified number of pulses. The filename for data logging, the file location and the option to add a timestamp to each value can also be set using this menu.

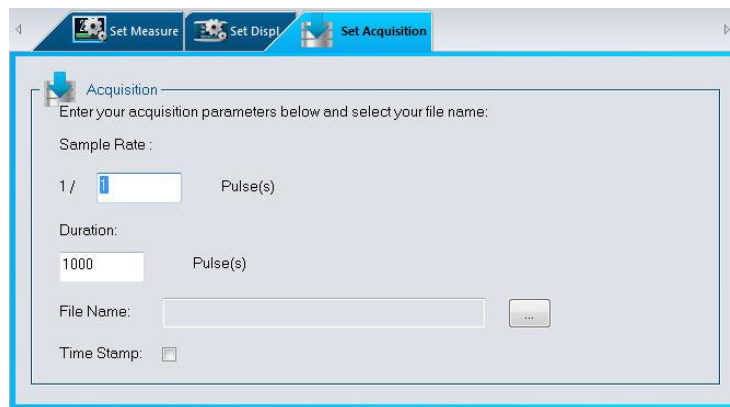


Fig. 3-7 Acquisition settings options in Energy mode



Warning

The number of pulses acquired is the number of pulses that the PC-MAESTRO received via the USB port, NOT the number of pulses that the MAESTRO monitor received directly from a detector head. The number of pulses, received via the serial port is limited. For repetition rates higher than 300 Hz, the MAESTRO will perform a subsampling. If you need to make an acquisition using *all the points measured by the MAESTRO*, please use the MAESTRO monitor and store the file on a USB key.



3.1.2.3 "Start/Stop Statistics" button

This button starts and stops the statistics calculation of the measured values. The different options for the statistics calculations can be made in the "Set Display" tab of the "Statistics" graph. Changing the duration settings of the statistics will automatically change the duration settings of the acquisition. Statistics can also be saved to a file, as long as a filename has been provided.

To save only the statistics to a file, check the "Save statistics to the acquisition file" option in the "Statistics" options panel and start only the statistics, not the acquisition. To save statistics at the end of the acquisition logging file, check the "Save statistics to the acquisition file" option in the "Statistics" options panel and start the acquisition. Starting the acquisition when the "Save statistics to the acquisition file" option is checked will also start the statistics. The statistics and acquisition routines produce a "*.acq" file which can be drag-and-dropped directly to an opened Microsoft Excel sheet or in Notepad.

3.1.3 STARTUP CONFIG menu



Fig. 3-8 "Startup Config" buttons

- 1 **Save Settings:** Save the current display and graphic settings in a ".maestro" file
- 2 **Load Settings:** Load a ".maestro" file with previously saved settings.
- 3 **Default Settings:** Put the settings back to the factory defaults.

All modifications to the PC-MAESTRO options (Set Measure options, Set Display options of each graphic and Set Acquisition options) can be save to a "*.maestro" file. The operation of this tool is very simple.

1. Proceed to all modifications in the PC-MAESTRO.
2. Press the "Save Settings" button and save your settings to a file.
3. When opening the PC-MAESTRO, press the "Load Settings" button and choose your settings file.



Tip

To go back to the PC-MAESTRO's original settings, press the "Default Settings" button. Every option inside de PC-MAESTRO will be restored to its original factory default value.

3.2 HELP menu

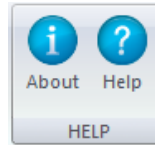
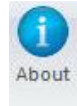


Fig. 3-9 HELP menu



3.2.1.1 "About" button

To learn more about the PC-MAESTRO, the MAESTRO monitor, and the detector head that is plugged into the MAESTRO, press the "About" Button.

It is also the place to go to verify if the current version of the PC-MAESTRO is the latest available version from Gentec-EO.



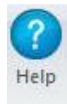
Warning

To verify the available updates from Gentec-EO directly from the PC-MAESTRO software, an internet connection is needed.



Tip

You can also obtain the latest PC-MAESTRO software version on our website at www.gentec-eo.com/downloads



3.2.1.2 "Help" button

The "Help" button opens the PC-MAESTRO user manual. All information, tips, warnings and troubleshooting about the software are in this manual.



Warning

The help file is in PDF format. A PDF reader needs to be installed on your PC to open the file.

4 GETTING STARTED

4.1 Connect your MAESTRO to the PC-MAESTRO.

1. Connect your MAESTRO to the PC using a USB cable. Use the correct port as identified in the picture below.
2. Install the PC-MAESTRO on the PC.
3. Power up the MAESTRO
4. Start the PC-MAESTRO
5. Click on the “*Connection*” button in the Main Controls ribbon. The software will scan each port on your computer and connect the PC to the first port connected to a MAESTRO.

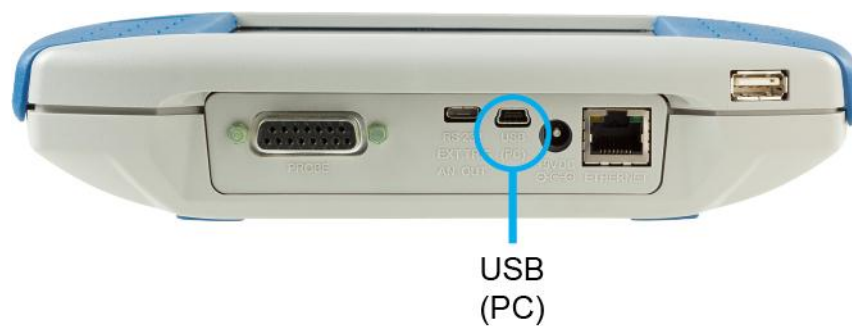


Fig. 3-10 Correct USB port to plug a MAESTRO to a PC

4.2 To disconnect your MAESTRO

Click on the “*Disconnect*” button in the main controls ribbon.

4.3 To change the measurement settings of your detector head

To change the behavior of the detector head plugged into a MAESTRO, go to the “*Set Measure*” tab panel.

4.3.1 "Set Measure" Options Panel

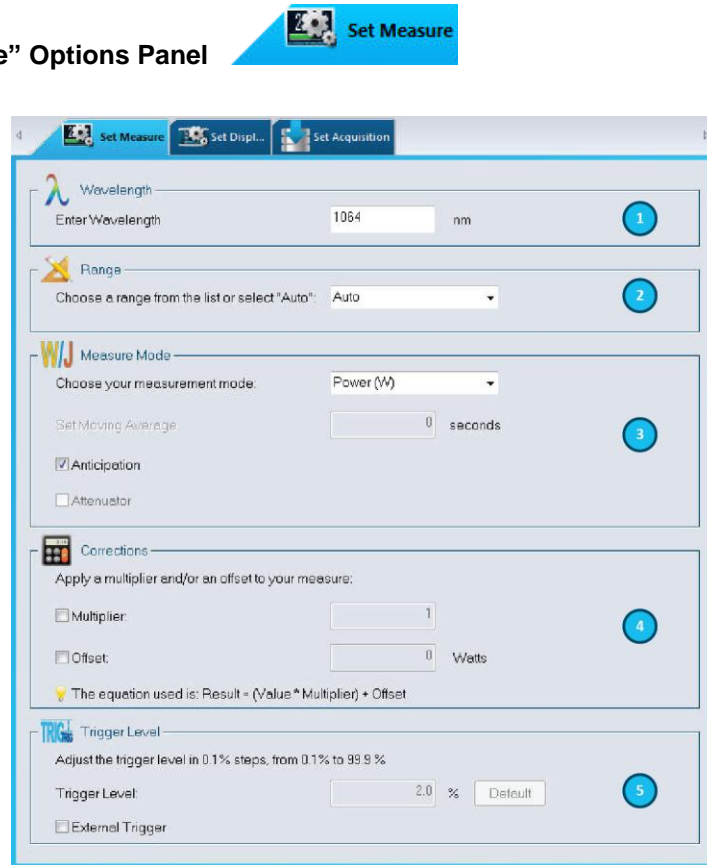


Fig. 4-1 The Set Measure panel

1

Wavelength: Enter the desired wavelength. Press *Enter* or *Tab* to make the change effective.

2

Range: Use the dropdown menu to select the desired range. The chosen value will be the maximum that the PC-MAESTRO will measure before displaying "OUT". By default, the MAESTRO is in "Auto" mode. For more information about the Auto Mode, please refer to the MAESTRO user manual.

3

Measure Mode: Use the dropdown menu to set the measurement mode (Power, Single Shot Energy, Moving Average, etc.). Please note that it can take up to 3 seconds for the PC-MAESTRO to switch between measurement modes. "Anticipation ON/OFF" and "Attenuator ON/OFF" can be controlled in this menu. Please refer to the MAESTRO user manual to get more information about these functions.

4

Corrections: Use these settings to set a multiplier and/or an offset to your measurement. The equation used is : $Result = (Value * Multiplier) + Offset$

5

Trigger Level: Adjust the trigger level in 0.1% steps, from 0.1% to 99.9%.
 Trigger level is not available in power mode
 External trigger option is not available in power mode
 Default value is 2%
 For more information about the trigger level functionality, please refer to the MAESTRO user manual.

5 GRAPHICAL DISPLAYS

The PC-MAESTRO offers six different graphical displays to view and analyze your signal. Every display shows the real time value of the signal on top of the graphic, except the Real Time graph which displays the real time value in large digits in the center of the panel.



Real Time: A real time display of the signal value shown in the center of the graph panel with the corresponding bar graph below.



Scope: A real time display of the signal value presented in a scope mode.



Needle: A real time display of the signal value presented by a needle.




Averaging: A scope-like display which presents the minimum, maximum, and average values of the last 50 values for a given period.



Histogram: A real time graph that displays the power or energy distribution of the last desired number of samples in the desired number of bars. Ex: A distribution, in real time, of the last 1000 samples in 50 different bars.



Statistics: Shows different measured and calculated information about the signal for a specified duration and sample rate.

For all displays, you can access the specific display options by clicking the Settings  button on the top right of the graph panel. This operation will open the corresponding options panel for the current display, located on the right-hand side of the software.

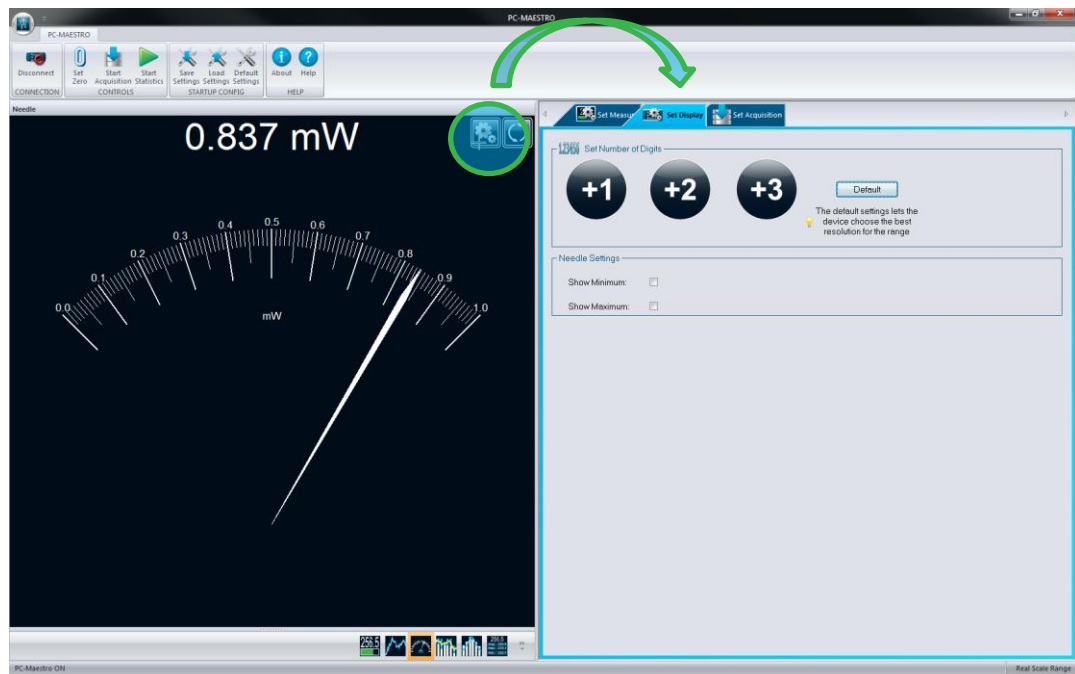


Fig. 5-1 Graphical Display with Settings button

5.1 Real Time

A large, simple, real time value with a bar graph that allows you to see what is going on in real time. The large digits makes it perfect to read from a distance.

5.1.1 Real Time Bar Graph Display

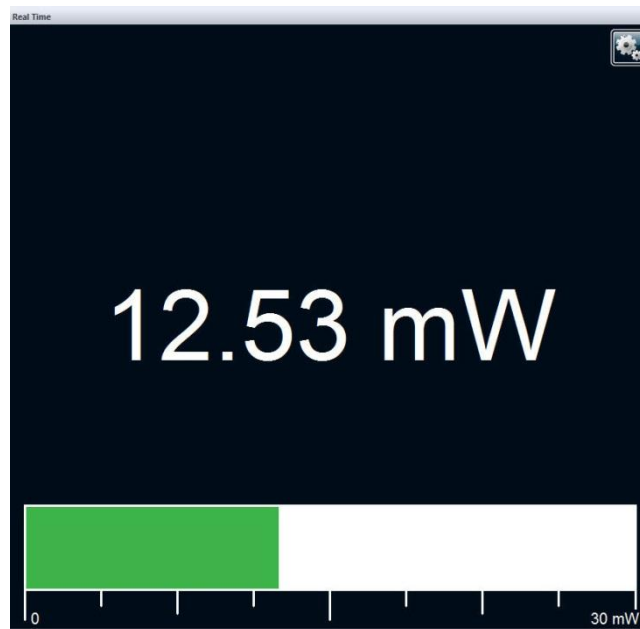


Fig. 5-2 Real time with bar graph display

By resizing the window, you can also hide the real time bar graph. When the window becomes too small to show the bar graph, the software will automatically hide it and keep only the real time value, like shown below.



Fig. 5-3 Real time without bar graph display

5.1.1.1 Real Time Bar Graph Display - Options Panel

The only option available for the real time display is to change the number of digits of the real time value. The “*Default*” button lets the device choose the best resolution for the range. The “+1”, “+2” and “+3” buttons let you add one, two, or three digits to the resolution.



Fig. 5-4 Real time with bar graph display options panel

5.2 Scope



See the evolution in real time of your signal. This graphical mode can also show the minimum, maximum and average values of your signal over a determined period of time.

5.2.1 Scope Display

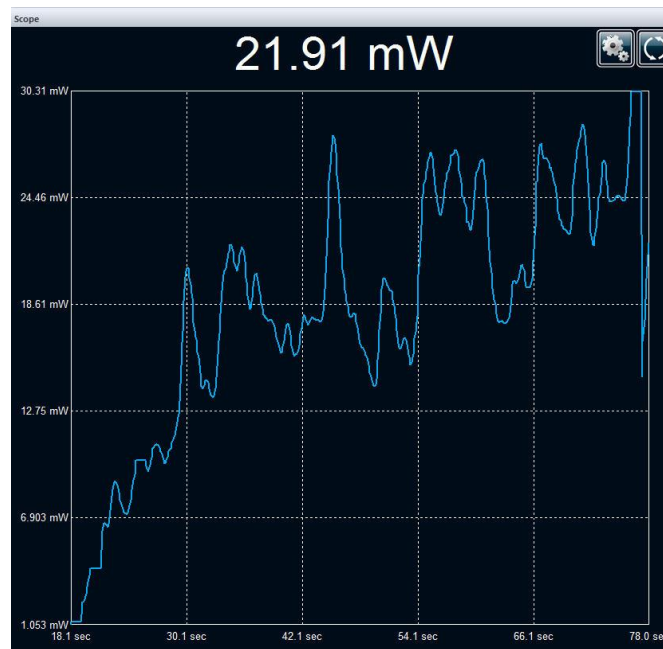




Fig. 5-5 Scope display

It is possible to have live on-screen statistics with this graphical mode. Simply go in the “Set Display” panel using the Settings  button and click “Display Stats”. To restart the graph, use the Refresh  button directly in the graphic panel.

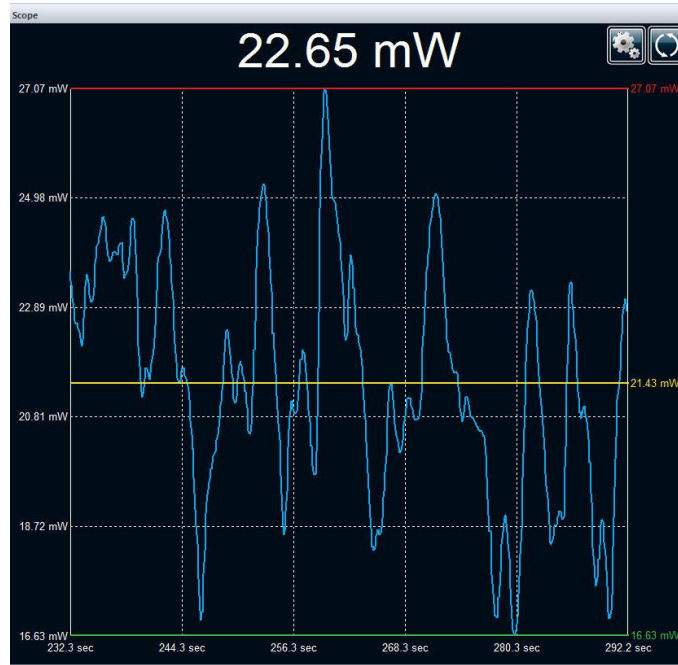


Fig. 5-6 Scope display with Statistics

5.2.1.1 Scope Display - Options Panel

The options panel for the scope display allows to control the number of digits, to change the period of the graphic and to show/hide the on-screen statistics.



Fig. 5-7 Scope display options panel

5.3 Needle

5.3.1 Needle Display

This is a simple and intuitive way to see your current signal value. It is the ideal tool for laser tuning.

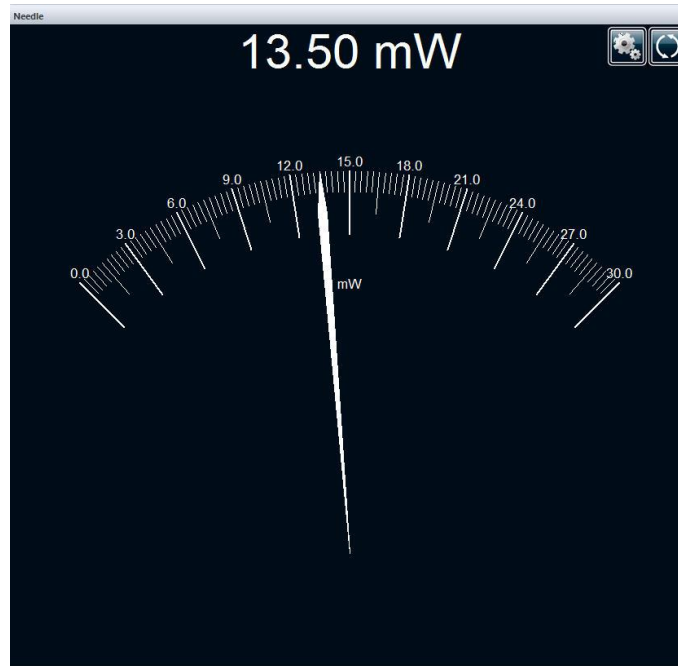




Fig. 5-8 Needle display

It is possible to add green and red needles indicating the minimum and maximum values in this graphical mode. Simply go in the "Set Display" panel using the Settings  button and click "Show Minimum" and/or "Show maximum". To refresh the Min/Max needles, use the Refresh  button directly in the graphic panel.

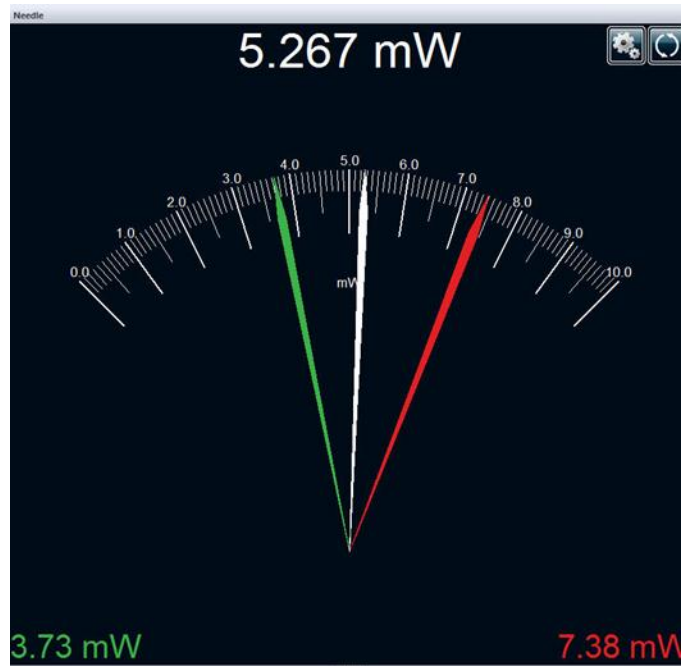


Fig. 5-9 Needle display with Minimum and Maximum values

5.3.1.1 Needle Display - Options Panel

The options panel for the needle display allows to control the number of digits and to show/hide the minimum and maximum values on the graph.

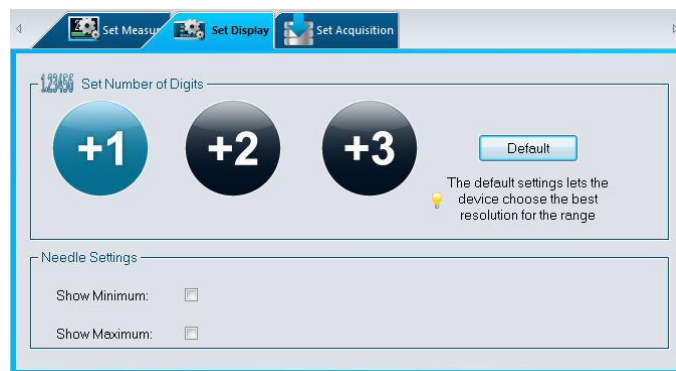


Fig. 5-10 Needle display options panel

5.4 Averaging

5.4.1 Averaging Display

The averaging graph is the perfect tool to check laser stability over time. For more information on how this graphical display works, check the MAESTRO user manual.

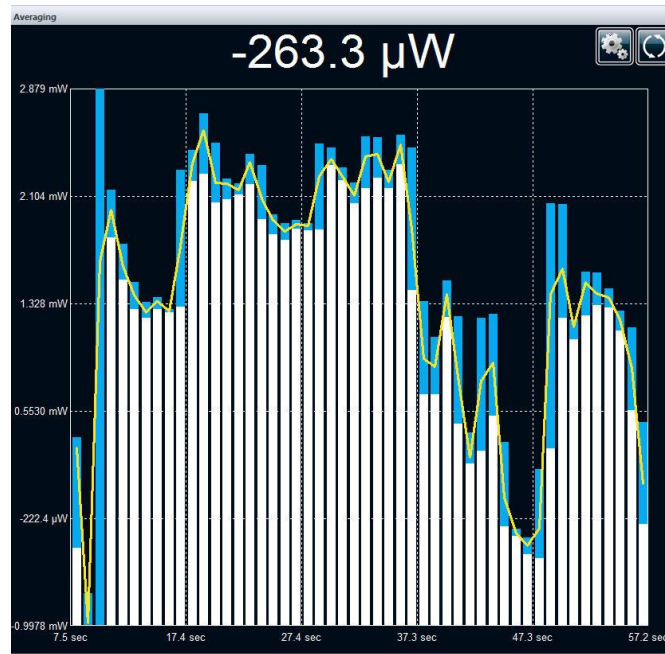



Fig. 5-11 Averaging display

5.4.2 Averaging Display Options Panel

The options panel for the Averaging display allows to control the number of digits and to change the averaging period (the period of one bar on the graph). Whatever the period entered, the total number of bars (once the screen is filled) is 50. To refresh the screen and accumulate new data, use the Refresh  button directly in the graphic panel.

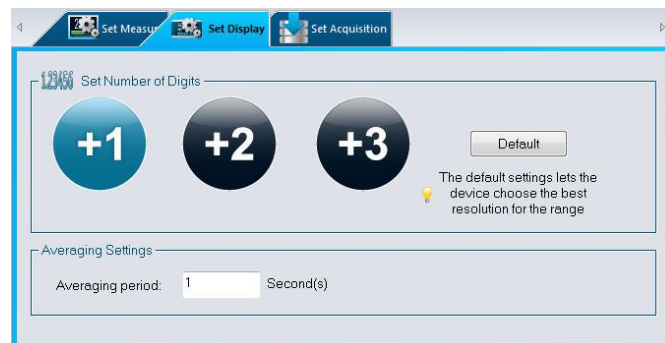


Fig. 5-12 Averaging display option panel

5.5 Histogram

5.5.1 Histogram Display Graph

This is a simple way to see in real time the power or energy distribution of a signal.

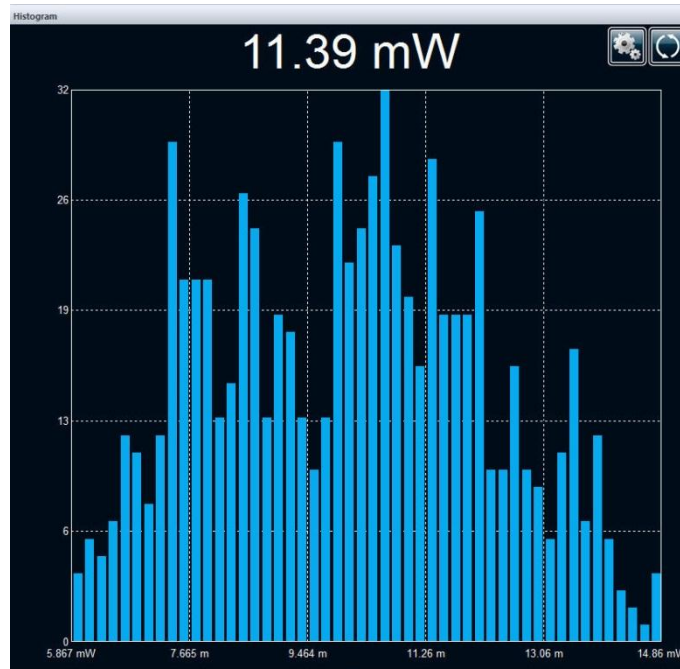


Fig. 5-13 Histogram display

5.5.2 Histogram Display Options Panel

The options panel for the histogram display allows to control the number of digits and the number of bars and period of the graphic:

1. Bars
 - a. Enter the desired number of bars manually
 - b. Press Enter or Tab to make the change effective
2. Period
 - a. Enter the desired period in # of samples manually
 - b. Press Enter or Tab to make the change effective



Warning

The number of samples is not related to the repetition rate of the signal, it is the number of samples that the MAESTRO sends through the serial port.



Fig. 5-14 Histogram display options panel

5.6 Statistics

256.5
Avg: 254.5
Max: 275.1
Min: 232.7

5.6.1 Statistics Display Graph

The options panel for the statistics display allows to control the number of digits and the number of bars and period of the graphic:

Statistics in the PC-MAESTRO are calculated from the values that come from the serial port of the MAESTRO.



Warning

Statistics in PC-MAESTRO are calculate from all the entry points coming from the serial port of the MAESTRO and are limited by the speed of the serial port. For rates greater than 300 Hz, the MAESTRO will perform a subsampling.



Tip

Users who want to accumulate statistics from all acquired points at rates >300 Hz must use the statistics directly on a MAESTRO and store them to a USB key.

The statistics available depend on the type of detector that is plugged, as can be seen in the pictures below.

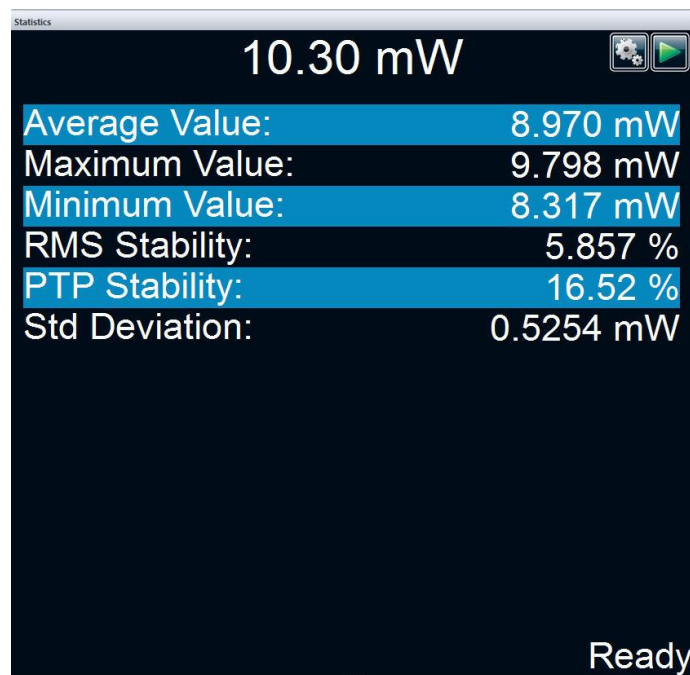


Fig. 5-15 Statistics display in Power mode

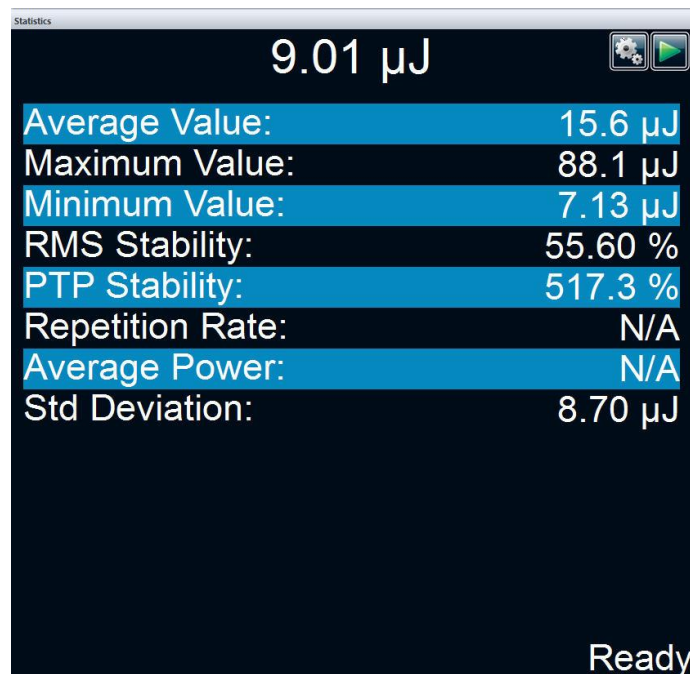


Fig. 5-16 Statistics display in Energy mode

5.6.2 Statistics Display Options Panel

The options panel for the statistics display allows to control the period and the sample rate for the calculations. In power mode, the duration can be set in days, hours, minutes and/or seconds.

1. Enter manually the desired value in each boxes
2. Press Enter or Tab to make the change effective



Fig. 5-17 Statistics display options panel in Power mode

In energy mode, the duration can be set in number of pulses.

1. Enter manually the desired number of samples
2. Press Enter or Tab to make the change effective



Warning

Statistics in PC-MAESTRO are calculate from all the entry points coming from the serial port of the MAESTRO and are limited by the speed of the serial port. For rates greater than 300 Hz, the MAESTRO will perform a subsampling.




Tip


Users who want to accumulate statistics from all acquired points at rates >300 Hz must use the statistics directly on a MAESTRO and store them to a USB key.



Fig. 5-18 Statistics display options panel in Energy mode

5.6.2.1 Continuous and Fixed statistics duration mode

In both statistics modes, the statistics start and reset with the “*Start Statistics*” button in the controls section of ribbon bar, or with the  button at the top right corner in the statistics graph panel.

The difference between the *Fixed* and the *Continuous* modes is that, in the *Fixed* mode, the statistics will stop automatically after the duration period. With the *Continuous* mode, the statistics, after the duration period has ended, will automatically reset and start again with the same duration period. This will continue until the stop button  is pressed.



Tips

If “*Save statistics to the acquisition file*” is checked, the *Continuous* mode cannot be used. The statistics are entered into a file at the end of the duration period, so we must use the *Fixed* duration.

The file used for the statistics is the same as the file used for the acquisition. Therefore, if the filename of the statistics is changed, the acquisition log filename will be changed automatically.

To store only the statistics in a file, check the “*Save statistics to the acquisition file*” and start the statistics. To add statistics at the end of an acquisition log file, check the “*Save statistics to the acquisition file*” option and start the acquisition. The statistics will automatically start at the same time and will be entered in the file at the end of the acquisition.

6 TROUBLESHOOTING

6.1 PC-MAESTRO cannot find the MAESTRO monitor

The following warning message is displayed: *"No MAESTRO monitor was found on your computer. Please verify your connection."* Try the following steps, in the order presented, until your connection is active.

- Verify all your connections. Verify that a MAESTRO monitor is opened and connected to the PC with a USB cable.
- In the MAESTRO monitor, go to "Home" menu ▶ "Set Device" ▶ "Serial Commands"
 - Verify that the MAESTRO *is not* in Solo2 Serial Compatibility (ASCII Only) mode.
 - Verify that the MAESTRO *is not* in Binary Mode Measurement (Energy Mode only) mode.
 - Verify that USB (if a USB cable is used) or RS-232 (if a RS-232 cable is used) is selected
- Restart the MAESTRO.
- Restart the PC-MAESTRO.
- Restart your computer.
- If none of these steps have worked, contact Gentec-EO support at service@gentec-eo.com.

6.2 Moving Average mode is not working

This is because this feature is not yet available. If the moving average is activated directly on the MAESTRO monitor, the PC-MAESTRO will stop displaying measurements.

6.3 My settings won't load

Settings can be saved exclusively for one type of detector head. If you have a power detector head and a photo detector head, you cannot directly load and apply to the photo detector head the settings from the power detector head.

For each new head type, to avoid redoing all the manipulations by hand, follow this procedure:

1. Connect your first detector (ex: A photo detector)
2. Customize the PC-MAESTRO to your wishes
3. Save the settings to a file using the Save Settings button in the CONTROLS menu (ex: "Photodetector.maestro")
4. Disconnect your first detector
5. Connect your second detector (ex: A power detector)

Note: All the settings from the first detector are still active

6. Verify the options in the “*Set Measure*” settings tab
7. Save the new settings to a file (ex: “Power.maestro”)

After that, you can plug any of your different detectors and load the corresponding settings without problem.

6.4 Repetition Rate and Average Power not displaying values in the statistics mode

These features are not available yet.

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