

# MAESTRO

Touch Screen, Single Channel, Power & Energy Monitor

MULTIPLE LANGUAGES



## CONNECTIVITY



## ACCESSORIES



Additional 9V Power Supply  
(Model Number: 200960)



Battery Pack  
(Model Number: 201013)



USB, RS-232, External Trigger &  
Analog Out Cables



Protective Pouch  
(Model Number: 200128)



Pelican Carrying Case

## KEY FEATURES

- 1. READS ALL HEADS**
  - Power: Thermopiles, Photo Detectors and Pyroelectrics
  - Energy: Thermopiles (in single shot mode), Photo Detectors and Pyroelectrics
- 2. LARGE TOUCH SCREEN COLOR LCD DISPLAY**
  - 5.6in Diagonal
  - 640 x 480 Resolution
  - 18bit Color
  - FULLY Touch Screen Controls
- 3. UNIQUE ERGONOMIC DESIGN**  
Great for both handheld and tabletop use, with improved rubber bands and kickstand for better stability
- 4. INTUITIVE USER INTERFACE**  
Easy to navigate interface, with many display features:
  - Single or Dual Graph Display
  - Instant access to the main functions
  - Function Search tool
  - Interface available in multiple languages
- 5. USB KEY ACCESS**  
Store data directly on a USB key
- 6. REAL-TIME STATISTICAL FUNCTIONS**  
Max, Min, Average, Standard Deviation, RMS and PTP Stability, Pulse # and Repetition Rate
- 7. AVAILABLE OUTPUTS**  
USB Key, Analog Output, RS-232, PC-USB, Ethernet

## PC-GENTEC-EO SOFTWARE

### UNIVERSAL

Compatible with INTEGRA detectors and MAESTRO

### EASY-TO-USE

Clear and concise user interface with attractive graphics and well organized functions

## SEE ALSO

ENERGY DETECTORS	40
POWER DETECTORS	66
HIGH POWER DETECTORS	102
PHOTO DETECTORS	116
THZ DETECTORS	132
OEM DETECTORS	148
LIST OF ALL ACCESSORIES	198

Watch the Introduction video available on our website at [www.gentec-eo.com](http://www.gentec-eo.com)

# MAESTRO



\*Also traceable to NRC-CNRC

## SPECIFICATIONS

### MAESTRO

<b>DETECTOR TYPES</b>	ALL MODELS: Thermopiles, Pyroelectrics, Photo Detectors
<b>DISPLAY</b>	Touch Screen 5.6 in Color LCD

#### POWER METER SPECIFICATIONS

Power Range	
Thermopile	1 $\mu$ W to 30 kW
Photo Detector	4 pW to 3 W
Monitor Accuracy	0.25 % $\pm$ 5 $\mu$ V best scale
Statistics	Current Value, Max, Min, Average, Standard Deviation, RMS & PTP Stability, Time

#### ENERGY METER SPECIFICATIONS

Energy Range	2 fJ to 30 kJ
Monitor Accuracy	$\pm$ 1 % best scale
Software Trigger Level	0.1 to 99.9 %, 0.1 % resolution, default 2 %
Repetition Rate	2 000 Hz / 10 000 Hz in sampling
Real Time Data Transfer (To USB key)	2 000 Hz
Statistics	Current Value, Max, Min, Average, Std Dev., RMS & PTP Stability, Pulse #, Rep. Rate and Avg Power

#### DETECTOR COMPATIBILITY

Thermopile	Average Power & Single Shot Energy
Photo Detector	Average Power & Pulse Energy
Pyroelectric	Pulse Energy & Average Power

#### GENERAL SPECIFICATIONS

Interface Languages	English, German, French and Japanese
Digital Display Size	112.9 x 84.7 mm LCD - 640 x 480 pixels
Data Display	Real Time, Scope, Statistics, Digital Tuning Needle and Averaging
Analog Output	0-1 Volt, Full Scale, $\pm$ 0.5 %
Rising Edge External Trigger	TTL Compatible, 2-25 V @ 0.4 mA
Serial Commands Via	USB (standard), Ethernet or RS-232 (cable in option)
Internet Upgrades Via	USB key
Data Storage Via	USB key
Dimensions	210W x 122H x 45D mm
Weight (With Batteries)	0.67 kg
Battery Type	4 x Rechargeable 1.2 V Ni-MH AA
Battery Life	6.5 hours
External Power Supply	100/240 VAC 50-60 Hz to 9 VDC 1.66 A

#### ORDERING INFORMATION

Product Name	MAESTRO
Product Number	201235

Specifications are subject to change without notice

# MAESTRO

MONITORS



ENERGY DETECTORS

POWER DETECTORS

HIGH POWER SOLUTIONS

PHOTO DETECTORS

THZ DETECTORS

OEM DETECTORS

SPECIAL PRODUCTS

BEAM DIAGNOSTICS

## HOME

Set Device:	Set all the parameters related to your MAESTRO device.
Set Measure:	Set all the parameters related to your sensor.
Display:	Set the device in Dual or Full Screen display mode and choose the display(s) you want.
Acquisition:	Set all your acquisition parameters (time, sample rate, etc.).
Startup Config:	Choose how your MAESTRO will remember your sensor settings at startup.
About:	View the main parameters and update your MAESTRO.

## SET DEVICE

Use the elements in this menu to set the parameters related to your MAESTRO:

Number of Digits:	Use this menu to set the precision of the measurement.
Serial Commands:	Set compatibility with SOLO2 and use the RS-232, USB and Analog Outputs
Ethernet:	Configure the Ethernet communication protocol.
Languages:	Select the display language: English, German, Japanese or French

Recalibrate Touchscreen: Recalibrate your touchscreen by following the simple step-by-step procedure



## SET MEASURE

Use the elements in this menu to set everything related to your measurements:

Wavelength:	Select one of the standard wavelengths offered, enter a custom value and create your own list of standard wavelengths.
Range:	Set the measuring range to autoscale or a fixed scale.
Measure Mode:	Use this menu to decide what type of measurements will be displayed: average power, single shot energy, pulse-to-pulse energy, etc.
Corrections:	Enter multipliers and offsets.
Trigger Level:	Set the trigger level in 0.1% steps, from 0.1% and 99.9%.



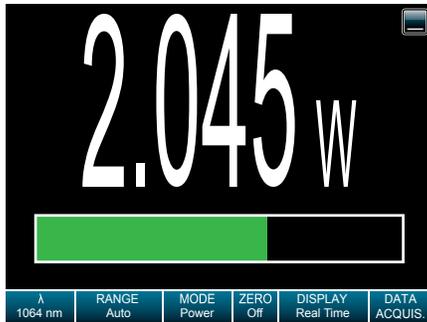
## DUAL SCREEN DISPLAY (SHOWN WITH SCOPE DISPLAY)

With the Dual Screen mode, the MAESTRO really takes full advantage of its extra-large screen! Any display mode can be used in both single or dual display mode. In dual display mode, the Real Time display takes the upper portion of the screen, while any of the other displays (Scope, Needle, Averaging or Statistics) is set on the lower portion. The display in the lower portion can be easily changed using the parameters bar with drop-down menus in the center of the screen. You can also expand one of the displays to have it in Full Screen mode using the maximize  button. Just as easily, you can go back to Dual Screen display by using the minimize  button.



# MAESTRO

CE NIST\* Traceable  
\*Also traceable to NRC-CNRC



## REAL TIME DISPLAY

This display shows the measured value in real time, with a corresponding bar graph below. The large size of the digits and high contrast of the graphics allow to see the measurement from a good distance. This mode is also always present in dual screen mode, in the upper portion of the screen.

- Very Large Digits
- Bar graph



## SCOPE DISPLAY

With its line filling from the right of the screen, in a first-in/first-out manner, this display mode is a good approximation of an actual oscilloscope reading. Settings include time (x-axis) and range (y-axis). Basic statistics can also be displayed directly on the screen.

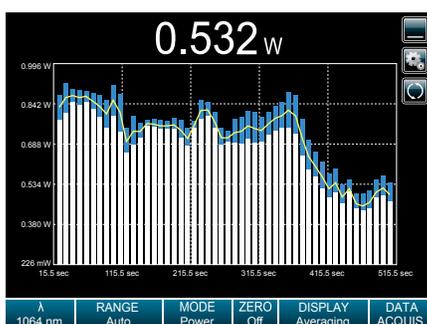
- Oscilloscope-type graph
- On-screen, real time statistics (min, max and average)
- Fully customizable x and y axis



## NEEDLE DISPLAY

Exactly like an analog needle, only faster! This mode is particularly useful when tuning a laser. The Real Time value is also displayed at the top of the screen.

- Ultra-fast readings
- Great for tuning
- Real Time value at the top of the screen
- Min and Max Values hold



## AVERAGING DISPLAY

This very unique mode is perfect to show the trend of a laser over time. Set the number of points per batch and let the MAESTRO identify the minimum and maximum values of every batch. A yellow curve then follows the average of each batch, displayed as bars on the screen. The wider the difference between the white and blue portions of a bar (corresponding to the min and max values), the more unstable your laser is.

- Calculates the min, max and average values of batches of measurements
- Perfect to check laser stability over time



**Photonic Solutions Ltd** Unit 2.2, Quantum Court, Research Avenue South, HWU Research Park, Edinburgh, EH14 4AP, UK, Tel: +44 (0)131 664 8122  
 Email [sales@photronicsolutions.co.uk](mailto:sales@photronicsolutions.co.uk) Web [www.photronicsolutions.co.uk](http://www.photronicsolutions.co.uk)