Hand-Held DSO/DMM

- 20Mhz [820], 40MHz [840], 60MHz [860] bandwidths
- Built in High accuracy 6000 count True RMS DMM
- 200MS/s sampling rate single channel and 100MS per channel in dual channel [840, 860], 100MS/s [820]
- 2.5GHz Equivalent sampling [840] and 5GHz Equivalent sampling [860]
- 20 automatic waveform Measurements
- Self test and Self calibration
- Help menu
- Models 840 and 860 include FFT
- 125KB record length for each channel
- 10 waveforms and setups may be stored and recalled
- USB interface and optional flash memory port [840, 860]
- High Resolution 320x 240 pixel Monochrome LCD
- Edge/Pulse width, TV/Pattern and Delay trigger modes

820, 840, 860

SPECIFICATIONS

Vertical
No inputs: 2
Analog bandwidth: [820] 20MHz, [840] 40MHz, [860] 60MHz
Rise Time: [820] <17.5ns, [840] < 8.75ns, [860] < 5.83ns
Sensitivity: 5mV to100V/div (in a 1,2,5 sequence)
Resolution: 8 bit
Offset: ±5 div from the center
Vertical Accuracy: ±3 %
Input Impedance: 1MΩ ±1% and 20pF ±1.3pF
Max input V: 300V DC or AC peak
Probe Attenuation: x1 and x10

Horizontal:
Sweep rates: [820] 50ns/Div to 50s/Div, [840] 10ns/Div to 50s/Div, [860] 5ns/Div to 50s/Div
Time base Accuracy: ±0.01%

Acquisition system:
Acquisition Modes: Sample, Peak detect, Envelope, Average
Sampling: Real Time and Equivalent [840, 860]
Sample Rates: [820] 100MS/s, [840, 860] 200MS/s single channel and 100MS/s per channel Dual channel
Equivalent Sampling: [840] 2.5GS/s, [860] 5GS/s
Sample Rate Accuracy: 100ppm
Record Length: 125KB/Channel
Waveform Interpolation: Dot, Linear, Sine, and Pulse
Peak Detect: 10ns minimum
Averages: 2 to 256

Trigger
Sensitivity: 0.5 Div (DC to 5MHz)
Trigger Types: Edge, Pulse width, Video
Coupling: AC, DC HF-Reject, LF-Reject, Noise Reject
Modes: Normal, Single, Roll, Auto
Trigger Level Range: ±20 Div from the center of the screen
Trigger Level accuracy: ±0.4 Div
Trigger sources: CHA and CHB

Video Trigger
Video Trigger sensitivity: 0.7 Div
Video Type: NTSC, PAL, Secam

Measurements:
Types: P-P, Max, Amplitude, Top, Base, Pos/Neg over shoot, Pre-shoot, RMS, Mean, One cycle mean, Freq., Period, ±Width, ±Duty cycle, Rise/Fall time, Delay and Phase shift
Math Operations:
CHA+CHB, CHA-CHB, CHB-CHA, FFT [840, 860]
Cursors: △V, △T
FFT: [840, 860]
Weighting:
Rectangular, Hamming, Hanning and Blackman-Harris
Amplitude display: 1, 2, 5, 10dB/Div
Maximum Frequency: 1.25GHz
Memory: 10 waveforms and settings saved and recalled

DMM

DC Volts:
Range: 600mV to 1000V
Accuracy: ±(0.3% + 10d)
Best Resolution: 100µV
Impedance: 10MΩ
Overload protection: 1000VDC or AC peak

AC Volts:
Range: 6V to 600V
Accuracy: ±(0.75% + 10d) 50Hz to 1KHz;
±(2.0% + 10d) 1KHz to 30KHz
Best Resolution: 1mV
Impedance: 10MΩ
Overload protection: 1000VDC or AC peak

Resistance
Range: 600Ω to 60MΩ
Accuracy: ±(0.5% + 10d)
Best Resolution: 100mΩ
Overload Protection: 250V DC or AC peak

Capacitance
Range: 60nF to 300µF; Accuracy: ±(2.0% + 10d)

Other measurements
Diode test accuracy: ±2%
Continuity: Buzzer will sound < 60Ω
dBm with reference impedances of
2,4,8,16,50,75,93,110,125,135,150,300,600,900, 1K or 1.2KΩ
High current: to 600A with external current Clamp
Temperature (with Probe): to 600ºC (1112ºF)

General Specifications
Size: 8.3" (H) x 4.2" (W) x 2.2" (D); Weight: 2.6 lbs
Power: 9VDC @ 1A AC/DC adapter, 7.2V NIMH rechargeable battery pack
Standard accessories: AC/DC adapter, User's manual, Scope probe (2), Holster, Test Leads, USB cable and software
Optional accessories: Battery pack, Temperature adapter, Clamp-on current probe, Carrying Bag and USB flash memory

Protek Test & Measurement
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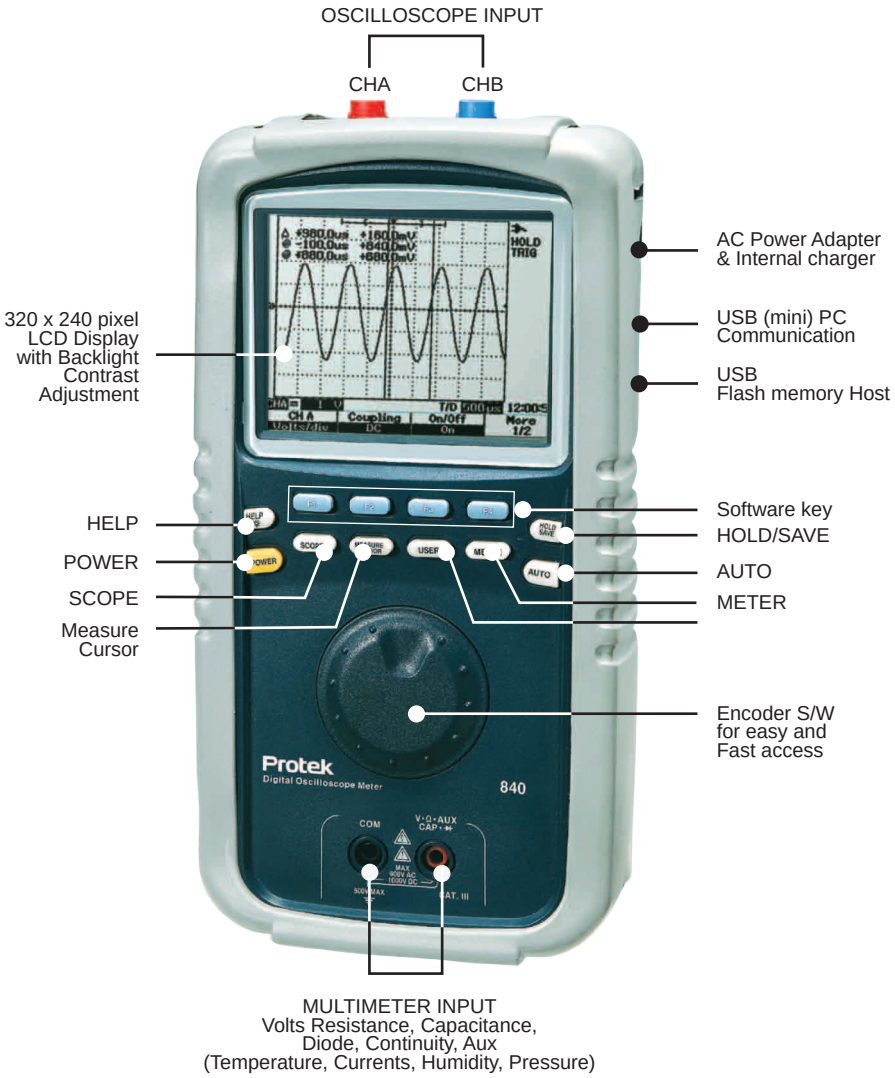
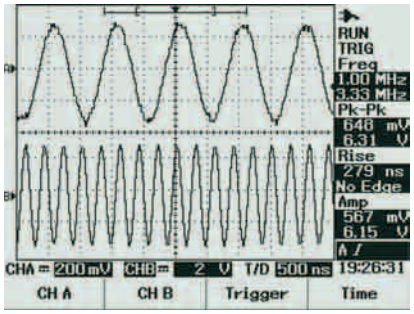


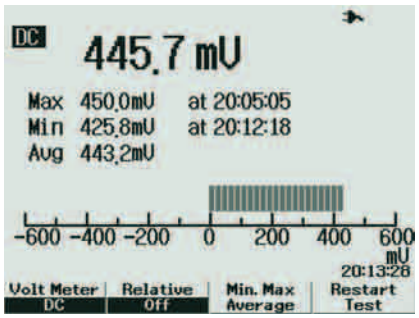
Main Display waveforms and indicators

Oscilloscope



CH1 and CH2 waveforms, along with the Dual channel Math waveform, trigger levels, horizontal positions, offsets, V/div and Time/division settings are displayed.

Meter

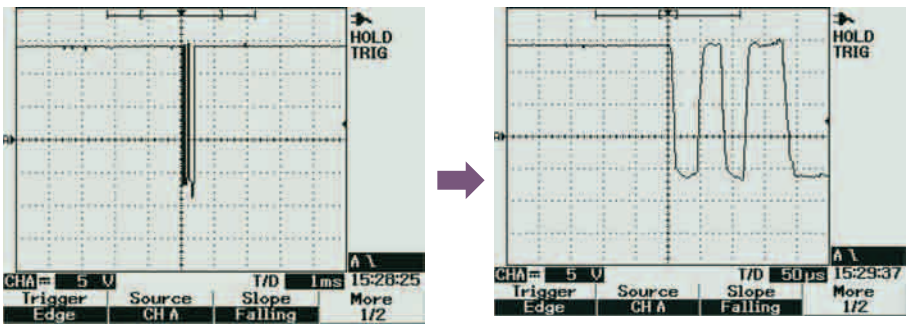


Analog Bargraph, MIN, MAX, AVG VOLT, DC, etc.

FEATURES

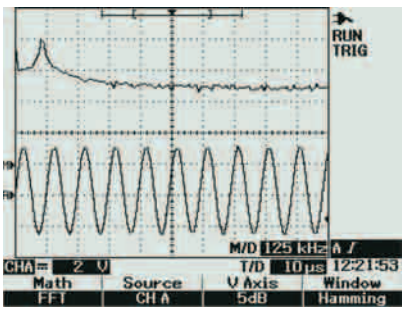
Record Length

A long record length and high-speed sampling rates allows the user to capture and view a more detailed "picture" of a complex Waveform and it components. Up to 125kB samples of waveform information may be captured and accurately displayed on the LCD screen as show in the illustration below.



Math

Dual channel Math functions are available for adding and subtracting waveforms applied to the CHA and CHB inputs. The FFT allows you to view a waveform spectrum using a Rectangular, Hamming, Hanning or Black Man-Harris window.



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