



DC – 100 MHz, 2 CH, 500 MS/s

■ Portability

With a total weight of only about 3 kg (including the printer), this compact scope is easy to carry and fits easily into narrow spaces on crowded workbenches.

■ High-speed sampling rate and long memory

The DS-8812 operates at 500 MS/s sampling rate with 100 MHz frequency bandwidth. Each channel has a long 100k-word acquisition memory.

■ Built-in printer

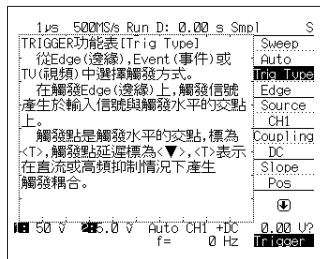
Display data or waveform data can be printed out on the built-in printer.

■ Optimum design for DSO beginners

With a variety of interfaces and triggers provided, this scope can be connected to a wide selection of external devices. The wide choice of signal outputs is something only possible with a digital oscilloscope.

■ Help menu

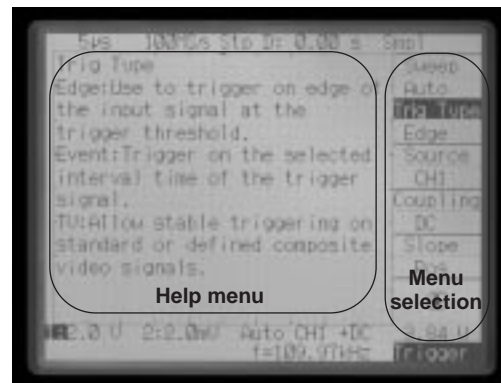
Explains the various menu functions (shown in reverse). This menu is useful if a user needs to know what a particular function does. Four display modes (English, Japanese, traditional Chinese, simplified Chinese) are available.



Traditional Chinese mode



Simplified Chinese mode

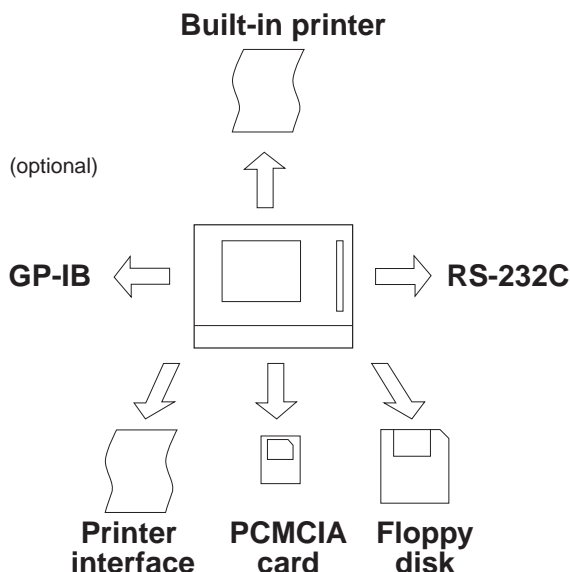


Help menu

Menu selection

System flexibility

A built-in PCMCIA card slot and floppy disk drive are provided so you can save measurement data direct to a PCMCIA card or floppy disk and print it out as needed using either the built-in printer or an external printer via the printer interface. GP-IB (optional) and RS-232C interfaces are also provided, letting you control the scope via a personal computer.



■ Event trigger

A wide range of triggers are available, including event triggers (count/burst/extra/missing) and TV triggers (NTSC, PAL/SECAM).

■ Hardware 5-digit frequency counter

Input signal frequency can be shown in five digits, making aliasing display checking easier.

■ Various automatic measurements

All the basic automatic measurement functions required for common measurements are provided, assuring quick, accurate results and improving efficiency.

■ 25 GS/s equivalent sampling

Using the equivalent sampling method, the time resolution is increased up to 40 ps (equivalent to 25 GS/s). Waveforms can be observed before triggering.

Specifications

Vertical CH1, CH2

Sensitivity 2 mV/div – 10 V/div (1-2-5 steps),
(0.8 mV/div zoomed)
±2%
(From 10 Hz at AC coupling)
Accuracy DC – 100 MHz, –3 dB
Frequency Bandwidth DC – 10 MHz (CH1, CH2 can be set
individually)
Bandwidth Limiter AC, DC, GND
Input coupling AC, DC, GND
Input RC 1 MΩ ± 1.5%/ / 20 pF ± 2 pF
Maximum input voltage ±400 V DC + AC peak.
Probe sense AUTO, Manual (1:1, 10:1, 100:1, 1000:1)
Rise time Approx. 3.5 ns
Note: Calculated from the following formula

$$Tr = \frac{350}{\text{Bandwidth [MHz]}} \text{ [ns]}$$

Offset voltage

Vertical range	Offset voltage
2 mV/div – 50 mV/div	±1 V
0.1 V/div – 0.5 V/div	±10 V
1 V/div – 5 V/div	±100 V

Triggering

Trigger mode EDGE, EVENT, TV
Source CH1, CH2, EXT, LINE
Coupling DC, AC, HF-REJ, LF-REJ
Slope +, –
Sensitivity

Frequency bandwidth	CH1, CH2	EXT
DC – 10 MHz	0.5 div	50 m Vp-p
10 MHz – 100 MHz	1.5 div	150 m Vp-p

Event trigger

TV trigger COUNT, BURST, MISSING, EXTRA
Format NTSC, PAL/SECAM
TV-V ODD, EVEN, BOTH (line number selectable)
TV-H

Horizontal

A sweep
Sweep mode AUTO, NORMAL, SINGLE
Sweep rate 5 ns – 50 s/div (1-2-5 sequence)
Trigger delay

Memory length	Sweep time	Set range
Short	5 ns/div ~ 1 ms/div	–5 div ~ +10 ms
	2 ms/div ~ 50 s/div	–5 div ~ +500s
Long	5 ns/div ~ 20 ms/div	–5 div ~ +200 ms
	50 ms/div ~ 50 s/div	–5 div ~ +500s

–500s ~ +750 s (fixed) when waveform acquisition stops

Hold off

200 ns – 2 s, OFF

Storage functions

Maximum sampling rate simultaneous for two channels		
Resolution	Max. sampling	Peak detect
8-bit	500 MS/s	250 MS/s

Acquisition memory

Short memory 5 k words/ch
Long memory 100 k words/ch
Storage mode Normal, Equivalent Sampling, Peak detect,
Average, Roll

Waveform processing

Average 2 – 256 times

Display functions

Display 5.8-inch high contrast LCD display, 320 x
240dots (high brightness backlight EL)
Waveform display Waveform display area of 8 x 10 div
Dot join On, Off
Persistence (infinity only) On, Off
Arithmetic functions +, –, x
X–Y display X = CH1, Y = CH2
Reference waveform Up to 10 traces
Scale type Frame, axes, grid
Comment display Available
Help function English/Japanese, Chinese (Simplified,
Traditional) selectable

Waveform storage

Ref. Save/clear Ref. save and clear functions are available with
individual key (internal memory only)
Setup save/clear, undo Setup data save, clear and undo functions are
available with individual key (internal memory
only)

Save and recall

Media ATA card, floppy disk (3.5-inch)
Data type Setup data, waveform
Number of record ATA: Max. 9999
Floppy: Max. 200
Record format Binary/ASCII format are available for waveform
data
Comment Available
Auto copy Waveform data can be automatically stored
when the waveform is triggered (ATA card,
floppy disk, built-in printer)

Other functions

Auto setup Automatically setup V, H range and trigger for
repetitive signal
 $\Delta V, \Delta t (1/\Delta t), V$ at t

Cursor measurement

Automatic measurement
Channels CH1, CH2
Items Tr, Tf, Vrms, Vmean, f, T, +PW, –PW,
Duty, +Peak, –Peak, P-P, Skew
Four (4) items

Simultaneous

Frequency counter 5 digits
Display digit ±0.01%
Accuracy 1 Hz - 100 MHz
Frequency range RS-232C, GP-IB (option)

Interface

RS-232C
Baud rate 2.4 k, 4.8 k, 9.6 k, 19.2 k, 38.4 k, 57.6 k, 115.2 k
Data bit 7, 8-bit
Parity None
Delimiter LF or CR/LF

Data output

Built-in printer, Floppy disk (3.5-inch), ATA card
Centronics

Built-in printer

Type Line thermal printer
Paper width 80 mm
Roll print Available

Floppy, ATA card

Output format TIFF, BMP
Centronics DPU-414, ESC-P09, ESC-P24, PC-PR201
Output format TIFF, BMP

Calibration signal

Waveform Square wave
Output voltage 0.6 V ± 1%
Frequency 1 kHz ± 0.01%

Power supply

Voltage range AC 100 – 240 V
Frequency 50 – 60 Hz
Power consumption 90 VA max. (with built-in printer operation)

Dimensions & weight

Dimensions Approx. 215 (W) x 170 (H) x 166 (L) mm
Weight Approx. 3.0 kg excluding accessories
Accessories Power cord (1), probe (SS-0130R x 2), fuse (2),
roll paper (1), instruction manual (1),