



* Photo shows the 8808-01 with optional printer unit installed.

New Concept with Detachable Printer

Compact Size Recorder with Color Display

The MEMORY HiCORDERs 8807-01/8808-01, housed in a B5 book-sized, compact, and thin body weighing in at under 1.2 kg, are handy high-speed recorders equipped with features such as analog 4-channel (8807-01: 2-channel) isolated inputs, PC card slot, RS-232C communication, 3-way power supply, and powerful trigger functions. One unit is capable of covering a variety of usages, ranging from low-speed/long-term continuous recording to recording of high-speed transients.

Enhanced Model with Harmonic Analysis Function ... 8807-51/8808-51

To the MEMORY HICORDERs 8807-01/8808-01 with their popular detachable printers, HIOKI has added the MEMORY HICORDERs 8807-51/8808-51 with harmonic analysis function. Capable of both instantaneous analysis and time series analysis of harmonics, these units can measure and analyze harmonic current flowing into and out of a commercial power system, as well as harmonic components piggybacking on power line voltage.







Recording Intermittent Leakage, Engine Performance and Relay Timing

-Application Examples-

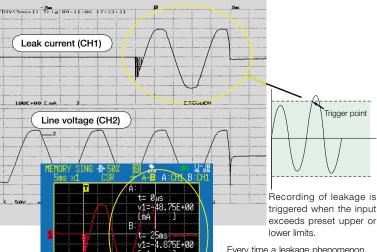
Unpredictable intermittent leakage is monitored unattended by recording instantaneous waveforms of the leakage current and line voltage



For long-term monitoring, use the AC ADAPTER 9418-15 for the MEMORY HICORDER 8807-01 and the AC ADAPTER 9445-02/-03 for the CLAMP ON LEAK HITESTER 3283

Monitor power line anomalities!

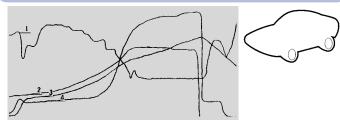




Every time a leakage phenomenon occurs, the waveforms can be printed out or the data saved on an ATA card.

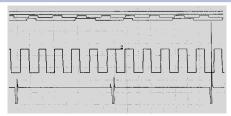
Data saved on a flash ATA card can be read back by the 8807-01 for analysis of peak current values at breaker trip time using the cursor function.

Analysis of engine characteristics



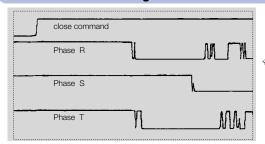
Allows the balance between boost, oil pressure, air fuel ratio, ignition timing, engine speed, injector aperture, etc., to be observed and recorded as waveforms.

Analysis of Sequence Control Device Faults



Abnormal halts and warnings issued by sequence control devices in manufacturing production and testing lines can be caused by AC power hits or low voltage. Such anomalous behavior can best be analyzed by setting the sequence relay signal as a trigger to record the abnormal AC power waveforms and DC voltage systems.

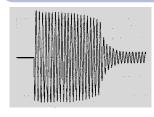
Circuit breaker timing measurement



Circuit breaker cut-off in a power circuit can be investigated by analyzing the relationship of multipoint logic signals to the analog waveform. Up to eight channels are provided for recording relay operation using logic probes.

Use the model 9320-01 for non-voltage contact signals, and the LOGIC PROBE 9321-01 with isolated inputs for powered AC relay signals.

Recording of motor rush current



Motor power-on inrush current waveforms can be precisely recorded. The CLAMP ON PROBEs model 9018-10 and 9132-10 are available for current measurement, as is the CLAMP ON LEAK HITESTER 3283.

In addition, to measure direct current waveforms, a variety of sensors such as the UNIVERSAL CLAMP ON CTs model 9277, 9278 and 9279 are available upon request.

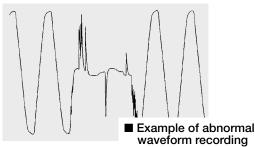
High-Speed Response for Capturing Transient Events

查询"8808-01"供应商rder function -

Operation of the memory recorder functions

The input signal is converted*¹ to digital data that are stored in the internal memory. The data can then be displayed on the screen or printed out on paper*². Once recorded, data are backed up for five years by the internal battery, provided that the start button is not pressed a second time (trigger mode: one-shot). The necessary parts can be searched out on the screen so that only the required waveforms are printed out*².

- *1 The data sampling speed (sampling rate) is automatically set at 1/80 of the time axis range. E.g., at 200 μs/division the sampling rate is 2.5 μs, at 5 minutes/division, the sampling rate becomes 3.75 sec.
- *2 The optional PRINTER UNIT 8992 is required.

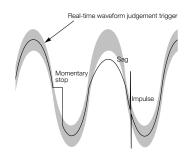


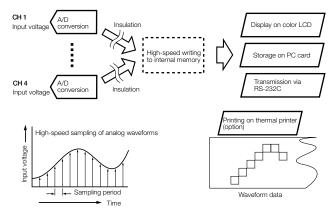
Waveform captured using the voltage-drop detection trigger. This allows recording of the waveforms of momentary voltage drops in power lines.

Trigger functions capable of monitoring all 4 channels*3

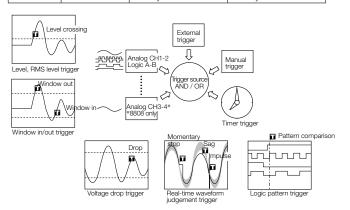
For all of the measurement functions, including recorder and memory recorder, triggers can be set on all 4 analog input channels and the 8 logic input channels. In addition to a simple level trigger based on comparison with a single voltage value, the following trigger conditions are also available:

- Window in/out trigger based on comparison of 2 voltage values
- Voltage drop trigger for AC power lines*4
- RMS level trigger based on rms values*5
- Waveform judgment trigger*4 monitoring the waveforms of AC power lines in real-time
- Pattern trigger monitoring the ON/OFF condition of a logic signal
- *3 MEMORY HICORDER 8808-01. 2 channels in the case of the MEMORY HICORDER 8807-01.
- *4 Memory recorder function only. For 50/60 Hz only.
- *5 RMS recorder function only. For 50/60 Hz only.





Time axis	Sampling period	1-channel setting 256 kW/ch 3200 divisions	4-channel setting 64 kW/ch 800 divisions	
200μs/DIV	2.5 μs	640 ms	160 ms	
$400 \mu s/DIV$	5 μs	1.28 s	320 ms	
1ms/DIV	12.5 μs	3.2 s	800 ms	
2ms/DIV	25 μs	6.4 s	1.6 s	
5ms/DIV	62.5 μs	16 s	4 s	
10ms/DIV	125 µs	32 s	8 s	
20ms/DIV	250 μs	1 m 4 s	16 s	
50ms/DIV	625 µs	2 m 40 s	40 s	
100ms/DIV	1.25 ms	5 m 20 s	1 m 20 s	
200ms/DIV	2.5 ms	10 m 40 s	2 m 40 s	
500ms/DIV	6.25 ms	26 m 40 s	6 m 40 s	
1s/DIV	12.5 ms	53 m 20 s	13 m 20 s	
2s/DIV	25 ms	1 h 46 m 40 s	26 m 40 s	
5s/DIV	62.5 ms	4 h 26 m 40 s	1 h 6 m 40 s	
10s/DIV	125 ms	8 h 53 m 20 s	2 h 13 m 20 s	
30s/DIV	375 ms	1 day 2 h 40 m	6 h 40 m	
1min/DIV	750 ms	2 days 5 h 20 m	13 h 20 m	
2min/DIV	1.5 s	4 days 10 h 40 m	1 day 2 h 40 m	
5min/DIV	3.75 s	11 days 2 h 40 m	2 days 18 h 40 m	



■ Real-time waveform judgement trigger with constant monitoring of the voltage waveforms of AC power lines

(Memory recorder function only)*6

The waveform judgement trigger constantly monitors the AC power line for irregular waveforms. There are two ways to use this trigger. One cycle of measured waveforms is observed with the judgement area automatically created from the immediately preceding cycle waveform, or the judgement area can be automatically created from the ideal sine wave. In both cases, the trigger activates when the signal is detected to move outside the reference area. This allows real-time monitoring of phenomena in AC power lines that existing level triggers have not been able to capture, such as momentary stops, sags, and impulses.

The level trigger can be set separately for each analog channel.

Also, when the printer is connected, the judgment area automatically generated from the ideal sine wave can be printed as an overlay with the measurement waveform.

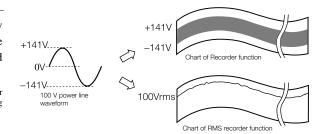
^{*6} The time axis can be used for all ranges above 10 ms/DIV (version 2.20 or later).

- RMS Recorder, Recorder functions - 查询"8808-01"供应商

RMS recorder function

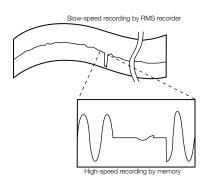
This function is exclusively for use on 50/60 Hz power-supply lines and DC. High-speed sampling is applied to calculate the rms value from the waveform data*1, and the result is recorded as a graph.

*1 Using 250 µs high-speed sampling, data for three waveforms are captured for calculating the rms value. This process is repeated 800 times per second using the moving average method, resulting in high-speed response.



■ RMS Recorder & Memory function

If an abnormal event is detected by triggers during real-time recording of signals using the RMS recorder, it is stored in memory by the high-speed sampling memory recorder. The RMS recorder function works independently and never stops. This function is highly convenient when it is desirable to record both abnormal phenomena and normal level fluctuations.



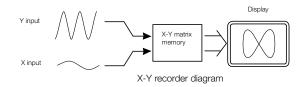
Recorder function operation

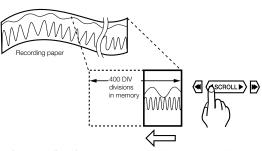
The input signal is converted to digital form and displayed or printed*2 in real-time. The chart speed is maximum 10 mm/s (in the 1s/division range)*3. Even with the real-time recording, the last 400 divisions of the waveform can be observed by scrolling or reprinting the data*2.

- *2 The optional 8992 PRINTER UNIT is required.
- *3 Only when using the AC Adapter. When using batteries, the maximum speed is 5 mm/s (2 s/division range).

■ X-Y Recorder format

This function allows two signals converted to digital form to be combined in an x-y plot and stored in memory. Any of the four analog channels can be used for an x-y plot, but only one plot can be combined. The X-Y plot can be viewed in real-time on the display, and there is no limit on the recording time. The waveforms can also be printed out as many times as desired.





Recorder recording time Actual operation conditions are assumed, and it is assumed that 30 cm of the length of the recording paper is not used, for a total of 1770 divisions

Time axis Chart speed		Sampling period	Approximate recording time with one roll of recording paper (18 m)
100 ms/DIV		2.5 μs	Stored in memory only: 40 s
200 ms/DIV	Printer not required		Stored in memory only: 1 m 20 s
500 ms/DIV			Stored in memory only: 3 m 20 s
1 s/DIV	AC Adapter used 10 mm/s	2.5 µs	AC Adapter used: 29 m 30 s
2 s/DIV	2 s/DIV 5 mm/s 5 s/DIV 2 mm/s 10 s/DIV 1 mm/s 30 s/DIV 20 mm/s 1 min/DIV 10 mm/s		59 m
5 s/DIV			2 h 27 m 30 s
10 s/DIV			4 h 55 m
30 s/DIV			14 h 45 m
1 min/DIV			1 day 5 h 30 m
2 min/DIV	5 mm/s	2.5 µs	2 days 11 h
5 min/DIV	2 mm/s	2.5 µs	6 days 3 h 30 m
10 min/DIV	1 mm/s	2.5 µs	12 days 7 h
30 min/DIV	20 mm/h	2.5 μs	36 days 21 h
1 h/DIV	10 mm/h	2.5 μs	73 days 18 h

- Data Communication with PC, other functions - 查询"8808-01"供应商

Off-Line Data Exchange with a PC

Waveforms acquired by the memory recorder can be stored on flash ATA-PC cards. Stored waveform data can be converted to text (CSV) format files by the supplied **Wv** Waveform Viewer PC application program.

■ Waveform Viewer software

Measurement data can be saved in binary format. Also, can be converted to text format for numerical analysis in a PC spreadsheet program.

Data can be saved in binary or text formats. The binary format is for data to be used in the MEMORY HiCORDERs 8807-01 and 8808-01. Data saved to the PC in binary format can be converted to text format using the supplied Wv (Waveform Viewer program), for loading into a spreadsheet program such as Excel.

■ Display copy in BMP format

Displayed images can be saved in BMP format to easily create and print color reports from the PC's word processor.



Example showing measurement data imported to Excel.

Convenient features for ease of operation

Convenient features such as the DMM function, special range for a clamp probe, numerical value calculation, scaling, A/B cursor measurement, free comment input, and automatic restart after power outage make the measurement work quick and simple.



■ DMM Function

Digital Multi Meter functions are provided for simple input voltage checking. Selectable modes are Effective value mode (AC+DC), and Instantaneous value mode (DC), each displaying four numeric digits. When the scaling function is enabled, the specified scaling value is incorporated.

 $\it Note:$ Convenient for checking waveform recordings of power lines. RMS display is for 50/60 Hz or DC only.

■ Special range for clamp probe enables easy current measurement *1

Using the CLAMP ON PROBE 9018-10, current waveforms can be captured on live lines. Voltage range settings and scale settings are performed with a one-touch operation thanks to the special clamp probe range provided.

*1 Only compatible with the CLAMP ON PROBEs model 9018-10 and

The CLAMP ON PROBEs model 9018 and 9132 can be connected using the CONVERSION ADAPTER 9199.



■ RS-232C connection to PC

The PC and HiCORDER can be directly connected serially for transferring recorded data and remote settings. The software created by the user may be used on the PC.

-Specifications-

Measurement functions	corder, (2) Recorder, der & memory (50/60 Hz/ or DC only) input section, 2 analog + 8 logic,	Memory function		
Input type and number of channels Maximum sampling rate Memory capacity Memory capacity Memory capacity External memory External memory External control Interface Environment (no condensation) Applicable standards Power supplies *\textit{Note: These LR6/AA} alkalia batterise cannot be used with the PPINTER UNIT 5992.} Power consumption Continuous operation time Charge time Dimensions and mass Supplied accessories Fecording and display *\textit{Vertication} with the printer paper Display method *\textit{Printer paper} 112 mm (4.4 in 10 mm/s mm/s (10 mm/s mm/s) (10 mm/s)	der & memory (50/60 Hz/ or DC only)	Time axis	200 us to 5 minutes/division 10 settings times avis group	
Input type and number of channels 8808-01: fixed isolated analog GND. Maximum sampling rate 400 k sample/simultaneous sa 8807-01: (anal channel (CH1) words/channel (B808-01: (anal channel (CH1) channel (CH1) channel (CH1) PC card TYPE format Memory context), image Battery backup Clock, waveford External control Terminal block Terminal block Terminal block Rs-232C intext (the optional Rs Printer interface Printer interface Printer interface Printer interface Safety: EN618 Maximum printer 10 Operation: +5 °C Storage: -10 °C Storage: -10 °C	input section 2 analog + 8 logic		200 µs to 5 minutes/division, 19 settings, time axis zoom ×2 to ×10; 3 settings, compression 1/2 to 1/500; 8 settings	
number of channels Maximum sampling rate Memory capacity Memory capacity Memory capacity External memory External memory Battery backup External control Interface Environment (no condensation) Applicable standards Power supplies ** Note: These LR6/AA alkaline batteries camot be used with the PPINTER UNIT 8992. Power consumption Continuous operation time Charge time Dimensions and mass Pinter interface (1) AC Adapt (2) **LR6/AA alkaline batteries camot be used with the PPINTER UNIT 8992. Dimensions and mass Continuous operation time Charge time With power swo Dimensions and mass Supplied accessories Recording and display *2 w. Berows/mn (203 k807-01, 8088-01: (anal channel (CH1) words/channel Res-232C inte (the optional Rs Printer interfac (Doparation: +5 °C Storage: -10 °C/ Storage: -1	input section, 2 analog + 8 logic, input section 4 analog + 8 logic	Sampling period	1/80 of time axis ranges (minimum sampling period 2.5 μs)	
Memory capacity Samultaneous sa 8807-01: (anal channel (CH1) words/channel (B808-01: (anal channel (CH1) channel (CH1) channel (CH1) PC card TYPE format Memory context (ENT), image Clock, waveform External control Terminal block RS-232C intext (the optional R Printer interface Printer interface Printer interface Operation: +5 °C Storage: -10 °C	channels, isolated input and outputs, logic has common	Recording length	20 to 3200*3 divisions *3 Depending on the number of channels in use.	
Channel (CH1) words/channel (808-01; (anal 6808-01; (anal channel (CH1) channel (CH1) ch			Can record data from before the trigger point, 0 to 100 % or -95 % of recording length; 15 settings	
External memory Battery backup External control External control Battery backup External control External control RS-232C inte (the optional RS Printer interface Environment (no condensation) Applicable standards Power supplies ** Note: These LR6/AA alkaline batteries camnot be used with the PRINTER UNIT 8992. Power consumption Continuous operation time Charge time Dimensions and mass Supplied accessories Recording and display **2 Printer paper **2Printer paper Paper feed density **2Praper feed density Trigger function Trigger source Analog input (Analog input of external, timer AND/OR of st Level: Trigger DOWN dires Window in/ou by upper or Voltage drop: Voltage drop: **2Puse feed density Analog input of external, timer AND/OR of st Level: Trigger DOWN dires Window in/ou by upper or Voltage drop:	Memory capacity 8807-01: (analog 12 bits + logic 4 bits) × 256 kilo-words/ channel (CH1) to (analog 12 bits + logic 4 bits) × 128 kilo- words/channel (CH1, CH2) 8808-01: (analog 12 bits + logic 4 bits) × 256 kilo-words/ channel (CH1) to (analog 12 bits + logic 4 bits) × 64 kilo-words/		Numerical calculations, logging (numerical printout), X-Y waveform plot (one plot on the 8807-01, up to three plots on the 8808-01), voltage axis zoom x2 to x10; 3 settings, compression 1/2	
External memory Battery backup External control Interface Interface Environment (no condensation) Applicable standards Power supplies ** Note: These LR6/AA alkaline batteries camnot be used with the PRINTER UNIT 8992. Power consumption Continuous operation time Charge time Dimensions and mass Supplied accessories Recording and display *2 Printer paper **Printer featched) **Printer featched) **Recording width **Precording width **Precording speed **Trigger function Trigger source Analog input o external, timer AND/OR of st Level: Trigger DOWN dires Window in roo by upper o Voltage drop: Vol			tion	
External memory Battery backup External control RS-232C inter (the optional RS Printer interfer Environment (no condensation) Applicable standards Power supplies *\(^1\) Note: These LR6/AA alkaline batteries camnot be used with the PRINTER UNIT 8992. Power consumption Continuous operation time Charge time Dimensions and mass Supplied accessories Recording and display *2 w. Display method *\(^2\)Printer paper Environment (no condensation) (1) AC Adapti (2) *\(^1\)LR6/AA used in combinat on with (4) 12 V Car b (7) 12 V Car b (7) 12 V Car b (7) 13 V Car b (7) 14 V Car b (7) 15 V Car b (7) 16 V Car b (- CH4)	Recorder funct	100 ms*4 to 1 hr/division; 14 settings, 1 division = 80 samples,	
Battery backup External control Interface Interface Environment (no condensation) Applicable standards Power supplies *\textit{Note: These I k6/A}\textit{RS-L8/24}\textit{Cite optional RS Printer interface} Power supplies *\textit{Note: These I k6/A}\textit{Cite N6/13}\textit{Cite N6/13}\te	II slot × 1: flash ATA card (max. 1GB), MS-DOS Ints: Setting conditions, measurement data (binary,	Time axis	time axis compression 1/2 to 1/50; 5 settings *4 100 ms to 500 ms/division ranges shown only on display when using AC Adapter. 100 ms to 1 s/division ranges shown only on display when using batteries	
External control Interface Interface RS-232C inter (the optional RS Printer interface) Environment (no condensation) Applicable standards Power supplies *Note: These LR6/AA alkaline batteries cannot be used with the PRINTER UNIT 8992. Power consumption Continuous operation time Charge time Charge time With power swith power swith sample accessories Dimensions and mass Supplied accessories Recording and display *2 wc 240 x 320 dots 12 printer paper *2Peaper feed density *2Paper feed density Trigger function Trigger source Analog input of external, timer AND/OR of st Use 1 times 1 time of Voltage drop: Level: Trigger DOWN dire Window in/out of Voltage drop: Voltage drop: *2**Inter paper *Analog input of external, timer AND/OR of st Use 1 times 2 time	data (BMP), calculation results (figures) n data, settings, battery life approx. 5 years (at 25 °C/77 °F)	Sampling period	2.5 µs fixed	
Interface RS-232C inter (the optional RS Printer interface)	c: trigger input/output	Recording length	20 to 400 divisions, "continuous"*5 *5 only "continuous" for X-Y plotting	
Interface (the optional RS Printer interface Printer interface) Environment (no condensation) Applicable standards Power supplies ** Note: These LR6/AA alkaline batteries cannot be used with the PRINTER UNIT 8992. Power consumption 8807-o1, 8808-O1, 8008-O1, 8	rface: 9-pin round connector terminal	X-Y sampling period	250 μs; fixed (dot), 500 μs to 10 ms (line)	
Environment (no condensation) Applicable standards Power supplies *\text{Note:} \text{These LR6/AA} \text{alkaline batteries cannot be used with the PRINTER UNIT 8992.} Power consumption Continuous operation time Charge time With power swi 8807-01, 8808-01: (printer detached) 8807-01, 8808-01: (printer detached) 8807-01, 8808-01: (printer detached) 8807-01 approx. 1 8808-01: approx. 1 Application di *2Printer paper 112 mm (4.4 in the symmetries of the	8-232C CABLE 9612 is required for connection to PC) ACE: PRINTER UNIT 8992 can be connected (option)	X-Y axis resolution	20 pixel/DIV (display), 80 pixels/DIV × 80 pixels/DIV (optional printer)	
Power supplies *\ Note: These LR6/AA alkaline batteries camot be used with the PRINTER UNIT 8992. Power consumption Continuous operation time Charge time Dimensions and mass Supplied accessories Recording and display *2 w. Display method *\(^2\)Printer paper \(^2\)Printer paper \(^3\) Paper feed density *\(^2\)Paper feed density *\(^2\)Printer source Trigger function Trigger source \(^1\) AC Adag used in combination with 20 and used in combination with 20 and used in combination with 20 and used in combination with 24 prox. 3 hou does not 20 and 20 a	C/41 °F to +40 °C/104 °F, 35% to 80% relative humidity. 14 °F to +50 °C/122 °F, 35% to 80% relative humidity.	Other functions	Back-scroll of memory data (max. last 400 divisions) and reprinting of stored data (with/optional printer), logging (numerical printout) (with/optional printer), voltage axis magnification ×2 to ×10; 3 settings, compression 1/2; 1 setting. X-Y waveform plot (one plot on the 8807-01, up to three plots on the 8808-01)	
Power supplies *\ Note: These LR6\AA used in combinated alkaline batteries camnot be used with the PRINTER UNIT 8992. Power consumption Continuous operation time Charge time B807-01, 8808-01: Approx. 1 hou App	26, EN61000-3-2, EN61000-3-3	PMS Recorder		
alkaline batteries camot be used with the PRINTER UNIT 8992. Power consumption 8807-o1, 8808 Continuous operation time Approx. 3 hou operation time Charge time With power swi 8807-o1, 8808-o1: (printer detached) 8807-o1, 8808-o1: (p	er model 9418-15 or 9418-10 (DC 12V ±10%) alkaline batteries × 6 (AC adapter has priority when ion with battery pack)	Time axis	RMS recorder: 100 ms to 1 hr/division; 14 settings	
Power consumption 8807-01, 8808-01 Continuous operation time Approx. 3 hou Approx. 3 hou Approx. 1 hou Approx. 1 hou Manass 8807-01, 8808-01: 9807-01, 8808-01: 9807-01, 8808-01: 9807-01, 8808-01: 9807-01, 8808-01: 9807-01, 8808-01: 9807-01, 8808-01: 9807-01, 8808-01: 9807-01, 8808-01: 9807-01, 8808-01: 9807-01, 8808-01: 9807-01, 8808-01: 9807-01, 8808-01: 9807-01, 8808-01: 9807-01, 8808-01: 9808-	used in combination with battery pack) (3) BATTERY PACK 9447 (AC adapter has priority when used in combination with battery pack, fast recharge possible with AC adapter)		Memory recorder: 200 µs to 20 ms/division; 7 settings 1 division = 80 samples, time axis compression 1/2 to 1/50; 5 settings	
Continuous operation time Charge time With power swi 8807-01, 8808-01: (printer detached) 8807-01, 8808-01: (printer attached) 8807-01: approx. 1. 8808-01: approx. 1. 8808-01: approx. 1. 8808-01: approx. 1. Supplied accessories Recording and display *2 w. Display method *2Printer paper 112 mm (4.4 in *2Recording width 10 divisions in fi *2Paper feed density *2Recording speed Max. 10 mm/s max. 5 mm/s (Trigger function Trigger source Analog input dexternal, timer AND/OR of st Level: Trigger DOWN dire. Window in/ou by upper or l Voltage drop:	attery (Please contact HIOKI for connection cord).	Sampling period	RMS recorder: 250 μs fixed (800 RMS data/second) Memory recorder: 1/80 of time axis range	
Operation time Approx. 1 hou Charge time With power swi 8807-01, 8808-01 (primer detached) 8807-01, 8808-01 (primer attached) 8807-01 (primer attached) 8808-01 (primer attach	R-01: 15 VA max. (when using optional printer) rs (when using BATTERY PACK 9447)	RMS calculation accuracy	±3% f.s.	
Dimensions and mass (printer detached) 8807-01, 8808-01 (printer attached) 8807-01, 8808-01 (printer attached) 8807-01 (printer attached) 807-01 (printer attached) 8007-01 (printer attached) 8007	rs (when using *1 alkaline batteries) tch OFF, approx. 2 hours fast charge (at 23 °C/73 °F)	Recording length	RMS recorder: 20 to 200 divisions, continuous Memory recorder: 20 to 400 divisions, OFF (only RMS recorder when OFF)	
Supplied accessories Recording and display *2 w. Display method *2Printer paper *2Recording width *2Paper feed density *2Recording speed *2Recording speed *2Recording speed *2Recording speed *3 rows/mm (406 rows/mm (approx. 203 (7.99) W × 170 (6.69) H × 52 (2.05) D mm (inch) : approx. 280 (11.02) W × 170 (6.69) H × 52 (2.05) D mm (inch) 1 kg/ 38.80 oz (printer detached) 1.5 kg/ 52.91 oz (printer attached) 2 kg/ 42.33 oz (printer detached) 1.6 kg/ 56.44 oz (printer attached)	Other functions	Back-scroll of memory data (max. last 200 divisions) and reprinting of stored data (with/ optional printer), for memory recorder: back-scroll of memory data (max. last 400 divisions) and reprinting of stored data (with/ optional printer), logging (numerical printout) (w/ optional printer), voltage axis magnification ×2 to ×10; 3 settings, compression 1/2; 1 setting.	
Recording and display *2 w. Display method \$5.7-inch STN 240 × 320 dots *2Printer paper 112 mm (4.4 in *2Paper feed density *2Paper feed density *2Paper feed density *2Recording speed Max. 10 mm/s max. 5 mm/s (Trigger function Trigger source Analog input (external, timer AND/OR of so Level: Trigger DOWN direct Window in/out by upper or l Voltage drop:	ine batteries ×6, alkaline battery box ×1, strap ×1,	Auxiliary functi	ion	
Display method 5.7-inch STN 240 × 320 dots *2Printer paper 112 mm (4.4 in *2Recording width 10 divisions in f 8 rows/mm (203 16 rows/mm (406 rows) *2Recording speed Max. 10 mm/s max. 5 mm/s (Trigger function Trigger source Analog input (external, timer AND/OR of so Level: Trigger DOWN direct Window in/ou by upper or l Voltage drop:			Printing of settings including input range, trigger time, etc., cursor measurement, scaling, comment input, screen hard copy, start	
240 × 320 dots *2Printer paper 112 mm (4.4 in *2Recording width 10 divisions in f *2Paper feed density 8 rows/mm (203 16 rows/mm (406 rows *2Recording speed Max. 10 mm/s max. 5 mm/s (Trigger function Trigger source Analog input 0 external, timer AND/OR of so Level: Trigger DOWN direct Window in/out by upper or l Voltage drop:	aveform printing when the optional PRINTER UNIT 8992 is used.	General	condition retention, auto setup, auto saving, remote control, auto- range setting, list & gauge printing (with/optional printer), DMM	
**2Recording width 10 divisions in from the state of the	s		function (voltage shown as numerals on the display). Up to four arithmetic operations simultaneously	
*2Paper feed density 8 rows/mm (203 16 rows/mm (406 rows 16 rows/mm (406 rows) *2Recording speed Max. 10 mm/s max. 5 mm/s (Trigger function Trigger source Analog input 0 external, timer AND/OR of so Level: Trigger DOWN direct Window in/out by upper or 1 Voltage drop:	n) × 18 m (59.06 ft), thermal paper roll	Calculation functions (Memory recorder)	Average value, effective (RMS) value, peak to peak value, maximum value, time to maximum value, minimum value, time to minimum value.	
**2Recording speed Max. 10 mm/s max. 5 mm/s (Trigger function Trigger source Analog input (external, timer AND/OR of so Level: Trigger DOWN direct Window in/out by upper or 1 Voltage drop:	full scale, 1 division = 10mm (0.39in) (80pixels) rows/in)	(Memory recorder)	period, and frequency, area, X-Y area.	
Trigger function Trigger source Analog input Cexternal, timer AND/OR of so Level: Trigger DOWN direct Window in/out by upper or Voltage drop:	(0.39 inch/s) (when using AC Adapter),		Display update rate: 1 s, display contents: AC+DC rms (measurement signal is DC, 50/60Hz only), or DC instantaneous value	
Trigger source Analog input (external, timer AND/OR of so Level: Trigger DOWN direct Window in/out by upper or Voltage drop:	0.2 inch/s) (when using batteries)	DMM function	Display digits: 4 digits (last digit 0 to 4 is rounded zero, 5 to 9 is rounded five)	
Trigger source external, timer AND/OR of so Level: Trigger DOWN direw Window in/ou by upper or l Voltage drop:			Voltage range: Auto only (10 mV to 100 V/division, 5 settings) Accuracy: ±3% rdg. ±5dgt.	
Level: Trigger DOWN dire Window in/ou by upper or I Voltage drop:	, manual (either ON or OFF for each source), logical			
DOWN direc Window in/ou by upper or I Voltage drop:		Analog input (a)	ccuracy at 23 ±5 °C/73 ±9 °F after 30 minutes warm-up time; accuracy guaranteed for 1 year	
Voltage drop:	DOWN direction. Window in/out: When entering or exiting a level range defined by upper or lower limit Voltage drop: Only for AC 50/60 Hz power lines. Triggered when the peak voltage falls below setting value RMS level: Only for DC and AC 50/60 Hz power lines. Triggered when rms value crosses set value in UP or DOWN direction (RMS recorder function only) Real-time waveform judgment: Only for AC 50/60 Hz power lines. Trigger function that monitors when a signal exceeds the evaluation area (Memory recorder function only)		Terminal: isolated BNC Inter-channel and input-frame isolation MEM or REC function: 10mV to 100V/DIV, 13 settings PMS recorder function: 5mV to 50V/DIV, 13 settings	
(Analog) RMS level: On			full-scale (f.s.) = 10 divisions, AC voltage for possible measurement / display using the memory function: 450 V AC rms, low-pass filter: 5/500 Hz, the measurement resolution is 1/160 of range	
			400 kS/s (simultaneous sampling of all channels)	
Real-time wav lines. Trigger			±0.5% f.s., DC to 50 kHz ±3 dB	
			1 MΩ, 7 pF approx. (at 100 kHz)	
resolution divisions)		and capacitance Input coupling	DC, GND	
	1 0 on w (diagrams) locical per dest (ANT)	Max. allowable input	450 V AC rms, DC (upper voltage which when applied to between input pins does not damage them)	
Trigger filter 9 settings from OFF (recorder)	: 1, 0, or × (disregard), logical product (AND) or OR) set for 4 channels			
(Analog) RMS level: Or Triggered wild direction (R) Real-time wav lines. Trigger evaluation and divisions) Level setting resolution Trigger types RMS level: Or Triggered wild division (R) Real-time wav lines. Trigger evaluation and divisions) Pattern trigger	AND/OR of sources Level: Triggered when set voltage value is exceeded in UP or DOWN direction. Window in/out: When entering or exiting a level range defined by upper or lower limit Voltage drop: Only for AC 50/60 Hz power lines. Triggered when the peak voltage falls below setting value RMS level: Only for DC and AC 50/60 Hz power lines. Triggered when rms value crosses set value in UP or DOWN direction (RMS recorder function only) Real-time waveform judgment: Only for AC 50/60 Hz power lines. Trigger function that monitors when a signal exceeds the evaluation area (Memory recorder function only) Level setting resolution Trigger types Pattern trigger: 1, 0, or × (disregard), logical product (AND) or		Accuracy: ±3% rdg. ±5dgt. ccuracy at 23 ±5 °C/73 ±9 °F after 30 minutes warm-up time; accuracy guaranteed for 1 Terminal: isolated BNC Inter-channel and input-frame isolation MEM or REC function: 10mV to 100V/DIV, 13 settings RMS recorder function: 5mV to 50V/DIV, 13 settings full-scale (f.s.) = 10 divisions, AC voltage for possible measureme / display using the memory function: 450 V AC rms, low-pass filt 5/500 Hz, the measurement resolution is 1/160 of range 400 kS/s (simultaneous sampling of all channels) ±0.5% f.s., DC to 50 kHz ±3 dB 1 MΩ, 7 pF approx. (at 100 kHz) DC, GND 450 V AC rms, DC	

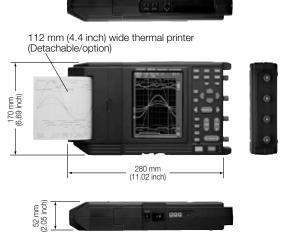
■ Appearance and Dimensions (8807-01 and 8808-01 Instrument-only)



Battery compartment at the rear

LR6/AA alkaline batteries × 6 or 9447 BATTERY PACK × 1

■ Appearance and Dimensions (8807-01 and 8808-01 with printer attached)



Mass: (with 8992 printer attached) 8807-01: Approx. 1.5 kg/59.91 oz 8808-01: Approx. 1.6 kg/56.44 oz

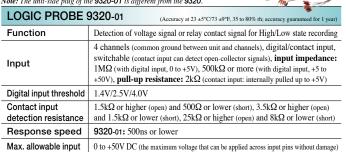
Supplied accessory PC Software Specifications

,				
Wave Viewer (Wv) Software (Application disk CD-R, bundled accessory)				
Functions	Quick display of waveform files Text conversion: Conversion of binary data files to text format, with storage in either CSV or space/tab delimited format. Span specification and data culling available. Display format settings: scroll function, enlarge/reduce display, display CH settings. Other: Voltage trace function, jump to cursor/trigger position function, etc.			
Compatible operating systems	Windows 95/98/Me or Windows NT 4.0 (SP3 or later), 2000, XP			

■ Specifications of Options (sold separately)

Cable length and mass: Main unit cable 1.5 m (4.92 ft), input section cable 30 cm (0.98 ft), approx. 150 g (5.3 oz)

Note: The unit-side plug of the 9320-01 is different from the 9320



Cable length and mass: Main unit cable 1.3 m (4.27 ft), input section cable 46 cm (1.51 ft), approx. 350 g (12.3 oz)



DIFFERENTIAL	PROBE 9322 (Accuracy at 23 ±5°C/73 ±9°F, 35 to 80% rh, after 30 minutes of warm-up time; accuracy guaranteed for 1 year)	
Function	For high-voltage floating measurement, power line surge noise detection, RMS rectified output measurement	
DC mode	For waveform monitor output, frequency characteristics: DC to 10MHz (\pm 3dB), amplitude accuracy: \pm 1% of full scale (at max. 1000V DC), \pm 3% of full scale (at max. 2000V DC) (full scale: 2000V DC)	
AC mode For detection of power line surge noise, frequency characteristics: 1kHz to		
RMS mode	DC/AC voltage RMS output detection, frequency characteristics: DC, 40Hz to 100k Hz, response speed: 200ms or less (400V AC), accuracy: ±1% of full scale (DC, 40Hz to 1kHz), ±4% of full scale (1kHz to 100kHz) (full scale: 1000V AC)	
Input	Input type: balanced differential input, input impedance/capacitance: H-L 9MΩ/10pF, H/L-unit 4.5MΩ/20pF, Max. rated voltage to earth: when using grabber clip 1500V AC/DC (CAT II), 600V AC/DC (CAT III), when using alligator clip: 1000V AC/DC (CAT III), 600V AC/DC (CAT III)	
Maximum allowable input voltage	2000V DC, 1000V AC (CAT II), 600V AC/DC (CAT III)	
Output	Voltage divider for 1/1000 of input, BNC connectors (output switchable for 3 modes DC, AC, RMS)	
Power source	Power terminal of the input units, or use with AC ADAPTER 9418-15 (DC 12V)	

Cable length and mass: Main unit cable 1.5 m (4.92 ft), input section cable 1 m (3.28 ft), approx. 320 g (11.3 oz) Note: The unit-side plug of the 9321-01 is different from the 9321.

LOGIC PROBE	9321-01 (Accuracy at 23 ±5°C/73 ±9°F, 35 to 80% rh; accuracy guaranteed for 1 year)
Function	Detection of AC or DC relay drive signal for High/Low state recording Can also be used for power line interruption detection
Input	4 channels (isolated between unit and channels), HIGH/LOW range switching Input impedance: $100k\Omega$ or higher (HIGH range), $30k\Omega$ or higher (LOW range)
Output (H) detection	170 to 250V AC, ±DC (70 to 250V) (HIGH range) 60 to 150V AC, ±DC (20 to 150V) (LOW range)
Output (L) detection	0 to 30V AC, ±DC (0 to 43V) (HIGH range) 0 to 10V AC, ±DC (0 to 15V) (LOW range)
Response time	Rising edge 1ms max., falling edge 3ms max. (with HIGH range at 200V DC, LOW range at 100V DC)
Maximum allowable input voltage	250Vrms (HIGH range), 150Vrms (LOW range) (the maximum voltage that can be applied across input pins without damage)

WAVE PROCE	SSOR 9335	
Distribution media	One CD-R	
Operating environment	Computer equipped with Pentium (133 MHz) or better CPU and at least 32 MB of memory, and running under Windows 95/98/Me, Windows NT 4.0/2000/XP, or Windows Vista 32-bit type (recommended system: Pentium (200 MHz) or better with at least 64 MB of memory)	
Display functions	Waveform display/X-Y display/digital value display/cursor function/ scroll function/maximum number of channels (32 channels analog, 32 channels logic)/gauge display (time, voltage axes)/graphical display	
File loading	Readable data formats (.MEM, .REC, .RMS, .POW) Maximum loadable file size: Maximum file size that can be saved by a given device (file size may be limited depending on the computer configuration)	
Data conversion	Conversion to CSV format, tab delimited, space delimited/data culling (simple)/convert for specified channel/batch conversion of multiple files	
Print functions	Print formatting (1 up, 2-to-16 up, 2-to-16 rows, X-Y 1-to-4 up) /preview/ hard copy functions usable on any printer supported by operating system	
Other Parameter calculation/search/clipboard copy/launching of applications		



CARRYING CASE 9648 Hard case type, for storing

CARRYING CASE 9391

Soft case type, for storing options Holds more options than the **9648** hard case



8861/8860, 8855, 8807-01/8808-01,

8807-51/8808-51)

(E



08-01"1

LOGIC PROBE 9320-01 LOGIC PROBE 9321-01 4-channel type, for voltage signal ON/OFF detection miniature terminal for use with the

4 isolated channels, ON/OFF detection of AC/DC voltage (miniature terminal for use with the 8861/8860, 8855, 8807-01/8808-01, 8807-51/8808-51)

MEMORY HICORDER 8807-01 (2ch model)

MEMORY HICORDER 8808-01 (4ch model)

Included accessories: LR6/AA Alkaline batteries ×6, Alkaline battery box ×1, Shoulder belt ×1, Application disk ×1



CONVERSION CABLE 9323 Used for connecting the 9320/9321 and 8807 series MEMORY HiCORDERs.

* This cable is not required for the small-terminal types 9320-01 and 9321-01.



RS-232C CABLE 9612 Mini DIN 9-pin - Dsub 9-pin, Cable length 1.5m



(128MB capacity) PC CARD 256M 9727

(256MB capacity) PC CARD 512M 9728 (512MB capacity)

PC CARD 1G 9729

(1GB capacity)



WAVE PROCESSOR 9335 Data conversion, print functions, waveform display, compatible with Windows 95/98/Me, Windows NT 4.0/2000/XP, and Windows Vista

32-bit type.



Use only PC Cards sold by HIOKI. Compatibility and performance are not guaranteed for PC cards made by other manufacturers. You may be unable to read from or save data to such cards.

Current Measurement



4ch (8808-01)



DIFFERENTIAL PROBE 9322
For inputs up to 2kV DC or 1kV AC, the 9322 requires the AC ADAPTER 9418-15 CONNECTION CORD 9197 For up to 500V, 1.5 m length



CONNECTION CORD 9198 For up to 300 V, 1.5 m length



CONNECTION CORD 9217 Insulation BNC-to-insulation BNC, use to connect to insulation-BNC terminal on Input Module

An input cord for measurement use is not provided. Please purchase the optional CONNECTION CORD 9197 or 9198 together with the



LINE SPLITTER CT101A For 100V/ 15A, convenien For 100V/15A, convenient for measuring 100V AC line current with clamp-on probe



CONVERSION ADAPTER 9199 Banana-to-BNC, use to connect to insulation-BNC terminal on Input



BNC terminal

CLAMP ON PROBE 9018-10 Input from 10 to 500A 40Hz to 3kHz for 0.2V AC output.



CLAMP ON PROBE 9132-10 Input from 20 to 1000A 40Hz to 1kHz for 0.2V AC output.



CLAMP ON LEAK HITESTER 3283 For leakage current measurement, includes 10mA to 200A ranges, with analog output of 1V f.s. DC, and waveform monitor output of 1V f.s. AC at 40Hz to 2kHz. Requires the AC ADAPTER 9445-02/-03





PAPER WINDER 220H Paper width: 70 to 220 mm, using special-purpose AC adapter



BATTERY PACK 9447 7.2V, 2400mAh



CHARGE STAND 9643 Independent of main unit the 8714-01/8715-01, use with the AC ADAPTER 9418-15 to charge one Model BATTERY PACK 9447.



AC ADAPTER 9418-15 Universal 100 to 240 V AC, 12 V DC/ 2.5 A output

 The units can be operated using the supplied LR6/AA alkaline batteries but use of the optional AC ADAPTER 9418-15 or BATTERY PACK 9447 (the AC ADAPTER 9418-15 is necessary for recharging) is recommended. Manganese batteries cannot be used. Use of commercially available rechargeable batteries instead of the original battery pack may result in damage to the unit.

■ Combination example: 2-channels, with printer

	Main unit	Printer	Paper	AC Adapter	Battery pack	Input cord
Model number ×	8807-01×1	8992×1	9234×1 (10 rolls)	9418-15×1	9447×1	9198×2

■ Combination example: 4-channels, with printer

	Main unit	Printer	Paper	AC Adapter	Battery pack	Input cord
Model number × quantity	8808-01×1	8992×1	9234×1 (10 rolls)	9418-15×1	9447×1	9198×4

-||()| HIOKI E.E. CORPORATION

PRINTER UNIT 8992 Printing width 100 mm, used together with the 8807-01, 8808-01 main body

RECORDING PAPER 9234

18 m/ 59.06 feet lengt 10 rolls/ 1 set

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