HIOKI

MEASUREMENT GUIDE

8807-01
8808-01
8807-51
8808-51

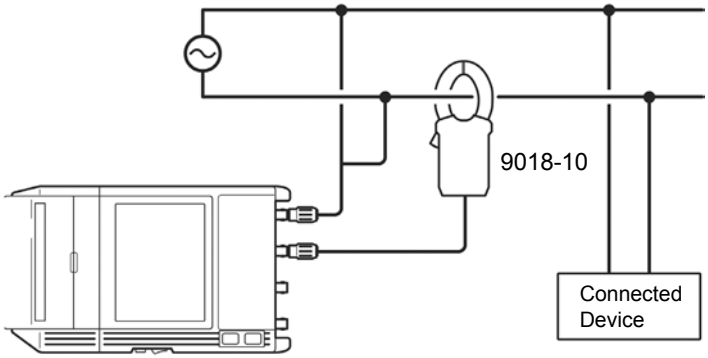
MEMORY HiCORDER

HIOKI E. E. CORPORATION

Measurement Guide

This Measurement Guide provides examples of settings for actual measurements using the 8807-01, 8808-01, 8807-51, 8808-51. The Guide provides only the minimum required information: please read the Operating Manual for usage in particular applications, and the notes about the measurement operations, before beginning to measure.

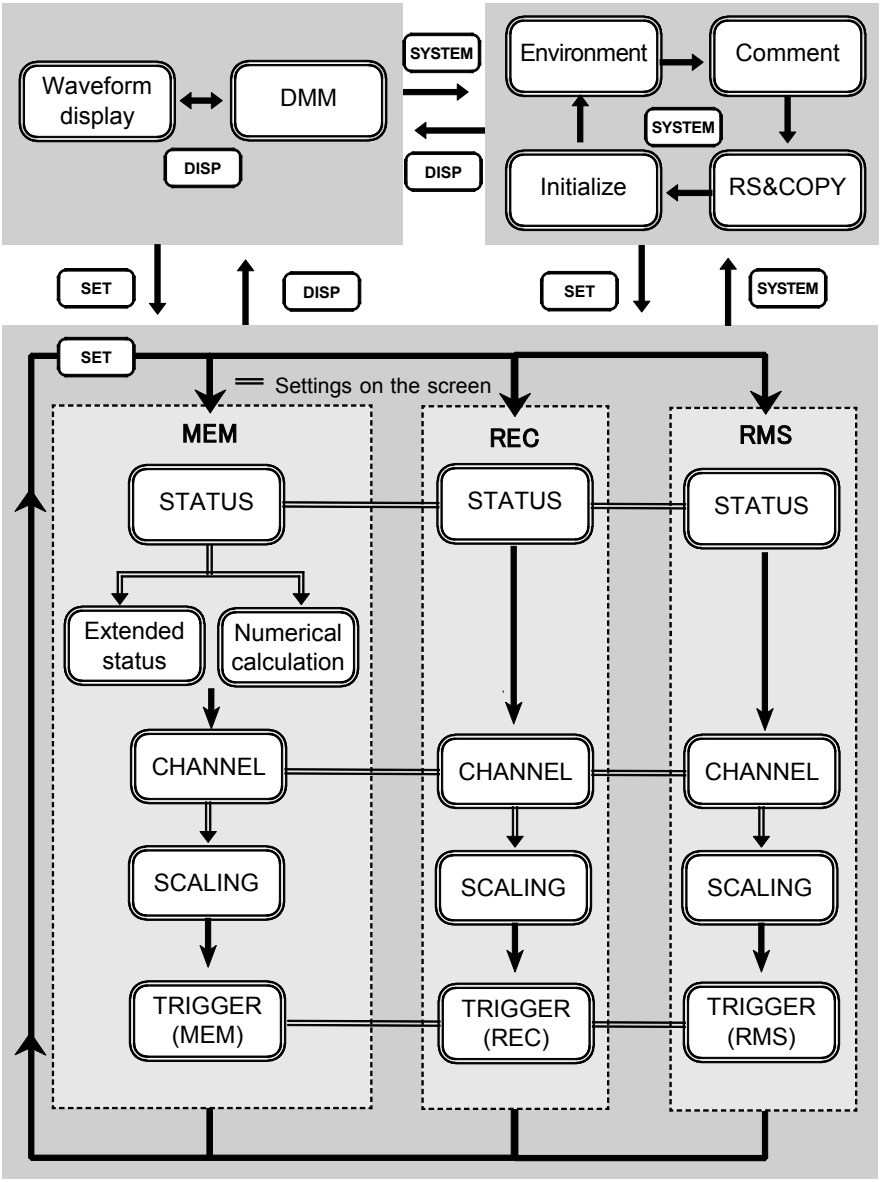
The following three examples are provided:
(1) Measuring the voltage waveform of a 220 V AC source (Memory Recorder Function)
(2) Measuring the RMS voltage of a 220 V AC source (RMS Recorder Function)
(3) Measuring a current waveform using the 9018-10 (Memory Recorder Function)



Measurement Example Wiring Diagram

NOTE The printer cannot be used with alkaline batteries: use either the 9418-15 AC ADAPTER or 9447 BATTERY PACK when using the printer.

Screen Configuration

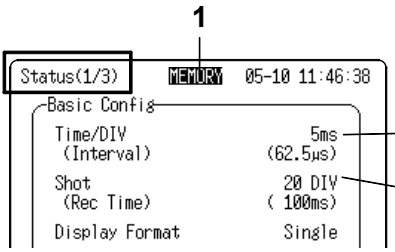


(MEM): Memory recorder function/ (REC): Recorder function/
(RMS): RMS recorder function

(1) Measuring the Voltage Waveform of a 220 V AC Source (Memory Recorder Function)

This example describes how to measure the voltage waveform of a 220 V AC (50 Hz) commercial power source using the Memory Recorder function.
Move the flashing cursor using the cursor keys (◁△▽▷), and use the ▲ and ▼ keys to make a setting.

1. Press the SET key to display the Status screen.

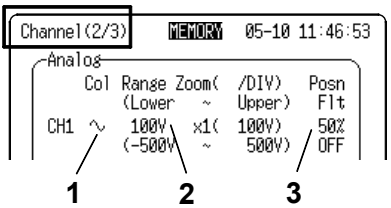


SYSTEM SET DISP

1. Function: **MEMORY**
2. Time axis range: **5 ms**
3. Shot: optional setting

2. Press the SET key to display the Channel screen.

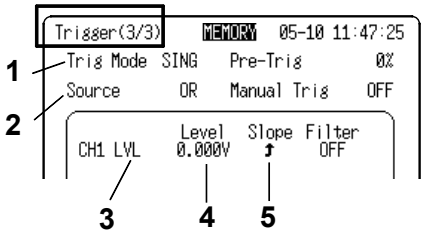
SYSTEM SET DISP



Settings for Channel 1 (CH1)

1. Waveform color ∿ : optional setting
2. Voltage axis range: **100 V** (The waveform peak value of 220 Vrms is approximately ±311 V.)
3. Zero position: **50 %** (Set the center of the screen to 0 V)

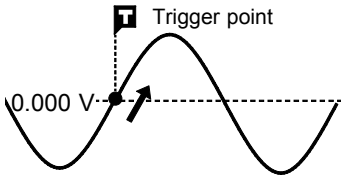
3. Press the SET key to display the Trigger screen.



Settings for Channel 1 (CH1)

1. Trigger mode: **SING** (single) (input the waveform once)
2. Trigger source: **OR**
3. Trigger type: **LVL** (Level)
4. Trigger level: **0.000 V**
5. Slope: ⤴ (rising)

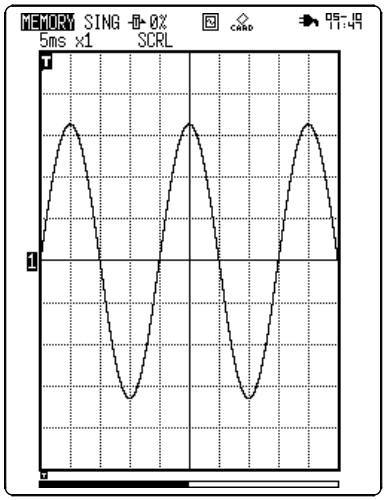
Trigger Setting
The trigger activates at the rising zero crossing (0.000V)
(Measurement is started.)



Start Measurement

Press the START key to start measurement. The unit remains in the Trigger Waiting Condition until the trigger condition occurs. When the trigger occurs, the waveform is input for the set recording length.

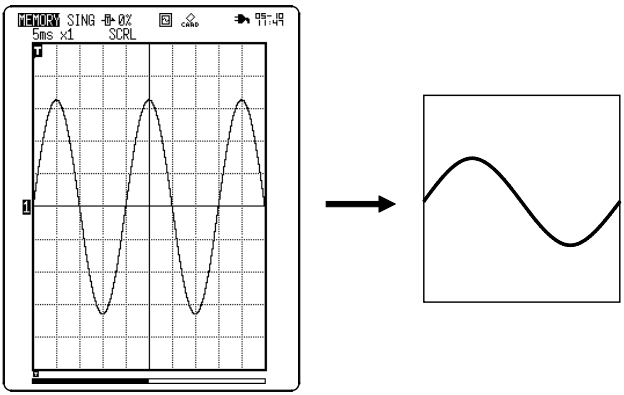
Waveform Display



When input is finished, the waveform appears on the Waveform Display screen.

Waveform Print

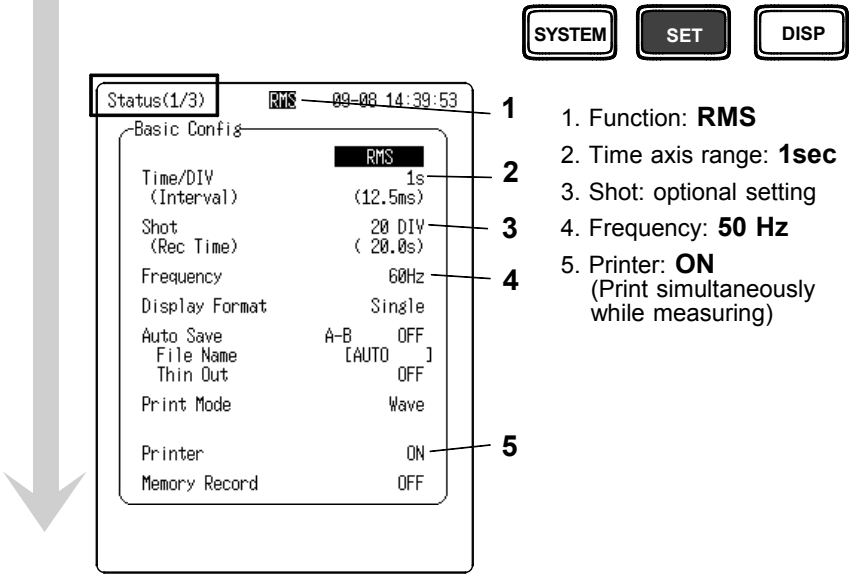
Press the PRINT key to print out.



(2) Measuring the RMS Voltage of a 220 V AC Source (RMS Recorder Function)

This example describes how to measure the voltage waveform of a 220 V AC (50 Hz) commercial power source using the RMS Recorder function.
Move the flashing cursor using the cursor keys ◁△▽▷ and make a setting using the ▲ and ▼ keys.

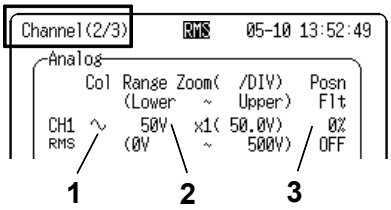
1. Press the SET key to display the Status screen.



1. Function: **RMS**
2. Time axis range: **1sec**
3. Shot: optional setting
4. Frequency: **50 Hz**
5. Printer: **ON**
   (Print simultaneously while measuring)

2. Press the SET key to display the Channel screen.

SYSTEM SET DISP

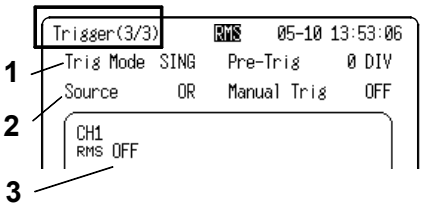


Settings for Channel 1 (CH1)

1. Waveform color ∿ : optional setting
2. Voltage axis range: **50 V** (Measured by 50 Vx10 DIV)
3. Zero position: **0%** (Set the bottom of the screen to 0 V)

3. Press the SET key to display the Trigger screen.

SYSTEM SET DISP



Settings for Channel 1 (CH1)

1. Trigger mode: **SING**(single) (input the waveform once)
2. Trigger source: **OR**
3. Trigger type: **OFF**

Trigger setting

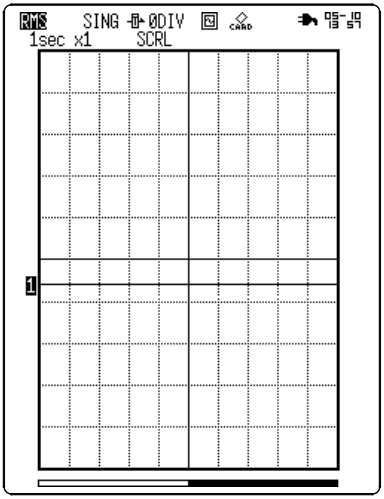
When the trigger type is set to OFF, measurement starts simply by pressing the START key.

Start Measurement

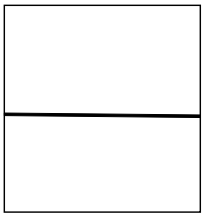
START STOP

Press the START key to start measurement. Waveform input starts for the set recording length. Printing starts at the same time.

Waveform Display and Print



When measurement starts, the waveform is displayed and printed at the same time.



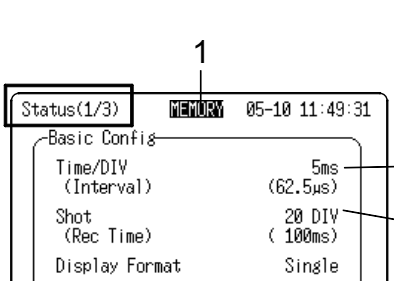
NOTE

- When operating from the AC adapter, real-time printing requires that the time axis range be no faster than 1 s/DIV.
- When operating from the Battery Pack, real-time printing requires that the time axis range be no faster than 2 s/DIV.

(3) Measuring a Current Waveform Using the 9018-10 (Memory Recorder Function)

The 8807-01, 8808-01, 8807-51, 8808-51 MEMORY HiCORDER can measure only voltage by itself, but when connected with the 9018-10 CLAMP ON PROBE, it can also measure current.

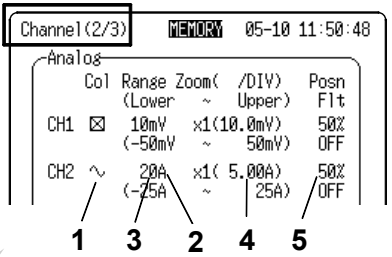
1. Press the SET key to display the Status screen.



SYSTEM SET DISP

1. Function: **MEMORY**
2. Time axis range: **5 ms**
3. Shot: optional setting

2. Press the SET key to display the Channel screen.



SYSTEM SET DISP

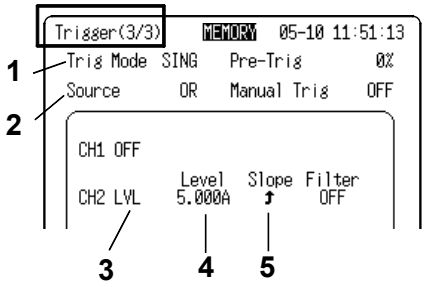
Settings for Channel 2 (CH2)

1. Waveform color ∿ : optional setting
2. Input coupling: **CLAMP** (unit: A)
3. Voltage axis range: Set the range to correspond with the current range of the 9018-10 Example: 20 A
4. Current value for one division (along the measurement axis range)
5. Zero position: **50%** (set the center of the screen to 0 A.)

When changing the current range of the 9018-10 CLAMP ON PROBE, be sure to also change the voltage axis range of the 8807-01, 8808-01, 8807-51, 8808-51 to correspond to the new range. If the ranges of the two units do not correspond, incorrect values are displayed.

3. Press the SET key to display the Trigger screen.

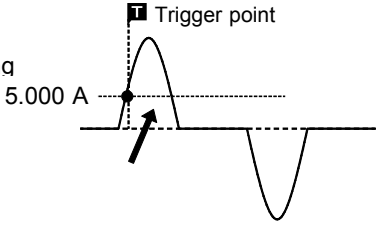
SYSTEM SET DISP



Settings for Channel 2 (CH2)

1. Trigger mode: **SING** (single) (input the waveform once)
2. Trigger source: **OR**
3. Trigger type: **LVL**(Level)
4. Trigger level: **5.000 A**
5. Slope: ⊥↑(rising)

Trigger Setting
The trigger activates at the rising 5.000A crossing.
(Measurement is started.)

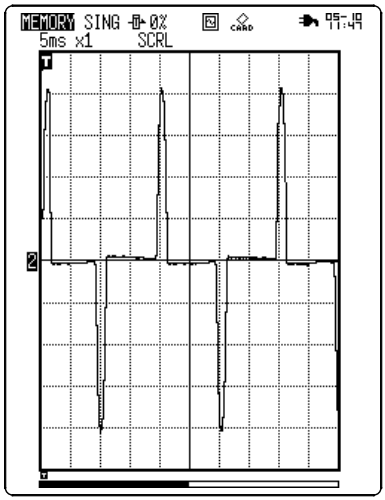


Start Measurement

START STOP

Press the START key to start measurement. The unit remains in the Trigger Waiting Condition until the trigger condition occurs. When the trigger occurs, the waveform is input for the set recording length.

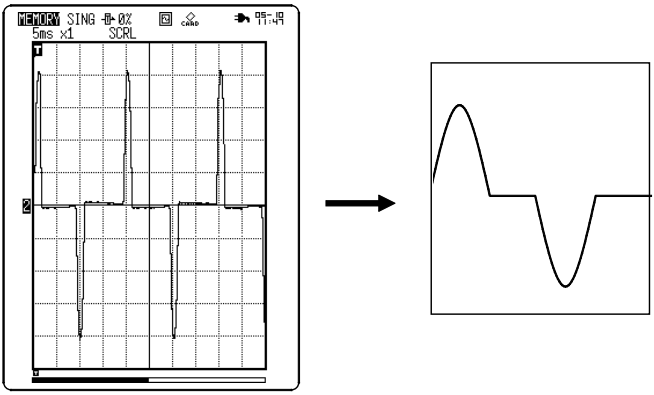
Waveform Display



When input is finished, the waveform appears on the Waveform Display screen.

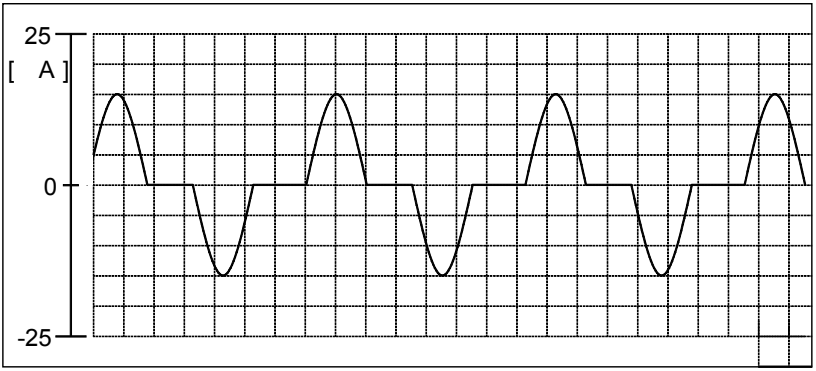
Waveform Print

Press the PRINT key to print out.



Printing Example

When the List&Gauge setting is set to "Gauge" or "List&Gauge" on the Environment screen, the gauge is printed with the waveform. The gauge is displayed as 'A' (Amperes) with the input coupling settings in effect.



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