

# Automotive Testing Solution

Cars, Motorcycles, Bus, Truck



**HIOKI**



ISO 9001  
JMI-0216



ISO 14001  
JQA-E-90091

- **MR8875 Wave Recorder**  
(for Engine, Clutch & Transmission, ECU/CAN)
- **LR8400-20 Data Logger**  
(for Powertrain Test Bench & Running Tests)
- **3390 Power Analyzer**  
(for Motor Control: Electric & Hybrid Electric Vehicles)
- **PW3198 Power Quality Analyzer**  
(for Production Plants: Power Quality & Energy Saving Solutions)

# Powertrain and Road Tests

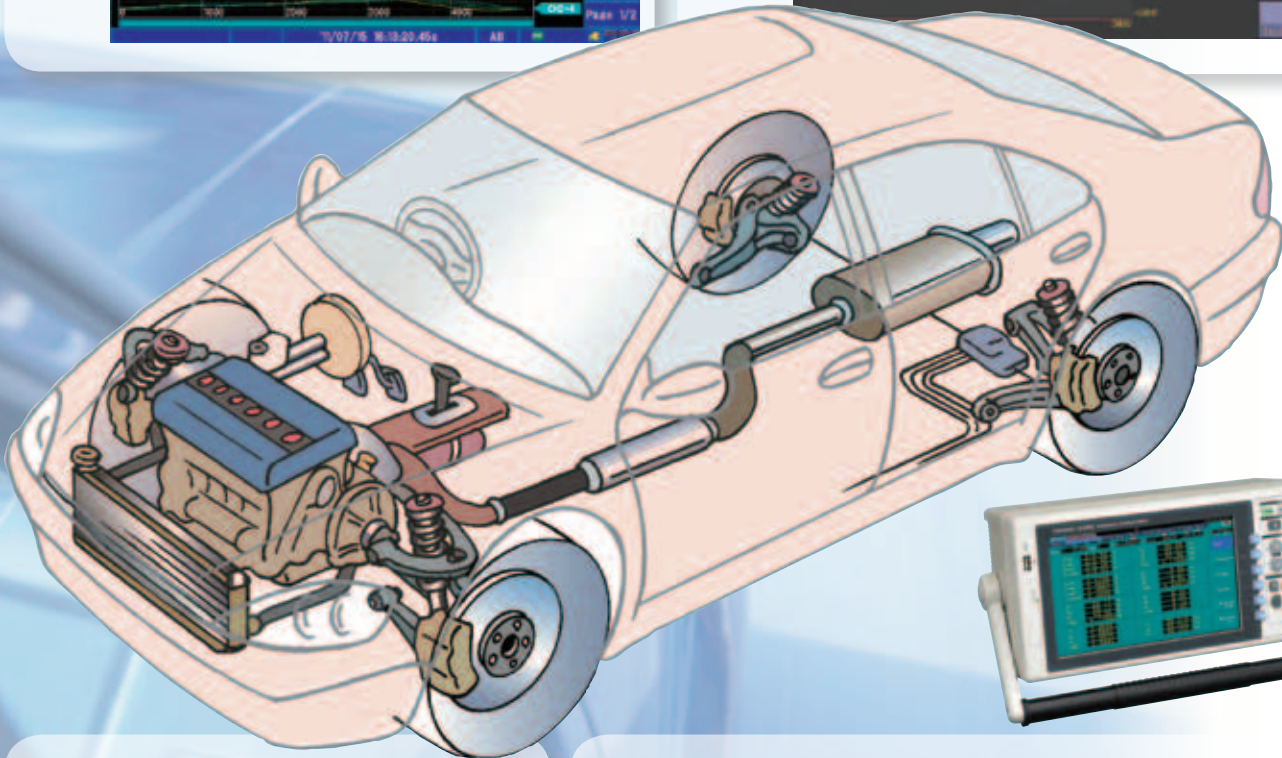
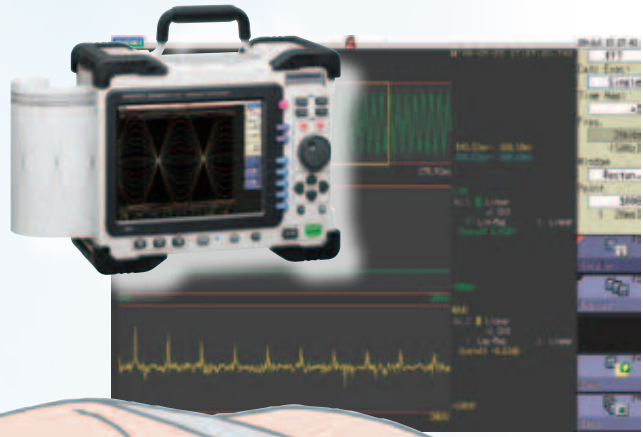
## MEMORY RECORDER: MR8875

Powertrain Tests: Engine, Clutch and Transmission  
 Engine: Temperature, Pressure, Strain (Metallic Distortion),  
 Rotation  
 Test Bench, Chassis Dynamo Tests and Road tests CAN  
 (Controller Area Network) Data Recording



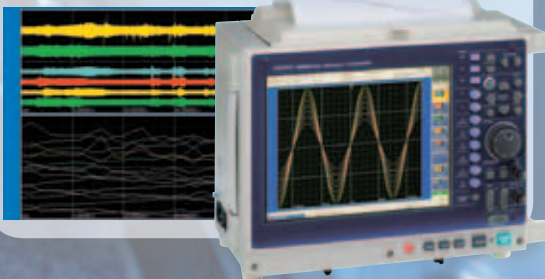
## MEMORY RECORDER: MR8847-01/02/03

ECU (Engine Control Unit), Electrical Components  
 Brake, Damper and Shock Absorber  
 Power Window, Starter Motor and Alternator  
 Fuel refueling (Flow rate, Electronic Control Logic Timing)

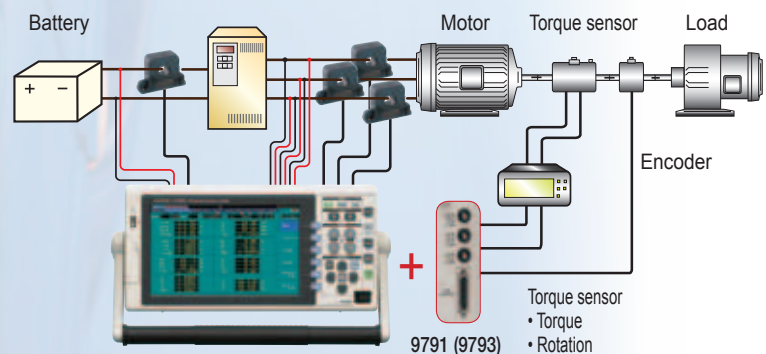


## MEMORY RECORDER: 8860-50, 8861-50

EV/PHV/FC (Electric Vehicle, Plug-in Hybrid  
 Vehicle, Fuel Cell CAR)  
 AT Car (Automatic Transmission), Electronic  
 Control Logic Timing  
 ABS (Anti-lock brake system)  
 Ignition Coil & Distributor (Voltage & Current  
 Wave Recording)



## POWER Analyzer: 3390/3390-10

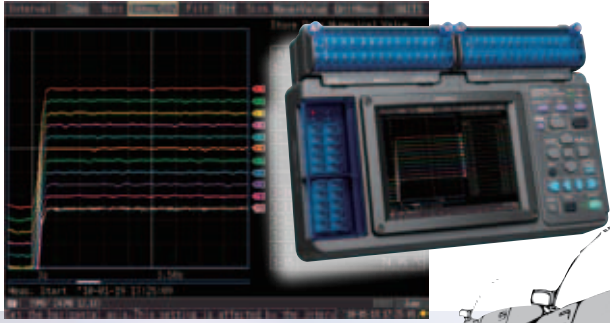


EV/PHV (Electric Vehicles, Plug-in Hybrids, Fuel Cell Cars)  
 Motor Performance Test (V/A/W/Torque/ Rotation)  
 Inverter Performance Test (V/A/W and Effects=Output Power/Input Power)

# Electrical Components & Production plants

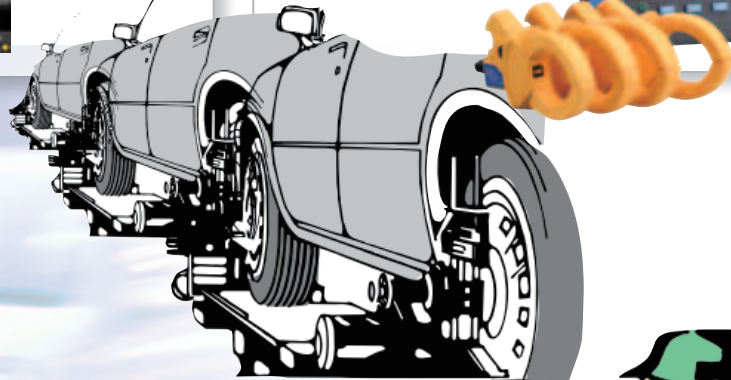
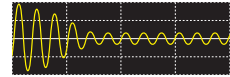
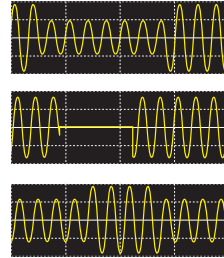
## DATA LOGGER: LR8400 Series

Powertrain Tests (Engine, Clutch and Transmission)  
 Test Bench, Chassis Dynamo Test and Road tests  
 Temperature, Pressure, Strain (Metallic Distortion),  
 Rotation  
 Long-term Recording of Slow Phenomena



## POWER QUALITY ANALYZER: PW3198

Production plants and processes  
 Observe power malfunctions  
 Monitor for voltage swells and dips, transient over-voltages  
 and interruptions  
 Harmonics to the 50th order, inrush current, waveform recording



## BATTERY TESTER: 3554/BT3563

Batteries (Lead-Acid Battery, Ni-cd Battery,  
 Lithium ion Battery, Fuel cell)  
 Internal resistance measurement (1kHz-AC)  
 Measure the deterioration state of batteries  
 with the 3554 (lead-acid batteries only)



## LCR Meter: IM3570

Parts inspections (electronic components and functional parts)  
 Shipment Checks (resistance, capacitance, inductance and  
 impedance)  
 Mechanical component inspections (harnesses, relays, switches, etc.)  
 Fuel Cell Performance Tests: Cole-Cole Plot



## Memory Recorders



LAN  
USB<sub>2.0</sub>

### MEMORY HiCORDER MR8875

16ch (ANALOG) + 8ch (Logic)  
500k Sampling/s, CAN support  
Touch screen operation



USB<sub>2.0</sub>

### MEMORY HiCORDER MR8880-20

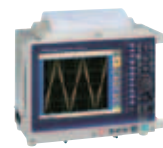
4ch (Analog) + logic 8ch  
1 M Sampling/s, (All channels isolated)  
Optional printer



LAN  
USB<sub>2.0</sub>

### MEMORY HiCORDER MR8847-01/02/03

16ch (Analog) + 16ch (Logic)  
20M Sampling/s  
Built-in printer

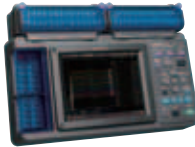


LAN  
USB<sub>2.0</sub>

### MEMORY HiCORDER 8860-50

16ch (Analog) + 16ch (Logic)  
Scanner Unit 64ch  
20M-Sampling/s

## Data Loggers



LAN  
USB<sub>2.0</sub>

### MEMORY HiLOGGER LR8400 Series

30ch to 60ch isolated input  
DC voltage/ Temperature, Thermocouple  
or Platinum sensor/ Humidity/ Cumulative pulses



USB<sub>2.0</sub>

### MEMORY HiLOGGER LR8431-20

10 ch isolated input  
DC voltage/ Temperature with Thermocouple  
or Cumulative pulses/ Rotation measurement

## Clamp Meter



### CLAMP ON AC/DC HiTESTER 3285

True RMS  
For AC/DC measurement

200/ 2000 A range  
DC/ AC/ AC+DC mode  
Peak value at inrush current

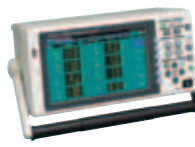


### DIGITAL MULTIMETER DT4282

True RMS  
Multi-function model  
High-accuracy type

60,000 count display  
DC+AC voltage, Frequency counter  
Capacitance, Temperature measurement

## Power Analyzers



LAN  
USB<sub>2.0</sub>  
RS-232C  
True RMS

### POWER ANALYZER 3390

Measure inverter equipment and analyze motors  
4ch/ Clamp input  
DC, or Single-phase to 3-phase 4-wire  
Wide-band DC, 0.5Hz to 150kHz



LAN  
RS-232C  
GP-IB  
True RMS

### POWER METER PW3337 series

3 ch input, DC, or 1P2W to 3P3W, or 3P4W  
1000 V, 65 A max. input, DC or 0.1 Hz to 100 kHz  
±0.1% basic accuracy  
Harmonic measurement up to 50th order

## Power Quality Analyzers



LAN  
USB<sub>2.0</sub>  
RS-232C  
True RMS

### POWER QUALITY ANALYZER PW3198

Class A Power Quality Analyzer  
Monitor and record the quality of power  
3 phase 4-wire + additional input (AC/DC 1ch)  
(Clamp input)



USB<sub>2.0</sub>  
True RMS

### POWER QUALITY ANALYZER 3197

Monitor and record the quality of power  
Single phase 2-wire to 3 phase 4-wire  
(Clamp input)  
Compact & lightweight

## Environmental Measuring Instruments



RS-232C  
True RMS

### CLAMP ON POWER HiTESTER 3169-20/21

Designed for 50/60 Hz commercial line use  
Save demand value to the PC card continually  
(Model 3169-21: with D/A output)



IEC 61672-1  
2002 Class2

### SOUND LEVEL METER FT3432

Simple operation-no range switching needed  
Compact, lightweight design  
30dB to 130dB, Analog output



### INFRARED THERMO HiTESTER 3419-20

Surface temperature measurement type  
Ø125mm at a 1m distance  
-35.0 °C to 500.0 °C (Laser marker)



### TACHO HiTESTER FT3405/ FT3406

500mm non-contact detection distance  
0.5 r/sec to 99990 r/min  
Drop proof (1m onto concrete surface)

## Component Testing Instruments



LAN  
USB<sub>2.0</sub>  
GP-IB  
RS-232C

### IMPEDANCE ANALYZER IM3570

|Z|, L, C, R testing, Measuring time: 0.5 msec  
Testing source frequency: 4 Hz to 5 MHz  
(Measure LCR and conduct frequency sweeps simultaneously)



USB<sub>2.0</sub>

### RESISTANCE METER RM3548

Basic accuracy: 0.02%, Max. resolution: 0.1 µΩ  
Measure from 0.0 µΩ (testing current 1 A) to 3.5 MΩ  
Easily record up to 1,000 data points in memory



GP-IB  
BT3562-01  
BT3563-01  
RS-232C

### BATTERY HiTESTER BT3562/ BT3563

The Perfect Battery Tester  
Testing source AC 1kHz  
Battery Packs up to 300V (BT3563)  
Finest resolution 0.1µΩ and 10µV



USB<sub>2.0</sub>

### BATTERY HiTESTER 3554

For check battery deterioration  
Testing source AC 1kHz  
Finest resolution 1µΩ

# HIOKI

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