HIOKI

2004

# 8910 CAN ADAPTER

Recorders


CE

## Use your own recorder for

# CAN Signal Visualization

CAN (Controller Area Network) is a serial data communications bus standard for transferring sensor data and control signals within vehicles during development or inspection.

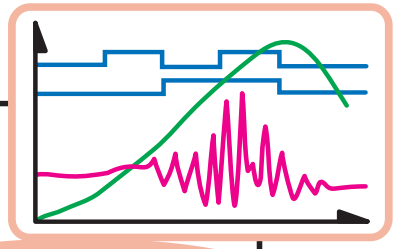
The **8910 CAN ADAPTER** allows you to freely select signals on the CAN bus for conversion to analog and logic signals for recording and monitoring. Via the real-time output, monitor CAN signals on your own MEMORY HiCORDER or other data recorder. By using it with a recorder, you can capture and store CAN sensor data and control signals along with signals acquired from non-CAN-bus devices.

ISO14001
JQA-E-90091

INTERNET HIOKI Website http://www.hioki.co.jp/

HIOKI company overview, new products, environmental considerations and other information are available on our website.

# Record combinations of



CAN Data Monitoring

CAN Data Recording

Mixed Recording:
Mechanical + Control

Mechanical Data

Output from various sensors such as strain gauges, vibration pickups and pressure sensors

MEMORY HiCORDER

or

Your existing **data logger** or other recorder

Various MEMORY HiCORDER Input Units

Analog Outputs (-5 to +5 V)

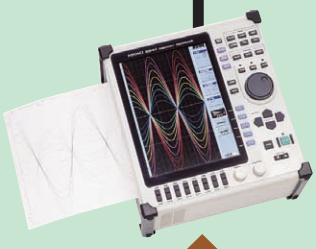
Logic Outputs (0/5 V)

Output of acquired CAN data after D/A conversion


8910
CAN ADAPTER

RS-232C

RS-232C



PC Card

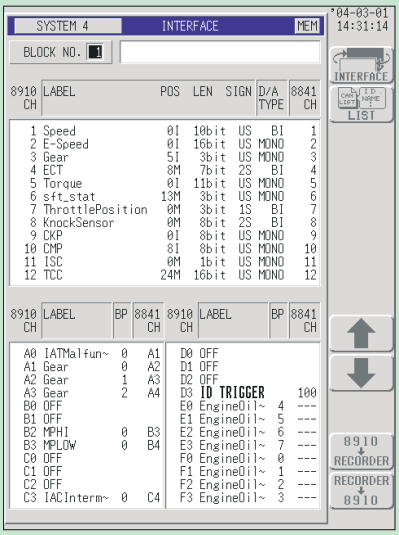
MO disc Floppy diskette

Settings for the 8910 stored on floppy diskette, PC Card or MO discs by a PC can be loaded by a MEMORY HiCORDER.

## CAN Setup Function
## (Supplemental Function for MEMORY HiCORDERs)

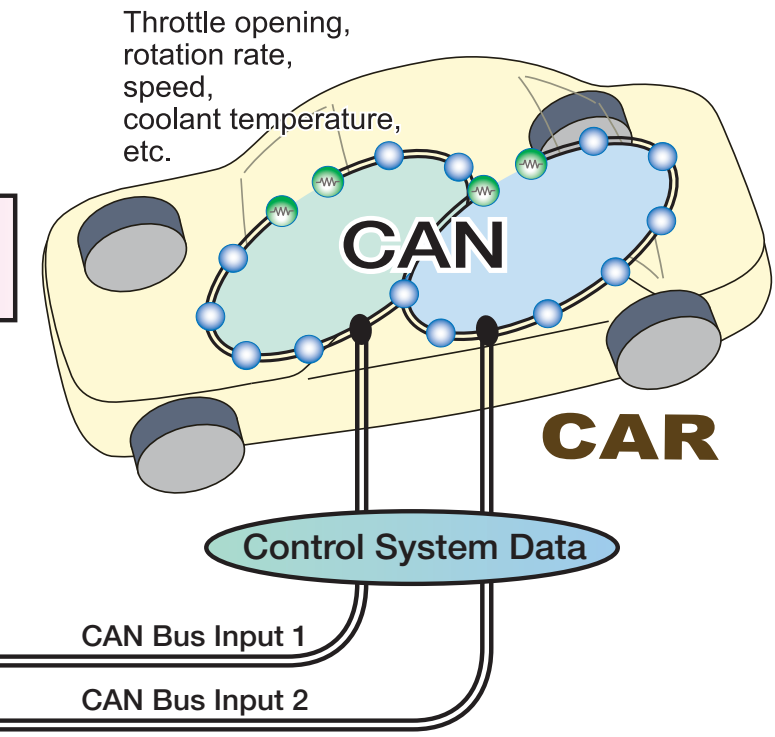
By connecting a Model 8841, 8842 or 8826 MEMORY HiCORDER to the **8910 CAN ADAPTER** via RS-232C, the output channel and other settings can be made simply from the MEMORY HiCORDER screen.

In addition, scaling and units can be set automatically by loading setting data for the **8910** from storage media (floppy diskette, PC Card or MO disc) or via RS-232C.




CAN Setup Function Screen
(on Model 8841 MEMORY HiCORDER)

# CAN bus data and other signals




## Features of the 8910 CAN ADAPTER

### ●Easily monitor a variety of CAN data

The **8910 CAN Adapter** allows you to freely select signals on the CAN bus for conversion to analog and logic signals.

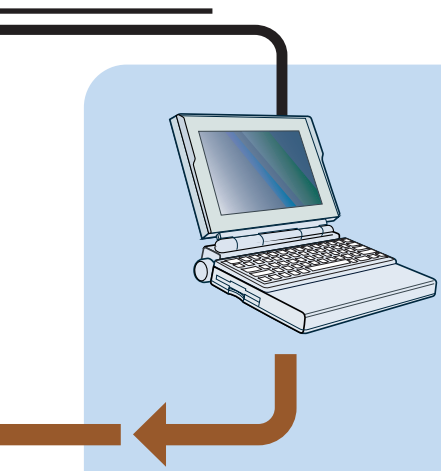
### ●Monitor CAN signals on your existing MEMORY HiCORDER or similar recorder

The **8910 CAN Adapter** provides your selected CAN signals as analog (-5 to +5 V) or logic (0/5 V) outputs in real time. You can monitor CAN signals simply using your existing MEMORY HiCORDER or other data recorder.

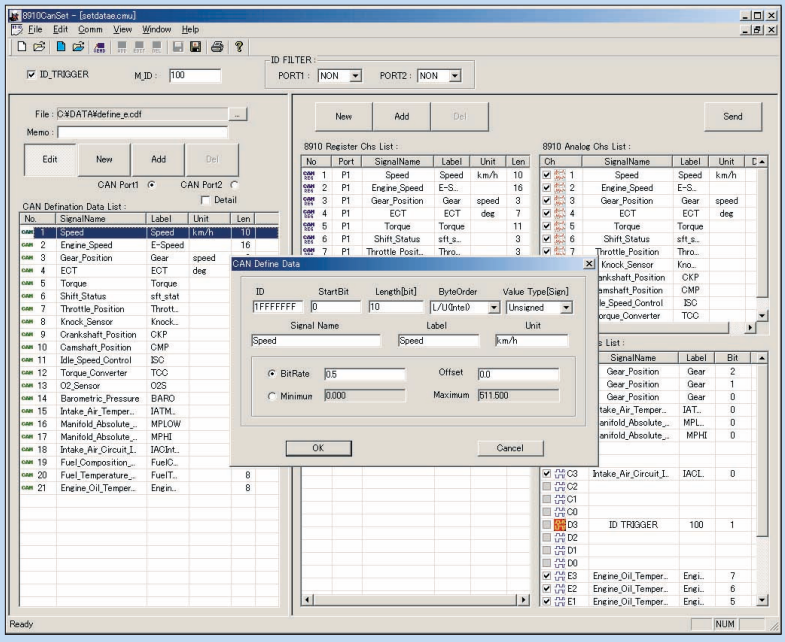
### ●Record combinations of CAN bus sensor data and control signals along with signals acquired from non-CAN-bus devices

To verify proper engine response and to evaluate ECUs, control signals and mechanical functions need to be recorded simultaneously. With the **8910 CAN Adapter**, you can record combinations of sensor data or control signals on the CAN bus and signals acquired from non-CAN-bus devices.

## CAN Set Program (PC Software Application)



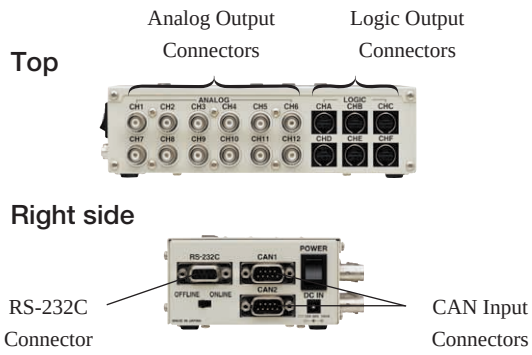
You can select CAN definition data and output channels using the CAN Set Windows application running on a PC. Setting data can also be sent via RS-232C to the **8910 CAN Adapter** at the touch of a button.



CAN Set Screen (PC Software Application)

## ■Specifications

| 8910 CAN ADAPTER General Specifications | (Accuracy specified at 23±5°C, 30 minutes after power on, guaranteed for one year) |
|---|---|
| CAN Input | Two CAN channels (listen-only) |
| CAN Protocol | CAN vers. 2.0B (Standard/Extended formats) |
| CAN Communication Speeds | 125k, 250k, 500k and 1Mbps, High-Speed CAN (ISO 11898) |
| Output Channels | 12 Analog + 6 Logic (24 bits) |
| Output Resolution | 16 bits |
| Output Voltage | -5 to +5 V (Analog), 0/5 V (Logic) |
| Output Accuracy | ±0.1% f.s. |
| Response Speed | 1 ms or less (single-capture ID [with at least 3 ms output interval], with the same ID assigned to all analog and logic channels, and with ID filter on; the time from receipt of a CAN message until all analog and logic output is completed) |
| Interface | RS-232C (status settings) |
| Ambient Environment (non-condensating) | Operating Temp & Humidity: -10 to 55°C, 30 to 80% RH<br>Storage Temp & Humidity: -20 to 70°C, 10 to 90 % RH |
| Applicable Standards | **Safety**: EN61010; **EMC**: EN61326 |
| Power Supply | (1)Model **9418-15** AC Adapter (supplies 12V DC / 2.5A from 100 to 240V AC mains)<br>(2)10 to 30V DC (may be obtained from vehicle)<br>(3)Obtain 10 to 30V DC from CAN input connector |
| External Dimensions | Approx. 180W × 50H × 100D mm |
| Weight | Approx. 940 g |
| Setup Software | (1) CAN Set Program (PC software application)<br>(2) CAN Setup Function (supplemental function for MEMORY HiCORDERs) |
| Supplied Accessories | **9418-15** AC Adapter (1), RS-232C Cable (1),<br>**9713-01** CAN Cable (1),<br>CD-R [CAN Set Program, CAN Setup Function] (1) |
| **Functional Specifications** | |
| Settings | (1)CAN definition data setup (various parameter settings for capturing data from the CAN bus)<br>(2)CAN input port selection<br>(3)Output channel setup (select channels to output captured CAN data), etc. |
| Setting Methods | (a)Above settings [(1) to (3)] can be made from the CAN Set program<br>(b)Above settings (3) can be made from the **8910** itself or a MEMORY HiCORDER |
| Scaling | Only linear function supported (at the MEMORY HiCORDER side) |




| CAN Set Program (PC software application) | |
|---|---|
| Supported Model | 8910 CAN ADAPTER |
| Supplied Media | One CD-R |
| Operating System Environment | Windows 95, 98, Me, NT4.0 (SP3 or later), 2000, XP |
| Settings | CAN definition data, CAN input ports, output channels, ID trigger, ID filter, etc. |
| Communications | 8910: RS-232C,<br>MEMORY HiCORDER: Media (floppy diskette, PC Card, MO disc) |
| Saving | Saves CAN definition data and 8910 setting data |

| CAN Setup Function (Supplemental Function for MEMORY HiCORDERs) | |
|---|---|
| Supported Recorder Models | Model 8826, 8841, 8842* MEMORY HiCORDERs |
| Settings | Output channels, MEMORY HiCORDER channels, D/A conversion format, logic bit assignments |
| Communications | 8910: **Model 9557 RS-232C CARD** (PC Card)<br>PC: Media (floppy diskette, PC Card, MO disc) |
| Saving | Six blocks of 8910 setting data can be saved in the backup memory of a MEMORY HiCORDER |

* MEMORY HiCORDERs currently in use can be upgraded to support the 8910. Use the accessory CD supplied with the 8910 for the upgrade.

## Ordering infomation

### 8910 CAN ADAPTER

#### ●Compatible MEMORY HiCORDERs (capable of making settings on the 8910)

**8841 MEMORY HiCORDER** (use with input units sold separately)
**8842 MEMORY HiCORDER** (use with input units sold separately)
**8826 MEMORY HiCORDER** (use with input units sold separately)

#### ●Compatible MEMORY HiCORDERs (waveform recording only)

**8807-01/51 MEMORY HiCORDER**
**8808-01/51 MEMORY HiCORDER**
**8835-01 MEMORY HiCORDER** (use with input units sold separately)
**8852 MEMORY HiCORDER**
**8852-01 MEMORY HiCORDER**
**8855 MEMORY HiCORDER** (use with input units sold separately)
**8720 VISUAL HiCORDER** (use with input units sold separately)

#### ●Optional accessories

**9713-01 CAN CABLE** (unprocessed on one end, included accessory)
**9713-02 CAN CABLE** (for automobile connectors)
*manufactured upon order; please inquire with your local distributor regarding specifications and delivery
**9714-01 LOGIC CABLE** (unprocessed on one end)
**9714-02 LOGIC CABLE** (use to connect to MEMORY HiCORDER)
**9165 CONNECTION CORD** (Metal BNC-to-metal BNC)
**9217 CONNECTION CORD** (Insulated BNC-to-insulated BNC, use to connect to insulated-BNC terminal on MEMORY HiCORDER input units)
**9557 RS-232C CARD** (compliant with the PCMCIA standard, for MEMORY HiCORDER)

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