# ΗΙΟΚΙ

**INSTRUCTION MANUAL** 

# 9536-11 UTILITY DISK

HIOKI E.E. CORPORATION

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# **Request for Return of User Registration Card**

The 9536-11 UTILITY DISK is provided with a software license agreement.

You may only use this product if you agree to be bound by the terms and conditions of this agreement. Please read the following software license agreement and return the user registration card to HIOKI. As a licensed registered owner of this product, you are entitled to receive software support and upgrade notices. Even if you do not return the registration card, by opening the package, you are consenting to be bound by the software license agreement.

The user registration card is not valid for products sold by distributors outside of Japan. Users outside of Japan should refer to the distributor from whom they purchased the product for product support.

### Software License Agreement

### (1) Applicability

The following terms and conditions apply to the 9536-11 UTILITY DISK you purchased from HIOKI.

### (2) Consent of use

- 1. The 9536-11 may only be used under the supervision of a registered owner of this product.
- 2. The product may only be used on a single computer at one time.
- 3. The product may not be transferred, sold or leased under any circumstances.
- 4. The product may be copied onto a program disk solely for back-up purpose provided HIOKI's copyright notice is also reproduced.
- 5. Production, transfer, sale or lease of copyrighted material produced using the 9536-11 without written permission from HIOKI is prohibited.
- 6. Quotations from the 9536-11 may not be published without prior consent from HIOKI. Use of the trademark "HIOKI" is prohibited.
- 7. This agreement does not authorize the use of any software made by other companies. Authorization for use of each company's software must be obtained separately.

### (3) Limited Warranty

- 1. Specifications of this product are subject to change without notice. Information on revisions to the 9536-11 is provided to licensed registered users for one year from the date of registration.
- 2. In no event will HIOKI be responsible for any outcome resulting from the use of this software.
- 3. HIOKI will provide a replacement for this product in the event that it cannot be used due to a serious physical defect, such as erasure or physical damage. This is the full extent of HIOKI's warranty regarding the product.

### (4) Term of Agreement

This agreement is effective from the date of purchase. (The date of purchase is indicated on the user registration card.)

# Introduction

Thank you for purchasing this HIOKI "9536-11 UTILITY DISK." To get the maximum performance from the unit, please read this manual first, and keep this at hand.

# Notes on Use

In order to ensure safe operation and to obtain maximum performance from the unit, observe the cautions listed below.

	<ul> <li>Do not drop or bend floppy disks, or subject them to other strong shocks.</li> <li>Do not leave floppy disks in direct sunlight, near strong magnetic fields, or close to heating equipment.</li> <li>Keep water away from the disk.</li> </ul>
	<ul> <li>HIOKI cannot accept responsibility for any incidental problems occurring as a result of use of the software.</li> </ul>

The following symbols are used in this Instruction Manual to indicate the relative importance of cautions and warnings.

	Indicates that incorrect operation presents possibility of injury to the user or damage to the equipment.
NOTE	Denotes items of advice related to performance of the equipment or to its correct operation.

# **Chapter 1 Overview**

The 9536-11 software contained on these disks is a utility for converting to ASCII format data gathered with the memory function and recorder function of the HIOKI MEMORY HiCORDER models 8825, 8840, 8852, and 8853. The software also can be used to display data stored on floppy disk, and to zoom the display. Using the A/B cursors, it is also possible to perform voltage differential and time differential processing.

# **Chapter 2 Specifications**

# 2.1 General Specifications

Supply medium HIOKI devices supported	Three 3.5-inch 2HD (1.44 MB) floppy disks 8825 (Input unit: 8907, 8908 and 8909)
	8840 (Input unit: 8916, 8917, 8918 and 8919)
	8852
	8853 (Input unit: 8945)
Operating environment	PC/AT compatible, Windows 95
Software supported	Excel (*1)
	Lotus 1-2-3 (*2)
	DADiSP (*3)

(\*1) Windows, Excel is a registered trademark of Microsoft Corporation.
(\*2) Lotus 1-2-3 is a registered trademark of Lotus Development Corporation.
(\*3) DADiSP is a registered trademark of DSP Development Corporation.

# 2.2 Functional Specifications

Conversion of the data on a 3.5-inch floppy disk

(1) Data conversion	Conversion of the waveform data on a data disk to
	ASCII format voltage and temperature values
	(scaling and computations supported), conversion of
	the logic data to 1 or 0, intermittent conversion of
	the data possible.
(2) Number of values converted	Any number to the total on the disk.
(3) Header	Appended.
(4) Header content	Trigger times, total number of samples (recording
	length), sampling interval, Y-axis units, X-axis units,
	time axis range, comments
(5) Waveform monitor	Gives an approximate representation of the
display	waveform data being converted, can display two
	zoom windows.
(6) Channels converted	All channels or desired channel(s) selected.

# Chapter 3 9536-11 Installation

### 9536-11 Setup

For installation of the 9536-11 software, the setup program (SETUP.EXE) is used. This program will install the required files on the hard disk.

### Important

The files on the 9536-11 distribution disks are compressed. Simply copying these files to the hard disk using an MS-DOS or Windows copy utility will not result in a usable installation. Be sure to use the setup program, which will decompress the files and install them into the proper directory.

1. Before starting

Before starting the installation procedure, check your hardware and software to see whether the requirements for using 9536-11 software are met.

System configuration requirements

To use the 9536-11 program, the following hardware and software requirements must be met:

- $\cdot$  Computer with i486 CPU or higher
- · Floppy disk drive
- Microsoft Windows 95 running at 800×600 or higher resolution, using the "small font" setting (can be set under "Display Settings" in the Control Panel)
- $\cdot$  16 MB memory or more
- Mouse or other pointing device
- 2. 9536-11 setup

The setup program creates a directory for the 9536-11 software and installs the necessary files.

Starting the setup program

- (1) Insert DISK 1/3 into the floppy disk drive.
- (2) Click on the Start button of Windows 95 and select "Run".
- (3) Type the full path name of the setup program file (SETUP.EXE) in the dialog box. For example, if the floppy disk is inserted in drive A, type a:setup
- (4) Click on "OK" to start SETUP.EXE.

Changing an option after installation is completed

The setup program can be run as often as desired, even if the 9536-11 software is already installed. This can be used for example to install the 9536-11 software in another directory or to perform a new installation with different options. Before reinstalling the 9536-11 software in the same directory, delete any old files.

When installation has been completed successfully, the 9536-11 utility can be started from the Start menu of Windows 95.

# Chapter 4 Starting and Terminating the 9536-11 Utility

# 4.1 9536-11 Startup

- (1) Click on the Start button of Windows 95, and select "Programs" "9536-11" - "9536-11.EXE".
- (2) A window with the HIOKI logo appears.
- (3) Click on "Menu" "Run".
- (4) The main screen with the title bar "9536-11 UTILITY DISK" appears.

# 4.2 9536-11 Shutdown

- (1) On the main screen, select "File" "Close".
- (2) Answer "Yes" to the confirmation prompt.
- (3) A window with the HIOKI logo appears.
- (4) Click on "Menu" "End" to terminate the program.

# Chapter 5 Displaying Data Stored on 3.5-inch Floppy Disk

# 5.1 Display Explanation

- 1. Main screen Shows the menu bar and tool box used for carrying out various actions.
- 2. Wave Monitor

Shows data from a file on a 3.5-inch floppy disk on the screen as waveform data.

3. Information Shows data storage status, unit usage condition, and other file parameters.

The following items are not shown on the initial screen. They become available when the "Wave Monitor" window is displayed.

4. Zoom-in Window - (Right Click) Zoom display is controlled with the right mouse button.

NOTE

Only channels 1 through 8 can be zoomed.

5. Zoom-in Window - (Left Click) Zoom display is controlled with the left mouse button.

NOTE

- Only channels 1 through 8 can be zoomed.
- 6. Differential processing window

Using the A/B cursors, a voltage value or temperature value point for the A cursor and B cursor can be chosen and the difference between the two points (B-A) can be calculated for every channel.

# 5.2 Calling Up the Display Screens

- Calling up the main screen Start the 9536-11 utility. Select "Menu" - "Run". The main screen appears.
- 2. Calling up the "Information" (file status) screen

The information screen gives information about the file save status, including the following items: function mode, trigger time, recording length, recording speed (TIME/DIV), pre-trigger (timing if recording function), file name, channel usage, and unit usage. Perform the following steps to call up the information screen.

- (1) Insert a floppy disk with waveform data in the drive.
- (2) Select "File" "File Information".
- (3) The "Information" and "Wave Monitor" windows and a dialog box appear.
- (4) Select the desired file from the dialog box.
- (5) The various parameters are shown in the "Information" window.
- (6) The file name and number of data for each channel are shown in the "Wave Monitor" window.

The file information can be used in various ways to increase the efficiency of working with data.

3. Calling up the "Wave Monitor" (file data) screen

When file information has been obtained, use the wave monitor as follows. Perform the following steps to use the wave monitor.

- (1) Insert a floppy disk with waveform data in the drive.
- (2) Select "File" "Open".
- (3) The "Information" and "Wave Monitor" windows and a dialog box appear.
- (4) Select the desired file from the dialog box.
- (5) If a question about scrolling appears, select the scrolling option. If the option is not selected, data for the entire recording length are shown.
- (6) The various parameters are shown in the "Information" window.
- (7) The "Wave Monitor" window opens the files sequentially, starting from channel 1, and displays the waveform.
- (8) When a file contains logic data, a question regarding display of logic data appears. Select the desired option.

### About waveform scrolling

When "Yes" was selected in step 5, the waveform can be scrolled, using the scroll box in the scroll bar at the top right of the "Wave Monitor" window or by moving the bar itself.

4. "Zoom-in Window (Left Click/Right Click)"

When an analog waveform exists in the "Wave Monitor" window, the display can be zoomed to any portion of any channel (1 to 8). The right and left mouse buttons are used for this purpose.

By making effective use of the zoom function, unneeded data can be eliminated before performing conversion.

The explanation below is for using the left mouse button. The zoom window controlled by the right mouse button is operated in the same way.

- (1) Verify that an analog waveform is shown on the "Wave Monitor".
- (2) Select (check) the channel(s) you want to zoom in the "Zoom Channel" list. The default is the ch1 to ch8 range, so that all channels where a waveform exists are selected.
- (3) Press the left mouse button at the start point of the zoom range, move the mouse while keeping the button depressed, and release the button at the end point.
- (4) The "Zoom-in Window (Left Click)" appears.

Channels displayed on screen and from the range ch1 to ch8 can be zoomed. Logic data cannot be zoomed.

#### 5. Using the cursors

When analog waveform data exist on the "Wave Monitor" screen, the A cursor and B cursor can be used to determine voltage differences, temperature differences or time differences for each channel. To use this function, proceed as follows.

- (1) Verify that an analog waveform is shown on the "Wave Monitor".
- (2) Check the "A cursor" and "B cursor" items on the main screen.
- (3) The "Differential Processing" window appears, and two scroll bars appear on the top left of the "Wave Monitor" window. When the A and B cursors are moved using the scroll box in the scroll bar or by moving the bar itself, the voltage, temperature, or time differential is shown.

### NOTE

The cursor movement range is limited to the analog waveform shown in the "Wave Monitor" window. Cursor processing is carried out for all channels contained in the floppy disk data. Selecting individual channels is not possible.

### 6. Display a grid

Using the "Option" - "Show Grid" item, the X-axis and Y-axis display can be turned on and off. The selection will become active the next time the display is started (it does not become active immediately).

# Chapter 6 Converting and Storing Data Stored on 3.5-inch Floppy Disk

When storing data, the 9536-11 utility always converts the data to ASCII format first. There are three ways of storing data: "All Data Save", "Zoom Save", and "Block Save".

The time required for conversion and storing depends on the recording length and the number of channels.

### NOTE

If a file name is specified that is used by another application (existing file), an error message appears and data are not stored.

### "All Data Save"

Data from all channels that are checked on "Main Screen" - "Convert/Save Ch" and that are selected are stored (also if not shown on the display). If logic data exist, these are stored also.

### "Zoom Save"

Only the zoomed data range from channels that are checked on "Main Screen" - "Convert/Save Ch" and that are selected are stored. The zoom window allows only selection of channels 1 to 8, but for storing, the setting made with "Main Screen" - "Convert/Save Ch" is used. If there are logic data, these are stored also.

### "Block Save"

Only block data currently shown on screen from channels that are checked on "Main Screen" - "Convert/Save Ch" and that are selected are stored. If there are logic data, these are stored also.

### NOTE

Use a file name of up to 8 characters, and do not specify an extension.

### 6.1 "All Data Save"

The file name extension is assigned automatically, as follows: txt (analog data), tx1, tx2 (logic data).

- 1. Open the file by specifying the file name on "File" "Open".
- 2. Verify that an analog waveform is shown on the "Wave Monitor".
- 3. Set the data save sampling interval. The default setting is "5". This will reduce the number of data, so that analysis with spreadsheet software such as Excel or Lotus 1-2-3 is possible.
- 4. Check the channels to be saved with the "Convert/Save Ch" item.
- 5. Click on "File" "Save" "All Data". A dialog box appears. Enter the desired file name and click on "OK" (no file extension required).
- 6. Analog waveform data and logic waveform data (if present) are stored sequentially.

### 6.2 "Zoom Save"

The file name extension is assigned automatically, as follows: txt (analog data), tx1, tx2 (logic data).

- 1. Open the file by specifying the file name on "File" "Open".
- 2. Verify that analog waveforms are shown on the "Wave Monitor" and "Zoom Window".
- 3. Set the data save sampling interval. The default setting is "5". This will reduce the number of data, so that analysis with spreadsheet software such as Excel or Lotus 1-2-3 is possible.
- 4. Check the channels to be saved with the "Convert/Save Ch" item.
- 5. Click on "File" "Save" "Zoom Data". A dialog box appears. Select the desired directory and click on "OK".
- 6. Analog waveform data and logic waveform data (if present) are stored sequentially.

NOTE

- · If there are no zoom data, "Zoom Save" cannot be selected.
- If there are two zoom windows, the data in the most recently opened zoom window will be stored.

# 6.3 "Block Save"

The file name extension is assigned automatically, as follows: txt (analog data), tx1, tx2 (logic data).

- 1. Open the file by specifying the file name on "File" "Open".
- 2. Verify that an analog waveform is shown on the "Wave Monitor".
- 3. Set the data save sampling interval. The default setting is "5". This will reduce the number of data, so that analysis with spreadsheet software such as Excel or Lotus 1-2-3 is possible.
- 4. Check the channels to be saved with the "Convert/Save Ch" item.
- 5. Click on "File" "Save" "Block Data". A dialog box appears. Select the desired directory and click on "OK".
- 6. Analog waveform data and logic waveform data (if present) are stored sequentially.

### 6.4 Examples of the Converted Data Output

Analog waveform data

When converting and storing the file saving the waveform data of ch1 to ch4, setting the header to ON and the time to ON.

"COMMENT"," " "DATE","01-17-1997" "TIME","16:27:09" "NUM\_SIGS",5 "HORZ\_UNITS","S" "VERT\_UNITS","S" "VERT\_UNITS","S","V","V","V","V" "INTERVAL",.00025 "SIGNAL","TIME","CH1","CH2","CH3","CH4" "DATA" -.025,-5.95,5.9375,-5.9875,6.0125 -.02475,-5.9,5.875,-5.9375,5.9625 -.0245,-5.85,5.825,-5.9,5.9125 -.02425,-5.8,5.7875,-5.85,5.85 -.024,-5.75,5.725,-5.7875,5.8125

Data are ordered as follows: time from the trigger point, ch1, ch2, ch3, ch4.

Logic waveform data

When converting and storing the file saving the logic waveform data, setting the header to OFF and the time to ON.

Data are ordered as follows: time from the trigger point, chA, chB, chC, chD.



### HIOKI 9536-11 UTILITY DISK

Instruction Manual

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