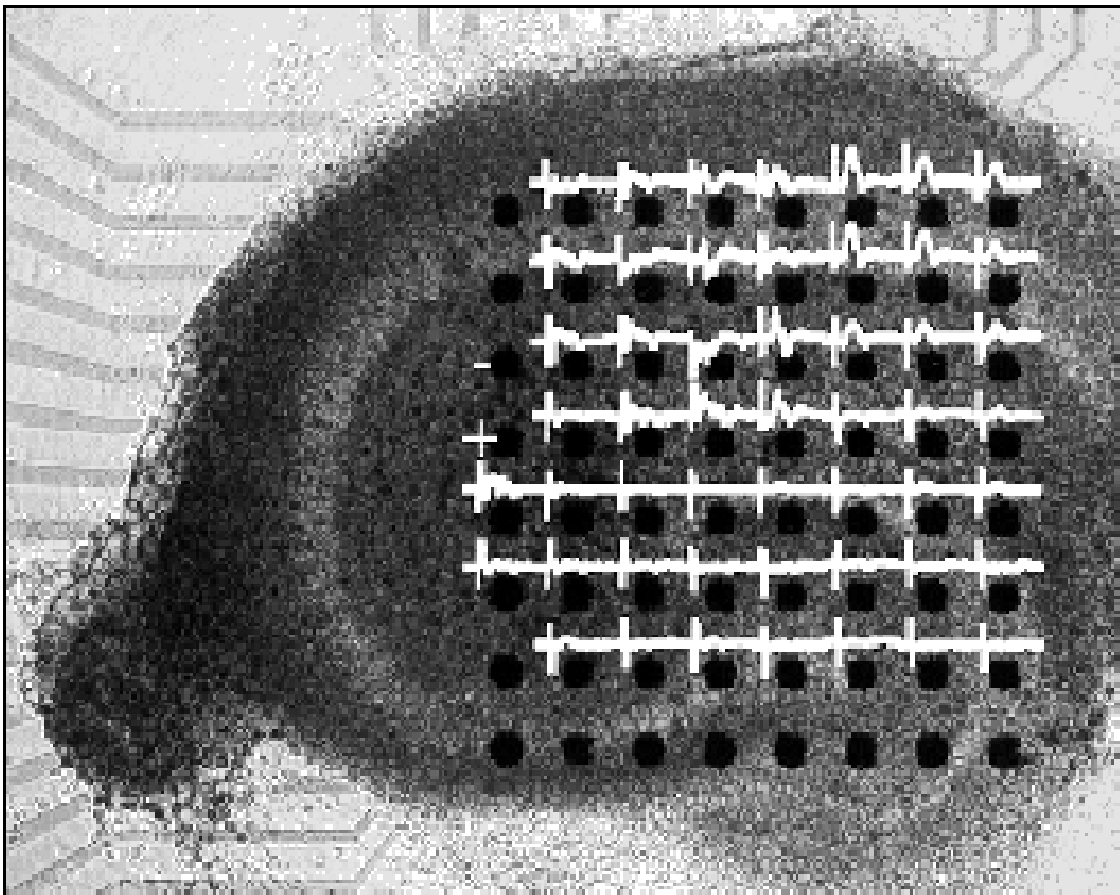


Panasonic

Multi-channel Extra-cellular Recording System Measuring Software (MED8conductor) Operating instructions



1 Installation

This chapter contains information on the hardware environment and instructions for installing the software (MED8 conductor) for the Multi-channel Extracellular Recording System.

1.1 Hardware Environment

This software requires the following hardware.

- Computer: An AT compatible computer capable of running the Microsoft Windows 95 Operating System
- CPU: An Intel Pentium*1 Processor of 166MHz or higher
- Main Memory: 32MB or greater
- Video: 1280x1024 display resolution and 256 color depth
- Disk Drives: one or more hard disk drives with at least 5MB of available space*2 CD-ROM Drive
- A/D Board: National Instruments' AT-MIO-16E-1 (NI-DAQ 5.0),
DMA Channel: The three 16-bit channels 5, 6 and 7
IRQ Level: one of 3, 4, 5, 7, 10, 11, 12 or 15.

Please install the A/D board and software onto your computer according to the instructions that follow.

*1 System performance depends on the components of the expansion card.

*2 It is strongly suggested that a second disk drive be used for saving the data in addition to the Windows95 system disk drive.

For maximum system performance, the following Bus Master SCSI controller and high-end SCSI hard disks are recommended.

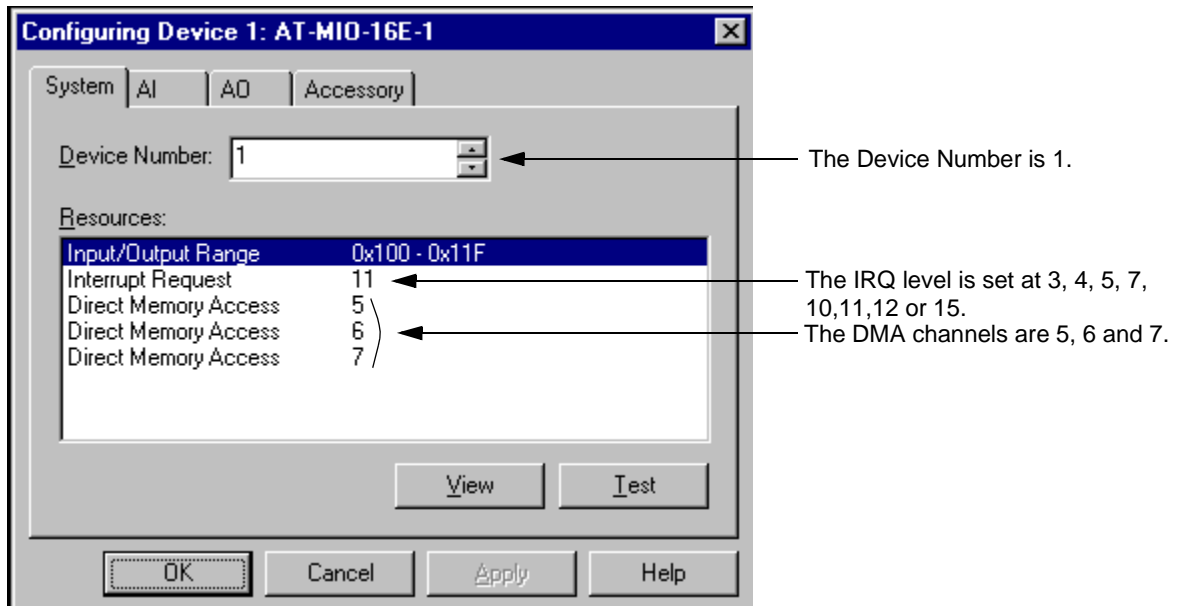
- SCSI Controller: Adaptec AHA-2940 series
- SCSI Hard disk: Seagate Barracuda series
Quantum ATLAS series
IBM DCAS series, DOAS series

1.2 Installation of the A/D board

Installation onto your computer while running Windows95:

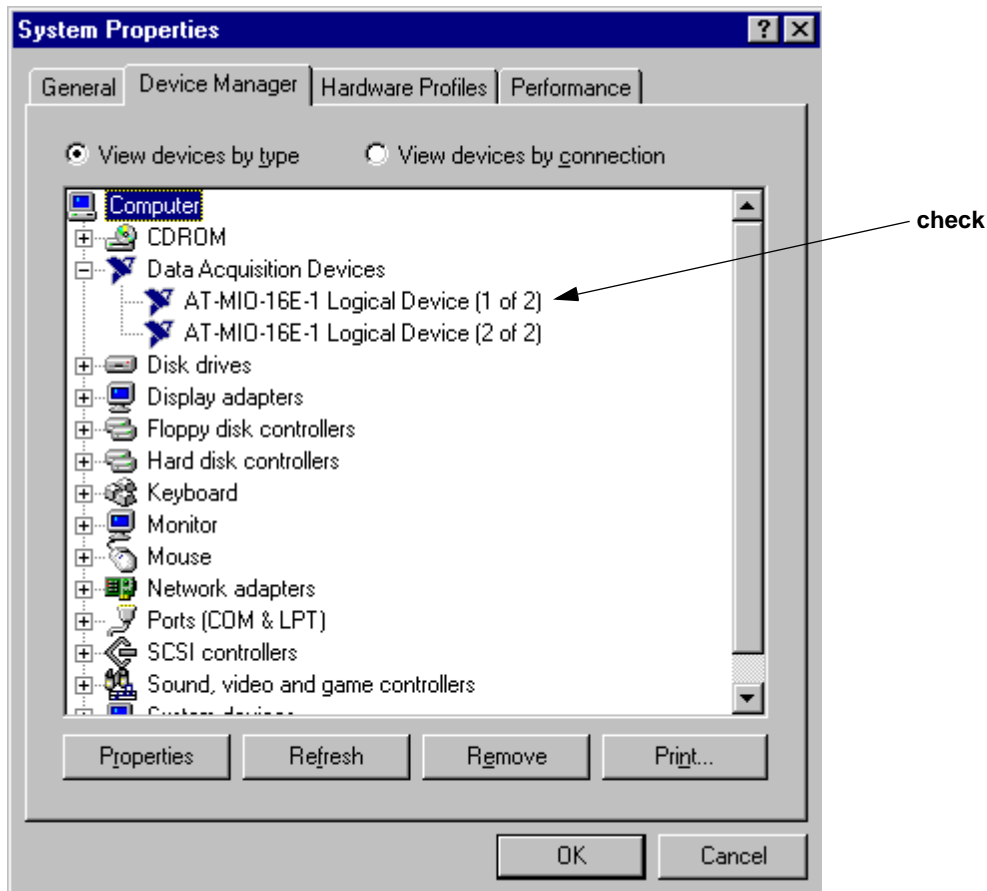
1. Insert the A/D board into your computer's ISA bus slot as instructed in the A/D board manual (see AT-MIO E Series User Manual , 2-1 Hardware Installation).
2. Install the A/D board driver (NI-DAQ) onto your computer as outlined in the A/D board manual (see 2-2 Software Installation).
3. Run the NI-DAQ Configuration Utility Program,
Start - Program - NI-DAQ for Windows - NI-DAQ Configuration Utility
and set the A/D board Device Number to 1. If you assign another number, MED8 conductor will not function.

4. Verify the setting of the A/D board,



This A/D board requires three 16-bit DMA channels [5, 6, 7]. If unavailable, data acquisition will be limited. If there are any other internal devices such as a sound-card which employs the 16-bit DMA channels, do not use these channels or uninstall the sound-card from your computer. Then, run the **NI-DAQ Configuration Utility** program described above and reset the A/D board configuration.

5. Click the **Device Manager** tab in the **System Properties** window of **My Computer** to check for recognition of the A/D board as listed under **Data Acquisition Devices**.



If the A/D board is not recognized, **MED8 conductor** will not run. Verify that the DMA channels and IRQ levels are unassigned to other devices, and run the **NI-DAQ Configuration Utility** again.

Installation of the A/D board is now finished. Proceed to the next section to install **MED8 conductor**.

1.3 Installation of MED8 conductor

Installation onto your computer while running Windows95:

1. Kill all applications which are currently active.
2. Insert the **MED8 conductor Disk** into your CD-ROM drive, and run the "**d:\MED8con\English\DISK1\Setup.exe**" program (where **d** is your CD-ROM drive).

and follow the installation instructions of the setup program to create the **MED8 conductor** program group.

1.4 Uninstallation of MED8 conductor

Uninstallation of **MED8 conductor** from your computer while running the Windows95 :

1. Kill all applications which are currently active.
2. Open the **Control Panel** from the **Start** menu. Choose **Add/Remove Programs** and select **MED8 conductor** from the **Setting** menu.

and follow the uninstallation program.

1.5 Installation Notes

MED8 conductor operates the A/D board at **differential input** modes, therefore, use the BNC adapter (BNC-2090) as differential input mode. Input channels 0 to 7 on the BNC adapter correspond to channels 1 to 8 on **MED8 conductor** respectively.

The output channel of the stimulus wave is **DAC0OUT**, and the analogue export channel is **DAC1OUT**. Please take care not to reverse them.*1

*1 If you do not have a BNC adapter (BNC-2090), please connect with the appropriate terminal of each channel according to the instruction in the A/D board manual.

2 Operation of MED8 conductor

This chapter describes how to process signals collected with **MED8 conductor**.

2.1 Overview

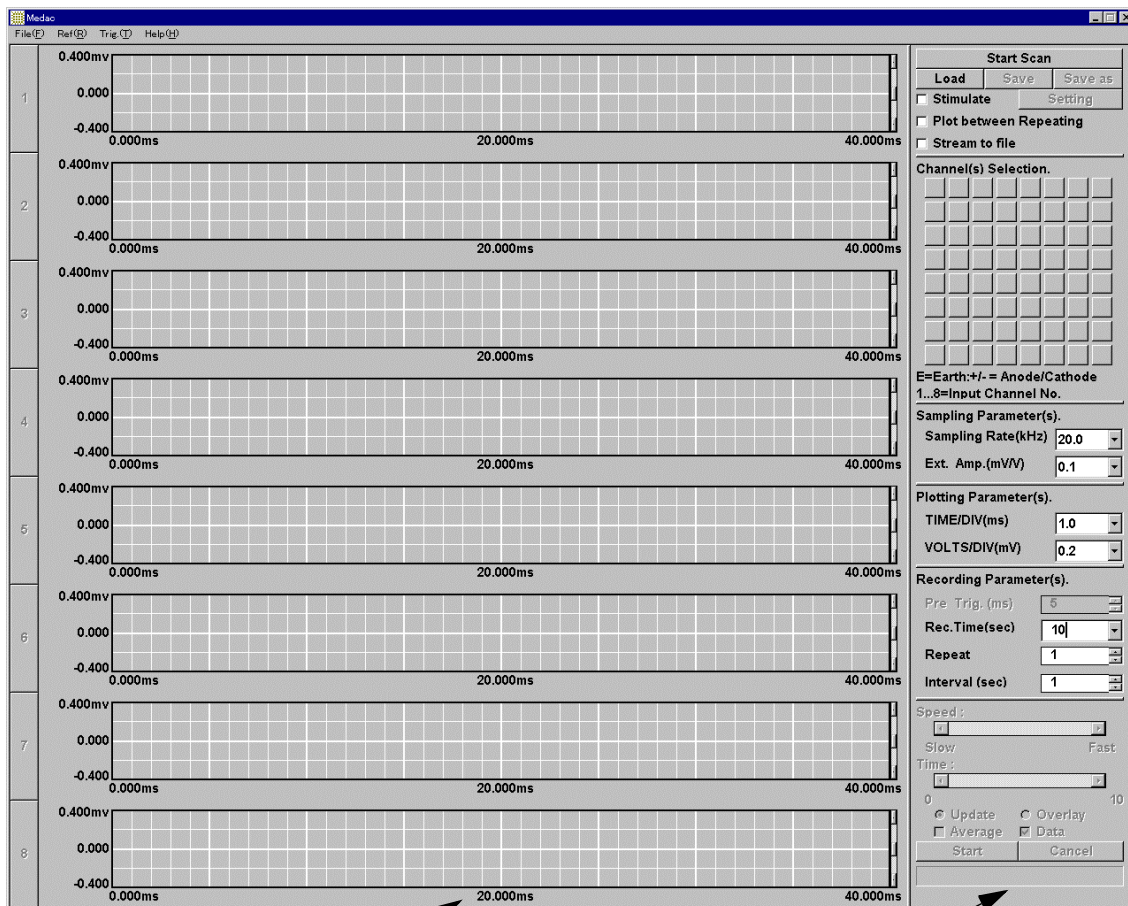
What you can do with **MED8 conductor**.

- Collect 8ch of spontaneous data at 20 kHz/ch
- Collect 8ch of evoked data at 20 kHz/ch
- Generate stimulus wave patterns
- Average repeated data
- Export the acquired data into text format (comma- or space-separated)
- Export the acquired data as an analogue signal (1ch)
- Printing

What you cannot do with **MED8 conductor** alone Almost all forms of data analysis

2.2 Getting started with MED8 conductor

Select the **MED8 conductor** program from the **Start** menu or double-click the **MED8 conductor** shortcut on the desktop to launch **MED8 conductor*1** , and the following window will appear.



Graph display area
Simultaneous display of 8 ch

Settings for display and recording

Details of the display and recording settings are described on the next page.

*1 The current display settings are automatically saved when the window is closed, and are restored automatically when re-opened.

The image shows a software control panel for data acquisition. It features several sections for configuring the acquisition process:

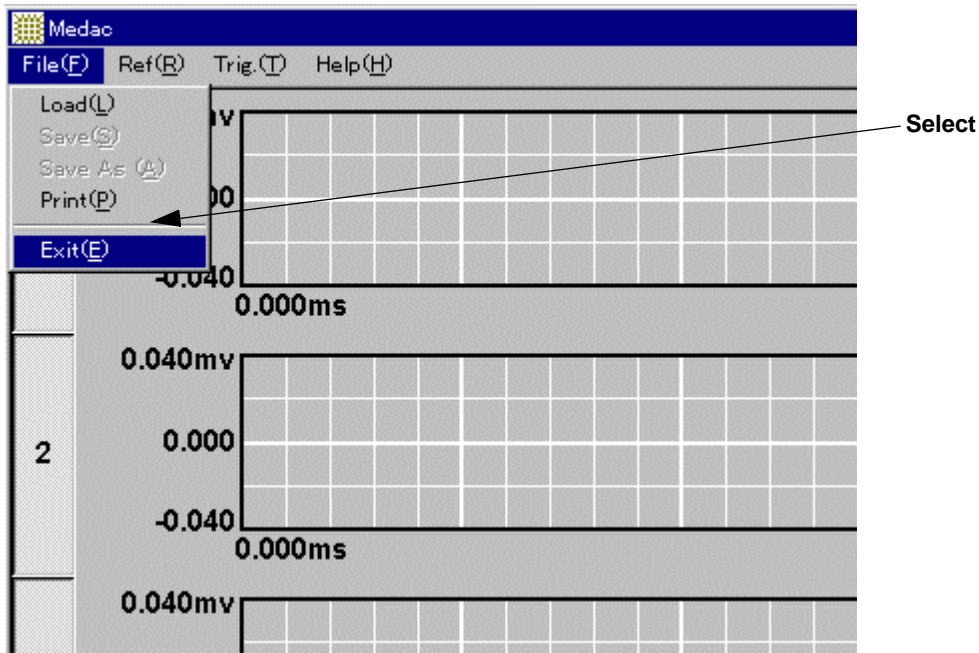
- Start Scan:** A button at the top to initiate the acquisition.
- File Management:** Buttons for 'Load', 'Save', and 'Save as' to handle data files.
- Stimulus and Plotting Options:**
 - Stimulate: Check to output stimulus wave.
 - Plot between Repeating: Check to plot of a waveform between repeated stimuli.
 - Stream to file: Check on streaming to a file.
- Channel(s) Selection:** A grid of buttons for selecting channels 1 through 8. Legend: E=Earth: +/- = Anode/Cathode, 1...8=Input Channel No.
- Sampling Parameter(s):**
 - Sampling Rate(kHz): 20.0
 - Ext. Amp.(mV/V): 0.1
- Plotting Parameter(s):**
 - TIME/DIV(ms): 1.0
 - VOLTS/DIV(mV): 0.2
- Recording Parameter(s):**
 - Pre Trig. (ms): 5
 - Rec.Time(sec): 10
 - Repeat: 60
 - Interval (sec): 600
- Speed and Time:** Sliders for 'Speed' and 'Time' ranging from 0 to 10.
- Display Options:**
 - Update, Overlay
 - Average, Data
- Buttons:** 'Start' and 'Cancel' buttons at the bottom.

Annotations with arrows point to various elements:

- To load acquired data (points to 'Load')
- To start/stop acquisition (points to 'Start Scan')
- To save data (points to 'Save')
- To export to other formats (points to 'Save as')
- Detailed setting of stimulus wave (points to 'Setting')
- Check on streaming to a file (points to 'Stream to file')
- Input channels (1...8), Stimulus channels (+,-), Ground channel (E) (points to channel selection grid)
- Sampling frequency [kHz/ch], which is controlled not to exceed more than 200 kHz/8ch. (points to 'Sampling Rate')
- Amplitude of external amplifier (100, 1000, 10000) (points to 'Ext. Amp.')
- Plotting parameters (points to 'Plotting Parameter(s)')
- Pre-trigger time (max. 100 ms) (points to 'Pre Trig.')
- Recording time per sweep (points to 'Rec.Time')
- Sweep Repeats (max. 1000) (points to 'Repeat')
- Interval between sweeps (max. 1000) (points to 'Interval')
- Control panel: Select speed for viewing acquisition or replay (points to 'Speed' and 'Time' sliders)

2.3 Exiting from MED8 conductor

Select **Exit** from the **File** menu to exit from **MED8 conductor**, but not when data acquisition or data replay is in progress. Prior to exiting, stop data acquisition or cancel data replay.*1



2.4 Collecting spontaneous data

To learn how to collect spontaneous activities, proceed to the next section.

2.4.1 Setting the parameters

The setting described on the next page is a typical setting for spontaneous data acquisition.

*1 To prevent accidental exiting, both the **Close** command on the window title bar and the **Close** button in the top-right corner are disabled. Select the **Exit** command from the menu to exit from **MED8 conductor**.

Start Scan

Load **Save** **Save as**

Stimulate **Setting**

Plot between Repeating

Stream to file

Channel(s) Selection.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1	2	3	4	5	6	7	8
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

E=Earth: +/- = Anode/Cathode
1..8=Input Channel No.

Sampling Parameter(s).

Sampling Rate(kHz)

Ext. Amp.(mV/V)

Plotting Parameter(s).

TIME/DIV(ms)

VOLTS/DIV(mV)

Recording Parameter(s).

Pre Trig. (ms)

Rec.Time(sec)

Repeat

Interval (sec)

Click here to start or stop(toggle) acquisition.

Remove the check from **Stimulate**.
 Check on **Stream to file** to stream the acquired data to a file.

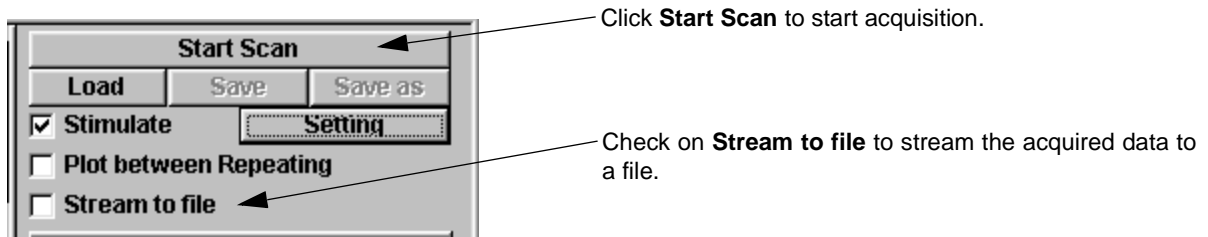
Assign the A/D channels to the electrodes you will use to record (Assign the same channels as on the **SWITCH-BOX**)

The sampling frequency is 20 kHz/ch.
 Select the same amplitude as the external amplifier.

In this example,
 TIME/DIV is 10 ms,
 VOLTS/DIV is 0.05 mV,
 But either parameter can be changed at any time.

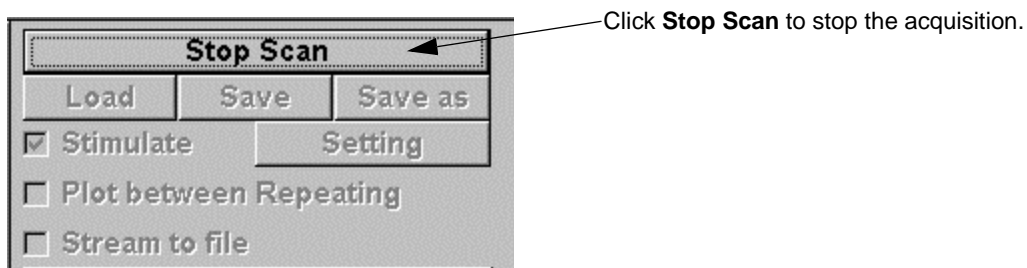
An example of recording parameters,
 1. The recording time for one sweep is 10 seconds.
 2. The number of repeats is 60.
 3. Each repeat interval is 10 minutes.

2.4.2 Starting data acquisition



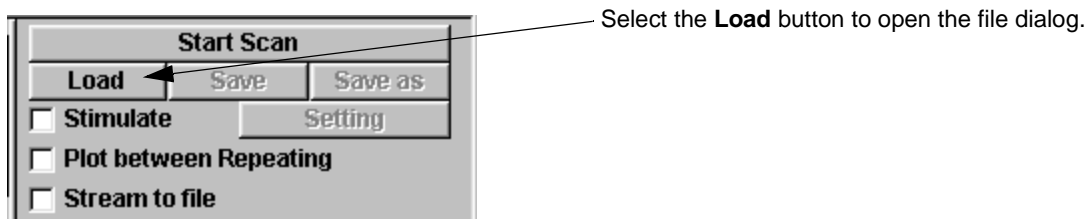
After you finish setting the recording parameters, click the **Start Scan** button to start acquisition. **MED8 conductor** will stop acquisition automatically after finishing the specified recording task. When the **Stream to file** box is checked on before starting acquisition, the file saving dialog will be opened at the end of recording. You can then name the acquired data on the dialog. When this box is not checked on prior to acquisition, you can save the data using the save command (**Save** button) after acquisition is completed.

2.4.3 Stopping data acquisition

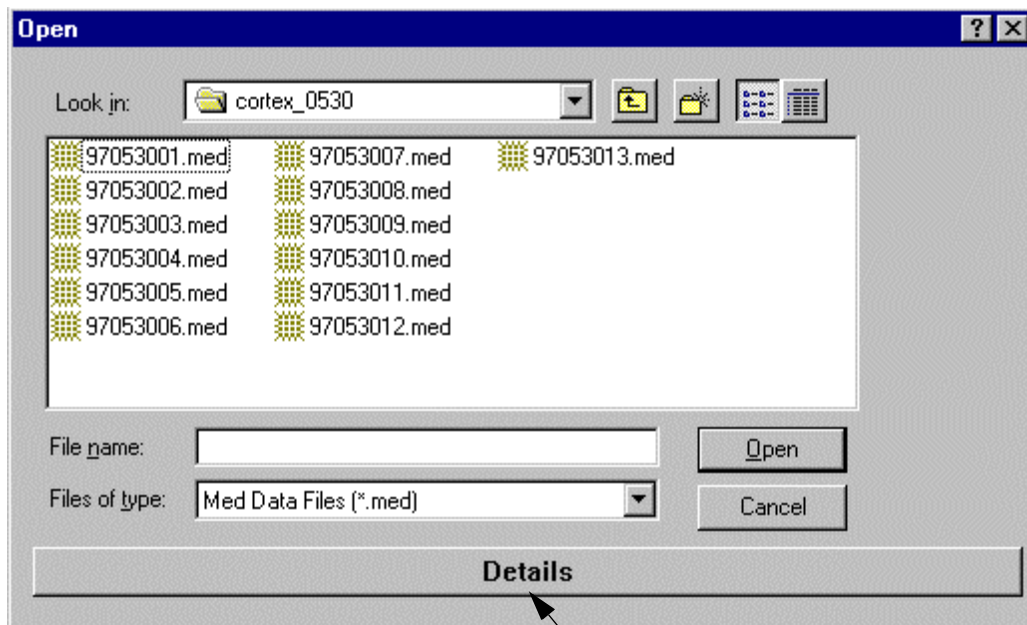


In the case of repeated recording, you can stop acquisition by clicking the **Stop Scan** button at repeat intervals, but not while measuring. At other settings, you can stop acquisition at any time. The **Save** button can be used to save and name the data collected during acquisition.

2.4.4 Replaying the collected data



File Selection



Select **Details** to open the table window to view the parameters (See below).

Double click in this field to select a file.

ID(*.med)	Date	Time	(sec)	Type	(kHz)	Rpt	Nch
97053001	05/30/97	10:18:34	0.5	Evoked	20.0	10	8
97053002	05/30/97	10:26:17	0.5	Evoked	20.0	10	8
97053003	05/30/97	10:32:42	0.5	Evoked	20.0	10	8
97053004	05/30/97	10:42:51	0.5	Evoked	20.0	10	8
97053005	05/30/97	10:57:05	0.5	Evoked	20.0	10	8
97053006	05/30/97	11:04:44	0.5	Evoked	20.0	10	8
97053007	05/30/97	11:14:27	0.5	Evoked	20.0	10	8
97053008	05/30/97	11:24:43	0.5	Evoked	20.0	10	8
97053009	05/30/97	11:36:04	60.0	Spontaneous	20.0	1	8
97053010	05/30/97	11:42:15	60.0	Spontaneous	20.0	1	8
97053011	05/30/97	11:51:57	60.0	Spontaneous	20.0	1	8
97053012	05/30/97	11:56:17	60.0	Spontaneous	20.0	1	8
97053013	05/30/97	12:03:45	60.0	Spontaneous	20.0	1	8

Cancel

Click here to close this window.

Operations for Replay

Change the speed of replay or the wave number to be plotted.

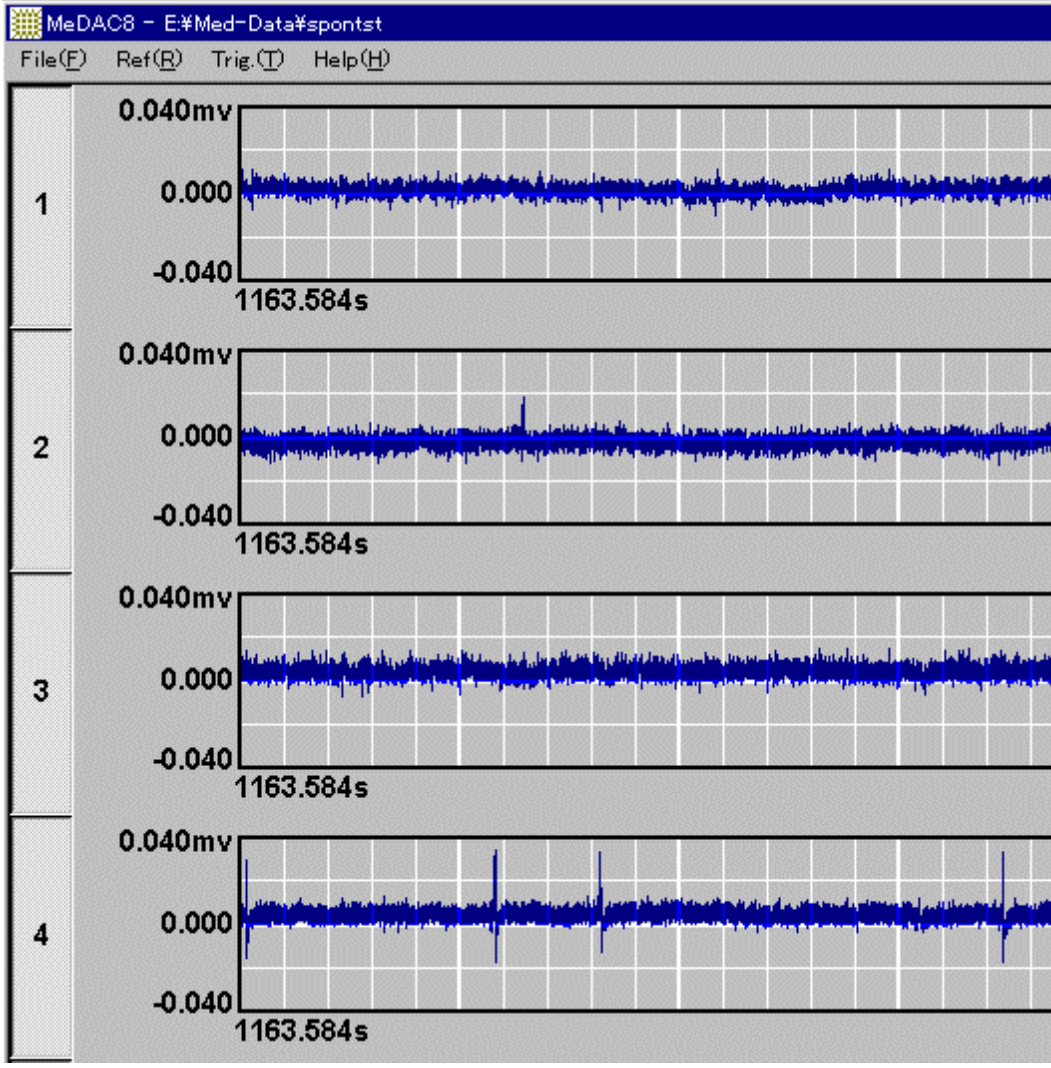
Jump to the selected time.

Start or stop replay.

Quit the replay function.

The dialog box contains a 'Speed' slider with 'Slow' and 'Fast' labels, a 'Time' slider with '0' and '180.000s' labels, and 'Start' and 'Cancel' buttons.

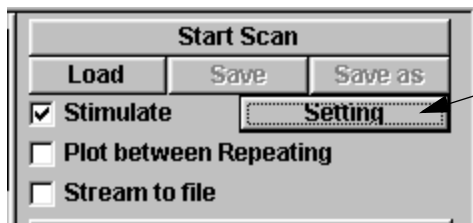
A Typical Display



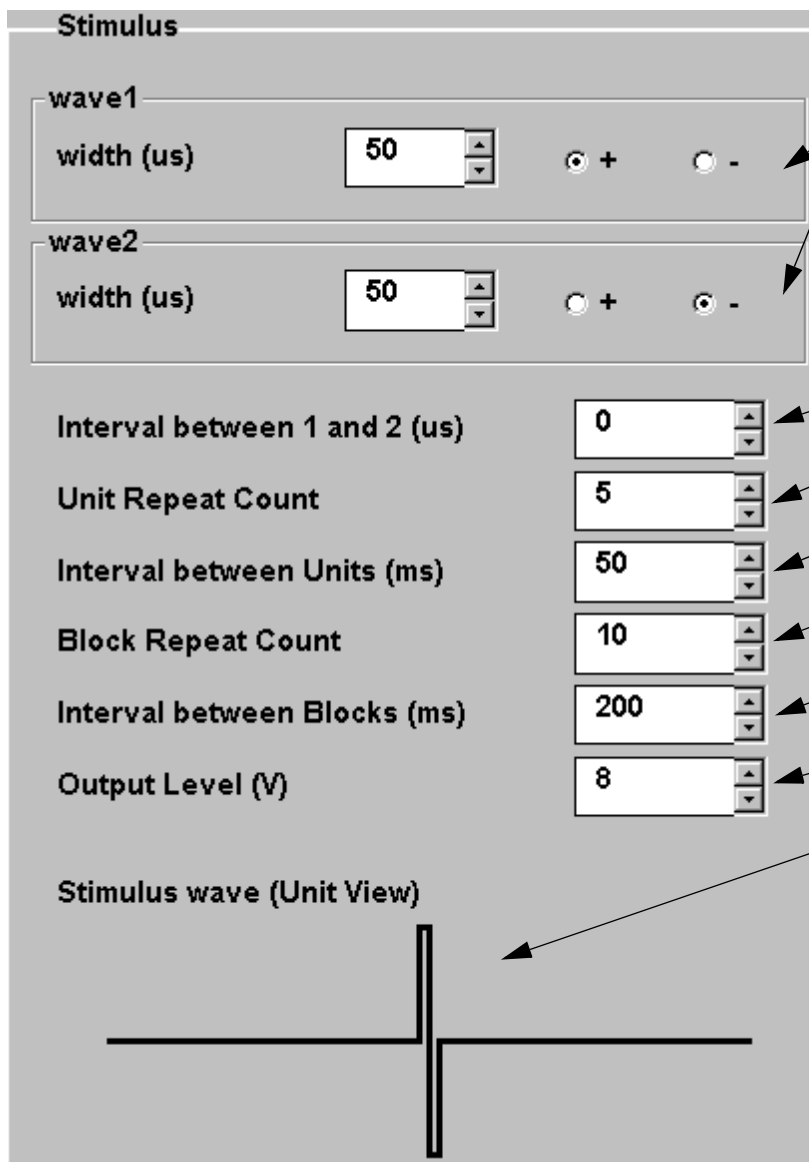
2.5 Collecting evoked data

This section describes how to collect evoked potential data obtained by stimulation.

2.5.1 Stimulus waveform



Check on **Stimulate** and click the **Setting** button to open the **Design Window**.



Specify the stimulus waveform
In this example, 50's **Bi-Phasic** was selected. The unit digit was ignored.

The interval between **wave1** and **wave2**

Number of stimulus waves

Interval between stimulus waves

Number of stimulus blocks

Interval between stimulus blocks

Output stimulus voltage

General view of the specified stimulus waveform.

"Unit" refers to the stimulus wave formed by **wave1** and **wave2**.

"Block" is the specified number of units repeat counts.

2.5.2 Setting the parameters

Sampling

Samp.Rate(kHz)

Ext.Amp.(mV/V)

The sampling frequency is 20 kHz/ch.
Select the same amplitude as the external amplifier.

Recording

Stream to file

Rec. Time (sec)

Pre Trig. (ms)

Select **Stream to file**, when you want to save.
An example of recording parameters,
1. The recording time for one sweep is 0.5 seconds.
2. The Pre-Trigger time is 5 ms.

Repeat & Interval

Repeat

Interval (s)

An example of repeat and interval parameters,
1. The number of repeats is 100.
2. The Interval between repeats is 10 seconds.

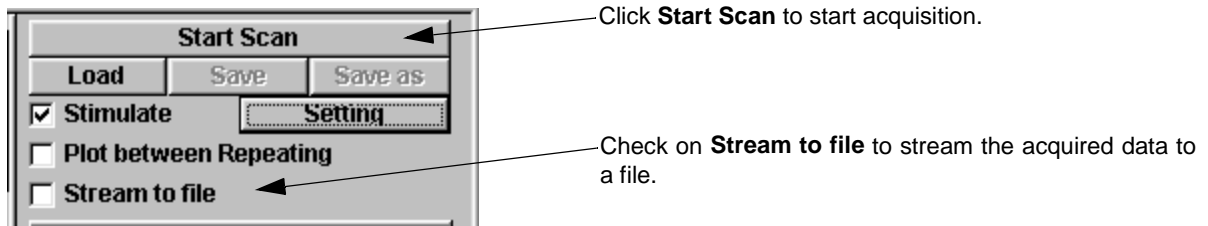
							E
			1	2	3	4	
			5	6	7	8	
	+						
	-						

E = Earth
+ = Anode
- = Cathode
1 ... 8 = Input Channel No.

Select the channels for recording and stimulating.
1... 8 : input A/D channel
+/- : the electrode for stimulus
E : the electrode for grounding

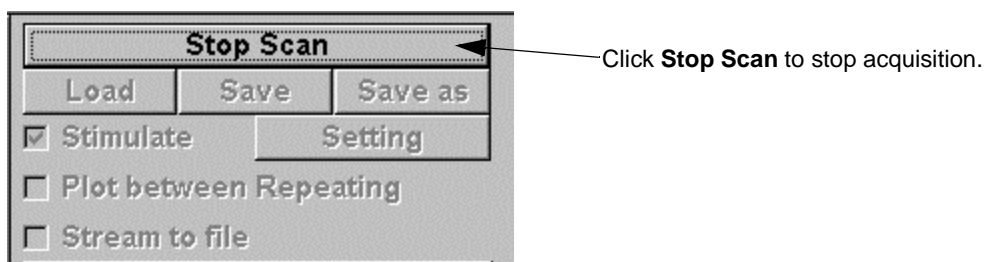
Press **OK** to return to the previous window after setting the parameters.

2.5.3 Starting data acquisition



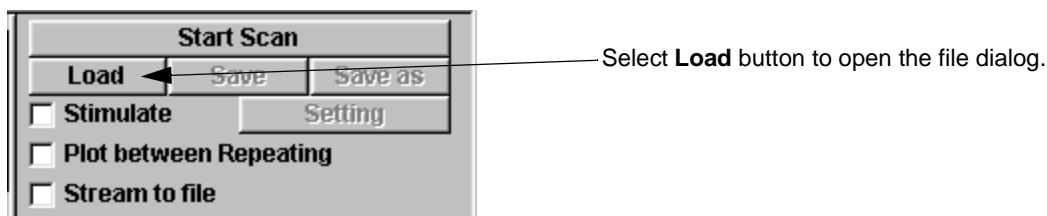
After you finish setting the recording parameters, click the **Start Scan** button to start acquisition. **MED8 conductor** will automatically stop collecting data after finishing the specified recording task. When you check on **Stream to file** before starting acquisition, the file saving dialog will be opened at the end of recording. You can then name the collected data on the dialog. If you did not check this box previously, you can save the data by pressing the **Save** button after finishing acquisition.

2.5.4 Stopping data acquisition

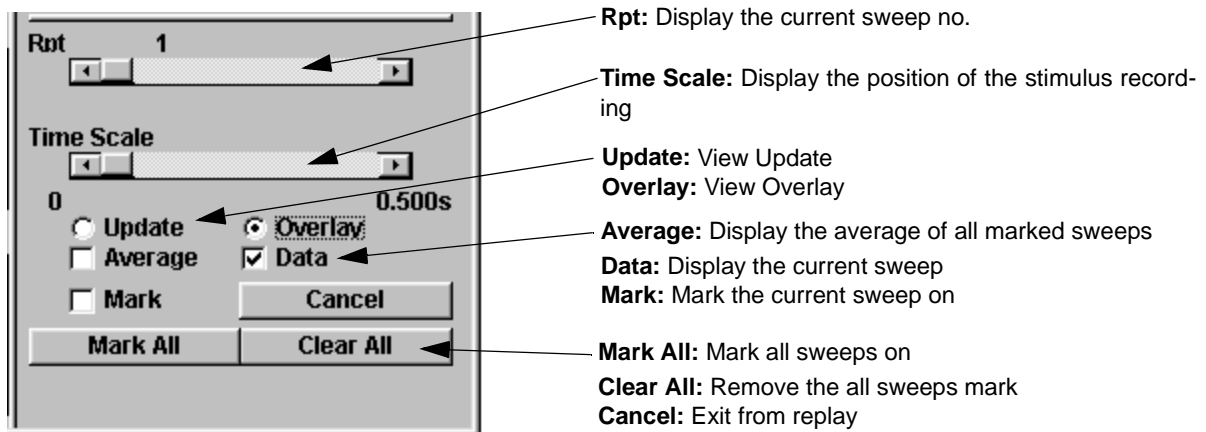


If set for repeated recording, you can stop acquisition by clicking the **Stop Scan** button at intervals, between repeats, but not while measuring. At other settings, you can stop acquisition at any time. You can use the **Save** button to save and name data collected during acquisition.

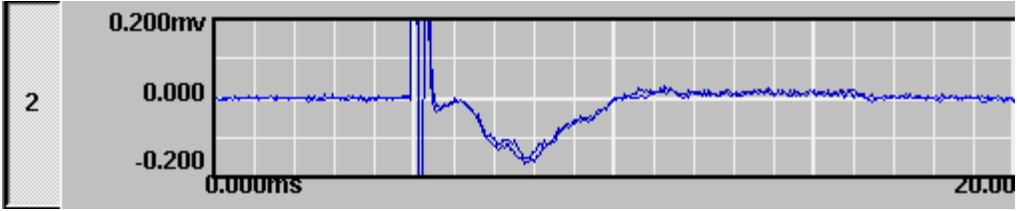
2.5.5 Replaying the collected data



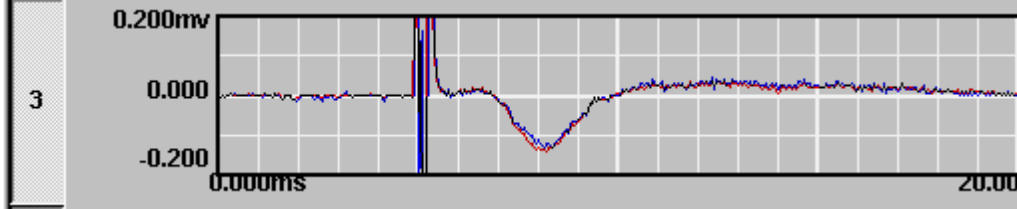
Operations for Replay



An example of an overlay view



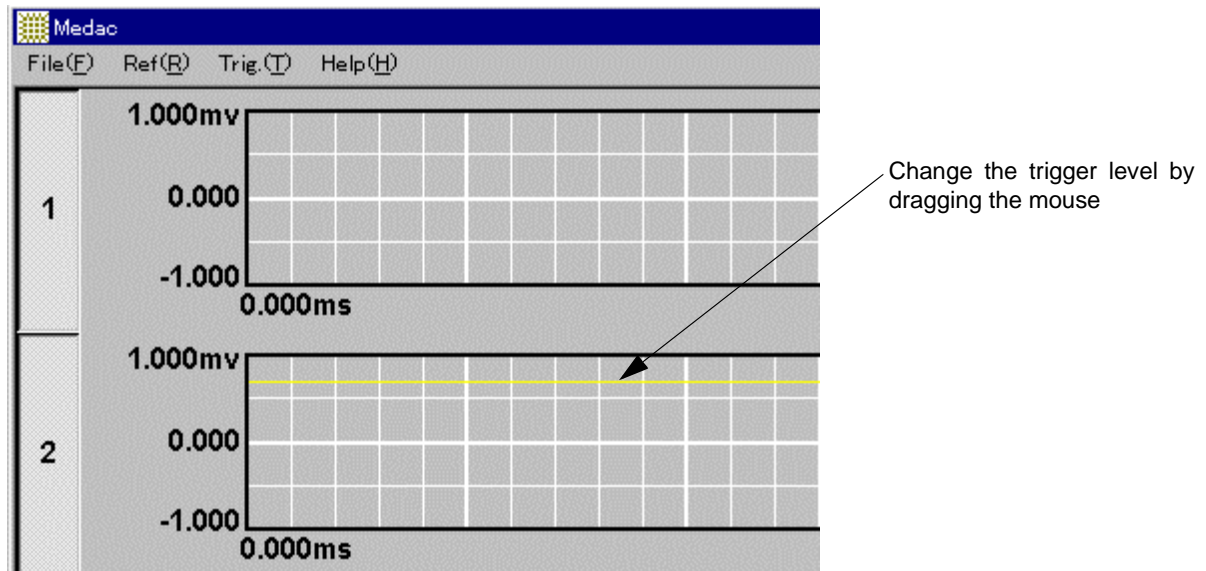
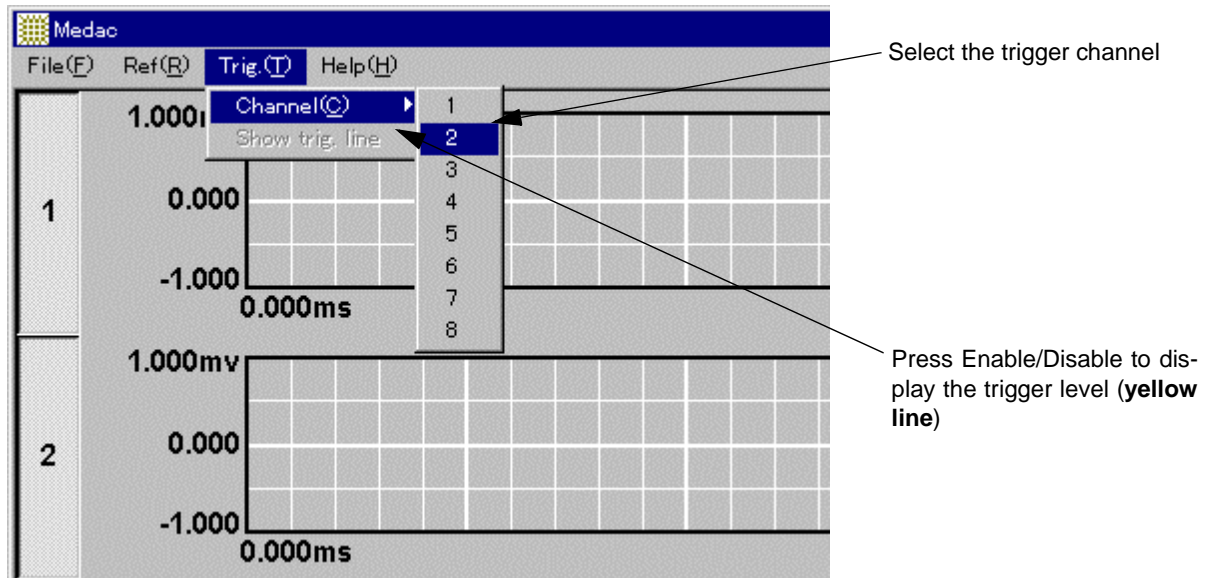
An example of an averaged view



— the current sweep
— the averaged view of all marked sweeps

2.5.6 Triggering

Select the trigger channel to enable the trigger function.*1

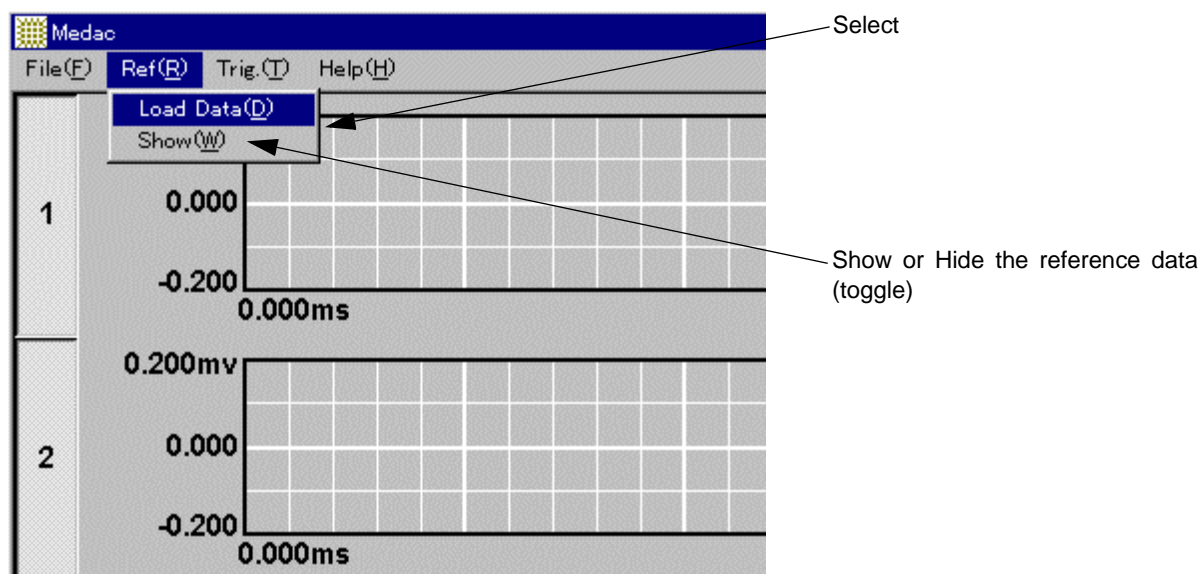


The trigger event is timed out after about 15 seconds (fixed) if no appropriate signal is detected. In this case, the recording will be carried out for the specified time, and will wait for the next trigger.

*1 In the case of the evoked potential data acquisition, by default, the trigger channel is assigned to the first A/D channel, and the trigger level is 70% of full scale.

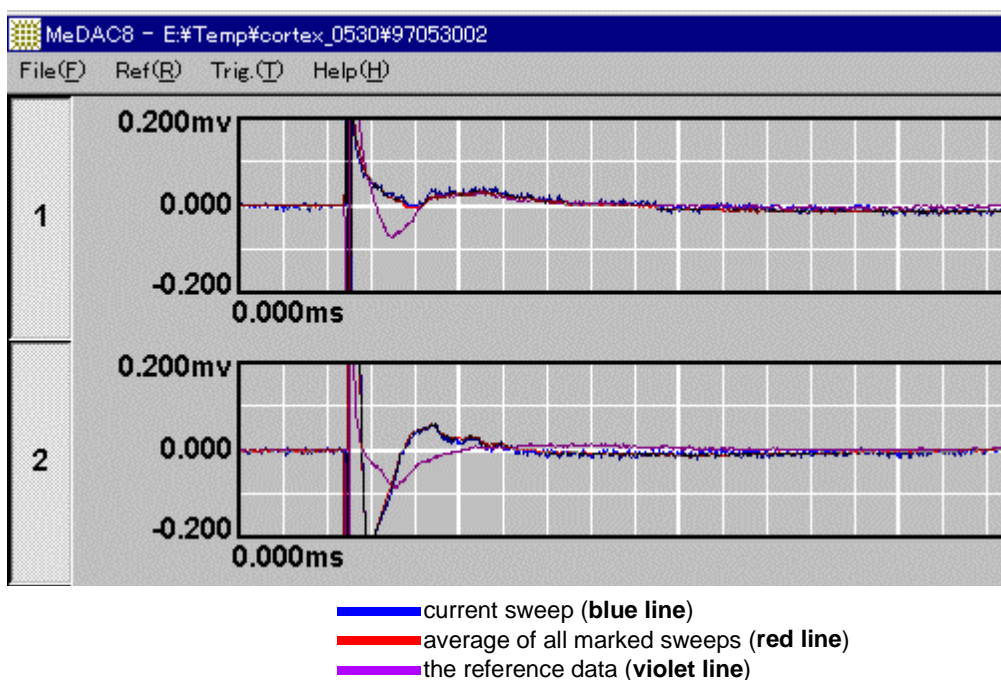
2.5.7 Reference data

Load reference data. (See the replay section for details of the file open dialog).



This reference graph displays the average of all marked sweeps, or of all the sweeps if none have been marked.

A reference data display



2.6 Other Important Considerations

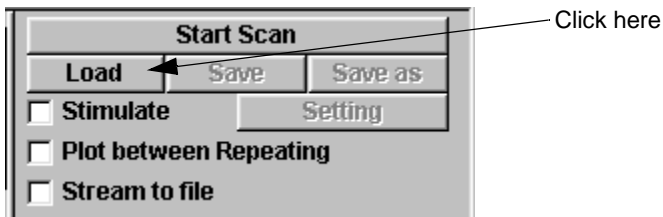
Please read the points covered below:

- **Terminate all other applications before starting MED8 conductor.**
Programs in the Windows95 startup group, such as the Microsoft Office shortcut bar program, often disturb data acquisition. Please terminate these programs before initiating the recording operation. This caution does not apply to data replay.
- **Do not start another application while MED8 conductor is in use.**
Do not start other programs, even during a repeat interval. The memory which is allocated for data transfer may be swapped out to the hard disk and an acquisition fail error may result.

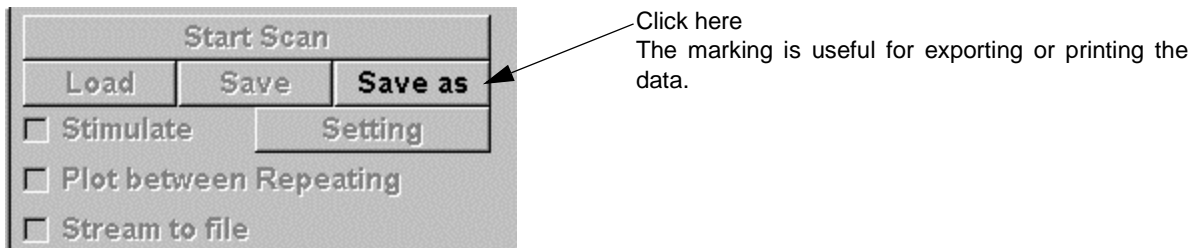
3 Data Export

In this chapter, we describe how to export the MED file to the other data formats.

1. Load data which you want to export to the other format.



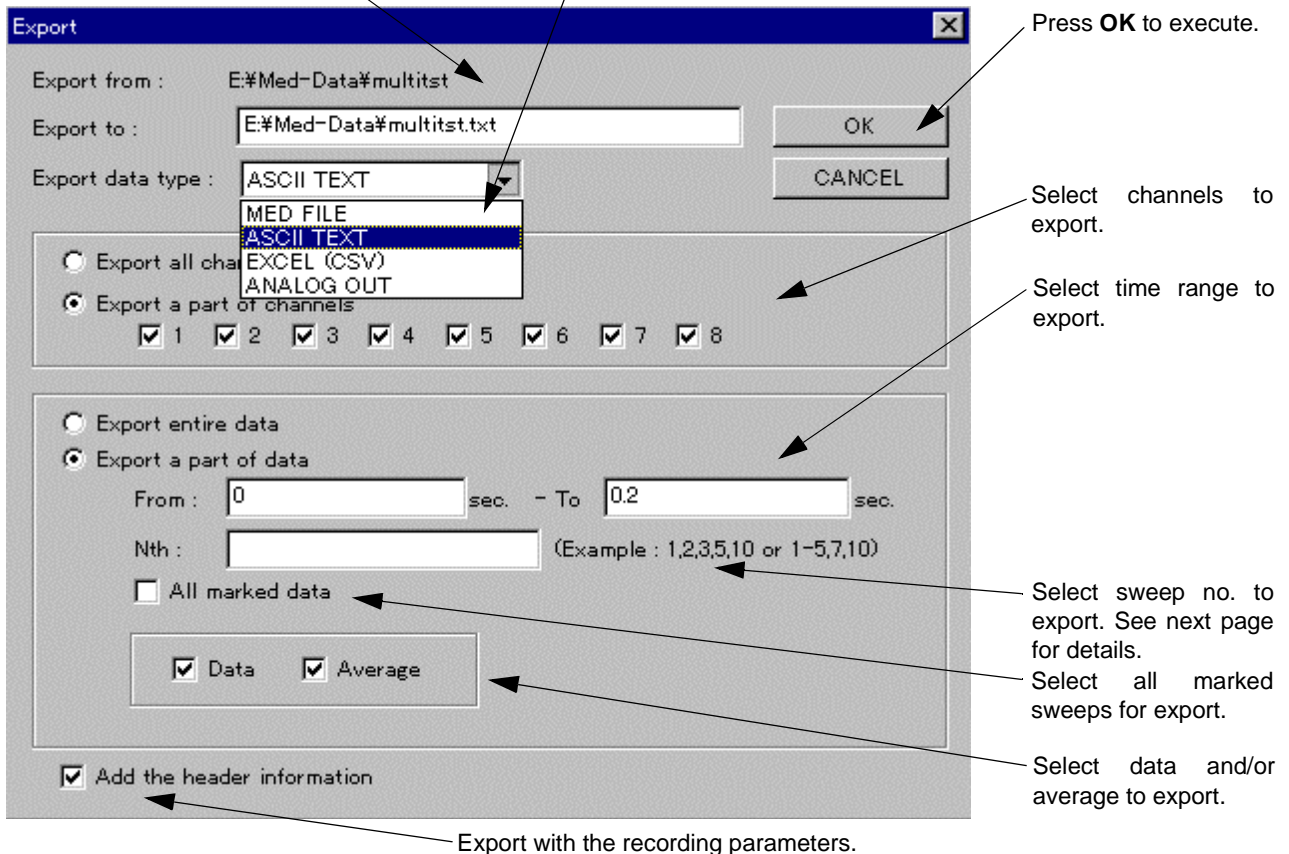
2. If the data is loaded successfully, open the Export dialog window.



3. Decide the export options, and press **OK** button to execute the export operation.

Destination file (Changeable)

Export file type
MED: MED format
ASCII: Text format with space delimiter
EXCEL: Text format with comma delimiter
ANALOG OUT: Analogue signal



Repeat Format (Nth)

1. With only constants

Please specify the sweep numbers with a comma delimiter as in the example, or use a hyphen to specify the sweep range.

Example 1, 2, 5-8, 10

Means 1, 2, 5, 6, 7, 8, 10

2. With a variable

Using an arbitrary string with an alphabet character as a variable, you can specify the sweep numbers to export. Only one variable is allowed, and four operands (*/+-) can be used. * and / are performed prior to + and -. Brackets cannot be used.

Example 2n+1

Means 1, 3, 5, 7, ...

3. Automatic export to one or more files

Using a colon(:) or semicolon(;) as a delimiter, you can export data to one or more files at a time. The file name is created automatically by appending numbers such as "-0001", "-0002", ... , onto the base file name.

Example 1-20;21-40;41-60;2n+1

Means #1-20 are exported to file XXXX-0001

#21-40 are exported to file XXXX-0002

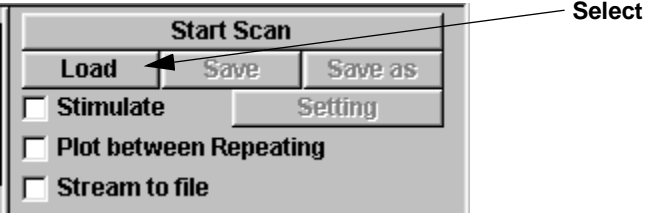
#41-60 are exported to file XXXX-0003

The odd numbered sweeps are exported to file XXXX-0004

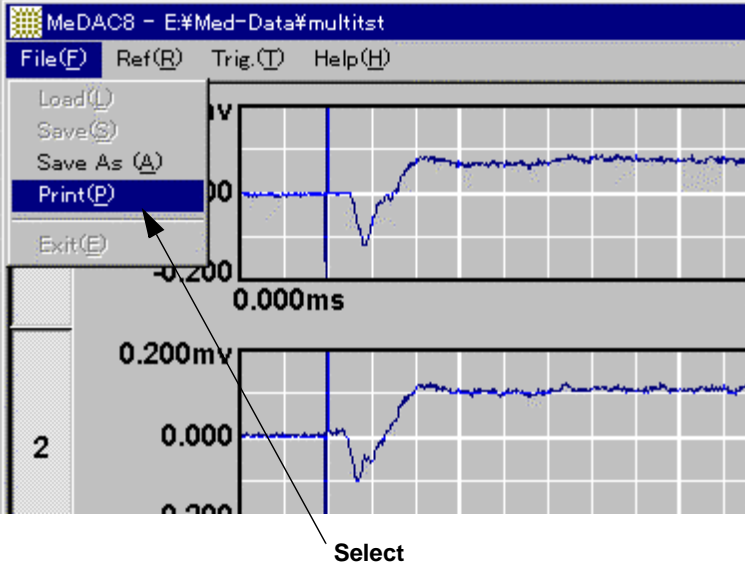
4 Printing

In this chapter, we describe how to print waveforms of the acquired data.

- 1. Load the data to be printed. (**L**oad command or **F**ile menu).



- 2. Open the print dialog. (**F**ile menu).



3. Press **OK** to print out.

The screenshot shows a 'Print' dialog box with the following settings and annotations:

- Printer:** Name: Oki OL-800 (annotated: Select a printer); Status: Default printer; Ready; Type: Oki OL-800; Where: \\NEOCTX\lp; Comments: no entries; Print to file: . (Annotation: Information on the printer to be used)
- Channels:** Print all channels; Print a part of channels. Channels 1-8 are all checked. (Annotation: Select channels for export)
- Data Range:** Print entire data; Print a part of data. From: 0 sec. - To: 0.2 sec. Nth: 1-8 (Example: 1,2,3,5,10 or 1-5,7,10). (Annotation: Select time range for export)
- Options:** All marked data; Data; Average. (Annotations: Select sweep no. for export. See next page for details; Select all marked sweeps for export; Select data and/or average for export)
- Print Order:** 8 raw(s) per one sheet; Collate; Grid; Parameter(s). (Annotations: Print order; Print on a graph grid; Print with recording parameters)
- Printing Style:** Single; Overlay. 8 sweep(s). (Annotation: The number of overlays (maximum number is the repeat count.))
- Scale:** TIME/DIV (ms): 5.0; VOLTS/DIV (mV): 0.2. (Annotations: TIME/DIV at printing; VOLTS/DIV at printing)
- Buttons:** OK, Cancel. (Annotation: Press OK to start printing)
- Other Annotations:** The number of graphs per sheet (maximum number is 16.)

Repeat Format (Nth)

1. With only constants

Please specify the sweep numbers with a comma delimiter as in the example, or use a hyphen to specify the sweep range.

Example 1, 2, 5-8, 10

Means 1, 2, 5, 6, 7, 8, 10

2. With a variable

Using an arbitrary string with an alphabet character as a variable, you can specify the sweep numbers to export. Only one variable is allowed, and four operands (*/+/-) can be used. * and / are performed prior to + and -. Brackets cannot be used.

Example 2n+1

Means 1, 3, 5, 7,

5 Data format

MED8 conductor uses a pair of files - one for acquired data and another for recording parameters:

.dat file : file of digital binary data converted from the analogue signals

.med file : a text format file which contains the recording parameters

5.1 Header file format

The header file is a very simple plain text file and can be edited by using a general Text Editor such as the **notepad** on Windows95. The format of each line is *key=value.*1*

The key functions are as follows:

Version= the version of **MED8 conductor**

Date= the date when recording started

Time= the time when recording started

Gain= the gain by converting from analogue to digital mode (*fixed at 0.5*) **Don't edit !**

TIME/DIV(ms)= the X-axis

VOLTS/DIV(mV)= the Y-axis

Amplitude(mV/V)= the amplitude of the external amplifier

Sample Rate(kHz)/CH= the sampling frequency per channel

Fragment(s)= the total number of recorded sweeps

Interval(s)= the intervals between sweeps

One Fragment Size/CH= one sweep sampling number per channel

Total Sample Counts/CH= the total sampling number per channel

A/D Channels= the electrode no. (the order is CH=1,2,3,4,5,6,7,8) *0 means not used.*

Earth= the electrode no. assigned as a Ground.

Mark= the marking for each repeat (0: off, 1: on)

Type= whether the data are *Evoked* or *Spontaneous*

Stimulate= the stimulating electrode no. (+,-) (*Type=Evoked only*)

Stimulus Wave= parameters of stimulus waveform (*Type=Evoked only*)

(the duration and polarity of wave1, the interval between waves 1 and 2,

the duration and polarity of wave2, the number of wave 1 and 2 repeats,

the interval between sweeps of waves 1 and 2,

the repeat numbers of blocks and the repeat intervals of blocks)

Pre-Trigger(ms)= pre-trigger time (*Type=Evoked only*)

Notes= any documents (arbitrary strings)

*1 This file can be edited, so if any changes are made to this file, please take care not to be able to replay.

5.2 Data file format

Format

Each converted 12bit sampling data is stored as 2 bytes in IBM (Intel processor) binary format. The significant 4 bits of each 2 bytes are masked by 0.

Data Formation

Data are arranged in the ascending order of the A/D channels used.

Example The A/D channels used here are 1,2,5, and 8 and data are collected as follows.

the first output of CH1, CH2, CH5, and CH8,

the second output of CH1, CH2, CH5, and CH8,

the third output of CH1, CH2, CH5, and CH8,

.....

.....

the Nth output of CH1, CH2, CH5, and CH8,

.....

.....

You can use the 16bit integer, *short int*, in C language on most machines, to make your own data scanning program.

Repeat Format

The data is arranged in the ascending order.

i.e. the first repeat output, the second repeat output, ... , and the Nth repeat output.

Example Repeated data, N samples per channel and A/D channels 1, 2, 5, and 8

Repeat outputs are ordered as below.

the first output of CH1, CH2, CH5, and CH8,
the second output of CH1, CH2, CH5, and CH8,

the Nth output of CH1, CH2, CH5, and CH8,
the N+1th output of CH1, CH2, CH5, and CH8,
the N+2th output of CH1, CH2, CH5, and CH8,

the 2Nth output of CH1, CH2, CH5, and CH8,
the 2N+1th output of CH1, CH2, CH5, and CH8,
the 2N+2th output of CH1, CH2, CH5, and CH8,

the 3Nth output of CH1, CH2, CH5, and CH8,
.....

6 Customization

Because this software includes not only the executable file but also the source files, it can be customized at the source code level as desired.*1 In order to install the source files onto your computer, please select the **complete** or **custom** option for the installation program.

This software is produced with Microsoft® Visual C++® version 4 which must be used when making changes.*2

*1 No documents for these source files are included.

*2 We assume no liability for modifications made by the user. Any detriment to results and performance following modification is entirely at the user's risk.

7 Error messages

File Open Error, File Create Error, Make File Error and similar messages

Since the specified data file may be malfunctioning or may not permit you to “*write to*” the directory, **MED8 conductor** will be unable to create the temporal file. This may occur when you read the data file directly from CD-ROM.

Solution

Please determine whether you have a “*write to*” access to the directory, or copy the data to another directory which you can access in this manner.

DAQ_DB_Transfer Error=10846

This indicates a failure to transfer the acquired data from the A/D board to the memory. This may occur when another application has precedence over **MED8 conductor**.

Solution

Please terminate other applications including the resident programs.

Memory Allocation Error and similar messages

The working memory can not be located.

Solution

MED8 conductor needs at least 32MB of physical memory and 100MB of virtual memory to work well. Please terminate other applications currently in use, and see whether there is enough disk space for virtual memory.

Trigger Time Out and similar messages

MED8 conductor cannot detect the trigger event during the specified waiting time.

This message may appear when output of the stimulus fails to occur or the specified trigger level is too high.

Solution

Please check to see whether the isolator is switched on and if the stimulus wave is set appropriately, and then adjust the trigger level.

