

Wave Sound Decorator User's Manual

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YAMAHA CORPORATION

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Introduction

WSD (Wave Sound Decorator) is application software designed for the use in mobile terminals with MA2/MA-3/MA-5/MA-7 that supports SMAF playback. It contains "simplified waveform editing function" etc. as well as "PCM-to-SMAF conversion function."

Recommended Operating Environments

The recommended operating environments of WSD are as follows.

| | |
|--------------------|--|
| Supported OS | Microsoft® Windows® XP Microsoft® Windows® 2000 |
| CPU/Clock | Pentium 4® 2.0GHz or faster; Or the other compatible processor |
| Memory | 256MB or more |
| Required HDD Space | 40MB or more |

【Note】 All product names used in this manual are trademarks and registered trademarks of their respective companies.

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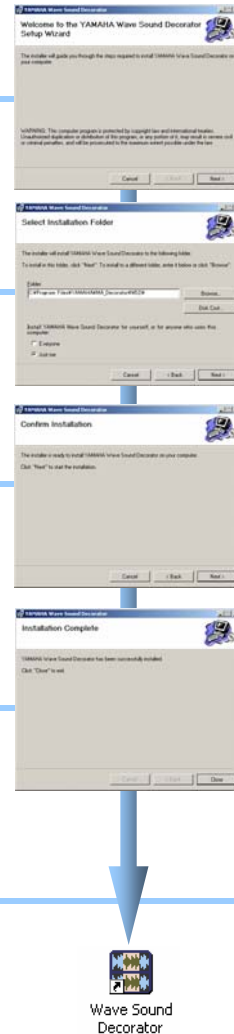
Revision History

| Version | Date of issue | Description | |
|---------|---------------|--|--|
| 1.0.0 | 2005/1/20 | | Newly Released |
| 1.1.0 | 2005/10/19 | Recommended Operating Environments | Pentium III 800MHz → Pentium 4 2.0GHz Memory 128MB → 256MB |
| | | 2. | Added MA-7. |
| | | 3.2. | Added MA-7. Deleted confirmation message for sampling frequency which exceeds frequency limits. |
| | | 3.3.3. | Added MA-7. |
| | | 3.3.6. | Added supported frequency of 44100 and 32000Hz |
| | | 3.3.8. | Added MA-7. |
| | | 4.1.1. | Added MA-7. |

1. Preparation for Use

This chapter describes a series of operations to install the WSD into your computer. Be sure to follow the steps shown below and correctly install the WSD into your PC.

1. Double-click "Setup.exe" to start "Setup Wizard."
2. Select any folder to install the WSD, and then press "Next."
3. "Confirm Installation" dialog is displayed.
Click "Next" button to start the Installation.
4. When the installation is completed, "Installation Complete" dialog will be displayed.
Click "Close" button.
5. A shortcut of the WSD is created on your desktop and start menu.
Click the created short-cut icon to start the WSD.



2. Input/Output Condition

Input/output restrictions of WSD are listed as follows.
WAVE-to-SMAF conversion beyond the following ranges cannot be supported.

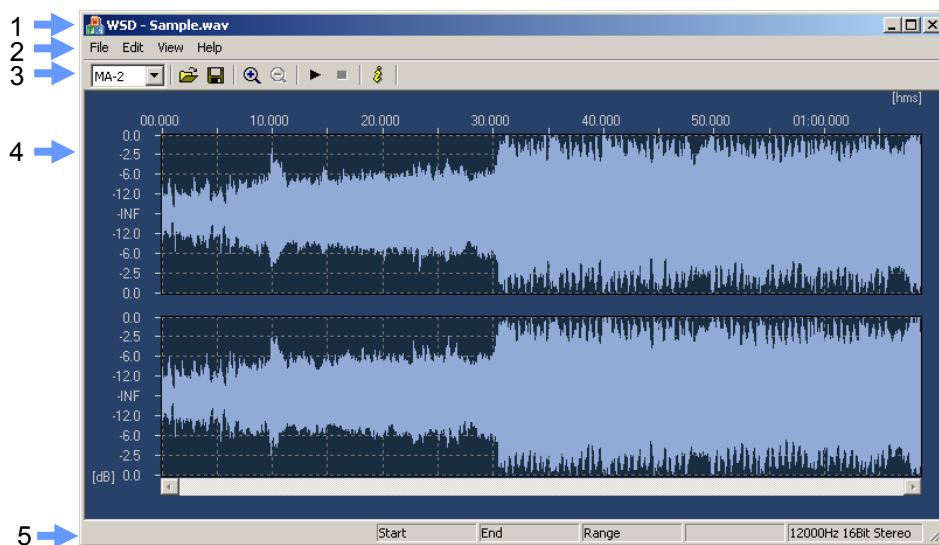
| Input File WAV [*.wav], AIFF [*.aif, *.aiff] | | | Output File SMAF [*.mmf] | | |
|---|----------------|--------------------|-----------------------------|---------|--------------------|
| Bit | Channel | Sampling Frequency | File Format | Channel | Sampling Frequency |
| 8bit or 16bit | Mono or Stereo | 4kHz to 48kHz | SMAF/MA-2 | Mono | 4kHz or 8kHz |
| | | | SMAF/MA-3 | Mono | 4kHz to 16kHz |
| | | | SMAF/MA5 | Mono | 4kHz to 24kHz |
| | | | | Stereo | 4kHz to 12kHz |
| | | | SMAF/MA7 | Mono | 4kHz to 48kHz |
| | | | | Stereo | 4kHz to 24kHz |

3. Let's use WSD

This chapter describes a series of operating procedures from the loading procedure of a WAV-file (*.wav) or AIFF-file (*.aif, *.aiff) to the saving procedure as a SMAF-file (*.mmf).

3.1. Configuration of User Interface

The following is the main window of the WSD. This window is designed so that a series of operation can be performed. For details of each function, see the later part in this document.



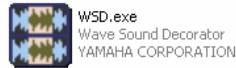
Application Window

| No. | Function Name | Description |
|-----|---------------|---|
| 1 | Title Bar | Displays this application name or a file name loaded into the WSD. (For details, see p.7) |
| 2 | Menu Bar | Opens "File Menu," "Edit Menu," "View Menu," or "Help Menu." (For details, see p.8) |
| 3 | Tool Bar | A series of performance such as WSD operating environments setting, file opening and file saving, and wave file playback can be executed. (For details, see p.10) |
| 4 | Waveform View | Displays a waveform of a loaded WAV file (*.wav) or AIFF file (*.aif, *.aiff). If monophonic data was loaded, one waveform is displayed. And, if stereo data was loaded, two waveforms are vertically displayed: upper waveform for L channel and lower waveform for R channel. (For details, see p.11) |
| 5 | Status Bar | Displays the status of loaded audio data. (For details, see p.11) |

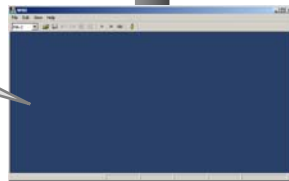
3.2. Let's convert WAV file/AIFF file into SMAF file

This section describes a series of operation from the load operation of a WAV file (*.wav) or AIFF file (*.aif, *.aiff) into WSD to the saving operation as a SMAF file (*.mmf). For details of each procedures and functions, see the later part in this document.

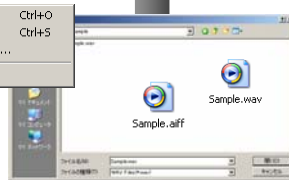
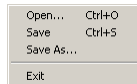
There are restrictions such as usable frequency range, usable channel numbers, etc. on the specification of each mobile synthesizer (MA-2/MA-3/MA-5/MA-7). So, before you start creating your contents, we strongly recommend you to refer to **WSD: Sample Type Spec Sheet...**, or **Input/Output Condition** in this document for your understanding.



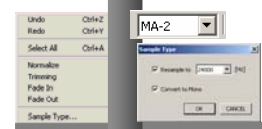
1. Start up WSD by selecting in order of Start→Program→YAMAHA→WSD or by double-clicking a shortcut icon "WSD.exe" created on the desktop.



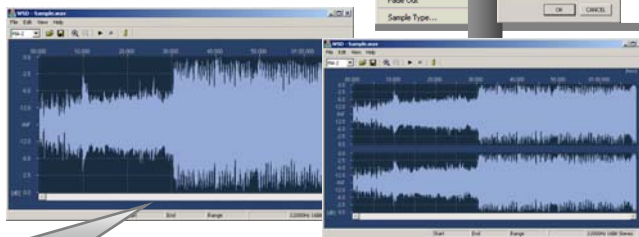
2. WSD application window is displayed on your desktop. For details about this application window, see [p.5](#).



3. Load a WAV file (*.wav) or AIFF file (*.aif, *.aiff) into WSD by directly dragging and dropping the file onto Application Window or by opening it from Menu Bar→File Menu→Open.



4. A music data was loaded into WSD. Based on the specifications of the objective content, change the settings of target selection box and Sample Type. For details about each input/output condition, see [p. 4](#)



5. If a data loaded into WSD is stereo, two waveforms are vertically displayed in two levels. And, in case of monaural, one waveform is displayed in one level. For details, see [p.11](#)



6. A loaded data can be modified into the desired form by using functions in Menu bar, such as Normalize, Trimming, Fade In, Fade Out, and Sample Type. In addition, WSD can not only convert all the loaded data but select a part of data by using the dragging function of mouse. When selected, waveform information of the selected area is displayed on Status bar. (Only playback of the designated part can be performed, but it cannot be saved. Perform "Designate a range by using mouse" → "Trimming" → "Save," to save the selected part.



7. Give a name to the edited file and save it in SMAF Format (*.mmf).



3.3. General Outline of Function

This section describes the functions, general outlines, names, etc. which are provided in WSD.

3.3.1 Title Bar

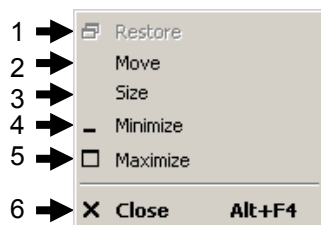
The Title Bar shows the application name "WSD" and the name of a file that is currently opened in WSD. The details of each function are described in the following table.



| No. | Function Name | Description |
|-----|---------------------------------|---|
| 1 | System Icon | By clicking this icon, System menu is opened. |
| 2 | Minimize button | By clicking this button, the window is minimized. |
| 3 | Maximize/Undo (minimize) button | By clicking this button, the window is maximized. In a condition of which the window has been maximized, when this button is pressed once again, the window is restored to its original size. |
| 4 | Close button | By clicking this button, the window is closed. |

3.3.1.1 System Menu

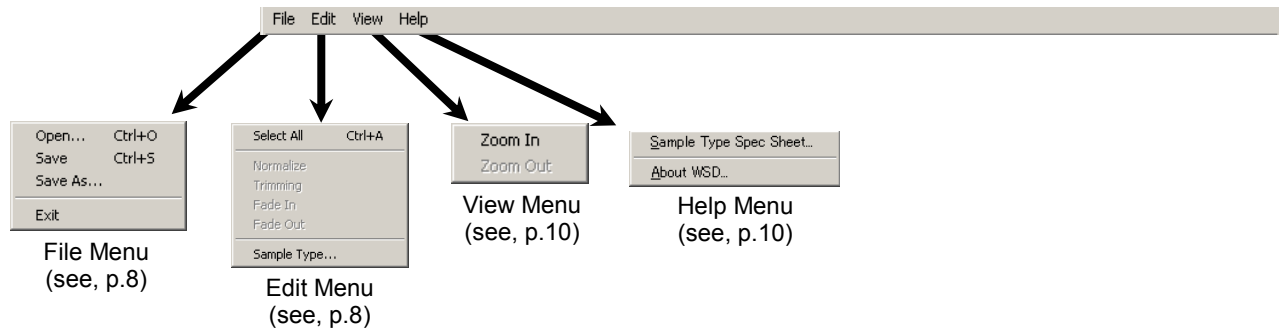
By clicking the "System Icon" located on the left end on "Title Bar," this "System Menu" is opened. Functions provided in this menu are described in the following table.



| No. | Function Name | Description |
|-----|------------------|---|
| 1 | Restore (R) | Restores the window being displayed to the original size. |
| 2 | Move (M) | Changes the mouse pointer into a moving tool. |
| 3 | Size (S) | Changes the mouse pointer into a size-change tool. |
| 4 | Minimize (N) | Minimizes the window. |
| 5 | Maximize (X) | Maximizes or reduces the window. |
| 6 | Close (C) Alt+F4 | Closes the window being opened. |

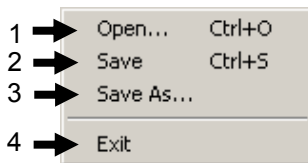
3.3.2 Menu Bar

The following functions are provided in Menu Bar to execute various operations. For details about each function, see the sections for each function.



3.3.2.1 File Menu

A series of operations such as Open, Save, and Exit of a file can be performed with this menu.

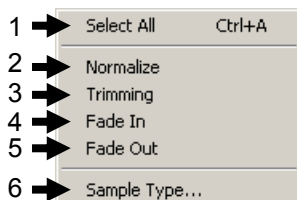


| No. | Function Name | Description |
|-----|-----------------|---|
| 1 | Open...(Ctrl+O) | Displays "Open..." dialog and reads a file selected in there. A format of WAV (PCM) [*.wav] or AIFF [*.aif, *.aiff] is supported. |
| 2 | Save (Ctrl+S) | Converts a file loaded in WSD into a SMAF and saves it on the file. |
| 3 | Save As... | Displays a "Save As..." dialog and converts a file into a SMAF and saves it. |
| 4 | Exit | Exits from this application. |

[Note] When "Exit" is executed while a file being opened on the WSD is not saved after editing, a save confirmation dialog will be displayed.

3.3.2.2 Edit Menu

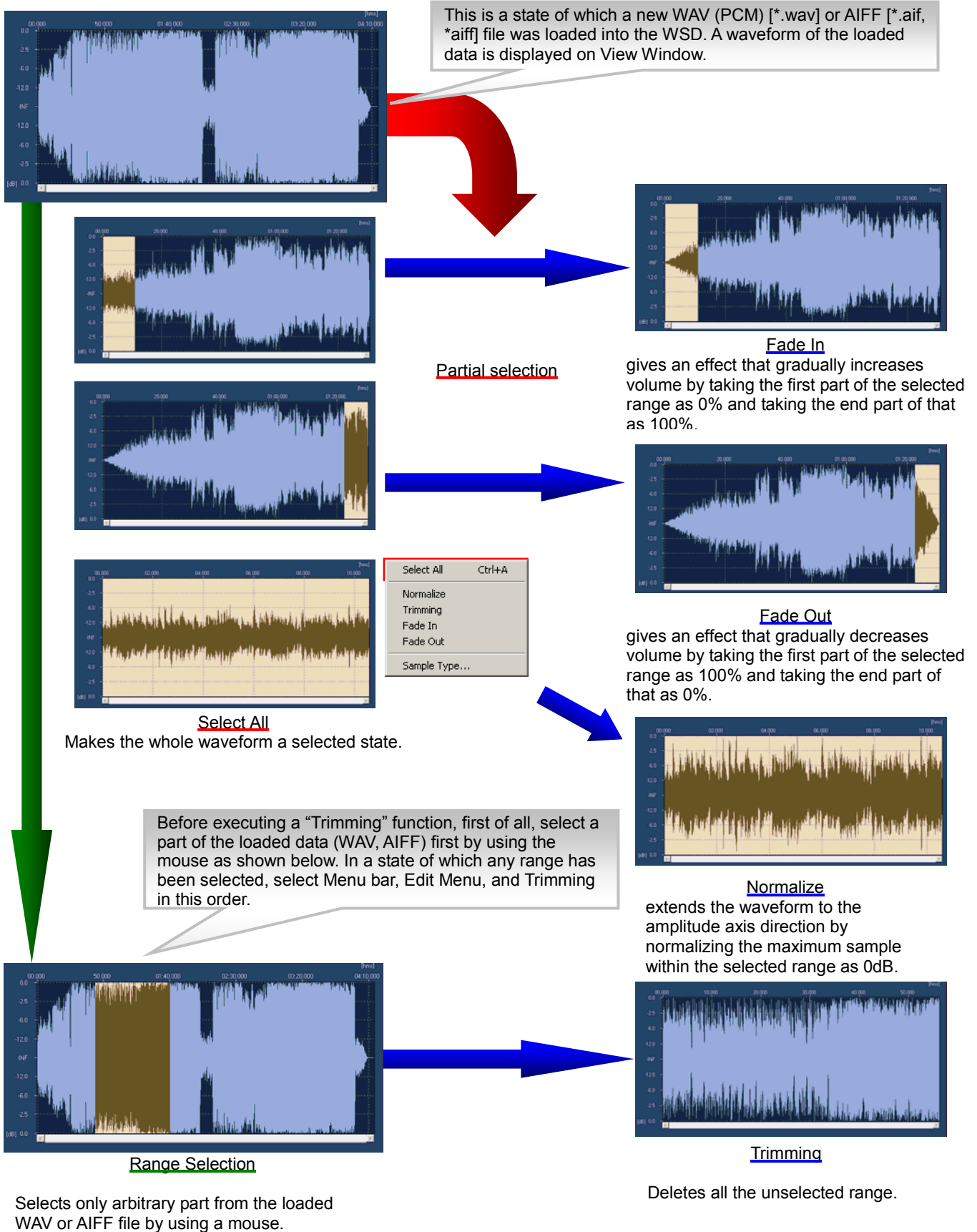
In Edit Menu, various editing functions (Normalize, Trimming, Fade In, and Fade Out) are provided.



| No. | Function | Description |
|-----|---------------------|---|
| 1 | Select All (Ctrl+A) | Makes the whole waveform a selected state. |
| 2 | Normalize | The waveform is extended to the amplitude axis direction by normalizing the maximum sample within the selected range as 0dB (100%). Waveform view will be updated after "Normalize" is processed. |
| 3 | Trimming | Deletes all unselected range. The selected range is resized (maximized) after "Trimming" is completed. |
| 4 | Fade In | This sound effect that gradually increases volume is given by taking the first part of the selected range as 0% and taking the end part of that as 100%. The contents on the window will be updated after "Fade In" was processed. |
| 5 | Fade Out | This sound effect that gradually decreases volume is given by taking the first part of the selected range as 100% and taking the end part of that as 0%. The contents on the window will be updated after "Fade Out" was processed. |
| 6 | Sample Type... | Displays "Sample Type..." dialog. (See, p.12) |

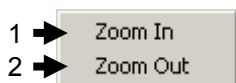
Example (Normalize, Trimming, Fade In, Fade Out)

This section describes the details about four types of editing functions which are provided from Edit Menu.



3.3.2.3 View Menu

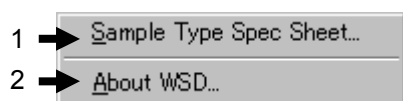
The View Menu provides functions to change the scaling.



| No. | Function Name | Description |
|-----|---------------|--|
| 1 | Zoom In | Magnifies the waveform display magnification to the time axis direction by one step. |
| 2 | Zoom Out | Reduces the waveform display magnification by one step. |

3.3.2.4 Help Menu

The Help Menu provides the following functions to support user's operations.



| No. | Function Name | Description |
|-----|---------------------------|---|
| 1 | Sample Type Spec Sheet... | Displays "Sample Type Spec Sheet (PDF)." |
| 2 | About WSD... | Displays "About WSD..." (See, p.12) |

3.3.3 Tool Bar

The Tool Bar contains functions for data playback and playback stop as well as the functions which are provided in "File Menu", "View Menu", etc. For details about each function, see the following table.



| No. | Function Name | Description |
|-----|----------------------------|--|
| 1 | Target Selection Combo Box | Switches the types of SMAF to output: MA-2/MA-3/MA-5/MA-7. |
| 2 | Open button | Opens a WAV (PCM) file or AIFF file. |
| 3 | Save button | Saves a loaded WAV (PCM) file or AIFF file in SMAF file format (*.mmf). |
| 4 | Zoom In button | Magnifies the waveform display magnification to the time axis direction by one step. |
| 5 | Zoom Out button | Reduces the waveform display magnification by one step. |
| 6 | Play button | Converts a displayed wave data into SMAF format and plays it back. When a part of the loaded wave data is selected, only that part is played back. |
| 7 | Stop button | Stops the playback of music. |
| 8 | Information button | Displays "Contents Information dialog." (See, p.13) |

3.3.4 Status Bar

The Status bar shows a state of waveform data that has been loaded in WSD. For details about each function, see the following table.

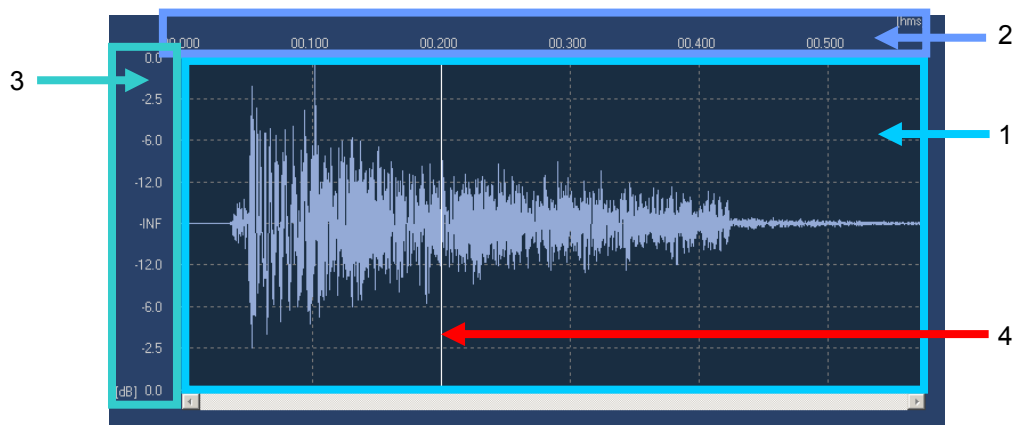


| No. | Function Name | Description |
|-----|---------------------------|--|
| 1 | Starting Position Display | A playback starting position is displayed in time when a range was selected on a waveform. |
| 2 | End Position Display | A playback end position is displayed in time when a range was selected on a waveform. |
| 3 | Selected Range Display | Displays the selected waveform range (Start → End) in time. |
| 4 | File Size Display | Displays an indication of the file size when a waveform data being opened on WSD is converted into SMAF and is output under the present settings. It is displayed in KB. (1KByte = 1024Byte) |
| 5 | Sample Type Display | Displays the sample types (sampling frequency, quantized bit number, Channel number) of the displayed waveform data. |

[Note] The file size is displayed only when a file can be saved as a SMAF.

3.3.5 Waveform View

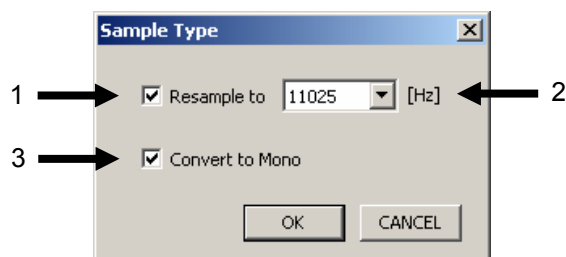
A loaded waveform data is visually expressed.



| No. | Function Name | Description |
|-----|------------------|---|
| 1 | Waveform Display | Opens a loaded data and displays its waveform. When a data loaded into WSD is stereo, two waveforms are vertically displayed: Upper level for L channel and lower level for R channel. And, in the case of monaural, a waveform is displayed. |
| 2 | Level Scale | Displays the scale of time axis direction. |
| 3 | Vertical Scale | Displays the scale of amplitude axis direction. |
| 4 | Playback cursor | Shows whereabouts a playback position is located. |

3.3.6 Sample Type Dialog

With this dialog, a sample type of the loaded waveform data can be converted into an arbitrary form. Re-sampling and conversion from stereo to mono can be performed.



| No. | Function Name | Description |
|-----|------------------------|--|
| 1 | Resample On/Off | By placing a check, sampling is enabled again. |
| 2 | Resample Combo Box | Displays a selectable frequency. Only conversion to the lower frequency than the waveform data frequency opened in WSD is possible. The selectable frequencies are as follows.(44100, 32000, 24000, 22050, 16000, 12000, 11025, 8000, 4000 Hz) |
| 3 | Convert to Mono On/Off | By placing a check, stereo data can be converted into mono. The mixing is performed under the following condition: L: 50% ,R:50% |

【Note】 Keep in mind that tone quality is deteriorated if re-sampling is repeated.

3.3.7 About WSD Dialog

The tool's version information etc. are displayed.



3.3.8 Contents Information

The Contents Information of a SMAF to output can be set.

Contents Information

1 → COPY STATUS EDIT ☐ SAVE ☒ TRANS. ☒

2 → CODE TYPE SHIFT-JIS

3 → VENDER NAME

4 → CARRIER NAME

5 → CATEGORY NAME

6 → SONG TITLE

7 → ARTIST NAME

8 → LYRICIST

9 → COMPOSER

10 → ARRANGER

11 → COPYRIGHT (C)

12 → MANAGEMENT GROUP

13 → MANAGEMENT INFO.

14 → CREATION DATE

15 → REVISION DATE

OK Cancel

| No. | Function Name | Description |
|-----|------------------|---|
| 1 | Copy Status | Sets Enable/Disable of Editing, Save, and Transfer of a SMAF to output. When checked: Enabled When unchecked: Disabled |
| | Edit | Enable/Disable of editing |
| | Save | Enable/Disable of save |
| | Trans. | Enable/Disable of transfer |
| 2 | Code Type | Character codes used for the contents information can be designated: Shift-JIS, Latin-1, EUC-KR, or UTF-8. |
| 3 | Vender Name | Vender Name |
| 4 | Carrier Name | Carrier Name can be entered. |
| 5 | Category Name | Category Name can be entered. |
| 6 | Song Title | Song Title can be entered. |
| 7 | Artist Name | Artist Name can be entered. |
| 8 | Lyricist | Lyricist can be entered. |
| 9 | Composer | Composer can be entered. |
| 10 | Arranger | Arranger can be entered. |
| 11 | Copyright© | Copyright can be entered. |
| 12 | Management Group | Management Group can be entered. |
| 13 | Management Info. | Management Info. can be entered. |
| 14 | Creation Date | Creation Date can be entered. |
| 15 | Revision Date | Revision Date can be entered. |

[Note] With the contents for MA-3/5/7, the setting of “Edit,” “SAVE,” and “Trans” is available. And, with the contents for MA-2, the setting of “Save” and “Trans” is available.

4. Supplemental Information

4.1. Message List

This section describes the messages displayed on WSD.

4.1.1 Error Messages

| No. | Error Message | Cause |
|-----|-------------------------------------|--|
| 1 | Cannot open WAV / AIFF file | File access error. Loading of a wave file is not permitted or a file is being used by other applications. |
| 2 | Extension is not .wav / .aif / aiff | A file other than WAV or AIFF was loaded, or the extension of a file is incorrect. |
| 3 | Filename length exceeds limit | The absolute path length of a file to load exceeds the limit of the character numbers. (when a file was dropped and when file name was designated in the Open dialog). Or, the absolute path length of a file that was designated as save destination exceeds the limit of the character numbers. (When file name was designated in the Save As ... dialog). |
| 4 | Audio format not supported | Data does not meet neither WAV(PCM)format nor AIFF format. Data is broken or is WAV format other than PCM (such as ADPCM or MP3). |
| 5 | Sampling Frequency not supported | Audio data with a sampling frequency outside the range from 4kHz to 48kHz were input, or data save was attempted in the unsupported frequency. The supported frequency is as follows. - MA-2 → 4000Hz or 8000Hz - MA-3 → 4000Hz to 16000Hz - MA-5 → 4000Hz to 24000Hz(Mono) 4000Hz to 12000Hz(Stereo) - MA-7 → 4000Hz to 48000Hz(Mono) 4000Hz to 24000Hz(Stereo) |
| 6 | Bits per sample not supported | Audio data of the quantized bit numbers other than 8bit/16bit were input. |
| 7 | Channel count not supported | Audio data with a channel number other than 1(Mono) or 2(Stereo) were input, or data save was attempted in an unsupported channel number. The supported channel number is as follows. - MA-2/3 → Mono - MA-5/7 → Mono/Stereo |
| 8 | Inadequate playback time | One attempted to load a file of 20 ms or shorter of playback time. |
| 9 | Playback time exceeds limit | One attempted to save data with playback time beyond the limitation as a SMAF. - MA-2 → 66040 [msec] - MA-3/5/7 → 2097151 [msec] |
| 10 | Cannot save SMAF file | File access error. A SMAF file with the same name exists as Read only, or the writing to the folder itself is not permitted. Or, disk capacity is insufficient. |
| 11 | Cannot open Sample Type Spec Sheet | There is no WSD_SampleTypeSpecSheet.pdf. Computer's environment for opening a PDF is not satisfied. |
| 12 | Cannot Load DLL | Cannot load either of M7_EmuSmw7.dll or M7_EmuHw.dll. |