MA-2 Authoring Tool
User's Manual
(ATS-MA2-SMAF Edition)

Ver. 1.3.2

2005/12/20

Yamaha Corporation

⊛ YAMAHA

<Revision History>

Ver.	Date	Content
1.0.0	2002/12/16	Newly released

1.2.0	2003/09/19	2.2.1 Starting Window
		    Note was added. The description of error message was changed.
		3.1.1 Menu Bar
		    Clerical error was corrected.
		3.1.1.3 Help Menu
		    Menu item was changed.
		3.1.6.8 Assigned MA2 Channel
		    Message was changed.
		3.2.5 Vendor Edit Box
		    Clerical error was corrected.
		3.6.5 Cancel Button
		    This was added newly.
		3.8 Version Dialogue
		    Image data was changed.
		4 Message
		    Error message was corresponded to Japanese. (only on Japanese OS)
		    Error message was changed.

1.3.0	2003/12/24	1.2.4 Memory
		    Recommended value was changed. (64k → 128k)
		2.1 File Composition
		    Composition of emulator was changed.
		2.2.2 Startup Display
		    Skip function for splash display was newly added.
		3.1.1.1 File Menu
		    Close function is newly added.
		3.1.6.7 Piano Roll Color
		3.1.7 MA2 ch Map list view
		3.1.8 Piano Roll button
		    Newly added.
		3.10 ADPCM Registration Dialog
		    Startup from SMAF ADPCM Edit Dialog was added.
		3.11 Piano Roll Dialog
		3.12 SMAF ADPCM Edit Dialog
		4.3 ADPCM Setup Error
		    Newly added.

1.3.2	2005/12/20	Clerical error correction.

\<Contents\>

1. Overview

This document describes the usage of MA-2 Authoring Tool ATS-MA2-SMAF (hereafter called ATS-MA2).

1.1. Functions of ATS-MA2

ATS-MA2 is an application software to create SMAF (Synthetic music Mobile Application Format) compatible with the synthesizer LSI "MA-2" which operates on Windows®2000 and Windows®XP. The main functions are as follows.
- The conversion function from SMF (Standard MIDI File) to SMAF
- SMAF voice edit function
- SMAF playback function
- Filter function for SMAF conversion of SMF (SMAF Filter)
  SMF creation in accordance with "Ringing Melody Authoring Guidelines for ATS-MA2" is necessary for the formal SMF -> SMAF conversion which does not use SMF Filter.
  [Note] When SMF Filter is used, all voices are changed to FM preset voice. Therefore, all setting of FM user voice/ADPCM voice becomes invalid.

1.2. Recommended Operation Environment

This application software needs the following operation environment.

1.2.1. CPU Clock

Pentium®/Celeron™ or compatible processor
400MHz or more

1.2.2. OS

Windows®2000/Windows®XP

1.2.3. Required Hard Disk space

40MB or more

1.2.4. Memory

128MB or more

2. Starting and Ending of the Application

2.1. File Composition

ATS-MA2 consists of the following four files.

File name	Function
ATS-MA2.exe	Main body of Application
M5_EmuHw.dll	Hardware Emulator
M5_EmuSmw5.dll	Middleware Emulator
fm_temp.vma	Voice library file

2.2. Starting

2.2.1. Starting Operation

Double-clicks ATS-MA2.exe or inputs a file name directly into "Run…" of Start menu.
(Note)
   If ATS-MA2.exe is put on the folder of a deep class, it may be unable to start normally.
   Please adjust the file path not to exceed 250 characters by the half-size English number.

In addition, the multi-simultaneous starting of ATS-MA2 is restricted. During an operation, if the dialog message is displayed on screen, either of ATS-MA2-SMAF or ATS SMAF PhraseL1 is already running. Please terminate the operation, when it is necessary.

2.2.2. Starting Screen

At starting, the following image is displayed.
While a starting screen displays, it is possible to cancel the display of bitmap by pressing a space key
or return key.

2.3.   Ending

2.3.1. Ending Operation by Title Menu Bar [Close]

It concludes by selecting [Close (Alt+F4)] in the title menu bar.

2.3.2. Ending Operation by [Close] Button

It concludes by pressing [Close] button (⊠) at the right corner of Title bar.

2.3.3. Other Ending Operation

When the main window is active, press [Alt] + [F4] (press [F4] with [ALT]).

2.3.4. Ending Limitation

When sub dialogues such as MA2 Voice Library are opening, the ending processing is impossible.

3.   Window

The relation between the functions and calls of window are summarized as follows.
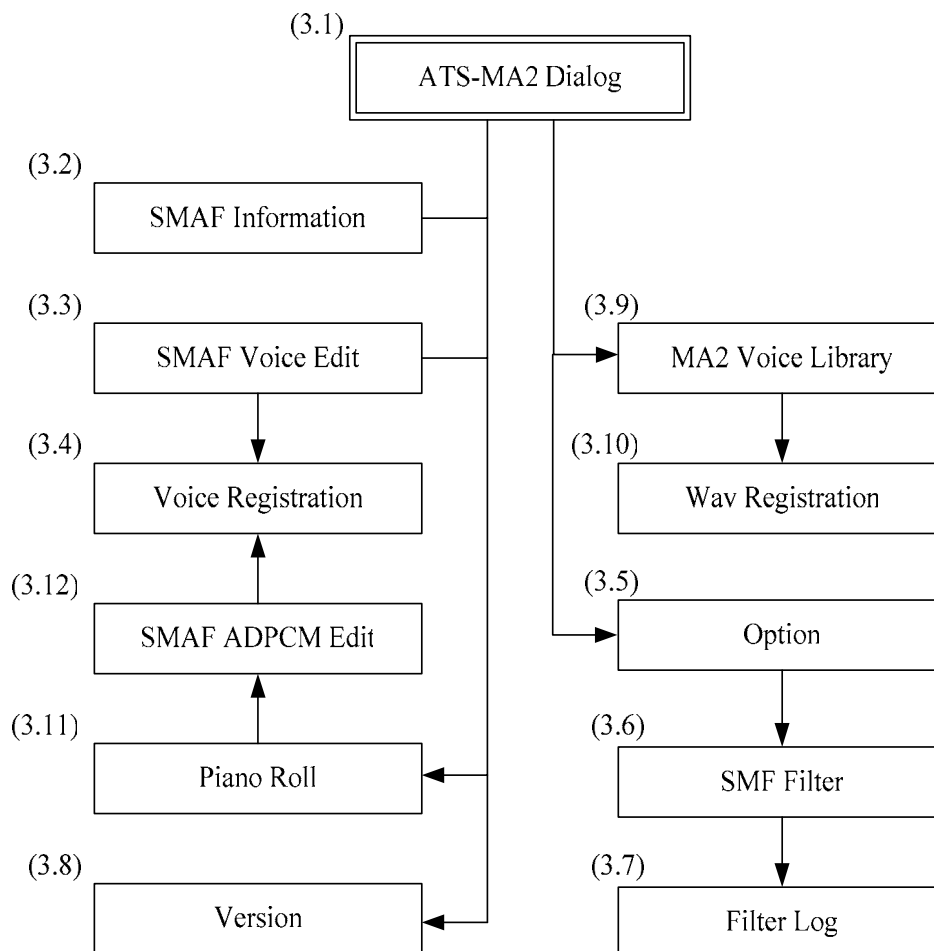
(3.1) ATS-MA2 Dialog
   It is the Main dialog of ATS-MA2 application. Reading of SMF and SMAF, specification of save, or play operation of SMAF by Player is performed.

(3.2) SMAF Information Dialog
   Sets up the information peculiar to SMAF.

(3.3) SMAF Voice Edit Dialogue
   Edit and audition of FM voice information to converted SMAF and audition of ADPCM is performed.

(3.4) Voice Registration Dialog
   The FM/ADPCM voice information edited for specific SMAF in the dialog of (3.3) SMAF Voice Edit dialog and (3.12) SMAF ADPCM Edit dialog is registered into the voice library of application, and reuse is made possible.

(3.5) Option Dialog

It is a setup dialog for optional functions. Concretely, it is the setting of (3.6) SMF Filter and (3.7) Filter Log.

(3.6) SMF Filter Dialog

Sets channels that becomes effective by SMF Filter.

(3.7) Filter Log

It displays detailed processing contents of (3.6) SMF Filter such as Event operation and Channel Deletion etc.

(3.8) Version Dialog

It displays the version information of ATS-MA2 application.

(3.9) MA2 Voice Library Dialog

It performs an edit and operation of voice information library used by application. The audition by tone unit edited is also possible.

(3.10) Wav Registration Dialog

It performs the ADPCM conversion to voice information of Wav files, and registers into voice library of application as voice information.

(3.11) Piano Roll Dialog

PianoRoll of FM voice specified to VoiceAssignMap is displayed on the upper part of a dialog, and PianoRoll corresponding to ADPCM is displayed on the lower part of a dialog. As for ADPCM, it is possible to add a new note by this operation.

(3.12) SMAF ADPCM Edit Dialog

A setup of ADPCM voice and a note is performed in the form which newly generates SMAF or SMAF converted from SMF.

3.1.   ATS-MA2 Dialog

This is the Main dialogue. It is simultaneously displayed as starting of application.
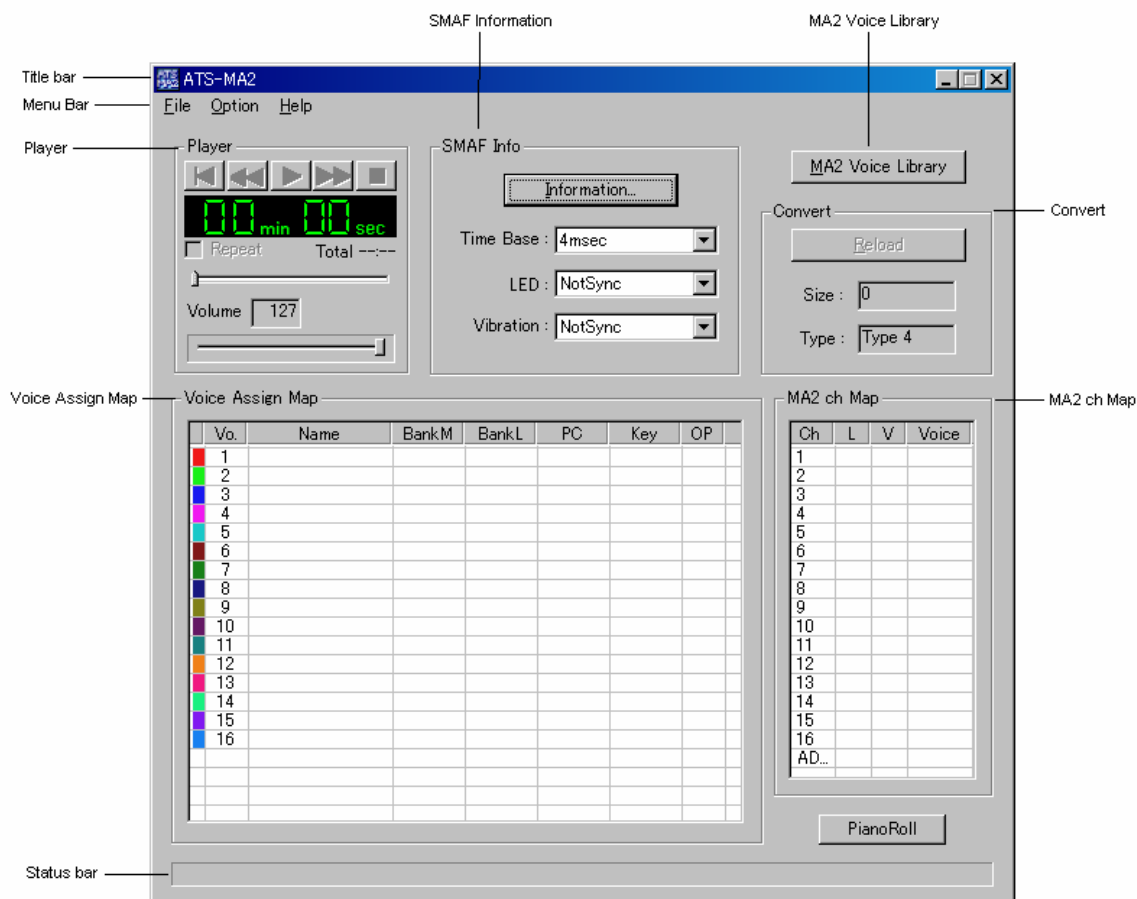
3.1.1.   Menu Bar

3.1.1.1.   File Menu
The following File menu is displayed when "File" of Menu bar was selected.
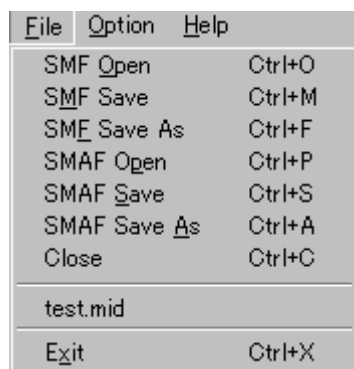
① SMF Open

When it is selected, [Open dialogue] is displayed and you can designate SMF. The designated SMF is converted into SMAF. And Player can play it when it succeeds in conversion. The file cannot be selected during SMAF play by Player.

The same operation is possible by drag and drop SMF to ATS-MA2 dialogue directly.

② SMF Save

SMF is overwritten with the file name saved in ③ SMF Save As immediately before. The SMF file which had SMF Filter processing can be saved. When SMF Filter is not used, it cannot be selected.

③ SMF Save as

When it is selected, [Save As dialogue] is displayed and the file name which will save can be designated. The SMF file which had SMF Filter processing can be saved. When SMF Filter is not used, it cannot be selected. If the input of extension is omitted at the input of File name, ".mid" is added.

④ SMAF Open

When it is selected, [Open dialogue] is displayed and SMAF can be designated. The designated SMAF can be played by Player, but cannot be re-edited and saved. And it cannot be selected during SMAF play by Player.

The same operation is possible by drag and drop SMAF to ATS-MA2 dialogue directly.

⑤ SMAF Save

SMAF is overwritten with the file name saved in ⑥ SMAF Save As immediately before. When ⑥ SMAF Save As is not used, it cannot be selected.

⑥ SMAF Save As

When it is selected, [Save As dialogue] is displayed and the file name which will save can be designated. Only when the read SMF is converted into SMAF normally, it can be selected. If the input of extension is omitted at the input of File name, ".mmf" is added.

⑦ Close

It clears all the internal data of ATS-MA2.

⑧ Exit

It closes the present dialogue and ends this application.

[ALT] + [F4] is same operation.

3.1.1.2. Open Menu

When "Option" in menu bar is selected, the following Option menu is displayed.
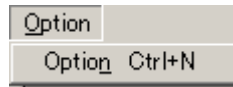
① Option

Option setting dialogue (3.5) is displayed.

3.1.1.3. Help Menu

When "Help" in menu bar is selected, the following Help menu is displayed.

① Version

Version information dialogue (3.8) is displayed.

② http://smaf-yamaha.com/

SMAF Official Web Site (English) is opened from the browser related with html.

3.1.2. Player

In this block, SMAF play function can be operated.
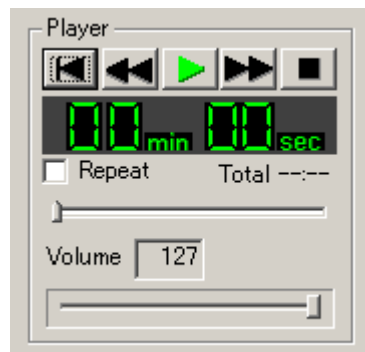
3.1.2.1. Search Button

  Returns the playing location of music to the head.

3.1.2.2. Rewind Button

  Rewinds the playing location in one-second step.

3.1.2.3. Play Button

 Starts the play of music.

It can be operated in the state in which the play by Player is possible.

3.1.2.4. Fast-forward Button

 Advances the playing location in one-second step.

3.1.2.5. Stop Button

 Stops the play of music, and returns the playing location to the head.

3.1.2.6. Time Display

This indicates the play time. When the performance ends, it returns to "0".

3.1.2.7. Repeat Check Box

Sets the repeat play of music. (Check in the box means the repeat play)
This cannot be operated during SMAF play.

3.1.2.8. Play time
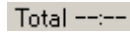
 Displays total play time of music.

3.1.2.9. Playing Location Slider

Displays the playing location. When the performance ends, it returns to "0".

3.1.2.10. Volume Display

 Displays the present Volume value (0 ~ 127)

3.1.2.11. Volume Slider

Sets Volume value (0 ~ 127) at the performance.

3.1.3.   SMAF Information

In this block, SMAF peculiar information can be set.
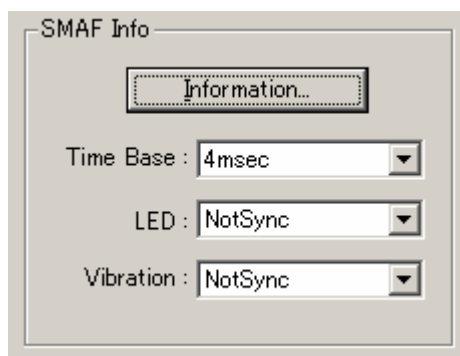
3.1.3.1.   Information Button

Displays SMAF Information Dialogue (3.2).

3.1.3.2.   Time Base Combo box
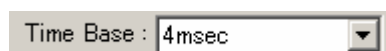
Time Base can be selected from 4,5,10,20msec at SMAF conversion.
Default is 4msec.
Please set TimeBase before reading SMF. When newly editing only data of ADPCM
Voice without preparing SMF, set TimeBase before starting editing. TimeBase can not be
changed during editing ADPCM.

3.1.3.3.   LED Combo box
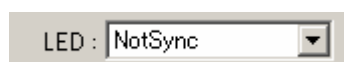
The channel to synchronize its Note and LED can be selected. It can be selected by the
individual channel designation of 1 ~ 12 or the group designation of 1~4, 5~8, 9~12
channels.
Default is with no synchronous setting (NotSync).
This setting refers to the display of MA2 ch Map.
[Note] LED does not synchronize with Note which has Pitch Bend in spite of this setting.

3.1.3.4.   Vibration Combo box
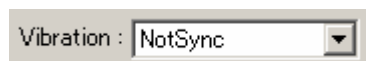
The channel to synchronize its Note and Vibration can be selected. It can be selected by
the individual channel designation of 1 ~ 12 or the group designation of 1~4, 5~8, 9~12
channels.
Default is with no synchronous setting (NotSync).
This setting refers to the display of MA2 ch Map.
[Note] Vibration does not synchronize with Note which has Pitch Bend in spite of this
        setting.

3.1.4.   MA2 Voice Library

In this block, voice library of application can be operated.

3.1.4.1.   MA2 Voice Lib Button
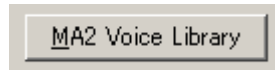
MA2 Voice Library

Displays MA2 Voice Library Dialogue (3.9).

3.1.5.   Convert

In this block, the conversion from SMF to SMAF is operated.

Convert
Reload
Size : 0
Type : Type 4
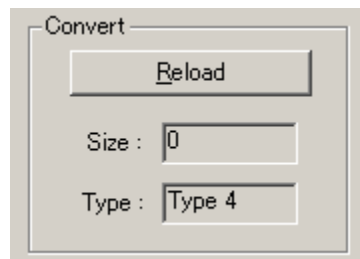
3.1.5.1.   Reload Button

Reload

Reads SMF again and performs SMAF conversion.
All internal data under edit is canceled.

3.1.5.2.   Size Display

Size : 0

Displays file size of the converted SMAF. The unit is byte.

3.1.5.3.   Type Display

Type : Type 4
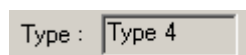
Classifies FIFO type of SMAF (channel use status) per 4 channel unit, and displays.

Type0 :   SMAF containing only ADPCM
Type1 :   SMAF using FM channels 1~4 and Voice numbers 1~4
Type2 :   SMAF using FM channels 1~8 and Voice numbers 1~8
Type3 :   SMAF using FM channels 1~12 and Voice numbers 1~12
Type4 :   SMAF using FM channels 1~16 and Voice numbers 1~16

3.1.6. Voice Assign Map List View

Displays information about use voices of SMAF which is converted from SMF.

SMAF Voice Edit Dialogue (3.3) is displayed by double-clicking on the displayed row. And the Voice information can be edited.

In the Preset voices (ProgramChange: 1-2) of drum(BankSelectMSB: 123), Note of undefined voice(Note: 0-12,92-127) is processed as conversion error. But Note which is not defined the effective voice (Note: 13-23,85-91) is not processed as conversion error and it is displayed by red colored font on VoiceAssignMap.

This Note can play by Player since it does not become the conversion error. However, it is desirable deleting from SMF since it is not effective setting.

3.1.6.1. Piano Roll Color

Displays the color used to display Piano Roll dialog.

By double-clicking this part, the specified Piano Roll is displayed.

3.1.6.2. Voice No

Displays the registration number of voices.

3.1.6.3. Voice Name

Displays the voice name.

3.1.6.4. BankMSB

Displays the value of Bank Select MSB of voice.

3.1.6.5. BankLSB

Displays the value of Bank Select LSB of voice.

3.1.6.6. Program Change

Displays the value of Program Change of voice (1-128).

3.1.6.7. Key

Displays the Note number (0-127) in the case of Drum voice.

3.1.6.8. Operator

Displays the used Operator number of voices. The display is 2 or 4.

3.1.6.9.   Assigned MA2 Channel

Displays channel of MA2 assigned for voice when the play started.

And displays information about the conversion error, which is occurred by the problem of the Note (0-12,92-127) setting of APCM in User voice (ProgramChange: 3-10) of drum bank (BankSelectMSB: 123).

①Cannot open vma file

This message is displayed when the Note corresponding to the ADPCM voice which is not registered into MA-2 Voice Library is specified.

②Either 4k Hz ADPCM or 8k Hz ADPCM can be used.

This message is displayed when ADPCM voices of different sampling frequency are specified simultaneously. This conversion error is removed by making frequency in agreement with 4kHz or 8kHz.

③Program Change is out of range.

This message is displayed when 0 or 1 which is Program Change for preset is specified. Please set Program Change of ADPCM voice from #2 to #9.

① and ②, among the above-mentioned error messages, are correctable by updating registration of ADPCM voice. The shortcut to ADPCM registration dialog operation (Refer to 3.10 ADPCM Registration Dialogue) is possible in double-clicking the line as which these messages are displayed. If an ADPCM voice is normally registered from shortcut, it will be re-converted to SMAF as it is.

3.1.7.   MA2 ch Map List View

In most of the case, SMF channel is not converted into the channel of SMAF as it is. Since the synchronization setting of LED/Vibration becomes the setting into SMAF channel, synchronization setting into specified voice can be possible by displaying SMAF channel in which voices displayed in VoiceAssignMap is assigned.
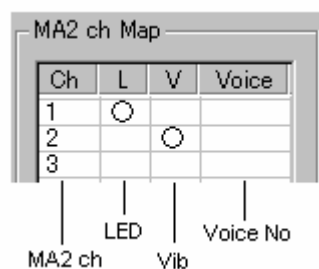
3.1.7.1.   MA2 ch

Shows ch of SMAF/MA2 to be converted. Synchronization setting is set to ch of SMAF/MA2, not to ch of SMF.

3.1.7.2.   LED

Displays LED Combo box setting (3.1.3.3).

3.1.7.3. Vib
Displays Vibration Combo box setting (3.1.3.4).

3.1.7.4. Voice No
Displays voice number to be used with Ch. It displays only voice number to be set during the performance when playing by Player.

3.1.8. Piano Roll button
Piano Roll of the voice selected by Voice Assgned Map is displayed.
When there is no designation of Voice, only ADPCM is displayed in the lower part of a PanoRoll dialog.

3.1.9. Status Bar

Open mid file successfully.

Displays the information about read and save of file.
Please refer to Status Display (4.1) for the details of the displayed contents.

3.2. Information Dialogue

Starts by the Information button of Main dialogue (ATS-MA2).

3.2.1. Contents Class Combo box

Sets Contents Class. However, it is 0 (YAMAHA) fixed in ATS-MA2.

3.2.2. Contents Type Combo box
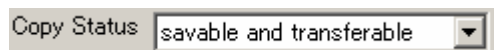
Sets Contents Type. However, it is 1 (MA-2 ringing melody) fixed in ATS-MA2.

3.2.3. Contents Code Type Combo box

Selects character code of Text information from the following.

Character code	Language supported
Latin 1(ASCII(7bit) + ISO 8859-1)	English, French, German, Italian, Spanish, Portuguese, etc.
Shift-JIS	Japanese
EUC-KR	Korean
HZ-GB-2312	Chinese (Simplified)
Big5	Chinese (Traditional)
KOI8-R	Russian etc.
TCVN-5773:1993	Vietnamese
UTF8	UTF8

3.2.4. Copy Status Combo box

Copy Status | savable and transferable | ▼

Selects Copy Status from the following.

Combo box display	Setting
savable and transferable	0
savable and untransferable	1
unsavable and untransferable	3

3.2.5. Vendor name Edit Box

Vendor name |

Describes Vendor name.

3.2.6. Carrier name Edit Box

Carrier name |

Describes Carrier name.

3.2.7. Category name Edit Box

Category name |

Describes Category name.

3.2.8. Song title Edit Box

Song title |

Describes song Title name.

3.2.9. Artist name Edit Box

Artist name |

Describes Artist name (Singer/Performer)

3.2.10. Lyricist Edit Box

Lyricist |

Describes Lyricist.

3.2.11. Composer Edit Box

Composer |

Describes Composer.

3.2.12. Arranger Edit Box

Arranger [   ]

Describes Arranger

3.2.13. Copyright (C)Edit Box

Copyright(C) [   ]

Describes Copy right©

3.2.14. Managed group By Edit Box

Management group [   ]

Describes copyright Management organization name

3.2.15. Management Info. Edit Box

Management info. [   ]

Describe Management information

3.2.16. Careation date Edit Box
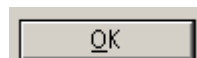
Creation date [   ]

Describes Created date.

3.2.17. Revision data Edit Box

Revision date [   ]
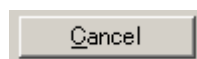
Describes Modified date.

3.2.18. OK Button

[OK   ]

Completes each setting on dialogue and closes the dialogue.

3.2.19. Cancel Button

[Cancel   ]

Cancels each setting on dialogue and closes the dialogue.

3.3.   SMAF Voice Edit Dialogue

Starts by double-clicking the voice information items of Voice Assign Map in Main dialogue (ATS-MA2).

You can edit and listen FM voice information and listen ADPCM voice.
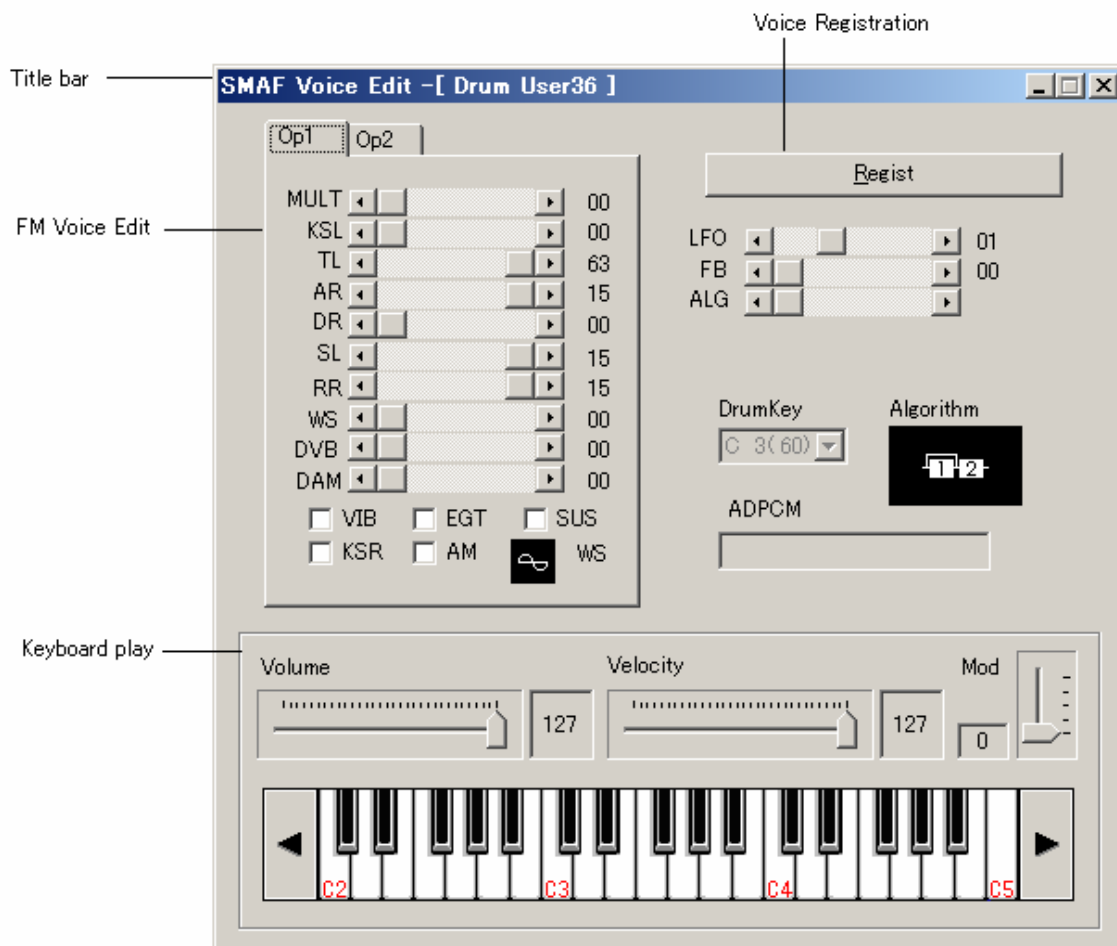
3.3.1. Voice Edit

In this block, FM voice information can be edited.
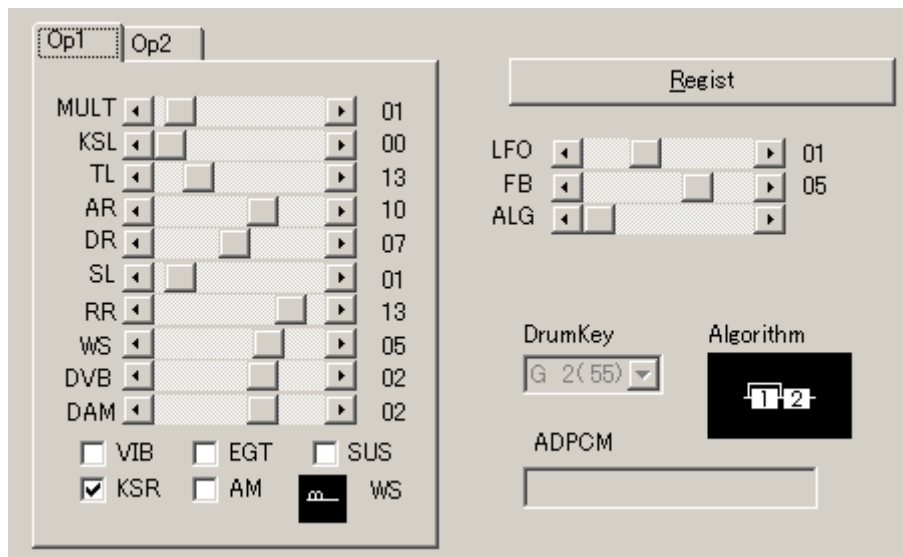
3.3.1.1. Operator Tab

Displays Operators which constitute FM voice. It is changed by tab.
It is possible to operate the parameter with Scroll bar or the left and right button.

① MULTI Scroll Bar
   Sets the magnification of frequency. It can set within the range from 0 to 15.

② KSL Scroll Bar
   Sets the scaling of level (the amount of decay per octave). It simulates that the volume decreases as the interval becomes higher such as natural musical instruments. It can set within the range from 0 to 3.

③ TL Scroll Bar
   Sets the level of envelope. It can set within the range from 0 to 63.

④ AR Scroll Bar
   Sets the time from the starting of tone generation (-96 dB) to the moment maximum volume (0 dB). It can set within the range from 0 to 15. The bigger value makes faster attack..
   About the operator of Carrier side, setting of 0 is restricted.

⑤ DR Scroll Bar
   Sets the decay time from the moment maximum volume (0 dB) to Sustain Level (SL). It can set within the range from 0 to 15. The bigger value makes faster decay.

⑥ SL Scroll Bar
   In the case of decay sound, sets its Level changing from Decay Rate to Release rate. In the case of sustain sound, sets Sustain Level, that is sustaining volume level. It can set within the range from 0 to 15.

Envelope form (sustain sound mode)   Envelope form (decay sound mode)
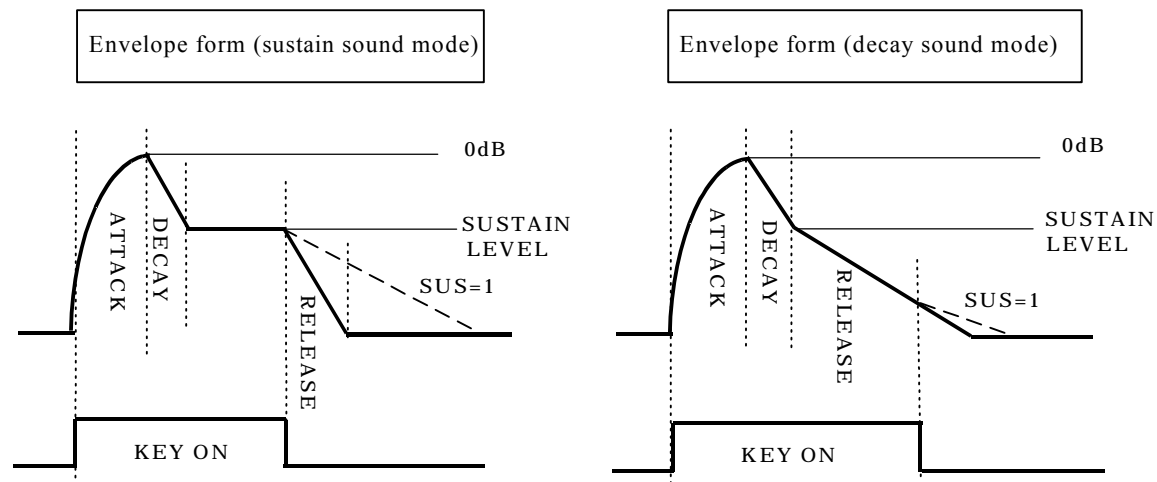
⑦   RR Scroll Bar
    Sets the time from key off to the mute status (-96 dB). It can set within the range from 0 to 15.
    When both of ⑫ EGT and ⑬ SUS are checked (enable), this setting is ignored.

⑧   WS Scroll Bar
    Designates waveform of each Operator that is used for FM operation. It can set within the
    range from 0 to 7. This setting is reflected to the display of ⑯ WS picture.

⑨   DVB Scroll Bar
    Sets the depth of vibrato modulation. It can set within the range from 0 to 3. The bigger value
    makes vibrate more greatly.

⑩   DAM Scroll Bar
    Sets the depth of amplitude modulation. It can set within the range from 0 to 3. The bigger
    value makes vibrate more greatly.

⑪   VIB Check Box
    Sets to apply a vibrato to Operator with the checkmark.

⑫   EGT Check Box
    Sets as the sustain sound with the checkmark, and sets as the decay sound without the
    checkmark

⑬   SUS Check Box
    Sets as the Sustain-On with the checkmark. And it is changed to the release rate = 4 when the
    pronunciation length ends.

⑭   KSR Check Box
    Sets Key scale of rate as effective with the checkmark.

⑮   AM Check Box
    Sets to apply the amplitude (AM) modulation to corresponding operator with the checkmark.

⑯   WS Display

Displays waveforms image which corresponds to the setting of ⑧ WS scroll bar.

WS value	waveform	WS value	waveform
0		4	
1		5	
2		6	
3		7	

3.3.1.2. LFO Scroll Bar

Sets frequency for Vibrato and AM modulation. It can set within the range from 0 to 3.

LFO	0	1	2	3
Frequency (Hz)	1.9	4.2	6.1	7.2

3.3.1.3. FB Scroll Bar

Sets Feedback modulation. It can set within the range from 0 to 7.

3.3.1.4. ALG Scroll Bar

Sets the connection method of each operator. It selects from total of 6 kinds.

However, you cannot set the algorithm which operator number is different from it of algorithm displayed at SMAF Voice Edit dialogue start.

In order to change the number of use operators, please use ALG scroll bar in the Voice Library dialog. The algorithm and the number of use operators of user voice can be changed.
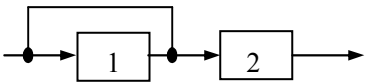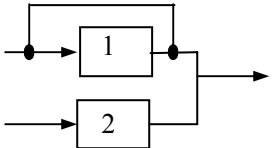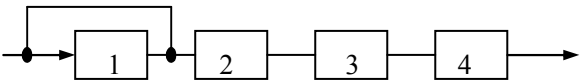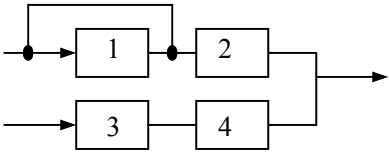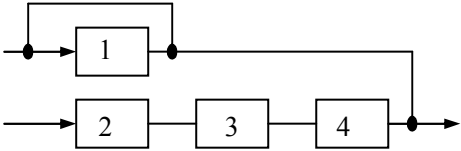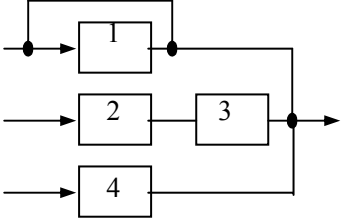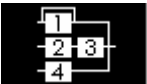
3.3.1.5. Drum Key Combo box

Sets actual keys which is pronounced by voice. It cannot be changed in this dialog.

In order to set up this value, please use a Drum Key combo box in the Voice Library dialog. Real pronunciation key of a user drum voice can be set up in the range of 0 to 127.

3.3.1.6. Algorithm Display

Displays the algorithm pattern which corresponds to the setting of ALG (3.3.1.4).

Note: The above number 1 to 4 corresponds to Operator 1 to 4.

3.3.1.7. ADPCM Display

Displays the data format information of ADPCM.

It is displayed only when Smaf Voice Edit Dialogue is started from the ADPCM setting on Voice Assign Map.

3.3.2. Regist Button

Starts Voice Registration dialogue (3.4) and registers editing voice information into Voice Map which is displayed on MA2 Voice Library dialogue.

3.3.3. Keyboard Play

In this block, you can listen the voice sound.
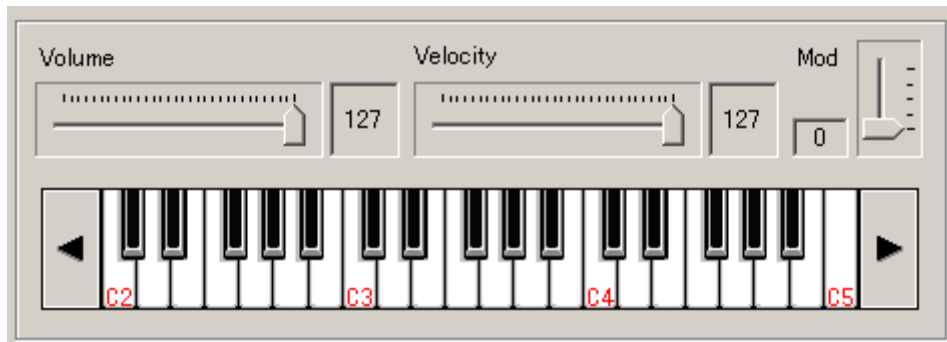
3.3.3.1. Key Board

This is the control for listening voices. When clicking on the keyboard area with mouse, single sound of the voice, which the cursor indicates in the voice map currently, is generated.

① Scroll button
Scrolls the keyboard display to right and left per octave unit.

3.3.3.2. Modulation slider

Sets Modulation of Control Change 01 (modulation) that is reflected to pronunciation of Keyboard operation. It can set within the range from 0 to 127.
This is used to change the state of vibrato to voices of which checkmark is put in the VIB check box.

Slider setting	State of application of vibrato
0	Vibrato off
31	Vibrato with depth of DVB
63	Vibrato with depth of DVB+1
95	Vibrato with depth of DVB+2
127	Vibrato with depth of DVB+3

3.3.3.3. Volume slider

Sets Volume of Control Change 07 (channel volume) that is reflected to pronunciation of Keyboard operation. 32 steps can be set in the range from 3 to 127. The default value is 127.

3.3.3.4. Velocity slider

Sets NoteOn velocity that is reflected to pronunciation of Keyboard operation. 32 steps can be set in the range from 3 to 127. The default value is 127.

3.4. Registration Dialogue

Starts by the button operation of "Regist" on SMAF Voice Edit dialog, or the button operation of "Library Registration" on SMAFADPCM Edit dialog.
Voice Map Entry setting started from SMAF Voice Edit dialog is the same as the Voice Assign Map designation item.

3.4.1. Voice Name Edit Box

Sets the voice name registered into Voice Map of MA2 Voice Library Dialogue.
[Note] Registration of Name is restricted to 16 bytes or less.

3.4.2. Voice Map Entry

3.4.2.1. Bank MSB Combo box

Sets Bank Select MSB registered into Voice Map of MA2 Voice Library dialogue.
Please set Normal voice to 122, and set Drum/ADPCM voice to 123.

3.4.2.2. Bank LSB Combo box

Sets Bank Select LSB registered into Voice Map of MA2 Voice Library dialogue.
When normal voice, please set within the range from 2 to 9, since 0-1 are used for Preset voices. Drum /ADPCMvoice is fixed to 0.

3.4.2.3. PC Combo box
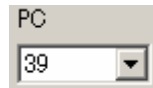
Sets Program Change registered into Voice Map of MA2 Voice Library.
Please set Normal voice within the range from 1 to 128. When it is Drum/ADPCM voice,
please set within the range from 3 to 10, since 1-2 are used for Preset voice.

3.4.2.4. Note Combo box
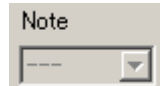
Sets Note registered into Voice Map of MA2 Voice Library.
When Normal voice, this setting is not necessary.
When Drum voice, please set within the range from 13 to 91.
When ADPCM voice, please set within the range from 0 to 12 and 92 to 127.

3.4.3. OK Button
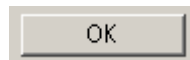
Completes each setting on this dialogue and closes this dialogue.

3.4.4. Cancel Button
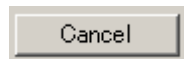
Cancels each setting on this dialogue and closes this dialogue.

3.5. Option Dialogue

Starts by selecting of Menu bar "Option" on Main dialogue (ATS-MA2).
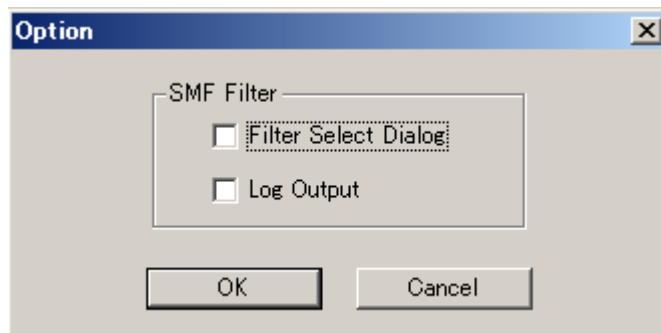
3.5.1. SMF Filter

3.5.1.1. Filter Select Dialog Check Box
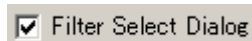
Sets whether the processing is closed as an error or a dialog is displayed to verify SMF Filter processing when there are some problems in the conversion from SMF to SMAF.
(When checkmark is put in this checkbox, the dialogue is displayed. The default setting is marked.)
Some conversion errors are uncorrectable also by SMF Filter. In this case, even if there is the checkmark of Filter Select Dialog, SMF Filter processing cannot be selected.
Please refer to "4.2 Error Message" about the corresponding error.

3.5.1.2. Log Output Check Box
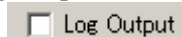
Sets whether the result of Filter processing is displayed as a log or not.
(When checkmark is put in this checkbox, the Filter Log dialogue is displayed.)

3.5.2. OK Button

Completes each setting on dialogue and closes this dialogue.

3.5.3. Cancel Button
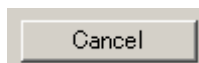
Cancels each setting on this dialogue and closes this dialogue.

3.6. SMF Filter Dialogue

Displays the analysis result of SMF in SMF Filter processing. It can set channel which is effective after Filter by the operation of ch check box.
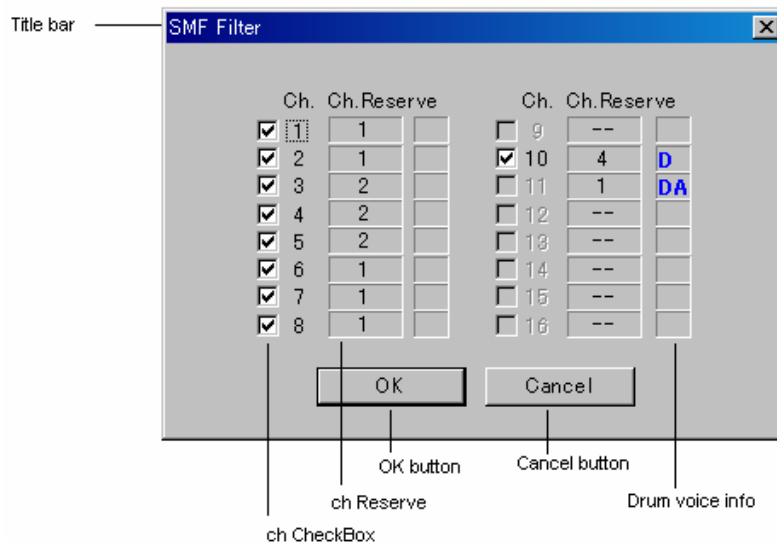
3.6.1. Ch Check Box

Designates the channel to convert with SMF Filter. The channel is removed from a target for conversion by clearing the checkmark in the check box.

The checkmark at the dialog display is put with the to priority to Drum channel. After Drum channels, the remainders are assigned in numerical order in the range of simultaneous pronunciation number limitation.

The change of check is possible. But if the total of channel exceeds the maximum pronunciation number, "OK" button becomes disable to forbid setting it.

3.6.2. Ch Reserve Text

Displays channel reserve number (it corresponds to channel number and the maximum simultaneous pronunciation number of MA2), which is secured to each channel at the conversion.

3.6.3. Drum Voice Classification Text

Displays "D" on FM Drum voice channel and "DA" on the ADPCM channel.

Nothing is displayed on FM normal voice channel.

And the operation of checkbox is annulled, since all channels of ADPCM voice setting are deleted by SMF Filter processing

3.6.4. OK Button
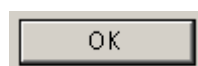
 Completes each setting on dialogue and closes this dialogue.

3.6.5. Cancel Button
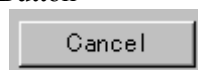
 Stops the processing of SMF Filter and closes this dialogue.

3.7. Filter Log Dialogue

Starts Filter Log dialogue which displays the log of analysis/conversion result at the SMF Filter end, when the checkmark is put in the log output check box of Option dialogue, which is started by the file menu "Option" on Main dialogue (ATS-MA2).
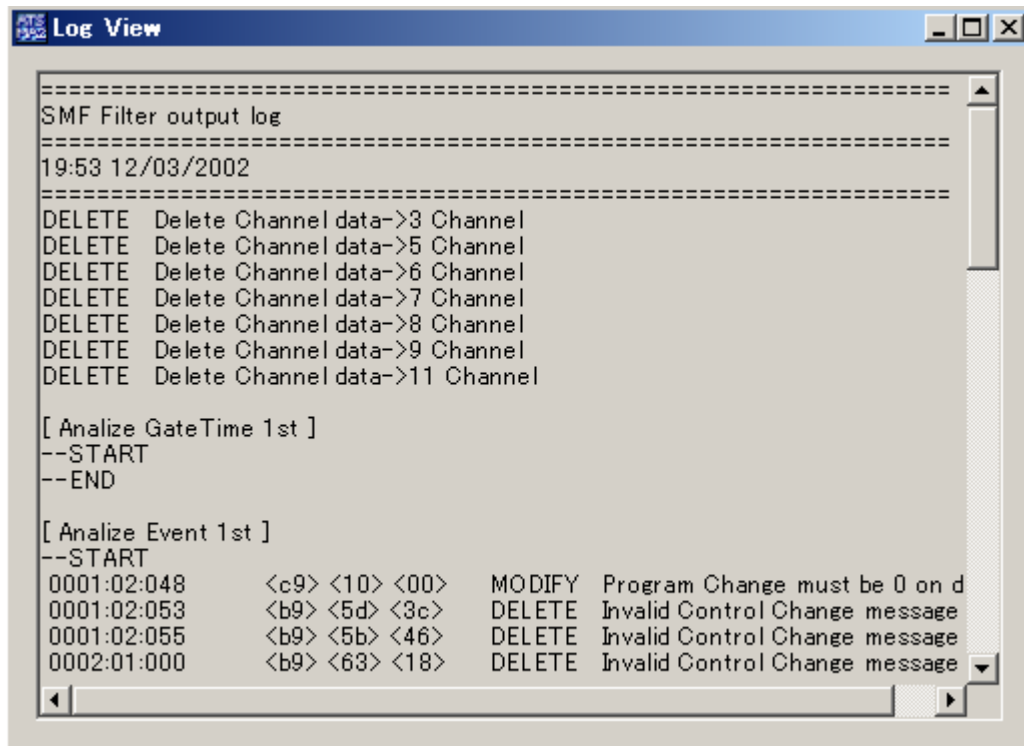
3.8. Version Dialogue

Starts by selecting of File menu "Help-Version" on Main dialogue (ATS-MA2).
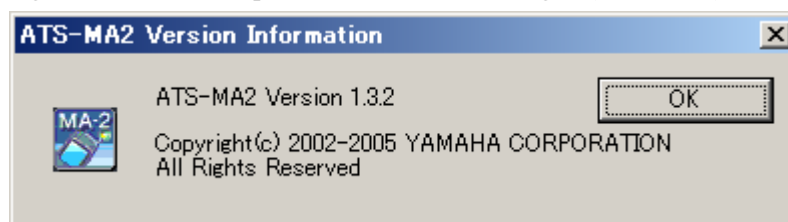
3.9. MA2 Voice Library Dialogue

Starts by the operation of MA2 Voice Library button on Main dialogue (ATS-MA2).

You can edit FM/ADPCM voice information and listen voice sounds.

3.9.1.   Menu bar

File Edit
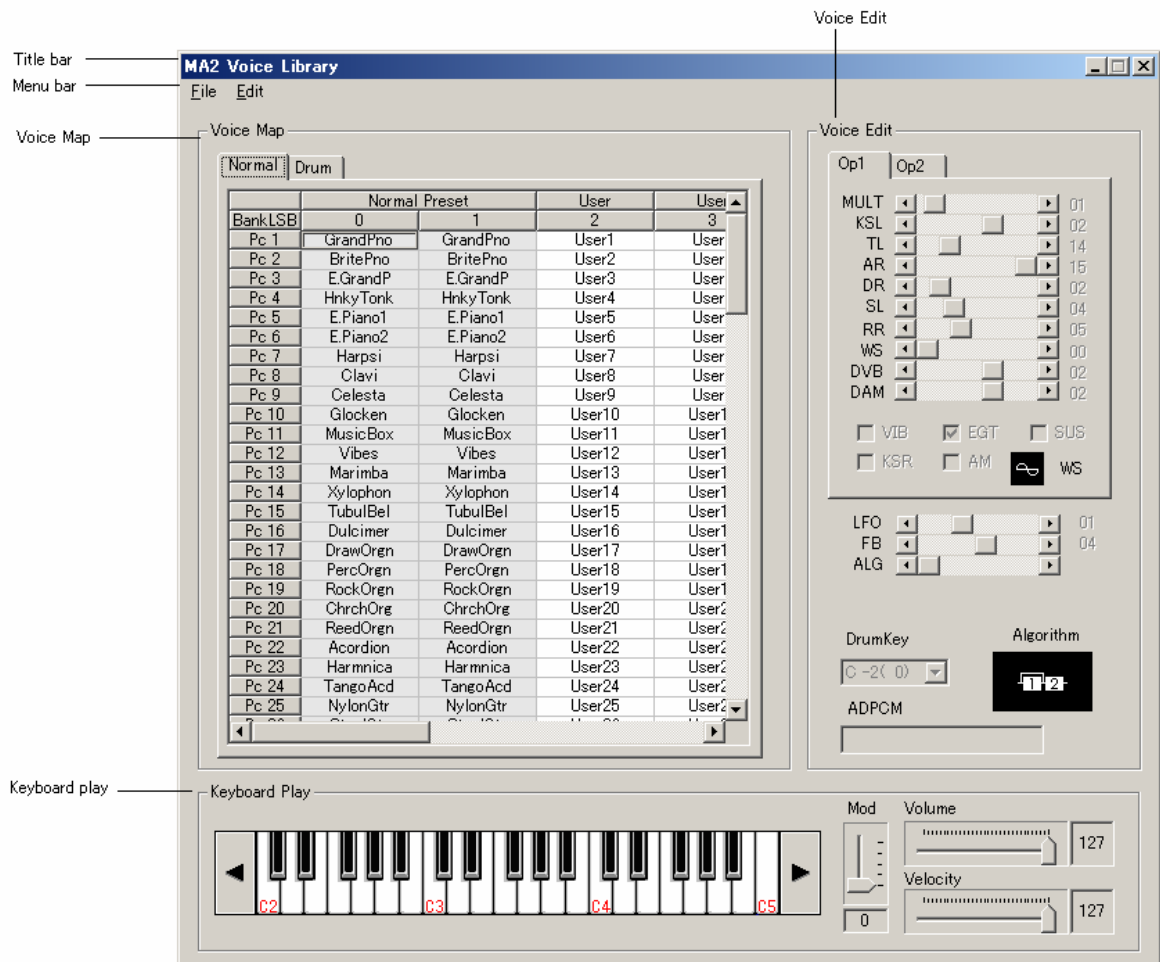
3.9.1.1.   File menu

Displays the following menu when File of menu bar is selected.

File Edit
Load Vma   Ctrl+L
Load Wav   Ctrl+W
Save Fm Vma   Ctrl+F
Save Adpcm Vma Ctrl+A
Exit   Ctrl+X
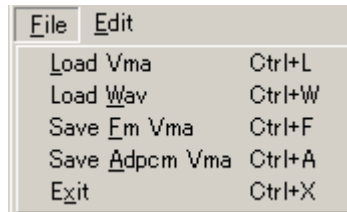
① Load Vma

The voice information of MA2 Voice Library can be changed by selecting voice library file (*.vma) from "Open dialogue".
The voice information of MA2 Voice Library is backup at any time in the fm_temp.vma file of the same folder as ATSMA2.exe.

② Load Wav

Wav file can be converted into ADPCM and registered by selecting Wav file from "ADPCM registration dialogue".
It is effective only when the particular cell of ADPCM is selected in Program Change and Note on Voice Map.

③ Save Fm Vma

FM voice information of MA2 Voice Library can be saved with the appointed file name on "Save As dialogue". .vma is added when the extension is omitted.

④ Save Adpcm Vma

ADPCM voice information of MA2 Voice Library can be saved with the appointed file name on "Save As dialogue". .vma is added when the extension is omitted.

⑤ Exit

Ends MA2 Voice Library dialogue.

3.9.1.2. Edit Menu

Displays the following Edit menu when Edit of menu bar is selected.
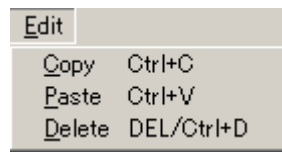
① Copy

Holds the information of the highlighted cell of Voice Map primary on Memory.
The continuous plural cells can be designated.

② Paste

Pastes the information which is primary held at Copy to the highlighted cell.

③ Delete

Resets the voce information of the highlighted cell to default voice setting.
It corresponds only to the part of User voice.

3.9.2.   Voice Map
　　　In this block, the voice information to edit can be designated.
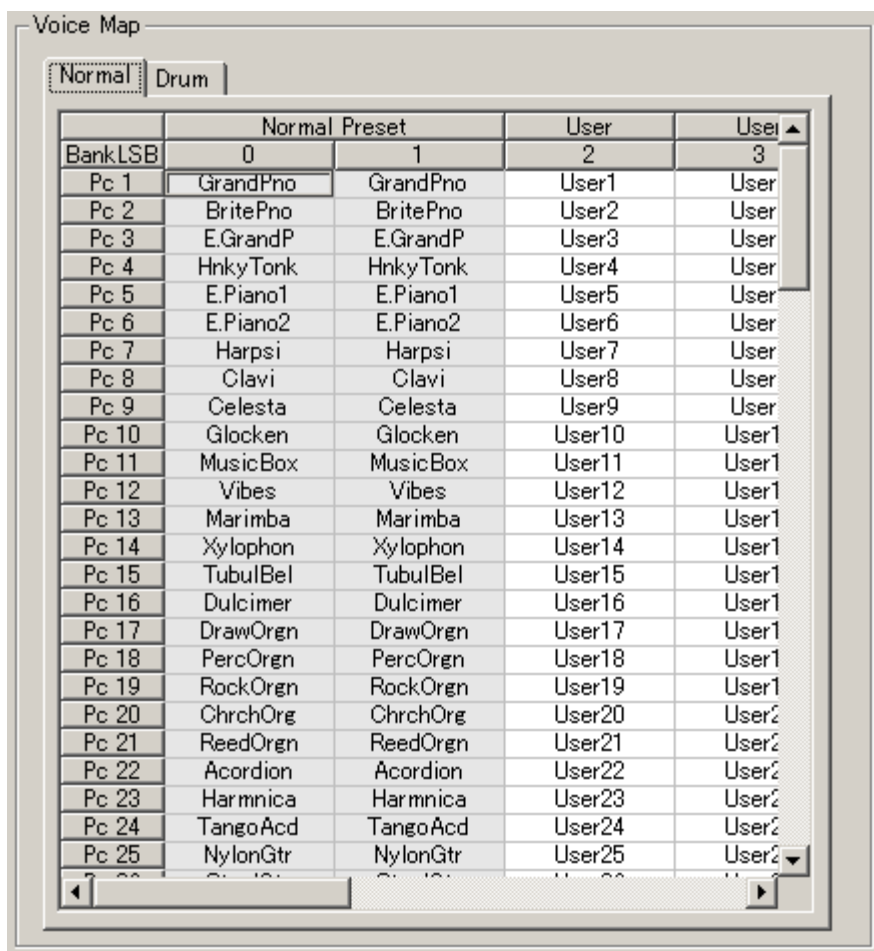
3.9.2.1.   Normal tab

Normal
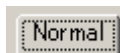
Selects voice map corresponding to BankSelect MSB: 122 of SMF.
Please refer to Appendix (5.2.1) for the details of Preset voice.

① Voice Map List View
Displays in list by Bank Select LSB column (0-1: Preset voice, 2-9: User voice) and
ProgramChange row (1-128). Copy/Paste/Delete processing of menu is possible when the cells
are highlight-displayed. It corresponds to the Drag & Drop operation by the mouse. And
pop-up menu is displayed by the right-click on LSB and voice information per column can be
saved and read.

3.9.2.2. Drum tab
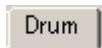
Selects voice map corresponding to BankSelect MSB: 123 of SMF.
Please refer to Appendix (5.2.2) for the details of Preset voice.

① Voice MapList View
Displays in a list by ProgramChange column (1-2: Preset voice, 3-10: User voice) and Note
row (1-128). Copy/Paste/Delete processing of menu is possible when the cells are
highlight-displayed. It corresponds to the Drag & Drop operation by the mouse. And pop-up
menu is displayed by the right-click on PC and voice information per row can be saved and
read.

3.9.2.3. Voice operation on Voice Map

① Moving cursor display

"Cursor display" is the rectangular object as shown below that is displayed in the voice map. It
is located on the top leftmost position on the MA2 Voice Library dialog when it is started.

The cursor can be moved by using one of the arrow keys, [↑], [↓], [→] and [←] on the
keyboard.
Clicking on a voice name moves the cursor display to its position.

② Changing voice name

First, move the cursor display to the position of a voice of which name is to be changed.
Then, press [RETURN] key or [ENTER] key. The name change edit box appears as shown
below, where a cullet blinks.

Type a new name. And press [RETURN] key or [ENTER] key to apply the new name.
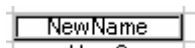
The capacity of the voice name entry is 16 bytes.
The voice name such as Preset voice and unassigned ADPCM voice cannot be changed.

③   Selecting voices and canceling the selection
When the list view section becomes a state of voice selection, the overall rectangular area
where the voice names are displayed are highlighted as shown below.

Select (highlight) state
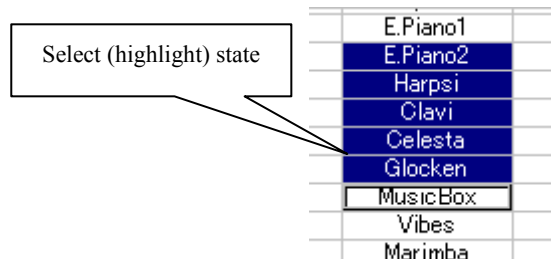
There are two method of selection of voices, the one using keyboard and the one using the
mouse.

1. Selecting voices by using keyboard
    Use [↑], [↓], [←] or [→] key while pressing and holding [SHIFT] key to move the cursor
    display.

2. Selecting voices by using mouse
    When selecting only one voice, click in the rectangular area of the voice name. When
    selecting two or more voices, press the mouse button and drag the mouse so that all the
    voices to be selected are highlighted.

The keyboard or mouse can also be used to canceling the selection of the voices.

1. Canceling selection of voices by using keyboard
    Press [ESC] key.

2. Canceling selection of voices by using mouse
    Click on a voice that is not in selected state (highlighted).

④   Copying and pasting voices

The copy of voice information is possible in voice map on list view. However, the copy between Normal voice and Drum voice is impossible.
The copying and pasting voices can be made by using either of the two methods, keyboard (shortcut) or mouse.

　　　1.   Copying and pasting voices by using keyboard (menu shortcut)

At first, voices to copy changes into a selection state and press "C" key, while pressing holding "CTRL" key.

GrandPno	User1
BritePno	User2
E.GrandP	User3
HnkyTonk	User4
E.Piano1	User5
E.Piano2	User6
Harpsi	User7
Clavi	User8
Celesta	User9
Glocken	User10
MusicBox	User11
Vibes	User12
Marimba	User13
Xylophon	User14
TubulBel	User15
Dulcimar	User16
DrawOrgn	User17

Move the cursor display to the top voice which performs paste

BritePno	User2
E.GrandP	User3
HnkyTonk	User4
E.Piano1	User5
E.Piano2	User6
Harpsi	User7
Clavi	User8
Celesta	User9
Glocken	User10
MusicBox	User11
Vibes	User12
Marimba	User1
Xylophon	User7

Press "V" key while pressing holding "CTRL" key.

HnkyTonk	User4
E.Piano1	User5
E.Piano2	E.Piano2
Harpsi	Harpsi
Clavi	Clavi
Celesta	Celesta
Glocken	Glocken
MusicBox	MusicBox
Vibes	Vibes
Marimba	User13
Xylophon	User14
TubulBel	User15

2.   Copying and pasting voices by using mouse (drag and drop)

At first, a tone to copy changes into a selection state.

It changes into the state where mouse button was depressed in the portion of a selection state.

If a mouse cursor is moved with mouse button depressed (If it drag), this rectangle is moved too.

Pasting will be completed, if a red rectangle is moved to a place to paste on and mouse button is released (if it drops). A selection state is canceled at this time.

⑤   Assignment of ADPCM voices

ADPCM voices are created by converting from WAV file to ADPCM. The format of WAV file that can be converted is only 16 bit monaural Fs 8000Hz and 4000Hz.

ADPCM assignment can be made by using keyboard or mouse.

1.   Method using keyboard (menu shortcut)
     Move the cursor display to one of ADPCM voices with note numbers 0 to 12 and 92 to 127 of program change 3 to 10.
     And press [W] key while pressing holding [CTRL] key.

2.   Method using mouse
     Double-click to one of ADPCM voices with note numbers 0 to 12 and 92 to 127 of program change 3 to 10.

Normal	Drum			
	Drum Preset		User	Use ▲
PC	1	2	3	4
Note 0	-----	-----	Adpcm	Adpc
Note 1	-----	-----	Adpcm	Adpc
Note 2	-----	-----	Adpcm	Adpc
Note 3	-----	-----	Adpcm	Adpc
Note 4	-----	-----	Adpcm	Adpc
Note 5	-----	-----	Adpcm	Adpc
Note 6	-----	-----	Adpcm	Adpc
Note 7	-----	-----	Adpcm	Adpc
Note 8	-----	-----	Adpcm	Adpc
Note 9	-----	-----	Adpcm	Adpc
Note 10	-----	-----	Adpcm	Adpc
Note 11	-----	-----	Adpcm	Adpc
Note 12	-----	-----	Adpcm	Adpc
Note 13	Drum	Drum	Drum User13	Drum Us
Note 14	Drum	Drum	Drum User14	Drum Us
Note 15	Drum	Drum	Drum User15	Drum Us
Note 16	Drum	Drum	Drum User16	Drum Us
Note 17	Drum	Drum	Drum User17	Drum Us

3.9.2.4.   File operation of Voice Information of List sequence unit

①   Read file
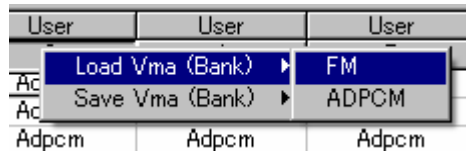
Sub menu can be selected to assort FM/ADPCM from LoadVma menu by right-clicking on "the row number" which shows BankSelectLSB of FM normal voice and shows ProgramChange of Drum voice

By each menu, the voice information file (*.vma) is selected from "Open file" dialogue. And the voice information is read into the same voice list column.

Its file extension is same as the voice information file extension of whole Voice Map, which is operated from file menu. However, only the file, which is saved per column, can be read by the operation of file save of ②.

②   Save file
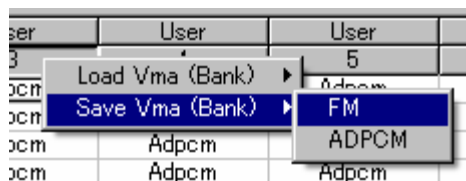
Same as read file, sub menu can be selected to assort FM/ADPCM from SaveVma menu by right-clicking on "the row number".

By each menu, the voice information file (*.vma) is designated from "Save As" dialogue and the information of same voice list column can be saved.

The voice information file of whole Voice Map which is operated from file menu and the extension are same, however, it is different from the contents saved per sequence.

Its file extension is same as the voice information file extension of whole Voice Map, which is operated from file menu. However, contents of each file are different.

3.9.3.   Voice Edit

In this block, FM voice information can be edited.
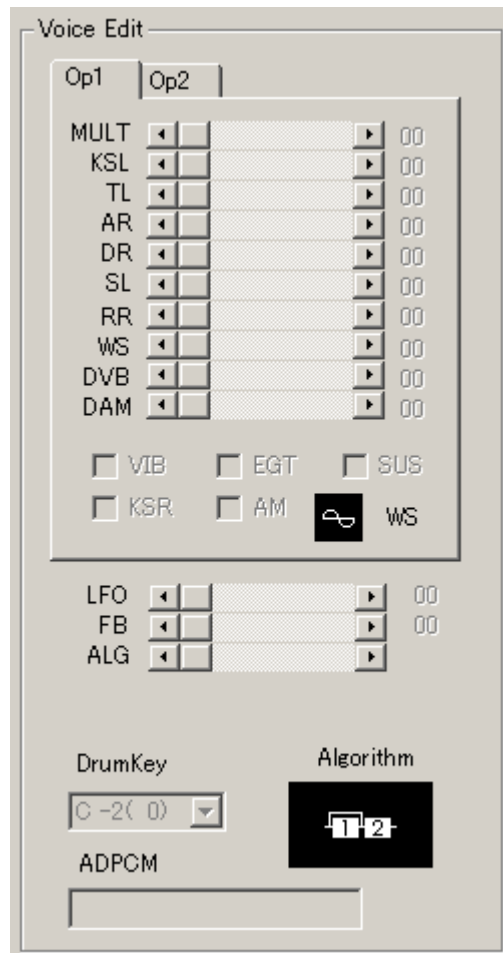
3.9.3.1.   Operator tab

It is same as "3.3.1.1 Operator Tab".

3.9.3.2.   LFO Scroll bar

It is same as "3.3.1.2 LFO Scroll Bar".

3.9.3.3.   FB Scroll bar

It is same as "3.3.1.3 FB Scroll Bar".

3.9.3.4.   ALG Scroll bar

It is same as "3.3.1.4 ALG Scroll Bar".

3.9.3.5. Drum Key Combo box

Sets the actual key Drum Key (0-127) which is pronounced by voice.
It is effective only when the cursor display is in the User Drum voice.

3.9.3.6. Algorithm display

It is same as "3.3.1.6 Algorithm Display".

3.9.3.7. ADPCM display

It is same as "3.3.1.7 ADPCM Display".

3.9.4. Keyboard Play

This is the control for listening voices.
This is a keyboard control for audition of voices. When clicking on the keyboard area, single
sound of the voice, which the cursor indicates on Voice Map, is generated.
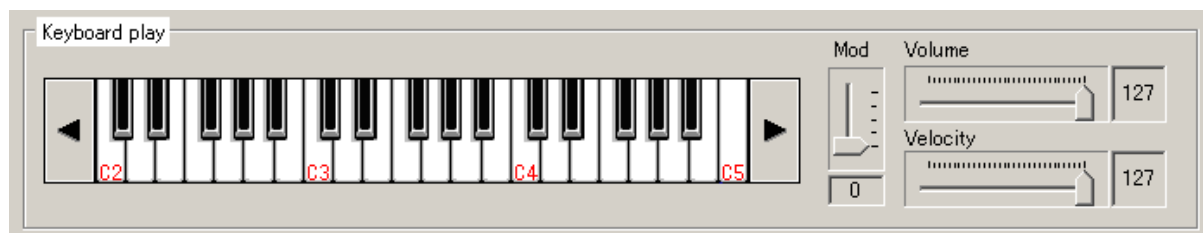
It is same as "3.3.3 Keyboard Play".

3.10. ADPCM Registration Dialogue

Starts by double-clicking ADPCM cell, which is set on Note 0-12/92-127 of more than PC3 in Voice Map, after selecting Drum tab of MA2 Voice Library.

The same dialog can be started by the operation of "File Select" button on SMAF ADPCM Edit dialog, and registers ADPCM voice directly to SMAF file.
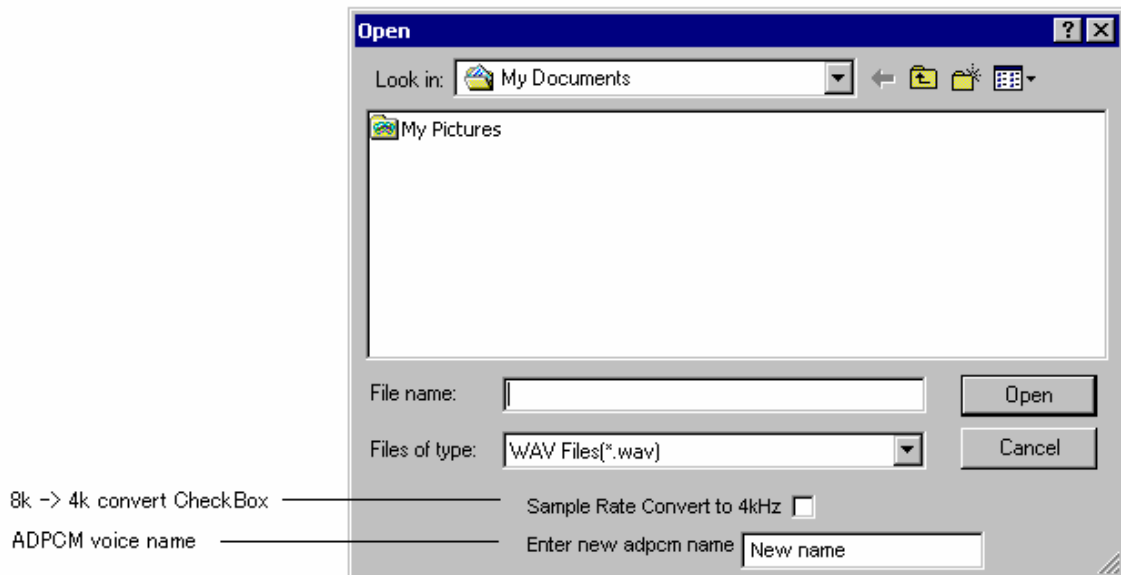
3.10.1. 8k → 4k Conversion Box

Sets whether the down sampling is done to 4kHz or not in ADPCM conversion when the data of sampling frequency 8kHz is read.

3.10.2. Voice Name Input Text Box

Sets the voice name of ADPCM registered.

[Note] The registration of Name is restricted to 16 bytes ore less.

3.11. Piano Roll Dialog
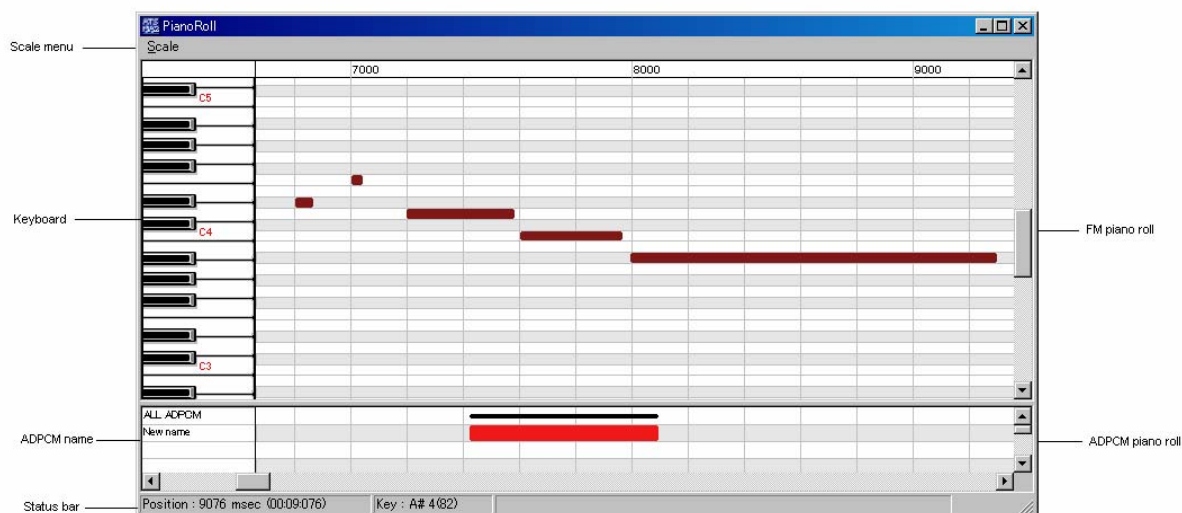
3.11.1. Scale Menu

The vertical side is displayed in the range of keyboard, and the horizontal side is displayed in the editable time range. When SMF is read, the range becomes its play time, but when newly editing ADPCM without preparing SMF, the display differs according to the selectable display magnification selected by ScaleMenu. The magnification can be selected from 20%, 40%, 50%, 100%, 200%, and 400%. When selecting 400%, it displays the editable range of the maximum of 1000 seconds. And also, although the default magnification at starting is 100%, if the play time of read SMF is too long to display within 100% magnification, it automatically set the range to 20 ~ 50%

3.11.2. Keyboard

The vertical side displays Note No corresponded by Keyboard.

3.11.3. FM piano roll

Displays PianoRoll of FM voice designated by Voice Assign Map.
[Note] FM voice is only displayed, and can not be edited. Use it as the guide of timing adjustment to edit ADPCM.

3.11.4. ADPCM name

Displays registered voice name in each line when using ADPCM, although keyboard displays its Note when using FM PianoRoll.

3.11.5. ADPCM piano roll

The vertical side displays Note No corresponded by Keyboard.
By the following operation, data which uses ADPCM voice can be edited.

3.11.5.1. Drag
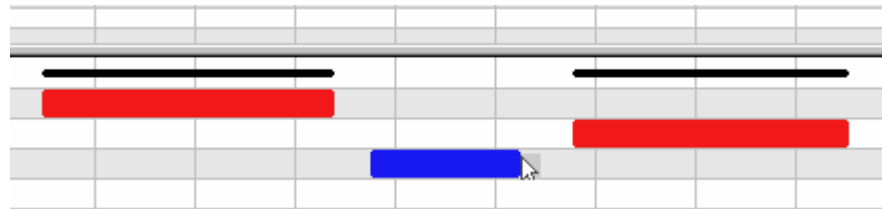
Note can be designated by dragging mouse from the start location to the stop location.
Voice setting and Note adjustment etc can be made with SMAF ADPCM edit dialog which opens after designating Note information. When voice has been already registered in the line to drag, SMAF ADPCM edit dialog opens as the voice is set.
In addition, the portion in which voices are overlapping is displayed with different color so that illegal simultaneous voices can be verified easily.
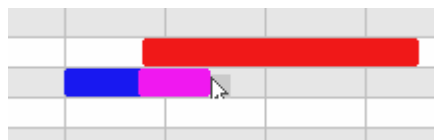
[Note] Other than the restriction of overlapping voices, the interval from the top of song to the first note, and the interval from the end of last note to the end of song are restricted so that more than twice of TimeBase is set into each intervals.

3.11.5.2. Popup Menu

The following popup-menu appears by right-clicking in the PianoRoll area of ADPCM.

(1) New menu
Adds new ADPCM. The location in which popup-menu was displayed becomes Start location of Note. In the line in which voice has been already registered, Stop location of Note is set as the data length of the voice. In the line in which no voices have been registered, Stop location of Note becomes TimeBase value of main dialog.
Double clicking in PianoRoll area of ADPCM means the same as selecting New menu.

(2) . Modify menu
This menu only can be selected on existing Note. When selecting, information of the Note is displayed in opened SMAF ADPCM edit dialog, and becomes editable.

(3) . Delete menu
This menu only can be selected on existing Note. Note which is designated by selecting "Delete" is deleted.

3.11.5.3. Wav file

By drag-and-dropping Wav file into the PianoRoll area of ADPCM directly, ADPCM
Convert Dialog, shown below, is displayed.
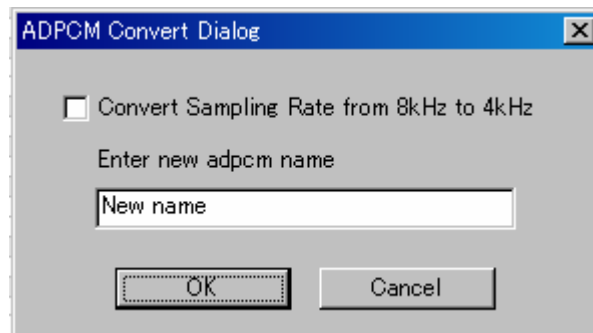
ADPCM Convert Dialog designation is the same as ADPCM Registration Dialog
(3.10).

When ADPCM voice conversion normally terminated, SMAF ADPCM Edit dialog
opens by making Wav file dropping location into Start location, and making data
length of Wav file into Stop location.

3.11.6. Status bar

Displays time position and Note information, according to the position where the
mouse is over.
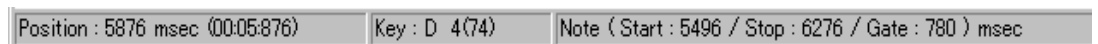
3.11.6.1. Time position

When mouse cursor is over each PianoRoll display area of FM/ADPCM, the position
it displays with msec and the form of (**min:sec:msec).**

3.11.6.2. Key information

When mouse cursor is over each PianoRoll display area of FM/ADPCM, the key
information (voice No. when ADPCM) is displayed.

3.11.6.3. Note information

When mouse cursor is over specified Note, Start location, Stop location, and
GateTime(stop-start) of the Note are displayed.

3.12. SMAF ADPCM Edit

3.12.1. ADPCM Data

Sets ADPCM voice data. Setting has 3 ways, one is to use voice registered into MA2 Voice Library, and one is to use voice already set with SMAF, and the other is to newly register ADPCM voice from Wav file.

3.12.1.1. Library radio button

When setting from registered MA2 Voice Library, select Library radio button at first .

3.12.1.2. BankMSB

Bank MSB

123   BankMSB is fixed to 123. It is not selectable.

3.12.1.3. BankLSB

Bank LSB

0   BankLSB is fixed to 123. It is not selectable.

3.12.1.4. Program Change

Pc
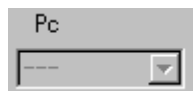
----   Program Change is selectable within the range of 3 to 10.

3.12.1.5. Note
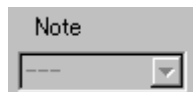
Note

----   Note is selectable within the range of 0 to 12, and 92 to 127.

3.12.1.6. SMAF ADPCM radio button

◉ SMAF ADPCM

Select this SMAF ADPCM radio button at first when select voice used in existing files or register from wav file directly.

3.12.1.7. ADPCM name combo box

(1) dog

Select from voices used in existing files.
Number of usable ADPCM voice in a file is restricted to 32. ADPCM voice once designated from Library is registered into this combo box, and it can be designated any times without the maximum number restriction to 32.

3.12.1.8. File Select button

Wave File   File Select

By this button operation, ADPCM Registration dialog (3.10) is displayed, and Wav file to convert into ADPCM voice becomes selectable.

3.12.1.9. Library Registration button

Library Registration
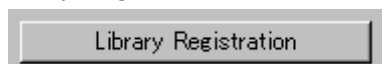
By this button operation, Registration dialog (3.4) is displayed, and registered voices ,displayed on combo box, is registered into MA2 Voice Library.

3.12.2. Name

Displays voice name set up. When voice is not set, it displays "No Name".

3.12.3. Format
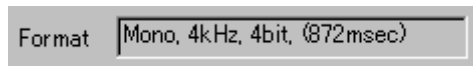
Displays voice format information and data play time set up. When voice is not set, it displays "No Data".

[Note] The play time is the same as the play time of ADPCM data. If play time of ADPCM Note is set longer than the play time of data, the pronunciation terminates in the way. Use it as the guide of GateTime setting.

3.12.4. Play

3.12.4.1. Play start button

Starts test-playing of ADPCM Note set up.

It is available only when voice is set.

3.12.4.2. Play stop button

Stops test-playing. It is available only when playing.

3.12.4.3. Playing location view

Displays playing location as "play time view" by the unit of msec, and also as "slider".

3.12.5. ADPCM Note

3.12.5.1. Start Time

Displays start time of pronunciation. It can be changed by inputting numerical value directly in the window, or by changing spin-button. Spin-button changes it up and down by the unit of TimeBase.

3.12.5.2. Stop Time

Displays stop time of pronunciation. It can be changed by inputting numerical value directly in the window, or by changing spin-button. Spin-button changes it up and down by the unit of TimeBase.
Update of StopTime also reflects to GateTime value.

3.12.5.3. Gate Time

Displays time of pronunciation from starting pronunciation time to stopping time. It can be changed by inputting numerical value directly in the window, or by changing spin-button. Spin-button changes it up and down by the unit of TimeBase.
[Note] GateTime is restricted to TimeBase*16510(msec).

3.12.5.4. Volume

Set volume by inputting numerical value directly in the window by the unit of Note, or by using spin-button or slider. The settable range is 0 to 127.

3.12.6. Setting Error Information edit box

> ADPCM tone is not assigned.
> Notes are overlapped on ADPCM Channel.
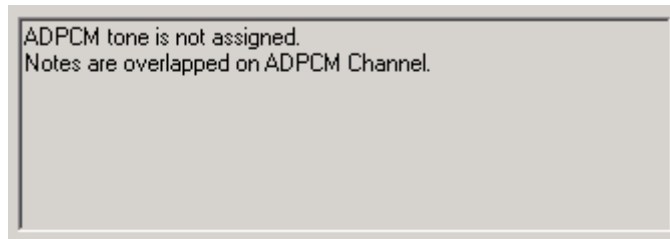
Displays problem of ADPCM setting. Confirm setting contents referring to this display. For the detail of messages to display, refer to 4.3 ADPCM Setting Error.

3.12.7. OK button
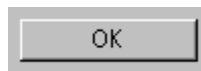
Confirms dialog setting, then closes dialog. However, it does not become available when ADPCM setting has any problem.

3.12.8. Cancel button
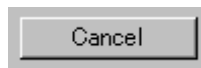
Cancels dialog setting, then closes dialog.

4. Message

4.1. Status Bar Display

The following message about read/save/conversion of file is displayed.

Open error:

Reading of file, or SMF → SMAF conversion is failure.

Conversion has finished successfully:

SMF → SMAF conversion is success.

Open mmf file successfully:

Read of SMAF file is success.

Save mmf file successfully:

Save of SMAF file is success.

Open mid file successfully:

Read of SMF is success.

Save mid file successfully:

Save of SMF is success.

Save error:

Save of file is failure.

4.2. Error Display

This is error list displayed in dialogue at the conversion from SMF and SMF Filter processing.
Error messages are classified based on error contents for making the search easier.

4.2.1. Cannot….

Cannot assign a 4-operator tone. :

A 4-operator voice cannot be assigned. More than eight 4-operator voices may be assigned.
Check the number of operators for the voices being used.

Cannot assign a 2-operator tone. :

A 2-operator voice cannot be assigned. Make sure that the 4-operator voices and 2-operator
voices total 32 operators or less.

Cannot load fm_temp.vma file. :

fm_temp.vma file has broken.
Delete it or change that name for newly creation of fm_temp.vma.
And then, new fm_temp.vma (Preset voices only) will be created automatically when MA-2
Voice Library is started.

Cannot load adpcm_temp.vma file. :

adpcm_temp.vma file has broken.
Load ADPCM data on MA-2 Voice Library. When this is loaded, MA-2 Voice Library will create the adpcm_temp.vma file.

Cannot find ADPCM data in vma file. :

adpcm_temp.vma file did not contain ADPCM data for the program changes and key numbers used in the song.

Cannot assign a drum channel. :

Drum channel cannot be assigned. All channels may be used up. Check the number of voice operators and their combination.

Cannot open SMAF file !! :

SMAF file cannot be opened. This error message appears in the following cases.
• Extension of the file is not ".mmf".
• ContentsClass is not "0".
• ContentsType is not "1".
• File format is not SMAF.

Cannot open SMF. :

SMF cannot be opened. Check whether it is opened in exclusion mode from other applications.

Cannot load fm_temp.vma. :

fm_temp.vma cannot be loaded. This file is broken. Check whether the unjust operation is done. When this file is broken, delete it or change the file name. Then when MA-2 Voice Library is started, fm_temp.vma (Only preset voices) will be newly created automatically.

Cannot load adpcm_temp.vma. :

adpcm_temp.vma cannot be loaded. This file is broken. Check whether the unjust operation is done. Load ADPCM data on MA-2 Voice Library. MA-2 Voice Library creates an adpcm_temp.vma file at the loading.

Cannot open vma file. :

VMA file cannot be opened. Check whether it is opened in exclusion mode from other applications.

Cannot load vma file. :

VMA file cannot be loaded. This file is broken. Check whether the unjust operation is done.

Cannot save vma file. :

VMA file cannot be saved. Check whether it exists already as read-only file or it is opened in exclusion mode from other applications.

Cannot open WAVE file. :

WAVE file cannot be opened. Check whether it is opened in exclusion mode from other applications.

Cannot load WAVE file. –Sampling Frequency must be 4k / 8k Hz :
Wav file cannot be loaded. The loadable Wav file is only the sampling frequency 4kHz and 8kHz.

Cannot load WAVE file. - Bits per sample must be 16 bit :
Wav file cannot be loaded. The loadable Wav file is only sampling bit numbers 16 bits.

Cannot load WAVE file. - WAVE file must be Mono :
Wav file cannot be loaded. The loadable Wav file is only monophonic.

Cannot create fm_temp.vma file. :
Creation of an fm_temp.vma file is failure. fm_temp.vma file is a file which saves the newest voice information on MA2 Voice Library.

Cannot create adpcm_temp.vma file. :
Creation of an adpcm_temp.vma file is failure. adpcm_temp.vma file is a file which saves the newest ADPCM voice information on MA2 Voice Library.

Cannot save SMF. :
The output to a file of SMF data is failure.

Cannot save SMAF file :
The output to a file of SMAF data is failure.

4.2.2.   MidiCh….

MidiCh * : Bank Select MSB is specified incorrectly. (Bank Select MSB: *) :
Designate 122 (0x7A) or 123 (0x7B) for BankSelectMSB.

MidiCh * : Bank Select LSB is out of range. (Bank Select LSB: *) :
Designate 0 to 9 at the BankSelectMSB=122 (0x7A) and designate 0 at the BankSelectMSB=123 (0x7B) for BankSelectLSB

MidiCh * : Control Change is not supported. (Control Change: *) :
The designated Control Change cannot be used. Please check the control number by the authoring guideline.

MidiCh * : Program Change is out of range on drum channel. (Program Change: *) :
The designated Program Change cannot be used.
Use 0~9 for the drum channel.

MidiCh* : Cannot assign a normal tone. :
There are too many normal voices to assign.
Decrease number of program change at normal channel.

MidiCh * : Cannot assign a drum tone. :
There are too many drum voices to assign. The number of drum voices corresponds to the number of different notes on the drum channel. Check how many different notes are being used.

MidiCh * : Channel Reserve is not specified. :
This MIDI channel has no Channel Reserve message.

MidiCh * : Program Change is not specified. :
This MIDI channel has no Program Change.

MidiCh * : Data Entry is out of range. (Data Entry: *) :
The range of values, which can be designated by DataEntry, is 0~24.

MidiCh * : Cannot assign 4-operator and 2-operator on same channel :
The number of operators for the voice prior to Program Change is different than the number of operators following Program Change. Unify the voices to either 2-operator or 4-operator.

MidiCh* : Cannot assign a normal channel. :
The number of tones designated by Channel Reserve has exceeded the number of channels that can be assigned. Check the number of operators that can be used overall, and modify the Channel Reserve setting.

MidiCh * : Pitch Bend is not supported on drum channel :
Cannot use PitchBend for Drum Channel.

MidiCh * : After Touch is not supported :
Cannot use AfterTouch (Polyphonic Key Pressure, Channel Pressure).

MidiCh * : Program Change is specified incorrectly on drum channel. :
Program change is prohibited on drum channel during a music.
Program change is prohibited during pronunciation.

MidiCh * : Bank Select MSB is specified incorrectly on drum channel. :
Bank select is prohibited on drum channel in the music.
* When this error occurs, SMF Filter cannot be selected.

MidiCh * : Bank Select LSB is specified incorrectly on drum channel. :
Bank select is prohibited on drum channel in the music.

MidiCh * : Channel Reserve is specified more than once :
Two or more Channel Reserves exist on the same MIDI channel.

MidiCh * : Channel Reserve must be equal to the number of assigned drum tones. (*) :
Channel Reserve on drum channel is unfit. Set it to designated value.

Midi Ch * : RPN LSB must be 0. :
　　There is a problem in the value of RPN LSB.
　　RPN LSB other than "0" is invalid.

Midi Ch * : RPN MSB must be 0. :
　　There is a problem in the value of RPN MSB.
　　RPN MSB other than "0" is invalid.

Midi Ch * : RPN LSB and RPN MSB are not specified. :
　　RPN LSB (=0) and RPN MSB (=0) are not set up.
　　Please set up RPN LSB (=0) and RPN MSB (=0) before Data Entry.

Midi Ch * : RPN LSB is not specified. :
　　RPN LSB (=0) is not set up.
　　Please set up RPN LSB (=0) before Data Entry.

Midi Ch * : RPN MSB is not specified. :
　　RPN MSB (=0) is not set up.
　　Please set up RPN MSB (=0) before Data Entry.

MidiCh * : Program Change is specified incorrectly on normal channel. :
　　There is a problem in the Program Change setup of normal channel.
　　Program Change is set up into the note, or Program Change is not set up in front of the note.

4.2.3.　aa:bb:cc….

aa:bb:cc　MidiCh * : Gate Time is 0. (Note Number: *) :
　　The note of the NoteNumber** at the position of Measure aa: Beat bb: Tick cc has a Gate Time of 0. The gate time must be 1 Time Base value or greater. Please increase the Gate Time.

aa:bb:cc　MidiCh * : Notes are overlapped on ADPCM Channel :
　　ADPCM Notes of NoteNumber** at the position of Measure aa: Beat bb: Tick cc overlaps. Avoid overlapping by moving location of one of the ADPCM Notes or making gate time shorter.

aa:bb:cc　MidiCh * : Gate Time is too long. (Note Number: *) :
　　The note of GateTime at the position of Measure aa: Beat bb: Tick cc has a Gate Time that is too long. A gate time longer than 16511xTime Base (msec) may have been designated. Please check the GateTime.

aa:bb:cc　MidiCh * : Notes are overlapped. (Note Number: *) :
　　The Measure aa: Beat bb: Tick cc location contains identical notes overlapping. Please erase all but one of them.

aa:bb:cc   MidiCh * : Cannot assign Note in the channel. (Note Number: *) :
The note at the position of Measure aa: Beat bb: Tick cc cannot be assigned to an MA2 channel. Many tones may be played simultaneously over the designated number by Channel Reserve. Either delete those notes, or increase the Channel Reserve setting.

aa:bb:cc   MidiCh * : Note Number is out of range on normal channel. (Note Number: *) :
NoteNumbers of notes at the positions of Measure aa: Beat bb: Tick cc cannot be used. Use them in the range from 13 to 108.

aa:bb:cc : Note On / Channel Volume is specified incorrectly on ADPCM Channel :
Events of the same time are located in the positions of Measure aa: Beat bb: Tick cc of ADPCM part. StartPoint, ChannelVolume or NoteON may be set at the same time. Take time of 1 TimeBase or longer for insertion of these events. And, this error message is also displayed when ChannelVolume and NoteOn are put on the head position (1:1:0) of music. These events should be placed to have interval 1 TimeBases or longer from the head position.

aa:bb:cc : Time interval of 2 Time Base is required from Note Off to the next Note On on ADPCM Channel. :
The time from NoteOn, which is inserted at the positions of Measure aa: Beat bb: Tick cc of ADPCM part, to previous NoteOff does not reach 2 TimeBase. Insert NoteOn taking time of 2 TimeBase or more.

aa:bb:cc : STOP is specified incorrectly on ADPCM Channel. :
This error message is displayed when another event exists at STOP point Position, which is inserted at the positions of Measure aa: Beat bb: Tick cc of ADPCM part.
This error message is also displayed when the total of time intervals of "START-first NoteOn-last NoteOff- STOP" is less than 2 TimeBase.
In either case, this problem can be solved by moving the location of STOP point backward. This error can be avoided by moving other event.

4.2.4.   Others….

Not enough Memory. :
> Memory can not be allocated. Please increase system memory.

adpcm_temp.vma file is invalid. :
> The format of the Adpcm_temp.vma file is invalid. Check whether it was created correctly.

Either 4k Hz ADPCM or 8k Hz ADPCM can be used :
> The sampling frequencies of ADPCM voices which are used simultaneously are not equal each other. When you are using more than one ADPCM data, they must all be either 4 kHz or 8 kHz.

Note On has no corresponding Note Off :
> A NoteOff corresponding to the NoteOn was not found. Normally, this message will not appear. The MIDI file may be damaged.

Extension is not .mid / .mmf. :
> The extension of designated file differs from the extension of SMF and SMAF file. Check the extension.

Extension is not .mmf. :
> The extension of designated file differs from the extension of SMAF file. Check the extension.

Extension is not .mid. :
> The extension of designated file differs from the extension of SMF. Check the extension.

SMAF file is invalid :
> This is an invalid SMAF file. Check Contents Class and Contents Type in Contents Info Chunk.

Input file is not SMAF file. :
> This file format differs from the format of SMAF. Check Chunk ID.

Input file is not SMF :
> This file format differs from the format of SMF. Check Chunk ID.
> * When this error occurs, SMF Filter cannot be selected.

Format of SMF must be format0 :
> The form of this SMF is not Format 0. Any form other than Format 0 are not supported. Convert the format to Format 0.

SMAF file has no Note / Tone :
> Voice information and Note information are not outputted to the SMAF file after conversion at all. Please check the setup of SMF.

fm_temp.vma is a read-only file. :
> fm_temp.vma is a read-only file. Check the attribute of file.

adpcm_temp.vma is a read-only file. :
> adpcm_temp.vma is a read only file. Check the attribute of file.

WAVE file is invalid. :
> This is an invalid WAVE file. Check the file data.

All sub-windows should be closed before exiting this application. :
> The end processing is impossible when the sub-dialogue is opening.

Player failed to load data. :
> Load of data to Player is failure.

Player failed to play data. :
> Play by Player is failure.

SMF Filter failed during conversion :
> SMF Filter is failure.

START / STOP is specified incorrectly :
> START position is after STOP position. START position should be located before STOP position.

START is specified incorrectly. :
> There is a Note-on is in front of START position. START position should be at the same position as the first Note-on or before it.

STOP is specified incorrectly :
> There is a Note-off after STOP position. STOP position should be located after last Note-off.

No note message in SMF. :
> There is no note message in SMF. Please check the contents.

SMF is invalid. :
> There is a problem in the format of SMF.
>> - Chunk size is inaccurate.
>> - The number of tracks is over 1. (It is not the SMF Format 0.)
>> - Chunk ID is inaccurate.

Program Change is out of range on ADPCM Channel. :
> This Program Change cannot be use for ADPCM.
> When uses ADPCM, please use Program Change 2-9.

Non-sounding voice is assigned :
> The voice which is not pronounced is specified.
> Please check the voice setup and the voice registered into Voice Library.

vma file is invalid. :
> There is a problem in the specified vma file. Please check the contents of a file.

Not enough Memory :
The memory required for processing is not securable. Please check the state of PC and other applications under starting.

4.3. ADPCM Setting Error

These are messages displayed on SMAF ADPCM edit dialog when setting ADPCM voice note.

ADPCM tone is not assigned. :
> ADPCM voice data is not set. Please designate from voices of MA2 Voice Library or voices under using, or convert from Wav file.

The number of assigned ADPCM tones is out of range. :
> The maximum number of ADPCM voice to be used with file is 32. Please adjust so that 32 is not exceeded.

Either 4kHz ADPCM or 8kHz ADPCM can be used. :
> Both 4kHz and 8kHz sampling frequency data can not be used in one file at a time. Please unify into either value.

Notes are overlapped on ADPCM Channel. :
> Multiple ADPCM can not be pronounced simultaneously. Please adjust so that Notes are not overlapped.

Time interval of 2 Time Base is required from Note Off to the next Note On on ADPCM Channel. :
> ADPCM can not start pronouncing within 2 TimeBase after the last pronunciation. Please adjust the interval to be more than 2 TimeBase at least.

Note is specified incorrectly on ADPCM Channel. :
> Start location or Stop location of ADPCM has problem. Please refer to "ADPCM" section of "Ringing Melody Authoring Guidelines". And also, setting into the location exceeding the time range displayed on PianoRoll can not be set. Please check setting time.

5. Appendix

5.1. Voice Map (Voice Assign)

MA2 Voice Library treats the following 2 kinds of voice.
- ▪ 2/4 operator FM voices, and
- ▪ ADPCM voices with sampling rate of Fs 4 kHz and 8 kHz, 4 bit monaural.

For FM voices, Bank Select MSB 122 and LSB 0 to 9 are assigned as normal voices, and Bank Select MSB 123 LSB 0 Program Change 1 to 10 and note number 13 to 91 are assigned as drum voices.
ADPCM voices are assigned to Bank Select MSB 123 LSB 0 program change 0 to 9 and note number 0 to 12 and 92 and 127. The assignment table is shown below.

Voice assignment of bank select MSB 122 voices

	Preset FM 2OP GM128 voices	Preset FM 4OP GM128 voices	FM user voices	FM user voices	FM user voices
Bank select LSB#	0	1	2	3…8	9
Program change # 1	GrandPno	GrandPno	User1	User1	User1
…	…	…	…	…	…
Program change # 128	Gunshot	Gunshot	User128	User128	User128

Program change 1 to 128 of Bank Select MSB 122, LSB 0 and 1 are preset voices.
Their names and voice parameters cannot be changed.

Voice assignment of Bank Select MSB 123, LSB 0

	Preset FM 2OP drum voices	Preset FM 4OP drum voices	User FM drum /ADPCM voices	User FM drum /ADPCM voices	User FM drum /ADPCM voices
Program change #	1	2	3	4…9	10
Note# 0	----	----	ADPCM	ADPCM	ADPCM
…	----	----	…	…	…
Note# 13	Drum	Drum	Drum User13	Drum User13	Drum User13
…	…	…	…	…	…
Note# 91	Drum	Drum	Drum User91	Drum User91	Drum User91
…	----	----	…	…	…
Note #127	----	----	ADPCM	ADPCM	ADPCM

Drum voices of Bank Select MSB 123 LSB 0 Program Change 1 and 2 are preset voices.
Their names and voice parameters cannot be changed.

Note number 13 to 91 are assigned as FM drum voices,
  and note number 0 to 12 and 92 to 127 are assigned as ADPCM voices.

[Note] Up to32 ADPCM voices can be set to 1 SMAF. The setting more than 32 is impossible.

5.2. Preset Voice

5.2.1. Normal Voice
BankSelectMSB: 122
BankSelectLSB: 0 is 2-operator voice
BankSelectLSB: 1 is 4-operator voice
PC# (Program change number) 1 to 128

PC#	Name	PC#	Name	PC#	Name
1	GrandPno	51	Syn.Str1	101	Bright
2	BritePno	52	Syn.Str2	102	Goblins
3	E.GrandP	53	ChoirAah	103	Echoes
4	HnkyTonk	54	VoiceOoh	104	Sci-Fi
5	E.Piano1	55	SynVoice	105	Sitar
6	E.Piano2	56	Orch.Hit	106	Banjo
7	Harpsi	57	Trumpet	107	Shamisen
8	Clavi	58	Trombone	108	Koto
9	Celesta	59	Tuba	109	Kalimba
10	Glocken	60	Mute.Trp	110	Bagpipe
11	MusicBox	61	Fr.Horn	111	Fiddle
12	Vibes	62	BrasSect	112	Shanai
13	Marimba	63	SynBras1	113	TnklBell
14	Xylophon	64	SynBras2	114	Agogo
15	TubulBel	65	SprnoSax	115	SteelDrm
16	Dulcimer	66	AltoSax	116	WoodBlok
17	DrawOrgn	67	TenorSax	117	TaikoDrm
18	PercOrgn	68	Bari.Sax	118	MelodTom
19	RockOrgn	69	Oboe	119	Syn.Drum
20	ChrchOrg	70	Eng.Horn	120	RevCymbl
21	ReedOrgn	71	Bassoon	121	FretNoiz
22	Acordion	72	Clarinet	122	BrthNoiz
23	Harmnica	73	Piccolo	123	Seashore
24	TangoAcd	74	Flute	124	Tweet
25	NylonGtr	75	Recorder	125	Telphone
26	SteelGtr	76	PanFlute	126	Helicptr
27	JazzGtr	77	Bottle	127	Applause
28	CleanGtr	78	Shakhchi	128	Gunshot
29	Mute.Gtr	79	Whistle		
30	Ovrdrive	80	Ocarina		
31	Dist.Gtr	81	SquareLd		
32	GtrHarmo	82	Saw.Lead		
33	Aco.Bass	83	CaliopLd		
34	FngrBass	84	ChiffLd		
35	PickBass	85	CharanLd		
36	Fretless	86	VoiceLd		
37	SlapBas1	87	FifthLd		
38	SlapBas2	88	Bass&Ld		
39	SynBass1	89	NewAgePd		
40	SynBass2	90	WarmPad		
41	Violin	91	PolySyPd		
42	Viola	92	ChoirPad		
43	Cello	93	BowedPad		
44	Contrabs	94	MetalPad		
45	Trem.Str	95	HaloPad		
46	Pizz.Str	96	SweepPad		
47	Harp	97	Rain		
48	Timpani	98	SoundTrk		
49	Strings1	99	Crystal		
50	Strings2	100	Atmosphr		

5.2.2.   Drum Voice

BankSelectMSB: 123
BankSelectLSB: 0
ProgramChange : 1   is 2-operator voice
ProgramChange : 2 is 4-operator voice
NOTE# is note number (Describes as the value which starts from 0)

BankSelectMSB : 123		BankSelectMSB : 123	
BankSelectLSB : 0		BankSelectLSB : 0	
ProgramChange : 1,2		ProgramChange : 1,2	
NOTE#	Name	NOTE#	Name
24	SeqClick H	55	Splash Cymbal
25	Brush Tap	56	Cowbell
26	Brush Swirl L	57	Crash Cymbal 2
27	Brush Slap	58	Vibraslap
28	Brush Swirl H	59	Ride Cymbal 2
29	Snare Roll	60	Bongo H
30	Castanet	61	Bongo L
31	Snare L	62	Conga H Mute
32	Sticks	63	Conga H Open
33	Bass Drum L	64	Conga L
34	Open Rim Shot	65	Timbale H
35	Bass Drum M	66	Timbale L
36	Bass Drum H	67	Agogo H
37	Closed Rim Shot	68	Agogo L
38	Snare M	69	Cabasa
39	Hand Clap	70	Maracas
40	Snare H	71	Samba Whistle H
41	Floor Tom L	72	Samba Whistle L
42	Hi-Hat Closed	73	Guiro Short
43	Floor Tom H	74	Guiro Long
44	Hi-Hat Pedal	75	Claves
45	Low Tom	76	Wood Block H
46	Hi-Hat Open	77	Wood Block L
47	Mid Tom L	78	Cuica Mute
48	Mid Tom H	79	Cuica Open
49	Crash Cymbal 1	80	Triangle Mute
50	High Tom	81	Triangle Open
51	Ride Cymbal 1	82	Shaker
52	Chinese Cymbal	83	Jingle Bell
53	Ride Cymbal Cup	84	Belltree
54	Tambourine		

5.3. The Rough Procedure of ATS-MA2

① Preparation of SMF

Please create the optimal SMF for SMAF conversion by ATS-MA2 based on "Ringing Melody Authoring Guidelines for ATS-MA2". Please use the usual SMF as it is.

② Setting

If the SMF prepared in ① is created in accordance with "Ringing Melody Authoring Guidelines for ATS-MA2", it is possible to convert into SMAF with no problem.
But if you use a usual SMF, please set it to use SMF Filter in accordance with Option setting (3.5). SMF Filter processes SMF into the possible form to SMAF conversion.

③ SMF → SMAF Conversion

Please read SMF and convert into SMAF by designating SMF from File menu or drag & drop SMF on Main dialogue.

④ SMF Filter

When you set to use SMF Filter in the setting of ②, if an error occurs in SMAF conversion in ③, the dialogue which urges verification of whether to use SMF Filter is displayed.

⑤ Voice Edit

Please start the dialogue for voice edit (3.3) from voice setting of Voice Assign Map in Main dialogue, and edit FM/ADPCM voice.

⑥ SMAF Information Edit

Please set SMAF peculiar information from control of SMAF Information (3.1.3) in Main dialogue.

⑦ SMAF Playing

Please confirm the SMAF play sound.
You can always play and confirm the newest SMAF because SMAF is re-converted for every edit operation of ⑤ and ⑥. (3.1.2)

⑧ Save SMAF

Save SMAF, which ended each edit processing, into the file.