

MA-2 Authoring Tool

User's Manual

(ATS-MA2-SMAF Edition)

Ver. 1.0.0

2002/12/16

Yamaha Corporation

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<History>

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

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1. Overview

This document describes how to use MA-2 Authoring Tool ATS-MA2-SMAF (ATS-MA2).

1.1. Function 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

64MB or more

1.2.5. Sound speaker

ATS-MA2 makes a sound from the Personal Computer speaker.

2. Starting and Ending of the Application

2.1. File Structure

ATS-MA2 consists of the following 2 files.

File name	Function
ATS-MA2.exe	Main body of Application
ma2syn.dll	MA-2 emulator
fm_temp.vma	Voice library file

2.2. Starting

2.2.1. Starting Operation

Double-clicks ATS-MA2.exe or inputs file name directly into “Run...” of Start menu.

Only one ATS-MA2 can be launched on the one PC. If [ATS-MA2 has already been launched.] is shown at the time of start, ATS-MA2-SMAF or ATS-MA2-SMAFPhrase is already running. Please end it if needed.

2.2.2. Starting Window

At starting, the following image is displayed.



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

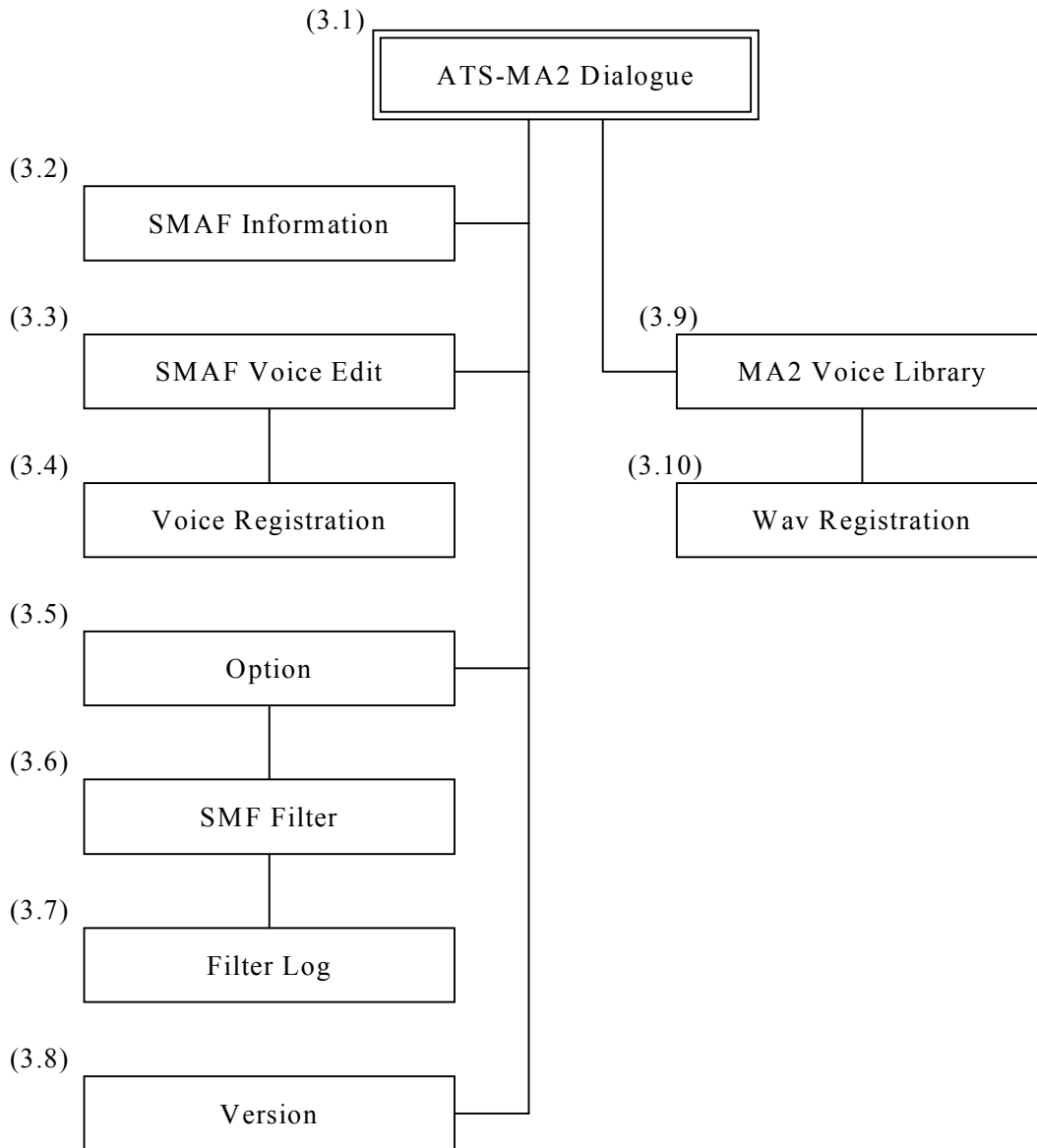
When the main window is active, presses [Alt] + [F4]. (press [F4] with [ALT])

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 function and call of window are summarized to below.



(3.1) ATs-MA2 Dialogue

It is Main dialogue of ATs-MA2 application. You can operate the read and save of SMF and SMAF, and play SMAF by Player.

(3.2) SMAF Information Dialogue

You can set information peculiar to SMAF.

(3.3) SMAF Voice Edit Dialogue

You can edit and listen FM voice information for converted SMAF and listen ADPCM voice.

(3.4) Voice Registration Dialogue

You can register the FM/ADPCM voice information, which edited for SMAF in (3.3) SMAF Voice Edit Dialogue, into voice library of application. And you can reuse it.

(3.5) Option Dialogue

You can set the optional function. Concretely, it is the setting of (3.6) SMF Filter and (3.7) Filter Log.

(3.6) SMF Filter Dialogue

You can set channel which 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 Dialogue

It displays the version information of ATS-MA2 application.

(3.9) MA2 Voice Library Dialogue

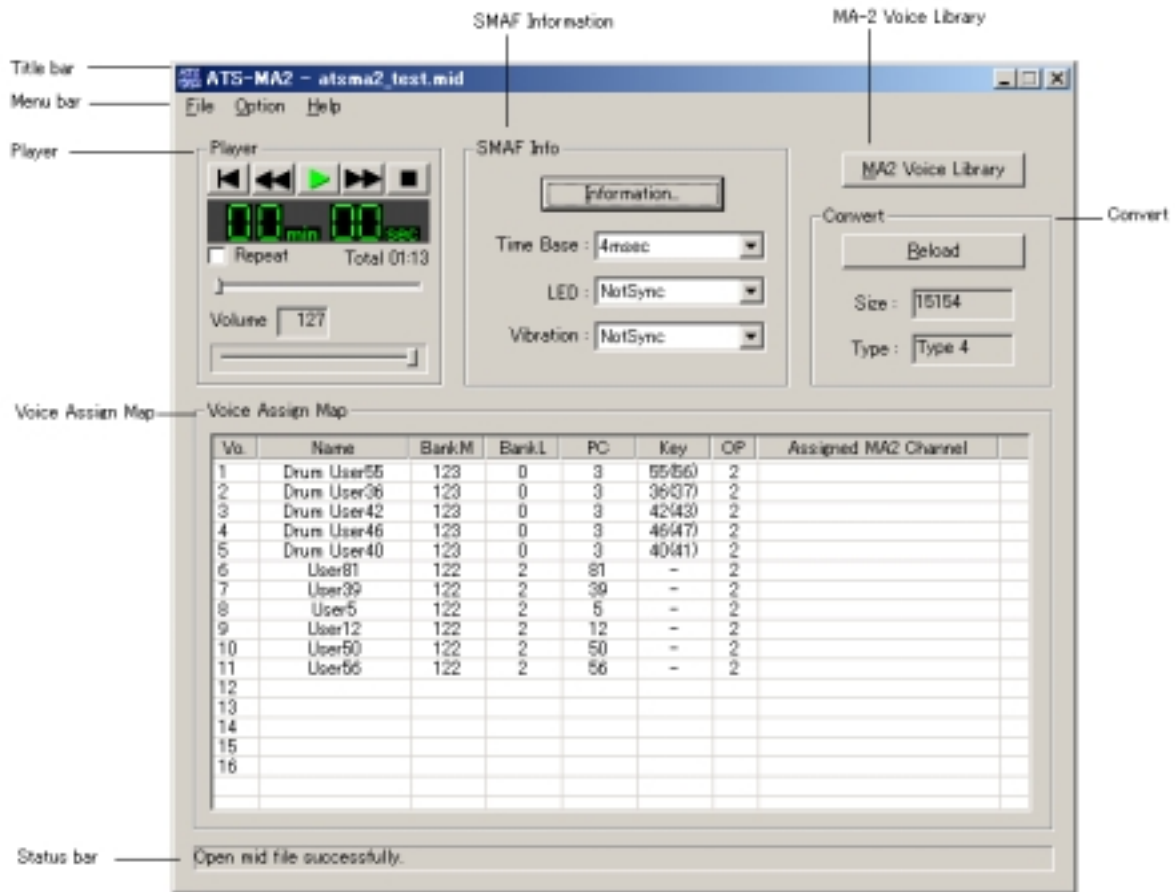
You can operate and edit voice library, which is used in application. And you can listen the edited voice.

(3.10) Wav Registration Dialogue

You can register Wav file, which is converted to ADPCM, into voice library of application as voice information.

3.1. ATS-MA2 Dialogue

This is Main dialogue. It is displayed as starting of application simultaneously.

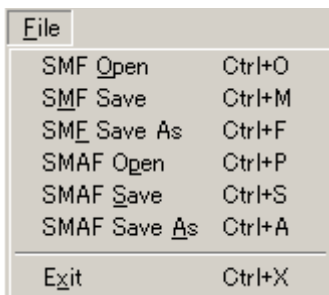


3.1.1. Menu Bar



3.1.1.1. File Menu

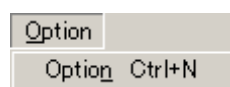
The following File menu is displayed when “File” of Menu bar was selected.



- 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 Save SMF
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 Save as SMF
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 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 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

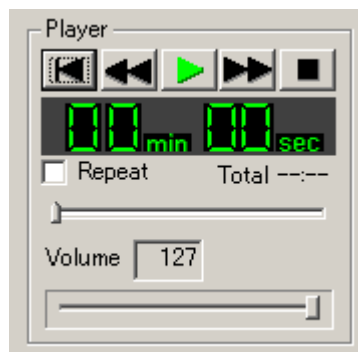
When “Help” in menu bar is selected, the following Help menu is displayed.



- ① Version
Version information dialogue (3.8) is displayed.
- ② SMAF Official Website (Global)
SMAF Official Web Site (English) is opened from the browser related with html.
- ③ SMAF Official Website (Japanese)
SMAF Official Web Site (Japanese) 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 playback position of music to the head.

3.1.2.2. Rewind Button



Rewinds the playback 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 playback location in one-second step.

3.1.2.5. Stop Button

 Stops the play of music, and returns the playback position to the head.

3.1.2.6. Time Display



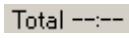
This indicates the playback time. When the playback ends, returns to “0”.

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. Playback time


 Total ---:-- Displays total playback time of music.

3.1.2.9. Playback Position Slider



Displays the playback position. When the playback ends, returns to “0”.

3.1.2.10. Volume Display

 Volume 127 Displays the present Volume value (0 ~ 127)

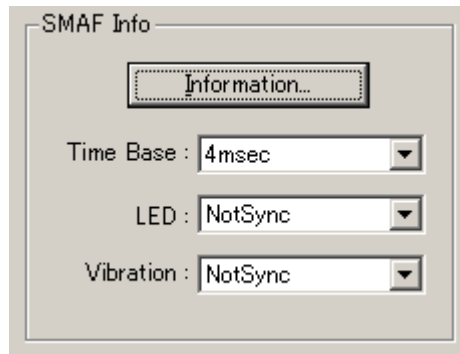
3.1.2.11. Volume Slider



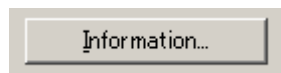
Sets Volume value (0 ~ 127) at the playback.

3.1.3. SMAF Information

In this block, SMAF peculiar information can be set.

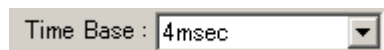


3.1.3.1. Information Button



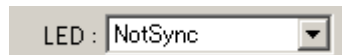
Displays SMAF Information Dialogue (3.2).

3.1.3.2. Time Base Combo box



Time Base can be selected from 4,5,10,20msec at SMAF conversion.
Default is 4msec.

3.1.3.3. LED Combo box

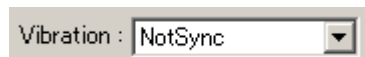


The channel to synchronize its Note and LED can be selected. It can be selected by the individual channel designation of 1 ~ 12 or the group designation of 1~4, 5~8, 9~12 channels.

Default is with no synchronous setting (NotSync).

[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.

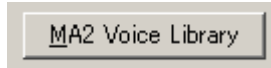
Default is with no synchronous setting (NotSync).

[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.

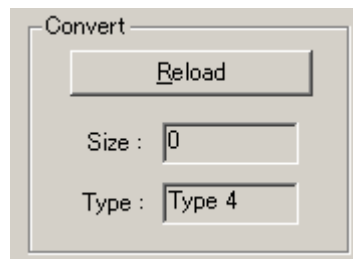
3.1.4.1. MA2 Voice Lib Button



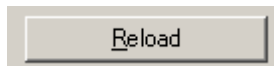
Displays MA2 Voice Library Dialogue (3.9).

3.1.5. Convert

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



3.1.5.1. Reload Button



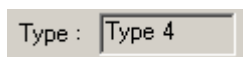
Reads SMF again and performs SMAF conversion.

3.1.5.2. Size Display



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

3.1.5.3. Type Display



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.

Vo.	Name	BankM	BankL	PC	Key	OP	Assigned MA2 Channel
1							
2							
3							

Labels below the table: Voice No, Voice Name, BankMSB, BankLSB, Program Change, Operator

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. Voice No

Displays the registration number of voices.

3.1.6.2. Voice Name

Displays the voice name.

3.1.6.3. BankMSB

Displays the value of Bank Select MSB of voice.

3.1.6.4. BankLSB

Displays the value of Bank Select LSB of voice.

3.1.6.5. Program Change

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

3.1.6.6. Key

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

3.1.6.7. Operator

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

3.1.6.8. 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).

- Cannot find the ADPCM data

This error message is displayed when the NOTE into which ADPCM is not registered in MA-2 Voice Library is designated.


This conversion error is removed by registering ADPCM voice into the corresponding Note and re-converting. (Refer to 3.1.5.1 Reload button)

- Different sampling rate adpcm data

This error message is displayed when the ADPCM voices of different sampling frequency are designated simultaneously.

This conversion error is removed by making frequency in agreement with 4kHz or 8kHz.

3.1.7. Status Bar



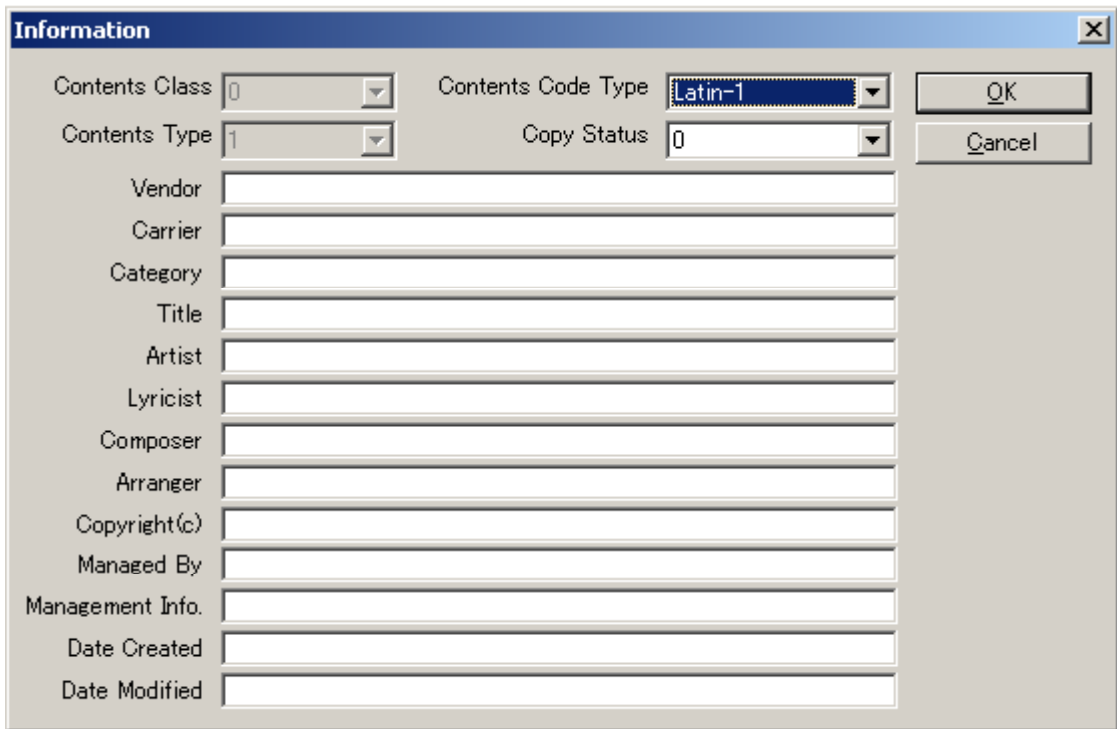
Open mid file successfully.

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).

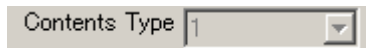


3.2.1. Contents Class Combo box



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.

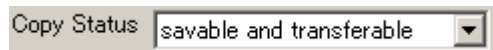
3.2.3. Contents Code Type Combo box



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



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 Edit Box



Describes Vender name.

3.2.6. Carrier Edit Box



Describes Carrier name.

3.2.7. Category Edit Box



Describes Category name.

3.2.8. Title Edit Box



Describes song Title name.

3.2.9. Artist Edit Box

Describes Artist name (Singer/Performer)

3.2.10. Lyricist Edit Box

Describes Lyricist.

3.2.11. Composer Edit Box

Describes Composer.

3.2.12. Arranger Edit Box

Describes Arranger

3.2.13. Copyright Edit Box

Describes Copy right©

3.2.14. Managed By Edit Box

Describes copyright Management organization name

3.2.15. Management Info Edit Box

Describe Management information

3.2.16. Date Created Edit Box

Describes Created date.

3.2.17. Date Modified Edit Box

Describes Modified date.

3.2.18. OK Button

Completes each setting on dialogue and closes the dialogue.

3.2.19. Cancel Button

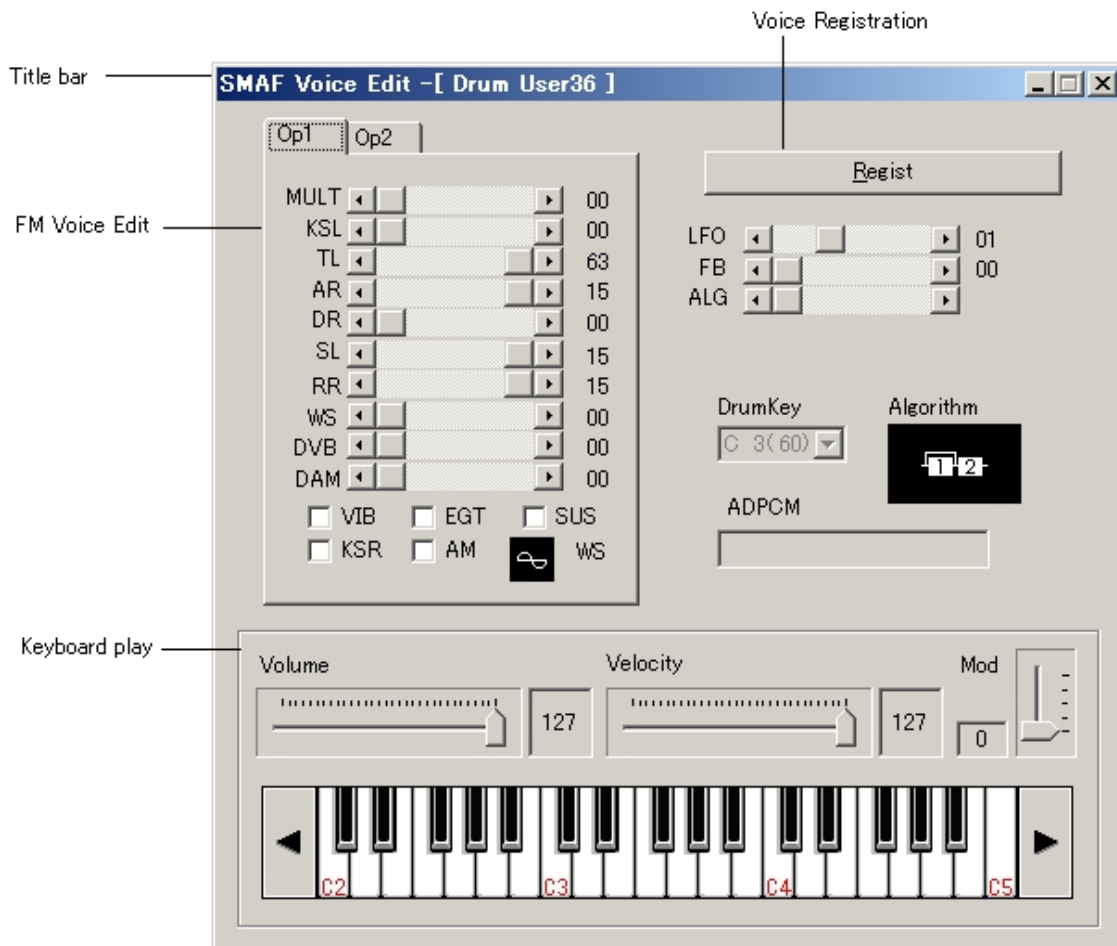


Cancels each setting on dialogue and closes the dialogue.

3.3. SMAF Voice Edit Dialogue

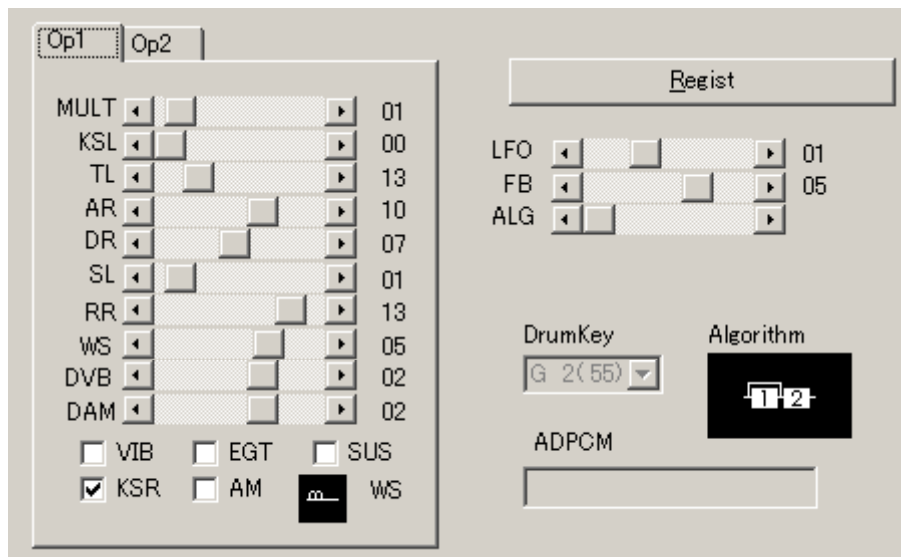
Starts by double-clicking the voice information items of Voice Assign Map in Main dialogue (ATS-MA2).

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.

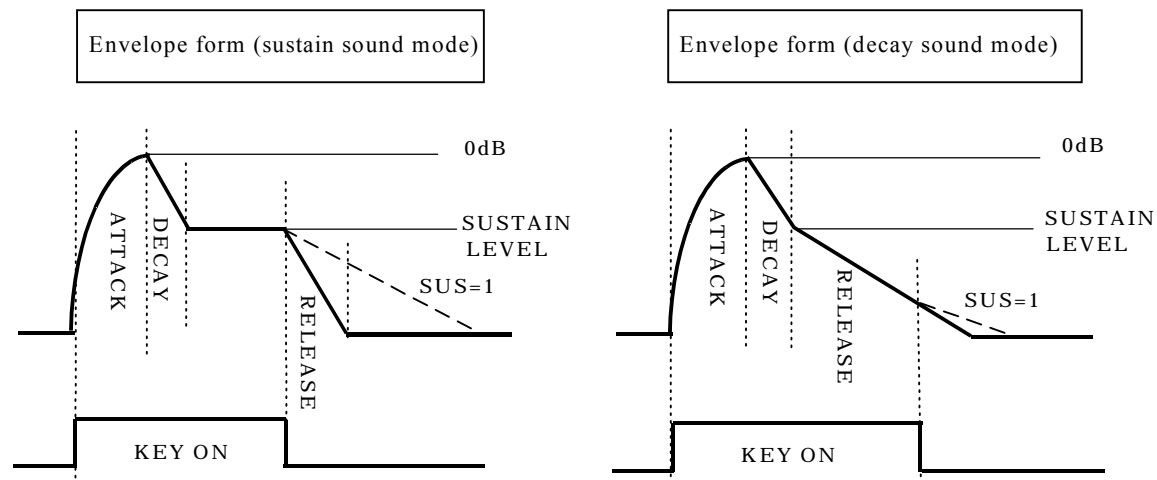


3.3.1.1. Operator Tab

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.
- 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.



- 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.

⑩ 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.

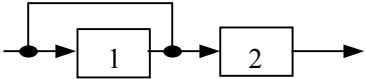

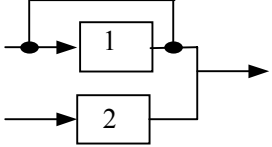

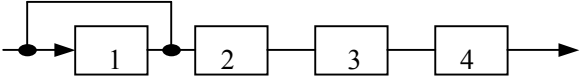
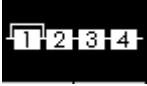
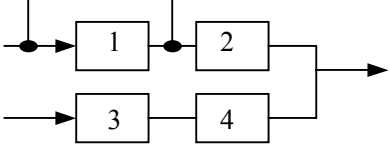

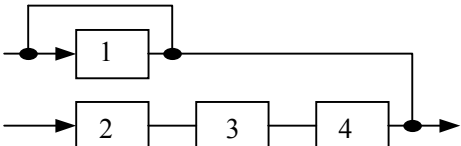

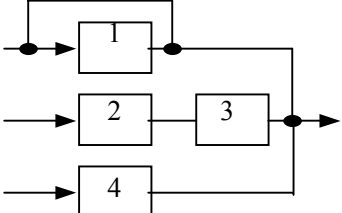
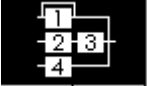
3.3.1.5. Drum Key Combo box

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.

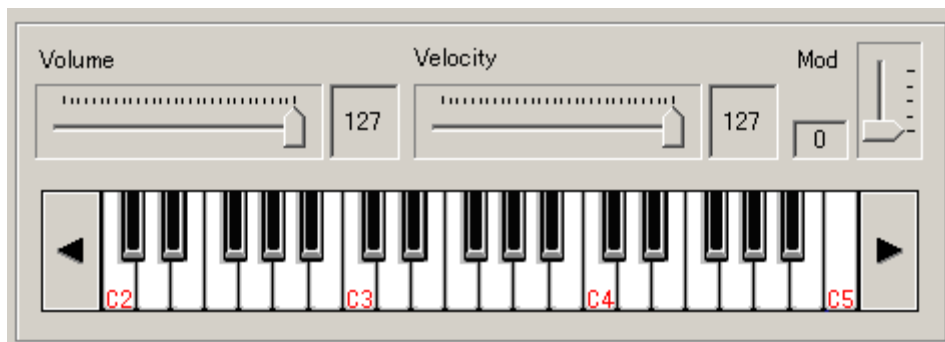
It is displayed only when Smaf Voice Edit Dialogue is started from the ADPCM setting on Voice Assign Map.

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.

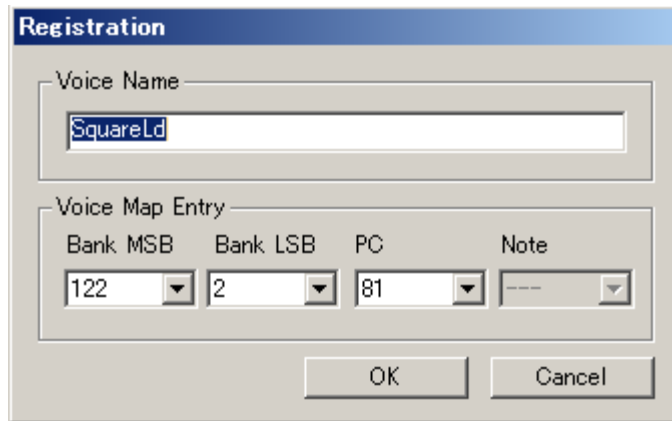
3.3.3.4. Velocity slider

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 operation of “Regist” button on SMAF Voice Edit dialogue.

The setting of Voice Map Entry at starting is same as the Voice Assign Map designation item at starting SMAF Voice Edit dialogue.



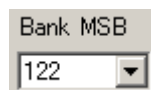
3.4.1. Voice Name Edit Box



Sets the voice name registered into Voice Map of MA2 Voice Library Dialogue.

3.4.2. Voice Map Entry

3.4.2.1. Bank MSB Combo box



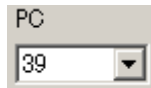
Sets Bank Select MSB registered into Voice Map of MA2 Voice Library dialogue.
Please set Normal voice to 122, and set Drum voice to 123.

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 voice is fixed to 0.

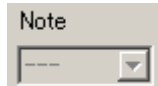
3.4.2.3. PC Combo box



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 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

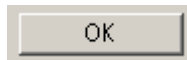


Sets Note registered into Voice Map of MA2 Voice Library.

When Normal voice, this setting is not necessary.

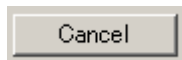
When Drum voice, please set within the range from 13 to 91.

3.4.3. OK Button



Completes each setting on this dialogue and closes this dialogue.

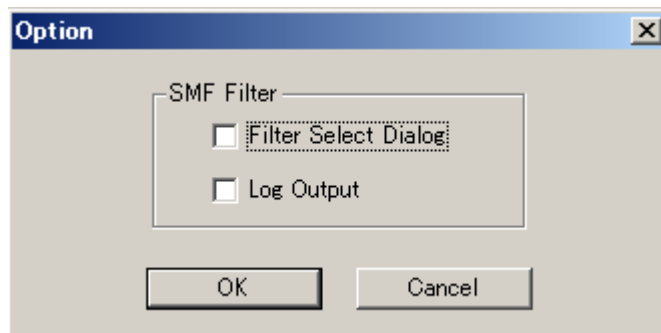
3.4.4. Cancel Button



Cancels each setting on this dialogue and closes this dialogue.

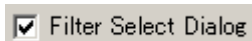
3.5. Option Dialogue

Starts by selecting of Menu bar “Option” on Main dialogue (ATS-MA2).



3.5.1. SMF Filter

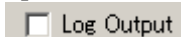
3.5.1.1. Filter Select Dialog Check Box



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



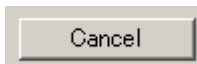
Sets whether the result of Filter processing is displayed as a log or not. (When checkmark is put in this checkbox, the Filter Log dialogue is displayed.)

3.5.2. OK Button



Completes each setting on dialogue and closes this dialogue.

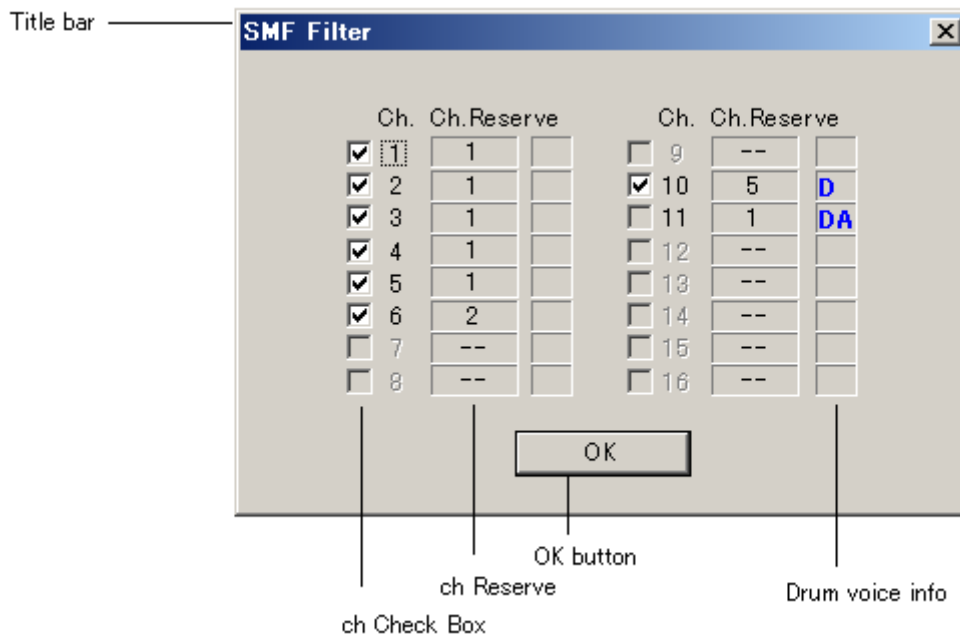
3.5.3. Cancel Button



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.

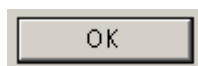
3.6.3. Drum Voice Classification Text

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

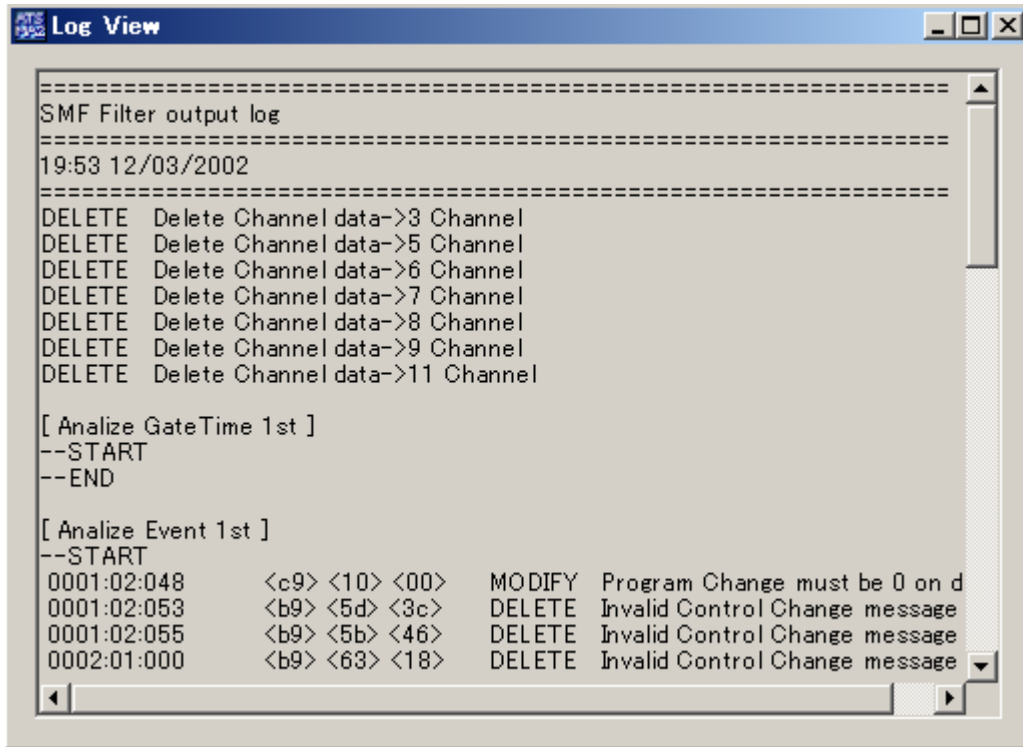
3.6.4. OK Button



Completes each setting on dialogue and closes this dialogue.

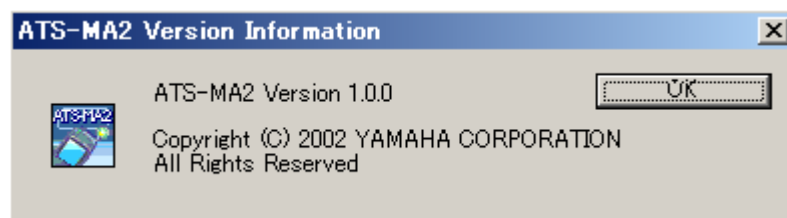
3.7. Filter Log Dialogue

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

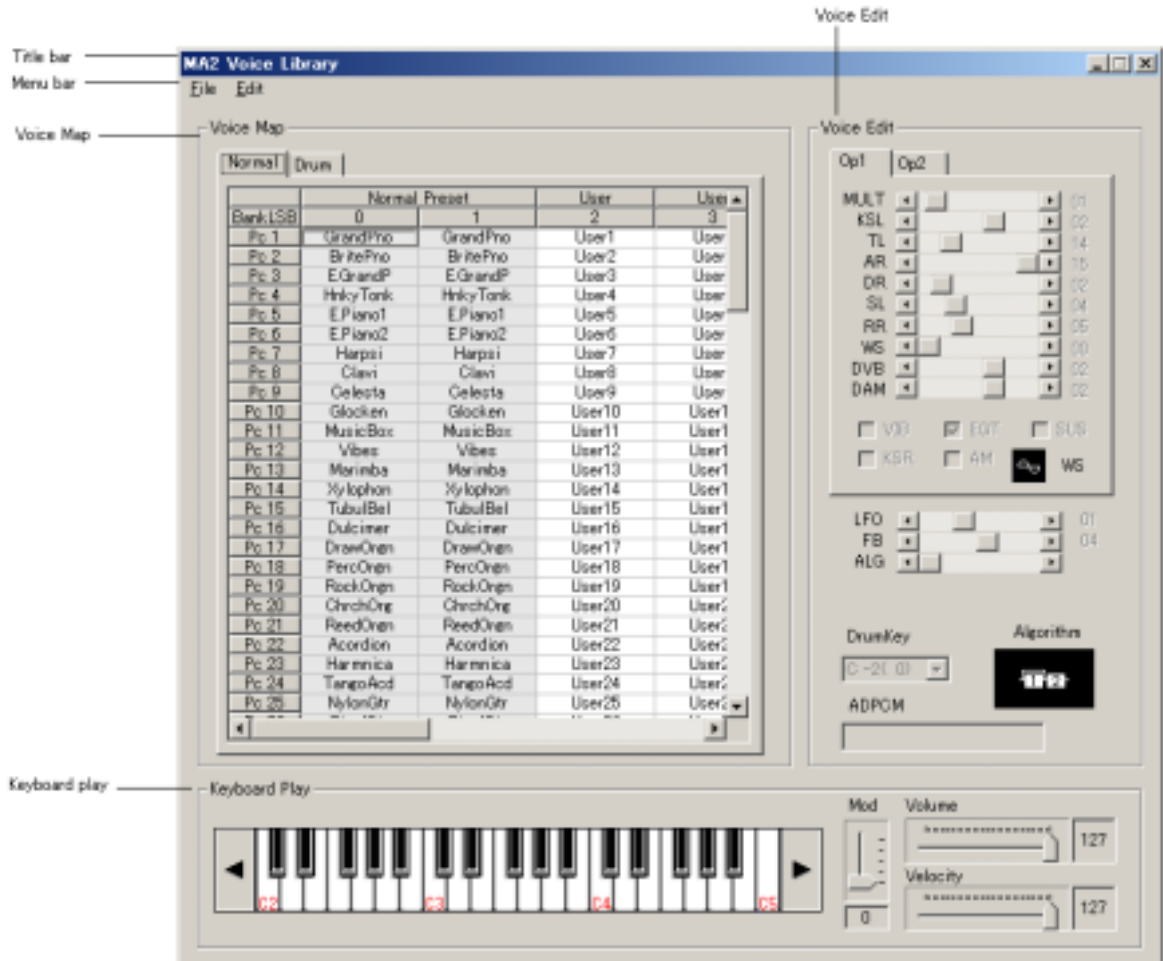
Starts by selecting of File menu “Help-Version” on Main dialogue (ATS-MA2).



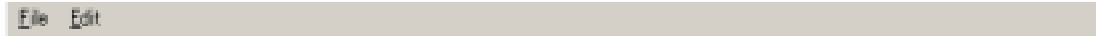
3.9. MA2 Voice Library Dialogue

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.

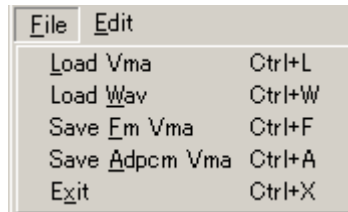


3.9.1. Menu bar



3.9.1.1. File menu

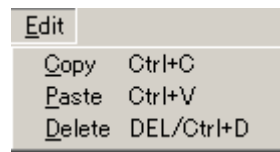
Displays the following menu when File of menu bar is selected.



- 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 ATSMMA2.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

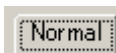
In this block, the voice information to edit can be designated.

Voice Map

Normal Drum

Bank LSB	Normal Preset		User	User
	0	1	2	3
Pc 1	GrandPno	GrandPno	User1	User
Pc 2	BritePno	BritePno	User2	User
Pc 3	E.GrandP	E.GrandP	User3	User
Pc 4	HnkyTonk	HnkyTonk	User4	User
Pc 5	E.Piano1	E.Piano1	User5	User
Pc 6	E.Piano2	E.Piano2	User6	User
Pc 7	Harpsi	Harpsi	User7	User
Pc 8	Clavi	Clavi	User8	User
Pc 9	Celesta	Celesta	User9	User
Pc 10	Glocken	Glocken	User10	User1
Pc 11	MusicBox	MusicBox	User11	User1
Pc 12	Vibes	Vibes	User12	User1
Pc 13	Marimba	Marimba	User13	User1
Pc 14	Xylophon	Xylophon	User14	User1
Pc 15	TubulBel	TubulBel	User15	User1
Pc 16	Dulcimer	Dulcimer	User16	User1
Pc 17	DrawOrgn	DrawOrgn	User17	User1
Pc 18	PercOrgn	PercOrgn	User18	User1
Pc 19	RockOrgn	RockOrgn	User19	User1
Pc 20	ChrchOrg	ChrchOrg	User20	User2
Pc 21	ReedOrgn	ReedOrgn	User21	User2
Pc 22	Acordion	Acordion	User22	User2
Pc 23	Harmnica	Harmnica	User23	User2
Pc 24	TangoAcc	TangoAcc	User24	User2
Pc 25	NylonGtr	NylonGtr	User25	User2

3.9.2.1. Normal tab



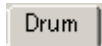
Selects voice map corresponding to BankSelect MSB: 122 of SMF.

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.

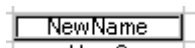
Clicking on a voice name moves the cursor display to its position.

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.

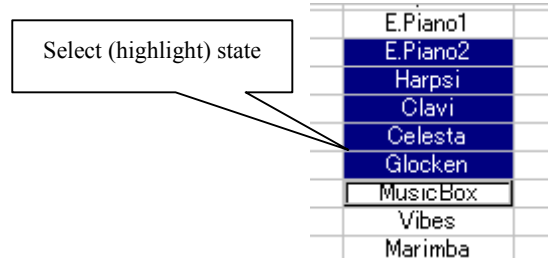


The capacity of the voice name entry is 16 bytes.

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.



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
DrawOrgn	User18

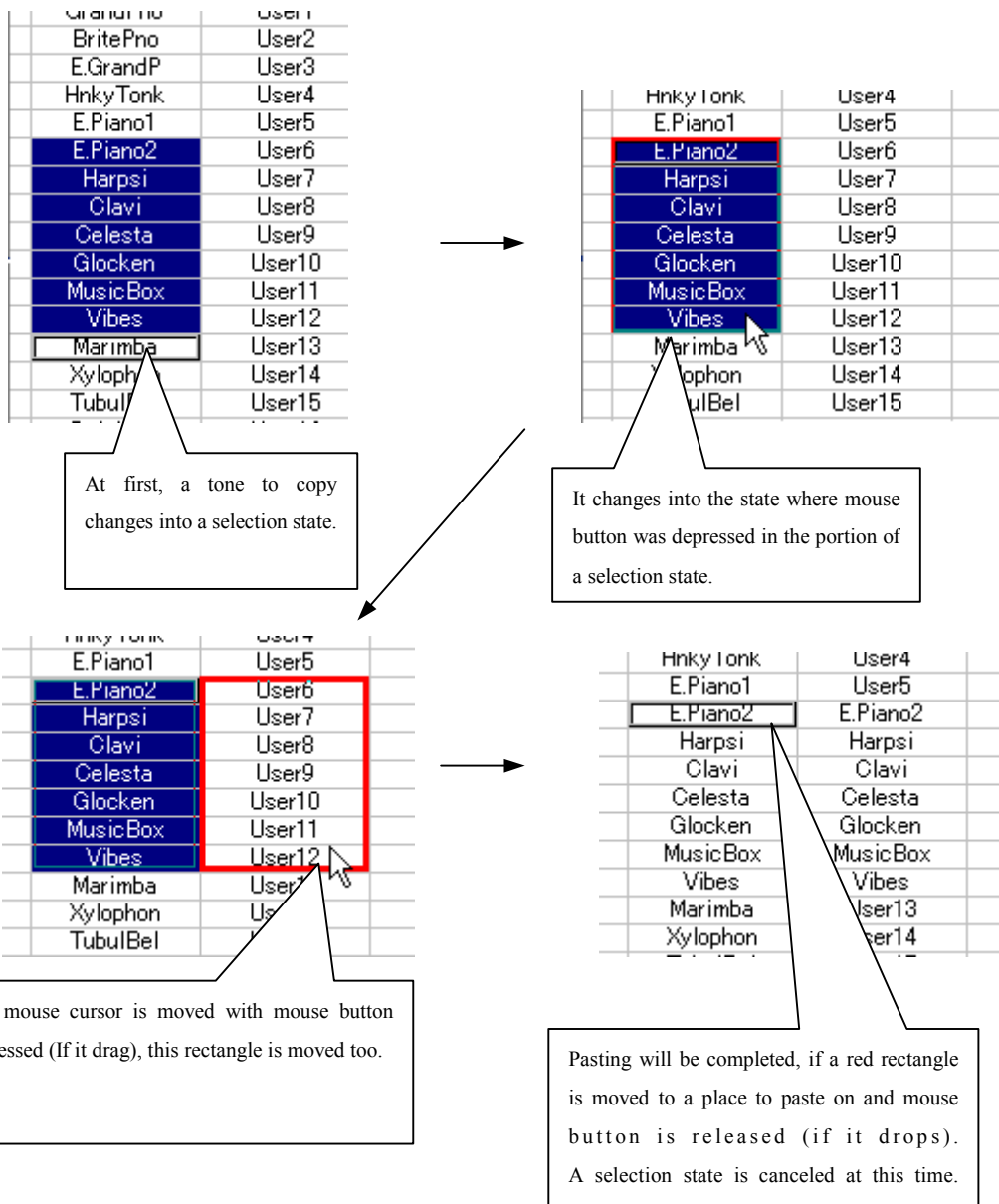
Press "V" key while pressing holding "CTRL" key.

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

Move the cursor display to the top voice which performs paste

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)



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)

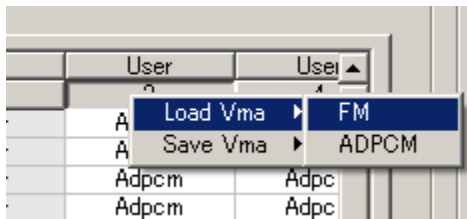
Move the cursor display to one of ADPCM voices with note numbers 0 to 12 and 92 to 127 of program change 3 to 10.
And press [W] key while pressing holding [CTRL] key.
2. Method using mouse

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

PC	Drum Preset		User	
	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”.

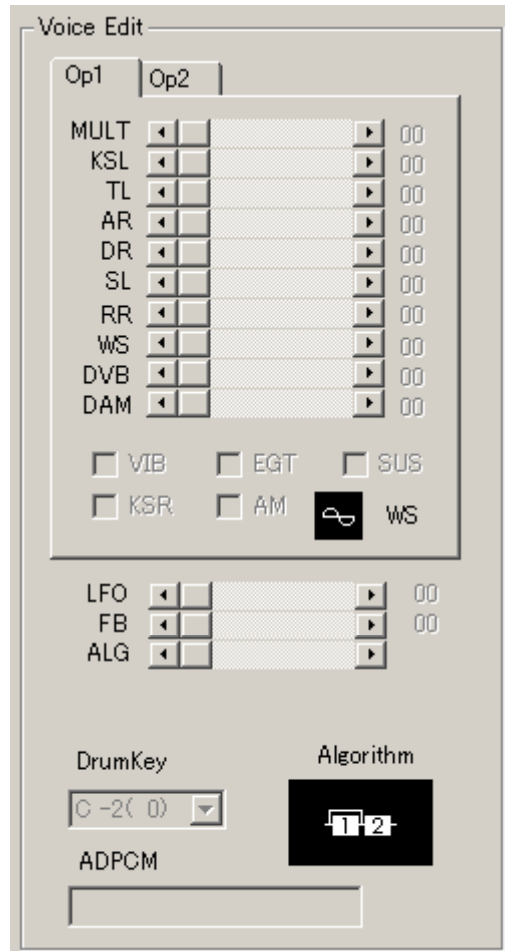
By each menu, the voice information file (*.vma) is designated from “Save As” dialogue and the information of same voice list column can be saved.

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.

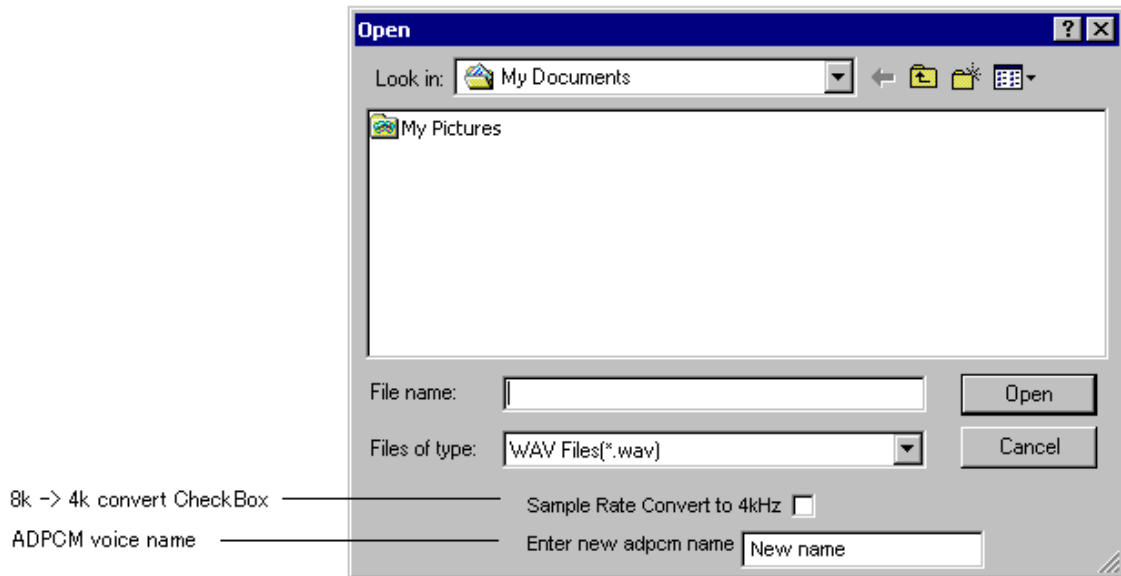
This is a keyboard control for audition of voices. When clicking on the keyboard area, single sound of the voice, which the cursor indicates on Voice Map, is generated.



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.



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.

4. Message

4.1. Status Bar Display

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

Cannot convert:

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.

Open error:

Read 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 initial letters 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 open 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 open 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 the adpcm data. :

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

Cannot assign 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 FM type vma file :

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

Cannot save ADPCM type vma file :

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

Cannot open Wav file :

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

Cannot convert SMF Filter :

The conversion of SMF Filter is failure.

Cannot load Wav file :

Wav file cannot be loaded. The loadable Wav file is only the sampling frequency 4kHz and 8kHz of 16bit monaural.

4.2.2. MidiCh....

MidiCh ** : Wrong BankSelectMSB ** :

Designate 122 (0x7A) or 123 (0x7B) for BankSelectMSB.

MidiCh ** : Wrong BankSelectLSB ** :

Designate 0 to 9 at the BankSelectMSB=122 (0x7A) and designate 0 at the BankSelectMSB=123 (0x7B) for BankSelectLSB

MidiCh ** : Wrong Control Number ** :

The designated Control Change cannot be used. Please check the control number by the authoring guideline.

MidiCh ** : Wrong 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 ** : No Channel Reserve :

This MIDI channel has no Channel Reserve message.

MidiCh ** : No ProgramChange :

This MIDI channel has no Program Change.

MidiCh ** : Wrong Data Entry ** :

The range of values, which can be designated by DataEntry, is 0~24.

MidiCh ** : Wrong Operator number at a program change. :

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 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 : Cannot use PitchBend. :**

Cannot use PitchBend for Drum Channel.

MidiCh : Cannot use AfterTouch. :**

Cannot use AfterTouch (Polyphonic Key Pressure, Channel Pressure).

MidiCh : Cannot insert the Program Change. :**

Program change is prohibited on drum channel during a music.

Program change is prohibited during pronunciation.

* When this error occurs, SMF Filter cannot be selected.

MidiCh : Cannot insert the BankSelectMSB. :**

Bank select is prohibited on drum channel in the music.

* When this error occurs, SMF Filter cannot be selected.

MidiCh : Cannot insert the BankSelectLSB. :**

Bank select is prohibited on drum channel in the music.

* When this error occurs, SMF Filter cannot be selected.

MidiCh : ChannelReserve Error :**

Two or more Channel Reserves exist on the same MIDI channel.

MidiCh : ChannelReserve should be ** :**

Channel Reserve on drum channel is unfit. Set it to designated value.

4.2.3. aa:bb:cc....**aa:bb:cc MidiCh** NoteNumber **: The GateTime is 0 :**

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 MidiChNoteNumber** : The ADPCM Note is overlapped. :**

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 The GateTime is too long. :**

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 : The NoteNumber ** is overlapped. :**

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 the Note. :**

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 The NoteNumber is Out of Area. :**

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 ADPCM part EventOverlapError :

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 ADPCM part NoteEventDuration Error. :

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 ADPCM part Wrong STOP point Position. :

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. Wrong....

Wrong START and STOP position. :

START point is set after STOP point. START point must be set before STOP point.

Wrong START point position. :

There is a NoteOn before START point. The position of START point must be same as the first NoteOn or before it.

Wrong STOP point position. :

There is a NoteOff after STOP point. The position of STOP position must be after the last NoteOff.

4.2.5. Others....

Memory allocation error!! :

Memory can not be allocated. Please increase system memory.

Illegal format in adpcm_temp.vma file. :

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

Different sampling rate adpcm data. :

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.

No Note off Message :

A NoteOff corresponding to the NoteOn was not found. Normally, this message will not appear. The MIDI file may be damaged.

The extension is not .mid/.mmf. :

The extension of designated file differs from the extension of SMF and SMAF file. Check the extension.

The extension is not .mmf. :

The extension of designated file differs from the extension of SMAF file. Check the extension.

The extension is not .mid. :

The extension of designated file differs from the extension of SMF. Check the extension.

Invalid SMAF file. :

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

This is not SMAF. :

This file format differs from the format of SMAF. Check Chunk ID.

File size over error. :

Size assignment of chunk and actual file size are not same. Check the file size.

This is not SMF. :

This file format differs from the format of SMF. Check Chunk ID.

* When this error occurs, SMF Filter cannot be selected.

This SMF is not 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.

No Effective MIDI data. :

There is no setup of voice information. Check the setup of FM voice information and ADPCM.

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.

Invalid Wav file. :

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

Current window cannot be closed since child windows are open. :

The end processing is impossible when the sub-dialogue is opening.

Error while loading in player. :

Load of data to Player is failure.

Error while playing in player. :

Play by Player is failure.

Error while filtering SMF. :

SMF Filter is failure.

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 to 32 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

BankSelectMSB 122 BankSelectLSB 0.1		BankSelectMSB 122 BankSelectLSB 0.1		BankSelectMSB 122 BankSelectLSB 0.1	
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	RevCymb1
21	ReedOrgn	71	Bassoon	121	FretNoiz
22	Acordion	72	Clarinet	122	BrthNoiz
23	Harmnica	73	Piccolo	123	Seashore
24	TangoAcid	74	Flute	124	Tweet
25	NylonGtr	75	Recorder	125	Telephone
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 playback

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.