SCP-MA3-L
User's Manual

Ver.1.1.0

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YAMAHA CORPORATION

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Revision History

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1. Outline

This document describes the usage of SCP-MA3-L.

1.1. Functions of SCP-MA3-L

SCP-MA3-L is the application software which operates on Windows®2000 and Windows®XP, to create MFi (***Melody Format for i-mode***) from SMAF (***Synthetic Music Mobile Application Format***) which supports the MA-3 (***Synthesizer LSI for mobile phones***).

1.2. Recommended Operation Environment

This application requires the operation environment which conforms to the followings.

1.2.1. CPU/Clock

Pentium®, Celeron™, or compatible processor/400MHz or faster.

1.2.2. OS

Windows®2000/Windows®XP

1.2.3. Required HDD Space

40MB or more

1.2.4. Memory

64MB or more

2. Start-up and Termination of Application

2.1. Application Configuration

As follows, this application software consists of a main body to input and output the files, and a plug-in part to convert the data.

SCP-MAX.exe : Application itself
Plugin_L31.dll : Plug-in (including the following files)
- \Plugin_L31\-
    CnvMA3SMAF.dll
    CnvMA3MFi_L31.dll
    Plugin_L31.ini

2.2. Start-up

Double-click the "***SCP-MAX.exe***" or its shortcut icon, or directly enter the file name from "***Run***" of the Start menu.

2.3. Termination

2.3.1. Menu Bar

Select the "File (F)" and "Exit (X)" in this order to terminate this application.

2.3.2. Close Button

Operation the "***Close***" button located on the lower right of the main window to terminate this application.

2.3.3. Other Terminating Operations

Termination can be performed in the following operations.

- Select the "***Close***" from the system menu on title bar.
- Select the close-button (☒) located on right-end in title bar.
- Press [ALT]+[F4] (Press [F4] while pressing [ALT]) while main window is active.

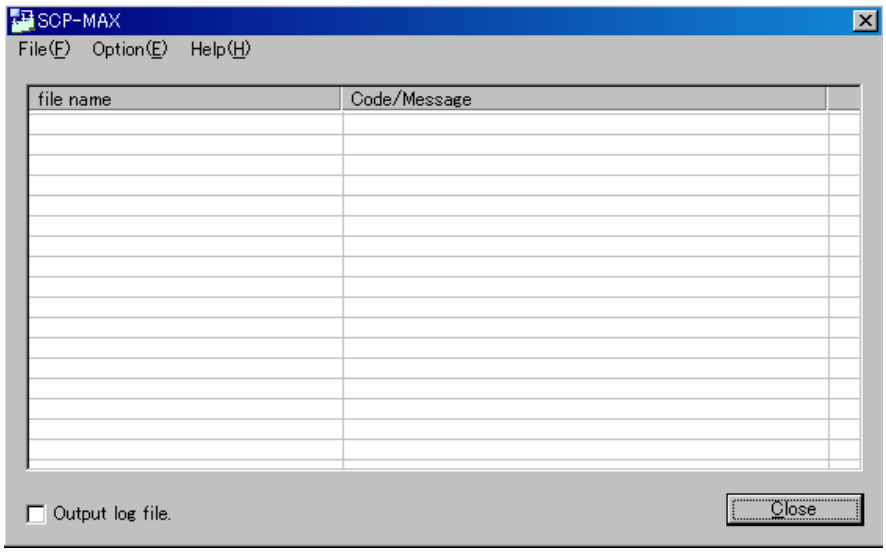
2.4. File Process

A conversion process of a file is executed by just dragging and dropping a target SMAF/MA-3 on the Main Window.

3. Window

3.1. SCP-MAX Window

This is the Main Dialog of SCP-MAX. This window is simultaneously displayed with the start-up of this application.



3.1.1. Menu Bar

3.1.1.1. File Menu (F)

1. Open(O)

   A dialog to designate SMAF for conversion is activated.

   When this menu is used, only one file can be designated; however, multi-file simultaneous designation by dragging and dropping the file or folder designations are also available.

2. Exit(X)

   This application is terminated.

3.1.1.2. Option Menu

1. Plugin Setting (P)

   Plugin Setting dialog (3.2) is activated for the Plugin Settings.

3.1.1.3. Help Menu

1. Version Info (A)

   Version dialog (3.6) is displayed.

3.1.2. List Review

Error information of file process is displayed.

1. file name

   The file name for the conversion is displayed.

2. Code/Message

   Error contents are displayed per each file process. Please use the numbers in the parentheses as an index for confirming the details of errors in error display (5).

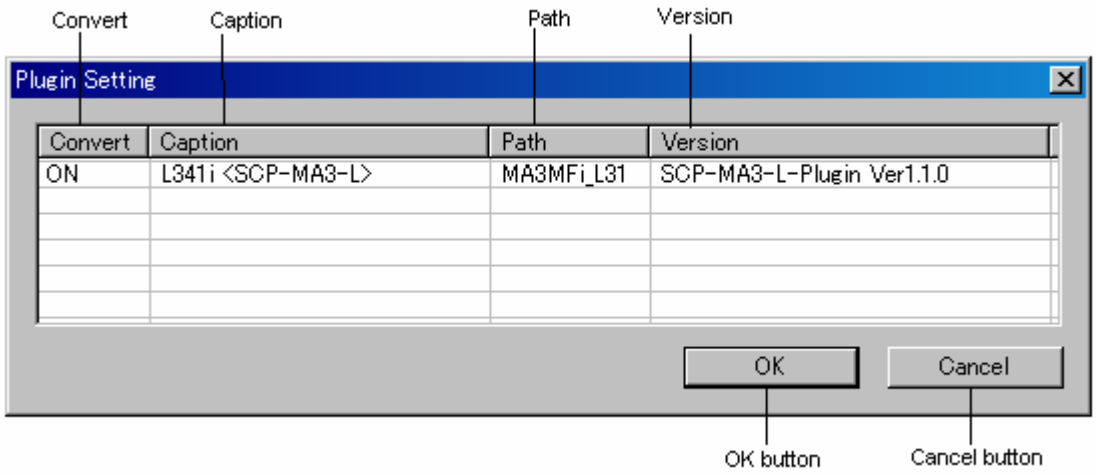
3.1.3. Check Box

It sets the output of error logs (same as a thing which is displayed on 3.1.2 List View) and logs which record the process result which becomes a list of output file name.
Logs are output when checked.

3.1.4. Close Button

Operating this button closes Main Window and terminates this application.

3.2. Plugin Setting Dialog



3.2.1. Convert

The setting for conversion process is performed. Double-clicking the relevant cell ON/OFF is selected. The default is "ON" at the application start-up.

3.2.2. Caption

The information about the conversion target of Plugin is displayed.
Double-clicking a part of display starts the extension settings dialog (see 3.3 SCP-MA3-L-Plugin dialog).

3.2.3. Path

An output folder name under the 'Output' folder with the same path as the input file is designated.
The path can be changed by double-clicking.
However, it cannot be updated under the following conditions.

- When the character strings is over 32 bytes.
- When the character which cannot be used for Path is used,
  such as [\], [/], [:], [,], [;], [*], [?], ["], [<], [>], and [|].

3.2.4. Version

The version information of Plugin is displayed.
Double-clicking a part of display starts the extension settings dialog (see 3.3 SCP-MA3-L-Plugin dialog).

3.2.5. OK button

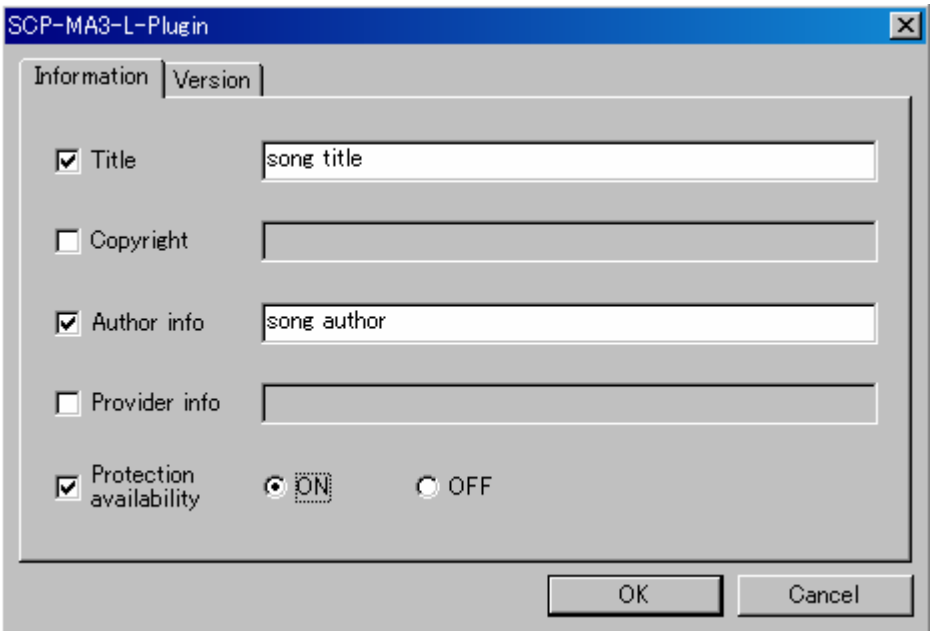
The settings are defined and Plugin Setting dialog is closed.

3.2.6. Cancel button

The settings are canceled and Plugin Setting dialog is closed.

3.3. SCP-MA3-L-Plugin Dialog

The Plugin extension setting dialog is popped up by double-clicking a part of Caption or Version on Plugin Setting dialog.



Available functions on the extension settings dialog are divided in two tabs.
SCP-MA3-L-Plugin has Information tab for setting MFi sub-chunk information and Version tab for displaying version information of the Plugin.

3.3.1. Information

The MFi sub-chunk information to be converted is set.
For the items not set here, the information is obtained from SMAF/MA-3 of conversion source.
The entered character strings are all converted into UTF-8 and are output to MFi.

3.3.1.1. Title

Checking a left check box enables the settings of edit box on the right.
(Note) The output size to MFi is limited to 50 bytes.

When unchecked, the information is obtained from Song Title(ST) tag in SMAF of conversion source.

3.3.1.2. Copyright

Checking a left check box enables the settings of edit box on the right.
(Note) The output size to MFi is limited to 255 bytes.

When unchecked, the information is obtained from Copyright(CR) tag in SMAF of conversion source.

3.3.1.3. Author info

Checking a left check box enables the settings of edit box on the right.
(Note) The output size to MFi is limited to 255 bytes.

When unchecked, the information is obtained from Management Group (GR) tag in SMAF of conversion source.

3.3.1.4. Provider Info

Checking a left check box enables the settings of edit box on the right.
(Note) The output size to MFi is limited to 255 bytes.

When unchecked, the information is obtained from Management Information (MI) tag in SMAF of conversion source.

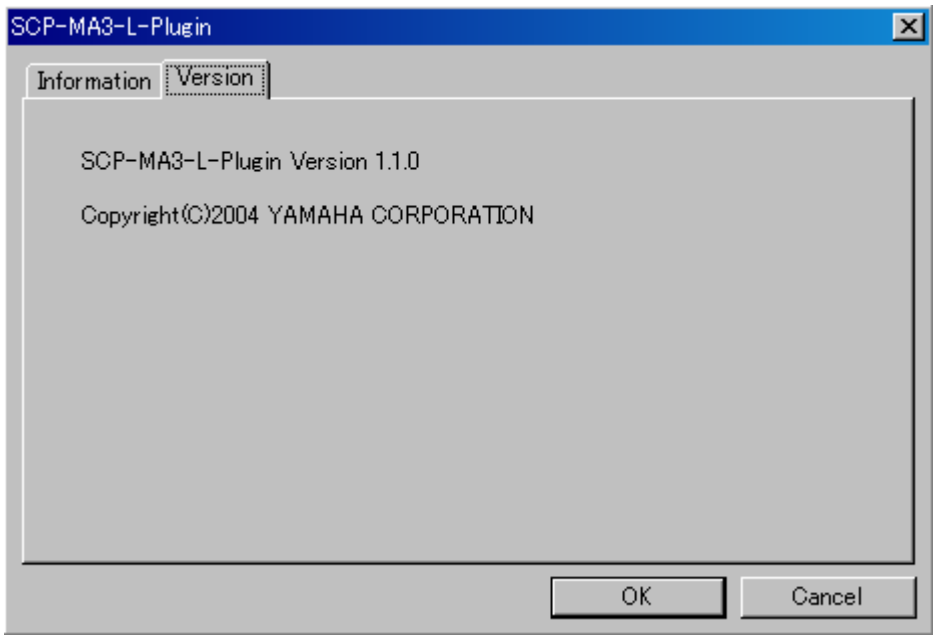
3.3.1.5. Protection Availability

Checking a left check box enables the settings of radio buttons on the right.
ON: Redistribution is possible. OFF: Redistribution is not possible.

When unchecked, the information is obtained from transfer Enable/Disable setting in SMAF of conversion source.

3.3.2. Version

The version of the Plugin is displayed.



3.3.3. OK Button

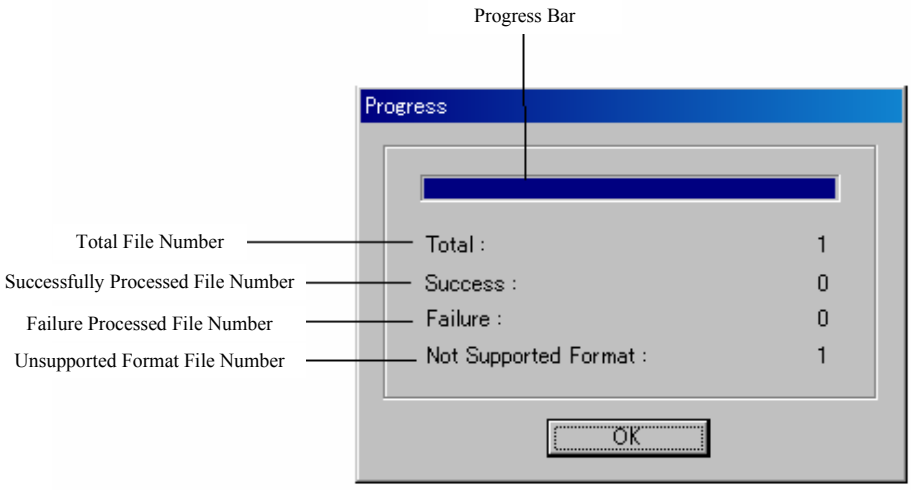
The button defines the settings and closes the dialog.

3.3.4. Cancel Button

The button defines the settings and closes the dialog.

3.4. Progress Dialog

Process status of processing multiple files together can be checked in this progress dialog.



3.4.1. Progress Bar

The progress bar indicates the percentage of processed file number to the designated file number.

3.4.2. Total File Number

The number of files which were designated by the drag and drop of file or folder is indicated.

3.4.3. Successfully Processed File Number

The number of files which were successfully processed is indicated.

3.4.4. Unsuccessfully Processed File Number

The number of files which were unsuccessfully processed is indicated.

3.4.5. Unsupported Format File Number

The number of files which became error in the interpretation stage because of incorrect SMAF format is indicated.

3.4.6. OK Button

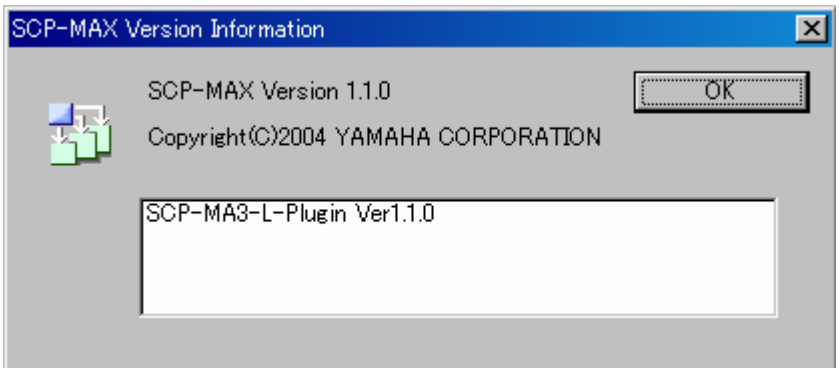
The process can be halfway terminated by pushing the button during "***STOP.***" When a process is ended, display of the button is changed to "***OK***." By pressing "***OK***", the Progress dialog will be closed.

3.5. Overwrite Confirmation Dialog

This is a dialog which is displayed when a file with the same name exists in the output destination. By selecting "***Yes (Y)***", all the followings are processed by the overwriting mode. On the other hand, by selecting "***No (N)***", the process is ended at the moment.

3.6. Version Dialog

Version dialog is opened by selecting Help (H) in menu bar → Version Info (A).
Version information of SCP-MAX and Plugin are displayed.



4. Input/Output

All processes are executed by just directly dragging and dropping the SMAF/MA-3 file (conversion source) or a folder which includes SMAF files.

4.1. Input File

SMAF/MA-3 files which become a target of conversion.

4.2. Output File

When a conversion into MFi is successfully completed, it is output to the folder designated by Path under the same directory ('Output' folder) as that of input. (If the folder is not there, a folder is automatically created.) Please refer to Plugin Setting dialog (3.2) about Path Settings.

4.3. Log File

4.3.1. File Configuration

When a file is processed by placing a check on "***output log file***" check box of dialog, the following log files are output to the same directory as that of output file.

File Name	Content
Log_YYYYMMDD.txt	Record of Process
Error_YYYYMMDD.txt	Record of Error File Process

(YYYYMMDD → Year/Month/Date : Example, 2040930 etc.)

4.3.2. Format

4.3.2.1. Log_YYYYMMDD.txt

in file: Input File Name (SMAF)
in class: Contents Class of Input File Name(SMAF)
in type: Contents Type of Input File (SMAF)
out file: Output File Name (MFi)
(E.g.)

in file	in class	in type	out file
test.mmf	0x01	0x32	test_scp.mld
:	:	:	:

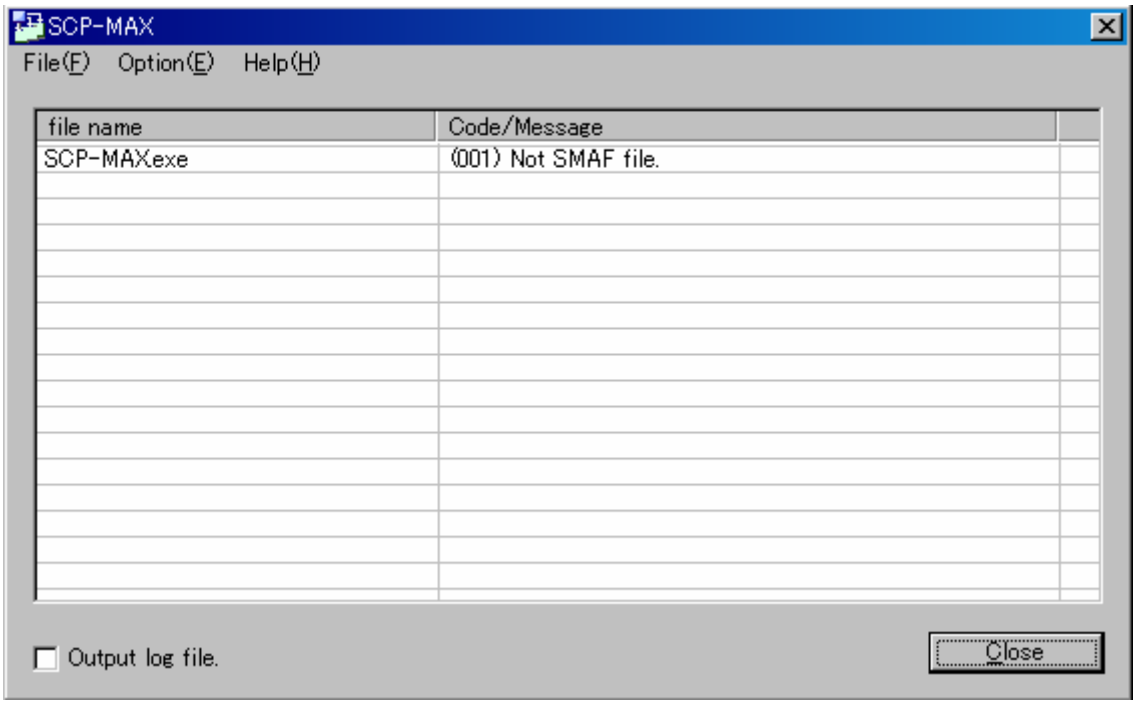
4.3.2.2. Error_YYYYMMDD.txt

The text is composed of Error No., Error Code, and File Name (Full-path).
(E.g.)
(007) Illegal ContentsType [C:\Data\test.mmf]
(006) Illegal chunk length [C:\Data\test2.mmf]

5. Error Display

5.1. Error on File processing

SMAF/MA-3 file names which were not converted and contents of errors were displayed on the following list view. In addition, when the log output is designated, similar contents are output to the file.



5.1.1. SMAF Error

No	Code	Comment
1	Not SMAF file	Extension of the file is not *.mmf.
2	Not SMAF format	Header of the file is not MMMD.
3	Not SMAF/MA-3 format	Number (No.) of MTR chunk is not "5."
4	Illegal file length	Not larger than the Minimum file size.
5	Illegal ATSig	ATSig exists in CNTI in SMAF/MA-3.
6	Illegal chunk length	Incorrect chunk size.
7	Illegal Contents Type	Contents type is out-of-target for processing.
8	Illegal CRC	Incorrect CRC.
9	Failed in loading of contents info	CNTI chunk dose not exist.
10	Failed in loading of optional data	Sub-chunk Dch does not exist in OPDA
11	Failed in loading of track chunk	Each track chunk does not exist.
12	Memory allocation error	Failure of memory reservation
13	File open error	Failure of opening an input/output file.
14	File load error	File reading error
15	File save error	File writing error
16	File path length error.	The length of file path is 260Byte or more.
17	Folder open error.	Problem in output folder (such as access limitation)

5.1.2. MFi Error

No	Code	Comment
201	CnvMA3SMAF.dll load error.	Failure of loading "***CnvMA3SMAF.dll***"
202	CnvMA3MFi_L31.dll load error.	Failure of loading "***CnvMA3MFi_L31.dll***"
203	Error Convert Native.	Failure of conversion from SMAF/MA3 to Native
204	Error Convert MFi v3.1.	Failure of conversion from Native to MFi v3.1
205	Warning Convert MFi v3.1.	Warning of conversion from Native to MFi v3.1 (Note 1)

(Note 1) The processing is continued by ignoring a portion which has a problem according to the specification of MA-3 Authoring Tool.

The following messages are output to only log files.

<E*: Messages that process cannot be made due to fatal errors>

No	Code	Comment
E01	Can not convert.	File cannot be created due to error.
E02	Output buffer length error.	Converted file does not fit in the buffer.
E03	Illegal format.	Invalid format identifier exits.
E04	Illegal function parameter.	Function Parameter value is wrong.
E05	Illegal event.	Undefined event exits.
E06	Buffer overflow.	Temporary buffer overflowed.
E07	RAM size overflow.	The capacity of used RAM exceeds the limitation.
E08	Illegal header information.	Header information which cannot be read exits.

<W*: Messages that process is continued during the warning display.> (Details of warning No.205)

No	Code	Comment
W01	Mono/Poly On in illegal position.	Problem exists in the setting position of Mono-on/Poly-on.
W02	Assigned SPCM size exceeds the limit.	Size of Stream PCM exceeds the upper limit (64kbyte).
W03	Nonsupport Sampling Frequency. (under 16kHz)	Fs is set beyond the upper limit (16kHz).
W04	Nonsupport Sampling Frequency. (over 4kHz)	Fs is set lower than the lower limit (4kHz).
W05	Nonsupport 8bit PCM.	8bit PCM is set.
W06	Nonsupport FM Base Wave Setting event.	FM basic waveform is set.
W07	Nonsupport Stream PCM Pair event	Stream PCM Pair is set.

5.2. Message Box

A part of error which relates to log files is displayed on message box.

Message	Contents
(Log File Name) can't open.	Failure of opening a log file.
(Log File Name) path length error.	Length of log output path is 260Byte or more.
Folder can't open.	When a folder which was dragged and dropped cannot be set as current folder.

6. Appendix

6.1. SMAF-MFi Conversion Event Correspondence Table

The table indicates the correspondence of event in the case of conversion from SMAF to MFi.
When events corresponding to MFi do not exist in the SMAF, the event is basically ignored.

SMAF/MA-3	MFi
Tempo (Master Track)	Tempo
Note Message	Note Message (Note 1) StreamOn / StreamOff
Bank Select Program Change	Bank Change Program Change Channel Configuration
Modulation Depth	Modulation
Channel Volume Expression	Channel Volume
Pan	Panpot
Hold1	Hold1
Data Entry RPN	Pitch Bend Range
Mono mode on	Mono on
Poly mode on	Poly on
Pitch Bend	Pitch Bend Fine Pitch Bend-B
Master Volume	Max Gain Master Volume
MA-3 Stream PCM Wave panpot	Stream Pan
MA-3 Voice Parameter Registration	FM Voice designation Extended WT Voice designation
MA-3 Voice Waveform Registration	Extended WT Waveform designation
MA-3 Stream PCM Reserve	Stream Number designation
Stream wave data chunk	Extended Stream Waveform designation
Channel Status	Channel Status
Contents Type	Pronunciation mode designation
ALL Sound Off	(No corresponding output)
Reset All Controller	(No corresponding output)
ALL Note Off	(No corresponding output)
MA-3 Stream PCM Pair	(No corresponding output)
MA-3 User Event	(No corresponding output)
MA-3 Native reset	(No corresponding output)
MA-3 FM Basic Waveform Registration	(No corresponding output)

(Note 1) SMAF/MA-3 which has a note that is repeated by same channel and same Keys are processed interconnected with one note according to the MFi specification.