

MVC-MA7-SMAF

(Command Line Version)

User's Manual

Ver.1.1.0

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YAMAHA Corporation

[Notes]

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<Introduction>

This document is for the Console Application Software (MasterVolume Converter for SMAF/MA-7 hereinafter called MVC-MA7-C-SMAF), which controls the volumes for each channel (ChannelVolume) of SMAF/MA-2 (contents for mobile phones) and the whole volume (MasterVolume) of SMAF/MA-3 and that of SMAF/MA-5 and the whole volume (MasterVolume) and MAXGain of SMAF/MA-7.

<Revision History>

Ver.	Date	Description
1.0.0	2005/12/19	Newly Released
1.1.0	2006/02/17	4.1 Option; -e option was added on Table 4-1. 4.1.1 Descripton about Effect Volume Adjustment was added. 4.2 Precautions for Option Input; descriptions were added. 6 Processing Result Display; Figure 6-1 and 6-2 were changed; Descriptions for Effect volume change were added on Table 6 1.

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1 MVC-MA7-C-SMAF

1.1 Outline

MVC-MA7-C-SMAF is the Console Application Software operating on Windows®2000 and Windows®XP to control volumes of SMAF (Synthetic Music Mobile Application Format) for mobile phones.

For SMAF/MA-2, volume for each channel (ChannelVolume) is controlled and for SMAF/MA-3 and SMAF/MA-5, the whole volume (MasterVolume) is controlled and for SMAF/MA-7, the whole volume (MasterVolume) and MaxGain are controlled.

There are two kinds of controls: increase and decrease value(dB) and absolute value control.

1.2 Target Format

1.2.1 Input Format

1.2.1.1 SMAF

MVC-MA7-C-SMAF supports SMAF/MA-2, SMAF/MA-3, SMAF/MA-5, and SMAF/MA-7 format.

1.2.2 Output Format

1.2.2.1 SMAF

The following changes are applied to input files.

- Change of volume
- ATSig change of A0 tag

1.3 Recommended Operating Environment

This application needs operating environment in compliance with the following requirements.

OS	Microsoft Windows®XP Microsoft Windows®2000
CPU/Clock	Pentium®, Celeron™, or compatible processor/ 266MHz or faster
Memory	64MB or over
Required hard disk space	40MB or over In addition, space as much as the total size of input files is needed.

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2 Installation

MVC-MA7-C-SMAF is composed of the following two files.

- MVC-MA7-C.exe (MVC-MA7-C execution file)
- MVC-MA7.ini (MVC-MA7-C initial setting file)

Place the above files on any directory.

3 On Volume Setting

With MVC-MA7-C-SMAF, two ways for volume setting are available.

<Table 3-1> Volume Setting Method

Setting Method	Description
Relative increase and decrease value (dB) input	<p>Input a value to increase or decrease to the volume in SMAF in dB.</p> <p>With SMAF/MA-2, it is possible to change volume uniformly while keeping the original volume balance to the whole channel volume.</p> <p>With SMAF/.MA-3,MA-5, it is possible to change volume uniformly while keeping the original volume balance to the whole master volume.</p> <p>With SMAF/MA-7, it is possible to change volume uniformly while keeping the original volume balance to MaxGain and the whole master volume. First, change MaxGain within the range of 0dB to -12dB and then change the master volume.</p>
Absolute value input	<p>The volume value in SMAF is replaced by the designated value.</p> <p>With SMAF/MA-2, when multiple volumes are present in the same channel, all the volumes are replaced by the designated values.</p> <p>With SMAF/.MA-3,MA-5, when multiple master volumes are present, all the volumes are replaced by the designated values.</p> <p>With SMAF/.MA-7, MaxGain is replaced by the designated value.</p>

[NOTE]

With absolute value input, when multiple channel volumes are present at the same channel in SMAF/ MA-2, or when multiple master volumes are present in SMAF/MA-3,MA-5, all volumes are replaced by the respective designated volume values; for this reason, the original volume balance could be destroyed.

Please pay attention when you use it.

3.1 Mechanism of Volume Conversion (increase and decrease value (dB) input)

When the volume increase and decrease value is designated in dB value, dB conversion to the volume is performed and inverse dB conversion is performed after increasing and decreasing the designated value.

[NOTE]

With SMAF/MA-2 and SMAF/MA-3,MA-5,MA-7, the volume value after the conversion may slightly differ even if increasing or decreasing by using the same dB value because tables for dB conversion and inverse dB conversion differ.

3.2 When channel volume is not present (SMAF/MA-2)

■ 1 to 16 channel:

When channel volume is not present until the first note message, insert channel volume of duration of 0 into the head of sequence data. In addition, shift the position of Start Point and Stop Point in Seek & Phrase Info Chunk.

■ ADPCM channel:

When channel volume is not present until the first note message, insert channel volume of duration of 1 into Start Point position of sequence data. In addition, shift the position of Stop Point in Seek & Phrase Info Chunk.

[NOTE]

Adjust the duration in ATR chunk so as not to change the position of “End of Sequence.”

4 Console Application

4.1 Option

Designate the following option following application name “MVC-MA7-C.”

Option surrounded by { } can be omitted.

<Table 4-1> Option List

Option Name	Description	Designated Range
-i Input File Name	SMAF file name to input is designated. File path in excess of 256-byte causes an error.	
-o Output File Name	Output file name is designated. File path in excess of 256-byte causes an error. Be sure to designate .mmf as an extension. When a file with the same name exists at the destination to output, the file is overwritten.	
Relative value designation		
{ -db dB value }	Volume increase and decrease value is designated in relative value (dB value).	-60 to 60
Absolute value designation		
{ -mg dB value }	MaxGain at the time MA-7 SMAF file is input is designated in dB value.	Increase and decrease 0 to -12 in 0.5 steps
{ -mv Volume value }	Master Volume value at the time MA3/5 SMAF file is input is designated.	0 to 127
{ -c1 Volume value }	Channel Volume value of Channel 1 at the time MA2 SMAF file is input is designated.	0 to 127
{ -c2 Volume value }	Channel Volume value of Channel 2 at the time MA2 SMAF file is input is designated.	0 to 127
{ -c3 Volume value }	Channel Volume value of Channel 3 at the time MA2 SMAF file is input is designated.	0 to 127
{ -c4 Volume value }	Channel Volume value of Channel 4 at the time MA2 SMAF file is input is designated.	0 to 127
{ -c5 Volume value }	Channel Volume value of Channel 5 at the time MA2 SMAF file is input is designated.	0 to 127
{ -c6 Volume value }	Channel Volume value of Channel 6 at the time MA2 SMAF file is input is designated.	0 to 127
{ -c7 Volume value }	Channel Volume value of Channel 7 at the time MA2 SMAF file is input is designated.	0 to 127
{ -c8 Volume value }	Channel Volume value of Channel 8 at the time MA2 SMAF file is input is designated.	0 to 127
{ -c9 Volume value }	Channel Volume value of Channel 9 at the time MA2 SMAF file is input is designated.	0 to 127
{ -c10 Volume value }	Channel Volume value of Channel 10 at the time MA2 SMAF file is input is designated.	0 to 127
{ -c11 Volume value }	Channel Volume value of Channel 11 at the time MA2 SMAF file is input is designated.	0 to 127

{ -c12 Volume value }	Channel Volume value of Channel 12 at the time MA2 SMAF file is input is designated.	0 to 127
{ -c13 Volume value }	Channel Volume value of Channel 13 at the time MA2 SMAF file is input is designated.	0 to 127
{ -c14 Volume value }	Channel Volume value of Channel 14 at the time MA2 SMAF file is input is designated.	0 to 127
{ -c15 Volume value }	Channel Volume value of Channel 15 at the time MA2 SMAF file is input is designated.	0 to 127
{ -c16 Volume value }	Channel Volume value of Channel 16 at the time MA2 SMAF file is input is designated.	0 to 127
{ -ca Volume value }	Channel Volume value of ADPCM Channel at the time MA2 SMAF file is input is designated.	0 to 127
{ -l Log File Name }	Log file with the designated log file name is output. File path in excess of 256-byte causes an error.	
{ -e }	Volume is adjusted when converted to SMAF/MA-7. For detail, see 4.1.1 About Effect Volume Adjustment .	
{ -h }	Option list is output.	
{ -v }	The version number (three digits) of MVC-MA7-C is output. Example of display: MVC-MA7-C Ver.1.1.0 (Dec 12 2005 10:00:00)	

4.1.1 About Effect Volume Adjustment

Designating “-e” option executes Effect volume adjustment.

This function is available when SMAF/MA-7 is input.

Even when the total volume is decreased, some volume isn't decreased, depending on Effect type.

Enabling this checkbox let Effect volume follow the total volume.

Applicable Effects are Distortion, Overdrive, Amp Simulator, and Compressor.

We recommend you to enable this option while using these Effects.

4.2 Precautions for Option Input

- When options of the relative value designation (-db) and the absolute value designation (-mg, -mv, -c*) are designated at the same time, -db option is preferred.
- When the same option is designated, the later option is preferred.

In the following cases, the value of INI file **<5 Setting of the Initial Setting File>** is used.

- When any of -db, -mg, -mv, or -c1 to -ca option is not designated, relative value conversion by using INI file value **<DB_VALUE>** is performed.
- When -mv option is designated and
 - SMAF/MA-2 is input:
Alert, "Not converted - Not Exist Target Volume" will be shown.
 - SMAF/MA-7 is input:
Absolute value conversion by using INI file value **<MG_VALUE>** is performed.
- When -mg option is designated and
 - SMAF/MA-2 is input:
Alert, "Not converted - Not Exist Target Volume" will be shown.
 - SMAF/MA-3 or 5 is input:
Absolute value conversion by using INI file value **<MG_VALUE>** is performed.
- When only -c1 to ca option is designated and
 - SMAF/MA-3,5 is input:
Absolute value conversion by using INI file value **<MV_VALUE>** is performed.
 - SMAF/MA-7 is input:
Absolute value conversion by using INI file value **<MG_VALUE>** is performed.

5 Setting of the Initial Setting File

“MVC-MA7.ini” that is located at the same folder as “MVC-MA7-C.exe” is the initial setting file.

Using this file, an initial value of each parameter at the startup of MVC-MA7 is designated.

```
[SETTING]
TARGET_FILE=0
DB_VALUE=0.0
MV_VALUE=100
MG_VALUE=-12.0
```

<Figure 5-1> Example of Initial Setting File

< TARGET_FILE >

Do not change.

< DB_VALUE • • • default dB value >

A default value in dB value that increases or decreases volume is set.

The input range is from -60.0[dB] to 60.0[dB].

When an input value exceeds the range, the value is automatically adjusted within the above.

If incorrect value is set or nothing is input, the value becomes 0[dB].

In addition, when MVC-MA7 ended, the value at this point is saved.

(e.g. 0.0 designation to dB: DB_VALUE = 0)

When -db, -mg, -mv, and -cl to -ca option are not set, relative value (dB value) conversion is performed by using the relevant value.

< MV_VALUE • • • default MV value for SAME/MA-3,MA-5 >

A default value of MasterVolume when absolute value input is used is set.

The input range is from 0 to 127.

If incorrect value is set or nothing is input, the value becomes 0.

In addition, when MVC-MA7 ended, the value at this point is saved.

(e.g. 0 setting to MasterVolume value: MV_VALUE = 0)

< MG_VALUE • • • default MaxGain value for SAME/MA-7 >

MaxGain default value in the absolute value input is set.

The input range is from 0 to -12.

If incorrect value is set or nothing is input, the value becomes 0.

In addition, when MVC-MA7 ended, the value at this point is saved.

(e.g. -12 setting as MaxGain value: MV_VALUE = -12)

6 Processing Result Display

The following log file is output when -l option is designated.

Example of output of the log file is shown below.

IN:test1.mmf		SMAF/MA-2	Result:OK	Detail:Converted.(0)	Data:2005/12/12 20:14:30			
OUT:test_out.mmf								
Point[sec]	Channel/Track		Action	Before Volume		After Volume		
0.000	1(MTR1)	Relative(-12.0dB)	[99]	51				
IN:test2.mmf		SMAF/MA-3	Result:OK	Detail:Converted.(0)	Data:2005/12/12 20:14:30			
OUT:test2_out.mmf								
Point[sec]	Channel/Track		Action	Before Volume		After Volume		
0.000	MTR5	Relative(-12.0dB)	100	51				
IN:test3.mmf		SMAF/MA-5	Result:OK	Detail:Converted.(0)	Data:2005/12/12 20:14:30			
OUT:test3_out.mmf								
Point[sec]	Channel/Track		Action	Before Volume		After Volume		
0.000	MTR6	Relative(-12.0dB)	100	51				
IN:test4.mmf		SMAF/MA-7	Result:OK	Detail:Converted.(0)	Data:2005/12/12 20:14:30			
OUT:test4_out.mmf								
Point[sec]	Channel/Track		Action	Before Volume		After Volume	Before Gain	After Gain
Before Level	After Level							
0.000	MTR7	Relative(-12.0dB)	---	---	24	24		
0.000	MTR7	Relative(-12.0dB)	127	64	---	---	64(R)	32(R)
30.588	MTR7	Relative(-12.0dB)	127	64	---	---	127(S)	127(S)
31.060	MTR7	Relative(-12.0dB)	125	62	---	---	---	---
31.528	MTR7	Relative(-12.0dB)	123	62	---	---	---	---
test5.mmf	SMAF/MA-7		Result:NG	Error:Nonsupport Chunk ID in MTR.(-12)			Data:2005/12/12 20:14:30	

<Figure 6-1> Example 1 of "MVC-MA7_result.txt"

IN:test1.mmf		SMAF/MA-2		Result:OK Detail:Not Converted - Not exist target volume.(0)			
Data:2005/12/12 20:08:24							
IN:test2.mmf		SMAF/MA-3		Result:OK Detail:Converted.(0)		Data:2005/12/12 20:08:25	
OUT:test2_out.mmf							
Point[sec]	Channel/Track	Action	Before	Volume	After	Volume	
0.000	MTR5	Absolute	100	100			
IN:test3.mmf		SMAF/MA-5		Result:OK Detail:Converted.(0)		Data:2005/12/12 20:08:25	
OUT:test3_out.mmf							
Point[sec]	Channel/Track	Action	Before	Volume	After	Volume	
0.000	MTR6	Absolute	100	100			
IN:test4.mmf		SMAF/MA-7		Result:OK Detail:Converted.(0)		Data:2005/12/12 20:08:24	
OUT:test4_out.mmf							
Point[sec]	Channel/Track	Action	Before	Volume	After	Volume	Before Gain
Before Level	After Level						After Gain
0.000	MTR7	Absolute	---	---	24	24	
0.000	MTR7	Absolute	127	127	---	---	64(R) 64(R)
30.588	MTR7	Absolute	127	127	---	---	127(S) 127(S)
31.060	MTR7	Absolute	125	125	---	---	---
IN:test5.mmf		SMAF/MA-7		Result:NG Error:Nonsupport		Chunk	ID in MTR.(-12)
Data:2005/12/12 20:08:24							

<Figure 6-2> Example 2 of "MVC-MA7_result.txt" file

The following is the description of “MVC-MA7_result.txt.”

<Table 6-1> Contents of the processing result

Log Type	Description	Example of Display
IN:Filename	The name of an input file is displayed.	test1.mmf
Kind of SMAF	The kind of SMAF of an input file is displayed. “---” is displayed when the kind of SMAF cannot be specified.	SMAF/MA-2
Result	Processing result is displayed. OK/NG	Result: OK
Detail/Error	Detail information of the result is displayed. For the detail information, see <8 Error Message List >. (Code) is displayed following the Error/Warning message.	Detail: Converted Error: Illegal ATSig. (-27)
Date	Date and time of the file conversion is displayed.	Date: 2005/12/12 18:38:49
OUT:Filename	The name of an output file is displayed.	OUT: test1_out.mmf
Point	With Result: OK / Detail: Converted, for the converted volume, time from the head of music (consideration for Start Point is unnecessary) is indicated in second (fixed to three decimal points). In other cases, this item is not output.	0.02
Channel/Track	■SMAF/MA-2: With Result: OK / Detail: Converted, a channel number of the channel in which the converted volume exists (or existed when deleted), and MTR are displayed. ■SMAF/MA-3, MA-5, or MA-7: With Result: OK / Detail: Converted, MTR in which the converted volume exists is displayed. In other cases, this item is not output. Case if Effect volume adjustment is performed by SMAF/MA-7 Result: OK /Detail: Converted, MTR and channel number in which the converted SendLevel exists is displayed.	1(MTR1) for SMAF/MA-2 MTR7 for others
Action	The processing method to convert volume is displayed. Relative(*dB): increase and decrease value input (dB) Absolute : absolute value input	Relative(60.0dB)
Before Volume	The original volume value is displayed. With SMAF/MA-2, when the original channel volume value is not present and a value is newly added, the following is displayed. <relative value input (dB)>: [99] * Default value [NOTE] <absolute value input> “---”	0 to 127
After Volume	The volume value after the conversion is displayed.	0 to 127
Before Gain	The original MaxGain value is displayed. Only for SMAF/MA-7	0 to 24
After Gain	A MaxGain value after the conversion is displayed. Only for SMAF/MA-7	0 to 24
Before Level	Displays old value of ChorusSend, Return Level. (R) represents Return, (S) represents Send. Unless Regulate Chorus option checkbox is checked, the value will not displayed.	1 (R) – 127 (R) 1 (S) – 127 (S)
After Level	Displays converted value of ChorusSend, Return	1 (R) – 127 (R)

	Llevel. (R) represents Return, (S) represents Send. Unless Regulate Chorus option checkbox is checked, the value will not be displayed.	1 (S) – 127 (S)
--	---	-----------------

[NOTE]

With increase-and-decrease-value (dB) input of MVC-MA7-C-SMAF, when a channel volume is not present in the input SMAF/MA-2, a volume value is calculated by an increase-and-decrease-value to 99 when considering a default value of channel volume as 99.

7 Return Value

Based on the conversion result, conversion result code and message are output as standard output and standard error, respectively.

(See <<**Table 7-1**> Return Value>)

For Conversion Result Code and Messages, see <8 **Error Message List**>.

<**Table 7-1**> Return Value

Standard Output	Conversion Result Code
Standard Error	Message

8 Error Message List

Message code list is shown below.

The following conversion result code is returned as a return value of MVC-MA7-C.exe.

For the return value, see <7 Return Value >.

8.1 Detail Messages

8.1.1 When conversion is OK

Conversion Result Code	Message	Description
0	Converted.	Volume was converted.
0	Not converted - Not Exist Target Volume	Volume was not converted. (With SMAF/MA-2:) - Volume input of all the channels is not enabled in the absolute value input mode.

8.1.2 When conversion is NG

Conversion Result Code	Message	Description
-1	Nonsupport Chunk ID.	Unknown chunk ID was found.
-2	Nonsupport File ID.	File ID is not MMMD.
-3	File size error.	File size error occurred.
-4	Not exist CNTI chunk.	CNTI chunk is not present.
-5	Chunk size error in CNTI.	CNTI chunk size error occurred.
-6	Chunk size error in OPDA.	Tag size in CNTI is incorrect.
-7	Nonsupport Chunk ID in OPDA.	OPDA chunk size error occurred.
-8	Tag size error in OPDA.	Unsupported chunk ID exists in OPDA.
-9	Chunk size error in Dch.	Tag of size error exists in OPDA.
-10	Chunk size error in Pro.	Chunk size error of Dch chunk in OPDA occurred.
-11	Chunk size error in MTR.	Chunk size error of Pro chunk in OPDA occurred.
-12	Nonsupport Chunk ID in MTR.	MTR chunk size error occurred.
-13	Chunk size error in MspI.	Unsupported chunk ID exists in MTR.
-14	Chunk size error in Mtsu.	Chunk size error of MtsI chunk in MTR1 to 7 occurred.
-15	Chunk size error in Mtsp.	Chunk size error of Mtsu chunk in MTR1 to 7 occurred.
-16	Chunk size error in Mtsq.	Chunk size error of Mtsp chunk in MTR1 to 7 occurred.
-17	Sequence Data Error in Mtsq	Sequence data error of Mtsq chunk in MTR1 to 7 occurred.
-18	Exclusive Message Size Error in Mtsq	Exclusive message size error of Mtsq chunk in MTR1 to 7 occurred.
-19	Sequence data error in Mtsq.	ATR chunk size error occurred.
-20	Exclusive message size error in Mtsq.	GTR chunk size error occurred.
-21	Chunk size error in ATR.	MSTR chunk size error occurred.
-22	Chunk size error in GTR.	Incorrect CRC exists.
-23	Chunk size error in MSTR.	This file is not .mmf file.
-24	File read error. File write error.	Read/Write of the SMAF file failed.
-25	File path is too long.	File path name is too long. In this case, the processing is stopped.

-27	Illegal ATSig.	With SMAF/MA-2, OPDA exists and ATSig exists in CNTL. And, with SMAF/MA-3,MA-5, ATSig exists in CNTL.
-28	Not exist ATSig(A0).	ATSig(A0) is not present.
-29	MTR of the different SMAF kind exists.	MTR of different kind of SMAF exists.
-30	Can not find MasterVolume.	MasterVolume is not present before the first note message.
-31	Invalid StartPoint/EndPoint in MspI.	StartPoint/EndPoint in MspI is incorrect.
-32	Invalid StartPoint/EndPoint in AspI.	StartPoint/EndPoint in AspI is incorrect.
-33	Tag size error in CNTL.	Tag size in CNTL is incorrect.
-34	Illegal Exclusive message in Mtsq.	Exclusive message in Mtsq is incorrect.
-35	Chunk size error in Atsq.	Chunk size error of Atsq chunk occurred.
-36	Chunk size error in Awa.	Chunk size error of Awa chunk occurred.
-37	Sequence data error in Atsq.	Sequence data error of Atsq chunk occurred.
-38	Sequence data error.	Sequence data error (general-purpose) occurred.
-39	Chunk size error in AspI.	AspI chunk size error occurred.
-40	Folder open error.	OUTPUT folder open failed.
-43	Can not find MaxGain.	MaxGain is not present.