
**Information technology — Multimedia
application format (MPEG-A) —**

Part 12:
Interactive music application format

**AMENDMENT 3: Conformance and
reference software and conformance**

*Technologies de l'information — Format pour application multimédia
(MPEG-A) —*

Partie 12: Format d'application musicale interactive

AMENDEMENT 3: Conformité et logiciel de référence et conformité

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Amendment 3 to ISO/IEC 23000-12:2010 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 29, *Coding of audio, picture, multimedia and hypermedia information*.

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AMENDMENT 3: Conformance and reference software and conformance

After 8.1, add the following:

- Conformance point 4 provides capability of parsing compact representation of dynamic volume change in preset boxes, and generating volume curve for individual audio tracks.
- Conformance point 5 provides capability of parsing audio equalization parameters in the preset boxes, and processing audio tracks according to the EQ parameters.

In 8.2 before Table AMD1.1, add the following:

- C4: conforming to the conformance point 4
- C5: conforming to the conformance point 5

Replace:

Table AMD1.1 — Conformance files with conformance points

No	File structure						Audio				Metadata	Image	Text
	ISO-BMFF	Brand	'grco'	'prst'	'rusc'	'rumx'	MP3	AAC	PCM	SAOC	MDS	JPEG	3GPP TT
1	C1	C1	-	C1	-	-	C1	-	-	-	-	-	-
2	C1	C1	-	C1	C2	C2	-	C1	-	-	C3	C3	C3
3	C1	C1	-	C1	C2	C2	-	-	C1	-	-	-	-
4	C1	C1	C2	C1	C2	C2	C1	-	-	-	-	-	-
5	C1	C1	-	C1	-	-	-	C1	-	C1	-	-	-
6	C1	C1	-	C1	-	-	C1	-	-	C1	-	-	-

with:

Table AMD1.1 — Conformance files with conformance points

No	File structure						Audio				Metadata	Image	Text
	ISO-BMFF	Brand	'grco'	'prst'	'rusc'	'rumx'	MP3	AAC	PCM	SAOC	MDS	JPEG	3GPP TT
1	C1	C1	-	C1	-	-	C1	-	-	-	-	-	-
2	C1	C1	-	C1	C2	C2	-	C1	-	-	C3	C3	C3
3	C1	C1	-	C1	C2	C2	-	-	C1	-	-	-	-
4	C1	C1	C2	C1	C2	C2	C1	-	-	-	-	-	-
5	C1	C1	-	C1	-	-	-	C1	-	C1	-	-	-
6	C1	C1	-	C1	-	-	C1	-	-	C1	-	-	-
7	C1	C1	-	C1	C4 C5	-	-	-	C1	-	-	-	-

Replace:

Table AMD1.2 — Description of conformance files

No.	File name	Brand (Covered Brand)	# of audio tracks	Components	Preset	# of groups	Rule	
							Selection	Mixing
1	example_01.ima	im01 (im02, im03, im11)	4	- MP3	- static/dynamic track volume preset - static/dynamic object volume preset	-	-	-
2	example_02.ima	im02 (im01, im03, im11, im21)	6	- AAC - JPEG - MDS	- static track volume preset	-	implication rule	- equivalence rule - limit rule
3	example_03.ima	im11 (im21)	6	- PCM	- static track volume preset	-	- exclusion rule - not mute rule	upper rule
4	example_04.ima	im11 (im01, im02, im03)	14	- MP3	- static track volume preset	3	- min/max rule	lower rule
5	Example_05.ima	im04 (im12)	2	- AAC - SAOC	- static object volume preset	-	-	-
6	Example_06.ima	im04 (im12)	2	- MP3 - SAOC	- static object volume preset	-	-	-

[Remark01] Major brand of conformance file 1 is 'im01' and it can be also 'im02', 'im03' and 'im11' because difference between them is only *the maximum number of simultaneously decoded audio tracks* and it depends on the *player performance*. Hence conformance file 1 covers the conformance test for 'im02', 'im03' and 'im11' with MP3 audio tracks.

[Remark02] As the previously mentioned in [Remark01], conformance file 2 covers the conformance test for 'im01', 'im03', 'im11' and 'im21' with AAC audio tracks.

[Remark03] As the previously mentioned in [Remark01], conformance file 3 covers the conformance test for 'im21' with PCM audio tracks.

[Remark04] As the previously mentioned in [Remark01], conformance file 4 covers the conformance test for 'im01', 'im02' and 'im11' with MP3 audio tracks.

[Remark05] As the previously mentioned in [Remark01], conformance file 5 covers the conformance test for 'im12' with AAC and SAOC audio tracks.

[Remark06] As the previously mentioned in [Remark01], conformance file 6 covers the conformance test for 'im12' with MP3 and SAOC audio tracks.

with:

Table AMD1.2 — Description of conformance files

No.	File name	Brand (Covered Brand)	# of audio tracks	Components	Preset	# of groups	Rule	
							Selection	Mixing
1	example_01.ima	im01 (im02, im03, im11)	4	- MP3	- static/dynamic track volume preset - static/dynamic object volume preset	-	-	-
2	example_02.ima	im02 (im01, im03, im11, im21)	6	- AAC - JPEG - MDS	- static track volume preset	-	implication rule	- equivalence rule - limit rule
3	example_03.ima	im11 (im21)	6	- PCM	- static track volume preset	-	- exclusion rule - not mute rule	upper rule
4	example_04.ima	im11 (im01, im02, im03)	14	- MP3	- static track volume preset	3	- min/max rule	lower rule
5	Example_05.ima	im04 (im12)	2	- AAC - SAOC	- static object volume preset	-	-	-
6	Example_06.ima	im04 (im12)	2	- MP3 - SAOC	- static object volume preset	-	-	-
7	Example_07.ima	Im11 (im21)	6	PCM	- static track volume preset - dynamic track approximated volume preset - static track volume preset with EQ	-	-	-

[Remark01] Major brand of conformance file 1 is 'im01' and it can be also 'im02', 'im03' and 'im11' because difference between them is only *the maximum number of simultaneously decoded audio tracks* and it depends on the *player performance*. Hence conformance file 1 covers the conformance test for 'im02', 'im03' and 'im11' with MP3 audio tracks.

[Remark02] As previously mentioned in [Remark01], conformance file 2 covers the conformance test for 'im01', 'im03', 'im11' and 'im21' with AAC audio tracks.

[Remark03] As previously mentioned in [Remark01], conformance file 3 covers the conformance test for 'im21' with PCM audio tracks.

[Remark04] As previously mentioned in [Remark01], conformance file 4 covers the conformance test for 'im01', 'im02' and 'im11' with MP3 audio tracks.

[Remark05] As previously mentioned in [Remark01], conformance file 5 covers the conformance test for 'im12' with AAC and SAOC audio tracks.

[Remark06] As previously mentioned in [Remark01], conformance file 6 covers the conformance test for 'im12' with MP3 and SAOC audio tracks.

In 9.25, replace:

The mixer executes mixing multiple decoded audio tracks according to the gains of audio tracks for a preset or user's direct control.

with:

The mixer executes mixing multiple decoded audio tracks according to the gains and EQ settings of audio tracks for a preset or user's direct control.

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