

TASCAM

XRI Specification Document

(eXtended Recording Information)

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TEAC

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1. Purpose

By adding various recording settings and position information to files during recording, checking recording settings and locations after the fact becomes possible.

Making recording settings for the same conditions can be simplified by loading the saved XRI data into the recording device.

2. Compatible file format

The BWF format is compatible.

3. XRI data storage location

XRI data is saved Text, freestring(T=<...>) in the CodingHistory inside the BWF file bext-chunk.

4. Extent of XRI standard

Even when functions are similar, setting items differ between devices. For this reason, only the recording format and some tags are standardized. Other tags and data names depend on the recording device.

We recommend that you make tag and data names the same as the names of the setting items and parameters of the recording device.

5. XRI format

5-1.

5-1-1. The character code is ASCII.

5-1-2. XRI data is classified into "XRI identifiers", "required items", "device dependent items" and "channel dependent items".

5-1-3. "XRI identifiers" and "required items" must always be included.

5-1-4. "Device dependent items" and "channel dependent items" are optional.

5-1-5. Each item is comprised of a tag and data.

5-1-6. Use a ";" as a delimiter for each item.

5-1-7. Use "=" as a separator between tags and data.

5-1-8. The same item must not occur multiple times.

5-1-9. After the last item, set to NULL (0x00).

5-1-10. If specification changes occur that cause compatibility problems, we will update the XRI VERSION.

5-2.

5-2-1. An "XRI identifier" is composed of an "XRI character string" and the "XRI size".

5-2-2. The "XRI identifier" is entered before the "XRI data".

5-3.

5-3-1. "Device dependent items" and "channel dependent items" can be in any order.

5-3-2. The tag names of "XRI identifiers" and "required items" are reserved words and must not be used as tag names for "device dependent items" and "channel dependent items".

5-3-3. Depending on the number of channels necessary, information from multiple channels can be included in a single tag for "channel dependent items".

5-3-4. Use "" as a separator within data.

5-3-5. The maximum channel number that can be input is 64.

5-3-6. The data length for each channel must be 32 bytes or less.

Note: in this specification document spaces (ASCII code 0x20) are indicated with a "_".

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6. XRI identifier and XRI Size details

XRI identifiers and XRI Size standard format

XRI_XXXX;

“XRI identifier” and “XRI Size details” are entered before “XRI data”.

6-1. XRI identifier and XRI Size

Tag name	Explanation
XRI identifier	Always “XRI_”
XRI Size	Bytes (size from XRI identifier to end of XRI data – 8)
Storage format	
XRI identifiers are stored in ASCII format as “XRI_”.	
XRI Size is written as a hex value in ASCII format. (Always 4 bytes.)	
Sample data	
“XRI_006F”;	

7. Required tag details

Required tag standard format

Tag name= data;

Always include required tag items.

7-1. XRI Version

Tag name	Explanation
XRI_VER	Enter the XRI format version.
Data storage format	
The XRI Version is written as a hex value in ASCII format.	
The data length is fixed at 4 bytes.	
Sample data	
“XRI_VER=0001”;	

7-2. Recorder Maker

Tag name	Explanation
MAKER	Enter the name of the recording device manufacturer.
Data storage format	
Use ASCII format.	
The data length must be 32 bytes or less.	
Sample data	
“MAKER=TASCAM”;	

7-3. Recorder Model

Tag name	Explanation
MODEL	Enter the name of the recording device.
Data storage format	
Use ASCII format.	
The data length must be 32 bytes or less.	
Sample data	
“MODEL=DR-44WL”;	

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7-4. Recorder F/W Version

Tag name	Explanation
FW_VER	Enter the firmware version of the recording device.
Data storage format	
	Use ASCII format. The data length must be 32 bytes or less.
Sample data	
	"FW_VER=1.20";

8. Device dependent tag details (DR-22WL/DR-44WL/DR-701D reference)

Note: Device dependent tags can be defined for each device.

Device dependent tag standard format

Tag name=data;

The tag name must be 32 bytes or less.

The data length must be 32 bytes or less.

8-1. Latitude

Tag name	Explanation
LATITUDE	Enter the latitude of the recording location.
Data storage format	
	Enter a decimal value in ASCII format. Enter a value within ± 90.00000 . The highest precision is 0.00001.
Sample data	
	"LATITUDE=+35.62497";

8-2. Longitude

Tag name	Explanation
LONGITUDE	Enter the longitude of the recording location.
Data storage format	
	Enter a decimal value in ASCII format. Enter a value within ± 180.00000 . The highest precision is 0.00001.
Sample data	
	"LONGITUDE=+139.42473";

8-3. Ambisonics Rec Mode

Tag name	Explanation
AMBI_REC_MODE	Ambisonics Rec Mode setting.
Data storage format	
	ASCII character string. A FORMAT. B FORMAT.
Sample data	
	"AMBI_REC_MODE=A FORMAT";

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8-4. Ambisonics B Format

Tag name	Explanation
AMBI B FORMAT	Ambisonics B Format setting.
Data storage format	
ASCII character string. FuMa. AmbiX.	
Sample data	
"AMBI B FORMAT=AmbiX";	

8-5. Ambisonics Mic Position

Tag name	Explanation
AMBI MIC POSITION	Ambisonics Mic Position setting.
Data storage format	
ASCII character string. UPRIGHT. UPSIDEDOWN. ENDIFRE.	
Sample data	
"LONGITUDE=+139.42473";	

9. Channel dependent tag details (DR-22WL/DR-44WL/DR-701D reference)

Note: Channel dependent tags can be defined for each device.

Channel dependent tag standard format
Tag name=Ch1:data'Ch2:data'...

The tag name must be 32 bytes or less.

The data length must be 32 bytes or less.

Channels are channels input during recording.

The maximum number of channels that can be input is 64.

The data length for each channel must be 32 bytes or less.

9-1. Input Source

Tag name	Explanation
SOURCE	Enter the input source.
Data storage format	
The format is "Ch:parameter". To enter multiple channels, use "Ch:parameter'Ch:parameter..." as the format. Enter a decimal value in ASCII format for the channel number. Enter parameters from 9-1-1 in ASCII format.	
Sample data	
"SOURCE=1:INT MIC'2:INT MIC";	Explanation of sample Ch 1/2 built-in mic

9-1-1. Input Source Parameter

Input Source	Explanation
INT__MIC	Built-in mic
EXT__MIC	External mic input
LINE__IN	Line input

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9-2. Input Level

Tag name	Explanation
LEVEL	Enter the Input Level setting.
Data storage format	
<p>The format is "Ch:parameter".</p> <p>To enter multiple channels, use "Ch:parameter'Ch: parameter..." as the format.</p> <p>Enter a decimal value in ASCII format for the channel number.</p> <p>Enter parameters from 9-2-1 in ASCII format.</p>	
Sample data	Explanation of sample
"LEVEL=1:31'2:54";	Ch1: input level 31, Ch2: input level 54

9-2-1. Input Level Parameter

Input Level	Explanation
0-100	Enter a decimal value in ASCII format for the input level.

9-3. Low Cut

Tag name	Explanation
LOW__CUT	Enter the Low Cut Filter setting value.
Data storage format	
<p>The format is "Ch:parameter".</p> <p>To enter multiple channels, use "Ch:parameter'Ch: parameter..." as the format.</p> <p>Enter a decimal value in ASCII format for the channel number.</p> <p>Enter parameters from 9-3-1 in ASCII format.</p>	
Sample data	Explanation of sample
"LOW__CUT=1:40'2:40";	Low Cut Filter for channels 1 and 2 set to 40 Hz.

9-3-1. Low Cut Parameter

Low Cut	Explanation
OFF	Low Cut Off
0-220	The low-cut filter frequency unit is Hz. Enter a decimal value in ASCII format.

9-4. Level Control

Tag name	Explanation
LEVEL__CTRL	Enter the Level Control setting.
Data storage format	
<p>The format is "Ch:parameter".</p> <p>To enter multiple channels, use "Ch:parameter'Ch: parameter..." as the format.</p> <p>Enter a decimal value in ASCII format for the channel number.</p> <p>Enter parameters from 9-4-1 in ASCII format.</p>	
Sample data	Explanation of sample
"LEVEL__CTRL=1:PEAK'2:PEAK";	Ch1/2 Peak Reduction Algorithm

9-4-1. Level Control Parameter

Level Control	Explanation
OFF	Level Control Off
PEAK	Peak Reduction Algorithm
LIMITER	Limiter On
AUTO	Auto Algorithm

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9-5. Effect

Tag name	Explanation
EFFECT	Enter the Effect setting.
Data storage format	
<p>The format is "Ch:parameter".</p> <p>To enter multiple channels, use "Ch:parameter'Ch: parameter..." as the format.</p> <p>Enter a decimal value in ASCII format for the channel number.-</p> <p>Enter parameters from 9-5-1 in ASCII format.</p>	
Sample data	Explanation of sample
"EFFECT=1:OFF'2:OFF";	Ch1/2 Effect Off

9-5-1. Effect Parameter

Effect	Explanation
OFF	Effect Off
ON	Effect On

10. XRI samples

Stereo file example		Number of bytes
"XRI_00D2";	XRI Size = 210Byte	9
"XRI_VER=0001";	XRI Version 0001	13
"MAKER=TASCAM";	Maker name: TASCAM	13
"MODEL=DR-44WL";	Recording device: DR-44WL	14
"FW_VER=1.20";	Device firmware version: 1.20	12
"LATITUDE=+35.62497";	Latitude: +35.62497	19
"LONGITUDE=+139.42473";	Longitude: +139.42473	21
"SOURCE=3:EXT_MIC'4:EXT_MIC";	Ch3/4 external mic	27
"LEVEL=3:31 AM'4:54 AM";	Ch3 Input Level 31, Ch4 Input Level 54	16
"LOW_CUT=3:40 AM'4:40 AM";	Ch3/4 Low Cut Filter 40 Hz.	18
"LEVEL_CTRL=3:PEAK'4:PEAK";	Ch3/4 Peak Reduction Algorithm	25
"EFFECT=3:OFF'4:OFF";	Ch3/4 Effect Off	19

Total 206

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4-channel poly file example

Number of bytes

"XRI_00F2";	XRI Size = 242Byte	9
"XRI_VER=0001";	XRI Version 0001	13
"MAKER=TASCAM";	Maker name: TASCAM	13
"MODEL=DR-xxWL";	Recording device: DR-xxWL	14
"FW_VER=1.20";	Device firmware version: 1.20	12
"SOURCE=1:INT_MIC'2:INT_MIC'3:EXT_MIC' 4:EXT_MIC";	Ch1/2 built-in mic Ch3/4 external mic	47
"LEVEL=1:31'2:54'3:21'4:22";	Ch1 Input Level 31, Ch2 Input Level 54, Ch3 Input Level 21, Ch4 Input Level 22	26
"LOW_CUT=1:40'2:80'3:120'4:220"	Ch1 LowCut 40Hz, Ch2 LowCut 80Hz, Ch3 LowCut 120Hz, Ch4 LowCut 220Hz	30
"LEVEL_CTRL=1:LIMITER'2:LIMITER'3:PEAK'4:PEAK"	Ch1 Limiter On, Ch2 Limiter On, Ch3 Peak Reduction, Ch4 Peak Reduction	45
"EFFECT=1:OFF'2:OFF'3:OFF'4:OFF";	Ch1/2/3/4 Effect Off	31

Total 240

