

16-Channel Audio Packaging Guide for Interop DCP

The audio channel ordering shown in the Table below is recommended for use in all Interop DCP compositions. Note that audio channel numbers for Interop-DCPs map one-to-one to the audio outputs of a player. For this reason, the Table also identifies the recommended audio wiring in cinemas.

Channel in package	Configuration			Notes
	5.1	7.1 SDDS	7.1 DS	
1	L	L	L	Left
2	R	R	R	Right
3	C	C	C	Center
4	LFE	LFE	LFE	Screen low frequency effects
5	Ls	Ls	Lss	Left surround (or left side surround)
6	Rs	Rs	Rss	Right surround (or right side surround)
7	HI			Hearing impaired (with emphasis on dialog)
8	VI-N			Visually impaired narrative (audio description)
9	--	Lc	--	Left center
10	--	Rc	--	Right center
11	--	--	Lrs	Left rear surround
12	--	--	Rrs	Right rear surround
13	Motion Data			Synchronous signal (currently used by D-Box)
14	--			<i>Unused at this time</i>
15	--			<i>Unused at this time</i>
16	--			<i>Unused at this time</i>

Note 0. While the Table above is a recommendation meant to capture and encourage common practice, it is not guaranteed that all Interop DCPs past, present or future will follow this recommendation.

Note 1. Not all channels need to be present in a given DCP. For instance, only the first 8 channels should be used when delivering 5.1 + HI/VI content. In all cases, an even number of channels shall be used.

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Note 2. While some labels are reused across all configurations for convenience, the corresponding channel may not carry the identical signal. For instance, the signal labeled "Lss" in a 7.1DS mix may not be identical to the signal labeled "Ls" in the 5.1 mix for the same title.

Note 3. Due to the absence of channel or configuration labels, the actual channel configuration may not always be inferred by channel count and preferably be indicated through other means, e.g. name of the CPL.

Note 4. Theatre equipment is responsible for rendering the audio channels to the appropriate combination of auditorium speakers. In particular, theatre equipment may choose to render the left surround channel (Ls) of a 5.1 content to all left surround speakers, including back left surround speakers.

Note 5. Delivery of a 7.1DS CPL (without a matching 5.1 CPL in the same delivery) to a 5.1 theatre is not recommended since theatre playback equipment is not guaranteed to accurately render a 7.1DS to a 5.1 auditorium.

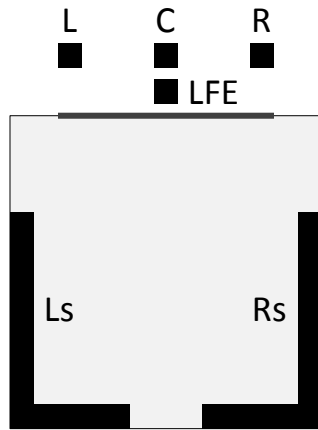
Note 6. Content using the 5.1 configuration may contain a back surround signal matrix-encoded in the Ls and Rs signals – see the 5.1 w/ Surround EX soundfield configuration below.

Note 7. A discrete 6.1 configuration is not defined in Interop.

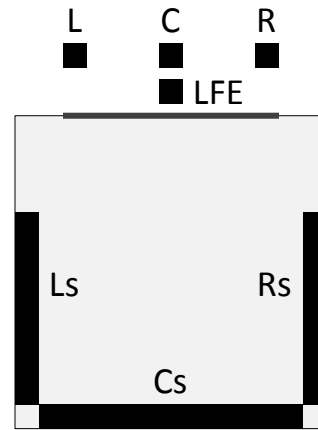
Note 8. SMPTE Labels should not be used for Interop-DCPs. (With channel labeling some equipment may not be able to recognize the labels with Interop-DCP packages and may not even play.)

Soundfield Configurations

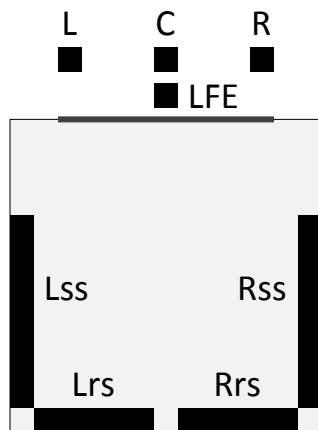
The following depict the soundfield for the configuration described above.



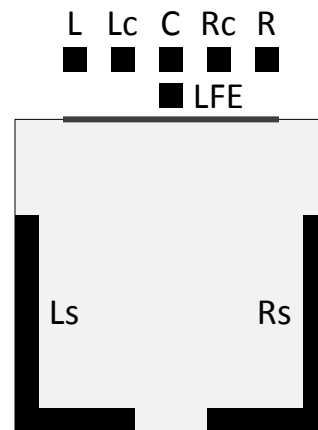
5.1



5.1 w/ Surround EX (5.1EX)



7.1DS



7.1 SDDS

Note 1. The Ls and Rs components of the 5.1 soundfield may not extend to the back of the auditorium in all situations.

Note 2. The Ls and Rs components of the 7.1DS soundfield may extend to the back of the auditorium in some situations.