

DENON®

AVC-X3700H

INTEGRATED NETWORK AV AMPLIFIER

Surround Parameter Table

Sound modes and channel output

- This indicates the audio output channels or surround parameters that can be set.
- This indicates the audio output channels. The output channels depend on the settings of "Speaker Config.".

Sound mode	Channel output												
	Front L/R	Center	Surround L/R	Surround Back L/R	Front Height L/R	Top Front L/R	Top Middle L/R	Top Rear L/R	Rear Height L/R	Front Dolby Atmos Enabled L/R	Surround Dolby Atmos Enabled L/R	Back Dolby Atmos Enabled L/R	Subwoofer
Direct/Pure Direct (2-channel)	<input type="radio"/>												<input type="radio"/> *4
Direct/Pure Direct (Multi-channel)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/> *5	<input type="radio"/> *5	<input type="radio"/> *5	<input type="radio"/>						
DSD Direct (2-channel)	<input type="radio"/>												<input type="radio"/> *4
DSD Direct (Multi-channel)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>										<input type="radio"/>
Stereo	<input type="radio"/>												<input type="radio"/>
Dolby Atmos	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dolby TrueHD	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/> *5								<input type="radio"/>
Dolby Digital Plus	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/> *5								<input type="radio"/>
Dolby Digital	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>										<input type="radio"/>
Dolby Surround *1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/> *6	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>					
IMAX DTS:X	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
IMAX DTS	<input type="radio"/>	<input type="radio"/>	<input type="radio"/> *7	<input type="radio"/> *7									<input type="radio"/>
DTS:X	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
DTS-HD	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/> *5								<input type="radio"/>
DTS Express	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>								<input type="radio"/>
DTS 96/24	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>								<input type="radio"/>
DTS Surround	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>								<input type="radio"/>
DTS Neural:X *2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
DTS Virtual:X *3	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>								<input type="radio"/>
Multi Ch In	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/> *5									<input type="radio"/>

*1 The applicable sound mode includes "Dolby Surround" and sound modes that have "+Dolby Surround" in the sound mode name.

*2 The applicable sound mode includes "DTS Neural:X" and sound modes that have "+Neural:X" in the sound mode name.

*3 The applicable sound mode includes "DTS Virtual:X" and sound modes that have "+Virtual:X" in the sound mode name.

*4 Audio is output when "Bass" - "Subwoofer Mode" in the menu is set to "LFE+Main".

*5 A signal for each channel contained in an input signal is output as audio.

*6 Audio is not output when the "Surround Parameter" - "Speaker Virtualizer" in the menu is set to "On" and "Speaker Config." - "Surr. Back" in the menu is set to "1 spkr".

*7 When "Speaker Config." - "Surr. Back" is set to "2 spkrs", "Speaker Config." - "Center" is set to "Large" or "Small", and sound mode is set to "IMAX DTS", surround audio is output from the surround back speaker. Audio is not output from the surround speaker.

Sound mode	Channel output												
	Front L/R	Center	Surround L/R	Surround Back L/R	Front Height L/R	Top Front L/R	Top Middle L/R	Top Rear L/R	Rear Height L/R	Front Dolby Atmos Enabled L/R	Surround Dolby Atmos Enabled L/R	Back Dolby Atmos Enabled L/R	Subwoofer
Multi Ch Stereo	○	○	○	○	○*8	○*8	○*8	○*8	○*8	○*8	○*8	○*8	○
Rock Arena	○	○	○	○	○*8	○*8	○*8	○*8	○*8	○*8	○*8	○*8	○
Jazz Club	○	○	○	○	○*8	○*8	○*8	○*8	○*8	○*8	○*8	○*8	○
Mono Movie	○	○	○	○	○*8	○*8	○*8	○*8	○*8	○*8	○*8	○*8	○
Video Game	○	○	○	○	○*8	○*8	○*8	○*8	○*8	○*8	○*8	○*8	○
Matrix	○	○	○	○	○*8	○*8	○*8	○*8	○*8	○*8	○*8	○*8	○
Virtual	○												○

*8 Audio is output from the speakers specified in the "Surround Parameter" - "Speaker Select" settings.

Sound modes and surround parameters

Sound mode	Surround Parameter												
	Cinema EQ	Loudness Management *2	Dynamic Compression *3	Dialog Control *4	Low Frequency Effects *5	Delay Time	Effect Level	Room Size	Speaker Select *6	Center Spread	Speaker Virtualizer *7	DTS Neural:X	IMAX
Direct/Pure Direct (2-channel) *1	○	○											
Direct/Pure Direct (Multi-channel) *1	○	○		○	○								
DSD Direct (2-channel)													
DSD Direct (Multi-channel)													
Stereo	○	○		○	○								
Dolby Atmos	○	○	○		○						○		
Dolby TrueHD	○	○	○		○								
Dolby Digital Plus	○	○	○		○								
Dolby Digital	○	○	○		○								
Dolby Surround	○	○	○							○	○		
IMAX DTS:X	○		○	○	○							○	○
IMAX DTS	○		○		○							○	○
DTS:X	○		○	○	○							○	○
DTS-HD	○		○		○							○	
DTS Express	○				○							○	
DTS 96/24	○				○							○	
DTS Surround	○		○		○								○
DTS Neural:X	○	○	○										
DTS Virtual:X	○		○										
Multi Ch In	○												
Multi Ch Stereo	○	○	○	○	○					○			
Rock Arena		○	○	○	○				○	○	○		
Jazz Club		○	○	○	○				○	○	○		
Mono Movie		○	○	○	○				○	○	○		
Video Game		○	○	○	○				○	○	○		
Matrix	○	○	○	○	○	○				○			
Virtual	○	○	○	○	○								

*1 During playback in Pure Direct mode, the surround parameters are the same as in Direct mode.

*2 This item can be selected when a Dolby Digital, Dolby Digital Plus, Dolby TrueHD or Dolby Atmos signal is played.

*3 This item can be selected when a Dolby Digital, Dolby Digital Plus, Dolby TrueHD, Dolby Atmos, DTS:X or DTS signal is played.

*4 This item can be selected when a DTS:X signal that is compatible with the Dialog Control function is input.

*5 This item can be selected when a Dolby Digital or DTS signal or DVD-Audio is played.

*6 This item can be selected when Height, Ceiling or Dolby Atmos Enabled speakers are used.

*7 This item can be set when any Height, Ceiling or Dolby Atmos Enabled speakers are not used, or Surround speakers are not used.

Sound mode	Surround Parameter					Tone *9	Center Level Adjust *10	Subwoofer Level Adjust *11	Audyssey				Restorer *16
	IMAX Audio Settings	High Pass Filter *8	Low Pass Filter *8	Subwoofer Mode *8	Subwoofer				MultEQ® XT32 *12*13*14	Dynamic EQ *14*15	Dynamic Volume *14*15	Audyssey LFC™ *14*15	
Direct/Pure Direct (2-channel) *1					○*17			○*17					
Direct/Pure Direct (Multi-channel) *1						○		○					
DSD Direct (2-channel)					○*17			○*17					
DSD Direct (Multi-channel)						○		○					
Stereo					○*18	○		○*18	○	○	○	○	○
Dolby Atmos						○		○	○	○	○	○	
Dolby TrueHD						○		○	○	○	○	○	
Dolby Digital Plus						○		○	○	○	○	○	
Dolby Digital						○		○	○	○	○	○	
Dolby Surround						○		○	○	○	○	○	○
IMAX DTS:X	○	○	○	○	○	○		○	○	○	○	○	
IMAX DTS	○	○	○	○	○	○		○	○	○	○	○	
DTS:X					○	○		○	○	○	○	○	
DTS-HD						○		○	○	○	○	○	
DTS Express						○		○	○	○	○	○	
DTS 96/24						○		○	○	○	○	○	
DTS Surround						○		○	○	○	○	○	
DTS Neural:X						○		○	○	○	○	○	○
DTS Virtual:X						○		○	○	○	○	○	○
Multi Ch In						○		○	○	○	○	○	
Multi Ch Stereo						○		○	○	○	○	○	
Rock Arena						○		○	○	○	○	○	
Jazz Club						○		○	○	○	○	○	
Mono Movie						○		○	○	○	○	○	
Video Game						○		○	○	○	○	○	
Matrix						○		○	○	○	○	○	
Virtual						○		○	○	○	○	○	

*1 During playback in Pure Direct mode, the surround parameters are the same as in Direct mode.

*8 This item can be selected when "Surround Parameter" - "IMAX Audio Settings" in the menu is set to "Manual".

*9 This item cannot be set when "Dynamic EQ" is set to "On".

*10 This item cannot be set when "Speaker Config." - "Center" is set to "None".

*11 This item cannot be set when "Speaker Config." - "Subwoofer" in the menu is set to "None".

*12 This item cannot be set when Audyssey® Setup (Speaker Calibration) has not been performed.

*13 This item cannot be selected when a DTS:X format with a sampling frequency of over 48 kHz is input.

*14 This item cannot be set when sound mode is "DTS Virtual:X" or sound mode that have "+Virtual:X" in the sound mode name.

*15 This item cannot be set when "MultEQ® XT32" in the menu is set to "Off".

*16 This item can be set when the input signal is analog, PCM 48 kHz or 44.1 kHz.

*17 This setting is available when "Bass" - "Subwoofer Mode" in the menu is set to "LFE+Main".

*18 This item can be set when "Speaker Config." - "Front" is set to "Small" or "Bass" - "Subwoofer Mode" is set to "LFE+Main".

Types of input signals, and corresponding sound modes

- This indicates the default sound mode.
- This indicates the selectable sound mode.

Sound mode	NOTE	2-channel signal								Multi-channel signal												PCM multi-channel	DSD (Super Audio CD)
		Dolby TrueHD	Dolby Digital Plus	Dolby Digital (EX)	DTS-HD	DTS Express	DTS	Analog / PCM	DSD (Super Audio CD)	Dolby Atmos	Dolby TrueHD	Dolby Digital Plus	Dolby Digital (EX)	IMAX DTS:X	IMAX DTS	DTS:X	DTS-HD	DTS Express	DTS ES Dscrt6.1	DTS ES Mtrx6.1	DTS		
Direct		○	○	○	○	○	○	○*2		○	○	○	○	○	○	○	○	○	○	○	○	○	○
Direct																							
DSD Direct									○														○
Pure Direct																							
Pure Direct		○	○	○	○	○	○	○		○	○	○	○	○	○	○	○	○	○	○	○	○	○
DSD Pure Direct									○														○
Stereo																							
Stereo		○	○	○	○	○	○	○	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○
Dolby Surround																							
Dolby Atmos	*1										●		○*3	○									
Dolby TrueHD		○																					
Dolby Digital Plus			○									○*4		○									
Dolby Digital				○																			
Dolby (D+) (HD) + Dolby Surround											●		●	●									
Dolby (D+) (HD) + Neural:X											○		○	○									
Dolby Surround		●	●	●	○	○	○	○															

*1 This item can be selected when using any of the Surround Back, Front Height, Top Front, Top Middle, Top Rear, Rear Height, Front Dolby, Surround Dolby or Back Dolby speaker. It can also be selected when the "Surround Parameter" - "Speaker Virtualizer" setting is turned "On".

*2 The default sound mode for the AirPlay playback is "Direct".

*3 This can be selected when the Dolby Atmos signal contains the Dolby TrueHD signal.

*4 This can be selected when the Dolby Atmos signal contains the Dolby Digital Plus signal.

Sound mode	NOTE	2-channel signal							Multi-channel signal															
		Dolby TrueHD	Dolby Digital Plus	Dolby Digital (EX)	DTS-HD	DTS Express	DTS	Analog / PCM	DSD (Super Audio CD)	Dolby Atmos	Dolby TrueHD	Dolby Digital Plus	Dolby Digital (EX)	IMAX DTS:X	IMAX DTS	DTS:X	DTS-HD	DTS Express	DTS ES Dscrt6.1	DTS ES Mtrx6.1	DTS	PCM multi-channel	DSD (Super Audio CD)	
DTS Surround														●*6										
IMAX DTS:X														○*6										
IMAX DTS														○*8	●								○*7	
DTS:X MSTR / DTS:X																								
DTS-HD MSTR					○*9										○*8		○*9							
DTS-HD HI RES					○*10										○*8		○*10							
DTS Express						○									○*8			○						
DTS ES Dscrt 6.1	*5																	○						
DTS ES Mtrx 6.1	*5																	○						
DTS 96/24							○*11															○*11		
DTS Surround							○								○*8			○					○	
IMAX DTS + Neural:X															●*6								○*7	
IMAX DTS / IMAX DTS:X + Virtual:X															○*6	○*6							○*7	
DTS (-HD) + Dolby Surround																○		○					○	
DTS (-HD) + Neural:X																○*8		●*12	●*12	●*12	●*12	●*12	●*12	
DTS (-HD) / DTS:X + Virtual:X															○*8	○*8	○*13	○	○	○	○	○	○	
DTS Neural:X		○	○	○	●*12	●*12	●*12	○	○	○	○	○	○											
DTS Virtual:X					○																			

*5 This item can be selected when surround back speakers are used.

*6 Selectable when "Surround Parameter" - "IMAX" is set to "Auto" in the menu.

*7 Selectable when "Surround Parameter" - "IMAX" is set to "On" in the menu and a 48 kHz sampling frequency DTS 5.1 channel signal is being input.

*8 Selectable when "Surround Parameter" - "IMAX" is set to "Off". (Selectable sound modes vary depending on the type of input signal).

*9 This item can be selected when the input signal is DTS-HD Master Audio.

*10 This item can be selected when the input signal is DTS-HD Hi Resolution.

*11 This item can be selected when the input signal is DTS 96/24.

*12 This item cannot be selected when a DTS(-HD) format with a sampling frequency of over 48 kHz is input.

*13 This item cannot be selected when a DTS:X format with a sampling frequency of over 48 kHz is input.

Sound mode	NOTE	2-channel signal								Multi-channel signal												PCM multi-channel	DSD (Super Audio CD)	
		Dolby TrueHD	Dolby Digital Plus	Dolby Digital (EX)	DTS-HD	DTS Express	DTS	Analog / PCM	DSD (Super Audio CD)	Dolby Atmos	Dolby TrueHD	Dolby Digital Plus	Dolby Digital (EX)	IMAX DTS:X	IMAX DTS	DTS:X	DTS-HD	DTS Express	DTS ES Dscrt6.1	DTS ES Mtrx6.1	DTS			
Multi Ch In																								
Multi Ch In																							●	●
Multi Ch In 7.1	*5																						○	*14
Multi Ch In + Dolby Surround																							○	○
Multi Ch In + Neural:X																							○	○
Multi Ch In + Virtual:X																							○	○
Original sound mode																								
Multi Ch Stereo		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Rock Arena		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Jazz Club		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Mono Movie		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Video Game		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Matrix		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Virtual		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○

*5 This item can be selected when surround back speakers are used.

*14 This item can be selected when the input signals contain surround back signals.

*15 This can be selected when the Dolby Atmos signal contains the Dolby TrueHD or Dolby Digital Plus signal.