Recommended Audio Setup Layouts for Videoconferencing



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Microphone Type/Version Information

Microphone Type

- PCS-A1: (Sony)
 - · Omni directional microphone
- PCSA-A3: (Sony)
 - Uni-directional microphone
- PCSA-A7: (Sony)
 * PCSA-A7P4 is a set of four PCSA-A7s.
 - · Uni-directional microphone with echo canceller.
- PCS-C1: (Sony)
 - Uni-directional microphone (PCS-1 built-in microphone)
- CTE-600: (Sony)
- * Currently not available.
- Automatic voice direction selection microphone with echo canceller and omni speaker unit
- AccuMIC: (ClearOne)
 - Automatic voice direction selection microphone with echo canceller
- RAV600/900: (ClearOne)
 - Audio conferencing system

Version Information

- PCS-1
 - Version 3.31
- PCS-G50/G70
 - Version 2.4
- CTE-600
 - /2 version
- AccuMIC (ClearOne)
 - Rev 1.3
- RAV600/900 (ClearOne)
 - N/A



Icon List

Icon List

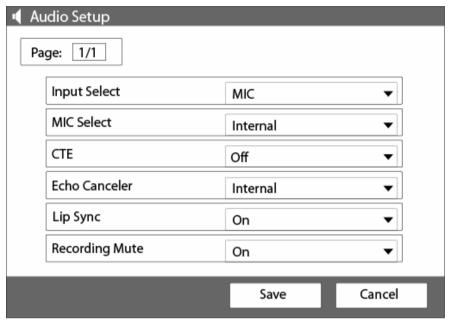
Icon	Description	Type Name	Remarks
	Codec	PCS-1 or PCS-G50/G70	
	Speaker (TV etc.)	N/A	
и	Projector	N/A	Noise source
©	Microphone	PCS-A1	
	Microphone	PCSA-A3	
	Microphone	PCSA-A7	
	Microphone	CTE-600	
靣	Microphone	PCS-C1	PCS-1 built-in microphone
	Microphone	AccuMIC	(ClearOne)
9	Microphone	RAV600/900	(ClearOne)



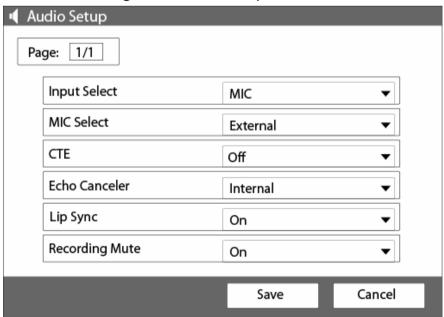
Audio Setup (1 of 5)

PCS-1

In case of using Internal Microphone



In case of using External Microphone

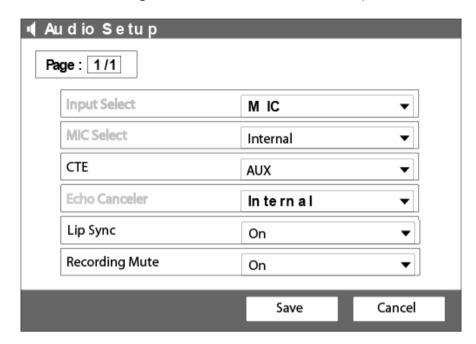




Audio Setup (2 of 5)

PCS-1 (continued)

In case of using External Echo Canceller (CTE-600 or ClearOne)

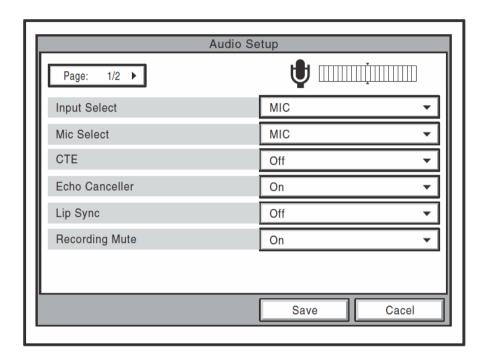


• To enable the external echo canceller (including devices made by other manufacturers), set "CTE" to "AUX" as shown in the figure.

Audio Setup (3 of 5)

PCS-G50/G70

In case of using Internal Echo Canceller

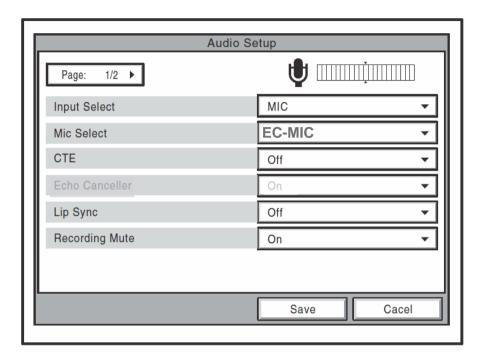


• "Input Select" selects the sound to be input. "MIC", "DSB MIC", and "LINE" are selectable. Note that selecting "EC-MIC" forcibly turns off the echo canceller.

Audio Setup (4 of 5)

PCS-G50/G70 (continued)

In case of using EC-MIC

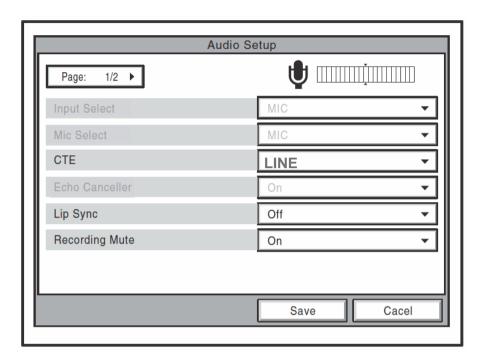


 With "EC-MIC" selected by "Mic Select", "Echo Canceller" will be disabled.

Audio Setup (5 of 5)

PCS-G50/G70 (continued)

In case of using External Echo Canceller (CTE-600 or ClearOne)



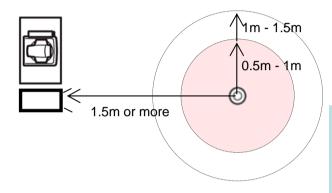
• To enable the external echo canceller (including devices made by other manufacturers), set "CTE" to "LINE" as shown in the figure.

Basic Data (1 of 4)

PCS-A1

Distance from TV speaker(s):

Recommended: 1.5m or more(5ft) Acceptance: 0.5m to 1.5m (1.5ft to 5ft)



Coverage area:

Recommended: 0.5m to 1m

(1.5ft to 3.5ft)

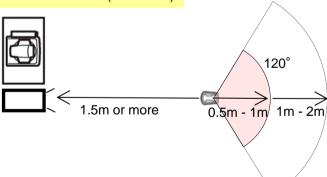
Acceptance:1m to 1.5m

(3.5ft to 5ft)

PCSA-A3

Distance from TV speaker(s):

Recommended: 1.5m or more (5ft) Acceptance: 0.5m to 1.5m (1.5ft to 5ft)



Coverage area:

Recommended: 0.5m to 1m

(1.5ft to 3.5ft)

Acceptance: 1m to 2m

(3.5ft to 7ft)

Angle: within 120 degrees

Basic Data (2 of 4)

PCSA-A7 Distance from TV speaker(s): Recommended: 0.5m to 1m (1.5ft to 3.5ft) Acceptance: 1m to 1.5m (3.5ft to 5ft) Angle: within 120 degrees

PCS-C1(PCS-1 camera unit with built-in microphone)

Note: When using the PCS-C1 camera placed on the codec, it is not recommended to use the built-in microphone. (It may be affected by the fan noise.) If you have to use the built-in microphone, separate the camera

from the codec using

a camera stand or similar item.

Coverage area:

Recommended: 0.5m to 1m (1.5ft to 3.5ft)

Acceptance:1m to 1.2m

(3.5ft to 4ft)

Angle: within 90 degrees

Distance from TV speaker(s):

Recommended: 0.5m or more (1.5ft) Acceptance: 0.5m (1.5ft)

IPELA

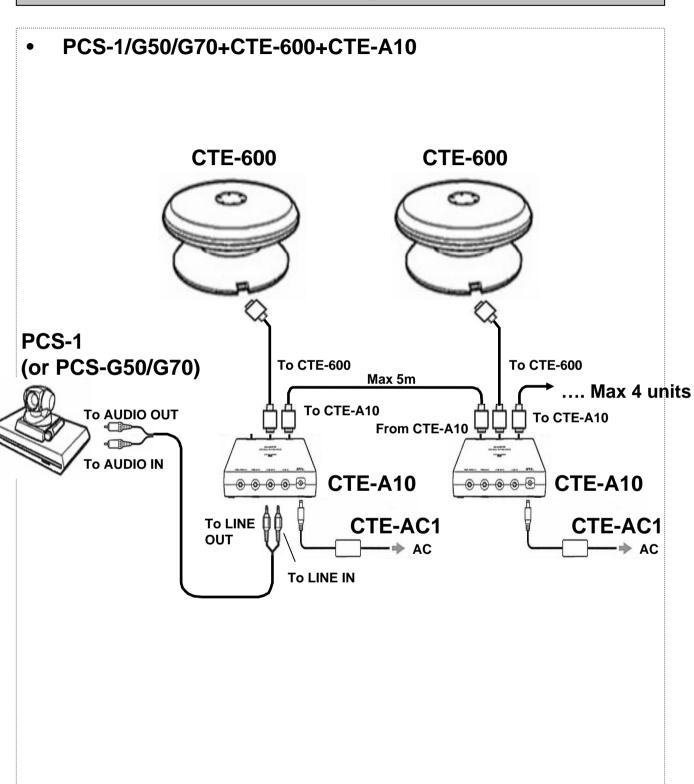
Basic Data (3 of 4)

CTE-600 * TV speakers are NOT allowed to be used. 1.5m-3m 1.5m Coverage area: Recommended: 1m to 1.5m (3.5ft to 5ft) Acceptance: 1.5m to 3m (5ft to 10ft) AccuMIC (ClearOne) Distance from TV speaker(s): Recommended: 2.5m or more (8ft) Acceptance : 2m (7ft) 1m- 1.5m 0.5m- 1m 2.5m or more Coverage area: Recommended: 0.5m to 1m (1.5ft to 3.5ft) Acceptance:1m to 2m (3.5ft to 7ft)

Basic Data (4 of 4)

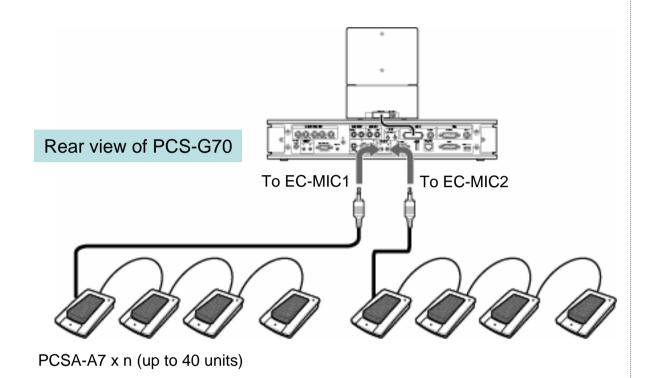
RAV600/900 (ClearOne) Distance from TV speaker(s): Recommended: 2.5m or more (8ft) Acceptance: 2m (7ft) 0.5m~1m 1m~2m 2.5m or more Coverage area: Recommended: 0.5m to 1m (1.5ft to 3.5ft) Acceptance:1m to 2m (3.5ft to 7ft)

Connection Diagram (1 of 3)

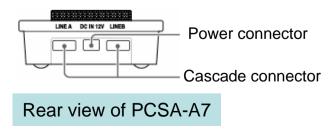


Connection Diagram (2 of 3)

PCS-G50/G70 + PCSA-A7



No additional AC adaptor is needed when up to four PCSA-A7s are used by connecting a codec and the first microphone with an 8-meter cable and connecting between microphones with an 1.5-meter cable each.

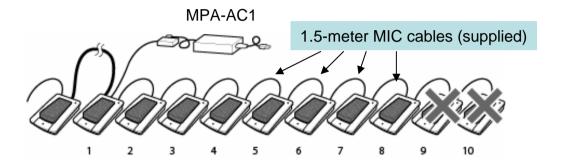


Basic Data (3 of 3)

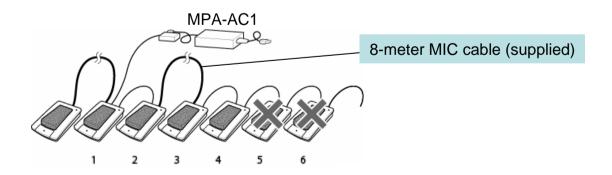
PCS-G50/G70 + PCSA-A7 (continued)

When five or more microphones are used, an additional AC adaptor (MPA-AC1) or more are also needed.

The power can be supplied to up to 8 microphones per a AC adaptor when the 1.5 meter cable is used to connect between microphones.



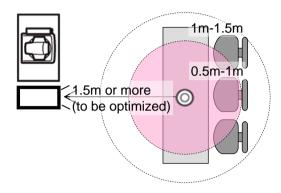
You can also use an 8-meter cable as well to connect between microphones. But note that using the single 8-meter cable will reduce the connectable number of microphones by 4 per a AC adaptor.

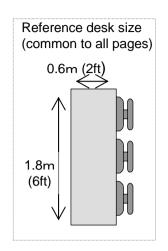


Basic Layout (1 of 18)

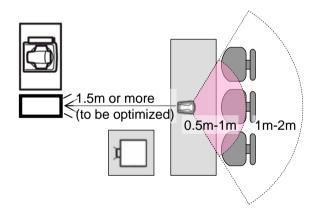
Number of attendees: 1 to 3

PCS-A1

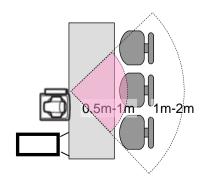




PCSA-A3

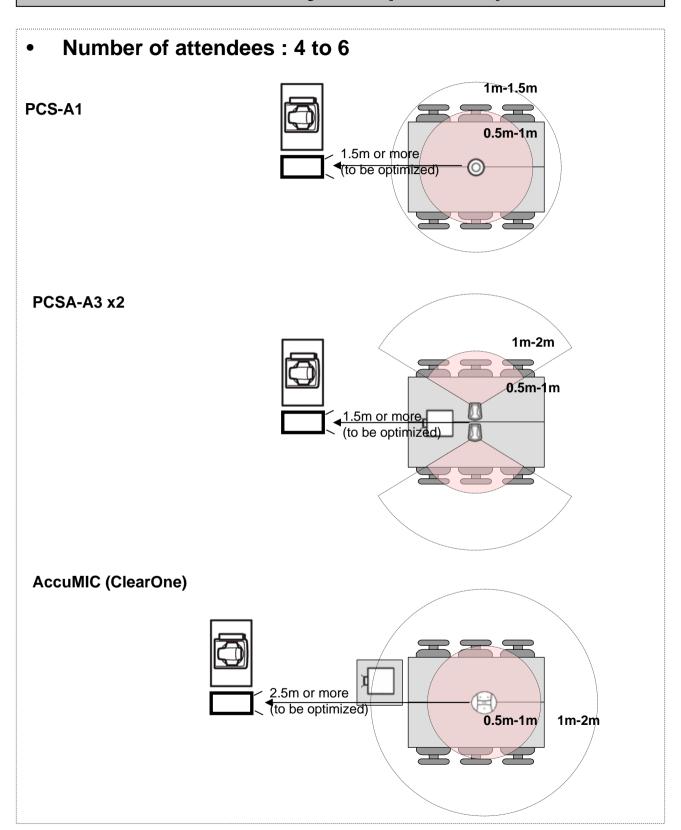


PCS-C1 (PCS-1 camera unit with built-in microphone)



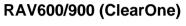


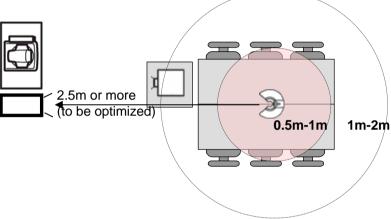
Basic Layout (2 of 18)



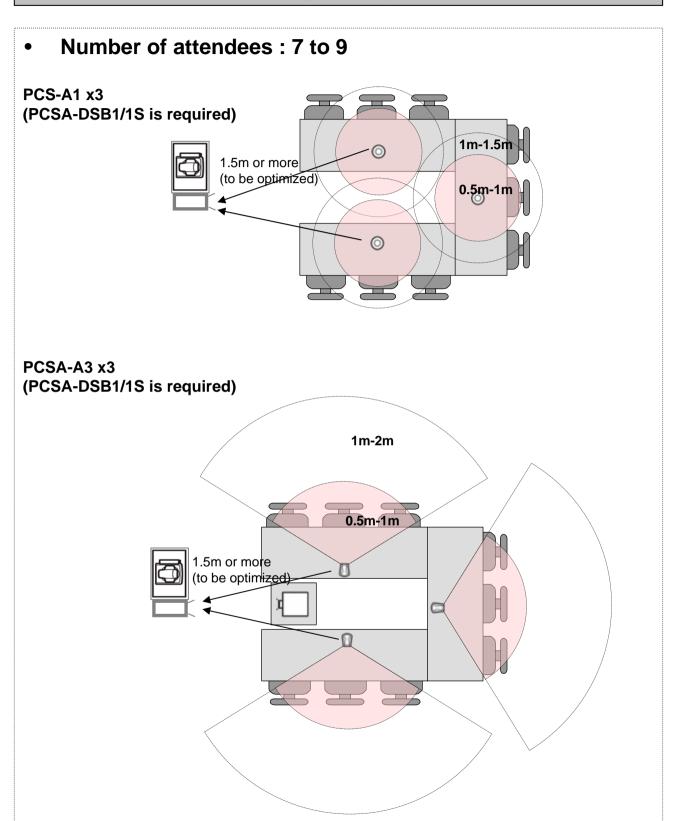
Basic Layout (3 of 18)

Number of attendees: 4 to 6 (continued)

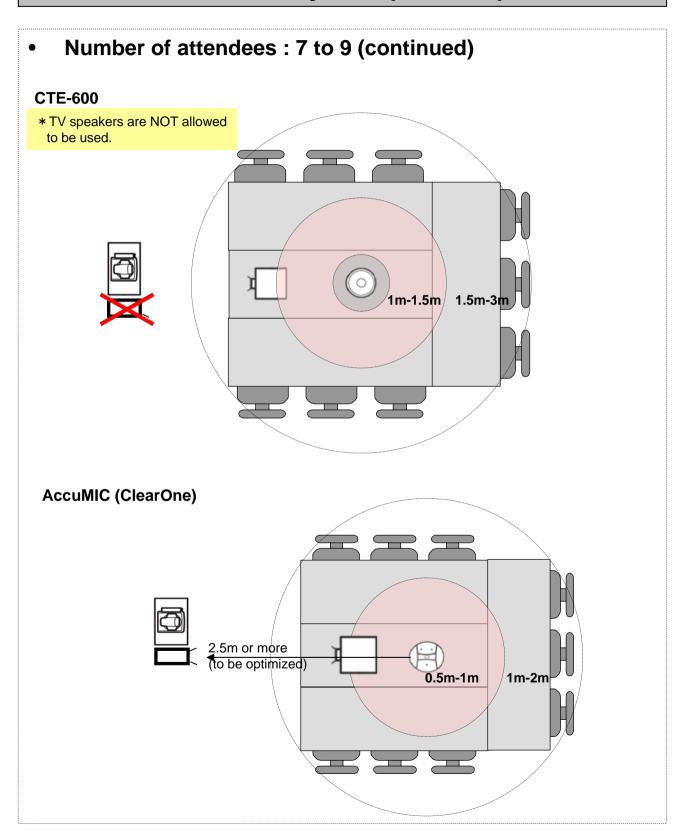




Basic Layout (4 of 18)

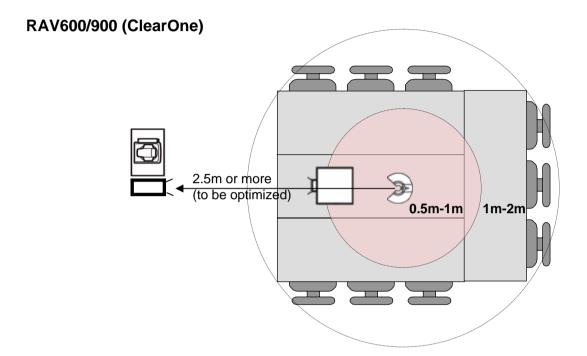


Basic Layout (5 of 18)

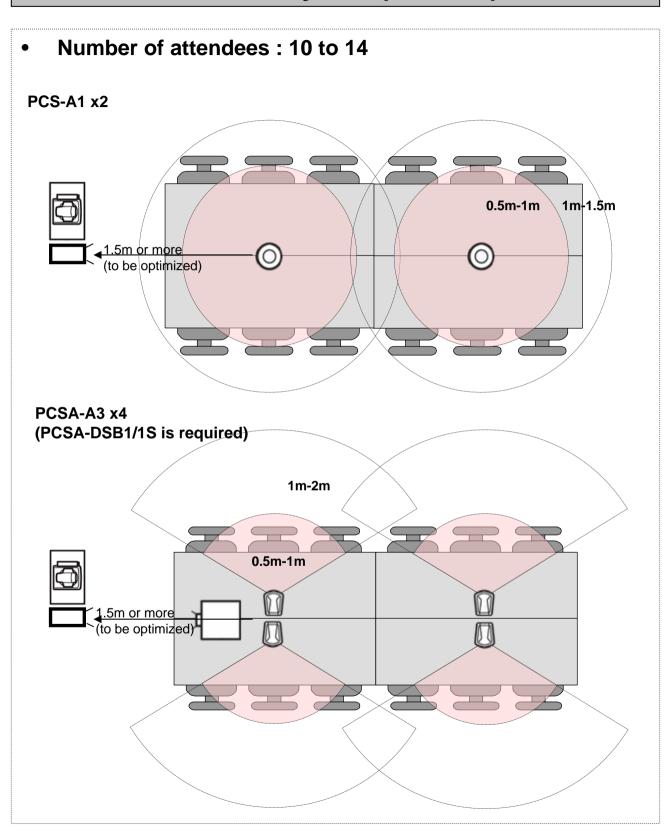


Basic Layout (6 of 18)

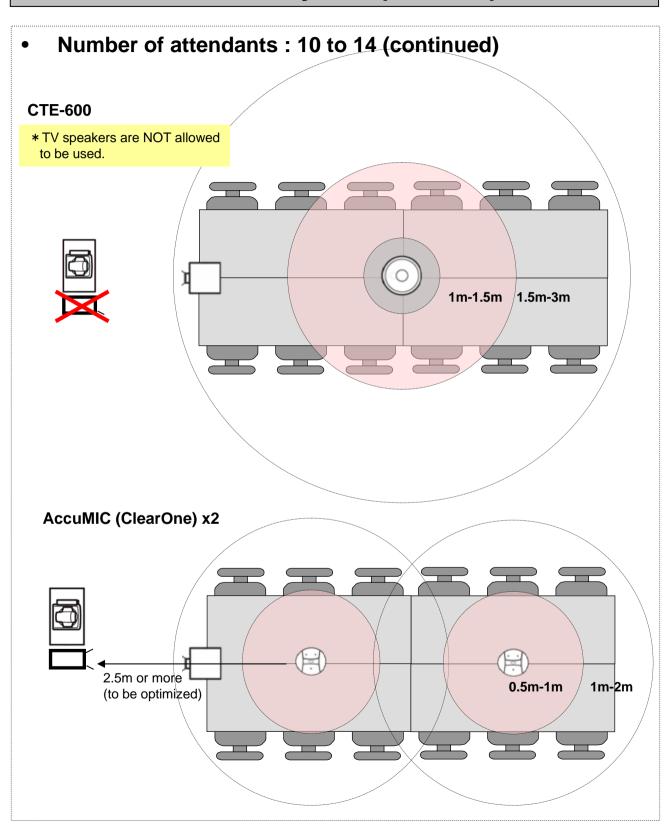
Number of attendees: 7 to 9 (continued)



Basic Layout (7 of 18)

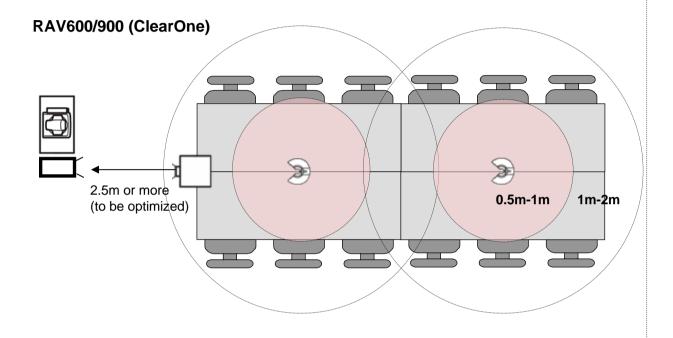


Basic Layout (8 of 18)



Basic Layout (9 of 18)

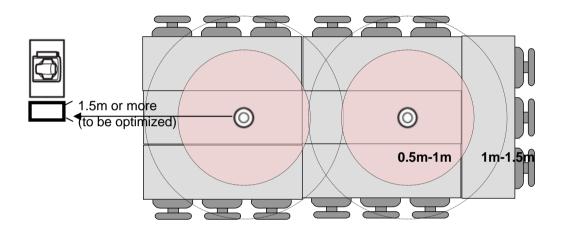
Number of attendees : 10 to 14 (continued)



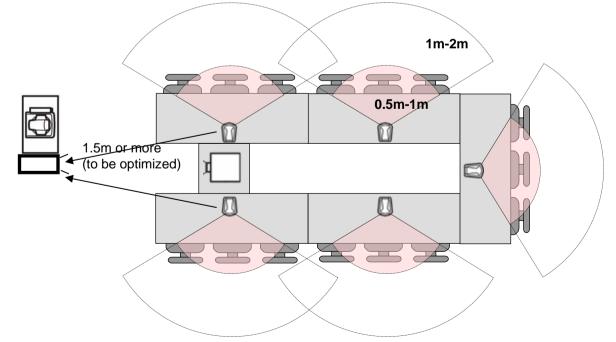
Basic Layout (10 of 18)

Number of attendees: 15 or more

PCS-A1 x 2







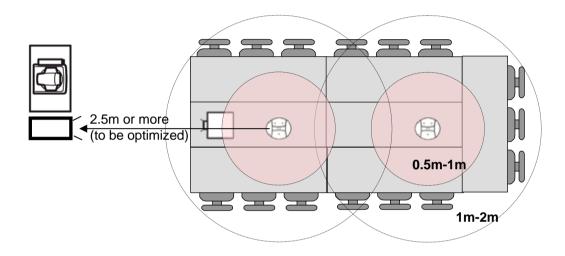
Basic Layout (11 of 18)

Number of attendants: 15 or more (continued) CTE-600 x 2 + CTE-A10 x2 * TV speakers are NOT allowed to be used. 1.5m-3m 1m-1.5m 3m (10ft) or more Additional tables should be one meter (3 ft) wide or more RAV600/900 (ClearOne) (2.5m or more (to be optimized) 0.5m-1m 1m-2m

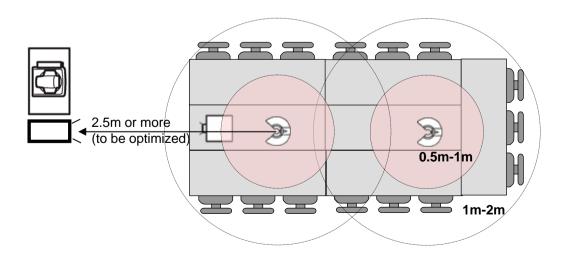
Basic Layout (12 of 18)

Number of attendees: 15 or more (continued)

AccuMIC (ClearOne) x2



RAV600/900 (ClearOne)



Basic Layout (13 of 18)

Number of attendees: 15 or more (continued) CTE-600 x 4 + CTE-A10 x4 * TV speakers are NOT allowed to be used. 1.5m-3m 1m-1.5m 3m (10ft) or more

Additional tables should be one meter (3 ft) wide or more

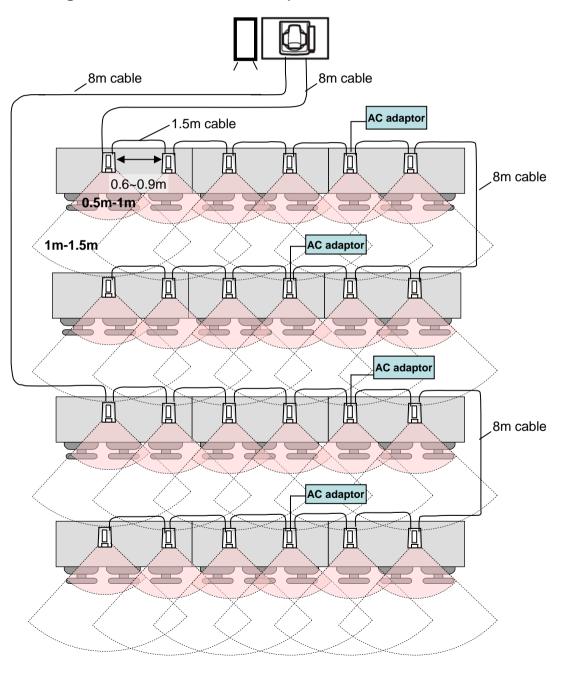
Basic Layout (14 of 18)

Number of attendees: 15 or more (continued) PCSA-A7 x n (To be used together with the PCS-G70/G50) 1m-1.5m 0.5m-1m 8m cable AC adaptor . 1.5m cable 0.6~0.9m 1.5m or more (to be optimized) 1m-1.5m 0.5m-1m 0.6~0.9n AC adaptor 8m cable 1.5m cable

Basic Layout (15 of 18)

 Number of attendees : 15 or more (with Classroom Style seating)

PCSA-A7 x n (To be used together with the PCS-G70/G50)

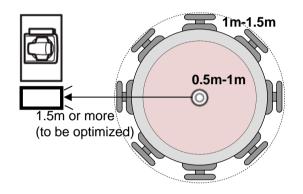


Basic Layout (16 of 18)

Round Table Style

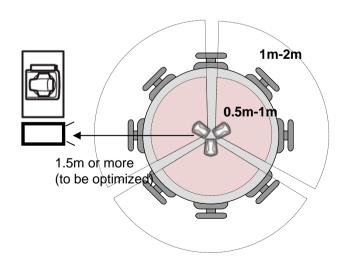
Note: Avoid moving objects between microphone(s) and loudspeakers, or the learning result of the echo canceller may be affected.

PCS-A1 x 1



Good for 4-8 attendees

PCSA-A3 x3 (PCSA-DSB1/1S is required)



Good for 6-10 attendees

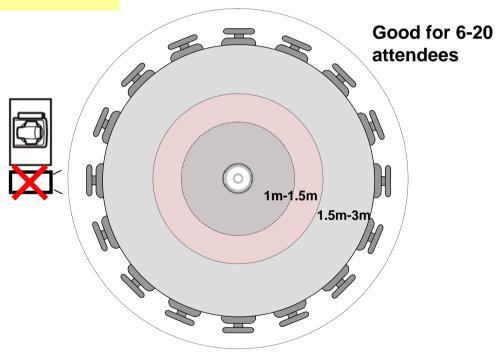
Basic Layout (17 of 18)

Round Table Style (continued)

Note: Avoid moving objects between microphone(s) and loudspeakers, or the learning result of the echo canceller may be affected.

CTE-600

* TV speakers are NOT allowed to be used.



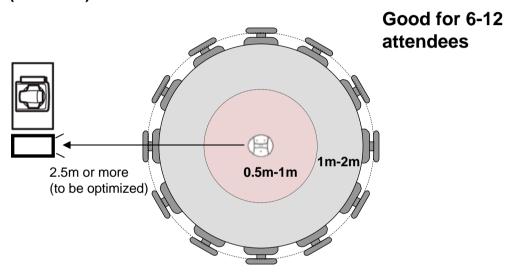


Basic Layout (18 of 18)

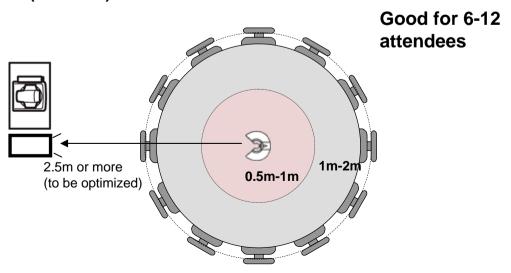
Round Table Style (continued)

Note: Avoid moving objects between microphone(s) and loudspeakers, or the learning result of the echo canceller may be affected.

AccuMIC (ClearOne)



RAV600/900 (ClearOne)

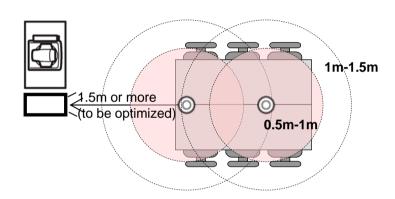


Advanced Layout (1 of 13)

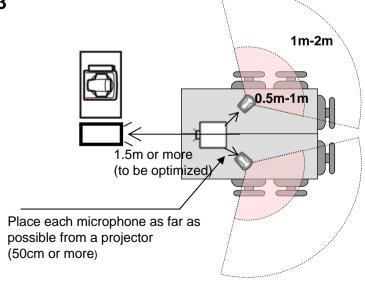
In videoconferencing, speakers tend to not speak to a microphone. As most of them speak to a monitor which is displaying a remote party, speaker's voice cannot be collected enough, even using the basic layouts. To prevent this, please also try advanced layouts to be hereinafter shown.

Number of attendees: 4 to 6

PCS-A1



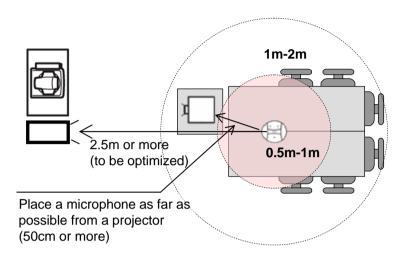
PCSA-A3



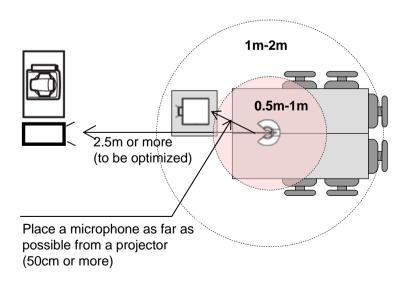
Advanced Layout (2 of 13)

Number of attendees: 4 to 6 (continued)

AccuMIC (ClearOne)



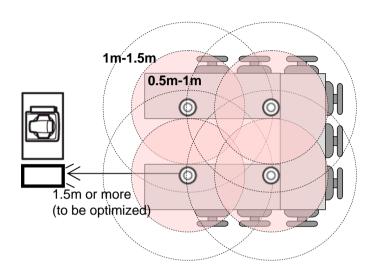
RAV600/900 (ClearOne)



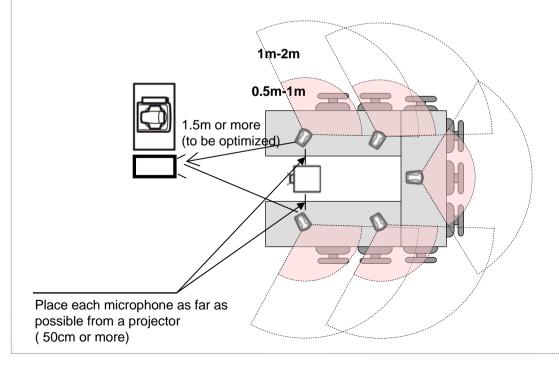
Advanced Layout (3 of 13)

Number of attendees: 7 to 9

PCS-A1 x4 (PCSA-DSB1/1S is required)



PCSA-A3 x5 (PCS-DSB1/1S is required)

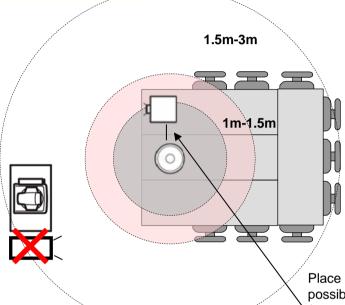


Advanced Layout (4 of 13)

Number of attendees: 7 to 9 (continued)

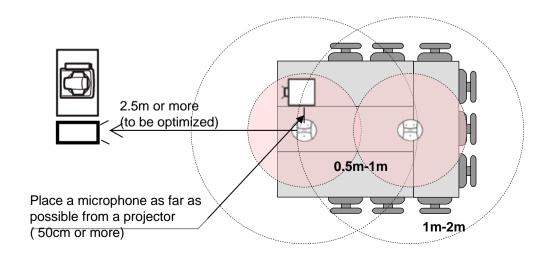
CTE-600

* TV speakers are NOT allowed to be used.



Place a microphone as far as possible from a projector (50cm or more)

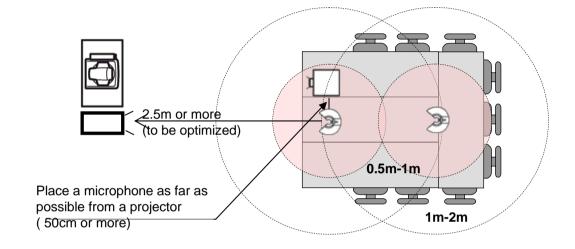
AccuMIC (ClearOne) x2



Advanced Layout (5 of 13)

Number of attendees: 7 to 9 (continued)

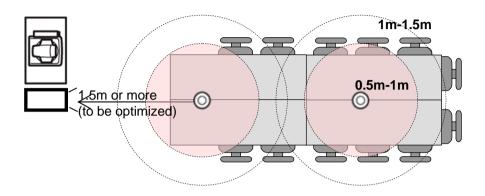
RAV600/900 (ClearOne)



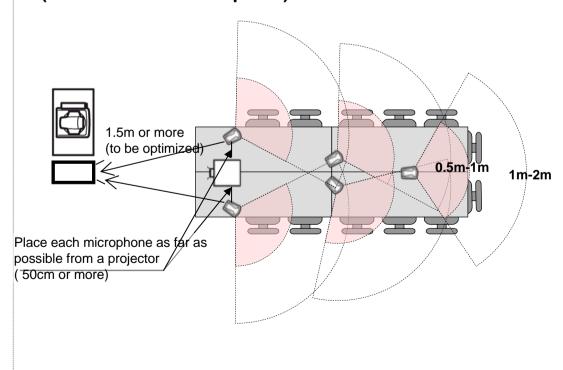
Advanced Layout (6 of 13)

Number of attendees: 10 to 14

PCS-A1 x2



PCSA-A3 x5 (PCSA-DSB1/1S is required)



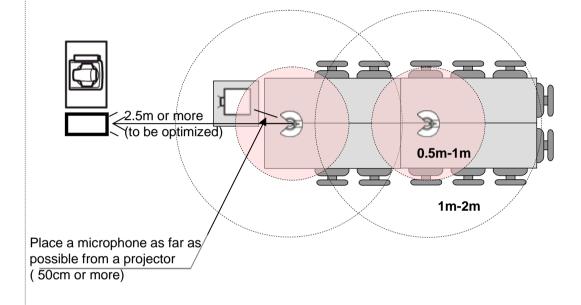
Advanced Layout (7 of 13)

Number of attendees: 10 to 14 (continued) CTE-600 x2 + CTE-A10 x2 * TV speakers are NOT allowed to be used. 1.5m-3m 1m-1.5m Place a microphone as far as possible from a projector (50cm or more) AccuMIC (ClearOne) x2 (to be optimized) 0.5m-1m Place a microphone as far as possible from a projector 1m-2m (50cm or more)

Advanced Layout (8 of 13)

Number of attendees: 10 to 14 (Continued)

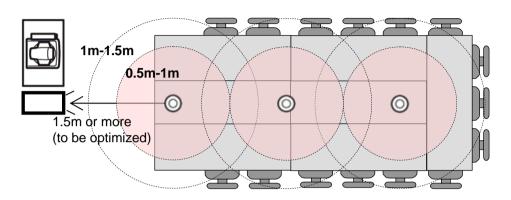
RAV600/900 (ClearOne)



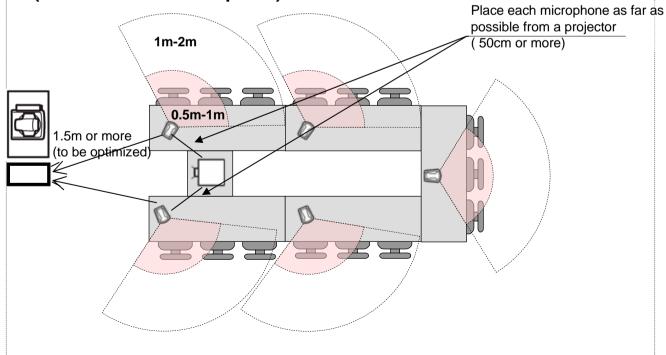
Advanced Layout (9 of 13)

Number of attendees: 15 or more

PCS-A1 x3 (PCSA-DSB1/1S is required)

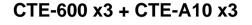


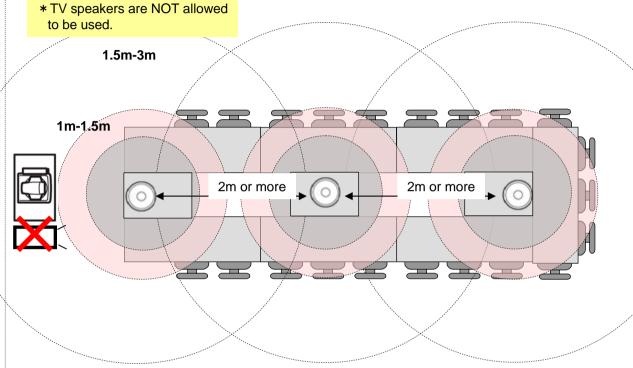
PCSA-A3 x5 (PCSA-DSB1/1S is required)



Advanced Layout (10 of 13)

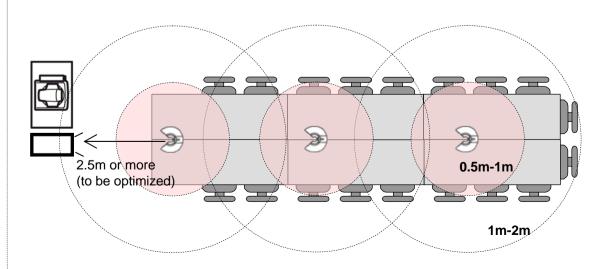
Number of attendees: 15 or more (continued)





Additional tables should be one meter (3 ft) wide or more

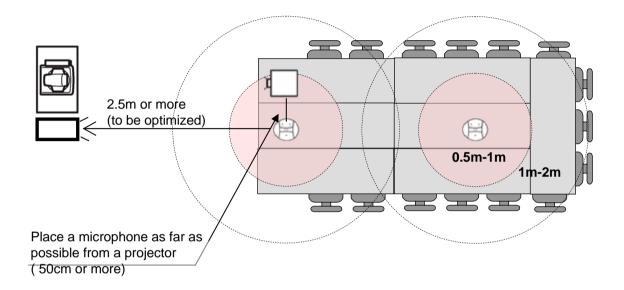
RAV900 (ClearOne)



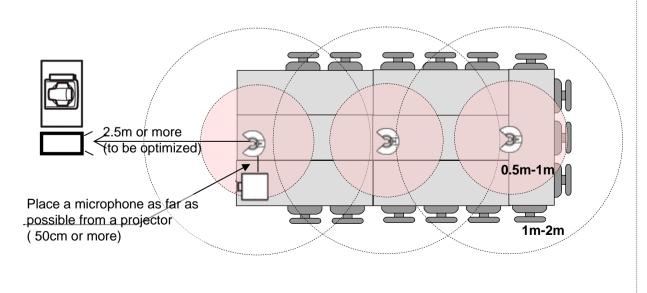
Advanced Layout (11 of 13)

Number of attendees: 15 or more (continued)

AccuMIC (ClearOne) x2



RAV900 (ClearOne)

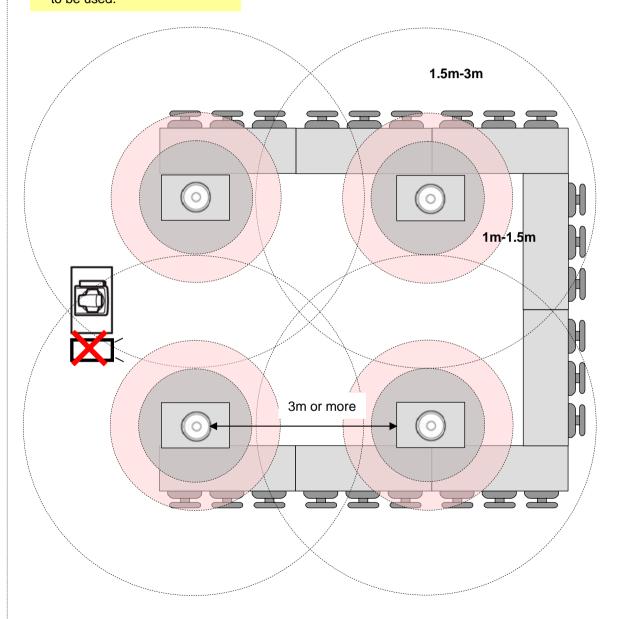


Advanced Layout (12 of 13)

Number of attendees: 15 or more (continued)

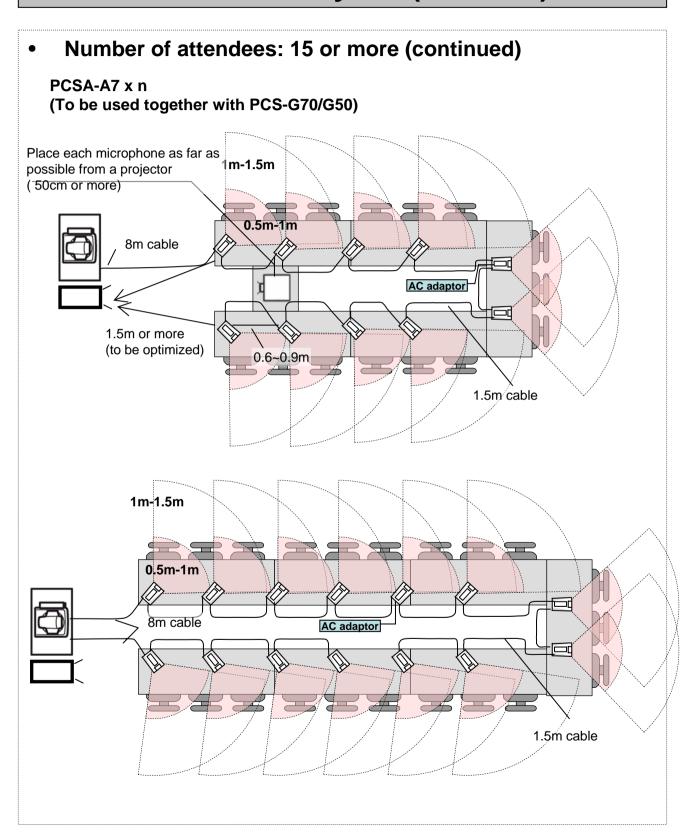
CTE-600 x4+ CTE-A10 x4

* TV speakers are NOT allowed to be used.



*Tables of about 1m wide are added in front of each conference table.

Advanced Layout (13 of 13)



Appendix



PCS-1 Audio Selection List

Audio Setup Menu	Nenu				Operating Status			Audio Output			
	Input Select	Mc Select	Echo Canceller	Audio Signal Input Terminal	Internal Echo Canceller	MIC Mute	RCVR Volume Adj.	AUDIO OUT/ DSB AUX	AUDIO OUT (MIXED) (Rec mute off)	AUDIO OUT (MIXED) (Rec mute on)	Remarks
OFF	MIC	Internal	Internal	Built-in MIC	Enabled	Enabled	Enabled	Remote	Remote + Built-in MIC	Remote + Built-in MIC	
			External	AUDIO IN	Disabled	Disabled	Disabled	Remote	Remote + AUX	Remote + AUX	
			OFF	Built-in MIC	Disabled	Enabled	Enabled	Remote	Remote + Built-in MC	Remote + Built-in MIC	
		External	Internal	External MIC	Enabled	Enabled	Enabled	Remote	Remote + External MIC	Remote + External MIC	
			External	AUDIO IN	Disabled	Disabled	Disabled	Remote	Remote + AUX	Remote + AUX	
			OFF	External MIC	Disabled	Enabled	Enabled	Remote	Remote + External MIC	Remote + External MIC	
		DSB MIC	Internal	DSB MIC	Enabled	Enabled	Enabled	Remote	Remote + DSB MIC	Remote + DSB MIC	
			External	AUDIO IN	Disabled	Disabled	Disabled	Remote	Remote + AUX	Remote + AUX	
			OFF	DSB MIC	Disabled	Enabled	Enabled	Remote	Remote + DSB MIC	Remote + DSB MIC	
	AUX	Internal	Internal	AUDIO IN	Disabled	Disabled	Enabled	Remote + AUX	Remote + AUX Remote + AUX	No output	
			External	AUDIO IN	Disabled	Disabled	Disabled Remote	Remote	Remote + AUX	No output	
			OFF	AUDIO IN	Disabled	Disabled	Enabled	Enabled Remote + AUX Remote + AUX	Remote + AUX	No output	
		External	Internal	AUDIO IN	Disabled	Disabled	Enabled	Remote + AUX	Remote + AUX Remote + AUX	No output	
											Recommended when an
			External	AUDIO IN	Disabled	Disabled	Disabled Remote	Remote	Remote + AUX	No output	external echo canceller is used.
			OFF	AUDIO IN	Disabled	Disabled	Enabled	Enabled Remote + AUX Remote + AUX	Remote + AUX	No output	
		DSB MIC	Internal		Disabled	Disabled	Enabled	Enabled Remote + AUX Remote + AUX		No output	
			External		Disabled	Disabled	Disabled Remote	Remote	Remote + AUX	No output	
			OFF	AUDIO IN	Disabled	Disabled	Enabled	Enabled Remote + AUX Remote + AUX	Remote + AUX	No output	
	MIC+AUX	Internal	Internal	Built-in MIC + AUDIO IN	Built-in MIC Enabled Built-in MIC Enabled		Enabled	Remote + AUX	Enabled Remote + AUX Remote + Built-in MIC + AUX	No output	
			External	AUDIO IN	Disabled	Disabled	Disabled Remote	Remote	Remote + AUX	No output	
			OFF	Built-in MIC + AUDIO IN	Disabled	Built-in MIC Enabled	Enabled	Remote + AUX	Enabled Remote + AUX Remote + Built-in MIC + AUX	No output	
		External	Internal	External MIC + AUDIO IN	External MIC Enabled	External MIC Enabled	Enabled	Remote + AUX	External MIC Enabled External MIC Enabled Enabled Remote + AUX Remote + External MIC + AUX No output	No output	
			External	AUDIO IN	Disabled	Disabled	Disabled Remote	Remote	Remote + AUX	No output	
			OFF	External MIC + AUDIO IN	External MIC Enabled	External MIC Enabled	Enabled	Remote + AUX	External MIC + AUDIO IN External MIC Enabled External MIC Enabled Enabled Remote + AUX Remote + External MIC + AUX	No output	
		DSB MIC	Internal	DSB MIC + AUDIO IN	DSB MICEnabled	DSB MIC Enabled	Enabled	Remote + AUX	Remote + AUX Remote + DSB MIC + AUX	No output	
			External	AUDIO IN	Disabled	Disabled	Disabled	Remote	Remote + AUX	No output	
			OFF	DSB MIC + AUDIO IN	DSB MICEnabled	DSB MIC Enabled	Enabled	Remote + AUX	Remote + AUX Remote + DSB MIC + AUX	No output	
											Recommended when an
AUX	ı	ı	ı	AUDIO IN	Disabled	Enabled	Disabled Remote	Remote	Remote + AUX	No output	external echo canceller is
DSB AUX IN	1	1	1	DSB AUX IN	Disabled	Enabled	Fnabled Remote	Ramota	Remote + DSB ALIX	No ordent	2000

AUX: AUDIO IN input of Communication terminal DSB AUX: AUX IN input of Data solution box Remote: Remote audio

MIC: MIC1/MIC2 input of Communication terminal DSB MIC: MIC1 to MIC5 input of Data solution box LINE: AUDIO LINE input of Communication terminal

Audio input/output

PCS-G50/G70 Audio Selection List

Audio Selection List of PCS-G70/G70P/G50/G50P	ion List of	PCS-G70/	'G70P/G50	/G50P	(Ver.2.24 and higher)	higher)					
Audio Setup Menu	nus				Operating Status			Audio Output			
сте	Input Select	Mic Select	Echo Canceller	Audio Signal Input Terminal	Internal Echo Canceller	MIC Mute	RCVR / Volume II Adf.	AUDIO OUT DSB AUX OUT DSB LINE OUT	AUDIO OUT (MIXED) (Rec mute off)	AUDIO OUT (MIXED) (Rec mute on)	Remarks
OFF	MIC	MIC	NO	MIC	Enabled	Enabled	Enabled Remote	Remote	Remote + MIC	0	Recommended when a specified microphone *1 is used.
			OFF	MIC	Disabled	Enabled	Enabled Remote		Remote + MIC	Remote + MIC	
		DSB MIC	NO	DSB MIC	Enabled	Enabled	Enabled Remote		Remote + DSB MIC Remote + DSB MIC	Remote + DSB MIC	Recommended when a specified microphone *1 is used.
			OFF	DSB MIC	Disabled	Enabled	Enabled Remote		Remote + DSB MIC Remote + DSB MIC	Remote + DSB MIC	
		LINE	NO	LINE	Enabled	Enabled	Enabled Remote		Remote + LINE	Remote + LINE	
			OFF	LINE	Disabled	Enabled	Enabled Remote		Remote + LINE	Remote + LINE	Recommended when an external echo canceller is used.
		EC-MIC	1	EC-MIC	-	Enabled	Enabled Remote		Remote + EC-MIC	Remote + EC-MIC	
	AUX	MIC	NO	AUX	Disabled	Disabled	Enabled	Enabled Remote + AUX	Remote + AUX	Remote	
			OFF	AUX	Disabled	Disabled	Enabled	Enabled Remote + AUX	Remote + AUX	Remote	
		DSB MIC	NO	AUX	Disabled	Disabled	Enabled	Enabled Remote + AUX	Remote + AUX	Remote	
			OFF	AUX	Disabled	Disabled	Enabled	Enabled Remote + AUX	Remote + AUX	Remote	
		LINE	NO	AUX	Disabled	Disabled	Enabled	Enabled Remote + AUX	Remote + AUX	Remote	
			OFF		Disabled	Disabled	Enabled	Enabled Remote + AUX	Remote + AUX	Remote	
		EC-MIC	-	AUX	Disabled	Disabled	Enabled	Enabled Remote + AUX Remote + AUX	Remote + AUX	Remote	
	MIC+AUX	MIC	NO	MIC + AUX	MIC Enabled	MIC Enabled	Enabled	Enabled Remote + AUX	Remote + MIC + AUX Remote + MIC	Remote + MIC	
			OFF	AUX	Disabled	MIC Enabled	Enabled	Enabled Remote + AUX	Remote + MIC + AUX Remote + MIC	Remote + MIC	
		DSB MIC	NO	DSB MIC + AUX DSB MIC Enabled DSB MIC Enabled Enabled Remote + AUX	DSB MIC Enabled	DSB MIC Enabled	Enabled		Remote + DSB MIC + AUX Remote + DSB MIC	Remote + DSB MIC	
			OFF	DSB MIC + AUX Disabled		DSB MIC Enabled Enabled Remote + AUX	Enabled		Remote + DSB MIC + AUX Remote + DSB MIC	Remote + DSB MIC	
		LINE	NO	LINE + AUX	LINE Disabled	LINE Disabled LINE Disabled Enabled Remote + AUX	Enabled		Remote + LINE + AUX Remote + LINE	Remote + LINE	
			OFF	LINE + AUX	Disabled	LINE Disabled Enabled Remote + AUX	Enabled		Remote + LINE + AUX Remote + LINE	Remote + LINE	
		EC-MIC	1	EC-MIC + AUX	ı	Enabled	Enabled	Enabled Remote + AUX	Remote + EO-MIC + AUX Remote + EC-MIC	Remote + EC-MIC	
INF	_	-	-	IN I	Disabled	Fnahlad	Frehad Remote		Remote + LINE	Remote + I INF	Recommended when CTE.
										3	an external echo canceller is used.
DSB AUX IN	1	1	1	DSB AUX	Disabled	Enabled	Enabled Remote		Remote + DSB AUX	Remote + DSB AUX	Remote + DSB AUX Remote + DSB AUX connected to DSB AUX) is used.
											24 4000 0004/ F4 000

MIC: MIC1/MIC2 input of Communication terminal DSB MIC: MIC1 to MIC5 input of Data solution box LINE: AUDIO LINE input of Communication terminal

Audio input/output

. AUX: AUDIO AUX IN input of Communication terminal
. DSB AUX: AUX IN input of Data solution box
. Remote: Remote audio