

Edge A & Edge NQ Serial Control Protocol v1.1

General Message Format

Byte	1	2	3	4	5	6	7	8	...	
	#	g	g	,	n	n	,	d	d	\r

Each byte contains an ASCII character.

All transmissions start with the '#' character (ASCII decimal 35).

gg = two byte Command Group.

There is a comma (ASCII decimal 44) separating the Group code from the Command Number.

nn = two byte Command Number.

There is a comma separating the Command Number and any Data bytes.

dd = Variable number of Data bytes.

Message terminated with a Carriage Return (ASCII decimal 13).

RS232 port settings

9600 Baud

no parity bits

8 data bits

1 stop bit

Group Commands

Group	Description
00	Error Messages
01	Amplifier Command
02	Replies from Amplifier Commands
03	Source Commands
04	Replies from Source Commands
05	Media Commands
06	Replies from Media Commands
13	Version Commands
14	Replies from Version Commands

Error Messages are only ever sent from the Edge unit.

- These are used to inform the user when the Edge unit does not understand the received message correctly, or the command is valid but cannot be executed at the current time.
- Each message that is sent to the Edge unit should receive a response back which is either a Reply message or an Error message.

Command Groups occur in pairs.

- The first Group, eg Group 01 "Amplifier Commands", is for messages that may be sent to the Edge unit from external control equipment.
- The second Group, eg Group 02 "Replies from Amplifier Commands", are responses from the Edge unit following a command being received.

Power/Mute/Volume/Source changes in the Edge unit.

- When the power state, mute state, volume level or source is changed in the Edge unit by any means, for example from an IR remote control button press, a Reply message will be sent indicating the new changed state without the external control equipment needing to poll the unit for the current state.
- Volume change messages are not sent for every volume step, only when the volume has stabilised at a new level.

Source Selection

Where a source is specified, the code for the selected source is shown below

Edge A

Code	Source
00	Source A1
01	Source A2
02	Source A3
04	Source D1
05	Source D2
06	Source D3
08	Source D4 (TV ARC)
14	Bluetooth
16	Source D5 (USB Audio)

Edge NQ

Code	Source
00	Source A1
01	Source A2
02	Source A3
04	Source D1
05	Source D2
06	Source D3
08	Source D4 (TV ARC)
09	Internet Radio
13	Spotify
14	Bluetooth
15	AirPlay
16	Source D5 (USB Audio)
17	Chromecast
18	Music Library

Commands

Error Messages

Group	Number	Data	Description	Example	
00	01	No Data	Command group unknown	#00,01\r	The Command Group is invalid
00	02	No Data	Command number unknown	#00,02\r	The Command Number is invalid for this Group
00	03	No Data	Command data error	#00,03\r	The data is not in the expected range
00	04	No Data	Command not available	#00,04\r	The command is valid, but can't be actioned

An Error message is only sent from the Edge unit if there is a problem with the received message or the message is valid but cannot be actioned, otherwise a normal Reply message will be sent.

Amplifier Commands

Group	Number	Data	Description	Example	
01	01	No Data	Get current power state	#1,01\r	
01	02	0 - Standby 1 - On	Set power state	#1,02,0\r	Put unit into standby
01	03	No Data	Get current mute state	#1,03\r	
01	04	0 - Off 1 - On (Muted)	Set mute state	#1,04,0\r	Mute off
01	05	No Data	Get current volume level	#1,05\r	
01	08	-xx (dB)	Set absolute volume level	#1,08,-53\r	Set volume to -53dB

Replies from Amplifier Commands

Group	Number	Data	Description	Example	
02	01	0 - Standby 1 - On	Current power state	#02,01,1\r	Unit is currently powered on
02	03	0 - Off 1 - On (Muted)	Current mute state	#02,03,0\r	Mute is currently off
02	05	-xx (dB)	Current volume level	#02,05,-15\r	Volume is currently set to -15dB

Source Commands

Group	Number	Data	Description	Example	
03	01	No Data	Get current source	#3,01\r	
03	02	No Data	Select next source	#3,02\r	
03	03	No Data	Select previous source	#3,03\r	
03	04	Source	Set source	#3,04,02\r	Select Source A3

Replies from Source Commands

Group	Number	Data	Description	Example	
04	01	Source	Current source	#04,01,02\r	Current source is source A3

Media Commands

Group	Number	Data	Description	Example	
05	01	No Data	Play	#5,01\r	
05	02	No Data	Pause	#5,02\r	
05	04	No Data	Skip next	#5,04\r	
05	05	No Data	Skip previous	#5,05\r	

Media Commands are only valid for certain sources on the Edge NQ.

Replies from Media Commands

Replies from Media commands are not implemented in this version.

Version Commands

Group	Number	Data	Description	Example	
13	01	No Data	Get Protocol Version	#13,01\r	Get protocol version
13	02	No Data	Get Firmware Version	#13,02\r	Get firmware version

Replies from Version Commands

Group	Number	Data	Description	Example	
14	01	x.x	Protocol Version	#14,01,1.1\r	This RS232 Serial Protocol is version 1.1
14	02	x	Get Firmware Version	#14,02,10009001B01B61E\r	

Information in this document has been carefully checked for accuracy; however, Cambridge Audio's policy is one of continuous improvement, therefore design and specifications are subject to change without prior notice. If you notice any errors please feel free to contact us at: <http://techsupport.cambridgeaudio.com/>

This document contains proprietary information protected by copyright. All rights are reserved. No part of this document may be reproduced by any mechanical, electronic or other means, in any form, without prior written permission of the manufacturer.

© Copyright Cambridge Audio Ltd 2018