



Rotel RSX-1550 RS232 HEX Protocol

Date	Version	Update Description
February 6, 2012	1.00	Original Specification

The RS232 protocol structure for the RSX-1550 is detailed below. This is a HEX based communication protocol.

Connection Settings

Baud Rate	Parity	Valid Data Bits	Stop Bit Value	Handshaking	Data Type
115200	N	8	1	None	String

All commands sent to the attached Rotel device must follow the command structure detailed below, unless specified otherwise. Send only the bytes only, no spaces, delimiter, etc.

Standard Command String Format

Start	Count	Device ID	Type	Key	Checksum
0xFE	0x03	0xC9	0x10	0xFF	0xFF

Note: The count byte only includes the ID, Type, and Key bytes; it does not include the Start or Checksum bytes.

Note 2: Do not include any carriage returns or line feeds after the commands

Communication Protocol

Command and response messages are included on the following pages. The standard response string of the unit mirrors the data that would be available on the front panel of the unit.

Any change to the status of the front display on the unit will prompt a feedback string mirroring that change.

Note that the spaces shown between hex bytes below are for clarity only; do not include spaces in the actual command sent to the unit.

Meta Encoding

The start byte for all command and response strings is FE. To keep the device from encountering the start byte FE in any position other than as the start byte, any occurrence of the bytes FD or FE in a command string must be converted to either FD 00 (for FD), or FD 01 (for FE). This will allow the string to pass while masking any occurrence of the byte FE except as the start byte. Commands that have Meta Encoding applied will be highlighted in red.

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Table 1 - Type 10 Primary Commands

RSX-1550 HEX	Command Description
POWER & VOLUME COMMANDS	
FE 03 C9 10 0A E6	Power Toggle
FE 03 C9 10 4A 26	Power Off
FE 03 C9 10 4B 27	Power On
FE 03 C9 10 0B E7	Volume Up
FE 03 C9 10 0C E8	Volume Down
FE 03 C9 10 1E FA	Mute Toggle
FE 03 C9 10 71 4D	Power Off All Zones
SOURCE SELECTION COMMANDS	
FE 03 C9 10 02 DE	Source CD
FE 03 C9 10 03 DF	Source Tuner
FE 03 C9 10 04 E0	Source Tape
FE 03 C9 10 05 E1	Source Video 1
FE 03 C9 10 06 E2	Source Video 2
FE 03 C9 10 07 E3	Source Video 3
FE 03 C9 10 08 E4	Source Video 4
FE 03 C9 10 09 E5	Source Video 5
FE 03 C9 10 15 F1	Source Multi Input
SURROUND MODE COMMANDS	
FE 03 C9 10 11 ED	Stereo
FE 03 C9 10 12 EE	Dolby 3 Stereo
FE 03 C9 10 13 EF	Dolby Pro Logic
FE 03 C9 10 14 F0	DSP Mode Toggle
FE 03 C9 10 53 2F	Dolby 3 Stereo / Pro Logic Toggle
FE 03 C9 10 54 30	dts Neo:6 Music/Cinema Toggle
FE 03 C9 10 57 33	DSP 1
FE 03 C9 10 58 34	DSP 2
FE 03 C9 10 59 35	DSP 3
FE 03 C9 10 5A 36	DSP 4

RSX-1550 HEX	Command Description
FE 03 C9 10 5B 37	5 Channel Stereo
FE 03 C9 10 5C 38	7 Channel Stereo
FE 03 C9 10 5D 39	Dolby PLIIx Cinema
FE 03 C9 10 5E 3A	Dolby PLIIx Music
FE 03 C9 10 74 50	Dolby PLIIx Game
FE 03 C9 10 5F 3B	Dolby Pro Logic
FE 03 C9 10 60 3C	dts Neo:6 Music
FE 03 C9 10 61 3D	dts Neo:6 Cinema
FE 03 C9 10 62 3E	PLIIx Panorama Toggle
FE 03 C9 10 63 3F	PLIIx Dimension Up
FE 03 C9 10 64 40	PLIIx Dimension Down
FE 03 C9 10 65 41	PLIIx Center Width Up
FE 03 C9 10 66 42	PLIIx Center Width Down
FE 03 C9 10 68 44	Dolby Digital EX Toggle
FE 03 C9 10 22 FD 01	Next Surround Mode
TONE CONTROL COMMANDS	
FE 03 C9 10 0D E9	Treble Up
FE 03 C9 10 0E EA	Treble Down
FE 03 C9 10 0F EB	Bass Up
FE 03 C9 10 10 EC	Bass Down
FE 03 C9 10 67 43	Tone Control Select
OSD MENU COMMANDS	
FE 03 C9 10 18 F4	OSD Menu
FE 03 C9 10 19 F5	Enter
FE 03 C9 10 1A F6	Cursor Right
FE 03 C9 10 1B F7	Cursor Left
FE 03 C9 10 1C F8	Cursor Up
FE 03 C9 10 1D F9	Cursor Down
TUNER COMMANDS	
FE 03 C9 10 28 04	Tune Up
FE 03 C9 10 29 05	Tune Down
FE 03 C9 10 6F 4B	Preset Up
FE 03 C9 10 70 4C	Preset Down
FE 03 C9 10 72 4E	Frequency Up
FE 03 C9 10 73 4F	Frequency Down
FE 03 C9 10 27 03	Memory
FE 03 C9 10 24 00	Band Toggle
FE 03 C9 10 56 32	AM
FE 03 C9 10 55 31	FM
FE 03 C9 10 20 FC	Tune / Preset
FE 03 C9 10 69 45	Tuning Mode Select
FE 03 C9 10 6A 46	Preset Mode Select

RSX-1550 HEX	Command Description
FE 03 C9 10 25 01	Frequency Direct
FE 03 C9 10 21 FD 00	Preset Scan
FE 03 C9 10 44 20	Tuner Display
FE 03 C9 10 45 21	RDS PTY
FE 03 C9 10 46 22	RDS TP
FE 03 C9 10 47 23	RDS TA
FE 03 C9 10 26 02	FM Mono
NUMERIC KEY COMMANDS	
FE 03 C9 10 2A 06	Number 1
FE 03 C9 10 2B 07	Number 2
FE 03 C9 10 2C 08	Number 3
FE 03 C9 10 2D 09	Number 4
FE 03 C9 10 2E 0A	Number 5
FE 03 C9 10 2F 0B	Number 6
FE 03 C9 10 30 0C	Number 7
FE 03 C9 10 31 0D	Number 8
FE 03 C9 10 32 0E	Number 9
FE 03 C9 10 33 0F	Number 0
OTHER COMMANDS	
FE 03 C9 10 17 F3	Record Function Select
FE 03 C9 10 16 F2	Dynamic Range
FE 03 C9 10 1F FB	Digital Input Select
FE 03 C9 10 23 FF	Zone 2 / Main
FE 03 C9 10 4C 28	Temporary Center Trim
FE 03 C9 10 4D 29	Temporary Subwoofer Trim
FE 03 C9 10 4E 2A	Temporary Surround Trim
FE 03 C9 10 4F 2B	Cinema EQ Toggle
FE 03 C9 10 52 2E	Front Display On/Off
FE 03 C9 10 FF DB	Display Refresh
FE 03 C9 10 6E 4A	Party Mode Toggle
FE 03 C9 10 75 51	Output Resolution
FE 03 C9 10 78 54	HDMI Amp Mode
FE 03 C9 10 79 55	HDMI TV Mode
FE 03 C9 10 93 6F	Force Factory Default (Requires Main Software V1.2.8)

Table 2 - Type 14 Main Zone Commands

NOTE: These commands are duplicate functions of the primary commands in the table above bearing the same name, but are discrete for the main zone only. For multi-zone installation applications, it is recommended that the below commands be used where applicable rather than the type 10 commands to avoid zone conflicts.

RSX-1550 HEX	Command Description
MAIN ZONE POWER & VOLUME COMMANDS	
FE 03 C9 14 0A EA	Main Zone Power Toggle
FE 03 C9 14 4A 2A	Main Zone Power Off
FE 03 C9 14 4B 2B	Main Zone Power On
FE 03 C9 14 00 E0	Main Zone Volume Up
FE 03 C9 14 01 E1	Main Zone Volume Down
FE 03 C9 14 1E FD 01	Main Zone Mute Toggle
FE 03 C9 14 6C 4C	Main Zone Mute On
FE 03 C9 14 6D 4D	Main Zone Mute Off
MAIN ZONE SOURCE SELECTION COMMANDS	
FE 03 C9 14 02 E2	Main Zone Source CD
FE 03 C9 14 03 E3	Main Zone Source Tuner
FE 03 C9 14 04 E4	Main Zone Source Tape
FE 03 C9 14 05 E5	Main Zone Source Video 1
FE 03 C9 14 06 E6	Main Zone Source Video 2
FE 03 C9 14 07 E7	Main Zone Source Video 3
FE 03 C9 14 08 E8	Main Zone Source Video 4
FE 03 C9 14 09 E9	Main Zone Source Video 5
FE 03 C9 14 15 F5	Main Zone Source Multi Input

Table 3 - Type 15 Record Source Commands

RSX-1550 HEX	Command Description
RECORD SOURCE SELECTION COMMANDS	
FE 03 C9 15 02 E3	Record Source CD
FE 03 C9 15 03 E4	Record Source Tuner
FE 03 C9 15 04 E5	Record Source Tape
FE 03 C9 15 05 E6	Record Source Video 1
FE 03 C9 15 06 E7	Record Source Video 2
FE 03 C9 15 07 E8	Record Source Video 3
FE 03 C9 15 08 E9	Record Source Video 4
FE 03 C9 15 09 EA	Record Source Video 5
FE 03 C9 15 6B 4C	Record Follow Main Zone Source

Table 4 - Type 16 Zone 2 Commands

RSX-1550 HEX	Command Description
ZONE 2 POWER & VOLUME COMMANDS	
FE 03 C9 16 0A EC	Zone 2 Power Toggle
FE 03 C9 16 4A 2C	Zone 2 Power Off
FE 03 C9 16 4B 2D	Zone 2 Power On
FE 03 C9 16 00 E2	Zone 2 Volume Up
FE 03 C9 16 01 E3	Zone 2 Volume Down
FE 03 C9 16 1E 00	Zone 2 Mute Toggle
FE 03 C9 16 6C 4E	Zone 2 Mute On
FE 03 C9 16 6D 4F	Zone 2 Mute Off
FE 03 C9 16 71 53	Power Off All Zones
ZONE 2 SOURCE SELECTION COMMANDS	
FE 03 C9 16 02 E4	Zone 2 Source CD
FE 03 C9 16 03 E5	Zone 2 Source Tuner
FE 03 C9 16 04 E6	Zone 2 Source Tape
FE 03 C9 16 05 E7	Zone 2 Source Video 1
FE 03 C9 16 06 E8	Zone 2 Source Video 2
FE 03 C9 16 07 E9	Zone 2 Source Video 3
FE 03 C9 16 08 EA	Zone 2 Source Video 4
FE 03 C9 16 09 EB	Zone 2 Source Video 5
FE 03 C9 16 6B 4D	Zone 2 Follow Main Zone Source
ZONE 2 TUNER COMMANDS	
FE 03 C9 16 28 0A	Zone 2 Tune Up
FE 03 C9 16 29 0B	Zone 2 Tune Down
FE 03 C9 16 6F 51	Zone 2 Preset Up
FE 03 C9 16 70 52	Zone 2 Preset Down
FE 03 C9 16 72 54	Zone 2 Frequency Up
FE 03 C9 16 73 55	Zone 2 Frequency Down
FE 03 C9 16 24 06	Zone 2 Band Toggle
FE 03 C9 16 56 38	Zone 2 AM
FE 03 C9 16 55 37	Zone 2 FM
FE 03 C9 16 20 02	Zone 2 Tune / Preset
FE 03 C9 16 69 4B	Zone 2 Tuning Mode Select
FE 03 C9 16 6A 4C	Zone 2 Preset Mode Select
FE 03 C9 16 21 03	Zone 2 Preset Scan
FE 03 C9 16 26 08	Zone 2 FM Mono
ZONE 2 NUMERIC KEY COMMANDS	
FE 03 C9 16 2A 0C	Zone 2 Number 1
FE 03 C9 16 2B 0D	Zone 2 Number 2
FE 03 C9 16 2C 0E	Zone 2 Number 3
FE 03 C9 16 2D 0F	Zone 2 Number 4

RSX-1550 HEX	Command Description
FE 03 C9 16 2E 10	Zone 2 Number 5
FE 03 C9 16 2F 11	Zone 2 Number 6
FE 03 C9 16 30 12	Zone 2 Number 7
FE 03 C9 16 31 13	Zone 2 Number 8
FE 03 C9 16 32 14	Zone 2 Number 9
FE 03 C9 16 33 15	Zone 2 Number 0
ZONE 2 OTHER COMMANDS	
FE 03 C9 16 6E 50	Party Mode Toggle

Table 5 - Type 17 Zone 3 Commands

RSX-1550 HEX	Command Description
ZONE 3 POWER & VOLUME COMMANDS	
FE 03 C9 17 0A ED	Zone 3 Power Toggle
FE 03 C9 17 4A 2D	Zone 3 Power Off
FE 03 C9 17 4B 2E	Zone 3 Power On
FE 03 C9 17 00 E3	Zone 3 Volume Up
FE 03 C9 17 01 E4	Zone 3 Volume Down
FE 03 C9 17 1E 01	Zone 3 Mute Toggle
FE 03 C9 17 6C 4F	Zone 3 Mute On
FE 03 C9 17 6D 50	Zone 3 Mute Off
FE 03 C9 17 71 54	Power Off All Zones
ZONE 3 SOURCE SELECTION COMMANDS	
FE 03 C9 17 02 E5	Zone 3 Source CD
FE 03 C9 17 03 E6	Zone 3 Source Tuner
FE 03 C9 17 04 E7	Zone 3 Source Tape
FE 03 C9 17 05 E8	Zone 3 Source Video 1
FE 03 C9 17 06 E9	Zone 3 Source Video 2
FE 03 C9 17 07 EA	Zone 3 Source Video 3
FE 03 C9 17 08 EB	Zone 3 Source Video 4
FE 03 C9 17 09 EC	Zone 3 Source Video 5
FE 03 C9 17 6B 4E	Zone 3 Follow Main Zone Source
ZONE 3 TUNER COMMANDS	
FE 03 C9 17 28 0B	Zone 3 Tune Up
FE 03 C9 17 29 0C	Zone 3 Tune Down
FE 03 C9 17 6F 52	Zone 3 Preset Up
FE 03 C9 17 70 53	Zone 3 Preset Down
FE 03 C9 17 72 55	Zone 3 Frequency Up
FE 03 C9 17 73 56	Zone 3 Frequency Down
FE 03 C9 17 24 07	Zone 3 Band Toggle
FE 03 C9 17 56 39	Zone 3 AM
FE 03 C9 17 55 38	Zone 3 FM
FE 03 C9 17 20 03	Zone 3 Tune / Preset

RSX-1550 HEX	Command Description
FE 03 C9 17 69 4C	Zone 3 Tuning Mode Select
FE 03 C9 17 6A 4D	Zone 3 Preset Mode Select
FE 03 C9 17 21 04	Zone 3 Preset Scan
FE 03 C9 17 26 09	Zone 3 FM Mono
ZONE 3 NUMERIC KEY COMMANDS	
FE 03 C9 17 2A 0D	Zone 3 Number 1
FE 03 C9 17 2B 0E	Zone 3 Number 2
FE 03 C9 17 2C 0F	Zone 3 Number 3
FE 03 C9 17 2D 10	Zone 3 Number 4
FE 03 C9 17 2E 11	Zone 3 Number 5
FE 03 C9 17 2F 12	Zone 3 Number 6
FE 03 C9 17 30 13	Zone 3 Number 7
FE 03 C9 17 31 14	Zone 3 Number 8
FE 03 C9 17 32 15	Zone 3 Number 9
FE 03 C9 17 33 16	Zone 3 Number 0
ZONE 3 OTHER COMMANDS	
FE 03 C9 17 6E 51	Party Mode Toggle

Table 6 - Type 18 Zone 4 Commands

RSX-1550 HEX	Command Description
ZONE 4 POWER & VOLUME COMMANDS	
FE 03 C9 18 0A EE	Zone 4 Power Toggle
FE 03 C9 18 4A 2E	Zone 4 Power Off
FE 03 C9 18 4B 2F	Zone 4 Power On
FE 03 C9 18 00 E4	Zone 4 Volume Up
FE 03 C9 18 01 E5	Zone 4 Volume Down
FE 03 C9 18 1E 02	Zone 4 Mute Toggle
FE 03 C9 18 6C 50	Zone 4 Mute On
FE 03 C9 18 6D 51	Zone 4 Mute Off
FE 03 C9 18 71 55	Power Off All Zones
ZONE 4 SOURCE SELECTION COMMANDS	
FE 03 C9 18 02 E6	Zone 4 Source CD
FE 03 C9 18 03 E7	Zone 4 Source Tuner
FE 03 C9 18 04 E8	Zone 4 Source Tape
FE 03 C9 18 05 E9	Zone 4 Source Video 1
FE 03 C9 18 06 EA	Zone 4 Source Video 2
FE 03 C9 18 07 EB	Zone 4 Source Video 3
FE 03 C9 18 08 EC	Zone 4 Source Video 4
FE 03 C9 18 09 ED	Zone 4 Source Video 5
FE 03 C9 18 6B 4F	Zone 4 Follow Main Zone Source
ZONE 4 TUNER COMMANDS	
FE 03 C9 18 28 0C	Zone 4 Tune Up

RSX-1550 HEX	Command Description
FE 03 C9 18 29 0D	Zone 4 Tune Down
FE 03 C9 18 6F 53	Zone 4 Preset Up
FE 03 C9 18 70 54	Zone 4 Preset Down
FE 03 C9 18 72 56	Zone 4 Frequency Up
FE 03 C9 18 73 57	Zone 4 Frequency Down
FE 03 C9 18 24 08	Zone 4 Band Toggle
FE 03 C9 18 56 3A	Zone 4 AM
FE 03 C9 18 55 39	Zone 4 FM
FE 03 C9 18 20 04	Zone 4 Tune / Preset
FE 03 C9 18 69 4D	Zone 4 Tuning Mode Select
FE 03 C9 18 6A 4E	Zone 4 Preset Mode Select
FE 03 C9 18 21 05	Zone 4 Preset Scan
FE 03 C9 18 26 0A	Zone 4 FM Mono
ZONE 4 NUMERIC KEY COMMANDS	
FE 03 C9 18 2A 0E	Zone 4 Number 1
FE 03 C9 18 2B 0F	Zone 4 Number 2
FE 03 C9 18 2C 10	Zone 4 Number 3
FE 03 C9 18 2D 11	Zone 4 Number 4
FE 03 C9 18 2E 12	Zone 4 Number 5
FE 03 C9 18 2F 13	Zone 4 Number 6
FE 03 C9 18 30 14	Zone 4 Number 7
FE 03 C9 18 31 15	Zone 4 Number 8
FE 03 C9 18 32 16	Zone 4 Number 9
FE 03 C9 18 33 17	Zone 4 Number 0
ZONE 4 OTHER COMMANDS	
FE 03 C9 18 6E 52	Party Mode Toggle

Table 7 - Type 30 Volume Direct Commands

NOTE: Volume direct commands range from hex 00 – 60; below is a sample of the commands available.

RSX-1550 HEX	Command Description
VOLUME DIRECT COMMANDS	
FE 03 C9 30 00 FC	Volume Min
FE 03 C9 30 01 FD 00	Volume 1
FE 03 C9 30 02 FD 01	Volume 2
FE 03 C9 30 03 FF	Volume 3
FE 03 C9 30 04 00	Volume 4
FE 03 C9 30 05 01	Volume 5
FE 03 C9 30 06 02	Volume 6
FE 03 C9 30 07 03	Volume 7
FE 03 C9 30 08 04	Volume 8
FE 03 C9 30 09 05	Volume 9

RSX-1550 HEX	Command Description
FE 03 C9 30 0A 06	Volume 10
FE 03 C9 30 0B 07	Volume 11
FE 03 C9 30 0C 08	Volume 12
FE 03 C9 30 0D 09	Volume 13
FE 03 C9 30 0E 0A	Volume 14
FE 03 C9 30 0F 0B	Volume 15
FE 03 C9 30 10 0C	Volume 16
FE 03 C9 30 20 1C	Volume 32
FE 03 C9 30 30 2C	Volume 48
FE 03 C9 30 40 3C	Volume 64
FE 03 C9 30 50 4C	Volume 80
FE 03 C9 30 5F 5B	Volume 95

Table 8 - Type 32 Zone 2 Volume Direct Commands

RSX-1550 HEX	Command Description
ZONE 2 VOLUME DIRECT COMMANDS	
FE 03 C9 32 00 FD 01	Zone 2 Volume Min
FE 03 C9 32 01 FF	Zone 2 Volume 1
FE 03 C9 32 02 00	Zone 2 Volume 2
FE 03 C9 32 03 01	Zone 2 Volume 3
FE 03 C9 32 04 02	Zone 2 Volume 4
FE 03 C9 32 05 03	Zone 2 Volume 5
FE 03 C9 32 06 04	Zone 2 Volume 6
FE 03 C9 32 07 05	Zone 2 Volume 7
FE 03 C9 32 08 06	Zone 2 Volume 8
FE 03 C9 32 09 07	Zone 2 Volume 9
FE 03 C9 32 0A 08	Zone 2 Volume 10
FE 03 C9 32 0B 09	Zone 2 Volume 11
FE 03 C9 32 0C 0A	Zone 2 Volume 12
FE 03 C9 32 0D 0B	Zone 2 Volume 13
FE 03 C9 32 0E 0C	Zone 2 Volume 14
FE 03 C9 32 0F 0D	Zone 2 Volume 15
FE 03 C9 32 10 0E	Zone 2 Volume 16
FE 03 C9 32 20 1E	Zone 2 Volume 32
FE 03 C9 32 30 2E	Zone 2 Volume 48
FE 03 C9 32 40 3E	Zone 2 Volume 64
FE 03 C9 32 50 4E	Zone 2 Volume 80
FE 03 C9 32 5F 57	Zone 2 Volume 89

Table 9 - Type 33 Zone 3 Volume Direct Commands

RSX-1550 HEX	Command Description
ZONE 3 VOLUME DIRECT COMMANDS	
FE 03 C9 33 00 FF	Zone 3 Volume Min
FE 03 C9 33 01 00	Zone 3 Volume 1
FE 03 C9 33 02 01	Zone 3 Volume 2
FE 03 C9 33 03 02	Zone 3 Volume 3
FE 03 C9 33 04 03	Zone 3 Volume 4
FE 03 C9 33 05 04	Zone 3 Volume 5
FE 03 C9 33 06 05	Zone 3 Volume 6
FE 03 C9 33 07 06	Zone 3 Volume 7
FE 03 C9 33 08 07	Zone 3 Volume 8
FE 03 C9 33 09 08	Zone 3 Volume 9
FE 03 C9 33 0A 09	Zone 3 Volume 10
FE 03 C9 33 10 0F	Zone 3 Volume 16
FE 03 C9 33 20 1F	Zone 3 Volume 32
FE 03 C9 33 30 2F	Zone 3 Volume 48
FE 03 C9 33 40 3F	Zone 3 Volume 64
FE 03 C9 33 50 4F	Zone 3 Volume 80
FE 03 C9 33 5F 58	Zone 3 Volume 89

Table 10 - Type 34 Zone 4 Volume Direct Commands

RSX-1550 HEX	Command Description
ZONE 4 VOLUME DIRECT COMMANDS	
FE 03 C9 34 00 00	Zone 4 Volume Min
FE 03 C9 34 01 01	Zone 4 Volume 1
FE 03 C9 34 02 02	Zone 4 Volume 2
FE 03 C9 34 03 03	Zone 4 Volume 3
FE 03 C9 34 04 04	Zone 4 Volume 4
FE 03 C9 34 05 05	Zone 4 Volume 5
FE 03 C9 34 06 06	Zone 4 Volume 6
FE 03 C9 34 07 07	Zone 4 Volume 7
FE 03 C9 34 08 08	Zone 4 Volume 8
FE 03 C9 34 09 09	Zone 4 Volume 9
FE 03 C9 34 0A 0A	Zone 4 Volume 10
FE 03 C9 34 10 10	Zone 4 Volume 16
FE 03 C9 34 20 20	Zone 4 Volume 32
FE 03 C9 34 30 30	Zone 4 Volume 48
FE 03 C9 34 40 40	Zone 4 Volume 64
FE 03 C9 34 50 50	Zone 4 Volume 80

Table 11 - Type 40 12V Trigger Direct Commands

NOTE: These commands require Main software V1.2.2 to be effective.

RSX-1550 HEX	Command Description
12V TRIGGER DIRECT COMMANDS	
FE 03 C9 40 00 0C	Main Zone 12V Trigger 1 Toggle
FE 03 C9 40 01 0D	Main Zone 12V Trigger 2 Toggle
FE 03 C9 40 02 0E	Main Zone 12V Trigger 3 Toggle
FE 03 C9 40 03 0F	Main Zone 12V Trigger 4 Toggle
FE 03 C9 40 04 10	Main Zone 12V Trigger 5 Toggle
FE 03 C9 40 05 11	Main Zone 12V Trigger 6 Toggle
FE 03 C9 40 06 12	Zone 2 12V Trigger 1 Toggle
FE 03 C9 40 07 13	Zone 2 12V Trigger 2 Toggle
FE 03 C9 40 08 14	Zone 2 12V Trigger 3 Toggle
FE 03 C9 40 09 15	Zone 2 12V Trigger 4 Toggle
FE 03 C9 40 0A 16	Zone 2 12V Trigger 5 Toggle
FE 03 C9 40 0B 17	Zone 2 12V Trigger 6 Toggle
FE 03 C9 40 0C 18	Zone 3 12V Trigger 1 Toggle
FE 03 C9 40 0D 19	Zone 3 12V Trigger 2 Toggle
FE 03 C9 40 0E 1A	Zone 3 12V Trigger 3 Toggle
FE 03 C9 40 0F 1B	Zone 3 12V Trigger 4 Toggle
FE 03 C9 40 10 1C	Zone 3 12V Trigger 5 Toggle
FE 03 C9 40 11 1D	Zone 3 12V Trigger 6 Toggle
FE 03 C9 40 12 1E	Zone 4 12V Trigger 1 Toggle
FE 03 C9 40 13 1F	Zone 4 12V Trigger 2 Toggle
FE 03 C9 40 14 20	Zone 4 12V Trigger 3 Toggle
FE 03 C9 40 15 21	Zone 4 12V Trigger 4 Toggle
FE 03 C9 40 16 22	Zone 4 12V Trigger 5 Toggle
FE 03 C9 40 17 23	Zone 4 12V Trigger 6 Toggle

Section 2: Feedback String Format

Standard Response String Format

Start	Count	ID	Type	Data						Checksum
0xFE	0x17	0xC9	0x20	Char1	...	Char13	Flag1	...	Flag 8	0xXX

The feedback string is a representation of the display of the unit.

The Char1 - Char13 data bytes contain ASCII data representing the text that appears across the front display. It can contain source input, volume, and surround mode data and should be parsed to obtain this information.

The Flag1 - Flag8 data bytes contain data on which of the various icons on the front display are currently illuminated.

The display status uses 2 bits in Flag6 to confirm if the front display is On or Off.

Flag1 - Flag4 Data

	Flag1	Flag2	Flag3	Flag4
Bit0	char1_dot	char8_dot	St (Tuner)	Auto
Bit1	char2_dot	char9_dot	HDMI	Tuned
Bit2	char3_dot	char10_dot	4	PTY
Bit3	char4_dot	char11_dot	3	TA
Bit4	char5_dot	char12_dot	2	TP
Bit5	char6_dot	char13_dot	1	RT
Bit6	char7_dot	char8_colon	Coaxial	RDS
Bit7	Zone 2	Zone 3	Optical	Multi

Flag5 - Flag8 Data

	Flag5	Flag6	Flag7	Flag8
Bit0	96/24	Display Mode 0	SBR	CB
Bit1	Neo:6	Display Mode 1	SBL	S
Bit2	ES	Zone 4	Dolby Pro Logic	LFE
Bit3	dts	Standby LED	EX	SR
Bit4	MSTR	Rh	+	SL
Bit5	dts-HD	Memory	Dolby Digital	FR
Bit6	x	Preset	Dolby TrueHD	C
Bit7	ll	Lh	Zone	FL

Display Status

	Display On	Display Off
Display Mode 1	0	1
Display Mode 0	0	0

12V Trigger Status String Format

NOTE: This response string was added with Main software V1.2.2.

Start	Count	ID	Type	Data					Checksum
0xFE	0x07	0xC9	0x21	Flag1	Flag2	Flag3	Flag4	Flag5	0xXX

12V Trigger Status Flag1 – Flag5 Data

	Flag1: All	Flag2: Main	Flag3: Zone 2	Flag4: Zone 3	Flag5: Zone 4
Bit0	Trigger 1	Trigger 1	Trigger 1	Trigger 1	Trigger 1
Bit1	Trigger 2	Trigger 2	Trigger 2	Trigger 2	Trigger 2
Bit2	Trigger 3	Trigger 3	Trigger 3	Trigger 3	Trigger 3
Bit3	Trigger 4	Trigger 4	Trigger 4	Trigger 4	Trigger 4
Bit4	Trigger 5	Trigger 5	Trigger 5	Trigger 5	Trigger 5
Bit5	Trigger 6	Trigger 6	Trigger 6	Trigger 6	Trigger 6
Bit6					
Bit7					