



## Rotel RSX-1560 RS232 HEX Protocol

Date	Version	Update Description
February 7, 2012	1.00	Original Specification

The RS232 protocol structure for the RSX-1560 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	0xCA	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-1560 HEX	Command Description
<b>POWER &amp; VOLUME COMMANDS</b>	
FE 03 CA 10 0A E7	Power Toggle
FE 03 CA 10 4A 27	Power Off
FE 03 CA 10 4B 28	Power On
FE 03 CA 10 0B E8	Volume Up
FE 03 CA 10 0C E9	Volume Down
FE 03 CA 10 1E FB	Mute Toggle
FE 03 CA 10 71 4E	Power Off All Zones
<b>SOURCE SELECTION COMMANDS</b>	
FE 03 CA 10 02 DF	Source CD
FE 03 CA 10 03 E0	Source Tuner
FE 03 CA 10 04 E1	Source Tape
FE 03 CA 10 05 E2	Source Video 1
FE 03 CA 10 06 E3	Source Video 2
FE 03 CA 10 07 E4	Source Video 3
FE 03 CA 10 08 E5	Source Video 4
FE 03 CA 10 09 E6	Source Video 5
FE 03 CA 10 15 F2	Source Multi Input
<b>SURROUND MODE COMMANDS</b>	
FE 03 CA 10 11 EE	Stereo
FE 03 CA 10 12 EF	Dolby 3 Stereo
FE 03 CA 10 13 F0	Dolby Pro Logic
FE 03 CA 10 14 F1	DSP Mode Toggle
FE 03 CA 10 53 30	Dolby 3 Stereo / Pro Logic Toggle
FE 03 CA 10 54 31	dts Neo:6 Music/Cinema Toggle
FE 03 CA 10 57 34	DSP 1
FE 03 CA 10 58 35	DSP 2
FE 03 CA 10 59 36	DSP 3
FE 03 CA 10 5A 37	DSP 4

<b>RSX-1560 HEX</b>	<b>Command Description</b>
FE 03 CA 10 5B 38	5 Channel Stereo
FE 03 CA 10 5C 39	7 Channel Stereo
FE 03 CA 10 5D 3A	Dolby PLIIx Cinema
FE 03 CA 10 5E 3B	Dolby PLIIx Music
FE 03 CA 10 74 51	Dolby PLIIx Game
FE 03 CA 10 5F 3C	Dolby Pro Logic
FE 03 CA 10 60 3D	dts Neo:6 Music
FE 03 CA 10 61 3E	dts Neo:6 Cinema
FE 03 CA 10 62 3F	PLIIx Panorama Toggle
FE 03 CA 10 63 40	PLIIx Dimension Up
FE 03 CA 10 64 41	PLIIx Dimension Down
FE 03 CA 10 65 42	PLIIx Center Width Up
FE 03 CA 10 66 43	PLIIx Center Width Down
FE 03 CA 10 68 45	Dolby Digital EX Toggle
FE 03 CA 10 22 FF	Next Surround Mode
<b>TONE CONTROL COMMANDS</b>	
FE 03 CA 10 0D EA	Treble Up
FE 03 CA 10 0E EB	Treble Down
FE 03 CA 10 0F EC	Bass Up
FE 03 CA 10 10 ED	Bass Down
FE 03 CA 10 67 44	Tone Control Select
<b>OSD MENU COMMANDS</b>	
FE 03 CA 10 18 F5	OSD Menu
FE 03 CA 10 19 F6	Enter
FE 03 CA 10 1A F7	Cursor Right
FE 03 CA 10 1B F8	Cursor Left
FE 03 CA 10 1C F9	Cursor Up
FE 03 CA 10 1D FA	Cursor Down
<b>TUNER COMMANDS</b>	
FE 03 CA 10 28 05	Tune Up
FE 03 CA 10 29 06	Tune Down
FE 03 CA 10 6F 4C	Preset Up
FE 03 CA 10 70 4D	Preset Down
FE 03 CA 10 72 4F	Frequency Up
FE 03 CA 10 73 50	Frequency Down
FE 03 CA 10 27 04	Memory
FE 03 CA 10 24 01	Band Toggle
FE 03 CA 10 56 33	AM
FE 03 CA 10 55 32	FM
<b>FE 03 CA 10 20 FD 00</b>	Tune / Preset
FE 03 CA 10 69 46	Tuning Mode Select
FE 03 CA 10 6A 47	Preset Mode Select

RSX-1560 HEX	Command Description
FE 03 CA 10 25 02	Frequency Direct
FE 03 CA 10 21 FD 01	Preset Scan
FE 03 CA 10 44 21	Tuner Display
FE 03 CA 10 45 22	RDS PTY
FE 03 CA 10 46 23	RDS TP
FE 03 CA 10 47 24	RDS TA
FE 03 CA 10 26 03	FM Mono
<b>NUMERIC KEY COMMANDS</b>	
FE 03 CA 10 2A 07	Number 1
FE 03 CA 10 2B 08	Number 2
FE 03 CA 10 2C 09	Number 3
FE 03 CA 10 2D 0A	Number 4
FE 03 CA 10 2E 0B	Number 5
FE 03 CA 10 2F 0C	Number 6
FE 03 CA 10 30 0D	Number 7
FE 03 CA 10 31 0E	Number 8
FE 03 CA 10 32 0F	Number 9
FE 03 CA 10 33 20	Number 0
<b>OTHER COMMANDS</b>	
FE 03 CA 10 17 F4	Record Function Select
FE 03 CA 10 16 F3	Dynamic Range
FE 03 CA 10 1F FC	Digital Input Select
FE 03 CA 10 23 00	Zone 2 / Main
FE 03 CA 10 4C 29	Temporary Center Trim
FE 03 CA 10 4D 2A	Temporary Subwoofer Trim
FE 03 CA 10 4E 2B	Temporary Surround Trim
FE 03 CA 10 4F 2C	Cinema EQ Toggle
FE 03 CA 10 52 2F	Front Display On/Off
FE 03 CA 10 FF DC	Display Refresh
FE 03 CA 10 6E 4B	Party Mode Toggle
FE 03 CA 10 75 52	Output Resolution
FE 03 CA 10 78 55	HDMI Amp Mode
FE 03 CA 10 79 56	HDMI TV Mode
FE 03 CA 10 93 70	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-1560 HEX	Command Description
<b>MAIN ZONE POWER &amp; VOLUME COMMANDS</b>	
FE 03 CA 14 0A EB	Main Zone Power Toggle
FE 03 CA 14 4A 2B	Main Zone Power Off
FE 03 CA 14 4B 2C	Main Zone Power On
FE 03 CA 14 00 E1	Main Zone Volume Up
FE 03 CA 14 01 E2	Main Zone Volume Down
FE 03 CA 14 1E FF	Main Zone Mute Toggle
FE 03 CA 14 6C 4D	Main Zone Mute On
FE 03 CA 14 6D 4E	Main Zone Mute Off
<b>MAIN ZONE SOURCE SELECTION COMMANDS</b>	
FE 03 CA 14 02 E3	Main Zone Source CD
FE 03 CA 14 03 E4	Main Zone Source Tuner
FE 03 CA 14 04 E5	Main Zone Source Tape
FE 03 CA 14 05 E6	Main Zone Source Video 1
FE 03 CA 14 06 E7	Main Zone Source Video 2
FE 03 CA 14 07 E8	Main Zone Source Video 3
FE 03 CA 14 08 E9	Main Zone Source Video 4
FE 03 CA 14 09 EA	Main Zone Source Video 5
FE 03 CA 14 15 F6	Main Zone Source Multi Input

**Table 3 - Type 15 Record Source Commands**

RSX-1560 HEX	Command Description
<b>RECORD SOURCE SELECTION COMMANDS</b>	
FE 03 CA 15 02 E4	Record Source CD
FE 03 CA 15 03 E5	Record Source Tuner
FE 03 CA 15 04 E6	Record Source Tape
FE 03 CA 15 05 E7	Record Source Video 1
FE 03 CA 15 06 E8	Record Source Video 2
FE 03 CA 15 07 E9	Record Source Video 3
FE 03 CA 15 08 EA	Record Source Video 4
FE 03 CA 15 09 EB	Record Source Video 5
FE 03 CA 15 6B 4D	Record Follow Main Zone Source

**Table 4 - Type 16 Zone 2 Commands**

RSX-1560 HEX	Command Description
<b>ZONE 2 POWER &amp; VOLUME COMMANDS</b>	
FE 03 CA 16 0A ED	Zone 2 Power Toggle
FE 03 CA 16 4A 2D	Zone 2 Power Off
FE 03 CA 16 4B 2E	Zone 2 Power On
FE 03 CA 16 00 E3	Zone 2 Volume Up
FE 03 CA 16 01 E4	Zone 2 Volume Down
FE 03 CA 16 1E 01	Zone 2 Mute Toggle
FE 03 CA 16 6C 4F	Zone 2 Mute On
FE 03 CA 16 6D 50	Zone 2 Mute Off
FE 03 CA 16 71 54	Power Off All Zones
<b>ZONE 2 SOURCE SELECTION COMMANDS</b>	
FE 03 CA 16 02 E5	Zone 2 Source CD
FE 03 CA 16 03 E6	Zone 2 Source Tuner
FE 03 CA 16 04 E7	Zone 2 Source Tape
FE 03 CA 16 05 E8	Zone 2 Source Video 1
FE 03 CA 16 06 E9	Zone 2 Source Video 2
FE 03 CA 16 07 EA	Zone 2 Source Video 3
FE 03 CA 16 08 EB	Zone 2 Source Video 4
FE 03 CA 16 09 EC	Zone 2 Source Video 5
FE 03 CA 16 6B 4E	Zone 2 Follow Main Zone Source
<b>ZONE 2 TUNER COMMANDS</b>	
FE 03 CA 16 28 0B	Zone 2 Tune Up
FE 03 CA 16 29 0C	Zone 2 Tune Down
FE 03 CA 16 6F 52	Zone 2 Preset Up
FE 03 CA 16 70 53	Zone 2 Preset Down
FE 03 CA 16 72 55	Zone 2 Frequency Up
FE 03 CA 16 73 56	Zone 2 Frequency Down
FE 03 CA 16 24 07	Zone 2 Band Toggle
FE 03 CA 16 56 39	Zone 2 AM
FE 03 CA 16 55 38	Zone 2 FM
FE 03 CA 16 20 03	Zone 2 Tune / Preset
FE 03 CA 16 69 4C	Zone 2 Tuning Mode Select
FE 03 CA 16 6A 4D	Zone 2 Preset Mode Select
FE 03 CA 16 21 04	Zone 2 Preset Scan
FE 03 CA 16 26 09	Zone 2 FM Mono
<b>ZONE 2 NUMERIC KEY COMMANDS</b>	
FE 03 CA 16 2A 0D	Zone 2 Number 1
FE 03 CA 16 2B 0E	Zone 2 Number 2
FE 03 CA 16 2C 0F	Zone 2 Number 3
FE 03 CA 16 2D 10	Zone 2 Number 4

RSX-1560 HEX	Command Description
FE 03 CA 16 2E 11	Zone 2 Number 5
FE 03 CA 16 2F 12	Zone 2 Number 6
FE 03 CA 16 30 13	Zone 2 Number 7
FE 03 CA 16 31 14	Zone 2 Number 8
FE 03 CA 16 32 15	Zone 2 Number 9
FE 03 CA 16 33 16	Zone 2 Number 0
<b>ZONE 2 OTHER COMMANDS</b>	
FE 03 CA 16 6E 51	Party Mode Toggle

**Table 5 - Type 17 Zone 3 Commands**

RSX-1560 HEX	Command Description
<b>ZONE 3 POWER &amp; VOLUME COMMANDS</b>	
FE 03 CA 17 0A EE	Zone 3 Power Toggle
FE 03 CA 17 4A 2E	Zone 3 Power Off
FE 03 CA 17 4B 2F	Zone 3 Power On
FE 03 CA 17 00 E4	Zone 3 Volume Up
FE 03 CA 17 01 E5	Zone 3 Volume Down
FE 03 CA 17 1E 02	Zone 3 Mute Toggle
FE 03 CA 17 6C 50	Zone 3 Mute On
FE 03 CA 17 6D 51	Zone 3 Mute Off
FE 03 CA 17 71 55	Power Off All Zones
<b>ZONE 3 SOURCE SELECTION COMMANDS</b>	
FE 03 CA 17 02 E6	Zone 3 Source CD
FE 03 CA 17 03 E7	Zone 3 Source Tuner
FE 03 CA 17 04 E8	Zone 3 Source Tape
FE 03 CA 17 05 E9	Zone 3 Source Video 1
FE 03 CA 17 06 EA	Zone 3 Source Video 2
FE 03 CA 17 07 EB	Zone 3 Source Video 3
FE 03 CA 17 08 EC	Zone 3 Source Video 4
FE 03 CA 17 09 ED	Zone 3 Source Video 5
FE 03 CA 17 6B 4F	Zone 3 Follow Main Zone Source
<b>ZONE 3 TUNER COMMANDS</b>	
FE 03 CA 17 28 0C	Zone 3 Tune Up
FE 03 CA 17 29 0D	Zone 3 Tune Down
FE 03 CA 17 6F 53	Zone 3 Preset Up
FE 03 CA 17 70 54	Zone 3 Preset Down
FE 03 CA 17 72 56	Zone 3 Frequency Up
FE 03 CA 17 73 57	Zone 3 Frequency Down
FE 03 CA 17 24 08	Zone 3 Band Toggle
FE 03 CA 17 56 3A	Zone 3 AM
FE 03 CA 17 55 39	Zone 3 FM
FE 03 CA 17 20 04	Zone 3 Tune / Preset

RSX-1560 HEX	Command Description
FE 03 CA 17 69 4D	Zone 3 Tuning Mode Select
FE 03 CA 17 6A 4E	Zone 3 Preset Mode Select
FE 03 CA 17 21 05	Zone 3 Preset Scan
FE 03 CA 17 26 0A	Zone 3 FM Mono
<b>ZONE 3 NUMERIC KEY COMMANDS</b>	
FE 03 CA 17 2A 0E	Zone 3 Number 1
FE 03 CA 17 2B 0F	Zone 3 Number 2
FE 03 CA 17 2C 10	Zone 3 Number 3
FE 03 CA 17 2D 11	Zone 3 Number 4
FE 03 CA 17 2E 12	Zone 3 Number 5
FE 03 CA 17 2F 13	Zone 3 Number 6
FE 03 CA 17 30 14	Zone 3 Number 7
FE 03 CA 17 31 15	Zone 3 Number 8
FE 03 CA 17 32 16	Zone 3 Number 9
FE 03 CA 17 33 17	Zone 3 Number 0
<b>ZONE 3 OTHER COMMANDS</b>	
FE 03 CA 17 6E 52	Party Mode Toggle

**Table 6 - Type 18 Zone 4 Commands**

RSX-1560 HEX	Command Description
<b>ZONE 4 POWER &amp; VOLUME COMMANDS</b>	
FE 03 CA 18 0A EF	Zone 4 Power Toggle
FE 03 CA 18 4A 2F	Zone 4 Power Off
FE 03 CA 18 4B 30	Zone 4 Power On
FE 03 CA 18 00 E5	Zone 4 Volume Up
FE 03 CA 18 01 E6	Zone 4 Volume Down
FE 03 CA 18 1E 03	Zone 4 Mute Toggle
FE 03 CA 18 6C 51	Zone 4 Mute On
FE 03 CA 18 6D 52	Zone 4 Mute Off
FE 03 CA 18 71 56	Power Off All Zones
<b>ZONE 4 SOURCE SELECTION COMMANDS</b>	
FE 03 CA 18 02 E7	Zone 4 Source CD
FE 03 CA 18 03 E8	Zone 4 Source Tuner
FE 03 CA 18 04 E9	Zone 4 Source Tape
FE 03 CA 18 05 EA	Zone 4 Source Video 1
FE 03 CA 18 06 EB	Zone 4 Source Video 2
FE 03 CA 18 07 EC	Zone 4 Source Video 3
FE 03 CA 18 08 ED	Zone 4 Source Video 4
FE 03 CA 18 09 EE	Zone 4 Source Video 5
FE 03 CA 18 6B 50	Zone 4 Follow Main Zone Source
<b>ZONE 4 TUNER COMMANDS</b>	
FE 03 CA 18 28 0D	Zone 4 Tune Up



RSX-1560 HEX	Command Description
FE 03 CA 18 29 0E	Zone 4 Tune Down
FE 03 CA 18 6F 54	Zone 4 Preset Up
FE 03 CA 18 70 55	Zone 4 Preset Down
FE 03 CA 18 72 57	Zone 4 Frequency Up
FE 03 CA 18 73 58	Zone 4 Frequency Down
FE 03 CA 18 24 09	Zone 4 Band Toggle
FE 03 CA 18 56 3B	Zone 4 AM
FE 03 CA 18 55 3A	Zone 4 FM
FE 03 CA 18 20 05	Zone 4 Tune / Preset
FE 03 CA 18 69 4E	Zone 4 Tuning Mode Select
FE 03 CA 18 6A 4F	Zone 4 Preset Mode Select
FE 03 CA 18 21 06	Zone 4 Preset Scan
FE 03 CA 18 26 0B	Zone 4 FM Mono
<b>ZONE 4 NUMERIC KEY COMMANDS</b>	
FE 03 CA 18 2A 0F	Zone 4 Number 1
FE 03 CA 18 2B 10	Zone 4 Number 2
FE 03 CA 18 2C 11	Zone 4 Number 3
FE 03 CA 18 2D 12	Zone 4 Number 4
FE 03 CA 18 2E 13	Zone 4 Number 5
FE 03 CA 18 2F 14	Zone 4 Number 6
FE 03 CA 18 30 15	Zone 4 Number 7
FE 03 CA 18 31 16	Zone 4 Number 8
FE 03 CA 18 32 17	Zone 4 Number 9
FE 03 CA 18 33 18	Zone 4 Number 0
<b>ZONE 4 OTHER COMMANDS</b>	
FE 03 CA 18 6E 53	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-1560 HEX	Command Description
<b>VOLUME DIRECT COMMANDS</b>	
FE 03 CA 30 00 FD 00	Volume Min
FE 03 CA 30 01 FD 01	Volume 1
FE 03 CA 30 02 FF	Volume 2
FE 03 CA 30 03 00	Volume 3
FE 03 CA 30 04 01	Volume 4
FE 03 CA 30 05 02	Volume 5
FE 03 CA 30 06 03	Volume 6
FE 03 CA 30 07 04	Volume 7
FE 03 CA 30 08 05	Volume 8
FE 03 CA 30 09 06	Volume 9

RSX-1560 HEX	Command Description
FE 03 CA 30 0A 07	Volume 10
FE 03 CA 30 0B 08	Volume 11
FE 03 CA 30 0C 09	Volume 12
FE 03 CA 30 0D 0A	Volume 13
FE 03 CA 30 0E 0B	Volume 14
FE 03 CA 30 0F 0C	Volume 15
FE 03 CA 30 10 0D	Volume 16
FE 03 CA 30 20 1D	Volume 32
FE 03 CA 30 30 2D	Volume 48
FE 03 CA 30 40 3D	Volume 64
FE 03 CA 30 50 4D	Volume 80
FE 03 CA 30 5F 5C	Volume 95

**Table 8 - Type 32 Zone 2 Volume Direct Commands**

RSX-1560 HEX	Command Description
<b>ZONE 2 VOLUME DIRECT COMMANDS</b>	
FE 03 CA 32 00 FF	Zone 2 Volume Min
FE 03 CA 32 01 00	Zone 2 Volume 1
FE 03 CA 32 02 01	Zone 2 Volume 2
FE 03 CA 32 03 02	Zone 2 Volume 3
FE 03 CA 32 04 03	Zone 2 Volume 4
FE 03 CA 32 05 04	Zone 2 Volume 5
FE 03 CA 32 06 05	Zone 2 Volume 6
FE 03 CA 32 07 06	Zone 2 Volume 7
FE 03 CA 32 08 07	Zone 2 Volume 8
FE 03 CA 32 09 08	Zone 2 Volume 9
FE 03 CA 32 0A 09	Zone 2 Volume 10
FE 03 CA 32 0B 0A	Zone 2 Volume 11
FE 03 CA 32 0C 0B	Zone 2 Volume 12
FE 03 CA 32 0D 0C	Zone 2 Volume 13
FE 03 CA 32 0E 0D	Zone 2 Volume 14
FE 03 CA 32 0F 0E	Zone 2 Volume 15
FE 03 CA 32 10 0F	Zone 2 Volume 16
FE 03 CA 32 20 1F	Zone 2 Volume 32
FE 03 CA 32 30 2F	Zone 2 Volume 48
FE 03 CA 32 40 3F	Zone 2 Volume 64
FE 03 CA 32 50 4F	Zone 2 Volume 80
FE 03 CA 32 59 58	Zone 2 Volume 89

**Table 9 - Type 33 Zone 3 Volume Direct Commands**

RSX-1560 HEX	Command Description
<b>ZONE 3 VOLUME DIRECT COMMANDS</b>	
FE 03 CA 33 00 00	Zone 3 Volume Min
FE 03 CA 33 01 01	Zone 3 Volume 1
FE 03 CA 33 02 02	Zone 3 Volume 2
FE 03 CA 33 03 03	Zone 3 Volume 3
FE 03 CA 33 04 04	Zone 3 Volume 4
FE 03 CA 33 05 05	Zone 3 Volume 5
FE 03 CA 33 06 06	Zone 3 Volume 6
FE 03 CA 33 07 07	Zone 3 Volume 7
FE 03 CA 33 08 08	Zone 3 Volume 8
FE 03 CA 33 09 09	Zone 3 Volume 9
FE 03 CA 33 0A 0A	Zone 3 Volume 10
FE 03 CA 33 10 10	Zone 3 Volume 16
FE 03 CA 33 20 20	Zone 3 Volume 32
FE 03 CA 33 30 30	Zone 3 Volume 48
FE 03 CA 33 40 40	Zone 3 Volume 64
FE 03 CA 33 50 50	Zone 3 Volume 80
FE 03 CA 33 59 59	Zone 3 Volume 89

**Table 10 - Type 34 Zone 4 Volume Direct Commands**

RSX-1560 HEX	Command Description
<b>ZONE 4 VOLUME DIRECT COMMANDS</b>	
FE 03 CA 34 00 01	Zone 4 Volume Min
FE 03 CA 34 01 02	Zone 4 Volume 1
FE 03 CA 34 02 03	Zone 4 Volume 2
FE 03 CA 34 03 04	Zone 4 Volume 3
FE 03 CA 34 04 05	Zone 4 Volume 4
FE 03 CA 34 05 06	Zone 4 Volume 5
FE 03 CA 34 06 07	Zone 4 Volume 6
FE 03 CA 34 07 08	Zone 4 Volume 7
FE 03 CA 34 08 09	Zone 4 Volume 8
FE 03 CA 34 09 0A	Zone 4 Volume 9
FE 03 CA 34 0A 0B	Zone 4 Volume 10
FE 03 CA 34 10 11	Zone 4 Volume 16
FE 03 CA 34 20 21	Zone 4 Volume 32
FE 03 CA 34 30 31	Zone 4 Volume 48
FE 03 CA 34 40 41	Zone 4 Volume 64
FE 03 CA 34 50 51	Zone 4 Volume 80
FE 03 CA 34 59 5A	Zone 4 Volume 89

## Table 11 - Type 40 12V Trigger Direct Commands

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

RSX-1560 HEX	Command Description
<b>12V TRIGGER DIRECT COMMANDS</b>	
FE 03 CA 40 00 0D	Main Zone 12V Trigger 1 Toggle
FE 03 CA 40 01 0E	Main Zone 12V Trigger 2 Toggle
FE 03 CA 40 02 0F	Main Zone 12V Trigger 3 Toggle
FE 03 CA 40 03 10	Main Zone 12V Trigger 4 Toggle
FE 03 CA 40 04 11	Main Zone 12V Trigger 5 Toggle
FE 03 CA 40 05 12	Main Zone 12V Trigger 6 Toggle
FE 03 CA 40 06 13	Zone 2 12V Trigger 1 Toggle
FE 03 CA 40 07 14	Zone 2 12V Trigger 2 Toggle
FE 03 CA 40 08 15	Zone 2 12V Trigger 3 Toggle
FE 03 CA 40 09 16	Zone 2 12V Trigger 4 Toggle
FE 03 CA 40 0A 17	Zone 2 12V Trigger 5 Toggle
FE 03 CA 40 0B 18	Zone 2 12V Trigger 6 Toggle
FE 03 CA 40 0C 19	Zone 3 12V Trigger 1 Toggle
FE 03 CA 40 0D 1A	Zone 3 12V Trigger 2 Toggle
FE 03 CA 40 0E 1B	Zone 3 12V Trigger 3 Toggle
FE 03 CA 40 0F 1C	Zone 3 12V Trigger 4 Toggle
FE 03 CA 40 10 1D	Zone 3 12V Trigger 5 Toggle
FE 03 CA 40 11 1E	Zone 3 12V Trigger 6 Toggle
FE 03 CA 40 12 1F	Zone 4 12V Trigger 1 Toggle
FE 03 CA 40 13 20	Zone 4 12V Trigger 2 Toggle
FE 03 CA 40 14 21	Zone 4 12V Trigger 3 Toggle
FE 03 CA 40 15 22	Zone 4 12V Trigger 4 Toggle
FE 03 CA 40 16 23	Zone 4 12V Trigger 5 Toggle
FE 03 CA 40 17 24	Zone 4 12V Trigger 6 Toggle

## Section 2: Feedback String Format

### Standard Response String Format

Start	Count	ID	Type	Data						Checksum
0xFE	0x31	0xCA	0x20	Char1	...	Char42	Flag1	...	Flag5	0xXX

The feedback string is a representation of the display of the unit. The Char1 - Char42 data bytes contain ASCII data representing the text that appears across the 2 lines of the front display. It can contain source input, volume, and surround mode data and should be parsed to obtain this information.

The Flag1 - Flag5 data bytes contain data on which of the various icons on the front display are currently illuminated. The display status uses 2 bits in Flag3 to confirm if the front display is On or Off.

**Note:** The Zone 2/3/4 bits were added with Main software V1.1.8. These bits will toggle when their respective Zone is active so zone power status can be tracked.

#### Flag1 – Flag5 Data

Bit	Flag1	Flag2	Flag3	Flag4	Flag5
Bit0	A	x	Display Mode0	SB	CBL
Bit1	5	II	Display Mode1	Zone 4	CBR
Bit2	4	HDMI	Zone 2	Zone 3	SW
Bit3	3	EX	Standby LED	<	SR
Bit4	2	ES	Tuned	>	SL
Bit5	1	dtc	St (Tuner)	7.1	FR
Bit6	Coaxial	Pro Logic	RDS	5.1	C
Bit7	Optical	Dolby Digital	Preset	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	0xCA	0x21	Flag1	Flag2	Flag3	Flag4	Flag5	0xXX

#### 12V Trigger Status Flag1 – Flag5 Data

Bit	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					

