



Rotel RSX-1562 RS232 HEX Protocol

Date	Version	Update Description
February 7, 2012	1.00	Original Specification
December 11, 2012	1.01	Corrected an error with Stereo / Bypass checksum
August 12, 2014	1.02	Corrected an error with the Max volume command

The RS232 protocol structure for the RSX-1562 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	0xCC	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**.

Press & Release Keys

Certain commands require a starting “Key Pressed” command and will automatically repeat the command until a “Key Released” command is received.

The key pressed command is the standard Type 10 command, while key released commands use the same command Key but with Type 11.

Commands requiring press & release are highlighted in **orange**.

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Table 1 - Type 10 Primary Commands

RSX-1562 HEX	Command Description
POWER & VOLUME COMMANDS	
FE 03 CC 10 0A E9	Power Toggle
FE 03 CC 10 4A 29	Power Off
FE 03 CC 10 4B 2A	Power On
FE 03 CC 10 0B EA	Volume Up
FE 03 CC 10 0C EB	Volume Down
FE 03 CC 10 1E FD 00	Mute Toggle
FE 03 CC 10 71 50	Power Off All Zones
SOURCE SELECTION COMMANDS	
FE 03 CC 10 02 E1	Source CD
FE 03 CC 10 03 E2	Source Tuner
FE 03 CC 10 05 E4	Source Video 1
FE 03 CC 10 06 E5	Source Video 2
FE 03 CC 10 07 E6	Source Video 3
FE 03 CC 10 08 E7	Source Video 4
FE 03 CC 10 09 E8	Source Video 5
FE 03 CC 10 94 73	Source Video 6
FE 03 CC 10 8E 6D	Source iPod/USB
FE 03 CC 10 15 F4	Source Multi Input
SURROUND MODE COMMANDS	
FE 03 CC 10 11 F0	Stereo / Bypass Toggle
FE 03 CC 10 12 F1	Dolby 3 Stereo
FE 03 CC 10 13 F2	Dolby PLIIx Mode Toggle
FE 03 CC 10 A2 81	Dolby PLIIx Music/Cinema Toggle
FE 03 CC 10 14 F3	DSP Mode Toggle
FE 03 CC 10 53 32	Dolby 3 Stereo / PLIIx Toggle
FE 03 CC 10 54 33	dts Neo:6 Music/Cinema Toggle
FE 03 CC 10 57 36	DSP 1
FE 03 CC 10 58 37	DSP 2
FE 03 CC 10 59 38	DSP 3
FE 03 CC 10 5A 39	DSP 4
FE 03 CC 10 5B 3A	5 Channel Stereo
FE 03 CC 10 5C 3B	7 Channel Stereo
FE 03 CC 10 5D 3C	Dolby PLIIx Cinema
FE 03 CC 10 5E 3D	Dolby PLIIx Music
FE 03 CC 10 74 53	Dolby PLIIx Game
FE 03 CC 10 5F 3E	Dolby Pro Logic
FE 03 CC 10 92 71	Dolby PLIIz
FE 03 CC 10 60 3F	dts Neo:6 Music
FE 03 CC 10 61 40	dts Neo:6 Cinema

RSX-1562 HEX	Command Description
FE 03 CC 10 62 41	PLII Panorama Toggle
FE 03 CC 10 63 42	PLII Dimension Up
FE 03 CC 10 64 43	PLII Dimension Down
FE 03 CC 10 65 44	PLII Center Width Up
FE 03 CC 10 66 45	PLII Center Width Down
FE 03 CC 10 68 47	Dolby Digital EX Toggle
FE 03 CC 10 22 01	Next Surround Mode
OSD MENU COMMANDS	
FE 03 CC 10 18 F7	OSD Menu
FE 03 CC 10 19 F8	Enter
FE 03 CC 10 90 6F	Exit
FE 03 CC 10 1A F9	Cursor Right – Key Pressed
FE 03 CC 11 1A FA	Cursor Right – Key Released
FE 03 CC 10 1B FA	Cursor Left – Key Pressed
FE 03 CC 11 1B FB	Cursor Left – Key Released
FE 03 CC 10 1C FB	Cursor Up – Key Pressed
FE 03 CC 11 1C FC	Cursor Up – Key Released
FE 03 CC 10 1D FC	Cursor Down – Key Pressed
FE 03 CC 11 1D FD 00	Cursor Down – Key Released
TUNER COMMANDS	
FE 03 CC 10 28 07	Tune Up
FE 03 CC 10 29 08	Tune Down
FE 03 CC 10 6F 4E	Preset Up
FE 03 CC 10 70 4F	Preset Down
FE 03 CC 10 72 51	Frequency Up
FE 03 CC 10 73 52	Frequency Down
FE 03 CC 10 27 06	Memory
FE 03 CC 10 24 03	Band Toggle
FE 03 CC 10 56 35	AM
FE 03 CC 10 55 34	FM
FE 03 CC 10 20 FF	Tune / Preset
FE 03 CC 10 69 48	Tuning Mode Select
FE 03 CC 10 6A 49	Preset Mode Select
FE 03 CC 10 25 04	Frequency Direct
FE 03 CC 10 21 00	Preset Scan
FE 03 CC 10 44 23	Tuner Display
FE 03 CC 10 45 24	RDS PTY
FE 03 CC 10 46 25	RDS TP
FE 03 CC 10 47 26	RDS TA
FE 03 CC 10 26 05	FM Mono
NUMERIC KEY COMMANDS	
FE 03 CC 10 2A 09	Number Key 1

RSX-1562 HEX	Command Description
FE 03 CC 10 2B 0A	Number Key 2
FE 03 CC 10 2C 0B	Number Key 3
FE 03 CC 10 2D 0C	Number Key 4
FE 03 CC 10 2E 0D	Number Key 5
FE 03 CC 10 2F 0E	Number Key 6
FE 03 CC 10 30 0F	Number Key 7
FE 03 CC 10 31 10	Number Key 8
FE 03 CC 10 32 11	Number Key 9
FE 03 CC 10 33 12	Number Key 0
USB CONTROL COMMANDS	
FE 03 CC 10 85 64	Play
FE 03 CC 10 86 65	Pause
FE 03 CC 10 87 66	Stop – Key Pressed
FE 03 CC 11 87 67	Stop – Key Released
FE 03 CC 10 88 67	Track Forward – Key Pressed
FE 03 CC 11 88 68	Track Forward – Key Released
FE 03 CC 10 89 68	Track Back – Key Pressed
FE 03 CC 11 89 69	Track Back – Key Released
FE 03 CC 10 8A 69	Scan Forward – Key Pressed
FE 03 CC 11 8A 6A	Scan Forward – Key Released
FE 03 CC 10 8B 6A	Scan Back – Key Pressed
FE 03 CC 11 8B 6B	Scan Back – Key Released
FE 03 CC 10 8F 6E	Shuffle
FE 03 CC 10 8C 6B	Repeat
OTHER COMMANDS	
FE 03 CC 10 17 F6	Record Function Select
FE 03 CC 10 16 F5	Dynamic Range
FE 03 CC 10 1F FD 01	Digital Input Select
FE 03 CC 10 23 02	Zone 2 / Main
FE 03 CC 10 4C 2B	Temporary Center Trim
FE 03 CC 10 4D 2C	Temporary Subwoofer Trim
FE 03 CC 10 4E 2D	Temporary Surround Trim
FE 03 CC 10 4F 2E	Cinema EQ Toggle
FE 03 CC 10 52 31	Front Display On/Off
FE 03 CC 10 FF DE	Display Refresh
FE 03 CC 10 6E 4D	Party Mode Toggle
FE 03 CC 10 75 54	Output Resolution
FE 03 CC 10 78 57	HDMI Amp Mode
FE 03 CC 10 79 58	HDMI TV Mode
FE 03 CC 10 67 46	Temporary Room EQ Toggle
FE 03 CC 10 A1 80	Speaker Level Setting Toggle
FE 03 CC 10 93 72	Force Factory Default

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-1562 HEX	Command Description
MAIN ZONE POWER & VOLUME COMMANDS	
FE 03 CC 14 0A ED	Main Zone Power Toggle
FE 03 CC 14 4A 2D	Main Zone Power Off
FE 03 CC 14 4B 2E	Main Zone Power On
FE 03 CC 14 00 E3	Main Zone Volume Up
FE 03 CC 14 01 E4	Main Zone Volume Down
FE 03 CC 14 1E 01	Main Zone Mute Toggle
FE 03 CC 14 6C 4F	Main Zone Mute On
FE 03 CC 14 6D 50	Main Zone Mute Off
FE 03 CC 14 71 54	Power Off All Zones
MAIN ZONE SOURCE SELECTION COMMANDS	
FE 03 CC 14 02 E5	Main Zone Source CD
FE 03 CC 14 03 E6	Main Zone Source Tuner
FE 03 CC 14 05 E8	Main Zone Source Video 1
FE 03 CC 14 06 E9	Main Zone Source Video 2
FE 03 CC 14 07 EA	Main Zone Source Video 3
FE 03 CC 14 08 EB	Main Zone Source Video 4
FE 03 CC 14 09 EC	Main Zone Source Video 5
FE 03 CC 14 94 77	Main Zone Source Video 6
FE 03 CC 14 8E 71	Main Zone Source iPod/USB
FE 03 CC 14 15 F8	Main Zone Source Multi Input

Table 3 - Type 15 Record Source Commands

RSX-1562 HEX	Command Description
RECORD SOURCE SELECTION COMMANDS	
FE 03 CC 15 02 E6	Record Source CD
FE 03 CC 15 03 E7	Record Source Tuner
FE 03 CC 15 05 E9	Record Source Video 1
FE 03 CC 15 06 EA	Record Source Video 2
FE 03 CC 15 07 EB	Record Source Video 3
FE 03 CC 15 08 EC	Record Source Video 4
FE 03 CC 15 09 ED	Record Source Video 5
FE 03 CC 15 94 78	Record Source Video 6
FE 03 CC 15 8E 72	Record Source iPod/USB
FE 03 CC 15 6B 4F	Record Follow Main Zone Source

Table 4 - Type 16 Zone 2 Commands

RSX-1562 HEX	Command Description
ZONE 2 POWER & VOLUME COMMANDS	
FE 03 CC 16 0A EF	Zone 2 Power Toggle
FE 03 CC 16 4A 2F	Zone 2 Power Off
FE 03 CC 16 4B 30	Zone 2 Power On
FE 03 CC 16 00 E5	Zone 2 Volume Up
FE 03 CC 16 01 E6	Zone 2 Volume Down
FE 03 CC 16 1E 03	Zone 2 Mute Toggle
FE 03 CC 16 6C 51	Zone 2 Mute On
FE 03 CC 16 6D 52	Zone 2 Mute Off
FE 03 CC 16 71 56	Power Off All Zones
ZONE 2 SOURCE SELECTION COMMANDS	
FE 03 CC 16 02 E7	Zone 2 Source CD
FE 03 CC 16 03 E8	Zone 2 Source Tuner
FE 03 CC 16 05 EA	Zone 2 Source Video 1
FE 03 CC 16 06 EB	Zone 2 Source Video 2
FE 03 CC 16 07 EC	Zone 2 Source Video 3
FE 03 CC 16 08 ED	Zone 2 Source Video 4
FE 03 CC 16 09 EE	Zone 2 Source Video 5
FE 03 CC 16 94 79	Zone 2 Source Video 6
FE 03 CC 16 8E 73	Zone 2 Source iPod/USB
FE 03 CC 16 6B 50	Zone 2 Follow Main Zone Source
ZONE 2 TUNER COMMANDS	
FE 03 CC 16 28 0D	Zone 2 Tune Up
FE 03 CC 16 29 0E	Zone 2 Tune Down
FE 03 CC 16 6F 54	Zone 2 Preset Up
FE 03 CC 16 70 55	Zone 2 Preset Down
FE 03 CC 16 72 57	Zone 2 Frequency Up
FE 03 CC 16 73 58	Zone 2 Frequency Down
FE 03 CC 16 24 09	Zone 2 Band Toggle
FE 03 CC 16 56 3B	Zone 2 AM
FE 03 CC 16 55 3A	Zone 2 FM
FE 03 CC 16 20 05	Zone 2 Tune / Preset
FE 03 CC 16 69 4E	Zone 2 Tuning Mode Select
FE 03 CC 16 6A 4F	Zone 2 Preset Mode Select
FE 03 CC 16 21 06	Zone 2 Preset Scan
FE 03 CC 16 26 0B	Zone 2 FM Mono
ZONE 2 NUMERIC KEY COMMANDS	
FE 03 CC 16 2A 0F	Zone 2 Number 1
FE 03 CC 16 2B 10	Zone 2 Number 2
FE 03 CC 16 2C 11	Zone 2 Number 3

RSX-1562 HEX	Command Description
FE 03 CC 16 2D 12	Zone 2 Number 4
FE 03 CC 16 2E 13	Zone 2 Number 5
FE 03 CC 16 2F 14	Zone 2 Number 6
FE 03 CC 16 30 15	Zone 2 Number 7
FE 03 CC 16 31 16	Zone 2 Number 8
FE 03 CC 16 32 17	Zone 2 Number 9
FE 03 CC 16 33 18	Zone 2 Number 0
ZONE 2 OTHER COMMANDS	
FE 03 CC 16 6E 53	Party Mode Toggle

Table 5 - Type 17 Zone 3 Commands

RSX-1562 HEX	Command Description
ZONE 3 POWER & VOLUME COMMANDS	
FE 03 CC 17 0A F0	Zone 3 Power Toggle
FE 03 CC 17 4A 30	Zone 3 Power Off
FE 03 CC 17 4B 31	Zone 3 Power On
FE 03 CC 17 00 E6	Zone 3 Volume Up
FE 03 CC 17 01 E7	Zone 3 Volume Down
FE 03 CC 17 1E 04	Zone 3 Mute Toggle
FE 03 CC 17 6C 52	Zone 3 Mute On
FE 03 CC 17 6D 53	Zone 3 Mute Off
FE 03 CC 17 71 57	Power Off All Zones
ZONE 3 SOURCE SELECTION COMMANDS	
FE 03 CC 17 02 E8	Zone 3 Source CD
FE 03 CC 17 03 E9	Zone 3 Source Tuner
FE 03 CC 17 05 EB	Zone 3 Source Video 1
FE 03 CC 17 06 EC	Zone 3 Source Video 2
FE 03 CC 17 07 ED	Zone 3 Source Video 3
FE 03 CC 17 08 EE	Zone 3 Source Video 4
FE 03 CC 17 09 EF	Zone 3 Source Video 5
FE 03 CC 17 94 7A	Zone 3 Source Video 6
FE 03 CC 17 8E 74	Zone 3 Source iPod/USB
FE 03 CC 17 6B 51	Zone 3 Follow Main Zone Source
ZONE 3 TUNER COMMANDS	
FE 03 CC 17 28 0E	Zone 3 Tune Up
FE 03 CC 17 29 0F	Zone 3 Tune Down
FE 03 CC 17 6F 55	Zone 3 Preset Up
FE 03 CC 17 70 56	Zone 3 Preset Down
FE 03 CC 17 72 58	Zone 3 Frequency Up
FE 03 CC 17 73 59	Zone 3 Frequency Down
FE 03 CC 17 24 0A	Zone 3 Band Toggle
FE 03 CC 17 56 3C	Zone 3 AM

RSX-1562 HEX	Command Description
FE 03 CC 17 55 3B	Zone 3 FM
FE 03 CC 17 20 06	Zone 3 Tune / Preset
FE 03 CC 17 69 4F	Zone 3 Tuning Mode Select
FE 03 CC 17 6A 50	Zone 3 Preset Mode Select
FE 03 CC 17 21 07	Zone 3 Preset Scan
FE 03 CC 17 26 0C	Zone 3 FM Mono
ZONE 3 NUMERIC KEY COMMANDS	
FE 03 CC 17 2A 10	Zone 3 Number 1
FE 03 CC 17 2B 11	Zone 3 Number 2
FE 03 CC 17 2C 12	Zone 3 Number 3
FE 03 CC 17 2D 13	Zone 3 Number 4
FE 03 CC 17 2E 14	Zone 3 Number 5
FE 03 CC 17 2F 15	Zone 3 Number 6
FE 03 CC 17 30 16	Zone 3 Number 7
FE 03 CC 17 31 17	Zone 3 Number 8
FE 03 CC 17 32 18	Zone 3 Number 9
FE 03 CC 17 33 19	Zone 3 Number 0
ZONE 3 OTHER COMMANDS	
FE 03 CC 17 6E 54	Party Mode Toggle

Table 6 - Type 18 Zone 4 Commands

RSX-1562 HEX	Command Description
ZONE 4 POWER & VOLUME COMMANDS	
FE 03 CC 18 0A F1	Zone 4 Power Toggle
FE 03 CC 18 4A 31	Zone 4 Power Off
FE 03 CC 18 4B 32	Zone 4 Power On
FE 03 CC 18 00 E7	Zone 4 Volume Up
FE 03 CC 18 01 E8	Zone 4 Volume Down
FE 03 CC 18 1E 05	Zone 4 Mute Toggle
FE 03 CC 18 6C 53	Zone 4 Mute On
FE 03 CC 18 6D 54	Zone 4 Mute Off
FE 03 CC 18 71 58	Power Off All Zones
ZONE 4 SOURCE SELECTION COMMANDS	
FE 03 CC 18 02 E9	Zone 4 Source CD
FE 03 CC 18 03 EA	Zone 4 Source Tuner
FE 03 CC 18 05 EC	Zone 4 Source Video 1
FE 03 CC 18 06 ED	Zone 4 Source Video 2
FE 03 CC 18 07 EE	Zone 4 Source Video 3
FE 03 CC 18 08 EF	Zone 4 Source Video 4
FE 03 CC 18 09 F0	Zone 4 Source Video 5
FE 03 CC 18 94 7B	Zone 4 Source Video 6
FE 03 CC 18 8E 75	Zone 4 Source iPod/USB

RSX-1562 HEX	Command Description
FE 03 CC 18 6B 52	Zone 4 Follow Main Zone Source
ZONE 4 TUNER COMMANDS	
FE 03 CC 18 28 0F	Zone 4 Tune Up
FE 03 CC 18 29 10	Zone 4 Tune Down
FE 03 CC 18 6F 56	Zone 4 Preset Up
FE 03 CC 18 70 57	Zone 4 Preset Down
FE 03 CC 18 72 59	Zone 4 Frequency Up
FE 03 CC 18 73 5A	Zone 4 Frequency Down
FE 03 CC 18 24 0B	Zone 4 Band Toggle
FE 03 CC 18 56 3D	Zone 4 AM
FE 03 CC 18 55 3C	Zone 4 FM
FE 03 CC 18 20 07	Zone 4 Tune / Preset
FE 03 CC 18 69 50	Zone 4 Tuning Mode Select
FE 03 CC 18 6A 51	Zone 4 Preset Mode Select
FE 03 CC 18 21 08	Zone 4 Preset Scan
FE 03 CC 18 26 0D	Zone 4 FM Mono
ZONE 4 NUMERIC KEY COMMANDS	
FE 03 CC 18 2A 11	Zone 4 Number 1
FE 03 CC 18 2B 12	Zone 4 Number 2
FE 03 CC 18 2C 13	Zone 4 Number 3
FE 03 CC 18 2D 14	Zone 4 Number 4
FE 03 CC 18 2E 15	Zone 4 Number 5
FE 03 CC 18 2F 16	Zone 4 Number 6
FE 03 CC 18 30 17	Zone 4 Number 7
FE 03 CC 18 31 18	Zone 4 Number 8
FE 03 CC 18 32 19	Zone 4 Number 9
FE 03 CC 18 33 1A	Zone 4 Number 0
ZONE 4 OTHER COMMANDS	
FE 03 CC 18 6E 55	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-1562 HEX	Command Description
VOLUME DIRECT COMMANDS	
FE 03 CC 30 00 FF	Volume Min
FE 03 CC 30 01 00	Volume 1
FE 03 CC 30 02 01	Volume 2
FE 03 CC 30 03 02	Volume 3
FE 03 CC 30 04 03	Volume 4
FE 03 CC 30 05 04	Volume 5
FE 03 CC 30 06 05	Volume 6
FE 03 CC 30 07 06	Volume 7
FE 03 CC 30 08 07	Volume 8
FE 03 CC 30 09 08	Volume 9
FE 03 CC 30 0A 09	Volume 10
FE 03 CC 30 10 0F	Volume 16
FE 03 CC 30 20 1F	Volume 32
FE 03 CC 30 30 2F	Volume 48
FE 03 CC 30 40 3F	Volume 64
FE 03 CC 30 50 4F	Volume 80
FE 03 CC 30 5F 5E	Volume 95
FE 03 CC 30 64 63	Volume Max

Table 8 - Type 32 Zone 2 Volume Direct Commands

RSX-1562 HEX	Command Description
ZONE 2 VOLUME DIRECT COMMANDS	
FE 03 CC 32 00 01	Zone 2 Volume Min
FE 03 CC 32 01 02	Zone 2 Volume 1
FE 03 CC 32 02 03	Zone 2 Volume 2
FE 03 CC 32 03 04	Zone 2 Volume 3
FE 03 CC 32 04 05	Zone 2 Volume 4
FE 03 CC 32 05 06	Zone 2 Volume 5
FE 03 CC 32 06 07	Zone 2 Volume 6
FE 03 CC 32 10 11	Zone 2 Volume 16
FE 03 CC 32 20 21	Zone 2 Volume 36
FE 03 CC 32 30 31	Zone 2 Volume 48
FE 03 CC 32 40 41	Zone 2 Volume 64
FE 03 CC 32 50 51	Zone 2 Volume 80
FE 03 CC 32 5F 60	Zone 2 Volume 95
FE 03 CC 32 64 65	Zone 2 Volume Max

Table 9 - Type 33 Zone 3 Volume Direct Commands

RSX-1562 HEX	Command Description
ZONE 3 VOLUME DIRECT COMMANDS	
FE 03 CC 33 00 02	Zone 3 Volume Min
FE 03 CC 33 01 03	Zone 3 Volume 1
FE 03 CC 33 02 04	Zone 3 Volume 2
FE 03 CC 33 03 05	Zone 3 Volume 3
FE 03 CC 33 04 06	Zone 3 Volume 4
FE 03 CC 33 05 07	Zone 3 Volume 5
FE 03 CC 33 06 08	Zone 3 Volume 6
FE 03 CC 33 10 12	Zone 3 Volume 16
FE 03 CC 33 20 22	Zone 3 Volume 32
FE 03 CC 33 30 32	Zone 3 Volume 48
FE 03 CC 33 40 42	Zone 3 Volume 64
FE 03 CC 33 50 52	Zone 3 Volume 80
FE 03 CC 33 5F 61	Zone 3 Volume 95
FE 03 CC 33 64 66	Zone 3 Volume Max

Table 10 - Type 34 Zone 4 Volume Direct Commands

RSX-1562 HEX	Command Description
ZONE 4 VOLUME DIRECT COMMANDS	
FE 03 CC 34 00 03	Zone 4 Volume Min
FE 03 CC 34 01 04	Zone 4 Volume 1
FE 03 CC 34 02 05	Zone 4 Volume 2
FE 03 CC 34 03 06	Zone 4 Volume 3
FE 03 CC 34 04 07	Zone 4 Volume 4
FE 03 CC 34 05 08	Zone 4 Volume 5
FE 03 CC 34 06 09	Zone 4 Volume 6
FE 03 CC 34 10 13	Zone 4 Volume 16
FE 03 CC 34 20 23	Zone 4 Volume 34
FE 03 CC 34 30 33	Zone 4 Volume 48
FE 03 CC 34 40 43	Zone 4 Volume 64
FE 03 CC 34 50 53	Zone 4 Volume 80
FE 03 CC 34 5F 62	Zone 4 Volume 95
FE 03 CC 34 64 67	Zone 4 Volume Max

Table 11 - Type 40 12V Trigger Direct Commands

RSX-1562 HEX	Command Description
12V TRIGGER DIRECT COMMANDS	
FE 03 CC 40 00 0F	Main Zone 12V Trigger 1 Toggle
FE 03 CC 40 01 10	Main Zone 12V Trigger 2 Toggle
FE 03 CC 40 02 11	Main Zone 12V Trigger 3 Toggle
FE 03 CC 40 03 12	Main Zone 12V Trigger 4 Toggle
FE 03 CC 40 04 13	Main Zone 12V Trigger 5 Toggle
FE 03 CC 40 05 14	Main Zone 12V Trigger 6 Toggle
FE 03 CC 40 06 15	Zone 2 12V Trigger 1 Toggle
FE 03 CC 40 07 16	Zone 2 12V Trigger 2 Toggle
FE 03 CC 40 08 17	Zone 2 12V Trigger 3 Toggle
FE 03 CC 40 09 18	Zone 2 12V Trigger 4 Toggle
FE 03 CC 40 0A 19	Zone 2 12V Trigger 5 Toggle
FE 03 CC 40 0B 1A	Zone 2 12V Trigger 6 Toggle
FE 03 CC 40 0C 1B	Zone 3 12V Trigger 1 Toggle
FE 03 CC 40 0D 1C	Zone 3 12V Trigger 2 Toggle
FE 03 CC 40 0E 1D	Zone 3 12V Trigger 3 Toggle
FE 03 CC 40 0F 1E	Zone 3 12V Trigger 4 Toggle
FE 03 CC 40 10 1F	Zone 3 12V Trigger 5 Toggle
FE 03 CC 40 11 20	Zone 3 12V Trigger 6 Toggle
FE 03 CC 40 12 21	Zone 4 12V Trigger 1 Toggle
FE 03 CC 40 13 22	Zone 4 12V Trigger 2 Toggle
FE 03 CC 40 14 23	Zone 4 12V Trigger 3 Toggle
FE 03 CC 40 15 24	Zone 4 12V Trigger 4 Toggle
FE 03 CC 40 16 25	Zone 4 12V Trigger 5 Toggle
FE 03 CC 40 17 26	Zone 4 12V Trigger 6 Toggle

Section 2: Feedback String Format

Standard Response String Format

Start	Count	ID	Type	Data						Checksum
0xFE	0x31	0xCC	0x20	Char1	...	Char42	Flag1	...	Flag5	0xFF

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.

Flag1 – Flag5 Data

	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	ds	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

Start	Count	ID	Type	Data					Checksum
0xFE	0x07	0xCC	0x21	Flag1	Flag2	Flag3	Flag4	Flag5	0xFF

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					

Smart Display Data String 1 Format

Start	Count	ID	Type	Data (28 Bytes)					Checksum
0xFE	0x1E	0xCC	0x22	0x00	0x00	Line1(1)	...	Line1(26)	0xFF

Smart Display Data String 2 Format

Start	Count	ID	Type	Data (234 Bytes)					
0xFE	0xEC	0xCC	0x23	Line2(1)	...	Line2(26)	Line3(1)	...	Line3(26)

Data					
Line4(1)	...	Line4(26)	Line5(1)	...	Line5(26)

Data					
Line6(1)	...	Line6(26)	Line7(1)	...	Line7(26)

Data					
Line8(1)	...	Line8(26)	Line9(1)	...	Line9(26)

Data					Checksum
Line10(1)	...	Line10(26)			0xFF

When the iPod/USB input is in use, the unit will send additional information representing the metadata from the USB source device. This is contained in 2 separate strings and is sent in addition to the standard feedback string.

The smart display strings represent the metadata that is also shown on the video output of the unit. The first string contains the data present on the first line of the display. The second string represents the remaining 9 lines of data.

Each line of data is 26 characters, and can be either ASCII characters (0x20-0x7F) or special characters (0x80-0x8C). A reference chart for the special character data is below.

Value	Display Data
0x20-0x7F	Standard ASCII Characters
0x80	Invert F
0x81	Invert M
0x82	Invert T
0x83	Invert R
0x84	Invert S
0x85	Invert A
0x86	Full Bar "—"
0x87	▶
0x88	
0x89	■
0x8A	◀
0x8B	Cursor Right >
0x8C	Cursor Left <