

RDV 1060

1 Byte Waveform Format:

Baud Rate	Parity	Data Bits	Stop Bit	Handshaking	Data Type
9600	N	8	1	None	String

1. Other Controller -> RDV 1060

RDV 1060 expected format for RS232 commands:

Function Code	Key Code	Ending Code
1 byte	1 byte	1 byte

All commands are sent as a sequence of 3 hex bytes, with no spaces, no delimiters, etc.

For example, a command for "Progressive Scan" would require the following bytes:

35	58	36
----	----	----

The following commands use Function Code 33, and Ending Code 34

Key Code	Command
02	Eject
04	Next
08	Pause
20	Pre
40	Stop
80	Play

The following commands use Function Code 35, and Ending Code 36

Key Code	Command
45	Power
69	Power On
6A	Power Off
03	0
04	1
05	2
5F	3
07	4
08	5
09	6
0A	7
0B	8
0C	9
10	Slow
58	Progressive Scan
0D	+10
0F	Clear
55	Resume
5A	Repeat

5B	AB
54	GOTO
35	Display
40	Angle
41	Subtitle
42	Audio
53	Zoom
44	Up
02	Menu (VCD/SVCD)
43	Menu (DVD/DVDA)
1C	Left
48	Right
01	OSD
1D	Down
13	Title
14	FF
5C	FB

NOTE: The commands listed in red do not utilize the ending code. These commands require only the function code and key code to be transmitted to work properly.

For example, to send the OSD command would only require 35 01 instead of 35 01 36.

2. RDV 1060 -> Other Controller

2. Stream Structure (ASCII string representation of hexadecimal number values):

The device may generate one of three different possible structured feedback streams at a time. Each single member of the structured feedback stream is a two byte ASCII string representation of the hexadecimal number.

Structure Type 1:

Leading Code		Space Byte	Data Value		Space Byte	Ending Bytes 1 & 2	
ASCII	ASCII	0x20	ASCII	ASCII	0x20	0x0D	0x10

With Structure Type 1 the leading code key is always a two byte ASCII representation of the hex byte "0A". Refer to the examples below for more information on this two byte ASCII representation method.

The Space Byte is always a hex value 0x20.

The index or Data Value key is sent in the feedback stream as two ASCII bytes. These two bytes represent the hexadecimal value of each key in two ASCII bytes.

Example: "Stop" is listed in Table 1 below as value 57 (Hex)

- The feedback returned is not a 1 byte value of 57, but rather 2 bytes containing the hex equivalent of "57" in ASCII value

Feedback Byte 1 = 0x35, Byte 2 = 0x37
0x35(Hex) is equivalent to 5 (ASCII)
0x37(Hex) is equivalent to 7 (ASCII)

The ending bytes are 2 hex bytes, and are always values 0x0D followed by 0x10.

Example String for feature key "Stop" feedback:

Leading Code		Space Byte	Data Value		Space Byte	Ending Bytes 1 & 2	
0	A	0x20	5	7	0x20	0x0D	0x10

- Leading Code: 0A Byte 1 = 0x30, Byte 2 = 0x41
- Data Value: 57 Byte 1 = 0x35, Byte 2 = 0x37
- Ending Code: 0D 10 Byte 1 = 0x0D, Byte 2 = 0x10

Table 1

The Feature Key Table presents a hexadecimal number for each feature key. Remember there is a sequence of two ASCII bytes to represent each of these feature keys.

Data	Function	Data	Function	Data	Function	Data	Function
33	No Disc	52	Remain	71	CDDA	90	QUANT 24bits
34	Open	53	FB	72	VCD	91	FS 44kHz
35	MSG Close	54	FF	73	SVCD	92	FS 48kHz
36	MSG Stop	55	Pause	74	DVD	93	FS 32kHz
37	MSG Root	56	Play	75	DVD Off	94	FS 88kHz
38	MSG Title	57	Stop	76	Reserved	95	FS 96kHz
39	MSG Loading	58	PBC On	77	Reserved	96	FS 64kHz
3A	MSG Clearall	59	PBC Off	78	Reserved	97	FS 22kHz
3B	MSG SetA	5A	Colon1 On	79	Reserved	98	FS 24kHz
3C	MSG SetB	5B	Colon2 On	7A	Circle Off	99	FS 16kHz
3D	MSG ClearAB	5C	Reserved	7B	Circle On	9A	FS 176kHz
3E	MSG DVD	5D	Colon Off	7C	Repeat Off	9B	FS 192kHz
3F	MSGDVDA	5E	Title	7D	Repeat One	9C	Reserved
40	MSG VCD	5F	Track	7E	Repeat All	9D	Reserved
41	MSG CDDA	60	Track Off	7F	A-B Cancel	9E	Reserved
42	MSG VCD30	61	Chapter	80	A-B A	9F	Reserved
43	Mono L	62	Chapter Off	81	A-B B	A0	Reserved
44	Mono R	63	Reserved	82	Last On	A1	Reserved
45	Stereo	64	Reserved	83	Last Off	A2	Reserved
46	Dts	65	Time Remain	84	Zoom On	A3	Reserved
47	Dolby	66	Time Elapsed	85	Zoom Off	A4	Power On
48	AC3 On	67	Reserved	86	AC3	A5	Power Off
49	AC3 Off	68	Reserved	87	MUSICAM	A6	Zoom 15X
4A	5.1Ch	69	Pause On	88	MP3	A7	Zoom 20X
4B	Clear Audio	6A	Pause Off	89	CDDA LPCM	A8	Mute On
4C	Clear All	6B	Angle On	8A	DTS	A9	Mute Off
4D	Reserved	6C	Angle Off	8B	SDDS	AA	VFD Off
4E	Reserved	6D	Chap. Repeat	8C	DMC	AB	VFD On
4F	Reserved	6E	Title Repeat On	8D	MLP	AC	READ PwrStatus
50	Reserved	6F	Chap. Repeat Off	8E	QUANT 16bits	AD	
51	Remain On	70	Title Repeat Off	8F	QUANT 20bits	10E	

Structure Type 2:

Leading Code		Space Byte	Data Value 1		Space Byte	Data Value 2		Ending Bytes 1 & 2	
ASCII	ASCII	0x20	ASCII	ASCII	0x20	ASCII	ASCII	0x0D	0x10

With Structure Type 2 the overall structure is similar to Type 1, but the leading code key is always a two byte ASCII representation of the hex byte "0B", and there is an additional Data Value key. Refer to the examples from Structure Type 1 for more information on this two byte ASCII representation method.

Structure Type 2 is used to represent numeric values such as time and disc track numbers.

Data Value 1 represents the category of data, and Data Value 2 represents the actual number. Please refer to Table 2 for a listing of each category.

Example String to represent CD Track "15" feedback:

Leading Code		Space Byte	Data Value 1		Space Byte	Data Value 2		Ending Bytes 1 & 2	
0	B	0x20	3	6	0x20	1	5	0x0D	0x10

- Leading Code: 0B Byte 1 = 0x30, Byte 2 = 0x42
- Data Value 1: 36 Byte 1 = 0x33, Byte 2 = 0x36
- Data Value 2: 15 Byte 1 = 0x31, Byte 2 = 0x35
- Ending Code: 0D 10 Byte 1 = 0x0D, Byte 2 = 0x10

Table 2

This table presents a decimal number for each type of numeric category. Remember there is a two byte ASCII sequence to represent each of these data keys.

Data	Category	Data	Category	Data	Category
32	HOUR	37	CHAPTER / DVDA TRACK	3C	DIM
33	MINUTE	38	Reserved		
34	SECOND	39	GROUP		
35	TITLE	3A	DVD A LED		
36	CD TRACK	3B	DVDA CHANNELS		

Structure Type 3:

Leading Code	Value 1	Value 2	Value 3	Value 4	Value 5	Value 6	Value 7	Value 8	Value 9
ASCII	ASCII	ASCII	ASCII	ASCII	ASCII	ASCII	ASCII	ASCII	ASCII

Structure Type 3 is a 10 byte structure is similar to Type 1 and 2, but the leading code key is always a two byte ASCII representation of the hex byte "0E". There are also space bytes between each of the value bytes, and the standard ending bytes 0x0D and 0x10.

Value 1:

Represents the disc type in the player.

00	01	02	03	04	05	06
DVD Audio	DVD Video	CD-DA	VCD	VCD30	MP3	SVCD

Value 2:

Represents the hours.

Value 3:

Represents the type of digital audio of the disc in the player.

01	02	03	04
DTS	PCM	MLP	DOLBY

Value 4:

Represents the number of titles or groups on the disc.

Value 5:

Represents the number of tracks on the disc.

Value 6:

Represents the sampling rate frequency (kHz).

01	02	03	04	05	06	07	08	09	10
44	48	88	96	176	192	32	22	24	16

Value 7:

Represents the number bits in the audio signal.

01	02	03
16	20	24

Value 8:

Represents the minutes.

Value 9:

Represents the power state of the unit.

00	01
Power Off	Power On

RDV 1060 RS232 Controller Command List

Table: RDV 1060 Waveform format expected:

Baud Rate	Parity	Valid Data Bits	Stop Bit Value	Handshaking	Data Type
9600	N	8	1	None	String

Table: RDV 1060 expected format of a request by RS 232 controller:

Function Code	Key Code	Ending Code
1 byte	1 byte	1 byte

Table 1: Command List

NOTE: The values in the table below show the exact byte sequence of all requests. The device will expect three bytes only - no spaces, no delimiter, etc. The controlling device may implement its own method to download each command sequence.

RDV 1060 HEX	Command Description
33 02 34	Button Eject
33 04 34	Button Next
33 08 34	Button Pause
33 20 34	Button Pre
33 40 34	Button Stop
33 80 34	Button Play
35 45 36	Button OFF-ON
35 69 36	REV 1.25 only ON
35 6A 36	REV 1.25 only OFF
35 03 36	Button 0
35 04 36	Button 1
35 05 36	Button 2
35 5F 36	Button 3
35 07 36	Button 4
35 08 36	Button 5
35 09 36	Button 6
35 0A 36	Button 7
35 0B 36	Button 8
35 0C 36	Button 9
35 10 36	Button Slow
35 58 36	Button PSCAN
35 0D 36	Button Plus10
35 0F 36	Button Clear
35 55 36	Button Resume
35 5A 36	Button Repeat
35 5B 36	Button AB
35 54 36	Button GOTO
35 35 36	Button DISP
35 40 36	Button ANGLE
35 41 36	Button SBTLE
35 42 36	Button AUDIO
35 53 36	Button ZOOM
35 44 36	Button UP

35 02 36	MENU if VCD or SVCD
35 43 36	MENU DVD-V DVD-A
35 1C 36	Button LEFT
35 48 36	Button RIGHT
35 01 36	Button OSD
35 1D 36	Button DOWN
35 13 36	Button TITLE
35 14 36	Button FF
35 5C 36	Button FB

Table 2: Commands Sent with exceptions or modifications required

Controller	Command Description
35 01	Button OSD
35 44	Button Up
35 1D	Button Down
35 48	Button Right
35 1C	Button Left

The table above list commands with exceptions. Testing OSD Menu passed with exception. The root cause is the ending code. The ending code 34 has the effect of executing the selected OSD menu option. For example, if the selected position calls a Sub Menu on <enter>, the menu will be selected automatically.

The solution is to remove the ending code HEX 34 from the set of OSD requests. Using the modified strings by omitting the ending code allows OSD navigation to be consistent with the IR Remote functionality.