



## Rotel RCC-1055 RS232 HEX Protocol

Date	Version	Update Description
February 2, 2012	1.00	Original Specification

The RS232 protocol structure for the RCC-1055 is detailed below. This is a HEX based communication protocol.

### Connection Settings

*Units BEFORE serial # 077-7121001 (Black) or 977-7121001 (Silver)*

Baud Rate	Parity	Valid Data Bits	Stop Bit Value	Handshaking	Data Type
2400	N	8	1	None	String

*Units AFTER serial # 077-7121001 (Black) or 977-7121001 (Silver)*

Baud Rate	Parity	Valid Data Bits	Stop Bit Value	Handshaking	Data Type
9600	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	0xB0	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.

## Section 1: Control Command List

RCC-1055 HEX	Command Description
<b>POWER COMMANDS</b>	
FE 03 B0 10 49 0C	Power Toggle
FE 03 B0 10 4A 0D	Power On
FE 03 B0 10 4B 0E	Power Off
<b>CD TRANSPORT COMMANDS</b>	
FE 03 B0 10 13 D6	Play
FE 03 B0 10 0F D2	Stop
FE 03 B0 10 0B CE	Pause
FE 03 B0 10 1A DD	Track >>
FE 03 B0 10 0E D1	Track  <<
FE 03 B0 10 1E E1	Search >>
FE 03 B0 10 0A CD	Search <<
FE 03 B0 10 09 CC	Number 1
FE 03 B0 10 1D E0	Number 2
FE 03 B0 10 1F E2	Number 3
FE 03 B0 10 0D D0	Number 4
FE 03 B0 10 19 DC	Number 5
FE 03 B0 10 1B DE	Number 6
FE 03 B0 10 11 D4	Number 7
FE 03 B0 10 15 D8	Number 8
FE 03 B0 10 17 DA	Number 9
FE 03 B0 10 12 D5	Number 10
FE 03 B0 10 16 D9	Number +10
FE 03 B0 10 41 04	Next Disc
FE 03 B0 10 42 05	Disc 1
FE 03 B0 10 43 06	Disc 2
FE 03 B0 10 44 07	Disc 3
FE 03 B0 10 45 08	Disc 4
FE 03 B0 10 46 09	Disc 5
FE 03 B0 10 10 D3	Drawer Open/Close
<b>ADDITIONAL COMMANDS</b>	
FE 03 B0 10 00 C3	Random
FE 03 B0 10 01 C4	Repeat
FE 03 B0 10 02 C5	Time
FE 03 B0 10 03 C6	Program
FE 03 B0 10 04 C7	Scan
FE 03 B0 10 07 CA	Review
FE 03 B0 10 4F 12	Release Key
FE 03 B0 10 47 0A	Front Display On
FE 03 B0 10 48 0B	Front Display Off

## Section 2: Feedback String Format

### Standard Response String Format

*Units BEFORE serial # 077-7121001 (Black) or 977-7121001 (Silver)*

Start	Count	ID	Type	Data													Chk
0xFE	0x0E	0xB0	0x20	F1	F2	F3	F4	F5	C1	C2	C3	C4	C5	C6	C7	0xXX	

The feedback string is a representation of the display of the unit. The F1-F5 data bytes contain data on which of the various icons on the front display are currently illuminated. The C1-C7 data bytes contain ASCII data on current disc and track information.

#### F1 - F5 Flag Data

	Flag1	Flag2	Flag3	Flag4	Flag5
Bit0		9	REMAIN	RANDOM	5/
Bit1	16	8	1	PROGRAM	4/
Bit2	15	7		INTRO	3/
Bit3	14	6	REPT-DISC	:	2/
Bit4	13	5	REPT-1	DISC	1/
Bit5	12	4	REPT-ALL	TRACK	PLAY
Bit6	11	3	REPEAT	MIN	PAUSE
Bit7	10	2		SEC	DISP OFF

#### C1 – C7: ASCII Characters

C1: DISC                      C2-3: TRACK                      C4-5: MIN                      C6-7: SEC

*Units AFTER serial # 077-7121001 (Black) or 977-7121001 (Silver)*

Start	Count	ID	Type	Data														Chk
0xFE	0x0E	0xB0	0x20	F1	F2	F3	F4	F5	F6	C1	C2	C3	C4	C5	C6	C7	C8	0xXX

The feedback string is a representation of the display of the unit. The F1-F6 data bytes contain data on which of the various icons on the front display are currently illuminated. The C1-C8 data bytes contain ASCII data on current disc and track information.

#### F1 - F6 Flag Data

	Flag1	Flag2	Flag3	Flag4	Flag5	Flag6
Bit0	20	12	4	:	CD	PAUSE
Bit1	19	11	3	REMAIN	HD CD	INTRO
Bit2	18	10	2	EACH	MP3	PLAY
Bit3	17	9	1	TOTAL	1/	REP-ALL
Bit4	16	8		SEC	2/	REP-DISC
Bit5	15	7	RANDOM	MIN	3/	REP-1
Bit6	14	6		TRACK	4/	REPEAT
Bit7	13	5	PROGRAM	DISC	5/	DISP OFF

#### C1 – C8: ASCII Characters

C1: DISC                      C2-4: TRACK                      C5-6: MIN                      C7-8: SEC