



Rotel RAP-1580 / RAP-1580MKII RS232 / IP ASCII Controller Command List

Date	Version	Update Description
January 16, 2017	1.00	Original Specification
October 10, 2020	1.01	Update to include RAP-1580MKII in description.

The RAP-1580/RAP-1580MKII supports an ASCII based RS232 and IP protocol. The RS232 hardware does not support flow control so care needs to be taken when sending and receiving data to avoid packet loss.

All commands sent to the attached Rotel device must have a terminating “!” character.

Example Command: power_on!

Note: Do not include any spaces in the command, and do not include a carriage return or line feed after the command, only the “!” terminating character.

Status information from the attached Rotel product will either have a terminating “!” character or a byte count for variable length text data that may include a “!” in the returned message. It is up to the sending/receiving control application to properly parse and process the packets.

Note: The byte count only includes the text data and not the length or “,” character.

RS232 Connection Settings

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

IP Control Settings

The RAP-1580 will accept and respond to IP control commands if the product is connected to a local network and has a valid IP address.

Commands will be accepted via TCP port 9596, and the unit will send responses back via the same port.

NOTE: If the Front USB input is selected IP control response will be noticeably slower while on this input. Therefore, it is recommended if the Front USB input will be utilized in a system to use RS232 for control instead of IP.

Speaker Level Trim Notes

Center Back

For speaker configurations where there is one Center Back channel, use the Center Back left channel commands for temporary level adjustments.

Ceiling Middle

For speaker configurations where there are Ceiling Middle channels, use the Ceiling Front Left & Right channel commands for temporary level adjustments.

Section 1: Control Command List

RAP-1580 ASCII	Command Description	Unit Response
POWER & VOLUME COMMANDS		
power_on!	Power On	power=on!
power_off!	Power Off	power=standby!
power_toggle!	Power Toggle	power=on/standby!
volume_up!	Volume Up	volume=##!
volume_down!	Volume Down	volume=##!
volume_nn!	Set Volume to level n n = 00 (<i>min</i>) – 96 (<i>max</i>)	volume=##!
mute!	Mute Toggle	mute=on/off!
mute_on!	Mute On	mute=on!
mute_off!	Mute Off	mute=off!
SOURCE SELECTION COMMANDS		
cd!	Source CD	source=cd!
video1!	Source Video 1	source=video1!
video2!	Source Video 2	source=video2!
video3!	Source Video 3	source=video3!
video4!	Source Video 4	source=video4!
video5!	Source Video 5	source=video5!
video6!	Source Video 6	source=video6!
video7!	Source Video 7	source=video7!
video8!	Source Video 8	source=video8!
tuner!	Source Tuner	source=tuner!
phono!	Source Phono	source=phono!
usb!	Source Front USB	source=usb!
pc_usb!	Source PC-USB	source=pc_usb!
bal_xlr!	Source XLR	source=bal_xlr!
bluetooth!	Source Bluetooth	source=bluetooth!
multi_input!	Source Multi Input	source=multi_input!
SOURCE CONTROL COMMANDS		
play!	Play Source	n/a
stop!	Stop Source	n/a
pause!	Pause Source	n/a
track_fwd!	Track Forward/Tune Up	n/a
track_back!	Track Backward/Tune Down	n/a
MENU CONTROL COMMANDS		
menu!	Display the Menu	n/a
exit!	Exit Key	n/a
up!	Cursor Up	n/a
down!	Cursor Down	n/a
left!	Cursor Left	n/a
right!	Cursor Right	n/a

RAP-1580 ASCII	Command Description	Unit Response
enter!	Enter Key	n/a
DSP MODE COMMANDS		
2channel!	Select 2 channel mode	dsp_mode=stereo!
3channel!	Select 3 channel stereo mode	dsp_mode=dolby_3_stereo!
5channel!	Select 5 channel stereo mode	dsp_mode=5_channel_stereo!
7channel!	Select 7 channel stereo mode	dsp_mode=7_channel_stereo!
9channel!	Select 9 channel stereo mode	dsp_mode=9_channel_stereo!
11channel!	Select 11 channel stereo mode	dsp_mode=11_channel_stereo!
dolby_atmos!	Select Dolby Atmos mode	dsp_mode=dolby_atmos_surround!
dts_neural!	Select DTS Neural:X mode	dsp_mode=dts_neural:x!
bypass!	Select Analog Bypass mode	dsp_mode=analog_bypass!
surround_next!	Select the next DSP mode	cycles through all dsp modes
LEVEL TRIM COMMANDS		
subwoofer_up!	Temp. increase sub level +0.5dB	subwoofer_level=+/-##.##db!
subwoofer_down!	Temp. decrease sub level -0.5dB	subwoofer_level=+/-##.##db!
center_up!	Temp. increase C level +0.5dB	center_level=+/-##.##db!
center_down!	Temp. decrease C level -0.5dB	center_level=+/-##.##db!
surround_right_up!	Temp. increase RS level +0.5dB	surround_right =+/-##.##db!
surround_right_down!	Temp. decrease RS level -0.5dB	surround_right =+/-##.##db!
surround_left_up!	Temp. increase LS level +0.5dB	surround_left=+/-##.##db!
surround_left_down!	Temp. decrease LS level -0.5dB	surround_left=+/-##.##db!
center_back_right_up!	Temp. increase RB level +0.5dB	center_back_right=+/-##.##db!
center_back_right_down!	Temp. decrease RB level -0.5dB	center_back_right=+/-##.##db!
center_back_left_up!	Temp. increase LB level +0.5dB	center_back_left=+/-##.##db!
center_back_left_down!	Temp. decrease LB level -0.5dB	center_back_left=+/-##.##db!
ceiling_front_right_up!	Temp. increase CFR level -0.5dB	ceiling_front_right=+/-##.##db!
ceiling_front_right_down!	Temp. decrease CFR level -0.5dB	ceiling_front_right=+/-##.##db!
ceiling_front_left_up!	Temp. increase CFL level -0.5dB	ceiling_front_left=+/-##.##db!
ceiling_front_left_down!	Temp. decrease CFL level -0.5dB	ceiling_front_left=+/-##.##db!
ceiling_rear_right_up!	Temp. increase CRR level -0.5dB	ceiling_rear_right=+/-##.##db!
ceiling_rear_right_down!	Temp. decrease CRR level -0.5dB	ceiling_rear_right=+/-##.##db!
ceiling_rear_left_up!	Temp. increase CRL level -0.5dB	ceiling_rear_left=+/-##.##db!
ceiling_rear_left_down!	Temp. decrease CRL level -0.5dB	ceiling_rear_left=+/-##.##db!
OTHER COMMANDS		
dimmer!	Toggle display dimmer (+/-10)	dimmer=+/-##!
dimmer_0!	Set display to neutral level (0)	dimmer=0!
dimmer_-n!	Set display to dimmer level -n (n = 1-10)	dimmer_-#!
dimmer_+n!	Set display to dimmer level +n (n = 1-10)	dimmer=+#!
factory_default_on!	Reset unit to factory defaults	n/a

Section 2: Feedback Request Command List

Command:	get_current_power!
Description:	Request current power status
Return String(s):	power=on! / power=standby!
Return Description:	Current power status
Example:	power=on!

Command:	get_current_source!
Description:	Request current source
Return String(s):	source=cd! / source=coax1! / source=coax1! / source=coax2! / source=coax3! / source=opt1! / source=opt2! / source=opt3! / source=tuner! / source=phono! / source=usb! / source=pc_usb! / source=video1! / source=video2! / source=video3! / source=video4! / source=video5! / source=video6! / source=video7! / source=video8! / source=bluetooth! / source=bal_xlr! / source=multi_input!
Return Description:	Current source
Example:	source=pc_usb!

Command:	get_volume!
Description:	Request current volume value
Return String(s):	volume=##!
Return Description:	current volume level
Example:	volume=26!

Command:	get_mute_status!
Description:	Request current mute status.
Return String(s):	mute=off! / mute=on!
Return Description:	Current mute state
Example:	mute=on!

Command:	get_dsp_mode!
Description:	Request current DSP mode.
Return String(s):	dsp_mode=stereo! / dsp_mode=dolby_3_stereo! / dsp_mode=5_channel_stereo! / dsp_mode=7_channel_stereo! / dsp_mode=9_channel_stereo! / dsp_mode=11_channel_stereo! / dsp_mode=dolby_atmos_surround! / dsp_mode=dts_neural:x! / dsp_mode=analog_bypass! / dsp_mode=source_dependent!
Return Description:	Current DSP mode.
Example:	dsp_mode=dolby_atmos_surround!