



Rotel T11 RS232 ASCII Controller Command List

Date	Version	Update Description
August 29, 2016	1.00	Original Specification
August 28, 2018	1.01	Add missing "!" char to recall preset commands.

The T11 supports an ASCII based RS232 protocol. The RS232 hardware does not support flow control so care needs to be take 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 with 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.

Connection Settings

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

Communication Protocol

Command and response messages are included on the following pages. Automatic display update information can be enabled/disabled using the "display_update_auto" and "display_update_manual" commands.

In automatic mode each time the display changes the new display line(s) will be sent.

In manual mode the display updates must be requested each time a refresh of the display information is desired. This primarily applies to Front USB metadata information. Basic status information such as volume, power or source changes will still be provided automatically.

Section 1: Control Command List

T11 ASCII	Command Description	Unit Response
POWER COMMANDS		
power_on!	Power On	power=on!
power_off!	Power Off	power=standby!
power_toggle!	Power Toggle	power=on/standby!
SOURCE SELECTION COMMANDS		
fm!	Source FM	source=fm!
dab!	Source DAB	source=dab!
TUNER CONTROL COMMANDS		
tune_up!	Tune Up	n/a
tune_down!	Tune Down	n/a
queue!	Access Preset List	n/a
preset_up!	Preset Up	n/a
preset_down!	Preset Down	n/a
fm_mono!	Toggle FM Mono/Stereo Mode	n/a
fm_rds_disp!	Toggle through FM RDS or DAB Station Information	n/a
MENU CONTROL COMMANDS		
menu!	Display the System Menu	n/a
module_setup!	Display the FM/DAB Setup 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
enter!	Enter Key	n/a
NUMERIC KEY COMMANDS		
1!	Number Key 1	n/a
2!	Number Key 2	n/a
3!	Number Key 3	n/a
4!	Number Key 4	n/a
5!	Number Key 5	n/a
6!	Number Key 6	n/a
7!	Number Key 7	n/a
8!	Number Key 8	n/a
9!	Number Key 9	n/a
0!	Number Key 0	n/a

T11 ASCII	Command Description	Unit Response
FM / DAB PRESET COMMANDS		
memory!	Select memory for saving presets	n/a
call_fm_preset_n!	Recall FM Preset n (n = 01 - 30)	fm_preset_n=##,text
call_dab_preset_n!	Recall DAB Preset n (n = 01 - 30)	dab_preset_n=##,text
OTHER COMMANDS		
dimmer!	Toggle display dimmer	dimmer_#!
dimmer_0!	Set display to brightest setting	n/a
dimmer_1!	Set display to dimmer level 1	n/a
dimmer_2!	Set display to dimmer level 2	n/a
dimmer_3!	Set display to dimmer level 3	n/a
dimmer_4!	Set display to dimmer level 4	n/a
dimmer_5!	Set display to dimmer level 5	n/a
dimmer_6!	Set display to dimmest setting	n/a
DISPLAY REFRESH COMMANDS		
display_update_auto!	Set Display Update to Auto	display_update=auto!
display_update_manual!	Set Display Update to Manual	display_update=manual!

Section 2: Feedback Request Command List

Command:	get_display!
Description:	Request the entire display to be sent
Return String:	display=###,text
Return Description:	Current display data; must include 3 digit length of text string at beginning followed by "," and text string (no terminating character)
Example:	display=020, Sample Text

Command:	get_display1!
Description:	Request display line #1 to be sent
Return String:	display1=##,text
Return Description:	Current display line 1, must include 2 digit length of text string at beginning followed by "," and text string (no terminating character)
Example:	display1=20, Sample Text

Command:	get_display2!
Description:	Request display line #2 to be sent
Return String:	display2=##,text
Return Description:	Current display line 2, must include 2 digit length of text string at beginning followed by "," and text string (no terminating character)
Example:	display2=20, Sample Text

Command:	get_product_type!
Description:	Request the product type
Return String:	product_type=##,text
Return Description:	Rotel product type name, must include 2 digit length of text string at beginning followed by "," and text string (no terminating character)
Example:	product_type=05,RT-11

Command:	get_product_version!
Description:	Request the main CPU software version
Return String:	product_version=##,text
Return Description:	Rotel main CPU software version, must include 2 digit length of text string at beginning followed by "," and text string (no terminating character)
Example:	product_version=06,V2.1.6

Command:	get_display_size!
Description:	Request display size
Return String:	display_size=##,##!
Return Description:	Columns and rows on current display
Example:	display_size=20,02!

Command:	get_display_update!
Description:	Request display update
Return String(s):	display_update=auto! / display_update=manual!
Return Description:	Status of if the display refresh is automatic or manual
Example:	display_update=auto!

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=fm! / source=dab!
Return Description:	Current source
Example:	source=fm!

Command:	get_current_station!
Description:	Request current station
Return String(s):	FM format: current_station=modulated frequency [9 characters]+! DAB format: current_station=station name[16 characters]+!
Return Description:	Current FM or DAB station
Example:	current_station= 99.55MHz! / current_station=6N 64-3_1KHZ_Mo!

Command:	get_current_preset!
Description:	Request current preset
Return String(s):	preset_fm=##! / preset_dab=##!
Return Description:	Current FM or DAB preset. If currently tuned station is not a stored preset will return 00 for preset number.
Example:	preset_fm=03! / preset_dab=01! / preset_dab=00!

Command:	get_signal_strength!
Description:	Request current FM antenna signal strength. 0 (min) – 5 (max)
Return String(s):	signal_strength=#!
Return Description:	Current FM antenna signal strength
Example:	signal_strength=3!

Command:	get_current_dimmer!
Description:	Request current front display dimmer status
Return String(s):	dimmer=#! (0 (brightest) – 6 (dimmiest))
Return Description:	Current front display dimmer status
Example:	dimmer=3!

Command:	get_fm_preset_n!
Description:	Request saved FM station info for present n (n = 1 – 30)
Return String(s):	fm_preset_n=##,text
Return Description:	Saved FM preset number, must include 2 digit length of text string at beginning followed by "," and text string (no terminating character)
Example:	fm_preset_04=09,107.15MHz

Command:	get_dab_preset_n!
Description:	Request saved DAB station info for present n (n = 1 – 30)
Return String(s):	dab_preset_n=##,text
Return Description:	Saved DAB preset number, must include 2 digit length of text string at beginning followed by "," and text string (no terminating character)
Example:	dab_preset_01=##,text

Command:	get_allpreset_fm!
Description:	Request all saved FM station info [1..30]
Return String(s):	fm_preset_n=##,text
Return Description:	Saved FM preset number, must include 2 digit length of text string at beginning followed by "," and text string (no terminating character)
Example:	fm_allpreset_01=##,text .. fm_allpreset_30=##,text

Command:	get_allpreset_dab!
Description:	Request all saved DAB station info [1..30]
Return String(s):	dab_preset_n=##,text
Return Description:	Saved DAB preset number, must include 2 digit length of text string at beginning followed by "," and text string (no terminating character)
Example:	dab_allpreset_01=##,text .. dab_allpreset_30=##,text