

PARASOUND



Zone Tuner



RS-232 Communications Specifications

Hardware Specification

- Asynchronous serial communication
- TXD, RXD, GND pins (TXD = 2, RXD = 3, GND = 5)
- 9600 bps, 8 bits, 1 stop bit, no parity
- No flow control
- 200ms delay is required between any commands sent to Ztuner

Software Specification

Full command format:

Full command format is based on human readable ASCII characters. All codes are separated with field separators and terminated by line terminator.

Program so that there is a 200ms (0.2 seconds) delay between all commands or Ztuner may lock up !

read / write	field separator	zone	field separator	command	field separator	parameter 1	field separator	parameter 2	line terminator
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field	purpose	possible values
read / write	indicate this command is for read or write	R for READ W for WRITE (must be entered as upper case)
zone	no current purpose	1
command	a command identification	any valid number
parameter 1	an optional parameter for the command	any valid number
parameter 2	another optional parameter for the command	any valid number
field separator	separator for fields in the command line	one or more spaces
line terminator	terminator for the command line	CR, LF, CR/LF, or LF/CR

Command Reference

Power On/Off

read / write	zone	command	purpose	parameter 1	purpose	parameter 2	purpose
R	1	1	Power Status	0			
W	1	1	Power	0 1	Off On		
W	1	1	Power	10	PowerToggle		

Turn Power On:

W 1 1 1 <CR>

Turn Power Off:

W 1 1 0 <CR>

Read Power Status:

R 1 1 <CR>

Return: 0 or 1

For power off status, it will return the following:

0 <CR>

Power Toggle:

W 1 1 10 <CR>

Preset

read / write	zone	command	purpose	parameter 1	purpose	parameter 2	purpose
R	1	3	Preset	1	Read current preset number		
W	1	3		1	Go to preset number	N	Preset N
W	1	3	Preset	2	Memorize current channel	N	Preset N
W	1	3	Preset	3	Next preset		
W	1	3	Preset	4	Previous preset		

Read Current Preset Number:

R 1 3 1 <CR>

Return: current preset number (1...10)

For preset 10, it will return the following:

10<CR>

Change Current Preset:

Command string to change current preset to preset number 6:

W 1 3 1 6<CR>

Note: For preset numbers above 9 the command would be like this:

W 1 3 1 17<CR> (for preset 17)

Memorize Current Channel into Certain Preset:

Memorize current channel into preset number 6:

W 1 3 2 6<CR>

Next Preset:

W 1 3 3<CR>

Previous Preset:

W 1 3 4<CR>

Tuner Frequency

read / write	zone	command	purpose	parameter 1	purpose	parameter 2	purpose
R/W	1	6	Tuner frequency direct tuning	87 ~ 108	For FM band: in MHz	00 ~ 95	For FM band: in tenths of MHz
				5 ~ 16	For AM band: in hundreds of kHz	00 ~ 99	For AM band: in kHz
W	1	7	Tuner frequency automatic / manual tuning	1	Auto tune, seek up		
				2	Auto tune, seek down		
				3	Manual tune, step up		
				4	Manual tune, step down		

Read current frequency:

R 1 6<CR>

Return: current frequency

For FM 102.7 MHz, it will return the following:

102<CR>

70<CR>

For AM 1300 kHz, it will return the following:

13<CR>

00<CR>

Change frequency directly:

Tune to FM 102.7MHz:

W 1 6 102 70<CR>

Tune to AM 1300 kHz:

W 1 6 13 00<CR>

Auto Tune - seek up/down:

Auto Tune up:

W 1 7 1<CR>

Auto Tune down:

W 1 7 2<CR>

Manual Tune - step up/down:

Step up:

W 1 7 3<CR>

Step down:

W 1 7 4<CR>

Band (FM/AM)

read / write	zone	command	purpose	parameter 1	purpose	parameter 2	purpose
R/W	1	8	Band (FM/AM)	1 2	FM band AM band		
W	1	8	Band (FM/AM)	10	FM/AM toggle		

Read current band (FM/AM):

R 1 8<CR>

Return: 1 for FM or 2 for AM

For AM, it will return the following:

2<CR>

Change band (FM/AM):

Change band to AM:

W 1 8 2<CR>

Toggle band (FM/AM):

If current band is FM, sending the following command will change current band to AM:

W 1 8 10<CR>

Mono Enforcement / Stereo Auto Detect

read / write	zone	command	purpose	parameter 1	purpose	parameter 2	purpose
R/W	1	9	Stereo auto detect / Mono enforcement	1 2	Stereo auto detect Mono enforcement		
W	1	9	Stereo auto detect / Mono enforcement	10	Stereo auto detect / Mono enforcement toggle		
R	1	10	Auto detected Stereo / Mono	1 2	Stereo Mono		

Read current stereo auto / mono enforcement status:

R 1 9<CR>

Return: 1 for Stereo auto detect mode or 2 for Mono enforcement mode

For Mono enforcement mode, it will return the following:

2<CR>

For Stereo auto detect mode, it will return the following:

1<CR>

Change stereo / mono enforcement mode:

Change to Mono enforcement mode:

W 1 9 2<CR>

Toggle between stereo auto detect / mono enforcement modes:

If current mode is Stereo auto detect mode, sending the following command will change to Mono enforcement mode:

W 1 9 10<CR>

Read detected Mono/Stereo:

In Stereo auto detect mode, the Ztuner will determine if the current channel is stereo or mono by using its detection circuitry.

The "detected" Mono/Stereo status can be read back with the following command:

R 1 10<CR>

Return: 1 for Stereo or 2 for Mono

If Mono is detected, it will return the following:

2<CR>



PARASOUND

Parasound Products, Inc. 950 Battery Street, San Francisco, CA 94111
Customer Service 415-397-7100 / Technical Dept. 415-675-7272 / Fax 415-397-0144
www.parasound.com