

Zonotech – IP Protocol Guide – v1.0

Introduction

Thank you for purchasing the Rane Zonotech. This guide will help you get familiar with using IP protocols to control your Zonotech.

Communicating with Zonotech’s External Control Server

The Zonotech provides its own external control server that exposes all of its system parameters for control by an external control system.

Connect to the Zonotech external control server at one of Zonotech’s IP addresses using **port 4997**. The Zonotech’s current IP addresses are shown on the front display by repeatedly pressing the **Info knob** until the **“Wired Network Settings”** or **“Wireless Network Settings”** page is shown.

External Control Message Protocol

Once you have connected to the Zonotech external control server, you can communicate with it using simple, JSON text-based messages. This section defines this message protocol.

All messages consist of ASCII text, and a single message always starts with a **“{”** character and ends with a **“}”** character. Inside the start and end characters is the message body, which always includes one or more parameters delimited by commas. Each parameter is defined as the following: **“ParameterName”:****“ParameterValue”**. Quotes should not be used around the ParameterValue, except when the value is text. For example, here is the format of a message to set Enable Paging in Zone 2, set the level of Zone 2 to -10db, and set Zone 2’s name to “Lobby”:

```
{ "Z2-PL-E":true, "Z2-L":-10, "Z2-N":"Lobby" }
```

Anytime a Zonotech parameter value changes, a new JSON message will be transmitted to all connected clients with the new parameter value. At any time, a client can query Zonotech for a specific parameter value by sending a JSON message with the ParameterValue set to **“?”**. For example, you can query the Pager Chime Level by sending the following:

```
{"PG-CH-L":"?"}
```

You can also query all the parameters for a functional block, such as all the parameters for Input 2 PEQ, by sending the following:

```
{"I2-PQ":"?"}
```

Or, the query can be even broader if, for example, you wanted to query all the parameters for Zone 6:

```
{"Z6":"?"}
```

If you want to query every parameter in the Zonotech, you can send the following command:

```
{"":"?"} or {:"?"}
```

When sending messages to the Zonotech control server, it:

- Allows white space anywhere in the message, which includes space, tab, carriage return, and line feed characters
- Ignores all characters outside of a message (that is, before the start character and after the end character)

Using Telnet to Test Zonotech External Control Server

The Zonotech external control message protocol is ASCII text based, which means that you can use a standard telnet client to connect to the control server and exchange messages. This is often useful when developing and testing the connection of external control systems to the Zonotech.

Any telnet client will work with Zonotech. For example, PuTTY is an open source telnet client application that is free, easy to install and use, and runs on all versions of Windows.

Note: You might have to change the firewall settings for your PC to allow for connection to the Zonotech on port 4997.

Control Parameters

Page	Page (Desc.)	Group	Parameter	Type	Min	Max	Default	Units	Precision	Index	JSON Key	Page-Key	Page-Index	Group-Key	Group-Index	Param-Key	JSON	Read Only	
Input 1	Line	General	Level	Float	-88	12	0	dB	0.5	2	I1-L	I	1	G		L	"I1-L":0,	FALSE	
		General	Meter (Left)	Float	-60	0	-60	dB	0.25	3	I1-ML	I	1	G		ML	"I1-ML":-60,	TRUE	
		General	Meter (Right)	Float	-60	0	-60	dB	0.25	4	I1-MR	I	1	G		MR	"I1-MR":-60,	TRUE	
		General	Display Name	String			"Input 1"				0	I1-N	I	1	G		N	"I1-N":"Input 1",	FALSE
		Shelf	Low Shelf Level	Float	-15	8	0	dB	0.5	5	I1-SL-L	I	1	SL		L	"I1-SL-L":0,	FALSE	
		Shelf	Low Shelf Frequency	Float	20	630	630	Hz	1	6	I1-SL-F	I	1	SL		F	"I1-SL-F":630,	FALSE	
		PEQ Band	Mid PEQ Level	Float	-15	8	0	dB	0.5	7	I1-PQ-L	I	1	PQ		L	"I1-PQ-L":0,	FALSE	
		PEQ Band	Mid PEQ Frequency	Float	20	20000	630	Hz	1	8	I1-PQ-F	I	1	PQ		F	"I1-PQ-F":630,	FALSE	
		PEQ Band	Mid PEQ Bandwidth	Float	0.3	4	0.5	oct	0.025	9	I1-PQ-B	I	1	PQ		B	"I1-PQ-B":0.5,	FALSE	
		Shelf	High Shelf Level	Float	-15	8	0	dB	0.5	10	I1-SH-L	I	1	SH		L	"I1-SH-L":0,	FALSE	
		Shelf	High Shelf Frequency	Float	630	20000	630	Hz	1	11	I1-SH-F	I	1	SH		F	"I1-SH-F":630,	FALSE	
Input 2	Line	General	Level	Float	-88	12	0	dB	0.5	12	I2-L	I	2	G		L	"I2-L":0,	FALSE	
		General	Meter (Left)	Float	-60	0	-60	dB	0.25	13	I2-ML	I	2	G		ML	"I2-ML":-60,	TRUE	
		General	Meter (Right)	Float	-60	0	-60	dB	0.25	14	I2-MR	I	2	G		MR	"I2-MR":-60,	TRUE	
		General	Display Name	String			"Input 2"				0	I2-N	I	2	G		N	"I2-N":"Input 2",	FALSE
		Shelf	Low Shelf Level	Float	-15	8	0	dB	0.5	15	I2-SL-L	I	2	SL		L	"I2-SL-L":0,	FALSE	
		Shelf	Low Shelf Frequency	Float	20	630	630	Hz	1	16	I2-SL-F	I	2	SL		F	"I2-SL-F":630,	FALSE	
		PEQ Band	Mid PEQ Level	Float	-15	8	0	dB	0.5	17	I2-PQ-L	I	2	PQ		L	"I2-PQ-L":0,	FALSE	
		PEQ Band	Mid PEQ Frequency	Float	20	20000	630	Hz	1	18	I2-PQ-F	I	2	PQ		F	"I2-PQ-F":630,	FALSE	
		PEQ Band	Mid PEQ Bandwidth	Float	0.3	4	0.5	oct	0.025	19	I2-PQ-B	I	2	PQ		B	"I2-PQ-B":0.5,	FALSE	
		Shelf	High Shelf Level	Float	-15	8	0	dB	0.5	20	I2-SH-L	I	2	SH		L	"I2-SH-L":0,	FALSE	
		Shelf	High Shelf Frequency	Float	630	20000	630	Hz	1	21	I2-SH-F	I	2	SH		F	"I2-SH-F":630,	FALSE	
Input 3	Line	General	Level	Float	-88	12	0	dB	0.5	22	I3-L	I	3	G		L	"I3-L":0,	FALSE	
		General	Meter (Left)	Float	-60	0	-60	dB	0.25	23	I3-ML	I	3	G		ML	"I3-ML":-60,	TRUE	
		General	Meter (Right)	Float	-60	0	-60	dB	0.25	24	I3-MR	I	3	G		MR	"I3-MR":-60,	TRUE	
		General	Display Name	String			"Input 3"				0	I3-N	I	3	G		N	"I3-N":"Input 3",	FALSE
		Shelf	Low Shelf Level	Float	-15	8	0	dB	0.5	25	I3-SL-L	I	3	SL		L	"I3-SL-L":0,	FALSE	
		Shelf	Low Shelf Frequency	Float	20	630	630	Hz	1	26	I3-SL-F	I	3	SL		F	"I3-SL-F":630,	FALSE	
		PEQ Band	Mid PEQ Level	Float	-15	8	0	dB	0.5	27	I3-PQ-L	I	3	PQ		L	"I3-PQ-L":0,	FALSE	
		PEQ Band	Mid PEQ Frequency	Float	20	20000	630	Hz	1	28	I3-PQ-F	I	3	PQ		F	"I3-PQ-F":630,	FALSE	
		PEQ Band	Mid PEQ Bandwidth	Float	0.3	4	0.5	oct	0.025	29	I3-PQ-B	I	3	PQ		B	"I3-PQ-B":0.5,	FALSE	
		Shelf	High Shelf Level	Float	-15	8	0	dB	0.5	30	I3-SH-L	I	3	SH		L	"I3-SH-L":0,	FALSE	
		Shelf	High Shelf Frequency	Float	630	20000	630	Hz	1	31	I3-SH-F	I	3	SH		F	"I3-SH-F":630,	FALSE	

Page	Page (Desc.)	Group	Parameter	Type	Min	Max	Default	Units	Precision	Index	JSON Key	Page-Key	Page-Index	Group-Key	Group-Index	Param-Key	JSON	Read Only		
Input 4	Line	General	Level	Float	-88	12	0	dB	0.5	32	I4-L	I	4	G		L	"I4-L":0,	FALSE		
		General	Meter (Left)	Float	-60	0	-60	dB	0.25	33	I4-ML	I	4	G		ML	"I4-ML":-60,	TRUE		
		General	Meter (Right)	Float	-60	0	-60	dB	0.25	34	I4-MR	I	4	G		MR	"I4-MR":-60,	TRUE		
		General	Display Name	String				"Input 4"			0	I4-N	I	4	G		N	"I4-N":"Input 4",	FALSE	
		Shelf	Low Shelf Level	Float	-15	8	0	dB	0.5	35	I4-SL-L	I	4	SL		L	"I4-SL-L":0,	FALSE		
		Shelf	Low Shelf Frequency	Float	20	630	630	Hz	1	36	I4-SL-F	I	4	SL		F	"I4-SL-F":630,	FALSE		
		PEQ Band	Mid PEQ Level	Float	-15	8	0	dB	0.5	37	I4-PQ-L	I	4	PQ		L	"I4-PQ-L":0,	FALSE		
		PEQ Band	Mid PEQ Frequency	Float	20	20000	630	Hz	1	38	I4-PQ-F	I	4	PQ		F	"I4-PQ-F":630,	FALSE		
		PEQ Band	Mid PEQ Bandwidth	Float	0.3	4	0.5	oct	0.025	39	I4-PQ-B	I	4	PQ		B	"I4-PQ-B":0.5,	FALSE		
		Shelf	High Shelf Level	Float	-15	8	0	dB	0.5	40	I4-SH-L	I	4	SH		L	"I4-SH-L":0,	FALSE		
		Shelf	High Shelf Frequency	Float	630	20000	630	Hz	1	41	I4-SH-F	I	4	SH		F	"I4-SH-F":630,	FALSE		
		Input 5	Mic/Line/Line+	General	Level	Float	Varies by input type (see Common)		0	dB	0.1	42	I5-L	I	5	G		L	"I5-L":0,	FALSE
				General	Meter	Float	-60	0	-60	dB	0.25	43	I5-M	I	5	G		M	"I5-M":-60,	TRUE
General	Display Name			String				"Input 5"			0	I5-N	I	5	G		N	"I5-N":"Input 5",	FALSE	
General	Input Type			Enum.	0	3	1				0	I5-T	I	5	G		T	"I5-T":1,	FALSE	
Shelf	Low Shelf Level			Float	-15	8	0	dB	0.5	44	I5-SL-L	I	5	SL		L	"I5-SL-L":0,	FALSE		
Shelf	Low Shelf Frequency			Float	20	630	630	Hz	1	45	I5-SL-F	I	5	SL		F	"I5-SL-F":630,	FALSE		
PEQ Band	Mid PEQ Level			Float	-15	8	0	dB	0.5	46	I5-PQ-L	I	5	PQ		L	"I5-PQ-L":0,	FALSE		
PEQ Band	Mid PEQ Frequency			Float	20	20000	630	Hz	1	47	I5-PQ-F	I	5	PQ		F	"I5-PQ-F":630,	FALSE		
PEQ Band	Mid PEQ Bandwidth			Float	0.3	4	0.5	oct	0.025	48	I5-PQ-B	I	5	PQ		B	"I5-PQ-B":0.5,	FALSE		
Shelf	High Shelf Level			Float	-15	8	0	dB	0.5	49	I5-SH-L	I	5	SH		L	"I5-SH-L":0,	FALSE		
Shelf	High Shelf Frequency			Float	630	20000	630	Hz	1	50	I5-SH-F	I	5	SH		F	"I5-SH-F":630,	FALSE		
Input 6	Mic/Line/Line+			General	Level	Float	Varies by input type (see Common)		0	dB	0.1	51	I6-L	I	6	G		L	"I6-L":0,	FALSE
				General	Meter	Float	-60	0	-60	dB	0.25	52	I6-M	I	6	G		M	"I6-M":-60,	TRUE
		General	Display Name	String				"Input 6"			0	I6-N	I	6	G		N	"I6-N":"Input 6",	FALSE	
		General	Input Type	Enum.	0	3	1				0	I6-T	I	6	G		T	"I6-T":1,	FALSE	
		Shelf	Low Shelf Level	Float	-15	8	0	dB	0.5	53	I6-SL-L	I	6	SL		L	"I6-SL-L":0,	FALSE		
		Shelf	Low Shelf Frequency	Float	20	630	630	Hz	1	54	I6-SL-F	I	6	SL		F	"I6-SL-F":630,	FALSE		
		PEQ Band	Mid PEQ Level	Float	-15	8	0	dB	0.5	55	I6-PQ-L	I	6	PQ		L	"I6-PQ-L":0,	FALSE		
		PEQ Band	Mid PEQ Frequency	Float	20	20000	630	Hz	1	56	I6-PQ-F	I	6	PQ		F	"I6-PQ-F":630,	FALSE		
		PEQ Band	Mid PEQ Bandwidth	Float	0.3	4	0.5	oct	0.025	57	I6-PQ-B	I	6	PQ		B	"I6-PQ-B":0.5,	FALSE		
		Shelf	High Shelf Level	Float	-15	8	0	dB	0.5	58	I6-SH-L	I	6	SH		L	"I6-SH-L":0,	FALSE		
		Shelf	High Shelf Frequency	Float	630	20000	630	Hz	1	59	I6-SH-F	I	6	SH		F	"I6-SH-F":630,	FALSE		

Page	Page (Desc.)	Group	Parameter	Type	Min	Max	Default	Units	Precision	Index	JSON Key	Page-Key	Page-Index	Group-Key	Group-Index	Param-Key	JSON	Read Only	
Input 7	Stream	General	Level	Float	-88	12	0	dB	0.5	60	IS-L	IS		G		L	"IS-L":0,	FALSE	
		General	Meter (Left)	Float	-60	0	-60	dB	0.25	61	IS-ML	IS		G		ML	"IS-ML":-60,	TRUE	
		General	Meter (Right)	Float	-60	0	-60	dB	0.25	62	IS-MR	IS		G		MR	"IS-MR":-60,	TRUE	
		General	Display Name	String			"Stream"				0	IS-N	IS		G		N	"IS-N":"Stream",	FALSE
		General	Source	Enum.	0	3	0				0	IS-S	IS		G		S	"IS-S":0,	FALSE
		General	Bluetooth Pairing Enable	Boolean			false				0	IS-BT-PR	IS		BT		PR	"IS-BT-PR":false,	FALSE
		General	AirPlay Password Enable	Boolean			false				0	IS-AP-PE	IS		AP		PE	"IS-AP-PE":false,	FALSE
		General	AirPlay Password	String			""				0	IS-AP-PW	IS		AP		PW	"IS-AP-PW": "",	FALSE
		Status	Bluetooth Connection Status	Boolean			false				0	IS-ST-C	IS		ST		C	"IS-ST-C":false,	TRUE
		Status	Bluetooth Connected Device Name	String			""				0	IS-ST-N	IS		ST		N	"IS-ST-N": "",	TRUE
		Shelf	Low Shelf Level	Float	-15	8	0	dB	0.5	63	IS-SL-L	IS		SL		L	"IS-SL-L":0,	FALSE	
		Shelf	Low Shelf Frequency	Float	20	630	630	Hz	1	64	IS-SL-F	IS		SL		F	"IS-SL-F":630,	FALSE	
		PEQ Band	Mid PEQ Level	Float	-15	8	0	dB	0.5	65	IS-PQ-L	IS		PQ		L	"IS-PQ-L":0,	FALSE	
		PEQ Band	Mid PEQ Frequency	Float	20	20000	630	Hz	1	66	IS-PQ-F	IS		PQ		F	"IS-PQ-F":630,	FALSE	
		PEQ Band	Mid PEQ Bandwidth	Float	0.3	4	0.5	oct	0.025	67	IS-PQ-B	IS		PQ		B	"IS-PQ-B":0.5,	FALSE	
		Shelf	High Shelf Level	Float	-15	8	0	dB	0.5	68	IS-SH-L	IS		SH		L	"IS-SH-L":0,	FALSE	
		Shelf	High Shelf Frequency	Float	630	20000	630	Hz	1	69	IS-SH-F	IS		SH		F	"IS-SH-F":630,	FALSE	
		Paging	Paging	General	Level	Float	-88	12	0	dB	0.5	70	PG-L	PG		G		L	"PG-L":0,
General	Page Active			Boolean			false			71	PG-A	PG		G		A	"PG-A":false,	FALSE	
General	Meter			Float	-60	0	-60	dB	0.25	72	PG-M	PG		G		M	"PG-M":-60,	TRUE	
General	Display Name			String			"Paging"			0	PG-N	PG		G		N	"PG-N":"Paging",	FALSE	
Shelf	Low Shelf Level			Float	-15	8	0	dB	0.5	73	PG-SL-L	PG		SL		L	"PG-SL-L":0,	FALSE	
Shelf	Low Shelf Frequency			Float	20	630	630	Hz	1	74	PG-SL-F	PG		SL		F	"PG-SL-F":630,	FALSE	
PEQ Band	Mid PEQ Level			Float	-15	8	0	dB	0.5	75	PG-PQ-L	PG		PQ		L	"PG-PQ-L":0,	FALSE	
PEQ Band	Mid PEQ Frequency			Float	20	20000	630	Hz	1	76	PG-PQ-F	PG		PQ		F	"PG-PQ-F":630,	FALSE	
PEQ Band	Mid PEQ Bandwidth			Float	0.3	4	0.5	oct	0.025	77	PG-PQ-B	PG		PQ		B	"PG-PQ-B":0.5,	FALSE	
Shelf	High Shelf Level			Float	-15	8	0	dB	0.5	78	PG-SH-L	PG		SH		L	"PG-SH-L":0,	FALSE	
Shelf	High Shelf Frequency			Float	630	20000	630	Hz	1	79	PG-SH-F	PG		SH		F	"PG-SH-F":630,	FALSE	
Chime	Enable Chime	Boolean			false				80	PG-CH-E	PG		CH		E	"PG-CH-E":false,	FALSE		
Chime	Chime Level	Float	-30	12	0	dB	0.5	81	PG-CH-L	PG		CH		L	"PG-CH-L":0,	FALSE			

Page	Page (Desc.)	Group	Parameter	Type	Min	Max	Default	Units	Precision	Index	JSON Key	Page-Key	Page-Index	Group-Key	Group-Index	Param-Key	JSON	Read Only		
Zone 1	Mono	General	Level	Float	-30	12	0	dB	0.5	82	Z1-L	Z	1	G		L	"Z1-L":0,	FALSE		
		General	Meter	Float	-60	0	-60	dB	0.25	83	Z1-M	Z	1	G		M	"Z1-M":-60,	TRUE		
		General	Display Name	String				"Zone 1"			0	Z1-N	Z	1	G		N	"Z1-N":"Zone 1",	FALSE	
		General	Input Source Selection	<i>Enum.</i>	0	6	0				84	Z1-S	Z	1	G		S	"Z1-S":0,	FALSE	
		General	Priority Input Source Selection	<i>Enum.</i>	0	7	7				85	Z1-SP	Z	1	G		SP	"Z1-SP":7,	FALSE	
		General	Priority Detector Hold Time	Float	1	60	3	Sec	1		86	Z1-H	Z	1	G		H	"Z1-H":3,	FALSE	
		General	Priority Input Selected Meter	Boolean				false			87	Z1-MP	Z	1	G		MP	"Z1-MP":false,	TRUE	
		Shelf	Low Shelf Level	Float	-15	8	0	dB	0.5		88	Z1-SL-L	Z	1	SL		L	"Z1-SL-L":0,	FALSE	
		Shelf	Low Shelf Frequency	Float	20	630	630	Hz	1		89	Z1-SL-F	Z	1	SL		F	"Z1-SL-F":630,	FALSE	
		PEQ Band	Mid PEQ Level	Float	-15	8	0	dB	0.5		90	Z1-PQ-L	Z	1	PQ		L	"Z1-PQ-L":0,	FALSE	
		PEQ Band	Mid PEQ Frequency	Float	20	20000	630	Hz	1		91	Z1-PQ-F	Z	1	PQ		F	"Z1-PQ-F":630,	FALSE	
		PEQ Band	Mid PEQ Bandwidth	Float	0.3	4	0.5	oct	0.025		92	Z1-PQ-B	Z	1	PQ		B	"Z1-PQ-B":0.5,	FALSE	
		Shelf	High Shelf Level	Float	-15	8	0	dB	0.5		93	Z1-SH-L	Z	1	SH		L	"Z1-SH-L":0,	FALSE	
		Shelf	High Shelf Frequency	Float	630	20000	630	Hz	1		94	Z1-SH-F	Z	1	SH		F	"Z1-SH-F":630,	FALSE	
		Page	Page Level	Float	-30	12	0	dB	0.5		95	Z1-PL-L	Z	1	PL		L	"Z1-PL-L":0,	FALSE	
		Page	Page Ducker Depth	Float	0	85	12	dB	0.5		96	Z1-PL-D	Z	1	PL		D	"Z1-PL-D":12,	FALSE	
		Limiters	Limiters Threshold	Float	-60	0	0	dBFS	0.5		97	Z1-PL-H	Z	1	PL		H	"Z1-PL-H":0,	FALSE	
		Page	Page Enabled In Zone	Boolean				false			98	Z1-PL-E	Z	1	PL		E	"Z1-PL-E":false,	FALSE	
		Zone 2	Mono	General	Level	Float	-30	12	0	dB	0.5	99	Z2-L	Z	2	G		L	"Z2-L":0,	FALSE
				General	Meter	Float	-60	0	-60	dB	0.25	100	Z2-M	Z	2	G		M	"Z2-M":-60,	TRUE
General	Display Name			String				"Zone 2"			0	Z2-N	Z	2	G		N	"Z2-N":"Zone 2",	FALSE	
General	Input Source Selection			<i>Enum.</i>	0	6	0				101	Z2-S	Z	2	G		S	"Z2-S":0,	FALSE	
General	Priority Input Source Selection			<i>Enum.</i>	0	7	7				102	Z2-SP	Z	2	G		SP	"Z2-SP":7,	FALSE	
General	Priority Detector Hold Time			Float	1	60	3	Sec	1		103	Z2-H	Z	2	G		H	"Z2-H":3,	FALSE	
General	Priority Input Selected Meter			Boolean				false			104	Z2-MP	Z	2	G		MP	"Z2-MP":false,	TRUE	
Shelf	Low Shelf Level			Float	-15	8	0	dB	0.5		105	Z2-SL-L	Z	2	SL		L	"Z2-SL-L":0,	FALSE	
Shelf	Low Shelf Frequency			Float	20	630	630	Hz	1		106	Z2-SL-F	Z	2	SL		F	"Z2-SL-F":630,	FALSE	
PEQ Band	Mid PEQ Level			Float	-15	8	0	dB	0.5		107	Z2-PQ-L	Z	2	PQ		L	"Z2-PQ-L":0,	FALSE	
PEQ Band	Mid PEQ Frequency			Float	20	20000	630	Hz	1		108	Z2-PQ-F	Z	2	PQ		F	"Z2-PQ-F":630,	FALSE	
PEQ Band	Mid PEQ Bandwidth			Float	0.3	4	0.5	oct	0.025		109	Z2-PQ-B	Z	2	PQ		B	"Z2-PQ-B":0.5,	FALSE	
Shelf	High Shelf Level			Float	-15	8	0	dB	0.5		110	Z2-SH-L	Z	2	SH		L	"Z2-SH-L":0,	FALSE	
Shelf	High Shelf Frequency			Float	630	20000	630	Hz	1		111	Z2-SH-F	Z	2	SH		F	"Z2-SH-F":630,	FALSE	
Page	Page Level			Float	-30	12	0	dB	0.5		112	Z2-PL-L	Z	2	PL		L	"Z2-PL-L":0,	FALSE	
Page	Page Ducker Depth	Float	0	85	12	dB	0.5		113	Z2-PL-D	Z	2	PL		D	"Z2-PL-D":12,	FALSE			
Limiters	Limiters Threshold	Float	-60	0	0	dBFS	0.5		114	Z2-PL-H	Z	2	PL		H	"Z2-PL-H":0,	FALSE			
Page	Page Enabled In Zone	Boolean				false			115	Z2-PL-E	Z	2	PL		E	"Z2-PL-E":false,	FALSE			

Page	Page (Desc.)	Group	Parameter	Type	Min	Max	Default	Units	Precision	Index	JSON Key	Page-Key	Page-Index	Group-Key	Group-Index	Param-Key	JSON	Read Only
Zone 3	Mono	General	Level	Float	-30	12	0	dB	0.5	116	Z3-L	Z	3	G		L	"Z3-L":0,	FALSE
		General	Meter	Float	-60	0	-60	dB	0.25	117	Z3-M	Z	3	G		M	"Z3-M":-60,	TRUE
		General	Display Name	String			"Zone 3"			0	Z3-N	Z	3	G		N	"Z3-N":"Zone 3",	FALSE
		General	Input Source Selection	<i>Enum.</i>	0	6	0			118	Z3-S	Z	3	G		S	"Z3-S":0,	FALSE
		General	Priority Input Source Selection	<i>Enum.</i>	0	7	7			119	Z3-SP	Z	3	G		SP	"Z3-SP":7,	FALSE
		General	Priority Detector Hold Time	Float	1	60	3	Sec	1	120	Z3-H	Z	3	G		H	"Z3-H":3,	FALSE
		General	Priority Input Selected Meter	Boolean			false			121	Z3-MP	Z	3	G		MP	"Z3-MP":false,	TRUE
		Shelf	Low Shelf Level	Float	-15	8	0	dB	0.5	122	Z3-SL-L	Z	3	SL		L	"Z3-SL-L":0,	FALSE
		Shelf	Low Shelf Frequency	Float	20	630	630	Hz	1	123	Z3-SL-F	Z	3	SL		F	"Z3-SL-F":630,	FALSE
		PEQ Band	Mid PEQ Level	Float	-15	8	0	dB	0.5	124	Z3-PQ-L	Z	3	PQ		L	"Z3-PQ-L":0,	FALSE
		PEQ Band	Mid PEQ Frequency	Float	20	20000	630	Hz	1	125	Z3-PQ-F	Z	3	PQ		F	"Z3-PQ-F":630,	FALSE
		PEQ Band	Mid PEQ Bandwidth	Float	0.3	4	0.5	oct	0.025	126	Z3-PQ-B	Z	3	PQ		B	"Z3-PQ-B":0.5,	FALSE
		Shelf	High Shelf Level	Float	-15	8	0	dB	0.5	127	Z3-SH-L	Z	3	SH		L	"Z3-SH-L":0,	FALSE
		Shelf	High Shelf Frequency	Float	630	20000	630	Hz	1	128	Z3-SH-F	Z	3	SH		F	"Z3-SH-F":630,	FALSE
		Page	Page Level	Float	-30	12	0	dB	0.5	129	Z3-PL-L	Z	3	PL		L	"Z3-PL-L":0,	FALSE
		Page	Page Ducker Depth	Float	0	85	12	dB	0.5	130	Z3-PL-D	Z	3	PL		D	"Z3-PL-D":12,	FALSE
		Limiter	Limiter Threshold	Float	-60	0	0	dBFS	0.5	131	Z3-PL-H	Z	3	PL		H	"Z3-PL-H":0,	FALSE
		Page	Page Enabled In Zone	Boolean			false			132	Z3-PL-E	Z	3	PL		E	"Z3-PL-E":false,	FALSE
Zone 4	Mono	General	Level	Float	-30	12	0	dB	0.5	133	Z4-L	Z	4	G		L	"Z4-L":0,	FALSE
		General	Meter	Float	-60	0	-60	dB	0.25	134	Z4-M	Z	4	G		M	"Z4-M":-60,	TRUE
		General	Display Name	String			"Zone 4"			0	Z4-N	Z	4	G		N	"Z4-N":"Zone 4",	FALSE
		General	Input Source Selection	<i>Enum.</i>	0	6	0			135	Z4-S	Z	4	G		S	"Z4-S":0,	FALSE
		General	Priority Input Source Selection	<i>Enum.</i>	0	7	7			136	Z4-SP	Z	4	G		SP	"Z4-SP":7,	FALSE
		General	Priority Detector Hold Time	Float	1	60	3	Sec	1	137	Z4-H	Z	4	G		H	"Z4-H":3,	FALSE
		General	Priority Input Selected Meter	Boolean			false			138	Z4-MP	Z	4	G		MP	"Z4-MP":false,	TRUE
		Shelf	Low Shelf Level	Float	-15	8	0	dB	0.5	139	Z4-SL-L	Z	4	SL		L	"Z4-SL-L":0,	FALSE
		Shelf	Low Shelf Frequency	Float	20	630	630	Hz	1	140	Z4-SL-F	Z	4	SL		F	"Z4-SL-F":630,	FALSE
		PEQ Band	Mid PEQ Level	Float	-15	8	0	dB	0.5	141	Z4-PQ-L	Z	4	PQ		L	"Z4-PQ-L":0,	FALSE
		PEQ Band	Mid PEQ Frequency	Float	20	20000	630	Hz	1	142	Z4-PQ-F	Z	4	PQ		F	"Z4-PQ-F":630,	FALSE
		PEQ Band	Mid PEQ Bandwidth	Float	0.3	4	0.5	oct	0.025	143	Z4-PQ-B	Z	4	PQ		B	"Z4-PQ-B":0.5,	FALSE
		Shelf	High Shelf Level	Float	-15	8	0	dB	0.5	144	Z4-SH-L	Z	4	SH		L	"Z4-SH-L":0,	FALSE
		Shelf	High Shelf Frequency	Float	630	20000	630	Hz	1	145	Z4-SH-F	Z	4	SH		F	"Z4-SH-F":630,	FALSE
		Page	Page Level	Float	-30	12	0	dB	0.5	146	Z4-PL-L	Z	4	PL		L	"Z4-PL-L":0,	FALSE
		Page	Page Ducker Depth	Float	0	85	12	dB	0.5	147	Z4-PL-D	Z	4	PL		D	"Z4-PL-D":12,	FALSE
		Limiter	Limiter Threshold	Float	-60	0	0	dBFS	0.5	148	Z4-PL-H	Z	4	PL		H	"Z4-PL-H":0,	FALSE
		Page	Page Enabled In Zone	Boolean			false			149	Z4-PL-E	Z	4	PL		E	"Z4-PL-E":false,	FALSE

Page	Page (Desc.)	Group	Parameter	Type	Min	Max	Default	Units	Precision	Index	JSON Key	Page-Key	Page-Index	Group-Key	Group-Index	Param-Key	JSON	Read Only
Zone 5	Mono	General	Level	Float	-30	12	0	dB	0.5	150	Z5-L	Z	5	G		L	"Z5-L":0,	FALSE
		General	Meter	Float	-60	0	-60	dB	0.25	151	Z5-M	Z	5	G		M	"Z5-M":-60,	TRUE
		General	Display Name	String			"Zone 5"			0	Z5-N	Z	5	G		N	"Z5-N":"Zone 5",	FALSE
		General	Input Source Selection	<i>Enum.</i>	0	6	0			152	Z5-S	Z	5	G		S	"Z5-S":0,	FALSE
		General	Priority Input Source Selection	<i>Enum.</i>	0	7	7			153	Z5-SP	Z	5	G		SP	"Z5-SP":7,	FALSE
		General	Priority Detector Hold Time	Float	1	60	3	Sec	1	154	Z5-H	Z	5	G		H	"Z5-H":3,	FALSE
		General	Priority Input Selected Meter	Boolean			false			155	Z5-MP	Z	5	G		MP	"Z5-MP":false,	TRUE
		Shelf	Low Shelf Level	Float	-15	8	0	dB	0.5	156	Z5-SL-L	Z	5	SL		L	"Z5-SL-L":0,	FALSE
		Shelf	Low Shelf Frequency	Float	20	630	630	Hz	1	157	Z5-SL-F	Z	5	SL		F	"Z5-SL-F":630,	FALSE
		PEQ Band	Mid PEQ Level	Float	-15	8	0	dB	0.5	158	Z5-PQ-L	Z	5	PQ		L	"Z5-PQ-L":0,	FALSE
		PEQ Band	Mid PEQ Frequency	Float	20	20000	630	Hz	1	159	Z5-PQ-F	Z	5	PQ		F	"Z5-PQ-F":630,	FALSE
		PEQ Band	Mid PEQ Bandwidth	Float	0.3	4	0.5	oct	0.025	160	Z5-PQ-B	Z	5	PQ		B	"Z5-PQ-B":0.5,	FALSE
		Shelf	High Shelf Level	Float	-15	8	0	dB	0.5	161	Z5-SH-L	Z	5	SH		L	"Z5-SH-L":0,	FALSE
		Shelf	High Shelf Frequency	Float	630	20000	630	Hz	1	162	Z5-SH-F	Z	5	SH		F	"Z5-SH-F":630,	FALSE
		Page	Page Level	Float	-30	12	0	dB	0.5	163	Z5-PL-L	Z	5	PL		L	"Z5-PL-L":0,	FALSE
		Page	Page Ducker Depth	Float	0	85	12	dB	0.5	164	Z5-PL-D	Z	5	PL		D	"Z5-PL-D":12,	FALSE
		Limiter	Limiter Threshold	Float	-60	0	0	dBFS	0.5	165	Z5-PL-H	Z	5	PL		H	"Z5-PL-H":0,	FALSE
		Page	Page Enabled In Zone	Boolean			false			166	Z5-PL-E	Z	5	PL		E	"Z5-PL-E":false,	FALSE

Page	Page (Desc.)	Group	Parameter	Type	Min	Max	Default	Units	Precision	Index	JSON Key	Page-Key	Page-Index	Group-Key	Group-Index	Param-Key	JSON	Read Only
Zone 6	Stereo	General	Level	Float	-30	12	0	dB	0.5	167	Z6-L	Z	6	G		L	"Z6-L":0,	FALSE
		General	Meter Left (High)	Float	-60	0	-60	dB	0.25	168	Z6-ML	Z	6	G		ML	"Z6-ML":-60,	TRUE
		General	Meter Right (Low)	Float	-60	0	-60	dB	0.25	169	Z6-MR	Z	6	G		MR	"Z6-MR":-60,	TRUE
		General	Display Name	String			"Zone 6"			0	Z6-N	Z	6	G		N	"Z6-N":"Zone 6",	FALSE
		General	Input Source Selection	<i>Enum.</i>	0	6	0			170	Z6-S	Z	6	G		S	"Z6-S":0,	FALSE
		General	Priority Input Source Selection	<i>Enum.</i>	0	7	7			171	Z6-SP	Z	6	G		SP	"Z6-SP":7,	FALSE
		General	Priority Detector Hold Time	Float	1	60	3	Sec	1	172	Z6-H	Z	6	G		H	"Z6-H":3,	FALSE
		General	Priority Input Selected Meter	Boolean			false			173	Z6-MP	Z	6	G		MP	"Z6-MP":false,	TRUE
		Shelf	Low Shelf Level	Float	-15	8	0	dB	0.5	174	Z6-SL-L	Z	6	SL		L	"Z6-SL-L":0,	FALSE
		Shelf	Low Shelf Frequency	Float	20	630	630	Hz	1	175	Z6-SL-F	Z	6	SL		F	"Z6-SL-F":630,	FALSE
		PEQ Band	Mid PEQ Level	Float	-15	8	0	dB	0.5	176	Z6-PQ-L	Z	6	PQ		L	"Z6-PQ-L":0,	FALSE
		PEQ Band	Mid PEQ Frequency	Float	20	20000	630	Hz	1	177	Z6-PQ-F	Z	6	PQ		F	"Z6-PQ-F":630,	FALSE
		PEQ Band	Mid PEQ Bandwidth	Float	0.3	4	0.5	oct	0.025	178	Z6-PQ-B	Z	6	PQ		B	"Z6-PQ-B":0.5,	FALSE
		Shelf	High Shelf Level	Float	-15	8	0	dB	0.5	179	Z6-SH-L	Z	6	SH		L	"Z6-SH-L":0,	FALSE
		Shelf	High Shelf Frequency	Float	630	20000	630	Hz	1	180	Z6-SH-F	Z	6	SH		F	"Z6-SH-F":630,	FALSE
		Page	Page Level	Float	-30	12	0	dB	0.5	181	Z6-PL-L	Z	6	PL		L	"Z6-PL-L":0,	FALSE
		Page	Page Ducker Depth	Float	0	85	12	dB	0.5	182	Z6-PL-D	Z	6	PL		D	"Z6-PL-D":12,	FALSE
		Limiter	Limiter Threshold	Float	-60	0	0	dBFS	0.5	183	Z6-PL-H	Z	6	PL		H	"Z6-PL-H":0,	FALSE
		Page	Page Enabled In Zone	Boolean			false			184	Z6-PL-E	Z	6	PL		E	"Z6-PL-E":false,	FALSE
		Stereo Mode	Enable X-Over	Boolean			false			185	Z6-M-SR	Z	6	M		SR	"Z6-M-SR":false,	FALSE
		Stereo Mode	X-Over Frequency	Float	80	300	125	Hz	1	186	Z6-M-XF	Z	6	M		XF	"Z6-M-XF":125,	FALSE
		Stereo Mode	X-Over Low Level	Float	-10	6	0	dB	0.5	187	Z6-M-XLL	Z	6	M		XLL	"Z6-M-XLL":0,	FALSE
		Stereo Mode	X-Over High Level	Float	-10	6	0	dB	0.5	188	Z6-M-XHL	Z	6	M		XHL	"Z6-M-XHL":0,	FALSE

Page	Page (Desc.)	Group	Parameter	Type	Min	Max	Default	Units	Precision	Index	JSON Key	Page-Key	Page-Index	Group-Key	Group-Index	Param-Key	JSON	Read Only
Status		Device Status	Firmware Version	String			"1.0"			0	S-D-FV	S		D		FV	"S-D-FV": "1.0",	TRUE
		Device Status	Serial Number	String			1234			0	S-D-SN	S		D		SN	"S-D-SN": "1234",	TRUE
		Device Status	Device Status	<i>Enum.</i>			0			0	S-D-ST	S		D		ST	"S-D-ST": "0",	TRUE
		Device Status	FW Update Progress	Integer	0	100	0			0	S-D-FST	S		D		FST	"S-D-FST": "0",	TRUE
		Wired Network	MAC Address	String			""			0	S-N-MAC	S		N		MAC	"S-N-MAC": "",	TRUE
		Wired Network	DHCP Assigned IP Address (IP+[Subnet])	String			""			0	S-N-DIP	S		N		DIP	"S-N-DIP": "",	TRUE
		Wireless Network	MAC Address	String			""			0	S-NW-MAC	S		NW		MAC	"S-NW-MAC": "",	TRUE
		Wireless Network	DHCP Assigned IP Address (IP+[Subnet])	String			""			0	S-NW-DIP	S		NW		DIP	"S-NW-DIP": "",	TRUE
		Wireless Network	Connection Status	Boolean			false			0	S-NW-CN	S		NW		CN	"S-NW-CN": false,	TRUE
		Wireless Network	List of available networks	String			""			0	S-NW-LS	S		NW		LS	"S-NW-LS": "",	TRUE
		Port Status	Pager Port - Status	<i>Enum.</i>			0			0	S-PG-ST	S		PG		ST	"S-PG-ST": "0",	TRUE
		Port Status	Pager Port - FW Update Progress	Integer	0	100	0			0	S-PG-FST	S		PG		FST	"S-PG-FST": "0",	TRUE
		Port Status	Pager Port - Device Name	String			""			0	S-PG-N	S		PG		N	"S-PG-N": "",	TRUE
		Port Status	Master Port - Status	<i>Enum.</i>			0			0	S-PM-ST	S		PM		ST	"S-PM-ST": "0",	TRUE
		Port Status	Master Port - FW Update Progress	Integer	0	100	0			0	S-PM-FST	S		PM		FST	"S-PM-FST": "0",	TRUE
		Port Status	Master Port - Device Name	String			""			0	S-PM-N	S		PM		N	"S-PM-N": "",	TRUE
		Port Status	Remote Port - Status	<i>Enum.</i>			0			0	S-P1-ST	S		P	1	ST	"S-P1-ST": "0",	TRUE
		Port Status	Remote Port - FW Update Progress	Integer	0	100	0			0	S-P1-FST	S		P	1	FST	"S-P1-FST": "0",	TRUE
		Port Status	Report Port - Device Name	String			""			0	S-P1-N	S		P	1	N	"S-P1-N": "",	TRUE
		Port Status	Remote Port - Status	<i>Enum.</i>			0			0	S-P2-ST	S		P	2	ST	"S-P2-ST": "0",	TRUE
		Port Status	Remote Port - FW Update Progress	Integer	0	100	0			0	S-P2-FST	S		P	2	FST	"S-P2-FST": "0",	TRUE
		Port Status	Report Port - Device Name	String			""			0	S-P2-N	S		P	2	N	"S-P2-N": "",	TRUE
		Port Status	Remote Port - Status	<i>Enum.</i>			0			0	S-P3-ST	S		P	3	ST	"S-P3-ST": "0",	TRUE
		Port Status	Remote Port - FW Update Progress	Integer	0	100	0			0	S-P3-FST	S		P	3	FST	"S-P3-FST": "0",	TRUE
		Port Status	Report Port - Device Name	String			""			0	S-P3-N	S		P	3	N	"S-P3-N": "",	TRUE
		Port Status	Remote Port - Status	<i>Enum.</i>			0			0	S-P4-ST	S		P	4	ST	"S-P4-ST": "0",	TRUE
		Port Status	Remote Port - FW Update Progress	Integer	0	100	0			0	S-P4-FST	S		P	4	FST	"S-P4-FST": "0",	TRUE
		Port Status	Report Port - Device Name	String			""			0	S-P4-N	S		P	4	N	"S-P4-N": "",	TRUE
		Port Status	Remote Port - Status	<i>Enum.</i>			0			0	S-P5-ST	S		P	5	ST	"S-P5-ST": "0",	TRUE
		Port Status	Remote Port - FW Update Progress	Integer	0	100	0			0	S-P5-FST	S		P	5	FST	"S-P5-FST": "0",	TRUE
		Port Status	Report Port - Device Name	String			""			0	S-P5-N	S		P	5	N	"S-P5-N": "",	TRUE
		Port Status	Remote Port - Status	<i>Enum.</i>			0			0	S-P6-ST	S		P	6	ST	"S-P6-ST": "0",	TRUE
		Port Status	Remote Port - FW Update Progress	Integer	0	100	0			0	S-P6-FST	S		P	6	FST	"S-P6-FST": "0",	TRUE
		Port Status	Report Port - Device Name	String			""			0	S-P6-N	S		P	6	N	"S-P6-N": "",	TRUE

Page	Page (Desc.)	Group	Parameter	Type	Min	Max	Default	Units	Precision	Index	JSON Key	Page-Key	Page-Index	Group-Key	Group-Index	Param-Key	JSON	Read Only
Configuration Settings		System	Mute	Boolean			true			1	C-D-M	C		D		M	"C-D-M":true,	FALSE
		Device Info	Venue Display Name	String			"Zonetech"			0	C-D-N	C		D		N	"C-D-N":"Zonetech",	FALSE
		Firmware Update	Firmware update from TFTP URL	String			""			0	C-D-FU	C		D		FU	"C-D-FU": "",	FALSE
		GUI Page	Front Panel GUI Page	<i>Enum.</i>	0	18	""			0	C-D-GP	C		D		GP	"C-D-GP": "",	FALSE
		Security	Full Access Password	String			"admin"			0	C-SS-FPW	C		SS		FPW	"C-SS-FPW":"admin",	FALSE
		Security	Limited Access Password	String			""			0	C-SS-LPW	C		SS		LPW	"C-SS-LPW": "",	FALSE
		Security	Front Panel Access Level	<i>Enum.</i>	0	2	0			0	C-SS-FA	C		SS		FA	"C-SS-FA":0,	FALSE
		Wired Network	Static IP Address (IP+[Subnet])	String			""			0	C-N-SIP	C		N		SIP	"C-N-SIP": "",	FALSE
		Wireless Network	Static IP Address (IP+[Subnet])	String			""			0	C-NW-SIP	C		NW		SIP	"C-NW-SIP": "",	FALSE
		Wireless Network	Enable WiFi	Boolean			false			0	C-NW-E	C		NW		E	"C-NW-E":false,	FALSE
		Wireless Network	Chosen Network (SSID)	String			""			0	C-NW-SSID	C		NW		SSID	"C-NW-SSID": "",	FALSE
		Wireless Network	Chosen Password (PSK)	String			""			0	C-NW-PSK	C		NW		PSK	"C-NW-PSK": "",	FALSE
		Wireless Network	Scan for networks enable	Boolean			false			0	C-NW-SE	C		NW		SE	"C-NW-SE":false,	FALSE

Common Ranges & Defaults

All Levels					
Parameter Name	Min	Max	Default	Units	Precision
Input 1-4: Level	-88	12	0	dB	0.5
Input 5-6:	-88	12	0	dB	0.5
Level - Dynamic	-88	12	0	dB	0.5
Level - Condenser	-88	12	0	dB	0.5
Level - Unbalanced (Line+)	-88	12	0	dB	0.5
Level - Balanced (Line)	-88	12	0	dB	0.5
Stream: Level	-88	12	0	dB	0.5
Paging: Level	-88	12	0	dB	0.5
Paging: Chime Level	-30	12	0	dB	0.5
Zone 1-5: Level	-30	12	0	dB	0.5
Zone 6: Level	-30	12	0	dB	0.5

Zone - Page & Limiters					
Parameter Name	Min	Max	Default	Units	Precision
Page: Level	-30	12	0	dB	0.5
Page: Ducker Depth	0	85	12	dB	0.5
Limiter: Threshold	-60	0	0	dBFS	0.5

Zone 6 - Stereo Crossover					
Parameter Name	Min	Max	Default	Units	Precision
X-Over: Frequency	80	300	125	Hz	1
X-Over: Low Level	-10	6	0	dB	0.5
X-Over: High Level	-10	6	0	dB	0.5

Inputs & Zones - Shelf & PEQ					
Parameter Name	Min	Max	Default	Units	Precision
Low Shelf: Level	-15	8	0	dB	0.5
Low Shelf: Frequency	20	630	630	Hz	1
Mid PEQ: Level	-15	8	0	dB	0.5
Mid PEQ: Frequency	20	20000	630	Hz	1
Mid PEQ: Bandwidth	0.3	4	0.5	oct	0.025
High Shelf: Level	-15	8	0	dB	0.5
High Shelf: Frequency	630	20000	630	Hz	1

Enumerations

Zonetech Status	
Value	Name
0x0000	None (no issues)
0x0001	Firmware Update in Progress
0x0002	DSP Error
0x0004	FPGA Error
0x0008	Firmware Update Error

Device Port Status	
Value	Name
0x0000	None (no issues)
0x0001	Firmware Update in Progress
0x0002	Remote Power Low
0x0004	Port Power Low
0x0008	Rx Failure
0x0010	Tx Failure

Input Type	
Value	Name
0	Line-Plus
1	Balanced
2	Dynamic
3	Condenser

Access Level	
Value	Name
0	Full
1	View-Only
2	Limited

Stream Source	
Value	Name
0	None
1	Bluetooth
2	AirPlay
3	UPnP/DNLA

Input Source Selection	
Value	Name
0	Input 1
1	Input 2
2	Input 3
3	Input 4
4	Input 5
5	Input 6
6	Stream

Priority Input Source Selection	
Value	Name
0	Input 1
1	Input 2
2	Input 3
3	Input 4
4	Input 5
5	Input 6
6	Stream
7	None

Front Panel GUI Page	
Value	Name
0	Input 1
1	Input 2
2	Input 3
3	Input 4
4	Input 5
5	Input 6
6	Stream
7	Page
8	Zone 1
9	Zone 2
10	Zone 3
11	Zone 4
12	Zone 5
13	Zone 6
14	Status Meters
15	Status Ports
16	Status Network
17	Status WiFi
18	Status Info