

# K-300i RS-232/IP Control Protocol

## RS-232 Communications Protocol

RS-232 Port Settings

9600 Baud, 8 Data bits, 1 Stop bit, No Parity

## Commands

Function	Command	Comments
Power On	1PWRZ	
Power Off	0PWRZ	
Mute Toggle	MUTGZ	
Mute	MUTZ	
Unmute	UMTZ	
Volume	xxxMVLZ	xxx is volume level 0-100
Volume Up	VOLUPZ	
Volume Down	VOLDWNZ	
<i>Status Commands</i>		
Auto status on	ASTEZ	
Auto status off	ASTDZ	
Get status	STAZ	
<i>Source Select</i>		
BALANCED1	SBAL1Z	
BALANCED2	SBAL2Z	
S1	SS1Z	
S2	SS2Z	
S3	SS3Z	
Coax Digital	SDIG1Z	
Optical Digital	SDIG2Z	
HDMI1	SHDMI1Z	
HDMI2	SHDMI2Z	
Network Audio	SNETZ	
USB Audio	SUSBZ	
Bluetooth	SBTZ	
HDMI ARC (TV)	STVZ	
<i>Menu Commands</i>		
Up	UPZ	
Down	DWNZ	
Left	LFTZ	
Right	RGTZ	
Enter	ENTZ	
Menu	MENZ	
<i>Balance</i>		
Balance Left	BALLZ	
Balance Right	BALRZ	
<i>Diagnostic Commands</i>		
Enable Diagnostic Mode	1DIAGZ	

# K-300i RS-232/IP Control Protocol

## IP Communications Protocol

Telnet, port 3623

## Commands

Commands must be terminated with <CR><LF> and are not case sensitive.

Function	Command	Comments
Power On	1PWR	
Power Off	0PWR	
Mute Toggle	MUTG	
Mute	MUT	
Unmute	UMT	
Volume	xxxMVL	xxx is volume level 0-100
Volume Up	VOLUP	
Volume Down	VOLDWN	
<i>Status Commands</i>		
Auto status on	ASTE	
Auto status off	ASTD	
Get status	STA	
<i>Source Select</i>		
BALANCED1	SBAL1	
BALANCED2	SBAL2	
S1	SS1	
S2	SS2	
S3	SS3	
Coax Digital	SDIG1	
Optical Digital	SDIG2	
HDMI1	SHDMI1	
HDMI2	SHDMI2	
Network Audio	SNET	
USB Audio	SUSB	
Bluetooth	SBT	
HDMI ARC (TV)	STV	
<i>Menu Commands</i>		
Up	UP	
Down	DWN	
Left	LFT	
Right	RGT	
Enter	ENT	
Menu	MEN	
<i>Balance</i>		
Balance Left	BALL	
Balance Right	BALR	
<i>Diagnostic Commands</i>		
Enable/Disable prompt	PROMPT x	x=0 disable, x=1 enable
Display status mode	DISPMODE x	x=0 binary, x=1 text, x=2 ascii, x=3 Hex
Show commands	HELP	
Disconnect	EXIT	

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## Status Feedback

### Data Format

18 bytes total, first byte and last byte are framing bytes with a value of 0x55

Note: all 18 bytes are sent whenever status is requested with the STA command or when any information contained in them changes and auto status is enabled.

#### Byte 1: Framing

Value: 0x55

#### Byte 2: General Status 1

Bit	7	6	5	4	3	2	1	0
	System Mute	User Mute			Input Trigger			Main Power

Main Power: 1=On

Input Trigger: 1=12V trigger input active

User Mute: 1=user mute active

System Mute: 1=internal mute active

#### Byte 3: General Status 2

Bit	7	6	5	4	3	2	1	0
	Menu Mode	Auto Status Enabled					Curr Fault	DCO Fault

DCO Fault: 1=High DC Fault, 0=No Fault

Curr Fault: 1=Current Fault, 0=No Fault

Auto Status Enabled: 0=Disabled, 1=Enabled

Menu mode: 1=menu is on

#### Byte 4: Current Source

Bit	7	6	5	4	3	2	1	0
	THR				Src 3	Src 2	Src 1	Src 0

MN Src 3-0: Source value

THR : Theater Mode, 1=Enabled, 0=Disabled

#### Byte 5: Volume

Bit	7	6	5	4	3	2	1	0
	Vol7	Vol6	Vol5	Vol4	Vol3	Vol2	Vol1	Vol0

Vol 7-0: Volume Level

#### Byte 6 Audio Mode

Bit	7	6	5	4	3	2	1	0
	CODEC3	CODEC2	CODEC1	CODEC0	Audio Mode3	Audio Mode2	Audio Mode1	Audio Mode0

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Bit 3-0

Audio Mode value:

0=Unknown (Waiting for audio)

1=Analog Stereo

2=PCM Stereo

3=DSD Stereo

4=CODEC

Bit 7-4

CODEC Format: (valid only when audio mode is CODEC)

0x00	Unknown
0x01	MP3
0x02	AAC/ALAC
0x03	FLAC
0x04	APE
0x05	OGG
0x06	WAV
0x07	AIFF
0x08	WMA
0x09	ATRAC
0x10	DSD
0x11	MQA
0x12	MQA STUDIO

Byte 7: Audio Sample Frequency

Bit	7	6	5	4	3	2	1	0
	FREQ7	FREQ6	FREQ5	FREQ4	FREQ3	FREQ2	FREQ1	FREQ0

FREQ7-0

Sample Frequency: (valid only when audio mode is PCM Stereo or CODEC)

0x00	32kHz
0x01	44.1kHz
0x02	48kHz
0x03	88.2kHz
0x04	96kHz
0x05	176.4kHz
0x06	192kHz
0x07	352.8kHz
0x08	384kHz
0x09	DSD 64
0x10	DSD 128

Byte 8: Temperature

Bit	7	6	5	4	3	2	1	0
	TEMP7	TEMP6	TEMP5	TEMP4	TEMP3	TEMP2	TEMP1	TEMP0

Temperature Value in degrees Celsius (°C )

Byte 9-11: Reserved

Byte 12: Balance

Bit	7	6	5	4	3	2	1	0
				Bal 4	Bal 3	Bal 2	Bal 1	Bal 0

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Bal 4-0: Balance setting

0 Right Off	9 Left +2.0	18 Right +2.5
1 Left +6	10 Left +1.5	19 Right +3.0
2 Left +5.5	11 Left +1.0	20 Right +3.5
3 Left +5.0	12 Left +0.5	21 Right +4.0
4 Left +4.5	13 Centered	22 Right +4.5
5 Left +4.0	14 Right +0.5	23 Right +5.0
6 Left +3.5	15 Right +1.0	24 Right +5.5
7 Left +3.0	16 Right +1.5	25 Right +6.0
8 Left +2.5	17 Right +2.0	26 Left Off

Byte 13: Current Source Level Trim

Bit	7	6	5	4	3	2	1	0
	Trim 7	Trim 6	Trim 5	Trim 4	Trim 3	Trim 2	Trim 1	Trim 0

Trim 7-0: Source trim value

0 -10 dB	6 -4 dB	12 +2 dB	18 +8 dB
1 -9 dB	7 -3 dB	13 +3 dB	19 +9 dB
2 -8 dB	8 -2 dB	14 +4 dB	20 +10 dB
3 -7 dB	9 -1 dB	15 +5 dB	
4 -6 dB	10 0 dB	16 +6 dB	
5 -5 dB	11 +1 dB	17 +7 dB	

Byte 14: Pre Amp Output Trim Level

Bit	7	6	5	4	3	2	1	0
	Trim 7	Trim 6	Trim 5	Trim 4	Trim 3	Trim 2	Trim 1	Trim 0

Trim 7-0: Pre Amp Output trim value

0 -10 dB	6 -4 dB	12 +2 dB	18 +8 dB
1 -9 dB	7 -3 dB	13 +3 dB	19 +9 dB
2 -8 dB	8 -2 dB	14 +4 dB	20 +10 dB
3 -7 dB	9 -1 dB	15 +5 dB	
4 -6 dB	10 0 dB	16 +6 dB	
5 -5 dB	11 +1 dB	17 +7 dB	

Byte 15-17: Reserved

Byte 18: Framing

Value: 0x55