AUDIUM

AUDIUM *Air* *kTALK*

Document explaining "kTALK" - a protocol to control AUDIUM devices

Contents

Version List

01.11.2019	Version 1.0	Initial Document
27.11.2019	Version 1.1	Changes in Command Table
06.02.2019	Version 1.2	Added Contents, Title sheet + Version List

AUDIUM *Air* AUDIUM

HowTo test kTALK Communication via USB / COMM

Connecting the USB Port of the AIR Device to a host creates a new (virtual) COM Port on this computer
Connect to this (virtual) COM port with a terminal program and send commands / read response messages

1) Connect AUDIUM Air Device to Host
   Use a USB-B to USB-A cable (standard „printer-cable“) for this connection
   On modern operating systems there is no need for a driver

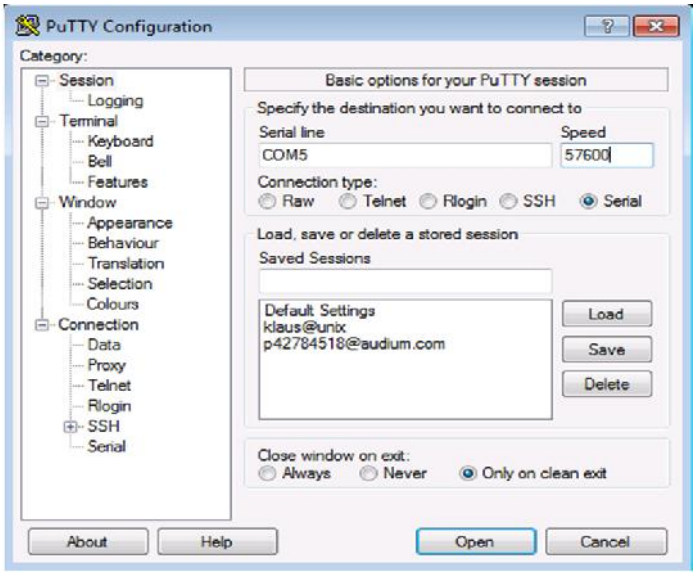
2) If the device is not detected
   Disconnect USB cable
   Download and install driver from www.audium.com/downloads/ FT232
   Reconnect cable – the device shall be found now

3) Find out the assigned COM port
   On Windows: open Device Manager, navigate to serial devices, open branch and look for COM device
   On UNIX look in the syslog for the message saying something like „detected /dev/ttyUSB0“

3) Connect to Device via Terminal Program
   On MacOS or UNIX, install minicom (or similar)
   Enter the following command: minicom

```
MacBook:~klaus$ minicom ….
```

   On Windows use e.g. PuTTY (download from https://www.putty.org/)
   After starting PuTTY, select Serial and en COM interface and Speed



After clicking „Open“ you will be presented the following simple Window.
You will type in the commands here and get the response messages.

4) Test kTALK with some commands

All commands have to be 5 characters or more

To read the volume setting type

KX?vo

The respinse will be (if the current volume setting is 70)

KX#70

AUDIUM Air AUDIUM

HowTo test kTALK Communication via TCP

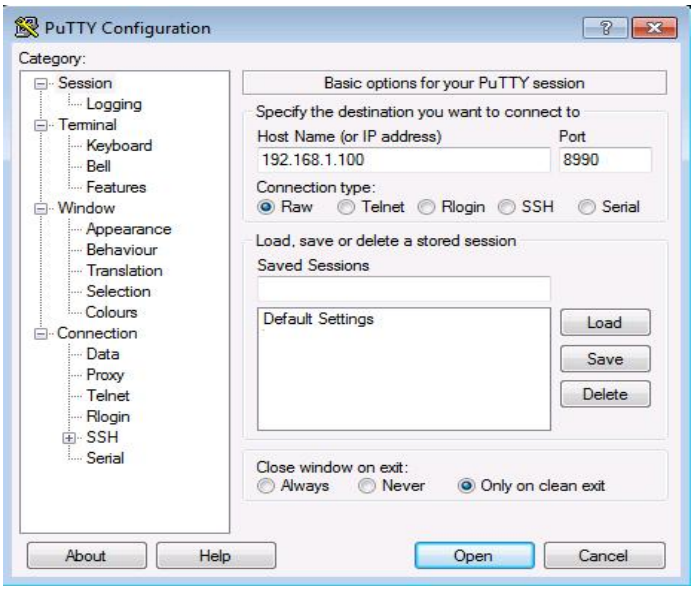
The AIR Device listens on the active network interface on port 8990 for incoming TCP connections
Connect to this port with a terminal program and send commands / read response messages

1) Setup your AUDIUM Air Device
   Connect the Device to LAN via Cable
   Or configure it to access your WiFi Network with the AUDIUM App

2) Find out it's IP Address
   Select the Device in the AUDIUM App, click „NEXT >>“, then you see the IP-Address
   `In this HowTo we use IP-Address 192.168.1.100`

3) Connect to Device via Terminal Program
   On MacOS or UNIX, open Terminal program
   Enter the following command: telnet <IP-Address> 8990
   `MacBook:~klaus$ telnet 192.168.1.100 8990`

   On Windows use e.g. PuTTY (download from https://www.putty.org/)
   After starting PuTTY, select RAW and add IP-Address and Port



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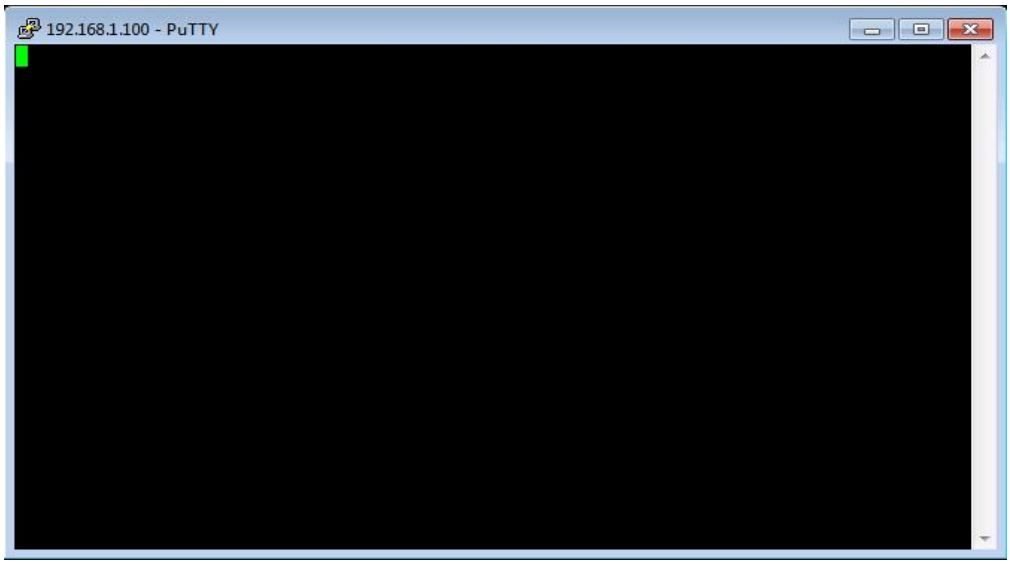

4) Test kTALK with some commands

All commands have to be 5 characters or more

To read the volume setting type

KX?vo

The respinse will be (if the current volume setting is 70)

KX#70

AUDIUM Air AUDIUM

kTALK Protocol

1) Connect USB port with computer, open the COM port that is being installed (57600 8N1).
COM number and parameters can be changed in the device manager
If no driver is found, install FT232 Driver from www.audium.com/downloads

2) Open TCP connection to IP:8990
IP is the address of the speaker in the network (can be found out with the AUDIUM App)
8990 is the TCP port number where the speaker is listening for control connections

Commands are sent in ASCII text and are case sensitive.
Each command ist min. 5 characters long (optional data max 50 Bytes is appended)
and ends with a '\n' (carriage return CR character)

Commands/requests are having the following format:

	prefix		*commanc*		*data (optional)*					
Send command:	K	X	!	x	x	y	y	…	y	\n

! => set vaue

Request value/status:	K	X	?	x	x	\n

? => request status/vaue

The response from the device has this format

	prefix		*return coc*		*data (optional)*					
response	K	X	#	e	e	y	y	…	y	\n

=> status from device

If somebody adjusts a parameter on the device, it sends the new parameter this way:

	prefix		*commanc*		*data (optional)*					
	K	X	!	x	x	y	y	…	y	\n

! => set vaue

Examples:
Set Subwoofer Crossover Frequency to 120 Hz:

send command:	KX! fg ##	`KX!fg120`	
response from sub:	KX# 00	`KX#00`	00 = no error

Set Input to Cinch:

send command:	KX! IN S	`KX!INS`	S…speaker input
response from sub:	KX# 00	`KX#00`	00=no error

Ask Sub for active input:	KX? IN	`KX?IN`	
response from sub:	KX# 00 S	`KX#00S`	Active input is Loudsp.

If you change the Frequency on the Sub to 140Hz:

command from sub:	KX! fg ##	`KX!fg140`

AUDIUM *Air*

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Version 1.1, 27.11.2018

kTALK Command Table

nnn = 3 numbers as Argument, s = sign, c = a character, b = boolean (0…off, 1…on)

Sub	Comp	Command	R/W	Bytes	Data	Comments
X	X	MUTE_OFF	W	MF	-	
X	X	MUTE_ON	W	MO	-	
X	X	LOCK	W	LO	-	
X	X	UNLOCK	W	LF	-	
X	X	STANDBY	W	PF	-	
X	X	POWER_ON	W	PO	-	
X	X	~~POWER_TOGGLE~~	W	PT	-	
X	X	AUTO_OFF	RW	AO	nnn	Set Auto-Off Time in Minutes. 0…infinite or 1, 5, 10, 15, 30, 60, 120 or 240
X	X	DISPLAY_BRIGHT	RW	DB	n	0…4
X	X	DISPLAY_TIME	RW	DT	nnn	Display Fade out time
X	X	MUTE_TIME	RW	MT	nnn	Auto unmute time in seconds 0…infinite, 5, 10, 15, 30, 60 or120
X	X	LANGUAGE	RW	LA	c	Set Display Language D german E english P polish
X	X	CHANNEL	RW	CH	c	Assign channel (L, R, M…mono)
X	X	DIGI_LINK	RW	DL	b	
X	X	RESET	W	RE	-	Factory reset of speaker
X	X	RESET_WLAN	W	RW	-	Reset the Wifi Modue
X	X	REBOOT	W	RB	-	Reboot speaker
X	X	~~BEEP~~	W	BI	n	Produce beep sound
X	X	TEXT	W	TX	cccc…	Dispay text on dispay
X	X	STATUS	R	ST	c	Status (Read Only!) B BRAND M MODEL m Model ID S SN A ARRAY_RC_FILENAME V SW VERS K kOS Vers L lifetime C compiledate F fags
X	X	~~FLASH~~	W	FL	-	Switch to flash modus
X	X	INPUT	W	IN	c	Choose desired Input: C Cinch X XLR L Loudspeaker

						D Digital 1 d Digital 2 W Wifi/LAN N none A automatic
X	X	ACTIVE_INPUT	R	ai	-	Read Ony!
X	X	VOLUME	RW	vo	nnn	0...100
X		FREQU_FG	RW	fg	nnn	30..180
X		STEILH_FG	RW	fs	nn	0... Filter off, or 6, 12, 18, 24
X		FREQU_FHP	RW	fh	nn	20...40 or 0 to turn off HP
X		PHASE	RW	ph	n	0...180
X		POLARITY	RW	po	b	0...normal 1...invert
X		~~NACHT~~	RW	nm	b	
X		PROFILE_LOAD	W	Pl	n	
X		PROFILE_SAVE	W	Ps	n	
X		EQ	RW	eq	n	1...on 0...off
X		EQ_F	RW	ef	nnn	20...200
X		EQ_Q	RW	eQ	n	1...9
X		EQ_G	RW	eg	snn	-12...12
	X	BASS	RW	ba	sn	0...-1 1...norma 2...+1, 3...+2
	X	PLACE	RW	pl	c	F...free W...wall C...corner
	X	ROOM	RW	ro	c	R, r, n, d, D (Reverb - Dampened)
	X	GAIN	RW	ga	nnn	
	X	GAIN_WIFI	RW	gw	nnn	
	X	GAIN_1	RW	g1	nnn	
	X	GAIN_2	RW	g2	nnn	
	X	INPUT_ORDER	RW	io	nn	..ccbbaa = .321 = 00111001 = 0x39