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# Introduction

Welcome to the commands user manual of the Audac audio players. This manual describes the commands whereby the range of audac audio players can be controlled using their remote control ports. Depending on the model of audio player (and/or the type of main unit where connected when using SourceCon<sup>™</sup> modular technology), the supported control interfaces might be different. The supported models including their available control interfaces are listed in the table below.

MODEL	AVAILABLE CONTROL INTERFACES
XMP44	TCP/IP & RS–232
TMP40	TCP/IP & RS-232 (when inserted to supporting main unit)
TSP40	RS-232
DMP40	TCP/IP & RS-232 (when inserted to supporting main unit)
DSP40	RS-232
IMP40	TCP/IP & RS-232 (when inserted to supporting main unit)
ISP40	RS-232
MMP40	TCP/IP & RS-232 (when inserted to supporting main unit)
MSP40	RS-232



## **Using the commands**

Depending of the type of device the different kinds of communication ports are:

- RS–232 port
- TCP/IP port

RS232 Configuratio	n details
CONNECTION PIN 2	Standard RS232 Audiosource TX
PIN 3	Audiosource RX
PIN 5	GND
Settings	19200 Baud 8 Bit 1 Stop bit No parity No Handshaking
TCP/IP Configuratio	n details
IP Address Port Max connections	User configurable 5001 1

#### **Command overview**

Startsymbol I Destination I Source I Command I Argument(s) I Checksum I Stopsymbol

Each command is followed by an 'x' character, which represents the number of the slot whereto the command is sent. If the audio player doesn't support multiple slots, the number '1' shall always be used.

Example: Set output gain to -20 dB for module 1 ASCII: #/D001/web/SOG1/28/U/return HEX: 237C443030317C7765627C534F47317C32387C3766666617C0D0A

#### Notes

- The address of the audio player is fixed at 'D001'
- The checksum is CRC–16 excluding the '#'. The checksum can always be replaced by 'U', which is always accepted.
- Return in ASCII : <CR> <LF> HEX : 0x0D 0x0A (carriage return & line feed)
- Source address has a maximum length of 4 characters and cannot contain 'l' or '#'

#### **Command flow**

- 1) The client sends a command to the audio player (Command)
- 2) The audio player acknowledges the command by returning the same command and a '+' as Argument. (Acknowledge)
- 3) The audio player updates all client's with the new information (Update)

For modular audio players featuring both RS–232 and TCP/IP communication ports, the update feedback is only available on the TCP/IP command port (not on RS–232).



#### GTPS

Gives feedback about the type of audio player and/or installed modules and their software versions

Command:	GTPS
Arguments:	None (0)
Feedback:	DMP40/DSP40 = 1
	IMP40/ISP40 = 2
	MMP40/MSP40 = 3
	IMP40/ISP40 = 4
	FMP40 = 6
	No module installed $= 15$

#### Example:

Get info about the type of audio player and/or installed modules: Command: #ID001IwebIGTPSI0IUIreturn

Answer: #IALLID001ITPSI4^1^15^6^IMP40 V 1.0.4^DMP40 ^No Module ^ FMP40 V1.4.29la3f8Ireturn

#### SOGx

Set the output gain lev	el
Command:	SOGx (with 'x' the number of slot)
Arguments:	Output gain in dB (range depending of the module type)
Remark:	Max output gain is $+8$ dB, which corresponds with argument '0'.
	Always increment negative output gain in dB with 8
	Set gain to $+8 \text{ dB} \rightarrow \text{Argument} = '0'$
	Set gain to 0 dB $\rightarrow$ Argument = '8'
	Set gain to $-20 \text{ dB} \rightarrow \text{Argument} = 28^{\circ}$

#### Example:

Set output gain for slot 1 to -20 dB		
Command:	#ID001IwebIS0G1I28IUIreturn	
Acknowledge:	#IwebID001IS0G1I+IUIreturn	
Update:	#IALLID001I0G1I28I1b88Ireturn	

#### GOGx

Get output gain level	
Command:	GOGx (with 'x' the number of slot)
Arguments:	None (0)

Get output gain for slot	1 (-20 dB)
Command:	#ID001IwebIG0G1I0IUIreturn
Answer:	#IALLID001I0G1I28I9dd8Ireturn

#### SFREQx

Set tuning frequency fo	r FM tuner
Command:	SFREQx (with 'x' the number of slot)
Arguments:	Tuning frequency in integers

#### Example:

Set tuning frequency to	104.10 MHz for slot 1
Command:	#ID001IwebISFREQ1I10410IUIreturn
Acknowledge:	#IwebID001ISFREQ1I+IUIreturn
Update:	#IALLID001IFREQ1I10410I927clreturn

#### SFSUPx

Automatic tuning frequency search up

Command:	SFSUPx, (with 'x' the number of slot)
Arguments:	None (0)
Remark:	Multiple frequencies will be given as update while searching. The last
	given update is the finally tuned station.

#### Example:

Example.
Automatic tuning frequency search up for slot 1

Command:	#ID001IWebISESUP11010Ireturn
Acknowledge:	#lwebID001ISFSUP1I+IUIreturn
Update:	#IALLID001IFREQ1I10410I927cIreturn

#### SFSDNx

Automatic tuning frequency search down

Command:	SFSDNx, (with 'x' the number of slot)
Arguments:	None (0)
Remark:	Multiple frequencies will be given as update while searching. The last given update is the finally tuned station.

#### Example:

Automatic tuning frequency search down for slot 1		
Command:	#ID001IwebISFSDN1I0IUIreturn	
Acknowledge:	#IwebID001ISFSDN1I+IUIreturn	
Update:	#IALLID001IFREQ1I10410I927cIreturn	

#### SELPRx

Select tuner frequency preset (stored radio station) Command: SELPRx, (with 'x' the number of slot) Arguments: Number of preset (1 to 10)

Select tuner frequency preset 4 for slot 1		
Command:	#ID001IwebISELPR1I4IUIreturn	
Acknowledge:	#IwebID001ISELPR1I+IUIreturn	
Update:	#IALLID001IFREQ1I10410I927clreturn	



#### SSBNDx

Toggle band between FM and DAB

Command:SSBNDx, (with 'x' the number of slot)Arguments:None (0)Feedback:DAB = 0FM = 1

#### Example:

Example:		
Toggle band between FM and DAB for slot 1		
Command:	#ID001IwebISSBND1I0IUIreturn	
Acknowledge:	#lweblD001lSSBND1l+lUlreturn	
Update:	#IALLID001IBND1I1I927clreturn	

#### GPRGNx

Get station / program name of the currently playing station		
Command:	GPRGNx, (with 'x' the number of slot)	
Arguments:	None (0)	
Feedback:	Currently playing station / program name in string	

#### Example:

Enterinprof		
Get station / program name for radio tuner on slot 1		
Command:	#ID001IwebIGPRGN1I0IUIreturn	
Answer:	#IALLID001IPRGN1I< <program in="" name="" string="">&gt;IchecksumIreturn</program>	

#### GPRGTx

Get station / program additionally carried text information of currently playing station

Command:	GPRGTx, (with 'x' the number of slot)
Arguments:	None (0)
Feedback:	Currently playing station / program text in string

#### Example:

Get station / program text for radio tuner on slot 1		
Command:	#ID001IwebIGPRGT1I0IUIreturn	
Answer:	#IALLID001IPRGT1I< <program in="" string="" text="">&gt;IchecksumIreturn</program>	

#### GFREQx

Get tuning frequency for FM tuner

Command:	GFREQx (with 'x' the number of slot)
Arguments:	None (0)
Feedback:	Currently tuned frequency in integers

Get tuning frequency for FM tuner on slot 1		
Command:	#ID001IwebIGFREQ1I0IUIreturn	
Answer:	#IALLID001IFREQ1I10410I927clreturn	

#### GCHx

Get tuning channel for DAB tuner

Command:	GCHx (with 'x' the number of slot)
Arguments:	None (0)
Feedback	Currently tuned channel in integers

#### Example:

Get tuned channel for DAB tuner on slot 1		
Command:	#ID001IwebIGCH1I0IUIreturn	
Answer:	#IALLID001ICH1I5I460elreturn	

### GBNDx

Get band info (FM or DAB) for FM & DAB tuner Command: GBNDx, (with 'x' the number of slot) Arguments: None (0) Feedback: DAB = 0 FM = 1

#### Example:

Get status for band for	r FM & DAB tuner on slot 1
Command:	#ID001IwebIGBND1I0IUIreturn
Answer:	#IALLID001IBND1I1I927clreturn

#### GSIGSx

Get signal reception strength

-		-
	Command:	GSIGSx, (with 'x' the number of slot)
	Arguments:	None (0)
	Feedback:	Signal reception strength (percentage) in integers

#### Example:

Enternipror		
Get signal reception strength for tuner on slot 1		
Command:	#ID001IwebIGSIGS1I0IUIreturn	
Answer:	#IALLID001ISIGS1I85I360alreturn	

#### GSTSTx

Get stereo output state

Command:	GSTSTx, (with 'x' the number of slot)
Arguments:	None (0)
Feedback:	Mono = 0
	Stereo = 1

Get stereo output state	for audio player on slot 1
Command:	#ID001IwebIGSTST1I0IUIreturn
Answer:	#IALLID001ISTST1I1I56c1Ireturn



#### GSONx

Get name of currently playing audio track

Command:	GSONx, (with 'x' the number of slot)
Arguments:	None (0)
Feedback:	Currently playing track name text in string

#### Example:

Get name of currently	playing audio track on slot 1
Command:	#ID001IwebIGS0N1I0IUIreturn

oonnnana.	
Answer:	#IALLID001ISON1I< <track in="" name="" string="" text=""/> >IchecksumIreturn

#### **GSTNx**

Get station name (from	database) of the currently playing station
Command:	GSTNx, (with 'x' the number of slot)
Arguments:	None (0)
Feedback:	Currently playing station name text in string

#### Example:

Get name of currently playing station on slot 1		
Command:	#ID001IwebIGSTN1I0IUIreturn	
Answer:	#IALLID001ISTN1I< <station in="" name="" string="" text="">&gt;IchecksumIreturn</station>	

#### **SPPLAYx**

Start audio track playing Command: SPPLAYx, (with 'x' the number of slot) Arguments: None (0)

#### Example:

Start audio track playing on slot 1		
Command:	#ID001IwebISPPLAY1I0IUIreturn	
Acknowledge:	#IwebID001ISPPLAY1I+IUIreturn	

#### SPSTOPx

]
SPSTOPx, (with 'x' the number of slot)
None (0)

#### Example:

Stop audio track playing	g on slot 1
Command:	#ID001IwebISPST0P1I0IUIreturn
Acknowledge:	#lweblD001lSPST0P1l+lUlreturn

#### SPPAUSx

SPPAUSX	
Pause audio track	
Command: Arguments:	SPPAUSx, (with 'x' the number of slot) None (0)

Example: Pause audio track on slot 1 Command: #ID001IwebISPPAUS1I0IUIreturn Acknowledge: #lwebID001ISPPAUS1I+IUIreturn



#### SPGTSTx

Go to begin of audio track Command: SPGTSTx, (with 'x' the number of slot) Arguments: None (0)

#### Example:

Go to begin of audio tra	ck on slot 1
Command:	#ID001IwebISPGTST1I0IUIreturn
Acknowledge:	#lwebID001ISPGTST1I+IUIreturn

#### **SPNEXT**x

Browse to next audio track Command: SPNEXTx, (with 'x' the number of slot) Arguments: None (0)

#### Example:

Browse to next audio track on slot 1		
Command:	#ID001IwebISPNEXT1I0IUIreturn	
Acknowledge:	#lwebID001ISPNEXT1I+IUIreturn	

#### **SPPREV**x

Browse to previous audio track Command: SPPREVx, (with 'x' the number of slot) Arguments: None (0)

#### Example:

Browse to previous aud	io track on slot 1
Command:	#ID001lwebISPPREV1I0IUIreturn
Acknowledge:	#lwebID001ISPPREV1I+IUIreturn

#### SPFFWx

Fast forward audio track

Command:	SPFFWx, (with 'x' the number of slot)
Arguments:	None (0)
Feedback:	Fast forward speed $(1 = 1x; 4 = 4x; 16 = 16x)$
Remark:	If multiple fast forward commands are given, the speed will be increased in
	following sequence: $1x (play) > 4x > 16x$

#### Example:

Fast forward audio track on slot 1

Command:	#ID001IwebISPFFW1I0IUIreturn
Acknowledge:	#IwebID001ISPFFW1I+IUIreturn
Update:	#IALLID001IPFFW1I4Idb13Ireturn



#### **SPFRWx**

Fast rewind audio track Command: Arguments: Feedback: Remark:	SPFRWx, (with 'x' the number of slot) None (0) Fast rewind speed (1 = 1x; 4 = 4x; 16 = 16x) If multiple fast rewind commands are given, the speed will be increased following sequence: 1x (play) > $4x > 16x$
	#ID001IwebISPFRW1I0IUIreturn #IwebID001ISPFRW1I+IUIreturn
<b>SPRPx</b> Set repeat mode Command: Arguments:	SPFRWx, (with 'x' the number of slot) Repeat one = 0 Repeat folder = 1 Repeat x times = 2 Repeat off = 3 Repeat all = 4
	peat all' on slot 1 #ID001IwebISPRP1I4IUIreturn #IwebID001ISPRP1I+IUIreturn #IALLID001IPRP1I4IacabIreturn
<b>SPRNDx</b> Set random mode Command: Arguments:	SPRNDx, (with 'x' the number of slot) Random off = 0 Random on = 1
Example: Set random mode on fo Command: Acknowledge: Update:	r slot 1 #ID001IwebISPRND1I1IUIreturn #IwebID001ISPRND1I+IUIreturn #IALLID001IPRND1I1I01c0Ireturn



#### GPSIx

Get playing song info fr	om currently playing audio track
Command:	GPSIx, (with 'x' the number of slot)
Arguments:	None (0)
Feedback:	Currently playing song info
	(songname, artist, album, length seconds, seconds played)

### Example:

Get plaving song info o	f playing audio track on slot 1
Command:	#ID001IwebIGPSI1I0IUIreturn
Answer:	#IALLID001IPSI1I< <songname^artist^album^length seconds^seconds<="" td=""></songname^artist^album^length>
	played>>lchecksumlreturn

#### **GPSTAT**x

Get player status info	
Command:	GPSTATx, (with 'x' the number of slot)
Arguments:	None (0)
Feedback:	Currently player status info (playing, paused, stop)
	$Playing = 0^1$
	Paused = $1^0$
	Stopped = $0^0$
Remark:	The player status feedback command (PSTAT) is continuously given when
	changed the player status
Evenanles	

#### Example:

Get player status info for audio track on slot 1

Command:	#ID001IwebIGPSTAT1I0IUIreturn
Answer:	#IALLID001IPSTATI<< <pre>paused^playing&gt;&gt;IchecksumIreturn</pre>

