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#### **Command Overview**

The TCP/IP Control Protocol will enable a third party device to control all the features of the NetServer using TCP/IP commands sent to the NetServer IP address and port 9090. This document only details basic one way commands selecting stored favourites, and transport control. The full command line interface specification is available to view via the Logitech Media Web page, look at the Squeezebox server web page and select 'Help' followed by 'Technical Information' and then 'The Logitech Media Server Command Line Interface'

Each command starts with the unique MAC address of the zone. This can be obtained from the Netamp webpage 'Source Setup' and then copied from source 3A (for zone A) and 3 (for zone B)

Example MAC address:

00:04:20:89:7e:75

Each command must finish with a carriage return and line feed <CR><LF> or 0D 0A

#### 1. Selecting a favourite

The last number in the command determines the favourite to be played, use the favourite number shown on the S7 App -1. So selecting favourite 1, uses command number 0

#### To select favourite 1:

00:04:20:89:7e:75 favorites playlist play item\_id:12341234.0

#### To select favourite 2:

00:04:20:89:7e:75 favorites playlist play item\_id:12341234.1

# To select favourite 3:

00:04:20:89:7e:75 favorites playlist play item\_id:12341234.2

And so on...

Replace the MAC address in these commands with the specific address for the zone in the system.

# 2. Transport commands

**Play:** 00:04:20:89:7e:75 play

**Stop:** 00:04:20:89:7e:75 stop

Pause: 00:04:20:89:7e:75 pause

Skip >|: 00:04:20:89:7e:75 playlist index +1

Skip |<: 00:04:20:89:7e:75 playlist index -1

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Replace the MAC address in these commands with the specific address for the zone in the system.

# 3. Power off

00:04:20:89:7e:75 power 0

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The value associated with each command type is detailed below:

Parameter	Value	Command Description	Notes
src	off	NetAmp enters standby	
src	on	NetAmp exits standby	NetAmp selects last playing source
src	1	Source 1 select	Exits standby playing source 1
src	2	Source 2 select	Exits standby playing source 2
src	3	Source 3 select	Exits standby playing source 3
src	loc	Local source select	Exits standby playing source Local
vol	+	Increment volume	Range is 0 to 30 (incl). See note 1
vol	-	Decrement volume	Range is 0 to 30 (incl). See note 1
vol	0 to 30	Absolute volume level	Range is 0 to 30 (incl)
vol	mute	Mute	
vol	moff	Un-mute	
mxv	0 to 30	Absolute max-volume level	Range is 0 to 30 (incl)
bas	+	Increment bass	Range is -7 to +7 (incl). See note 1
bas	-	Decrement bass	Range is -7 to +7 (incl) . See note 1
bas	-7 to +7	Absolute bass level	Range is -7 to +7 (incl)
tre	+	Increment treble	Range is -7 to +7 (incl) . See note 1
tre	-	Decrement treble	Range is -7 to +7 (incl) . See note 1
tre	-7 to +7	Absolute treble level	Range is -7 to +7 (incl)
bal	+	Increment balance	Range is -15 to +15 (incl) . See note 1
bal	-	Decrement balance	Range is -15 to +15 (incl) . See note 1
bal	-15 to +15	Absolute balance level	Range -15 to +15 (incl)
znn	<name></name>	Set zone name	0-16 chars. No leading space permitted.
sn1	<name></name>	Set source name 1	0-16 chars. No leading space permitted.
sn2	<name></name>	Set source name 2	0-16 chars. No leading space permitted.
sn3	<name></name>	Set source name 3	0-16 chars. No leading space permitted.
snl	<name></name>	Set source name local	0-16 chars. No leading space permitted.
sm3	<name></name>	Set source 3 MAC Address	17 chars format xx:xx:xx:xx:xx:xx
sm4	<name></name>	Set source 3 MAC Address	17 chars format xx:xx:xx:xx:xx:xx
lim	а	LIM source analogue	Exits auto switching and selects analogue input
lim	d	LIM source digital	Exits auto switching and selects digital input
lim	1	LIM source automatic	Returns LIM to auto switching mode

# Notes:

**1** If an up/down command is issued and the unit is at maximum/minimum limit already, then the <u>actual</u> maximum or minimum value is returned within the response (i.e. 0 or 30 respectively for volume).



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When a command is issued to the NetAmp the unit will action any requests and return a response with the result of the action performed. A 'Response' command is never initiated by the NetAmp without a corresponding command.

If the command is a 'Set' command the unit will action the request and return a response with the result if successful. If the request has been successful the response will be the same as the request, albeit with an "r" as the command response.

If a 'Get' command is issued then the unit will simply return the current applicable value.

#### Error Response

If a 'set' or 'get' command is issued that is unrecognised by the NetAmp or the action is not completed successfully for whatever reason, the response will be "\$rxError\r\n":

\$ r x Error

#### "NetAmp FIND" and "NetAmp DHCP Reset" using UDP packets

The NetAmp has the ability to respond to UDP broadcast packets sent through Port 30303.

The payload of the UDP packet decides the action of the NetAmp, as detailed below.

UDP Command: "FIND"

Sending a 'discovery' broadcast UDP packet through 30303 causes the respective numbered (or all NetAmps) to respond with the information response list, below.

Send example: UDP payload data as follows -> "IPNetAmp:X:FIND:"

Where '**X**' is the NetAmp 'logical' number, in the range 1 - 12.

Or, where 'X' is sent as '0' all NetAmp's will respond.

Response: UDP payload reply as below:

"IPNetAmp\r\nC\r\nH\r\nL\r\n1\r\n2\r\nFIND\r\nB\r\nM\r\nIP\r\n"

Information response list:-

Where ' <b>C</b> '	is the 'memory changed' checksum	(for now H=C)
Where 'H'	is the hashed 'memory changed' checksum	(for now H=C)
Where 'L'	is the NetAmp's 'logical' number that has responded (range 1 - 12).	
Where '1'	is the Room Type ID zone 1.	
Where '2'	is the Room Type ID zone 2.	
Where 'FIND'	is the packet identifier.	
Where ' <b>B</b> '	is the NetAmp's NetBIOSName.	
Where ' <b>M</b> '	is the NetAmp's MAC address.	

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Where '**IP**' is the NetAmp's IP address.

#### UDP Command: Set DHCP & Reset

(not yet tested)

Sending a "Set DHCP & Reset" UDP packet through 30303 causes the respective number NetAmp (or all NetAmp's) to reset their network configuration to DHCP, and perform a hard reset.

This action effectively forces a (default) DHCP configuration and reboots the NetAmp so it obtains a new dynamic address from the network router/switch.

"Reset All" command:	UDP payload data as follows -> "IPNetAmp:00-00-0	<b>)0-00-00-00</b> :DHCP:"
Response:	UDP payload data as follows -> "IPNetAmp\r\nX\r\n	DHCP\r\n OK\r\n " (TODO)
"Reset selected" command:	UDP payload data as follows -> "IPNetAmp:nn-nn-	nn-nn-nn-nn:DHCP:"
Response:	UDP payload data as follows -> "IPNetAmp\r\nX\r\n	DHCP\r\n R\r\n " (TO DO)

Where 'X' is the NetAmp 'logical' number that has responded, in the range 1 up to 12.

Where '**nn-nn-nn-nn-nn**' is the respective NETAmp's MAC Address (typically having been discovered using the 'discover' command) that you want to address.

# Interface Commands

# **Source Select Commands**

Used to 'get' and 'set' source select information.

Select Source 1 on Zone 1	command response	-> "\$s1src1/r/n" -> "\$r1src1/r/n"	See Note
Select Source 3 on Zone 2	command response	-> "\$s2src3/r/n" -> "\$r2src3/r/n"	See Note
Get selected source on Zone 2	command response	-> "\$g2src/r/n" -> "\$r2src1/r/n"	
Select Local Source on Zone 2	command response	-> "\$s2srcloc/r/n" -> "\$r2srcloc/r/n"	See Note
Get selected source on Zone 1	command response	-> "\$g1src/r/n" -> "\$r1srcloc/r/n"	



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Note:

If in standby, NetAmp turns on this source.

# Volume Commands

Volume commands use the values 0 - 30 (inclusive) as the active range.

This volume level range is internally mapped within the NetAmp so that the full volume step range of the 'NJW preamp/selector' is utilised (typically 0 - 50).

#### Examples:

Zone 1 volume increment	command response	-> "\$s1vol+/r/n" -> "\$r1vol5/r/n"	(volume now at level 5)
Zone 2 volume decrement	command response	-> "\$s2vol-/r/n" -> "\$r2vol12/r/n"	(volume now at level 12)
Zone 2 volume get	command response	-> "\$g2vol/r/n" -> "\$r2vol11/r/n"	(volume at level 11)
Zone 1 volume mute	command response	-> "\$s1mute/r/n" -> "\$r1mute/r/n"	

Notes:

If volume was muted: sending a "vol+", "volX" or "moff" un-mutes the selected muted zone. NetAmp replies with a "moff" response and then a "volX" response.

# Max Volume Command

Volume uses the values 0 - 30 (inclusive) as the active range.

The Max Volume command limits the upper value to which the volume can be set to within each zone.

Examples:

Zone 1 max volume	command Response	-> "\$s1mxv20/r/n" -> "\$r1mxv20/r/n"	(max volume now at level 20)
Zone 2 max volume	command Response	-> "\$s2mxv25/r/n" -> "\$r2mxv25/r/n"	(max volume now at level 25)

# **Bass Commands**

Bass commands use the values -7 through +7 (inclusive) as the active range, which maps directly to the range of the 'NJW preamp". Bass commands are essentially the same format as for volume.

#### Examples:

Zone 1 bass increment	command	-> "\$s1bas+/r/n"
	response	-> "\$r1bas-2/r/n"

(bass now at level -2)

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Zone 2 bass increment	command response	-> "\$s2bas+/r/n" -> "\$r2bas7/r/n"	(bass now at level 7)	
Zone 2 bass get	command response	-> "\$g2bas/r/n" -> "\$r2bas4/r/n"	(when at level 4)	
Treble Commands		• • • • •	( )	

Treble commands use the values -7 through +7 (inclusive) as the active range, which maps directly to the range of the 'NJW preamp". Treble commands are exactly the same format as for bass.

#### Examples:

Zone 1 treble increment	command response	-> "\$s1tre+/r/n" -> "\$r1tre4/r/n"	(treble now at level 4)
Zone 2 treble increment	command response	-> "\$s2tre+/r/n" -> "\$r2tre-6/r/n"	(treble now at level -6)
Zone 2 treble get	command response	-> "\$g2tre/r/n" -> "\$r2tre-2/r/n"	(when at level -2)

#### **Balance Commands (Left/Right control)**

Balance (L/R) command uses the values -15 through +15 (inclusive) as the active range, which maps directly to the range of the 'NJW preamp" to control Left/Right balance.

#### Examples:

Zone 1 balance increment	command response	-> "\$s1bal+/r/n" -> "\$r1bal-1/r/n"	(balance at level -1)
Zone 2 balance increment	command response	-> "\$s2bal+/r/n" -> "\$r2bal-15/r/n"	(balance at level -15)
Zone 2 balance get	command response	-> "\$g2bal/r/n" -> "\$r2bal-2/r/n"	(when at balance level -2)

#### **Zone Name Commands**

Used to 'get' and 'set' zone name information. Maximum length of zone name can be 16 characters. Minimum length of zone name is 4 characters, without a leading space.

Zone 1 get 'ZoneName'	command response	-> "\$g1znn/r/n" -> "\$r1znnKITCHEN/r/n"
Zone 2 get 'ZoneName'	command response	-> "\$g2znn/r/n" -> "\$r2znnLOUNGE/r/n"



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Zone 1 set 'ZoneName'	command response	-> "\$s1znnBEDROOM/r/n" -> "\$r1znnBEDROOM/r/n"	

#### Local Source Name Commands

Used to 'get' and 'set' local source name information.

Maximum length of source name can be 16 characters. Minimum length of source name is 4 characters, without a leading space.

Examples:

Local Source on Zone 1 'get'	command response	-> "\$g1snl/r/n" -> "\$r1snITELEVISION/r/n"
Local Source on Zone 2 'set'	command response	-> "\$s2snITELEVISION/r/n" -> "\$r2snITELEVISION/r/n"

#### **Source Name Commands**

Used to 'get' and 'set' global source name information.

Maximum length of source name can be 16 characters. Minimum length of source name is 4 characters, without a leading space.

#### Examples:

Source 1 get 'Source Name'	command response	-> "\$gXsn1/r/n" -> "\$rXsn1IPOD/r/n"
Source 3 get 'Source Name'	command response	-> "\$gXsn3/r/n" -> "\$rXsn3CD PLAYER/r/n"
Source 2 set 'Source Name'	command response	-> "\$sXsn2BLU RAY PLAYER/r/n" -> "\$rXsn2BLU RAY PLAYER/r/n"

Notes:

"\$gXsnY/r/n"

**X** represents zone and is a 'don't care' for this command. **Y** represents the source name number in the range 1 thru 4 inclusive.

#### Source MAC Address Commands

Used to 'get' and 'set' source MAC address information.

Mac address must 17 characters in the format: **xx:xx:xx:xx:xx:xx** Mac addresses are only supported for input source "3" and input source "3a".

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Source 3 get 'Source MAC'	command response	-> "\$gXsn3/r/n" -> "\$rXsn300:04:A3:00:00:01/r/n"	
Source 3a get 'Source MAC'	command response	-> "\$gXsn4/r/n" -> "\$rXsn400:04:A3:00:00:02/r/n"	
Notes:			
"A M M M M	<b>V</b>		

"\$g <b>X</b> sn <b>Y</b> /r/n"	X represents zone and is a 'don't care' for this command.		
	Y represents the source name number in the range 1 thru 4 inclusive.		

# **Standby Commands**

To switch the NetAmp zones in/out of standby mode:

Examples:

Zone 1 - Enter Standby	command response	-> "\$s1srcoff/r/n" -> "\$r1srcoff/r/n"	
Zone 2 - Exit Standby	command response	-> "\$s2srcon/r/n" -> "\$r2src1/r/n"	See note 1
Exit Standby	command command command command	-> "\$sXsrc1/r/n" -> "\$sXsrc2/r/n" -> "\$sXsrc3/r/n" -> "\$sXsrcloc/r/n"	See note 2

Zone number 'X' can be '1' or '2' for this command. Each zone has a separate standby mode.

Notes:

- 1 Command \$sXsrcon turns NetAmp on and selects last source.
- 2 Commands \$sXsrc1, \$sXsrc2, \$sXsrc3, \$sXsrcloc turn NetAmp on and switches to selected source.

# **Get Parameter Value Commands**

The gpv command has no value but initiates multiple responses from the Netamp from one command. The Netamp will respond with current source selection, current volume, volume status (fixed or variable), balance, bass and treble.

Zone 1 – Get parameter values	command response	-> "\$g1gpv/r/n" -> "\$r1src3/r/n" -> "\$r1vol20/r/n" -> "\$r1volvar/r/n -> "\$r1bal0/r/n" -> "\$r1bas3/r/n" -> "\$r1tre7/r/n"
		-> "\$r1tre7/r/n"



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#### **Get Parameter Name Commands**

The gpn command has no value but initiates multiple responses from the Netamp from one command. The Netamp will respond with zone name, source 1 name, source 2 name, source 3 name, source 3a name and local source name.

Examples:

Zone 1 – Get parameter names command response

-> "\$g1gpn/r/n" -> "\$r1znnKitchen/r/n" -> "\$r1sn1AirPlay/r/n" -> "\$r1sn2DISABLED/r/n" -> "\$r1sn3NetMusic/r/n" -> "\$r1sn4NetMusic/r/n" -> "\$r1snITV/r/n"

#### Local Input Module (LIM) Commands

The factory default is set so that the LIM auto switches between digital and analogue inputs, digital taking priority. The LIM can be forced to switch to any of the two inputs and thus exiting automatic mode. The command must include the correct zone address, as there is a LIM for both zones.

Examples:

Set zone 1 LIM to analogue input	command response	-> "\$s1lima/r/n" -> "\$r1lima/r/n"
Set zone 1 LIM to digital input	command response	-> "\$s1limd/r/n" -> "\$r1limd/r/n"

END