High Efficiency 4-Channel Class-D Amplifier with DSP

Commands manual 4 channel amplifier module with integrated DSP

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Port;

Commands have to be sent to UDP port 6790 as string (json formatted).

Input list;

Source 1 - Analog input 1
Source 2 - Analog input 2
Source 3 - Analog input 3
Source 4 - Analog input 4
Source 5 - Digital input 1
Source 6 - Digital input 2
Source 7 - Digital input 3
Source 8 - Digital input 4
Source 9 - Streamer L
Source 10 - Streamer R

Set Source Mixer Gain

Command details;
This command will set the gain levels for each of the 10 selectable sources for each channel independtly.

Command;
set_source_mixer_gain (arg1), (arg2), (arg3)

Argument 1	Argument 2	Argument 3	Minimum value	Maximum value
Channel 1-4	Source 1-10	Gain value	-80	15

Command example;
Set source 2 on channel one to -6dB.

{"command":"set_source_mixer_gain","arg1":1, "arg2":4, "arg3":-6}

Answer
{"status":OK, "response":sourceGainValue}

Set All Mixer Gain

Command details;
This command will set the gain levels for all 10 selectable sources for one channel simultaneously.

Command;
set_all_mixer_gain (arg1), (arg2)

Argument 1	Argument 2	Minimum value	Maximum value
Channel 1-4	Gain value array of all inputs	-80	15

Command example;
Set source 1 to -80dB, Set source 2 to -80dB, Set source 3 to -80dB, Set source 4 to -80dB, Set source 5 to 0dB, Set source 6 to 0dB, Set source 7 to -80dB, Set source 8 to -80dB, Set source 9 to -80dB and Set source 10 to -80dB on channel one.

{"command":"set_all_mixer_gain","arg1":1, "arg2":[-80,-80,-80,-80,0,0,-80,-80,-80,-80]}

Answer
{"status":OK, "response":arrayGainValue}

Set Gain Single Channel

Command details;
This command will set the output gain (output volume) for one channel independtly.

Command;
set_channel_gain (arg1), (arg2)

Argument 1	Argument 2	Minimum value	Maximum value
Channel 1-4	Gain value	-80	15

Command example;
Set channel 1 output level to -10.0dB.

{"command":"set_channel_gain", "arg1":1, "arg2":-10.0}

Answer
{"status":OK, "response":gainValue}

Increase Gain Single Channel

Command details;
This command will increase the output gain (output volume) in steps for one channel independtly, upto the channel´s maximum level if 15dB.

Command;
set_channel_gain_up (arg1), (arg2)

Argument 1	Argument 2	Minimum value	Maximum value
Channel 1-4	Step value	0	95

Command example;
Increase channel 2 output level by 3dB per step.

{"command":"set_channel_gain_up", "arg1":2, "arg2":3.0}

Answer
{"status":OK, "response":updatedGain}

Decrease Gain Single Channel

Command details;
This command will decrease the output gain (output volume) in steps for one channel independtly, down to the channel´s minimum level if -80dB**.**

Command;
set_channel_gain_down (arg1), (arg2)

Argument 1	Argument 2	Minimum value	Maximum value
Channel 1-4	Step value	0	95

Command example;
Decrease channel 3 output level by 2dB per step.

{"command":"set_channel_gain_down", "arg1":3, "arg2":2.0}

Answer
{"status":OK, "response":updatedGain}

Set Gain Per Group

Command details;
This command will set the gain level of any group.

Command;
set_group_gain (arg1), (arg2)

Argument 1	Argument 2	Minimum value	Maximum value
Group 1-6	Gain value	-80	15

Command example;
Set group 1 gain to -10.0dB

{"command":"set_group_gain", "arg1":1, "arg2":-10.0}

Answer
{"status":OK, "response":gainValue}

Increase Gain Group

Command details;
This command increase the gain level of any group in steps, upto the channel´s maximum level if 15dB.

Command;
set_group_gain_up (arg1), (arg2)

Argument 1	Argument 2	Minimum value	Maximum value
Group 1-6	Step value	0	95

Command example;
Increase gain of group 2 by 3dB per step.

{"command":"set_channel_gain_up", "arg1":2, "arg2":3.0}

Answer
{"status":OK, "response":updatedGain}

Decrease Gain Group

Command details;
This command decrease the gain level of any group in steps, upto the channel´s minimum level if -80dB.

Command;
set_group_gain_down (arg1), (arg2)

Argument 1	Argument 2	Minimum value	Maximum value
Group 1-6	Step value	0	95

Command example;
 Decrease gain of group 3 by 2dB per step.

{"command":"set_group_gain_down", "arg1":3, "arg2":2.0}

Answer
{"status":OK, "response":updatedGain}

Mute Single Channel

Command details;
This command will mute the audio output for each channel independtly.

Command;
set_channel_mute (arg1), (arg2)

Argument 1	Argument 2	Mute Enabled	Mute Disabled
Channel 1-4	Mute Status	True	False

Command example;
Mute channel 4

{"command":"set_channel_mute","arg1":4,"arg2":true}

Answer
{"status":OK, "response":muteStatus}

Mute Group

Command details;
This command will mute one group of channels independtly from other groups.

Command;
set_group_mute (arg1), (arg2)

Argument 1	Argument 2	Mute Enabled	Mute Disabled
Group 1-6	Mute Status	True	False

Command example;
Mute group 4

{"command":"set_group_mute","arg1":4,"arg2":true}

Answer
{"status":OK, "response":muteStatus}

Mute All

Command details;
This command will mute the audio output channel simultaneously.

Command;
set_mute_all (arg1)

Argument 1	Mute Enabled	Mute Disabled
Mute Status	True	False

Command example;
Mute all channels

{"command":"set_mute_all","arg1":true}

Answer
{"status":OK, "response":muteStatus}

Set Speaker Preset

Command details;
This command will activate a speaker preset stored on the device.

Command;
set_speaker_preset (arg1), (arg2)

Argument 1	Argument 2
Channel 1-4	Folder/Preset

Note: the "Folder/Preset" is case sensitive.

Command example;
set Folder 1/File 1 as speaker preset for channel 1

{"command":"set_speaker_preset","arg1":1,"arg2":"Folder 1/File 1"}

Answer
{"status":OK, "response":presetPath}

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Get Source Mixer Gain

Command details;
Get a 10 item array with mixer gains of all sources for channel 1-4, this command must be sent for each channel.

Command;
get_source_mixer_gain (arg1)

Argument 1	Min	Max
Channel number	1	4

Command example;
Get source mixer gain for channel 2

{"command":"get_source_mixer_gain","arg1":2}

Answer
{"status":OK, "response":arrayGainValue}

Get Single Channel Gain

Command details;
Get Channel gain of for channel 1-4, this command must be sent for each channel.

Command;
get_channel_gain (arg1)

Argument 1	Min	Max
Channel number	1	4

Command example;
{"command":"get_channel_gain","arg1":1}

Answer
{"status":OK, "response":gainValue}

Get Source Mixer Gain

Get Gain Per Group

Command details;
Get group gain vaules. This command must be sent for each group

Command;
get_group_gain (arg1)

Argument 1	Min	Max
Group	1	6

Command example;
Get group 5 gain value

{"command":"get_group_gain","arg1":5}

Answer
{"status":OK, "response":gainValue}

Get Mute Status per Channel

Command details;
 Get Channel mute status for channel 1-4, this command must be sent for each channel.

Command;
{"command":"get_channel_mute", "arg1":1}

Argument 1	Min	Max
Channel number	1	4

Command example;
Get mute status for channel 1 false = unmute, true = mute

{"command":"get_channel_mute", "arg1":1}

Answer
{"status":OK, "response":muteValue}

Get Mute Status Group

Command details;
 Get group mute status for groups 1-6, this command must be sent for each group.

Command;
get group 3 mute status, false = unmute, true = mute

Argument 1	Min	Max
Group	1	6

Command example;
{"command":"get_group_mute", "arg1":3}

Answer
{"status":OK, "response":muteValue}

History

Revision	Date	Author	Description
V1.0.0	2021-12-20	Graeme Stevenson	Initial
V2.0.0	2023-5-10	Graeme Stevenson	Get commands added