High Efficiency 4-Channel Class-D Amplifier with DSP

V2.0.3

Commands manual

4 channel amplifier module with integrated DSP

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Table Of Contents

Introduction
Set Commands
Gain
Source Mixer Gain 5
All Mixer Gain 5
Gain Single Channel 6
Increase Gain Single Channel 6
Decrease Gain Single Channel 7
Gain Per Group 7
Increase Gain Group 8
Decrease Gain Group 8
Mute
Mute Per Channel 9
Mute Group 9
Mute All 10
Miscellaneous
Set Speaker Preset 10
Set Global Preset 11
Set Amplifier Standby 11
Get Commands
Gain
Source Mixer Gain 12
Single Channel 12
Gain Per Group 13
Mute
Mute Status Per Channel 13
Mute Status Group 14
Miscellaneous
Amplifier Standby Status 14
Amplifier Status 15
Get Output Level 15
Get Module temperature 16
Get Module voltage 16
Get Channel Label 16
Document History 17

Details

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}

Set Global Preset

Command details;
set Default Folder/Default Preset as global device audio preset

Command;
set_global_preset (arg1)

Argument 1
Folder/Preset

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

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

{"command":"set_global_preset", "arg1":"Default Folder/Default Preset"}

Answer
{"response": "Default Folder/Default Preset", "status": "OK"}

Set Amplifier Standby

Command details;
This command will enable and dispable the device standby function, this will only disable the amplifier side of the device, the DSP will remain active.

Command;
set_standby_status (arg1)

Argument 1	Mute Enabled	Mute Disabled
Status	True	False

Command example;
Enable standby function.

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

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

Get Source Mixer Gain

Command details;
Get all 10 mixer gain levels for all sources for one channel

Command;
get_source_mixer_gain (arg1)

Argument 1	Limit
Channel number	1-4

Command example;
get a 10 items array with mixer gain of all sources for channel 2

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

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

Get Single Channel Gain

Command details;
Get gain level for one channel

Command;
get channel gain (arg1)

Argument 1	Limit
Channel number	1-4

Command example;
get gain from channel 1

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

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

Get Gain Per Group

Command details;
get group gain value

Command;
get_group_gain (arg1)

Argument 1	Limit
Group number	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 mute status for channel 1 false = unmute, true = mute

Command;
Get channel mute status (arg1).

Argument 1	Limit
Channel number	1-4

Command example;
get_channel_mute

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

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

Get Mute Status Group

Command details;
Get group mte status.

Command;
set_mute_all (arg1)

Argument 1	Limit
Group number	1-6

Command example;
Mute all channels

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

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

Get Amplifier Standby Status

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}

Get Amplifier Status

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

Command;
get_amplifier_status

Command example;
Mute all channels

{"command":"get_amplifier_status"}

Answer
{"status":Ok, "response":statusValue"}

true = OK false = something wrong

Get Output Level

Command details;
get an array with output level (according to the amount of channel) (-60,0 means no signal)

Command;
get_output_level

Command example;
get output level

{"command":"get_output_level"}

Answer
{"response": [-51.0, -51.8, -58.7, -58.2], "status": "OK"}

Get Module Temperature

Command details;
Get the highest temperature of module(s)

Command;
get_module_temperature

Command example;
{"command":"get_module_temperature"}

Answer
{"response": 45.6, "status": "OK"}

Get Module Voltage

Command details;
Get the input voltage of the amplifier (10 as value means out of range)

Command
Get module input voltage.

Command example;
{"command":"get_module_voltage"}

Answer
{"response": 235, "status": "OK"}

Get Channel Label

Command details;
Request each name label/name.

Command;
Get channel label (arg1)

Argument 1
Channel 1-4

Command example;
Get label from channel 1

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

Answer
{"status":OK, "response":"Channel label"}

History

Revision	Date	Author	Description
V1.0.0	2021 -12 - 20	Graeme Stevenson	Initial
V2.0.0	2024 - 07 - 31	Graeme Stevenson	New commands added
V2.0.1	2024 -11 - 05	Graeme Stevenson	Get channel label added
V2.0.3	2025 - 07 - 10	Graeme Stevenson	Corrected errors in Get command pages