

API Manual WebSocket & RS232

AD Series DSP Matrices

- AD-46100 - 4x6 DSP Matrix Amplifier 100W
- AD-810-100 - 8x10 DSP Matrix Amplifier 100W
- AD-1616 - 16x16 Audio Distribution Matrix

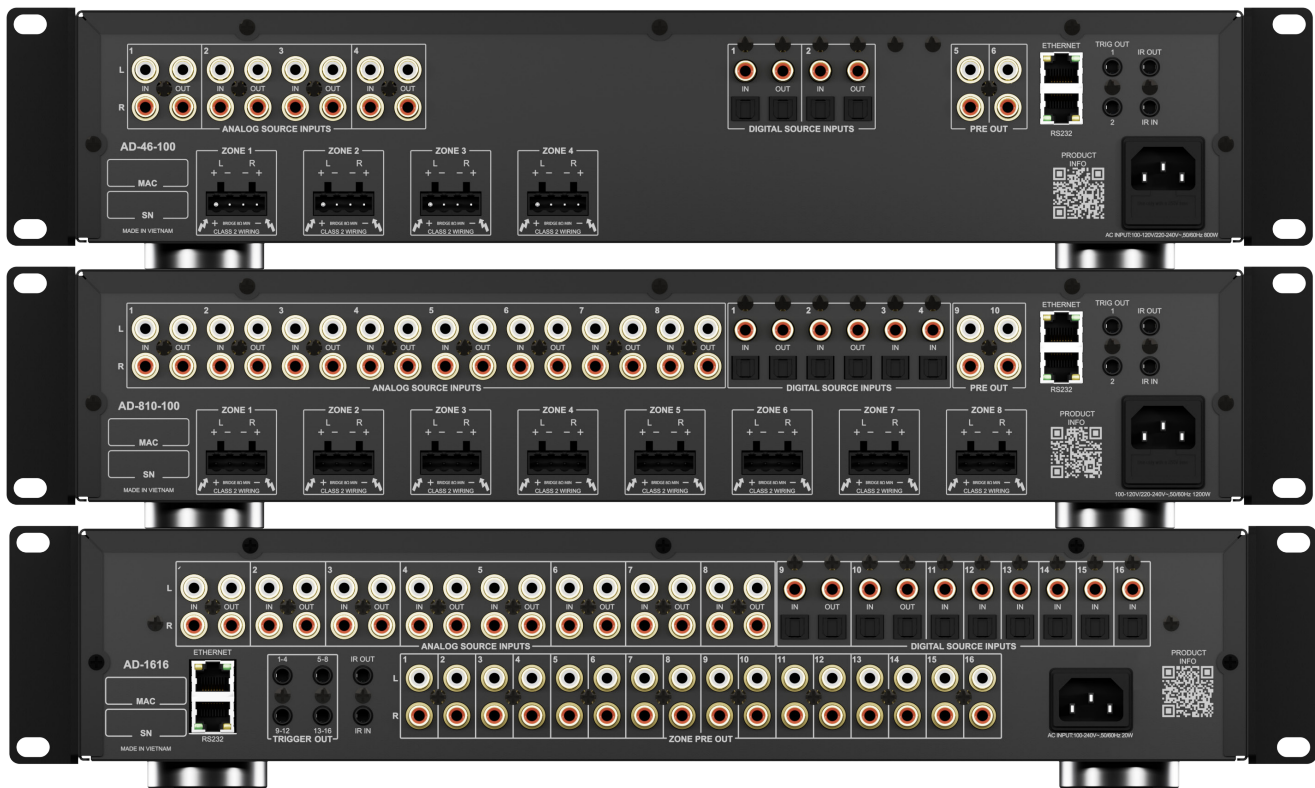


Table of Contents

Introduction	5
Version History	5
Overview	5
Connections	5
Status Codes	5
Command List	6
Get Status	6
System Commands	8
Get System Info	8
Login	8
Power	9
Reboot	9
Factory Reset	9
Network Reset	9
User Reset	10
API Version	10
Firmware Version	10
Serial Number	10
Mac Address	11
IP Address Setting	11
Unit Name	11
Audio Sense Setting	12
Power Button Setting	12
Eco Setting	12
Standby Setting	13
Zone Commands	13
Get All Zones Info	13
Name	14
Volume	14
Volume Up	15
Volume Down	15
Mute	15
Primary Source	16
Secondary Source	16
Secondary Source Mode	17
Secondary Source Enable/Disable	17

Table of Contents (continued)

Startup Volume.....	18
Max Volume	18
Bridge Mode	19
Stereo/Mono Mode.....	19
Test Signal	20
DSP Preset.....	20
Do Not Disturb Mode.....	21
Follow Zone Mode.....	21
Source Commands.....	22
Get All Sources Info.....	22
Name	23
Trim Level.....	23
Source Type	24
Auto Ducking.....	24
Delay	25
Group Commands.....	25
Get All Groups Info.....	25
Name	26
Number of Groups.....	26
Create Group	27
Delete Group	27
Enable/Disable Group.....	27
Volume.....	28
Volume Up.....	28
Volume Down	28
Mute.....	29
Select Source.....	29
Add/Remove Group Member	30
Action Setting.....	30
Adjust Setting.....	31
DSP Commands.....	31
Get Preset Info.....	31
Copy Preset Info	32
Enable/Disable Low Shelf Setting.....	33
Low Shelf Frequency	33
Low Shelf Gain	34

Table of Contents (continued)

Enable/Disable Low Pass Setting.....	34
Low Pass Frequency.....	35
Low Pass Filter	35
Enable/Disable High Shelf Setting.....	36
High Shelf Frequency	36
High Shelf Gain	37
Enable/Disable High Pass Setting.....	37
High Pass Frequency.....	38
High Pass Filter	38

Introduction

This api uses either websocket or RS232 for communication to the AD unit. There is no need for any polling as the api supports broadcast messaging and every command sent invokes an automatic response with the current value of the command sent. All settings that are changed from the web gui will initiate a broadcast message sent via websocket and RS232 connections.

All commands and responses have a json key called "type". This indicates what the command/query response is for. All query/broadcast commands and responses have a type that starts with get. All commands have a type that starts with set.

Version History

Version 1.1: RS-232 connection added (page 5)

Overview

Connections

- **Web Socket**
The WebSocket is listening on port 80. Authorization is required for each connection. The api supports a maximum of 2 websocket connections at any time.
- **RS-232**
Baud rate: 9600 • Data bits: 8 • Parity: None • Stop bits: 1

Status Codes

All data from the device has a status field in the JSON response, which is an integer value. These are the current definitions:

Code	Meaning
200	Success
300	Repeat Operation
400	Username or Password error
401	Illegal request
402	Login Required
403	Default Password – Needs to be changed
405	Account is signed out
406	Too many incorrect passwords, account locked
407	Entered the same password as previous, please reset
408	Password set successfully
410	Invalid parameter value
500	An unknown error occurred on the server side

Code	Meaning
600	The import file doesn't exist
601	File MD5 values don't match
602	File type mismatch
700	The device is in Standby mode
701	The device is Voltage Trigger Mode
702	The device is in Audio Mode
800	Update Success
801	Update Failed
900	Discarded Protocol
901	Broadcast Message

Command List

All commands are in JSON format

Get Status

This command gets the complete state of the unit.

Query Status

```
{"type": "get_status"}
```

Response

```
{"type": "get_status", "status": 200, "system": [{"name": "AD-46-100", "model": "AD-46-100", "serial": "777-1234567", "ethmac": "00:15:26:01:02:03", "apiversion": "V1.04", "fwversion": "20240705_v1", "powerstate": 1, "audiosense": false, "powerbutton": true, "eco": false}], "sources": [{"index": 1, "name": "Source 1", "vol": 100, "type": 0}, {"index": 2, "name": "Source 2", "vol": 100, "type": 0}, {"index": 3, "name": "Source 3", "vol": 100, "type": 0}, {"index": 4, "name": "Source 4", "vol": 100, "type": 0}], "zones": [{"index": 1, "name": "Zone 1", "src": 0, "vol": 50, "startupvol": 50, "maxvol": 100, "mute": false}, {"index": 2, "name": "Zone 2", "src": 0, "vol": 50, "startupvol": 50, "maxvol": 100, "mute": false}, {"index": 3, "name": "Zone 3", "src": 0, "vol": 50, "startupvol": 50, "maxvol": 100, "mute": false}, {"index": 4, "name": "Zone 4", "src": 0, "vol": 50, "startupvol": 50, "maxvol": 100, "mute": false}, {"index": 5, "name": "Zone 5", "src": 0, "vol": 50, "startupvol": 50, "maxvol": 100, "mute": false}, {"index": 6, "name": "Zone 6", "src": 0, "vol": 50, "startupvol": 50, "maxvol": 100, "mute": false}], "groups": [{"index": 1, "name": "Group 1", "src": 1, "vol": 53, "mute": false, "button": true, "action": false, "adjust": false, "fixedgroup": true, "zone": [1, 2, 3, 4]}, {"index": 2, "name": "Group 2", "src": 1, "vol": 56, "mute": false, "button": false, "action": false, "adjust": false, "fixedgroup": true, "zone": [1, 2, 3, 4]}, {"index": 3, "name": "Group 3", "src": 1, "vol": 35, "mute": false, "button": false, "action": false, "adjust": false, "fixedgroup": true, "zone": [3, 4]}, {"index": 4, "name": "Group 4", "src": 1, "vol": 50, "mute": false, "button": false, "action": false, "adjust": false, "fixedgroup": false, "zone": []}, {"index": 5}, {"index": 6}, {"index": 7}, {"index": 8}]}
```

system is an object containing:

- unit name
- model
- serial number
- mac address
- api version
- firmware version
- power state (0 = Off, 1 = On, 2 = Standby)
- audiosense setting state
- power button setting state
- eco setting state

zones is an array of objects with each object containing:

- zone index
- name
- source
- volume level
- startup volume level
- maximum volume level
- mute state

sources is an array of objects with each object containing:

- source index
- name
- trim level
- source type

groups is an array of objects with each object containing:

- group index
- name
- source
- volume
- mute state
- enable state
- action state
- adjust state
- fixed group state
- array of group members

System Commands

Get System Info

This command gets the state of the system.

Query System Info

```
{"type":"get_sysinfo"}
```

Response

```
{"type":"get_sysinfo","status":200,"system":[{"name":"AD-46-100","model":"AD-46-100","serial":"777-1234567","ethmac":"00:15:26:01:02:03","apiversion":"V1.04","fwversion":"20240705_v1","powerstate":1,"audiosense":false,"powerbutton":true,"eco":false}]}
```

system is an object containing:

- unit name
- model
- serial number
- mac address
- api version
- firmware version
- power state (0 = Off, 1 = On, 2 = Standby)
- audiosense setting state
- power button setting state
- eco setting state

Login

Replace ****name** with the username and ****passwd** with the password.

Command

```
{"type":"login","username":"**name","password":"**passwd"}
```

Response

```
{"type":"login","status":200}
```

Power

This command gets/sets the power state of the unit, false = off, true = on, "toggle" = toggle.

When the unit is powering on, there will be a broadcast message sent with a type of "poweringon".

When the unit is finished powering on a broadcast message will be sent with a type of "get_powerstate".

Query Power State

```
{"type": "get_powerstate"}
```

Response

```
{"type": "get_powerstate", "status": 200, "value": true}
```

Command

```
{"type": "set_powerstate", "value": true}
```

Response

```
{"type": "set_powerstate", "status": 200, "value": true}
```

Reboot

This command reboots the unit.

Command

```
{"type": "device_reboot"}
```

Response

```
{"type": "device_reboot", "status": 200, "value": true}
```

Factory Reset

This command resets the unit to factory settings.

Command

```
{"type": "device_factoryreset"}
```

Response

none

Network Reset

This command resets the network settings to factory defaults.

Command

```
{"type": "device_resetnetwork"}
```

Response

none

User Reset

This command resets the users to factory defaults.

Command

```
{"type":"device_resetuser"}
```

Response

none

API Version

This command responds with the api version.

Command

```
{"type":"get_apiversion"}
```

Response

```
{"type":"get_apiversion","status":200,"value":"V1.03"}
```

Firmware Version

This command responds with the firmware version.

Command

```
{"type":"get_fwversion"}
```

Response

```
{"type":"get_fwversion","status":200,"value":"20240129_v2"}
```

Serial Number

This command responds with the serial number of the unit.

Command

```
{"type":"get_csn"}
```

Response

```
{"type":"get_csn","status":200,"value":"776-4830015"}
```

Mac Address

This command responds with the mac address of the unit.

Command

```
{"type":"get_ethmac"}
```

Response

```
{"type":"get_ethmac","status":200,"value":"00:15:26:0F:99:52"}
```

IP Address Setting

This command gets/sets the units IP Address.

Query IP Address

```
{"type":"get_ip"}
```

Response

```
{"type":"get_ip","status":200,"value":{"dhcp":"on/off","ipaddress":"192.168.199.100","gateway":"192.168.199.1","subnetmask":"255.255.255.0","dnserver":"192.168.199.1"}}
```

Command

```
{"type":"set_ip","value":{"dhcp":"on/off","ipaddress":"192.168.199.100","gateway":"192.168.199.1","subnetmask":"255.255.255.0","dnserver":"192.168.199.1"}}
```

Response

```
{"type":"set_ip","status":300,"result":[{"value":"ip address"}]}
```

Unit Name

This command gets/sets the units name, maximum of 20 characters.

Query Unit Name

```
{"type":"get_ampname"}
```

Response

```
{"type":"get_ampname","status":200,"value":"your amplifier name"}
```

Command

```
{"type":"set_ampname","value":"new amplifier name"}
```

Response

```
{"type":"set_ampname","status":200,"result":[{"value":" new amplifier name "}]}
```

Audio Sense Setting

This command gets/sets the audio sense setting.

Query Audio Sense State

```
{"type": "get_audiosense"}
```

Response

```
{"type": "get_audiosense", "status": 200, "value": true}
```

Command

```
{"type": "set_audiosense", "value": true}
```

Response

```
{"type": "set_audiosense", "status": 200, "result": [{"value": true}]}
```

true is Enabled, false is Disabled, "toggle" is Toggle

Power Button Setting

This command gets/sets the power button setting.

Query Power Button State

```
{"type": "get_powerbutton"}
```

Response

```
{"type": "get_powerbutton", "status": 200, "value": true}
```

Command

```
{"type": "set_powerbutton", "value": true}
```

Response

```
{"type": "set_powerbutton", "status": 200, "result": [{"value": true}]}
```

true is Enabled, false is Disabled, "toggle" is Toggle

Eco Setting

This command gets/sets the eco setting.

Query Eco State

```
{"type": "get_ecomode"}
```

Response

```
{"type": "get_ecomode", "status": 200, "value": true}
```

Command

```
{"type":"set_ecomode","value":true}
```

Response

```
{"type":"set_ecomode","status":200,"result":[{"value":true}]}
```

true is Enabled, false is Disabled, "toggle" is Toggle

Standby Setting

This command gets/sets the Standby setting.

Query Standby State

```
{"type":"get_standby"}
```

Response

```
{"type":"get_standby","status":200,"value":true}
```

Command

```
{"type":"set_standby ","value":true}
```

Response

```
{"type":"set_standby","status":200,"result":[{"value":true}]}
```

true is Enabled, false is Disabled, "toggle" is Toggle

Zone Commands

Get All Zones Info

This command gets the state of all zones.

Query Zone Info

```
{"type":"get_zoneinfo"}
```

Response

```
{"type":"get_zoneinfo","status":200,"zones":[{"index":1,"name":"Zone 1","src":0,"vol":50,"startupvol":50,"maxvol":100,"mute":false},{index":2,"name":"Zone 2","src":0,"vol":50,"startupvol":50,"maxvol":100,"mute":false},{index":3,"name":"Zone 3","src":0,"vol":50,"startupvol":50,"maxvol":100,"mute":false},{index":4,"name":"Zone 4","src":0,"vol":50,"startupvol":50,"maxvol":100,"mute":false},{index":5,"name":"Zone 5","src":0,"vol":50,"startupvol":50,"maxvol":100,"mute":false},{index":6,"name":"Zone 6","src":0,"vol":50,"startupvol":50,"maxvol":100,"mute":false}]}
```

zones is an array of objects with each object containing:

- zone index
- name
- source
- volume level
- startup volume level
- maximum volume level
- mute state

Name

This command gets/sets the zones name, maximum of 20 characters.

You can get/set multiple zones at once.

Query Zone Name

```
{"type": "get_outputname", "value": [1,2,3]}
```

value is an array of zone numbers

Response

```
{"type": "get_outputname", "status": 200, "value": [{"index": 1, "value": "Zone 1"}, {"index": 2, "value": "Zone 2"}]}
```

value is an array of objects with each object containing the zone index and the zone name

Command

```
{"type": "set_outputname", "value": [{"index": 1, "value": "Zone 1"}]}
```

value is an array of objects with each object containing the zone index and the zone name

Response

```
{"type": "set_outputname", "status": 200, "result": [{"index": 2, "value": "Zone 2"}]}
```

value is an array of objects with each object containing the zone index and the zone name

Volume

This command gets/sets the zones volume, range is 0-100. You can get/set multiple zones at once.

Query Zone Volume

```
{"type": "get_outputvol", "value": [1,2,3]}
```

value is an array of zone numbers

Response

```
{"type": "get_outputvol", "status": 200, "value": [{"index": 1, "value": zonevol}, {"index": 2, "value": zonevol }]}
```

value is an array of objects with each object containing the zone index and the zone volume

Command

```
{"type": "set_outputvol", "value": [{"index": 1, "value": volume}, {"index": 2, "value": volume}]}
```

index is the zone number (Use index 0 for all zones), value is the volume level

Response

```
{"type": "set_outputvol", "status": 200, "result": [{"index": 1, "value": zonevol}, {"index": 2, "value": zonevol}]}
```

result is an array of objects with each object containing the zone index and the volume level

Volume Up

This command increases the zones volume.

Command

```
{"type": "set_outputvolup", "value": 1}
```

value is the zone number (Use index 0 for all zones)

Response

```
{"type": "set_outputvolup", "status": 200, "result": [{"index": 1, "value": zonevol}, {"index": 2, "value": zonevol}]}
```

result is an array of objects with each object containing the zone index and the volume level

Volume Down

This command decreases the zones volume.

Command

```
{"type": "set_outputvoldown", "value": 1}
```

value is the zone number (Use index 0 for all zones)

Response

```
{"type": "set_outputvoldown", "status": 200, "result": [{"index": 1, "value": zonevol}, {"index": 2, "value": zonevol}]}
```

result is an array of objects with each object containing the zone index and the volume level

Mute

This command gets/sets the zones mute. You can get/set multiple zones at once.

Query Mute State

```
{"type": "get_muteoutput", "value": [1, 2, 3]}
```

value is an array of zone numbers

Response

```
{"type": "get_muteoutput", "status": 200, "value": [{"index": 1, "value": true}, {"index": 2, "value": false}]}
```

value is an array of objects with each object containing the zone index and the mute state

Command

```
{"type": "set_muteoutput", "value": [{"index": 1, "value": true}, {"index": 2, "value": "toggle"}]}
```

index is the zone number (Use index 0 for all zones)

false = Unmuted, true = Muted, "toggle" = Toggle

Response

```
{"type": "set_muteoutput", "status": 200, "result": [{"index": 1, "value": true}, {"index": 2, "value": false}]}
```

result is an array of objects with each object containing the zone index and the mute state

Primary Source

This command gets/sets the zones primary input. You can get/set multiple zones at once.

Query Zone Primary Input

```
{"type": "get_outputsource1", "value": [1, 2, 3]}
```

value is an array of zone numbers

Response

```
{"type": "get_outputsource1", "status": 200, "value": [{"index": 1, "value": 5}, {"index": 2, "value": 0}]}
```

value is an array of objects with each object containing the zone index and the source number

Command

```
{"type": "set_outputsource1", "value": [{"index": 1, "value": 5}, {"index": 2, "value": 0}]}
```

index is the zone number.

value is the source number (0 = Off)

Response

```
{"type": "set_outputsource1", "status": 200, "result": [{"index": 1, "value": 5}, {"index": 2, "value": 0}]}
```

result is an array of objects with each object containing the zone index and the source number

Secondary Source

This command gets/sets the zones secondary input. You can get/set multiple zones at once.

Query Zone Secondary Input

```
{"type": "get_outputsource2", "value": [1, 2, 3]}
```

value is an array of zone numbers

Response

```
{"type": "get_outputsource2", "status": 200, "value": [{"index": 1, "value": 1}, {"index": 2, "value": 2}]}
```

value is an array of objects with each object containing the zone index and the source number

Command

```
{"type": "set_outputsource2", "value": [{"index": 1, "value": 5}, [{"index": 2, "value": 0}]}
```

index is the zone number.

value is the source number (0 = None)

Response

```
{"type": "set_outputsource2", "status": 200, "result": [{"index": 1, "value": 1}, [{"index": 2, "value": 1}]}
```

result is an array of objects with each object containing the zone index and the source number

Secondary Source Mode

This command gets/sets the zones secondary source mode, range is - 0 = Priority, 1 = Mix, 2 = Auto Ducking. You can get/set multiple zones at once.

Query Zone Secondary Input Mode

```
{"type": "get_outputsource2mode", "value": [1,2,3]}
```

value is an array of zone numbers

Response

```
{"type": "get_outputsource2mode", "status": 200, "value": [{"index": 1, "value": 0}, [{"index": 2, "value": 2}]}
```

value is an array of objects with each object containing the zone index and the mode

Command

```
{"type": "set_outputsource2mode", "value": [{"index": 1, "value": 0}, [{"index": 2, "value": 1}]}
```

index is the zone number, value is the mode

Response

```
{"type": "set_outputsource2mode", "status": 200, "result": [{"index": 1, "value": 0}, [{"index": 2, "value": 1}]}
```

result is an array of objects with each object containing the zone index and the mode

Secondary Source Enable/Disable

This command gets/sets the zones secondary input enable/disable, false = disable and true = enable. You can get/set multiple zones at once.

Query Zone Secondary Input State

```
{"type": "get_doorbell", "value": [1,2,3]}
```

value is an array of zone numbers

Response

```
{"type": "get_doorbell", "status": 200, "value": [{"index": 1, "value": true}, [{"index": 2, "value": false}]}
```

value is an array of objects with each object containing the zone index and the state

Command

```
{"type": "set_doorbell", "value": [{"index": 1, "value": true}, {"index": 2, "value": true}]}
```

value is an array of objects with each object containing the zone index and the state

Response

```
{"type": "set_doorbell", "status": 200, "result": [{"index": 1, "value": true}, {"index": 2, "value": true}]}
```

result is an array of objects with each object containing the zone index and the state

Startup Volume

This command gets/sets the zones startup volume, range is 0-100.

You can get/set multiple zones at once.

Query Zone Startup Volume

```
{"type": "get_turnonvol", "value": [1, 2, 3]}
```

value is an array of zone numbers

Response

```
{"type": "get_turnonvol", "status": 200, "value": [{"index": 1, "value": 50}, {"index": 2, "value": 50}]}
```

value is an array of objects with each object containing the zone index and the level

Command

```
{"type": "set_turnonvol", "value": [{"index": 1, "value": 75}, {"index": 2, "value": 25}]}
```

value is an array of objects with each object containing the zone index and the level

Response

```
{"type": "set_turnonvol", "status": 200, "result": [{"index": 1, "value": 75}, {"index": 2, "value": 25}]}
```

result is an array of objects with each object containing the zone index and the level

Max Volume

This command gets/sets the zones maximum volume, range is 0-100.

You can get/set multiple zones at once.

Query Zone Max Volume

```
{"type": "get_maxvol", "value": [1, 2, 3]}
```

value is an array of zone numbers

Response

```
{"type": "get_maxvol", "status": 200, "value": [{"index": 1, "value": 90}, {"index": 2, "value": 100}]}
```

value is an array of objects with each object containing the zone index and the state

Command

```
{"type": "set_maxvol", "value": [{"index": 1, "value": 80}, {"index": 2, "value": 80}]}
```

value is an array of objects with each object containing the zone index and the level

Response

```
{"type": "set_maxvol", "status": 200, "result": [{"index": 1, "value": 80}, {"index": 2, "value": 80}]}
```

result is an array of objects with each object containing the zone index and the level

Bridge Mode

This command gets/sets the zones Bridged/Standard mode. You can get/set multiple zones at once.

Query Zone Bridge Mode

```
{"type": "get_bridgemode", "value": [1, 2, 3]}
```

value is an array of zone numbers

Response

```
{"type": "get_bridgemode", "status": 200, "value": [{"index": 1, "value": true}, {"index": 2, "value": false}]}
```

value is an array of objects with each object containing the zone index and the state

Command

```
{"type": "set_bridgemode", "value": [{"index": 1, "value": false}, {"index": 2, "value": true}]}
```

value is an array of objects with each object containing the zone index and the state

value is either – false (Standard) or true (Bridged) or "toggle"

Response

```
{"type": "set_bridgemode", "status": 200, "result": [{"index": 1, "value": false}, {"index": 2, "value": true}]}
```

result is an array of objects with each object containing the zone index and the state

state is either – false (Standard) or true (Bridged)

Stereo/Mono Mode

This command gets/sets the zones Stereo/Mono mode. You can get/set multiple zones at once.

Query Zone Stereo/Mono Mode

```
{"type": "get_stereomono", "value": [1, 2, 3]}
```

value is an array of zone numbers

Response

```
{"type": "get_stereomono", "status": 200, "value": [{"index": 1, "value": true}, {"index": 2, "value": false}]}
```

value is an array of objects with each object containing the zone index and the state

Command

```
{"type": "set_stereomono", "value": [{"index": 1, "value": false}, {"index": 2, "value": true}]}
```

value is an array of objects with each object containing the zone index and the state

value is either – false (Stereo) or true (Mono) or “toggle”

Response

```
{"type": "set_stereomono", "status": 200, "result": [{"index": 1, "value": false}, {"index": 2, "value": true}]}
```

result is an array of objects with each object containing the zone index and the state

state is either – false (Stereo) or true (Mono)

Test Signal

This command gets/sets the zones Test Signal. You can get/set multiple zones at once.

Query Zone Test Signal

```
{"type": "get_testsignal", "value": [1, 2, 3]}
```

value is an array of zone numbers

Response

```
{"type": "get_testsignal", "status": 200, "value": [{"index": 1, "testenable": false, "testsignal": 0}, {"index": 2, "testenable": true, "testsignal": 1}]}
```

Command

```
{"type": "set_testsignal", "value": [{"index": 1, "testenable": false, "testsignal": 0}, {"index": 2, "testenable": false, "testsignal": 0}]}
```

index = zone number

testenable = false (Off) or true (On)

testsignal = 0 (White Noise), 1 (Pink Noise) or 2 (Gray Noise)

Response

```
{"type": "set_testsignal", "status": 200, "result": [{"index": 1, "testenable": false, "testsignal": 2}, {"index": 2, "testenable": false, "testsignal": 2}]}
```

index = zone number

testenable = false (Off) or true (On)

testsignal = 0 (White Noise), 1 (Pink Noise) or 2 (Gray Noise)

DSP Preset

This command gets/sets the zones DSP Preset. You can get/set multiple zones at once.

Query Zone DSP Preset

```
{"type": "get_dsppreset", "value": [1, 2, 3]}
```

value is an array of zone numbers

Response

```
{"type":"get_dsppreset","status":200,"value":[{"index":1,"value":3},{"index":2,"value":9}]}
```

value is an array of objects with each object containing the zone index and the preset number

Command

```
{"type":"set_dsppreset", "value": [{"index": 1, "value": 2}, [{"index": 2, "value": 3}]}
```

value is an array of objects with each object containing the zone index and the preset number

Response

```
{"type":"set_dsppreset","status":200,"result":[{"index":1,"value":2},{"index":2,"value": 3}]}
```

result is an array of objects with each object containing the zone index and the preset number

Do Not Disturb Mode

This command gets/sets the zones do not disturb mode. You can get/set multiple zones at once.

Query Zone Do Not Disturb Mode

```
{"type":"get_zonedisturb", "value":[1,2,3]}
```

value is an array of zone numbers

Response

```
{"type":"get_zonedisturb","status":200,"value":[{"index":1,"value": true}, {"index":2,"value":false}]}
```

value is an array of objects with each object containing the zone index and the state

Command

```
{"type":"set_zonedisturb", "value": [{"index": 1, "value": false}, [{"index": 2, "value": "toggle"}]}
```

value is an array of objects with each object containing the zone index and the state

value is either – false (Disabled) or true (Enabled) or "toggle"

Response

```
{"type":"set_zonedisturb","status":200,"result":[{"index":1,"value":false}, {"index":2,"value": true}]}
```

result is an array of objects with each object containing the zone index and the state

state is either – false (Disabled) or true (Enabled)

Follow Zone Mode

This command gets/sets the zones follow zone mode. You can get/set multiple zones at once.

Query Zone Follow Zone Mode

```
{"type":"get_followzone", "value":[1,2,3]}
```

value is an array of zone numbers

Response

```
{"type":"get_followzone","status":200,"value":[{"index":11,"value": 1}, {"index":12,"value":4}]}
```

value is an array of objects with each object containing the zone index and the zone its followings number

Command

```
{"type": "set_followzone", "value": [{"index": 1, "value": 2}, {"index": 12, "value": 1}]}
```

value is an array of objects with each object containing the zone index and the zone to follow number
value is either - 0 (None) or 1 - 16

Response

```
{"type": "set_followzone", "status": 200, "result": [{"index": 1, "value": 2}, {"index": 12, "value": 1}]}
```

result is an array of objects with each object containing the zone index and the zone its followings number
value is either - 0 (None) or 1 - 16

Source Commands

Get All Sources Info

This command gets the state of all sources.

Source types are - 0 = Analog, 1 = Optical and 2 = Coaxial

AD-1616 - Zones 1-8 only have Analog, Zones 9-16 only has Optical and Coaxial

AD-810-100 - Zones 1-4 have Analog, Optical and Coaxial, Zones 5-8 only has Analog

AD-46-100 - Zones 1-2 have Analog, Optical and Coaxial, Zones 3-4 only has Analog

Query Source Info

```
{"type": "get_sourceinfo"}
```

Response

```
{"type": "get_sourceinfo", "status": 200, "sources": [{"index": 1, "name": "Source 1", "vol": 100, "type": 0}, {"index": 2, "name": "Source 2", "vol": 100, "type": 0}, {"index": 3, "name": "Source 3", "vol": 100, "type": 0}, {"index": 4, "name": "Source 4", "vol": 100, "type": 0}]}
```

sources is an array of objects with each object containing:

- source index
- name
- trim level
- source type

Name

This command gets/sets the sources name, maximum of 20 characters. You can get/set multiple zones at once.

Query Source Name

```
{"type":"get_inputname","value":[1,2,3]}
```

value is an array of source numbers

Response

```
{"type":"get_inputname","status":200,"value":[{"index":1,"name":"Source 1"}, {"index":2,"name":"Source 2"}]}
```

value is an array of objects with each object containing the source index and the source name

Command

```
{"type":"set_inputname","value":[{"index":1,"name":"Source One"}, {"index":2,"name":"Source Two"}]}
```

Response

```
{"type":"get_inputname","status":200,"result":[{"index":1,"value":"Source One"}, {"index":2,"value":"Source Two"}]}
```

result is an array of objects with each object containing the source index and the source name

Trim Level

This command gets/sets the sources trim level, range is 0-100. You can get/set multiple zones at once.

Query Source Trim Level

```
{"type":"get_inputvol","value":[1,2,3]}
```

value is an array of source numbers

Response

```
{"type":"get_inputvol","status":200,"value":[{"index":1,"value":100}, {"index":2,"value":100}]}
```

value is an array of objects with each object containing the source index and the level

Command

```
{"type":"set_inputvol","value":[{"index":1,"value":70}, {"index":2,"value":70}]}
```

value is an array of objects with each object containing the source index and the level

Response

```
{"type":"set_inputvol","status":200,"result":[{"index":1,"value":70}, {"index":2,"value":70}]}
```

result is an array of objects with each object containing the zone index and the level

Source Type

This command gets/sets the sources type. You can get/set multiple zones at once.

Source types are - 0 = Analog, 1 = Optical and 2 = Coaxial

AD-1616 – Zones 1-8 only have Analog, Zones 9-16 only has Optical and Coaxial

AD-810-100 – Zones 1-4 have Analog, Optical and Coaxial, Zones 5-8 only has Analog

AD-46-100 – Zones 1-2 have Analog, Optical and Coaxial, Zones 3-4 only has Analog

Query Source Type

```
{"type":"get_logicsource","value":[1,2]}
```

value is an array of source numbers

Response

```
{"type":"get_logicsource","status":200,"value":[{"index":1,"value":0},{"index":2,"value":0}]}
```

value is an array of objects with each object containing the source index and the source type

Command

```
{"type":"set_logicsource","value":[{"index":1,"value":1},{"index":2,"value":1}]}
```

value is an array of objects with each object containing the source index and the level

Response

```
{"type":"set_logicsource","status":200,"result":[{"index":1,"value":1},{"index":2,"value":1}]}
```

result is an array of objects with each object containing the source index and the source type

Auto Ducking

This command gets/sets the sources auto ducking setting. You can get/set multiple zones at once.

Query Source Auto Ducking Level

```
{"type":"get_sourceautoducking","value":[1,2]}
```

value is an array of objects with each object containing the source index and the state

Response

```
{"type":"get_sourceautoducking","status":200,"value":[{"index":1,"value":true},{"index":2,"value":false}]}
```

value is an array of objects with each object containing the source index and the source type

Command

```
{"type":"set_sourceautoducking","value":[{"index":1,"value":false},{"index":2,"value":"toggle"}]}
```

value is an array of objects with each object containing the source index and the level

value is either – false (Disable) or true (Enable) or "toggle"

Response

```
{"type":"set_sourceautoducking","status":200,"result":[{"index":1,"value":false},{"index":2,"value":true}]}
```

result is an array of objects with each object containing the source index and the state

state is either – false (Disabled) or true (Enabled)

Delay

This command gets/sets the sources delay, range is 0-50 (ms). You can get/set multiple zones at once.

Query Source Delay

```
{"type":"get_delaysms","value":[1,2,3]}
```

value is an array of source numbers

Response

```
{"type":"get_delaysms","status":200,"value":[{"index":1,"value":0}, {"index":2,"value":50}]}
```

value is an array of objects with each object containing the source index and the delay

Command

```
{"type":"set_delaysms","value":[{"index":1,"value":10}, {"index":2,"value":10}]}
```

value is an array of objects with each object containing the source index and the delay

Response

```
{"type":"set_delaysms","status":200,"result":[{"index":1,"value":10}, {"index":2,"value":10}]}
```

result is an array of objects with each object containing the source index and the delay

Group Commands

Get All Groups Info

This command gets the state of all groups.

Query Group Info

```
{"type":"get_groupinfo"}
```

Response

```
{"type":"get_groupinfo","status":200,"groups":[{"index":1,"name":"Group 1","src":1,"vol":53,"mute":false,
"button":true,"action":false,"adjust":false,"fixedgroup":true,"zone":[1,2,3,4]}, {"index":2,"name":"Group
2","src":1,"vol":56,"mute":false,"button":false,"action":false,"adjust":false,"fixedgroup":true,"zone":
[1,2,3,4]}, {"index":3,"name":"Group 3","src":1,"vol":35,"mute":false,"button":false,"action":false,"adjust":
false,"fixedgroup":true,"zone":[3,4]}, {"index":4,"name":"Group 4","src":1,"vol":50,"mute":false,"button":
false,"action":false,"adjust":false,"fixedgroup":false,"zone":[]}, {"index":5}, {"index":6}, {"index":7}, {"index":8}]}
```

groups is an array of objects with each object containing:

- group index
- name
- source
- volume
- mute state
- enable state
- action state
- adjust state
- fixed group state
- array of group members

Name

This command gets/sets the groups name, maximum of 20 characters.
You can get/set multiple zones at once.

Query Group Name

```
{"type": "get_groupname", "value": [1,2,3]}
```

value is an array of group numbers

Response

```
{"type": "get_groupname", "status": 200, "value": [{"index": 1, "value": 3}, {"index": 2, "value": 9}]}
```

value is an array of objects with each object containing the zone index and the preset number

Command

```
{"type": "set_groupname", "value": [{"index": 1, "value": "Group 1"}, {"index": 2, "value": "Group 2"}]}
```

value is an array of objects with each object containing the group index and the name

Response

```
{"type": "set_groupname", "status": 200, "result": [{"index": 1, "value": "Group 1"}, {"index": 2, "value": "Group 2"}]}
```

result is an array of objects with each object containing the group index and the name

Number of Groups

This command gets the groups number.

Query Group Number

```
{"type": "get_groupnum"}
```

Response

```
{"type": "get_groupnum", "status": 200, "value": 3}
```

value is the number of groups

Create Group

This command creates a group and sets its name.

Command

```
{"type":"create_group", "value": "Group 1"}
```

value is the group name

Response

```
{"type":"create_group","status":200,"result":[{"value":1,"groupname":"Group 1"}]}
```

result is an object containing the group index and the name

Delete Group

This command deletes a group. Note: You cannot delete any groups that have Fixed Group enabled.

Command

```
{"type":"delete_group", "value": 1}
```

value is the group index (0 = delete all groups)

Response

```
{"type":"delete_group","status":200,"result":[{"value":1}]}
```

result is an object containing the group index

Enable/Disable Group

This command gets/sets a groups enabled setting. You can get/set multiple groups at once.

Query if Groups are enabled

```
{"type":"get_groupenable", "value":[1,2,3]}
```

value is an array of group numbers

Response

```
{"type":"get_groupenable","status":200,"value":[{"index":1,"value":true}, {"index":2,"value":true}]}
```

Command

```
{"type":"set_groupenable", "value":[{"index":1, "value":true}, {"index":2, "value": "toggle"}]}
```

value is an array of objects with each object containing the group index and the state
state is either – true (Enable), false (Disable) or "toggle"

Response

```
{"type":"delete_group","status":200,"result":[{"index":1,"value",true}, {"index":2,"value":false}]}
```

result is an array of objects with each object containing the group index and the state
state is either – true (Enable) or false (Disable)

Volume

This command get/sets the groups volume, volume range is 0-100.

You can get/set multiple groups at once.

Query a Group's Volume Level

```
{"type":"get_groupvol","value":[1,2,3]}
```

value is an array of group numbers

Response

```
{"type":"get_groupvol","status":200,"value":[{"index":1,"value":50},{"index":2,"value":50}]}
```

value is an array of objects with each object containing the group index and the level

Command

```
{"type":"set_groupvol","value":[{"index":1,"value":75},{"index":2,"value":80}]}
```

value is an array of objects with each object containing the group index and the level

Response

```
{"type":"set_groupvol","status":200,"result":[{"index":idx,"value":0~100}]}
```

value is an array of objects with each object containing the group index and the level

Volume Up

This command adjusts a group's volume up.

Command

```
{"type":"set_groupvolup","value":1}
```

value is the group index

Response

```
{"type":"set_groupvolup","status":200,"result":[{"index":1,"value":75}]}
```

result is an object containing the group index and the group volume

Volume Down

This command adjusts a group's volume down.

Command

```
{"type":"set_groupvoldown","value":1}
```

value is the group index

Response

```
{"type":"set_groupvoldown","status":200,"result":[{"index":1,"value":75}]}
```

result is an object containing the group index and the group volume

Mute

This command gets/sets a groups mute. false = unmute, true = mute and "toggle" = Toggle. You can get/set multiple groups at once.

Query a Group's Mute State

```
{"type":"get_groupmute","value":[1,2,3]}
```

value is an array of group numbers

Response

```
{"type":"get_groupmute","status":200,"value":[{"index":1,"value":true},{"index":2,"value":false}]}
```

value is an array of objects, each containing the group index and the mute state

Command

```
{"type":"set_groupmute","value":[{"index":1,"value":false},{"index":2,"value":"toggle"}]}
```

value is an array of objects, each containing the group index and the mute state

Response

```
{"type":"set_groupmute","status":200,"result":[{"index":1,"value":false},{"index":2,"value":true}]}
```

result is an array of objects, each containing the group index and the mute state

Select Source

This command gets/sets the groups source. You can get/set multiple groups at once.

Query a Group's Source

```
{"type":"get_groupsource","value":[1,2,3]}
```

value is an array of group numbers

Response

```
{"type":"get_groupsource","status":200,"value":[{"index":1,"value":3},{"index":2,"value":5}]}
```

value is an array of objects, each containing the group index and the source

Command

```
{"type":"set_groupsource","value":[{"index":1,"value":1},{"index":2,"value":2}]}
```

value is an array of objects, each containing the group index and the source

Response

```
{"type":"set_groupsource","status":200,"result":[{"index":1,"value":1},{"index":2,"value":2}]}
```

result is an array of objects, each containing the group index and the source

Add/Remove Group Member

This command gets/sets the groups members, false = delete, true = add.
You can get/set multiple groups at once.

Query a Group's Members

```
{"type":"get_groupmember","value":[1,2,3]}
```

value is an array of group numbers

Response

```
{"type":"get_groupmember","status":200,"value":[{"index":1,"value":[1,2,3]}]}
```

value is an array of objects with each object containing the group index and an array of zones numbers

Command

```
{"type":"set_groupmember","value":[{"index":1,"value":2,"state":true}]}
```

value is an array of objects with each object containing the group index, zone index and state

Response

```
{"type":"set_groupmember","status":200,"result":[{"index":1,"value":2,"state":true},{index":2,"value":3,"state":false}]}
```

result is an array of objects with each object containing the group index, zone index and state

Action Setting

This command gets/sets the groups action setting, false = original, true = continue, "toggle" = toggle.
You can get/set multiple groups at once.

Query a Group's Action Setting

```
{"type":"get_groupaction","value":[1,2,3]}
```

value is an array of group numbers

Response

```
{"type":"get_groupaction","status":200,"value":[{"index":1,"value":true},{index":2,"value":false}]}
```

value is an array of objects with each object containing the group index and state

Command

```
{"type":"set_groupaction","value":[{"index":1,"value":"toggle"},{index":2,"value":true}]}
```

value is an array of objects with each object containing the group index and state

Response

```
{"type":"set_groupaction","status":200,"result":[{"index":1,"value":true},{index":2,"value":true}]}
```

result is an array of objects with each object containing the group index and state

Adjust Setting

This command gets/sets the groups adjust setting, false = absolute, true = relative, "toggle" = toggle. You can get/set multiple groups at once.

Query a Group's Adjust Setting

```
{"type":"get_groupadjust","value":[1,2,3]}
```

value is an array of group numbers

Response

```
{"type":"get_groupadjust","status":200,"value":[{"index":1,"value":true}, {"index":2,"value":false}]}
```

value is an array of objects with each object containing the group index and state

Command

```
{"type":"set_groupadjust","value":[{"index":1,"value":"toggle"}, {"index":2,"value":true}]}
```

value is an array of objects with each object containing the group index and state

Response

```
{"type":"set_groupadjust","status":200,"result":[{"index":1,"value":true}, {"index":2,"value":true}]}
```

result is an array of objects with each object containing the group index and state

DSP Commands

Get Preset Info

This command gets/sets preset eq info. You can get/set multiple presets at once.

Query EQ Info

```
{"type":"get_eqinfo"}
```

Response

```
{"type":"get_eqinfo","status":200,"value":[{"index":1,"value":{"uuid":0,"eq_enable":false,"eq_freq":100,"eq_qratio":10,"eq_gain":0}, {"uuid":1,"eq_enable":false,"eq_freq":300,"eq_qratio":10,"eq_gain":0}, {"uuid":2,"eq_enable":false,"eq_freq":1000,"eq_qratio":10,"eq_gain":0}, {"uuid":3,"eq_enable":false,"eq_freq":12000,"eq_qratio":10,"eq_gain":0}, {"uuid":4,"eq_enable":false,"eq_freq":15000,"eq_qratio":10,"eq_gain":0}}]}
```

value is an array of objects, each containing the preset index and an array of objects that contains:

- EQ Number (uuid)
- Enable state
- Frequency
- Q ratio (0.3 to 20)
- Gain (-12 to 12)

Command

```
{"type":"set_eqinfo","value":[{"index":1,"value":[{"uuid":0,"eq_enable":true,"eq_freq":2000,"eq_qratio":12,"eq_gain":2}]}]}
```

value is an array of objects, each containing the preset index and an array of objects that contains:

- EQ Number (uuid)
- Enable state
- Frequency
- Q ratio (0.3 to 20)
- Gain (-12 to 12)

Response

```
{"type":"set_eqinfo","status":200,"value":[{"index":1,"value":[{"uuid":0,"eq_enable":true,"eq_freq":2000,"eq_qratio":12,"eq_gain":2},{"uuid":1,"eq_enable":false,"eq_freq":300,"eq_qratio":10,"eq_gain":0},{"uuid":2,"eq_enable":false,"eq_freq":1000,"eq_qratio":10,"eq_gain":0},{"uuid":3,"eq_enable":false,"eq_freq":12000,"eq_qratio":10,"eq_gain":0},{"uuid":4,"eq_enable":false,"eq_freq":15000,"eq_qratio":10,"eq_gain":0}]}]}
```

value is an array of objects, each containing the preset index and an array of objects that contains

- EQ Number (uuid)
- Enable state
- Frequency
- Q ratio (0.3 to 20)
- Gain (-12 to 12)

Copy Preset Info

This command copies the preset eq info from one preset to another.

You can get/set multiple groups at once.

Command

```
{"type":"copy_dsp","value":[{"from":1,"to":2}, {"from":3,"to":4}]}
```

value is an array of objects, each containing the preset to copy from and the preset to copy to

Response

```
{"type":"copy_dsp","status":200,"result":[{"value":"from: 3, to: 4"}, {"value":"from: 3, to: 4"}]}
```

result is an array of objects, each containing the preset to copy from and the preset to copy to

Enable/Disable Low Shelf Setting

This command gets/sets the low shelf setting, false = Off, true = On, "toggle" = Toggle.
You can get/set multiple groups at once.

Query Low Shelf Setting

```
{"type":"get_lowtiltenable","value":[1,2,3]}
```

value is an array of preset numbers

Response

```
{"type":"get_lowtiltenable","status":200,"value":[{"index":1,"value":true},{"index":2,"value":false}]}
```

value is an array of objects, each containing the preset index and the low shelf state

Command

```
{"type":"set_lowtiltenable","value":[{"index":1,"value":"toggle"}, {"index":2,"value":false}]}
```

value is an array of objects, each containing the preset index and the low shelf state

Response

```
{"type":"set_lowtiltenable","status":200,"result":[{"index":1,"value":true}, {"index":2,"value":false}]}
```

result is an array of objects, each containing the preset index and the low shelf state

Low Shelf Frequency

This command gets/sets the low shelf frequency, range is 20 to 20000.
You can get/set multiple groups at once.

Query Low Shelf Frequency

```
{"type":"get_lowtiltfreq","value":[1,2,3]}
```

value is an array of preset numbers

Response

```
{"type":"get_lowtiltfreq","status":200,"value":[{"index":1,"value":100}, {"index":2,"value":100}]}
```

value is an array of objects, each containing the preset index and the low shelf frequency

Command

```
{"type":"set_lowtiltfreq","value":[{"index":1,"value":100}, {"index":2,"value":150}]}
```

value is an array of objects, each containing the preset index and the low shelf frequency

Response

```
{"type":"set_lowtiltfreq","status":200,"result":[{"index":1,"value":100}, {"index":2,"value":150}]}
```

result is an array of objects, each containing the preset index and the low shelf frequency

Low Shelf Gain

This command gets/sets the low shelf gain, range is -12 to 12. You can get/set multiple groups at once.

Query Low Shelf Gain

```
{"type":"get_lowtiltgain","value":[1,2,3]}
```

value is an array of preset numbers

Response

```
{"type":"get_lowtiltgain","status":200,"value":[{"index":1,"value":0},{"index":2,"value":0}]}
```

value is an array of objects, each containing the preset index and the low shelf gain

Command

```
{"type":"set_lowtiltgain","value":[{"index":1,"value":3},{"index":1,"value":-3}]}
```

value is an array of objects, each containing the preset index and the low shelf gain

Response

```
{"type":"set_lowtiltgain","status":200,"result":[{"index":1,"value":-3},{"index":1,"value":-3}]}
```

result is an array of objects, each containing the preset index and the low shelf gain

Enable/Disable Low Pass Setting

This command gets/sets the low pass setting, false = Off, true = On, "toggle" = Toggle. You can get/set multiple groups at once.

Query Low Pass Setting

```
{"type":"get_lowpassenable","value":[1,2,3]}
```

value is an array of preset numbers

Response

```
{"type":"get_lowpassenable","status":200,"value":[{"index":1,"value":true},{"index":2,"value":false}]}
```

value is an array of objects, each containing the preset index and the low pass state

Command

```
{"type":"set_lowpassenable","value":[{"index":1,"value":"toggle"}, {"index":2,"value":false}]}
```

value is an array of objects, each containing the preset index and the low pass state

Response

```
{"type":"set_lowpassenable","status":200,"result":[{"index":1,"value":true}, {"index":2,"value":false}]}
```

result is an array of objects, each containing the preset index and the low pass state

Low Pass Frequency

This command gets/sets the low pass frequency, range is 20 to 20000.

You can get/set multiple groups at once.

Query Low Pass Frequency

```
{"type":"get_lowpassfreq","value":[1,2,3]}
```

value is an array of preset numbers

Response

```
{"type":"get_lowpassfreq","status":200,"value":[{"index":1,"value":100},{"index":2,"value":100}]}
```

value is an array of objects, each containing the preset index and the low pass frequency

Command

```
{"type":"set_lowpassfreq","value":[{"index":1,"value":100},{"index":2,"value":150}]}
```

value is an array of objects, each containing the preset index and the low pass frequency

Response

```
{"type":"set_lowpassfreq","status":200,"result":[{"index":1,"value":100},{"index":2,"value":150}]}
```

result is an array of objects, each containing the preset index and the low pass frequency

Low Pass Filter

This command gets/sets the low pass filter, range is 6,12,18 and 24.

You can get/set multiple groups at once.

Query Low Pass Filter

```
{"type":"get_lowpassfilter","value":[1,2,3]}
```

value is an array of preset numbers

Response

```
{"type":"get_lowpassfilter","status":200,"value":[{"index":1,"value":6},{"index":2,"value":12}]}
```

value is an array of objects, each containing the preset index and the low pass filter

Command

```
{"type":"set_lowpassfilter","value":[{"index":1,"value":12},{"index":2,"value":24}]}
```

value is an array of objects, each containing the preset index and the low pass filter

Response

```
{"type":"set_lowpassfilter","status":200,"result":[{"index":1,"value":12},{"index":2,"value":24}]}
```

result is an array of objects, each containing the preset index and the low pass filter

Enable/Disable High Shelf Setting

This command gets/sets the high shelf setting, false = Off, true = On, "toggle" = Toggle.
You can get/set multiple groups at once.

Query High Shelf Setting

```
{"type":"get_hightilttenable","value":[1,2,3]}
```

value is an array of preset numbers

Response

```
{"type":"get_hightilttenable","status":200,"value":[{"index":1,"value":true}, {"index":2,"value":false}]}
```

value is an array of objects, each containing the preset index and the high shelf state

Command

```
{"type":"set_hightilttenable","value":[{"index":1,"value":"toggle"}, {"index":2,"value":false}]}
```

value is an array of objects, each containing the preset index and the high shelf state

Response

```
{"type":"set_hightilttenable","status":200,"result":[{"index":1,"value":true}, {"index":2,"value":false}]}
```

result is an array of objects, each containing the preset index and the high shelf state

High Shelf Frequency

This command gets/sets the high shelf frequency, range is 20 to 20000.
You can get/set multiple groups at once.

Query High Shelf Frequency

```
{"type":"get_hightiltfreq","value":[1,2,3]}
```

value is an array of preset numbers

Response

```
{"type":"get_hightiltfreq","status":200,"value":[{"index":1,"value":100}, {"index":2,"value":100}]}
```

value is an array of objects, each containing the preset index and the high shelf frequency

Command

```
{"type":"set_hightiltfreq","value":[{"index":1,"value":100}, {"index":2,"value":150}]}
```

value is an array of objects, each containing the preset index and the high shelf frequency

Response

```
{"type":"set_hightiltfreq","status":200,"result":[{"index":1,"value":100}, {"index":2,"value":150}]}
```

result is an array of objects, each containing the preset index and the high shelf frequency

High Shelf Gain

This command gets/sets the high shelf gain, range is -12 to 12. You can get/set multiple groups at once.

Query High Shelf Gain

```
{"type":"get_hightiltgain","value":[1,2,3]}
```

value is an array of preset numbers

Response

```
{"type":"get_hightiltgain","status":200,"value":[{"index":1,"value":0},{"index":2,"value":0}]}
```

value is an array of objects, each containing the preset index and the high shelf gain

Command

```
{"type":"set_hightiltgain","value":[{"index":1,"value":3},{"index":1,"value":-3}]}
```

value is an array of objects, each containing the preset index and the high shelf gain

Response

```
{"type":"set_hightiltgain","status":200,"result":[{"index":1,"value":-3},{"index":1,"value":-3}]}
```

result is an array of objects, each containing the preset index and the high shelf gain

Enable/Disable High Pass Setting

This command gets/sets the high pass setting, false = Off, true = On, "toggle" = Toggle.

You can get/set multiple groups at once.

Query High Pass Settings

```
{"type":"get_highpassenable","value":[1,2,3]}
```

value is an array of preset numbers

Response

```
{"type":"get_highpassenable","status":200,"value":[{"index":1,"value":true},{"index":2,"value":false}]}
```

value is an array of objects, each containing the preset index and the high pass state

Command

```
{"type":"set_highpassenable","value":[{"index":1,"value":"toggle"},{"index":2,"value":false}]}
```

value is an array of objects, each containing the preset index and the high pass state

Response

```
{"type":"set_highpassenable","status":200,"result":[{"index":1,"value":true},{"index":2,"value":false}]}
```

result is an array of objects, each containing the preset index and the high pass state

High Pass Frequency

This command gets/sets the high pass frequency, range is 20 to 20000.

You can get/set multiple groups at once.

Query High Pass Frequency

```
{"type":"get_highpassfreq","value":[1,2,3]}
```

value is an array of preset numbers

Response

```
{"type":"get_highpassfreq","status":200,"value":[{"index":1,"value":100},{"index":2,"value":100}]}
```

value is an array of objects, each containing the preset index and the high pass frequency

Command

```
{"type":"set_highpassfreq","value":[{"index":1,"value":100},{"index":2,"value":150}]}
```

value is an array of objects, each containing the preset index and the high pass frequency

Response

```
{"type":"set_highpassfreq","status":200,"result":[{"index":1,"value":100},{"index":2,"value":150}]}
```

result is an array of objects, each containing the preset index and the high pass frequency

High Pass Filter

This command gets/sets the high pass filter, range is 6, 12, 18 and 24.

You can get/set multiple groups at once.

Query High Pass Filter

```
{"type":"get_highpassfilter","value":[1,2,3]}
```

value is an array of preset numbers

Response

```
{"type":"get_highpassfilter","status":200,"value":[{"index":1,"value":6},{"index":2,"value":12}]}
```

value is an array of objects, each containing the preset index and the high pass filter

Command

```
{"type":"set_highpassfilter","value":[{"index":1,"value":12},{"index":2,"value":24}]}
```

value is an array of objects, each containing the preset index and the high pass filter

Response

```
{"type":"set_highpassfilter","status":200,"result":[{"index":1,"value":12},{"index":2,"value":24}]}
```

result is an array of objects, each containing the preset index and the high pass filter



Remote Technologies Incorporated
5775 12th Avenue East, Suite 180
Shakopee, MN 55379
Tel: 952-253-3100
www.rticontrol.com