



## Introduction

The following guide outlines the TCP Protocol including commands that are available for all Dante Connect Series and Network Connect Series models. There are more advanced commands available which are not listed. Please email [techsupport@leaprofessional.com](mailto:techsupport@leaprofessional.com) for assistance with advanced API integration.

## Nomenclature

element - an item in the amplifier that can be controlled and/or monitored

control - term applied to an element that can be controlled and monitored, i.e. read/write

sensor - term applied to an element that can be monitored only (i.e. read-only) object - a

logical grouping of elements (see websocket API doc)

## Supported commands (case-insensitive)

GET <object/element> - get an element's value (control or sensor); normal response = element's value

SET <object/element> <value> - set an element's value (controls only); normal response = OK

SUBSCRIBE <object/element>- sign up for notifications of changes to an element's value (control or sensor); normal response = element's value

UNSUBSCRIBE <object/element> - cancel a subscription; normal response = OK

## Details

- uses TCP port 4321
- Any LEA Connect Firmware version 1.1.0.X and higher supports TCP Communication. Firmware versions prior to this only support websocket protocol.
- commands and responses are newline (i.e. '\n', 0x0a) delimited <-- THIS IS IMPORTANT! All messages end with '\n'
- all commands generate response messages
- subscriptions generate additional, asynchronous messages (of course, subscriptions require a persistent connection)
- illegal commands generate error messages (i.e. response beginning with 'error')
- out-of-range numeric values will be clamped (i.e. no error response; this is the same behavior as websocket API)
- string/enum values containing spaces must be enclosed in double-quotes



## Example commands with responses

- a) To get Dante On Ramp Channel 1 setting:  
**Command:** `get /amp/channels/1/inputSelector/danteOnRamp\n`  
**Amp Response:** `/amp/channels/1/inputSelector/danteOnRamp "Post Crossover"\n`
- b) Set channel 1 primary input fader level to -3.0dB:  
**Command:** `set /amp/channels/1/inputSelector/primaryFader -3.0\n`  
**Amp Response:** `OK\n`
- c) Subscribe to channel 1 input level:  
**Command:** `subscribe /amp/channels/1/levels/level_db\n`  
**Amp Response:** `/amp/channels/1/levels/level_db -52.78131103515625\n`
- d) Unsubscribe to channel 1 input level:  
**Command:** `unsubscribe /amp/channels/1/levels/level_db\n` **Amp Response:** `OK\n`
- e) If a command is sent that the amplifier does not recognize:  
**Command Sent:** `set /amp/channels/1/inputSelector/danteOnRamp "Post Toasties"\n`  
**Amp Response:** `error: unsupported value: Post Toasties (/amp/channels/1/inputSelector/danteOnRamp)\n`
- f) If a command is sent that is not in the proper syntax/format:  
**Command:** `get something-that-doesn't-exist\n`  
**Amp Response:** `error: cannot parse - 'get something-that-doesn't-exist'\n`
- g) If you forget to put `\n` at the end of your command:  
**Command:** `message that's missing delimiter`  
**Amp Response:** (no response)

## Security

All TCP communication to and from the LEA Connect Series Amplifier is on port 4321. The amplifier will only send and receive API commands for the amplifier's control and monitoring.

## Example Sessions

```
Subscribe /amp/channels/1/levels/level_db  
/amp/channels/1/levels/level_db -52.78131103515625  
/amp/channels/1/levels/level_db -53.08610916137695  
/amp/channels/1/levels/level_db -52.2020378112793  
/amp/channels/1/levels/level_db -52.78131103515625
```



/amp/channels/1/levels/level\_db -51.658992767333984  
/amp/channels/1/levels/level\_db -52.2020378112793  
/amp/channels/1/levels/level\_db -51.92626953125  
/amp/channels/1/levels/level\_db -51.658992767333984  
/amp/channels/1/levels/level\_db -51.92626953125  
/amp/channels/1/levels/level\_db -53.40199279785156  
/amp/channels/1/levels/level\_db -52.2020378112793  
/amp/channels/1/levels/level\_db -52.486846923828125  
/amp/channels/1/levels/level\_db -51.92626953125  
/amp/channels/1/levels/level\_db -52.486846923828125  
/amp/channels/1/levels/level\_db -53.08610916137695  
/amp/channels/1/levels/level\_db -52.2020378112793  
/amp/channels/1/levels/level\_db -53.08610916137695  
/amp/channels/1/levels/level\_db -51.658992767333984  
/amp/channels/1/levels/level\_db -52.78131103515625  
/amp/channels/1/levels/level\_db -53.08610916137695

## **Subscribe /amp/channels/1/levels/level\_db**

/amp/channels/2/levels/level\_db -53.40199279785156  
/amp/channels/1/levels/level\_db -52.78131103515625  
/amp/channels/2/levels/level\_db -54.794715881347656  
/amp/channels/1/levels/level\_db -51.92626953125  
/amp/channels/2/levels/level\_db -53.72980499267578  
/amp/channels/1/levels/level\_db -52.78131103515625  
/amp/channels/2/levels/level\_db -54.425048828125  
/amp/channels/2/levels/level\_db -54.794715881347656  
/amp/channels/1/levels/level\_db -51.39969253540039  
/amp/channels/2/levels/level\_db -53.72980499267578  
/amp/channels/1/levels/level\_db -51.658992767333984  
/amp/channels/1/levels/level\_db -52.2020378112793  
/amp/channels/2/levels/level\_db -54.070472717285156  
/amp/channels/1/levels/level\_db -53.08610916137695  
/amp/channels/2/levels/level\_db -55.180816650390625  
/amp/channels/1/levels/level\_db -52.2020378112793  
/amp/channels/2/levels/level\_db -54.425048828125  
/amp/channels/1/levels/level\_db -52.78131103515625  
/amp/channels/2/levels/level\_db -54.794715881347656  
/amp/channels/1/levels/level\_db -52.486846923828125  
/amp/channels/2/levels/level\_db -54.425048828125  
/amp/channels/1/levels/level\_db -52.78131103515625  
/amp/channels/2/levels/level\_db -54.794715881347656  
/amp/channels/1/levels/level\_db -52.486846923828125  
/amp/channels/2/levels/level\_db -54.425048828125  
/amp/channels/1/levels/level\_db -51.92626953125



/amp/channels/2/levels/level\_db -54.070472717285156 /amp/channels/1/levels/level\_db -52.2020378112793

/amp/channels/2/levels/level\_db -54.425048828125

/amp/channels/1/levels/level\_db -52.486846923828125

/amp/channels/1/levels/level\_db -53.08610916137695

/amp/channels/2/levels/level\_db -55.180816650390625

/amp/channels/1/levels/level\_db -51.92626953125

**unsubscribe /amp/channels/1/levels/level\_db /amp/channels/1/levels/level\_db**  
-52.78131103515625

/amp/channels/1/levels/level\_db -52.2020378112793

/amp/channels/2/levels/level\_db -54.070472717285156

OK

/amp/channels/2/levels/level\_db -54.794715881347656

/amp/channels/2/levels/level\_db -54.070472717285156

/amp/channels/2/levels/level\_db -54.794715881347656

/amp/channels/2/levels/level\_db -53.72980499267578

/amp/channels/2/levels/level\_db -55.180816650390625

/amp/channels/2/levels/level\_db -54.070472717285156

**unsubscribe /amp/channels/2/levels/level\_db**

/amp/channels/2/levels/level\_db -55.58488464355469 OK

subscribe /amp/channels/1/inputSelector/danteOnRamp

/amp/channels/1/inputSelector/danteOnRamp "Analog Input" set

/amp/channels/1/inputSelector/danteOnRamp "Post Crossover"

OK

/amp/channels/1/inputSelector/danteOnRamp "Post Crossover" get

/amp/channels/1/inputSelector/danteOnRamp

/amp/channels/1/inputSelector/danteOnRamp "Post Crossover"

get /amp/channels/2/inputSelector/danteOnRamp

/amp/channels/2/inputSelector/danteOnRamp "Analog Input" set

/amp/channels/1/inputSelector/danteOnRamp "Post Toasties"

error: unsupported value: Post Toasties (/amp/channels/1/inputSelector/danteOnRamp)

set /amp/channels/1/inputSelector/primaryFader -80.0

OK

/amp/channels/1/inputSelector/primaryFader -80.0

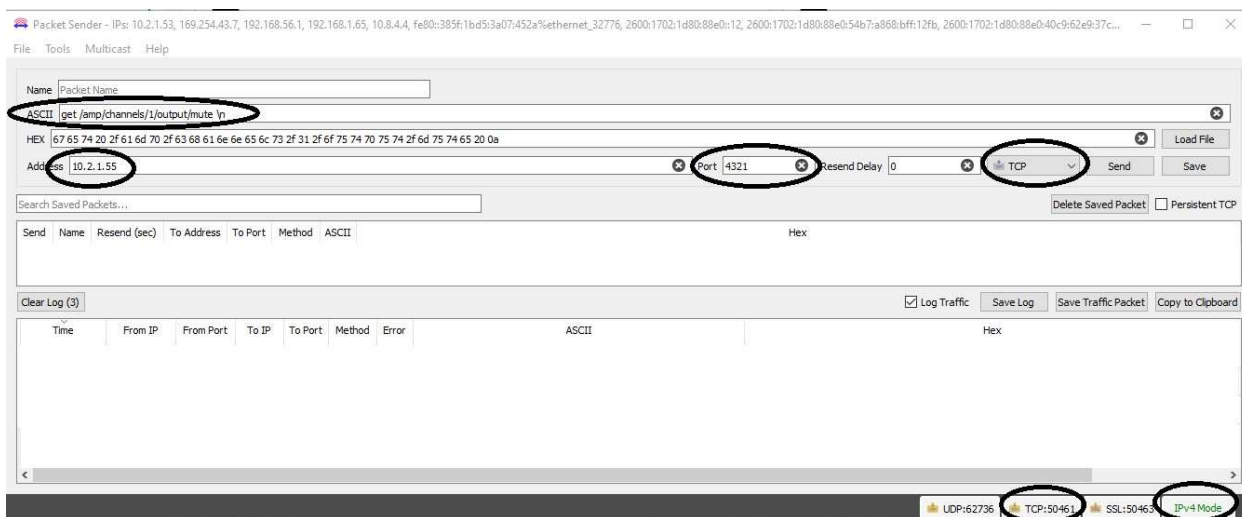
## Examples using Packet Sender

Packet Sender is a free open source cross-platform application that is widely used to send and receive TCP messages on a specified port. A free download is available at <http://www.packetsender.com>.

Below are some screen shots to help you use packet sender successfully and several examples.

### Packet Sender Setup

- In the bottom right corner, make sure it is in IPv4 Mode (not IPv6 Mode)
  - In the bottom right corner, make sure TCP is enabled
  - Enter the Port number "4321"
  - On the same line select TCP from the dropdown list, should be TCP by default
  - Enter the IP address of the amplifier to receive the message
  - Enter the ASCII message
    - get/set/subscribe/unsubscribe ○ url of the element ○ value if method is set
    - All messages must be terminated with a new line "\n" •
- Press "Send" button when finished





Example: Get Ch1 Mute

**Command:** `get /amp/channels/1/output/mute\n`

The screenshot shows the Packet Sender interface with the following configuration:

- Name: Packet Name
- ASCII: `get /amp/channels/1/output/mute\n`
- HEX: `67 65 74 20 2f 61 6d 70 2f 63 68 61 6e 6e 65 6c 73 2f 31 2f 6f 75 74 70 75 74 2f 6d 75 74 65 0a`
- Address: 10.2.1.55
- Port: 4321
- Resend Delay: 0
- Method: TCP

The Log Traffic section shows the following entries:

Time	From IP	From Port	To IP	To Port	Method	Error	ASCII	Hex
08:18:37.991	10.2.1.55	4321	You	50263	TCP			
08:18:37.890	10.2.1.55	4321	You	50263	TCP		<code>/amp/channels/1/output/mute false\n</code>	<code>2f 61 6d 70 2f 63 68 61 6e 6e 65 6c 73 2f 31 2f 6f 75 74 70 75 74 2f 6d 75 74 65 20 66 61 6c 73 65 0a</code>
08:18:37.885	You	50263	10.2.1.55	4321	TCP		<code>get /amp/channels/1/output/mute\n</code>	<code>67 65 74 20 2f 61 6d 70 2f 63 68 61 6e 6e 65 6c 73 2f 31 2f 6f 75 74 70 75 74 2f 6d 75 74 65 0a</code>

Example: Set Ch1 Mute

**Command:** `set /amp/channels/1/output/mute true\n`

The screenshot shows the Packet Sender interface with the following configuration:

- Name: Packet Name
- ASCII: `set /amp/channels/1/output/mute true\n`
- HEX: `73 65 74 20 2f 61 6d 70 2f 63 68 61 6e 6e 65 6c 73 2f 31 2f 6f 75 74 70 75 74 2f 6d 75 74 65 20 74 72 75 65 0a`
- Address: 10.2.1.55
- Port: 4321
- Resend Delay: 0
- Method: TCP

The Log Traffic section shows the following entries:

Time	From IP	From Port	To IP	To Port	Method	Error	ASCII	Hex
08:20:46.299	10.2.1.55	4321	You	50308	TCP			
08:20:46.100	10.2.1.55	4321	You	50308	TCP		<code>OK\n</code>	<code>4f 48 0a</code>
08:20:46.095	You	50308	10.2.1.55	4321	TCP		<code>set /amp/channels/1/output/mute true\n</code>	<code>73 65 74 20 2f 61 6d 70 2f 63 68 61 6e 6e 65 6c 73 2f 31 2f 6f 75 74 70 75 74 2f 6d 75 74 65 20 74 72 75 ...</code>



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Example: Set Ch2 output Fader to -42.0dB

**Command:** set /amp/channels/1/output/fader -42.0\n

Packet Sender - IPs: 10.2.1.53, 169.254.43.7, 192.168.56.1, 192.168.1.65, 10.8.4.4, fe80::385f:1bd5:3a07:452a%ethernet\_32776, 2600:1702:1d80:88e0:12, 2600:1702:1d80:88e0:54b7:a868:bfff:12fb, 2600:1702:1d80:88e0:40c9:62e9:37c...

Name: Packet Name  
ASCII: set /amp/channels/1/output/fader -42.0\n  
HEX: 73 65 74 20 2f 61 6d 70 2f 63 68 61 6e 6e 65 6c 73 2f 31 2f 6f 75 74 70 75 74 2f 66 61 64 65 72 20 2d 34 32 2e 30 0a  
Address: 10.2.1.55 Port: 4321 Resend Delay: 0 TCP Send Save

Time	From IP	From Port	To IP	To Port	Method	Error	ASCII	Hex
08:21:58.156	10.2.1.55	4321	You	50322	TCP			
08:21:57.959	10.2.1.55	4321	You	50322	TCP	OK\n		4F 4B 0A
08:21:57.953	You	50322	10.2.1.55	4321	TCP		set /amp/channels/1/output/fader -42.0\n	73 65 74 20 2f 61 6d 70 2f 63 68 61 6e 6e 65 6c 73 2f 31 2f 6f 75 74 70 75 74 2f 66 61 64 65 72 20 2d 34 ...

UDP:64445 TCP:49809 SSL:49810 IPv4 Mode

Example: Set Ch3 Input Selector to Analog 1

**Command:** set /amp/channels/3/inputSelector/primary "Analog 1"\n

Packet Sender - IPs: 10.2.1.53, 169.254.43.7, 192.168.56.1, 192.168.1.65, 10.8.4.4, fe80::385f:1bd5:3a07:452a%ethernet\_32776, 2600:1702:1d80:88e0:12, 2600:1702:1d80:88e0:54b7:a868:bfff:12fb, 2600:1702:1d80:88e0:40c9:62e9:37c...

Name: Packet Name  
ASCII: set /amp/channels/3/inputSelector/primary "Analog 1"\n  
HEX: 73 65 74 20 2f 61 6d 70 2f 63 68 61 6e 6e 65 6c 73 2f 33 2f 69 6e 70 75 74 53 65 6c 65 63 74 6f 72 2f 70 72 69 6d 61 72 79 20 22 41 6e 61 6c 6f 67 20 31 22 0a  
Address: 10.2.1.55 Port: 4321 Resend Delay: 0 TCP Send Save

Time	From IP	From Port	To IP	To Port	Method	Error	ASCII	Hex
08:24:18.044	10.2.1.55	4321	You	50367	TCP			
08:24:17.861	10.2.1.55	4321	You	50367	TCP	OK\n		4F 4B 0A
08:24:17.855	You	50367	10.2.1.55	4321	TCP		set /amp/channels/3/inputSelector/primary "Analog 1"\n	73 65 74 20 2f 61 6d 70 2f 63 68 61 6e 6e 65 6c 73 2f 33 2f 69 6e 70 75 74 53 65 6c 65 63 74 6f 72 2f 70 ...

UDP:64445 TCP:49809 SSL:49810 IPv4 Mode



## Supported objects/elements (case-sensitive)

### Object URL Scheme

Below is a list of available base object URL destinations

"x" is the desired channel number

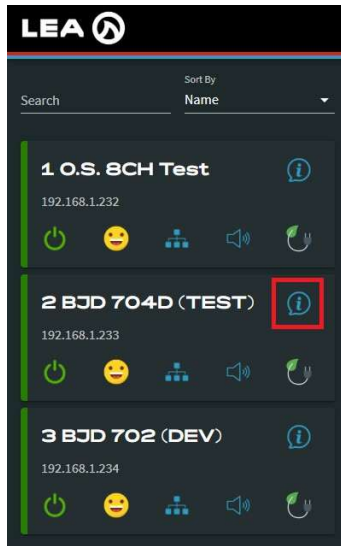
"#" is the desired input number

"\*" is the desired filter number

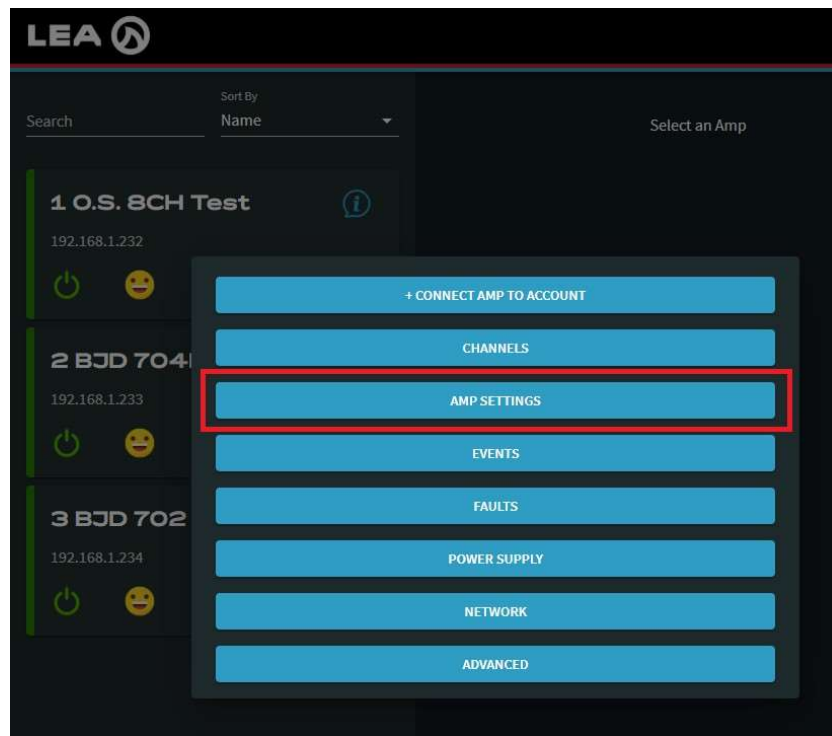
*/amp/deviceInfo/  
/amp/powerSupply/  
/amp/autoStandby/  
/amp/signalGenerator/  
/amp/inputs/analog/#/  
/amp/channels/x/inputSelector/  
/amp/channels/x/crossover/  
/amp/channels/x/outputEqFilters/\*/  
/amp/channels/x/rmsLimiter/  
/amp/channels/x/peakLimiter/  
/amp/channels/x/output/  
/amp/channels/x/levels/  
/amp/channels/x/loadMonitor/*

## Amplifier Device Info

Click on the amplifier info button



Click on Amp Settings to view the relevant page for this API section





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## Device Name

**Type:** CONTROL

**Commands:** get, set, subscribe, unsubscribe

**URL:** /amp/deviceInfo/deviceName

**Values:** any text up to 64 characters

**Example:** get /amp/deviceInfo/deviceName\n

- Response: /amp/deviceInfo/deviceName "2 BJD 704D (TEST)"\n
- The command asked for the amplifiers device name and got the response 2 BJD 704D (TEST)

The screenshot shows the LEA web interface. On the left, there is a list of three devices:

- 1 O.S. 8CH Test (IP: 192.168.1.232)
- 2 BJD 704D (TEST) (IP: 192.168.1.233) - This device is highlighted with a blue border.
- 3 BJD 702 (DEV) (IP: 192.168.1.234)

Each device card includes a power icon, a smiley face icon, a network icon, a speaker icon, and a refresh icon. On the right, the 'Settings' panel for device 2 is displayed:

- Device Name: 2 BJD 704D (TEST) (highlighted with a red box)
- Venue Name: LEA Office
- Model ID: Connect Series Model 704D
- Asset Tag Number: BJD-704D-0001
- Installer Name: Bradley Drummond
- Installer Contact Info: 1-800-123-4567 email@email.com
- Date of Installation: February 16, 2020
- Rack Name: Desk 1
- Rack Position: RU 1



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## Venue Name

**Type:** CONTROL

**Commands:** get, set, subscribe, unsubscribe

**URL:** /amp/deviceInfo/venueName

**Values:** any text up to 64 characters

**Example:** get /amp/deviceInfo/venueName\n

- Response: /amp/deviceInfo/venueName "LEA Office"\n
- The command asked for the amplifiers device name and got the response LEA Office

The screenshot shows the LEA web interface. On the left, there is a list of three devices: '1 O.S. 8CH Test', '2 BJD 704D (TEST)', and '3 BJD 702 (DEV)'. Each device entry includes an IP address and a set of control icons. On the right, the 'Settings' panel for the selected device '2 BJD 704D (TEST)' is displayed. The 'Venue Name' field is highlighted with a red box and contains the text 'LEA Office'. Other settings include Device Name (2 BJD 704D (TEST)), Model ID (Connect Series Model 704D), Asset Tag Number (BJD-704D-0001), Installer Name (Bradley Drummond), Installer Contact Info (1-800-123-4567 email@email.com), Date of Installation (February 16, 2020), Rack Name (Desk 1), and Rack Position (RU 1).



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## Model ID

**Type:** SENSOR

**Commands:** get, subscribe, unsubscribe

**URL:** /amp/deviceInfo/modelID

**Values:** Amplifier Model

**Example:** get /amp/deviceInfo/modelID\n

- Response: /amp/deviceInfo/modelID "Connect Series Model 704D"\n
- The command asked for the amplifiers model ID and got the response Connect Series Model 704D

The screenshot displays the LEA web interface. On the left, there is a list of three devices:

- 1 O.S. 8CH Test (IP: 192.168.1.232)
- 2 BJD 704D (TEST) (IP: 192.168.1.233)
- 3 BJD 702 (DEV) (IP: 192.168.1.234)

Each device card includes a power icon, a smiley face, a network icon, a speaker icon, and a refresh icon. The second device, '2 BJD 704D (TEST)', is highlighted with a blue border.

On the right, the 'Settings' panel for the selected device is shown. The 'Model ID' field is highlighted with a red border and contains the text 'Connect Series Model 704D'. Other settings include:

- Device Name: 2 BJD 704D (TEST)
- Venue Name: LEA Office
- Asset Tag Number: BJD-704D-0001
- Installer Name: Bradley Drummond
- Installer Contact Info: 1-800-123-4567 email@email.com
- Date of Installation: February 16, 2020
- Rack Name: Desk 1
- Rack Position: RU 1



## Asset Tag Number

**Type:** CONTROL **Commands:**

**URL:** /amp/deviceInfo/assetTagNumber

**Values:** any text up to 64 characters

**Example:** get /amp/deviceInfo/assetTagNumber\n

- Response: /amp/deviceInfo/assetTagNumber "BJD-704D-0001"\n
- The command asked for the amplifiers asset tag number and got the response BJD-704D-0001

The screenshot displays the LEA web interface. On the left, a list of devices is shown, with the second device, '2 BJD 704D (TEST)', highlighted in blue. This device has the IP address 192.168.1.233 and various status icons. On the right, the 'Settings' panel for this device is visible. The 'Asset Tag Number' field is highlighted with a red box and contains the value 'BJD-704D-0001'. Other settings include Device Name '2 BJD 704D (TEST)', Venue Name 'LEA Office', Model ID 'Connect Series Model 704D', Installer Name 'Bradley Drummond', Installer Contact Info '1-800-123-4567 email@email.com', Date of Installation 'February 16, 2020', Rack Name 'Desk 1', and Rack Position 'RU 1'.



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## Installer Name

**Type:** CONTROL **Commands:**

**URL:** /amp/deviceInfo/installerName

**Values:** any text up to 64 characters

**Example:** get /amp/deviceInfo/installerName\n

- Response: /amp/deviceInfo/installerName "Bradley Drummond"\n
- The command asked for the amplifiers installer name and got the response Bradley Drummond

The screenshot displays the LEA web interface. On the left, a list of devices is shown, sorted by name. The second device, '2 BJD 704D (TEST)', is selected and highlighted with a blue border. On the right, the 'Settings' panel for this device is visible. The 'Installer Name' field is highlighted with a red rectangular box and contains the text 'Bradley Drummond'. Other settings include Device Name (2 BJD 704D (TEST)), Venue Name (LEA Office), Model ID (Connect Series Model 704D), Asset Tag Number (BJD-704D-0001), Installer Contact Info (1-800-123-4567 email@email.com), Date of Installation (February 16, 2020), Rack Name (Desk 1), and Rack Position (RU 1).



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## Installer Contact Info

**Type:** CONTROL **Commands:**

**URL:** /amp/deviceInfo/installerContactInfo

**Values:** any text up to 64 characters

**Example:** get /amp/deviceInfo/installerContactInfo\n

- Response: /amp/deviceInfo/installerContactInfo "1-800-123-4567 email@email.com"\n
- The command asked for the amplifier's installer contact info and got the response 1-800-123-4567 email@email.com

The screenshot shows the LEA web interface. On the left, there is a list of three devices: '1 O.S. 8CH Test', '2 BJD 704D (TEST)', and '3 BJD 702 (DEV)'. The second device, '2 BJD 704D (TEST)', is selected and highlighted with a blue border. On the right, the 'Settings' panel for this device is displayed. The 'Installer Contact Info' field is highlighted with a red border and contains the text '1-800-123-4567 email@email.com'. Other settings include Device Name (2 BJD 704D (TEST)), Venue Name (LEA Office), Model ID (Connect Series Model 704D), Asset Tag Number (BJD-704D-0001), Installer Name (Bradley Drummond), Date of Installation (February 16, 2020), Rack Name (Desk 1), and Rack Position (RU 1).



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## Date of Installation

**Type:** CONTROL

**Commands:** get, set, subscribe, unsubscribe

**URL:** /amp/deviceInfo/dateOfInstallation

**Values:** any text up to 64 characters

**Example:** get /amp/deviceInfo/dateOfInstallation\n

- Response: /amp/deviceInfo/dateOfInstallation "2020-02-16T20:47:00.000Z"\n
- The command asked for the amplifiers asset tag number and got the response February 16, 2020 time 20:47:00.000

The screenshot shows the LEA web interface. On the left, there is a list of devices. The second device, '2 BJD 704D (TEST)', is highlighted with a blue border. Below the device name is the IP address '192.168.1.233' and a row of control icons: a power button, a smiley face, a network diagram, a speaker, and a leaf with a hand. On the right, the 'Settings' panel is visible. The 'Date of Installation' field is highlighted with a red border and contains the text 'February 16, 2020'. Other settings include Device Name (2 BJD 704D (TEST)), Venue Name (LEA Office), Model ID (Connect Series Model 704D), Asset Tag Number (BJD-704D-0001), Installer Name (Bradley Drummond), Installer Contact Info (1-800-123-4567 email@email.com), Rack Name (Desk 1), and Rack Position (RU 1).



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## Rack Name

**Type:** CONTROL

**Commands:** get, set, subscribe, unsubscribe

**URL:** /amp/deviceInfo/rackName

**Values:** any text up to 64 characters

**Example:** set /amp/deviceInfo/rackName "Rack 1"\n

- Response: OK \n
- The command successfully set the amplifiers rack name to Rack 1

The screenshot displays the LEA web interface. On the left, a list of devices is shown, including '1 O.S. 8CH Test', '2 BJD 704D (TEST)', and '3 BJD 702 (DEV)'. The '2 BJD 704D (TEST)' device is selected. On the right, the 'Settings' page for this device is visible. The 'Rack Name' field is highlighted with a red box and contains the text 'Desk 1'. Other settings include Device Name '2 BJD 704D (TEST)', Venue Name 'LEA Office', Model ID 'Connect Series Model 704D', Asset Tag Number 'BJD-704D-0001', Installer Name 'Bradley Drummond', Installer Contact Info '1-800-123-4567 email@email.com', Date of Installation 'February 16, 2020', and Rack Position 'RU 1'.



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## Rack Position

**Type:** CONTROL

**Commands:** get, set, subscribe, unsubscribe

**URL:** /amp/deviceInfo/rackPosition

**Values:** any text up to 64 characters

**Example:** get /amp/deviceInfo/rackPosition\n

- Response: /amp/deviceInfo/rackPosition "RU 1"\n
- The command asked for the amplifiers rack position and got the response RU 1

The screenshot displays the LEA web interface. On the left, a list of devices is shown, sorted by name. The second device, '2 BJD 704D (TEST)', is highlighted with a blue border. On the right, the 'Settings' page for this device is visible. The 'Rack Position' field is highlighted with a red border and contains the value 'RU 1'.

Device Name	IP Address	Rack Position
1 O.S. 8CH Test	192.168.1.232	
2 BJD 704D (TEST)	192.168.1.233	RU 1
3 BJD 702 (DEV)	192.168.1.234	

**Settings**

Device Name: 2 BJD 704D (TEST)

Venue Name: LEA Office

Model ID: Connect Series Model 704D

Asset Tag Number: BJD-704D-0001

Installer Name: Bradley Drummond

Installer Contact Info: 1-800-123-4567 email@email.com

Date of Installation: February 16, 2020

Rack Name: Desk 1

Rack Position: RU 1

## Serial Number

**Type:** SENSOR

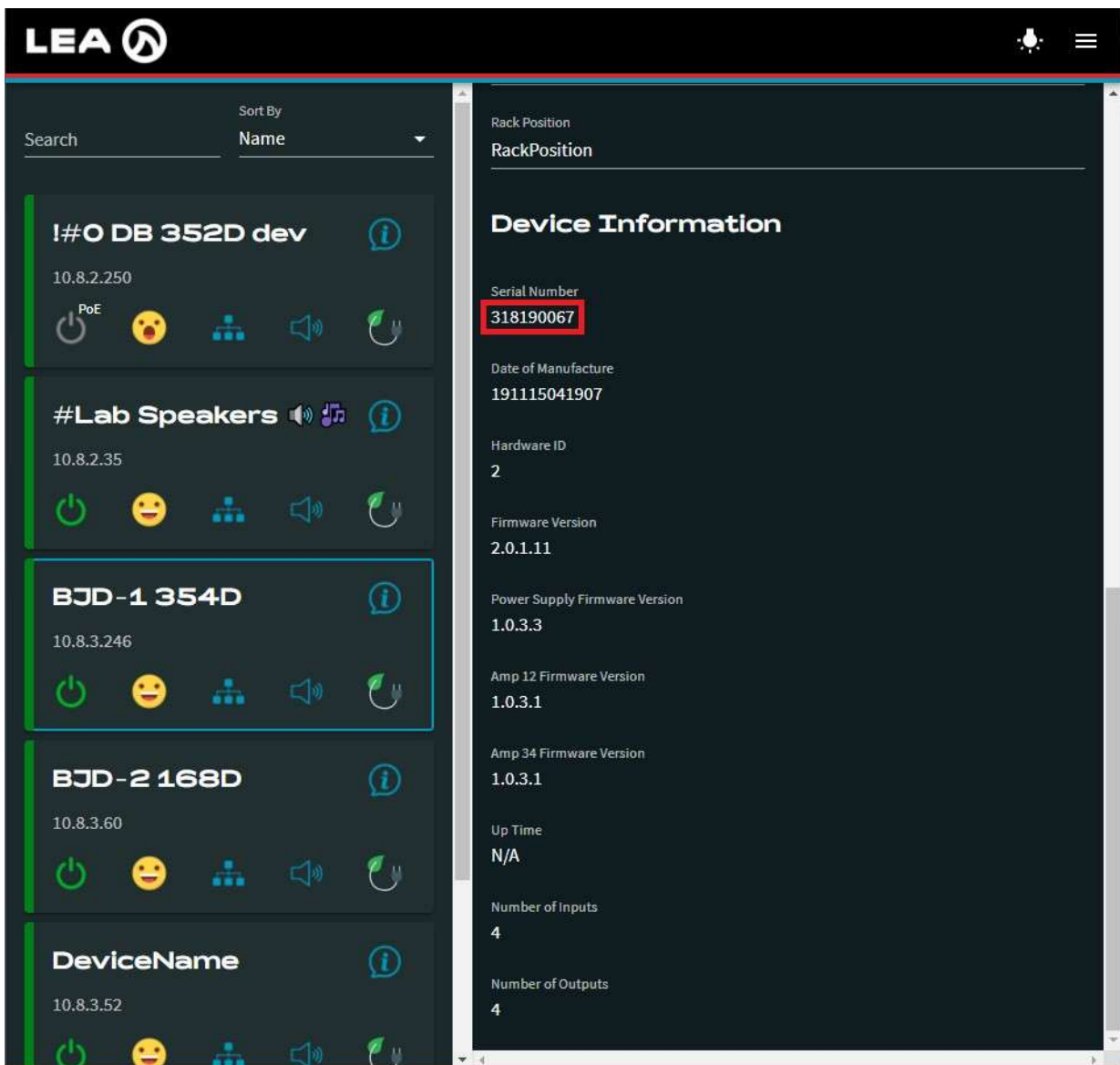
**Commands:** get, subscribe, unsubscribe

**URL:** /amp/deviceInfo/serialNumber

**Values:** any text up to 64 characters

**Example:** get /amp/deviceInfo/serialNumber\n

- Response: /amp/deviceInfo/serialNumber "31890067"\n
- The command asked for the amplifiers serial number and got the response 31890067



The screenshot displays the LEA web interface. On the left, a list of devices is shown with columns for 'Search' and 'Sort By Name'. The devices listed are: '#O DB 352D dev' (IP: 10.8.2.250), '#Lab Speakers' (IP: 10.8.2.35), 'BJD-1 354D' (IP: 10.8.3.246), 'BJD-2 168D' (IP: 10.8.3.60), and 'DeviceName' (IP: 10.8.3.52). Each device entry includes a status bar with icons for PoE, a smiley face, a network diagram, a speaker, and a refresh icon. The 'BJD-1 354D' device is selected, and its details are shown on the right. The 'Device Information' section includes: Rack Position, RackPosition, Serial Number (318190067, highlighted in a red box), Date of Manufacture (191115041907), Hardware ID (2), Firmware Version (2.0.1.11), Power Supply Firmware Version (1.0.3.3), Amp 12 Firmware Version (1.0.3.1), Amp 34 Firmware Version (1.0.3.1), Up Time (N/A), Number of Inputs (4), and Number of Outputs (4).

## Date of Manufacture

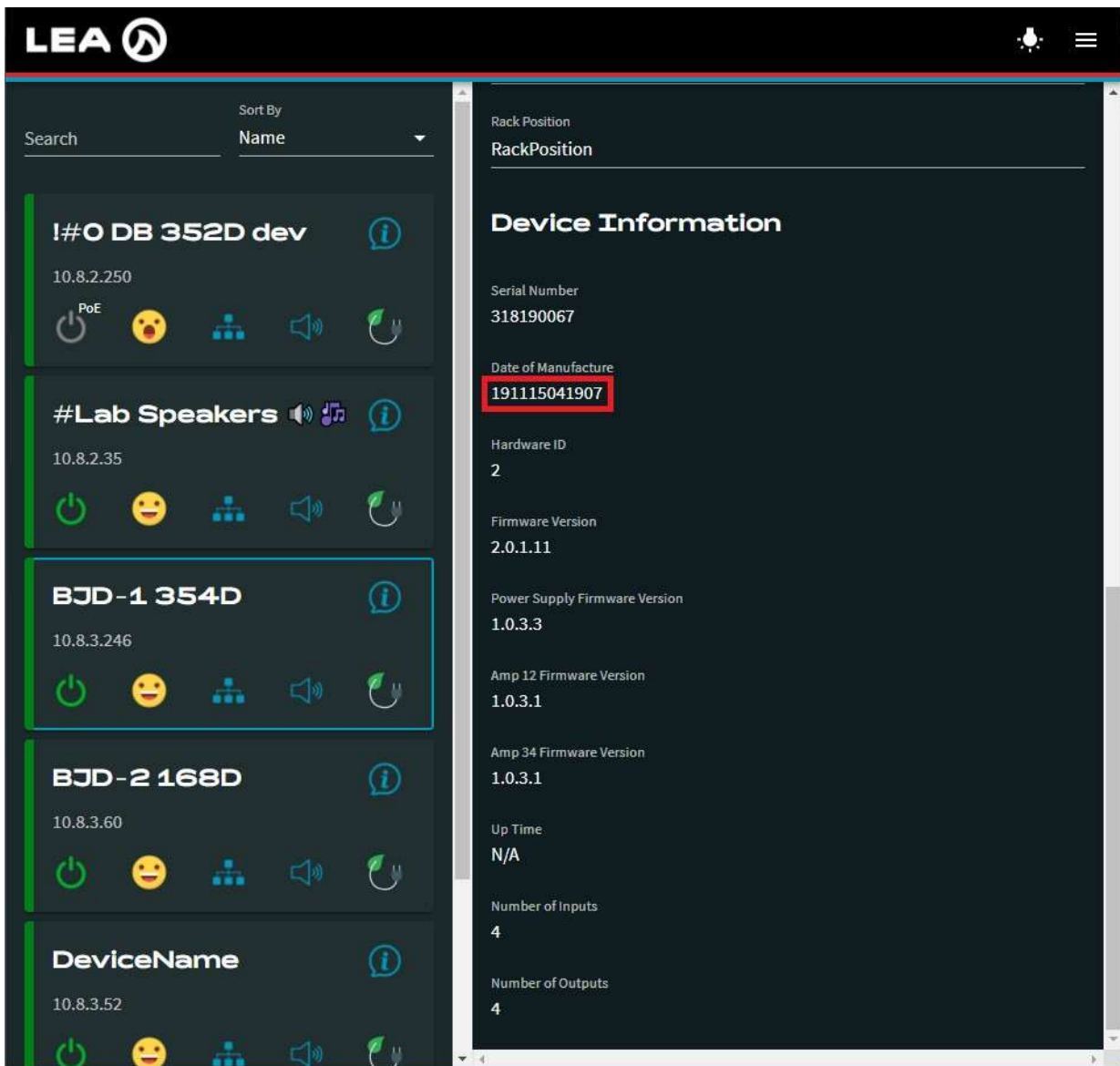
**Type:** SENSOR **Commands:**

**URL:** /amp/deviceInfo/dateOfMfg

**Values:** any text up to 64 characters

**Example:** get /amp/deviceInfo/ dateOfMfg \n

- Response: /amp/deviceInfo/ dateOfMfg "191115041907"\n
- The command asked for the amplifiers date of manufacture and got the response 191115041907



The screenshot displays the LEA web interface. On the left, a list of devices is shown, with 'BJD-1 354D' selected and highlighted in blue. The right panel shows the 'Device Information' for this device. The 'Date of Manufacture' field is highlighted with a red box, showing the value '191115041907'. Other fields include Rack Position, Serial Number (318190067), Hardware ID (2), Firmware Version (2.0.1.11), Power Supply Firmware Version (1.0.3.3), Amp 12 Firmware Version (1.0.3.1), Amp 34 Firmware Version (1.0.3.1), Up Time (N/A), Number of Inputs (4), and Number of Outputs (4).

Field	Value
Rack Position	RackPosition
Serial Number	318190067
Date of Manufacture	191115041907
Hardware ID	2
Firmware Version	2.0.1.11
Power Supply Firmware Version	1.0.3.3
Amp 12 Firmware Version	1.0.3.1
Amp 34 Firmware Version	1.0.3.1
Up Time	N/A
Number of Inputs	4
Number of Outputs	4



# OPEN API – TCP Protocol

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## Hardware ID

**Type:** SENSOR

**Commands:** get, subscribe, unsubscribe

**URL:** /amp/deviceInfo/hardwareID

**Values:** any text up to 64 characters

**Example:** get /amp/deviceInfo/hardwareID\n

- Response: /amp/deviceInfo/hardwareID "2"\n
- The command asked for the amplifiers hardware ID and got the response 2

The screenshot displays the LEA web interface. On the left, a list of devices is shown with their names and IP addresses. The 'BJD-1 354D' device (IP: 10.8.3.246) is selected and highlighted. On the right, the 'Device Information' panel for this device is visible, showing various attributes. The 'Hardware ID' is specifically highlighted with a red box and shows the value '2'.

Attribute	Value
Rack Position	RackPosition
Serial Number	318190067
Date of Manufacture	191115041907
Hardware ID	2
Firmware Version	2.0.1.11
Power Supply Firmware Version	1.0.3.3
Amp 12 Firmware Version	1.0.3.1
Amp 34 Firmware Version	1.0.3.1
Up Time	N/A
Number of Inputs	4
Number of Outputs	4

## Firmware Version

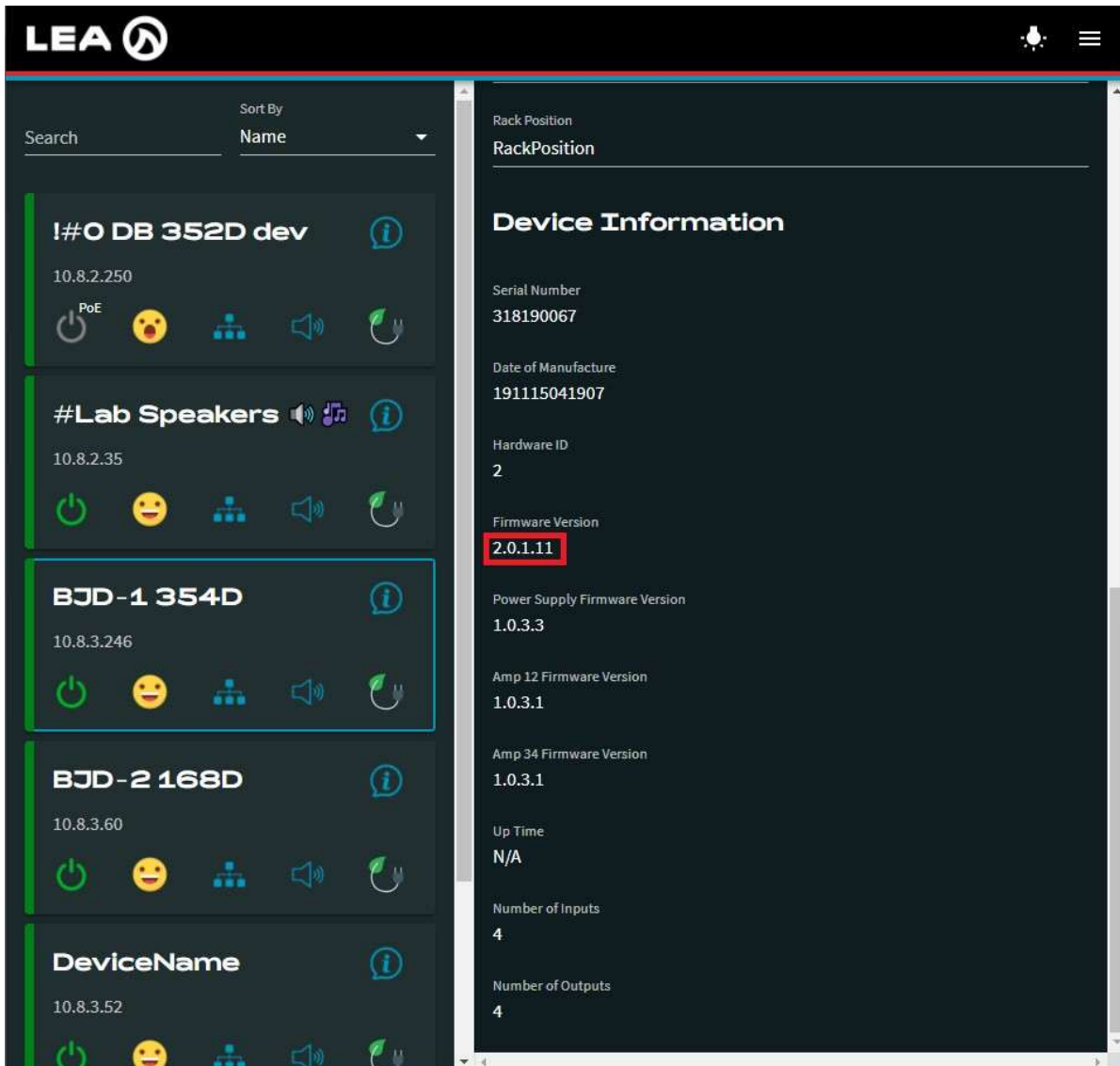
**Type:** SENSOR **Commands:**

**URL:** /amp/deviceInfo/firmwareVersion

**Values:** any text up to 64 characters

**Example:** get /amp/deviceInfo/firmwareVersion\n

- Response: /amp/deviceInfo/ firmwareVersion "2.0.1.11"\n
- The command asked for the amplifiers firmware version and got the response 2.0.1.11



The screenshot displays the LEA web interface. On the left, a list of devices is shown, with 'BJD-1 354D' selected and highlighted in blue. The right panel shows the 'Device Information' for this device. The 'Firmware Version' field is highlighted with a red box, showing the value '2.0.1.11'. Other fields include Rack Position, Serial Number (318190067), Date of Manufacture (191115041907), Hardware ID (2), Power Supply Firmware Version (1.0.3.3), Amp 12 Firmware Version (1.0.3.1), Amp 34 Firmware Version (1.0.3.1), Up Time (N/A), Number of Inputs (4), and Number of Outputs (4).

Device Name	IP Address	Status	Power	Audio	Info
!#O DB 352D dev	10.8.2.250	Off	Off	Off	Info
#Lab Speakers	10.8.2.35	On	On	On	Info
<b>BJD-1 354D</b>	10.8.3.246	On	On	On	Info
BJD-2 168D	10.8.3.60	On	On	On	Info
DeviceName	10.8.3.52	On	On	On	Info



# OPEN API – TCP Protocol

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## Power Supply Firmware Version

**Type:** SENSOR

**Commands:** get, subscribe, unsubscribe

**URL:** /amp/deviceInfo/powerSupplyfirmwareVersion

**Values:** any text up to 64 characters

**Example:** get /amp/deviceInfo/powerSupplyfirmwareVersion\n

- Response: /amp/deviceInfo/powerSupplyfirmwareVersion "1.0.3.3"\n
- The command asked for the amplifiers power supply firmware version and got the response 1.0.3.3

The screenshot displays the LEA web interface. On the left, a list of devices is shown, including 'BJD-1 354D' with IP 10.8.3.246. The right panel shows 'Device Information' for the selected device, listing various attributes. The 'Power Supply Firmware Version' is highlighted with a red box and shows the value '1.0.3.3'.

Device Name	IP Address	Power Supply Firmware Version
!#O DB 352D dev	10.8.2.250	
#Lab Speakers	10.8.2.35	
<b>BJD-1 354D</b>	10.8.3.246	<b>1.0.3.3</b>
BJD-2 168D	10.8.3.60	
DeviceName	10.8.3.52	

Attribute	Value
Rack Position	RackPosition
Serial Number	318190067
Date of Manufacture	191115041907
Hardware ID	2
Firmware Version	2.0.1.11
Power Supply Firmware Version	1.0.3.3
Amp 12 Firmware Version	1.0.3.1
Amp 34 Firmware Version	1.0.3.1
Up Time	N/A
Number of Inputs	4
Number of Outputs	4



# OPEN API – TCP Protocol

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## Amp 12 Firmware Version

**Type:** SENSOR **Commands:**

**URL:** /amp/deviceInfo/amp12firmwareVersion

**Values:** any text up to 64 characters

**Example:** get /amp/deviceInfo/amp12firmwareVersion\n

- Response: /amp/deviceInfo/amp12firmwareVersion "1.0.3.1"\n
- The command asked for the amplifiers amp 12 firmware version and got the response 1.0.3.1

The screenshot displays the LEA web interface. On the left, a list of devices is shown, with 'BJD-1 354D' selected. The right panel shows the 'Device Information' for this device. The 'Amp 12 Firmware Version' is highlighted with a red box and shows the value '1.0.3.1'.

Field	Value
Rack Position	RackPosition
Serial Number	318190067
Date of Manufacture	191115041907
Hardware ID	2
Firmware Version	2.0.1.11
Power Supply Firmware Version	1.0.3.3
Amp 12 Firmware Version	1.0.3.1
Amp 34 Firmware Version	1.0.3.1
Up Time	N/A
Number of Inputs	4
Number of Outputs	4



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## Amp 34 Firmware Version

**Type:** SENSOR **Commands:**

**URL:** /amp/deviceInfo/amp12firmwareVersion

**Values:** any text up to 64 characters

**Example:** get /amp/deviceInfo/amp34firmwareVersion\n

- Response: /amp/deviceInfo/amp34firmwareVersion "1.0.3.1"\n
- The command asked for the amplifiers amp 34 firmware version and got the response 1.0.3.1

The screenshot displays the LEA web interface. On the left, a list of devices is shown, with 'BJD-1 354D' selected and highlighted in blue. The right panel shows the 'Device Information' for this device. The 'Amp 34 Firmware Version' is highlighted with a red box and shows the value '1.0.3.1'.

Field	Value
Rack Position	RackPosition
Serial Number	318190067
Date of Manufacture	191115041907
Hardware ID	2
Firmware Version	2.0.1.11
Power Supply Firmware Version	1.0.3.3
Amp 12 Firmware Version	1.0.3.1
Amp 34 Firmware Version	1.0.3.1
Up Time	N/A
Number of Inputs	4
Number of Outputs	4



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## Up Time

**Type:** SENSOR **Commands:**

**URL:** /amp/deviceInfo/upTime

**Values:** any text up to 64 characters

**Example:** get /amp/deviceInfo/upTime\n

- Response: /amp/deviceInfo/upTime "N/A"\n
- The command asked for the amplifiers up time and got the response N/A

The screenshot displays the LEA web interface. On the left, a list of devices is shown, with 'BJD-1 354D' selected. The right panel shows the 'Device Information' for this device. The 'Up Time' field is highlighted with a red box and contains the value 'N/A'.

Field	Value
Rack Position	RackPosition
Serial Number	318190067
Date of Manufacture	191115041907
Hardware ID	2
Firmware Version	2.0.1.11
Power Supply Firmware Version	1.0.3.3
Amp 12 Firmware Version	1.0.3.1
Amp 34 Firmware Version	1.0.3.1
Up Time	N/A
Number of Inputs	4
Number of Outputs	4

## Number of Inputs

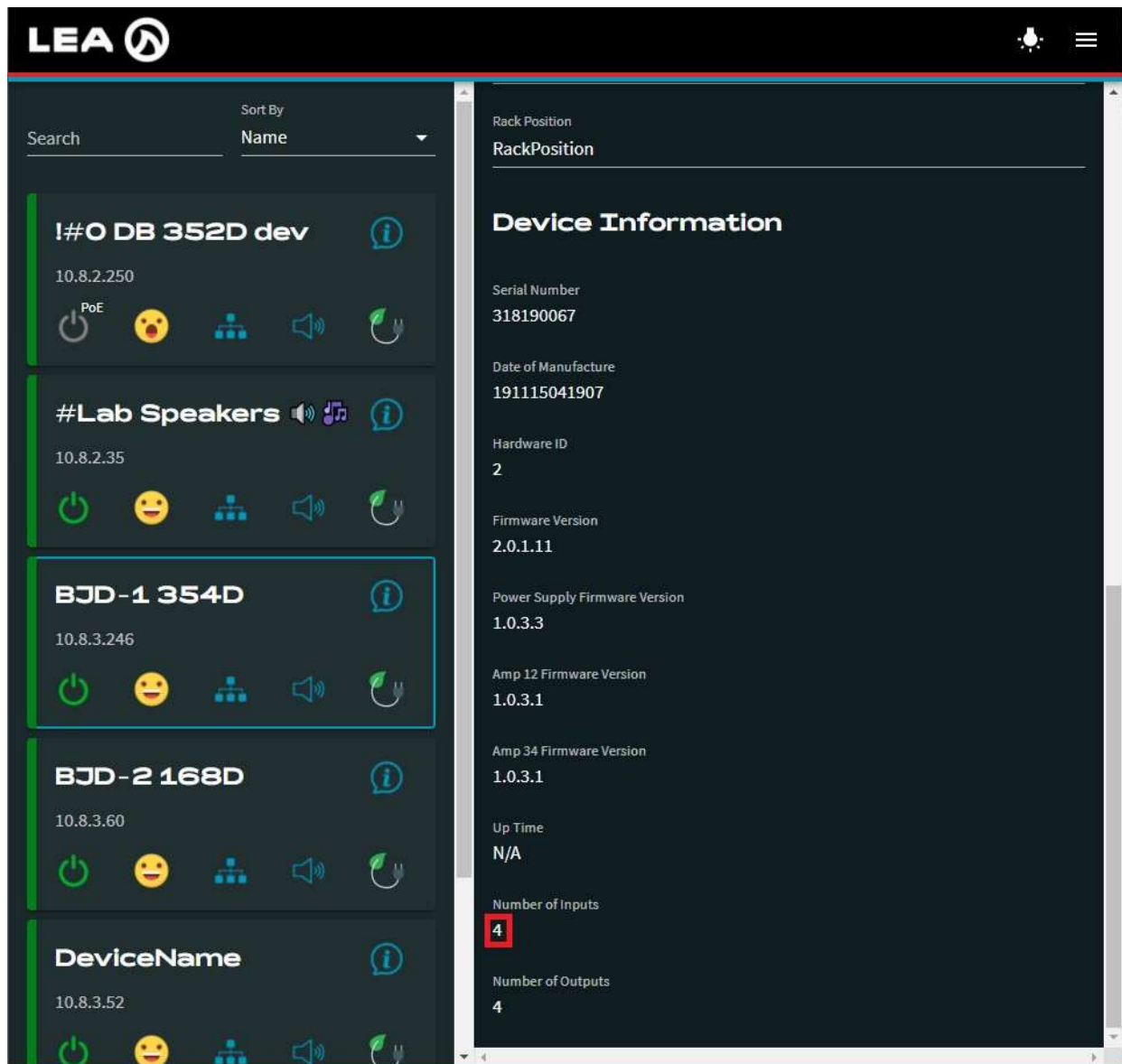
**Type:** SENSOR **Commands:**

**URL:** /amp/deviceInfo/numInputs

**Values:** any text up to 64 characters

**Example:** get /amp/deviceInfo/numInputs\n

- Response: /amp/deviceInfo/numInputs 4.0\n
- The command asked for the amplifiers number of inputs and got the response 4



The screenshot displays the LEA web interface. On the left, a list of devices is shown, with 'BJD-1 354D' selected and highlighted in blue. The right panel shows the 'Device Information' for this device. The 'Number of Inputs' is highlighted with a red box and shows the value '4'. The 'Number of Outputs' is also shown as '4'.

Device Name	IP Address	Serial Number	Date of Manufacture	Hardware ID	Firmware Version	Power Supply Firmware Version	Amp 12 Firmware Version	Amp 34 Firmware Version	Up Time	Number of Inputs	Number of Outputs
I#0 DB 352D dev	10.8.2.250	318190067	191115041907	2	2.0.1.11	1.0.3.3	1.0.3.1	1.0.3.1	N/A	4	4
#Lab Speakers	10.8.2.35										
BJD-1 354D	10.8.3.246									4	4
BJD-2 168D	10.8.3.60										
DeviceName	10.8.3.52										

## Number of Outputs

**Type:** SENSOR

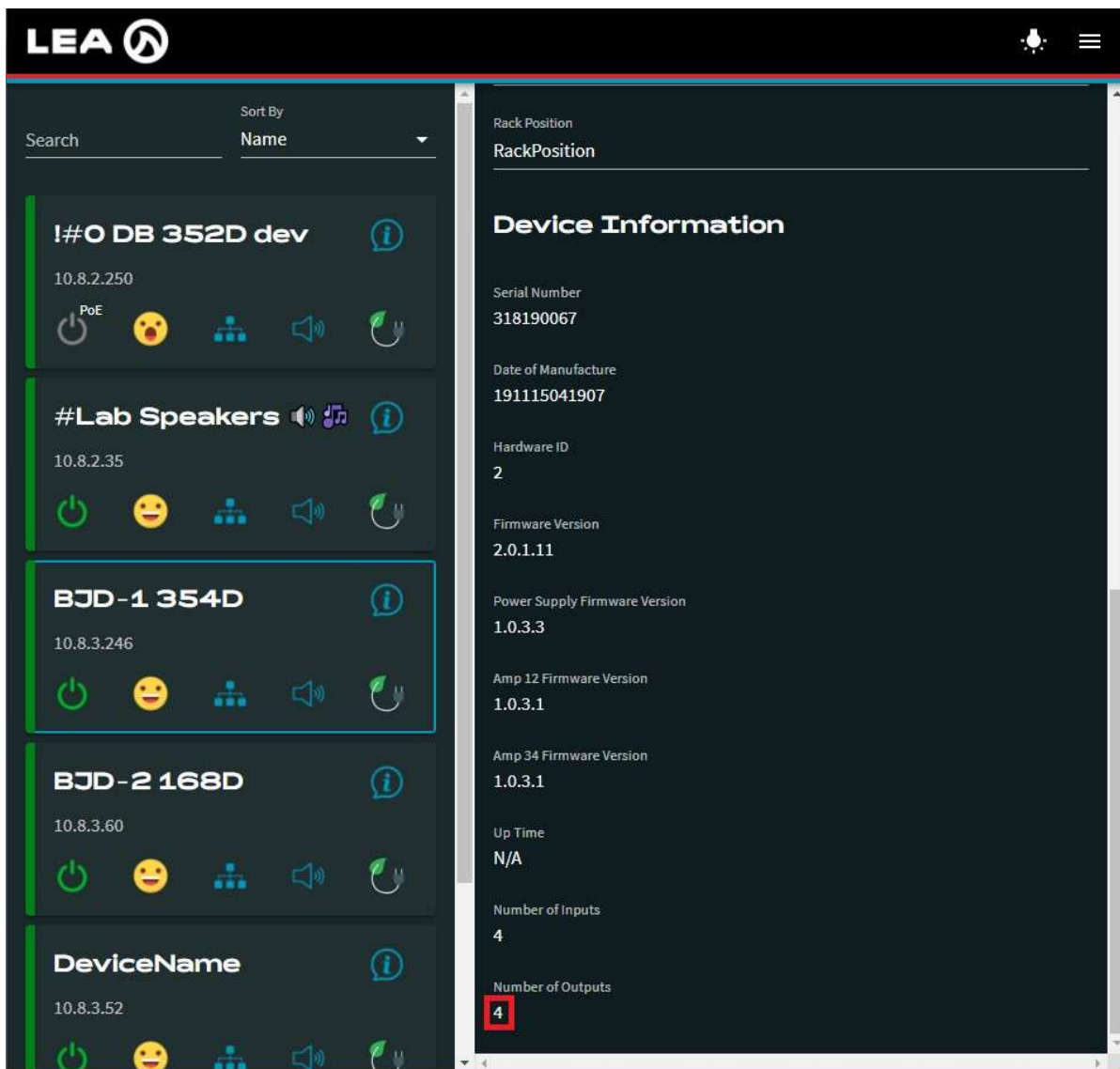
**Commands:** get, subscribe, unsubscribe

**URL:** /amp/deviceInfo/numOutputs

**Values:** any text up to 64 characters

**Example:** get /amp/deviceInfo/numOutputs\n

- Response: /amp/deviceInfo/numOutputs 4.0\n
- The command asked for the amplifiers number of outputs and got the response 4

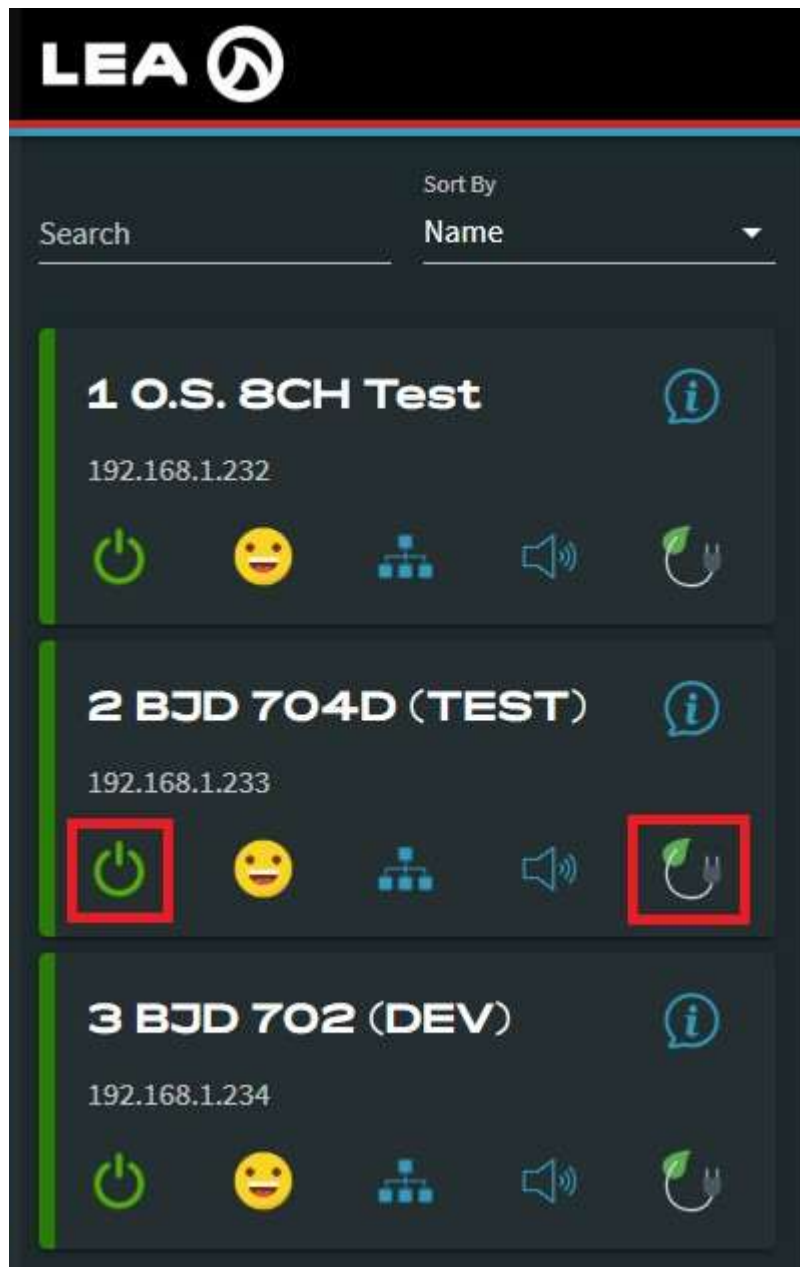


The screenshot displays the LEA web interface. On the left, a list of devices is shown, with 'BJD-1 354D' (IP: 10.8.3.246) selected and highlighted in blue. The right panel shows the 'Device Information' for this device, including:

- Rack Position: RackPosition
- Serial Number: 318190067
- Date of Manufacture: 191115041907
- Hardware ID: 2
- Firmware Version: 2.0.1.11
- Power Supply Firmware Version: 1.0.3.3
- Amp 12 Firmware Version: 1.0.3.1
- Amp 34 Firmware Version: 1.0.3.1
- Up Time: N/A
- Number of Inputs: 4
- Number of Outputs: 4 (highlighted with a red box)

## Amplifier Power Supply

Click on the power supply or green power menu buttons to view the relevant pages for this API section



## AC Line Voltage RMS

**Type:** SENSOR

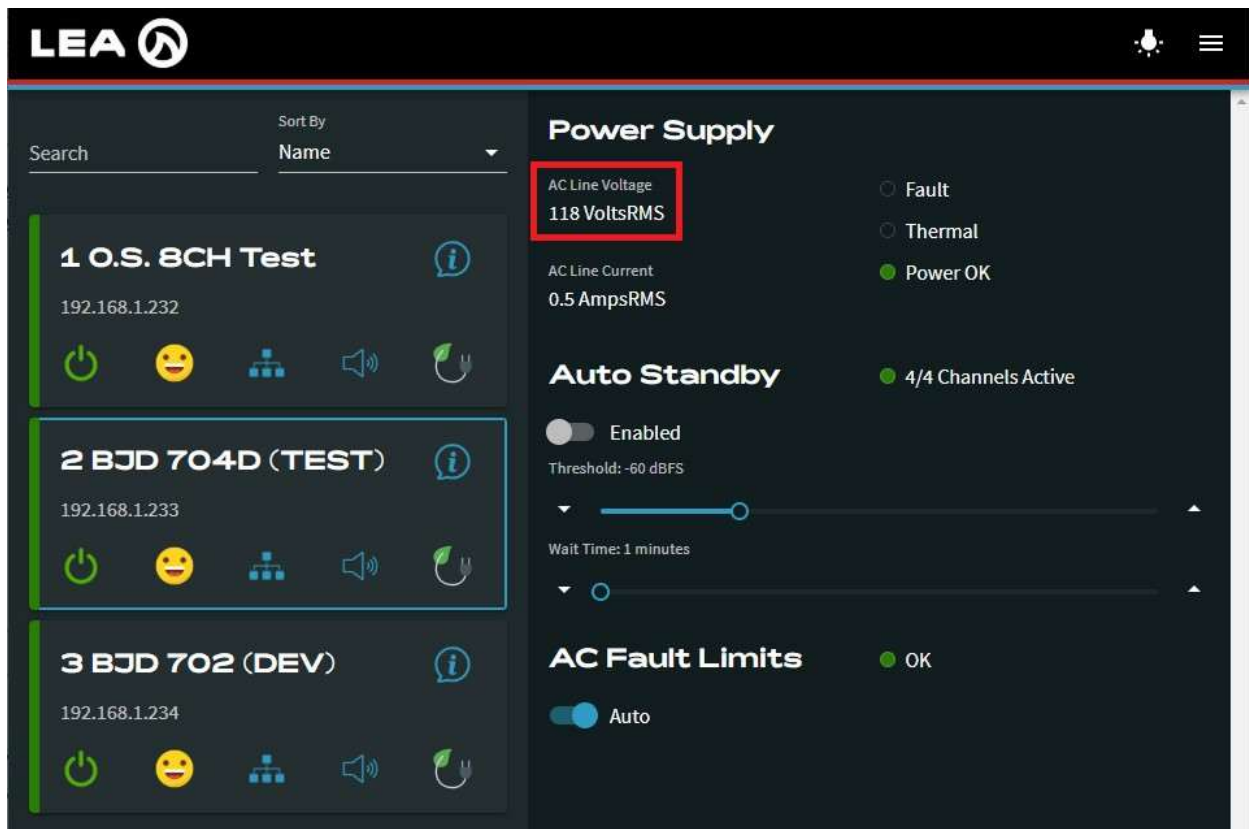
**Commands:** get, subscribe, unsubscribe

**URL:** /amp/powerSupply/acLineVoltage

**Values:** 0.0 through 300.0 volts

**Example:** get /amp/powerSupply/acLineVoltage\n

- Response: /amp/powerSupply/acLineVoltage 118.0\n
- The command asked for the amplifier AC Line Voltage RMS and got the response 118.0 V



The screenshot displays the LEA web interface. On the left, there is a search bar and a list of three test units: "1 O.S. 8CH Test", "2 BJD 704D (TEST)", and "3 BJD 702 (DEV)". The right side of the interface is titled "Power Supply" and shows the following data:

- AC Line Voltage:** 118 VoltsRMS (highlighted with a red box)
- AC Line Current:** 0.5 AmpsRMS
- Auto Standby:** Enabled, Threshold: -60 dBFS, Wait Time: 1 minutes
- AC Fault Limits:** OK

Additional status indicators include "Power OK" and "4/4 Channels Active".



# OPEN API – TCP Protocol

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## AC Line Current RMS

**Type:** SENSOR

**Commands:** get, subscribe, unsubscribe

**URL:** /amp/powerSupply/acLineCurrent

**Values:** 0.0 through 100.0 amps

**Example:** get /amp/powerSupply/acLineCurrent\n

- Response: /amp/powerSupply/acLineCurrent 0.5\n
- The command asked for the amplifier AC Line Current RMS and got the response 0.5 amps

The screenshot displays the LEA web interface. On the left, there is a list of three amplifier units: '1 O.S. 8CH Test', '2 BJD 704D (TEST)', and '3 BJD 702 (DEV)'. Each unit has a status bar with icons for power, smiley face, network, speaker, and leaf. The right side of the interface shows the 'Power Supply' section with the following details:

- AC Line Voltage: 118 VoltsRMS
- AC Line Current: 0.5 AmpsRMS (highlighted in a red box)
- AC Fault Limits: OK
- Auto Standby: Enabled, Threshold: -60 dBFS, Wait Time: 1 minutes
- 4/4 Channels Active



## AC Line Power Draw

**Type:** SENSOR

**Commands:** get, subscribe, unsubscribe

**URL:** /amp/powerSupply/acLineWatts

**Values:** 0.0 through 5000.0

**Example:** get /amp/powerSupply/acLineWatts\n

- Response: /amp/powerSupply/acLineWatts 61\n
- The command asked for the amplifier ac line watts and got the response 61 watts

The screenshot shows the LEA web interface. On the left, there is a list of three devices: '1 O.S. 8CH Test' (IP: 192.168.1.232), '2 BJD 704D (TEST)' (IP: 192.168.1.233), and '3 BJD 702 (DEV)' (IP: 192.168.1.234). Each device card has a power icon, a smiley face, a network icon, a speaker icon, and a leaf icon. On the right, the 'Realtime Power Usage' section is highlighted with a red box, showing '61 Watts'. Below this, the 'Auto Standby' section is visible, with a toggle switch set to 'Enabled', a threshold of '-60 dBFS', and a wait time of '1 minutes'. The 'Estimated Power Usage When in Auto Standby' is '25.0 Watts'. The 'Power over Ethernet' section shows 'PoE Status' as 'Off' and 'Estimated Power Usage When in Standby with PoE' as '2.5 Watts'.

## Power Supply Fault Status

**Type:** SENSOR

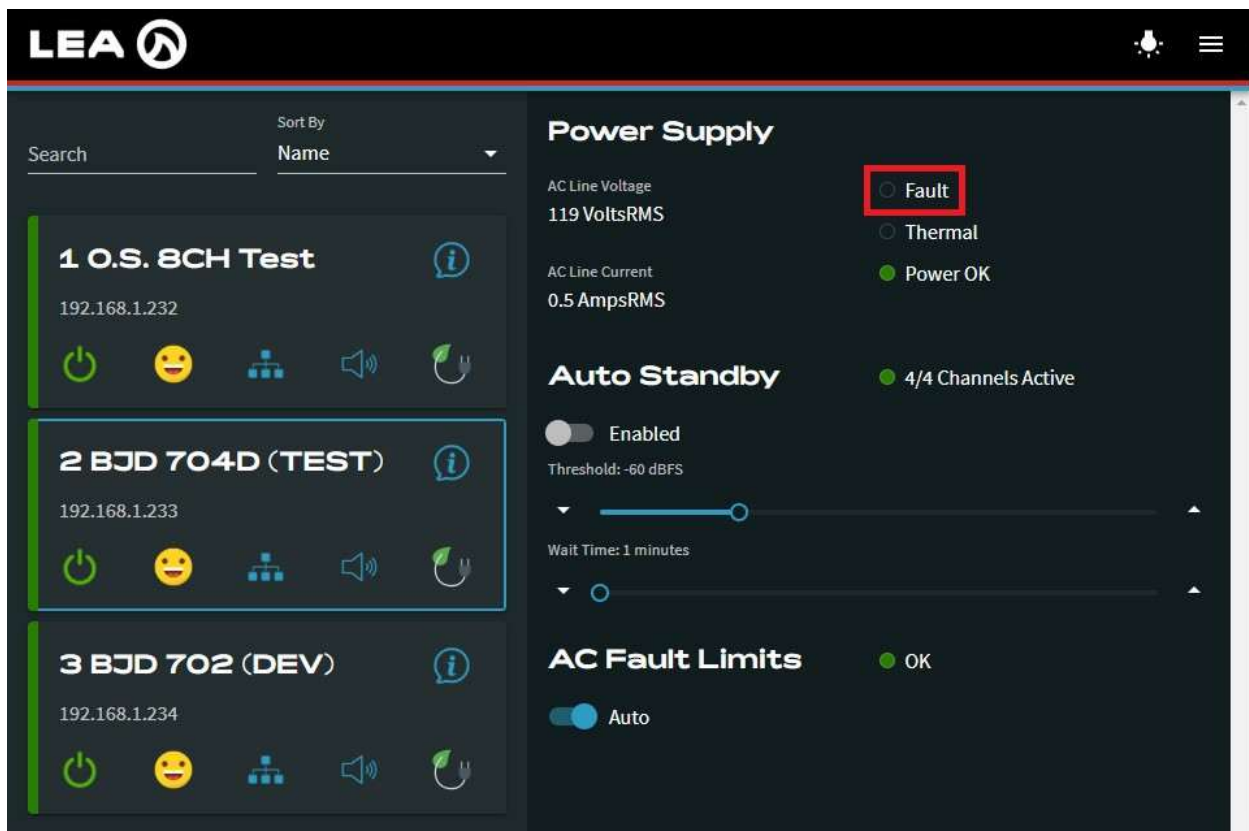
**Commands:** get, subscribe, unsubscribe

**URL:** /amp/powerSupply/fault

**Values:** "true", "false"

**Example:** get /amp/powerSupply/fault\n

- Response: /amp/powerSupply/fault false\n
- The command asked for the power supply fault status and got the response False, meaning there is no power supply fault



The screenshot shows the LEA control interface. On the left, there is a list of three test units: '1 O.S. 8CH Test', '2 BJD 704D (TEST)', and '3 BJD 702 (DEV)'. Each unit has a status bar with icons for power, smiley face, network, speaker, and refresh. The '2 BJD 704D (TEST)' unit is highlighted with a blue border. On the right, the 'Power Supply' section is visible. It shows 'AC Line Voltage' at 119 VoltsRMS and 'AC Line Current' at 0.5 AmpsRMS. The 'Fault' status is indicated by a red box around the 'Fault' radio button, which is selected. Other options include 'Thermal' and 'Power OK'. Below this, the 'Auto Standby' section is shown with a toggle for 'Enabled' and a 'Threshold' slider set to -60 dBFS. The 'AC Fault Limits' section is also visible with a toggle for 'Auto' and a status of 'OK'.

## Power Supply Thermal Protection Status

**Type:** SENSOR

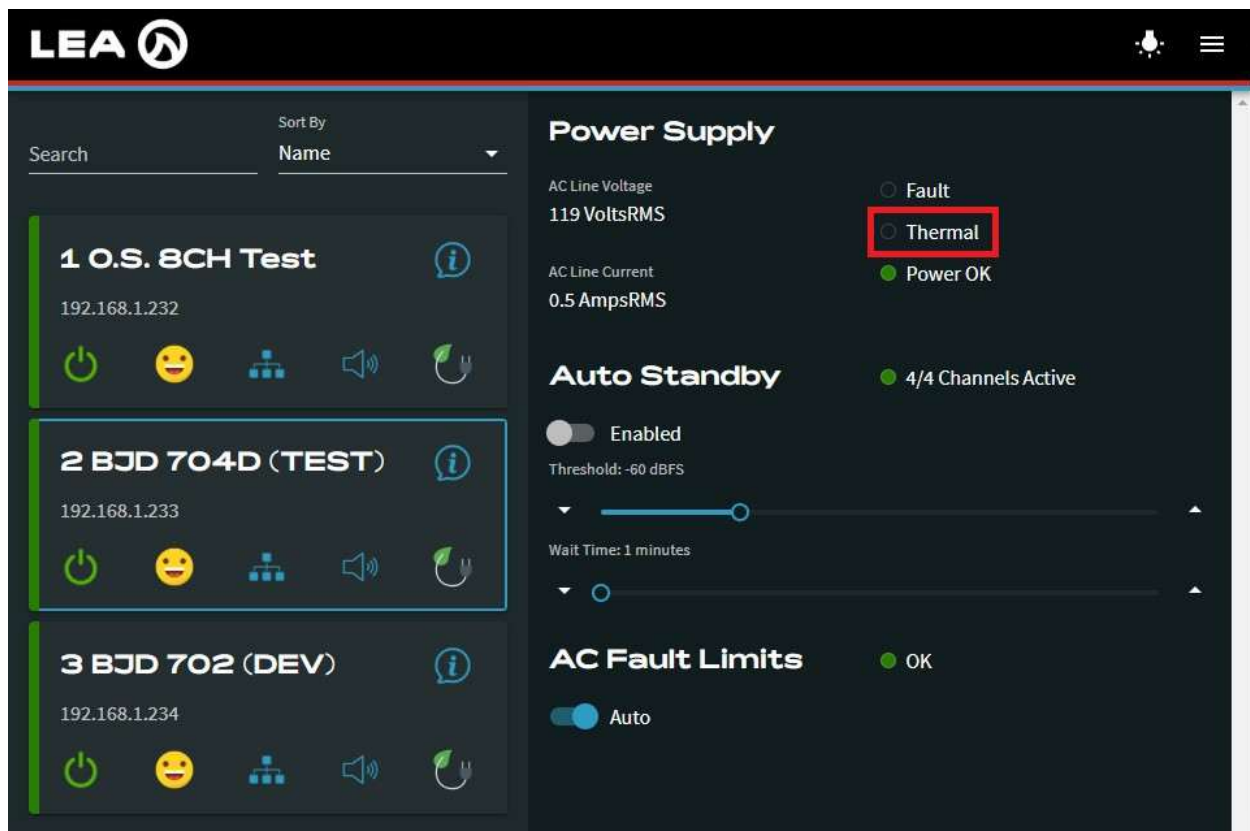
**Commands:** get, subscribe, unsubscribe

**URL:** /amp/powerSupply/thermal

**Values:** "true", "false"

**Example:** get /amp/powerSupply/thermal\n

- Response: /amp/powerSupply/thermal false\n
- The command asked for the power supply thermal protection status and got the response False, meaning there is no thermal protection active, and the amplifier is operating at a safe temperature



The screenshot shows the LEA web interface with a dark theme. On the left, there is a list of three test channels: '1 O.S. 8CH Test', '2 BJD 704D (TEST)', and '3 BJD 702 (DEV)'. The second channel is highlighted with a blue border. On the right, the 'Power Supply' section is visible, showing 'AC Line Voltage' at 119 VoltsRMS and 'AC Line Current' at 0.5 AmpsRMS. Below this, there are three status indicators: 'Fault' (disabled), 'Thermal' (disabled and highlighted with a red box), and 'Power OK' (enabled). Further down, the 'Auto Standby' section is shown with a toggle set to 'Enabled', a threshold of -60 dBFS, and a wait time of 1 minute. At the bottom, the 'AC Fault Limits' section is shown with a toggle set to 'Auto' and a status of 'OK'.

## Power Supply Power OK Status

**Type:** SENSOR

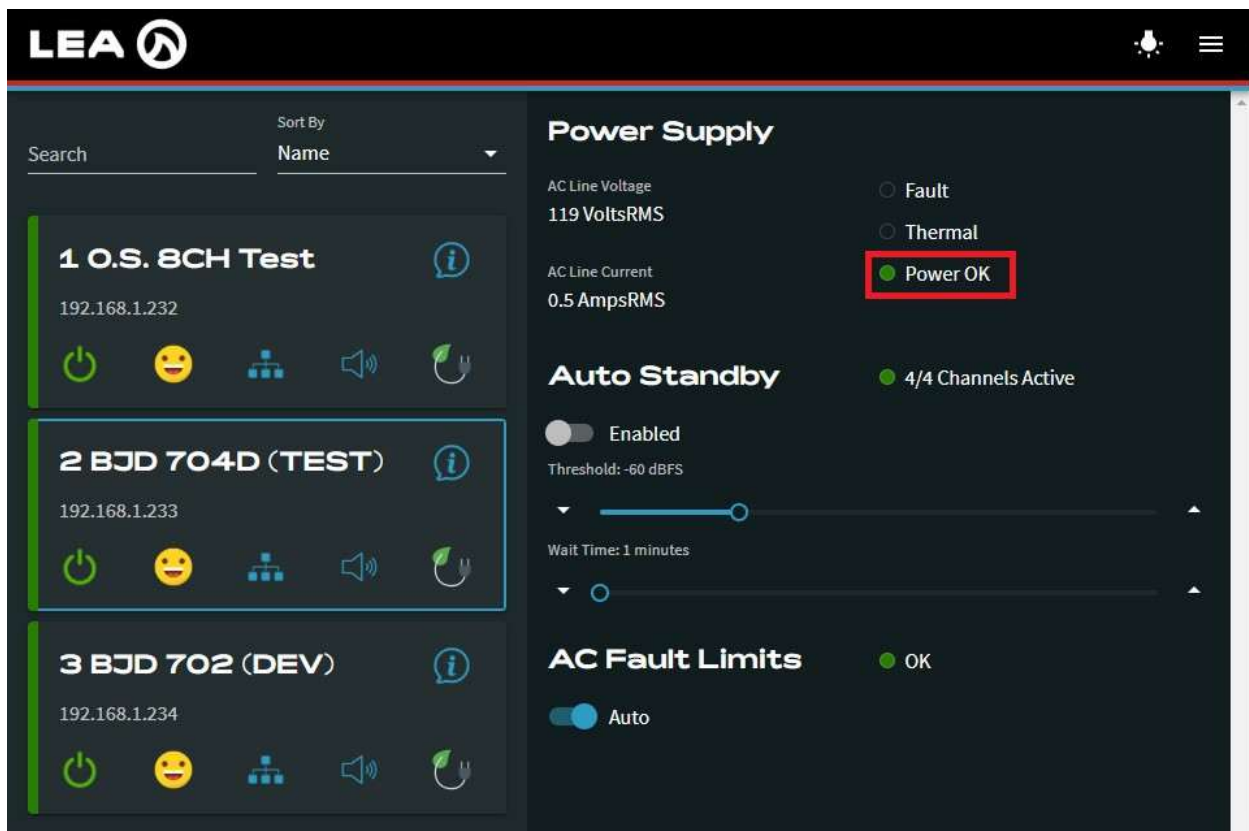
**Commands:** get, subscribe, unsubscribe

**URL:** /amp/powerSupply/powerOk

**Values:** "true", "false"

**Example:** get /amp/powerSupply/powerOk\n

- Response: /amp/powerSupply/powerOk true\n
- The command asked for the power supply power ok status and got the response True, meaning that the power is Ok



The screenshot displays the LEA control interface. On the left, there is a list of three test units: '1 O.S. 8CH Test', '2 BJD 704D (TEST)', and '3 BJD 702 (DEV)'. Each unit has a set of control icons (power, smiley face, network, speaker, and leaf) and a status indicator. The '2 BJD 704D (TEST)' unit is highlighted with a blue border. On the right, the 'Power Supply' section shows 'AC Line Voltage' at 119 VoltsRMS and 'AC Line Current' at 0.5 AmpsRMS. The 'Power OK' status is indicated by a green dot, which is highlighted with a red box. Other sections include 'Auto Standby' (Enabled, Threshold: -60 dBFS, Wait Time: 1 minutes) and 'AC Fault Limits' (OK, Auto).

## Power Supply AC Line Voltage Ok

**Type:** SENSOR

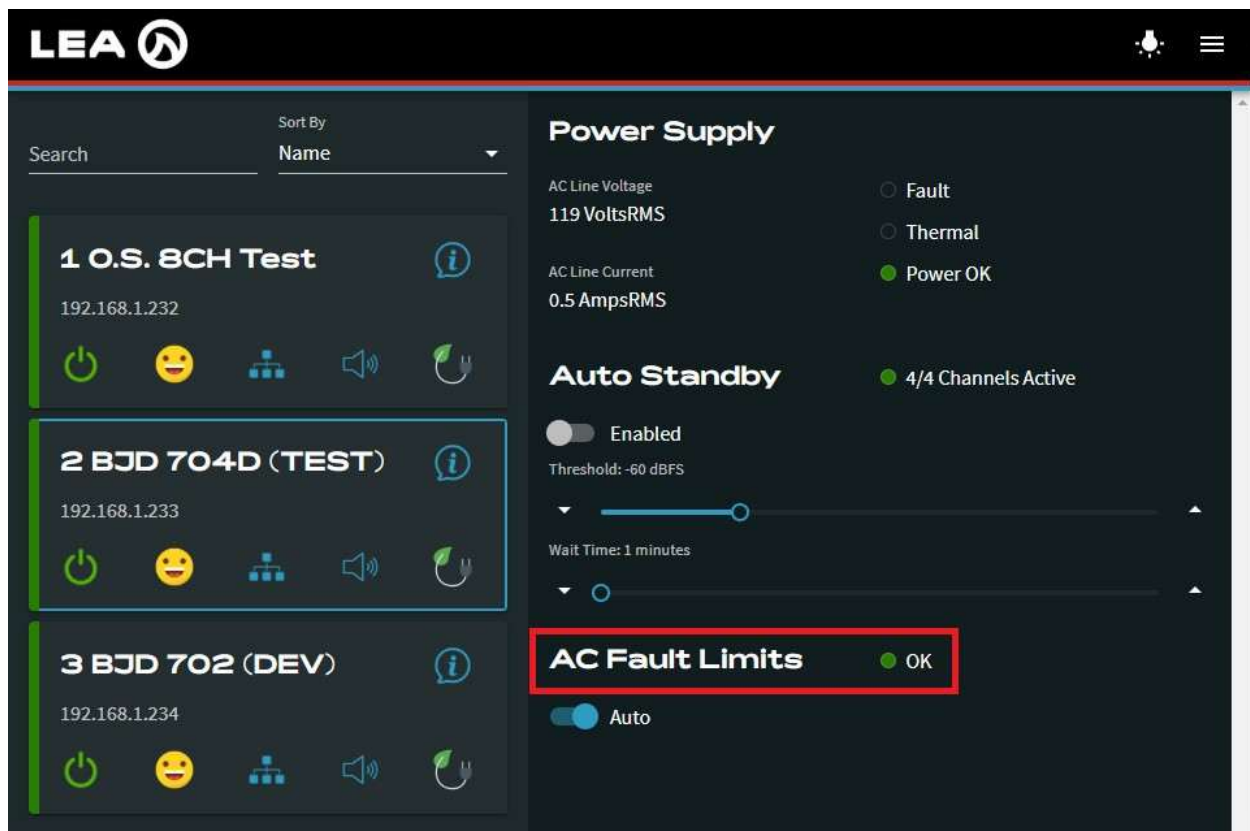
**Commands:** get, subscribe, unsubscribe

**URL:** /amp/powerSupply/lineWarning

**Values:** "true", "false"

**Example:** get /amp/powerSupply/lineWarning\n

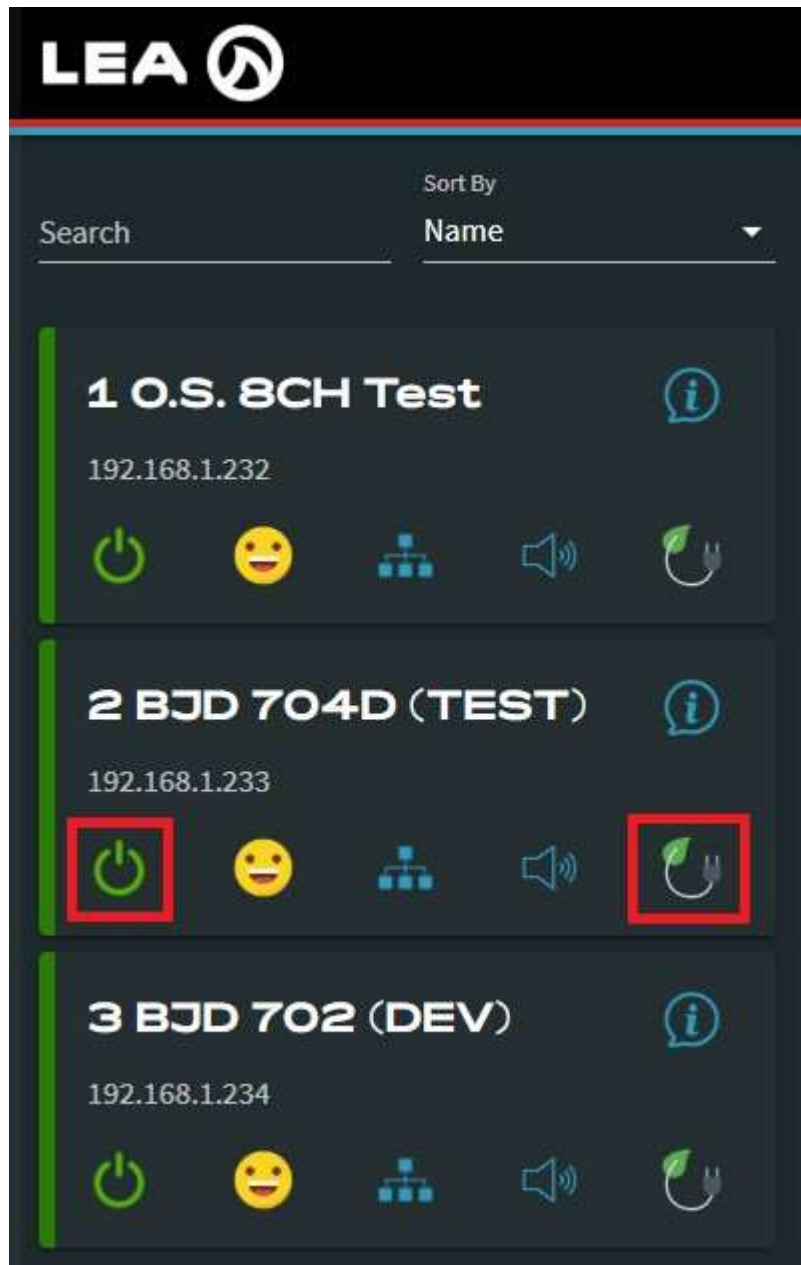
- Response: /amp/powerSupply/lineWarning true\n
- The command asked for the power supply AC line voltage ok status and got the response True, meaning that it is Ok



The screenshot displays the LEA control interface. On the left, there is a list of three test units: '1 O.S. 8CH Test', '2 BJD 704D (TEST)', and '3 BJD 702 (DEV)'. Each unit has a set of control icons (power, status, network, audio, and refresh). The right panel shows the 'Power Supply' configuration. It displays 'AC Line Voltage' at 119 VoltsRMS and 'AC Line Current' at 0.5 AmpsRMS. The status is 'Power OK'. Below this, the 'Auto Standby' feature is enabled with a threshold of -60 dBFS and a wait time of 1 minute. At the bottom, the 'AC Fault Limits' are set to 'OK' and 'Auto'.

## Auto Standby

Click on the power supply or green power menu buttons to view the relevant pages for this API section



## Auto Standby Enable

**Type:** CONTROL

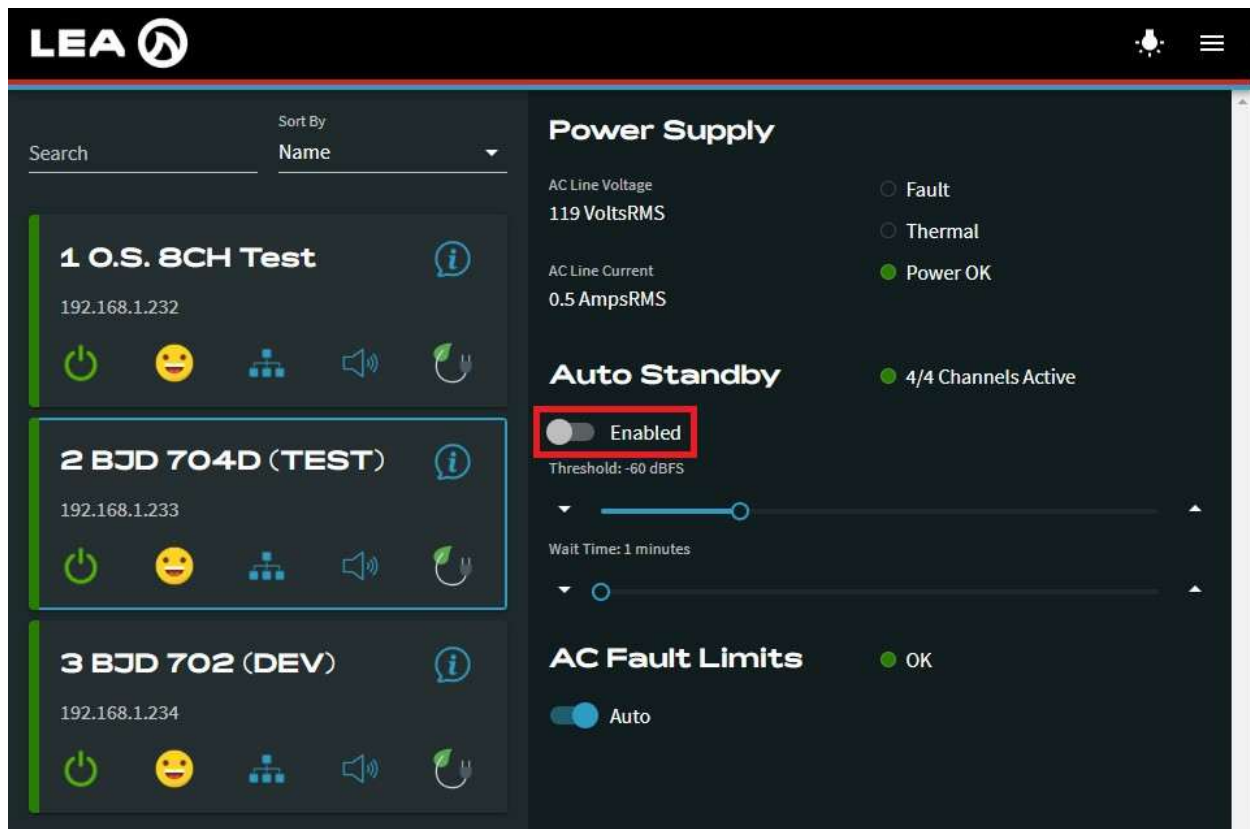
**Commands:** get, set, subscribe, unsubscribe

**URL:** /amp/autoStandby/enable

**Values:** "true", "false"

**Example:** set /amp/autoStandby/enable "true"\n

- Response: OK\n
- The command set the auto standby setting to enabled



The screenshot displays the LEA web interface. On the left, there is a list of three test units: '1 O.S. 8CH Test' (IP: 192.168.1.232), '2 BJD 704D (TEST)' (IP: 192.168.1.233), and '3 BJD 702 (DEV)' (IP: 192.168.1.234). Each unit card includes a power icon, a smiley face, a network icon, a speaker icon, and a refresh icon. The '2 BJD 704D (TEST)' card is highlighted with a blue border. On the right, the 'Power Supply' section shows 'AC Line Voltage' at 119 VoltsRMS and 'AC Line Current' at 0.5 AmpsRMS. Below this, the 'Auto Standby' section features a toggle switch labeled 'Enabled' which is currently turned on and highlighted with a red box. Underneath the toggle, there is a 'Threshold: -60 dBFS' label and a slider control. The 'Wait Time: 1 minutes' is also visible. At the bottom right, the 'AC Fault Limits' section shows a status of 'OK' and an 'Auto' toggle switch.

## Auto Standby Threshold

**Type:** CONTROL

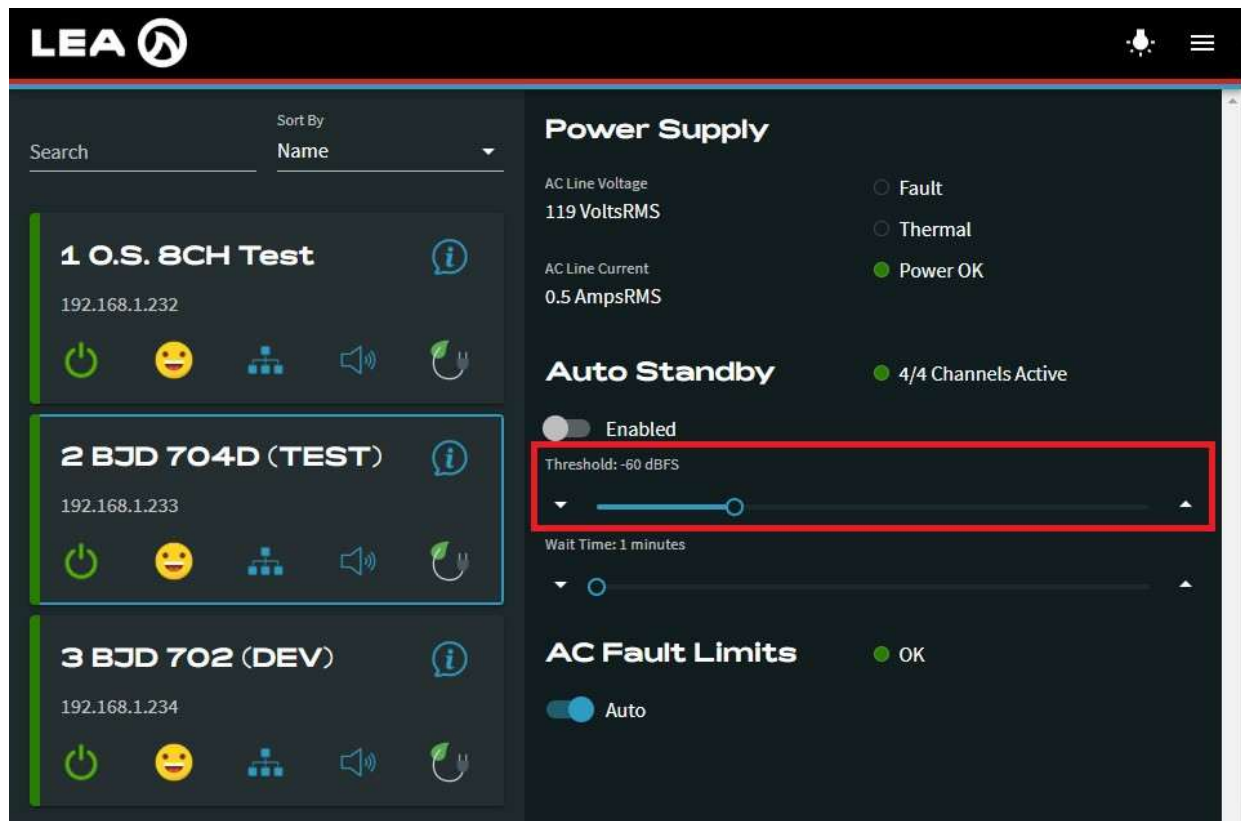
**Commands:** get, set, subscribe, unsubscribe

**URL:** /amp/autoStandby/threshold

**Values:** -80.0 through 0.0

**Example:** set /amp/autoStandby/threshold -60.0\n

- Response: OK\n
- The command set the auto standby threshold to -60.0 dBFS



The screenshot displays the LEA control interface. On the left, there is a list of three test channels: '1 O.S. 8CH Test' (IP: 192.168.1.232), '2 BJD 704D (TEST)' (IP: 192.168.1.233), and '3 BJD 702 (DEV)' (IP: 192.168.1.234). Each channel has a set of control icons. On the right, the 'Power Supply' section shows 'AC Line Voltage' at 119 VoltsRMS and 'AC Line Current' at 0.5 AmpsRMS. Below this, the 'Auto Standby' section is highlighted with a red box. It shows a toggle switch for 'Enabled', a 'Threshold: -60 dBFS' slider, and a 'Wait Time: 1 minutes' slider. The 'AC Fault Limits' section shows 'Power OK' and 'Auto' mode selected.

## Auto Standby Wait Time

**Type:** CONTROL

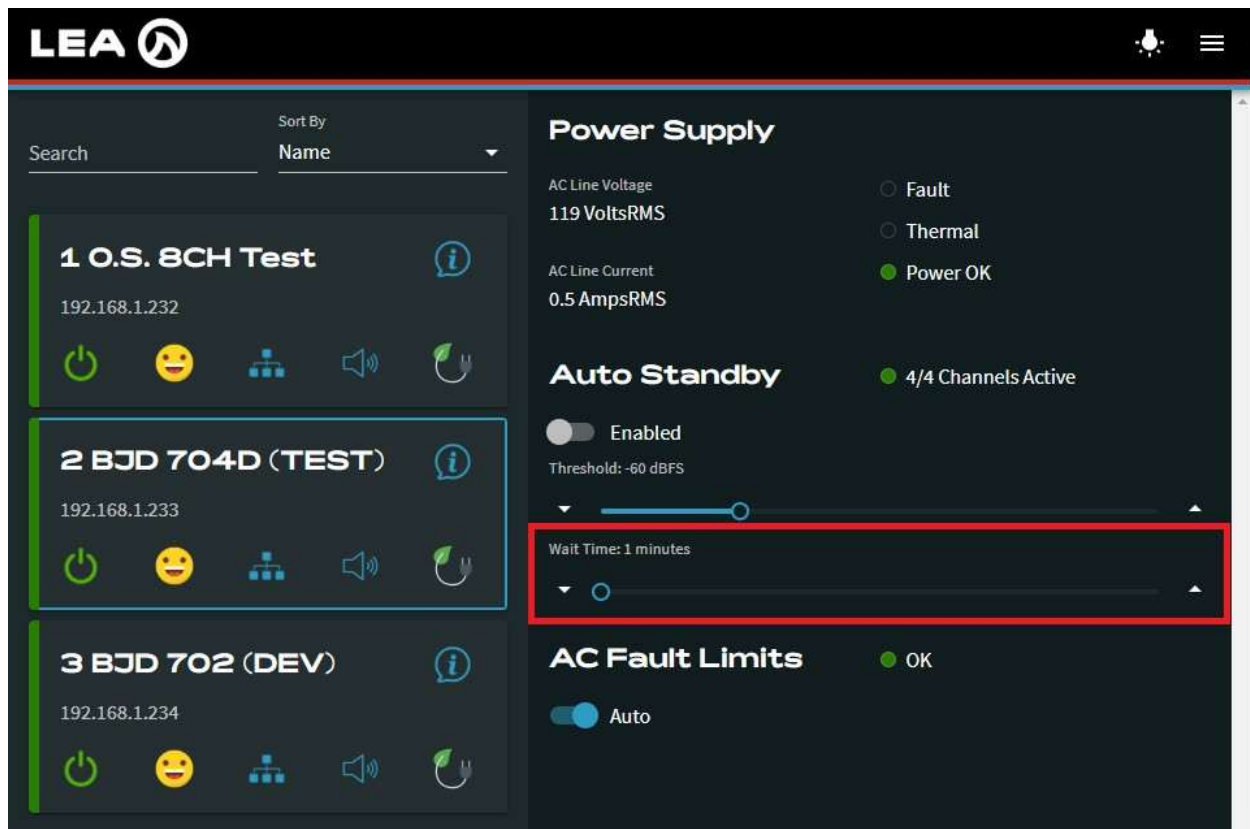
**Commands:** get, set, subscribe, unsubscribe

**URL:** /amp/autoStandby/timeToWait

**Values:** 1 through 240

**Example:** set /amp/autoStandby/timeToWait 1\n

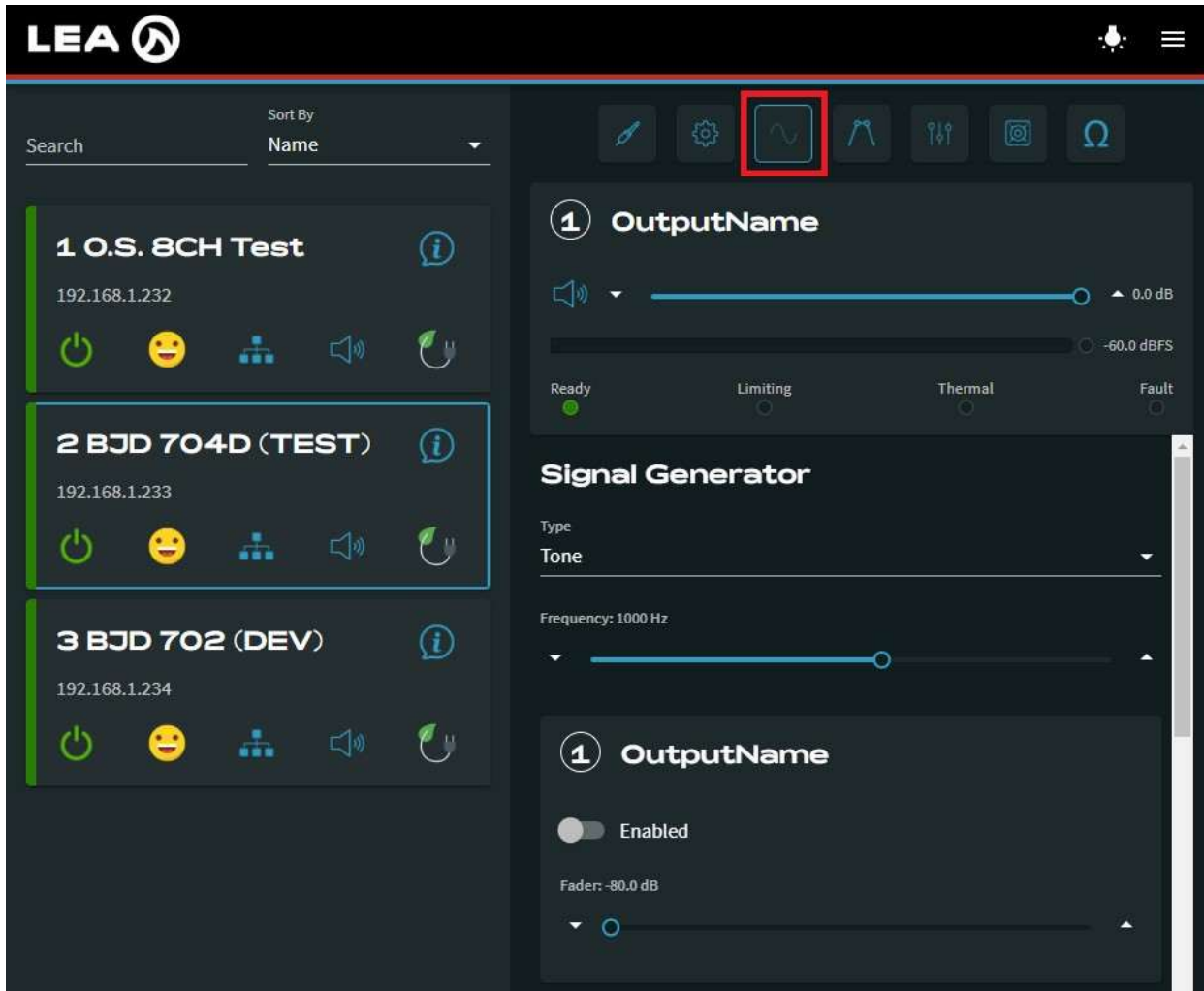
- Response: OK\n
- The command set the auto standby wait time to 1 minute



The screenshot displays the LEA control interface. On the left, there is a list of three test channels: '1 O.S. 8CH Test', '2 BJD 704D (TEST)', and '3 BJD 702 (DEV)'. Each channel card includes a search bar, a 'Sort By Name' dropdown, and a set of control icons (power, status, network, audio, and refresh). The '2 BJD 704D (TEST)' channel is highlighted with a red border. On the right, the 'Power Supply' section shows 'AC Line Voltage' at 119 VoltsRMS and 'AC Line Current' at 0.5 AmpsRMS. Below this, the 'Auto Standby' section is active, showing a toggle for 'Enabled' and a 'Threshold: -60 dBFS'. A red box highlights the 'Wait Time: 1 minutes' setting, which is currently set to 1 minute. The 'AC Fault Limits' section shows 'OK' and 'Auto' mode.

## Signal Generator

Click on this button to navigate to the signal generator page relevant to this API section



## Signal Generator Type

**Type:** CONTROL

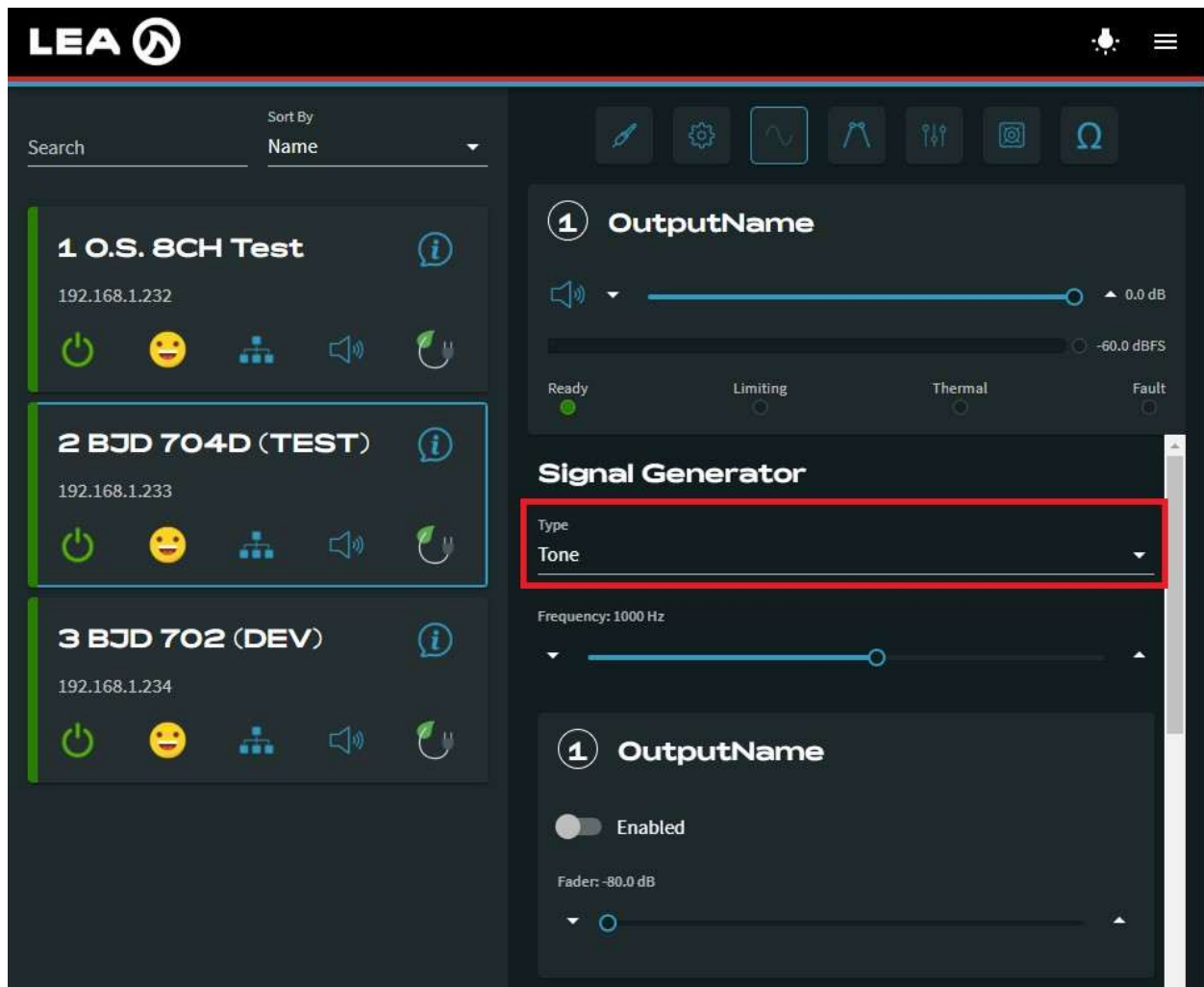
**Commands:** get, set, subscribe, unsubscribe

**URL:** /amp/signalGenerator/type

**Values:** "Pink Noise", "White Noise", "Tone"

**Example:** set /amp/signalGenerator/type "Tone"\n

- Response: OK\n
- The command set the signal generator type to sine wave tone



The screenshot displays the LEA control interface. On the left, there is a list of three test configurations: '1 O.S. 8CH Test' (IP: 192.168.1.232), '2 BJD 704D (TEST)' (IP: 192.168.1.233), and '3 BJD 702 (DEV)' (IP: 192.168.1.234). Each configuration has a set of control icons including power, status, network, audio, and refresh. The right side of the interface shows the configuration for the selected device. The 'Signal Generator' section is highlighted with a red box, showing the 'Type' dropdown menu set to 'Tone'. Other visible settings include 'OutputName', 'Frequency: 1000 Hz', 'Enabled' toggle, and 'Fader: -80.0 dB'.

## Signal Generator Tone Frequency

**Type:** CONTROL

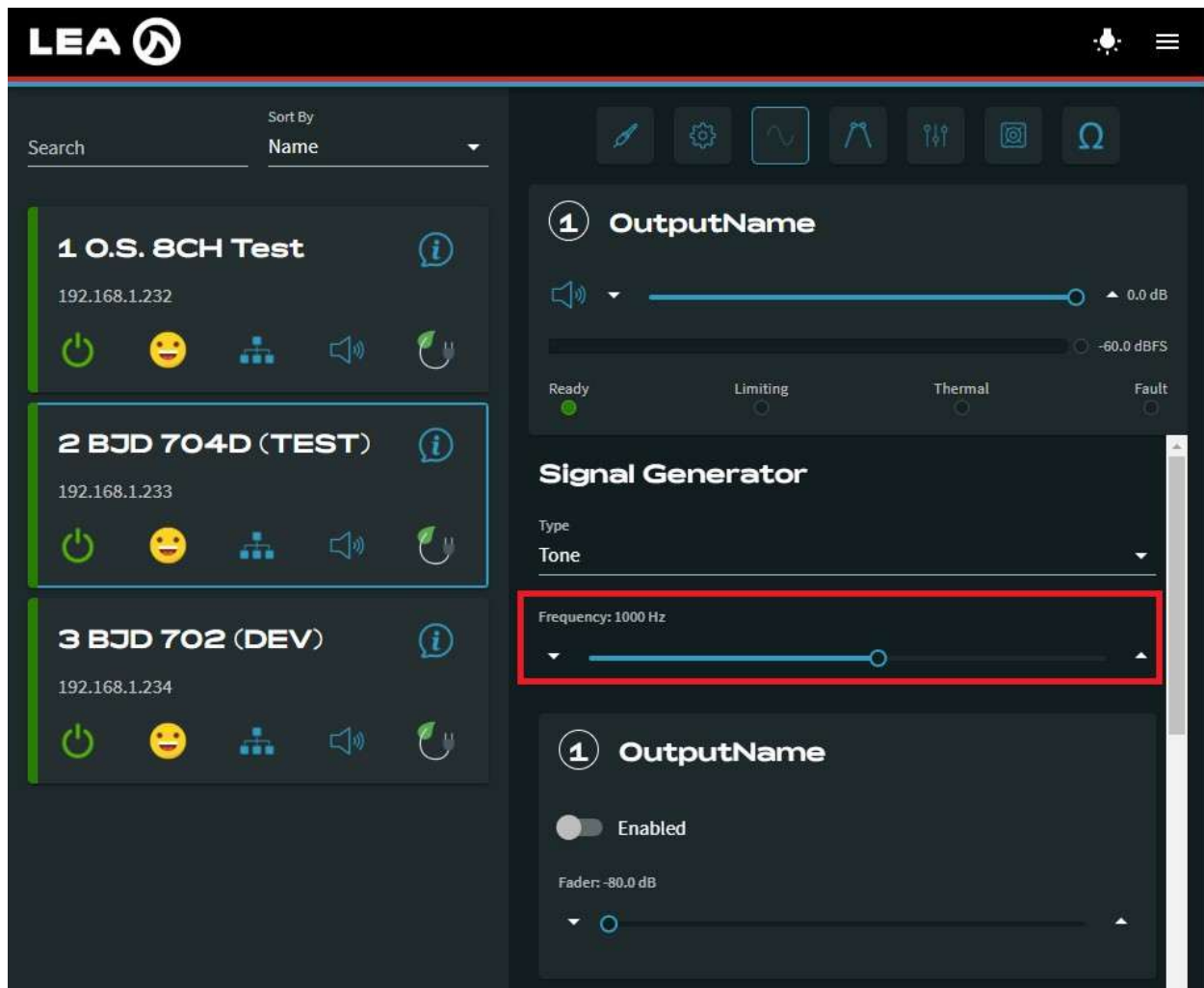
**Commands:** get, set, subscribe, unsubscribe

**URL:** /amp/signalGenerator/frequency

**Values:** 20 through 20000

**Example:** set /amp/signalGenerator/frequency 1000\n

- Response: OK\n
- The command set the signal generator sine wave tone frequency to 1000 Hz



The screenshot displays the LEA control interface. On the left, a list of three test configurations is shown: '1 O.S. 8CH Test' (IP: 192.168.1.232), '2 BJD 704D (TEST)' (IP: 192.168.1.233), and '3 BJD 702 (DEV)' (IP: 192.168.1.234). Each configuration has a set of control icons. The right panel shows the configuration for the selected device. The 'Signal Generator' section is highlighted with a red box, showing the 'Type' set to 'Tone' and the 'Frequency' set to '1000 Hz'. Below this, there is an 'OutputName' section with an 'Enabled' toggle and a 'Fader' set to '-80.0 dB'.

## Amplifier Inputs

Click on this button to navigate to the Input section of the DSP relevant to this API section

The screenshot displays the LEA software interface for configuring amplifier inputs. On the left, a list of three API sections is shown: '1 O.S. 8CH Test' (IP: 192.168.1.232), '2 BJD 704D (TEST)' (IP: 192.168.1.233), and '3 BJD 702 (DEV)' (IP: 192.168.1.234). Each entry includes status icons for power, smiley face, network, speaker, and refresh. The '2 BJD 704D (TEST)' entry is highlighted with a blue border. On the right, the configuration panel for the selected API is visible. A red box highlights a pencil icon in the top toolbar. Below it, the 'OutputName' section shows a volume slider set to 0.0 dB, with a range from -60.0 dBFS. Status indicators for 'Ready', 'Limiting', 'Thermal', and 'Fault' are shown below the slider. The 'Primary Input' section is active, showing 'Input Signal' at 0.0 dB, a volume slider, and an 'Input' dropdown menu set to 'Analog 1'. The 'Sensitivity' is set to 34dB. The 'Secondary Input' section is currently inactive, showing 'Input Signal' at 0.0 dB and an 'Input' dropdown menu set to 'None'. On the far right, two vertical level meters are visible, labeled 'IN' and 'OUT', with 'PRI' and 'SEC' sub-labels. The 'IN' meter shows a signal level near 0 dB, while the 'OUT' meter shows a level near -6 dB.

## Analog Input Sensitivity

**Type:** CONTROL

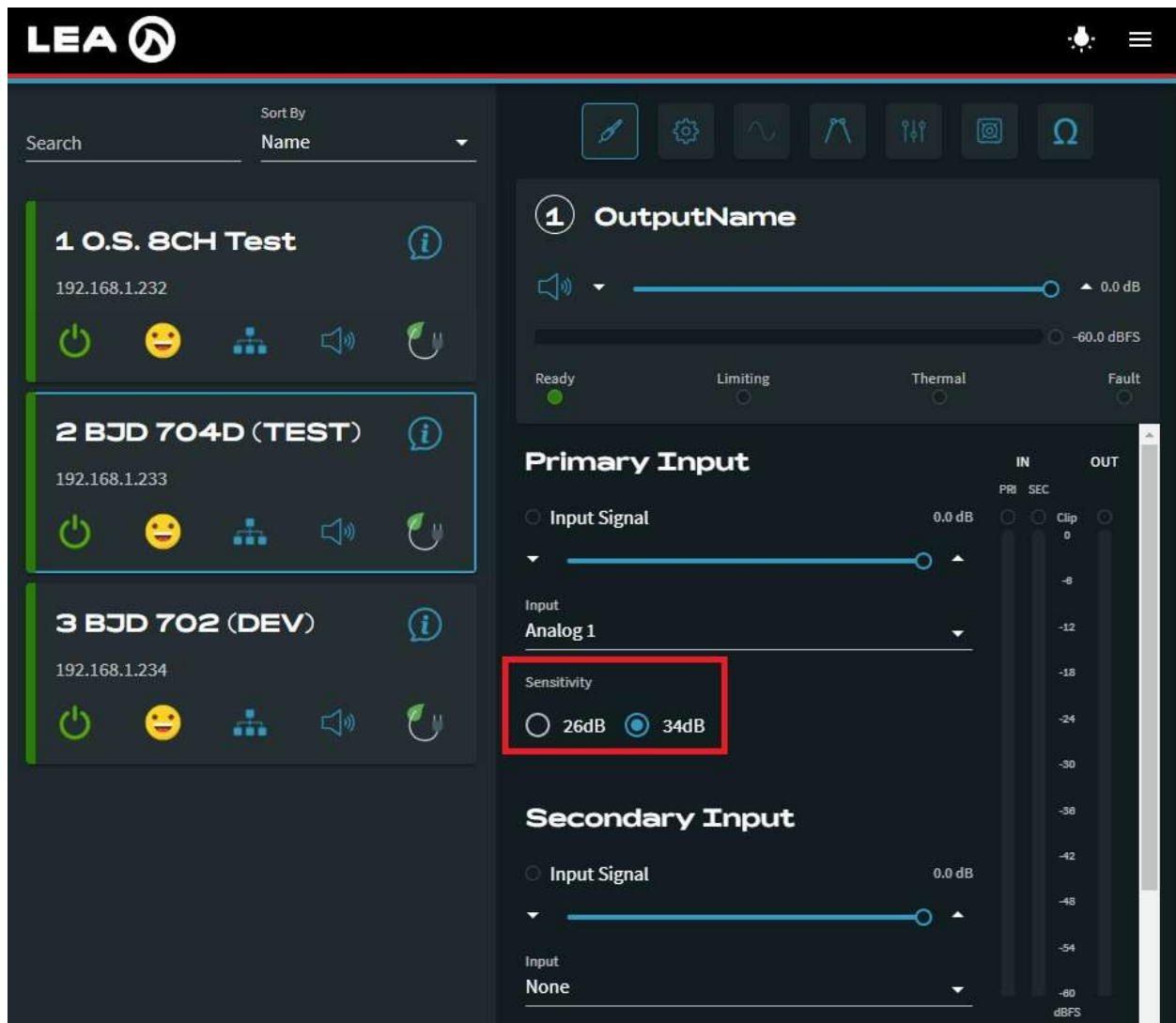
**Commands:** get, set, subscribe, unsubscribe

**URL:** /amp/inputs/analog/#/sensitivity

**Values:** "26dB", "34dB"

**Example:** set /amp/inputs/analog/1/sensitivity "34dB"\n

- Response: OK\n
- The command set the sensitivity of the Analog 1 input to 34dB



The screenshot displays the LEA control interface. On the left, there is a list of three test channels: 1 O.S. 8CH Test (IP: 192.168.1.232), 2 BJD 704D (TEST) (IP: 192.168.1.233), and 3 BJD 702 (DEV) (IP: 192.168.1.234). The second channel is highlighted with a blue border. On the right, the control panel for the selected channel is shown. The 'OutputName' section has a volume slider set to 0.0 dB. Below it, the 'Primary Input' section is active, showing 'Input Signal' at 0.0 dB and 'Input' set to 'Analog 1'. The 'Sensitivity' section is highlighted with a red box, showing two radio buttons: '26dB' (unselected) and '34dB' (selected). The 'Secondary Input' section is currently set to 'None'. On the far right, there are vertical meters for 'IN' (PRI and SEC) and 'OUT' (Clip) with a scale from 0 to -80 dBFS.



# OPEN API – TCP Protocol

Rev 7. 10-10-2025

## Primary Input Source

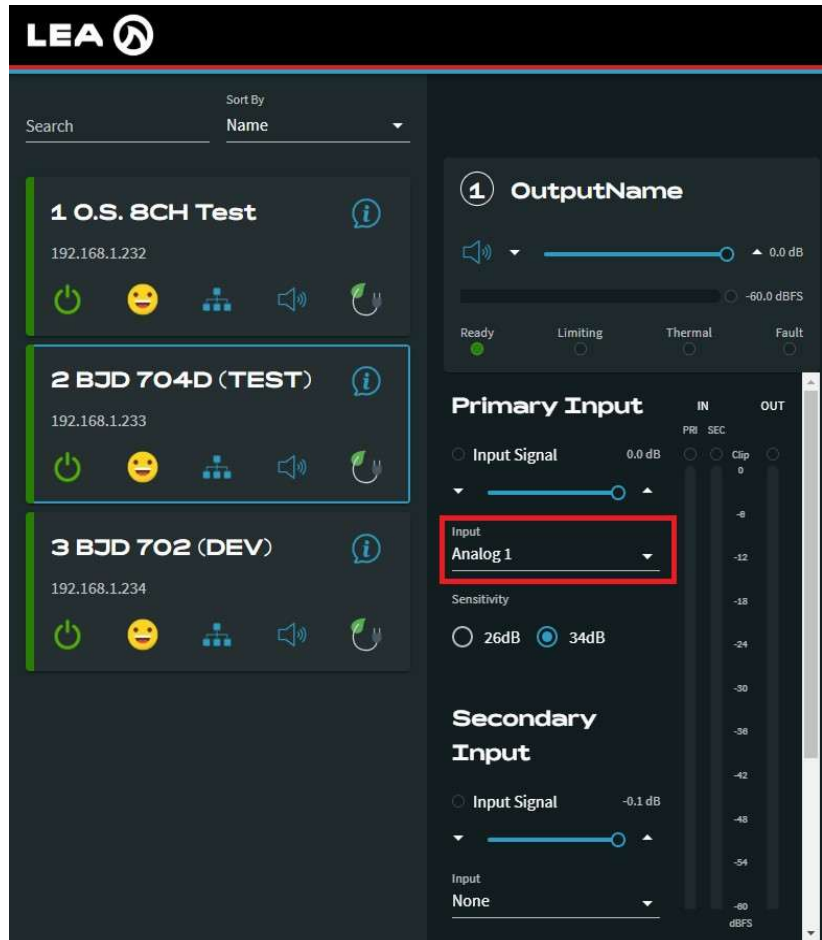
**Type:** CONTROL

**Commands:** get, set, subscribe, unsubscribe

**URL:** /amp/channels/x/inputSelector/primary

**Values:**

"Analog 1"  
"Analog 2"  
"Analog 1+2"  
"Analog 3"  
"Analog 4"  
"Analog 3+4"  
"Analog 5"  
"Analog 6"  
"Analog 5+6"  
"Analog 7"  
"Analog 8"  
"Analog 7+8"  
"Dante 1"  
"Dante 2"  
"Dante 1+2"  
"Dante 3"  
"Dante 4"  
"Dante 3+4"  
"Dante 5"  
"Dante 6"  
"Dante 5+6"  
"Dante 7"  
"Dante 8"  
"Dante 7+8"  
"Mixer"



**Example:** set /amp/channels/1/inputSelector/primary "Analog 1"\n

- This will set the primary input source on Channel 1 to "Analog 1"

For the Network Connect Series, only Analog inputs are available, and only the number of channels that are on the amplifier, for example a 354 would not have Analog 5-8 available.

For the Dante Connect Series analog inputs are only available for the number of inputs on the amplifier, however all 8 Dante inputs are available on all Dante models.

## Input Mixer – Input Source Mix Faders

**Note:** To access the individual Mix Faders and their attenuation adjustments within the WebUi, Mixer must be selected as the Primary Input Source. The attenuation adjustments made to the Mix Faders will only be in effect when Mixer is selected as the Primary Input Source.

**Type:** CONTROL

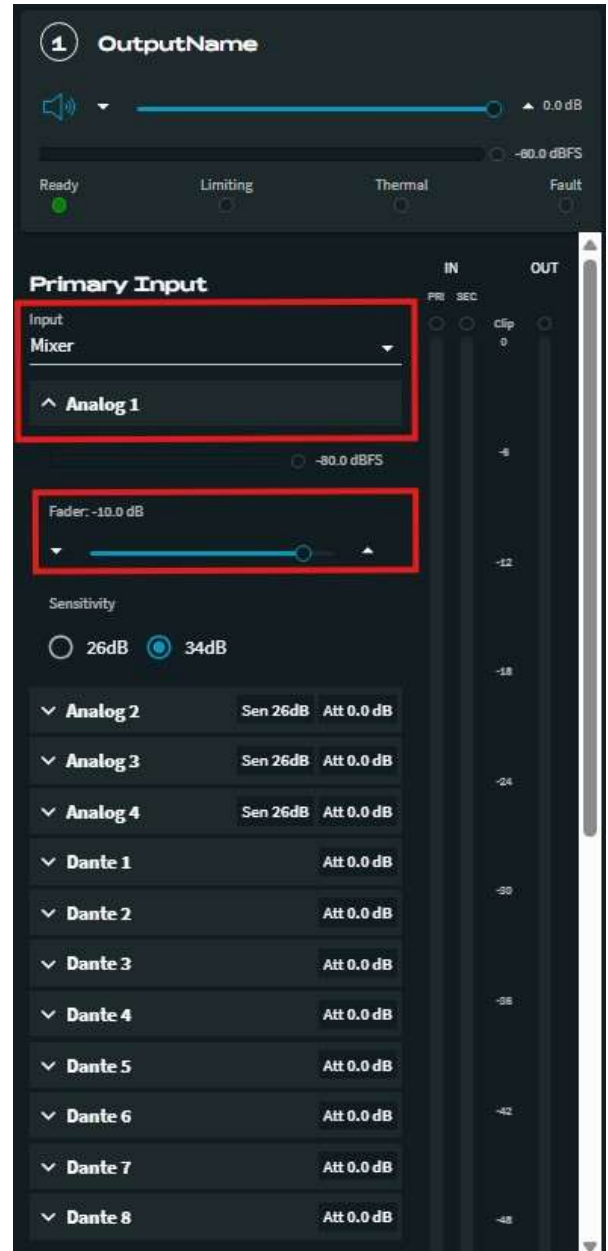
**Commands:** get, set, subscribe, unsubscribe

**URL:** /amp/channels/x/inputSelector/MixFader

**Values:** Attenuation values between -80 and 0

**Values continued:**

- "analog1MixFader"
- "analog2MixFader"
- "analog3MixFader"
- "analog4MixFader"
- "analog5MixFader"
- "analog6MixFader"
- "analog7MixFader"
- "analog8MixFader"
- "dante1MixFader"
- "dante2MixFader"
- "dante3MixFader"
- "dante4MixFader"
- "dante5MixFader"
- "dante6MixFader"
- "dante7MixFader"
- "dante8MixFader"



**Example:** set /amp/channels/1/inputSelector/analog1MixFader -10\n

- This will set the "analog1MixFader" on Channel 1 to -10.0dB

The number of Analog Mix Faders available within the Mixer section is determined by the number of channels in the amp model being used, for example a 354 would not have Analog Mix Faders 5-8 available.

## Primary Gain Attenuation Fader

**Type:** CONTROL

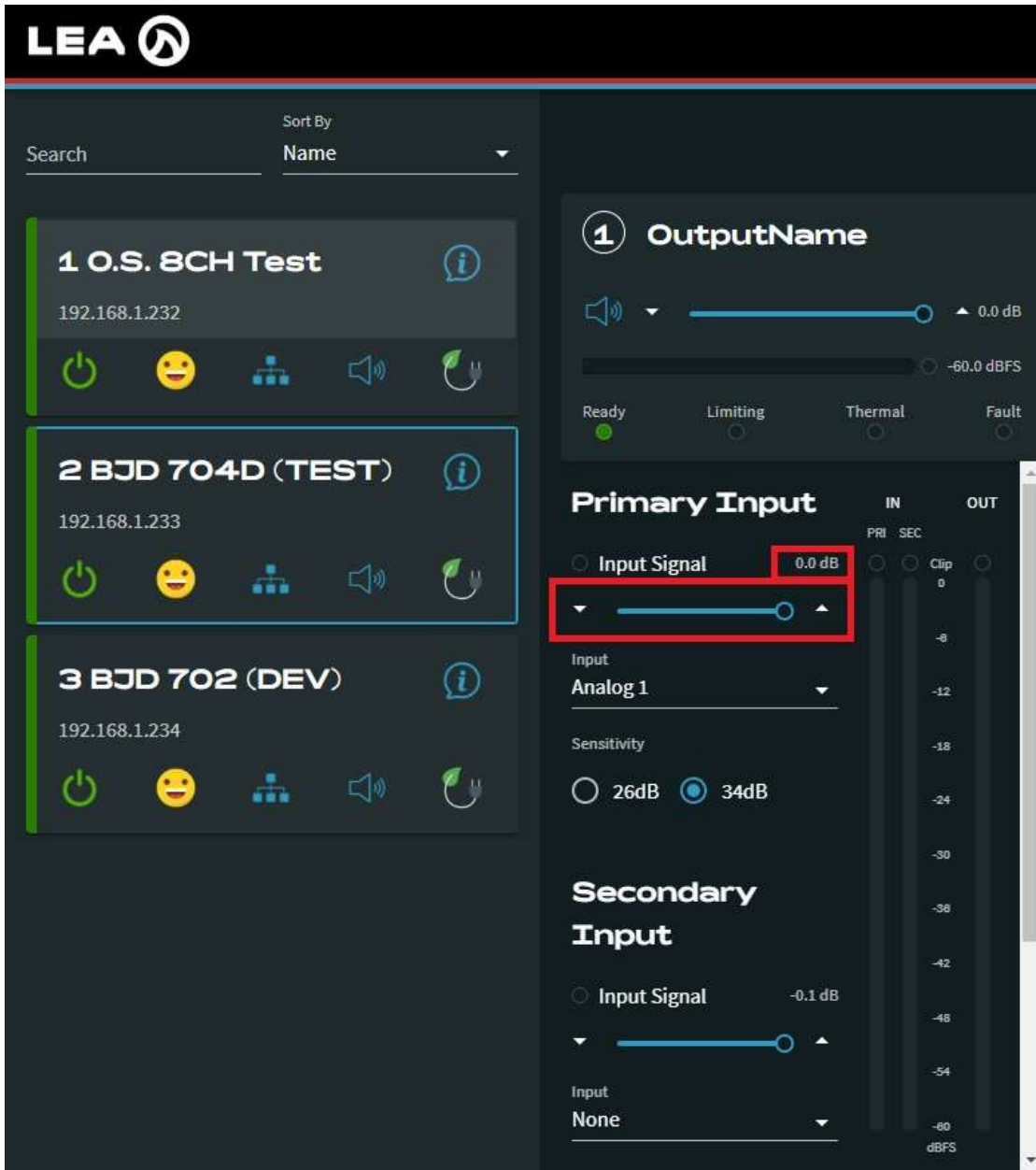
**Commands:** get, set, subscribe, unsubscribe

**URL:** /amp/channels/x/inputSelector/primaryFader

**Values:** Gain attenuation values between -80 and 0

**Example:** set /amp/channels/1/inputSelector/primaryFader -10.0\n

- This will set the Primary Input Level on Channel 1 to -10.0dB



The screenshot displays the LEA control interface. On the left, a list of channels is shown, with '2 BJD 704D (TEST)' selected. The right panel shows the 'OutputName' section with a volume slider set to 0.0 dB. Below this, the 'Primary Input' section is visible, featuring a red-bordered slider for 'Input Signal' set to 0.0 dB. The 'Secondary Input' section is also visible, with its 'Input Signal' slider set to -0.1 dB. The interface includes various status indicators like 'Ready', 'Limiting', 'Thermal', and 'Fault' for the output, and a vertical level meter for the primary and secondary inputs.

## Primary Input Meter

**Type:** SENSOR

**Commands:** get, subscribe, unsubscribe

**URL:** /amp/channels/x/inputSelector/primaryLevel

**Values:** -80 through 0 dBFS

**Example:** subscribe /amp/channels/1/inputSelector/primaryLevel\n

- This will subscribe to the primary input meter level for channel 1

The screenshot displays the LEA control interface. On the left, a list of channels is shown, with the second channel, '2 BJD 704D (TEST)', highlighted with a blue border. The right side of the interface shows detailed settings for the selected channel. The 'OutputName' section includes a volume slider set to 0.0 dB and status indicators for Ready, Limiting, Thermal, and Fault. The 'Primary Input' section shows 'Input Signal' at 0.0 dB and 'Input Analog 1' selected, with a sensitivity of 34dB. The 'Secondary Input' section shows 'Input Signal' at -0.1 dB and 'Input None' selected. A vertical red box highlights the 'Primary Input' level scale, which ranges from 0 dB down to -80 dBFS.

## Primary Input Signal Present

**Type:** SENSOR

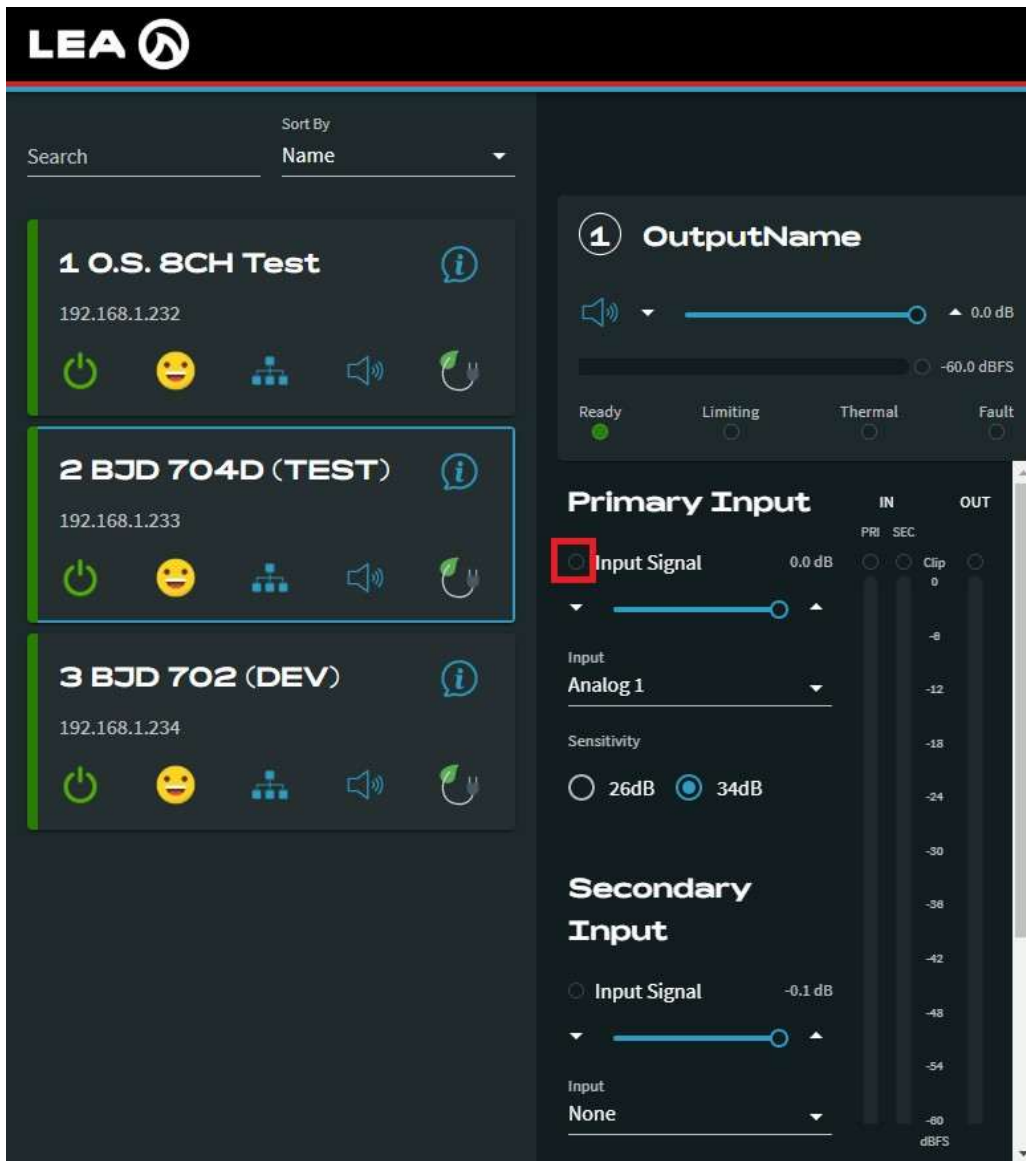
**Commands:** get, subscribe, unsubscribe

**URL:** /amp/channels/x/inputSelector/primarySignalDetect

**Values:** "true", "false"

**Example:** get /amp/channels/1/inputSelector/primarySignalDetect\n

- Response: /amp/channels/1/inputSelector/primarySignalDetect true\n
- This command asked to get the primary input signal presence state on Channel 1 and the response back was "true" meaning that signal is present



The screenshot displays the LEA control interface. On the left, a list of channels is shown:

- 1 O.S. 8CH Test** (192.168.1.232)
- 2 BJD 704D (TEST)** (192.168.1.233) - This channel is highlighted with a blue border.
- 3 BJD 702 (DEV)** (192.168.1.234)

Each channel card includes a power icon, a smiley face, a network icon, a speaker icon, and a refresh icon. On the right, the configuration for the selected channel (2 BJD 704D) is shown:

- OutputName** section: A volume slider is set to 0.0 dB, with a range from -60.0 dBFS to 0.0 dB. Status indicators for Ready (green), Limiting, Thermal, and Fault are shown.
- Primary Input** section: The **Input Signal** radio button is selected and highlighted with a red box. The current level is 0.0 dB. The input is set to **Analog 1**. Sensitivity is set to **34dB** (selected over 26dB).
- Secondary Input** section: The **Input Signal** radio button is unselected. The current level is -0.1 dB. The input is set to **None**.
- A vertical level meter on the right shows the signal levels for IN (PRI and SEC) and OUT (Clip, 0, -8, -12, -18, -24, -30, -36, -42, -48, -54, -60 dBFS).

## Primary Input Signal Clip Indicator

**Type:** SENSOR

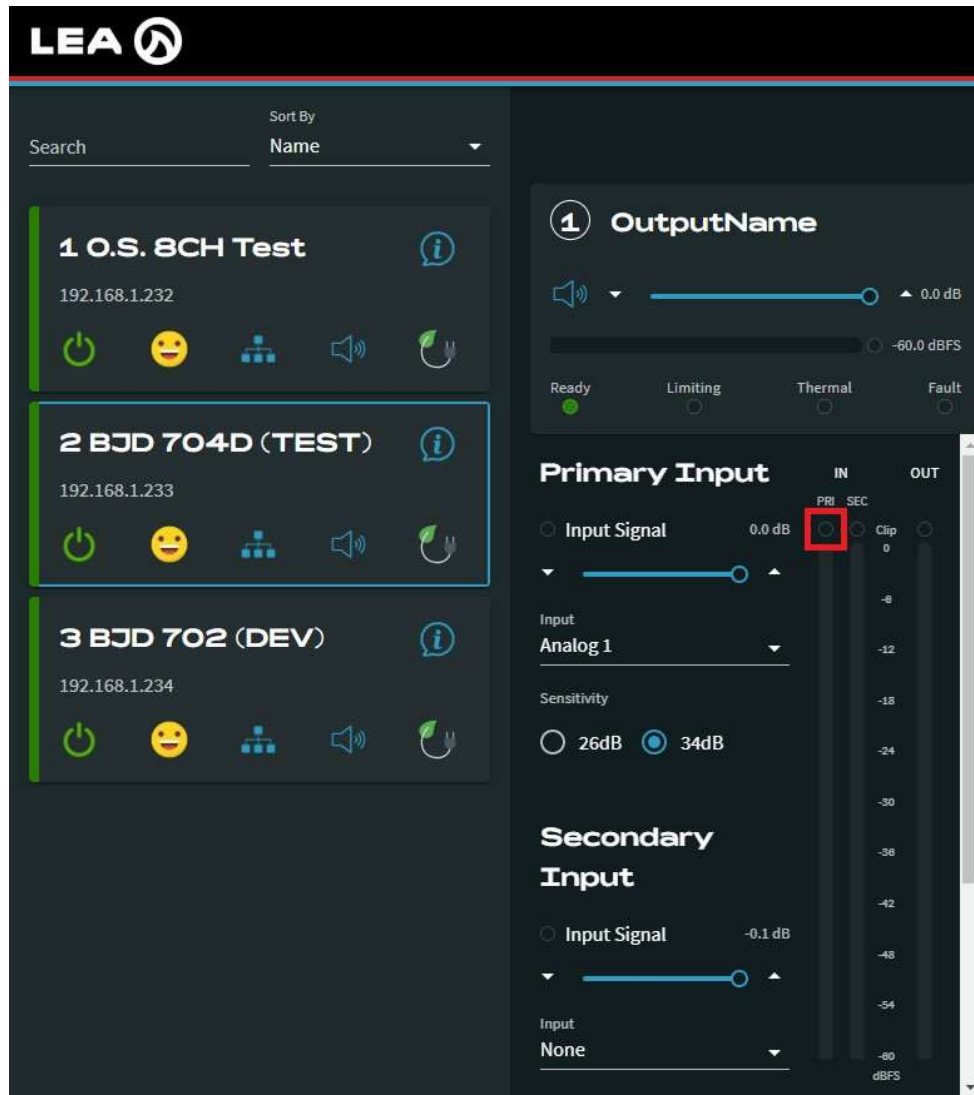
**Commands:** get, subscribe, unsubscribe

**URL:** /amp/channels/x/inputSelector/primaryClip

**Values:** "true", "false"

**Example:** subscribe /amp/channels/1/inputSelector/primaryClip\n

- Response: /amp/channels/1/inputSelector/primaryClip false\n
- This command asked to subscribe to primary input signal clip indication state on Channel 1 and the response back was "false" meaning that signal is not clipped, but as this is a subscription and any changes here will continue to be reported



The screenshot displays the LEA control interface. On the left, a list of channels is shown: '1 O.S. 8CH Test', '2 BJD 704D (TEST)', and '3 BJD 702 (DEV)'. The '2 BJD 704D (TEST)' channel is highlighted with a blue border. On the right, the '1 OutputName' control panel is visible, showing a volume slider set to 0.0 dB and a status indicator for 'Ready'. Below this, the 'Primary Input' section shows 'Input Signal' at 0.0 dB, with a red box highlighting the 'Clip' indicator. The 'Secondary Input' section shows 'Input Signal' at -0.1 dB. A vertical scale on the right indicates signal levels from 0 dB to -60 dBFS.

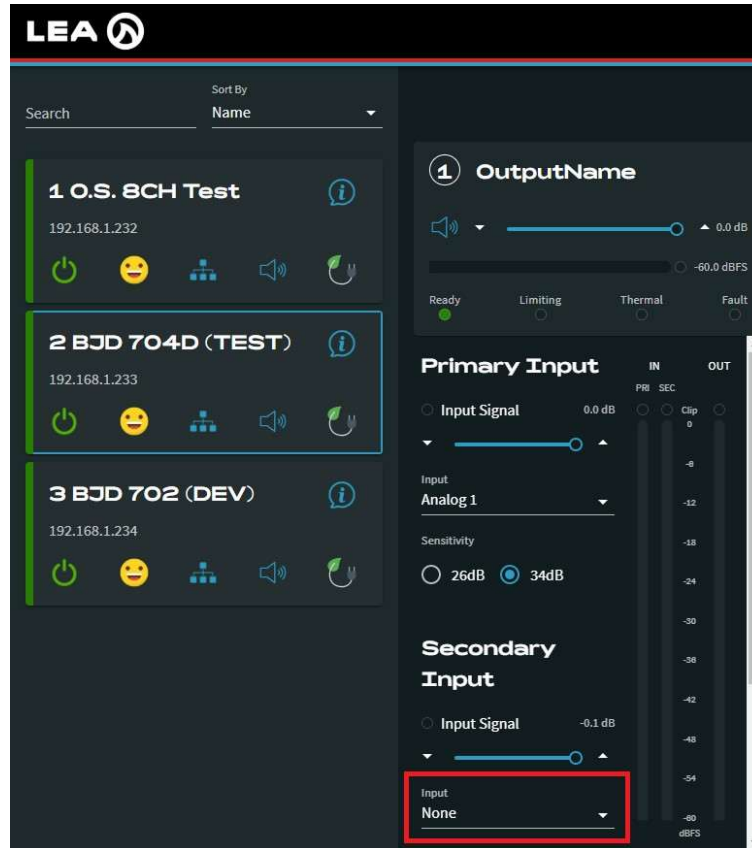
## Secondary Input Source

**Type:** CONTROL

**Commands:** get, set, subscribe, unsubscribe **URL:**  
/amp/channels/x/inputSelector/secondary

**Values:**

- "Analog 1"
- "Analog 2"
- "Analog 1+2"
- "Analog 3"
- "Analog 4"
- "Analog 3+4"
- "Analog 5"
- "Analog 6"
- "Analog 5+6"
- "Analog 7"
- "Analog 8"
- "Analog 7+8"
- "Dante 1"
- "Dante 2"
- "Dante 1+2"
- "Dante 3"
- "Dante 4"
- "Dante 3+4"
- "Dante 5"
- "Dante 6"
- "Dante 5+6"
- "Dante 7"
- "Dante 8"
- "Dante 7+8"
- "None"



**Example:** set /amp/channels/1/inputSelector/secondary "Analog 2"\n

- This will set the secondary input source on Channel 1 to "Analog 2"

For the Network Connect Series, only Analog inputs are available, and only the number of channels that are on the amplifier, for example a 354 would not have Analog 5-8 available.

For the Dante Connect Series analog inputs are only available for the number of inputs on the amplifier, however all 8 Dante inputs are available on all Dante models.

## Secondary Gain Attenuation Fader

**Type:** CONTROL

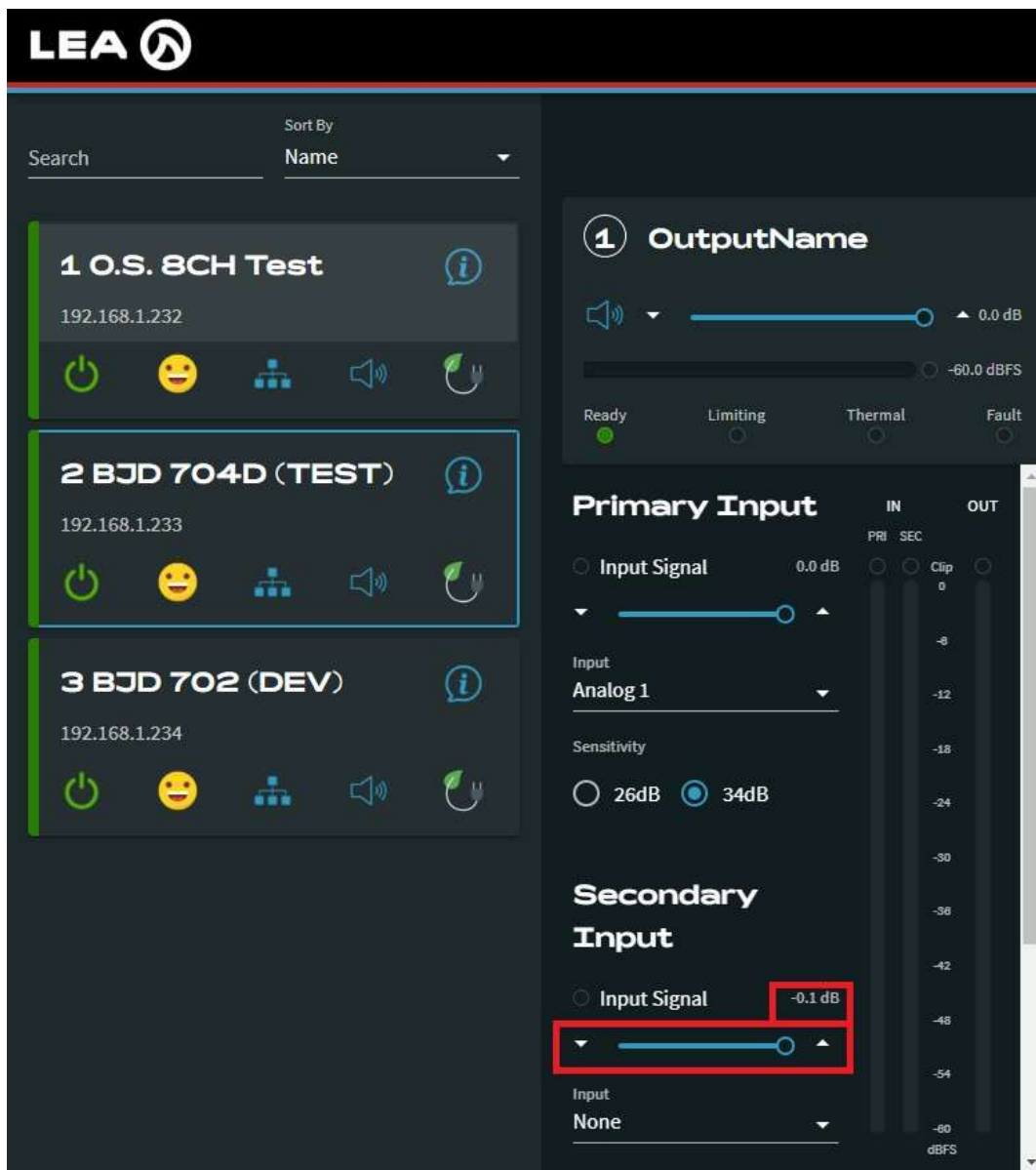
**Commands:** get, set, subscribe, unsubscribe

**URL:** /amp/channels/x/inputSelector/secondaryFader

**Values:** Gain attenuation values between -80 and 0

**Example:** get /amp/channels/1/inputSelector/secondaryFader\n

- Response: /amp/channels/1/inputSelector/secondaryFader -0.1\n
- This command asked for the secondary fader level on channel 1 and got -0.1dB as the response



The screenshot displays the LEA control interface. On the left, a list of channels is shown:

- 1 O.S. 8CH Test** (IP: 192.168.1.232)
- 2 BJD 704D (TEST)** (IP: 192.168.1.233)
- 3 BJD 702 (DEV)** (IP: 192.168.1.234)

The right panel shows detailed settings for channel 1:

- OutputName:** 1
- Volume:** A slider is set to 0.0 dB, with a range from -60.0 dBFS to 0.0 dB.
- Status:** Ready (indicated by a green dot), Limiting, Thermal, and Fault (all indicated by grey dots).
- Primary Input:**
  - Input Signal: 0.0 dB
  - Input: Analog 1
  - Sensitivity: 26dB (selected), 34dB
  - IN/OUT meters: PRI (0.0 dB), SEC (0.0 dB), Clip (0)
- Secondary Input:**
  - Input Signal: -0.1 dB (highlighted with a red box)
  - Input: None
  - IN/OUT meters: PRI, SEC, Clip (all at 0)

## Secondary Input Meter

**Type:** SENSOR

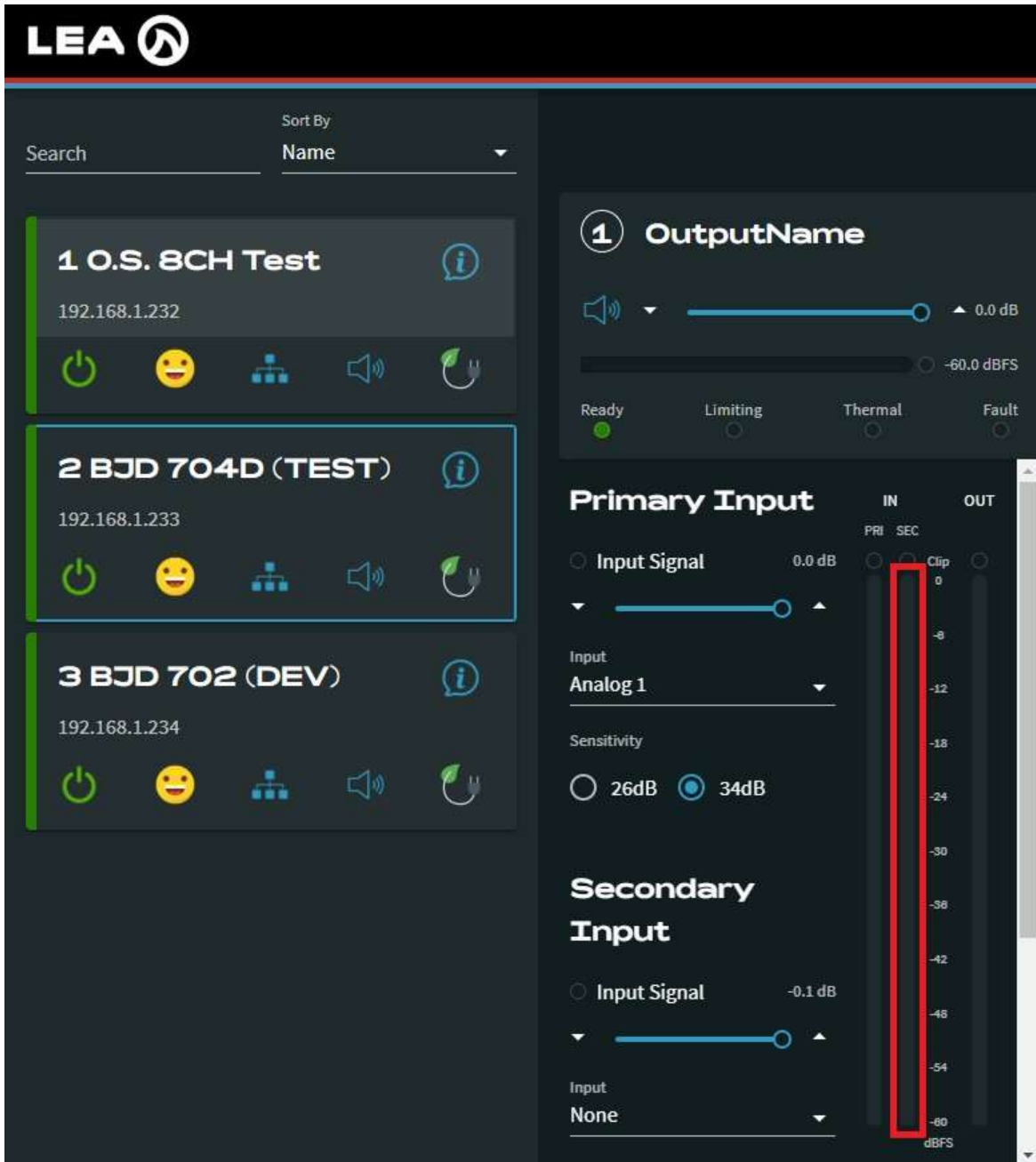
**Commands:** get, subscribe, unsubscribe

**URL:** /amp/channels/x/inputSelector/secondaryLevel

**Values:** -80 through 0 dBFS

**Example:** subscribe /amp/channels/1/inputSelector/secondaryLevel\n

- This will subscribe to the secondary input meter level for channel 1



The screenshot displays the LEA control interface. On the left, a list of channels is shown:

- 1 O.S. 8CH Test** (IP: 192.168.1.232)
- 2 BJD 704D (TEST)** (IP: 192.168.1.233)
- 3 BJD 702 (DEV)** (IP: 192.168.1.234)

Each channel card includes status icons (power, smiley, network, speaker, leaf) and an information icon. The right panel shows detailed settings for channel 1:

- OutputName:** 1
- Volume:** 0.0 dB (range: -60.0 dBFS to 0.0 dB)
- Status:** Ready (green dot), Limiting (grey dot), Thermal (grey dot), Fault (grey dot)
- Primary Input:**
  - Input Signal: 0.0 dB
  - Input: Analog 1
  - Sensitivity: 26dB (grey), 34dB (blue)
- Secondary Input:**
  - Input Signal: -0.1 dB
  - Input: None
- IN/OUT Meters:** A vertical meter on the right shows levels for IN (PRI, SEC) and OUT (Clip, 0, -8, -12, -18, -24, -30, -36, -42, -48, -54, -60 dBFS). A red box highlights the 'SEC' input level, which is approximately -10 dBFS.

## Secondary Input Signal Present

**Type:** SENSOR

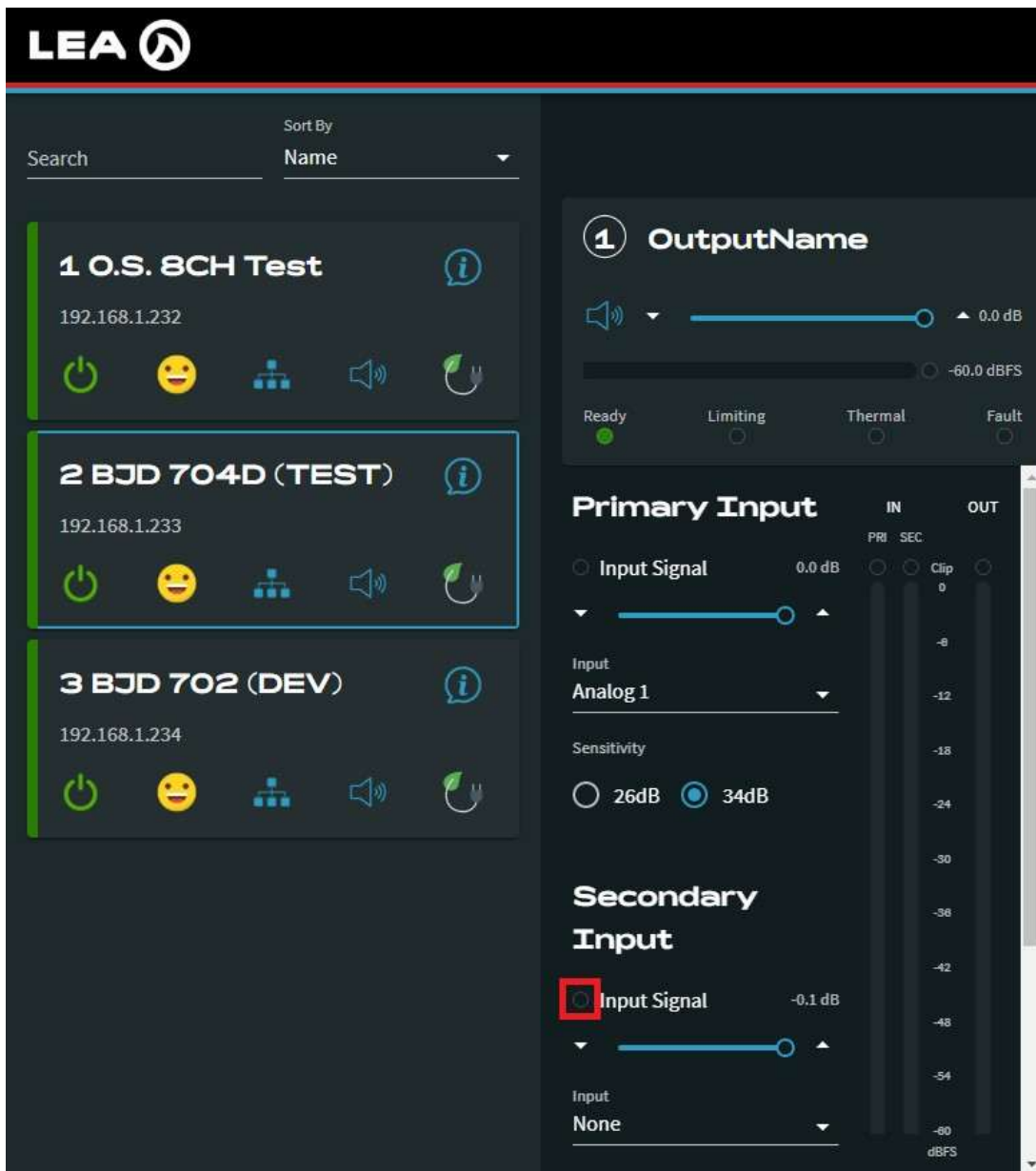
**Commands:** get, subscribe, unsubscribe

**URL:** /amp/channels/x/inputSelector/secondarySignalDetect

**Values:** "true", "false"

**Example:** get /amp/channels/1/inputSelector/secondarySignalDetect\n

- Response: /amp/channels/1/inputSelector/secondarySignalDetect true\n
- This command asked to get the secondary input signal presence state on Channel 1 and the response back was "true" meaning that signal is present



The screenshot displays the LEA control interface. On the left, a list of channels is shown:

- 1 O.S. 8CH Test** (192.168.1.232)
- 2 BJD 704D (TEST)** (192.168.1.233) - This channel is highlighted with a blue border.
- 3 BJD 702 (DEV)** (192.168.1.234)

Each channel card includes icons for power, status, network, audio, and refresh. On the right, the configuration for Channel 1 is shown:

- OutputName:** 1
- Volume:** 0.0 dB (range -60.0 dBFS)
- Status:** Ready (green dot), Limiting, Thermal, Fault (all grey)
- Primary Input:**
  - Input Signal: 0.0 dB
  - Input: Analog 1
  - Sensitivity: 26dB (unselected), 34dB (selected)
- Secondary Input:**
  - Input Signal: -0.1 dB (highlighted with a red box)
  - Input: None

A vertical dBFS scale on the right ranges from 0 to -80 dBFS.

## Secondary Input Signal Clip Indicator

**Type:** SENSOR

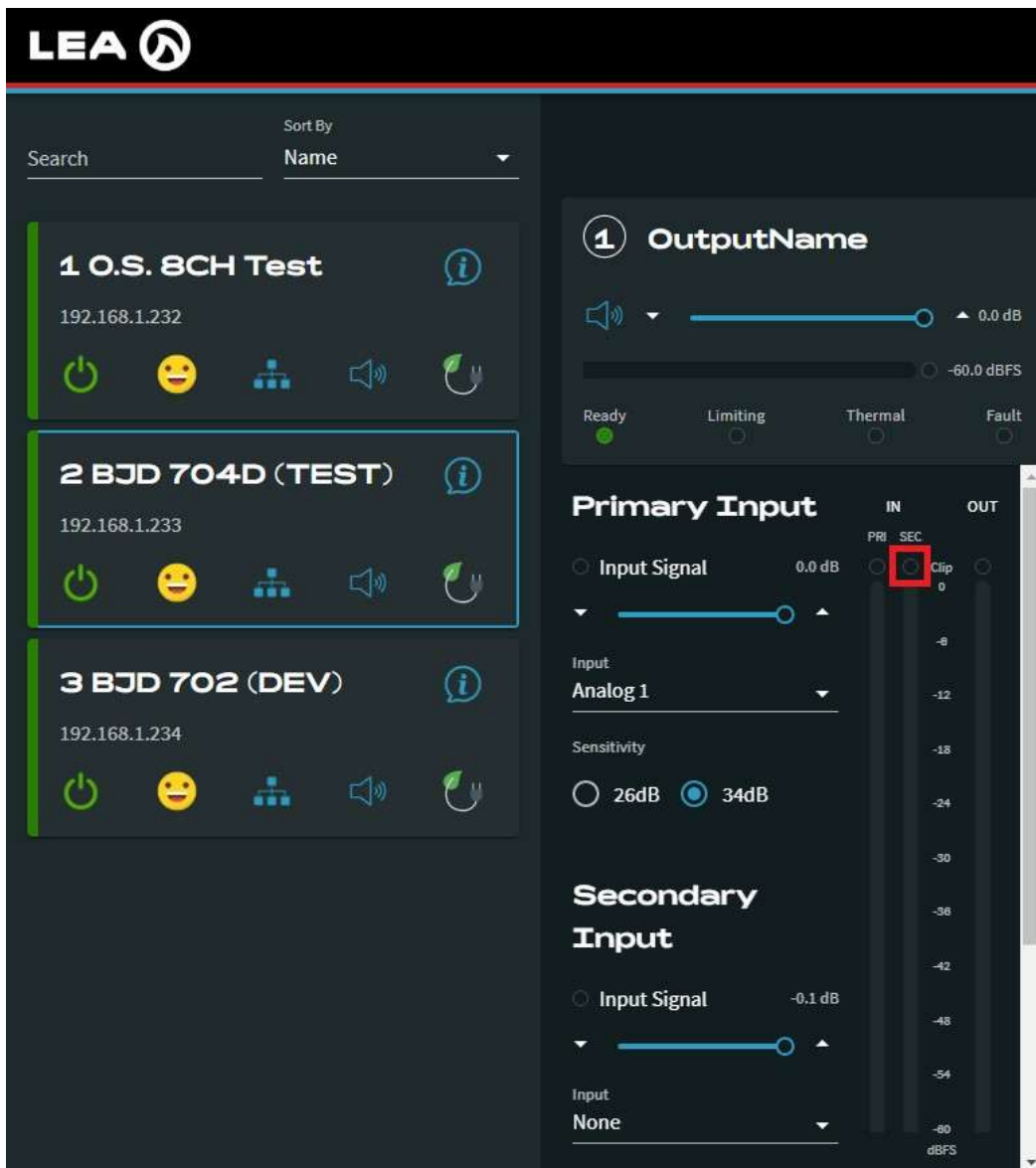
**Commands:** get, subscribe, unsubscribe

**URL:** /amp/channels/x/inputSelector/secondaryClip

**Values:** "true", "false"

**Example:** subscribe /amp/channels/1/inputSelector/secondaryClip\n

- Response: /amp/channels/1/inputSelector/secondaryClip false\n
- This command asked to subscribe to secondary input signal clip indication state on Channel 1 and the response back was "false" meaning that signal is not clipped, but as this is a subscription any changes here will continue to be reported



The screenshot displays the LEA control interface. On the left, there is a list of channels:

- 1 O.S. 8CH Test** (IP: 192.168.1.232)
- 2 BJD 704D (TEST)** (IP: 192.168.1.233)
- 3 BJD 702 (DEV)** (IP: 192.168.1.234)

Each channel card includes status icons for power, smiley face, network, speaker, and refresh. The right panel shows detailed settings for channel 1:

- OutputName:** 1
- Volume:** 0.0 dB (range -60.0 dBFS to 0.0 dB)
- Status:** Ready (green dot), Limiting (off), Thermal (off), Fault (off)
- Primary Input:**
  - Input Signal: 0.0 dB
  - Input: Analog 1
  - Sensitivity: 34dB (selected), 26dB
  - IN PRI: Clip 0 (highlighted with a red box)
  - IN SEC: 0
  - OUT: -8, -12, -18, -24, -30, -36, -42, -48, -54, -60 dBFS
- Secondary Input:**
  - Input Signal: -0.1 dB
  - Input: None

## Input Signal Present

**Type:** SENSOR

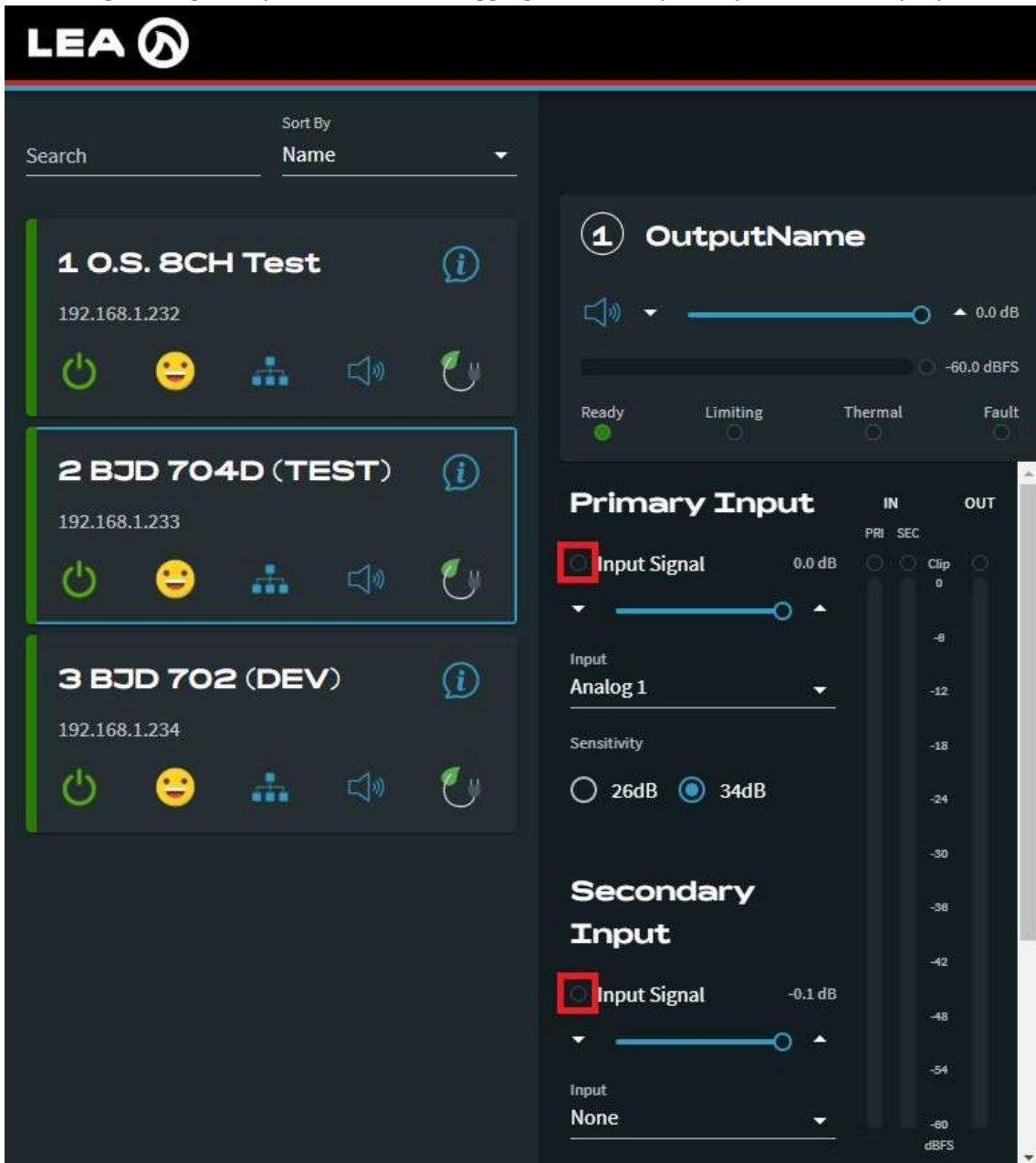
**Commands:** get, subscribe, unsubscribe

**URL:** /amp/channels/x/inputSelector/signalDetect

**Values:** "true", "false"

**Example:** get /amp/channels/1/inputSelector/signalDetect\n

- Response: /amp/channels/1/inputSelector/signalDetect true\n
- This command asked to get the input signal presence state on Channel 1 and the response back was "true" meaning that signal is present (this is an aggregate of both primary and secondary inputs)



The screenshot displays the LEA control interface. On the left, a list of channels is shown:

- 1 O.S. 8CH Test** (IP: 192.168.1.232)
- 2 BJD 704D (TEST)** (IP: 192.168.1.233)
- 3 BJD 702 (DEV)** (IP: 192.168.1.234)

Each channel card includes a power icon, a smiley face, a network icon, a speaker icon, and a refresh icon. The right side of the interface shows detailed settings for the selected channel (Channel 1):

- OutputName:** 1. Includes a volume slider set to 0.0 dB (range -60.0 dBFS to 0.0 dB) and status indicators for Ready (green), Limiting, Thermal, and Fault.
- Primary Input:** Input Signal is checked (highlighted with a red box) and set to 0.0 dB. The input is set to Analog 1 with a sensitivity of 34dB (selected over 26dB). A vertical scale on the right shows levels from 0 to -60 dBFS.
- Secondary Input:** Input Signal is checked (highlighted with a red box) and set to -0.1 dB. The input is set to None.

## Input Signal Clip Indicator

**Type:** SENSOR

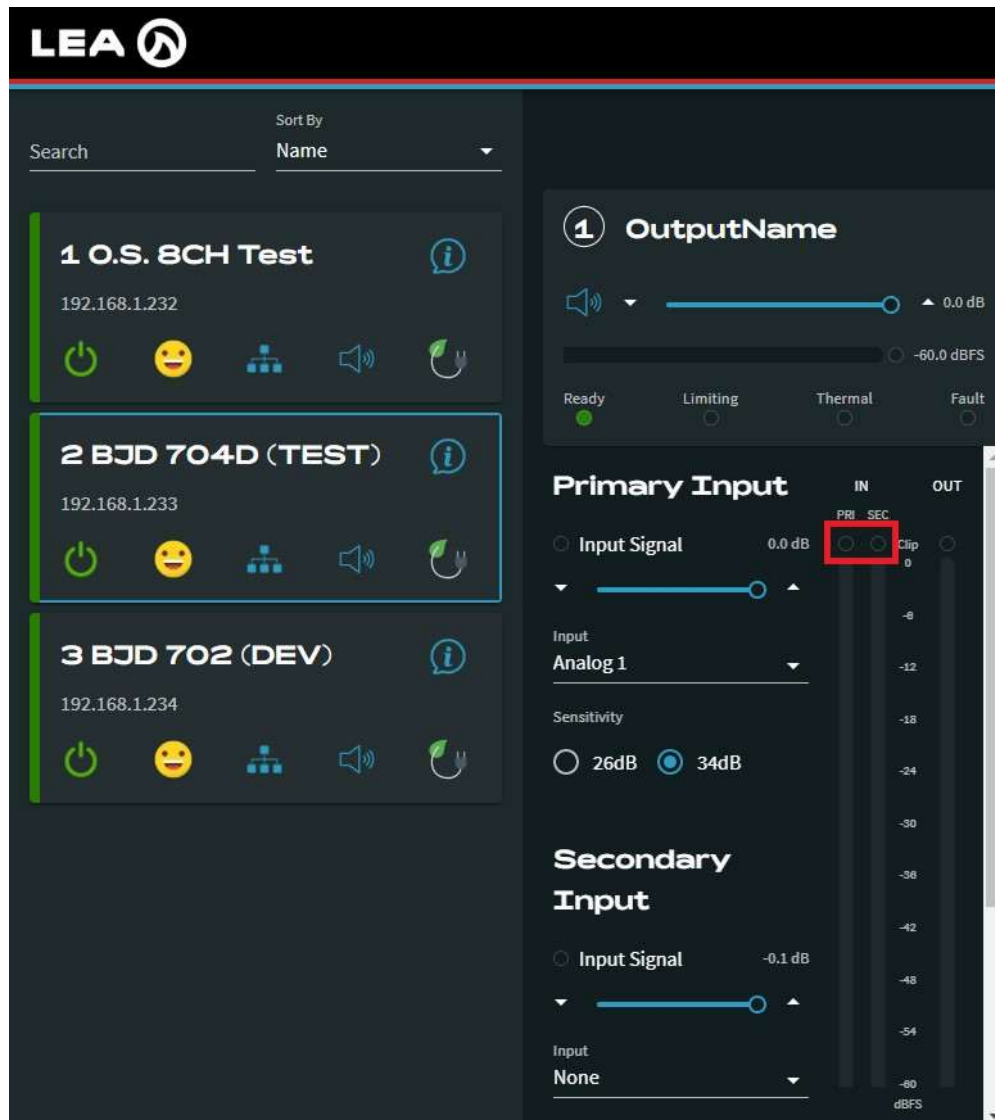
**Commands:** get, subscribe, unsubscribe

**URL:** /amp/channels/x/inputSelector/clip

**Values:** "true", "false"

**Example:** subscribe /amp/channels/1/inputSelector/clip\n

- Response: /amp/channels/1/inputSelector/clip false\n
- This command asked to subscribe to input signal clip indication on Channel 1 and the response back was "false" meaning that signal is not clipped, but as this is a subscription and any changes here will continue to be reported (this is an aggregate of both primary and secondary inputs)



The screenshot displays the LEA control interface. On the left, a list of channels is shown:

- 1 O.S. 8CH Test** (IP: 192.168.1.232)
- 2 BJD 704D (TEST)** (IP: 192.168.1.233)
- 3 BJD 702 (DEV)** (IP: 192.168.1.234)

On the right, the configuration for Channel 1 is shown:

- OutputName:** 1
- Volume:** 0.0 dB (range: -60.0 dBFS to 0.0 dB)
- Status:** Ready (Limiting, Thermal, Fault are inactive)
- Primary Input:** Input Signal (0.0 dB), IN (PRB, SEC), OUT (Clip, 0)
- Input:** Analog 1
- Sensitivity:** 26dB (selected), 34dB
- Secondary Input:** Input Signal (-0.1 dB)
- Input:** None

A red box highlights the 'PRB' and 'SEC' indicators in the Primary Input section, which are currently active.

## Input Signal Priority Override Mode

**Type:** CONTROL

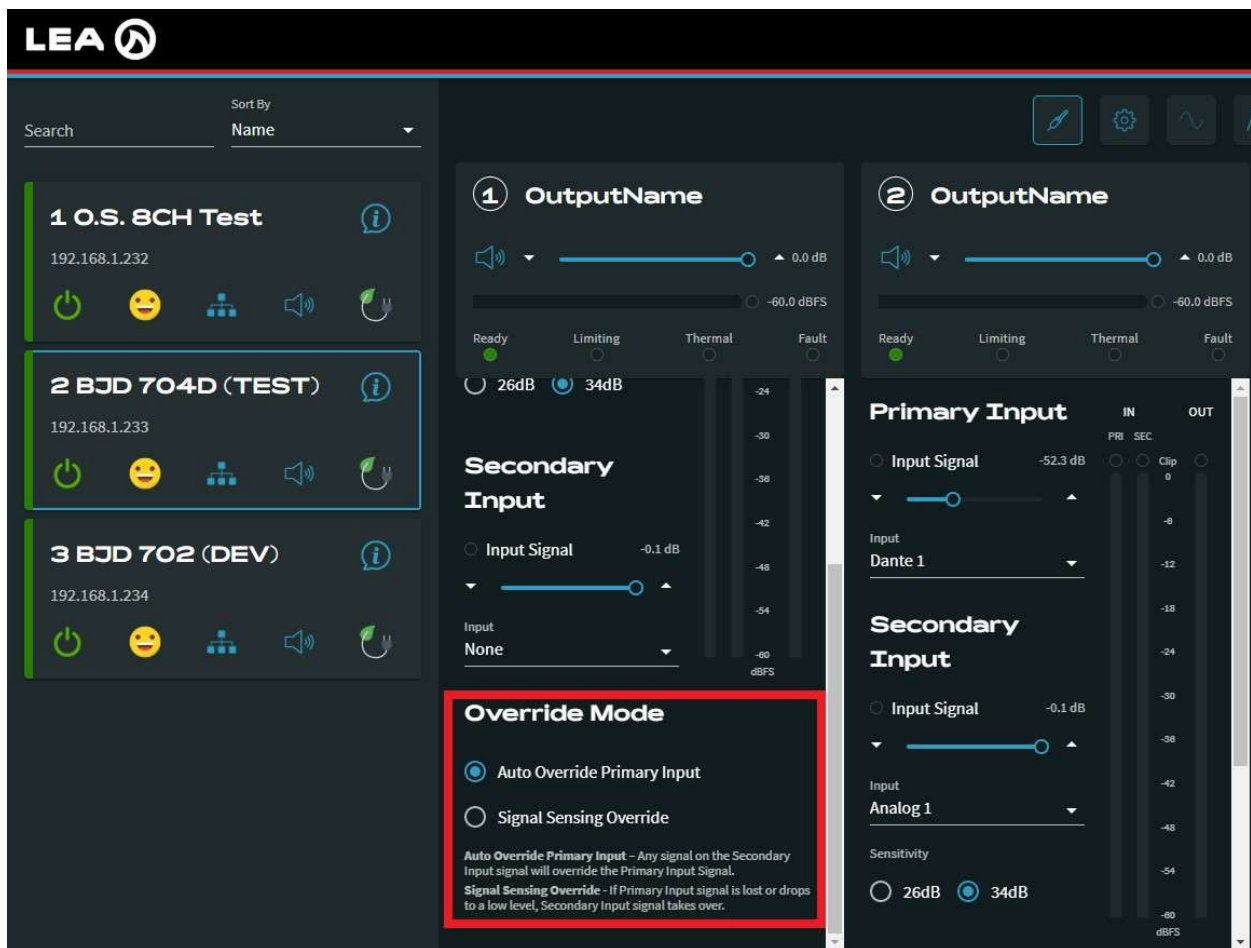
**Commands:** get, set, subscribe, unsubscribe

**URL:** /amp/channels/x/inputSelector/mode

**Values:** "Override", "Backup"

**Example:** set /amp/channels/1/inputSelector/mode "Override"\n

- The command set the priority override mode on channel 1 to "Override"
- "Override" is Auto Override Primary Input
- "Backup" is Signal Sensing Override



The screenshot displays the LEA control interface. On the left, a list of channels is shown: 1 O.S. 8CH Test, 2 BJD 704D (TEST), and 3 BJD 702 (DEV). The 'Override Mode' section is highlighted with a red box, showing two options: 'Auto Override Primary Input' (selected) and 'Signal Sensing Override'. Below this, explanatory text reads: 'Auto Override Primary Input - Any signal on the Secondary Input signal will override the Primary Input Signal. Signal Sensing Override - If Primary Input signal is lost or drops to a low level, Secondary Input signal takes over.'

### Primary Input Signal Override Threshold

**Type:** CONTROL

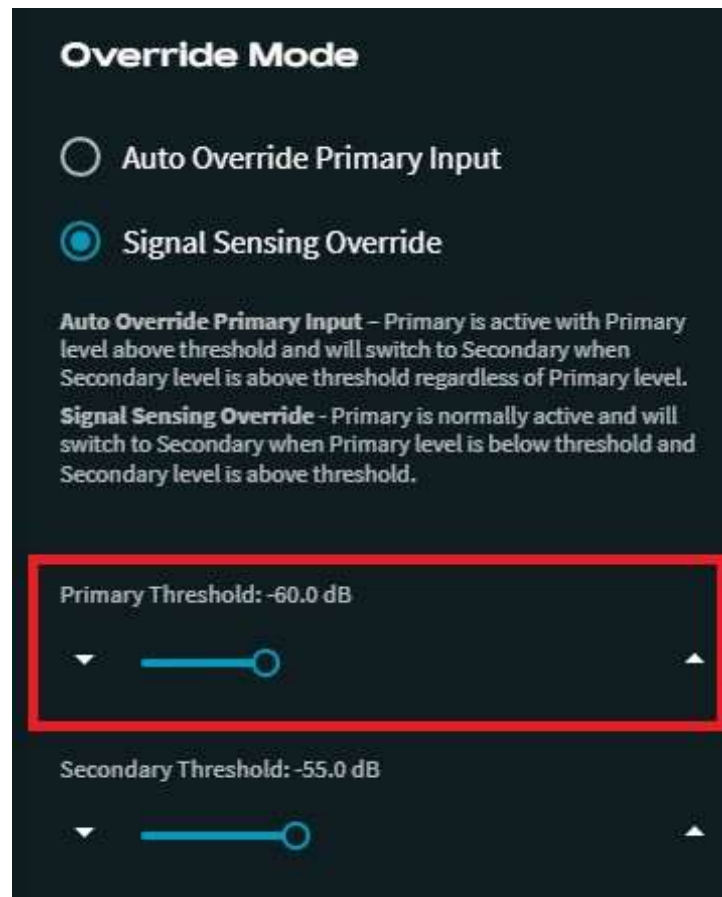
**Commands:** get, set, subscribe, unsubscribe

**URL:** /amp/channels/x/inputSelector/primaryThreshold

**Values:** -80 through 0

**Example:** set /amp/channels/1/inputSelector/primaryThreshold -60\n

- This command set the secondary override threshold to -60dB



## Secondary Input Signal Override Threshold

**Type:** CONTROL

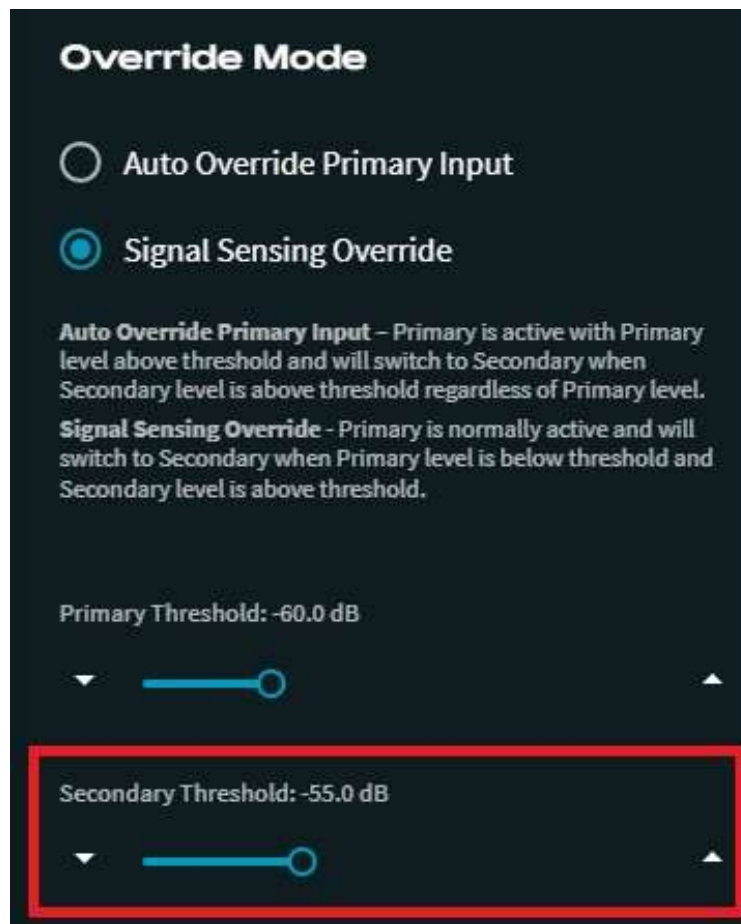
**Commands:** get, set, subscribe, unsubscribe

**URL:** /amp/channels/x/inputSelector/secondaryThreshold

**Values:** -80 through 0

**Example:** set /amp/channels/1/inputSelector/secondaryThreshold -55\n

- This command set the secondary override threshold to -55dB



## Signal Generator Channel Enable

**Type:** CONTROL

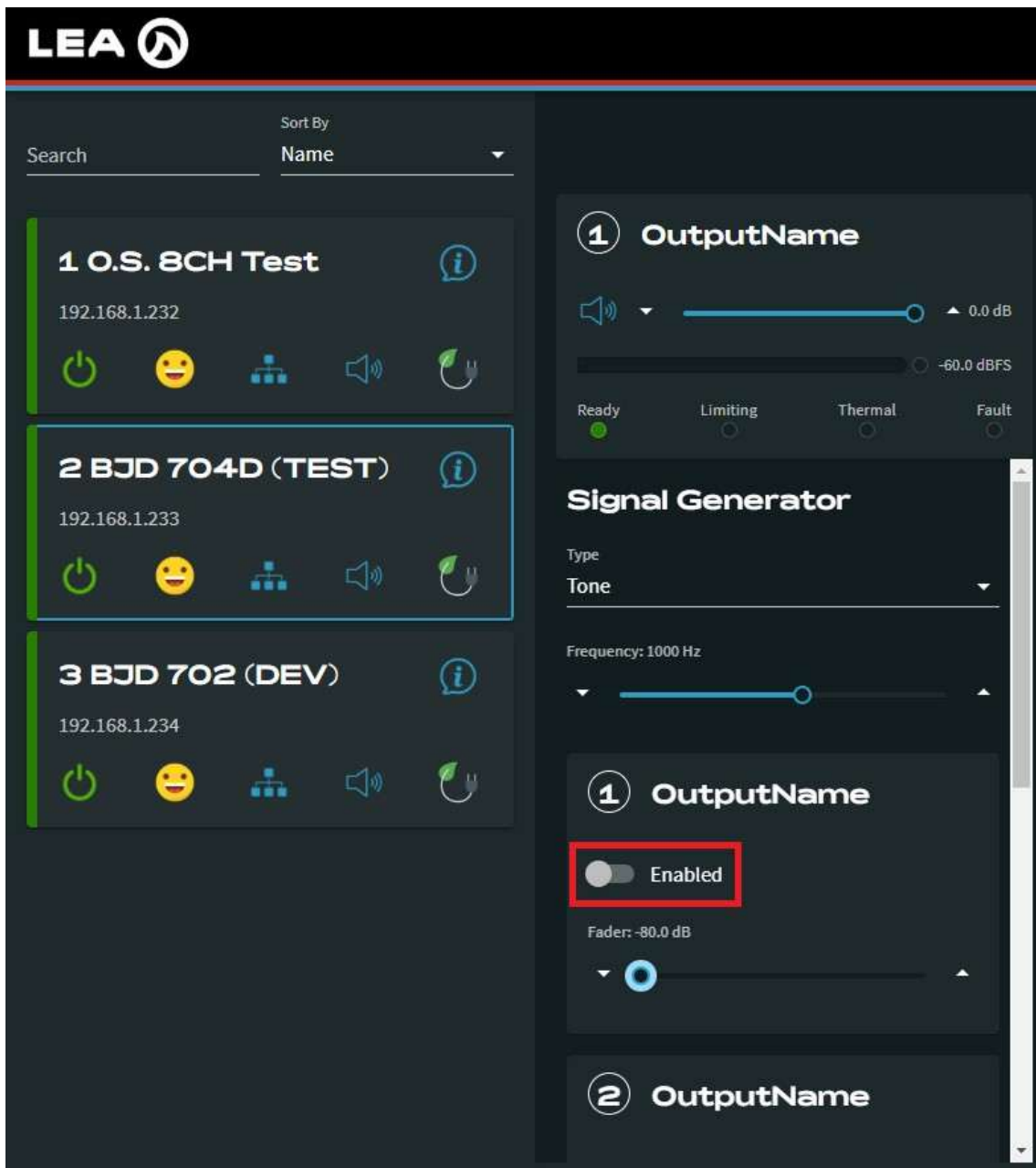
**Commands:** get, set, subscribe, unsubscribe

**URL:** /amp/channels/x/inputSelector/signalGeneratorEnable

**Values:** "true", "false"

**Example:** set /amp/channels/1/inputSelector/signalGeneratorEnable "true"\n

- This command enabled the signal generator on Channel 1



The screenshot displays the LEA control interface. On the left, a list of channels is shown, sorted by name. Channel 2, 'BJD 704D (TEST)', is highlighted with a blue border. The right panel shows the configuration for the selected channel. The 'Signal Generator' section is visible, with the 'Enabled' toggle switch turned on and highlighted by a red box. The 'Frequency' is set to 1000 Hz. Below the 'Enabled' toggle, the 'Fader' is set to -80.0 dB. The 'OutputName' is also visible at the bottom of the panel.

## Signal Generator Channel Fader

**Type:** CONTROL

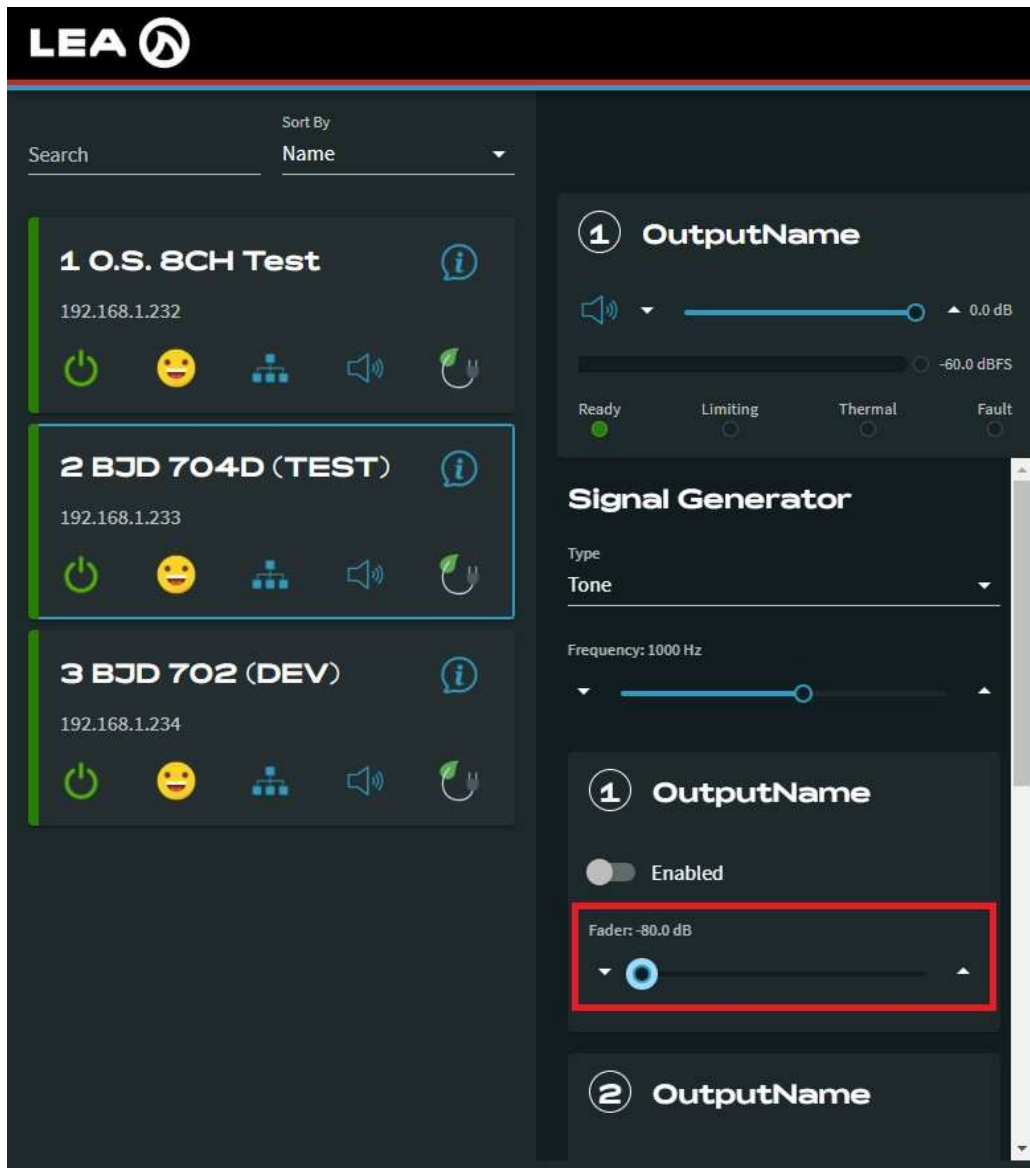
**Commands:** get, set, subscribe, unsubscribe

**URL:** /amp/channels/x/inputSelector/signalGeneratorFader

**Values:** -80 through 0 dB

**Example:** set /amp/channels/1/inputSelector/signalGeneratorFader -20.0\n

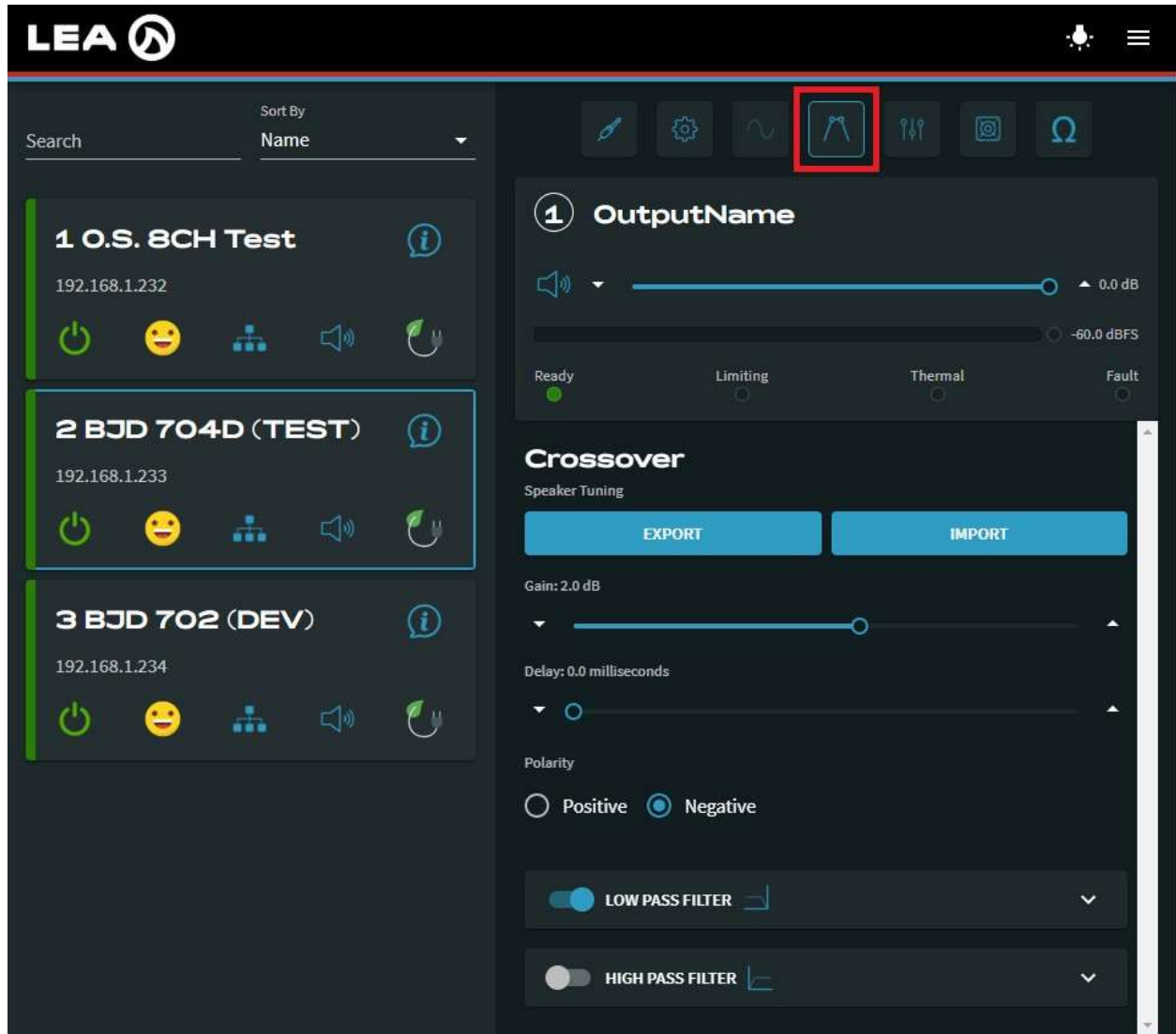
- This command set the signal generator fader to -20 dB on Channel 1



The screenshot displays the LEA control interface. On the left, a list of channels is shown, including '1 O.S. 8CH Test', '2 BJD 704D (TEST)', and '3 BJD 702 (DEV)'. The 'Signal Generator' settings for Channel 1 are shown on the right. The 'OutputName' is set to '1'. The 'Type' is 'Tone' and the 'Frequency' is '1000 Hz'. The 'Fader' is set to '-80.0 dB', which is highlighted with a red box. The 'Enabled' toggle is turned on. The 'Signal Generator' section also includes a volume slider and status indicators for 'Ready', 'Limiting', 'Thermal', and 'Fault'.

## Amplifier Channels Crossover

Click on this button to navigate to the Crossover section of the DSP relevant to this API section



The screenshot displays the LEA software interface. On the left, a list of amplifier channels is shown, with the second channel, "2 BJD 704D (TEST)", highlighted. The main panel on the right shows the configuration for the selected channel. At the top of this panel, a toolbar contains several icons, with the crossover icon (a square with a diagonal line) highlighted by a red box. Below the toolbar, the "OutputName" section shows a volume slider set to 0.0 dB and a status indicator for "Ready". The "Crossover" section includes "Speaker Tuning" buttons for "EXPORT" and "IMPORT", a "Gain" slider set to 2.0 dB, a "Delay" slider set to 0.0 milliseconds, and "Polarity" options for "Positive" and "Negative" (selected). At the bottom, there are two filter sections: "LOW PASS FILTER" (enabled) and "HIGH PASS FILTER" (disabled).

## Crossover Gain

**Type:** CONTROL

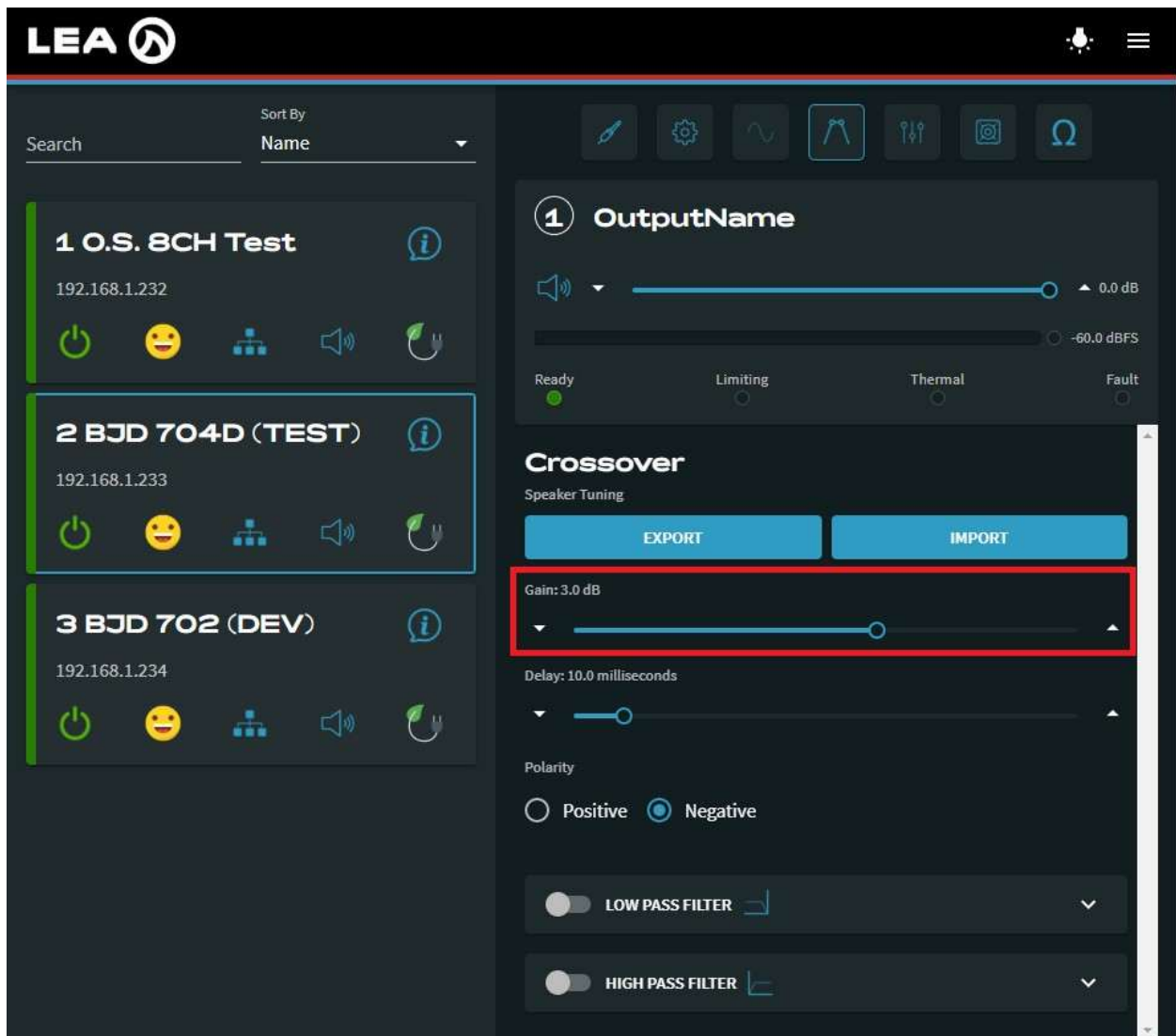
**Commands:** get, set, subscribe, unsubscribe

**URL:** /amp/channels/x/crossover/bandGainAndDelay/gain

**Values:** -15.0 through 15.0

**Example:** set /amp/channels/1/crossover/bandGainAndDelay/gain 3.0\n

- This command set the crossover gain on channel 1 to 3.0 dB



The screenshot displays the LEA control interface. On the left, a list of channels is shown, with channel 1 selected. The main panel shows the 'OutputName' control for channel 1, with a volume slider set to 0.0 dB. Below this, the 'Crossover' section is visible, featuring a 'Gain: 3.0 dB' slider highlighted with a red box. Other controls include 'Delay: 10.0 milliseconds', 'Polarity' (set to Negative), and 'LOW PASS FILTER' and 'HIGH PASS FILTER' toggle switches.

## Crossover Delay

**Type:** CONTROL

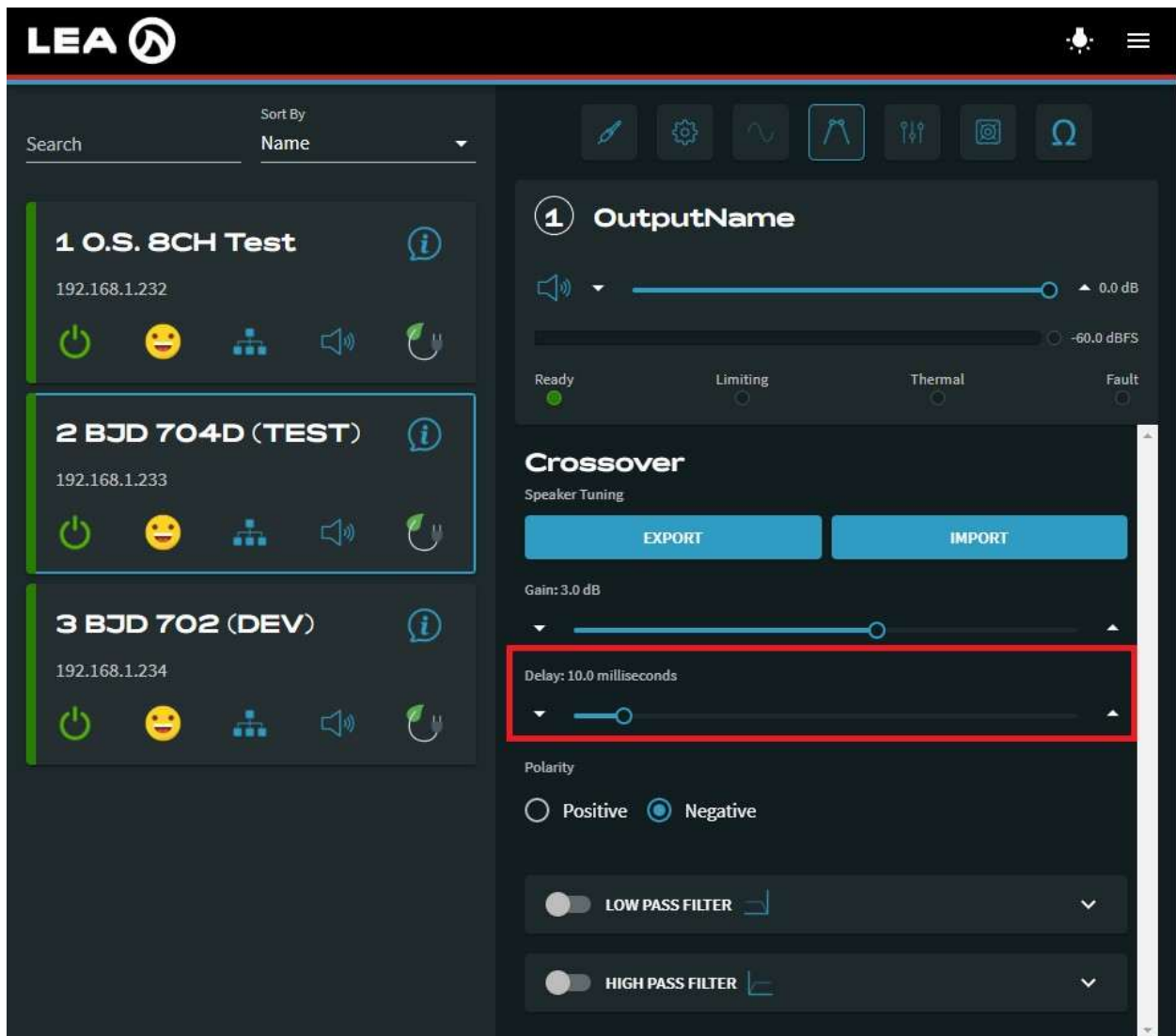
**Commands:** get, set, subscribe, unsubscribe

**URL:** /amp/channels/x/crossover/bandGainAndDelay/delay

**Values:** 0.0 through 100.0

**Example:** set /amp/channels/1/crossover/bandGainAndDelay/delay 10.0\n

- This command set the crossover delay on channel 1 to 10.0 ms



The screenshot displays the LEA control interface. On the left, a list of channels is shown, with channel 2 'BJD 704D (TEST)' selected. The right panel shows the 'OutputName' control for channel 1, including volume sliders and status indicators. Below this, the 'Crossover' section is visible, featuring 'EXPORT' and 'IMPORT' buttons, a 'Gain' slider set to 3.0 dB, and a 'Delay' slider set to 10.0 milliseconds, which is highlighted with a red box. The 'Polarity' is set to 'Negative', and there are toggle switches for 'LOW PASS FILTER' and 'HIGH PASS FILTER'.

## Crossover Polarity

**Type:** CONTROL

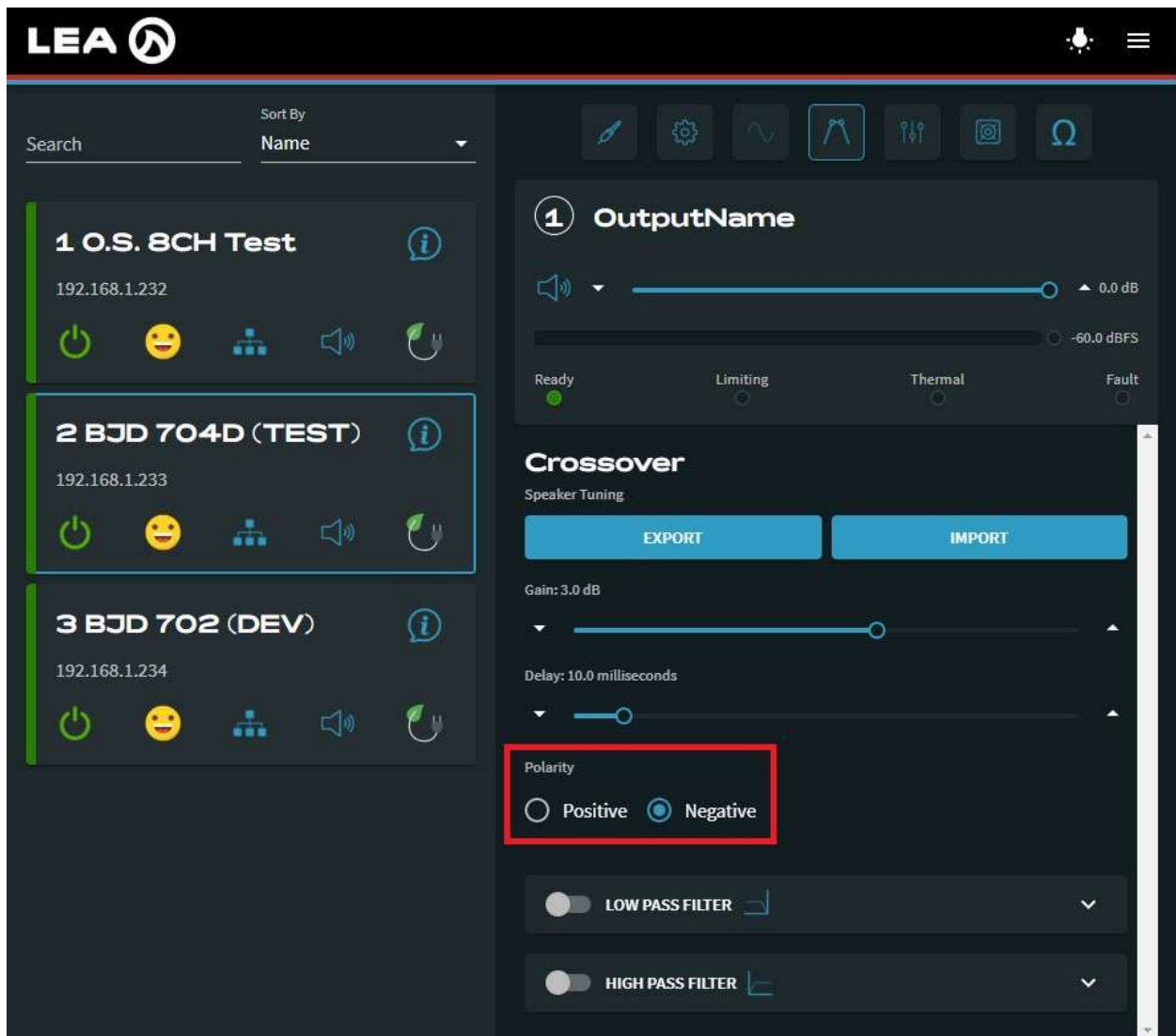
**Commands:** get, set, subscribe, unsubscribe

**URL:** /amp/channels/x/crossover/bandGainAndDelay/invert

**Values:** "true", "false"

**Example:** set /amp/channels/1/crossover/bandGainAndDelay/invert "true"\n

- This command set the crossover polarity to negative on channel 1



The screenshot displays the LEA control interface. On the left, a list of channels is shown, with channel 1 selected. The main panel shows the 'OutputName' section for channel 1, which includes a volume slider and status indicators (Ready, Limiting, Thermal, Fault). Below this is the 'Crossover' section, which includes 'Speaker Tuning' buttons (EXPORT, IMPORT), a Gain slider (3.0 dB), and a Delay slider (10.0 milliseconds). The 'Polarity' section is highlighted with a red box, showing two radio buttons: 'Positive' (unselected) and 'Negative' (selected). At the bottom, there are toggle switches for 'LOW PASS FILTER' and 'HIGH PASS FILTER'.

## Crossover Low Pass Filter Enable

**Type:** CONTROL

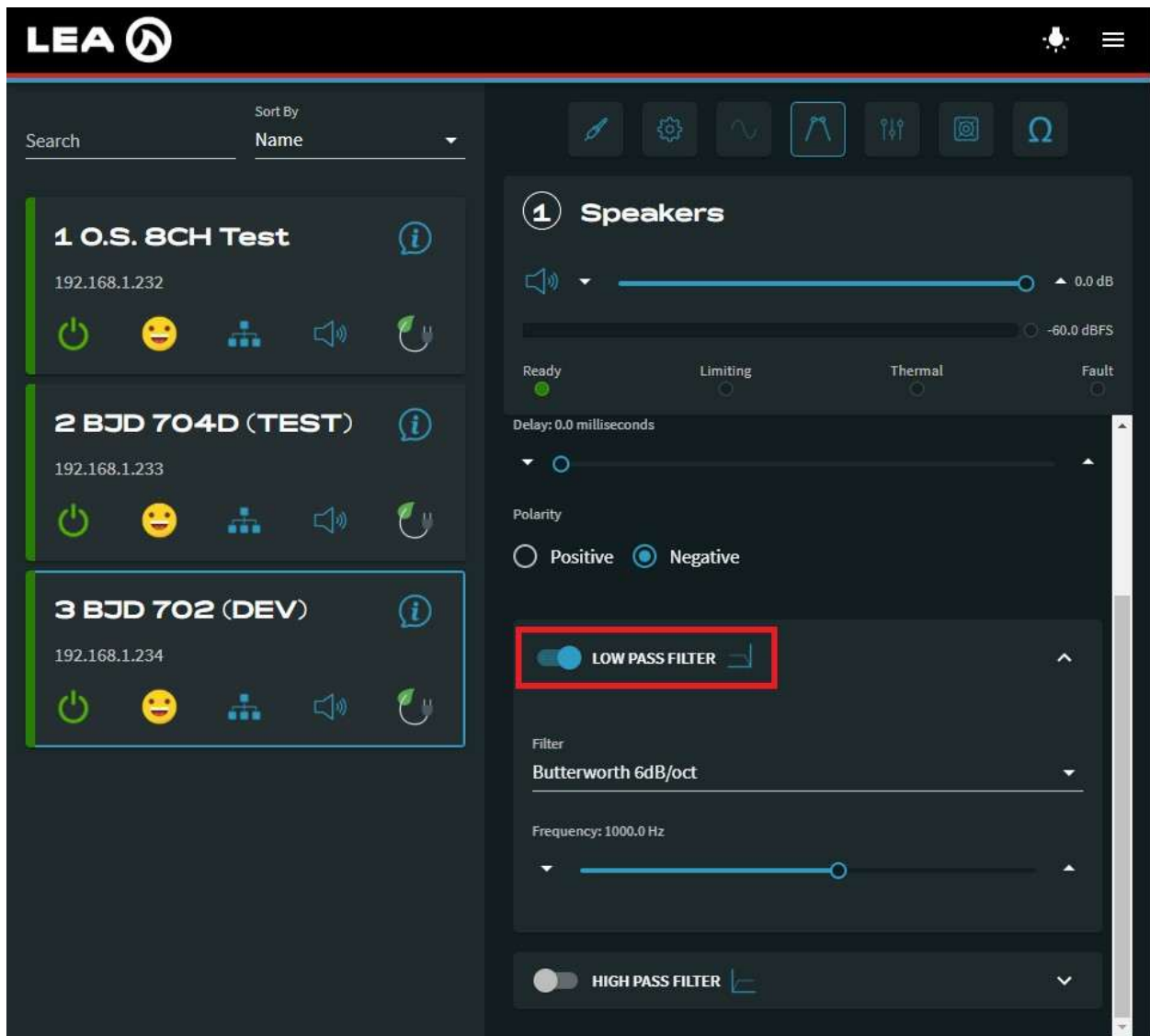
**Commands:** get, set, subscribe, unsubscribe

**URL:** /amp/channels/x/crossover/lowPassFilter/enable

**Values:** "true", "false"

**Example:** set /amp/channels/1/crossover/lowPassFilter/enable "true"\n

- This command enabled the Low Pass Filter on channel 1



The screenshot displays the LEA control interface. On the left, a list of channels is shown: '1 O.S. 8CH Test', '2 BJD 704D (TEST)', and '3 BJD 702 (DEV)'. The right panel shows the settings for channel 1, titled 'Speakers'. The volume is set to 0.0 dB. Below the volume, there are indicators for 'Ready', 'Limiting', 'Thermal', and 'Fault'. The 'Delay' is set to 0.0 milliseconds. The 'Polarity' is set to 'Negative'. A red box highlights the 'LOW PASS FILTER' toggle, which is currently turned on. Below this, the 'Filter' is set to 'Butterworth 6dB/oct' and the 'Frequency' is set to 1000.0 Hz. The 'HIGH PASS FILTER' toggle is currently turned off.



## Crossover Low Pass Filter Type

**Type:** CONTROL

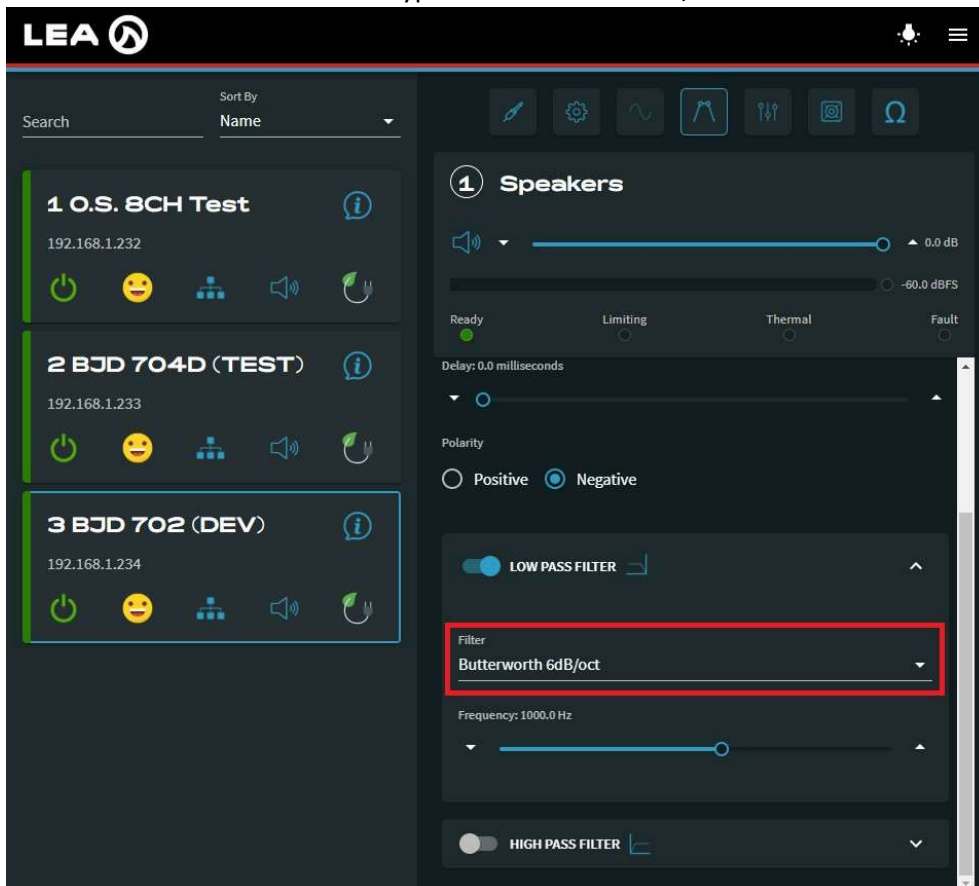
**Commands:** get, set, subscribe, unsubscribe **URL:**  
/amp/channels/x/crossover/lowPassFilter/type

**Values:**

- "Butterworth 6dB/oct"
- "Butterworth 12dB/oct"
- "Butterworth 18dB/oct"
- "Butterworth 24dB/oct"
- "Butterworth 48dB/oct"
- "Linkwitz-Riley 24dB/oct"
- "Linkwitz-Riley 48dB/oct"
- "Bessel 6dB/oct"
- "Bessel 12dB/oct"
- "Bessel 18dB/oct"
- "Bessel 24dB/oct"
- "Bessel 48dB/oct"

**Example:** set /amp/channels/1/crossover/lowPassFilter/type "Butterworth 6dB/oct"\n

- This command set the Low Pass Filter type to Butterworth 6dB/oct on channel 1



## Crossover Low Pass Filter Frequency

**Type:** CONTROL

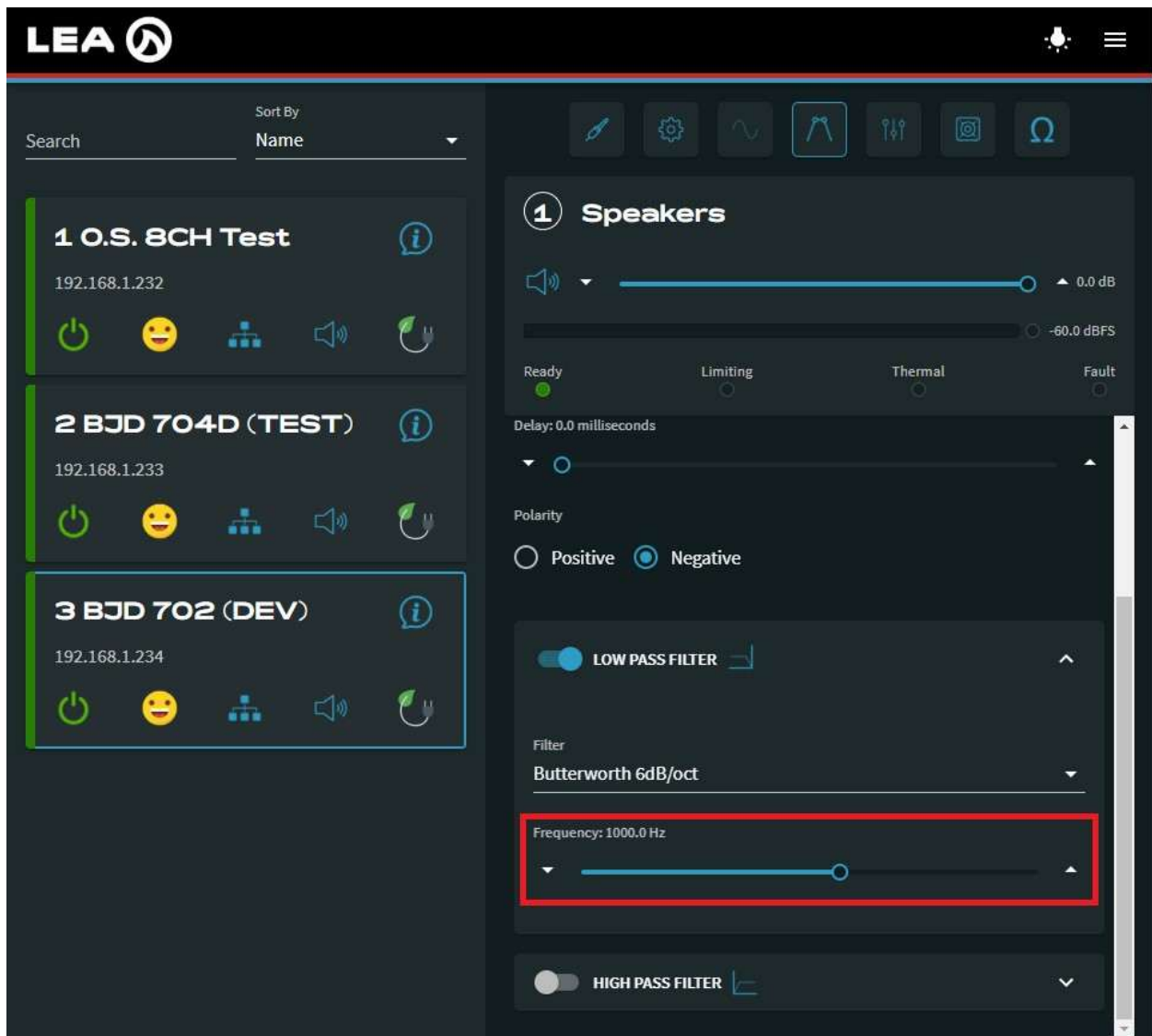
**Commands:** get, set, subscribe, unsubscribe

**URL:** /amp/channels/x/crossover/lowPassFilter/frequency

**Values:** 20 through 20000

**Example:** set /amp/channels/1/crossover/lowPassFilter/frequency 1000\n

- This command set the Low Pass Filter Frequency on channel 1 to 1000 Hz



The screenshot displays the LEA control interface. On the left, a list of channels is shown, with the third channel, "3 BJD 702 (DEV)", highlighted in blue. The main panel on the right is titled "1 Speakers" and shows various controls for the selected channel. A volume slider is set to 0.0 dB. Below it, there are indicators for "Ready", "Limiting", "Thermal", and "Fault". A "Delay" slider is set to 0.0 milliseconds. The "Polarity" is set to "Negative". A "LOW PASS FILTER" toggle is turned on, and the filter type is set to "Butterworth 6dB/oct". The "Frequency" is set to 1000.0 Hz, which is highlighted with a red box. A "HIGH PASS FILTER" toggle is turned off.

## Crossover High Pass Filter Enable

**Type:** CONTROL

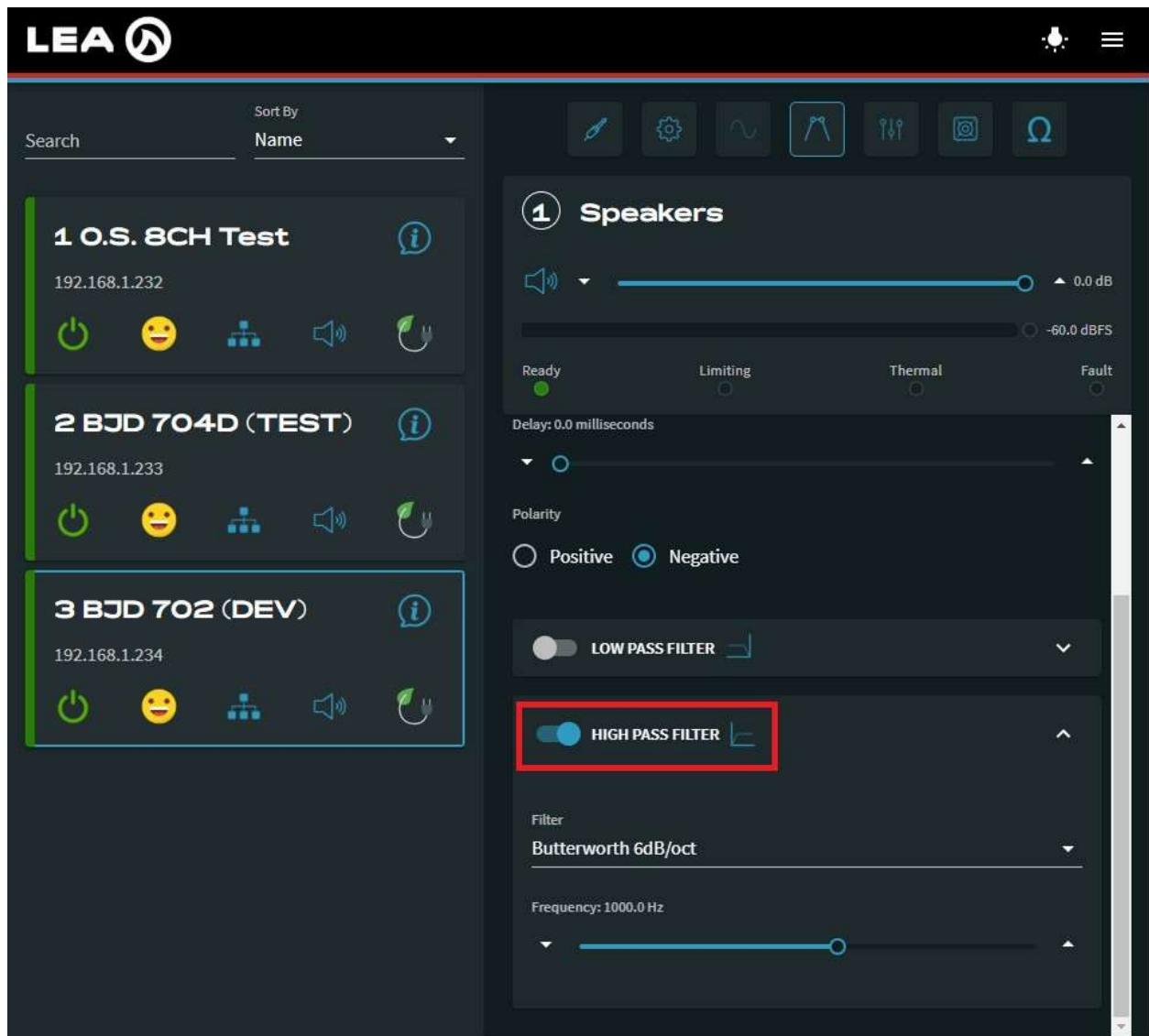
**Commands:** get, set, subscribe, unsubscribe

**URL:** /amp/channels/x/crossover/highPassFilter/enable

**Values:** "true", "false"

**Example:** set /amp/channels/1/crossover/highPassFilter/enable "true"\n

- This command enabled the High Pass Filter on channel 1



The screenshot displays the LEA control interface. On the left, a list of channels is shown: '1 O.S. 8CH Test' (IP: 192.168.1.232), '2 BJD 704D (TEST)' (IP: 192.168.1.233), and '3 BJD 702 (DEV)' (IP: 192.168.1.234). The third channel is highlighted with a blue border. On the right, the 'Speakers' control panel for channel 1 is visible. It includes a volume slider set to 0.0 dB, a status indicator showing 'Ready', a delay slider set to 0.0 milliseconds, and polarity options for 'Positive' and 'Negative'. The 'HIGH PASS FILTER' toggle is turned on and highlighted with a red box. Below it, the filter type is set to 'Butterworth 6dB/oct' and the frequency is set to 1000.0 Hz.



## Crossover High Pass Filter Type

**Type:** CONTROL

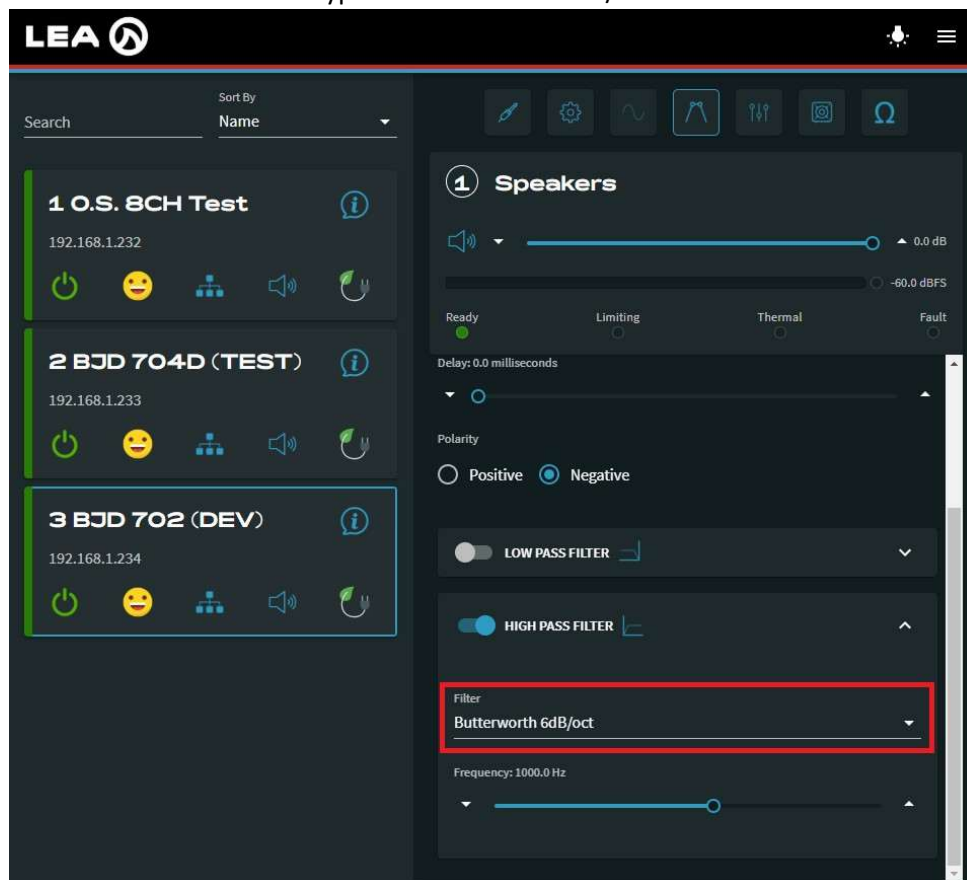
**Commands:** get, set, subscribe, unsubscribe **URL:**  
/amp/channels/x/crossover/highPassFilter/type

**Values:**

- "Butterworth 6dB/oct"
- "Butterworth 12dB/oct"
- "Butterworth 18dB/oct"
- "Butterworth 24dB/oct"
- "Butterworth 48dB/oct"
- "Linkwitz-Riley 24dB/oct"
- "Linkwitz-Riley 48dB/oct"
- "Bessel 6dB/oct"
- "Bessel 12dB/oct"
- "Bessel 18dB/oct"
- "Bessel 24dB/oct"
- "Bessel 48dB/oct"

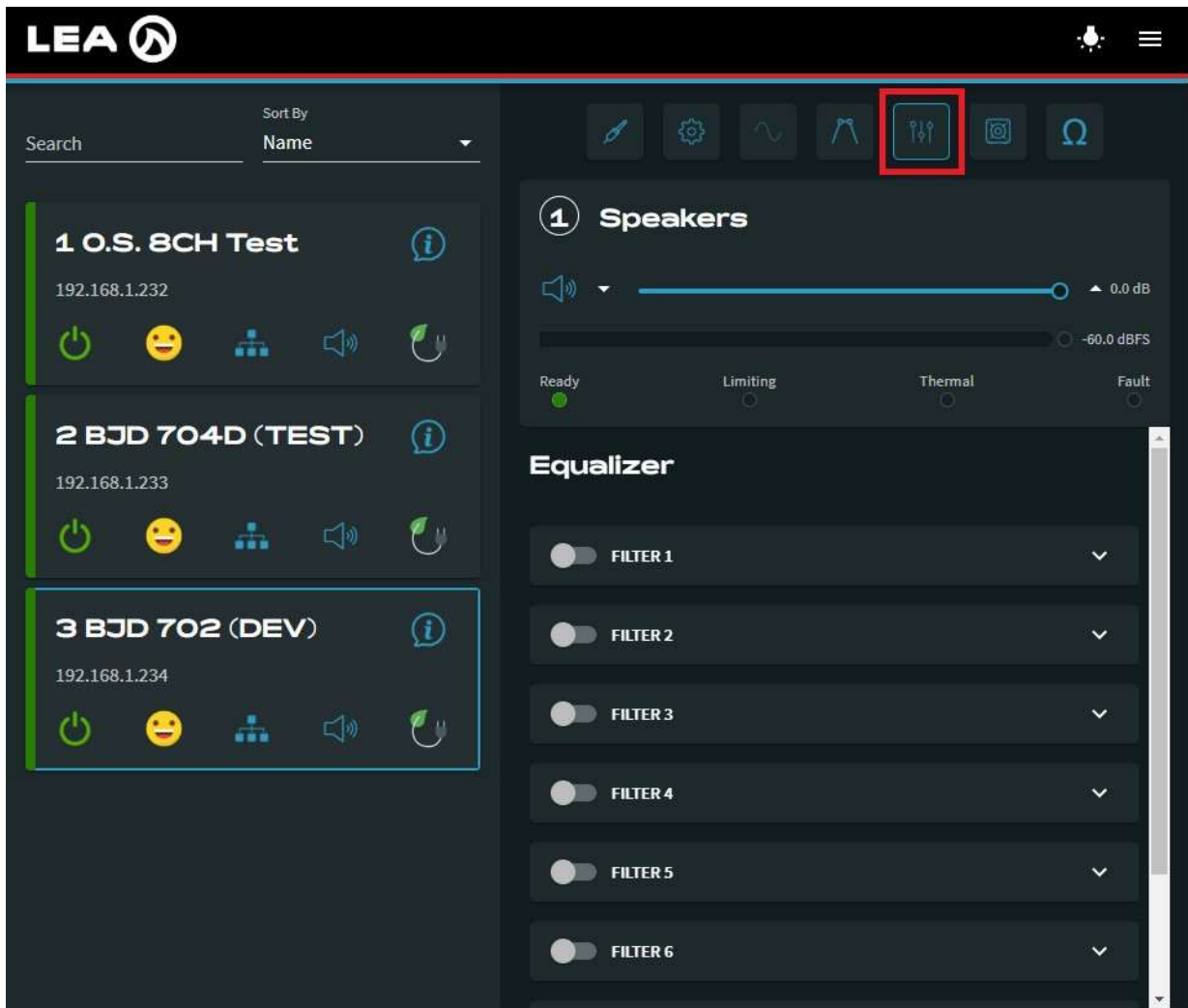
**Example:** set /amp/channels/1/crossover/lowPassFilter/type "Butterworth 6dB/oct"\n

- This command set the Low Pass Filter type to Butterworth 6dB/oct on channel 1



## Amplifier Channels Output EQ

Click on this button to navigate to the EQ section of the DSP relevant to this API section



## Output EQ Filter Enable

**Type:** CONTROL

**Commands:** get, set, subscribe, unsubscribe

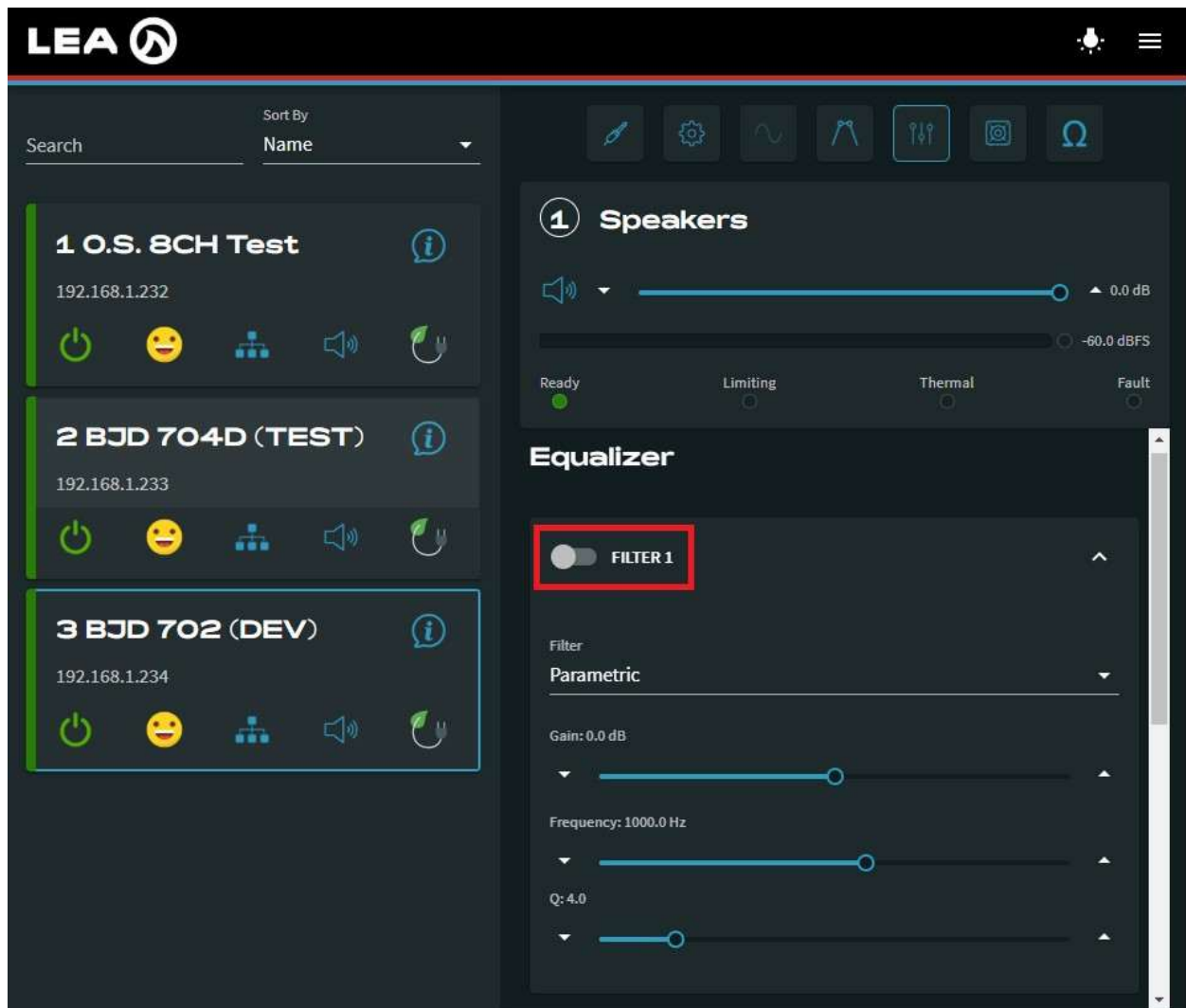
**URL:** /amp/channels/x/outputEqFilters/\*/enable

- x is the desired channel number and \* is the desired filter number

**Values:** "true", "false"

**Example:** set /amp/channels/1/outputEqFilters/1/enable "true"\n

- This command enabled the EQ Filter 1 on Channel 1



The screenshot displays the LEA control interface. On the left, a list of channels is shown, including '1 O.S. 8CH Test', '2 BJD 704D (TEST)', and '3 BJD 702 (DEV)'. The right panel shows the 'Speakers' section for channel 1, with a volume slider set to 0.0 dB and status indicators for Ready, Limiting, Thermal, and Fault. Below this is the 'Equalizer' section, where 'FILTER 1' is highlighted with a red box and is currently disabled. The filter type is set to 'Parametric', with a gain of 0.0 dB, a frequency of 1000.0 Hz, and a Q of 4.0.

## Output EQ Filter Type

**Type:** CONTROL

**Commands:** get, set, subscribe, unsubscribe

**URL:** /amp/channels/x/outputEqFilters/\*/type

- x is the desired channel number and \* is the desired filter number **Values:**

"Parametric"

"LP Shelf 6dB/oct"

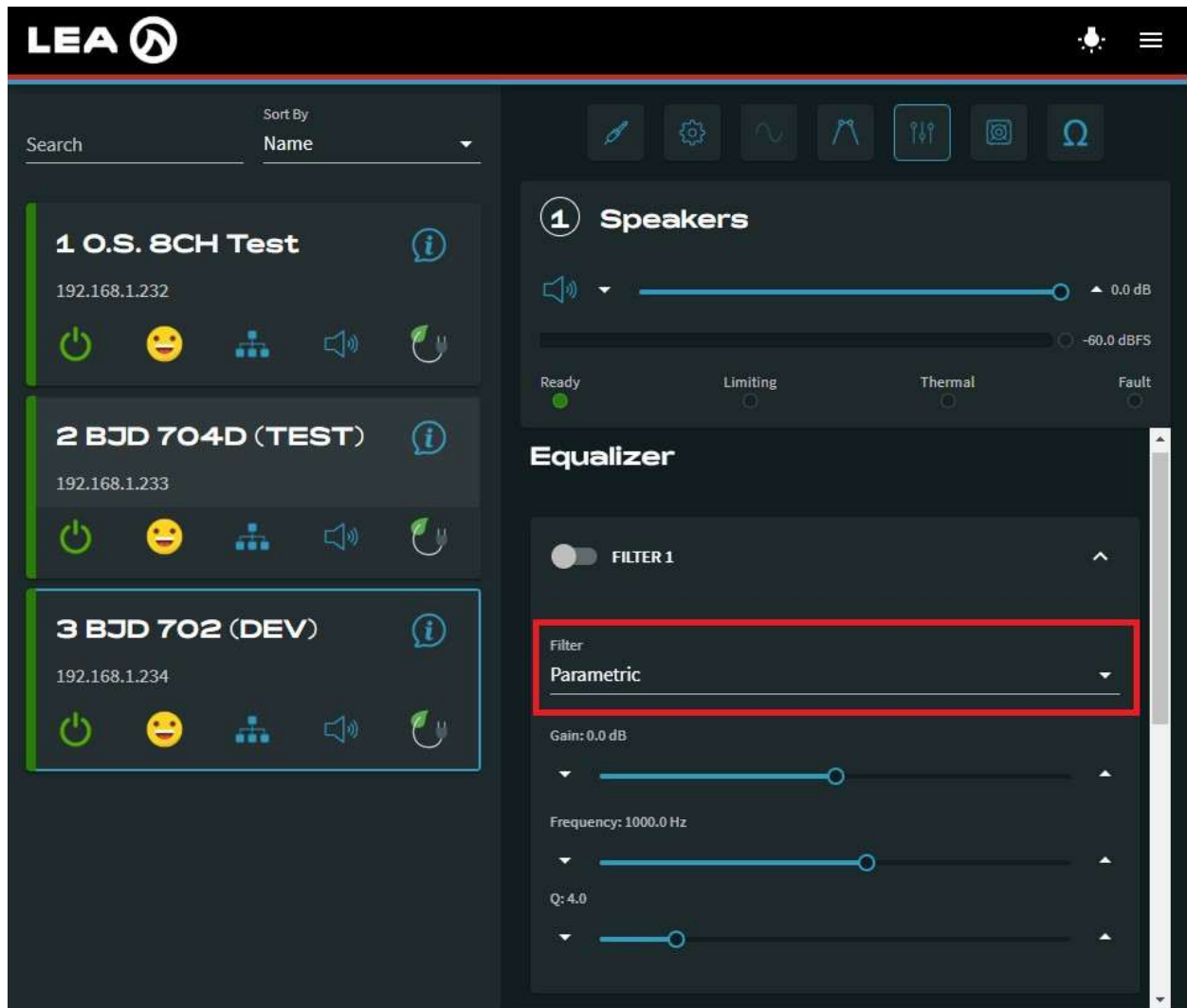
"HP Shelf 6dB/oct"

"LP Shelf 12dB/oct"

"HP Shelf 12dB/oct"

**Example:** set /amp/channels/1/outputEqFilters/1/type "Parametric"\n

- This command set the filter type on EQ Filter 1 on Channel 1 to Parametric



The screenshot displays the LEA control interface. On the left, there is a list of channels: '1 O.S. 8CH Test', '2 BJD 704D (TEST)', and '3 BJD 702 (DEV)'. The '3 BJD 702 (DEV)' channel is highlighted with a blue border. On the right, the 'Speakers' section is active, showing a volume slider set to 0.0 dB and a status indicator for 'Ready'. Below this is the 'Equalizer' section, which includes a toggle for 'FILTER 1' and a dropdown menu for the filter type. The dropdown menu is highlighted with a red box and shows 'Parametric' selected. Below the dropdown, there are sliders for 'Gain: 0.0 dB', 'Frequency: 1000.0 Hz', and 'Q: 4.0'.

## Output EQ Filter Gain

**Type:** CONTROL

**Commands:** get, set, subscribe, unsubscribe

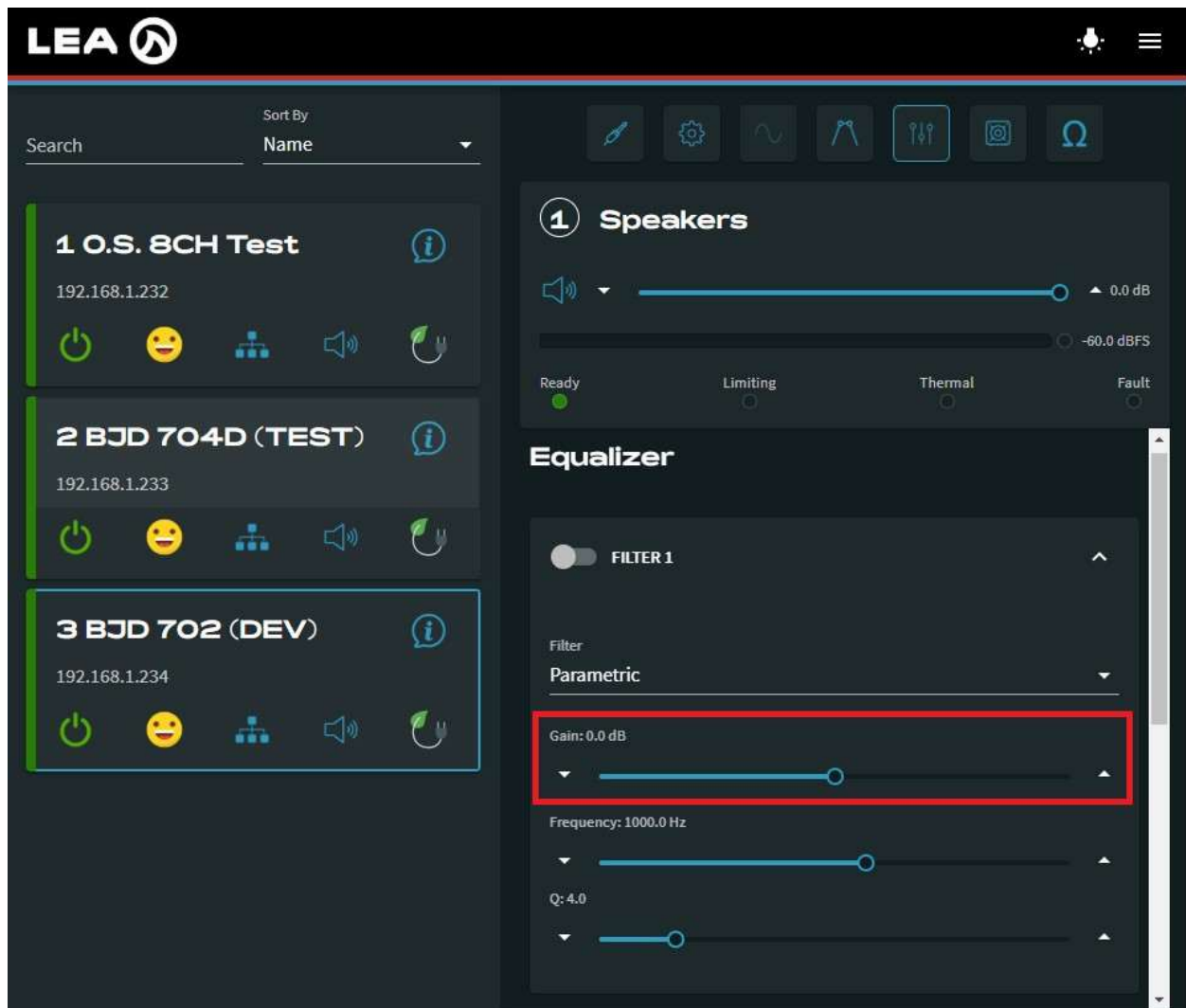
**URL:** /amp/channels/x/outputEqFilters/\*/gain

- x is the desired channel number and \* is the desired filter number

**Values:** -15.0 through 15.0

**Example:** set /amp/channels/1/outputEqFilters/1/gain 3.0\n

- This command set the gain on EQ Filter 1 on Channel 1 to 3.0 dB



The screenshot displays the LEA control interface. On the left, a list of channels is shown, with the third channel, '3 BJD 702 (DEV)', highlighted. The right panel shows the 'Speakers' section for channel 1, with a volume slider set to 0.0 dB. Below this is the 'Equalizer' section, where 'FILTER 1' is active. The filter type is 'Parametric', and the gain is set to 0.0 dB, which is highlighted with a red box. Other parameters shown include Frequency: 1000.0 Hz and Q: 4.0.

## Output EQ Filter Frequency

**Type:** CONTROL

**Commands:** get, set, subscribe, unsubscribe

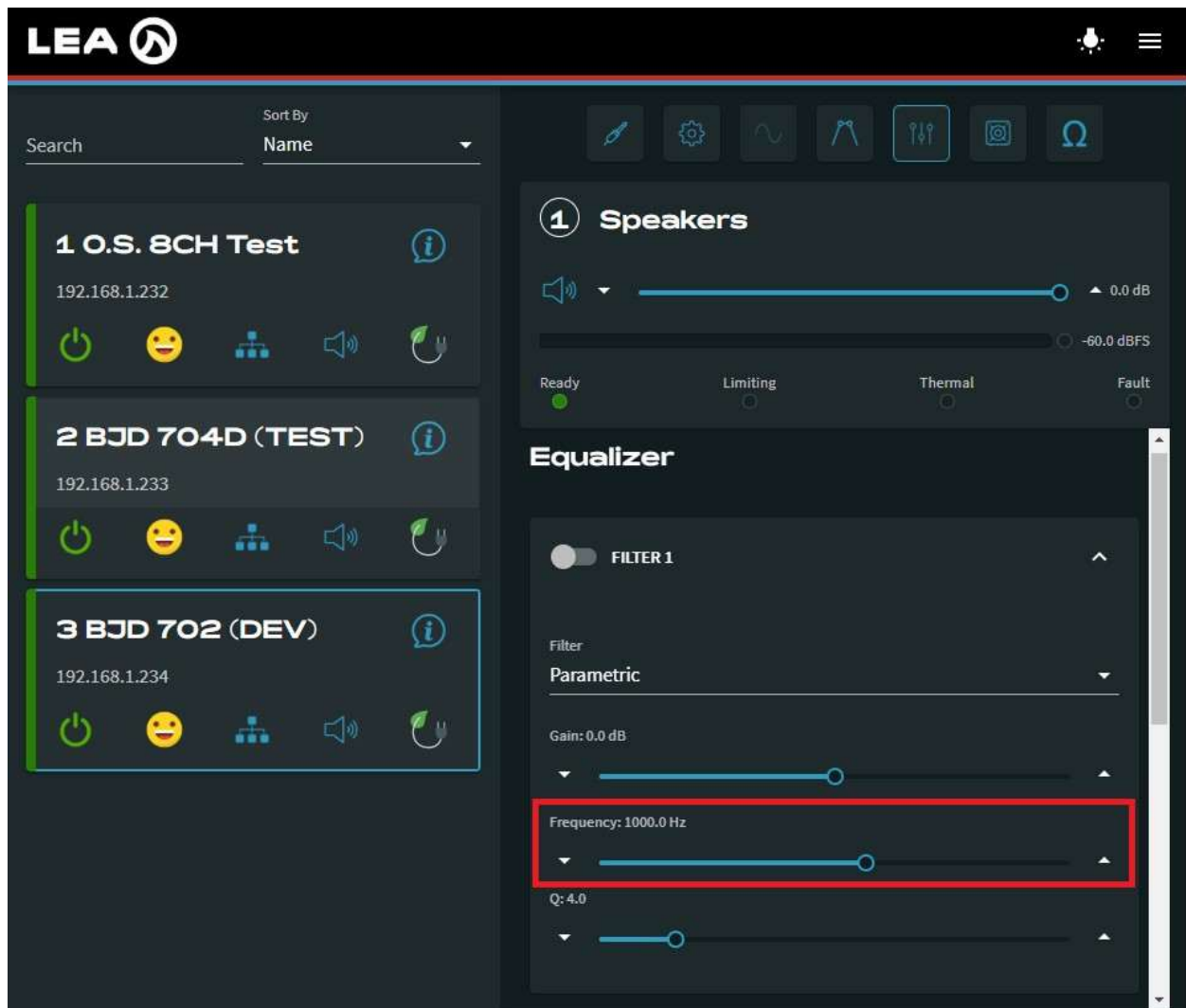
**URL:** /amp/channels/x/outputEqFilters/\*/frequency

- x is the desired channel number and \* is the desired filter number

**Values:** 20 through 20000

**Example:** set /amp/channels/1/outputEqFilters/1/frequency 1000\n

- This command set the frequency on EQ Filter 1 on Channel 1 to 1000 Hz



The screenshot displays the LEA control interface. On the left, a list of channels is shown, with the third channel, '3 BJD 702 (DEV)', highlighted. The main panel on the right shows the 'Speakers' section for '1 Speakers', including a volume slider set to 0.0 dB and status indicators for Ready, Limiting, Thermal, and Fault. Below this is the 'Equalizer' section, where 'FILTER 1' is active. The filter type is 'Parametric', and the 'Frequency' is set to 1000.0 Hz, which is highlighted with a red box. Other parameters shown include Gain: 0.0 dB and Q: 4.0.



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## Output EQ Filter Q

**Type:** CONTROL **Commands:**

**URL:** /amp/channels/x/outputEqFilters/\*/q

- x is the desired channel number and \* is the desired filter number

**Values:** 0.1 through 24.0

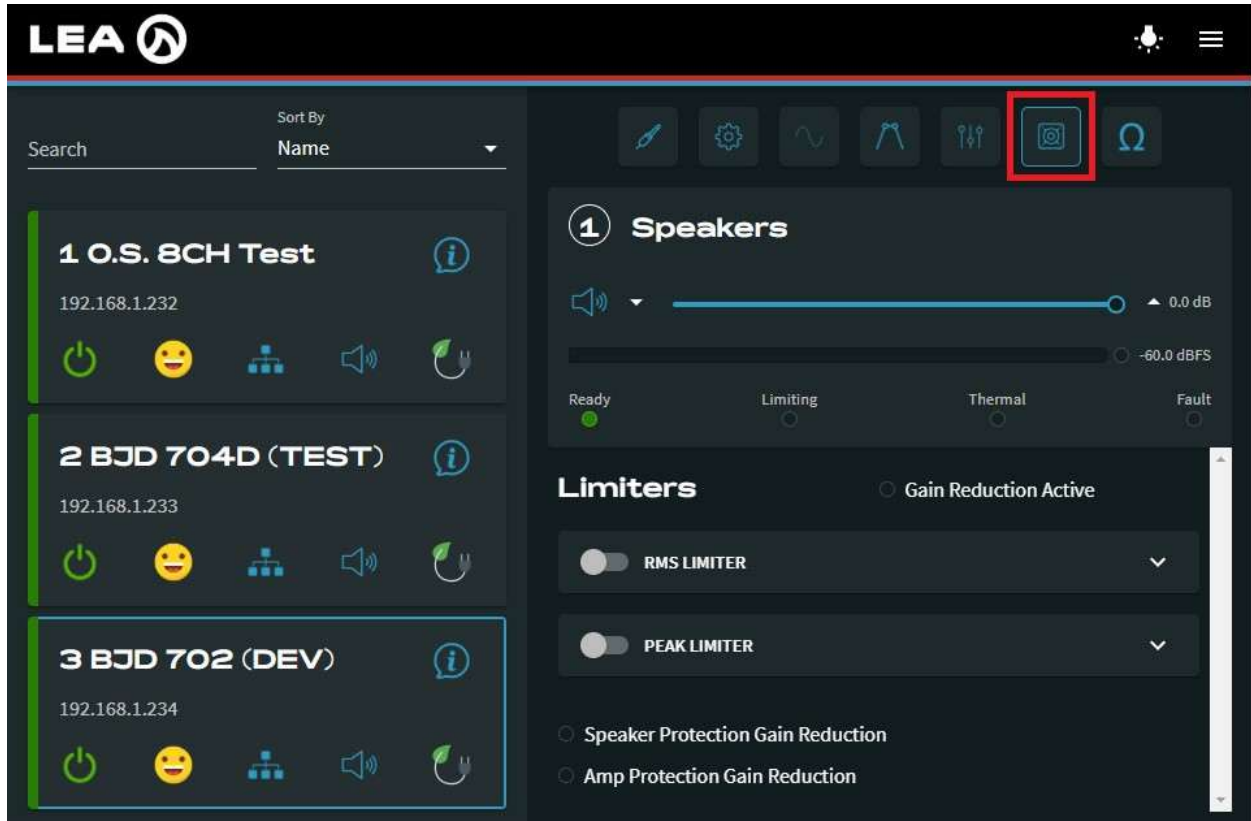
**Example:** set /amp/channels/1/outputEqFilters/1/q 4.0\n

- This command set the Q on EQ Filter 1 on Channel 1 to 4.0

The screenshot displays the LEA control interface. On the left, there is a list of three channels: '1 O.S. 8CH Test', '2 BJD 704D (TEST)', and '3 BJD 702 (DEV)'. The third channel is highlighted with a blue border. On the right, the 'Speakers' section shows volume and status indicators. Below that, the 'Equalizer' section is active, showing 'FILTER 1' with a 'Parametric' filter type. The 'Gain' is set to 0.0 dB and the 'Frequency' is 1000.0 Hz. The 'Q' value is set to 4.0, which is highlighted with a red rectangular box.

## Amplifier Channels RMS Limiter and Peak Limiter

Click on this button to navigate to the Limiter section of the DSP relevant to this API section





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## RMS Limiter Enable

**Type:** CONTROL **Commands:**

**URL:** /amp/channels/x/rmsLimiter/enable

**Values:** "true", "false"

**Example:** set /amp/channels/1/rmsLimiter/enable "false"\n

- This command disabled the RMS Limiter on channel 1

The screenshot displays the LEA control interface. On the left, there is a list of channels: "1 O.S. 8CH Test", "2 BJD 704D (TEST)", and "3 BJD 702 (DEV)". The right panel shows the "Speakers" control for channel 1. A red box highlights the "RMS LIMITER" toggle switch, which is currently turned off. Below the toggle, the following settings are visible:

- Threshold: 10.0 VoltsRMS
- Attack: 1000.0 milliseconds
- Release: 10000.0 milliseconds
- Speaker Limiter: 0.0 dB
- Protection Limiter: 0.0 dB
- Amp Output: 0.0 VoltsRMS

At the top of the right panel, there are status indicators for "Ready", "Limiting", "Thermal", and "Fault", all of which are currently inactive.

## RMS Limiter Threshold

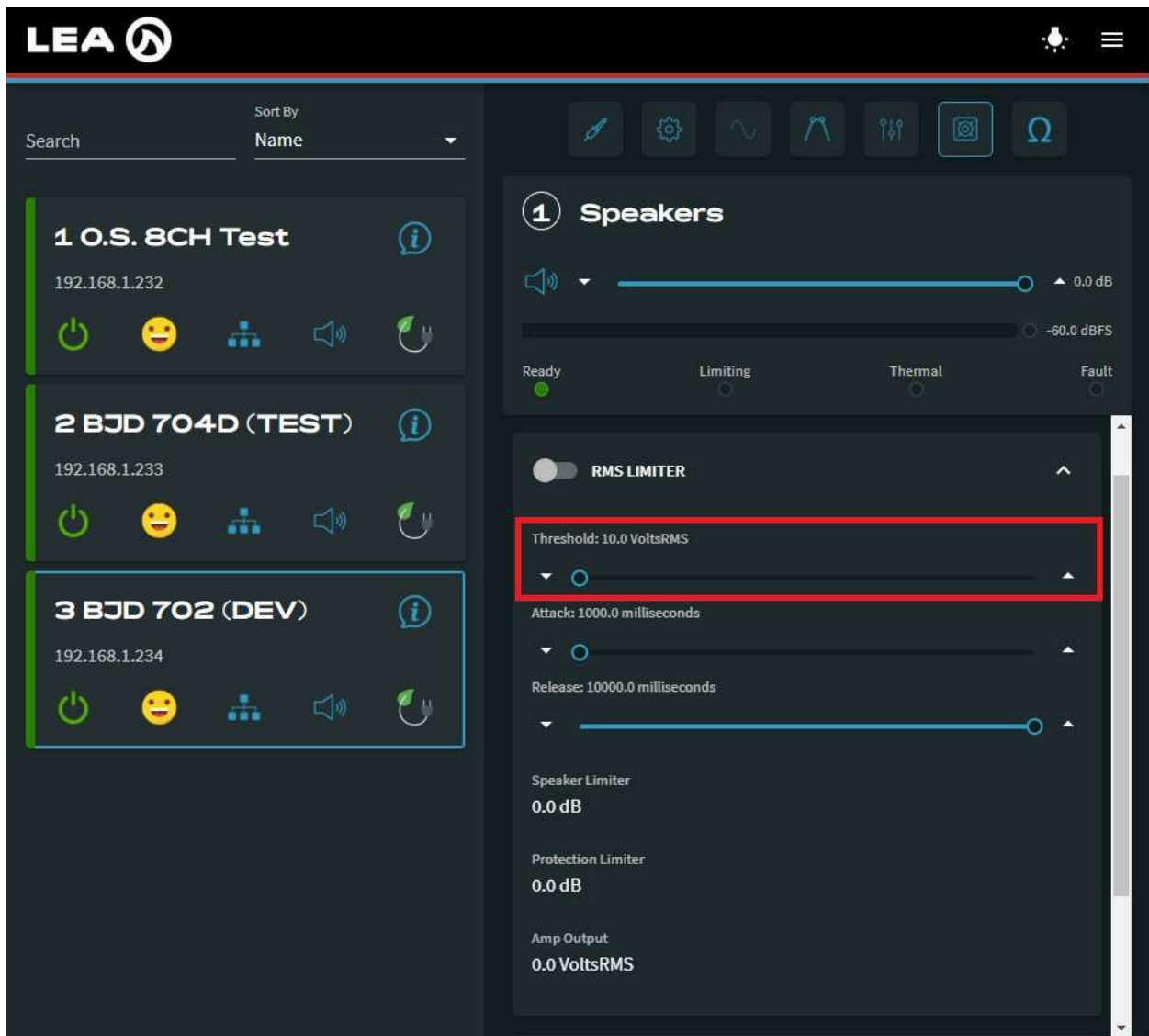
**Type:** CONTROL **Commands:**

**URL:** /amp/channels/x/rmsLimiter/threshold

**Values:** 10.0 through 140.0

**Example:** set /amp/channels/1/rmsLimiter/threshold 70.0\n

- This command set the RMS Limiter threshold to 70.0 V on channel 1





## RMS Limiter Attack

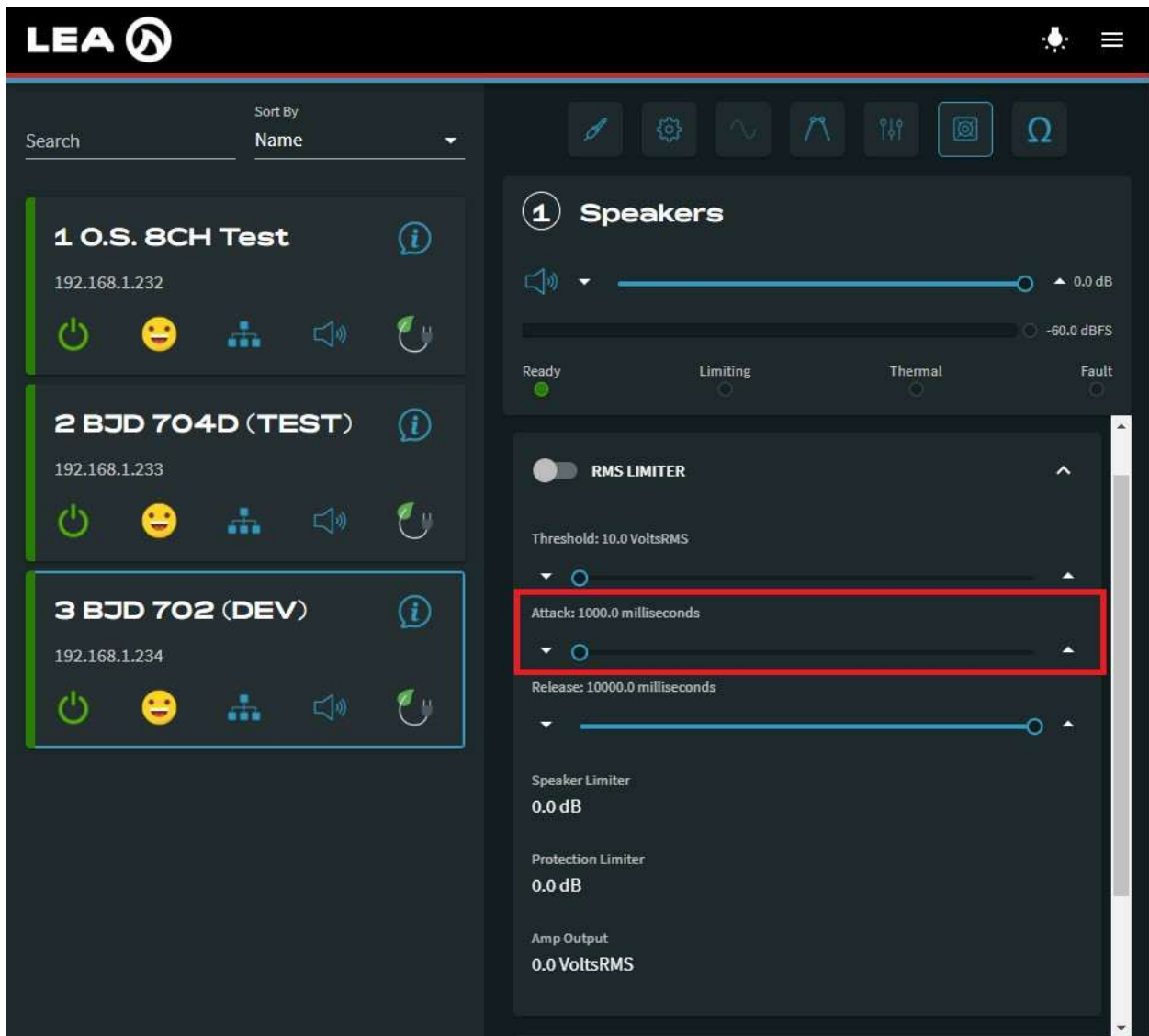
**Type:** CONTROL **Commands:**

**URL:** /amp/channels/x/rmsLimiter/attackTime

**Values:** 1000.0 through 10000.0

**Example:** set /amp/channels/1/rmsLimiter/attackTime 1000.0\n

- This command set the RMS Limiter attack time to 1000.0 ms on channel 1





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## RMS Limiter Release

**Type:** CONTROL

**Commands:** get, set, subscribe, unsubscribe

**URL:** /amp/channels/x/rmsLimiter/releaseTime

**Values:** 1000.0 through 10000.0

**Example:** set /amp/channels/1/rmsLimiter/releaseTime 10000.0\n

- This command set the RMS Limiter release time to 10000.0 ms on channel 1

The screenshot displays the LEA control interface. On the left, a list of channels is shown: 1 O.S. 8CH Test (192.168.1.232), 2 BJD 704D (TEST) (192.168.1.233), and 3 BJD 702 (DEV) (192.168.1.234). The right panel shows the 'Speakers' control for channel 1. The 'RMS LIMITER' is enabled, with a threshold of 10.0 VoltsRMS, an attack time of 1000.0 milliseconds, and a release time of 10000.0 milliseconds. The release time is highlighted with a red box. Other settings include Speaker Limiter at 0.0 dB, Protection Limiter at 0.0 dB, and Amp Output at 0.0 VoltsRMS.

## RMS Limiter Speaker Limiter Reduction

**Type:** SENSOR

**Commands:** get, subscribe, unsubscribe

**URL:** /amp/channels/x/rmsLimiter/gainReduction

**Values:** -80.0 through 0.0

**Example:** subscribe /amp/channels/1/rmsLimiter/gainReduction\n

- This command subscribed to the RMS Limiter speaker limiter reduction sensor
- This is the active gain reduction from the user defined limiters

The screenshot displays the LEA control interface. On the left, there is a list of three channels: '1 O.S. 8CH Test', '2 BJD 704D (TEST)', and '3 BJD 702 (DEV)'. Each channel has a set of control icons including power, status, network, audio, and refresh. The right panel shows the 'Speakers' configuration for channel 1. It includes a volume slider set to 0.0 dB, with a range from 0.0 dB to -60.0 dBFS. Below the slider are status indicators for 'Ready' (green), 'Limiting' (grey), 'Thermal' (grey), and 'Fault' (grey). The 'RMS LIMITER' section is expanded, showing a toggle switch that is turned on. The configuration parameters are: Threshold: 10.0 VoltsRMS, Attack: 1000.0 milliseconds, and Release: 10000.0 milliseconds. At the bottom, three limiter status indicators are shown: 'Speaker Limiter' at 0.0 dB (highlighted with a red box), 'Protection Limiter' at 0.0 dB, and 'Amp Output' at 0.0 VoltsRMS.



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## RMS Limiter Protection Limiter Reduction

**Type:** SENSOR

**Commands:** get, subscribe, unsubscribe

**URL:** /amp/channels/x/rmsLimiter/totalGainReduction

**Values:** -80.0 through 0.0

**Example:** subscribe /amp/channels/1/rmsLimiter/totalGainReduction\n

- This command subscribed to the RMS Limiter protection limiter reduction sensor
- This is the total active gain reduction applied to the amplifier from both the user defined limiters and internal amplifier protection limiters

The screenshot displays the LEA control interface. On the left, there is a list of three channels: '1 O.S. 8CH Test' (IP: 192.168.1.232), '2 BJD 704D (TEST)' (IP: 192.168.1.233), and '3 BJD 702 (DEV)' (IP: 192.168.1.234). Each channel has a set of control icons including power, smiley face, network, speaker, and leaf. The right panel shows the 'Speakers' configuration for channel 1. It includes a volume slider set to 0.0 dB (range -60.0 dBFS to 0.0 dB) and status indicators for Ready (green), Limiting, Thermal, and Fault. Below this, the 'RMS LIMITER' is enabled. Its settings are: Threshold: 10.0 VoltsRMS, Attack: 1000.0 milliseconds, and Release: 10000.0 milliseconds. At the bottom, the 'Protection Limiter' is highlighted with a red box and shows a value of 0.0 dB. Other values shown are Speaker Limiter at 0.0 dB and Amp Output at 0.0 VoltsRMS.

## Peak Limiter Enable

**Type:** CONTROL

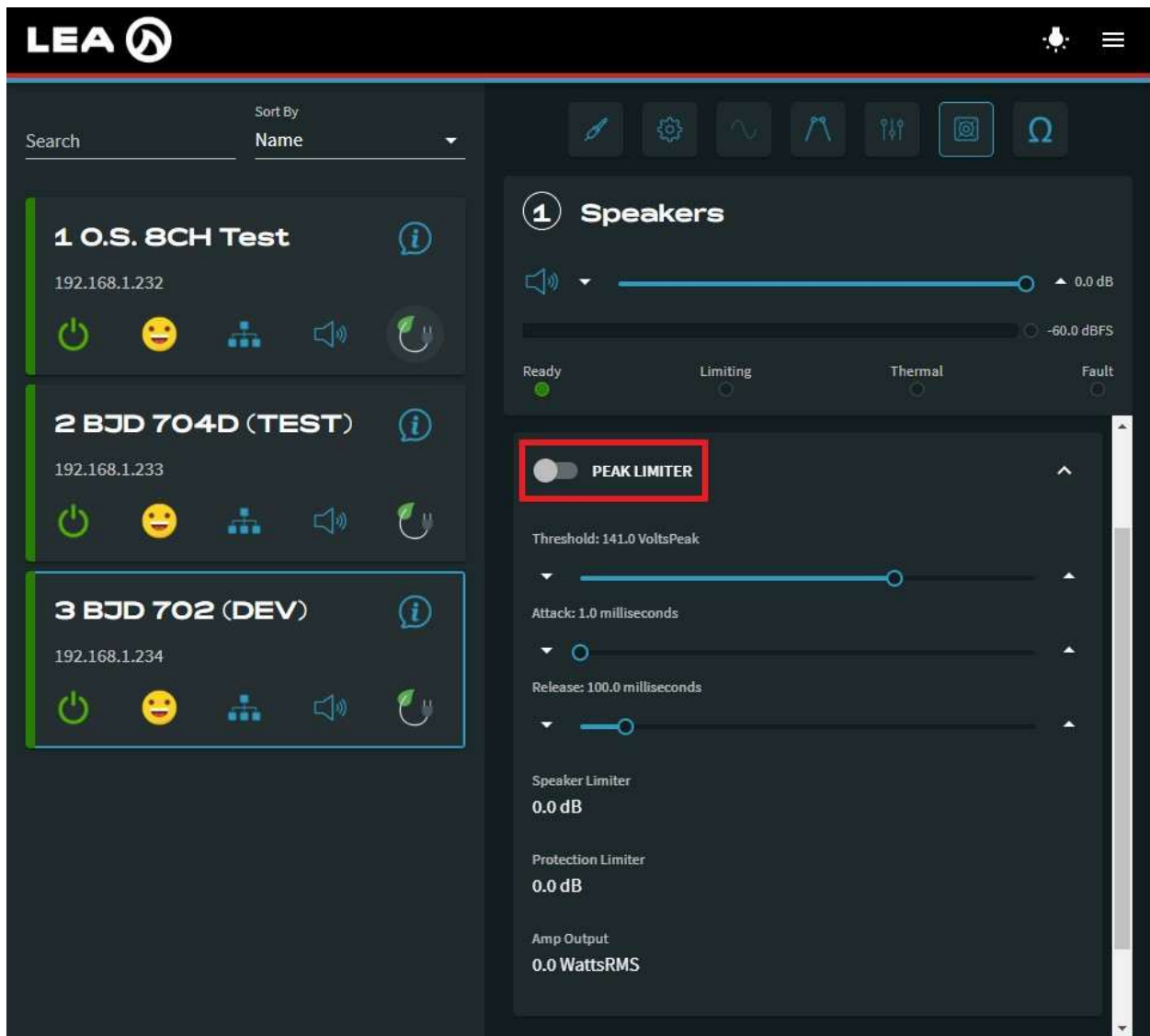
**Commands:** get, set, subscribe, unsubscribe

**URL:** /amp/channels/x/peakLimiter/enable

**Values:** "true", "false"

**Example:** set /amp/channels/1/peakLimiter/enable "false"\n

- This command disabled the Peak Limiter on channel 1



The screenshot displays the LEA control interface. On the left, there is a list of channels: '1 O.S. 8CH Test', '2 BJD 704D (TEST)', and '3 BJD 702 (DEV)'. The right panel shows the settings for channel '1 Speakers'. A red box highlights the 'PEAK LIMITER' toggle, which is currently turned off. Below this, several parameters are listed with sliders: 'Threshold: 141.0 VoltsPeak', 'Attack: 1.0 milliseconds', 'Release: 100.0 milliseconds', 'Speaker Limiter: 0.0 dB', 'Protection Limiter: 0.0 dB', and 'Amp Output: 0.0 WattsRMS'. At the top of the right panel, there are status indicators for 'Ready', 'Limiting', 'Thermal', and 'Fault', all of which are currently inactive.

## Peak Limiter Threshold

**Type:** CONTROL

**Commands:** get, set, subscribe, unsubscribe

**URL:** /amp/channels/x/peakLimiter/threshold

**Values:** 14.0 through 198.0

**Example:** set /amp/channels/1/peakLimiter/threshold 141.0\n

- This command set the Peak Limiter threshold to 141.0 V on channel 1

The screenshot shows the LEA control interface. On the left, there is a list of channels: 1 O.S. 8CH Test, 2 BJD 704D (TEST), and 3 BJD 702 (DEV). The right panel shows the 'Speakers' control for channel 1. The 'PEAK LIMITER' is enabled, and the 'Threshold' is set to 141.0 VoltsPeak, which is highlighted with a red box. Other settings include 'Attack: 1.0 milliseconds', 'Release: 100.0 milliseconds', 'Speaker Limiter: 0.0 dB', 'Protection Limiter: 0.0 dB', and 'Amp Output: 0.0 WattsRMS'. The status indicators for 'Ready', 'Limiting', 'Thermal', and 'Fault' are also visible.



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## Peak Limiter Attack

**Type:** CONTROL

**Commands:** get, set, subscribe, unsubscribe

**URL:** /amp/channels/x/peakLimiter/attackTime

**Values:** 1.0 through 1000.0

**Example:** set /amp/channels/1/peakLimiter/attackTime 10.0\n

- This command set the Peak Limiter attack time to 10.0 ms on channel 1

The screenshot displays the LEA control interface. On the left, there is a list of channels: '1 O.S. 8CH Test', '2 BJD 704D (TEST)', and '3 BJD 702 (DEV)'. The '3 BJD 702 (DEV)' channel is highlighted with a blue border. On the right, the 'Speakers' control panel is visible. The 'PEAK LIMITER' section is expanded, showing the following settings: Threshold: 141.0 VoltsPeak, Attack: 1.0 milliseconds (highlighted with a red box), Release: 100.0 milliseconds, Speaker Limiter: 0.0 dB, Protection Limiter: 0.0 dB, and Amp Output: 0.0 WattsRMS. The interface also shows a volume slider and status indicators for Ready, Limiting, Thermal, and Fault.

## Peak Limiter Release

**Type:** CONTROL

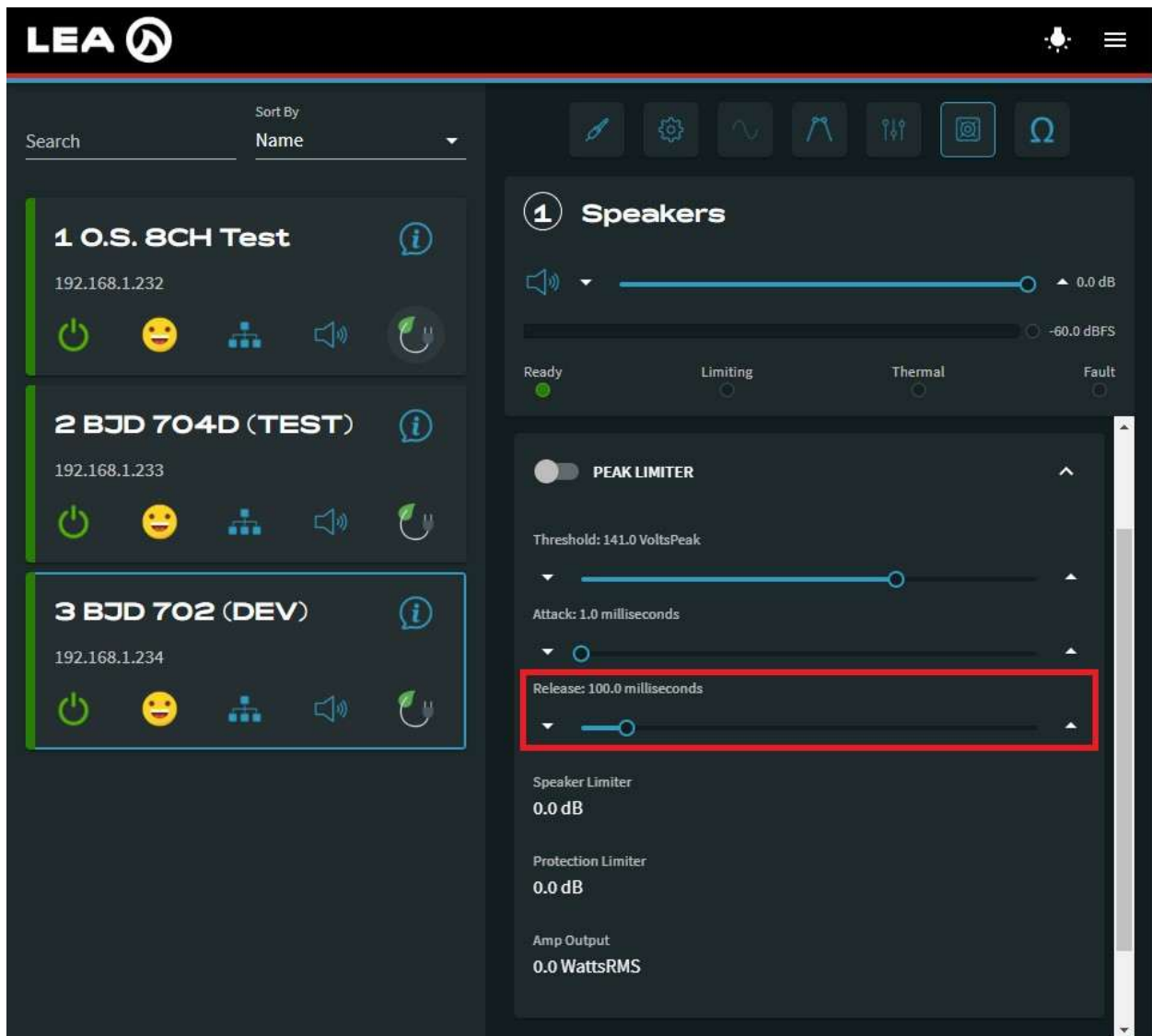
**Commands:** get, set, subscribe, unsubscribe

**URL:** /amp/channels/x/peakLimiter/releaseTime

**Values:** 1.0 through 1000.0

**Example:** set /amp/channels/1/peakLimiter/releaseTime 100.0\n

- This command set the Peak Limiter release time to 100.0 ms on channel 1



The screenshot displays the LEA control interface. On the left, a list of channels is shown: '1 O.S. 8CH Test' (IP: 192.168.1.232), '2 BJD 704D (TEST)' (IP: 192.168.1.233), and '3 BJD 702 (DEV)' (IP: 192.168.1.234). The right panel shows the '1 Speakers' control page. The 'PEAK LIMITER' is currently disabled. The 'Release' parameter is set to 100.0 milliseconds, which is highlighted with a red box. Other parameters include 'Threshold: 141.0 VoltsPeak', 'Attack: 1.0 milliseconds', 'Speaker Limiter: 0.0 dB', 'Protection Limiter: 0.0 dB', and 'Amp Output: 0.0 WattsRMS'. The interface also shows status indicators for 'Ready', 'Limiting', 'Thermal', and 'Fault'.

## Peak Limiter Speaker Limiter Reduction

**Type:** SENSOR

**Commands:** get, subscribe, unsubscribe

**URL:** /amp/channels/x/peakLimiter/gainReduction

**Values:** -80.0 through 0.0

**Example:** subscribe /amp/channels/1/peakLimiter/gainReduction\n

- This command subscribed to the Peak Limiter speaker limiter reduction sensor
- This is the active gain reduction from the user defined limiters

The screenshot displays the LEA control interface. On the left, there is a list of three channels: '1 O.S. 8CH Test' (IP: 192.168.1.232), '2 BJD 704D (TEST)' (IP: 192.168.1.233), and '3 BJD 702 (DEV)' (IP: 192.168.1.234). Each channel has a set of control icons. The right side of the interface shows the configuration for 'Speakers'. A volume slider is set to 0.0 dB, with a range from 0.0 dB to -60.0 dBFS. Below the slider, there are status indicators for 'Ready' (green), 'Limiting' (grey), 'Thermal' (grey), and 'Fault' (grey). The 'PEAK LIMITER' is currently disabled. The configuration includes: Threshold: 141.0 VoltsPeak, Attack: 1.0 milliseconds, Release: 100.0 milliseconds. At the bottom, a red box highlights the 'Speaker Limiter' value, which is 0.0 dB. Other values shown are 'Protection Limiter' at 0.0 dB and 'Amp Output' at 0.0 WattsRMS.



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## Peak Limiter Protection Limiter Reduction

**Type:** SENSOR

**Commands:** get, subscribe, unsubscribe

**URL:** /amp/channels/x/peakLimiter/totalGainReduction

**Values:** -80.0 through 0.0

**Example:** subscribe /amp/channels/1/peakLimiter/totalGainReduction\n

- This command subscribed to the Peak Limiter protection limiter reduction sensor
- This is the total active gain reduction applied to the amplifier from both the user defined limiters and internal amplifier protection limiters

The screenshot displays the LEA control interface. On the left, there is a list of three channels: '1 O.S. 8CH Test', '2 BJD 704D (TEST)', and '3 BJD 702 (DEV)'. Each channel has a status bar with icons for power, smile, network, speaker, and refresh. The right panel shows the '1 Speakers' configuration. At the top, there is a volume slider set to 0.0 dB, with a range from -60.0 dBFS. Below the slider are status indicators for 'Ready' (green), 'Limiting' (grey), 'Thermal' (grey), and 'Fault' (grey). The 'PEAK LIMITER' section is expanded, showing a toggle switch that is turned on. Below the toggle are several sliders: 'Threshold: 141.0 VoltsPeak', 'Attack: 1.0 milliseconds', 'Release: 100.0 milliseconds', 'Speaker Limiter: 0.0 dB', and 'Protection Limiter: 0.0 dB'. The 'Protection Limiter' value is highlighted with a red box. At the bottom, 'Amp Output' is shown as 0.0 WattsRMS.

## Amplifier Channels Output

Click on this button to navigate to the General Channel Settings of the DSP relevant to this API section

The screenshot displays the LEA software interface. On the left, a list of channels is shown: '1 O.S. 8CH Test' (IP: 192.168.1.232), '2 BJD 704D (TEST)' (IP: 192.168.1.233), and '3 BJD 702 (DEV)' (IP: 192.168.1.234). Each channel has a set of control icons. The '3 BJD 702 (DEV)' channel is highlighted with a blue border. On the right, the settings for the selected channel, '1 Bar Speakers', are displayed. A gear icon in the top toolbar is highlighted with a red box. The settings include a volume slider set to 0.0 dB (range -60.0 dBFS), status indicators for Ready (green), Limiting, Thermal, and Fault, and a 'Settings' section with 'Channel Name' set to 'Bar Speakers'. Below that, 'HiZ/LowZ Settings' shows 'HiZ/LowZ' and 'LoZ' options. The 'Smart Power Bridge Enabled' section has buttons for 'CH. 1' and 'CH. 2'. A note states: 'Note: You can only enable Smart Power Bridge on one channel per amplifier.' The 'Channel Ready' section has a toggle switch set to 'Enabled'.

## Output Channel Name

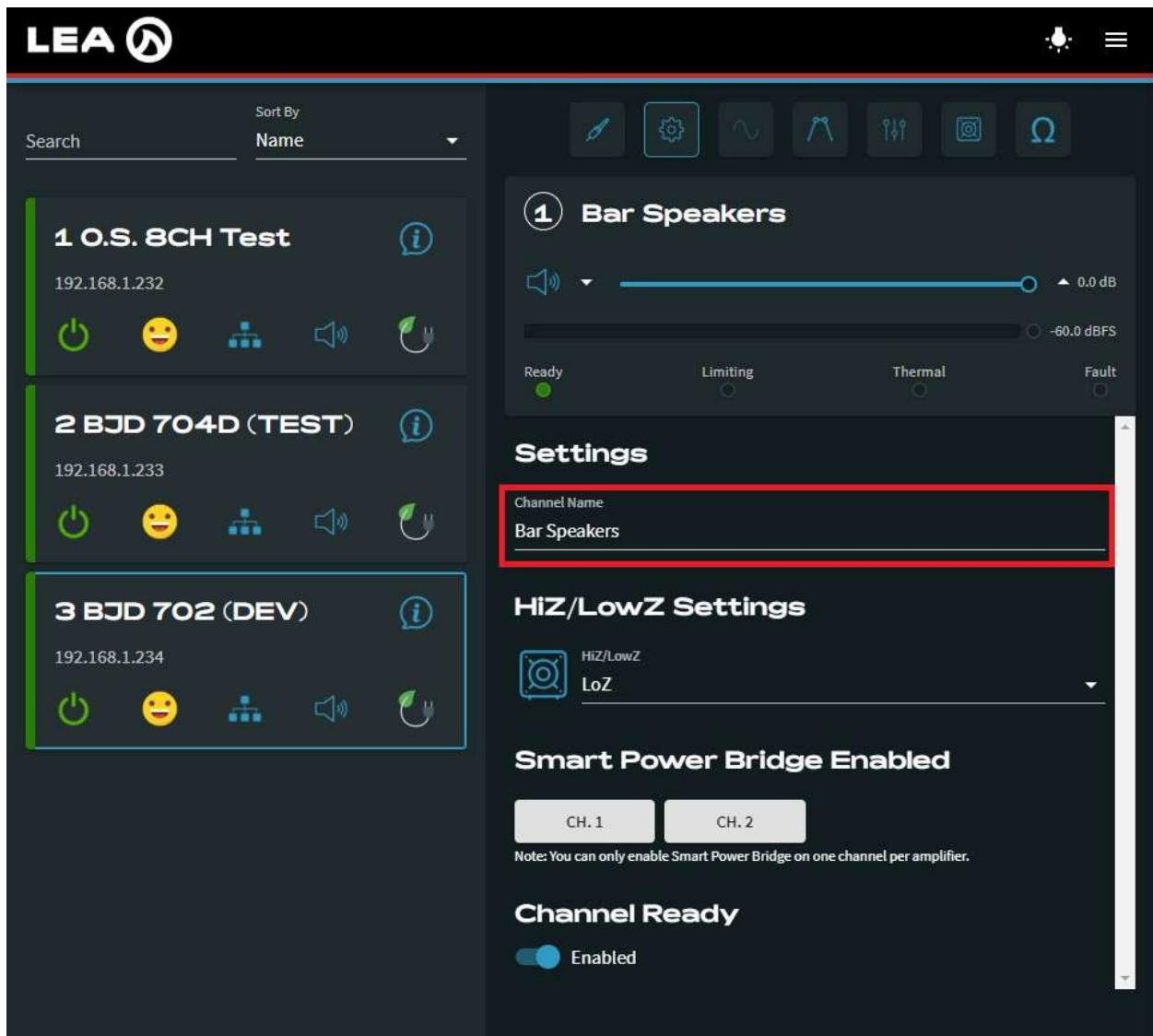
**Type:** CONTROL **Commands:**

**URL:** /amp/channels/x/output/name

**Values:** any text up to 64 characters

**Example:** get /amp/channels/1/output/name\n

- Response: amp/channels/1/output/name "Bar Speakers"\n
- This command asked for the output channel name and got the response Bar Speakers



The screenshot displays the LEA control interface. On the left, a list of channels is shown, including '1 O.S. 8CH Test', '2 BJD 704D (TEST)', and '3 BJD 702 (DEV)'. The right panel shows the settings for the selected channel, '1 Bar Speakers'. The 'Channel Name' field is highlighted with a red box and contains the text 'Bar Speakers'. Below this, the 'HiZ/LowZ Settings' section shows 'LoZ' selected. The 'Smart Power Bridge Enabled' section has two buttons, 'CH. 1' and 'CH. 2', and a note: 'Note: You can only enable Smart Power Bridge on one channel per amplifier.' The 'Channel Ready' section has a toggle switch set to 'Enabled'.



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## Output Channel Ready Enable

**Type:** CONTROL **Commands:**

**URL:** /amp/channels/x/output/enable

**Values:** "true", "false"

**Example:** set /amp/channels/1/output/enable "true"\n

- This command enabled the channel ready on channel 1

The screenshot displays the LEA control interface. On the left, a list of channels is shown, with '3 BJD 702 (DEV)' highlighted. The main panel shows the configuration for '1 Bar Speakers'. The volume is set to 0.0 dB. Below the volume, there are status indicators for 'Ready' (green), 'Limiting', 'Thermal', and 'Fault'. The 'Settings' section shows the channel name as 'Bar Speakers'. The 'HiZ/LowZ Settings' section shows the HiZ/LowZ setting as 'HiZ-100V' and the frequency as '70.0 Hz'. The 'Smart Power Bridge Enabled' section shows two buttons for 'CH. 1' and 'CH. 2'. A note states: 'Note: You can only enable Smart Power Bridge on one channel per amplifier.' At the bottom, the 'Channel Ready' status is shown as 'Enabled' with a blue toggle switch, which is highlighted by a red box.

## Output Channel Mute

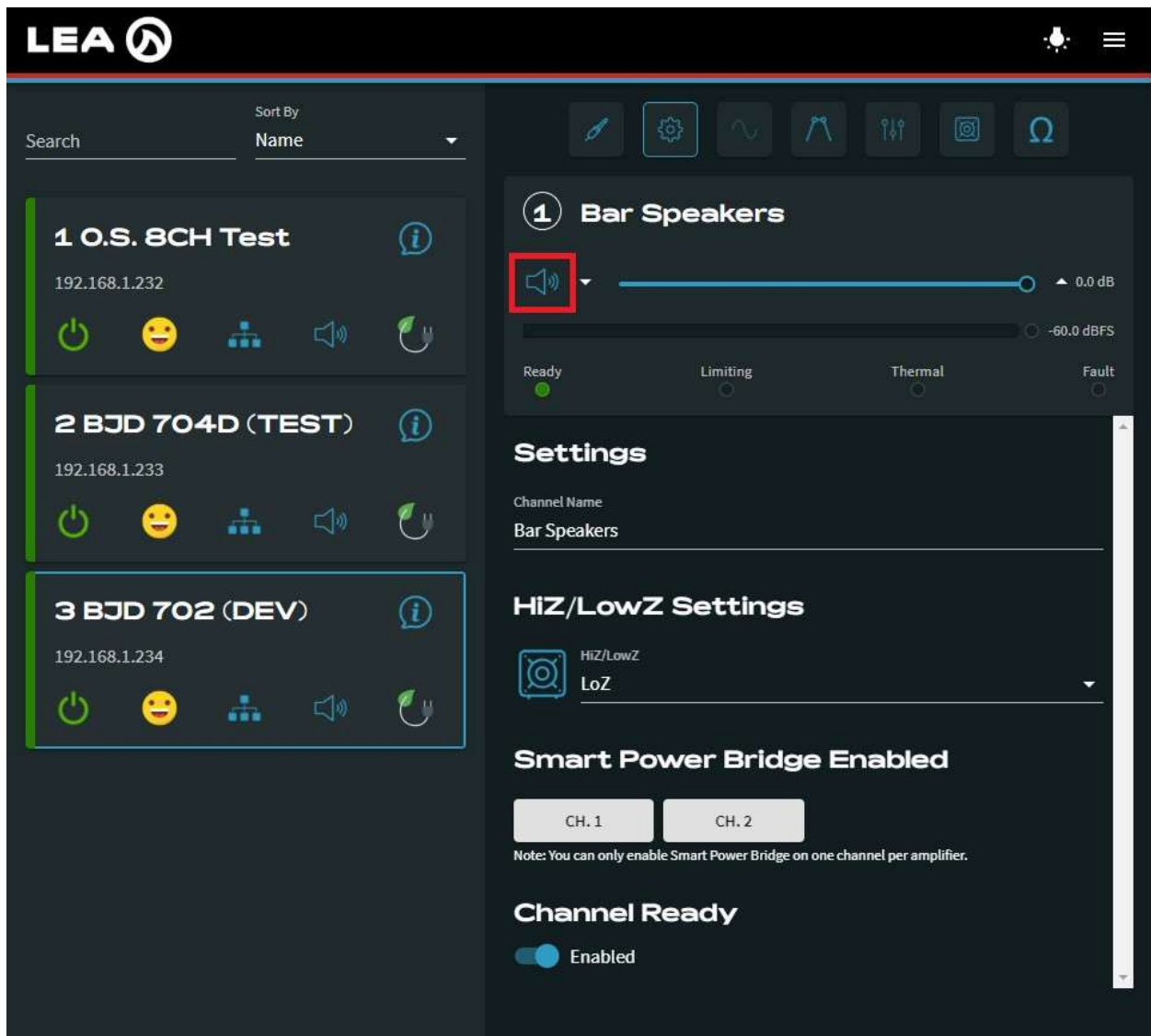
**Type:** CONTROL **Commands:**

**URL:** /amp/channels/x/output/mute

**Values:** "true", "false"

**Example:** set /amp/channels/1/output/mute "false"\n

- This command un-muted the output on channel 1



The screenshot displays the LEA control interface. On the left, a list of channels is shown, with '3 BJD 702 (DEV)' highlighted. The main panel shows the settings for '1 Bar Speakers'. A red box highlights the mute icon (a speaker with a slash through it) on the left side of the volume slider. The volume slider is currently set to 0.0 dB. Below the slider, there are status indicators for 'Ready' (green dot), 'Limiting' (grey dot), 'Thermal' (grey dot), and 'Fault' (grey dot). The 'Settings' section shows 'Channel Name' as 'Bar Speakers'. The 'HiZ/LowZ Settings' section shows 'HiZ/LowZ' and 'LoZ' options. The 'Smart Power Bridge Enabled' section has two buttons, 'CH. 1' and 'CH. 2'. A note below states: 'Note: You can only enable Smart Power Bridge on one channel per amplifier.' The 'Channel Ready' section has a toggle switch set to 'Enabled'.

## Output Channel Gain Attenuation Fader

**Type:** CONTROL

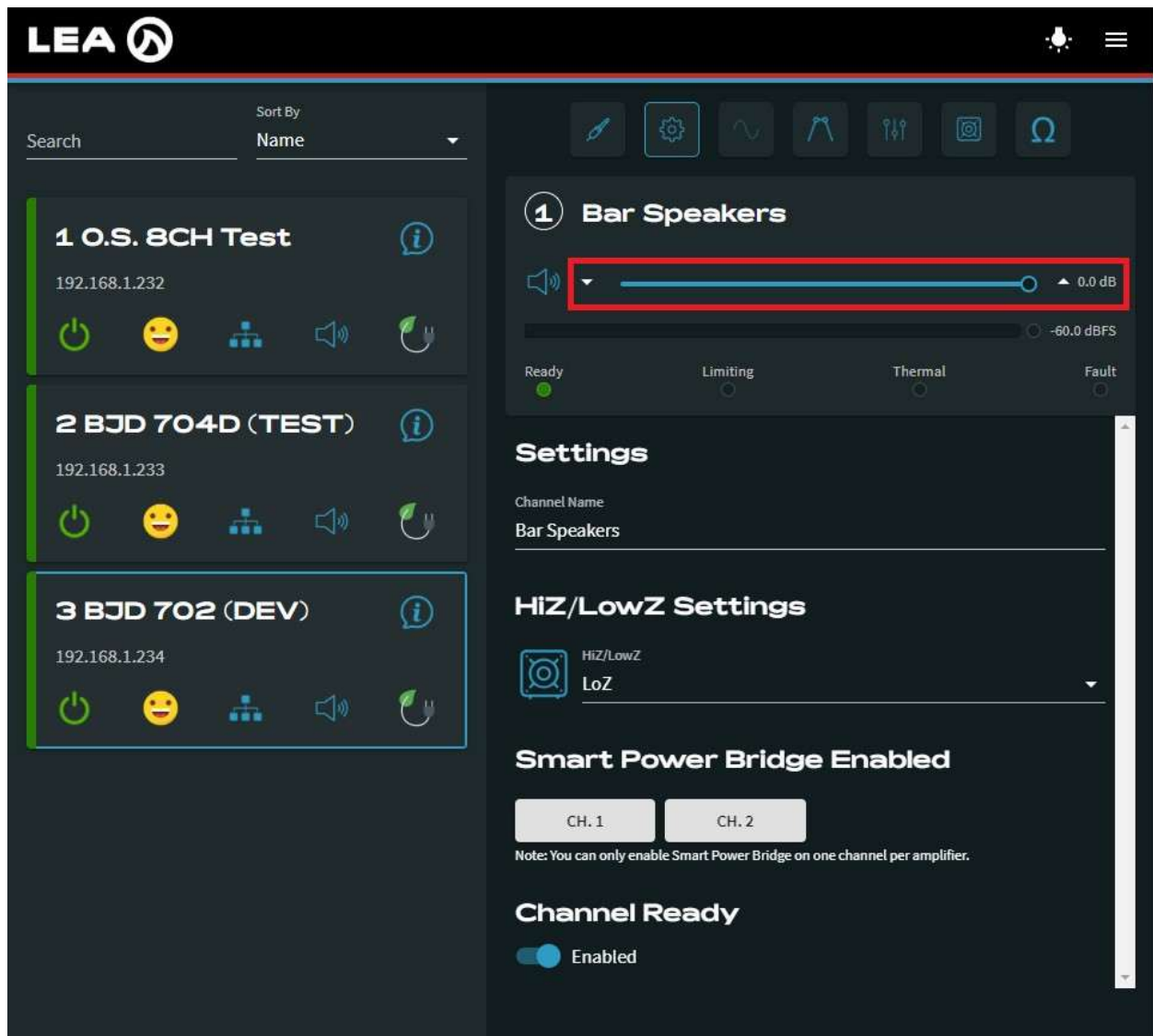
**Commands:** get, set, subscribe, unsubscribe

**URL:** /amp/channels/x/output/fader

**Values:** -80.0 through 0.0

**Example:** set /amp/channels/1/output/fader 0.0\n

- This command set the output attenuation to 0.0 dB on channel 1



The screenshot displays the LEA control interface. On the left, a list of channels is shown, with '3 BJD 702 (DEV)' highlighted. The main panel shows the settings for '1 Bar Speakers'. A red box highlights the output fader slider, which is set to 0.0 dB. Below the slider, there are status indicators for Ready (green), Limiting (grey), Thermal (grey), and Fault (grey). The 'Settings' section shows the Channel Name as 'Bar Speakers'. The 'HiZ/LowZ Settings' section shows the HiZ/LowZ setting as 'LoZ'. The 'Smart Power Bridge Enabled' section shows two buttons for 'CH. 1' and 'CH. 2'. The 'Channel Ready' section shows a toggle switch set to 'Enabled'.



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## Output Channel Gain Attenuation Fader – Incremental increase or decrease via “bump” method

**Type:** CONTROL

**Commands:** bump

**URL:** bump /amp/channels/x/output/fader

**Values:** -80.0 through 0.0

- This value determines the amount the fader is moved each time the command is sent.

**Example:** bump /amp/channels/1/output/fader -3\n

- This command will increase the amount of attenuation applied to the channel output fader by 3dB each time the command is sent. The result in this example is the output fader was lowered from 0dB to -3dB.

The screenshot displays the LEA control interface. On the left, a list of channels is shown, including '1 O.S. 8CH Test', '2 BJD 704D (TEST)', and '3 BJD 702 (DEV)'. The right panel shows the settings for '1 Bar Speakers'. A red box highlights the fader control, which is currently set to -3.0 dB. Below the fader, there are status indicators for 'Ready', 'Limiting', 'Thermal', and 'Fault'. The 'Settings' section shows 'Channel Name' as 'Bar Speakers'. The 'HiZ/LowZ Settings' section shows 'HiZ/LowZ' as 'LoZ'. The 'Smart Power Bridge Enabled' section has buttons for 'CH. 1' and 'CH. 2'. The 'Channel Ready' section has a toggle switch set to 'Enabled'.



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## Output Channel Hi-Z Low-Z Mode

**Type:** CONTROL

**Commands:** get, set, subscribe, unsubscribe

**URL:** /amp/channels/x/output/hiZLoZ

**Values:** "HiZ-70V", "HiZ-100V", "LoZ"

**Example:** set /amp/channels/1/output/hiZLoZ "HiZ-100V"\n

- This command set channel 1 to Hi-Z 100 V mode

The screenshot displays the LEA control interface. On the left, a list of channels is shown, with the third channel, '3 BJD 702 (DEV)', highlighted. The main panel shows the settings for '1 Bar Speakers'. The volume is set to 0.0 dB. The status is 'Ready'. The 'Settings' section shows the channel name 'Bar Speakers'. The 'HiZ/LowZ Settings' section has a dropdown menu set to 'HiZ-100V', which is highlighted with a red box. Below this, the frequency is set to 70.0 Hz. The 'Smart Power Bridge Enabled' section has two buttons, 'CH. 1' and 'CH. 2'. A note states: 'Note: You can only enable Smart Power Bridge on one channel per amplifier.' The 'Channel Ready' section has a toggle switch set to 'Enabled'.



## Output Channel Hi-Z Mode High Pass Frequency

**Type:** CONTROL

**Commands:** get, set, subscribe, unsubscribe

**URL:** /amp/channels/x/output/hiZHpFrequency

**Values:** 35 through 5000

**Example:** set /amp/channels/1/output/hiZHpFrequency 70\n

- This command set Hi-Z High Pass Filter to 70 Hz on channel 1

The screenshot displays the LEA control interface. On the left, a list of channels is shown: '1 O.S. 8CH Test', '2 BJD 704D (TEST)', and '3 BJD 702 (DEV)'. The right panel shows the settings for '1 Bar Speakers'. The volume is set to 0.0 dB. The status is 'Ready'. The 'Settings' section shows 'Channel Name: Bar Speakers'. The 'HiZ/LowZ Settings' section shows 'HiZ/LowZ: HiZ-100V' and 'Frequency: 70.0 Hz', which is highlighted with a red box. Below this, 'Smart Power Bridge Enabled' is shown with buttons for 'CH. 1' and 'CH. 2'. A note states: 'Note: You can only enable Smart Power Bridge on one channel per amplifier.' The 'Channel Ready' section shows a toggle switch set to 'Enabled'.



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## Output Channel Fault

**Type:** SENSOR

**Commands:** get, subscribe, unsubscribe

**URL:** /amp/channels/x/output/fault

**Values:** "true", "false"

**Example:** get /amp/channels/1/output/fault\n

- Response: /amp/channels/1/output/fault false\n
- This command asked for the fault status on channel 1 and got the response False, meaning there is no fault on the channel

The screenshot displays the LEA control interface. On the left, a list of channels is shown, with the third channel, '3 BJD 702 (DEV)', highlighted with a blue border. The main panel on the right shows the settings for '1 Bar Speakers'. A volume slider is set to 0.0 dB. Below the slider, there are four status indicators: 'Ready' (green dot), 'Limiting' (grey dot), 'Thermal' (grey dot), and 'Fault' (red dot, highlighted with a red box). The 'Settings' section shows 'Channel Name' as 'Bar Speakers'. The 'HiZ/LowZ Settings' section shows 'HiZ/LowZ' as 'LoZ'. The 'Smart Power Bridge Enabled' section has two buttons, 'CH. 1' and 'CH. 2'. The 'Channel Ready' section has a toggle switch set to 'Enabled'.



## Output Channel Thermal Fault

**Type:** SENSOR

**Commands:** get, subscribe, unsubscribe

**URL:** /amp/channels/x/output/thermal

**Values:** "true", "false"

**Example:** get /amp/channels/1/output/thermal\n

- Response: /amp/channels/1/output/thermal false\n
- This command asked for the thermal fault status on channel 1 and got the response False, meaning there is no thermal fault on the channel

The screenshot displays the LEA control interface. On the left, a list of channels is shown: '1 O.S. 8CH Test', '2 BJD 704D (TEST)', and '3 BJD 702 (DEV)'. The '3 BJD 702 (DEV)' channel is highlighted with a blue border. On the right, the settings for the selected channel '1 Bar Speakers' are shown. A volume slider is set to 0.0 dB. Below the slider, there are four status indicators: 'Ready' (green dot), 'Limiting' (grey dot), 'Thermal' (grey dot, highlighted with a red box), and 'Fault' (grey dot). Below these indicators, the 'Settings' section shows 'Channel Name' as 'Bar Speakers'. The 'HiZ/LowZ Settings' section shows 'HiZ/LowZ' as 'LoZ'. The 'Smart Power Bridge Enabled' section shows two buttons for 'CH. 1' and 'CH. 2'. Below this, a note states: 'Note: You can only enable Smart Power Bridge on one channel per amplifier.' The 'Channel Ready' section shows a toggle switch set to 'Enabled'.



## Output Channel Limiting

**Type:** SENSOR

**Commands:** get, subscribe, unsubscribe

**URL:** /amp/channels/x/output/limiting

**Values:** "true", "false"

**Example:** get /amp/channels/1/output/limiting\n

- Response: /amp/channels/1/output/thermal false\n
- This command asked for the limiting status on channel 1 and got the response False, meaning there is no limiting active on the channel

The screenshot displays the LEA control interface. On the left, a list of channels is shown, with '3 BJD 702 (DEV)' highlighted. The main panel shows the settings for '1 Bar Speakers'. A volume slider is set to 0.0 dB. Below the slider, the status is 'Limiting', which is highlighted with a red box. Other status options are 'Ready', 'Thermal', and 'Fault'. The 'Settings' section shows 'Channel Name' as 'Bar Speakers'. The 'HiZ/LowZ Settings' section shows 'HiZ/LowZ' set to 'LoZ'. The 'Smart Power Bridge Enabled' section has buttons for 'CH. 1' and 'CH. 2'. The 'Channel Ready' section has a toggle switch set to 'Enabled'.



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## Output Channel Clip

**Type:** SENSOR

**Commands:** get, subscribe, unsubscribe

**URL:** /amp/channels/x/output/clip

**Values:** "true", "false"

**Example:** get /amp/channels/1/output/clip\n

- Response: /amp/channels/1/output/clip false\n
- This command asked for the output clip status on channel 1 and got the response False, meaning the output is not being clipped on the channel

The screenshot displays the LEA control interface. On the left, a list of channels is shown, including '1 O.S. 8CH Test', '2 BJD 704D (TEST)', and '3 BJD 702 (DEV)'. The right panel shows the settings for '1 Bar Speakers'. A volume slider is set to 0.0 dB, with a red box highlighting the -60.0 dBFS limit. Below the slider, status indicators for 'Ready', 'Limiting', 'Thermal', and 'Fault' are shown. The 'Settings' section includes 'Channel Name' (Bar Speakers), 'HiZ/LowZ Settings' (LoZ), and 'Smart Power Bridge Enabled' (CH. 1 and CH. 2). A 'Channel Ready' section shows the bridge is enabled.



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## Output Channel Signal Presence

**Type:** SENSOR

**Commands:** get, subscribe, unsubscribe

**URL:** /amp/channels/x/output/signalDetect

**Values:** "true", "false"

**Example:** get /amp/channels/1/output/signalDetect\n

- Response: /amp/channels/1/output/signalDetect false\n
- This command asked for the output signal presence status on channel 1 and got the response False, meaning there is not output signal on the channel



## Output Channel Ready Indicator

**Type:** SENSOR

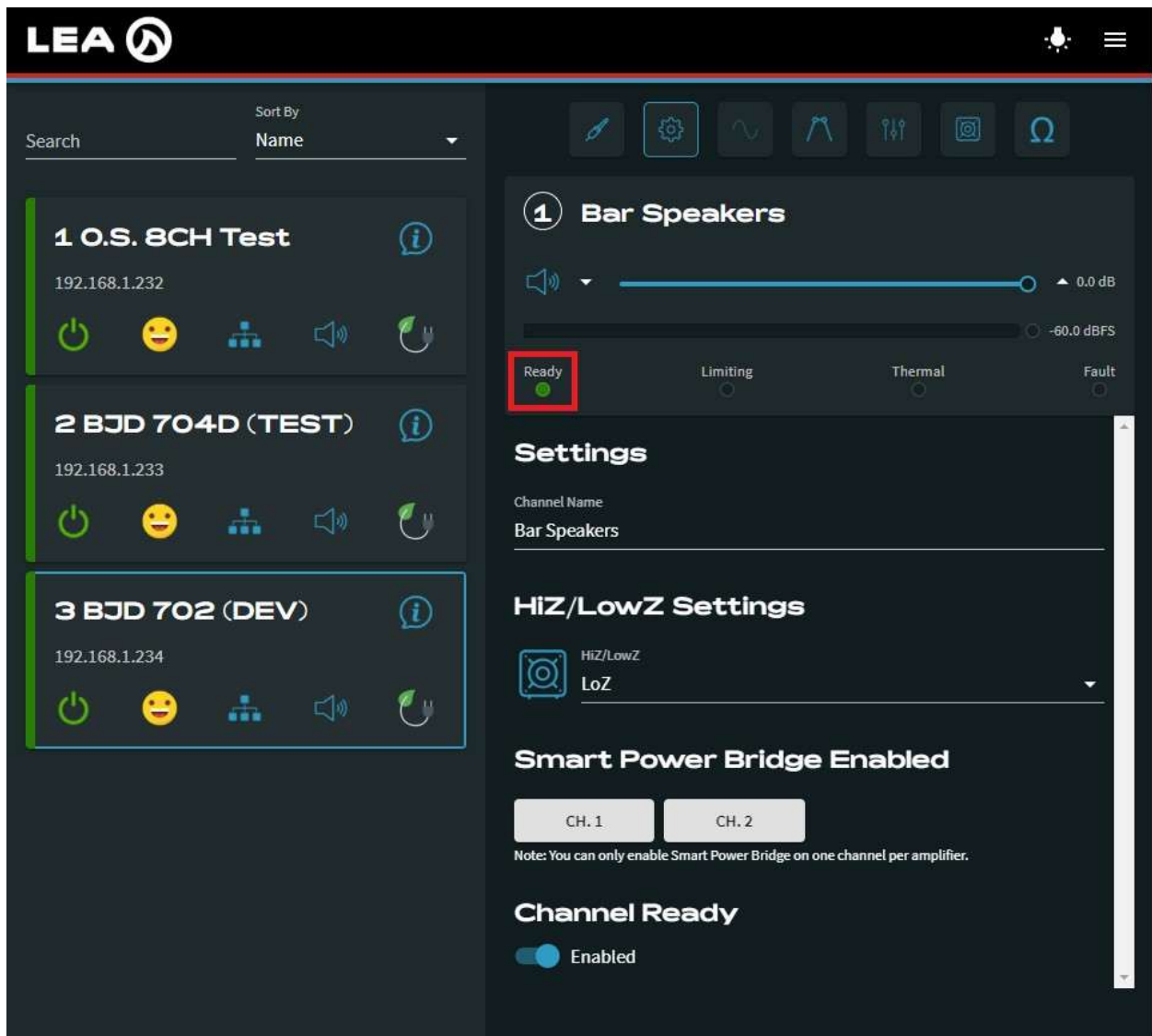
**Commands:** get, subscribe, unsubscribe

**URL:** /amp/channels/x/output/ready

**Values:** "true", "false"

**Example:** get /amp/channels/1/output/ready\n

- Response: /amp/channels/1/output/ready true\n
- This command asked for the output ready status on channel 1 and got the response True, meaning the output channel is ready to pass audio



The screenshot displays the LEA web interface. On the left, a list of channels is shown, including '1 O.S. 8CH Test', '2 BJD 704D (TEST)', and '3 BJD 702 (DEV)'. The right panel shows the configuration for '1 Bar Speakers'. A volume slider is set to 0.0 dB. Below the slider, the 'Ready' status is indicated by a green dot and is highlighted with a red box. Other status indicators for 'Limiting', 'Thermal', and 'Fault' are shown as grey dots. The 'Settings' section includes 'Channel Name' (Bar Speakers), 'HiZ/LowZ Settings' (LoZ), and 'Smart Power Bridge Enabled' (CH. 1 and CH. 2 buttons). A note states: 'Note: You can only enable Smart Power Bridge on one channel per amplifier.' At the bottom, the 'Channel Ready' status is shown as 'Enabled' with a blue toggle switch.

## Dante On Ramp

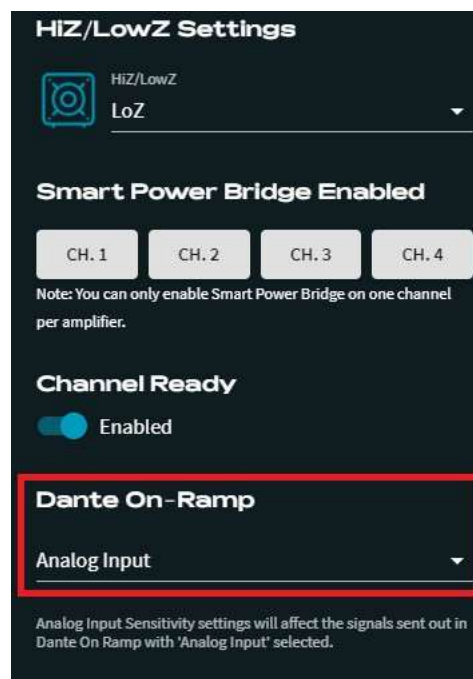
**Type:** CONTROL

**Commands:** get, set, subscribe, unsubscribe

**URL:** /amp/channels/x/inputSelector/danteOnRamp

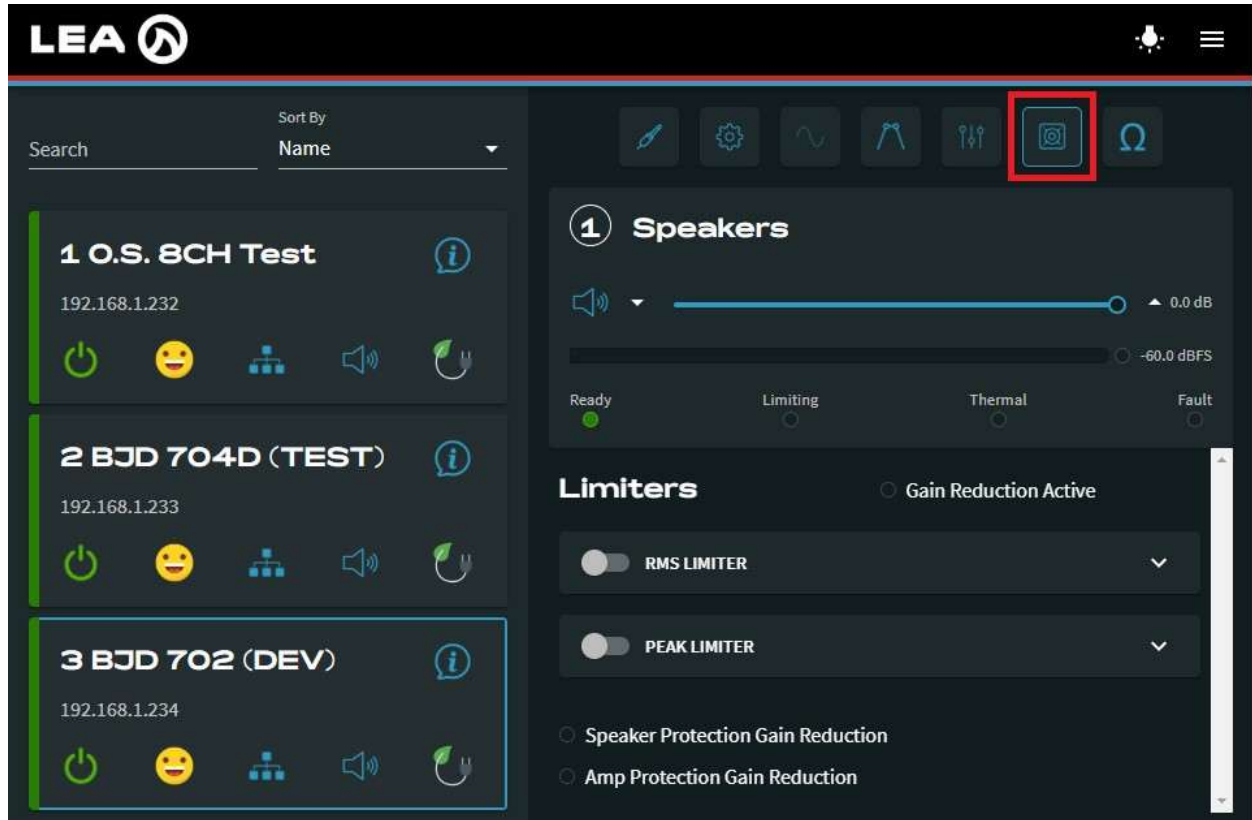
**Values:** "Analog Input", "Post Crossover", "Amp Output Monitor", "Amp Imon" **Example:**  
set /amp/channels/1/inputSelector/danteOnRamp "Analog Input"\n

- Response: OK\n
- This will set the Dante On Ramp setting on Channel 1 to "Analog Input"



## Amplifier Channel Levels

Click on this button to navigate to the Limiter section of the DSP relevant to this API section





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## Output Channel Meter Level dBFS

**Type:** SENSOR

**Commands:** get, subscribe, unsubscribe

**URL:** /amp/channels/x/levels/level\_db

**Values:** -60.0 through 0.0

**Example:** get /amp/channels/1/levels/level\_db\n

- Response: /amp/channels/1/levels/level\_db -31.5\n
- This command asked for the output level dBFS on channel 1 and got the response -31.5 dBFS

The screenshot displays the LEA control interface. On the left, a list of channels is shown: '1 O.S. 8CH Test' (IP: 192.168.1.232), '2 BJD 704D (TEST)' (IP: 192.168.1.233), and '3 BJD 702 (DEV)' (IP: 192.168.1.234). The right panel shows the configuration for '1 Bar Speakers'. A volume slider is set to 0.0 dB, and a red box highlights a secondary slider set to -60.0 dBFS. Below the sliders, status indicators for 'Ready', 'Limiting', 'Thermal', and 'Fault' are shown. The 'RMS LIMITER' section is expanded, showing a threshold of 10.0 VoltsRMS, an attack time of 1000.0 milliseconds, and a release time of 10000.0 milliseconds. At the bottom, the current levels for 'Speaker Limiter' (0.0 dB), 'Protection Limiter' (0.0 dB), and 'Amp Output' (0.0 VoltsRMS) are displayed.



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## Output Channel Level Volts RMS

**Type:** SENSOR

**Commands:** get, subscribe, unsubscribe

**URL:** /amp/channels/x/levels/level\_volts

**Values:** 0.0 through 200.0

**Example:** get /amp/channels/1/levels/level\_volts\n

- Response: /amp/channels/1/levels/level\_volts 24.5\n
- This command asked for the output in volts RMS on channel 1 and got the response 24.5 V

The screenshot displays the LEA control interface. On the left, a list of channels is shown:

- 1 O.S. 8CH Test** (IP: 192.168.1.232)
- 2 BJD 704D (TEST)** (IP: 192.168.1.233)
- 3 BJD 702 (DEV)** (IP: 192.168.1.234)

The right panel shows the configuration for **1 Speakers**. It includes a volume slider set to 0.0 dB, with a range from -60.0 dBFS. Below the slider are status indicators for Ready (green), Limiting, Thermal, and Fault. The **RMS LIMITER** is enabled, with the following settings:

- Threshold: 10.0 VoltsRMS
- Attack: 1000.0 milliseconds
- Release: 10000.0 milliseconds

At the bottom, the current output levels are displayed:

- Speaker Limiter: 0.0 dB
- Protection Limiter: 0.0 dB
- Amp Output: 0.0 VoltsRMS** (highlighted with a red box)



# OPEN API – TCP Protocol

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## Output Channel Level Watts RMS

**Type:** SENSOR

**Commands:** get, subscribe, unsubscribe

**URL:** /amp/channels/x/levels/level\_watts

**Values:** 0.0 through 10000.0

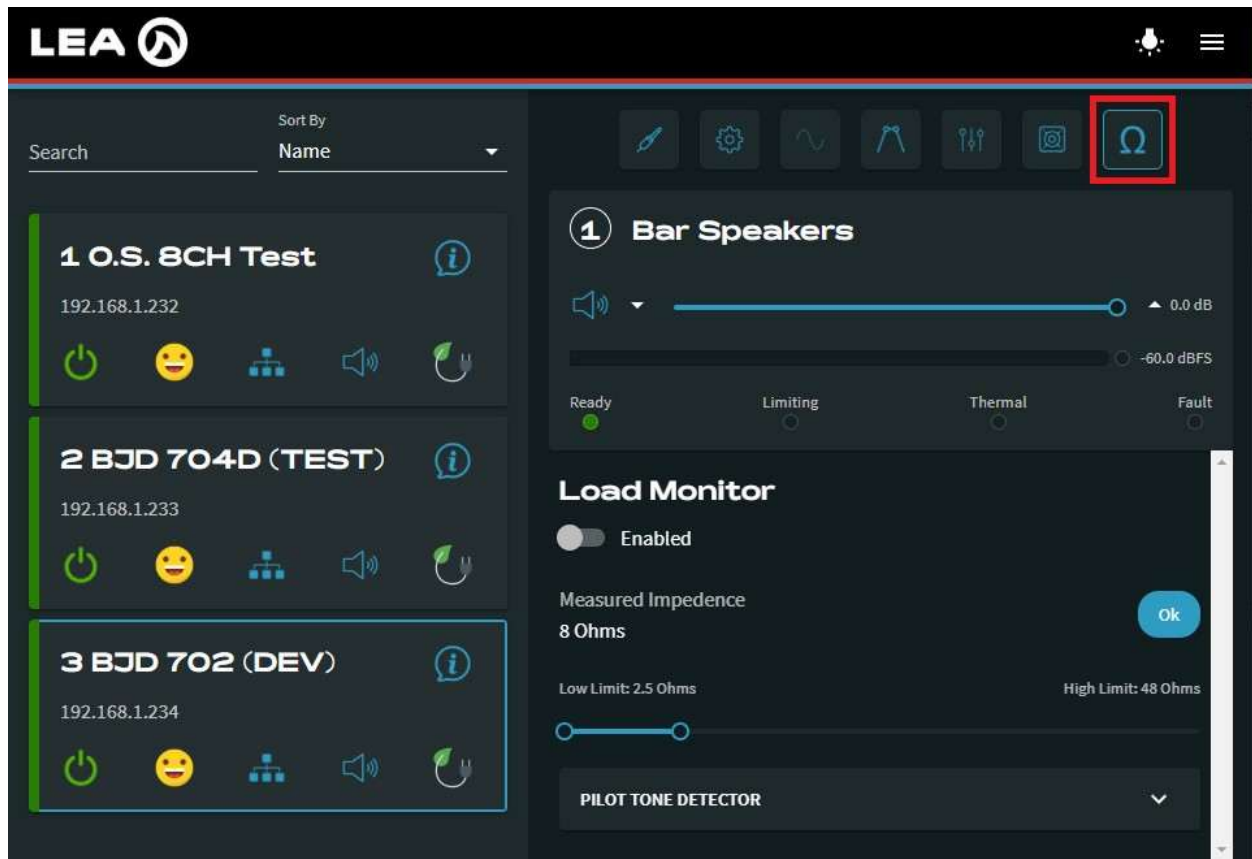
**Example:** get /amp/channels/1/levels/level\_watts\n

- Response: /amp/channels/1/levels/level\_watts 85.5\n
- This command asked for the output in watts RMS on channel 1 and got the response 85.5 W

The screenshot displays the LEA control interface. On the left, there is a list of three channels: '1 O.S. 8CH Test', '2 BJD 704D (TEST)', and '3 BJD 702 (DEV)'. Each channel has a set of control icons including power, status, network, volume, and refresh. The right side of the interface shows the 'Speakers' control panel for channel 1. It features a volume slider set to 0.0 dB, with a range from -60.0 dBFS. Below the slider are status indicators for 'Ready' (green), 'Limiting' (grey), 'Thermal' (grey), and 'Fault' (grey). A 'PEAK LIMITER' section is visible, with a toggle switch turned off. It includes settings for 'Threshold: 141.0 VoltsPeak', 'Attack: 1.0 milliseconds', and 'Release: 100.0 milliseconds'. At the bottom, the 'Amp Output' is displayed as '0.0 WattsRMS', which is highlighted with a red box.

## Amplifier Channel Load Monitoring

Click on this button to navigate to the Load Monitoring section of the DSP relevant to this API section



The screenshot displays the LEA software interface. On the left, there is a list of three test channels:

- 1 O.S. 8CH Test** (IP: 192.168.1.232)
- 2 BJD 704D (TEST)** (IP: 192.168.1.233)
- 3 BJD 702 (DEV)** (IP: 192.168.1.234)

Each channel has a set of control icons: power, status (smiley face), network, speaker, and refresh. The third channel is highlighted with a blue border.

On the right, the **1 Bar Speakers** control panel is shown. It features a volume slider set to 0.0 dB (range -60.0 dBFS to 0.0 dB) and a status indicator showing **Ready**. Below this is the **Load Monitor** section, which is **Enabled** and shows a **Measured Impedance** of **8 Ohms**. The limits are **Low Limit: 2.5 Ohms** and **High Limit: 48 Ohms**. A blue **Ok** button is present. At the bottom, there is a **PILOT TONE DETECTOR** dropdown menu.

A red box highlights the  $\Omega$  (ohm) icon in the top navigation bar of the right-hand panel.

## Load Monitor Enable

**Type:** CONTROL

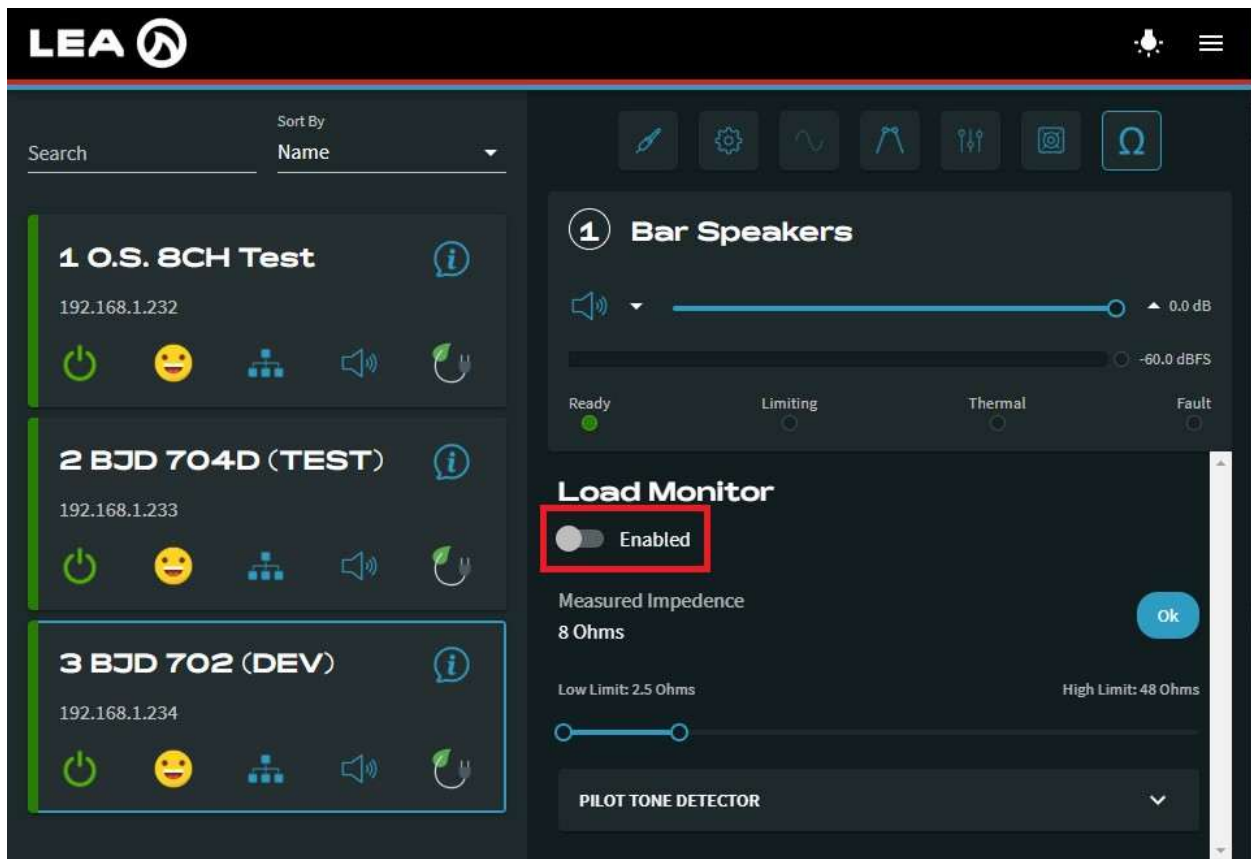
**Commands:** get, set, subscribe, unsubscribe

**URL:** /amp/channels/x/loadMonitor/enable

**Values:** "true", "false"

**Example:** set /amp/channels/1/loadMonitor/enable "false"\n

- This command disabled load monitoring on channel 1



The screenshot displays the LEA control interface. On the left, a list of channels is shown: '1 O.S. 8CH Test', '2 BJD 704D (TEST)', and '3 BJD 702 (DEV)'. The right panel shows the settings for channel 1, 'Bar Speakers'. The 'Load Monitor' section is highlighted with a red box, showing a toggle switch set to 'Enabled'. Below this, the 'Measured Impedance' is 8 Ohms, with a low limit of 2.5 Ohms and a high limit of 48 Ohms. The 'PILOT TONE DETECTOR' is also visible at the bottom.

## Load Monitor Measured Impedance

**Type:** SENSOR

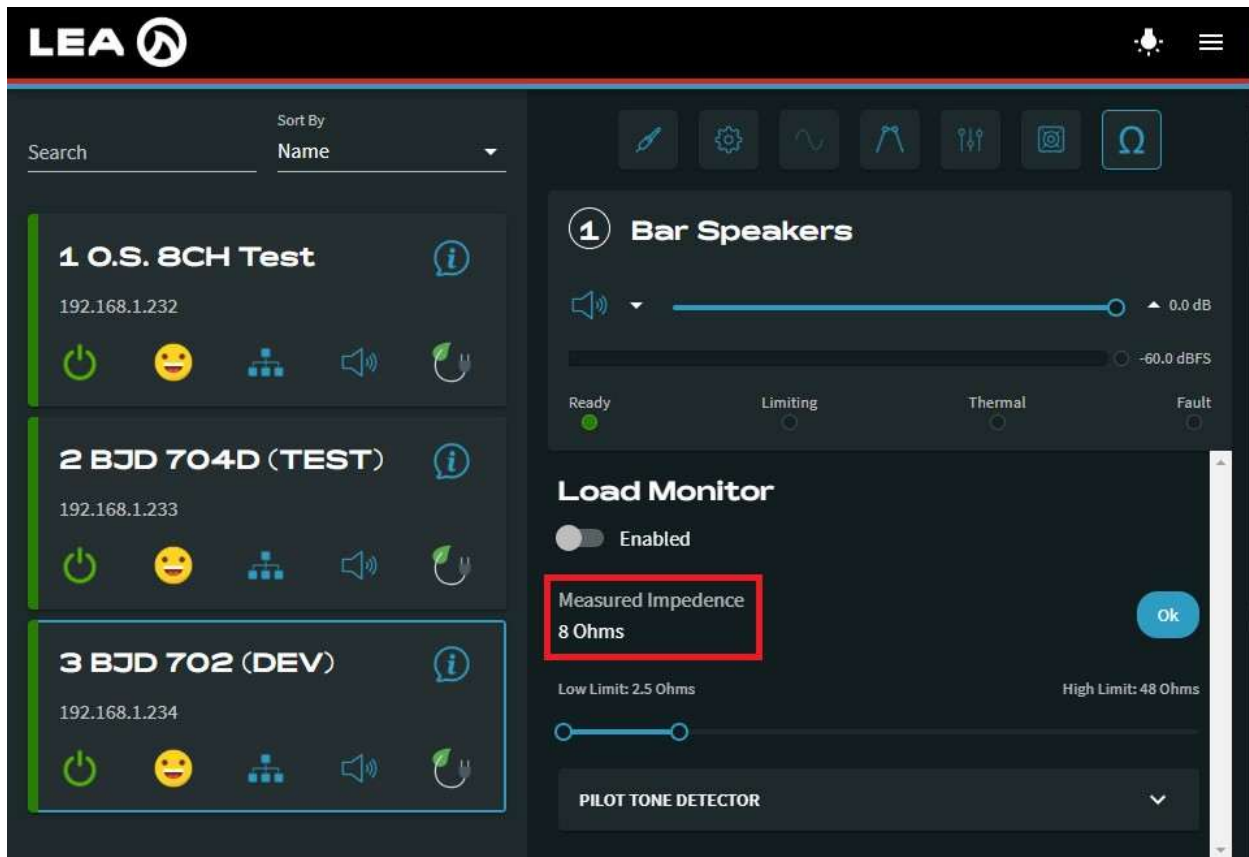
**Commands:** get, subscribe, unsubscribe

**URL:** /amp/channels/x/loadMonitor/measuredImpedance

**Values:** 0.0 through 250.0

**Example:** get /amp/channels/1/loadMonitor/measuredImpedance\n

- Response: /amp/channels/1/loadMonitor/measuredImpedance 8.2\n
- This command asked for the impedance measured on channel 1 and got the response 8.2  $\Omega$



The screenshot displays the LEA control interface. On the left, there is a list of channels: '1 O.S. 8CH Test', '2 BJD 704D (TEST)', and '3 BJD 702 (DEV)'. The right panel shows the 'Bar Speakers' control, including a volume slider and status indicators for 'Ready', 'Limiting', 'Thermal', and 'Fault'. Below this is the 'Load Monitor' section, which is currently 'Enabled'. A red box highlights the 'Measured Impedance' value of '8 Ohms'. The 'Low Limit' is set to 2.5 Ohms and the 'High Limit' is 48 Ohms. At the bottom, there is a 'PILOT TONE DETECTOR' dropdown menu.

## Load Monitor High Limit

**Type:** CONTROL

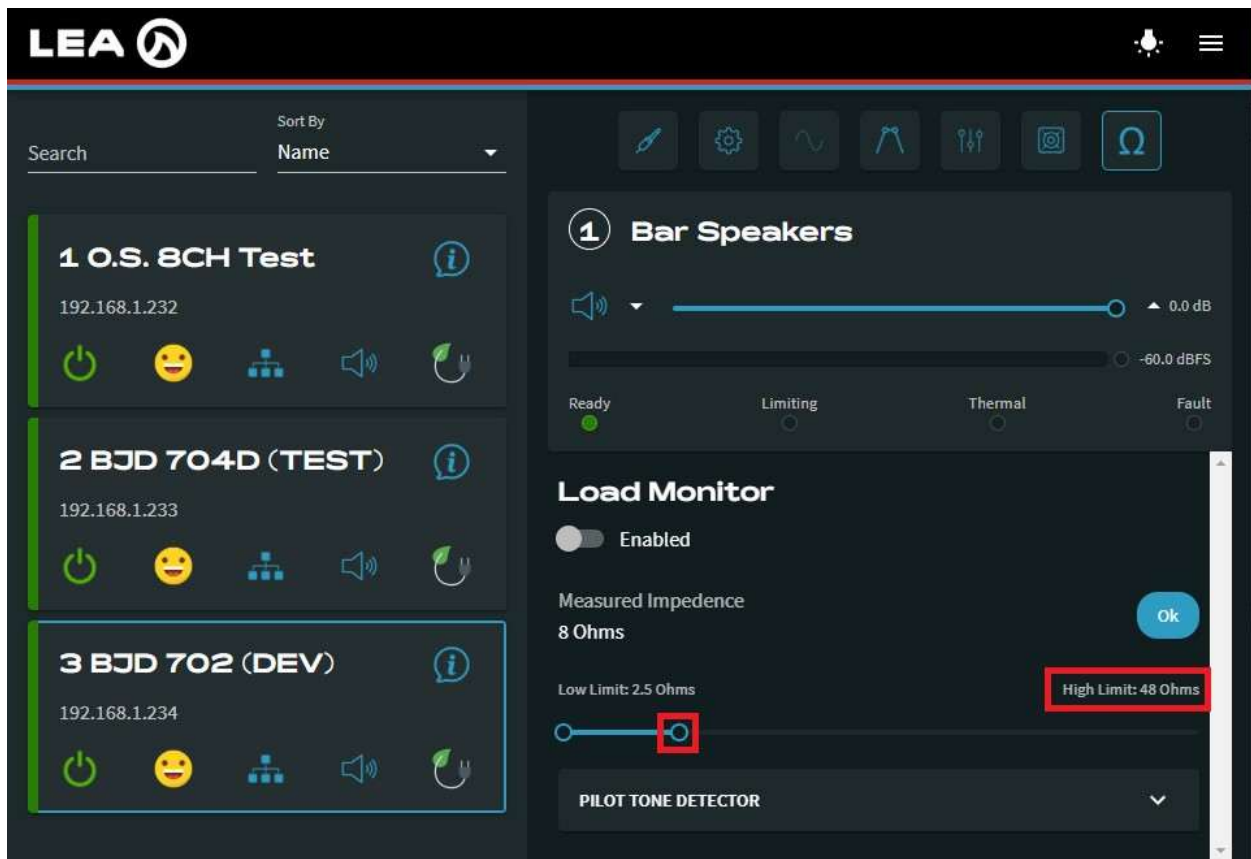
**Commands:** get, set, subscribe, unsubscribe

**URL:** /amp/channels/x/loadMonitor/highLimit

**Values:** 8.0 through 250.0

**Example:** set /amp/channels/1/loadMonitor/highLimit 48.0\n

- This command set the load monitor high limit on channel 1 to 48  $\Omega$



The screenshot displays the LEA control interface. On the left, a list of channels is shown, with channel 3 'BJD 702 (DEV)' highlighted. The main panel shows the settings for channel 1 'Bar Speakers'. The 'Load Monitor' section is active, showing a measured impedance of 8 Ohms. The high limit is set to 48 Ohms, which is highlighted with a red box. The low limit is 2.5 Ohms. The 'PILOT TONE DETECTOR' is also visible at the bottom.

## Load Monitor Low Limit

**Type:** CONTROL

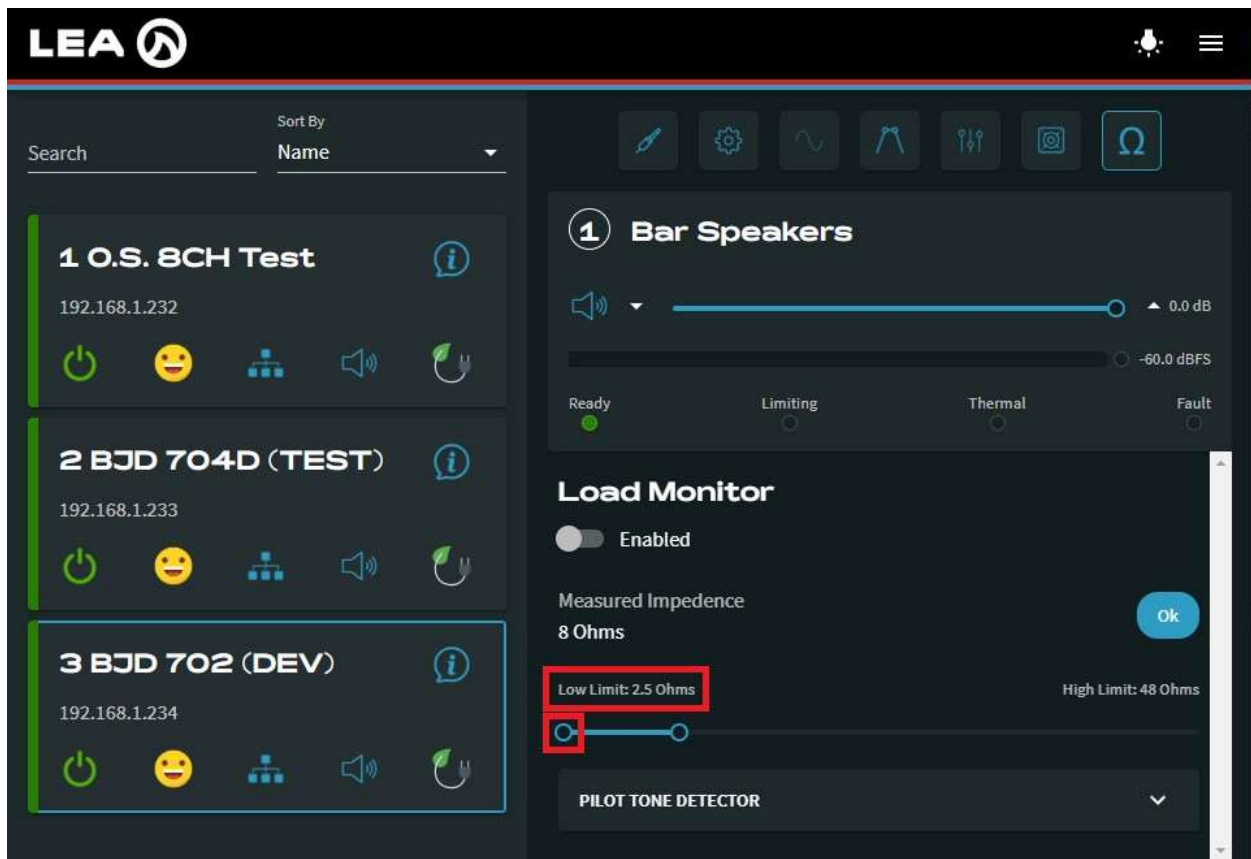
**Commands:** get, set, subscribe, unsubscribe

**URL:** /amp/channels/x/loadMonitor/lowLimit

**Values:** 1.0 through 250.0

**Example:** set /amp/channels/1/loadMonitor/lowLimit 2.5\n

- This command set the load monitor low limit on channel 1 to 2.5  $\Omega$



The screenshot displays the LEA control interface. On the left, a list of channels is shown, with channel 3 'BJD 702 (DEV)' highlighted. The main panel shows the settings for channel 1 'Bar Speakers'. The 'Load Monitor' section is active, showing a measured impedance of 8 Ohms. The 'Low Limit' is set to 2.5 Ohms, and the 'High Limit' is 48 Ohms. The 'Load Monitor' is currently 'Enabled'. Below the impedance settings, there is a 'PILOT TONE DETECTOR' dropdown menu.

## Load Monitor Status

**Type:** SENSOR

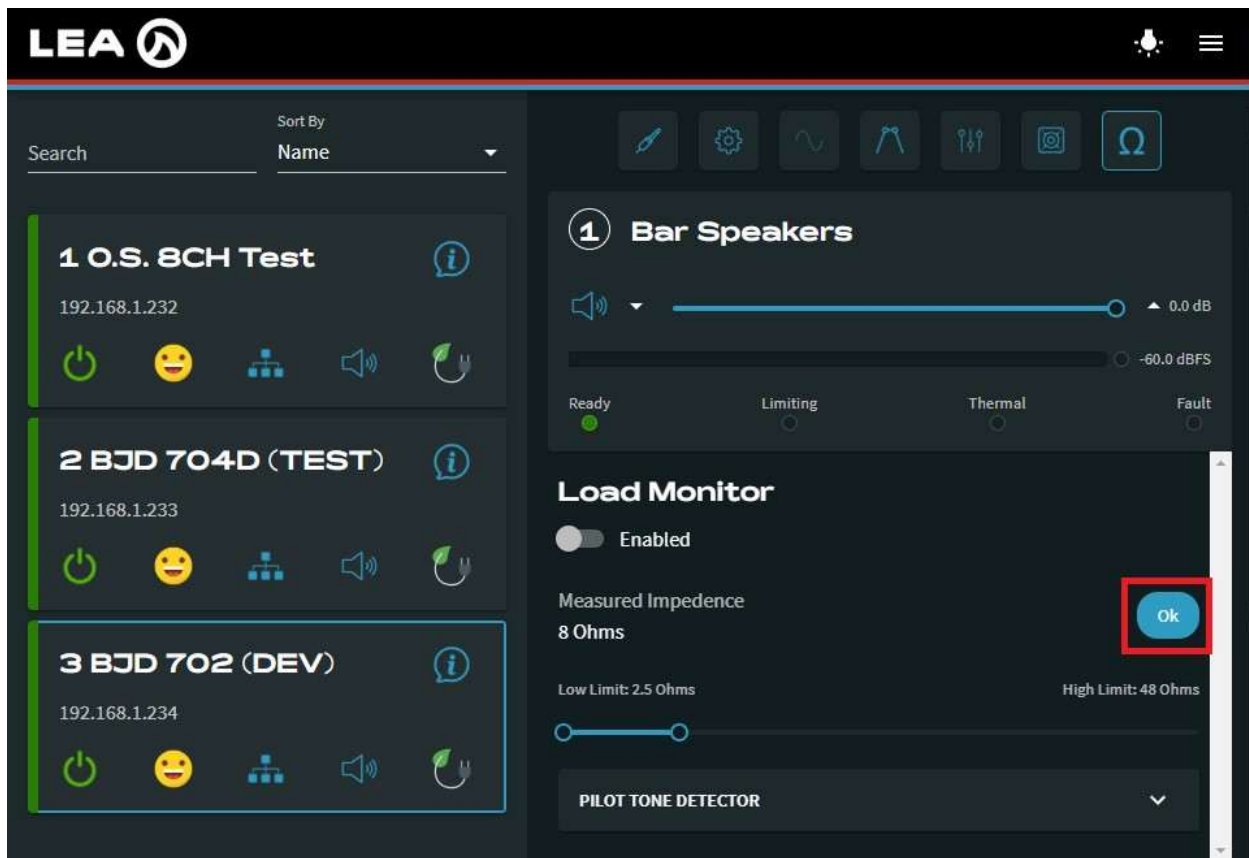
**Commands:** get, subscribe, unsubscribe

**URL:** /amp/channels/x/loadMonitor/status

**Values:** "Ok", "Short", "Open", "Low Signal"

**Example:** get /amp/channels/1/loadMonitor/status\n

- Response: /amp/channels/1/loadMonitor/status "Ok"\n
- This command asked for the load monitor status and got the response Ok meaning the measured impedance is in between the low and high limits



The screenshot displays the LEA control interface. On the left, there is a list of three channels: '1 O.S. 8CH Test', '2 BJD 704D (TEST)', and '3 BJD 702 (DEV)'. Each channel has a status indicator (power, smiley, network, speaker, and leaf icons) and the IP address 192.168.1.232. The right side of the interface shows the 'Bar Speakers' control panel. It includes a volume slider set to 0.0 dB, a status indicator for 'Ready' (green dot), and a 'Load Monitor' section. The 'Load Monitor' is enabled, showing a measured impedance of 8 Ohms, which is between the low limit of 2.5 Ohms and the high limit of 48 Ohms. A blue 'Ok' button is highlighted with a red box, indicating the current status.

## Pilot Tone Enable

**Type:** CONTROL

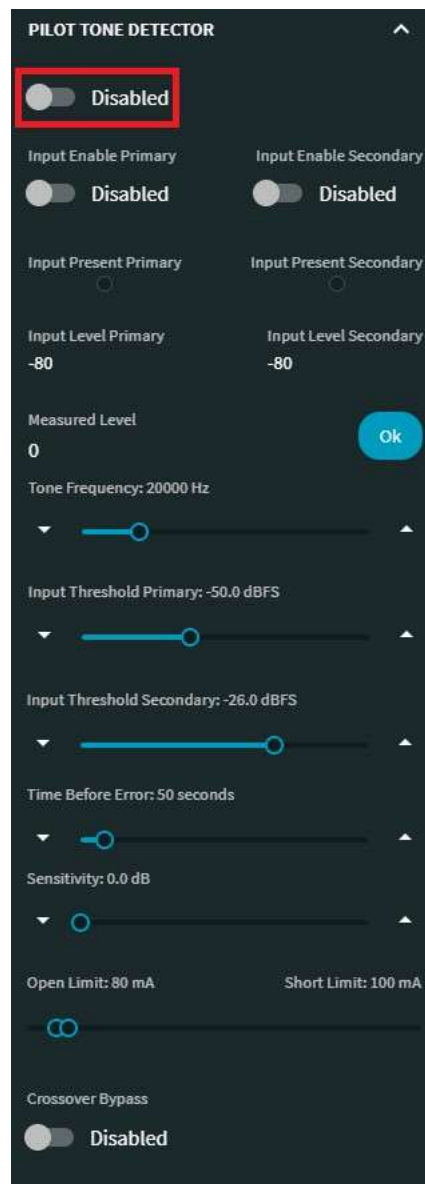
**Commands:** get, set, subscribe, unsubscribe

**URL:** /amp/channels/x/pilotToneDetector/enable

**Values:** "true", "false"

**Example:** set /amp/channels/1/pilotToneDetector/enable true\n

- Response: OK\n
- This command set the Pilot Tone Enable to TRUE or enabled



## Pilot Tone Input Enable Primary

**Type:** CONTROL

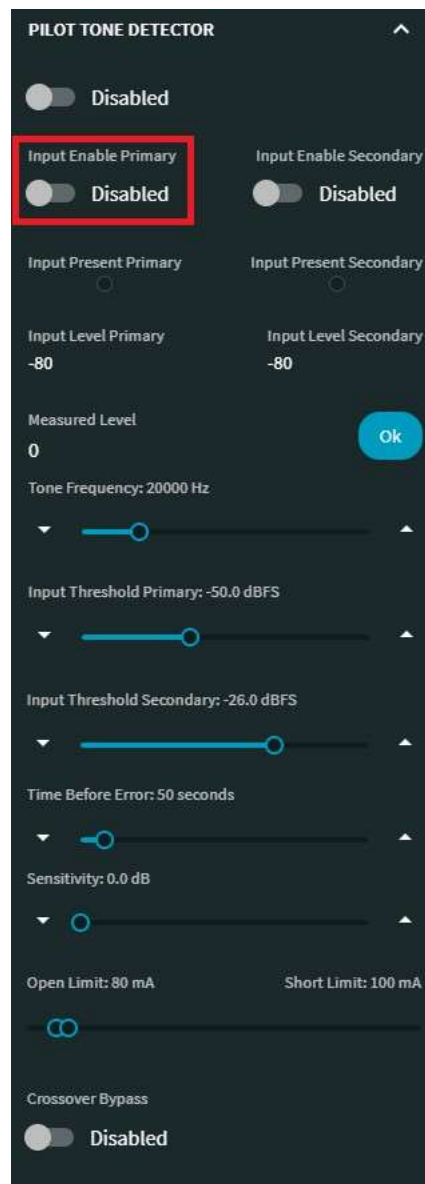
**Commands:** get, set, subscribe, unsubscribe

**URL:** /amp/channels/x/pilotToneDetector/inputEnablePrimary

**Values:** "true", "false"

**Example:** set /amp/channels/1/pilotToneDetector/inputEnablePrimary true\n

- Response: OK\n
- This command set the Pilot Tone Input Enable Primary to TRUE or enabled



## Pilot Tone Input Enable Secondary

**Type:** CONTROL

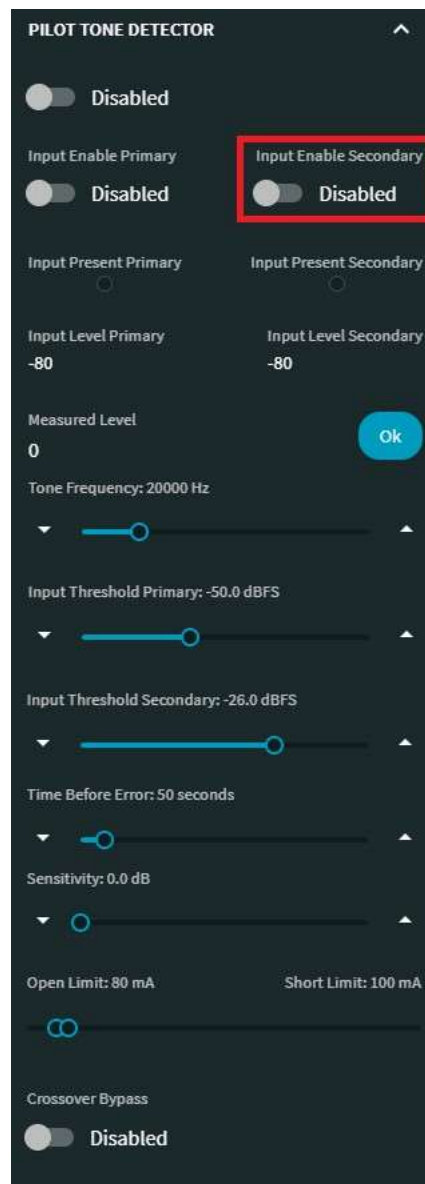
**Commands:** get, set, subscribe, unsubscribe

**URL:** /amp/channels/x/pilotToneDetector/inputEnableSecondary

**Values:** "true", "false"

**Example:** set /amp/channels/1/pilotToneDetector/inputEnableSecondary true\n

- Response: OK\n
- This command set the Pilot Tone Input Enable Secondary to TRUE or enabled



## Pilot Tone Input Present Primary

**Type:** SENSOR

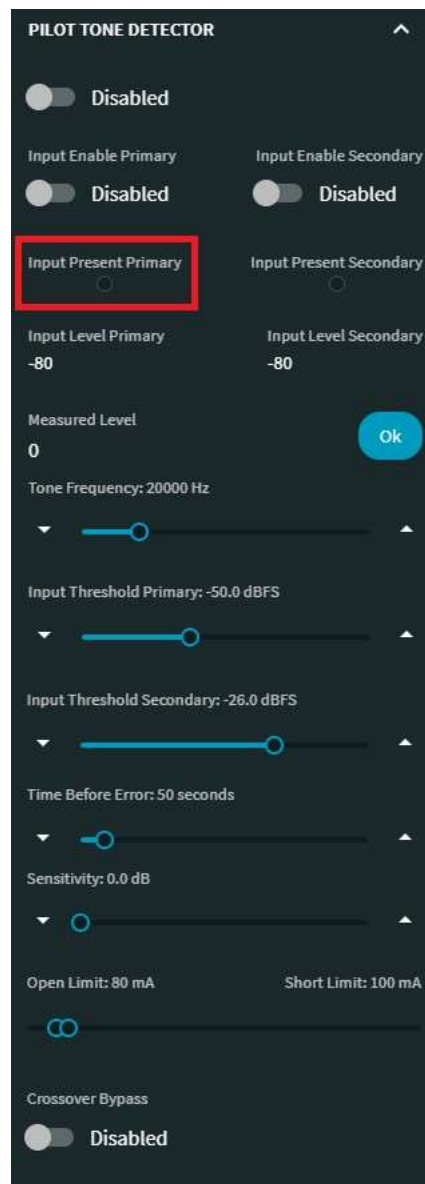
**Commands:** get, subscribe, unsubscribe

**URL:** /amp/channels/x/pilotToneDetector/inputPresentPrimary

**Values:** "true", "false"

**Example:** get /amp/channels/1/pilotToneDetector/inputPresentPrimary\n

- Response: /amp/channels/1/pilotToneDetector/inputPresentPrimary false\n
- This command asked for the Pilot Tone Input Present Primary state and received FALSE



## Pilot Tone Input Present Secondary

**Type:** SENSOR

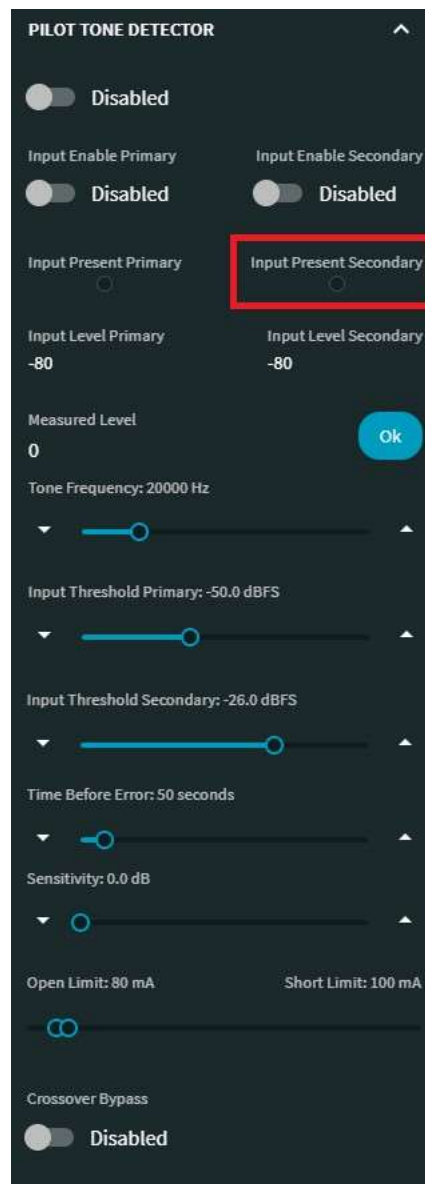
**Commands:** get, subscribe, unsubscribe

**URL:** /amp/channels/x/pilotToneDetector/inputPresentSecondary

**Values:** "true", "false"

**Example:** get /amp/channels/1/pilotToneDetector/inputPresentSecondary\n

- Response: /amp/channels/1/pilotToneDetector/inputPresentSecondary false\n
- This command asked for the Pilot Tone Input Present Secondary state and received FALSE



## Pilot Tone Input Level Primary

**Type:** SENSOR

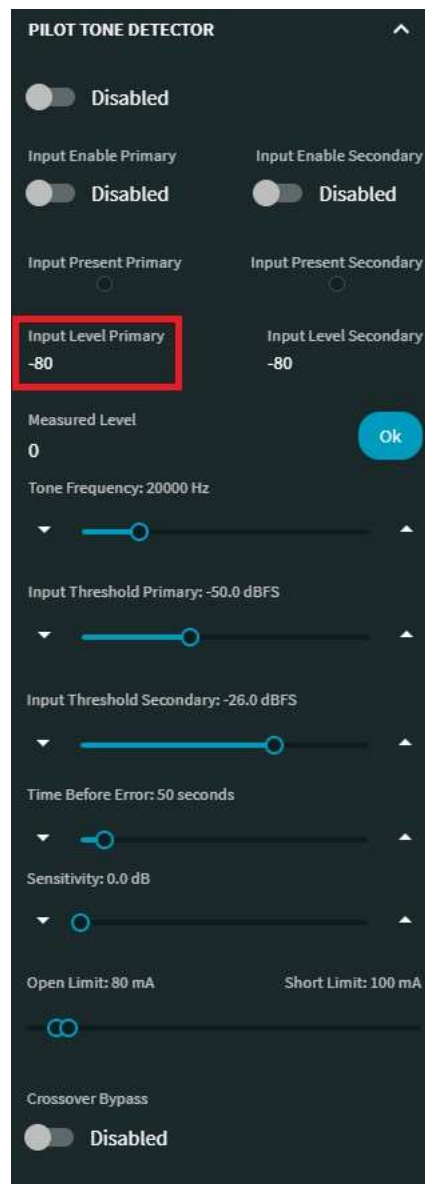
**Commands:** get, subscribe, unsubscribe

**URL:** /amp/channels/x/pilotToneDetector/inputLevelPrimary

**Values:** -80.0 through 0.0

**Example:** get /amp/channels/1/pilotToneDetector/inputLevelPrimary\n

- Response: /amp/channels/1/pilotToneDetector/inputLevelPrimary -33\n
- This command asked for the Pilot Tone Input Level Primary and received -33dB



## Pilot Tone Input Level Secondary

**Type:** SENSOR

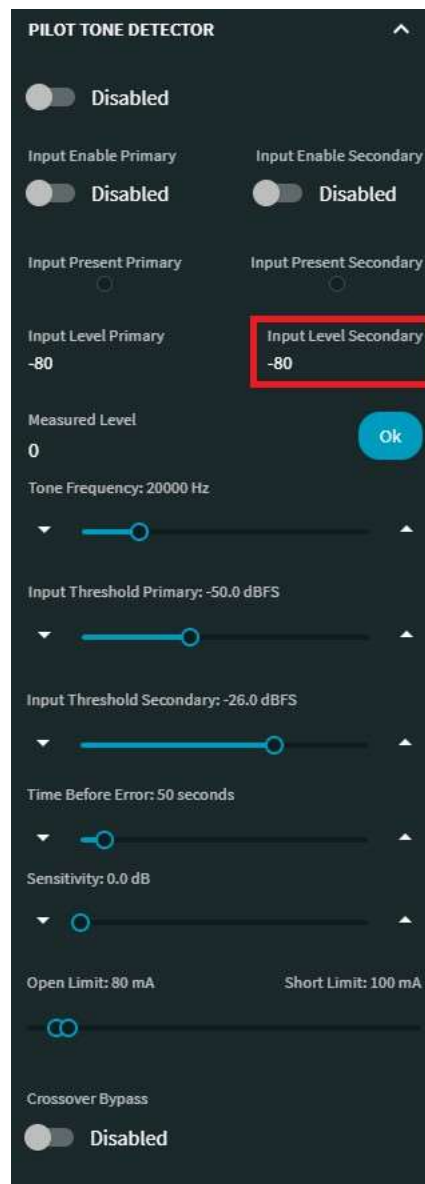
**Commands:** get, subscribe, unsubscribe

**URL:** /amp/channels/x/pilotToneDetector/inputLevelSecondary

**Values:** -80.0 through 0.0

**Example:** get /amp/channels/1/pilotToneDetector/inputLevelSecondary\n

- Response: /amp/channels/1/pilotToneDetector/inputLevelSecondary -38\n
- This command asked for the Pilot Tone Input Level Secondary and received -38dB





# OPEN API – TCP Protocol

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## Pilot Tone Measured Level

**Type:** SENSOR

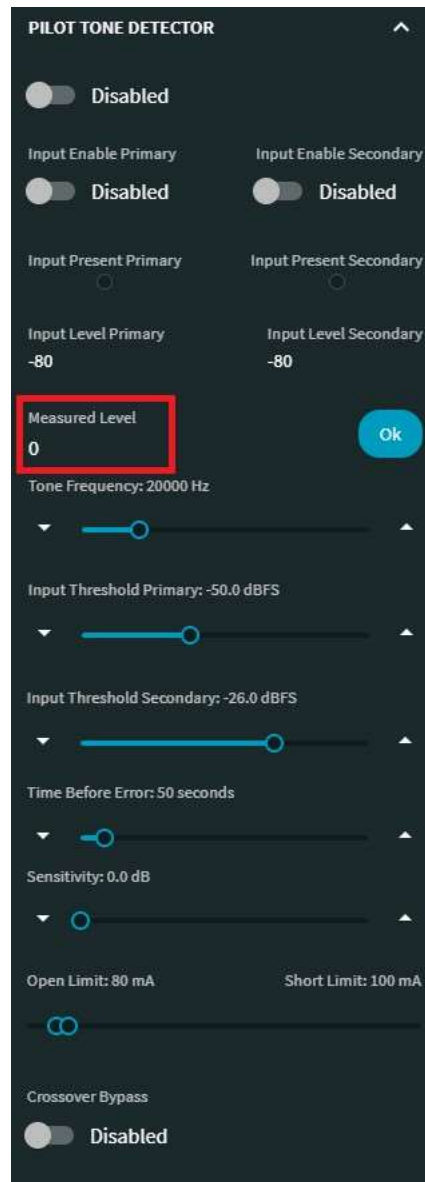
**Commands:** get, subscribe, unsubscribe

**URL:** /amp/channels/x/pilotToneDetector/measuredLevel

**Values:** 0 through 65535 mA ptd

**Example:** get /amp/channels/1/pilotToneDetector/measuredLevel\n

- Response: /amp/channels/1/pilotToneDetector/measuredLevel 35\n
- This command asked for the Pilot Tone Measured Level and received 35mA



## Pilot Tone Status

**Type:** SENSOR

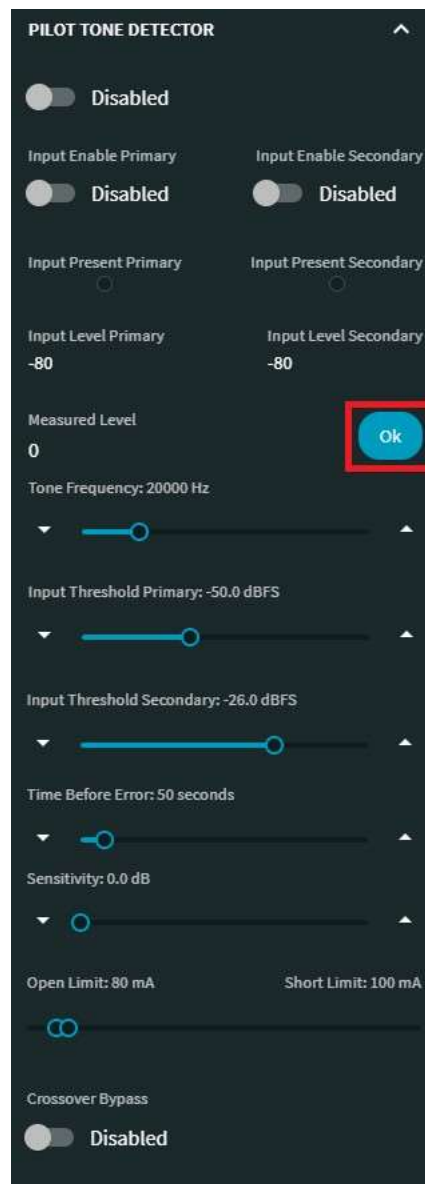
**Commands:** get, subscribe, unsubscribe

**URL:** /amp/channels/x/pilotToneDetector/status

**Values:** "Ok", "Short", "Above Short Limit", "Below Open Limit", "Open", "Low Signal"

**Example:** get /amp/channels/1/pilotToneDetector/status\n

- Response: /amp/channels/1/pilotToneDetector/status "Ok"\n
- This command asked for the Pilot Tone Status and received OK as the response



## Pilot Tone Frequency

**Type:** CONTROL

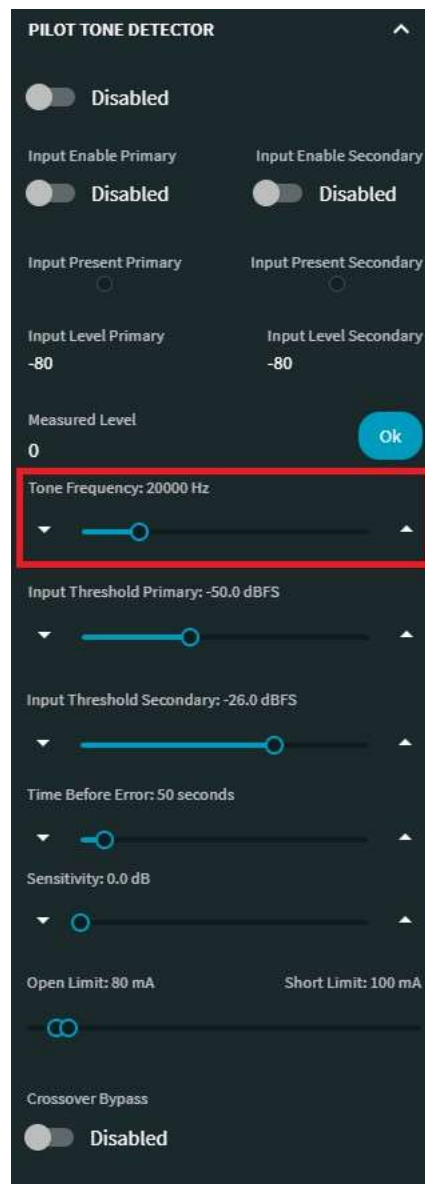
**Commands:** get, set, subscribe, unsubscribe

**URL:** /amp/channels/x/pilotToneDetector/toneFrequency

**Values:** 19000 through 24000

**Example:** set /amp/channels/1/pilotToneDetector/toneFrequency 20000\n

- Response: OK\n
- This command set the Pilot Tone Frequency to 20000Hz



## Pilot Tone Input Threshold Primary

**Type:** CONTROL

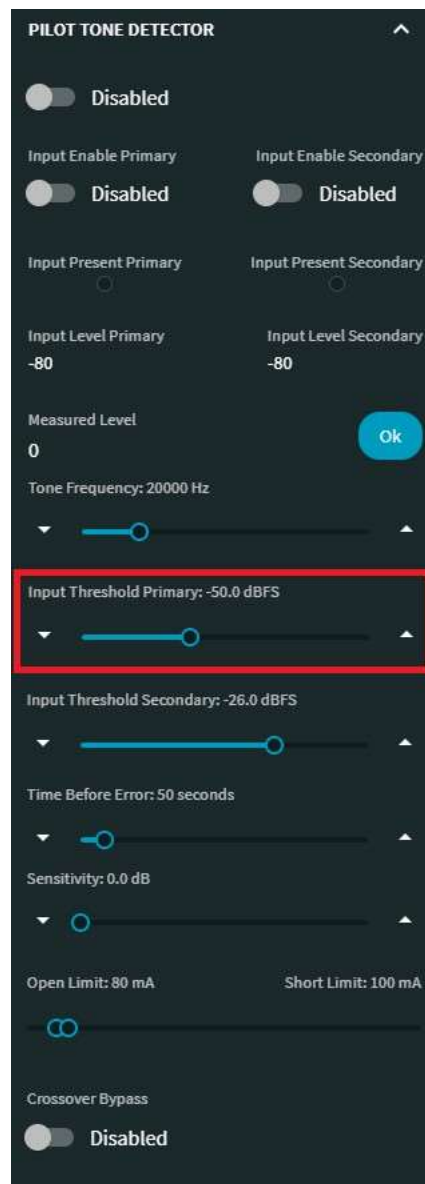
**Commands:** get, set, subscribe, unsubscribe

**URL:** /amp/channels/x/pilotToneDetector/inputThresholdPrimary

**Values:** -80.0 through 0.0

**Example:** set /amp/channels/1/pilotToneDetector/inputThresholdPrimary -50\n

- Response: OK\n
- This command set the Pilot Tone Input Threshold Primary to -50dB



## Pilot Tone Input Threshold Secondary

**Type:** CONTROL

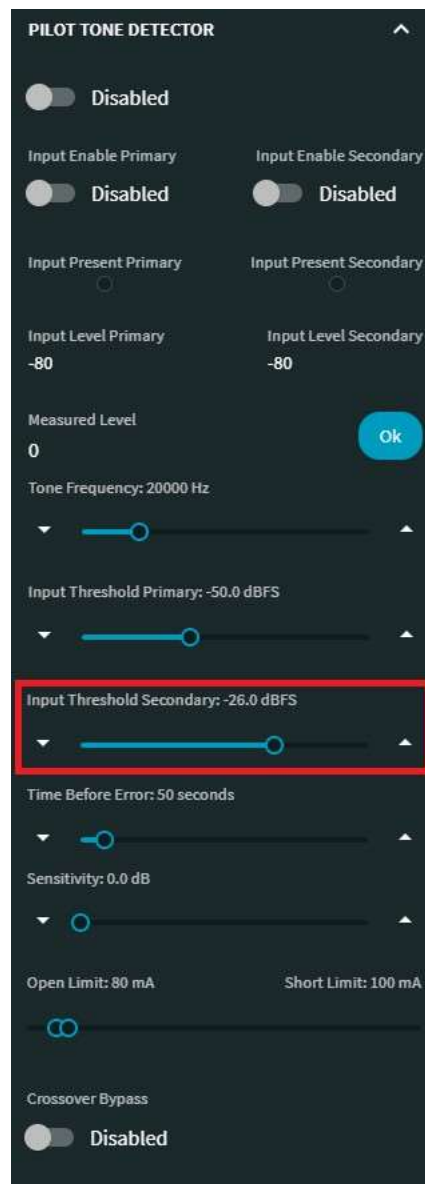
**Commands:** get, set, subscribe, unsubscribe

**URL:** /amp/channels/x/pilotToneDetector/inputThresholdSecondary

**Values:** -80.0 through 0.0

**Example:** set /amp/channels/1/pilotToneDetector/inputThresholdSecondary -26\n

- Response: OK\n
- This command set the Pilot Tone Input Threshold Secondary to -26dB





# OPEN API – TCP Protocol

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## Pilot Tone Time Before Error

**Type:** CONTROL

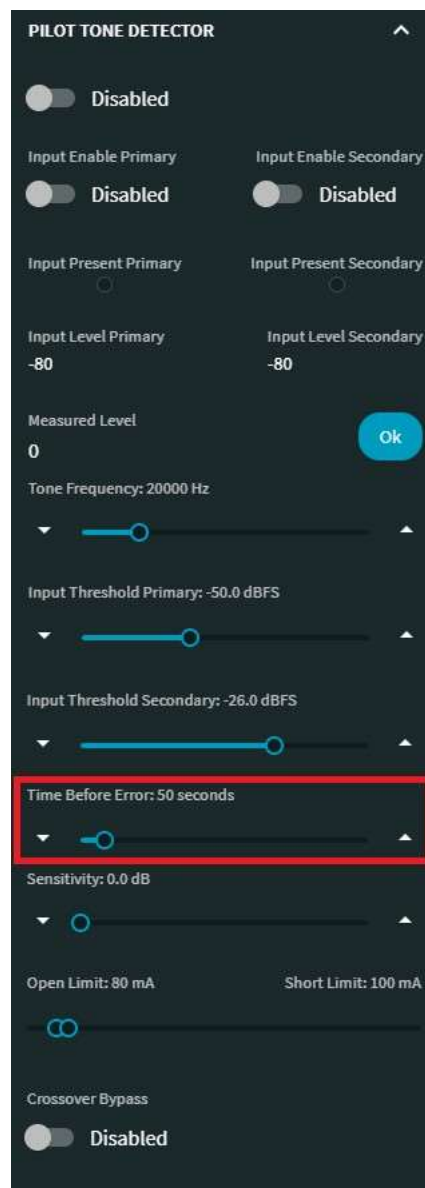
**Commands:** get, set, subscribe, unsubscribe

**URL:** /amp/channels/x/pilotToneDetector/ timeElapsedForError

**Values:** 1 through 600

**Example:** set /amp/channels/1/pilotToneDetector/ timeElapsedForError 50\n

- Response: OK\n
- This command set the Pilot Tone Time Elapsed for Error to 50 seconds



## Pilot Tone Sensitivity

**Type:** CONTROL

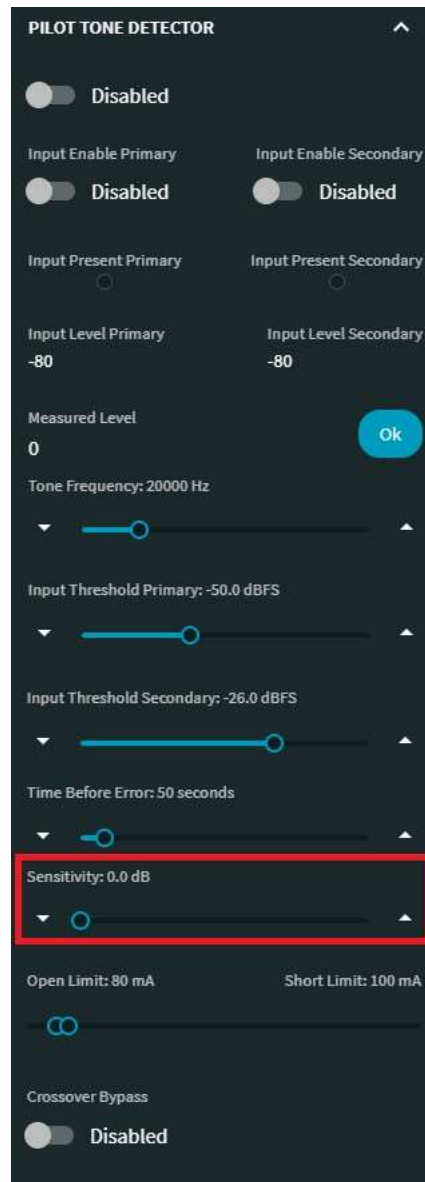
**Commands:** get, set, subscribe, unsubscribe

**URL:** /amp/channels/x/pilotToneDetector/sensitivity

**Values:** 0.0 through 12.0

**Example:** set /amp/channels/1/pilotToneDetector/sensitivity 0\n

- Response: OK\n
- This command set the Pilot Tone Sensitivity to 0dB



## Pilot Tone Open Limit

**Type:** CONTROL

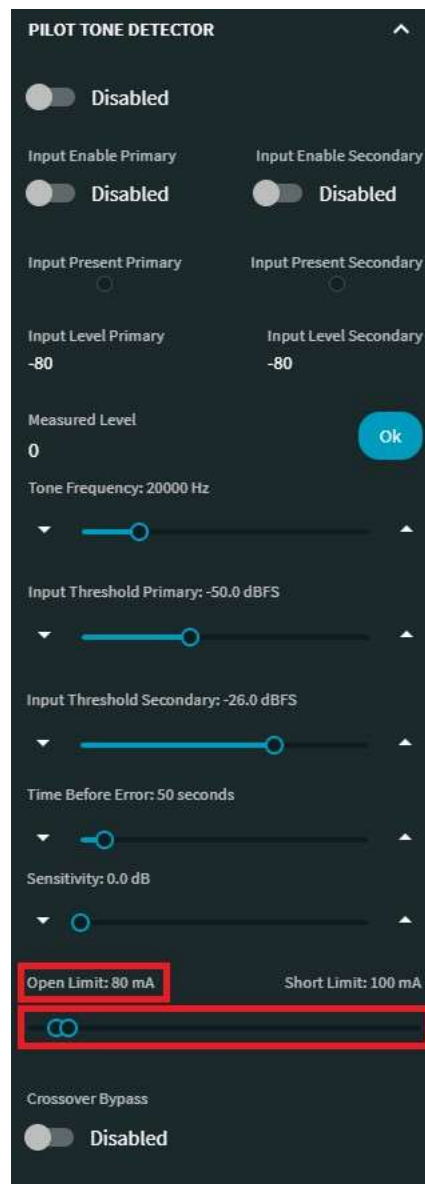
**Commands:** get, set, subscribe, unsubscribe

**URL:** /amp/channels/x/pilotToneDetector/openLimit

**Values:** 25.0 through 700.0

**Example:** set /amp/channels/1/pilotToneDetector/openLimit 80\n

- Response: OK\n
- This command set the Pilot Tone Open Limit to 80mA



## Pilot Tone Short Limit

**Type:** CONTROL

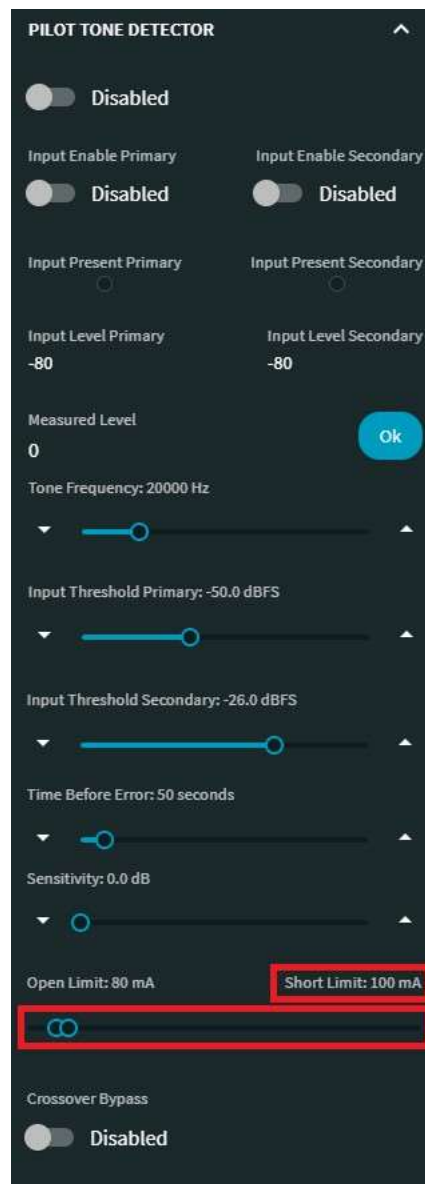
**Commands:** get, set, subscribe, unsubscribe

**URL:** /amp/channels/x/pilotToneDetector/shortLimit

**Values:** 50.0 through 750.0

**Example:** set /amp/channels/1/pilotToneDetector/shortLimit 100\n

- Response: OK\n
- This command set the Pilot Tone Short Limit to 100mA



## Pilot Tone Crossover Bypass

**Type:** CONTROL

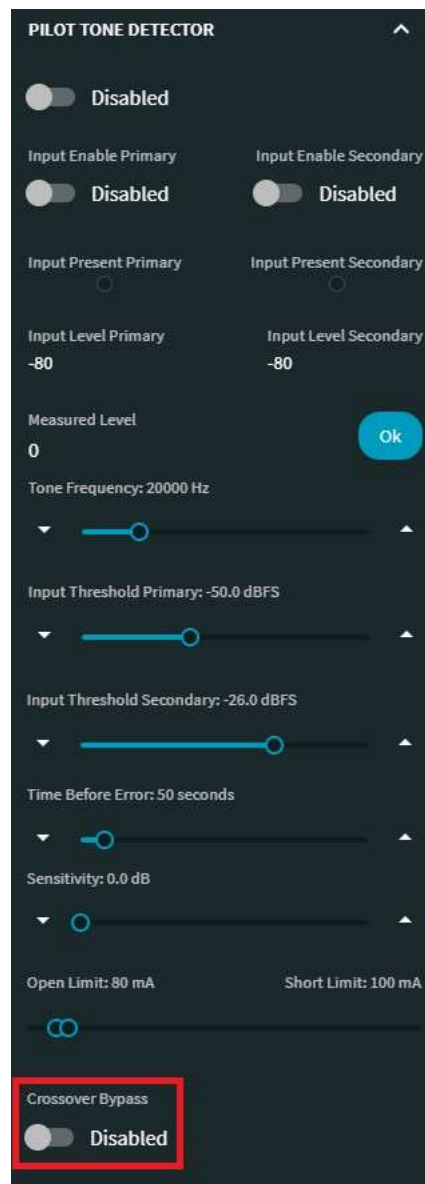
**Commands:** get, set, subscribe, unsubscribe

**URL:** /amp/channels/x/pilotToneDetector/CrossoverBypass

**Values:** "true", "false"

**Example:** set /amp/channels/1/pilotToneDetector/CrossoverBypass false\n

- Response: OK\n
- This command set the Pilot Tone Crossover Bypass to FALSE or DISABLED





# OPEN API – TCP Protocol

Rev 7. 10-10-2025

## Revision History

Rev	Date	Changed by	Description
0	4-17-2020	DB &WAP	Initial
1	5-11-2020	BJD	Addition of Available Commands
2	10-02-2020	BJD	Corrected some typos and added additional calls to Device Info
3	10-15-2020	BJD	Corrected some example responses that were incorrect
4	11-02-2020	BJD	Changed an example command to a more common example
5	09-21-2021	BJD	Updated for 2.0.2.X Firmware: Dante On Ramp, Pilot Tone, Priority Override Threshold
5.1	12-16-2021	BJD	Typo Correction
6	05-19-2022	NM	Corrected example responses that were incorrect
7	10-15-2025	NM	Updated for 4.0.4.0 Firmware: Input Mixer Selection, Input Mixer Attenuation Controls, and Output Attenuation “bump” command.