

Lab.gruppen

# D Series Q-SYS™ Plugin

## Quick Start Guide

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## Quick Start Guide

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### Introduction

The Lab.gruppen D Series Plugin for QSC® Q-SYS™ Designer software makes it is easy to integrate D Series and PLM+ Series amplifiers into any Q-SYS project. It allows for control and monitoring of multiple functions.

### Plugin Compatibility

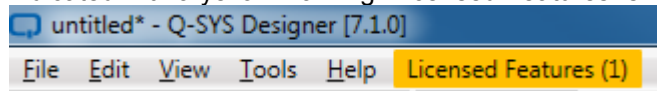
Hence the name, D Series, this version supports all D Series Lake (D10:4L, D20:4L, D40:4L, D80:4L, D120:4L and D200:4L) **and** all PLM+ Series (PLM5K44, PLM12K44 and PLM20K44) amplifiers.

### Lake Controller

The Plugin can run at the same time as an online Lake Controller is connected and also controlling/monitoring the same amplifier. Any changes done in Lake Controller will sync back to Q-SYS and vice versa.

### Q-SYS Core Requirements

Plugins use the Q-SYS Scripting Engine, which is a licensed feature on certain Cores manufactured with Q-SYS 7.0 and later. These require activating a license to deploy the plugin to a Core. This is indicated with a yellow warning “Licensed Features” shown in the top:



Pushing a design requiring licensing to an unlicensed core, will give an error message and the design will not be transferred.

The license is a once per Core, so once the Scripting License is installed, it is possible run as many plugins or scripts desired.

Please refer to [QSC](#) for further help and info regarding this.

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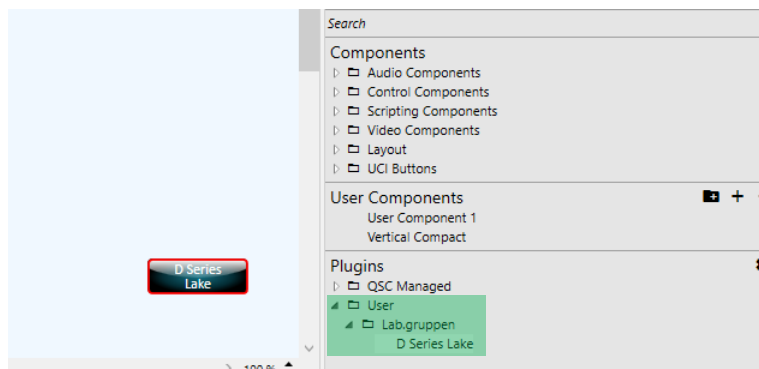
## Getting started

### Installation of the Plugin

1. Download and install the *Q-SYS Designer software* version 7 or later from the QSC website.
2. Install the **D Series Lake.qplug** by double clicking the file and confirm the installation.

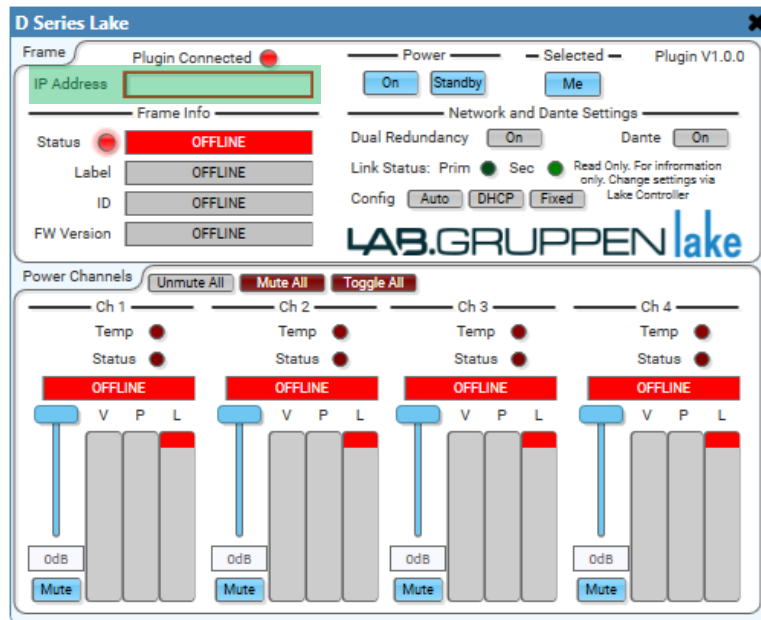
### Add a D Series component to the Schematic [NOT runtime]

3. After the installation of the **D Series Lake.qplug**, the Plugin is available from within the Q-SYS Designer software under *Plugins* → *User* → *Lab.gruppen* → *D Series*.
4. Take the component and place it in the Schematic:

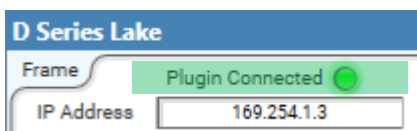


### Connect to an online Amplifier [runtime]

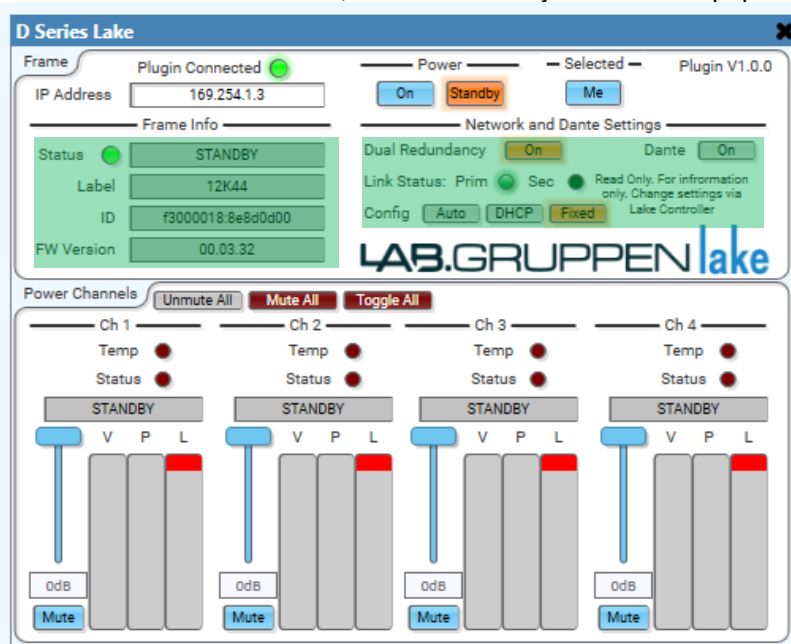
- Match the name and model of the Q-SYS Core and do a *File* → *Save to Core and run*
- Double click on the component to expand the controls. Now while in **Runtime**, specify the IP address of the Online amplifier (the amplifier can be in Standby or On, but must be on the network and in the same subnet as the Q-SYS Core) in the **IP Address** field:



- If a device can be found on the IP address, the plugin will connect. This is indicated by the “Plugin Connected” LED lit Green.



- Once connected to a device, all the Read only fields will be populated with data

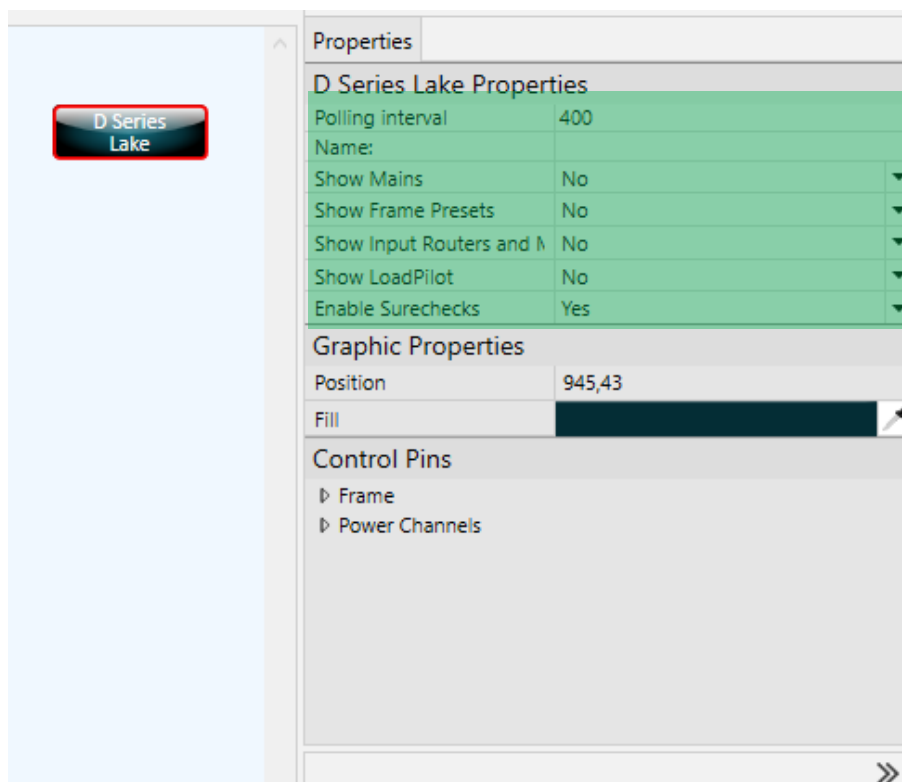


## Plugin Overview

### Properties and Pins [NOT runtime]

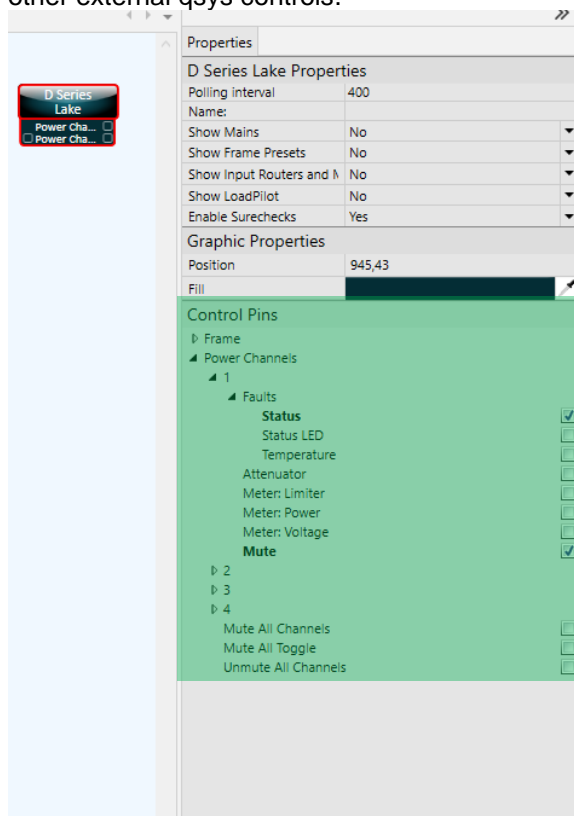
#### Properties

9. If in runtime, disconnect from Core by doing *File* → *Disconnect*. When in design (**not runtime**) you have access to the properties and control pin tabs. In the properties section it is possible to change;
  - a. *Polling interval*: specifies the time on how often the plugin communicates with the amplifier in milliseconds (interval is 400 to 1000 ms).  
The lower settings may work well depending on the size of the system and the characteristics of the network. If an amplifier's response is glitchy, unresponsive or amplifier control is not reliable, try increasing the polling interval to improve reliability. This will however increase the delay in both set and get data.
  - b. *Name*: The name that is displayed on the component in the Design. This will not display the Frame Label, but it is recommended to name it to the same as the Frame Label.
  - c. *Show Mains*: displays Mains Power
  - d. *Show Frame Presets*: Will display the section for frame presets.
  - e. *Show Input Routers and Mixers*: Will display the section for Input Routers and Mixer control
  - f. *Show LoadPilot*: Will display the section for LoadPilot
  - g. *Enable Surechecks*: if enabled certain potentially “destructive” controls will require 2 button presses instead of one to prevent accidental clicks



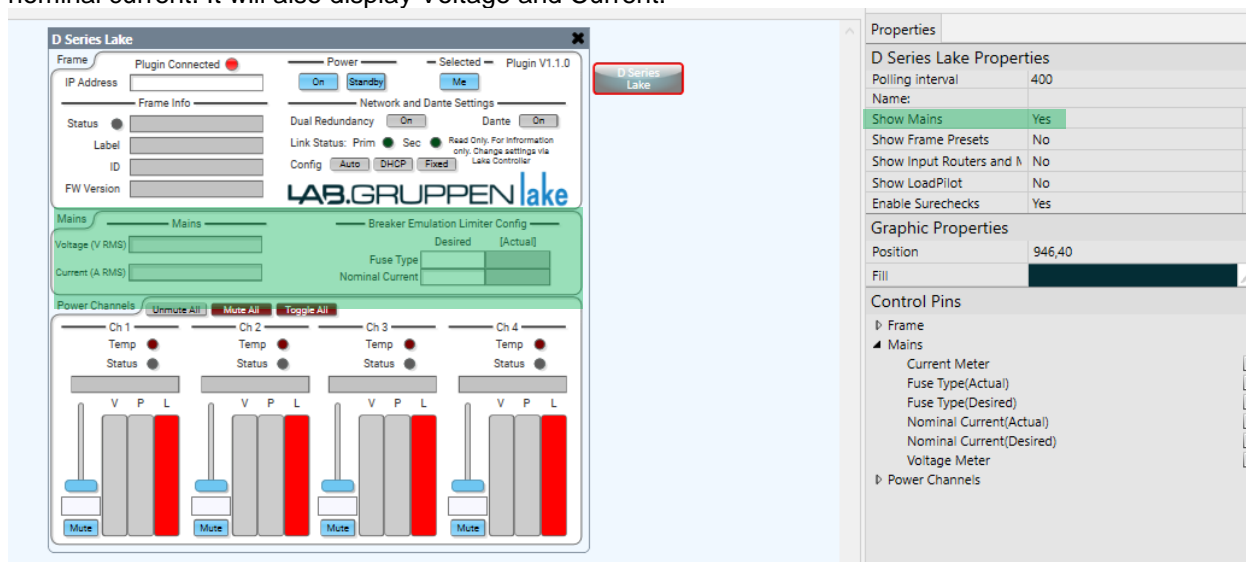
## Control pins

10. In the Control Pins section it is possible to enable read/set values of controls from the plugin with other external qsys controls.



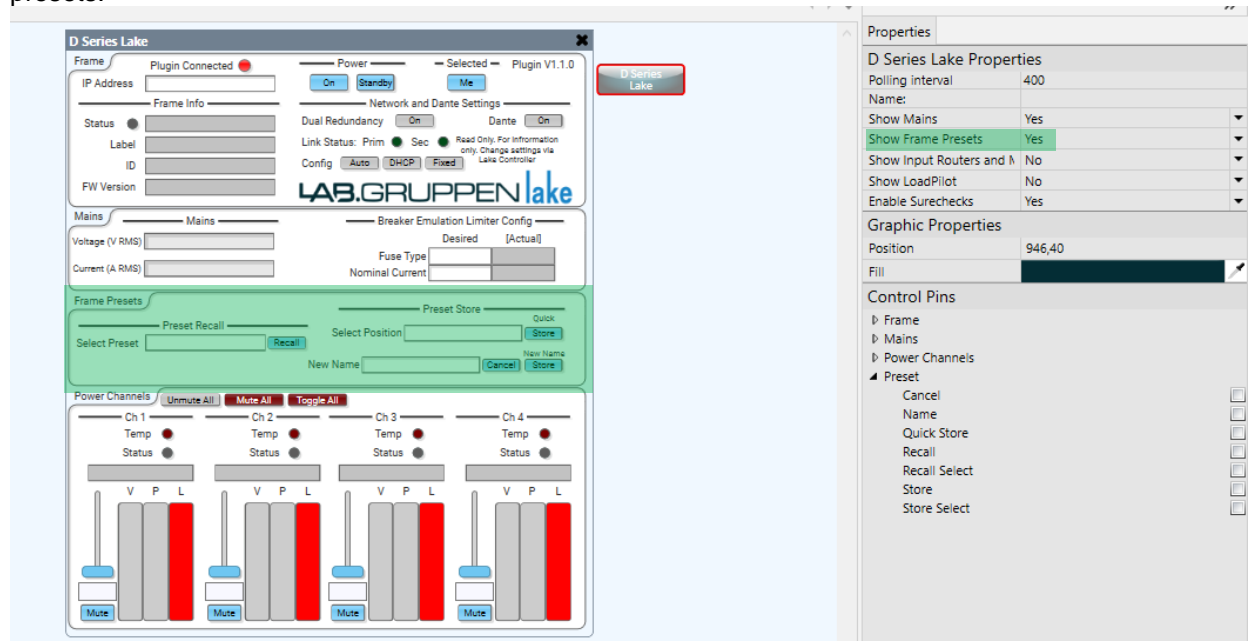
## Show Mains

11. Setting "Show Mains" will add the "Mains" view. This view lets you change the fuse type and nominal current. It will also display Voltage and Current.



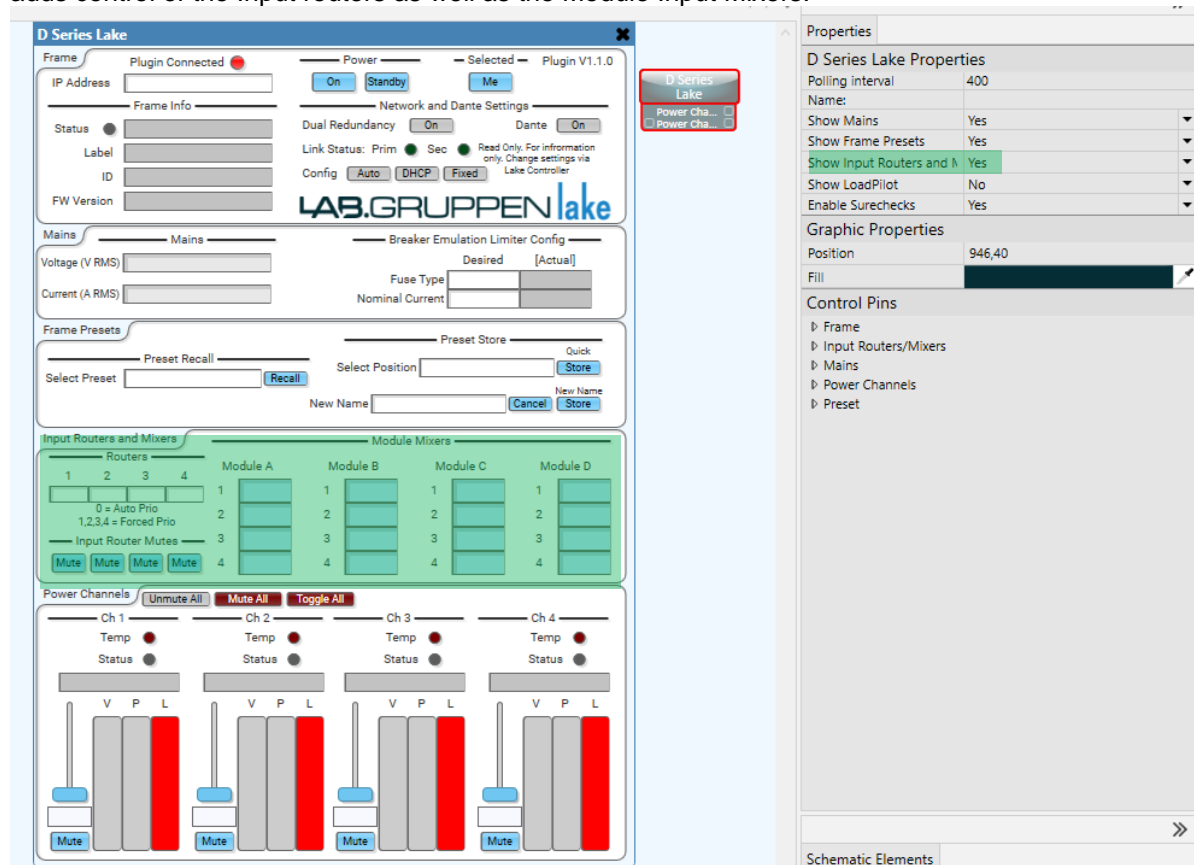
## Show Frame Presets

12. Setting “Show Frame Presets” to Yes will display controls that will let you store or recall up to 100 presets.



## Show Input Routers and Mixers

13. Set “Show Input Routers and Mixers” to Yes will add the “Input Routers and Mixer” view. This view adds control of the Input routers as well as the Module Input Mixers.



## Show Load Pilot

- Set “Show LoadPilot” to Yes will add the LoadPilot view. This will present the current configuration of LoadPilot and give status of connected load as well as presenting the impedance of the connected load.

**Note:** LoadPilot cannot be enabled from the Q-SYS Plugin. Enabling LoadPilot is done from the Lab.gruppen CAFÉ software (available from the [Lab.gruppen website](http://lab.gruppen.com)). Once LoadPilot is enabled, all LoadPilot data is displayed within Q-SYS and also accessible via Control pins.

The screenshot displays the 'D Series Lake' software interface. The main window is divided into several sections:

- Frame Info:** Includes fields for IP Address, Status, Label, ID, and FW Version. A 'Plugin Connected' indicator is shown at the top.
- Power:** Features a 'Power' button (On/Standby) and a 'Selected' button (Me).
- Network and Dante Settings:** Includes 'Dual Redundancy' (On/Off), 'Dante' (On/Off), 'Link Status' (Prim/Sec), and 'Config' (Auto/DHCP/Fixed).
- Mains:** Displays 'Voltage (V RMS)' and 'Current (A RMS)'.
- Frame Presets:** Includes 'Preset Recall', 'Select Position', and 'Preset Store' buttons.
- Input Routers and Mixers:** Shows a grid of modules (Module A, B, C, D) with 'Mute' buttons for each.
- Load Pilot:** This section is highlighted in green. It shows four channels (Ch 1 to Ch 4) with 'Status' indicators, 'Threshold Min/Max' settings, and 'H Tone' and 'L Tone' buttons.
- Power Channels:** Displays four channels (Ch 1 to Ch 4) with 'Temp' and 'Status' indicators, and 'V P L' (Voltage, Power, Load) meters.

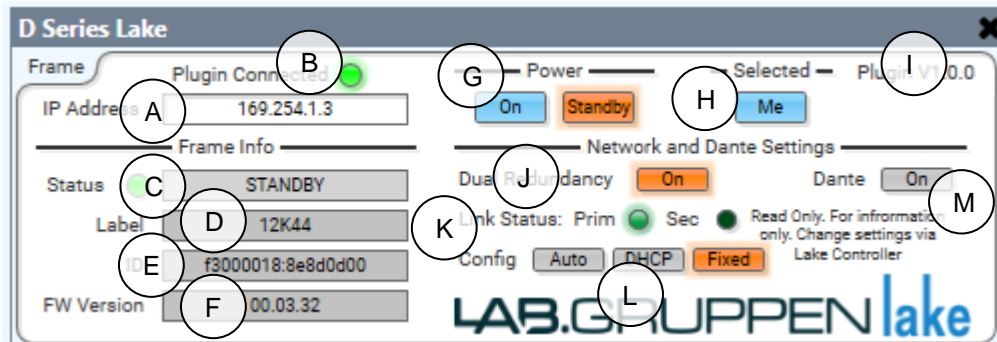
On the right side, there is a 'Properties' panel with the following settings:

- D Series Lake Properties:**
  - Polling Interval: 400
  - Name:
  - Show Mains: Yes
  - Show Frame Presets: Yes
  - Show Input Routers and Mixers: Yes
  - Show LoadPilot: Yes (highlighted in green)
  - Enable Surechecks: Yes
- Graphic Properties:**
  - Position: 946,40
  - Fill:
- Control Pins:**
  - Frame
  - Input Routers/Mixers
  - Load Pilot
  - Mains
  - Power Channels
  - Preset
- Schematic Elements:**
  - T H O L



## Component User Interface

### Frame



Label	Function	Description
A	IP Address field	Enter the amplifiers IP address
B	Plugin Connected LED	Green indicates that an amplifier has been found on the IP address entered. Red indicates plugin not connected to an online amplifier. Amplifier can be ON or in Standby.
C	Status LED and Display	If the LED is green, then there are no faults or warnings present and the device is Online on the network. It can be either in Standby or On, this is indicated on the adjacent Status Display. The display will be green when the device is On and there are no faults present (grey when the device on online but in Standby). If the LED is red, then there are faults or warnings present on the amplifier. The Status Display will specify the exact fault (what also can be seen in the Lake Controller (or on the Front panel as with a PLM+). The display will be red if there are faults present as well to highlight that there is a present fault.
D	Frame Label	Displays the frames label of the amplifier. This is set in the Lake Controller
E	Frame ID	Displays the Frames ID
F	Firmware Version	Displays the current firmware on the amplifier
G	Power On / Standby	Indicates the current power state of the amplifier with Orange. It is possible to change power state by clicking the expected power state.
H	Select Me	This will lit the Select LED on the front panel (see Operations manual of the product for further information). It will also select the amplifier in an online Lake Controller.
I	Plugin Version	The version of the plugin
J	Dual Redundancy	Will indicate in Orange if Dual Redundancy is enabled. This can be controlled from the Lake Controller.
K	Link Status	Primary and Secondary Ethernet connectors link status. If the device have Dual Redundancy disabled, only the Prim connector can be lit (the Secondary is disabled also if the actual Secondary port is used for Daisy chaining). When the Device have Dual Redundancy enabled, the Sec will indicate if it has connection.
L	Config Auto, DHCP or Fixed	This will indicate the current IP Configuration the device has on the Lake interface (Dante can have different). This is changed from the Lake Controller.
M	Dante On / Off	Will indicate in Orange if Dante is enabled. This can be controlled from the Lake Controller.

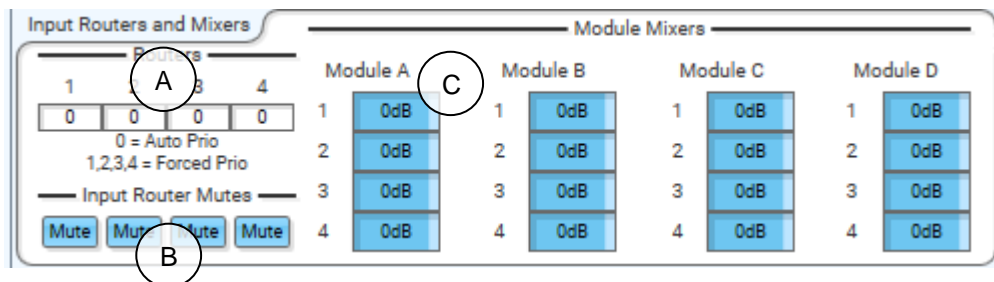
## PSU Mains

Label	Function	Description
A	Voltage Meter	Mains Voltage Meter
B	Current Meter	Mains Current Meter
C	Fuse Type	Desired Breaker Emulation Limiter (BEL) Fuse type and Actual Fuse Type. All models do not have all three fuse types. <i>Note:</i> To get correct Actual Fuse type for D10:4L and D20:4L firmware 3.36 is required.
D	Nominal Current	BEL Desired Nominal current value and Actual current setting. There will be a difference between the Desired and Actual if the specified value is outside the models specification.

## Frame Presets

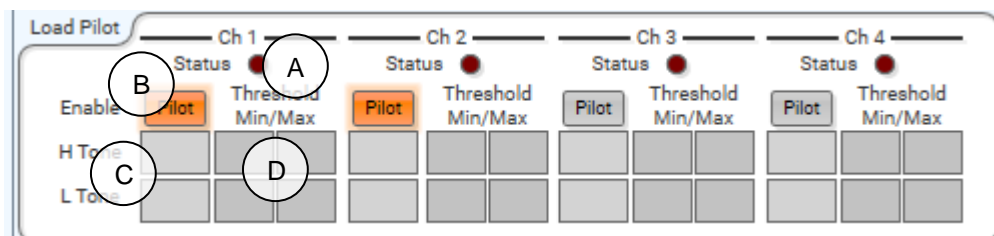
Label	Function	Description
A	Recall	Select a preset from the dropdown list of the 100 frame preset positions from the frame. When a FramePreset is selected, press Recall to load the preset. It is not possible to recall an "Empty" preset. If Surechecks are enabled, it is required to press twice within 3 seconds (also applies for pins). If this behaviour is unwanted, disable the "Surechecks" feature.
B	Quick Store	Select FramePreset position
C	Quick Store	The "Quick Store" will overwrite the given FramePreset position selected in (B) with the current settings that the device is using. It is not possible to Quick Store an "Empty"
D	New Store	With New Store it is possible to store the current settings that the device is using and manually enter a name for the FramePreset and store it on the position selected in the Selection Position dropdown (B). A name must be give be able to store (do not name Empty)

## Input Routers and Mixers



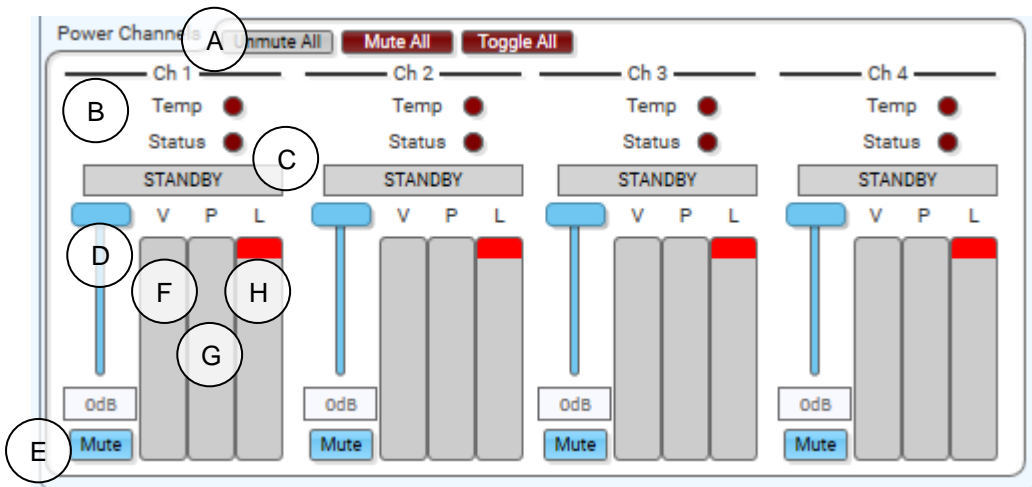
Label	Function	Description
A	Force Router Priority	Control of the Input Router Priority. Here it is possible to go between Auto or Force a specific priority. 0 = Enable Auto Select Mode 1 = force Prio 1 2 = force Prio 2 3 = force Prio 3 4 = force Prio 4
B	Input Router Mute	Mutes the router. Blue = unmuted, red = muted
C	Module A,B,C,D Input Mixers	Mix Input Router 1-4 from – 100dB to 15dB for any Module. <i>Note:</i> This is not dynamic, i.e. when using an A/B or C/D module where Input Mixer B and/or D is not available all 4 will still be displayed, but in that case use the Input Mixer for A and/or C.

## LoadPilot



Label	Function	Description
A	Status LED	If the LED is on then there is a fault related to the LoadPilot. Look in the respective channel status display available in the Power Channels section for further details. Frame must be On for LoadPilot to work.
B	Enabled	Indicates in Orange if LoadPilot is enabled. This is read only indication, LoadPilot can only be enabled from the CAFÉ Software (available on the Lab.gruppen website).
C	High and Low Tone Readings	Displays the current Impedance reading of the High and Low tone. Will indicate in red if the impedance is outside the thresholds. Frame must be On for LoadPilot to work
D	High and Low Tone Min/Max Thresholds	Displays the Min/Max Impedance thresholds of the High and Low tone. Frame must be On for LoadPilot to work

## Power Channels



Label	Function	Description
A	Unmute All, Mute All and Toggle All	Unmute All will unmute all Power Channel mutes Mute All will mute all Power channels Toggle All will toggle the mute state of all channels.
B	Temperature LED	Yellow if Warning, Red if Fault
C	Status LED and Display	<p>If the LED is green, then there are no faults or warnings present and the device is Online on the network. It can be either in Standby or On, this is indicated on the adjacent Status Display. The display will be green when the device is On and there are no faults present (grey when the device on online but in Standby).</p> <p>If the LED is red, then there are faults or warnings present on the amplifier. The Status Display will specify the exact fault (what also can be seen in the Lake Controller (or on the Front panel as with a PLM+). The display will be red if there are faults present as well to highlight that there is a present fault.</p> <p>Status Display will be red if there is a fault present on the channel and green if there are none. This includes Load Pilot faults but excludes Frame faults. Like the frame display this display will also be grey if no faults are present but the frame is in standby mode.</p>
D	Attenuator	Power channel attenuation, from – 100dB to 0dB.
E	Mute Channel	Power channel mute, Blue if unmuted, red if muted.
F	V Meter	Displays the current Voltage. Frame must be on for this to be true.
G	P Meter	Power Meter. Frame must be on for this to be true.
H	L Meter	ISVPL Limiter Meter. Frame must be on for this to be true.



## Support

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If assistance is required, please contact Lab.gruppen CARE on [care@musictribe.com](mailto:care@musictribe.com) for further help.

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