



# MUM-6 User Manual v1.0.1

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# Hello!

Thank you for purchasing a PresentDayProduction MUM-6 studio monitoring loudspeaker system. At PresentDayProduction, we want to create the best speaker designs we've ever heard. Explosive dynamic range, mind-boggling detail and modularity designed to rival the very best speakers out there, all designed and built by us - sound engineers who work using these speakers seven days a week.

We are incredibly proud of the speakers we have designed and built and we believe that with the MUM-6 system, you'll hear details you've never heard before. To see just what your speakers are capable of, head to <https://www.presentdayproduction.com/mum-listen> to download a demo compilation we think showcases the best of the MUM-6 design.

We really value the feedback of every single person who uses our speakers, so if you have any feedback or comments, please email us, and of course if you have any issues or need some troubleshooting advice, please don't hesitate to get in touch. You can reach us at [info@presentdayproduction.com](mailto:info@presentdayproduction.com)

There are a few documents within this pack to help you get set up - if there's anything not covered by these documents please drop us an email! If you lose any of these documents you can redownload a digital copy at <https://www.presentdayproduction.com/mum-support>

Thank you for your support and enjoy your new monitors!

James, Mark and FlopCat

# Getting Started

Once you've unboxed your MUM-6 monitors, it's super easy to get up and running. Your inputs should already be configured by us, however if you need to change the input selection for any reason, please consult the "Changing Inputs" document for guidance.

## Positioning

- It's important to make sure the MUM-6 monitors are oriented correctly - We designed the MUM-6 monitors to be used in a portrait orientation, and so only recommend using them in this orientation for best performance.
- The MUM-6 monitors will disperse more narrowly than the larger dome-mid monitors, thanks to the mid information coming from a cone, rather than a dome. For optimal performance we recommend positioning your speakers so the tweeter is at ear height.

## Connect your cables

- Ensure the power supply is **OFF**.
- Connect the audio input cables to the inputs at the top of the amplifier according to whichever input has been assigned by us, or by you using the "Changing Inputs" document in this manual.
  - There are multiple audio inputs on the PresentDayProduction amplifiers - by default your speakers are configured as requested during the build but it's very easy to change the input using the **left** and **right** arrows on the included Hypex IR remote control once the amplifier is turned on.
  - If you are using the "through" outputs on the amplifier, please connect these now.
    - The "through" output **must** use the same connection format as the input you have chosen when using analogue connections. For example, if you have chosen Analogue XLR as your input, you must use an Analogue XLR as the "through" output.

- When using digital connections, the S/PDIF, TOSLink and AES inputs are all mirrored on the outputs, so you can connect any digital input to any digital output for daisy chaining.
  - As the speakers are pre-configured for digital left and right signals, you can connect the cables in whichever order is suitable for your particular digital I/O setup. The serial numbers on the rear of your speakers will denote left and right.
- Switch the power supply **ON** using the switch to the side of the power supply cable.
  - Please ensure this is the **last** step in turning on your equipment, to avoid loud pops from the speakers. When turning off your equipment, please ensure the speakers are turned off **first**. This should be good practice when using any speakers from any manufacturer.
  - Once the power switch is on, it is safe to use the IR remote to put the speakers into standby for long periods of time - they consume very little power in this state.
- The default volume value of our amplifiers is **0dBFS (highest volume)** to ensure you can get the maximum volume needed where necessary, so please start with your monitoring controller set to its minimum value and turn up slowly to inform yourself of the levels at which these speakers may operate in your studio.
- Your speakers are ready to use!

# Remote Control



The included IR Remote Control is very easy to use and has the following functions:

Button	Function
Red Power Button	Speaker Power On/Off
F1	Load DSP Preset 1
F2	Load DSP Preset 2
F3	Load DSP Preset 3
F4	Not Used
+	Amplifier Volume Up
-	Amplifier Volume Down
Arrow Left	Switch DSP Input
Arrow Right	Switch DSP Input
OK	Not Used
Mute	Mute Audio

# Changing Inputs

Our MUM-6 speakers are equipped with custom PresentDayProduction amplifiers with onboard DSP. There are five possible input options available, some using digital protocols, others using analogue. Please see below for information on each input and how to change your input choice.

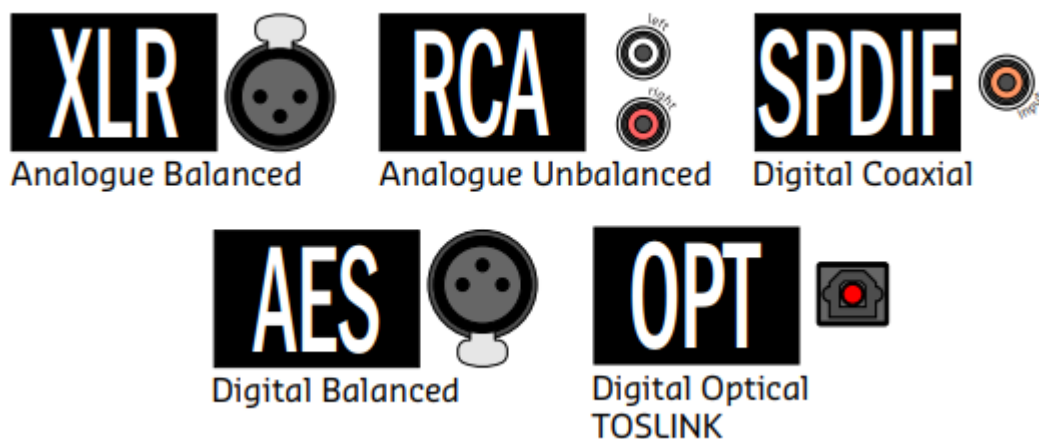
The MUM-6 system is pre-configured by us for your input of choice but it's simple to change the input if you need to, as shown below.

## Inputs

- Analogue
  - XLR
  - RCA
- Digital
  - AES XLR
  - S/PDIF
  - Optical

## How to select the input

Use the **left** and **right** arrow keys on the included IR remote control to choose an input. The selected input is displayed on the OLED screen.



- You can also select "**Auto detect**" by scrolling through the inputs until "**SCAN**" shows, but please note the system will go into an auto-mute state after 10 seconds of no signal whilst it commences input-searching. Playing a signal will unmute the speakers. Selecting a defined input will disable this auto-mute except for the 60 minute standby timer we have applied. **For best performance, we recommend explicitly choosing a defined input.**
- The amplifier will remember your settings upon power cycling.
- Aiming the remote control directly between both speakers should set both inputs at once however if the signal doesn't reach both speakers then it is possible to adjust one speaker at a time.
- The MUM-6 has a number of different inputs, and each preset will remember the last input selection for that specific preset. For example, if you choose S/PDIF on Preset 1, you have to switch to Preset 2 and Preset 3 and also set S/PDIF as your inputs on those presets. If you do not do this, there will be a different input active on each preset.

# DSP Presets

Our MUM-6 speakers are equipped with custom PresentDayProduction amplifiers with onboard DSP. There are three custom presets made to produce the very best sound - each preset has a different high pass filter slope set to allow for customisation between low-end reach and SPL headroom. The bass extension will continue lower than the designated filter frequency with a gently sloping reduction in amplitude as the frequency decreases. The selected preset will be displayed on the OLED screen upon initial startup of the MUM-6.

## Preset 1

- High pass filter set at 45Hz
- Lower-frequency bass extension means you can hear super-low sub frequencies.
- This in turn reduces the overall SPL available to the bass channel.
- This is our in-house personal favourite preset.
  - By default, Preset 1 is selected as we believe it offers the best performance for the MUM-6 monitor. For best accuracy in a critical listening environment, we recommend Preset 1.

## Preset 2

- High pass filter set at 80Hz.
- The perfect balance between low-end reach and SPL headroom. You will be able to achieve higher SPL levels with this preset.
- Some subwoofers will work well with this preset.

## Preset 3

- High pass filter set at 120Hz.
- This is the preferred setting for pairing with a subwoofer and getting the highest levels of SPL. We recommend only using this preset if a subwoofer is present.



- Great bass representation but avoiding those areas provided by the subwoofer, meaning no clashing between drivers.

## **Inputs**

The MUM-6 has a number of different inputs, and each preset will remember the last input selection for that specific preset. For example, if you choose S/PDIF on Preset 1, you have to switch to Preset 2 and Preset 3 and also set S/PDIF as your inputs on those presets. If you do not do this, there will be a different input active on each preset.

Guidance on changing these inputs can be found in the **Changing Inputs** section of this manual.

## **Fusion IR Remote / Changing Presets**

The included Fusion IR Remote allows for the following functions:

- Preset switching using the F1, F2 and F3 buttons.
- Volume up and down per speaker.
- Input switching.
- Stand-by and power on.
- Mute and unmute.
- Button F4 is not assigned at the present time.

## **Crossover filter access**

- Crossover filter access is not permitted due to the risk of inexperienced usage rendering a part damaged or broken.
- The filter is password protected.
- Any unauthorised changes to the filter will void your warranty - changes are easily detectable using our backend DSP development tools.

# User Assignable EQ

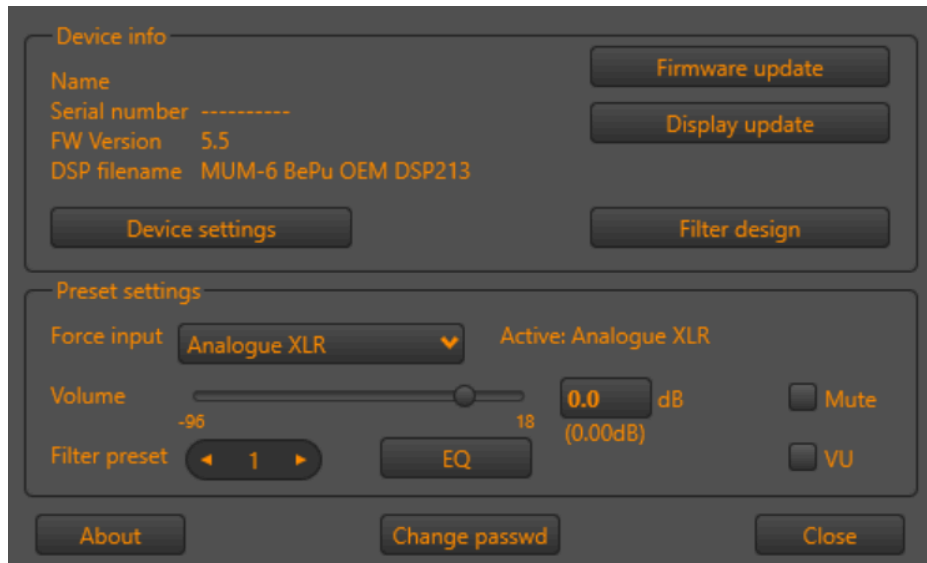
Although the MUM-6 has been calibrated to ensure its sound is as accurate as possible, there may be problem frequencies within your studio's acoustic properties. The MUM-6 features a user assignable EQ to enable tweaking the sound of the speaker to your personal taste.

**Note: It is of critical importance to not use a USB hub when updating firmware or adjusting the EQ of the speakers, as an improperly configured USB hub may result in data loss, corrupting the DSP profile. If this happens, please contact us immediately.**

**We recommend only connecting the USB cable directly into the motherboard USB sockets found on your computer.**

**The DSP Configuration software is only available on Windows. For Mac usage, we recommend installing Parallels (<https://www.parallels.com>)**

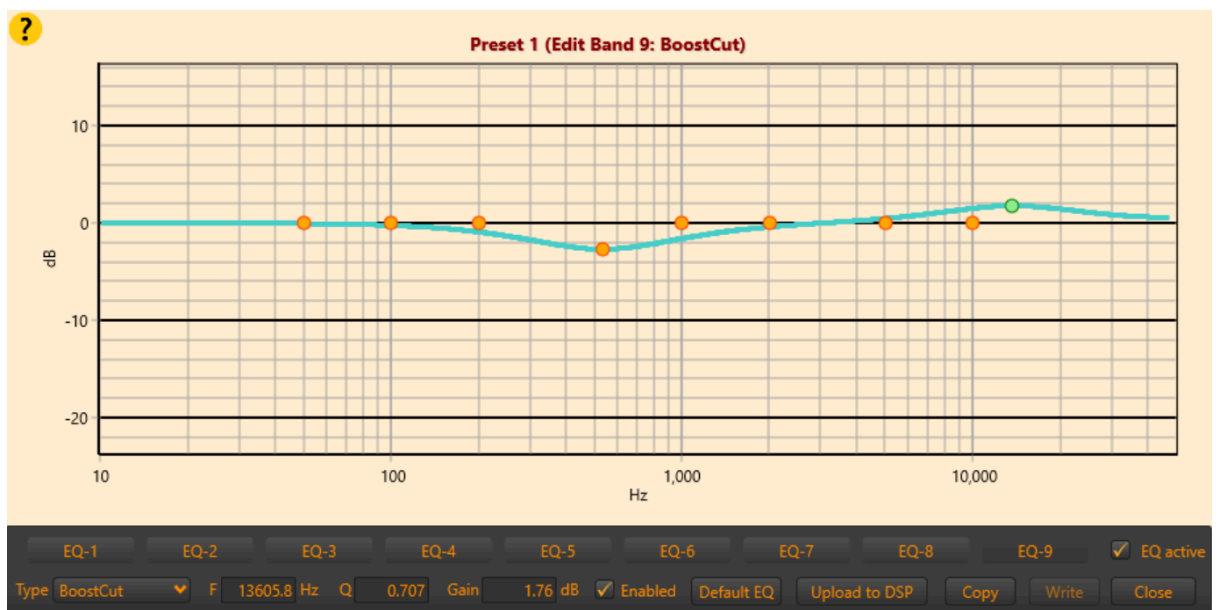
- Download the current software version from <https://www.presentdayproduction.com/mum-dsp-version>
- Install the Hypex Filter Design software and run it, then connect one speaker at a time to your computer using a USB-A>USB-Micro cable.
- If your speaker is detected, the software should look like this:



- Click the "EQ" button at the bottom of the program to load the EQ window.



- Drag the EQ nodes to where you'd like them, or alternatively enter values in the boxes below the graph.



- Ensure the “EQ Active” box is ticked, then hit “Upload to DSP” to confirm your changes.
- To reset the EQ to default settings, hit the “Default EQ” button, confirm the change, then “Upload to DSP”.



- Each preset has its own EQ curve so if each preset must be treated as a separate EQ setup.

# Firmware Updates

Our MUM-6 speakers are equipped with custom PresentDayProduction amplifiers with onboard DSP. When the speakers leave our production facility they will always be running the latest stable firmware version but if for any reason you need to upgrade to a newer version or reflash the firmware to resolve an issue, please read below.

**Note: It is of critical importance to not use a USB hub when updating firmware or adjusting the EQ of the speakers, as an improperly configured USB hub may result in data loss, corrupting the DSP profile. If this happens, please contact us immediately.**

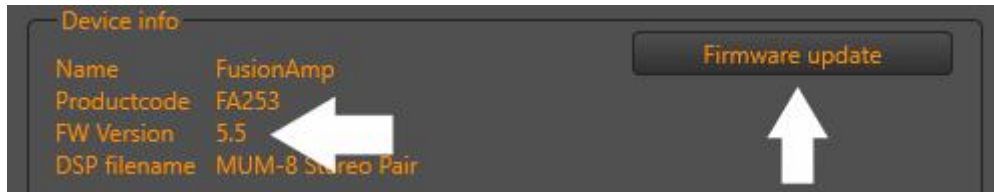
**We recommend only connecting the USB cable directly into the motherboard USB sockets found on your computer.**

**The DSP Configuration software is only available on Windows. For Mac usage, we recommend installing Parallels (<https://www.parallels.com>)**

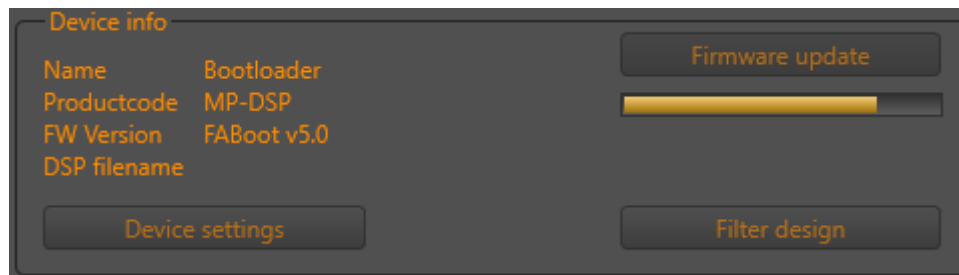
## Updating your monitors

- Download the current DSP version from <https://www.presentdayproduction.com/mum-dsp-version>
  - Please ensure to download the correct firmware for your speaker. Most customers will be running a MUM-6 setup with a PDP Amplifier on v5.x.
- Install and open the Hypex Filter Design software.
- Connect one speaker at a time to your computer using a USB-A>USB-Micro cable.
- Click "Firmware Update".
  - Navigate to where you saved the firmware and double click on the firmware .hex file that either matches the version your speaker is currently running or is newer than the current version - this is displayed on the "FW Version" number in the top left of the speaker management software.

- We recommend updating both speakers if you change the version number. If the version number remains the same (in the case of reflashing the firmware to fix an issue), you do not need to update both speakers.
- Your speaker will either be running DSP v1.x or v5.x - a v1 system will not accept v5 and vice versa, so please ensure you click on the correct firmware.



- The speaker should reboot into "Bootloader Mode". Please do not click or touch anything whilst this is in progress. If nothing happens straight away, please wait 10-15 seconds and the process should begin.



- If the Bootloader Mode doesn't begin to initiate, please try once more, and then contact us at [info@presentdayproduction.com](mailto:info@presentdayproduction.com) for a walkthrough if it does not initiate on the second attempt.
  - A yellow progress bar will appear with the update progress, and the speaker will reboot itself, before a message appears upon completion of the update.

## Updating your OLED display

The OLED Display in the front of the MUM-6 runs a separate firmware from the speaker DSP system. If for any reason you need to update the OLED Display firmware, please follow these steps:

**Note: It is of critical importance to not use a USB hub when updating firmware or adjusting the EQ of the speakers, as an improperly configured USB hub may result in data loss, corrupting the DSP profile. If this happens, please contact us immediately.**

**We recommend only connecting the USB cable directly into the motherboard USB sockets found on your computer.**

**The DSP Configuration software is only available on Windows. For Mac usage, we recommend installing Parallels (<https://www.parallels.com>)**

- Download the current OLED Firmware from <https://www.presentdayproduction.com/mum-dsp-version>
  - Click on the download button under “OLED Display Updates”
- Install and open the Hypex Filter Design software.
- Connect one speaker at a time to your computer using a USB-A>USB-Micro cable.
- Click on “Display Update”.
  - Navigate to where you saved the firmware and double click on the firmware .hex file.
- A yellow progress bar will appear with the update progress, and the OLED Display will show data transmission information.
- Once the update is complete, a confirmation message will appear on screen and the OLED Display will show a small green confirmation message.
- Turn off your speaker using the power switch on the amplifier and wait for the OLED Display to extinguish (approximately 30 seconds). The OLED Display will not be usable until the speaker is restarted.
- Restart the speaker.

# Specifications

## Dimensions

- Height: 350mm
- Width: 200mm
- Depth: 235mm
- Weight: 10kg

## General specifications

- Frequency Response: 45Hz - 22KHz
- Cabinet Design: Sealed enclosure made from high-density, eco-friendly Valchromat
- Front baffle OLED display with input display, volume, preset, and warnings
- Infrared remote for power toggle, input switching and volume
- Auto-switching power input with low-power standby mode

## Connectivity

- Inputs (Analogue): XLR (balanced), RCA (unbalanced)
- Inputs (Digital): AES XLR, S/PDIF, Optical TosLink
- Outputs (Analogue): Analogue XLR through
- Outputs (Digital): S/PDIF through

## Amplification

- Amplification model: PresentDayProduction MUM-6 Amp Pack
- Output Power: Bass 250W, Treble - 100W
- DSP: Hypex DSP Crossover and Loudspeaker Management
- DSP Latency (Analogue): 0.35ms
- DSP Latency (Digital): 1.8ms
- User-controllable parametric EQ
- MBW = 20KHz, unweighted, all filters set to unity, gain adjust 0dB
  - SNR AD/DA: =109dB
  - SNR DA: -111dB
  - THD(D+N) (at -1dBFS) AD/DA: -100dB



- THD(D+N) (at -1dBFS) DA: -102.5dB

### **Drivers**

- Bass woofer: Purifi PTT6.5, 6.5" Aluminium bass woofer
- Tweeter: BlieSMa T25S-6 (Silk) (Base Model)
  - 25mm silk dome and surround
  - 2mm linear excursion and large vent channel for undistorted low frequency operation
  - Neodymium Magnet
- Tweeter: BlieSMa T25B-6 (Beryllium) (Upgrade) - coming soon
  - 25mm beryllium dome with ultrasonic first breakup mode
  - 2mm linear excursion and large vent channel for undistorted low frequency operation
  - Neodymium magnet

### **Accessories**

- IEC power cable
- FusionIR remote

# Troubleshooting

Once you've unboxed your MUM-6 monitors, it's super easy to get up and running. If there are any issues in getting started, or if you experience unusual behaviour, please check below for solutions. If no solution can be found under the section related to your issue, please email us at [info@presentdayproduction.com](mailto:info@presentdayproduction.com)

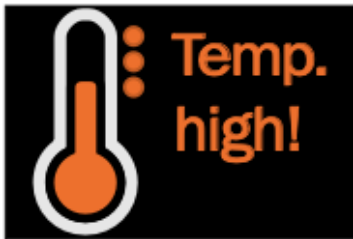
Please follow each step below in the order listed.

## No power

- Check the power cable is plugged in and power is turned on.
- Swap to another power socket if possible and try again.
- The internal fuse may be blown. This fuse is not user replaceable. Please email us at [info@presentdayproduction.com](mailto:info@presentdayproduction.com)

## No audio output

- Check the power cable is plugged in and power is turned on.
- Check the audio input cable is inserted into the chosen input socket.
- Check the audio input selection is correct.
  - Please consult the "Changing Inputs" document for guidance.
- Check your audio interface is turned on and the output choice is assigned to the correct output sockets.
- Check your playback software has the correct audio interface selected within its output preferences.
- Check you do not have any channels muted or solo'd within your mixer or mixing software which should be passing audio.
- If the OLED screen shows an overheat warning, the overheat protection may be triggered. Turn the amplifier off and wait 10 minutes for it to cool down, then turn the amplifier on again.



Warning High Temperature



Protection initiated auto shut down

**Left and right are reversed on playback**

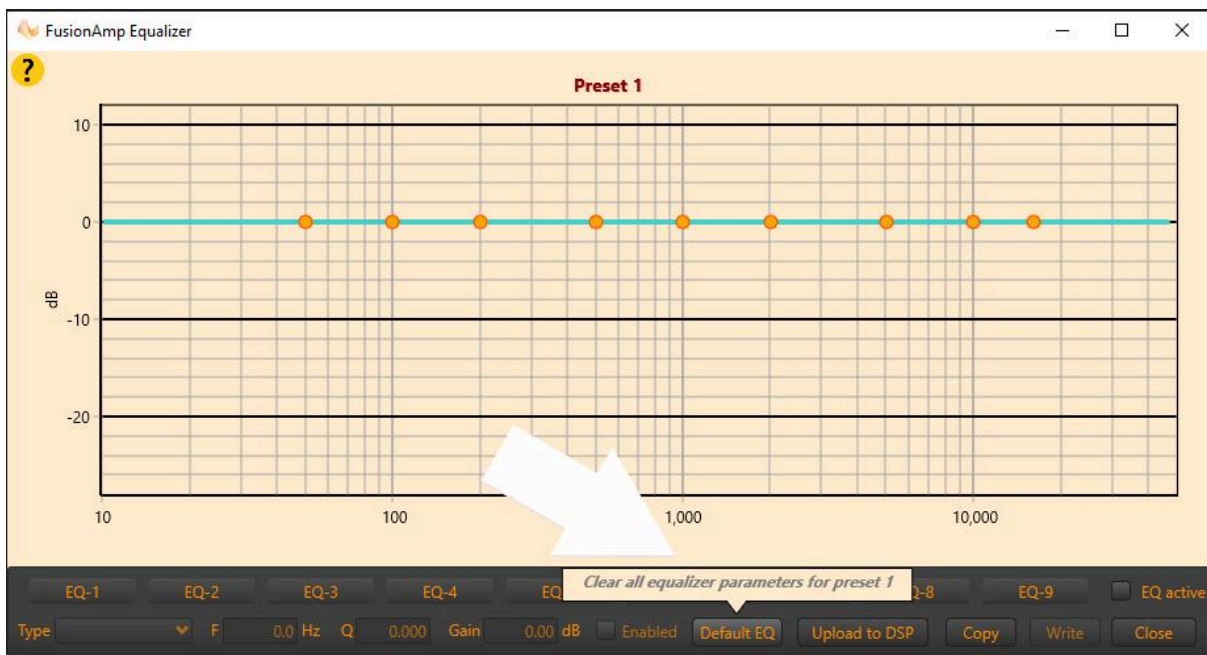
- Check your speakers are oriented correctly as in the **"Getting Started"** section of this manual. The serial number denotes whether a MUM-6 should be on the left or the right.
- Analogue connections:
  - Ensure the left and right cables are in the correct sockets on both your audio interface outputs and the speaker inputs.
- Digital connections:
  - Download the "Hypex Filter Design" software from <https://www.presentdayproduction.com/dsp-download> and install and run it (**Windows Only**).
  - Click on "Device Settings".
  - Find the category "Digital Audio Channel Selection".
  - Select left or right as necessary.
  - Other settings are password protected to avoid accidental damage to equipment.

**Poor sound quality**

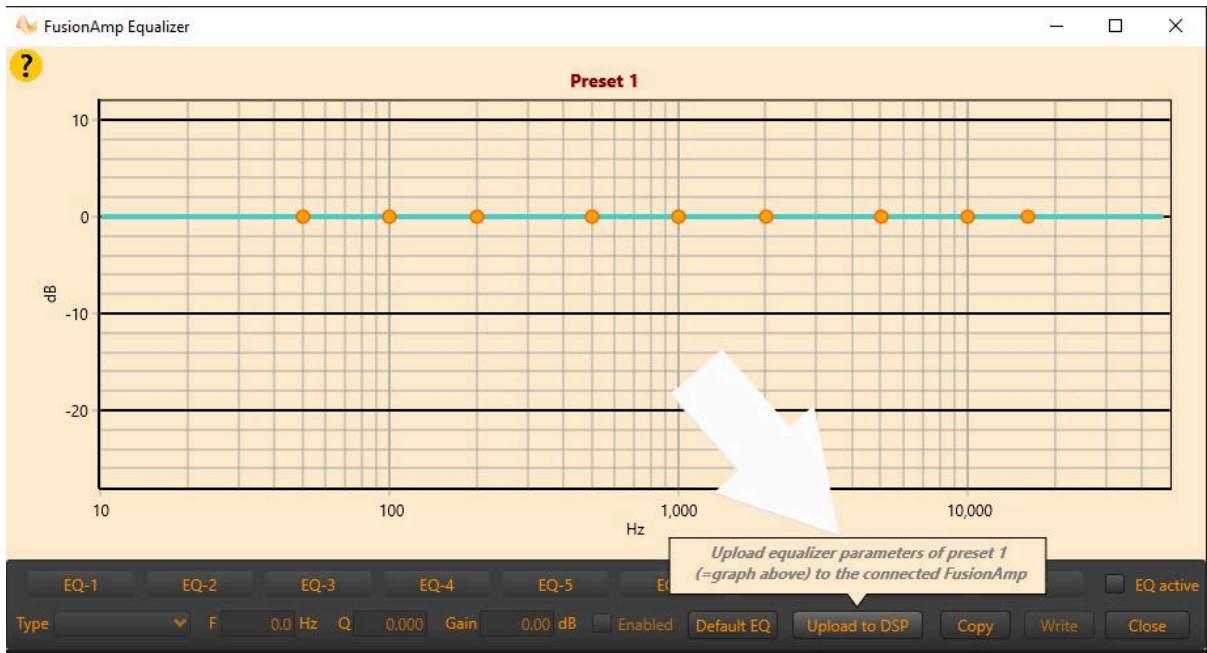
- Check all connections.
- Ensure the volume of audio passing into the speakers is not clipping the amplifier / preamps.
  - A red outline appears on the OLED screen if the amplifier is clipping.
- Use balanced cables to remove humming and for best system performance.
- If a driver has blown, please contact us at [info@presentdayproduction.com](mailto:info@presentdayproduction.com)

## Loud feedback sound when adjusting EQ

- **Do not** use a USB hub when adjusting firmware settings such as onboard EQ. Some USB hubs may have intermittent connections or insufficient bandwidth and this can cause data transmission errors within the DSP during the upload stage. If this happens, a loud feedback may occur which will drive the amplifier into protection mode.
  - **Immediately** turn **OFF** the amplifier power switch.
  - Disconnect **all** audio, power and USB cables.
  - Remove the drivers from the front of the speaker and disconnect the spade connectors, placing them back inside the cabinet.
  - Wait up to 1 minute for the red light on the amplifier to extinguish.
  - Reconnect the power cable and USB cable **only**.
  - Load the EQ software and ensure all EQ nodes are set to unity (0dB) by clicking "Default EQ".



- Click "Upload To DSP" to reset the EQ.
  - Repeat this for each preset.



- Verify the amplifier is no longer in protection mode.
  - If the red "Prot" light is flashing, repeat the above steps up to this point.
  - If the red "Prot" light is not flashing, proceed below.
- Turn **OFF** the power switch and wait up to 1 minute for the red light on the amplifier to extinguish.
- Reinsert and connect the drivers.
- Connect any audio cables to the relevant inputs and outputs on the amplifier.
- Turn **ON** the power switch.

### **Speaker won't go into sleep mode**

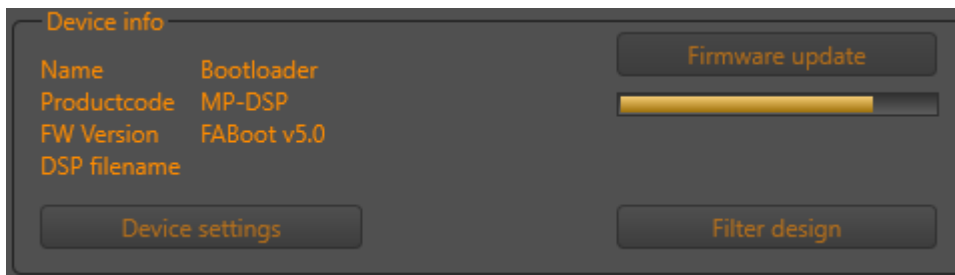
- If the automatic timeout or manual sleep mode activation fails to work and the speaker immediately wakes itself, reflashing the firmware is the most likely solution to fix the issue.
  - Download the current DSP version from <https://www.presentdayproduction.com/mum-dsp-version>
- Open the Hypex Filter Design software and click "Firmware Update".
  - Navigate to where you saved the firmware and double click on the firmware .hex file that either matches the version your speaker is currently running or is newer than the current version - this is displayed

on the "FW Version" number in the top left of the speaker management software.

- We recommend updating both speakers if you change the version number. If the version number remains the same, you do not need to update both speakers.



- The speaker should reboot into "Bootloader Mode". Please do not click or touch anything whilst this is in progress. If nothing happens straight away, please wait 10-15 seconds and the process should begin.
- If the process fails to begin, try double clicking on the firmware .hex file once more.



- If the Bootloader Mode doesn't begin to initiate, please contact us at [info@presentdayproduction.com](mailto:info@presentdayproduction.com) for a walkthrough.
- A yellow progress bar will appear with the update progress, and the speaker will reboot itself, before a message appears upon completion of the update.
- The issue should be resolved - if it isn't, please contact us at [info@presentdayproduction.com](mailto:info@presentdayproduction.com)

### **EQ value entry is bugged**

- We are aware of this issue and it consists of the differences between mathematics in the UK and Mainland Europe. Decimal points and commas are reversed in Europe and so "1.5" actually means "1,500" in the software, so when entering decimal points, please use a comma: "1,5"

- You can alternatively use the scroll wheel to change variables or drag nodes on the EQ graph to place them.

### **OLED screen remains off after standby**

- This issue has been fixed by a recent firmware update. This is caused by the speakers going into standby and then being turned back on by an audio trigger - playing audio to wake the speakers from standby will turn the speakers on but the screen will not turn back on.
  - A solution is to always turn the speakers on using the included IR remote's power button.
  - When a fix is discovered for this bug, it will be issued through a firmware update (See the "Firmware Updates" chapter of this manual).
- This issue is not present on the PresentDayProduction MUM-6, however it shall remain in the manual for future reference.

# Useful Links

PresentDayProduction website	<a href="https://www.presentdayproduction.com">https://www.presentdayproduction.com</a>
MUM-6 Manual Redownload	<a href="https://www.presentdayproduction.com/mum-support">https://www.presentdayproduction.com/mum-support</a>
Configuration software	<a href="https://www.presentdayproduction.com/dsp-download">https://www.presentdayproduction.com/dsp-download</a>
MUM-6 DSP Firmware and OLED Display Firmware	<a href="https://www.presentdayproduction.com/mum-dsp-version">https://www.presentdayproduction.com/mum-dsp-version</a>
MUM-6 test tracks	<a href="https://www.presentdayproduction.com/mum-listen">https://www.presentdayproduction.com/mum-listen</a>
Parallels Mac / Windows compatibility software	<a href="https://www.parallels.com">https://www.parallels.com</a>