



Hauptwerk Perspective Mix Surround Sound (4 Channel)

Most domestic installations are either 2 channel stereo or 4 channel surround sound. 2 channel stereo works out of the box however surround sound need some configuration. The guide below is a simplified version of the Hauptwerk User Guide and doesn't explain the concepts, just how to get 4 channel surround sound perspective mixing working. If you have issues or need more information, please see the Hauptwerk User Guide (page 186) or contact your Hauptwerk reseller.

There are 3 high level steps:

1. Configure Audio Outputs
2. Configure Master Mix Busses
3. Send sample set ranks to the correct perspective

Configure audio outputs.

You'll need an audio interface with at least 4 channels.

From the menu, select General Settings, Audio Device and Channels, select your audio interface and give each device channel a name. Press OK button.

Audio Device and Channels

Essential settings

Select the audio output device you want Hauptwerk to use. Make sure that no other software uses the selected device while you're using Hauptwerk.

A pro/semi-pro audio interface is usually best for performance/quality:

Audio output device: Scarlett 18i20 USB

Sample rate (for audio engine and audio output): 48 kHz (maximum polyphony)

Advanced settings

Audio buffer size (sample frames): 1024 (moderate sound delay, good polyphony, good resilience to glitches/crackle)

Number of audio buffers: 1 (least sound delay, least resilience to glitches/crackle)

Total buffer size (sound delay, sample frames): 1024 (23.2ms @44.1 kHz, 21.3ms @48 kHz, 10.7ms @96 kHz)

Output channels (for optional remapping/naming)

Device channel	Name for channel (optional)
001: 0001 (Scarlett 18i20 USB : Output 1)	Front L
002: 0002 (Scarlett 18i20 USB : Output 2)	Front R
003: 0003 (Scarlett 18i20 USB : Output 3)	Rear L
004: 0004 (Scarlett 18i20 USB : Output 4)	Rear R
005: 0005 (Scarlett 18i20 USB : Output 5)	
006: 0006 (Scarlett 18i20 USB : Output 6)	
007: 0007 (Scarlett 18i20 USB : Output 7)	

Help OK Cancel

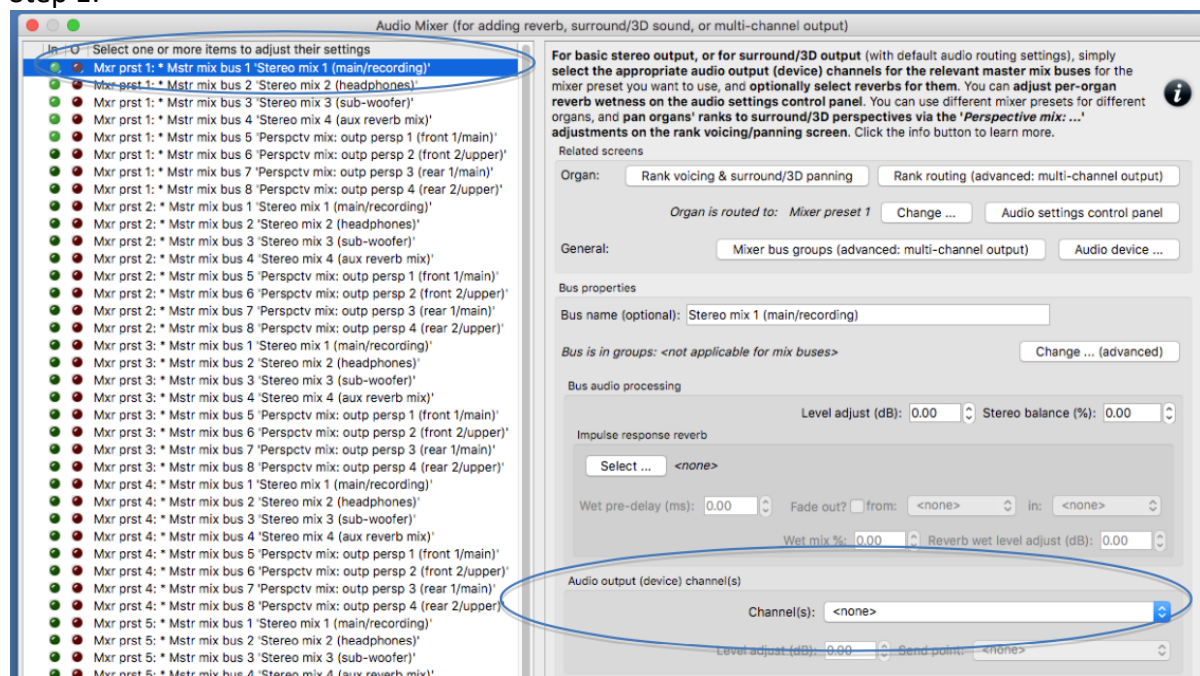
Configure Master Mix Busses

The audio outputs configured above are allocated to Master Mix busses.
We will assume that Mixer preset 1 (the default) will be used.

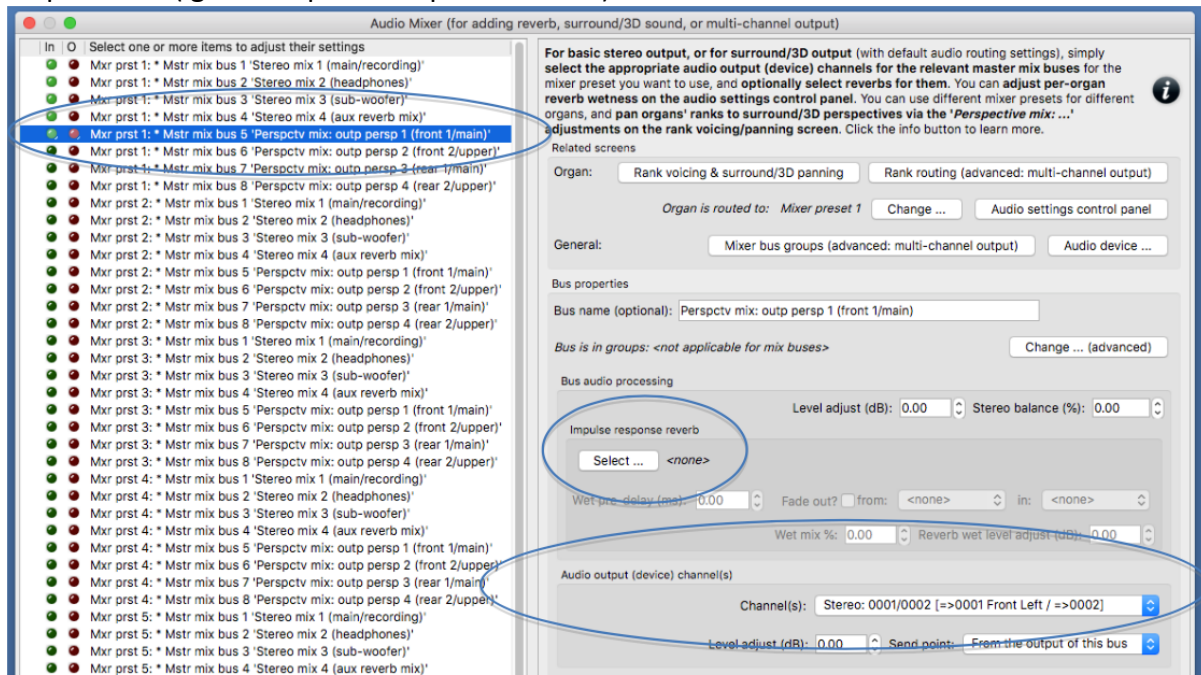
From the menu select **General Settings, Audio Mixer**

1. In the left pane, select Mxr prst 1: * **Mstr mix bus 1** 'Stereo mix 1 (main/recording)'
 - a. In the right pane, set the Audio output channel(s) to **<none>**
 - b. This is the default setting.
2. In the left pane, select Mxr prst 1: * **Mstr mix bus 5** 'Perspctv mix: outp persp1 (front 1/main)'
 - a. In the right pane, set the Audio output channel(s) to the **front** channels configured in the first step
3. In the left pane, select Mxr prst 1: * **Mstr mix bus 7** 'Perspctv mix: outp persp3 (rear 1/main)'
 - a. In the right pane, set the Audio output channel(s) to the **rear** channels configured in the first step
4. Press OK button

Step 1:



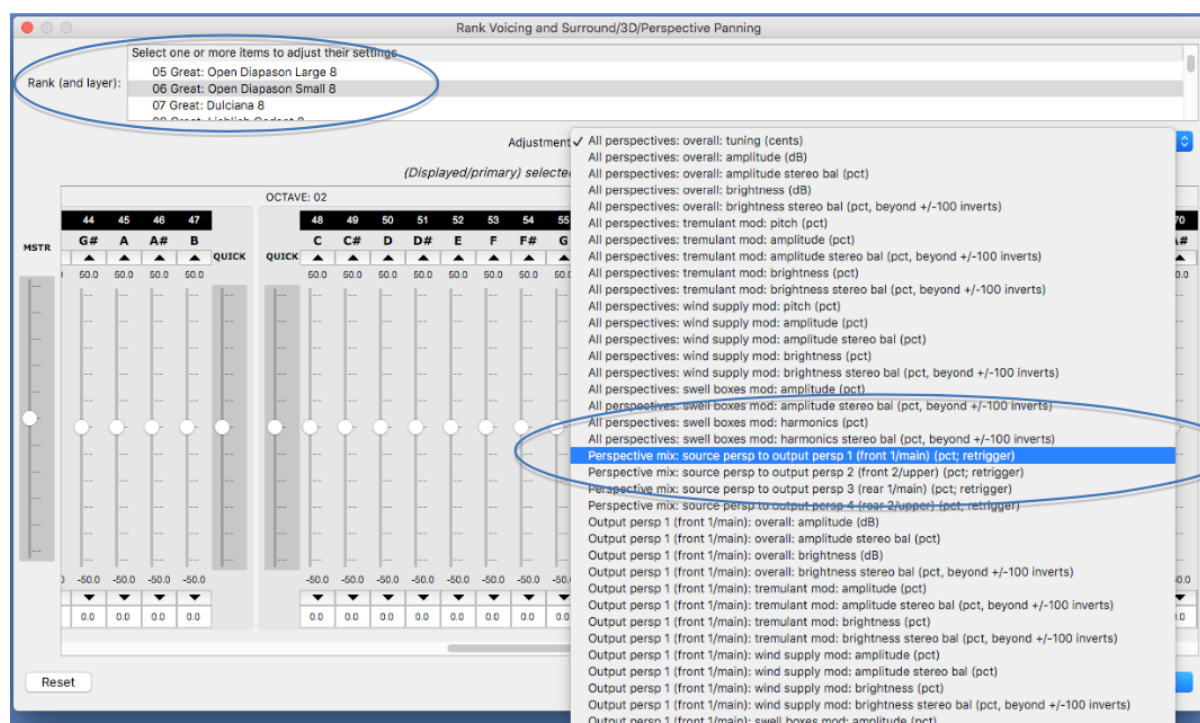
Step 2 and 3 (ignore Impulse Response reverb):



Send sample set ranks to the correct perspective

The perspectives are now configured, however, by default, Hauptwerk routes all ranks to perspective 1 (front 1/main). In the next step the rear ranks will be sent (mixed) to perspective 3 (rear 1/main).

1. From the menu, select Organ Settings, Rank Voicing and Surround/3D/Perspective Panning.
2. Select the rear rank(s) in the top of the screen, they can be multi-selected – the rank name usually contains rear in its name.
3. Select the 'Perspective mix: source persp to output persp 1 (front 1/main)' adjustment, then use the 'MSTR' slider to set all of the adjustment's pipe sliders to 0% (rather than the adjustment's default of 100%, since all ranks are routed entirely to the 'front' by default), and:
4. Select the 'Perspective mix: source persp to output persp 3 (rear 1/main)' adjustment, then use the 'MSTR' slider to set all of the adjustment's pipe sliders to 100% (rather than the adjustment's default of 0%).
5. Press Close button



The values don't have to be fully 100% or 0%; in-between values can be used to position ranks/pipes virtually 'between' the relevant speakers.

One final note, the audio output and mixer configurations are global, they apply to all organs and perspective mixing needs to be performed for each organ. A non-surround sample set can still use perspective mixing; ranks / departments can be sent to the front or rear, this is not surround sound, but can add an additional dimension to the experience.