

## Fulcrum Acoustic TQP-48 48 kHz Voicings

19 December 2016

19Dec16 Level 1 Voicing files (.voc) for Fulcrum Acoustic loudspeakers were created with *Ashly Protea NE v5.24* software. The Voicing files use arbitrary FIR filters to implement the precise temporal (time domain) filters that are responsible for the remarkable benefits of TQ processing. For more information on TQ processing please see the *TQ Explained* and *Implementing TQ Processing* white papers on the Fulcrum Acoustic website. The FIR filters in the Voicing files require the TQP-48 processor to be set to a 48 kHz sample rate.

### Using the Voicing files:

- 1) Unzip the contents of the “TQP-48 48k Level 1 Voicings 19Dec16.zip” file to a convenient folder on your hard drive.
- 2) Go online with the TQP-48, double-click its icon on the Canvas, and click the DSP Controls tab to open the DSP Control Screen.
- 3) Click the numbered button to the right of an output DSP channel, then select *Fulcrum Acoustic Voicing / Load from File*. See *Figure 1* below. The output 1 button is circled in red in this example.
- 4) Select the appropriate Voicing file in Windows Explorer and click *Open*. DSP for that loudspeaker will populate the first several output blocks. See *Figure 2* below.

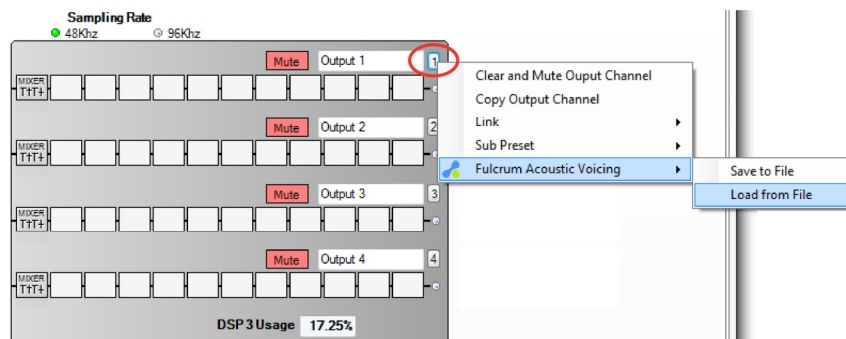


Figure 1

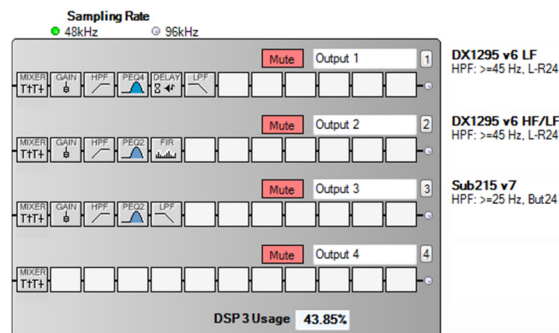


Figure 2

---

**Notes:**

- DSP for bi-amplified loudspeakers will populate adjacent output channels. For example, in *Figure 1* the DX1295 LF channel was loaded in output 1 and the HF/LF (coax) channel was loaded in output 2.
- If you load bi-amplified loudspeaker DSP in output 8 you will receive an error message informing you that you will lose one channel of processing.
- Output gains for bi-amplified loudspeakers assume all amplifier channels have the same voltage gain. If this is not possible, the DSP output gains should be adjusted to accommodate the difference. For example, if the LF amplifier's voltage gain is 34 dB and the HF amplifier's voltage gain is 32 dB you should trim 2 dB from the LF gain.
- A loudspeaker's minimum recommended high pass frequency is provided in the notes section to the right of an output.
- Be sure to adjust *both* the LF and HF/LF high pass filters of a bi-amplified loudspeaker if you are crossing over into a subwoofer. Both transducers operate over the loudspeaker's full bandwidth.
- Please review the *Protea NE Software's* help file to learn about additional processor functions.

---

**Changes since 10May16 release:**

- Added CS118 and CS121 Voicings.

---

Please send any questions to [info@fulcrum-acoustic.com](mailto:info@fulcrum-acoustic.com) , or give us a call at +1 866 234 0678 ext 1.