

miniDSP C-DSP 8x12 DL Quick Reference Setup Sheet

Quick-reference workflow for setting up the C-DSP 8x12 DL with Dirac Live using separate pre-Dirac and post-Dirac configuration files.

• Initial miniDSP Setup

- Connect the DSP and choose the appropriate preset (Config 1, Config 2, etc.).
- Menu > Display > Subwoofer Channels Selection: Set the sub channel (which RCA output feeds the sub amp).
- Menu > Display > Dirac Channels Configuration: Select and enable all channels that will be used in the system.
- Inputs & Bass Mgt:
 - Set inputs, typically Analog 1-2 or Digital 7-8, by turning off those that will not be used.
 - Temporarily turn off/bypass HPF/LPF for Bass Mgt.
- Routing:
 - Assign the inputs to the Dirac channels. This should match the Dirac Channels Configuration and RCA output assignments.
 - Assign the Bass Mgt input to the sub channel. This should match the RCA output feeding the sub amp.
- Mixer: Rename the speakers across the top row and assign the Dirac channels on the left to the corresponding speakers across the top. These should match the RCA outputs.
- Verify RCA output assignments and speaker connections before measuring. Confirm each output feeds the intended amp channel and speaker.
- Save the initial configuration.

• Pre-Dirac Measurement and PEQ Prep

- Start REW (Room EQ Wizard).
- Connect the microphone.
- Load the mic calibration file.
- Set the RTA settings for pre-Dirac measurements.
- Prepare a pink periodic noise track for REW-based measurements. Sweeps with an acoustic timing reference can also be used, which I explain later in the guide.
- Measure each speaker using periodic pink noise or sweeps. Speakers can be turned on/off using the Mixer tab.
- Inspect the response for appropriate crossover points and speaker behavior.
- Set appropriate PEQ filters for each speaker if pre-EQ peak reduction is desired. REW can help calculate these filters.
- After entering pre-Dirac PEQ filters, remeasure each speaker and verify the result.
- After PEQ is entered, verify speaker levels and rough timing before running Dirac.
- Menu > Display > Dirac Channels Configuration: Disable any channels that Dirac will not calibrate, such as rear fill. Verify that every enabled Dirac channel has an actual speaker connected, or Dirac may encounter errors during sweeps.
- Outputs 1-6 and Outputs 7-12: Set APFs if using the APF method, or set crossovers if calibrating with crossovers active.
- If using APFs, confirm that APF frequencies match the crossover points being used post-Dirac.
- Save the pre-Dirac configuration. This can be loaded later if another Dirac calibration is needed.
- Create a post-Dirac configuration in the miniDSP to load after the Dirac calibration. This version should have APFs removed, crossovers set, and final operating settings restored.

• Initial Dirac Test Calibration

- Menu > Start Dirac Live Software: This will open Dirac Live. Select the miniDSP to begin.
- Choose the microphone and load the calibration file.
- Set measurement levels.
- Select the sweet spot arrangement.
- For the first Dirac test run, measure only the center-of-head position.
- Group speakers, set the target curve, and set the correction curtains.
- Process the filters, name the project, and export the Dirac filter to the appropriate preset slot. This should match Config 1, Config 2, etc.
- Save the Dirac project file after exporting the preset.
- Close Dirac Live and reconnect to the C-DSP plug-in.
- After exporting the Dirac preset and reconnecting to the C-DSP, verify the Master Volume is back at 0 dB.
- Verify center imaging with the single-position Dirac run. Adjust the mic position if needed, rerun, save, and listen again. Repeat until the center image is correct before doing the full calibration.

• Final Dirac Calibration

- Restart Dirac Live, select the mic, set levels, and select the focused sweet spot arrangement.
- Measure the final determined center-of-head position and the other preferred mic positions.
- Group speakers, set the target curve, and set the correction curtains.
- Process the filters, name the project, and export the Dirac filter to the appropriate preset slot. This should match Config 1, Config 2, etc.
- Save the Dirac project file after exporting the preset.
- Close Dirac Live and reconnect to the C-DSP plug-in.

• Post-Dirac miniDSP Configuration

- Menu > Display > Dirac Channels Configuration: Re-enable any channels that were previously disabled, such as rear fill.
- Load the post-Dirac configuration file, which should include the following final operating settings:
 - Inputs & Bass Mgt tab: Set HPF/LPF for the sub-to-midbass crossover.
 - Routing tab: Configure rear differential fill if using the miniDSP for rear-fill processing.
 - Dirac tab: Review the tab information for any strange anomalies.
 - Outputs 1-6 and Outputs 7-12 tabs:
 - Remove APFs if used.
 - Set appropriate crossovers for each speaker.
 - Add shelf filters if used.
 - Add an appropriate delay to rear-fill speakers if used.
- Save the post-Dirac configuration if it was not created initially. This can be saved for future use.
- Confirm Dirac is enabled on the intended preset.

• Final Verification and Listening Adjustments

- Listen and set the rear-fill level if rear fill is used.
- Measure individual speakers, left/right speaker-pair responses, sub-to-midbass crossover, and full-system response.
- Repeat all or part of the process as needed.
- Save new presets as desired.