Professional Surround Sound Tuning Kit

1 Hardware Hookup

Follow this check list to tune your system:

☐ All components in the system should be powered *off* while making connections.

☐ Remove the plastic cover from the front of the processor.

☐ Place the microphone stand upright.

☐ Attach the microphone holder to the stand.

☐ Insert the microphone in a vertical position in the holder.

⚠ **NOTE:** You must place the microphone in a vertical position with the capsule facing the ceiling for all measurements.

☐ Connect the mini female XLR end of the female mini XLR to male XLR cable to the microphone.

⚠ **NOTE:** Use care when attaching the mini XLR cable so as not to strain the connector.

☐ For the AMS, connect the male XLR end of the cable to the XLR end of the female XLR to stereo 3.5 mm cable. For the PSPHD, connect the male XLR end of the cable to the XLR end of the female XLR to mini XLR cable.

☐ For the AMS, connect the stereo 3.5 mm plug to the microphone input on the AMS. For the PSPHD, connect the mini XLR plug to the microphone input on the PSPHD.

⚠ **NOTE:** Use care when attaching the microphone cable so as not to strain the connector.

☐ Using the included USB cable, connect your PC to the USB port on the front of the processor.

2 Room EQ Setup

⚠ **NOTE:** When Pro Sound Tools or PROCISE™ Tools is run for the first time, a setup wizard will take you through the process. Thereafter, the **Configure** button can be used to initiate the process.

☐ Insert the CD that came with the kit and click **Add/Change Mic Setup File**. Select the file for the microphone that came with your kit.

☐ When a center speaker or subwoofer is not used, un-check the *Front Center Speaker* and/or *Subwoofer* checkboxes.

☐ Any subwoofer low-pass filter should be defeated or set to its maximum frequency. Any subwoofer gain settings should be set to their nominal or 12 o'clock position. Also, any sort of auto standby or sleep mode for the subwoofer should be disabled.

☐ Click **Room Equalization Setup...** to begin the process. The "Job Information" screen is used to record the name of the customer or job and the name of the technician performing the job.

☐ Click the forward arrow to proceed to the "Options" screen. The "Options" screen is where you select the microphone file to match the microphone you are using.

☐ Select your microphone and click the forward arrow to proceed to the "Measurement" screen.

3 Measurement

☐ Quiet the room as much as possible.

☐ Turn off phones, TVs, radios, air conditioners, etc. and close any open windows.

☐ Refrain from talking and do not sit or stand directly between any of the speakers and the microphone.

⚠ **NOTE:** Do not touch the microphone stand or cable during the measurement process.

A. Position 1 Measurement

☐ Place the microphone at the primary listening location, at the ear height of a listener seated at this location.

⚠ **NOTE:** It is important to have the microphone in the primary listening position for the first measurement.

☐ Press the **Measure** button. The *Audyssey™* test signal will play a series of 10 "chirps" through each channel.

B. Additional Position Measurements

☐ Move the microphone to another listening position and press the **Measure** button again. Repeat the process for all listening positions in the room.

☐ You will need to measure a minimum of three positions before you can continue. The recommendation is to measure a minimum of eight positions for typical rooms.

☐ Click the forward arrow to finish the measurement process and continue to the "Detection Results" screen, which displays the results of the measurements.

☐ Click the forward arrow to proceed to the "Target Sound Options" screen.

4 Target Sound Options

☐ Choose which of the *Audyssey™* target curves you want to use by selecting the radio button next to the curve:

   ☐ For small to medium rooms (up to 2500 cu. ft.), choose the **High Frequency Roll Off 1** curve.

   ☐ For medium to large rooms (up to 5000 cu. ft.), choose the **High Frequency Roll Off 2** curve.

   ☐ For rooms larger than 5000 cu. ft., choose the **SMPTE 202M** curve.

The **Midrange Compensation** option (selected by default) is used to adjust the balance between on-axis and reflected sound in the crossover region. It is recommended that you leave this box checked. You can return to this screen later and change your setting if you prefer.

☐ Click the forward arrow to calculate your correction curves and proceed to the "Save Results" screen.

5 Save Results

A. Transfer the *MultEQ® XT* Filters

☐ Click **Transfer to Crestron** to temporarily store the filters so you can listen to them. This process may take several minutes.

B. *MultEQ® Pro* On/Off Demo

☐ You can now use the *MultEQ* **On** and **Off** buttons to demo the *MultEQ® XT* filters.

C. Dynamic EQ & Dynamic Volume On/Off Demos

☐ When *MultEQ* is **On**, use the *Dynamic EQ* **On** and **Off** buttons to demo the Dynamic EQ function. The *Dynamic Volume* presets can be auditioned as well.

This step for PSPHD only. For AMS, proceed to step D.

D. Save the *MultEQ® XT* Filters

☐ Click the **Save Permanently to Crestron** button to save the correction curves. This process may take several minutes.

⚠ **NOTE:** It is important to use the **Save Permanently to Crestron** function before leaving the program. Otherwise, all measurements will be lost and you will have to start the process over from the beginning.

This step for PSPHD only. For AMS, proceed to section 7.

6 Audyssey Settings

☐ After saving the *MultEQ® XT* filters, the "Audyssey Settings" screen is displayed. Use the sliders to adjust the amount of volume swing for each of the preset values (*Day*, *Evening*, *Midnight*). After this is complete, click the right arrow near the bottom of the screen.

7 Calibration Complete

☐ When the *Calibration Complete* message appears, click **Close** in the lower right corner of the window to exit the application.

8 Optional Adjustments

Sometimes users want to change the level of the center channel (for example, to boost dialog) or subwoofer. This is optional and is not required most of the time but if it is desired, adjustments to these or any other channels can be made by going into Pro Sound Tools or PROCISE Tools and clicking on **Speaker Adjustments**. This allows each speaker's level to be adjusted individually.

⚠ **NOTE:** After completion, you can demonstrate the improved performance of Audyssey™ Room Tuning from the AMS or PSPHD front panel. On the AMS, go to the Audyssey Configuration menu by selecting **Theater**, **More**, **Tools** and **Audyssey**. On the PSPHD, press **SETUP**, then select **Audyssey MultEQ**. This will allow an A/B comparison of the Audyssey and non-Audyssey configurations. On the AMS, the system will automatically default to the Audyssey configuration when this menu is entered or exited. On the PSPHD, the last setting will take priority.

For details, check the latest version of the **Professional Surround Sound Tuning Kit** Operations Guide, Doc. 6565.

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