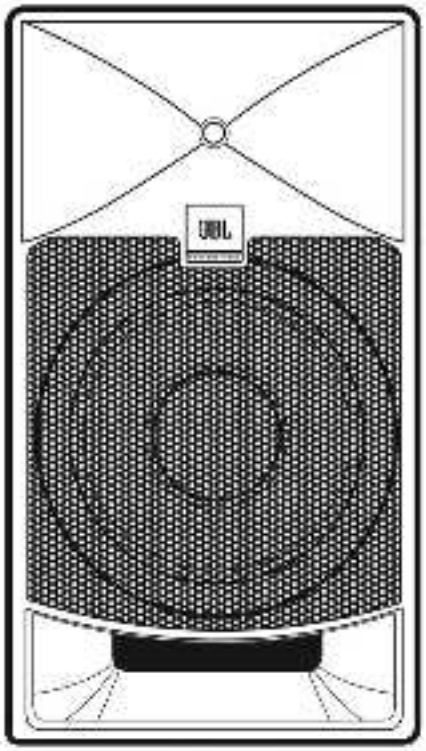
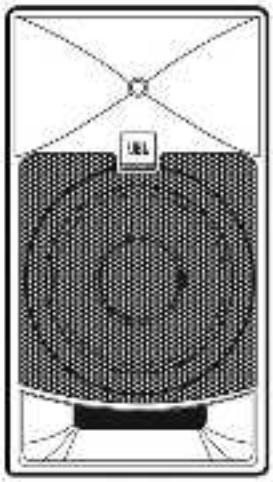
7 SERIES | MASTER REFERENCE MONITORS

Set Up Instructions



LSR708i



LSR705i

Hear the truth.

JBL PROFESSIONAL HARMAN

7 Series “i” Set Up Instructions

In preparation for set up you will need:

- One of more JBL 7 Series “i” model speakers
- A recommended Harman Crown Power Amplifier

  OR Harman BSS Soudweb London processor AND an amplifier with suitable power
- Mounting hardware
- Speaker Wire
- Balanced line level input cables
- Female XLR to “phoenix” adaptors if needed
- A computer with Windows 7 operating system and to which you have administrative privileges and access to the internet and HiQnet Audio Architect Software installed or London Architect Software installed.
- Category 5e Cable
- An Ethernet switch if more than one Crown DCi power amplifier is used.
- Small flat Head screwdriver
- Phillips screwdriver

Support:

JBL Customer Support is available Monday through Friday 8:00am - 5:00pm Pacific Coast Time in the U.S.A. +1 (800.852.5776), www.jblproservice.com

Audio Architect Software with Crown Amplifiers, please contact Crown Customer Support at +1 (800) 342-6939 Monday through Thursday 9:00am - 7:00pm, Friday: 9:00am - 5:00pm Eastern Standard Time in the U.S.A. www.crownaudio.com/techsupport

London Architect Software with BSS Soundweb London processors, please contact BSS Customer Support at +1 (800) 931-2357 during the hours of 8:00am - 5:00pm Mountain Time in the U.S.A www.bssaudio.com/en-US/support

Outside the USA: Contact the HARMAN Professional Distributor in your area. A complete list of HARMAN international distributors is provided on our U.S.A. website: www.jblpro.com

Installation and Mounting of Speakers

7 Series “i” model enclosures are reinforced to allow safe mounting and include mounting points on the top, bottom and rear panel of the speaker. Speaker dimensional drawings, location of mounting points, and mounting hardware requirements can be found at the end of this document, The speakers can be installed using readily available mounting brackets. A range of brackets are available from Adaptive Technologies Group 1635 E. Burnette Street, Signal Hill, California, USA 90755 Telephone: +1 (562) 273-4239 design@adapttechgroup.com www.adapttechgroup.com Bracket models can be found at the end of this document.

Caution: When installing speakers, observe safe mounting practices and recommendations provided by mounting hardware manufacturer. Do not modify the speaker enclosure.

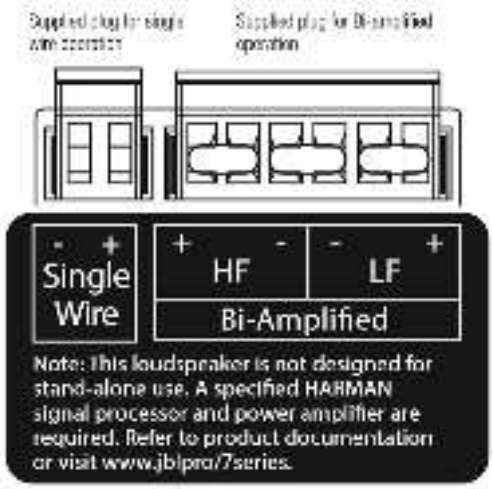
Amplifier and Power Requirements

The 708i and 705i models require use of an external power amplifier capable of delivering 300 watts per channel and also Harman Professional digital signal processing. The following Harman Crown Audio power amplifiers include the required Harman Digital Signal Processing and are recommended:

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- DCi 2|300N 2 channel power amplifier
- DCi 4|300N 4 channel power amplifier
- DCi 8|300N 8 channel power amplifier

A DCi 8|300 power amplifier supplies power for up to eight speakers, or up to four bi-amplified speakers or any combination of single and bi-amplified speakers. A detailed owner’s manual can be downloaded at www.crownaudio.com Crown DCi “N” networked models include the required digital signal processing for 7 Series speaker tuning profiles and also additional filters that can be used as room eq. Additionally, these amplifiers accept digital signals via HARMAN BLU link audio protocol. If you wish to use an amplifier other than the Crown DCi Networked models specified above, you must also use a HARMAN BSS Soundweb™ London Signal Processor. Information about BSS Soundweb London Processors and accessories is available at www.bssaudio.com



The Crown DCi models incorporate internal fans that are engaged full-time ensure the operating temperature of the power amp does not exceed specified thermal conditions. It is preferable to locate power amplifiers outside the listening area.

Connections and Wiring

Speaker Inputs:

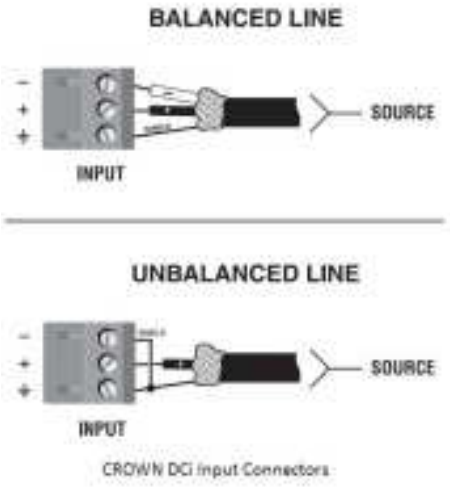
The 708i and 705i can be powered using a single amplifier channel or bi-amplified using separate amplifier channels for the low frequency and high frequency drivers. The speakers are supplied with “phoenix” type Euro-block wiring plugs installed. Remove and connect speaker wire to EITHER the plug inserted in the connector labeled Single Wire OR the plug inserted in the connector labeled Bi-Amplified. When operating the speaker using the Single Wire connection, the supplied plug must remain inserted in the Bi-Amplified connector. Removing this plug will prevent single wire operation. Replacement plugs can be obtained by contacting JBL **Customer Service at www.jblpro.com/support.**

Dedicated DSP device files are required for single wire and bi-amplified operation. These are available for download at www.jblpro.com/7series.

The speakers should be connected to the power amplifier using two conductor speaker wire. We recommend the use of high quality 12-gauge oxygen-free copper stranded wire, readily available from electronics retailers. Using 12-gauge wire, the speaker can be placed up to 100 feet from the power amplifier.

Crown Amplifier Inputs

Signal sources should be connected to Crown power amplifiers using balanced line level cables. Crown Power amplifiers feature balanced analog inputs using “phoenix” type connectors. For use with XLR, balanced ¼” TRS and other connectors, adaptors should be used. Crown recommends using pre-built or professionally wired balanced cables (two-conductor plus shield). Balanced wiring provides better rejection of unwanted noise and hum; however, unbalanced line may also be used. Use 6-pin plug-in cable ends at the amp input connectors. A male connector is supplied for each input of your model of amplifier. Additional connectors are available from Crown (P/N 5024623). Figure 3 shows connector pin assignments for balanced wiring and Figure 4



CROWN DCi Input Connectors

shows connector pin assignments for unbalanced wiring. Note that for bridged operation, only the connectors for odd numbered channels (1,3,5,7) for each bridged pair need be wired. For BLU link audio connection, standard Category 5e cabling can be used. To increase fault tolerance of the BLU link audio ring, the input and the output should be connected to adjacent BLU link nodes. There is a maximum limit of 60 BLU link nodes for each audio ring

Crown Amplifier Speaker Outputs



Crown has designed an output cover that does not need to be removed to connect the output wiring. Crown recommends using the included spade connectors and two- or four-conductor, 12-gauge speaker wire. DCi amplifiers can be configured for bi-amplification of speakers, using two amp channels per speaker. A single 8 channel Crown DCi power amplifier can power up to eight 7 Series speakers, or provide bi-amplification for up to four speakers The appropriate DSP Device File installs a crossover in the power amplifier. When using 7 Series “I” speakers in bi-amplified mode, connect channel 1,3,5 or 7 of the power amplifier to the HF inputs of the speaker and the adjacent even number amplifier channel to the LF terminals of the speaker. Before playing program material at high volume, confirm the amp channels are correctly connected to the LF and HF of each speaker. To ensure proper phase of all speakers in the system, confirm that wires connected to the amplifier terminals are correctly connected to the corresponding terminals on each of the speakers.

Note: DCi output terminals are configured as follows for channel 1-8 outputs:

- +, + - , - + , + - , - +, + - , - + , + -

Installing a 7 Series Speaker Tuning file in the Crown Power Amplifier using a computer

7 Series “i” models require a model-specific speaker tuning file to program the DSP in the power amp. Files for Crown DCi “N” version Power Amps are already included in the latest version of HARMAN Audio Architect Software. Audio Architect software can be downloaded at www.jblpro.com/7series

BSS Soundweb London tuning files can be downloaded from the JBL website at www.jblpro.com/7series.

To install the file in the DCi Power amplifier, a Windows computer with Win 7 operating system is connected to the amplifier network port via CAT 5 cable. If multiple amplifiers are used, the computer and all amplifier Ethernet ports should be connected to an Ethernet switch using Category 5e cable. For your reference, this photo shows the connections and controls on Crown DCi Power Amplifiers:



Note – While the DCi 8|300 power amp can operate on a 15 amp circuit, high power DCi amplifiers required 20 amp power circuits. The power connection in above illustration is for a 20-AMP power cord connection.

On the computer, install the latest version of Harman HiQnet™ Architect Software. In the computer’s Windows control panel, disable Windows Firewall. Also Disable WiFi.

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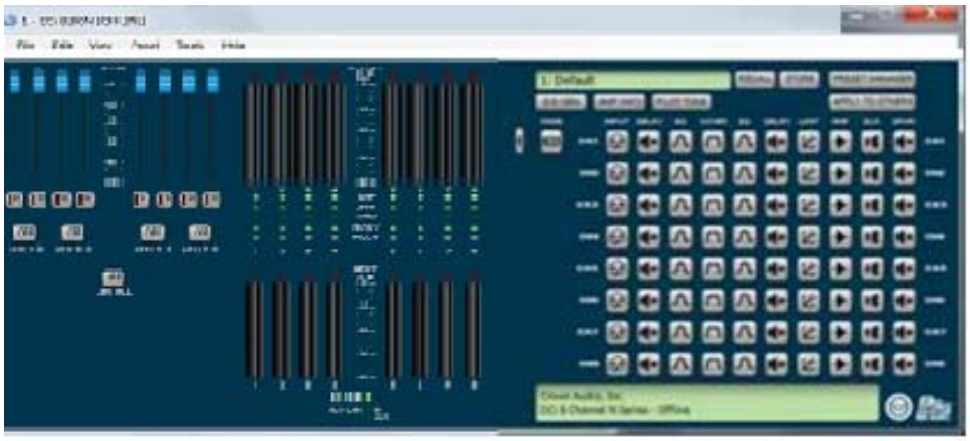
Create a folder on the Windows desktop and name it “Crown DCi Files.” Download the desired file and place it in the folder on your desktop. If the file is in .ZIP format, use a Windows .ZIP application to extract the files. Power the amplifier ON.

- Launch Audio Architect Software.
- When Audio Architect is first loaded, the software will scan the network for HiQnet devices. All devices that are discovered on the network will be found under the ADD DEVICE tab on the left hand tree menu. If the devices are not found, then the network may not be configured correctly. A feature of Audio Architect software is HiQnet NetSetter, a software tool that enables you to discover HiQnet devices and reconfigure network settings including IP addresses and HiQnet IDs in real-time for each device. Its function is to configure a system of devices to interoperate correctly on the same network and resolve conflicts quickly and easily. The NetSetter Window is shown below. NetSetter information is included in the DCi owner’s manual.





- Select and drag the discovered Crown amplifier(s) into the the Room View – the large open space that occupies the center of the screen.
- Click the amplifier icon to see the amplifier control panel shown below.



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- Double-click on the speaker tuning icon for the channel(s) you would like to configure. Select the particular tuning needed on a per-amplifier channel basis.



- After clicking the icon, you will see the following speaker tuning panel. On this speaker tuning panel, select "Recall."



- You will be presented with a list of speaker models. Select the preset for the desired speaker model.



- The following presets are provided for 7 Series and also JBL M2 Speakers:
  - **LSR705i:** LSR705i Single wire tuning
  - **LSR708i:** LSR708i Single wire tuning
  - **LSR705i LF** LSR705i Bi-Amp Tuning (Woofer)
  - **LSR705i HF** LSR705i Bi-Amp Tuning (Tweeter)
  - **LSR708i LF** LSR708i Bi-Amp Tuning (Woofer)
  - **LSR708i HF** LSR708i Bi-Amp Tuning (Tweeter)
  - **M2 HF** JBL M2 HF
  - **M2 LF** JBL M2 LF NoHP – Full Range LF
  - **M2 LF** JBL M2 LF HP27 –Includes High Pass Filter at 27Hz (Recommended)

- If you plan to use the speakers in bi-amplified mode, you will use bi-amp speaker tuning presets – one for the Tweeter and one for the Woofer.

  NOTE: You will need to configure the amplifier channels for bi-amplified operation. After selecting the speaker tuning preset, navigate back to the DCi Control Panel. To create a bi-amplified amplifier configuration, double click the **"Mode"** button in the amplifier control panel.

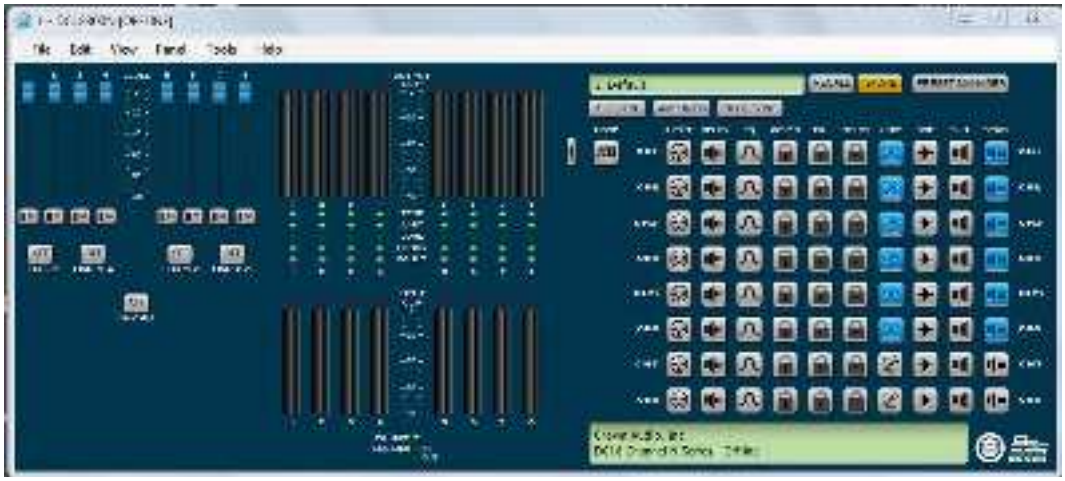


- Using the Mode settings, select the “Y” configuration for the amp channels you wish to bi-amp. As an example, this picture shows a DCi8300 configured for bi-amp tunings



- One HF tuning and one LF tuning would be used for each bi-amplified speaker. After configuring two channels for “bi-amplified” configuration using the MODE icon, select the appropriate LSR705i, LSR708i or M2 HF and LF speaker tuning for the amp channels in the bi-amplified pair.
- Exit and Save your file.

The following graphic illustrates the control panel of an 8 channel amplifier with channels 1-6 configured:



NOTE: Parameters of speaker tuning files are not user accessible. In the graphic above, DSP blocks containing crossover, EQ and delay settings appear with a padlock icon to indicate these parameters cannot be modified. Although the Limiter settings are user accessible, it is recommended the settings are not modified as they protect the drivers.

Using Audio Architect Software to control the speakers

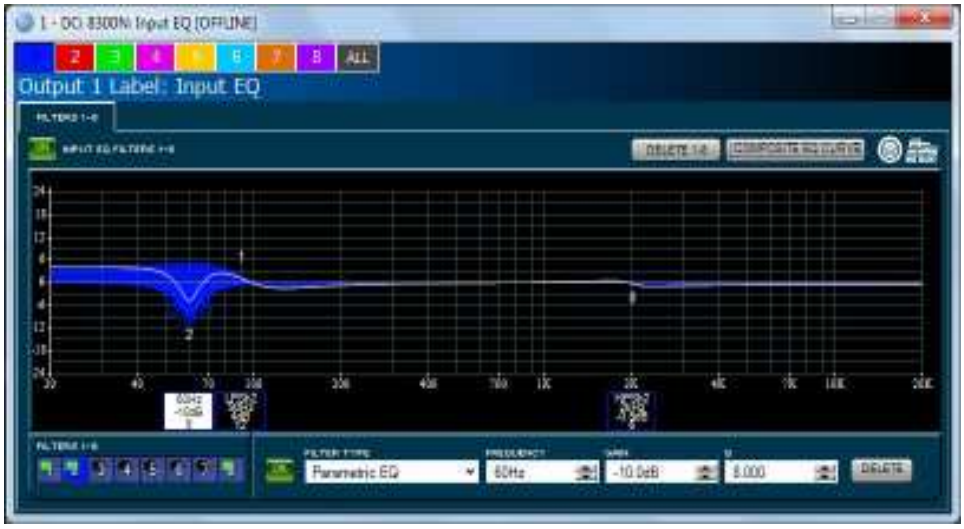
Harman HiQnet Audio Architect Software allows you to control all the settings in a networked amplifier and gives you access to speaker levels, and eq filters. All the details are included in the DCi owner’s manual. In addition to the “locked” EQ used for speaker tuning profile, eight additional bands of EQ per channel are available and can be used as “room eq” to compensate for acoustic anomalies caused by the room.

- Power ON the amps
- Launch Audio Architect software. Upon power up, your power amplifiers will appear in the Devices window on left side of the screen as “Discovered” devices. Drag these to the right into the area called “ROOM 1.
- After populating Room 1 with all the required amplifiers, save Room 1 using the FILE menu at the top left of the Audio Architect program. The “Venue” file includes all settings of all hardware in the room. Loading this file restores all settings of your system.
- Click on one amplifier in the room. The amplifier control panel will appear. To access available EQ, click on one of the amplifier channel EQ buttons

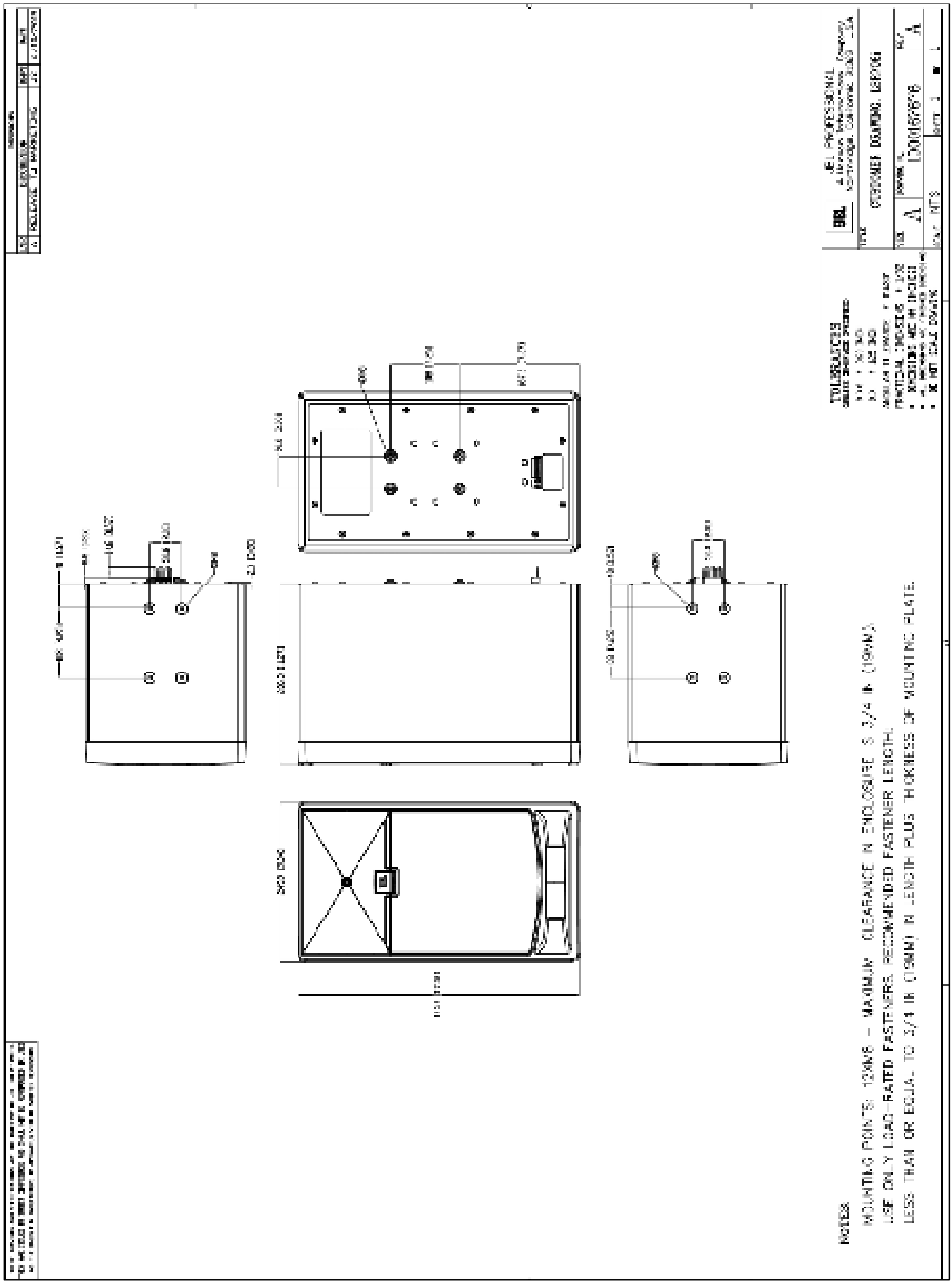
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In the example below, a parametric filter is used to remove 10 dB at 60 Hz compensating for resonance in the room. Low frequency shelf EQ can be applied to restore desired LF performance. An HF shelf can be used to attenuate the amount of HF response in rooms with reflective surfaces. Available filters can be used to compensate for screen transmission loss or to create industry standard response curves such as the X Curve used in film post production. The use of 3rd party measurement software will allow you to identify the exact frequencies at which room resonance exists. Apply EQ as needed and save the entire room in a Venue File.



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7 Series “i” Set Up Instructions

