AxisVoicebox EBS

EXTENDED BASS SYSTEM

BASIC OPERATING MANUAL

A Word from the Designer

Thank you for purchasing the Axis Voicebox Extended Bass System (EBS)! The information in this operating manual describes the most appropriate way to set-up the Voicebox EBS.

The Voicebox EBS is not your typical active subwoofer. It was created with one objective in mind: To enhance low-frequency information when used in conjunction with the Axis Voicebox 'S', or other high-quality monitor-class speakers. The result is bass playback that is deep, detailed and 'fast', while minimising the excitation of room modes. This approach is unique in the industry.

Best Regards,

John Reilly

It's all about the music!

Connections

You will need either:

- A preamplifier with two sets of line-level stereo outputs. One set of outputs will be connected to the power amplifiers driving the main speakers. The other set (usually labelled ‘Preamp Out’) will be connected to the Voicebox EBS;

or

- An integrated amplifier with line-level stereo outputs. These are usually labelled ‘Preamp Out’, and will be connected to the Voicebox EBS.

If your preamplifier or integrated amplifier does not have this extra set of line-level outputs then you can simply connect inexpensive Y-connectors to the amplifier’s line-level outputs. Doing this will not degrade the sonic performance of the overall system.

The Voicebox EBS contains a 150-watt Class-D amplifier, embedded in the rear of the cabinet. The amplifier’s input/control panel is shown in the diagram below.

The amplifier requires AC power. Insert the supplied IEC power cable into the power socket but *do not* switch on yet. Ensure that the correct mains voltage has been set by the red slider switch to the left of the power button.

If you have one Voicebox EBS:

- Connect the ‘left’ line-level output to the ‘L’ low-level input on the back of the Voicebox EBS.
- Connect the ‘right’ line-level output to the ‘R’ low-level input on the back of the Voicebox EBS.

If you have a stereo pair of Voicebox EBS:

- Connect the ‘left’ line-level output to either of the low-level inputs on the back of the ‘left’ Voicebox EBS.
- Connect the ‘right’ line-level output to either of the low-level inputs on the back of the ‘right’ Voicebox EBS.

Setting Up the Voicebox EBS

You are now ready to set up the Voicebox EBS and integrate it with the main loudspeakers and the listening room. Remember, the idea is not to just get more volume level from the Voicebox EBS, but to get more bass extension in order to get a wider frequency range and more low end detail from the combined system as a whole.

The instructions below are for setting up one Voicebox EBS. Repeat the setup process for each Voicebox EBS in the playback system, making sure that only the one that you are setting up is powered on.

Power Up the Voicebox EBS

1 Ensure that the main system's volume control is turned down.

2 Set the 'AUTO' switch to 'ON'.

3 Toggle the 'PHASE' switch to 0º.

4 Turn the Voicebox EBS' 'FREQUENCY' knob to the centre (12 o'clock) position.

5 Turn the Voicebox EBS' 'VOLUME' knob anti-clockwise to the minimum (7 o'clock) position.

6 Switch on the Voicebox EBS' amplifier by setting the power button to the 'ON' position.

Initial Setting of the Voicebox EBS' 'VOLUME' Control

7 Play music. Set your main system's volume control to the level at which you usually listen to music.

8 Gradually increase the volume on the Voicebox EBS until you can just hear the Voicebox EBS working.

9 While in the listening position ask an assistant to toggle the 'PHASE' switch to the 180º position. The correct switch position is the one at which there is more bass information.

Integrate the Voicebox EBS with the Main Speakers

You will next need to get the right 'stitch' between the main speakers and the Voicebox EBS. This 'stitch' is the matching up of the low-frequency end of your main speakers with the upper frequencies of the Voicebox EBS, without creating or enhancing low-frequency standing waves in the listening room. Two decisions are needed:

- The frequency cut-off required to match your main speakers.
- The volume you will use for the Voicebox EBS. This may be different from the level you initially set (see above), depending on your personal listening preferences.

10 Sit in the listening position.

11 Turn the 'FREQUENCY' knob clockwise to the highest (5 o'clock) position. Get your assistant to slowly reduce the crossover frequency until you detect a natural balance. Note the position of the 'FREQUENCY' knob.

12 Turn the 'FREQUENCY' knob anti-clockwise to the lowest (7 o'clock) position. Again, get your assistant to slowly increase the crossover frequency until you detect a natural balance. Note the position of the 'FREQUENCY' knob.

13 The positions from Steps 11 and 12 above are likely to be fairly close together. You may find that a position halfway between the two will give the most pleasing tonal balance.

14 Once you feel that the tonal balance is correct then you may adjust the 'VOLUME' level to the position that suits you best.

Suggested Test Tracks

- Jackson Browne's "Sergio Leone" from *The Naked Ride Home* CD.
- "Limbo Jazz" on Tony Dagradi Trio's *Live at the Columns.*
- Chris Jones' "No Sanctuary".
- Chris Cornell's "Sweet Euphoria" from the *Euphoria Morning* CD.
- "The Look of Love" from Sergio Mendes' *Morning in Rio* CD.
- "Sweeter" from Diana King's *Think Like A Girl* CD.
- Shelby Lynn's "Just A Little Lovin'" from her *Just A Little Lovin'* CD.

Conclusion

We are assuming that your main speakers are well-designed high-quality monitors. We therefore suggest that you operate your main speakers as a full-frequency system. By doing so, your speakers will operate as they were originally intended.

Beyond this we suggest that you experiment with speaker position. It is equally important to ensure that sound reflections of the listening environment are well-controlled. You will be well-rewarded with a most satisfying musical experience.

If you have a single Voicebox EBS we suggest that you eventually add another one to make a stereo pair. This is because stereo bass extenders with main speakers create the same aural effects as full-range stereo loudspeakers:

- Stereo bass extenders give a greater sense of envelopment in the sound field.
- Imaging may also be enhanced because bass extenders can be localised to some degree.
- Stereo bass extenders average out and reduce excitation of room modes.
- Stereo bass extenders have 3dB more (i.e., double) headroom than a single bass extender of the same power.
- The frequency response of a single bass extender will never be correct for all sources. Centre-located bass information will sound a little louder than equally loud bass information located to the sides.

Specifications

Frequency Response	20Hz – 150Hz
Crossover Frequency	30Hz – 120Hz
Driver Complement	10-inch Wavecor aluminum cone
Enclosure Type	Acoustic suspension (sealed cabinet) 50mm MDF cabinets, internally braced
Power Output	150W RMS (4Ω) 1% THD @ 100Hz (4Ω) Level & Crossover Frequency at maximum (full clockwise rotation)
Amplifier Type	Class D
Input Sensitivity	70mV Level & Crossover Frequency at maximum (full clockwise rotation)
Enclosure Dimensions	750mm x 350mm x 23.7mm
Net Weight	31kg (each)
Shipping Carton Dimensions	960mm x 600mm x 600mm (each)
Gross Weight	37kg (each)
Finish Options	High-gloss Black or White

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all
about
the

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