



SUB-80X

**150 Watt
Digital
Powered
Subwoofer**



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Earthquake Sound Corporation • 2727 McCone Avenue Hayward CA, 94545
Phone: 510-732-1000 Fax: 510-732-1095

User's Manual

Dear Valued Customer,

Congratulation on your choice of the SUB-80X self powered subwoofer system, one of Earthquake's newest designs in bass reproduction units.

With an integral high-power amplifier - 150 Watts, the SUB-80X subwoofer combines tight bass extension with high output levels. Acoustically, it is designed to match typical satellite speaker systems to enhance the over all sound quality and performance of your system.

Key Connection and Controls:

A) LINE IN RCA - Input jacks, accept up to 1.4 volts of audio input signal (mono and stereo).

B) LIN OUT RCA - High pass filtered RCA output jacks with left and right line output signals. The line out RCA's are not functional when the line in signal (going into the subwoofer) is derived from a sub-filtered output of an external processor.

C) XOVER FILTER - The 12dB/Octave variable crossover filter is designed to control the subwoofer cut off frequency (range from: 40Hz to 130Hz).

D) VOLUME CONTROL - Manual adjustment of the sound level of the subwoofer. Always start at MIN position and slowly increase the volume to reach the desired subwoofer level.

E) PHASE SHIFT - 0 to 180 degrees subwoofer phase shift switch.

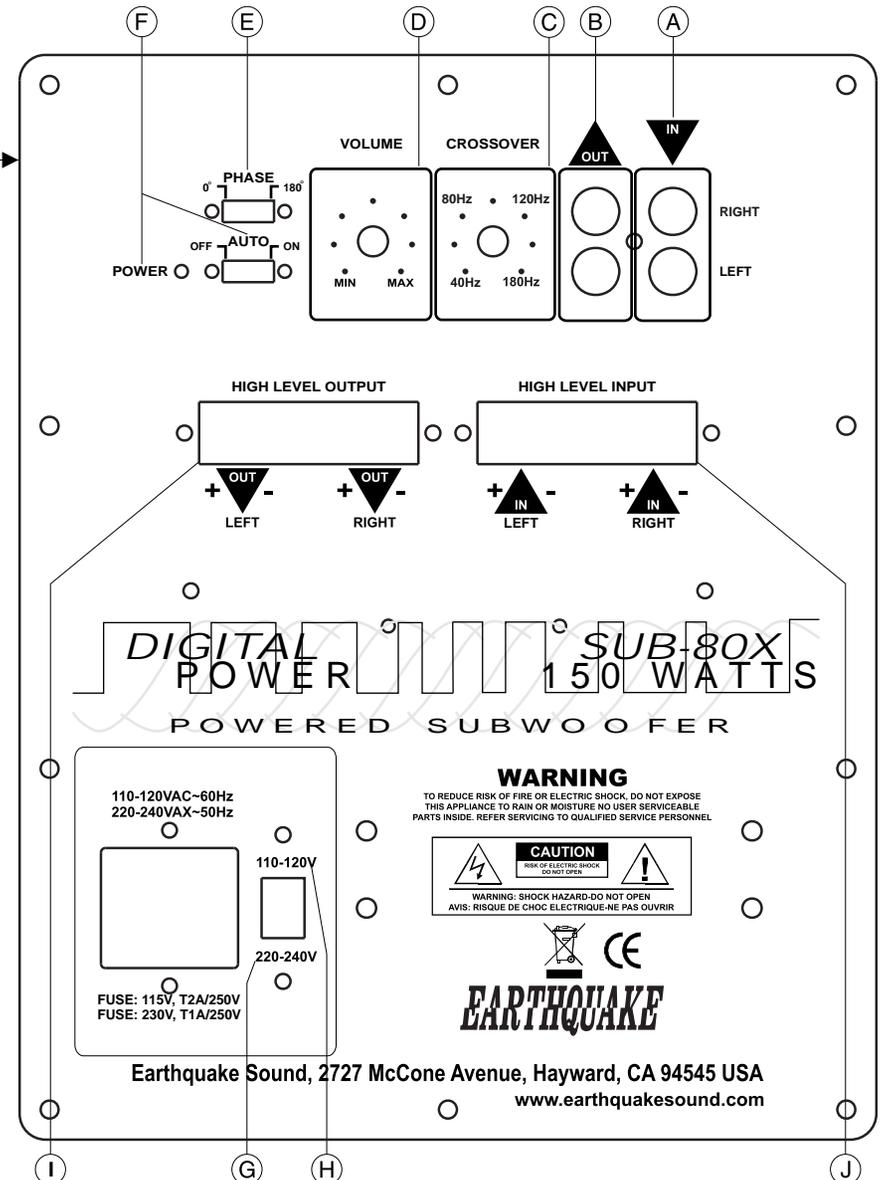
F) POWER SWITCH - For operating the amplifier automatic or manual power on. In automatic mode, the SUB-80X will turn OFF in 15 minutes if no audio signal is detected.

G), H) POWER INPUT - The SUB-80X operates in 115V and 230V environments. A sliding switch located near the power plug allows for both operations.

I) HIGH LEVEL OUTPUT - High pass filtered output terminals designed to power up stereo satellite speakers.

J) HIGH LEVEL INPUT - Clamp style input terminal, accepts high level audio input from the main or front system speakers (up to 10 volts).

Key Connection and Controls:



Listening Room & Subwoofer Position:

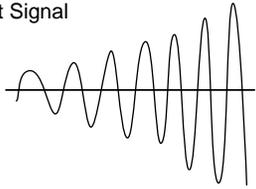
Subwoofer positioning is integral to the successful application of any surround sound system. It is very important to keep in mind that the proximity of the subwoofer to a wall or a corner contributes to an increase in efficiency (SPL) because of the "mirror effect" also referred to as "corner loading".

It is therefore advisable that you place the SUB-80X near a wall, or preferable in the corner of the room. That will increase the subwoofer effect by 2 to 3 decibels, without raising the volume control of the SUB-80X.

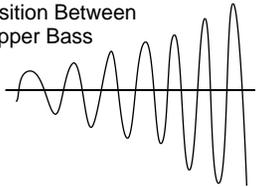
Fine Tuning:

The fine tuning process includes creating a smooth transition of music between the subwoofer and the next speaker up: usually a woofer or a mid-range. As shown in the graph below; a smooth transition between lower and upper bass is directly relative to the crossover setting and the capability of the next woofer up to reproduce lower frequencies. Keep in mind that vocals extend down to 70Hz, adjust your SUB-80X accordingly.

Original Input Signal



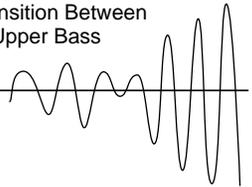
Smooth Transition Between Lower and Upper Bass



IDEAL
CROSSOVER SETTING

LOWER BASS / UPPER BASS

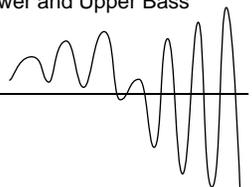
Gapped Transition Between Lower and Upper Bass



OVER GAPPED
CROSSOVER SETTING

LOWER BASS / UPPER BASS

Uneven & Gapped Transition Between Lower and Upper Bass

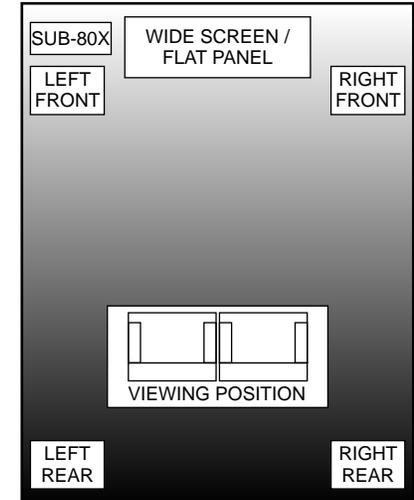


OVER GAPPED
CROSSOVER SETTING
LOWER BASS ENCROACHING
ON UPPER BASS

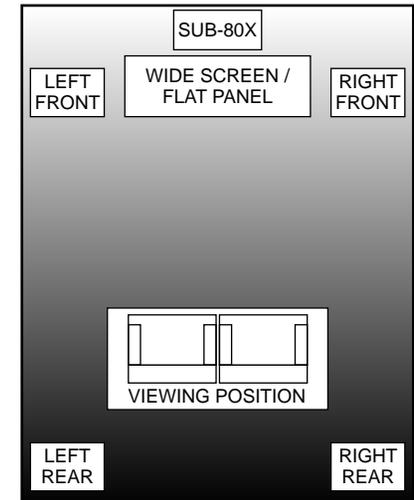
LOWER BASS / UPPER BASS

Positioning Examples

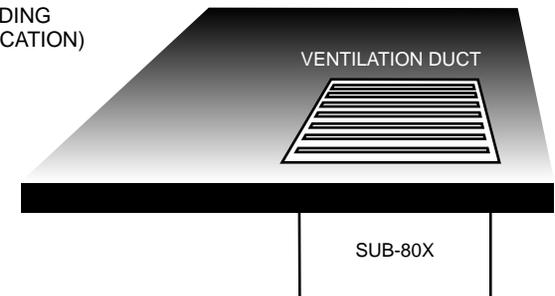
CORNER LOADING
(HIGHLY RECOMMENDED)



CENTERED POSITION
(RECOMMENDED)



BASEMENT LOADING
(STEALTH APPLICATION)





Operating & Controlling Your SUB-80X

* Secure all connection before powering up/plugging in the AC cord into the subwoofer.

* Connect the input signal to either the RCA in (A) or the High Level input terminal (F); these two input devices can not be used simultaneously, choose the one that best matches the output of your existing audio system.

* If needed, connect the RCA line out (B) to another amplifier to drive satellite speakers (front or rear). The RCA line out has high pass filtered signal at about 70Hz (5dB/Octave cut off).

* The High Level input (I) for satellite speakers is fitted with a High Pass filter (70Hz). It is only powered when the main or front speaker signals are driven into the High Level input (J). These terminals are marked with red and black to indicate the (+) & (-) respectively.

* Adjust the subwoofer low pass filter cut off to near 100Hz at first, slowly bring down the crossing point until you eliminate any vocals from emanating from the subwoofer. An ideal crossing point range from 55 to 70Hz

* In case the SUB-80X becomes out of phase with the satellite speaker, flip the phase switch to correct the problem (maximum bass is only achieved when the sub is in phase with rest of your speakers).

Cautions:

* Do not place the subwoofer in an environment exposed to dust, excessive moisture or heat. Direct exposure to sun light will over time deteriorate the enclosure finish and may cause the amplifier to overheat.

* To prevent electrical shock, never open the subwoofer cabinet before disconnecting the power cord from the amplifier's main socket.

* In the event of a blown fuse, replace it with a 1 ampere fuse only. Over fusing voids the warranty and will destroy the amplifier.

Features & Specifications:

Amplifier

- Power Output: 150 Watts
- Frequency Response: 23Hz - 180Hz
- Crossover Frequency: 40Hz - 130Hz
- Crossover Slope: 12dB per Octave
- Typical THD: 0.09%
- Input Impedance: 47,000 ohms
- Input Sensitivity: 50mV to 2.3V
- Power Supply: 115V/230V (50Hz~60Hz)
- Fuse Rating: 1 amp

Subwoofer

- 200 watts 8" subwoofer
- 1.5" high temperature voice coil
- Durable pressed paper cone
- Long Excursion santoprene surround
- 48oz high density magnet
- 89dB 1W/1M
- FS: 38Hz
- Qts: 0.516

System

- Dimensions HxWxD:
13-1/2" x 9-1/2" x 13-3/4"
- Weight: 18.7 lbs / 8.5Kg

For Technical Issues Please Contact Us VIA:
Phone: 1-800-576-7944
Email: tech@earthquakesound.com