



SW-15 POWERED SUBWOOFER

-INTRODUCTION-

The Motion Sound **SW-15 subwoofer** is specifically designed to complement the sound of “on stage” keyboard amplifiers and up to 500 watt PA systems. The front panel controls and inputs are easily accessible providing “on stage” style adjustment and operation.

Although operation may seem intuitive, we suggest that you read this manual for helpful tips and/or details about controls and operation of the SW-15 in various venues and environments.

-WARNING-

- **THE SW-15 CAN PRODUCE HIGH SOUND PRESSURE LEVELS. HEARING PROTECTION IS ADVISED**
- **THE SW-15 MUST BE EARTHED FOR SAFE OPERATION.**

-SPECIFICATIONS-

XLR ¼” inputs design range: 2.5 volts RMS
 Minimum 300 millivolts RMS
 Maximum 5 volts RMS

Input Impedance 10K ohms/100pf
 Power Amplifier 200 watts
 Frequency response 40-300 Hz
 Speaker Eminence Delta 15LF 400 Watt
 Caster Set Removable caster set with sockets

Power	Voltage	Watts	Frequency	Fuse (slo-blo)
US	117 VAC	400	50/60 Hz	5 Amp
Europe/Australia	220-240 VAC	400	50/60 Hz	2.5 Amp
Japan	100 VAC	400	50/60 Hz	5 Amp

Fuse Located in AC inlet module

Finish/Cabinet Two part polymer “polymaric™” on MDF

Dimensions 21” Height – 24.5 Width – 16 ¾” Depth

Indents in cabinet top accept KBR-3D, KP-200S, PRO-145

-QUICK START SETUP-

1. Make appropriate input connection
2. Turn on all amplifiers before turning on the SW-15
3. Turn off the SW-15 first, then other amplifiers.
4. Set volumes at “0”, high cut at 150, 45 and 60 Hz at zero, phase switches at +.
5. Play intended low notes and increase SW-15 volume to desired level.
6. Switch, phase switch for loudest bass sound.

-SOUND- -WHAT TO EXPECT-

Always try to place the SW-15 on the floor, this enhances the cabinet size and lower bass sound. Bass is very difficult to product in small rooms and/or low ceilings because of wavelength null points. You will hear different bass levels depending on the notes played and your relative position to the SW-15 and the room surfaces. Also consider the sound your audience will hear, solicit the help of a knowledgeable friend to listen with you when setting phase switches and adjusting EQ. Keep in mind moving the SW-15 even a few inches can make a difference.

-INPUTS-GENERAL-

Both the XLR and the ¼ TRS inputs are balanced inputs to help eliminate ground loops and associated “hum”: (Do not route input wires close to transformers (SW-15 left rear) or heavy power lines).

If your equipment has balanced outputs use them. If it does not it still may help to use a three conductor balanced type cord in the TRS input to reduce hum;

-TRS Input: This tip/ring/sleeve input is balanced with a phase switch and volume control.
Tip=plus Ring=neutral Sleeve=ground

-XLR Input: Standard balanced input wiring with a phase switch and volume control.
Pin 1-ground Pin 2-hot Pin 3=neutral

-EQ-

The SW-15 has three EQ adjustments to help tame resonance and “dips” in smaller rooms. These can also be used to set your preferred “bass response” sound.

- High Cut- This variable 12Db/oct filter removes highs from the SW-15 at the point of adjustment. In most cases 150 Hz is a good place to start. It may be desirable to raise this point up to 300 Hz if your total sound benefits by taking the bass “load” from your amplifier or PA. If a room is “boomy” you may want to lower the high cut to 100 Hz.
- 60 Hz- Many typical clubroom walls and ceiling heights have resonance around 60 Hz this can help tame a “boomy” room. Be sure to have someone listen at an important location while adjusting this control.
- 45 Hz- This is the low area of the SW-15’s response and coincides with bass guitar, organ pedals, kick drums and other deep bass instruments. You can eat up a lot of power very quickly at 45 Hz so listen carefully, use boost in moderation.

-PHASE SWITCHES-

Phase switches operate relative to the equipment to which the SW-15 is connected. Not all amplifiers have a + input = a + output phase relationship. The phase switches on the SW-15 will allow you to independently match the phase of two different inputs. The SW-15 is “in phase” when the loudest bass is produced. Play a few bass notes while changing the phase switch to find the loudest (in phase) position. It is advisable to have someone listen at a distance when doing this test.

-DIRECT KEYBOARD OUT-

In some cases you may want to connect the SW-15 directly to an output on your keyboard. This allows separate volume control of a keyboard amplifier and the SW-15.

This can be useful on Motion Sound KBR-3D and KBR-M amplifiers to eliminate any modulation of the bass signal by the internal low rotor simulator.

-MOTION SOUND AMPLIFIERS-

-CAUTION! DO NOT CONNECT SPEAKER OUTPUTS TO THE SW-15

Volume, phase, and EQ will vary with venue, speaker placement and personal taste. Experiment with settings to achieve the best sound. Most stereo sound sources have bass in both channels so it is normally only necessary to run one cord to the SW-15.

- KP-200S, KP-100S, PRO-145--use the ¼" subwoofer output.
- KT-80, KM-12, KBR-M--use the XRL output. Purchase an XRL splitter if a PA line feed is used.
- KBR-3D--use the subwoofer output if it has been added to your amplifier. If you only want subwoofer on organ, use the ¼" direct rotary output. Use one of the XLR outputs, purchase splitter if a PA line feed is used.
- PRO-3Tm--use the line output of the low-rotor amplifier.
- Also see "direct keyboard output" section.

-OTHER KEYBOARD AMPLIFIERS-

-CAUTION! DO NOT CONNECT SPEAKER OUTPUTS TO THE S1-15-

Most amplifiers will have a line level ¼" or XLR output for connection to a PA system. You can purchase a "Y splitter" from a music store if the output is shared with a PA line feed. Set the volume of your amplifier first then bring up the SW-15. You may want to reduce the bass in your amplifier for a cleaner overall sound.

-PA SYSTEMS-

-CAUTION! DO NOT CONNECT SPEAKER OUTPUTS TO THE SW-15-

Although the SW-15 is designed primarily for "on stage" convenience, it can be used very effectively with a PA or Karaoke systems up to 500 watts.

-PRO PA-

It is Common in PRO-level systems to send only certain instruments to a subwoofer system using an auxiliary output on the mixing board. Mix the bass instrument and kick drum only to the subwoofer output, the sound of the system will be much tighter and cleaner, without microphones and other unnecessary sounds going to the SW-15.

-MONO PA-

If your mixer does not have an auxiliary output, connect one of the left or right line outputs to the SW-15, use a “Y splitter” if needed. Depending on the size of the speakers in your PA cabinets, you can reduce the bass controls on the mixer and then “fill in” the bass with the SW-15. This will provide a cleaner over all PA sound.

-STEREO PA-

As long as the bass instrument and kick drum are “centered”, you may use the left or right line output for the SW-15. Spend some time and reduce the bass on non-bass instruments and microphone channels. Remove some bass from the bass instrument and kick drum channel and replace it with the SW-15. This will provide a cleaner PA sound.

-OTHER SOUND SOURCES-

The SW-15 can be used with virtually any source that has a ¼” or XLR line level output connector. If the sound source has tone controls you can turn down the bass and bring it up in the SW-15. Adjustment of volume, high cut, and the 60 Hz and 45 Hz EQ will depend on the room size and SW-15 location. The high cut will set where the SW-15 starts to “add” bass to the sound.

-MAINTENANCE-

- Polymer Coating:** The Polymaric™ finish on the SW-15 is extremely rugged. Clean with Mild soap and water as needed.
- Speaker Replacement:** Place the SW-15 on its backside. Remove the four screws and the speaker grill clamps and the grill. Remove four speaker screws. Remove the speaker from the front and disconnect the speaker wire spade nuts. Note speaker polarity and wire color.
- Amplifier Removal:** Remove the speaker as above. Rotate the SW-15 onto its left side (amplifier chassis is close to the floor). Remove two screws from the top rear of the amplifier chassis and five screws from the bottom. The chassis removes through the speaker hole (note ribbon cable connect polarity).

