



BASS 750

USER GUIDE



IMPORTANT SAFETY INSTRUCTIONS

CAUTION: TO REDUCE RISK OF ELECTRIC SHOCK, DO NOT REMOVE THE COVER OR BACK. NO USER-SERVICEABLE PARTS INSIDE. PLEASE REFER TO A QUALIFIED SERVICE TECHNICIAN.

A. Read Instructions: All safety and operation instructions should be read before the product is operated.

B. Retain Instructions: The safety and operating instructions should be retained for future reference.

C. Heed Warnings: All of the warnings on this product and in the operating instructions should be adhered to.

D. Follow Instructions: All operating and use instructions should be followed.

E. Cleaning: Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a slightly damp cloth for cleaning.

F. Water and Moisture: Do not use this product near water; for example, near a swimming pool, wet basement, and the like.

G. Accessories: Do not place this product on an unstable cart, stand, tripod, bracket or table. The product may fall, causing serious injury to a child or adult, and serious damage to the product.

H. Ventilation: Slots and openings in the unit are provided for ventilation and to ensure reliable operation of the product, to protect it from overheating, thus these openings must not be blocked or covered. This product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer's instructions have been adhered to.

I. Grounding: This product is equipped with a three-wire grounding-type plug, a plug having a third (grounding) pin. This plug will only fit into a grounding-type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the grounding-type plug.

J. Power Cord Protection: Power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon them, paying particular attention to cords at plugs and the point where they exit the product.

K. Lightning: For added protection of this product during a lightning storm or when it is left unattended and unused for long periods of time, unplug it from the wall outlet. This will prevent damage to the product due to lightning and power-line surges.

L. Overloading: Do not overload wall outlets or extension cords as this can result in a risk of fire or electric shock.

M. Object and Liquid Entry: Never push objects of any kind into this product through the openings as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock. Never spill liquid of any kind on the product.

N. Servicing: Do not attempt to service this product yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

O. Damage Requiring Service: Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:

- 1) When the power supply cord has been damaged
- 2) If liquid has been spilled or objects have fallen into the product
- 3) If the product has been exposed to rain, water, or other conductive liquids
- 4) If the product does not operate normally by following the operating instructions
- 5) If the product has been dropped or damaged in any way
- 6) When the product exhibits a distinct change in performance.

P. Replacement Parts: When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.

Q. Safety Check: Upon completion of any service or repairs to this product, ask the service technician to perform safety checks to determine that the product is in proper operating condition.

R. Heat: The product should be situated away from heat sources such as radiators, heat registers, stoves or other products that produce heat.



BASS 750 USER GUIDE

INTRODUCTION

CONGRATULATIONS...

...you are now the proud owner of a SWR Bass 750 amplifier! The Bass 750 was designed in response to a demand for an amplifier that delivered the volume and punch of classic high-powered amplifiers, coupled with the sound and clarity that SWR is known for. At 750 watts (mono), the Bass 750 is extremely loud, and its simple front panel controls make it a breeze to dial-in the perfect bass tone. After you spend some time with the Bass 750 you'll truly realize that "Feeling is Believing®." Please read this entire manual carefully so that you can fully realize the potential of the Bass 750.

MADE IN THE U.S.A.

SWR amplification is handmade and individually tested in the United States. Everyone at SWR sincerely hopes that you are satisfied with your recent purchase, as we are extremely proud of the quality and attention that goes into each and every SWR product. We truly hope that your purchase of an SWR helps bring out the best in your playing and adds to your enjoyment of music.

Thanks for choosing SWR!

The amplifier packaging should include the following items:

- (1) Owner's Manual
- (1) AC Power Cord
- (1) Warranty/Product Registration Form

SWR BASS 750

FRONT PANEL FEATURES

- Dual independent input jacks compatible with both active and passive instruments
- Stereo Headphone Jack
- Gain Control with LED peak clipping indicator
- Aural Enhancer Control
- Bass Control (with pull Turbo function)
- Mid Range Level Control
- Mid Range Frequency Control
- Treble Control (with pull Transparency function)
- Effects Blend Control
- Variable Limiter Control
- Master Volume Control
- Speaker On/Off Switch
- Power On/Off Switch
- Rack Handles

REAR PANEL FEATURES

- Balanced XLR Output with select switch for Line or Direct Mode
- XLR ground lift & pad control
- Tuner Send
- Side Chain Effects Loop
- Two 1/4" speaker output jacks
- Two Speakon[®] speaker output jacks
- (1) Speaker fuse: 3AG, 10 amp, fast-blo
- (1) Line Fuse: 3AG, 8 amp, slow-blo
- A/C power cord receptacle

SPECIFICATIONS

Power Output

850 watts @ 2.6 ohms

750 watts @ 4 ohms

450 watts @ 8 ohms

(minimum load = 2.6 ohms)

Frequency Response (power amplifier): 10Hz to 40kHz

Size: 19"W x 5.38"H x 10.5"D (482.6 x 136.6 x 266.7 mm) (3 rack spaces)

Weight: 33 lbs. (14.97 kg)

FRONT PANEL FEATURES

INPUT JACKS

Both input jacks accept a standard 1/4" phone plug and both inputs can be used at the same time. Since the two inputs are totally independent, no loss in volume or tone will occur if two instruments are used simultaneously. Please keep in mind, however, that the Active/Passive input has five times more gain than the Active input.

PASSIVE/ACTIVE INPUT

A "passive" instrument has no built in preamp and does not use a battery. On the other hand, an "active" bass utilizes a battery operated preamp, either for gain, tone controls, or both. Although labeled "Passive," the Passive input jack on your Bass 750 will work with all instruments having a maximum output of less than 1 volt RMS.

Generally speaking, try the Passive input jack first. If you hear a small amount of distortion and the preamp clip LED is not activated, try using the Active input jack.

Note: *If you would like to overdrive the first TUBE stage, this can be accomplished by using an external preamp between your instrument and the Passive input. To obtain optimum sound when trying this, make sure the preamp clip LED is not activated. If this occurs, turn down your Gain control. The first preamp tube stage is NOT monitored by the preamp clip circuit for this reason.*

ACTIVE INPUT

The Active input jack should be used with instruments having a built-in (on board) preamp that will produce signals over 1 volt RMS. Basses with really "hot" pickups may find the Active input more compatible. If you're using a KEYBOARD or BASS PEDAL, etc. with the Bass 750, we have found the best choice to be the Active input.

Note: *Using the Active input with a passive instrument may result in a loss of high end transients. Players who roll off their high end frequencies starting at about 2kHz or who prefer a "darker" sound may find this input more to their liking.*

If you hear some distortion with your active bass and are using the Active input jack, check your instrument's battery. Also, make sure that the preamp clip LED is not lit. Following these instructions can save you and a service technician a lot of aggravation.

HEADPHONE JACK (STEREO ONLY)

By inserting a set of stereo headphones into this jack you can monitor your sound or practice without disturbing your neighbors. The headphone volume level is adjusted by the Master Volume. We suggest you begin with the Master Volume off (fully counter-clockwise), then slowly bring up the volume to the desired level. If you hear some distortion in your headphones that is not present with the speakers on, turn down the volume. You are probably overdriving your headphones and could damage them (not to mention your ears).

Note: *Any impedance headphones will work. However, optimum impedance is 75 ohms.*

GAIN CONTROL

The Gain control adjusts the volume of the preamp section. After the tone controls and limiter are set to your liking, the Gain control should be set to where the Preamp Clip LED barely flashes upon striking your loudest note. Then adjust the Master Volume to the desired volume level. Utilizing these controls in this manner assures the user of maximum signal to noise ratio with no distortion caused by the preamp circuits "clipping."

PREAMP CLIP LED

The Preamp Clip LED will light if any portion of the preamplifier reaches clipping or runs out of headroom. This can be caused by the Gain Control being set too high or if any of the tone controls are set in a high boost position. To correct this condition, turn down one of the previously mentioned controls.

Note: *The Preamp Clip LED indicates that at some point the preamplifier is clipping. No harm is being done to your amplifier but, clipping of the power amplifier can cause damage to your loudspeakers and is not recommended.*

AURAL ENHANCER

SWR's Aural Enhancer control was developed to bring out the fundamental low notes of the bass guitar, reduce certain frequencies that help mask the fundamentals, and enhance the high end transients. The resulting frequency response is similar to that used for recording the bass in the studio. This effect becomes more radical as the control is turned to maximum. The result is a more "transparent" sound and is especially noticeable when slapping/thumb-style on the bass guitar.

Basically, the Aural Enhancer can be described as a tone shaping control, as it is a passive R/C network that alters the frequency response throughout the bass spectrum. This pre-shaping is "blended" into the original signal via the Aural Enhancer control. Exact frequencies affected are dependent on the characteristics of the instrument used.

ACTIVE TONE CONTROL SECTION

BASS CONTROL

The Bass control adjusts the level of the lower or bass frequencies. Starting at mid-center click-position, turning the control counter-clockwise cuts the bass response; turning the control clockwise boosts the bass response.

PULL TURBO FUNCTION

Pulling the bass control to the out position widens the bandwidth of the bass control to include frequencies down to 30Hz (low B on a five string bass). Since some of these notes can be felt more than heard, it is especially important to keep an eye on the preamp clip LED. Constant clipping of these frequencies can diminish the life of the speakers or cause them to fail.

MID RANGE SECTION

Level Control

The Level control cuts or boosts the frequency set by the Frequency control. Starting at mid-position, turning the Level control counter clockwise cuts the desired tone. Turning the Level control clockwise boosts the desired tone. When the level control set at mid (center click) position, turning the frequency control will have no affect on the sound.

To find the midrange area you're looking for:

1. Adjust the Level control to the full boost or cut position.
2. Rotate the Frequency control until the desired area you wish to cut or boost is found.
3. Adjust the Level control to the desired amount of cut or boost

Frequency Control

The Frequency control sets the area that is to be cut or boosted by the Level Control. If the Level control is set at mid-position, turning the Frequency knob will have NO affect.

Note: *If you need to "cut through" the band a little more, try boosting 200 to 400Hz. If you like a more transparent sound, try cutting at 800Hz. The midrange area is especially useful in controlling fretless basses and their inherent qualities.*

TREBLE CONTROL

The Treble control is a shelving type tone control that cuts or boosts the high notes and their octaves. Starting from mid position, turning the control counter-clockwise cuts the highs while turning the control clockwise boosts the treble region.

PULL TRANSPARENCY FUNCTION

In the normal (in) position, the shelving point of the treble control is approximately 2kHz. By pulling the knob outward, the shelving point is changed to 4kHz.

EFFECTS BLEND

This control blends the signal sent from your bass with that coming from your effects unit. With the Effects Blend control fully counter-clockwise, no signal from your effects will be heard ("dry"). As you turn this control clockwise, more of the effect can be heard in the overall sound. When the Blend control is fully clockwise ("wet"), no true or unaffected signal is heard other than what your effects unit provides. If your effects unit has a similar control, adjust it to the fully "wet" position. This will avoid any possible phasing problems.

The Blend circuit is similar to that used on recording consoles with the effects loop on a "side chain" to the normal circuit. Unless the control is set to the full "wet" position, you will always get the full sound of your instrument AND get the diversity an effects unit offers. This circuit is also effective in reducing noise generated by effects units because it is located after the gain stages in the preamp.

The Effects Blend functions *only when the effects loop is being used*. It is activated when a 1/4" phone plug is inserted into the Effects Receive jack. See the "Effects Loop" section for more information.

LIMITER CONTROL

This Limiter circuit is located after (post) the Master Volume and before (pre) the power amplifier. Therefore, the Limiter is driven by the Master Volume. Its threshold (or starting point) is set by the Limiter control and can be used to achieve maximum overall apparent volume without unduly overdriving the power amplifier or internal speakers. Turning the Limiter control clockwise (toward "max") increases the effect of the Limiter circuit.

LIMITER ACTIVE LED

When the threshold of the Limiter circuit is reached, the green Limiter Active LED will light. This LED will be inactive when the Limiter is set to the "off" position or when playing at lower levels.

MASTER VOLUME

The Master Volume adjusts the level being sent to the power amplifier section of the Bass 750 and controls the overall volume of the unit. It DOES NOT affect the level of the record XLR output in the "line" position.

Losses caused by effects units can be recovered by increasing the Master Volume.

SPEAKER ON/OFF SWITCH

Moving the Speaker On/Off Switch to the "On" position allows the signal from the amplifier to be heard through any speaker enclosure(s) connected to the Bass 750's output section. Moving the Speaker On/Off Switch to the "OFF" position disables the Bass 750's output section. This feature allows the user to:

1. Use the XLR Output without using the internal speakers. This is especially useful in recording when you are not miking the speakers and only a direct signal is required.
2. Tune up without interfering with other band members while using the Tuner Send feature.

Note: *If you do not hear any sound when you plug in and your system is properly connected, check the position of this switch!*

POWER ON/OFF SWITCH

Moving the Power Switch to the "On" position will turn on the amplifier as indicated by the Power LED lighting (directly above the switch).

REAR PANEL FEATURES

AC OR MAINS FUSE

This fuse is provided to protect the internal electronics against power surges, etc. It also protects the unit against itself should one of the internal components fail. If this fuse should open, replace it with the same type of fuse and rating.

Note: *Do not defeat the purpose of this feature by using a fuse of a higher value. It could damage the unit and will void your warranty!*

Proper size of the AC fuse for all countries is 3AG. Proper rating of the fuse is as follows:

Japan: 8 amp slo-blo

United States: 8 amp slo-blo

Europe (240V): 4 amp slo-blo

AC CORD RECEPTACLE

Accepts a standard AC power cable (supplied with the Bass 750), used with almost all current musical, professional and household electronic devices. If you misplace your AC power cable, a replacement can be found at almost any computer, electronics, or pro audio store.

Note: *The rating for this cable is 3 conductor, 10 amperes MINIMUM. If replacement is necessary, or if you wish to buy a longer cable, look for the rating on the cable and be sure it is at least 10 amps. Make sure the AC cord is plugged in all the way in both the amp and the wall socket. If your cord ever becomes frayed or split, replace it immediately.*

EFFECTS LOOP

The Effects Loop should accept any effect such as a chorus, flanger, etc. It is designed as a "side chain" function and works exactly like that of studio consoles. Some effects units have an input level adjustment switch. Whenever possible, set it at 0 dB. If that's not an option, +4 dB is fine. The level going to your effect is controlled by the Gain control on the front panel of the Bass 750.

Use of the Effects Loop should greatly reduce the noise generated by effects units (as compared to using the effect between your instrument and the input jack). This is because the loop is after the preamp gain stages.

Note: *The effects loop must be used in conjunction with the Effects Blend control on the front panel. When that control is in the "dry" position, no effects will be heard.*

All patch cords used with the Effects Loop should be as short as possible and should be routed as directly as possible. Running patch cables over the top of the Bass 750 (as with any amplifier) can induce hum in the cables.

SEND JACK

Run a shielded patch cable from the Bass 750's "Send" jack to the INPUT of your effects unit. Output impedance of the send jack is 100 ohms. This jack can be used as a line level output to connect a slave power amp, such as SWR's Power 750. It may also be used as an unbalanced record out.

RECEIVE JACK

Run a shielded patch cord from the Bass 750's "Receive" jack to the OUTPUT jack of your effects unit. A unique feature of the receive jack is that you can practice along with pre-recorded music. To accomplish this, insert a tape recorder or other sound source into the "Receive" jack (make sure it is a MONO source). Using the Effects Blend control, adjust the level of recorded music from the Receive to the "live" sound of your instrument. The mixed sound will be heard through your speakers. This is an excellent way to practice along with drum machines. Input impedance of the Receive jack is 27kohms minimum.

Note: *Inserting a plug into the "Receive" jack activates the Effects Blend control. The control receives this command through the ground created by the phone plug making contact with the jack. The plug must be a mono plug (tip and ground). If you have a stereo plug only, tie the ring and the ground together.*

PREAMP OUT JACK

The Preamp Out jack is a post-EQ output that allows a signal to be run to an external power amp (such as the Power 750) or recording device.

SPEAKER FUSE

The speaker fuse is provided to protect your speakers in the unlikely event of a power amp failure or to protect your power amplifier from incorrect speaker impedances or connections. Size and rating of the fuse is 10 amp, fast blow. Do not defeat the purpose of this feature by using a higher rated fuse as it could void your warranty and further damage your amp.

The fuse can open as a result of a fault in the speaker cable, the speakers themselves, or the power amp being sent well into clipping. With this in mind, we recommend keeping spare fuses with the amplifier at all times.

SPEAKER JACKS

Two 1/4" phone jacks (wired in parallel) and two Speakon[®] connectors (wired in parallel) are provided for hooking up your speaker system. The minimum load (or impedance) the Bass 750 is designed to drive is 2.67 ohms (the equivalent of one 8 ohm cab and one 4 ohm cab connected in parallel).

It should be noted that the Bass 750's preamp section *can* be run without speakers attached to the speaker jacks. (See "Speaker Off/On Switch" under "Front Panel Features.") This is helpful when using the amplifier for recording purposes (via the XLR output) and speakers are not required.

Note: *The frequency response of the Bass 750 is far greater than usually found in musical instrument amplifiers (10Hz to 40kHz). This was engineered in order to give the bass player the same punch and clarity on stage as found in the studio or concert P.A. systems. Therefore, it is doubly important that you be aware of the impedance and power rating of the speakers that you intend to use and that they are compatible with the Bass 750. Speakers that have been overdriven are easy to detect and are not covered under warranty.*

SPEAKER CABLE

Speaker cable should be made of 18-gauge, or heavier, wire. (The thicker the wire, the lower the gauge, so 18-gauge is heavier than 20-gauge and so on.) Do not use instrument cables to hook up your speakers. This can result in intermittent power loss, cause your power amp to oscillate and damage itself and/or your speakers, and render the cables useless for any purpose.

To connect the Bass 750 to your speakers via the Speakon output jacks, a Neutrik Speakon cable is required. These cables are NOT supplied with the Bass 750, but are available from your local music retailer or directly from the SWR Service Department.

XLR PAD

The XLR Pad control adjusts the level of the Balanced XLR Output. Rotating the control clockwise raises the level at this output.

GROUND LIFT

The XLR Pad has a built-in Ground Lift for the Balanced out. Pulling the knob outward lifts the ground (pin 1). If a persistent hum exists after trying both positions of the ground lift, there is probably a mis-wire or bad ground in the feed lines to the board or console or a dirty or miswired A/C socket. SWR recommends the purchase of an AC wall socket tester which can identify proper wiring (available at most hardware stores). These inexpensive devices are a simple way to protect you and your equipment from faulty electrical systems.

LINE/DIRECT SWITCH

The Line/Direct switch gives the user the option of either a line signal (preamp out) or direct signal from the instrument. The signal appearing at the XLR out is slightly "hotter" than normal D.I.'s. You may want to inform the engineer of this.

To use the Line/Direct function, position the knob in the desired location. Make sure the switch is all the way to the left or right to avoid intermittants.

Note: *Turn-off transients appear at the record outs when the amplifier is shut down. It is recommended that equipment being used in conjunction with the record out be turned down, off, or disconnected BEFORE the Bass 750 is turned off.*

BALANCED XLR OUT

The Balanced XLR out is a true electronically balanced record out. The signal appearing at the XLR out is governed by the position of the XLR Pad. In the LINE position, all front panel controls are functional except the Master Volume, and the signal is essentially the same as that heard through your speaker system. The output level in the Line position is adjusted by the GAIN control on the front panel. If you are using an effect, this will also appear mixed in the signal when you are in the line mode.

In the "Direct" position, the Balanced XLR out becomes an active TUBE direct box. No front panel controls are functional and the level is only adjustable via your instrument.

Wiring for the XLR connector is as follows:

Pin 1 = ground, Pin 2 = +, Pin 3 = - (negative) (American Standard)

The Bass 750 is compatible with Phantom Power-equipped mixing consoles.

TUNER SEND

The Tuner Send allows the user to plug an instrument tuner into this jack and tune up without having to unplug and go back and forth from amp to tuner. This feature is totally isolated from the rest of the preamp and will function regardless of the settings on the front panel. Being on a side chain (isolated) also avoids loading down of the instrument causing a loss in dynamic range.

To use this feature, plug in a shielded patch cord from the Tuner Send output to the input jack on your tuner. Turn the amplifier on and you're ready to go. If you do not wish to monitor your sound during the tuning process, switch the Speaker On/Off switch to the "off" position.

INTERNAL FEATURES

VACUUM TUBE (VALVE)

SWR installs a specially selected 12AX7 dual triode tube (valve) in the preamp section of every Bass 750. If this tube needs replacing, we recommend that you replace it with a similar high quality product. This tube will require replacement only in the event it becomes noisy or microphonic (sounds like glass tinkling in the background of certain notes), or completely fails causing no signal.

POWER ON TRANSIENT

When the Bass 750's power switch is moved to the "On" position, you will hear a turn-on transient (sounds like a "thud") through your speakers. This will not harm speakers made by SWR, however, you may wait to connect your speaker cable to the Bass 750 until after powering up. Just make sure you are not playing through the unit when you make the connection, as it could cause a speaker fuse to blow. Eliminating this transient would require a component called a relay. Since relays tend to degrade signal quality and often fail, we decided not to incorporate this type of component in the Bass 750.

A FEW WORDS CONCERNING HEAT

Please be aware that the chassis of your amplifier can get quite warm during normal use. This is especially true if you are using a 2.67 ohm total impedance, as this introduces the least efficient condition possible for the unit (i.e., power drawn from the outlet in relation to power produced in the speakers). The difference in these two figures can be quite high, basically resulting in the equivalent of putting a high wattage light bulb inside a metal box—which would obviously get quite warm.

Furthermore, most musical instrument amplifiers on the market today utilize steel for their chassis, which in most cases is considerably cheaper than aluminum and does not conduct heat as well. With the exception of the front panel (which is made of steel), the Bass 750 utilizes an all aluminum chassis, which has less impurities than steel, is less susceptible to rust, and is a better conductor of heat. This results in the chassis acting as a heatsink—drawing heat away from internal heat-producing components, thus extending their life and making the Bass 750 a more reliable amplifier.

You should be aware of a heat-related condition known as "over biasing." If one or more of the power amplifiers in your Bass 750 becomes over biased, it may cause the unit to generate more heat than normal. This condition can be recognized by turning on your amplifier and letting it sit without speakers plugged in and without playing it. If under these conditions your unit becomes quite warm, it may be over biased. This situation should be attended to and can be easily remedied in about 15 minutes by a qualified technician. An amplifier can become over biased through continuous vibration or by any large jolt received in shipping, transportation, etc.

RACK MOUNTING INSTRUCTIONS

To preserve the beauty and reliability of your amplifier, we recommend that you install your amplifier in a rack case. The Bass 750 is completely ready to be rack mounted and needs no additional parts or accessories other than the case itself. The Bass 750 takes up three full rack spaces (it is 5-3/8" high). If the rack that you mount the Bass 750 in requires that the rubber feet on the bottom of the chassis be removed, please remember to REPLACE the screws, as they help to reinforce the chassis.

The Bass 750 should be mounted as close to the bottom of the rack case as possible. The height of the rubber feet was chosen so that when you slide the unit in the bottom of the rack case, the rack mounting holes on the front panel will line up with the mounting holes of the rack rail. This prevents the Bass 750 from flexing downward if the rack case is dropped. If you must mount the Bass 750 in an area of the rack other than the bottom space, a piece of wood or similar solid material should be installed between the bottom of the rack case and the bottom of the amplifier to prevent flexing of the amplifier's chassis. Severe or constant flexing of the chassis can damage the amplifier and is not covered under the warranty.

Don't neglect your amp after it has been installed in a rack case. Continuous transportation and vibration can cause screws to become loose, both on the Bass 750 and on your rack case rails. We recommend that at least once a month you remove the Bass 750 from the case and tighten all outside screws (especially on the front panel). Then check all the connections in your rack case and reinstall the unit.

