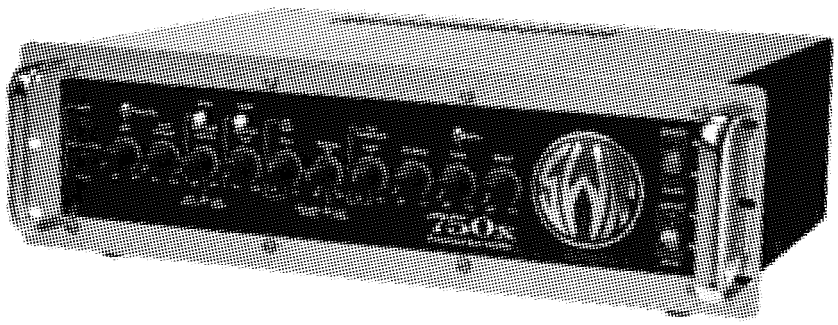
750x

OWNER'S MANUAL



SWR • SCOTTSDALE, AZ • USA

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.*

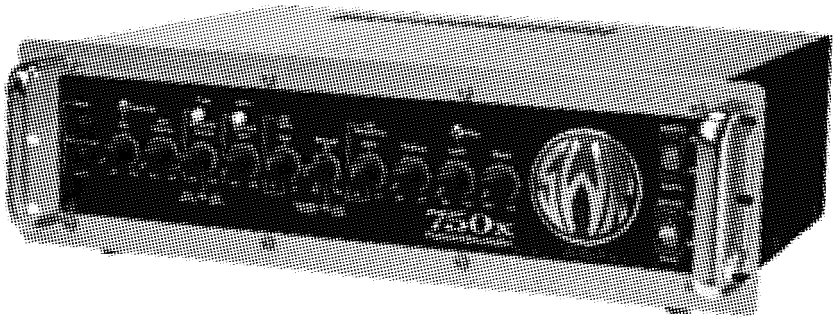
O. Damage Requiring Service: *Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:*

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.*



INTRODUCTION

Congratulations on your purchase of the SWR 750x Bass Amplifier! You now own a killer combination of massive power, easy-to-use controls, simply integrated onboard effects... and pure SWR tone.

A little history: The SWR 750x is an upgraded version of the Bass 750, a model we've offered since 1999 in response to demand for an amp that delivered the punch and volume of classic high-powered amplifiers, coupled with the sound and clarity SWR is known for. The highest-powered mono head in our world-renowned Professional Line, the Bass 750 featured a tube preamp (using a specially-selected 12AX7A vacuum tube), SWR's patented "Aural Enhancer," an easy-to-use 3-band EQ section, and a high-quality, discrete solid-state 750-watt power amp capable of delivering enough power and headroom for just about any application. Highly popular among rock, funk and jazz players alike, the Bass 750 quickly became a staple on large stages in high-profile venues, as well as in local clubs where bassists quickly saw the benefits of having more than enough power to do the job.

The new 750x maintains all of these proven features while adding significant improvements. We've integrated two new onboard effects. First, the Tube Overdrive provides the option of having a high-powered "dirty" amplifier at the ready, all the while preserving the famous SWR clean tone—and without having to lug around an 80-pound all-tube amplifier. Second, there's our SubWave™ circuit, which produces a tone an octave below the original signal and tracks as well or better than anything else on the market today. (The effects are foot-switchable, and we've provided a dual footswitch for your convenience.) Additionally, the unit is now lighter, quieter (in terms of overall residual and white noise), and in our humble opinion, better-looking thanks to a cosmetic rework from the ground up. And, of course, each 750x is assembled by hand and individually sound-tested in the USA at our factory in Southern California.

It's all part of SWR's commitment to continued improvement and refinement of even our most popular models, so that we can continue to assist today's bassist in the pursuit of the ultimate goal: finding equipment that not only does the job, but actually enhances the overall musical experience and contributes to the creative process. Everyone here at SWR sincerely hopes that the purchase of your 750x helps you get there from here... and beyond.

Please take the time to read your Owner's Manual thoroughly and completely, so that you can realize the full potential of your new 750x Bass Amplifier. Once again, thanks for your purchase, and for letting SWR help Amplify Your Future.™

Sincerely,

SWR

Note: *Please take a moment to verify that the following items were included in your SWR 750x packaging: AC Cable, 750x Effects Activator Dual Footswitch, SWR Catalog.*

750x – FRONT PANEL FEATURES

- **Dual independent input jacks compatible with both passive and active instruments**
- **Preamp Gain control with red LED clip indicator**
- **Aural Enhancer control**
- **Overdrive Activator Switch (illuminated red when engaged)**
- **Overdrive "Drive" Control**
- **Overdrive Level Control**
- **SubWave™ Activator Switch (illuminated blue when engaged)**
- **SubWave™ Level control**
- **Bass control (with Pull Turbo function)**
- **Midrange Level control**
- **Midrange Frequency control**
- **Treble control (with Pull Transparency function)**
- **Effects Blend control**
- **Variable Limiter**
- **Limiter Active green LED indicator**
- **Master Volume control**
- **Speaker On/Off Switch**
- **Illuminated Neon Power On/Off switch**

750x – REAR PANEL FEATURES

- **XLR Pad (Level) control**
- **XLR Output jack**
- **XLR Mode switch (Direct, Direct + EFX, Line)**
- **Ground/Lift switch for XLR Output jack**
- **Side-Chain Effects Loop (Effects Send and Effects Return 1/4" jacks)**
- **Tuner Out Jack**
- **Preamp Out Jack**
- **Overdrive Activator Footswitch jack**
- **SubWave™ Activator Footswitch jack**
- **Fan Mode switch**
- **Stereo Headphones Jack**
- **Two Speakon and two 1/4" Speaker Output jacks**
- **Speaker Fuse (3AG, 10-amp fast-blo)**
- **Line Fuse (3AG, 7-amp slo-blo in the U.S.)**
- **AC Power Cord Receptacle**

ELECTRICAL SPECIFICATIONS

Note: *All measurements were taken with a line voltage of 120VAC. All noise specifications are "unweighted." All voltages and watts are "RMS." All measurements are taken with tone controls set flat, Aural Enhancer at minimum.*

Power Ratings (minimum)

850 Watts @ 2.6 ohms

750 Watts @ 4 ohms

450 Watts @ 8 ohms

Frequency Response (power amplifier)

(@ 850 watts RMS) –3dB @ 20 Hz and 40 kHz

Sensitivity (full output under clipping, 8 ohms load, 100 Hz)

Passive Input Jack: 62 millivolts

Active Input Jack: 267 millivolts

Power Amplifier (Effects Return Jack "in"): 5 volts

Input Impedance

Passive/Active Input: 800k Ohms

Active Input: 60k Ohms

Effects Return: 27k Ohms

Output Impedance

Effects Send: 100 Ohms

Tuner Send: 100 Ohms

XLR (Balanced) Out: 750 Ohms

Dimensions (depth includes handles and XLR pad)

19" W x 5.38" H x 15" D (3 rack spaces)

Weight

31 lbs.

750x – GETTING STARTED

Connecting Your Speaker Cabinets

The 750x is a mono amplifier, which makes things fairly simple. Locate the "Speaker Outputs" section on the rear of the amp. You will notice that there are four different speaker output jacks, two 1/4" type and two Speakon® type jacks. The Speakon jacks are preferable if your speaker cabinet is equipped with Speakons as well; however, you can use any of the four available jacks to connect your speaker(s) to the 750x.

Using One Speaker Cabinet

Using a speaker cable of 18 gauge or heavier (the heavier the cable, the lower the gauge), simply connect any one of the 750x's Speaker Output jacks to the input jacks of your speaker cabinet. If your cabinet is a 4 ohm enclosure, the 750x will deliver will deliver 750 watts into it. If your cabinet is an 8 ohm enclosure, it will deliver 450 watts into it. This is a loud amplifier. Be sure to check the power handling capabilities of your speaker cabinet before connection and operation.

Using Two Speaker Cabinets

Using a speaker cable of 18 gauge or heavier (the heavier the cable, the lower the gauge), simply connect any of the 750x's Speaker Output jacks to the input jacks of your two speaker cabinets. (You can use one 1/4" and one Speakon Output jack each if you wish; however, it is always best to use speaker cables with similar type ends.) If the cabinets are the same impedance, the same amount of power will be sent to each enclosure. If the cabinets are different impedances, more power will flow to the cabinet with the lower impedance. Since the 750x is a mono amplifier and individual cabinet levels cannot be adjusted, it is recommended that you use cabinets of the same impedance when using more than one cabinet. If you use two 8 ohm cabinets—the two-cabinet setup recommended by SWR—the resulting "total" impedance will be 4 ohms, and the 750x will deliver 750 watts spread across both cabinets. Needless to say, in all cases, be sure to check the power handling capabilities and impedance of your speaker cabinet(s) before connection and operation.

Important: The minimum total impedance when operating the 750x is 2.6 ohms. This means you can safely use:

a) A single 8 ohm cabinet

b) A single 4 ohm cabinet

c) Two 8 ohm cabinets (total: 4 ohms)

d) One 8 ohm cabinet and one 4 ohm cabinet (total: 2.6 ohms) **

e) Three 8 ohm cabinets (total: 2.6 ohms) **

****Running the amplifier constantly at 2.6 ohms, while technically acceptable, will cause the amp to run hotter than usual, and will cause heat-related wear on components sooner than normal.**

Turning The Unit On

Remove the AC cable from the accessory pack and connect it from the amplifier to a standard wall outlet. Make sure that the both the Gain and Master Volume controls are set to the minimum position. Locate the Power switch on the right side of the front panel and turn the amplifier on. The Power switch should then illuminate in red. Upon powering up, don't be surprised if you hear a small pop. This is absolutely normal. (Eliminating this "power on transient" would require a component called a relay. SWR chose not to incorporate this type of component due to the fact that relays degrade signal quality and often fail, causing the unit to have no output and requiring a trip to a local service center. The noise can be eliminated by setting the speaker on/off switch to the "off" position upon powering up, after which point you can set the switch to "on" for operation.)

Getting Sound Out Of The 750x

Plug your instrument into the desired input jack (please refer to "Front Panel Features" for more detail). Turn your instrument's volume up to at least 75% of maximum and slowly adjust up the Gain control. Keep playing and turning the Gain control up until you see the Preamp Clip LED turn red. Then back off the Gain Control about one large hash mark on the dial. Now turn up the Master Volume control to an equal level. You should now hear the sound of your instrument amplified through the 750x into your speaker cabinet(s).

Eventually you may want to reset the Gain Control in conjunction with your desired settings for the Overdrive effect, but we'll get to that later on in the manual.

750x – 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 by using two instruments simultaneously. However, the main applicational use for the two separate input jacks is their difference in level, as the Passive/Active input has five times more gain than the Active input. In other words, it's not necessarily intended as a "submixer" for two instruments, but no harm will come from having two instruments plugged in at once. Please read below for more details.

Passive/Active Input Jack

This input jack is designed to accommodate both "passive" instruments and most "active" instruments. A passive instrument has no built-in preamp and does not use a battery, while an active bass utilizes a battery-operated preamp for gain, tone controls, or both. The Passive/Active Input will work with all instruments having a maximum output of less than 1 volt RMS. Some active pickups such as EMG, Bartolini, etc., use batteries for operation and will work perfectly using this input. Instruments made by MTD, Sadowsky, Modulus, etc., have active electronics that are suited for use in the Passive/Active input.

Generally speaking, try this input first. If you hear a small amount of distortion and the Preamp Clip LED is not activated, try using the Active input jack. If the Active input does not correct any audible distortion, check the battery in your bass.

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/Active 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 until the LED does not light. The first preamp tube stage is NOT monitored by the preamp clip circuit for this reason.

Active Input Jack

The Active input jack should be used with instruments having a built-in (on board) preamp or other sound sources that will produce output levels greater than 1 volt RMS. The number of bass manufacturers has increased significantly over the years, and it's impossible to try and keep track of them all. Generally, if you have very "hot" pickups and/or tone controls installed in your instrument, and you use them to boost the level of your bass signal 10 dB or more, you may find the Active input more compatible. The best judge is your own ears.

If you're using a keyboard or bass pedal with the 750x, we have found the best choice to be the Active input.

Note: *Using the Active input with passive basses (active instruments will always employ a battery) may result in a loss of high end transients. Players who roll off their high end starting at about 2kHz, or 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, make sure the Preamp Clip LED indicator is not lighting. If the preamp stage is not being driven into clipping, replace the battery in your instrument.

Gain Control

The Gain control adjusts the volume of the preamp section. Since the Gain control is similar to a "pad," a small amount of signal will be heard even with the Gain control rotated fully counter-clockwise ("MIN") if the Master Volume is up.

After all EQ settings and the Aural Enhancer are set, the Gain control should be raised until the Preamp Clip LED barely flashes when your loudest note is struck. This will insure maximum signal to noise ratio and prevent unwanted clipping of the preamp section.

Note: *The Gain can serve as an EFFECTS SEND LEVEL ADJUSTMENT. If your effect is being overdriven, turn down the Gain control and readjust your Master Volume for overall loudness.*

Preamp Clip LED

The Preamp Clip LED will light whenever the preamp, tone section or output buffer reach clipping (run out of headroom). This function does NOT monitor the first tube stage of the Passive input. See that section for more info.

In the event the clip indicator lights, turn down the Gain control. Since this circuit monitors the tone controls, boosting any one of them can cause the Preamp Clip LED to activate. Once again, you may leave the tone control at its desired level, but turn the Gain control down further.

Note: *Even though the Preamp Clip LED lighting indicates that at some point the preamp is clipping, no harm is being done to your amplifier. However, clipping of the power amp can cause damage to your speakers and is not recommended.*

Aural Enhancer

The Aural Enhancer is a feature that's been on just about every SWR amplifier since the company's inception in 1984, and is a trademark part of the "SWR Sound" people have come to know and love.
It was developed to help bring out the fundamental low notes of the bass guitar, enhance the high-end transients, and reduce certain frequencies that help "mask" the fundamentals. The ultimate result is:

1. **A more transparent sound, especially noticeable when slapping and popping.**
2. **It can make a passive bass take on an "active" type of quality when set at positions of "2 o'clock" or further clockwise.**

Let's take a second to learn how the Aural Enhancer works. Think of it as a variable tone curve that changes depending on where you set the Aural Enhancer control knob. As you raise the control clockwise from the "MIN" position, you are elevating a whole range of sound (lows, mids, and highs) at a variety of frequency points selected specifically because they're different than those selected for the individual Tone Controls.

This remains true up to about the "2 o'clock" position. This position—a favorite for many users—brings out both the low end fundamentals and crisp highs and, at the same time, adds a little lower midrange to help cut through the band. However, if you go further clockwise and past the 2:00 position, selected mids will start to drop off—specifically, a group of frequencies centered around 200 Hz. At this point and after, the effect becomes much more pronounced. However, the curves involved here are gentle, as opposed to the very extreme curves you can create by boosting or cutting the Active Tone Controls (EQ).

Most significantly for basses, the Aural Enhancer will help bring out the fundamentals of your lower registers without masking them with overtones, as is possible when using the Bass control only. At the same time, it opens up the sibilance characteristics of all instruments without being harsh.

Obviously, numbers and curves and circuits all mean nothing compared to what you hear with your own ears. Play a chord, a repeated lick, or a harmonic, and turn the Aural Enhancer control to various points on the knob to hear the effect for yourself. As always, your ears are the best judge when it comes to settings that affect the tone of your instrument.

Overdrive Controls

Based on the extremely popular circuit from SWR's groundbreaking Mo' Bass Soundstation, the Tube Overdrive onboard your 750x has been carefully calibrated to give you as much (or little) overdriven signal as necessary, all the while keeping the low end (and ultra-high end) wholly intact through the use of low and high-pass filters. That's the technical description. In plain English, it's just like a second channel on the front end of your amp. And by using the "Drive" (think: pre) and Level (think: post) controls, you can dial it in to get just a little bit of "edge" on the note... or, if you prefer, you can turn your tone into a buzzsaw and cut down trees with it.

Overdrive Activator Switch

Located directly above the Overdrive controls, this is an illuminated push-button switch that activates the Overdrive effect. When engaged, the switch cap will illuminate in red. Push once to engage, then again to disengage. (The Overdrive effect can also be switched on and off via footswitch; please see the heading titled "Effects Activator Footswitch Jacks" in the "Rear Panel Features" section later in this manual.)

Overdrive "Drive" Control

Located on the outer portion of the dual concentric knob underneath the Overdrive Activator Switch, the Drive Control adjusts the amount of distortion present in the signal. Some people refer to this element of an overdriven signal as the "pre" or the "gain." Rotating the control clockwise will increase the distortion present, while going counter-clockwise will decrease it. To hear what kind of effect this control has on your sound, engage the Overdrive effect by pushing the Overdrive Activator Switch (at which point the switch should illuminate in red). Set the Overdrive level (the inner portion of the dual concentric knob) to the 12:00 position. Now strike a note repeatedly and slowly turn up the Drive control to your liking.

Overdrive Level Control

Located on the inner portion of the dual concentric knob underneath the Overdrive Activator Switch, the Level Control adjusts the factor by which the signal level is boosted before leaving the Overdrive circuit and blending back into the clean signal. Some people refer to this element of an overdriven signal as the "post" or the "master." Rotating the control clockwise will increase the level of the distorted signal, while going counter-clockwise will decrease it. It can be used in conjunction with the Drive control to achieve "unity gain" (no overall level difference) with your clean sound, or to help you achieve as much boost as you feel is necessary when engaging the effect.

Using The Overdrive Controls

As mentioned previously, the two controls are meant to work together to help get you the kind of overdriven sound you want. For a mellow "fuzz" on the note, or just a touch of drive, set the Drive fairly low and the Level fairly high. For a drastic tonal change involving heavy distortion while keeping your levels intact during channel switching, set the Drive high and the Level low to medium (you'll notice that you need a certain amount of Level dialed in to make the circuit effective). As always, the best judge is your

own ears.

Remember, when you've got this effect engaged, you've essentially converted your 750x into a two-channel amplifier. The Overdrive acts as "Channel Two," and you can set it to best suit your needs in combination with the level of the clean "Channel One." How do you control the level of "Channel One?" By using the Gain Control, which controls the level of the clean bass signal in the preamp.

Also, the EQ Controls are located after the Overdrive circuitry, so they can have a drastic effect on the distorted tone. (The treble control is especially useful for adding or removing a nasty edge to your Overdrive sound.) And don't forget about the Limiter, which, when dialed higher than you might think necessary, is often useful in combination with distorted signals to create warm, smooth overdriven tones. Finally, if you engage the effect and both the Drive and Level controls are set to minimum, there will be little or no change in your tone. This is normal.

SubWave™ Controls

Once again, based on the circuit from SWR's Mo' Bass, the SubWave™ on your 750x is a lightning-quick sub-octave wave engine with tracking superior to other models of sub-octave effects currently on the market. In plain terms, it hears the note you play and immediately generates a signal one octave below it—all the way down to low "C#," "C," or even low "B" on some basses!

SubWave™ Activator Switch

Located directly above the SubWave™ Level Control, this is an illuminated push-button switch that activates the SubWave™ effect. When engaged, the switch cap will illuminate in blue. Push once to engage, then again to disengage. (The SubWave™ effect can also be switched on and off via footswitch; please see the heading titled "Effects Footswitch" in the "Rear Panel Features" section later in this manual.)

SubWave™ Level Control

Once the SubWave™ effect is engaged, you can use this control to determine the amount of effect to be blended in with your original ("clean") bass signal. Turning the control clockwise will increase the amount of effect, while turning the control counter-clockwise will decrease the amount of effect. When the control is set fully counter-clockwise to "MIN", no effect will be heard, even though the effect is engaged and the Activator switch is illuminated in blue. This is normal. Also, when the control is set fully clockwise to "MAX", the "clean" bass signal will still be present...along with plenty of sub-octave effect. As always, your ears and the desired musical application will be the best judge in setting this control.

(Keep in mind that the Bass Level control will have a significant impact on the perceived level of the SubWave™ effect as well, as it follows immediately after the SubWave™ in the signal chain. Please read below.)

Balancing Levels When Using Both Onboard Effects

If you wish to use the Overdrive and Subwave™ effects at the same time, here's something you should know. The Gain control effects the level of the Subwave™ effect, but it does not affect the Overdrive. So, if you're balancing the overall Overdrive signal against the clean sound, it's worth remembering that if you turn the Gain Control down, you're also reducing the amount of Subwave™ present in the final blended signal. Basically, when it comes to setting levels for using both effects at once and switching back and forth between sounds, you have three controls you can adjust: the Gain Control, the Overdrive "Drive" Control, and the Subwave™ Level Control. Experimentation is encouraged.

750x – ACTIVE TONE CONTROL SECTION

Bass Control

The Bass control employs a shelving-type circuit and boosts or cuts the bass response +/–15dB, from about 30 Hz to 100 Hz, centered at around 80 Hz. Starting at the control's mid-position ("center-click"), turning the control counter-clockwise cuts the bass response, and turning the control clockwise boosts the bass response.

You'll find that the Bass Level control will boost or cut the SubWave™ effect along with the "clean" bass signal; that's because of the range of frequencies covered by this particular control. You can use both the Bass and SubWave™ Level controls to get a good balance between how much bass you want in your clean

sound, and how much of a bass boost you want when engaging the SubWave™. Some users will want a significant boost, while others may be striving for a more consistent level (or "unity gain"). Again, let your ears and musical taste be the judge.

Pull Turbo

Pulling the Bass Control knob to the "out" position widens the bandwidth of the bass control, and changes the center-point frequency from 80 Hz to 40 Hz. It has the effect of more clearly enunciating frequencies down to 30 cycles (low "B" on a five string bass). Often these notes can be felt more than heard, so you may want to re-check the Preamp Clip LED, and listen for power amp clipping or speaker distortion as well. Constant clipping of these frequencies can diminish the life of the speakers or cause them to fail much sooner than expected.

Note: *Setting both the Bass (with or without Pull Turbo engaged) and SubWave™ Level controls near or at maximum boost will increase the overall amount of bass in your signal VERY SIGNIFICANTLY! We're all in favor of that, just so long as your speaker cabinet can handle the peak levels. Remember, adjust the controls slowly, and use common sense.*

Midrange Controls

Your 750x comes equipped with two different controls for setting the amount of midrange present: one for boosting and cutting the level of midrange, and another for setting the specific midrange frequency that will be adjusted in level. Both controls exist on one dual concentric knob. The Level control is located on the inner portion of the knob, while the Frequency control is located on the outer portion of the knob.

Midrange Level Control

The Midrange Level control cuts or boosts the frequency set by the Midrange 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 (set by the Midrange Frequency control). When the level control is set at mid-position ("center-click"), turning the frequency control will have no effect on the sound.

To find the midrange area you are looking for:

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

Midrange Frequency Control

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

Some hints: If you need to "cut through" the band a little more, try boosting 200 to 400 Hz. If you like a more transparent or "scooped" sound, try cutting at 800 Hz. The midrange controls are especially useful in controlling fretless basses and their inherent qualities.

Treble Control

The Treble control employs a shelving-type circuit and boosts or cuts the high frequencies (and their subsequent octaves) +/–15dB from about 2 kHz to 14 kHz. Starting at mid-position, turning the control counter-clockwise cuts the treble response, while turning the control clockwise boosts the treble response.

Pull Transparency

Pulling the Treble Control knob to the "out" position raises the lowest frequency affected by this control from 2 kHz to 4 kHz. This may be useful if you're looking to only boost the "high" highs, or "crystal" highs, as opposed to a broader range of treble frequencies that some players feel add too much of the more aggressive, high-midrange kind of treble to their tone. It can also help a set of dead strings make it through one more gig.

Effects Blend Control

The Effects Blend Control "blends" the signal sent from your instrument with the signal coming from your

EXTERNAL effects unit. (In other words, it has nothing to do with the Overdrive and SubWave™ effects onboard your 750x.) With the Effects Blend fully counter-clockwise ("DRY"), no signal from your external effects unit will be heard. As you turn this control clockwise, more of the effect can be heard in the overall sound. When the Effects Blend control is set fully clockwise ("WET"), no true or unaffected signal is heard other than what your external effects unit provides. If your external effects unit has a similar control, adjust it to the fully clockwise ("WET") position. This will avoid any possible phasing problems.

The Effects 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 control 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. (For more information, please see the heading titled "Effects Loop" in the "Rear Panel Features" section later in this manual.)

Variable Limiter Control

The 750x's soft knee-type limiter is there to help you protect your power amp from harmful states of operation. The circuit is located after the Master Volume and before the power amplifier, so it's driven by the Master Volume control. Its threshold (starting point) is preset by the factory so that you can get maximum overall apparent volume without unduly overdriving (or "clipping") the power amplifier—which, over time, can eventually damage the unit's internal circuitry, as well as damage speakers connected to your amp.

Using the control is simple. Turning the Limiter Control clockwise (toward "MAX") increases the amount of limiting on your signal, while turning it counter-clockwise decreases the amount. When trying to find the highest possible level of power amp operation under clipping, simply use the Master Volume and Limiter Controls together to find: a) The highest setting possible on the Master Volume; and b) The lowest possible setting of the Limiter... all while hearing no power amp distortion whatsoever.

Limiter Active LED

When the threshold (starting point) of the Limiter circuit is reached, the Limiter Active LED will light, indicating that the Limiter Circuit is active and helping to protect your power amplifier and speakers from power amp clipping. The Limiter LED will not illuminate when playing at levels not high enough to engage the circuit.

Note: *If you have the Limiter set at "MIN" and you hear a loud, sharp distortion present in your sound—and the Preamp Clip LED is not lighting up—engage the Limiter by turning up the control. If the distortion goes away, you were probably clipping the power amp, which is not a good thing. Remember, the Limiter circuit is there to protect your amplifier from such a state of operation.*

Master (Volume) Control

The Master (meaning "Master Volume") control adjusts the level being sent to the power amplifier in your 750x—it controls the overall volume of the unit. Turning the control counter-clockwise reduces the overall level, while turning the control clockwise boosts the overall level.

Two notes: The Master control never affects the level present at the various audio output jacks on the rear panel—it only affects the level being sent to the power amplifier, and subsequently, your speaker outputs only. Also, losses caused by external effects units can be recovered by increasing the Master control.

Speaker On/Off Switch

Setting the Speaker On/Off Switch up to the "On" position allows the signal from the amplifier to be heard through any speaker enclosure(s) connected to the Speaker Output section of the 750x. Setting the Speaker On/Off Switch down to the "Off" position disables the speaker output section. This feature allows you to:

1. **Use the Balanced (XLR) Output without using the internal speakers. This is especially useful in recording when you are "miking" the speakers and only a direct signal is required for the moment.**
2. **Tune up without making sound onstage (and interfering with other band members) while using the Tuner Out feature.**
3. **Defeat the "pop" you sometimes get when changing and/or unplugging instruments from the unit**

(especially if you sometimes forget to disconnect your instrument cable from the amplifier before disconnecting it from your bass, something that's always a good idea).

4. **Defeat the "pop" present upon powering up the unit (though it causes no harm to the unit and/or your speakers).**

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

This switch turns the complete unit on or off. Setting the switch upwards to the "On" position turns on the unit, and the switch itself will illuminate in red. Setting the switch downwards to the "Power" position will turn the unit off, and the red light inside the power switch will turn off as well.

750x – REAR PANEL FEATURES

Balanced (XLR) Output

The Balanced XLR out is a true electronically balanced output, suitable for studio and "front-of-house" (live) mixing consoles. The level present at this output can be adjusted by using the XLR Pad control (see the "XLR Pad Control" section below for more details). The signal appearing at the Balanced Output is governed by the setting of the three-position XLR Mode switch located directly below it (Line/Direct/ Direct + EFX).

In the LINE position, all front panel controls—including the Aural Enhancer, Overdrive, SubWave™, and EQ controls—are functional except the Master control, and the signal is essentially the same as that heard through your speaker system. If you are using an external effects device in the effects loop, that signal will also be present when in the LINE position (dictated by the setting of the Effects Blend control on your 750x). When in this position, the output level will be affected by the Gain control on the front panel as well as the XLR Pad control. It's worth noting that changing the level of the Gain control will affect the signal present at your speakers, the Effects Send jack, and the Balanced Output, while the XLR Pad control affects the level present at the Balanced Output only. For this reason, it's usually better to set your Gain control in accordance with the directions in the "Gain Control" previously listed in the "Front Panel Features" section of this manual, and to use the XLR Pad control to set the level specifically for the Balanced Output.

In the DIRECT position, the Balanced Output signal comes from directly after the first stage of the specially-selected 12AX7 preamp tube, giving you the sound of your instrument and some added warmth. In other words, it becomes an active TUBE direct box. In this position, no front panel controls are functional, and the Overdrive and SubWave™ effects are not present.

The third position for this switch is the DIRECT + EFX position. In this position, the signal present at the Balanced Output jack is the same as when in the DIRECT position, with one important exception: the Overdrive and SubWave™ effects are present. What's the benefit of this setting?

We've found that most people who use effects pedals prefer to use them in front of the amplifier. In other words, they run their bass into the effect pedal's input, then from the effect pedal's output into the front of their amplifier. In live applications where sound reinforcement is required, often times the front-of-house engineer will take a direct signal from the bass itself (via either a direct box, or the Balanced Output of your amp set to the DIRECT position) and use that signal as the main bass sound to the house PA. This way, if the bassist sets the amplifier's EQ controls in a way to his liking, but in a manner not conducive to a good bass sound for the house P.A., the front-of-house mixing engineer still has a nice, flat bass signal to work with, and then he can EQ the bass sound for what's best in the room. And, more relevantly, he would still get the sound of any effects pedal that was placed in front of the amplifier.

The DIRECT + EFX position provides this exact function for the Balanced Output. It always contains the sound of your bass signal just after the first tube stage, and will also contain the Overdrive and SubWave™ effects, when engaged, without also sending EQ settings that may not be right for the house PA. (or a studio mixing console). You can always include all of your EQ settings (plus the Overdrive and SubWave) at the Balanced Output by setting the three-position switch to the LINE position. But thanks to the DIRECT + EFX position of this switch, it's not a necessity that you do so just because you want your

effects present at the Balanced Output.

Note: *You can still use the Overdrive and SubWave™ Level controls to set the amount of effects present at the Balanced Output when in the DIRECT + EFX mode; however, that will also affect the level present at the speaker outputs. Also, though the Gain control will not affect the level of the "clean" bass signal present at the Balanced Output when in DIRECT + EFX mode, it WILL affect the level of sub-octave present. This is normal, and occurs because the SubWave™ circuit is located after the first stage of the preamp tube and is blended back into the signal specifically for this special mode of the three-position switch. We recommend that you set the Gain and Effects Level Controls in accordance with previously mentioned instructions, and the gain structure should fall into place fairly automatically.*

Wiring for the XLR jack at the Balanced Output is as follows:

Pin 1 = ground, Pin 2 = + (plus), Pin 3 = – (minus) (American Standard)

Note: *Turn off transients appear at the Balanced Output when the amplifier is shut down. We recommend that equipment being used in conjunction with the Balanced Output be turned down, off, or disconnected BEFORE the 750x is turned off.*

XLR Mode Switch (Line/Direct/Direct + EFX)

This three-position switch determines the signal present at the Balanced (XLR) Output jack as described in the section directly above. In simple terms:

1. **Direct = pre-EQ and onboard effects, post-first tube stage**
2. **Line = post-EQ and onboard effects**
3. **Direct + EFX = pre-EQ/post-first tube stage blended with onboard effects**

Make sure the switch is set either to full left, full right or center to avoid an intermittent condition.

XLR Pad Control

This control sets the level present at the Balanced (XLR) Output. Turning the control counter-clockwise reduces the overall level, while turning the control clockwise boosts the overall level. It should be noted that turning the control fully counter-clockwise to "MIN" does not fully defeat the signal. This is normal, as the XLR Pad is designed to provide a range of usable levels to be sent to a front-of-house or studio mixing console.

XLR Ground/Lift Switch

Sometimes connecting to certain mixing boards or studio consoles with non-standard XLR wiring can cause a ground loop. Your 750x has a push-button switch for lifting the ground on the Balanced (XLR) Output. (It affects no other outputs.) Pushing on the switch will change the mode of operation. When the switch is in the "out" position (default setting from the factory), ground is on Pin 1 of the Balanced Output jack as normal. When the switch is in the "in" position, the ground is lifted from Pin 1 of this output. If a persistent hum exists after trying both positions of the ground lift, there is probably:

1. **A bad cable or connection somewhere between your Balanced Output jack and the snake leading to the mixing console**
2. **A dirty or miswired A/C socket**
3. **Miswired or poorly wired A/C in the building**
4. **Fluorescent lighting directly above you or in close proximity (especially when using single-coil pickups)**
5. **A cell phone in your right pocket that's interacting with the electronics in your bass (don't laugh, this actually happens!)**

But, in the case of a true ground loop, this switch can often times solve the problem.

Tuner Out

The Tuner Out function allows the user to plug their 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 isolated on a side chain avoids loading down of the instrument, which can cause a loss in dynamic range.

To use this feature, connect a shielded patch cord from the Tuner Out jack on your 750x 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, you may turn down the Master Volume or set the Speaker On/Off switch to "Off".

Effects Loop (for external effects devices)

As mentioned previously in the "Effects Blend Control" section of the manual, the Effects Blend circuit in your 750x is similar to that used on recording consoles, with the effects loop on a "side chain" to the normal circuit. Unless the Effects Blend control is set to the full "wet" position, you will always get the full sound of your instrument AND get the diversity an external effects unit offers. Use of the effects loop will reduce the noise generated by external effects units (as compared to using the effect between your instrument and the input jack, though many people use it in this fashion anyway). This is because the loop is after the preamp gain stages.

The Effects Loop is compatible with most individual or multi-effect external effects devices. Many effects devices on the market have input level adjustments. For instance, some units have a switch that you can set for either –20 dB or +4 dB. In all cases, these should be set for 0 dB (if available) or +4 dB. The level going to your effect is controlled by the Gain control on the front panel.

Note: *The Effects Loop is used in conjunction with the Effects Blend control on the front panel. When the Effects Blend Control is in the full counter-clockwise ("DRY") position, no effects will be heard. This is normal.*

Connecting An External Effects Device To The 750x Effects Loop

Obtain two high-quality shielded patch cables, preferably as short as possible. Route them in the most direct way possible. (Running patch cables over the top of the 750x—as with any amplifier—can induce hum in the cables and is not recommended.) Take one cable and connect it from the Effects Send jack on the 750x to the input of your external effects device. Take the second cable and connect it from the output of your external effects device to the Effects Return jack on your 750x. To set levels, follow the instructions as previously listed in the "Effects Blend Control" heading under "Front Panel Features."

And, just so there isn't any confusion, the Effects Loop has nothing to do with the Overdrive or SubWave™ effects onboard your 750x. It is used only in conjunction with an external effects device.

Effects Send

This jack's primary function is to send a post-EQ-and-Overdrive/SubWave™ signal to an external effects device for use in the 750x Effects Loop. However, it can also be used as:

1. **A line level output for use in conjunction with an additional (slave) power amp—such as SWR's Power 750.**
2. **An unbalanced output suitable for recording or live mixing board purposes.**

The output impedance of the Effects Send jack is 100 Ohms.

Effects Receive

This jack's primary function is to complete the Effects Loop circuit by routing the post-external-effects device signal back into the power amp of the 750x, where it can be blended back in with the original signal by using the Effects Blend control on the front panel. However, it can also be used as:

1. **A power amp input jack. If, for some reason, you wished to bypass the entire front end and use the 750x strictly as a power amp, you could take the output of whatever line-level audio source you wished and connect it to this jack. Then, set the Effects Blend control to the full clockwise ("WET") position. Use the Master control to set the overall level, and your 750x is now a power amp only.**
2. **An input for pre-recorded music, for playing along and practicing purposes. To accomplish this, insert a CD player or other sound source into the Effects Receive jack. (It must be a MONO 1/4" plug that goes into this input, so you'll have to use a stereo-to-mono cable adaptor of some kind.) You can adjust the level of recorded music versus the "live" sound of your instrument by using both the Effects Blend control (the more clockwise the control, the more pre-recorded music**

signal you'll hear) and the volume control of your CD (or other) audio source. The mixed sound will be heard through your speakers. Besides pre-recorded music, this is also an excellent way to practice along with a drum machine.

Input impedance of the Effects Receive jack is 27k Ohms minimum.

Note: *Inserting a plug into the Effects 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, it will be necessary to tie the ring and the ground together.*

Preamp Out

This jack provides another audio output, but it is located later in the signal chain than the Effects Send jack. This signal is post-EQ AND post-effects loop, but still before (pre) the Master Volume control. You should use this jack when using an effects device in the effects loop and wish to achieve:

1. **A line level output for use in conjunction with an additional (slave) power amp—such as SWR's Power 750.**
2. **An unbalanced output suitable for recording or live mixing board purposes.**

Effects Activator Footswitch Jacks

Your 750x comes equipped with the capability for hands-free control of the onboard Overdrive and SubWave™ effects. To achieve this function, locate the dual footswitch included in your 750x packaging. Connect the end with the two 1/4" color-coded phone plugs to the corresponding input jacks on the rear of your 750x as follows:

Red = Overdrive

Blue = Subwave

Note: *In some cases, the color code on the Overdrive plug is gray, and the Subwave plug is orange.*

Turn the effects on and off by stepping on the desired switch or switches. As you do so, the illuminated switches above the Overdrive and Subwave™ controls on the front panel should alternate on and off, and the chosen effect(s) should engage and disengage accordingly. (Just so you know, we left the footswitch jacks independent of each other just in case you want to use your own separate footswitches and locate them in different positions on your custom pedalboard.)

Note: *The type of switches contained inside the footswitch chassis are both momentary, normally open. Also, if you connect the footswitch to the unit while the unit is on, the effects may engage. This is normal.*

Cooling Fan & Fan Mode Switch

The power amp in your 750x is cooled by two methods: a) an (internal) extruded aluminum heatsink; b) a fan. Be sure to leave at least a 1/2" clearance between the vent on the top of your 750x and anything you wish to put on top of it. This will allow for the heat generated by internal components to escape.

You have complete operational control of the fan via the Fan Mode Switch. Setting the Fan Mode Switch to the "On" position activates the internal cooling fan. Setting the switch to the "Off" position deactivates the cooling fan, regardless of the internal temperature of the unit. For this reason, it is recommended that the Fan Mode Switch be set to the "On" position for the majority of the time that the amplifier is in operation.

Note: *It is normal for the cooling fan to be audible at low levels. We recommend deactivating the fan only in situations where the noise floor is so low that normal fan noise might be noticeable or distracting, such as recording situations where a microphone is used in close proximity to the unit.*

750x – SPEAKER OUTPUT SECTION

This section of the manual will deal with the proper connection of speaker cabinets to the power amplifier in the 750x. Some of this ground has already been covered in the "Getting Started—Connecting Your Speaker Cabinets" section in the beginning of the manual. This is meant to supplement that section and provide information in greater detail, as power amplifiers, impedance and speaker cabinets are all crucial

in determining how best to operate your new 750x.

How Impedance Affects Power Ratings

People often have questions about impedance. What is it? The root of the word "impedance" is the verb "impede," which means to block or resist. That's what impedance is—resistance to power.

Solid-state power amps do not have a pre-determined impedance. They deliver power at whatever impedance the speaker cabinet tells it to. That's why you hear the term "slave amp"—amplifiers only do what they're told. So if someone tells you that they have a "4 ohm power amp," their terminology and understanding of the concept is way off the mark.

Unlike power amps, every speaker cabinet has a pre-determined impedance rating measured in "ohms." In most cases this rating is either 4 or 8 ohms (though there may still be some old 2 ohm creakers out there). The higher the impedance of the speaker cabinet, the more resistance to power it will offer. The lower the resistance of the speaker cabinet, the less resistance to power it will offer. In other words, HIGHER IMPEDANCE MEANS LESS POWER CAN ENTER THE SPEAKER CABINET. LOWER IMPEDANCE MEANS MORE POWER CAN ENTER THE SPEAKER CABINET.

You may be thinking that you've found the solution to the universe—just use speaker cabinets with really low impedances and you can get skull-crushing power out of your amplifier, right? Wrong. There's a catch. Power amps have limits as to how low an impedance they can drive safely. This is what's known as an amplifier's "Minimum Impedance Rating." If you try and operate a power amp below its minimum impedance rating, it will give you lots and lots of power for about five minutes...and then overheat, short out and fail completely. In other words, THE LOWER THE OPERATING IMPEDANCE OF THE AMPLIFIER, THE HOTTER IT WILL GET.

750x Power Amplifier Minimum Impedance Ratings

Here's what this means to the power amp in the 750x. As mentioned previously, the 750x contains a mono power amp, which makes things fairly simple. The Minimum Impedance Rating of the 750x is 2.6 ohms. This means that you can safely connect:

- **One 8 ohm speaker enclosure**
- **Two 8 ohm speaker enclosures**
- **Two 16 ohm speaker enclosures**
- **One 4 ohm speaker enclosure**

The optimum operating impedance for the 750x is 4 ohms. This way you get a good amount of power from the amp (750 watts—we'd call that "a good amount!") without operating too closely to the minimum impedance—or, in simple terms, without running the amplifier too hot. That said, the 750x is rated to operate safely when connecting:

- **One 8 ohm and one 4 ohm enclosure (2.6 ohms total)**
- **Three 8 ohm enclosures (2.6 ohms total)**

These two hookups will provide 850 watts of power—which should be more than enough for just about any application!—but as previously mentioned, your amplifier will run hotter, and an amp that runs at or near its minimum impedance all the time may wear the life of its components faster than normal. Furthermore, damage to the power amplifier section of the 750x may occur if speaker enclosures with total impedances less than the minimum loads listed above are connected to the speaker output section. The owner's manual that came with your speaker cabinet should state its total impedance. On SWR speaker enclosures, the total impedance is generally indicated on the speaker's input panel.

So how do you determine the total impedance of two cabinets hooked up to your 750x? Here's a quick key of the most common setups:

One 8 ohm enclosure + one 8 ohm enclosure = 4 ohms total impedance

One 8 ohm enclosure + one 4 ohm enclosure = 2.6 ohms total impedance

One 4 ohm enclosure + one 4 ohm enclosure = 2 ohms total impedance

Here's another formula: To figure out the total impedance of two or more cabinets of equal value hooked up in parallel, divide the impedance of one cabinet by the number of cabinets:

Impedance of one cabinet / number of cabinets = total impedance

(For an even more in-depth discussion of impedance and power rating issues, go to the SWR Website at www.swrsound.com, click on "Press," then click on "Articles," then click on "Plug and Play: Setup Tips for Amps and Speakers"—an article by SWR founder Steve Rabe that ran in the August '92 issue of *Bass Player* **Magazine.)**

750x Power Delivery Capabilities (Power Ratings)

After determining how the number of cabinets you wish to run affects the total operating impedance, you need to take into account the power handling capabilities of your speaker cabinets as compared to what the 750x can deliver at that impedance. Those ratings are as follows:

850 Watts @ 2.6 ohms

750 Watts @ 4 ohms

450 Watts @ 8 ohms

So if you have two 8 ohm speaker cabinets, they will each get up to 375 watts of power, and more during transient peaks. A single 4 ohm cabinet will get 750 watts of power, and again, more during peaks. Make sure your speaker cabinet(s) can handle the power!

Also be aware that when running the amp at 2.6 ohms, you are operating at or near the maximum capacity of the power amplifier. With extreme settings on the Gain and Master controls, you may hear audible clipping of the power amp. If so, you have exceeded the maximum capacity of the power amp. POWER AMP CLIPPING CAN CAUSE DAMAGE BOTH TO ITSELF AND YOUR SPEAKER CABINETS. If this occurs, back off on the Gain and Master controls, and/or engage the Variable Limiter at a higher setting.

Remember, it's always better to have a little too much power than just barely enough. If you find yourself constantly wanting more power than the 750x provides, either:

a) Tell your bandmates to turn down

b) Tell the monitor engineer to turn you up

c) (best option) Take the time to investigate getting an external power amp and/or additional speaker cabinets to supplement your rig.

Question: Can you safely daisy-chain an 8 ohm speaker cabinet and a 4 ohm speaker cabinet together even though they have different impedances? Yes, but one speaker cabinet will get more power—and be louder—than the other. Since your 750x is a mono amplifier, it is best to use cabinets of similar impedances when using more than one. The best two-cabinet setup is to use two 8-ohm enclosures.

Note: *The frequency response of the 750x is far greater than usually found in musical instrument amplifiers (20 Hz to 40 kHz). This was engineered in order to give the bass player the same punch and clarity on stage as found in the studio or concert PA. systems. Therefore, it is doubly important that you are aware of the impedance and power rating of the speakers that you intend to use, and that they are compatible with the 750x. Speakers that have been overdriven are easy to detect and generally do not fall under a manufacturer's warranty.*

Speaker Output Jacks

Two 1/4" phone jacks and two Speakon jacks (all wired in parallel) are provided for connection of the 750x to your speaker system. Whenever possible, use of the Speakon jacks is recommended. Speakon jacks and connectors offer the best possible connection and are far superior to banana or 1/4" phone jacks in that they not only lock in place (preventing accidental disconnection), but also offer a greater and more stable connection surface. This solid connection provides a more effective transfer of power to your speakers.

Only SPEAKER CABLE of 18 gauge or heavier (the heavier the cable, the lower the gauge) should be used to connect your 750x to your speaker system. Do not use shielded instrument cable to connect your amplifier to your speaker enclosure, as this can result in intermittent power loss, cause your amp to oscillate and damage itself and/or your speakers, and render the cable useless for any purpose.

Note: *Unlike most amplifiers on the market, the 750x can be used for recording purposes without speakers attached to the speaker output jacks (using only the Balanced [XLR] Output).*

Recommended single SWR Speaker enclosures for use with the 750x include:

- **Megoliath 8x10**

- **Goliath Senior 6x10**
- **Big Bertha 2x15**
- **Henry The 8x8**
- **12-Stack 4x12**
- **Workingman's Tower 8x10**

Recommended SWR Speaker combinations for use with the 750x include (all are 8 ohm models):

- **(2) Goliath III 4x10s**
- **(2) 12-Stack 4x12s**
- **(2) Son Of Bertha 1x15s**
- **(1) Goliath III 4x10 & (1) Son Of Bertha 1x15**
- **(1) Goliath III 4x10 & (1) Big Ben 1x18**
- **(1) Goliath III 4x10 & (1) Goliath Junior III 2x10**

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 hookups. Size and rating of the fuse is 3AG, 10 amp, fast-blo. Do not defeat the purpose of this feature by using a higher rated fuse as it can damage your amplifier and void your warranty.

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, it is wise to carry extra fuses at all times.

Line Fuse (A/C 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. Do not defeat the purpose of this feature by using a higher rated fuse as it can void your warranty.

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

United States: 10 amp slo-blo

Japan: 10 amp slo-blo

Europe (230V-240V): 5 amp slo-blo

A/C Cord Receptacle

This receptacle accepts a standard A/C power cable (supplied with the 750x in the United States) used with almost all current musical, professional and household electronic devices. We recommend great care when packing up. If your unit is not in a rack case, put the cable in your instrument or accessory case or leave it attached and looped around one of the rack handles. If it does become misplaced, a replacement cable can be purchased at almost any music or computer store.

Note: *The rating for this cable is 3 conductor, 10 amperes minimum. Look for this rating on the cable. Make sure the cable is plugged in all the way in both the amp and the wall socket.*

Internal Feature: Vacuum Tube (Valve)

SWR installs a specially selected 12AX7A dual triode on the preamp circuitboard of every 750x. If this tube needs replacing, we recommend that you replace it with a similar high quality product. This tube will need replacing if it becomes noisy or microphonic (which sounds like glass tinkling in the background of certain notes), or completely fails (causing no signal or signal at very low levels). The tube in your 750x should last one to three years, depending on usage.

RACK MOUNTING INSTRUCTIONS

To preserve the beauty and reliability of your amplifier, we recommend that you install your amplifier in a

rack case. The 750x is completely ready to be rack mounted and needs no additional parts or accessories other than the rack screws and the case itself.

The 750x takes up three full rack spaces. If the rack in which you mount your 750x requires that the rubber feet on the bottom of the chassis be removed, please remember to keep the screws handy in case you wish to reattach the rubber feet at a later date.

The 750x should be mounted as close to the bottom of the rack case as possible. If you must mount the 750x 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.

Please do not 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 750x and with your rack case rails. We recommend that at least once a month you remove the 750x from the case and tighten all outside screws and wipe off the outside of the chassis with a damp cloth. Then check all the connections in your rack case and reinstall the unit.

A FEW WORDS CONCERNING HEAT

One of the most asked questions about our amplifiers is why they tend to get warmer than other amps. The chassis of your amplifier can get quite warm during normal usage. This is especially true if you are operating your 750x at the minimum 2.6 ohm total impedance. This is because these low impedances are introducing the least efficient condition of the unit (in terms of power drawn from the outlet in relation to power produced in the speakers). The difference in these two figures can be as high as 300 watts. This would be the equivalent of putting a 300-watt light bulb inside a metal box, which would obviously get quite hot.

Most musical instrument amplifiers on the market today use steel for their chassis, which does not conduct heat as well as aluminum. The 750x uses an all aluminum chassis and front panel because it has less impurities than steel, is less susceptible to rust, and is a better conductor of heat. This results in the chassis acting as an additional heatsink, drawing heat away from heat-producing components inside and thus extending their life. In this manner, we feel we have produced a more reliable amplifier, but at the same time, the outside of the 750x will get warmer than cases made out of steel.

The one condition you should be aware of is if one or more of the power amplifiers in your unit becomes "over-biased." This condition can be recognized by turning your amplifier on and letting it sit "idle" (without speakers plugged in and without playing it). If your unit starts getting hot under these conditions, it may be over-biased. This situation should be attended to and can be easily remedied in about 15 minutes by a qualified service technician. A power amp can become over-biased through continuous vibration or by any large jolt received in shipping, etc.

FINAL ENGINEERING SUMMARY

The two preamp gain stages utilize a specially-selected 12AX7A. The tone controls incorporate I.C.'s, and the power amp is designed with extremely high quality bi-polar devices. Each type of device was chosen for its performance and reliability in the application used. The front panel and chassis of the 750x are comprised of aluminum, because of its superior electrical and thermal characteristics and light weight. All primary electrical components are U.L. approved, and SWR uses Beldon Cable for all shielded wire. All units are assembled by hand and individually soundtested in the USA at our factory in Southern California.

750x LIMITED WARRANTY

The SWR 750x from FMIC is warranted to the original consumer purchaser for TWO YEARS from the date of purchase, against defects in materials and workmanship and provided that it is purchased from an Authorized SWR Dealer. This warranty applies only to products purchased in the USA or Canada.

This warranty is VOID if the unit has been damaged due to accident, improper handling, installation or operation, shipping damage, abuse or misuse, unauthorized repair or attempted repair, or if the serial number has been defaced or removed. FMIC reserves the right to make such determination on the basis of inspection by an Authorized FMIC Service Center.

All liability for any incidental or consequential damages for breach of any expressed or implied warranties is disclaimed and excluded herefrom.

Some states do not allow limitations on how long an implied warranty lasts, or the exclusion or limitation of incidental or consequential damages, so that the above exclusion may not apply to you. This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

SHOULD YOUR SWR AMPLIFIER REQUIRE SERVICE OR REPAIR, PLEASE USE THE FOLLOWING PROCEDURE:

1. Locate your original receipt showing date of purchase, model and serial number.

2. Determine the closest Authorized FMIC Service Center to your location. The fastest way to get a complete list of Authorized FMIC Service Centers is on the web, at:

   http://www.mrgearhead.com/faq/allservice.html

   You can also get this information by calling FMIC Consumer Relations at (480) 596-7195.

3. To receive warranty service, return the complete product to an Authorized FMIC Electronics Service Center, with proof of purchase, during the applicable warranty period. Transportation costs are not included in this Limited Warranty.

4. Defective products that qualify for coverage under this warranty will be repaired or replaced, at FMIC's discretion, with a like or comparable product, without charge.

For a complete list of Authorized FMIC Service Centers, and the latest SWR news, interviews, and more, check out our website:

swrsound.com

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