# AMPLIFICATION

## SHIVA USER MANUAL

## Please read safety instructions before you use this amplifier!!!

#### Features:

- 2 Channel All-Tube Design
- Ch.1: Bass, Treble & Volume control, Bright switch
- Ch.2: Bass, Middle, Treble, Gain & Volume control, Bright and Shift switch
- Boost mode, variable via independent Volume control on Ch.2
- Common Master Volume and Presence control
- Tube-buffered series FX-Loop with pedal and rack sends and returns
- Functions on footswitch: ch.1 or Ch.2, boost, reverb

#### **OPTIONS:**

- 80 watt EL34 or 60 watt 6L6 power amp
- Reverb with independent reverb level controls for each channel
- **20**<sup>th</sup> **Anniversary** circuit, 90W KT88, Mode switch for Ch. 2, excursion control, plexi panel with gold background, head enclosure with classic bottom mounted look (see 2.e)
- Available as Head, ported 1x12 or 2x10 closed back combo and open back 2x12 combo

**DIMENSIONS and WEIGHTS:** Are subject to change anytime, Please measure *your* amp carefully if a Custom Case is being made. *Add ¾ inch for each, handle and rubber feet.* 

Head:	10"	Н	24.50"	W	10.50"	D	41 pounds
1x12 Combo:	21.37"	Н	24.25"	W	10.50"	D	68 pounds
2x10 Combo:	21.37"	Н	24 ½"	W	10.50"	D	71 pounds
2x12 Combo:	20"	Н	27.25"	W	10.50"	D	74 pounds

#### 2. How to use it:

Read this owner manual completely before use to fully understand your Shiva's functions. In paragraph e) the differences of the 20<sup>th</sup> Anniversary model are described.

#### a) Master Volume and Presence

The Master Volume and Presence work on both channels. Experiment with different combinations between Volume and Master Volume. You can set the Volume high and the Master Volume low or set the Master high and the Volume low. One setting could be just as loud as another, but they will feel and sound different.

#### b) Boost Function and Bright Switch

On Channel 1, with the Boost engaged, the Tone-Stack is bypassed. This means the Bass and Treble controls are not in the circuit anymore and have no effect on the sound. This was the only way to have a boost function on this channel with the original un boosted tone preserved.

With the Bright switch pushed in you get a brighter more open sound; this is less to none effective the higher the Vol.1 is set.

On Channel 2, with the Boost off use Vol.2, with the Boost engaged use B.Vol.2. This makes the boost variable and you are able to set it quite different.

With the Bright switch pushed in you get a brighter more open sound. This gets less effective the higher the Gain is set but still noticeable if turned all the way up.

#### c) Effects Loop

Your individual channel volume levels control how hot the effects loop send signal is, depending on the effect unit you may have to keep the channel volumes lower but you can then turn up the "Global Master Volume" to control your amps overall volume. The Shiva's Loop is a series Loop between the Pre and Power Amp, if you have an older version Shiva made prior to 12/1/05 see below for special info. Current version Shiva's made after 12/1/05 now have two Effect loop sends and one effect loop return. One send is a low-level Pedal/Instrument level and the other send is a hotter-level Rack/Line effects level. You can only use ONE loop send at a time. This newer version Shiva eliminates the need for the special "Effects loop cable" that older version Shiva's made prior to 12/1/05 sometimes needed to prevent effects from being overloaded from the hot loop send the older Shiva's had. Current Shiva's allow you to use the new low-level Pedal/Instrument level send for pedals and rack effects with inputs that overload easily. The new hotter-level Rack/Line level loop send is perfect for rack effects or pedal effects with a lot of headroom on their input stage. If you notice, after plugging in an effect through the loop that your tone is distorting or too compressed, try using the low-level Pedal/Instrument level send for pedals and rack effects with inputs that overload easily. If you're still overloading the effects input, remember to lower the individual channel volume levels since they control how hot the effects loop send signal is, you can then turn up the "Global Master Volume" to control your amps overall volume. If you would like to use the Shiva as a "Power Amp" only with other manufactures Preamps, plug your external preamps output into the "Power Amp In" Input jack on the back panel, located near the Effects Loop section. The "Power Amp In" bypasses the Shiva's preamp, you can still use the Master volume and Presence controls since these controls are part of the power amp circuit.

**NOTE for Older Shiva's made prior to 12/1/05 Effects Loop:** The Loop is a series Loop between the Pre and Power Amp; designed for line level-Fx (we used a Rocktron Intelifex). If you want to use an instrument level (floor) Effect unit or if your line level (rack) Effect unit is too sensitive for the hot send signal, you can use our special built in Boost Amp. All you need is a special level ducking cable, available from us or you can make your own, see the "How to Make Effects Cable" link on Shiva portion of our website. Plug this special cable between the Effects Loop Send output and Input of your Effect unit, make sure to insert into the Effects unit input the modified 1/4" plug. Plug the output of your Effects into the input of the Boost Amp (located on the back) and hook up the output of the Boost Amp to the return of the Fx Loop with a short jumper cable. This is necessary because of the lower output send level so it does not distort the input of your FX but we have to bring the level back up after it leaves the FX in order to keep the original tone of the amp. Remember (if you use the Loop) the Channel Volume controls work like send levels, the higher you set the Volume, the more Level comes into the Effect. Set the Master Volume for overall Volume. The Loop circuit is always in the sound chain (even if nothing is hooked up to it). If you want to bypass your FX, you would have to do it on the FX unit.

If you plug into the send you tap the signal of the Pre Amp and you could also send it to a recording device, mixer or another power amp etc. It would not be necessary to return the signal back into the amp. On the other hand if you plug into the return you disconnect the Pre Amp from the Power Amp. You could use your Shiva just as a Power Amp. As always, you must have the amp under load from a speaker cab or load box or damage may occur.

#### d) Reverb

If you switch the Reverb in, you hear a slight level loss. This is because the reverb circuit loads the amp down. On most amps you don't hear that because they don't have real reverb bypass and the amp is down loaded all the time. We decided not to do this because we like the open sound of the amp if you don't use the reverb. It is possible to change that with a very easy modification. Contact the factory for details. You have individual Reverb controls for each channel located on the back panel.

## e) 20<sup>th</sup> Anniversary Model

The 20thA model comes with a pair of KT88's and the amp is rated at 90 watts. The clean channel has an entire new boost circuit. Unlike the tone stack bypass boost on the other Shiva model this boost has a separate gain stage which brings this channel into Plexi territory when boost is engaged. The tone controls stay in the circuit and affect the sound.

The gain channel features higher gain and a slightly more refined type of gain. Two push button switches have been added to further shape the tone. The Shift button will as it is labeled shift the EQ., pushed in you will have a more Fender or type tone, less mids softer feel. One could say it will please the Dumble favoring players. The Mode button if pushed in will give a more aggressive in your face feel. A power amp dampening control was added located on the back panel. This control labeled Excursion is great to dial in a full sound at low volumes or adjust the right balanced bass to a cabinet. Be careful as this can add massive bottom to your sound which might overpower other frequencies and cover up an overall balanced sound. Best to keep low at higher volumes.

#### f) Speaker Outputs

If you put the amp in play make sure you have a load or speaker cabinet hooked up, otherwise you could damage the output transformer and the power tubes. Let's begin by hooking up a speaker to the new Speaker 1 "Use First" jack on the back panel of the Shiva. Be sure to set the impedance switch correctly, use the 16, 8, or 4 ohm setting to match your cabinet. If you're not sure what impedance your cab is, open the back of the cabinet and call your dealer. There are many ways to wire a speaker cabinet and you need to know what yours is rated at. To add a second speaker cabinet, use the second speaker jack and make sure both cabinets have matching impedances, the speaker output jacks are parallel so be sure to change the impedance selector to "half" the impedance rating of one speaker cabinet. For example: using two 16 ohm cabinets switch the impedance selector to 8 ohms or to use two 8 ohm cabinets you must change the selector to 4 ohms. Do not use two 4 ohm cabinets and NEVER EVER use mismatched speaker impedances. Next, flick the power switch (front panel, right side) to the center "standby" position and let the amp warm up for several minutes. This will stabilize the circuits and prevent a painful surge from flashing through your tubes. If you're kind to your amp, it will reward you with grateful reliability. When ready to play, flick the power switch up to the "play" position.

**NOTE for older Shiva's made prior to 12/1/05:** If you put the amp in play make sure you have a load or speaker cabinet hooked up, otherwise you could damage the output transformer and the power tubes. This older Shiva does not have an ohm selector; it has 3 speaker output jacks each labeled with an oval containing 2 numbers in it. One of the numbers in each oval is marked out with a black marker, so only the other number is important to you! If you hook up only one cabinet, the impedance (ohm value) of amp and cabinet should match: 4 into 4, 8 into 8 or 16 into 16. If you hook up two cabinets (they must have the same impedance, same ohm value). The total ohm value is half the value of one cabinet since they run parallel now: so two 16 ohm cabs plug into the two 8 ohm jacks, two 8 ohm cabs plug into the two 4 ohm jacks if your amp is wired with two 4 ohm speaker outputs of course, see the following for more details: The EL 34 Model has one 16 and two 8 ohm speaker outputs (the transformer has an internal 4 ohm tap also, so the outputs could be wired to 8 4 4 or 16 8 4 ohms if you wanted your amp customized)

**NOTE for 6L6 Shiva's made June 2002 and newer** are wired with one 16 and two 8 ohm speaker outputs, just like the EL34 models. Shiva 6L6 models made before June 2002 approx. do not have a 16 ohm tap. The older 6L6 Model have one 8 and two 4 ohm speaker outputs (the transformer has an internal 2 ohm tap also, so outputs could be wired to 4 2 2 or 8 4 2 ohms if you wanted your amp customized) Keep that in mind because most of the 4x12" cabinets are 16 ohms.

## g) Footswitch

Your amp comes with a 3 button footswitch, (Note: in the past 2 button footswitches were used for "older" non-Reverb Models, see below for info). One button is for switching between the two channels, one for engaging the boost on channel 1&2 and one for the reverb option if applicable. The footswitch jacks are located on the back panel. The top one is labeled reverb, the bottom one channel/boost. The older 2 button "non-Reverb" footswitch has one stereo (ring, ring, and tip) 1/4" plug which goes in the channel/boost jack. The 3 button footswitch has a second plug, a mono 1/4" plug (ring and tip), which goes into the reverb jack. If you don't know the difference between mono and stereo plugs look at them and you will notice the difference (Mono = tip, ring and Stereo = tip, ring, ring). Current Shiva's have a 4-position rotary switch on the right-side back panel. This rotary switch is only active when the footswitch is not plugged in. This rotary switch allows you to activate either: Position 1 = channel one or Position 2 = channel two or position 1+ = channel one with boost engaged or Position 2+ = channel two with boost engaged.

**NOTE for older Shiva versions made prior to 12/1/05:** On older Shiva's if you don't connect the footswitch only the Clean Channel 1 can be accessed, read further below on how to activate the High Gain channel 2 if not using a footswitch. On reverb models, the reverb is always on if the reverb footswitch plug isn't connected. NOTE using the "older version" Shiva without the footswitch connected: Some people may not need to use their footswitch because they only need one channel to play thru. The Shiva defaults to the Clean channel with the Reverb on when no footswitch is plugged in, however to activate the High gain channel without using the footswitch you have two options: First option, plug in a "shorted" mono 1/4" instrument plug, this will give you the High gain channel with the Boost function engaged as well. Second option: plug in a "shorted" stereo 1/4" instrument plug; this will give you the High gain channel without the Boost function. Shorted means the tip and sleeve/ground are connected; using a "right-angle" plug is a good idea also since it has a low profile and will not extend out from the amp chassis very much. Also you can easily short the 1/4" plug internally, just solder a jumper between the two contacts.

#### 3. Tubes

EL34's should be only Svetlana or old stock Siemens/Telefunken/Mullard. Other brands may work but it's risky because of the high plate voltage we use. 6L6 should be Svetlana or Sovtec 5881, we prefer the first. For preamp tubes you could use everything from 12AX7, 7025, ECC82, ECC83, 12AXWB, 12AX7WA, 12AT7 etc. Sovtek, EI, Electro Harmonix, Chinese, Tesla, GE, Philips, Telefunken, RCA etc. We prefer the Chinese 12AX7A's.

The Shiva has 6 preamp tubes (7 in reverb model) which do the following:

1st (closest to input jack) > Ch 1+2 > check that one if your amp gets noisy or microphonic. 2nd+3rd > Ch2 only

4th > one part (triode) Ch 1, second part for the loop send (affects both channels)

5th > loop return (affects both channels)

6th (second row in center of chassis) > phase inverter (affects both channels)

7th (second row towards side of chassis) > reverb

Note: If you want to experiment with different tubes the first 3 tubes are the most noticeable ones, sound wise. The less gain the tube has and the earlier the tube is in the sound chain (1st, 2nd...) the less noisy your amp is.

Make sure you turn your amp off when you switch tubes and be careful the tubes might be very hot!! Do not touch tube sockets with fingers? Even after turning your amp off and unplugging it from the power outlet there could be enough voltage stored in the capacitors to give you a lethal electrical shock. **Read safety instructions again!!** 

### 4. Speakers

The 1x12" combos made prior to June 2002, are loaded with a Celestion Classic 80 8 ohm speaker. 1x12" combos made June 2002 and newer use Celestion Classic 80 16 ohm speaker. If you want a more open vintage sound try a Celestion Vintage 30 NOTE: be careful how loud you play because the Vintage 30 speaker can handle only 60 watts.

Subject to change, depending on availability on Speakers.

#### 5. Troubleshooting

Make sure your read and understand the safety instructions!! Repairs should be done only by knowledgeable Technicians!! Always make sure your Cables, Guitars, Effects and Extension Cabinets are working and hooked up correctly. If you think something is wrong with your Amp, play straight into the Amp with nothing else hooked up other than a Guitar. That way you make sure it is the Amp. If you own a combo unplug the internal speaker and hook up an external speaker cabinet to make sure it's only the amp which is faulty. For noise check the appropriate preamp tubes (refer to f). Tubes are delicate and have a limited live span depending on operating time, temperature and mechanical influences. 99% of all sound and noise problems come from preamp tube failure. We let our amps run for at least two days before we ship them to make sure that the tubes work properly but since they have a glass housing and delicate little plates inside them it happened that they got damaged during shipping. Please don't feel discouraged. We don't manufacture tubes and can only retest them to make sure they're okay.

#### 6. Fuses

To check the fuses, use an Ohmmeter to make sure they're blown because sometimes you can't see if they're blown. The Main fuse for 100 and 117 volt models should be 3A (2A for 230 volt). The HT fuse should be ½ A on all models. Use only type "3AG Slow Blow" fuses. You can get those from Radio Shack. The HT fuse blows usually if your power tubes are bad to protect the power amp circuit from getting damaged. If the Main fuse blows it could be just a voltage peak from your power outlet. Put a new one in and see what happens. If it blows again give us a call. In most cases it is just a 20 cent rectifier diode for the plate voltage which went bad.

There you have it! It's all up to you now, be creative and push your musical imagination...For Questions call, check out our webpage: **www.bogneramplification.com**