



Owner's Manual

Generator
100w



welcome

Congratulations and welcome to the Revv family! The Generator guitar amplifier is our way of taking modern guitar amplification and giving it a new definition! One that brings monstrous tone and control together into one design that meets the needs of guitar players today! Tube technology is not new, but consider it improved in your new amplifier as you find your tone and end the search for the holy grail of amplifiers right here in your new Generator!

We know that with time your musical vision will expand, so we have made it our mission to give you the tools you need all in one amplifier. From beautiful cleans to high gain lead tone, modern control of functions in a state of the art interface, and the flexibility of channels to hold your favorite combinations, this amplifier will satisfy your needs as a professional player.

Thank you for choosing the Revv Generator and allowing us to share this state of the art guitar amplifier with you. We know you will love it and the way it dynamically responds to your playing technique and style, just like an amplifier should!

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warranty

This Revv Amplification Inc. product is warranted against manufacturing defects in material and workmanship for a period of five (5) years from the date of purchase to the original owner. Tubes and fuses however will be warranted for ninety (90) days from date of purchase of the product to the original owner. The warranty starts on the date of purchase by the original owner. This warranty is subject to the obligations and exclusions listed below.

Obligations:

This warranty will be honored with original proof of purchase to the original owner only. Warranty work must be authorized by Revv Amplification inc. in advance. All freight and duty (if applicable) is to be prepaid to and from Revv Amplification inc. of all products that requires and has been approved for warranty work. Revv Amplification inc. is not liable for any freight and or duty (if applicable) charges.

Exclusions:

Product that has been altered or are missing serial numbers will not be covered. Items that were damaged while being shipped to or from Revv Amplification Inc. will not be covered by this warranty. This warranty shall not apply to repair or replacements necessitated by any cause beyond the control of Revv Amplification Inc. including, but not limited to, any malfunction, defects, or failure caused by or resulting from unauthorized service or parts, damaged or broken tubes, improper maintenance, incorrect line voltages, liquid damages, modification or repair by the user, misuse, abuse, accident, neglect, or fire. Revv Amplification inc. does not authorize any party to assume for it any other obligation or liability. In no event shall Revv Amplification Inc. be liable for any damages arising from the use of this product, or for any delay in the performance of this warranty due to causes beyond our control.

safety instructions & warnings

Please read, understand and follow all safety instructions in this manual, as well as those on the rear panel of the amplifier. These instructions and warnings must be followed for your safety, and also to ensure that the amplifier will serve you for many years. Please use common sense when operating, this is a professional instrument designed for electric guitar amplification, and should only be used with electric guitar signals.

- Do not store or operate the amplifier in damp/wet areas.
- Do not keep items that contain liquid on or near the amplifier.
- Allow for 4-6 inches of space around the unit when operating. This unit produces heat and should be kept away from flammable items/objects.
- Never obstruct the top heat vent when the unit is powered on.
- Do not expose the amplifier to high temperature, keep away from radiators or heat producing/supplying items.
- Be sure to connect to an AC power supply that meets the power supply specifications listed on the rear of the unit.
- Do not use an AC power cord that is damaged, has been pinched or is missing prongs.
- This amplifier must be properly grounded to local standards when being operated. Do not use 2 pole extension or power cords to supply power to this amplifier.
- Remove the AC power cord from the amplifier when changing tubes, fuses or when moving the amplifier. Always replace fuses with the correct type and rating. Always remove AC power cord when removing chassis.
- The AC power cord should be removed from the outlet when left unused for long periods or when there is risk of electrical storms.
- No user serviceable parts inside, all service should be done by qualified personnel only.
- Always make certain the proper load is connected to the amplifier before operating. Always make connections to the amplifier with the power off.
- Your amplifier is designed to produce high volume/sound pressure levels. Long term exposure to these levels can damage your hearing. Please use hearing protection when exposed to these levels for extended periods to prevent loss of hearing or hearing damage.
- Keep away from children.

set up & power up

It is very important to place the amplifier in a dry location that provides 4-6" of space between the rear of the amplifier and anything in the area that has been designated for the amplifier. Tubes produce heat, and anything flammable should be kept away. Verify that the top heat vent is free from obstruction so that the heat produced by the tubes can escape from the interior of the amplifier. Now have a quick look at the tubes and make sure they are all seated in their sockets. Look good? We are ready to move on!

First, make sure that the power and standby switches are in the off (down) positions. Connect the amplifier to a speaker cabinet using a good quality speaker cable and set the impedance switch to the required impedance setting (See 3.5). Next, connect the AC power cord to the amplifier Mains connector on the rear of the amplifier and then to an AC outlet.

At this point, all other peripherals can be connected to the amplifier as well:

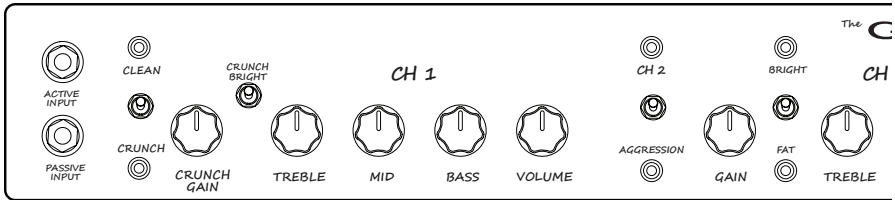
- Foot Switch (See 3.9)
- MIDI (See 3.8)
- FX Loop (See section 4)
- Line Out (See 3.5)
- Guitar and cable (See 2.1)

Note: A good quality, shielded instrument cable is recommended for guitar input as well as FX loop connections to prevent unwanted noise. Cables can color the sound of a guitars signal, and sometimes trying different cable lengths, can provide a desired sound.

Once all your connections are made, move the power switch to the On position and give the tubes at least one minute to warm up. Now is a great time to begin setting all controls while we wait. We recommend setting the master volume, channel level and gain controls to the lowest setting or zero (fully counter clockwise) and all treble, mid and bass controls to the 12 o'clock positions to begin. Set the bright and contour switches to the down position, the standby switch to the Revv (up) position and you are ready to begin exploring!

Note: Upon power up, you will have noticed that all channel LED's light up for a couple of seconds and then only the Channel 1 LED remains lit. This is normal as the amp does a start up sequence at power up then arms channel one to begin. This sequence will also assist you when setting other modes which will be touched on later in the manual.

front panel layout



2.1

Input

1/4" Instrument cable input.

Active Input – The active input jack is to be used with guitars that have active pickups and work better with lower impedance than a guitar with passive pickups. Because active pickups don't require high impedance and usually provide a stronger signal out, this jack provides the proper circuit in order to

keep the tone of the amp articulate and preventing unwanted compression and noise.

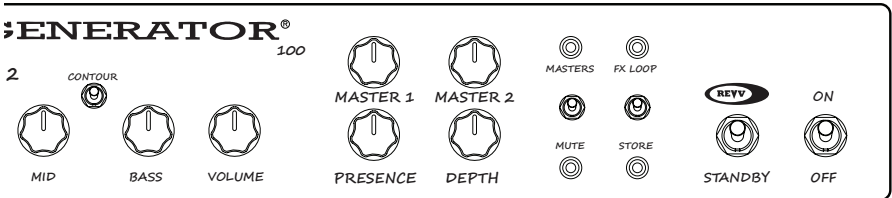
Passive Input – The passive input jack is to be used with guitars that have passive pickups and require high impedance for proper signal transfer. This jack is designed to get the strongest signal from a passive pickup to the first tube stage.

2.2

Channel One (Clean)

Selected by: 1) pushing the designated front panel momentary toggle switch up, 2) foot switch button #1 or a foot switch preset mode setting, 3) MIDI and CC commands.

Channel One CLEAN is equipped with a treble, mid, bass and level control. The passive EQ controls have a large range for all different clean variations and should be adjusted a little at a time while



2.2

experimenting with different sounds. The Generator clean has been tailored to have incredibly clean tone and is very

responsive and punchy to give you great versatility in finding the ultimate clean tone every time!

2.3

Channel One (Crunch)

Selected by: 1) pushing the designated front panel momentary toggle switch down, 2) foot switch button #1 or a foot switch preset mode setting, 3) MIDI and CC commands.

Channel One CRUNCH adds a gain control and bright switch to the EQ it shares with the channel one clean mode. These two modes have been voiced to share the EQ and still be switchable without large adjustments.

The gain control on channel one crunch will take you from a level above clean

at its lowest setting, to an old school medium gain crunch at full throttle. The definition of the channel is then complimented by an array of different sounds and settings once the passive EQ controls are adjusted to taste. But as always, adjustments should be made a little at a time as the range of control is very broad. Experimentation will expose many different combinations of great crunch tone. Throw the bright switch on and you have all you need to find your favorite combination of low to medium gain tones!

Finally, the level (volume) control adds the flexibility to keep the volume of the channel set as you require. Because the level control is added in the circuit before the effects loop, it also controls the amount of crunch channel signal

sent to the loop allowing for balanced signals from the two channels. This is a very handy feature that allows for volume boosts of desired channels without having to be limited to the master volume controls.

2.4

Channel Two (Dirt)

Selected by: 1) pushing the designated front panel momentary toggle switch up, 2) foot switch button #2 or a foot switch preset mode setting, 3) MIDI and CC commands.

Channel Two is equipped with a gain, treble, mid, bass and level (volume) control as well as aggression, bright, fat and contour switches.

The amount of gain from the channel can be selected by the relationship between the **gain control** and **aggression switch**. There are 3 levels of use from the aggression switch that shifts up the amount of gain, as well as the saturation and frequency spectrum. The range of the gain control itself in either of the 3 aggression settings is fully useable and will then dial in the amount of gain desired from the aggression setting selected. The relationship between the aggression switch and gain control will provide anything from a lower gain rock tone to a saturated metal or lead tone but still remain super articulate and well defined.

The aggression setting is foot switchable for on the fly selection, can be saved into the foot switch presets and is MIDI selectable essentially adding more channels to the amplifier.

The **EQ** controls on this channel are very broad and a little adjustment at a

time is suggested when experimenting. The range is large and the channel has been voiced to provide a huge frequency spectrum so as to make sure nothing is left out, but still remain very tight in the bottom end and not too harsh at higher frequencies. The midrange bite is very much present and the amount of cut can be easily tailored with use of the EQ controls and contour switch.

The **bright** and **fat switches** accentuate the EQ settings and give the channel more voice options. They do as they are described and really give the channel the added versatility that it was designed for without compromising the channels character. These switches are foot switch preset saveable and can be toggled via MIDI or CC commands.

The **contour switch** shifts the upper frequencies and changes the voice from that of a darker focused voice to a more open and bright voice that becomes projected and is almost 3 dimensional. Because the EQ will more than likely need to be set when the switch is toggled, it was not designed to be saved via foot switch presets or MIDI/CC selectable as it is considered to be an extension of the EQ itself. This switch is a latching type and not momentary like the others.

Master Volume Control

The Generator is equipped with 2 MIDI and foot switchable/programmable master volume controls. These controls come right after the effects loop and also work as the FX loop return control. These controls adjust the global volume of the amplifier and feed the preamp signal into the power amplifier and can be toggled from one to the other for complete volume control and boosts.

The master volume #1 control is in use when the red “masters” LED is off. And master volume #2 control is in use when the red “masters” LED is on. The controls can be toggled via the front panel “masters” toggle switch, the foot switch button #4 (or programmed bank) or a MIDI device. The “masters” function is also foot switch preset programmable and can be toggled via CC commands.

2.6

Depth & Presence

The Depth control is a bass control and will add some incredible low end to the output. Using the control sparingly is recommended to keep the bass response tight, as higher setting will give you a looser bass tone.

Note: Lowering the bass control on the four channels and increasing the depth control is also another means of experimenting with the voice of the Generator and the bass response.

The Presence control from the off position to the 2 o'clock position will give you a subtle increase in treble, and everything past that point will then provide a greater increase for a sharper cut.

Note: These are controls of the power amp section of the amplifier and are global controls which affect all channels. Because they work well with the EQ of each channel, experimentation will provide added tone and definition.

2.7

Function Controls

The accessory functions are activated by the momentary toggle switches. These switches are assigned 2 functions each and control the functions when the

switch is pushed in the direction of the functions label. The LED associated with each function will then react according to the state of the function.

A - Masters Switch

The **master volume** toggle switch is a momentary switch that needs to be pushed up in order to toggle between the 2 master volume controls. The Red

LED is illuminated when master #2 is in use and off when master #1 is in use. (See 2.6)

B - Mute Switch

The **mute** function allows for the amp to be silenced. This function requires the front panel momentary toggle switch to

be pushed down to be turned on and off. The Red LED will flash when the amplifier is in mute.

Mute can also be turned on by holding down button #4 on the foot switch for 2 seconds. Mute is also MIDI and CC controllable. (See Section 6)

Note: *It is not possible to program mute into a foot switch preset bank. Button #4 on the foot switch will control mute in any foot switch mode. (See Section 7)*

C - Serial FX Loop Switch

The FX Loop toggle switch turns the serial FX loop on and off, as well as in and out of the signal path. *On and off* is selected by pushing the toggle switch up and releasing it quickly, *in and out* is selected by pushing the toggle switch up and holding it until the LED flashes.

The *on and off* selection will set the amp to use the FX loop and activate the FX loop foot switch button #3 for use. When the FX loop is not being used it can be turned off and the foot switch will react to this condition by flashing the LED when stepped on.

The *in and out* control of the FX loop simply does what the foot switch would do when stepped on, it takes effects in and out of the signal path. This feature was added to be able to set the in or out

D - Store Switch

The store switch is used to program MIDI (See section 6) as well as set the MID channel. (See 6.3)

When the amplifier is powered up, by pressing the store toggle switch down, the store LED will begin to flash. At this point, the amplifier is waiting for a MIDI program command to be received. Once received, the current amplifier configuration will then be saved to memory so

Note: *Mute is a handy feature that is not found on many amplifiers today. It is something that takes time to remember to use instead of fiddling with volume controls and the standby switch. It is also very helpful for tuning live and should be taken advantage of whenever possible.*

condition of the FX loop to a preset bank on the foot switch when the foot switch is in preset mode (See 7.3), or to control the in or out function when the foot switch is not plugged in to the amp.

Note: *The Generator is set by default to start up with the FX Loop turned off. If you want to bypass the feature and want the FX loop to turn on automatically at start up, simply turn the power off on the amplifier, press the FX Loop toggle switch up and hold it, then turn the main power switch to the on position. The FX Loop LED will flash and immediately turn the loop on. Now whenever you turn the amplifier on, the FX loop will also be on and ready to be put in and out of the signal path as you wish.*

that anytime the program command is received via MIDI; the amp will switch itself to the saved configuration.

Note: *When in store mode, once a MIDI program command is received, the LED will flash quickly then turn off signaling the user that a program command has been received and the amps configuration has been stored to memory.*

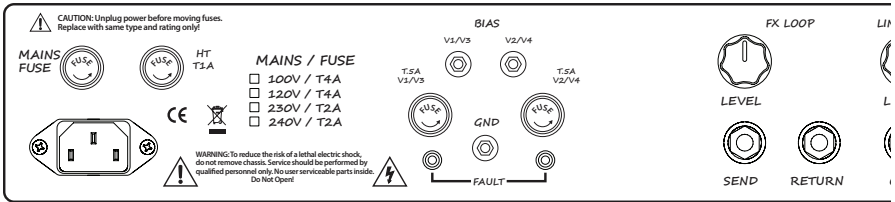
Standby & Power Switch

The power and standby switches give the amp power from the mains, as well as high voltage through the circuit. First turn on the power switch and wait a minute to allow the tubes to warm up.

Turn on the standby switch to the Revv position once you are ready to play.

Note: *NEVER power up the amplifier without the proper speaker load connected!*

rear panel layout



3.1

Main Power Connection

When plugging the amplifier into the mains A/C wall receptacle, always make sure the amplifier power and standby switches are in the off position. The

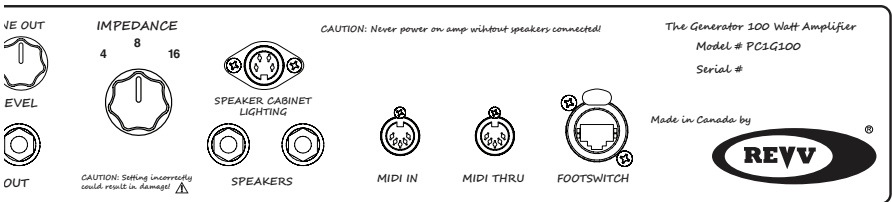
Required voltage and fuse ratings are marked on the amplifier, verify that they are correct before plugging it in.

3.2

Main & HT Fuses

The mains fuse and HT fuse are in place to protect you and the amplifier from overload conditions. Always replace them with the same type and rating

only! Always unplug the amplifier from the mains before replacing the fuses. Fuse requirements are marked on the rear panel of the amplifier.



3.3

Bias Test Points

The amplifier is designed to allow the user to set the bias of the power tubes without taking the chassis out of the

head shell. Each pair of power tubes needs to be set according to the tubes being used. (See 5.4)

3.4

Power Tube Fault Fuses

The power tubes are fused in pairs. Should a power tube fail, the fuse will blow and take the pair of power tubes out of service. This has the benefit of protecting the amplifier, but also allows for playability, so as to allow the user to finish the gig on the remaining pair. The volume and tone will change but the show will go on.

Note: Should the amp be run with 2 power tubes removed from service (Bad or blown fuse), in order to get the same tone as 4 tubes, the amp should be run with an impedance setting of half the speaker cabinet rating. For example, if the speaker cabinet is 8 ohms, set the amplifier to 4 ohms, and if the speaker cabinet is 16 ohms, set the amplifier to 8 ohms. This will improve tone and run the tubes more comfortably when 2 are taken out of the mix!

Line Out

The Line Out jack and level control provide a signal that is taken right off of the speaker jack. This can be used to run the Generator into another power amp for more power. Returning the signal back is not required as it is a direct out

and not a send signal like on an effects loop. Use a ¼" mono plug.

Note: *Never run the amp without a speaker connected to the speaker out jacks! The line out can never be used without a load connected to the speaker jacks!*

3.6

Impedance & Speaker Jacks

The amplifier must always be connected to a speaker cabinet or load when it is powered up. The Generator amplifier can be used with cabinets that provide a load of 4, 8 and 16 ohms. Because the amplifier provides 2 speaker jacks, it can also power 2 cabinets directly from the amplifier, but the impedance will need to be set correctly.

Most set ups are simple, one cabinet plugged into the amp, set the impedance to that marked on the cabinet and you're ready to go! But when it comes to adding more cabinets to the rig, then you need to set the impedance correctly to prevent damage. Most rigs don't usually run with more than 2 cabinets so we won't go beyond 2 cabinets here.

Some examples:

2 - 8 ohm cabinets would be run to the Generator (one per speaker jack), the correct impedance switch setting would be 4 ohms as they are being run in parallel.

2 - 16 ohm cabinets would be run to the Generator (one per speaker jack),

the correct impedance switch setting would be 8 ohms as they are being run in parallel.

2 - 4 ohm cabinets cannot be run in parallel with this amplifier. This will cause damage.

Note: *No damage will result when running the amplifier set at a lower impedance (Ex: 4 ohms) into a cabinet rated at a higher impedance (Ex: 8 Ohms). But running it the other way around will possibly cause damage to the output transformer or other components and it is suggested that the amplifier never be run into a lower load than what the amplifier impedance switch is set at when hooking up speakers in different configurations.*

Note: *Depending on the power tubes used, the Generator can supply 180 watts+ of power to the speakers at high volumes, so it is important to be sure your cabinet can handle that kind of power, especially when running KT88/6550 type tubes. If that is not the case, then it is recommended to keep your volume levels lower to prevent speaker damage.*

3.7

FX Loop Connections

The FX loop connections are to be hooked up to external pedals or effects units. The Send level will supply the

signal required and needs to be set accordingly with the send level control. (See 4.4)

MIDI Connections

The MIDI IN connection is for external equipment connections when the need to control the Generator with other MIDI equipment or Revv Products is desired. The MIDI IN connection can also provide

12V DC phantom power to power the external equipment (See 6.1). The MIDI through connection allows for daisy chaining of other MIDI devices.

3.9

Foot Switch Connection

This connection is for the foot switch which communicates with the amplifier as well as powers the foot switch. Should the provided foot switch cable ever fail, any Ethernet cable can be used when in a pinch. However, the cable sends data between the amplifier and

foot switch and if a low quality cable is used, communication between the 2 devices may suffer causing incorrect switching or erratic behavior. A high quality cable is recommended which can be provided by Revv should you need a replacement.

3.10

Speaker Cab Lighting

Revv speaker cabinets each have a light up logo that is powered from the cab lighting jack on Revv amplifiers. This is a 4 pin DIN jack that should be connected to the 4 pin DIN jack of a Revv speaker cabinet. A cable with 2 – 4 Pin DIN connectors is to be used to connect the cabinet and amplifier together. The

logo on Revv speaker cabinets change colors with the amplifiers logo to add to the great look of the Revv amplifier and cabinet rigs.

Note: *This jack can only be used with Revv speaker cabinets.*

4.0

serial effects loop

The effects loop has been designed to allow it to be foot switchable, preset able, as well as MIDI and CC controllable. It has also been given an On and Off control ability

to have the send level control and FX Loop jacks removed from the signal path. It is designed to be of the highest quality possible and is transparent. It is tube driven with the send output buffered at 900 ohms.

Note: *The Generator is set by default to start up with the FX Loop turned off. If you want to bypass the features benefits as described below, and want the FX loop to turn on automatically at start up, simply turn the power off on the amplifier, press the FX Loop toggle switch up and hold it, then turn the main power switch to the on position. The FX Loop LED will flash and immediately turn the loop on. Now whenever you turn the amplifier on, the FX loop will also be on.*

Note: *The effects loop will need to be turned on in order to be controlled via MIDI Program patches as well, unless it is set to turn on automatically at power up.*

4.1

FX Loop On/Off

The amplifiers foot switch (button #3 in control mode – see 7.2) is used to switch the effects loop *in and out* of the signal path to make it easier to apply and remove effects to the guitar signal on the fly. When the effects loop is being used (On), the send level control on the amplifier must be set to send the signal level that is required by the effects units or pedals being used. Because this level control can get messed with when moving the amp from place to place, venue to venue, we also found the need to add an *on and off* ability to the amp, to prevent a gig or jam from going bad when the effects loop is switched in and your instrument drops out of the mix because the level control was turned off completely by accident. (Hey, it's happened,

and we're just trying to help you so your drummer can't rub it in later!)

If you did forget to set up the FX loop and turn it on, when you press button #3 on the foot switch, it will simply flash the LED a few times letting you know it's **not** going to put the loop *in*, because it has not been turned *on*, saving you from your instrument dropping out of the mix. You might not have effects, but at least you can still be heard!

So, for the switchable effects loop to be used, it must be turned on. This is done on the amplifier itself **only** and cannot be turned on by the foot switch. But when turning it on, be sure to set the send level control accordingly so that you will be heard.

4.2

SEND Level Control

Some effects units have meters on them to show you what level of signal they are receiving and some do not. For those that do not have them, simply turn the send level control up until you are happy with the volume, or until your effects begin clipping, in which case you are

driving them too hard and have found your maximum setting. The master volume controls on the amp also work as return signal controls, so they will need to be adjusted once your send level is set up in order to drive the power amp to your desired volume.

Note: *The level controls on each channel will also affect the send level being sent from the effects loop, when one is higher than the rest you will find your signal changes when using that channel. Be sure*

to test each channel and the send level coming from the effects loop send jack. Its best to set the level of your channels first then adjust your effects loop send level.

4.3

FX Loop In/Out

In order to put the effects loop into the signal path, it needs to be turned on first (See 4.1). The effects loop, once turned on, can be put in and taken out of the guitar signal path in a few ways.

1) The front panel toggle switch, when held for 2 seconds will toggle the loop in and out. This method of toggling the loop is designed for foot switch preset setting (See 7.1) but can be used for FX Loop in/out toggling as the user requires from the front panel of the amplifier when the foot switch is not plugged in.

Note: *When the FX Loop in/out is toggled from the front panel by holding the switch,*

the LED will flash 4 times when it is in, and 3 times when it is out of the signal path.

2) The foot switch, when not in preset mode, toggles the effects loop in and out of the signal path when the FX Loop is turned on and button #3 of the foot switch is pressed. The foot switch LED #3 will illuminate when it is in, and turn off when it is out of your signal path.

3) The FX Loop can also be controlled via MIDI and CC commands from external equipment. Simply program the amp for MIDI programs or use CC commands to do so. (See Section 6)

4.4

FX Loop Hook up

Let's go through it step by step, just in case you have never used an effects loop and don't know how to hook it up.

First, you need to hook up your effects units to the Generator. The send jack will need to be connected to the *input* or *in* jack on your effects unit. The *out* jack on the effects unit (or last pedal in your chain) will then connect back to the return jack on the amp.

Next, turn on the amp and turn the effects loop *on* by pressing the FX Loop

toggle switch up on the front panel, you should see the red LED light up and the effects loop is now on and in the guitar signal path. Adjust each channels level control to your liking and set your send level control and master volume as stated above. Once that's done, your FX Loop is set and ready! If you hear no sound at all, have another look at the send level control as it's probably set to zero!

tubes & bias

5.1

Power Tubes

We have found these tubes to best fit the tone of this amplifier and for optimal performance we recommend them. Here are a few characteristics of the tubes we find with the amplifier.

KT88 – This tube is punchy with a strong low end and a great clarity. The extra power out of this tube adds extra headroom and is very tight and focused.

6L6GC – The 6L6GC tube is big, open and articulate. These tubes come stock in the Generator as they provide the low end and clarity that we find to work best with this amplifier.

EL34 – The EL34 tubes are more aggressive than the KT88, they add more harmonic content and have a bit more sizzle on the highs. The low end still remains tight, this tube also compliments the Generator tone.

Note: *The tubes listed above are guaranteed to bias correctly in the amplifier, but other tubes can be used in the amplifier as well. 6550, KT77, KT66, 5881 are some examples of other tube types that can be used.*

5.2

Power Tube Sockets & Tube Type

The Generator has been designed to allow mixing of power tubes as each pair has its own bias adjustment. Tube positions 1 and 3 are set up as one pair and are biased with the bias adjustment trimmer next to tube 1, and tubes 2 and 4 are the second set that are biased with the adjustment trimmer next to tube 2. This allows the user to mix different power tubes in the amp to get a desired sound. So a set of KT88 tubes can be used with a set of EL34 tubes and the benefits of using both tubes can be

mixed together, or maybe you prefer a set of EL34 tubes with a set of 6L6GC.

Tube Pair 1: V1 and V3 – set bias with trimmer next to V1.

Tube Pair 2: V2 and V4 – set bias with trimmer next to V2.

Note: *While we have equipped the amplifier to have this great feature, we advise that all tubes be set up by a qualified service technician to prevent damage to the amp from improper bias settings.*

Preamp Tubes

The Generator amplifier uses 12AX7 preamp tubes in tube positions V1 V2 V3 V4 and V6. A 12AU7 preamp tube is used in the V5 position for the FX Loop and only a 12AU7 tube should be used in this socket.

Preamp tubes do not need to be biased and usually have a long life unlike power tubes, but it is possible for a preamp tube to become faulty at any stage of its rated lifespan.

5.4

Power Tube Bias

The power tubes can be biased without taking the chassis out of the wood head shell. You will need a voltmeter or digital multi meter set to the lowest DC voltage range. (Make sure you refer to the meters user manual and are familiar with the meter).

Note: *Use tubes that are matched! If 2 different tube types are being used, make sure they are matched pairs. If all 4 are the same type, make sure they are matched pairs at the very least (and don't mix them up), although a matched quad is better.*

To prepare:

- 1) Remove the rear baffle cover from the rear of the amplifier and expose the tubes and bias trimmers. If you are replacing tubes, do so now with the power off and the amplifier unplugged from the main power receptacle. Place the new tubes in the correct socket positions if mixing tube types. (See 5.2)
- 2) Next unlock the bias trimmers by turning the nut counter clockwise and then turn the trimmers down by turning the trimmer shaft with a small screwdriver in the counterclockwise direction. If any fuses had blown, make sure to replace them as well.
- 3) Now plug the amplifier in to the main power receptacle, make sure the amplifier is plugged into a load or speaker cabinet, unplug any guitar cables from

the inputs and turn on the main power. Let the tubes warm up for one minute

- 4) Turn down the master volume controls to zero and turn on standby to the Revv position.
- 5) Verify that none of the tube fault LEDs are on. If they are, power down the amplifier, remove the plug from the main power receptacle and replace the faulty fuse and return to step 3. If everything checks out, move on to the next steps of setting the bias. If it is still blowing fuses, a tube is at fault, try a different pair.

Set the bias:

- 1) Place the black lead from your meter into the black bias test point on the amplifier and the red lead into the red bias test point (The red test point on the left is for V1 and V3 tubes, red test point on the right is for V2 and V4 tubes).
- 2) Refer to the chart below for bias set points for the tubes being used and slowly turn the trimmer in the clockwise direction until the value is reached.
- 3) Next, place the red lead into the other red bias test point and repeat step 2 for the other set of tubes. If 2 different pairs of tubes are being used, refer to the chart below and set the bias accordingly.
- 4) Re-check the settings of each bias test point and make any further adjustments as required.

5) Once the bias is set at the required settings, lock down the trimmer lock nuts by turning the nuts clockwise while holding the trimmer shaft with a screw driver so as not to lose the setting. Do not over tighten the nuts, just snug them.

Once complete, return the rear baffle panel to the rear of the amp and fasten it with the screws you removed and you are done!

BIAS CHART (Measurements are for two tubes per bias point)

Note: *The range setting is for experimentation. Power tube bias settings change the sound of the amp and the range listed above is safe for experimenting. The largest setting is considered the maximum setting and should not be set above this setting. Running the tubes on the higher end of the range will shorten the tubes expected life.*

Type	Recommended set point	Safe Range
KT88	105mV	90mV - 115mV
EL34	75mV	60mV - 85mV
6L6GC	90mV	80mV - 100mV

6.0

MIDI

The Generator has been designed and programmed to use MIDI controls to further the versatility of the amplifier. It will store up to 128 programs for program change commands as well as accept Continuous Controller (CC) commands to control functions directly. The amplifier also features OMNI mode to allow control options on 16 channels, and phantom power to power controlling devices.

6.1

Power Tube Sockets & Tube Type

The MIDI IN connection can also provide 12V DC phantom power to power the external equipment.

Phantom power: 12VDC - fused @1A

5 PIN DIN Connections:

Positive (12V) - PIN # 5

Negative - PIN # 1

Omni Mode

Omni mode *off*, will allow the amplifier to be controlled via a designated channel (1-16), and Omni mode *on* will allow the amplifier to respond to commands on any channel. If other equipment is being used along with the Generator in a MIDI system, it is desirable to set each piece of equipment to its own channel. But when the amplifier is the only piece of gear being used and controlled via MIDI, then setting it to a specific channel is not really required and setting the Omni mode *on* becomes desirable.

In order to toggle Omni mode on or off:

- 1) Make sure the power switch is in the off position.
- 2) Press and hold "masters" toggle switch.

3) With the "masters" toggle switch being held, turn on the power switch.

4) Release the masters toggle switch once the masters LED begins to flash.

Once the "masters" LED has stopped flashing, it has accepted the command to adjust Omni mode. The amplifier will adjust Omni mode and then reset itself by doing its start up sequence. Once the start up sequence is done (2 seconds) and the CH1 CLEAN LED is illuminated, you are ready to go.

Note: *The masters LED will flash 3 times when it turns Omni mode on, and 4 times when it turns Omni mode off.*

6.3

MIDI Channel Setting

The Generator is designed to automatically or manually change the 16 MIDI channels you would like it to respond to. The channel change is stored in memory and only needs to be done when you need the amp to respond on a certain channel.

1) In order to set the MIDI channel:

1) With the power off, press and hold the store switch then turn on the power switch. The amp will power up and begin to flash all 3 channel LEDs. Once this happens it is awaiting the channel data to be received from the external equipment (Auto) or to be set manually.

2a) To set the channel automatically:

With your external equipment ready (pedals, computers, etc.) and set to the channel you want the Generator to be controlled from via MIDI, send a command to the Generator by pressing a program change button or CC command on your external equipment. Once the

Generator receives the data, it will verify the channel it received and save it to memory.

2b) To set the channel manually:

Once step 1 has been completed above and the channel LEDs are flashing, press the CH1 CLEAN toggle switch (up). The CH1 LED will flash and the other Channel LEDs will turn off, this signifies that MIDI channel 1 has been selected. Simply continue to press the CH 1 toggle switch (up) to get to the channel you desire. As you press the switch you will notice the other Channel LEDs turn on as you increase the MIDI channel number. Once you reach the channel you desire, press the STORE switch to save it to memory.

Note: *There are only 3 channel LEDs and one aggression LED, so the MIDI channel count will be done in values of 4. MIDI channel 1 will be signified by CH1 CLEAN*

LED flashing, and as you increase in number, MIDI channel 4 will be signified by all three channel LEDs and the aggression LED flashing, but once MIDI channel 5 is selected, only the CH1 CLEAN LED will flash again. Every time you reach MIDI channel 5, 9, or 13, the LED cycle will once again start from the CH1 CLEAN LED. So keep count as you select the channel you

desire. If you go past MIDI channel 16, the count will start at channel 1 again.

Once saved to memory, the Channel LEDs will flash very quickly a number of times to verify the change has been made and completed. The amp will then restart, completing the MIDI channel change procedure.

6.4

MIDI Program Change

The Generator can remember up to 128 program settings of the MIDI controllable functions (See 6.5). In order to set a program (AKA amplifier configuration) to be controlled via MIDI:

- 1) Set the amplifier to the configuration you intend to save to a program number. (Ex: Ch: 2, Aggressive level: 2, Fat: ON, Master Volume: 2, FX Loop: OFF, etc)
- 2) Once the Generator is configured as you would like, press the store switch. The Store LED will flash and the amplifier will wait now for a command through its MIDI IN jack.
- 3) Send a program change command from your MIDI Pedal or other equipment

with the correct channel and program number you intend to have the Generator save the current configuration to.

- 4) Once the command is received, the Generator will save the current amp configuration to that program number. The Store LED will flash 3 times and turn off verifying that the command has been received and saved.

Now, anytime you send that program number to the Generator from your MIDI pedal or other external equipment, the Generator will switch to that saved configuration. This will allow for any configuration of the Generators settings for quick switching and a very versatile rig!

6.5

MIDI Controllable Functions

The Generator functions that can be controlled via MIDI are as follows:

Channel Selection

3 Aggression Levels (Channel 2)

Bright function (Channel 2)

Fat function (Channel 2)

FX Loop in/out

Master Volume 1 and 2

Mute

These functions can be set and controlled in a MIDI program change setting (See 6.4), where one program change command will call up a configuration of the above settings, or continuous controller commands (See 6.6), where a CC command will switch any one of the functions listed above, independent from any of the others. The CC command functions are great for things like instant access buttons on foot pedals etc.

Continuous Controller Commands (CC)

In order to use CC commands, the Generator Functions have all been given a designated number and a on or off setting. When using and selecting a function the number associated with the function must be used and then the setting of the function, on or off must also be sent. Most MIDI equipment (Pedals etc) allows you to select a CC number and then designate whether it be turned to on or off. (Consult the external equipments instruction manual).

The following commands and their CC numbers need only be sent an on command (0-63) as they are used to switch between channels and aggression levels which cannot be turned off, only changed to a different channel or level, on and off commands sent will produce the same result.

Function	CC Number (Hex Value)
Channel 1 Clean	16 - (0x10)
Channel 1 Crunch	17 - (0x11)
Channel 2 low aggression	18 - (0x12)
Channel 2 medium aggression	19 - (0x13)
Channel 2 high aggression	20 - (0x14)

The following command will switch to the channel and then toggle through the aggression levels with each use of the command like using the footswitch to switch to the channel and toggle through the aggression levels. This command will also respond to an on and off command with the same result:

Channel two plus aggression toggle:
24 - (0x18)

The following commands control functions that are turned *on and off*. These functions require an *on* (0-63) and *off* (64-127) command (byte) to be sent with the CC number to either turn them on or off. If you are trying to use them and are not getting them to respond, chances are you are sending the wrong command byte (0-63 is OFF and 64-127 is ON). (Consult the Peripherals instruction manual)

Effects Loop: 26 - (0x1A)

Masters: 27 - (0x1B)

Fat: 28 - (0x1C)

Bright: 29 - (0x1D)

Mute: 30 - (0x1E)

foot switch

The Foot switch that is used with the Generator is not like most foot switches. This unit not only controls the amplifiers functions, it can also be used as a MIDI program bank pedal. It has been designed with 2 modes, control (See 7.2) and Preset (See 7.3) modes.

Note: *The foot switch will always be updated should a change be made on the amplifier front panel.*

Note: *To switch between modes, press and hold button one for 2 seconds (See 7.4). The LEDs will all illuminate then switch to the setting in the other mode. All settings will be retained when switching between modes.*

7.1

Hook up

The Foot switch is connected to the rear of the amplifier (See 3.9) with a shielded Ethernet cable and very rigid connectors. The amplifier and foot switch will work with any Ethernet cable should you be in a pinch, but the Revv cable is always recommended for best performance.

It is recommended that the foot switch be connected to the amp with the power off, but should you plug it in once you have been using the amplifier for a

while, it will power up and automatically set itself to the amps current settings. So if you have been jamming for a bit, and have set the amp to your favorite setting via the front panel but then decide to plug the pedal in afterwards, it will update itself automatically!

Upon power up, all LEDs will turn on for a couple of seconds as it initializes. Once complete, the foot pedal will set itself to the amplifiers current configuration.

7.2

Control Mode

The foot pedal will always power up in control mode. This mode works like most other foot pedals; it simply controls the functions of the amp. Here is how the buttons respond in control mode:

Button One – This button has 3 functions, it switches to channel one when the amp is not in channel one, changes channel one to either the clean amp mode or crunch amp mode when the

amp is already in channel one, and switches between foot pedal modes.

When the button is pushed and released, it will switch to channel one, if the amp is already in channel one, it will switch between clean and crunch amp modes, and when the button is held down for 2 seconds, the pedal will switch from control to preset mode and vice versa. (See 7.4)

Button Two – This button has 2 functions in control mode, it will switch to channel two when the amp is not in channel two, and it will change the aggression level but only when the amp is already in channel two.

Note: *The foot pedal will not change the aggression level of channel two unless the amp is in the channel.*

Note: *The LED for channel two will change according to aggression level. Green is low,*

Blue is Medium and Red is high. The last 2 colors match those found on the amplifier.

Button Three – This button toggles the FX loop In/Out. If the FX Loop is not turned on however, the FX Loop will not be changed, the LED will flash a few times to signal this. (See 4.1)

Button Four – This button has two functions in control mode. It is used to switch between the 2 master volume controls as well as turn mute on and off. When the button is pressed and released, it will change the master volume controls. When it is held for 2 seconds it will turn on the mute ability of the Generator and the LED will flash.

Note: *Bright and Fat functions cannot be changed via the foot switch as they are considered to be an extension of the EQ. They can be saved to a bank when in Pre-set mode however.*

7.3

Preset Mode

When the foot switch is in preset mode, each button can then be used to save amp settings, much like a MIDI program change command. For example, if you wanted to save an amp setting like: ch2, aggression: high, bright: on, fat: on, FX loop: in, Master volume: 2, you could save this all to one button! Then every time you want to use this amp configuration, all you would have to do is press that one button and the amp would change to this setting. Each button on the foot controller can save settings.

Note: *When a preset is set into the foot switch, it will not be lost if power is removed from the amp. The Generator foot switch has memory and will retain the settings.*

Each button is identical in Preset mode and will be considered banks. Each bank can hold an amp preset.

Note: *Buttons one and four however, have 2 functions in preset mode. Button one will switch between the modes (Control and Preset – See 7.4), and button four will activate mute in the same way as in control mode. Holding either button for 2 seconds will activate their other ability.*

To set a preset to a bank:

- 1) Put the foot switch in preset mode and select the bank you want to save to (Buttons one through four).
- 2) Set the amplifier to your desired configuration from the front panel of the amp.
- 3) The bank LED on the foot switch you have selected will begin to blink stating a change has been made on the front panel of the amp.
- 4) Once you're finished configuring the amp, simply press the bank button on

the foot switch to save the setting into that bank and your done. The LED will stop flashing verifying that the change has been saved.

Now every time you press that bank button, the amp will switch to the configuration you saved to it.

Note: Any change made on the front panel of the amp will result in a bank LED blink-

ing which means that the current bank setting is different from that of the amps new configuration. To save the new setting press the bank button on the foot switch (blinking LED), or, to reset the configuration and not keep the change, simply press another bank button and the change will NOT be saved.

7.4

Switching Between Modes

The Foot Switch modes can be changed by holding down **button one** for two seconds.

7.5

Mute & the Foot Switch

The amp can be put into mute via the foot pedal by pressing and holding button six for 2 seconds in any mode. Once the amp is muted the LED will flash

until mute is turned off. Mute can be turned off by pressing button six again and quickly releasing it.

7.6

Mute & Preset Mode

Mute cannot be saved to a preset bank as it is always available via button four. (See 7.5)

7.7

Memory Reset

The foot switch memory can be cleared when it is needed. Each of the 4 banks will be returned to factory defaults. In order to reset the memory and return the unit to factory defaults, begin with the amplifiers power off and the foot switch plugged into the foot switch jack on the amplifier. Next,

press and hold buttons 1 and 2 down and turn the power switch to the ON position on the amplifier. As soon as the foot switch powers up it will return all memory locations to factory defaults as long as buttons one and two were held down properly at power up.

amp memory reset

8.1

Amp Memory Reset (Factory Default)

If you would like to clear the amps memory of all saved program patches and restore all of the amps settings to the factory default settings, which includes MIDI channel (restored to CH1), Omni Mode, FX Loop (Restored to off at power up) and a full memory clear, proceed with the procedure below.

With the power OFF, press and hold CH2 toggle switch (up) and the CH2 fat

switch (down) together and turn the power switch to the ON position. The amplifier will flash the CH2 and Red Aggression LEDs to confirm that the factory defaults have been restored and then reset the amplifier, which is then ready to play with the fresh configuration.

specifications

- 2 Channels: CH1 - Clean and Crunch / CH2 - Gain channel with 3 "aggression" levels
- MIDI capabilities as well as CC control of all functions and OMNI functionality
- Phantom Power provided from the MIDI IN connection port
- 3 band EQ per channel
- REVV Tube arrangement: 5 - 12AX7, 1 - 12AU7, 4 - 6L6GC
- Transparent, low output impedance, tube driven/buffered, serial effects loop with send and return level control ability (+4/-10 dB)
- Presence and depth control
- 4, 8, 16 ohm output impedance selector switch
- Baltic birch head shell
- Dimensions: 28.5" × 10" × 10.5"
- Weight: 50 lbs

REVV AMPLIFICATION INC
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