MESA/BOOGIE®

Owner's Manual

Hello from the tone Farm

Congratulations on your choice of the MARK VII™ and welcome to the MESA/Boogie® Family! The instrument you've selected has a deep heritage that combines the best attributes of vintage tube amplification with pioneering innovation that brings high-gain channel switching performance to a new frontier. One look at the thoroughness of the feature set of this amplifier tells you it's loaded with inspiring tools, but underneath the hood, the authenticity of these groundbreaking circuits and features (beware imitators) dates back to our MARK I™ and the very beginning of Modern guitar amplification. So congratulations on your choice… you should feel a sense of pride that you're playing an amp like no other, an original in every way! Just like you!

Our 50+ year commitment to excellence along with our solemn promise to musicians - to treat each of them as we ourselves would wish to be treated - guarantees you an experience that will make you feel truly justified in your choice. We're confident your new amplifier will have you smiling and inspired within minutes of plugging in for the first time...but what's really gratifying is that you will be finding new and inspiring sounds years after the price of admission has faded from memory and the MARK VII™ continues to unveil it's true worth.

It's with our sincere thanks for trusting us with your TONE and our best wishes for all your musical endeavors that we welcome you home. Should you ever need assistance or guidance we're here to help. You now have in your hands an instrument of limitless expression. Our hope is that it takes you and your playing to new and unimagined places throughout your musical journey. From all of us here at MESA®...Enjoy!

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IMPORTANT SAFETY INSTRUCTIONS

1. Before attempting to use this apparatus, read and follow these instructions for proper use.
2. Keep these instructions.
3. Heed all warnings.
4. Do not use this apparatus near water.
5. Clean only with a dry cloth, do not use any solvent such as benzene, naphtha or paint thinner on apparatus.
6. Do not block any ventilation openings. Install in accordance with manufacturer's instructions.
7. Do not install near any heat sources such as radiators, heat registers, stoves or other apparatus (including other amplifiers) that produce heat. Avoid placing the apparatus in direct sunlight.
8. Do not defeat the safety purpose of the polarized or grounding type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong (protective earth connection). The wide blade or third prong is provided for your safety. If the provided does not fit your outlet, consult an electrician for replacement of obsolete outlets.
9. Be sure that the amplifier's rated power supply voltage and frequency matches the voltage and frequency of your power source BEFORE connecting amplifier to the power source. The amplifier's rated power supply voltage and frequency are clearly indicated on the back panel near the power inlet, and the power cord's plug should match the power source in your region.
10. Protect the power cord from being walked on, pinched, or from excessive stress, particularly at the plug and attachment point of the apparatus.
11. Only use attachments and/or accessories specified by the manufacturer.
12. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as the power plug or cord is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally or has been dropped.
13. To ensure proper ventilation, ensure that there is a minimum of 4" (10cm) of space at the rear of the apparatus. The ventilation should not be impeded by covering the ventilation openings with items such as newspapers, cloth, tapestries, curtains, etc. Do not impede ventilation by placing objects on top of the apparatus which extend past the rear edge of the cabinet.
14. No naked flame sources, such as lighted candles or oil lamps, shall be placed on the apparatus.
15. The apparatus shall not be exposed to dripping or splashing, and insure that no objects filled with liquids, such as vases or beverages, are placed on the apparatus.
16. The AC plug is the mains disconnect, the plug shall remain accessible after installation.
17. **WARNING:** To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.
18. **WARNING:** Do not defeat the safety grounding pin on the power cable, it is there for your safety.
19. **WARNING:** Do not open or perform any internal modifications on this apparatus.
20. **WARNING:** Do not attempt to repair the apparatus, or replace parts within it (except where this manual provides specific instructions directing you to do so). Refer all servicing to your retailer, the nearest authorized Mesa Boogie Service Center, or authorized Mesa Boogie distributor in your region.
21. **WARNING:** Always disconnect the apparatus from the power source before changing fuses, tubes or removing the chassis for service. Use only the same type and rating as specified on the back of the apparatus when replacing a fuse.
22. **WARNING:** Disconnect apparatus from the power source during a lightning storm or when unused for long periods of time.
23. **WARNING:** This apparatus is heavy. Insure that the apparatus remains stable after installation.
24. **WARNING:** In areas where children may be present, use additional precautions as needed to protect the children from the hazards presented by the unit. This includes risk of electric shock, burns and toppling over.
25. **CAUTION:** This apparatus contains hot components and surfaces. Avoid direct contact with heated tubes and other components. Insure that any factory installed guards remain installed.
26. **CAUTION:** Avoid contact with moving fan blades that may be present within the apparatus or cabinet.
27. **CAUTION:** tube envelopes are glass and can present a hazard if broken. Always turn apparatus off, disconnect from the power source, and allow to cool before changing tubes.
28. **CAUTION:** To avoid damaging your speakers and other equipment, turn off the power of this and all connected equipment before making or changing connections. power apparatus up with the volume levels set to minimum, and slowly increase to desired level.
29. **CAUTION:** Always insure that the proper speaker load is connected to the apparatus before operating the apparatus. Failure to do so may cause damage to the apparatus.
30. **CAUTION:** Do not use excessive force when handling cords, jacks, buttons, switches and controls. Never unplug the apparatus from the power source by pulling on the wire, use the plug body.
31. **CAUTION:** This apparatus, in combination with speakers and/or headphones, may be capable of producing sound levels that could cause permanent hearing loss. Do not operate for a long period of time at high levels, or at a level that is uncomfortable, without hearing protection. If you experience any hearing loss or ringing in the ears, you should immediately stop using the apparatus and consult an audiologist.

PRODUCT COMPLIANCE INFORMATION

NOTICE: This device complies with Part 15 of FCC Rules and with Industry Canada license exempt RSS standard. Operation is subject to the following two conditions:

- This device may not cause harmful interference
- This device must accept any interference received, including interference that cause undesired operation.

Suppliers Declaration of Conformity for Mark VII

Responsible Party

Gibson Brands Inc.
209 10th Ave S Ste 205,
Nashville, TN 37203
United States
Telephone: + 1 615 933 6000

MARK·SEVEN™

Operating Instructions

OVERVIEW

Congratulations on your choice of the MARK VII, and Welcome to the MESA/Boogie Family!

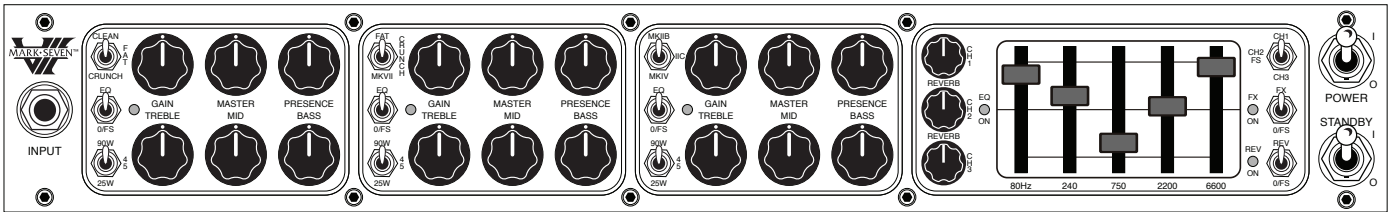
The amplifier you have chosen traces its roots back to the pivotal moment in the dawn of the ‘70s when Randall Smith happened upon the Holy Grail for electric guitar and created the first tube preamp with cascading gain stages. This landmark discovery gave birth to high gain and, ultimately, the sound of modern guitar.

With this invention, for the first time ever, sustain (created by tube overdrive) was separated from power section loudness, and a new solo voice with sustain like a horn was unveiled that could be used at any volume. Before that, blues and rock guitarists had to turn their amplifiers all the way up to nearly full volume to achieve the sustain they sought. This new development would set guitarists free from that limitation and usher in not only a new era of amp performance but also a new era of music reshaped by this game-changing circuitry.

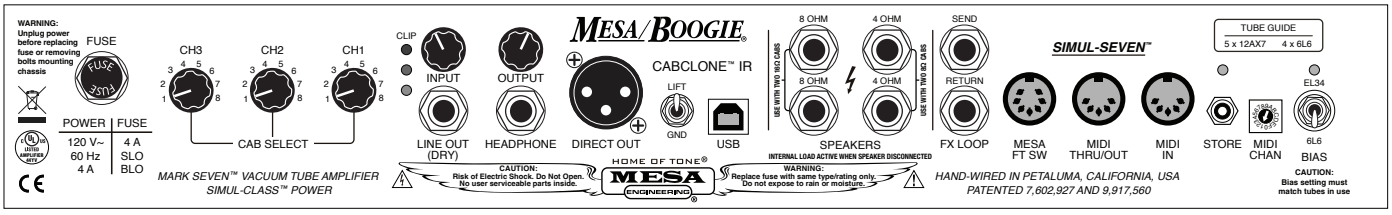
More than fifty years and countless iconic recordings later, the impact of those original Mark 1 Boogies and subsequent Mark models that followed and spawned nearly all now-commonplace modern guitar amp features have had more than their share of influence on popular music. Starting with Channel Switching and Performance Modes on the MARK II-A, B, C, MARK IIIs, and IV, up through the MARK FIVE with fully independent Channels and Multi-Watt™ Channel Assignable Power, each propelled the sound of guitar and popular music forward in their own time and way.

Now the culmination of all that innovation resides in your new amplifier, the MARK VII. More packed with features and Tone than even the milestone MARK FIVE, the MARK VII retains the best sounds of all these iconic amplifiers and adds a new one. From the model we leapfrogged – the MARK SIX – which provided a good working platform and proving ground, but ultimately, we’d surpassed, it was clear we had a MARK worth skipping a generational moniker for.

FRONT VIEW: MARK VII



REAR VIEW: MARK VII



With the new hyper-aggressive MARK VII high gain Mode in the middle Channel that traces its lineage to both the MARK FIVE's CRUNCH Mode and iconic Dual Rectifier Solo Head's VINTAGE Mode, along with a resurrected classic in Channel 3's MARK IIB Mode, the new MARK VII provides even more places to find inspiration and express from.

The MARK VII Mode's harmonic content, more cut, more dynamic midrange kick, and tighter low end all add up to a menacing new sound joining the MARK Family that is more shredding than MARK and more vocal than Recto!

The return of the MARK IIB's Lead Mode in Channel 3 brings back the long-missed but not forgotten, more traditional-voiced gain sound. The IIB Mode allows your instrument's character to shine through and give you the gain you want without the total saturation of the midrange and treble regions that can, at times, overshadow an instrument's personality. Even better is that this influential sound comes with the control always dreamed of but never included back in the day when we built the Dual Mode icons. Now in the VII, you can have completely independent Clean Channel(s) if you're, say, into blues or roots, one clean, one clipped for dirty rhythm, or a Clean and a Crunch in Channels 1 and 2, along with the great solo voice of the II-B Mode in Channel 3.

You could also flip it the other way if you're into classic rock and opt for a Clean in Channel 1, use Channel 3's IIB for a dirty rhythm sound and dedicate Channel 2 for your preference of either driven rhythm or a burning lead sound in either CRUCH or MARK VII Modes, ...your choice as either Mode can do both well.

And finally, since the VII is supremely configurable with CRUNCH appearing in both Channels 1 and 2 along with FAT CLEAN, almost any configuration you dream up can be accommodated from 2 CLEANS and a Lead, 2 CRUNCH's set differently and a Lead, through combinations of CLEAN, CRUNCH and Lead, all the way to three footswitchable high gain sounds for those into nothing but Heavy.

Knowing well that the power section plays an equally important role as the preamp in a great amp, the MARK VII gets the best version yet of our patented Multi-Watt™ Channel Assignable Power, here featuring our exclusive Simul-Class™ power. Simul- Class simultaneously marries the efficiency of Class AB operation with the warmth and smooth transition to clipping of Class A to create the ultimate in vintage tube tone with modern power and headroom. It also naturally cancels out the harsher odd-order harmonics and emphasizes the sweet, more musical even ones.

In addition, for each of the three preamp Channels you can choose between the full 90 Watts of high headroom/tight-tracking Simul-Class power, 45 watts of harmonically complex Class A Pentode power, or 25 watts of sweet, clip-able Class A Triode power. Having these different power levels and sonic characters at your fingertips means you can perfectly tailor the power section to the three footswitchable sounds you craft in the preamp. You can also set all three Channels to the same power to better suit different venues live or song needs in the studio.

Putting all this Tone under strategic control, the MARK VII employs MIDI Program Change and Control Change Commands, enabling you to bring up any one of the Channels under MIDI Programs along with your processors that respond to MIDI, for one-button convenience in live performance applications.

The MARK VII is the second amplifier in our Line (behind the Rectifier Badlander) to host our CABCLONE IR Direct circuitry. This feature was developed in partnership with Two Notes, the pioneering leader in Impulse Response technology, and we are proud to bring it on board in the MESA/Boogie line of amplifiers as it broadens their applicable landscape manyfold; namely, those places where employing Cabinetry is not ideal or feasible.

In the MARK VII, the CABCLONE IR feature is presented with maximum flexibility in mind and features individual CAB SELECT rotary controls for each of the 3 footswitchable Channels. We'll get into the instructions for use and more of its features later, but for now, we'd like to suggest that all your Direct recording and/or Live FOH and Monitor interfacing just got exponentially faster, easier, and often better sounding.

It also likely became more comprehensive with your new VII, with the addition of this modern approach to capturing your sound Direct, Miked, or both. With 8 popular MESA Cabinets to choose from in each Channel,

plus a huge Library for storage of your favorite IRs, the CABCLONE IR DI adds a whole new dimension to the traditional concept and performance of a Tube amplifier. Whether it's recording, capturing Live performances, or even personal Practicing through Headphones using your great feeling and sounding Tube amp ...power section included, these IRs provide great sounds and feel quickly and conveniently. And best of all, this comprehensive capturing power and ease of use preserve your creativity and the time to explore it!

And if you prefer your own external IR Reader from another Brand, or you need an unfiltered feed for recording a Track for re-amping, the VII's DI Section has got you covered there as well with the ¼" Buffered (Dry/Untreated) LINE OUT.

Reverb enhances any tube amplifier, and the MARK VII has got it in Spades. Tube Driven, analog Spring Reverb drenches the sound beautifully, and we've provided individual control over the mix for each of the three Channels. The VII moves these controls up front in an upgrade from most previous MARKs, and you now have faster access to the blend of the 'Verb for the sounds you've dialed up in the Modes. And again, since there are individual controls for the Reverb, you can tailor the effect perfectly for the preamp sound(s) you have dedicated your Channels to.

Now that you've got some historical perspective and an overview of your new amplifier logged, here's some tips to help you get the most from this Encyclopedia of Tone.

HELPFUL HINTS

WARM-UP! Always begin playing sessions with the following Cold Start Procedure at Power Up:

1. ***With the STANDBY in the OFF position, Flip POWER to ON***
2. ***Wait at LEAST 30 Seconds***
3. ***Flip STANDBY to ON ...and Enjoy!***

Following this Cold Start Procedure will help ensure reliability and prolong the toneful life of your tubes, especially the power tubes. Like an incandescent light bulb that has a filament, much wear and stress on your tubes occurs at the instant of powering up from a cold state. Much like a dimmer on a light switch being set low when you first flip it on, the STANDBY being OFF at the instant of power up – and for at least 30 seconds afterward - allows for a warm-up period and minimizes the shock on tube filaments when they are cold. If you follow this procedure every time you power up your amplifier, the likelihood of experiencing tube issues will be decreased while their longevity will be increased.

MESA FOOTSWITCH! When using the MESA Footswitch to access your Channels and Features, the CHANNEL SELECT switch must be set to the center 2/FS position, and the EQ, FX LOOP, and REVERB must be set to the lower OFF/FS positions to operate.

> **NOTE:** *If you connect the Footswitch when powered up, or you power down and back up with the Footswitch connected and any of the 3 features or the Channels don't come on, simply toggle the Front Panel switches on and back off to reset the circuit and engage the switching.*

RESPECT YOUR RIDE! Much like a race car, your new amplifier is a high-performance vehicle capable of gain and volume beyond what traditional amplifiers can deliver. The message here is that there is far more available than you will likely ever use or need, so applying wisdom in your application is warranted.

Just like with a race car, it is unwise to jump in and slam the accelerator down to the floor. ...You would likely run into trouble fast! The same concept applies to the Channel's GAIN and output level(s) on the MASTER controls in the MARK VII. Whether live with speaker cabinets or Direct "silently" through a console or headphones, you can invite "trouble" when you run things at their uppermost limits.

Thankfully we've had decades navigating these upper realms of performance, and your new amp benefits from that experience. Still, as you will hear many times throughout this manual, you don't need to set the controls in their highest range to achieve great performance, and in fact, ignoring that practice may lead to tonal compromises or annoyances that can otherwise be easily avoided.

POWER INTEGRITY AND PROTECTION! IMPORTANT! NEVER ALTER YOUR POWER CABLE! Be sure to connect all three terminals of your Power Cable, including the Ground! Failure to do so, and/or modifying your Power Cable in any way – including using a 3-2 Ground Lift Adapter - may void your Warranty and increase the risk of Electric Shock. Always connect your amplifier to a 3-Pin Grounded AC Wall Receptacle with the proper AC Line Voltage present (117Volts US/Domestic).

PROTECT YOUR TONE! It's always a good idea to use a high-quality Shielded (and Grounded) Instrument Cable of a reasonable length - say no more than 15 feet – for your instrument to amplifier connection ...unless you plan on using a Buffer. This will ensure the best sound and prevent loss of top end due to increased cable capacitance that can rob your instrument signal of its integrity.

REVERB MUTE! It is normal to hear a "swelling in" of the Reverb when switching between Channels. This is due to a timed "Reverb Mute" circuit necessary so that, for example, your overdriven big Crunch Rhythm chord or burning high note at the end of a solo doesn't wash over your beautiful clean arpeggiated chording as you switch back to Channel 1 or 2 (or even 3 in IIB Mode set low) for a featured part where the band stops in a "breakdown" section. We've chosen a length of time that reduces the sound passing through the Reverb circuit (Reverb Tank included) by about 75% so that the residual Reverb tail from the part previously played in another Channel will not overshadow what is currently being played.

EFFECTS; FRONT OR REAR? ...DEPENDS ON THE GEAR! Effects and processors are most often best suited for use in one of two different places in your signal chain: Between your guitar and your amplifier's Input, or, at the end of your signal path in the amplifier's Effects Loop.

Here are some general guidelines/hints as to what most often goes where for the optimum performance from your pedals and effects processors, as well as your amplifier.

Compressors, Wah pedals, Envelope Followers/Filters, Octave pedals, Boost pedals, some EQ pedals, Overdrive, Distortion, and Fuzz generally want to be in-line between your Instrument and the Amplifier's Input, i.e. "in the Front."

Time-based effects such as Reverb, Delay, Chorus, Phase, Flange, most Harmonizers, and most EQs usually work best in the amplifier's Effects Loop with the SEND feeding the first Effect's INPUT and the RETURN accepting the last processor's OUTPUT. In other words, "in the Rear."

The above are merely suggestions and general schemes ...you may find your preferences differ from these, but often these categories of processors and effects should work well in these locations in your signal chain if they are of good quality.

> **NOTE:** *Ultimately, anything and everything you put into your signal path has the potential to impact your Tone. We recommend using good-quality processing and trying it with your amplifier, if possible, before committing to a purchase. Pricing can be one indicator of quality but not always of compatibility, so the best way to assess an addition to your signal path is to try it with your amplifier and let your ears and hands be the judge.*

STRAIGHT-IN IS BEST - BUFFER THE REST! When inserting a Pedal setup on your Front-end (between the guitar and the amp's INPUT), keep in mind that EVERYTHING you put in your signal path affects the sound. You've chosen a high-end, professional instrument in your new amplifier, and it stands to reason that your guitar is likely of similar quality. Try not to compromise that discernment by placing devices that are of lesser integrity in the signal path.

If you do have a string of pedals you rely on for boost, overdrive, wah, compression, and other effects on your

Front-end, we suggest employing a Buffer in your signal chain to make sure you keep levels and impedances at their optimum and avoid excess cable capacitance created in all the additional wiring. Buffers are small, affordable devices readily available through many reputable companies, including MESA/Boogie. Your Tone will be well-served if you employ one to mitigate any loss incurred by the addition of your Front-end processors and subsequent cabling.

LOOP INSURANCE! Cabling quality is also important on "the Rear" of your signal chain in the Effects Loop. Here as well, use good quality Shielded audio cable to prevent degradation in your Tone and added noise. Even though the signal is buffered in the Effects Loop, it is still a good idea to use good-quality cabling of the shortest length possible. This patch point between the preamp and power section is a sensitive place in the amplifier's circuit, and anything you introduce here has the potential to change the sound.

PROCESSING: CHOOSE WISELY! Select the pedals and processors you wish to interface with the Effects Loop, with the same discretion used on your Front End (Input).

Since the patch point between the preamp and power amp is a sensitive place in the signal chain and the quality of what you place at this junction will ultimately affect the signal for better or worse, it's important to match your amp's level of quality with processors of similar quality. Price is somewhat an indicator of quality but not always as indicative of compatibility.

We suggest taking whatever processors you intend to buy home to try. ...Or taking your amplifier to the shop selling the processor and trying it in the Loop of your amplifier to determine whether it's a good match. With short to reasonable-length cables, you should hear very little difference once the Input (and possibly Output levels as well) on the processor are set to achieve unity gain (same gain level/no volume difference with cables inserted and removed from the Effects Loop's SEND and RETURN jacks).

If the level drops when you insert the Cables, increase the levels on the processor, if the level goes up when the processing is introduced, reduce the levels on the processor. Ideally, there should be no difference in Tone or levels when the cables are inserted and removed - this is "unity gain" and represents little to no signal loss.

This step (trying before buying) isn't always easy or convenient, but you probably didn't choose your amplifier based solely on convenience either, likely more for its inspiring Tone and performance. Discerning choices in your outboard gear will honor that decision and keep your amplifier sounding and performing to its optimum capability.

STAY CONNECTED! Sound waves transmit through objects and your body. This can be a good thing in the case of electric guitar. It is preferable to have at least one speaker cabinet, or the combo amplifier, sitting on the floor you are standing on while playing. The transmission, especially of the low end, will affect how the instrument feels to play. Keeping one speaker cabinet on the floor ensures the instrument, the amp, and your body are connecting and resonating in a harmonious, sympathetic feedback loop that makes playing your amp more emotionally satisfying and ultimately more expressive.

> **NOTE:** *The exception to this advice above can be when you are playing on stages with many live microphones cranked up and/or there are large monitors and subwoofers nearby (especially if too big and too many) ...or when the stage itself is extremely resonant in the lower frequencies. In any of these cases, it may be necessary to lift your cabinetry or the combo amplifier off the floor, or sometimes even off a Drum Riser, to de-couple it from the floor and even your instrument to prevent feedback. This type of feedback usually occurs in the low end. In some cases, and in certain environments, alternatively, you can trim the low end in the live microphones via the Mixing Console and then be able to keep the amplifier coupled to (sitting on) the floor or Stage. Having some coupling through the floor will likely always feel better to you and your hands.*

SPEAK ACCORDINGLY! Cabinetry and Speaker Choice are hugely important to achieving the sound you want and optimizing the amplifier to styles of music you may wish to play.

Whether you have chosen a Combo with its own internal speaker, or a Head format without one, remember that speakers have a giant impact on the sound, as does the cabinetry they are loaded into.

You can add or substitute Extension cabinets to tune your amplifier to the stylistic application or environment, regardless of the package you chose to house your amplifier chassis in, and tune the sound physically to best fit the music and/or venue(s) you most often play in.

OPEN BACK cabinetry leans toward beautifully balanced, open-sounding clean sounds, adding three-dimensionality and clarity in the top end and a low-end character with more “air” in the mix.

CLOSED-BACK cabinetry adds focus and a tighter tracking element, especially in the low end, as well as definition and punch in the rest of the spectrum. Some players use a combination of both (closed and open back) at the same time to achieve a balance of the two different characteristics. Others lean one way or another in accordance with their favored musical style, sounds, or popular Artists.

We suggest, at some point, exploring the options in each category to see if perhaps one or the other of these different designs unlocks sounds and response characteristics you’ve imagined but have not yet attained. We feel all our cabinets offer exceptional performance in their category, so whatever you have now, if it’s a MESA Cab, you’ve got Tone. At some point, though, you may want to refine or radically change your sound and perhaps require something that the “physical” impact and dimension of different cabinetry can achieve for you.

LESS CAN BE MORE! When it comes to the GAIN and TONE controls, restraint can be your friend and your key to great Tone.

Your amplifier was designed to deliver stunning performance across a wide range of settings and musical styles and much of that performance can be found in the median ranges of the controls. Unlike some amplifiers that are historically known for sounding good only at extreme settings, MESA amplifiers are designed such that the controls are active and deliver big sonic changes with subtle movements of the controls.

We suggest starting in the middle ranges of the controls, including the GAIN controls, and adjusting from there to find the sounds in the Modes that suit your particular needs. This will do two things; One - it will mean you have plenty of room for adjustment in either direction and Two - it will reduce the likelihood of excess noise being introduced and help you maintain an optimum noise floor.

Granted, there will be times when you will need to run the controls closer to their maximum (or minimum) settings, and this is fine and will not hurt your amplifier. However, if you explore the median settings on the controls first and learn their tapers, their frequencies, and their overall range, you will better know which ones can accommodate higher settings and which you may want to veer away from settings at the extreme ends. ... For musically relevant reasons, and also to keep the stress on tubes reasonable, so they have less chance of microphonic tendencies or instability.

EQ WITH IQ! The Five-Band Graphic Equalizer on your MARK VII is not only an iconic piece of Rock History, it’s also an extremely powerful shaping tool that - more often than not - needs to be used intelligently and with restraint if you want to achieve a balanced, cohesive sound.

The radical cut and boost capability of the EQ Slider Pots allow maximum flexibility on the one hand but also present the possibility of blowing holes in your sound if not used with a musical sense and some restraint. This is especially true with the 750 Hz Band, where we have often seen players scooping the midrange in ever-increasing amounts until there is literally nothing left aside from “boom and sizzle.”

The trap that awaits with the Graphic EQ is the fabled “EQ Hangover.” This pitfall is the tendency to over-EQ your sound due to the EQ’d sound of the Graphic engaged becoming your reference instead of the natural sound of the amplifier without the Bands cutting and boosting specific frequencies.

You’ll know you’re suffering an “EQ Hangover” when the amp sounds strange, nasal, boxy ...or even broken in extreme cases when you disengage the Graphic EQ. When this happens, simply let a couple/few moments pass without playing and start over with your shaping from a “Flat” Slider setting on the Bands. This will keep some sense of reality in the mix. Give your ears and brain time to adjust to the natural midrange content the

amplifier has when not heavily manipulated with the Graphic EQ before passing judgment on, or passing by, less EQ'd sounds.

This is true for all frequencies; however guitar is a midrange instrument, and much character and a large portion of the cut, impact, and definition needed to anchor your position in a mix is carried in the midrange frequencies. If needed, perhaps even stop playing for a few minutes and come back after a period of "recovery." Your perspective will return to a more balanced one and you'll be in a better position to judge your sculpting with the Graphic EQ in a fair, objective, and musical way.

One tip from the world of wise Studio and Live Front of House Engineers applies here as well; It's a great practice to **BEGIN YOUR SHAPING WITH THE GRAPHIC EQ BY CUTTING WHAT YOU DON'T WANT RATHER THAN BOOSTING WHAT YOU THINK YOU DO WANT.**

This approach does a few things that are beneficial; One, it keeps the noise floor (hiss and hum) lower. Two, it preserves headroom in the power section. The more radical the EQ curve, especially in the low frequencies that take more power to amplify due to their longer wavelengths, the more power it takes to amplify the sound. Three, it is easier to keep a fair perspective on what you are shaping, as boosting trains your ear to hear more is better, and this is rarely true when it comes to music. Applying the Engineer's method trains your ear toward balance and to add only what is needed for a great sound. Using care and taste in your EQ'ing will preserve tonal balance and power and ultimately give you the optimum control over your headroom (available power) and place in a mix.

COVERAGE BEATS POWER! Adding additional cabinetry increases your (stage) volume and coverage far more than increasing wattage in an amplifier's power section. If you need to hear yourself better, try adding an Extension Cabinet.

> **NOTE:** *When adding Extension cabinet(s), make sure you keep the Impedance Load on your amplifier correct. Most MESA Cabinets are wired for an 8 Ohm Load. Mesa Cabinets built post-mid-90s feature a Parallel jack on the Cabinet's Rear Jack Plate, and this is one way to connect an additional cabinet. When doing so via this method, be sure to move the cabinet connected to your amp's 8 Ohm Speaker Output over to the 4 Ohm Speaker Output (assuming the cabinet you are adding is also rated at 8 Ohms).*

You can also connect two 8 Ohm Cabinets independently, each to one of the two 4 Ohm Speaker Outputs on your amplifier (and most MESA amps). In either case, the two 8 Ohm Cabinets together create a 4 Ohm Load, so you want to connect them to the 4 Ohm Speaker Outputs in one of these two ways listed above.

Some MESA amplifiers have only one 4 Ohm Speaker Output to accommodate the internal Silent Load feature. You can still connect two 8 Ohm Cabinets to this single 4 Ohm Speaker Output, but you will need to do so either with the Parallel jack on the rear of your MESA Cabinet or if your cabinet is an older MESA cabinet or another Brand that does not have a Parallel jack, a (non-shielded) "Y" Speaker Cable. You can use a Shielded cable in a pinch, however, shielded instrument cables usually have smaller wire, and when it comes to Speaker Cables, thicker gauge wire is preferable.

CABCLONE SETTINGS FOR OPTIMIZED LEVELS Set the individual Channel MASTER controls below 11:00 (to avoid clipping of the CabClone's Input circuitry.)

Next, set the CabClone DI's Input Level to where the Yellow LED is illuminated on your highest/loudest dynamic peaks, but so that they don't light up the Red LED. Remember that high gain sounds/Modes usually have lower dynamic content overall (due to natural tube compression as gain is increased) while Clean sounds can have higher dynamic peaks.

Then, starting with all Output and Console Input Levels zeroed out, increase the CabClone's OUTPUT to the desired level for your Headphones or a Console's Input.

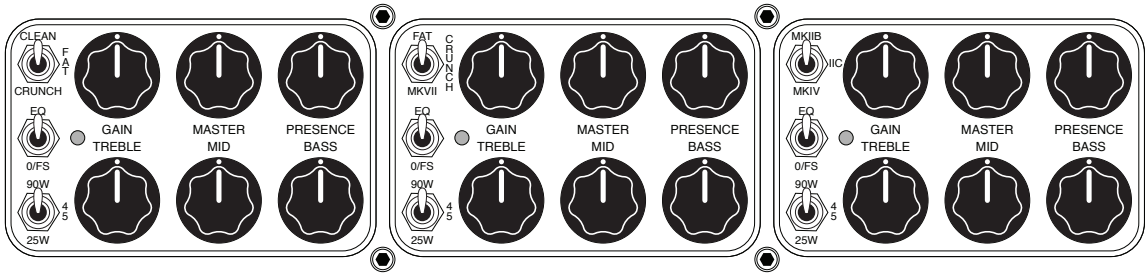
FUSE REPLACEMENT The Mains Fuse is there to help protect your amplifier from spikes or power surges in the AC

Line, faulty or arcing power tube issues, and other forms of duress your amplifier might encounter. If the Fuse should ever blow, ALWAYS replace your Fuse with the same type and power rating Fuse. In the US/Domestic MARK VII Simul Class model, the Fuse is a 4 Amp SLO-BLO Type Fuse. For export models, see the sticker under the fuse on the rear panel of your amplifier.

Now that we've got some tips for Tone covered, let's get into the Channels and their Modes and get some insight into applications. First, though, let's make sure you know how to access them.

CHANNEL SELECT This mini toggle located in the upper right-hand corner of the Graphic EQ (cutout) window allows the selection of the Channels when the MARK VII Footswitch is not in use or is unavailable. The switch calls up the Channels and also provides a "routing map" of sorts for storing/accessing the Channels under MIDI Programs. (See the MIDI section of this Manual for programming instructions.)

THE CHANNELS



MODE SELECT
The mini toggle switches located in the upper left corner of the three Channel Windows (cutouts) determine which Mode in each Channel will be called up. All three Channels contain this switch in the same location; uppermost (switch) in the stack of 3 switches to the left of the controls, though in each Channel, the Modes themselves are different except for the two duplicated Modes, and they are in different switch positions (upper, middle, lower) according to gain structure (least gain on top, most gain on the bottom).

A combination of the two switches outlined above - the Channel Select switch in the far upper right EQ window and the individual Mode Select switches located in the upper left of each Channel's window, will determine the sounds (Channel and Mode) you will play and hear.

EQ 0/FS
This 2 -position mini toggle located in the center spot of the 3-switch stack at the left of each Channel determines the status – in or out of the signal path - of the 5-Band Graphic EQ. The upper position of the switch turns the EQ on in each of the Channels. To use the MESA Footswitch, you must have the switch in the lower 0/FS position. See the section later in this manual for more info and settings tips for the 5-Band Graphic EQ.

> **NOTE:** *If you connect the MESA Footswitch while powered up or power down and back up after connecting it, you may need to toggle the Front Panel EQ (and Reverb as well) switch on and off once to reset the circuit and engage the switching via the Footswitch.*

MULTI-WATT™ POWER SELECT
This 3-position switch located at the lowermost left corner of each Channel Window determines the power rating and wiring style for each of the 3 Channels. The three options cover three distinct power ratings and 3 wiring styles; **90 Watts Simul-Class™**, whereby two of the power tubes run in Class A and two run in Class A/B, **45 Watts Class A Pentode**, and **25 Watts Class A Triode**. Each has its own character and application, however, the most vocal, boldest, punchiest, tightest-tracking, and maximum headroom are attained with the amp running in the 90 Watt Simul-Class position.

90W SIMUL-CLASS™
This uppermost position engages all four power tubes to produce 90 watts (full power) of Simul-Class power. Our unique and patented Simul-Class, in short, wires two of the tubes (outside pair) in Class A/B and two of the tubes (inside pair) in Class A to arrive at the smoothest, sweetest, most harmonically rich "100-watt" power section on the planet. That is a bold statement, however, 40 years of success with this unique power section backs it up with thousands of happy customers worldwide over five previous MARK models, including some of the biggest names in guitar adding their endorsement of its incredible tone and feel.

Combining Class A/B wiring's high efficiency/low heat and fast-transient/bold dynamic characteristics with the inefficient/high heat yet smooth-transition-to-clip signature of Class A wiring creates the ultimate tube power. The efficiency and headroom of Class A/B married to the sweet clip-ability and harmonic enhancement of Class A. The 90-Watt Mode is high headroom, superb balance, and sweet musicality – all showcased in one phenomenal power amp. The inherent smile, 3-D low end, and perfectly scooped midrange, coupled with diminished lower (harsher) harmonics and an emphasis on higher, sweeter ones, results in nothing short of magic in terms of tone and voice. Simul-Class really has to be experienced to be fully appreciated.

Having the two iconic Classes of operation occurring simultaneously in the same power amplifier is the pinnacle of tube power tech. It was a huge MESA milestone in the early '80s when first introduced on our MARK IIB, and to this day, it remains a mainstay in our MARK Series production. Catapulting IIBs onto the world stage, it has been a valuable component in capturing artist loyalty and elevating MARK Series amplifiers to icons throughout the last four decades.

Simul-Class cancels out the harsh artifacts produced by CLASS A/B's sacrifices toward efficiency while at the same time it embellishes CLASS A's inefficiencies and minimizes heat to arrive at the nexus between vintage response and modern power.

45W
This middle position on each Channel's Power Select toggle renders the two outermost power tubes in standby mode and leaves the two inner power tubes wired in Class A Pentode operational. As you might guess, this produces 45 watts, approximately half the power, and displays a different set of sonic characteristics.

Generally speaking, the sound will be less bold and punchy in the midrange and have less low-end girth and width. The top end will also be brighter and have more "give" to it, and some describe it as having a more bubbly, elastic character. The 45 Watt setting will also present somewhat reduced headroom and volume. The onset of clipping will occur earlier, and this is most noticeable in the first two Channels in CLEAN and FAT set for very clean sounds where the GAIN is at or below approximately 12:30, depending on the guitar and pickups.

In regard to output volume, though you would imagine by the wattage numbers that the volume (loudness) would be cut roughly in half by the power reduction, the impression for most players is that volume is reduced by more like a third, as the amp can still be loud depending on settings, cabinetry, and room. At lower MASTER settings, you may not notice the volume drop much at all and be more aware of only the tonal differences mentioned above. This is normal.

The 45-watt setting shines for classic rock, Americana, roots, or blues, and styles leaning more toward the traditional than it does modern rock or metal styles. The earlier, smoother transition to clipping and brighter, more forgiving response make it lean old school, as it will have a looser, more clip-able low end along with the enhanced harmonics up top. These characteristics don't really align with huge gained-up chording or tight-tracking bass lines saturated with high gain. For those Heavy styles, the 90-watt setting is far more appropriate. However, if it's classic rock rhythm or single note soloing that needs to be bright and cut yet also have an expressive leading edge full of harmonic richness and perhaps a bit of clip, 45 Watts could be the perfect choice.

The same applies to clean chording and soloing. If you need maximum headroom and authority with accuracy and percussive impact for really clean work or more modern styles, the 90-watt setting would be most appropriate. However, if you want a more Trad response with the ability to have a looser, clipped leading edge and

a more retro vibe, the 45-watt selection would be a great place to start.

NOTE: *For a bolder, brighter response in the 45-watt setting, try moving the speaker cabinet from the 8 OHM SPEAKER output over to the 4 Ohm SPEAKER output. The impedance will be a more correct match due to the fact you are using a different tap on the transformer and two fewer power tubes.*

25W

Last but not least is the 25 Watt setting on the Multi-Watt switches. This setting reconfigures the inner two 6L6s to Class A Triode for reduced volume and easier pushing of the power section. With the least power and the sweetest transition to clip, this is the setting for "low wattage" vintage style performance, at least as far as an amp with such big iron can take it anyway.

Although it is a "low power" setting, keep in mind the output and power transformers – and therefore internal voltages – are those capable of supporting a 90-watt amp and therefore have more push, authority, and sheer mass, which, though knocked down accordingly, still punch above their class. In other words, even the 25-watt setting can still be loud!

We point this out here to outline the fact that while you will get some of the characteristics of a "little, low power amp," there will be differences due to the bigger transformers and heftier power supply. The 25-watt setting will introduce an earlier clip threshold allowing more power section breakup (overdrive) earlier, and the sound will be even less punchy and have an even sweeter top end, but the mechanics of physical mass won't allow the same response a dedicated 25-watt amplifier with its relatively small transformers would have.

Now that you understand the physics, let's get to the sound! 25 Watt shines in the CLEAN and FAT Modes of Channel 1 (and 2 in FAT) when it's time to use these traditional gain circuits for pushed rhythm sounds. Cranking up the GAIN control to near its maximum and then also cranking the MASTER up, and perhaps even the TREBLE and MID, while reducing the PRESENCE, can unveil some great "vintage" style sounds.

25 Watt can also add a harmonic edge to CRUNCH in the first two Channels as well, although there you will need to ride the GAIN to achieve the perfect blend of preamp and power section overdrive. If you saturate the preamp with a very high setting of the GAIN control, you won't as easily be able to hear the characteristics the power amp being pushed can add, so just keep this in mind when applying the 25 Watt mode to CRUNCH.

The IIB Mode in Channel 3 is another place to look for interesting blends of preamp and power section overdrive combined. There are some nice nuances the 25 Watt setting can add if you keep the GAIN below 1:00. Much beyond 1:00, the preamp gain will likely overshadow what the power section might otherwise add when pushed, but ultimately, it's what works for your music and style so feel free to experiment.

This 90-watt full-power position would be the place to look for the most headroom and dynamic attack when searching for clean sounds. It is also where to go for the most width and authority, the tightest tracking low end in gained-up chording, and a voice-like character for single-note soloing. It is hard to argue with the three-dimensional width of the Simul-Class (90w) position as it can deliver a sonic footprint that has girth and is superbly balanced. There may be an added harmonic layering as the amp is switched down to the 45 and 25-watt positions, but the benefits there for these styles are often not worth the compromise in terms of tracking on the low end and dynamic presence and integrity.

To summarize, the 25 Watt setting, at least in terms of adding power section character and overdrive, is best utilized for sounds and musical styles that have or need less front-end/preamp gain. In high gain Modes and/or with high GAIN settings, the two higher power options will offer more accuracy, control of the low end, and authority, with 90 Watts being the best suited for these applications.

NOTE: *It is normal to hear a pop when the amplifier switches to the 25 Watt setting from either of the two higher power selections on the Multi-Watt switch (or switch Channels where the power is switched between either of the two higher power settings to 25W). This pop is due to the voltage changing on the power tubes. We have taken great steps internally to limit this noise, but there is some residual noise due to the physics of this operation.*

For the best performance in live miked applications where either large sound reinforcement is in place, or you are capturing performances that involve footswitching between Channels set to different power levels in a studio, we suggest using the amplifier in either 90 Watts or 45 Watts wherever possible as opposed to the 25 Watt option, as there will be less change in voltage in the power section and therefore noise derived from potential voltage changes will be minimized.

> **NOTE:** *As with the 45 Watt setting, for a bolder, brighter response in the 25-watt setting, try moving the speaker cabinet from the 8 OHM SPEAKER output over to the 4 Ohm SPEAKER output. The impedance will be a more correct match due to the fact you are using a different tap on the transformer and two fewer power tubes.*

CHANNEL 1

Channel 1 will likely become your "Rhythm" Channel, due to its two clean/ traditional gain Modes, CLEAN and FAT, with FAT being repeated in Channel 2 for maximum flexibility in the traditional gain domain. These two Modes provide two different "clean chording" characters and EQ Curves, with CLEAN being the more stripped, tight, and percussive of the two.

FAT follows it up with a bigger low end and richer low mids, which provides for wider, fatter, more 3-D sounding rhythm parts, and also, some nice round options for single note soloing when set appropriately (thoughtful BASS settings).

CRUNCH completes Channel 1 and brings it home for those into clipped/overdriven chording and/or single note work. It's got much higher gain than either CLEAN or FAT but also stays tight and percussive in comparison to the higher gain "Lead Modes" found in Channels 2 and 3. CRUNCH is saturated in most of its range but not so much that it compresses and slows things down, so the dynamic response is great for rhythmic styles that have some overdrive in their makeup.

Like FAT for clean work, CRUNCH is also repeated in Channel 2 to increase flexibility in overdrive for the rhythm sector. This allows one setting of CRUNCH in Channel 1 optimized for pushed chording or throaty single note grooves, while another different setting of CRUNCH can be called up in Channel 2 for higher gain work, be it heavier chording or soloing. And since CRUNCH roams the range between the edge of clean and overdrive so adeptly, you might also set CRUNCH in Channel 1 for a soft-clip clean response and set CRUNCH in Channel 2 a bit higher for classic rock chording.

Having this flexibility and being able to dedicate two Channels to different settings of the same sounds/Modes makes ultimate footswitching sense, along with the myriad of options possible when you don't "clone" the Channels. Either route you decide to take to your ultimate Tone and footswitchable palette, you'll find the three Modes that make up Channel 1 are Classics, one and all, and give you many ways to craft your Tone.

CLEAN

This is the lowest gain Mode in the MARK SEVEN, and many will view it as a Rhythm Channel. That said, it can be used for anything that suits your musical style, from clean comping to pushed single-note soloing and anything in between that doesn't require more than traditional gain levels.

CLEAN is the "skinnier," more stripped of the two traditional gain Modes in Channel 1. It is purposefully trimmed in the low end to provide for tight, percussive chording that will fit snugly into a mix, especially one heavy in instrumentation or having layered keyboard and vocal parts. This lack of sub-low end provides for maximum definition within a rhythmic framework, increases accuracy, enhances dynamic response, and works equally well for both chording and single-note lines.

CLEAN also lends itself well to tightening up instruments that have large amounts of low-end or low mids in their character. Hollow or semi-hollow guitars, or those instruments with shorter scale lengths, are often featured best in CLEAN, as the less prevalent low end keeps them tighter and more articulate, especially for rhythmically complex work.

CLEAN produces beautiful, sparkling clean chording sounds between where it starts to sound rich and full at about 11:00 on up to a richer sounding range that transitions around 2:00 on the GAIN Control to a warmer, fatter region where clipping begins. You will find the brighter, more open-sounding response at the lower end of this range, between 11:00 and 12:30. Above 12:30, richness builds in the low mids and lows and begins to fill in the sound. Above 2:00, gain increases dramatically along with the low end. At the very top end of the GAIN control, the sound is the fullest in the lows, yet still not as full as the FAT Mode at that GAIN setting.

> **TONE TIP:** *If you intend to use CLEAN at that upper end of the GAIN range (past 2:00), it can be helpful to reduce the BASS control to below 11:00 to retain a defined attack characteristic. With shorter scale instruments and/or mahogany bodies and necks, especially those fitted with Humbucking pickups, this is an even more important path to balance and great Tone.*

FAT

FAT is the other "traditional gain" Mode in Channel 1, and like CLEAN, it excels at clean chording sounds, albeit of a wider, fatter nature. FAT also sounds great when wound up on the GAIN control ...as long as you wind down the BASS and the MASTER as well to some degree when you're headed there.

In comparison to CLEAN, the sub-lows are left unfiltered in FAT to round out the response and deliver big, rich-sounding low end that breathes and a top end that sounds three-dimensional as it sparkles and shines. This low end, along with the tricks we apply to the top end, creates a beautiful bloom and richness and results in a truly three-dimensional (clean) chording sound. What this increased airy-sounding low end does for the top end, and our tricks up top do for the bottom end, is integral to creating the sound of this classic sounding, wonderful feeling Mode.

While FAT is nearly unbeatable for clean chordal work, it is also very expressive for clean single note and mildly saturated (Vintage-approved) soloing. FAT smears more easily and uniformly, and the response is smoother as it transitions in and out of clip, which is perfect for blues, R&B, indie rock, and Americana styles. Some guitars will want to see the TREBLE set higher (like 2:00) and BASS rather low (below 10:00) for balance and better control of these more saturated sounds.

Regardless of how you apply FAT, it's a perfect Mode for your rhythm work as well as a nice color and personality to have on hand for lead work that isn't so gained up the character of your guitar is disguised. This versatility is why we included it twice, once in Channel 1 and again in Channel 2, for an almost limitless palette of choices and expression in the traditional gain domain.

And don't forget to explore the further reaches of its scope by combining FAT's preamp character with the power options provided by Multi-Watt. Try middle-region GAIN settings with clean playing in the highest power setting for maximum headroom and sparkle, and conversely, higher GAIN settings (TREBLE higher, BASS and MID lower) for fury chording and single note soloing in the lowest (25 Watt) power option for added saturation and harmonic complexity. The FAT Mode covers the full spectrum and gives all the Multi-Watt power settings something great preamp-wise to work with.

CRUNCH

CRUNCH creates the perfect transitional step between what a traditional gain preamp offers and a high gain modern preamp can deliver. It occupies the middle zone between clean and overdrive, and for many players, it may prove the most useful Mode of all in the MARK VII. Knowing this fact, like FAT for clean work, we placed CRUNCH in both Channels 1 and 2 so that players who would like to use more than one setting of the CRUNCH Mode can dedicate two of their three footswitchable options to either two different settings of CRUNCH, or just two separate volume levels of the same sound, one for rhythm playing and one for soloing.

CRUNCH starts out at the lower end of the GAIN control's range, acting like a hopped-up traditional gain preamp. It will "clean up" nicely in this range despite its mid-biased urgency and "claw." By 12:00/Noon on the GAIN control, the more aggressive side of CRUNCH starts to reveal itself with perfect nuanced overdrive. Approaching 2:00 on the GAIN, you're in classic British territory where chords break up more smoothly and evenly yet with urgency, and the attack is still fast, crisp, dynamic, and deliberate.

This may be the best sound of all from CRUNCH and certainly one of the sounds that helped its predecessor, the MARK FIVE, stay a strong and vibrant part of our lineup for well over a decade. From there, gain increases again, and near the top of CRUNCH's range, you have a pretty saturated yet still supremely expressive Lead and/or Heavy Rhythm sound.

Truly one of the MARK SEVEN's most useful Modes, CRUNCH delivers classic sounds in a wide gain range and is sure to become a favorite for all kinds of different guitars and applications.

CHANNEL 2

Channel 2 begins as a Clean, traditional-gain amp in the duplicated (from Channel 1) FAT Mode and, through Mode selection, ends up a Beast capable of ripping, searing Brit-influenced high gain performance in the MARK VII Mode. Along the way, a duplicate CRUNCH (also from Channel 1) fills in the gap as the halfway point with its wide range of gain that stretches seamlessly between the two extremes.

FAT & CRUNCH

> **NOTE:** *Please see the descriptions of FAT and CRUNCH earlier in Channel 1's "biography" if you need a refresher as to their gain profile, characteristics, and most appropriate applications.*

This third Mode in Channel 2 makes an appearance for the first time on a Boogie here in the MARK VII. We toyed with the idea of calling it MARK SIX in tribute because there actually was a MARK SIX ...in prototype form. However, it never reached production status, and that was purposeful. Why? Because it was our proving ground for the subsequent MARK amp to the MARK FIVE, and after years of relentless refinement on that beloved prototype, we felt we had arrived at a MARK model so good... we had to skip one!

All those miles travelled with the MARK SIX prototype created a fondness for it, so though we haven't paid the full tribute due on the Front Panel, we wanted to pay tribute here by mentioning the fact that there was a MARK SIX... and it was our beloved prototype "mule" that carried us all the way here to the MARK VII and its incredible sounds and performance. So, if you happen to see a MARK VI for sale on the Internet or elsewhere, beware...it is counterfeit. We have the one and only MARK SIX preserved in our museum for posterity, so bidding on one would be akin to someone offering to sell you a bridge.

MARK VII

The new MARK VII Mode, as you may have guessed, appears for the first time on a MARK amp here and like the two that finish off Channel 3, it's another incredible high gain Mode. This works extremely well in the overall scheme of the VII's footswitching array, and especially being housed alongside the duplicate CRUNCH Mode in Channel 2. This way, one can use it as either a HEAVY Rhythm sound in Channel 2 and dedicate Channel 3 to any one of the 3 gain Modes there that are great for soloing. Or you could do the opposite and use MARK VII for a quasi-Brit-influenced Lead sound and dedicate the IIC+ or MARK IV Modes in Channel 3 – most likely with the Graphic EQ engaged and set to some sort of "V" setting – to your higher gain Rhythm work.

Alternatively... the traditionalist who needs mostly cleaner, lower gain Rhythm sounds can dedicate both Channels 2 and 3 to differently voiced Solo sounds of similar (or even wildly differing gain if in Channel 2's FAT Mode) but still higher - gain ranges.

And finally, the player who rarely uses Clean sounds might dedicate Channel 1 to CRUNCH for overdriven Rhythm, Channel 2 to CRUNCH or MARK VII for either Heavy Rhythm or Soloing, and Channel 3 to either of these applications and others with the IIC+ or MARK IV Modes.

From about 10:00 to 11:30 on the GAIN control, some classic sounds reside in the Brit-style flavor, though albeit a little more refined and smoother. From there on up to about 2:00, the texture thickens as you gain up. That's not to say that the sound becomes too saturated or slow, it doesn't, it's just that as the character becomes more saturated, there will be increased lows and low mids along with the gain introduced on the top end, which makes the sound wider and fuller.

Beyond 2:00, and on through the rest of the GAIN's rotation, the saturation becomes increasingly thicker and creamier. This upper region is really where the MARK VII Mode introduces a new Boogie gain voice that falls sonically between where the MARK IV Mode sits and where "Modified Brit" circuits, like our Triple Crown and Badlander, hang their hat. It's got a more aggressive top end and a percussive midrange attack with a chesty kick in the upper low end that is different than MARK circuits with their pronounced higher midrange bump and more sub-low bottom end that must be used sparingly in the preamp. This hybrid-Boogie may be the perfect blend between "American" and "Classic Brit" where gain is concerned, as it's got some of the character of each, yet has a new personality all its own.

Another great aspect of the MARK VII Mode that helps footswitchability is the fact that it sounds great for Heavy sounds without the need for the Graphic EQ engaged. This means you can dedicate the Graphic EQ to the Channel 3 Modes where scooping the mids and boosting lows and highs with the iconic "V" shape or some derivative on the Slider Pots is more appropriate and creates classic, wide Boogie Heavy Sounds.

With something for nearly everyone, don't be surprised if the MARK VII's tonal crossroads become a place you visit often to bridge stylistic gaps or nail specifics when it comes to your gain needs. That this useful sound rides alongside the multifaceted sounds in Channel 3's classic MARK circuits, footswitchably-speaking, makes it all the more useful for many alternate gain sounds from classic Crunch Rhythm to jabbing or soaring Lead work.

CHANNEL 3

Channel 3 is pure "Boogie" in every sense. Three iconic and versatile Modes reside in this last collection of circuits, and since Boogie, as the inventor of high gain is synonymous with the term, the MARK VII's offerings cover the waterfront and then some.

MARK IIB

First up is a long-requested addition to the MARK Line, the MARK IIB. Famous for its touch-sensitive nuanced gain and its round attack characteristic, it appears in this rendering as the least saturated of the three "Lead" Modes in Channel 3. Its perfect blend of smooth, well-attached overdrive excels for "Turbo-Traditional" sounds, be they blues, roots, classic rock, or nu-country. Over time you will likely find the IIB Mode is the go-to for smooth saturation that preserves the character of your instrument without covering it up.

A large part of this characteristic of the IIB Mode here in the VII is that the Treble frequencies are centered higher and in a more traditional range compared to that found in the next two Modes of Channel 3. In the IIC and MARK IV Modes that follow you have the "Treble SHIFT" - as it relates to the Pull Pot SHIFT feature brought forward from the IIC and MARK IV models - activated. The result of this auto-activation is enhanced mid focus and a resulting bump in gain in those frequencies.

That can be a good thing when saturation and high gain styles and are the order of the day, say for vocal-inspired single note soloing and rock or metal heavy rhythm work. However, if your world orbits styles born of lower to medium gain levels, the traditional, more "normal" frequencies found here in the IIB Mode are usually preferred. They allow the overdrive – which is more open and touch sensitive as a result - to surround your instrument, but not "cover it up" and saturate it to where gain is the most prominent feature.

MARK IIC

Holding the middle spot on the Mode Select toggle, we anchor Channel 3 with perhaps the most famous of all MARK Modes, the MARK IIC+. This most soaring and searing of all MARK models earned its legendary status in the Studios of LA in the mid to late '80s and subsequently found its way onto the biggest rock and pop tours of the day. MARK IICs are still highly coveted and bring many times their original price when one can be found on the pre-owned market.

This iteration here in the MARK VII rivals the originals in our collection and those we've borrowed from friends, and in many ways, we prefer it for its purity of voice and round, balanced Tone. That, coupled with the fact that it sits alongside all the other toneful circuits and welcomed modern features here in the VII, makes it a clear upgrade.

Fire and focus, ferocious yet singing, these are the traits that made the IIC+ the legendary amp it is. Being a bit more “stripped” and raw, it also sits in a track well, and the more complex the track is, the better. It has a mid-focused attack that defines its character while also being harmonically rich in the top end.

Most players using it for Heavy sounds scoop some of this midrange out of the mix with the 5-Band EQ while also enhancing the two lowest and two highest Sliders in the classic “V” curve. However, even when the inherent mid focus is reduced with this classic EQ curve, the nature of the circuit itself keeps the sound aggressive, urgent, percussive, and tight. Some of rock and metal’s most iconic songs and albums feature the IIC+, and we feel, as do those we shared this version with early on, it’s all IIC+ and then some!

MARK IV
We finish off Channel 3 with another legendary MARK amplifier Mode, the mighty MARK IV. We included this thick, creamy gain mode in the VII’s predecessor, the MARK FIVE, and it soon became many players’ go-to for instantly friendly Lead sounds due to its wider, thicker, throaty voice and easy to play feel.

MARK IV has more low end in its makeup and produces a more three-dimensional version of the classic IIC+ sound. It excels at single note solos and melody work, adding girth and depth to your phrases. It also produces huge Crunch Rhythm sounds and can be even “heavier sounding” than the IIC+ sound due to this added low end girth and thicker gain signature.

And don’t underestimate the MARK IV for lower to medium gain work as well. Its added low end and smoother top make lower gain solo, and even chording, sounds breathe and have an ambiance all its own, yet leans a bit toward traditional. The overdrive smears nicely across the spectrum and, with the right Treble and Presence settings, can even become a nice semi-clean threshold sound with your guitar volume backed off a bit.

There are few amps that offer the flexibility of even ONE of the MARK VII’s three wildly versatile Channels, let alone contain the collection of powerful Modes in these three riding alongside each other here. Serious Tone Power awaiting your thoughtful dedication in the seven performance Modes means the MARK VII truly stands alone in terms of musical readiness and near-limitless versatility where analog and real are the guiding directives and the result.

Adding the shaping power and flexibility of the Five Band Graphic EQ expands these Mode choices and their authenticity manyfold to arrive at the most comprehensive Tone palette for guitar found anywhere in the analog domain. Combine that with the different responses and sounds of various speakers and cabinet styles, or in the World of DI, the Channel Assignable IR options, and you’ve got an ultimate Tone Tool that won’t go out of style or need software upgrades to keep providing you with musical value and great Tone for many years to come.

THE CONTROLS

The MARK SEVEN’s GAIN and Tone Controls, though tripled due to the Channel count, are simple and straightforward. They do the same basic things across all three Channels, though depending on the Mode called up, they can have setting nuances important to achieving optimum performance. Things like, don’t set the BASS control too high in Channel 3 when using high GAIN settings. Or avoiding high settings of TREBLE and PRESENCE combined in high gain Modes ...especially with the Graphic EQ engaged and the high-end boosted.

These and other control setting nuances will become apparent and second nature to you with some hours in the driver’s seat and great sounds achieved, so not to worry, it’s mostly common sense. That said, it is worth the time experimenting to learn how the Controls interact to achieve the things you want to hear and feel.

The GRAPHIC EQ is its own entity, and since it is at the rear end of the signal path, interaction with the rotary TONE Controls located earlier in the preamp is somewhat diminished. That’s not to say it isn’t powerful, though, as the opposite is true. In many cases, the 5 Band Graphic EQ will be your most powerful shaping tool, especially in terms of tight low end in Channel 3, where too much low end earlier in the preamp can compromise

the attack and tracking.

NOTE: IMPORTANT! *This is a good time to mention that the rotary Tone Controls and Graphic EQ Slider Pots, while powerful when feeding guitar Cabinets and/or Speakers, can become FAR more powerful - and perhaps even dangerous (to Good Tone and Ears alike) - when using the Direct Out and CabClone IR Cabinetry.*

Studio Monitors, and especially Headphones, can enhance certain frequencies, and the amplifier's Controls may quickly push them past what is musically useful and/or physically unpleasant and beyond, potentially damaging ears and speakers.

Use care, common sense, and caution when dialing the Controls in a Direct Interfacing scenario until you learn the limitations of your destination system and your hearing's ability to handle the sounds you wish to achieve in your Studio or Live environment.

GAIN

In all three Channels of the MARK VII, GAIN is royalty among the Controls. Regardless of what style you are looking toward, the setting of the GAIN determines the character, color, and shape of the sound, clean or dirty, bright or dark, thick or trim. That's because as natural tube saturation increases, top end is usually traded for girth and warmth, which often leans appropriately toward the applications for the different sounds and playing styles. In other words, cleaner sounds usually benefit from the lower gain's brightness and trim EQ, and higher gain sounds benefit from the receding top end and added warmth and width as saturation compresses, fattens, and darkens the character.

The GAIN control meters the gain and tube saturation in the early and middle stages of the tube preamp and determines whether the response will be cleaner with maximum headroom or more saturated with tube overdrive, which again exhibits a more naturally compressed nature and recessive or "slowed" top end.

Not only do the opposing ends of the gain spectrum sound different (trim and bright or wide and dark), but it is also important to underscore that as the signal becomes more saturated and overdrive increases, the dynamic response changes, and the attack can begin to feel "slower" and less immediate. Not in a problematic sense, because the styles played with overdrive lend themselves naturally to the shape and feel produced by the added gain, but just in comparison to pristine clean sounds, where the attack is more immediate and urgent.

Most of the great sounds in most of the Channel Modes fall in the Tone Zone, as we refer to it, and lie somewhere closer to the middle range of the GAIN controls; 10:30 – 2:30.

Outside this middle range, there are good usable sounds. Still, with a good quality instrument and capable pickups, you will likely only occasionally find the need to venture there unless heavy rock and metal sounds are your calling. If that is the case, you may find the GAIN set much higher or even all the way up for the extremes. If that is your go-to range on the GAIN, just remember what we covered in the Helpful Hints Section; when the GAIN is set in its highest range, the tubes are more prone to any microphonic issues, such as squealing and "runaway" harmonic peaks and even Reverb howling or other gain related issues, including excess noise in the form of hiss and/or hum. Also, recall that as the GAIN goes up, the BASS control should often come down for the most articulate attack and focused low end.

MASTER

Think of the MASTER as the control valve for the feed to the Power Section. It supplies the Driver Stage, which in turn shovels gain toward the output tubes, and they, in turn, amplify the signal to achieve the playing volume you desire.

Having a MASTER control means you can set any amount of gain desired in the preamp stages and adjust the listening level (determined by the power amp's MASTER setting) independently. This makes the wide array of sounds available in the MARK VII possible at nearly any volume level.

The MASTER also feeds the CabClone IR DI Output section, and though we've taken steps to prevent overloading of the CabClone's Input circuit, being more reasonable with your MASTER settings will help avoid any

clipping there and ensure better performance when going Direct in both Live and Recording applications.

The most usable and well-behaved zone on the MASTER is found between 9:00 and 1:00. In this range there is plenty of room for adjustment in either direction (up or down in volume) with most preamp settings and it also provides a reasonable signal level for the CabClone's Input stage.

Above 1:00 on the MASTER, with most preamp GAIN settings, you enter an area of diminishing returns in regard to Tone. The low end starts to become looser and less controlled, and the tracking will get sloppy. Also, at these higher output levels, a more pronounced midrange bump from the 6L6 power tubes emerges and can become a dominant part of the sound. These two characteristics combined can work for some musical styles, mostly those relying on lower preamp gain and some power overdrive, but either and possibly both could be detrimental to great rock and Heavy sounds, where a scoop in the midrange and tight-tracking low end is for most players a prerequisite.

Beyond that cautionary advice, use the MASTER as you see fit to balance your Channel's Modes and global-level requirements.

PRESENCE

The PRESENCE is a Tone control located in the later part of the signal chain in the power section. It adjusts the mix of a predetermined (high) frequency relating to the negative feedback in the power section. It is a very powerful control, and its setting can give the impression of opening the sound up and adding brightness and attack, or clamping it down, compressing and darkening it. These characteristics, in turn, affect how you perceive dynamic content, as brighter sounds appear as faster while warmer sounds feel slower and more relaxed.

This addition - or removal of - top end with the PRESENCE can seem to move the sound forward and back (near or far) in the musical landscape (mix). It also has an impact on our perception in the time domain and helps define whether the sound feels either "tight-tracking" and "fast" or "slow" and "behind the beat."

Clean sounds handle higher PRESENCE settings well to a point, then things can become too forward in the top end. Overdrive sounds usually call for lower to medium PRESENCE settings. Overly high settings of the PRESENCE there can quickly lead to buzzy, unfocused top-end characteristics, especially with single-note lead playing, which is rarely good. Some Crunch Rhythm and Heavy chording sounds can tolerate added cut and sizzle from the medium to higher range of the PRESENCE, but how much usually depends on the Track or ensemble mix it is sitting in.

As mentioned before, along with the PRESENCE, the top end can be swapped around by utilizing the differing frequencies found in the TREBLE and even upper range of the MID control that carries a fair amount of high mid/low treble region cut. Between these three regions and flavors of high frequencies, you will be able to sculpt just the right type and amount of top end you need. And if you are still in need of more, or just different, there's plenty left in the upper two Sliders of the 5-Band Graphic EQ!

TREBLE

Next to the GAIN, the TREBLE is probably the most critical control in all Channels and their Modes. It feeds the Tone control string, and therefore, its setting can determine how powerfully the MID and BASS work. Like the GAIN, there are three zones in its range: low, middle, and high. These are as simple to understand as warm, cut, and bright, with the bright zone having a nickname, which is "dangerous" in terms of musically balanced sounds.

The lowest part of the range is where the round, warm sounds will be found. The most usable part of this range is between 9:00 and 11:00, with the portion below 9:00 having few uses apart from jazz sounds and 10:00 - 11:00 being the most useful.

The middle range is where most of the best performance and sounds are found for a wide range of instruments and styles, 11:00 – 12:45 being by far the most frequented for most players. In this range, the balance between all the Tone controls is at its best and plenty of brightness, cut, and openness is available for almost any style and instrument.

Beyond 1:00 – 1:30 on the Treble will, for most, be used in a very specific application that calls for maximum attack and cut with an instrument that is shy up top or for a gained-up chording sound in a crowded mix. When using settings in this zone, you may need to also increase the BASS and MID to fill in the gaps, as the TREBLE set up there overpowers the other two Tone controls.

A couple of places where you may see the TREBLE set in the higher zone are CRUNCH of Channels 1 and 2 and the IIB Mode in Channel 3. In CRUNCH, the added gain in the top end can add some edge and definition for medium to higher gain chording in rock styles. In the IIB Mode, the added gain produced in higher settings of the TREBLE fills in a spot that can add a singing quality for single note soloing in blues, R&B, and new country styles.

The high zone of the TREBLE can be used for the high gain Modes as well to add attack and cut, but keep in mind that, like the PRESENCE set high, it can also lend an unwanted buzzy or fizzle-y quality to the sound, especially on single notes if not balanced well with the other Tone controls.

Lastly, avoiding very high TREBLE settings can help reduce hiss and excess noise in your amplifier, especially in the gain Modes. Avoiding that region can also reduce the likelihood of tubes with microphonic tendencies to begin squealing or whistling, again, especially at high GAIN settings combined with high TREBLE settings. We paid special attention to this in final play testing when your amplifier was built, but no one can predict what a tube will do over time with continual use, temperature fluctuations, and the bumps, jiggles, and bounces incurred in traveling.

MID

The MID control adjusts the blend of a wide band of midrange frequencies in the mix, adding or taking away punch and authority. At the lower end of its range, it scoops mids and creates a resilient, easy-to-play feel that is forgiving and broad sounding, allowing the top end and low end to be the dominant part of the EQ curve. The middle and upper ranges of the MID bring in the punch, attack, and forwardness that mid-dominant sounds are known for. Depending on the instrument, musical style, and/or technique level, some may find this degree of punch and forwardness stiff feeling and unforgiving to play, so this is something you will need to determine for yourself through experimentation.

Clean sounds usually sound and feel better with lower settings of the MID, say 8:00 – 10:30, depending on the instrument. This range allows more low-end breathiness and air to support the sound and more top-end shimmer to come through and open it up, the overall result being a more three-dimensional character.

Gain sounds – depending on the style of music and application (Rhythm or Lead) – can call for either a lower setting with scooped mids or a little more midrange dialed in to make the sound more authoritative or aggressive and to focus the attack.

With clipped/overdriven sounds in the FAT Mode of Channel 1 and 2, the MID can color the sound and change the feel substantially. The lower range will let the gain smear the notes seemingly more evenly and cohesively, while a higher setting will add gain but also change the texture and attack, causing some elements to stand out more than others.

Remember that you can use the MID control in the individual Channels and the 750 Hz Band of the Graphic EQ in combination with each other to further define the character of your sounds. The two respond very differently, and each has a different part of the midrange under its control in terms of center point and width. Though both are fairly broad Q, using the two types of controls together can help you shape the mids with more options than using either one alone. Keep this in mind when searching for specific mid frequencies when searching for your own signature sounds.

BASS

The BASS is one of the easiest controls to operate on the MARK VII as it is largely independent in terms of controlling a frequency range within the preamp. What you hear is what you get. The only settings considerations are these:

As mentioned earlier in the Helpful Hints Section, as the GAIN control goes up, the BASS control should usually come down. This will ensure a definitive attack and a balanced dynamic response. This is most especially true in Channel 3's Modes for the best attack characteristics as excess low end dialed up early in the preamp can cause flub and indistinct attack characteristics. We'd suggest keeping the BASS control below 11:00 for medium to low gain sounds and lower for high gain sounds, possibly even as low as 9:00 or even occasionally off for the highest gain applications.

For lower to mid-gain sounds such as in blues, R&B, roots, and country in Channel 3, you can set the BASS a little higher than 11:00 to add girth and breath to the sounds. However, if you are running the GAIN control much past 12:30, you will discover the attack can be compromised pretty quickly by this up-front low-end available on the BASS control.

Clean sounds can more easily support higher BASS settings than overdrive sounds. Most players find a nice balance between 11:00 and 1:30 depending on the application, GAIN setting, and the instrument's scale length, wood, and pickups. However, if you are using CLEAN or FAT for clipped sounds with the GAIN control maxed or nearly so, you will be better served with the BASS set as low as you would with overdrive sounds in the higher gain Modes.

If you need a lot of low-end combined with high gain sounds for hard rock, metal, or heavy prog sounds, we suggest looking toward the Graphic EQ's two lowest Bands (80 Hz and 240 Hz) for the best performance.

The Five Band Graphic EQ comes at the very end of the preamp's signal path and right before the power section, so low end dialed up there is not further amplified in the preamp. In contrast, the BASS control is located upstream early in the preamp's signal path, and low frequencies added there are subject to more amplification and can quickly become overbearing and swamp the attack, especially on high gain sounds, sounding imbalanced and tubby/flabby.

Just keep in mind that the two lowest Bands of the Graphic EQ, when coupled with high BASS settings and especially high GAIN settings, can also overwhelm the attack and swamp the sound. Again, use common sense and taste to achieve the best blend of low-end and attack clarity.

High settings of either, and especially both combined, can also have the potential to create unwanted vibrational noises in a Combo and, at extreme volumes, can even have the potential to cause possible speaker damage. Use common sense and taste to ensure uninterrupted performance.

THE FIVE BAND GRAPHIC EQ WINDOW

A Boogie hallmark since the early 1970s, the Five Band Graphic EQ is famous for its precision shaping power and the versatility upgrade it brings to our Boogie amplifiers, both big and small. It allows surgical level control of the frequency spectrum and yet, at the same time, is broad and sweeping enough to be fast and easy to dial.

Another attribute is that its placement at the end of the preamp's signal path is perfect for enhancing high-gain sounds. This late placement in the circuit allows far more low end to be added than would otherwise be possible farther upstream in the preamp, where it would be further amplified through the signal path and subsequent tube stages.

The five frequency bands are "broad Q" and range in center frequency point from 80 Hz on the low end to 6600 kHz on the top end, with 750 Hz commanding the all-important midrange in the center. Each band provides approximately 12db of cut and boost from the center line's "Flat" detent point, and that provides ample room to radically shape the sound or just subtly enhance it.

The most classic application for the Graphic EQ in MARK amplifiers is the time-honored and widely used dipping or "scooping" of the 750 Hz Mid Band in conjunction with the boosting of all the other Bands in a "V" pattern. This creates a wide, 3-D spread and delivers huge Crunch Rhythm performance from, obviously, the CRUNCH Mode found in Channels 1 and 2, the MARK VII Mode in Channel 2, and the IIC and IV Modes in Channel 3.

The “V Curve” also works for enhancing clean sounds, but it is usually preferred with a less exaggerated form of the “V” pattern for sounds with less tube saturation. This would be especially true for the two lowest bands in combination with the FAT Clean Mode in Channels 1 and 2, as this Mode has increased low end in its makeup.

For Crunch Rhythm sounds – whether in the CRUNCH or MK VII Modes or Channel 3’s IIC+ and IV Modes, the added wideness and low-end “Chug” and top-end “grind” and high harmonics spread in the classic “V Curve” allows for 4x12-like performance out of cabinets much smaller and with fewer speakers. It can even help open-back Combos sound giant and menacing! The “V Curve” applied to our cascading gain is a signature sound etched in rock for so many recording artists from the 70s when we first introduced it, through the 80s and 90s when high gain ruled the airwaves, and on through today – as one of the biggest, widest guitar sounds ever captured.

> **NOTE:** *EQ Hangover! Going abruptly back to a sound that is “flatter” and devoid of the mid dip/scoop, added low end and boosted upper harmonics this classic “V” setting creates will sound flat, even “broken,” until your ears readjust to the “normal” midrange content the amplifier has when not scooped out with the Graphic EQ.*
>
> *This is an EQ Hangover and something we deal with all the time in R&D. It is no cause for alarm, but it can be unnerving the first couple times you experience it.*
>
> *When this happens, and it will if you explore the Graphic EQ like we hope you will, simply give your ears some time, perhaps even stop playing for a few minutes or longer and come back after a period of “recovery” time, and your perspective will return to a more balanced one.*

ENGAGING THE 5-BAND EQ

Controlling the EQ is done in each Channel individually in two ways, with the middle 2-position mini toggle in the stack of three on the left side of the Channel.

You can choose 1) ON in the Channel or 2) Off/Footswitchable in the Channel when the MARK VII Footswitch is connected.

It can also be triggered with MIDI Program Change Messages. See the section in this Manual on MIDI control.

Should you ever need more finite control over the sound, you can always insert an EQ – a Graphic style with more bands or a Parametric–style with overlapping sweepable frequencies for even more finite control over the sound into the EFFECTS LOOP. We highly doubt you will ever need to, though, as thousands of players worldwide over the last 50 years have turned to our Five Band EQ for its flexibility, musical accuracy, and ease of operation.

80 Hz focuses on the sub-low end and can provide sub-air and richness for clean sounds and low-end “chug” for high gain chording or bass lines. It works well with open-back cabinets to add some of the character and low end that closed-back cabinets bring to the mix, obviously not physically, but rather electronically. This low end comes late in the signal path, so often, it is the place to look for extra low end that will stay tight and focused, especially for the IIC+ and MARK IV high gain sounds in Channel 3. Remember that the 80 Hz slider carries a lot of power and has the potential to damage speakers if they are not rated for the power the Mark VII has on tap.

240 Hz handles the region from the higher low end through the low midrange, bringing in and out fullness and richness for clean sounds and chesty thump for gain sounds. This band often plays a supportive role rather than a dominant one and fills in the gaps, nooks, and crannies. By itself, the 240 Hz is not the most instantly gratifying frequency range, but its role is important nonetheless in arriving at a balanced sound. Remember there is also ample power in the 240 slider’s higher low end to do some damage to speakers not rated to handle the 90-watt power section. While not as potentially damaging perhaps as the 80 Hz slider, it DOES carry low-end and midrange frequencies that can be tough on drivers not designed to handle them at higher power/volume levels.

750 Hz is probably the most sonically powerful Band of the Graphic EQ's five Bands. Not so much in its potential to cut toward the imbalanced or boost toward the unpleasant like the top of the 2200's range, but rather more in a musically active sense. It's ability to scoop or boost radically the all-important midrange where guitar lives in the frequency spectrum makes it the go-to for your most effective shaping for stylistic accuracy quickly. This is especially true for jumping between old school blues and R&B sounds that are filled in with ample midrange, over to modern metal and Heavy styles where literally dropping the 750 can get you in the territory with just this one Band's setting. This is a bit of an overstatement, but it hints at the stylistically important power of the 750 Hz Band.

Because of this shaping power and the importance of the midrange in the guitar's makeup, as well as its place in an ensemble landscape, this is a good time to recall the previously mentioned EQ Hangover we discussed earlier. If there is any band among the five in the Graphic EQ that warps one's tonal perspective the fastest, it is 750 Hz. Pulling out or boosting the midrange – at least on a guitar - of its character quickly and effectively and then going back to a sound that replaces it with balance quickly, as can be the case when switching Channels here in the MARK VII, can at times sound very strange while your ears adjust to the difference.

On that note, when stylistically possible, try to avoid going down the rabbit hole in terms of the 750 Hz Slider. The more you cut or boost the midrange, especially while also boosting the lows and highs alongside it with adjacent Bands, the more difficult it will be to return to a balanced sound in the other Channels that may not be engaging the same curve on the Graphic EQ. Over EQ'ing is rarely a good thing for Tone, so approach the Graphic EQ as a tool for subtle enhancement, when possible, instead of a crutch the entire amp leans on … unless you only need one color from its diverse palette.

2200 kHz handles the next higher region from the upper midrange through the middle top end. This is an important frequency range as, like 750 Hz, it handles part of the spectrum that defines how a given sound will cut through a mix. The 2200's top end sits above the midrange, adding definition to the pick attack and, in a way, places things in the time domain.

While cutting and boosting the 2200 kHz slider doesn't change anything physically, it can seem as if it does, as this lower top-end "cut" factor weighs heavily on how our ears perceive things in terms of a sound being slow or fast feeling. Not just in the frequency range the 2200 controls but also in the low-end and lower midrange. When dipping the 750 Hz Slider in search of width and dimension, you can boost the 2200 band and dial in attack for the low end to give the impression of tightening it up. This can be especially effective for heavier, higher gain sounds in Channels 2 and 3.
From that perspective, it is the 750 Hz and 2200 kHz Bands that are the most powerful and the most critical of the five sliders to become familiar with and set appropriately for the sounds you want. Almost more than any other, they determine how sounds feel to play and how authoritative or textural they will come across in a mix. The 2200 Band is also an important bridge to the harmonic region found in the 6600 Band. Balancing these two top-end sliders is very important, as 2200 provides the glue that holds a harmonically enhanced sound together, at least in terms of rhythmic accuracy and overall definition. The more harmonics that are showcased with the boosting - and sometimes even cutting – of the 6600 Band, the more critical the setting of the 2200 becomes in terms of filling in gaps and creating a sound that is cohesive, musical, and rhythmically accurate. For example, when searching for huge-sounding yet tight-tracking Heavy sounds in Channels 2 and 3, try working with and swapping the 2200 and 6600 to find the best blend of harmonic enhancement and definitive pick attack. You may find the 2200 Band set a little higher than its higher 6600 kHz counterpart to add the cut that keeps the low strings tracking their tightest and most accurately.

6600 kHz stands watch over the uppermost harmonic region, and though perhaps not as critical to the attack frequencies, it is no less important to a balanced sound. Cutting or boosting 6600 to extremes can result in either too dark or too bright a sound, from muffled and choked to sizzling and thin, so you want to apply it with taste and a musical sensibility.

The most common application where the 6600 slider is boosted is seen in heavy rock and metal sounds for the fabled “V” setting. Here the 750 Hz Slider is dipped below the center line for a midrange scoop, 2200 kHz is boosted to near or above the upper line for the attack Heavy Crunch sounds need, and the 6600 kHz somewhere around the upper line adds the harmonic edge and haze. The two lowest sliders are most often boosted to near the upper line for these sounds as well to add the “chug” on the low end. In total, this “V-Curve” all adds up to a huge sound that has been a staple on classic and modern rock and metal albums since the late ‘70s when the Boogie 5-Band Graphic EQ first appeared on our MARK I Boogies.

Dipping or cutting the 6600 kHz slider is most often associated with searching for warm, round single-note solo sounds, be they clean for jazz-style sounds or higher gain for rock and fusion music. Dropping the 6600 slider below the center line removes the harmonic content from the sound, and this happens rather quickly.

Some players dip both the 6600 and 2200 for ultimate warmth, while others boost 2200 a bit as the 6600 is being reduced, to retain definitive attack or swap its frequency as the sound gets darker. Either way you go, the 6600 slider comes in handy when you want to customize your sounds – especially those infused with gain – and, for a bright guitar with weaker, vintage-style pickups you love for clean work but perhaps struggle with trying to get a warm jazzy or overdriven solo sound from.

Now that you have an overview of the Graphic EQ and a better understanding of the frequency points and how they might be used to attain or enhance the sounds you want, we suggest spending some time exploring. Getting to know how the 5 Bands interact with the rotary Tone controls in the Channels and what is most effective where will help you navigate the many sounds available in the MARK VII more quickly and accurately. Regardless of how you choose to apply it, the Boogie 5-Band Graphic EQ helps set the MARK Series amplifiers further apart from others in creating an ultimate palette for your expression.

REVERB

The MARK VII features an analog all-tube spring reverb circuit that produces a lush ambient reverb effect and offers independent mix controls for each of the 3 preamp Channels. Independent controls for each Channel’s Reverb means you can embellish your preamp Mode choices with just the right amount of the reverb effect for whatever musical style you have dedicated a Channel to. From subtle background reverb to a drenched wash, the reverb enhances the sounds you dial up, adding dimension and a more spatial landscape.

The Reverb is activated via the two-position mini toggle located in the lower right-hand corner of the Graphic EQ (cutout) window. To hear the reverb mix setting you have dialed up on the stacked REV mix knobs in the EQ cutout window, the REV mini toggle must be set to the ON (switch up) position.

> **NOTE:** *It is normal to hear a “swelling in” of the Reverb when switching between Channels. This is due to a timed “Reverb Mute” circuit necessary so that, for example, your overdriven big Crunch Rhythm chord or burning high note at the end of a solo doesn’t wash over your beautiful clean arpeggiated chording as you switch back to Channel 1 or 2 (or even 3 in IIB Mode set low) for a featured part where the band stops in a “breakdown” section. We’ve chosen a length of time that reduces the sound passing through the Reverb circuit (Reverb Tank included) by about 75% so that the residual Reverb tail from the part previously played in another Channel will not overshadow what is currently being played.*
>
> *This time will likely be judged in terms of both chronological measurements (like seconds) and musical application (as in Bars/Measures), and this will be overlayed on tempo ranges (BPM/Beats Per Minute). Being a purely analog piece of gear, we do not have an internal clock to apply to these complex variables, so in true musical fashion, we used our ears and our 50+ years of experience in what has made musicians happy to arrive at a balance of feature meets function.*
>
> **MESA FOOTSWITCH!** *You may also control the Reverb (on/off) via the MARK VII Footswitch, where there is a footswitch button provided for this function. When using the MESA Footswitch to switch your Reverb, the REV select mini toggle in the EQ cutout window must be set to the lower OFF/FS position to operate.*
>
> **NOTE:** *If you connect the Footswitch when powered up, or you power down and back up with the Footswitch connected and the Reverb doesn’t come on, simply toggle the Front Panel REV switch ON and back OFF to reset the circuit and engage the switching.*

The three stacked Reverb Mix controls reside in the Graphic EQ Window just to the left of the EQ Sliders. These mini pots control the Reverb mix in each Channel, with Channel 1 at the top, Channel 2 in the middle position, and Channel 3 at the bottom of the stack. Once the Reverb has been turned on with the Reverb mini toggle mentioned above, simply turn the Reverb controls up until you reach the desired mix level in each of the Channels.

The Reverb may also be stored under MIDI Program Change commands and can be triggered on or turned off automatically with one tap of a MIDI foot controller's buttons or other standard MIDI controller switch. See the section in this manual under MIDI for more pertinent information regarding controlling the Reverb with MIDI.

Because the MARK VII houses so many sounds, gain ranges, and dynamic characteristics within its 3 Channels and 7 Modes, it is not always possible to have uniform reverb mix levels available across the breadth of its sonic playbook.

The Modes in Channels 1 and 2 range from the more traditional gain circuits like CLEAN and FAT to the high gain signatures found in CRUNCH and MARK VII. With both the gain and dynamic content differences being this variable and wide-ranging, it is nearly impossible to achieve uniform input-send and return-mix levels in the reverb circuitry. Therefore, in the cleaner, lower gain Modes like CLEAN and FAT, you will experience greater reverb depth, while in the CRUNCH and MARK VII Modes, the depth (overall reverb available) is reduced.

Fortunately, this difference in mix/level due to gain characteristics also tracks the musical styles that tend to be played in the Modes. In CLEAN and FAT, where clean sounds are favored, be they rhythmic chording or single note soloing, you will find plenty of reverb depth to play virtually any style from R&B to jazz, country to surf music. In the CRUNCH and MARK VII Modes, where gain rules supreme and Crunch Rhythm and burning soloing are the main applications, high reverb mix settings are usually not called for or even appropriate. That said, you will likely find ample reverb depth available for most of your needs. Again, these mix level differences are a result of widely ranging gain signatures and the challenges they present to the reverb circuit.

In Channel 3, due to a similar gain structure across the 3 Modes, a little more consistent reverb mix level is possible throughout. There is not quite as much reverb depth available as in the CLEAN and FAT Modes in Channels 1 and 2, but there is a little more available than in the CRUNCH and MARK VII Modes in those Channels.

Regardless of how you choose to apply the lush tube Reverb throughout your Channels and Mode choices, the MARK VII's Reverb will likely prove to be a valued part of many sounds, be they more traditional clean-based, or high gain and saturated in nature.

CHANNEL SELECT
Again, this 3-position mini-toggle located in the upper right-hand corner of the Graphic EQ window allows for the selection of the Channels when the Footswitch is not in use or unavailable. It also allows for the selection of the Channels before storing them under MIDI Programs. (See the MIDI section of this Manual for programming/storing instructions.)

As notated with Panel Art, the upper position brings up Channel 1, and the middle position calls up Channel 2 and is where the switch needs to be set for the MESA Footswitch to function. Channel 3 is activated when the mini toggle is in the lower position.

FX 0/FS
This 2-position toggle located in the Center of the 3 stacked switches in the Graphic EQ window engages/controls the Effects Loop. When the switch is set to the upper position, the Effects Loop is activated and in the signal path. When the switch is in the lower/down position, the loop is Off but can be switched On and Off via the FX button on the MESA Footswitch. The adjacent FX ON LED will illuminate when the Effects Loop is switched On and in the signal path.

REVERB 0/FS
As mentioned above, this 2-position toggle located at the bottom of the 3 stacked switches on the right-hand side of the Graphic EQ window engages the Reverb circuit. When the switch is set to the upper REV position,

the Reverb is On and in the signal path. When the mini toggle is OFF (down/Green LED off), the Reverb is out of the circuit.

With the Reverb on (switch up/Green LED illuminated), use the 3 REVERB mix controls on the left-hand side of the Graphic EQ window to dial in the desired mix level of the Reverb effect in each of the 3 Channels. Channel 1 Reverb mix is at the top, Channel 2 mix is in the middle, and Channel 3's is on the bottom.

When the switch is set to the lower 0/FS position, the Reverb is off, but it can be switched on and off via the REVERB button on the MARK VII Footswitch. The adjacent REV ON LED will illuminate when the Reverb is switched on and in the signal path for all 3 of the Channels. As you would imagine, if a Channel's Reverb mix control is set all the way down (7:00), no Reverb effect will be heard.

POWER
This is the AC Mains Power Switch. The ON position supplies the AC voltage present at the Wall Socket – Domestic Rating = 117 Volts (120V). Make sure the amplifier's power cable (supplied) is firmly seated in its IEC socket on the amplifier's Rear Panel and that it is connected to a grounded power source that accepts the standard 3-prong plug.

> **NOTE:** *Never alter or modify your power cable! Do not use Ground Lift Adapters (3 to 2 adapters)! Doing so will void your warranty and put you at risk of electric shock.*

Always begin playing sessions with the following Cold Start Procedure at Power Up:

1. ***With the STANDBY in the OFF position, Flip POWER to ON***
2. ***Wait at LEAST 30 Seconds***
3. ***Flip STANDBY to ON ...and Enjoy!***

Following this Cold Start Procedure will help ensure reliability and prolong the toneful life of your tubes, especially the power tubes. Like an incandescent light bulb that has a filament, much wear and stress on your tubes occurs at the instant of power up from a cold state. Much like a dimmer on a light switch being set low when you first flip it on, the STANDBY being OFF at the instant of power up – and for at least 30 seconds afterward - allows the tubes to warm up and minimizes the shock on tube filaments when they are cold.

STANDBY
As mentioned above in the POWER SECTION, the STANDBY provides a warm- up/idle state for the tubes in your amplifier. It should ALWAYS be used at power up, even if the amp's chassis is warm to the touch from recent use. This is because tubes cool far more quickly than other components like the chassis, and even when they are warm, it is far easier on them to have 30 seconds of warm-up/prep time before being hit with the high voltage.

The STANDBY also doubles as a mute feature for set-up before and breaks during a performance. Use the STANDBY any time you are pausing from playing and want to keep your amplifier in a warm and ready state. If you're going to take a break for a couple of hours, it's probably best to power down to save electricity, just be sure to use the Cold Start Procedure (under the POWER instructions above) when you return and want to power back up and use the amplifier again.

> **NOTE:** *A little preemptive troubleshooting instruction here that you may never need but is good to know anyway as a tube amp owner/user:*

Should you ever flip the STANDBY to ON and hear a loud hum, loud static, or should you smell something hot/burning, quickly flip the STANDBY to OFF. What you could potentially be hearing (or smelling) may be a power tube arcing or shorting. While this is rare, it can happen if a power tube were to become faulty. In the event it ever does occur, flipping the amplifier to STANDBY stops the incident right away. On occasion, it will correct the problem, but often it can reoccur. You can troubleshoot the problem using the method below:

1. While looking at the Rear of the amplifier and watching the power tubes (you may need to move the Tube Cage by unhooking the nylon clips and moving it out of the way or removing it altogether), flip the STANDBY to ON.

2. If a power tube(s) is arcing or shorting, you will likely see it flashing brightly rather quickly or perhaps glowing red in the tube's center metal parts more than the rest of the set. Sometimes an arcing or shorting tube can pull its paired counterpart out of bias and cause it to "run away" as well. Regardless, flip the STANDBY to OFF.

3. Get an "OV-Glove" or similar method of hand protection (leather gloves, a Rag, etc.) to grab the hot tube with! Do NOT use your bare skin, as the tubes will be very HOT!

4. Push up the spring steel Tube Clamp(s) and gently rock the faulty tube back and forth slightly while pulling it down and out of its socket. Notice the orientation of the tube guide (raised bump) on the plastic piece in the center of the tube's base.

5. Gently and slowly and making sure the Tube Guide is aligned with the slot in the socket, install a new tube of the same type and color rating (preferably matched MESA Tubes) as the one(s) removed if possible. Again, make sure to line up the plastic guide bump with the slot in the tube socket's center hole. Make sure the tube is seated completely in the tube socket and that the tube filaments light up. If they are not lit up and glowing orange, check the tube's orientation and that it is seated firmly and completely into the socket.

6. Flip the POWER switch to ON and wait at least 30 seconds.

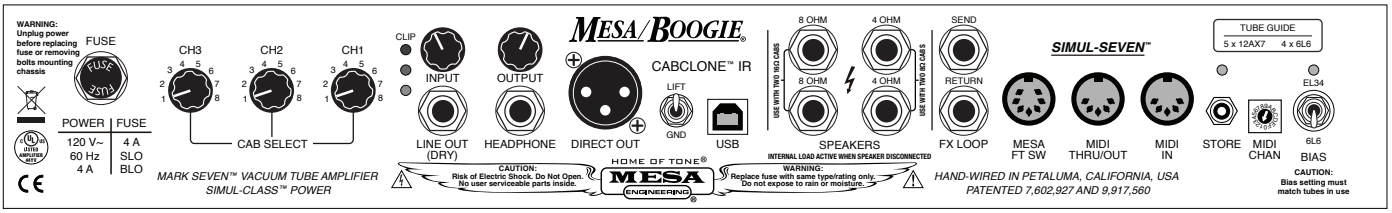
7. While watching the rear of the amplifier - and specifically the power tubes again - flip the STANDBY switch to ON.

8. If you do not see any unusual flashes or brightly glowing (red hot) metal in the center of any of the tubes, you have remedied the issues and are ready to enjoy your amplifier again.

9. If you see a flash or the center of the tube glowing bright red in the center of the metal inside the glass, repeat the steps in this troubleshooting section again using another/different (hopefully known good) power tube(s).

That's about it for the Front Panel Channels, Modes, controls, and features. Hopefully, this information will prove valuable as you explore to find your dream Tones. Now that you better understand your amplifier and what you can do to shape the sounds you hear and need, let's turn it around and go over the Rear Panel and its controls and features.

REAR PANEL



The MARK VII's Rear Panel is where all interfacing connections will be made except that of your instrument to the amplifier's INPUT. Your speaker outputs, Direct outputs, both cabinet-simulated impulse response types for recording and/or live Front of House applications, as well as the unprocessed Line output for triggering external impulse responses, all will be made here.

It is also where you will connect the MARK VII's included footswitch as well as MIDI cable(s) to interface the amplifier to your MIDI foot controller or sequencer/computer, should your stage setup run switching remotely. So, let's run through the Rear Panel (from Left to Right) Inputs, Outputs, and Features and learn optimum ways of getting your signal routed to where you need it.

FUSE
This is the Mains Fuse, and it is there to help protect your amplifier from spikes or power surges in the AC Line, faulty or arcing power tube issues, and other forms of duress your amplifier might encounter. If the Fuse should blow, ALWAYS replace your Fuse with the same type and power rating Fuse. In the US/Domestic MARK VII Simul Class model, the Fuse is a 4 Amp SLO-BLO type Fuse. For export models, see the sticker under the fuse on the rear panel of your amplifier.

CABCLONE SETTINGS FOR OPTIMIZED LEVELS
Set the individual Channel MASTER controls below 11:00 (to avoid clipping of the CabClone's Input circuitry.)

Next, set the CabClone DI's Input Level to where the Yellow LED is illuminated on your highest/loudest dynamic peaks, but so that they don't light up the Red LED. Remember that high-gain sounds/Modes usually have lower dynamic content (due to natural tube compression as the gain is increased), while Clean sounds can have higher dynamic peaks.

Then, starting with all Output and Console Input Levels zeroed out, increase the CabClone's OUTPUT to the desired level for your Headphones or a Console's Input.

CABCLONE IR DIRECT INTERFACE FEATURE
This section of the Rear Panel is dedicated to the CABCLONE IR, which, as mentioned previously, allows for quick and convenient capturing of your amplifier through digital modeling (impulse responses) of our most popular speaker cabinetry Direct.

This is made possible by not only the Impulse Response circuit but also the great sounding, great feeling built-in Reactive Load, which allows integration of and protection for the power section and all its character and magic, with no speaker cabinet connected. The feature is a welcome addition for anyone doing frequent tracking as well as live playing. The all-inclusive approach brings on board mighty DI performance that, when combined with the MARK VII's vast preamp versatility, along with the fact you can record or perform "silently" and safely with or without your favorite cabinet, puts the MARK VII in Top of Class. All that means you can capture your ideas more quickly and easily with far less in the way of your creativity.

The MARK VII is the second model (after our Badlander) to include this powerful feature. The 8 choices (repeated in each Channel) of Impulse Response Captures of our most popular MESA Speaker Cabinets can be a HUGE time-saver and inspiration-preserver when you can't use Cabs or don't have an environment suited for great room recordings. The array of open and closed-back cabinet IRs provide great choices in the very best of virtual cabinetry and give you 8 instant voicing options per Channel. It also provides footswitchable independence to treat the three channels differently in terms of cabinet styles when recording direct or sending live mic-free stage sounds to the front of house in performance venues.

The components of the CabClone IR DI section are as follows:

- ***CAB SELECT 8-position Rotary Switches which allow 8 different Cab/Mic choices for each of the three amplifier Channels.***
- ***LED Ladder for monitoring of your signal feeding the CabClone circuitry***
- ***INPUT Control for adjusting Input level to the CabClone DI circuitry***
- ***DRY/Unfiltered LINE OUT for sending the unprocessed signal of the MARK VII to outboard devices such as a Console or Interface for Re-Amping purposes, an external IR Reader, or any other Direct***

feed application where the CabClone cabinet simulation is not pertinent or desired.

- ***OUTPUT Control for adjusting the CabClone's output signal and the Headphone Level when headphones are in use for personal monitoring.***
- ***Stereo ¼" HEADPHONE Output for connecting headphones to monitor the Direct feed or for personal practice.***
- ***Standard 3-Pin XLR DI OUTPUT for the balanced DI Output signal's connection to an Interface or Console.***
- ***Circuit-To-Chassis GROUND/LIFT Switch to help compensate for differences in Ground between the amplifier and external host destinations.***
- ***Standard USB port to interface with your computer for File manipulation/transfer/downloads.***

CAB LIBRARY

The CabClone IR circuitry supports not only the onboard Factory-Loaded 8 Presets/Cabinet IRs but also third-party IRs. The processor can hold, depending on File size, hundreds of IRs in its Cab Library that you can drag into any of the 8 Preset Locations for a customized set of Cab choices.

1. ***4x12 RECTO STANDARD – Celestion V30s – MESA Proprietary – 8 Ohm***
2. ***4x12 RECTO TRADITIONAL – Celestion V30s – MESA Proprietary – 8 Ohm***
3. ***2x12 RECTO HORIZONTAL – Celestion V30s – MESA Proprietary – 16 Ohm***
4. ***1x12 RECTO – Celestion V30 – MESA Proprietary – 8 Ohm***
5. ***1x12 THIELE – Celestion C90 – MESA Proprietary – 8 Ohm***
6. ***2x12 LONE STAR – Celestion C90 – MESA Proprietary – 16 Ohm***
7. ***1x12 LONE STAR 23 – Celestion C90 – MESA Proprietary – 8 Ohm***
8. ***1x12 CALIFORNIA TWEED 23 – Jensen 100w AInico "Blackbird" – 8 Ohm***

MANIPULATING IR FILES/SWAPPING PRESETS

The 8 Cabinet IRs are shared and are the same across all 3 Channels. The locations of these 8 IRs can be manipulated and rearranged to serve your musical needs and/or footswitching preferences, but they will be the same for all three Channels on their respective CAB SELECT rotary controls whether manipulated, moved, or are the Factory loaded IRs in their original locations.

To move or manipulate/replace Cab Files (the IRs): Turn the MARK VII ON (but leave it in Standby), connect it to your computer using the USB port, then view and/or manipulate the IR Files within the MESA IR Drive Folder and its 8 folders in accordance with your needs.

Upon connection to your computer through the USB port, you will see the "MESA IR" Drive on your Desktop (Mac) or in your File Explorer (PC) in an icon much like a USB External Flash Drive/ Stick Drive.

Upon opening the Drive, you will see two Folders; one labeled "Cab Files" and one labeled "Cab Library."

Within the "CAB Files" Folder, you will see 8 Folders – one for each of the positions on the CAB SELECT rotary knob. Within those 8 Folders are the actual Cabinet IRs, one IR per Folder. The Cab IRs listed under each of these Folders will be the same for all three Channel's CAB SELECT rotary control positions 1 through 8.

The Channel Files contain the same 8 "Live" captures (IRs) found within BANK A of our standalone CabClone

IR and IR+ units. These were captured using Dynamic and Ribbon microphones and are a bit brighter and more open sounding than our “Studio” BANK B captures, to allow being used in ensemble mixes.

After manipulating (swapping locations or replacing) any Cab IRs within the Folders, you must eject the “MESA IR” Drive before unplugging the USB Cable.

After doing so, you should see the INPUT LED ladder flashing for a period of up to 20 seconds while the internal processor is remembering (storing) your changes. When this flashing stops, turn off the amplifier and turn it back on to finalize (load) your changes. You’re ready to rock with your changes intact and memorized.

> **NOTE:** *When manipulating IRs within the MESA IR Drive, each memory location within the 8 Presets in the MESA IR Drive must contain one IR and one IR only. Placing two IRs in each or any of the 8 locations or no IR at all in a memory location will produce the same result as having a blank location; there will be no sound at all in that memory location on the Cab Select Rotary.*

> **NOTE:** *Important!! Don’t forget to eject the CabClone IR Drive just as you would a Flash Drive/USB Stick Drive when you are done manipulating the IRs.*

And finally, perhaps one of the most valuable uses for the CabClone IR feature on the MARK VII lies in its use as a personal practice tool via headphones at home, backstage, or wherever you might want to apply its great tone and feel without necessarily having to share it with others.

DIRECT OUT

This standard 3-Pin Male XLR is for connecting to your Recording Console, Interface, Front of House Mixer, or Monitor Board. Cable length is usually fine up to 75 Feet or so as it sends a Balanced Signal. The Level is determined by the LEVEL Control here in the CabClone DI section and the setting of the MASTER controls on the Channels.

> **NOTE:** *It is always a good practice to zero out the Channel and Master Faders on the destination Console or Interface, as well as the LEVEL on the CabClone IR section of your amplifier, BEFORE connecting the cable to the XLR DIRECT OUT. This routine will help avoid unwanted (hot) signals accidentally sent during hook-up from damaging your ears and those of others, or damaging monitor speakers, etc.*

LINE OUT – DRY

This ¼” buffered Output provides an unprocessed/uncompensated signal for feeding external IR Readers or recording a signal for re-amping. The CabClone IR processing will NOT be utilized here and the sound will contain all your gain, Tone, and EQ/REVERB/LOOP settings and processing, but will not resemble what you hear through guitar Cabinets or the CabClone’s XLR Direct Out. It will be much brighter and contain all the characteristics present BEFORE the treatment of the signal by guitar speakers and cabinets or the Models/IRs used in the CabClone IR derived from miking those.

The LINE OUT signal level is determined by the INPUT LEVEL control and the signal level here will not be affected by the setting of the OUTPUT LEVEL control, which is dedicated to the CabClone IR’s XLR Balanced OUTPUT and the HEADPHONES Output. This is not a problem as any destination you are feeding with this output such as an IR Reader or Console or Interface will have its own Input Level control for optimization of incoming signals.

GND/LIFT

A mini toggle Ground switch is provided, which can lift the circuit Ground from the chassis Ground. This “Ground float” switch can be helpful in eliminating some Ground Loops caused by different references to Ground between Consoles, Interfaces, and the amplifier and its CabClone circuitry.

Always start with the unit set to the GND (GROUND/lower) position when connecting the unit to a Console. If you experience noise in the form of hum or buzz, you can try the LIFT (upper) position to see if perhaps the noise you are experiencing is caused by a different Ground reference between the Console and the CabClone IR/amplifier. The switch does not always cure the noise problems associated with these differences in Ground,

but it is often effective and a welcome feature to try for noise issues when you're anxious to get rolling in the Studio or do a timely Sound Check at a venue.

CAB SELECT
These three 8-position rotary controls select the Cabinet IRs you will trigger in each of the amplifier Channels when connected to the DIRECT OUT and/or the HEADPHONE Output.

Having separate rotary controls for each Channel allows you to set the Channels differently and optimize each Channel's gain region, sound style, and response with a Cabinet best suited to what you've dialed up with the Mode Select, GAIN, Tone, and MASTER controls. This kind of flexibility puts the MARK VII in a new category in terms of direct recording with a tube amp, enabling you to further authenticate your footswitchable sounds with a virtual Cab/IR that will not just broadcast them but rather showcase them.

USB PORT
This standard USB port accepts a 2.0 A to B cable (not included) and is provided for connecting to a computer for managing the IR File directory. If you don't have a 2.0 USB Cable around the house, it's an easy Cart add at many online Retailers or available in most Music or Tech stores.

> **NOTE:** *Important!! Don't forget to eject the CabClone IR Drive from your computer's Desktop/File Manager just as you would a Flash Drive when you are done manipulating the IRs.*

HEADPHONES
A standard 1⁄4" stereo phono jack provides the Output for Headphones. This allows the MARK VII to be not only a wonderful live performance and recording ally but also a great resource for "Silent" practicing with a tube amp sound and feel.

Like the Balanced XLR DI OUTPUT, the volume level at the HEADPHONES Output is determined by the LEVEL control. It's not a problem that the two share the LEVEL Control, as the XLR DI OUTPUT's feed is almost always sent to something with an Input Level control and EQ, and also, the signal level at the 1⁄4" HEADPHONES Output has been attenuated/optimized for personal monitoring with headphones.

That said, the impedance of the headphones (and their efficiency) can have an impact on the Headphone volume level that is possible as well. Since these factors can be as much a consideration with headphones as their sound, and since there seems to be variance in impedance and efficiency when choosing brands or models, it is wise to try headphones with your MARK VII before you buy ...or at least save the purchase receipt and get acknowledgment from the retailer you can swap or return them in the event they do not perform as you had hoped.

And finally, the HEADPHONES Output will present a signal regardless of what other Outputs are in use on the amplifier.

> **NOTE:** *When using Headphones with no speaker connected, it's best to keep your Channel Master levels below 11 o'clock. You should be able to get plenty of output level with the Input and Output Controls, and it will help reduce wear and tear on your output tubes.*

SPEAKERS (OUTPUTS)
These jacks deliver your amplifier's power to your speakers. Two 8 OHM and two 4 OHM OUTPUTS are provided to accommodate a wide range of cabinetry options.

When using a single 8 Ohm MESA cabinet, you will most often want to use the 8 Ohm Output. This provides a proper impedance match, and in the 90 Watt Power Mode, this setup will deliver the maximum power and headroom.

> **NOTE:** *As mentioned earlier in the Multi-Watt Power Switch section, for a bolder, punchier, and slightly brighter response in the 45 Watt and 25 Watt power settings, try moving the speaker cabinet from the 8 OHM SPEAKER Output over to the*

4 Ohm SPEAKER Output. The impedance will be a more correct match due to the fact you are using a different tap on the transformer and two fewer power tubes. This is not essential but rather offers a different color and response.

When using two MESA 8 OHM cabinets - such as two 1 x 12 Extension cabinets or two (MESA) 4 x 12 cabinets, the two 4 OHM SPEAKER Outputs should be used, one cabinet to each SPEAKER Output jack. Though each cabinet will present a mismatch, together "wired in series" (internally), the total impedance load will be 8 Ohms. This also will be a proper impedance match and allow the maximum power and headroom.

One 4 OHM cabinet (such as a 2 x 12 using 8 Ohm speakers wired in parallel) should be connected to one of the two 4 OHM SPEAKER Outputs.

A 2 x 12 with 8 OHM speakers wired in series - presenting a 16 Ohm Load - should be connected to the 8 Ohm SPEAKER Output. The maximum power will not be possible in this scenario, but it will be a mismatch in the safe direction.

We use predominantly 16 Ohm speakers wired in parallel for our 2 x 12 Cabinets so that players can combine two 8 Ohm 2 x 12 cabinets - one in each of the 4 Ohm SPEAKER Outputs - as a way of getting 4 x 12 performance and coverage in an easier-to-carry weight range and still get the same full rated power from the amplifier.

Some prefer the sound and feel of the 8 Ohm speakers themselves, citing more bold punch in the midrange and top end that remains more attached and cohesive. In a 2 x 12 scenario (2 x 8 Ohm Speakers wired in parallel at 4 Ohms total Load), and with a single such cabinet, use the 4 Ohm SPEAKER Output even though the full rated power will not be available. Most players find it is more than enough headroom and power and accept the trade-off in power for the difference in voicing compared with its 16 Ohm-loaded 8 Ohm 2 x 12 counterpart. They are both great-sounding cabinets, it's just what you need and want in regard to overall voicing and power. The standard 16 Ohm-loaded/8 Ohm version will be more scooped in the midrange and harmonic-laden, excelling at rock and metal sounds, while the Custom Order 4 Ohm version will be more filled-in regarding midrange, sound rich and balanced, and excel in most other musical genres with a bit more punch and cohesive, attached top end.

NOTE: *If you decide to order a 2 x 12 with 8 Ohm Speakers/4 Ohm total impedance, remember that you will not be able to combine that with another cabinet as the amplifier is not designed to accommodate impedance loads below 4 Ohms.*

MESA 4 x 12 cabinets can be treated just like the 1 x 12 Extension Cabinets, as they also present a total impedance Load of 8 Ohms (each pair wired in series, then the pairs combined in parallel to achieve 8 Ohms total). Remember, it is not the number of speakers but rather the total impedance that is important for your amplifier's output transformer.

For more information and a recap of speaker impedance, wiring styles, and total Loads, see the Speaker Wiring section in the rear of this manual.

EFFECTS LOOP

These two 1⁄4" jacks provide the interfacing patch points for your "rear-end" processing needs. The Effects Loop is basically a circuit bridge from the end of the preamp to just before the Driver stage, with the SEND interrupting the signal at the preamp's end and the RETURN feeding the signal back into the power section just before the EQ and the Driver tube.

Using this patch point usually ensures the best sonic performance as well as signal-to-noise ratio with your outboard processors. That said, it is important to point out that this is a critical junction in the MARK VII's circuit path, and whatever is inserted here can have an effect on the overall performance of the amplifier.

The Effects Loop is a Series Loop, meaning that the entire signal goes through it, unlike a Parallel Loop, where a percentage of the unaffected pure signal is taken around the Loop and mixed back into the signal path alongside that which has been redirected for processing. Therefore, the quality of the devices used in the Loop and their performance is critical to achieving the best sound and performance from your amplifier. We recommend auditioning any processor with your amplifier BEFORE buying it to ensure it delivers a good match in performance.

One clue is price. As with most segments of the marketplace, you get what you pay for most times, and there is a wide range of quality in regard to both build quality and sonic performance. While technology has raced ahead and features are at an all-time pinnacle, it is the sound and feel for which you've likely chosen your pure analog all-tube amplifier. Therefore, we recommend a similar degree of discretion when it comes to choosing your processing devices. Ultimately, what you insert in the middle of your amplifier's signal path will have a lot to do with how it performs.

To connect your Processors via the Effects Loop:

1. ***Connect the SEND to your processor's INPUT.***

2. ***Connect the RETURN to your processor's OUTPUT.***

NOTE: *If your processor has Stereo OUTPUTS – or is Stereo IN and OUT - connect the Mono connections of the processor to the MARK VII Loop's SEND and RETURN. Most Stereo processors provide a Mono option on the Inputs and Outputs, and most times, though not always, the Mono signal is processed in the LEFT Channel. In some cases, you may be able to connect the additional (output) channel of a stereo processor to another amplifier source to achieve a stereo effect.*

NOTE: *Keep in mind that connecting two amplifiers in the above manner can result in ground loops and unwanted noise from the amplifiers having differing Ground references. This is sometimes remedied by lifting one of the amplifier's circuit to chassis Ground, and depending on the amplifiers, this might be a switchable feature. DO keep the MARK VII Grounded in this scenario (don't disconnect the Ground prong on the Power Cable) as it needs to remain grounded to help prevent the risk of shock. Alternatively, there are buffers and isolating devices on the market, including some made by us here at MESA, that can help with these types of grounding issues. Call your local music retailer to investigate your options should you experience these unwanted noises when connecting two amplifiers in this manner.*

It is always best to use the shortest cable lengths possible when patching in your processors. If you intend to run very long cable lengths, use a buffer. Even though the amplifier's Effects Loop IS buffered, there can be some minimal sonic penalty the longer the cable length becomes.

Always use shielded, high-quality cables to connect your processors to the Effects Loop. One way to check the quality of your processors and also match the levels is to do this simple test: Set up a sound without processors in the Loop. Listen to the sound and observe the feel. Insert your processing into the Loop and do the same.

Remove the SEND and RETURN cables from the MARK VII, and if the sound gets better or the level jumps up, you will know that either your processor's levels are set too low and need adjustment, or perhaps the processor's output section is in question or not a good match.

If unplugging the cables from your Effects Loop reduces the signal level, simply lower the Input and/or Output Levels on the processor(s). Repeat the test until there is no - or very little - difference in levels when the Effects Loop patch cables (processors) are inserted and removed from the Effects Loop.

MESA FTSW
This 7-Pin DIN style jack accepts the 7-Pin DIN connector supplied with the MESA Footswitch. Connection of the Footswitch here offers you instant control of the Channels and switchable Features on the MARK VII when MIDI messages ARE NOT going to be used to control the amplifier.

NOTE: *DO NOT connect both the MESA Footswitch and a MIDI Controller to the MIDI IN at the same time. Doing so may result in damage to your amplifier not covered under its Warranty.*

MIDI
These standard DIN Jacks accept and pass on the MIDI signals that control the Channel and feature switching in your MARK VII. See the MIDI Implementation Section in this Manual for instructions on how to use MIDI to control your amplifier.

NOTE: *DO NOT connect both the MESA Footswitch and a MIDI Controller to the MIDI IN at the same time. Doing so may*

result in damage to your amplifier not covered under its Warranty.

MIDI IN
This DIN jack accepts a 5-Pin DIN connector and is the input for MIDI signals generated by your MIDI controller that you may want to use to control your amplifier. It can also be used to connect multiple MARK VIIs and control them via one "Master" MARK VII. See the section regarding Controlling multiple Mark VIIs in the MIDI Implementation section later in this manual.

MIDI THRU/OUT
This 5-Pin DIN jack sends and forwards MIDI information generated (like a Preset Dump) or received via external sources (like a foot controller or a Sequencer). If performing a Preset Dump from one Mark VII (using the MIDI THRU/OUT to another (using the MIDI IN), make sure both amplifiers are set to the same MIDI Channel via the MIDI CHAN rotary select.

STORE
This mini toggle activates the STORE function so that your choices of Channels (with their Modes already selected within) and Switchable Features, such as Reverb, EQ, and CabClone Cabinet IRs, can be stored and called up repeatedly under MIDI Program Change messages.

MIDI CHAN
This 16-position rotary selector allows you to set the MIDI Channel on which the MARK VII will respond to MIDI Program Change and Control Change Messages. The MIDI foot controller in use must be set to send messages on the same MIDI Channel selected here on this rotary selector for the MIDI messages to be received and interpreted by the MARK VII.

BIAS SWITCH
This switch determines what type of Bias Setting is operational, the standard 6L6 harness or one specifically adapted to operate EL34s safely. ALWAYS MAKE SURE the Bias Switch is set to match the tubes in use.

We feel the stock 6L6 complement does the best overall job of showcasing the MARK VII's many different sounds and the musical landscapes the amplifier can cover. That said, there are enhancements in certain areas possible when the Brit classic EL34 power tubes are substituted. Again, when swapping, ALWAYS MAKE SURE the Bias Switch is set to match the tubes in use.

The 6L6s will produce a more shimmering top end, robust midrange with body, and low-end depth and girth that has "air." This set of traits is balanced and musical and produces great sounds across the gain spectrum. Whether it's bubbly, shimmering Cleans to tight, percussive Crunch Rhythm sounds to soaring vocal solo sounds, or huge grinding Metal sounds, 6L6s serve it all up and with finesse. These sonic features, along with its robust construction and rugged reliability, make it our long-standing choice for the Stock complement of tubes in production.

Conversely, EL34s will strip sub-lows and skinny-up the bottom end, scoop the lower Midrange, and add slicing, shredding cut to the upper Mids while enhancing the higher harmonics as well. These traits are even more apparent when overdrive is in use. When pushed to clip in the lower wattage Multi-Watt options, these characteristics will serve you well for classic and indie rock and nu country styles or anywhere a Brit-influenced, urgent character is desired.

NOTE: *Historically, we have seen the 6L6 to be a more rugged and reliable power tube in comparison to the EL34. If you prefer the EL34 sonically, may we humbly suggest keeping a small stock of extra power tubes (in pairs) on hand and some extra Fuses of the same type and rating in your gig bag. This is wise regardless of the power tube type you favor, especially if you perform frequently, but even more so when EL34s are your tube of choice.*

MESA FOOTSWITCH & MIDI IMPLEMENTATION

MESA FTSW
This 7-Pin DIN jack accepts the MARK VII Footswitch cable or any other standard 7-Pin DIN style cable, should you misplace the included cable. The MARK VII Footswitch allows direct access to the three Channels, Effects Loop, Graphic EQ and Reverb. It comes in very handy for those players who don't use MIDI to control their stage or studio set up and also provides easy demonstration of the features and sounds of the MARK VII in dealership environments.

NOTE: *Do not connect any MIDI devices to the MIDI INPUT jack when using the MESA FTSW jack!!*

To use the MARK VII Footswitch, connect the 7-Pin DIN cable to the MESA FTSW jack on the Rear Panel, making sure to line the pins up correctly. Do NOT force the cable into the jack! When the pins are aligned, it will fit easily, though snugly, into the jack.

Connect the other end of the 7-Pin DIN cable to the similar jack on the MARK VII Footswitch; the STORE LED and all of the Footswitch LEDs should turn on briefly, then at least one Footswitch LED should remain on. If not, unplug the cable and try connecting it again, making sure the pins are properly aligned. Check the MARK VII Footswitch connection as well to be sure the cable is seated all the way home there also. When a button on the Footswitch is pressed, the STORE LED will flash once, indicating a button has been pressed.

NOTE: *Do not use the MARK VII Footswitch and a MIDI foot controller at the same time. Choose one or the other to control your amplifier, and DO NOT CONNECT THE JACK that corresponds to the switching method YOU DO NOT INTEND TO USE.*

BUILT-IN CABLE CHECK FEATURE:
The Footswitch has a built-in cable check feature which is activated when the MIDI CHANNEL SELECT SWITCH is set to Channel #1 (position '0'). So, if the Footswitch cable is damaged at any time, or there's a communications failure with the MARK VII, all of the Footswitch LEDs will blink steadily, assuming it is still receiving power from the MARK VII, of course.

CONTROLLING MULTIPLE MARK VIIS:
Controlling multiple MARK VIIs with one Footswitch is easily accomplished by connecting the Footswitch to the MESA FTSW jack on one MARK VII and connecting the MIDI THRU/OUT from this MARK VII to the MIDI INPUT on a second MARK VII. For a third MARK VII, connect the MIDI THRU/OUT from the second MARK VII to the MIDI INPUT on the third MARK VII, and so on.

When controlling multiple MARK VIIs, only the MARK VII with the Footswitch connected to it should be set to MIDI Channel #1; all of the other MARK VIIs should be set to another (any) MIDI Channel. Additionally, the Front and any rear panel toggle and/or rotary switches should be set to their center / off / FTSW position (for no other reason than to minimize any confusion).

EMERGENCY FAILSAFE FOR A LOST FTSW CABLE:
If the supplied 7-pin DIN Footswitch cable is lost, a temporary (for emergencies only) solution is to use a standard MIDI cable, which must have all 5-pins connected as per the MIDI specification. The Footswitch LEDs will blink five times when it is first connected to the MARK VII, indicating there's a cable issue, and the LEDs will remain off, but the buttons will still operate normally, allowing the Channels and other on/off functions to be selected.

MIDI INPUT
This 5-Pin female DIN jack accepts standard 5-Pin MIDI cables and passes all incoming MIDI messages to the MARK VII's processor for interpretation. Whether from a MIDI foot controller, Sequencer, Librarian Software, or DAW, all MIDI messages sent to the MARK VII will be received here, and, if pertinent, appropriate action will be taken by its processor. The MARK VII can respond to MIDI Program Change and Control Change messages, and all MIDI messages are passed on via the MIDI THRU/OUT jack.

NOTE: *Do not connect a Footswitch to the MESA FTSW jack when using the MIDI INPUT jack!!*

MIDI THRU/OUT
This 5-Pin female DIN jack accepts standard 5-Pin MIDI cables and passes all incoming MIDI messages received via the MARK VII's MIDI INPUT jack, unchanged, on to other MIDI devices. It also serves as the MIDI OUTPUT for a User Presets Dump and any other MIDI messages that originate from the MARK VII.

MIDI CHANNEL SELECT
This 16-position rotary switch is used to select the MIDI Channel on which MIDI messages must be received to be valid. The STORE LED flashes once whenever the position of the MIDI CHANNEL SELECT SWITCH is changed.

ROTARY DIP SWITCH POSITION	SELECTED MIDI CHANNEL	ROTARY DIP SWITCH POSITION	SELECTED MIDI CHANNEL
0	#1	**8**	#9
1	#2	**9**	#10
2	#3	**A**	#11
3	#4	**B**	#12
4	#5	**C**	#13
5	#6	**D**	#14
6	#7	**E**	#15
7	#8	**F**	#16

MIDI OPERATING INSTRUCTIONS

FEATURES

- ***Intelligent Footswitch control***
- ***Works with all MIDI foot controllers***
- ***Up to 128 presets can be saved in memory***
- ***Quick and easy User Presets Dump and Load***
- ***Immediate MIDI Channel selection via rotary switch***
- ***Responds to MIDI Program and Control Change messages***
- ***Software Updates and Software Version Identification via MIDI***

POWER-UP
When the amplifier is turned on, the channel and other on/off functions will be selected as per the amplifier's switch settings, and the STORE LED will flash once.

MESA FTSW
Refer to the Rear Panel section.

MIDI INPUT
Refer to the Rear Panel section.

MIDI THRU/OUT
Refer to the Rear Panel section.

MIDI CHANNEL SELECT
Refer to the Rear Panel section.

MIDI MESSAGES OVERVIEW
The amplifier is compatible with all MIDI foot controllers. The MIDI Channel can be easily changed to any one of sixteen channels via the MIDI CHANNEL SELECT SWITCH. Whenever a MIDI Program Change message or MIDI Control Change message is received, the STORE LED will flash once, confirming the reception of MIDI messages, whether valid or not, and that the amplifier's MIDI Interface is functioning properly.

> **NOTE:** *If the STORE LED flashes when a button on a MIDI foot controller is pressed, but none of the amplifier's channels or other on/off functions change states or engaging the STORE SWITCH to save a preset doesn't seem to work, that indicates a valid MIDI message hasn't been received. Check to make sure that the MIDI foot controller and the amplifier are set to send and receive the same type of MIDI messages and on the same MIDI Channel.*

USER PRESETS VIA MIDI PROGRAM CHANGE
128 user presets can be saved and recalled using MIDI Program Change messages #1 through #128. When a MIDI Program Change message is received on the same MIDI Channel as the MIDI CHANNEL SELECT SWITCH setting that's called up, the saved amplifier channel and other on/off functions (Reverb, Loop, EQ) for the received MIDI Program Change message, will be recalled.

SELECT, EDIT, AND SAVE A MIDI PRESET IN THREE EASY STEPS:

1. ***Select the MIDI Program Change message or number on your MIDI foot controller.***
2. ***Manually select the amplifier Channel and other on/off functions, using the amplifier's toggle and/or rotary switches.***
3. ***Engage the STORE SWITCH. The STORE LED will flash once as an indication that the preset has been saved to memory.***

PRE-STORE "RESET" REQUIRED:
Continuing with MESA/Boogie's tradition of robust toggle and rotary switches to select an amplifier's Channel and other on/off functions, instead of the ever so common "plastic" momentary push-button switch, requires sophisticated software algorithms that allow MIDI to control the amplifier at the same time. The mix of these different control methods requires that some toggle and/or rotary switches be double-actuated before they will have an effect (and are allowed to be stored). For example, if an amplifier's CHANNEL SELECT SWITCH

has Channel 1 selected, but Channel 2 is active/on as a result of a MIDI preset, and you would like to change to Channel 1, the amplifier's CHANNEL SELECT SWITCH will need to be moved to the Channel 2 position, then back to the Channel 1 position, in order to activate it. All other features must also be reset in this manner before the STORE SWITCH will store them to a MIDI preset.

MIDI PRESETS CANNOT BE SAVED/STORED UNDER THE FOLLOWING CONDITIONS:

- ***A Footswitch is connected to the MESA FTSW jack.***
- ***On power-up and/or when the amplifier has not yet received a MIDI Program Change message.***
- ***A User Presets Dump was received, whether successful or not, and the amplifier has not received a subsequent MIDI Program Change message.***

FACTORY PRESETS

MIDI PROGRAM CHANGE NUMBER								CH1	CH2	CH3	GEQ	FXL	RVB	CCIR
1	19	37	55	73	91	109	127	O						#8
2	20	38	56	74	92	110	128		O					#6
3	21	39	57	75	93	111				O				#1
4	22	40	58	76	94	112		O						#8
5	23	41	59	77	95	113			O					#6
6	24	42	60	78	96	114				O				#1
7	25	43	61	79	97	115		O						#8
8	26	44	62	80	98	116			O					#6
9	27	45	63	81	99	117				O				#1
10	28	46	64	82	100	118		O			O			#8
11	29	47	65	83	101	119			O		O			#6
12	30	48	66	84	102	120				O	O			#1
13	31	49	67	85	103	121		O			O		O	#8
14	32	50	68	86	104	122			O		O		O	#6
15	33	51	69	87	105	123				O	O		O	#1
16	34	52	70	88	106	124		O			O	O		#8
17	35	53	71	89	107	125			O		O	O		#6
18	36	54	72	90	108	126				O	O	O		#1

FACTORY RESTORE

Performing a Factory Restore will return all of the MIDI presets to the same state (shown in the table above) as when the amplifier left our one-and-only shop in Petaluma, California.

PERFORM A FACTORY RESTORE IN THREE EASY STEPS:

1. ***With the MARK 7 turned off, select CHANNEL 3, and set the EFFECTS LOOP, REVERB, and all three CHANNEL EQ switches to the ON position, then engage and hold the STORE SWITCH while powering up the amplifier.***
2. ***Release the STORE SWITCH after the amplifier is turned on. The STORE LED will turn on, and the Factory Restore will begin.***
3. ***After a successful Factory Restore, the STORE LED will turn off, then it will flash once as the amplifier's MIDI Interface is automatically restarted.***

A Factory Restore should take no more than 1 to 2 seconds to complete.
If the STORE LED begins to blink on and off quickly after Step #2, it indicates that the integrity of at least one of the User Presets EEPROM Memory locations is becoming or has become compromised. The Factory Restore has still been performed and completed, but the amplifier must be powered down and powered up again to be used.

> **NOTE:** *If any switch listed in Step #1 is changed after the amplifier is turned on and while the STORE SWITCH is still engaged, the Factory Restore will be aborted, and the amplifier will power up normally.*

DIRECT ACCESS VIA MIDI CONTROL CHANGE
In addition to supporting MIDI Program Change messages, the amplifier also accepts MIDI Control Change messages (also known as Continuous Controllers or CC messages).

When using a MIDI foot controller capable of sending MIDI Control Change messages, you can assign buttons on the MIDI foot controller for direct access to the individual functions on the amplifier, which allows the MIDI foot controller to act as a dedicated amplifier Footswitch.

Typically, you would use either MIDI Control Change or MIDI Program Change messages, but not both (see the note below). Using MIDI Program Change messages saves presets in the amplifier's memory but does not allow direct access to the channels and other on/off functions from the MIDI foot controller. Using MIDI Control Change messages saves preset combinations within the MIDI foot controller's memory and does provide direct access to the amplifier's Channels and other on/off functions.

> **NOTE:** *If you experience any odd or unexpected MIDI behavior, it is more than likely a result of the amplifier receiving both MIDI Control Change and Program Change messages at the same time. Ensure this is not the case before contacting us for support.*

MIDI CONTINUOUS CONTROLLER ASSIGNMENTS

MARK 7 FUNCTION	MIDI CC NUMBER	MIDI CC VALUES	COMMENTS
Ch.1 & IR	20	0 - 7	Selects Channel 1 and CabClone IR Preset 1 - 8
Ch.2 & IR	21	0 - 7	Selects Channel 2 and CabClone IR Preset 1 - 8
Ch.3 & IR	22	0 - 7	Selects Channel 3 and CabClone IR Preset 1 - 8
Channel 1	23	64 - 127	Selects Channel 1 and CabClone IR per Ch1 IR Sw.
Channel 2	24	64 - 127	Selects Channel 2 and CabClone IR per Ch2 IR Sw.
Channel 3	25	64 - 127	Selects Channel 3 and CabClone IR per Ch3 IR Sw.
FX Loop	26	0 - 63 (OFF) 64 - 127 (ON)	Turns the FX Loop on and off
Reverb	27	0 - 63 (OFF) 64 - 127 (ON)	Turns the Reverb on and off
Graphic EQ	28	0 - 63 (OFF) 64 - 127 (ON)	Turns the Graphic EQ on and off
NOTE: MIDI CC Numbers #20 - #25 are mutually exclusive; the most recently received takes priority.			

USER PRESETS DUMP/LOAD

DUMP (SEND) USER PRESETS

A User Presets Dump will send a MIDI SysEx file with the amplifier's presets and any other settings out through the MIDI THRU/OUT jack. The User Presets Dump includes CRC (Cyclic Redundancy Check) bytes for MIDI error detection.

To perform a User Presets Dump from one amplifier to another, making an exact clone, connect the MIDI THRU/OUT jack of the original to the MIDI INPUT jack of the clone. Remember to set the MIDI Channel of the clone so it matches that of the original (unless you don't actually want them to respond to MIDI messages on the same MIDI Channel).

The User Presets Dump can also be saved to a computer as a backup or to load the presets into another amplifier at some other time. In addition to the computer, you will also need a MIDI/USB Interface and a MIDI app/utility capable of sending and receiving MIDI SysEx messages or files. Two free apps that we recommend are SysEx Librarian by www.snoize.com (Mac OS X) and MIDI-OX by www.MIDIox.com (Microsoft Windows).

A USER PRESETS DUMP CAN BE PERFORMED AFTER:

- ***The amplifier is first powered up and prior to receiving any MIDI messages.***
- ***The amplifier has received a User Presets Load, whether successful or not.***

PERFORM A USER PRESETS DUMP IN FOUR EASY STEPS:

1. ***Connect the amplifier's MIDI THRU/OUT jack to either the MIDI INPUT of another amplifier or that of a MIDI/USB Interface, in which case launch the MIDI app/utility you plan to use and make sure the USB Interface is connected to the computer.***
2. ***If dumping to a computer, set the MIDI app/utility to receive, then engage the amplifier's STORE SWITCH to begin sending the User Presets Dump.***
3. ***The amplifier's STORE LED will turn on immediately, and after the User Presets Dump has been sent, the STORE LED will turn off.***
4. ***The STORE LED will then flash once, when a second, very short MIDI SysEx message containing the amplifier's Software Version I.D. Message is sent.***

A User Presets Dump should take no more than 1 to 2 seconds to complete.

> **NOTE:** *The Software Version I.D. Message that follows every User Presets Dump, providing a simple means of identifying the amplifier's Software Version, can be ignored, unless it's needed for troubleshooting a particular problem.*

LOAD (RECEIVE) USER PRESETS

A User Presets Load can be initiated at any time and can be received at full MIDI speeds. When performing a User Presets Load, it is first saved in the amplifier's RAM memory and does NOT immediately overwrite the existing presets saved in the User Presets EEPROM Memory. The existing presets will ONLY be overwritten after the User Presets Load has been completely and successfully received without CRC errors.

PERFORM A USER PRESETS LOAD IN FOUR EASY STEPS:

1. ***Connect the amplifier's MIDI INPUT jack to either the MIDI THRU/OUT of another amplifier or that of a MIDI/USB Interface, in which case launch the MIDI app/utility you plan to use and make sure the USB Interface is connected to the computer.***
2. ***If loading from a computer, locate and begin sending the User Presets Dump, or engage the STORE SWITCH on the amplifier that you're sending the User Presets Dump from.***
3. ***The amplifier's STORE LED will flash once when it starts receiving the User Presets Dump, and then it will then turn on while the User Presets Dump is being saved to the User Presets EEPROM Memory.***
4. ***After a successful User Presets Load, the STORE LED will turn off; then it will flash once more (for a third time) as the amplifier's MIDI Interface is automatically restarted.***

A User Presets Load should take no more than 1 to 2 seconds to complete.

If a User Presets Load fails, the STORE LED will remain on until the amplifier begins receiving another User Presets Dump or any other process occurs that toggles the STORE LED on and off, such as successfully receiving a User Presets Load or engaging the STORE SWITCH, or changing/toggling the MIDI CHANNEL SELECT SWITCH. Any failures could only be due to a corrupted file, but rest assured that the amplifier's built-in CRC error detection will prevent a corrupted file from overwriting existing presets or settings.
If the STORE LED begins to blink on and off quickly after Step #3, it indicates that the integrity of at least one of the User Presets EEPROM Memory locations is becoming or has become compromised. The User Preset Load has still been performed and completed, but the amplifier must be powered down and powered up again to be used.

SOFTWARE VERSION I.D. MESSAGE
A very short MIDI SysEx message will follow every User Preset Dump file, as a simple means of identifying the amplifier's Software Version. This MIDI SysEx message is ignored when a User Preset Load is being received. To view this MIDI SysEx message, you will need a computer, a MIDI/USB Interface, and a MIDI app/utility capable of sending and receiving MIDI SysEx messages or files. Two free apps that we recommend are SysEx Librarian by www.snoize.com (Mac OS X) and MIDI-OX by www.MIDIox.com (Microsoft Windows). To capture and view this message on a computer, simply select "Record Many" or "Receive Many" as an option within the MIDI app/utility being used, before performing a User Presets Dump.

The Software Version I.D. Message will look like: F0 00 01 4B 0A 68 x y F7

Where x y is the actual Software Version, for example, 1.1 would be shown as: 01 01

MIDI SOFTWARE UPDATES

> **NOTE:** *Software Updates should be performed with the amplifier in STANDBY and the MIDI THRU/OUT and MESA FTSW jacks left unconnected.*

To perform a Software Update, you'll need a Software Update file (which can be obtained from us via e-mail or the web), a computer, a MIDI/USB Interface, and a MIDI app/utility capable of sending and receiving MIDI SysEx messages or files. Two free apps that we recommend are SysEx Librarian by www.snoize.com (Mac OS X) and MIDI-OX by www.MIDIox.com (Microsoft Windows).
!ATTENTION! MIDI APP/UTILITY SETTINGS:

SysEx Librarian (Mac OS X)
Menu > Preferences
Transmit Speed = 50% or 1565 bytes/sec max.

MIDI-OX (Microsoft Windows)
Main Menu > View > SysEx
SysEx Window Menu > SysEx > Configure
Low Level Output Buffers, Size = 256 & Num = 64
Output Timing & Delay Between Buffers = 192ms min.
Auto-Adjust Buffer Delays If Necessary = Off/Unchecked

As with any piece of gear, it's always a good idea to back up your presets and other settings before performing a Software Update.

PERFORM A SOFTWARE UPDATE AS FOLLOWS:

1. ***With the MARK 7 turned off, set the REVERB SWITCH to the on position, and all three CHANNEL EQ switches to the off position, engage and hold the STORE SWITCH while powering up the amplifier.***
2. ***Release the STORE SWITCH after the amplifier is turned on. The STORE LED will remain on, indicating the Software Update mode.***
3. ***Connect the MIDI/USB Interface to your computer, launch the MIDI app/utility you plan to use, and then connect the Interface's MIDI Output to the amplifier's MIDI INPUT jack.***
4. ***Locate the Software Update file you received from us or downloaded, and verify its checksum is correct (as follows) before proceeding to Step #5.***

   SysEx Librarian includes two different methods of calculating a file's checksum. You should check

one or both of these against the checksums we've published to ensure the file you have is not corrupted.

Unfortunately, MIDI-OX doesn't provide a built-in checksum feature, but Microsoft does offer a free utility called "Microsoft File Checksum Integrity Verifier" which does the same thing. Download it from www.microsoft.com.

5. ***Begin sending the Software Update file. Upon receiving it, the STORE LED will begin to blink on and off quickly and will continue to blink during file reception, providing an indication that the Software Update is progressing problem free.***
6. ***After a successful Software Update, the STORE LED will stop blinking and turn off; then, it will flash once as the amplifier's MIDI Interface is automatically restarted.***

A Software Update should take no more than 20 to 30 seconds to complete.

If a Software Update fails, the STORE LED will stop blinking and remain on until the amplifier begins receiving another Software Update file. Any failures could only be due to either a corrupted file or because the file is being sent to the amplifier faster than it can be processed by the amplifier's MIDI Interface microcontroller. So, if a Software Update failure occurs, stop the app's file transfer, and check the MIDI app/utility data transmission/speed settings.

- ***If the settings are not as shown above, correct them, then toggle the REVERB SWITCH off and then back on again (this resets the amplifier's Software Update process) before attempting to send another Software Update file.***
- ***If the settings are correct, then chances are the Software Update failure was due to a file corruption error. Retry sending the Software Update file. If the STORE LED doesn't begin to blink on and off quickly, toggle the REVERB SWITCH off and then back on to reset the Software Update process and try re-sending the Software Update file.***

NOTE: *To abort a Software Update before sending a Software Update file (in Step #5), simply power down the amplifier, and it will return to its normal mode of operation when powered up again.* ***NEVER*** *abort a Software Update after the amplifier has started to receive a Software Update file, and* ***NEVER*** *use an amplifier that has not had its software successfully updated, as indicated above (in Step #6).*

That wraps up the necessary information you'll need to operate your new amplifier with confidence and get to work crafting your own sounds using the Channels, Modes, and Features. The following pages contain some Sample Settings aimed at helping you get close for some particular applications throughout the Channels and their Modes. Feel free to use these to get you in the ballpark stylistically, and as always, we greatly encourage you to use these as merely starting points for your own journey of discovery with the MARK VII.

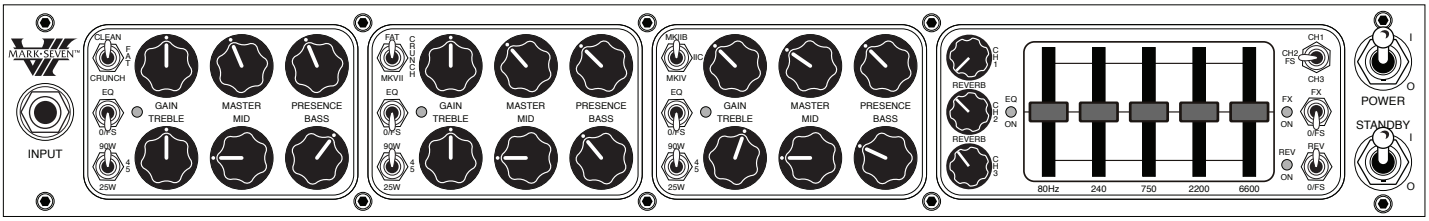
Please care for your new amplifier like you would any fine instrument of value, as if well taken care of, it is built to last and go the distance with you, providing many years of inspiration and enjoyment.

We value your belief in us, and we are proud to be your amplifier company. Feel free to reach out to us with any questions you might have left unanswered and most importantly ...Enjoy!

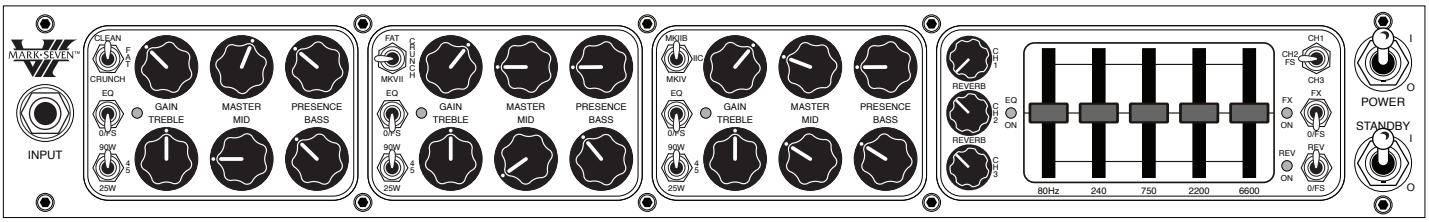
PLAYER NOTES AND REMINDERS

SAMPLE SETTINGS (WITHOUT GRAPHIC EQ)

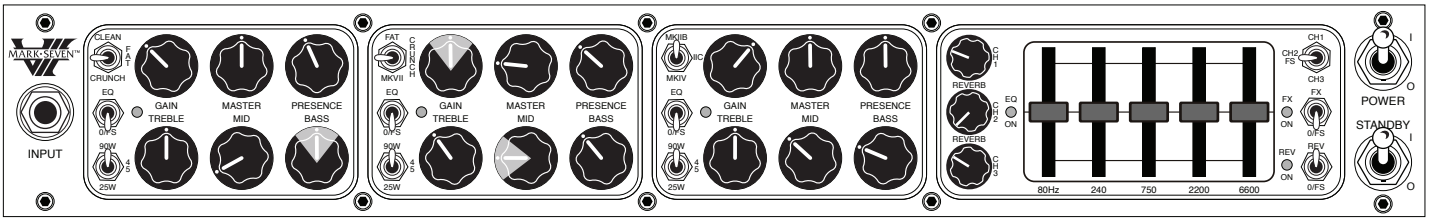
PERCUSSIVE CLEAN • FAT CLEAN • DRIVING BLUES



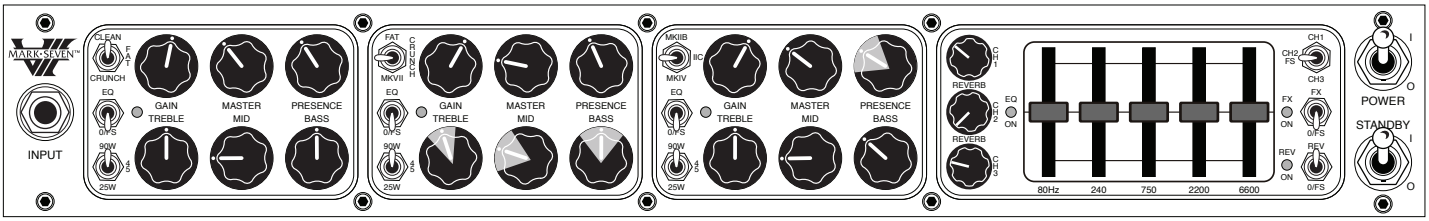
TIGHT COMP • CLEAN SOLO • BLUES FUSION



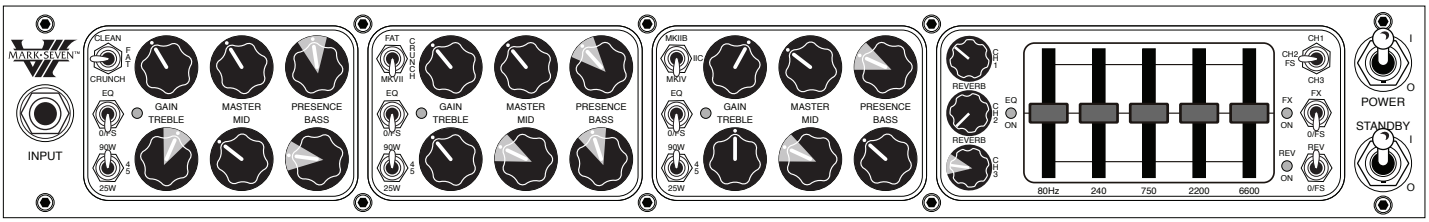
COUNTRY CLEAN • VINTAGE DRIVE • 70s SOLO



ROCK CLEAN • CLASSIC CRUNCH • ROCK SOLO

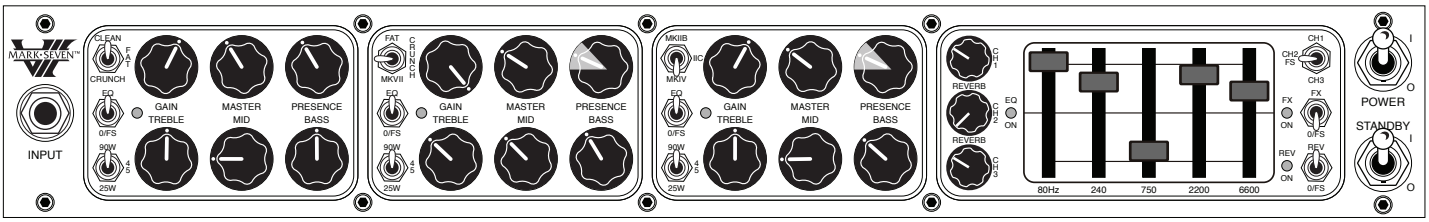


ROCK CLEAN • MOD CRUNCH • FAT ROCK SOLO

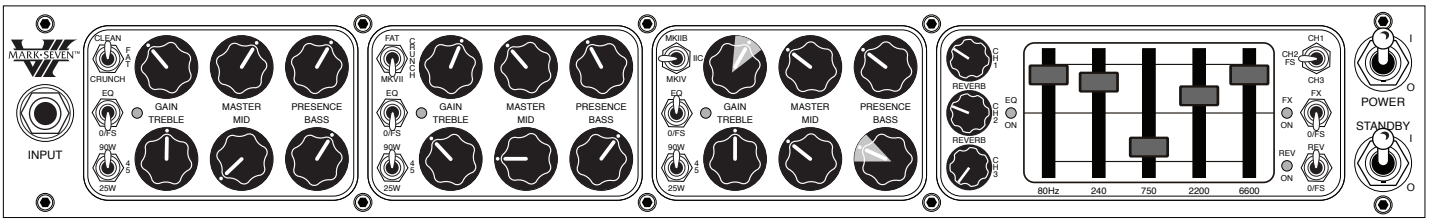


SAMPLE SETTINGS (WITH GRAPHIC EQ)

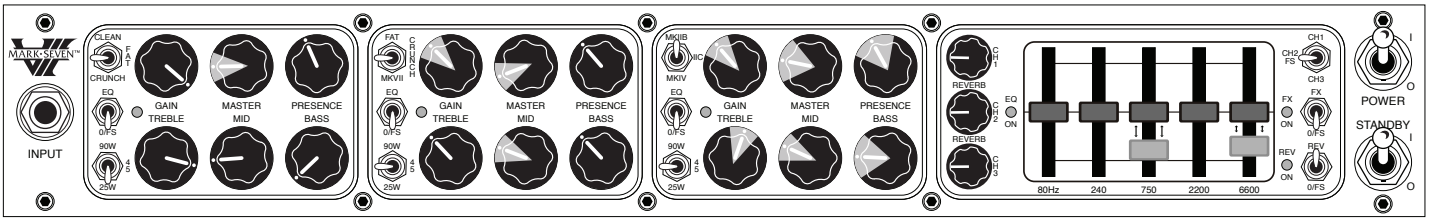
BIG ROCK CLEAN • HUGE CRUNCH • SOARING SOLO



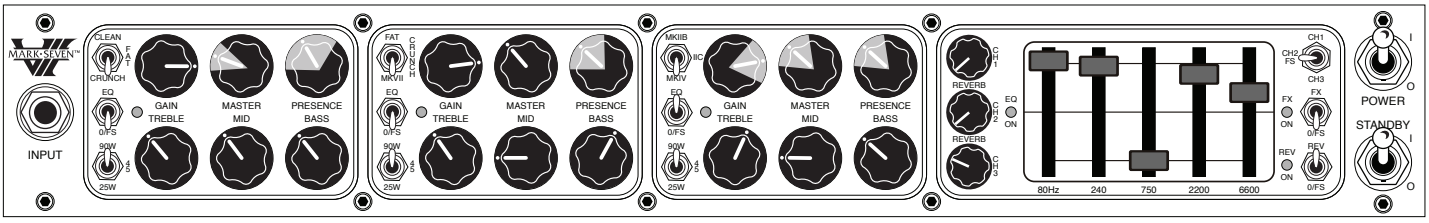
BRIGHT CLEAN • BRIT LEAD • II-C CRUNCH



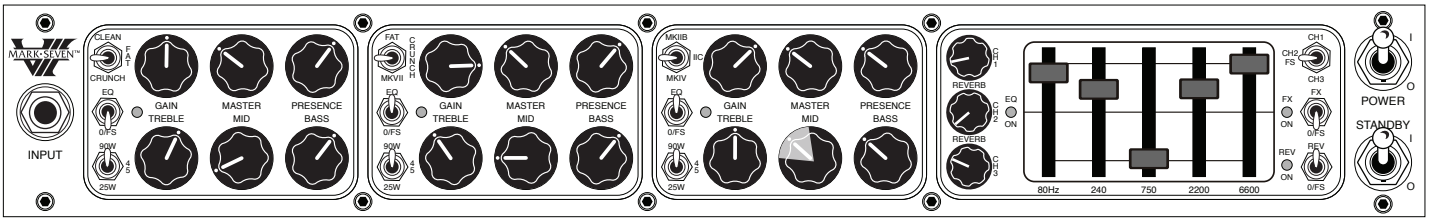
TRADITIONAL CLIP



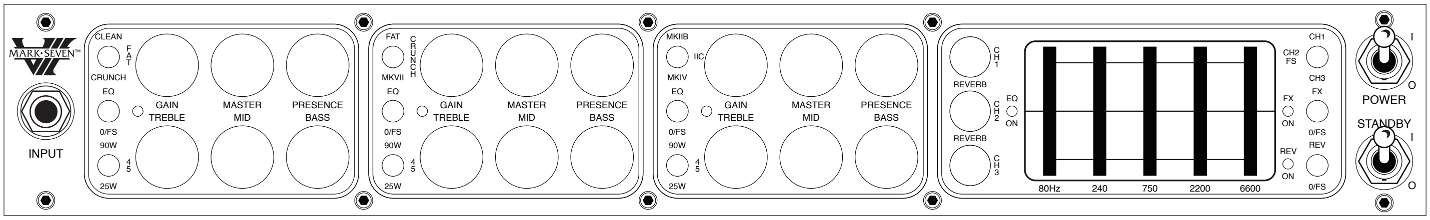
CRUNCH • CRAZY • CRAZIER

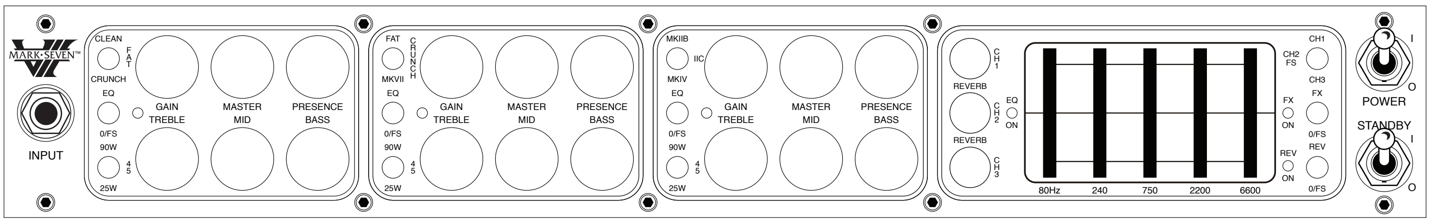


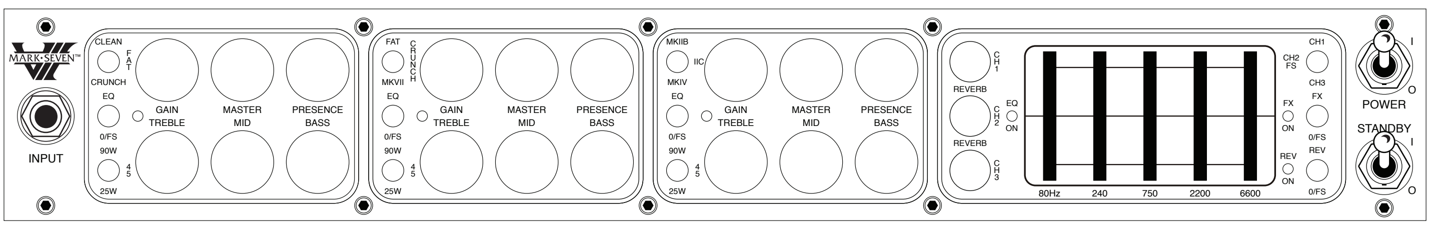
CLASSIC MARK

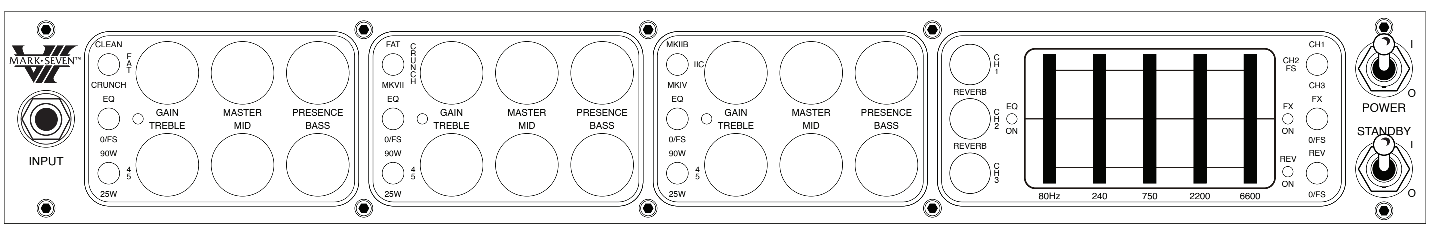


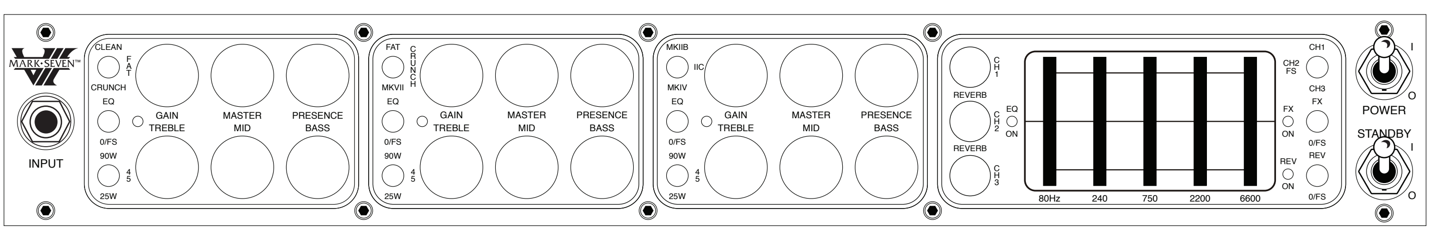
USER SETTINGS



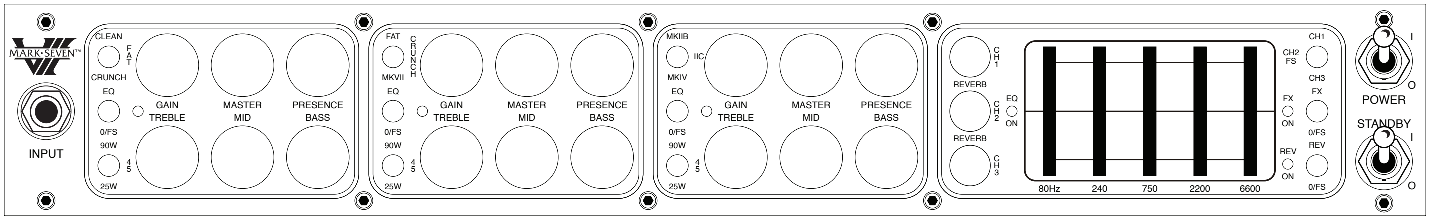


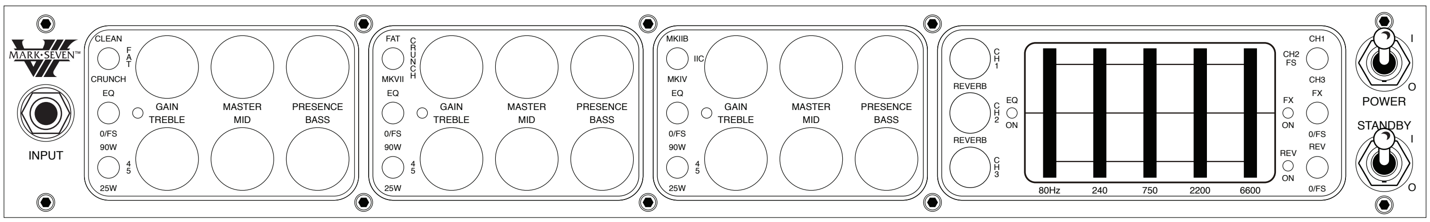


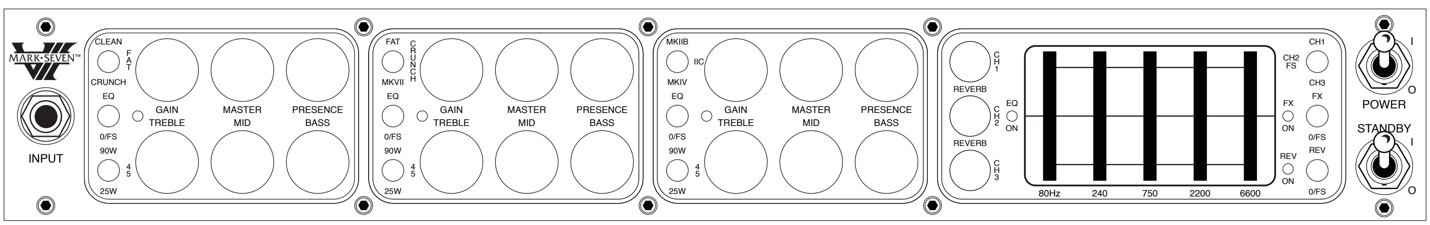


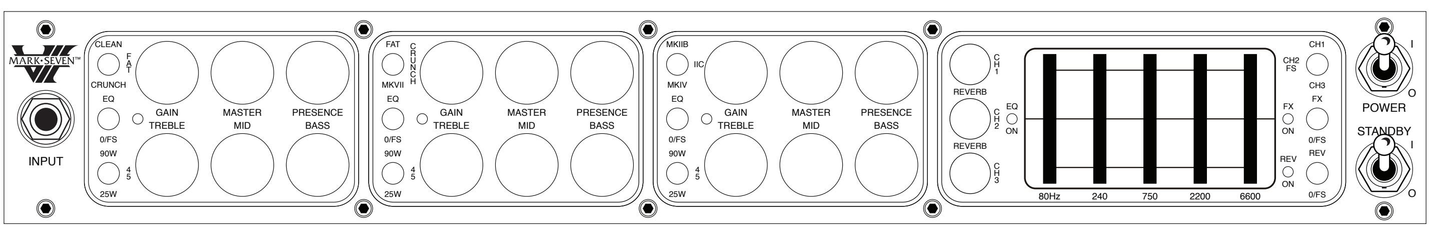


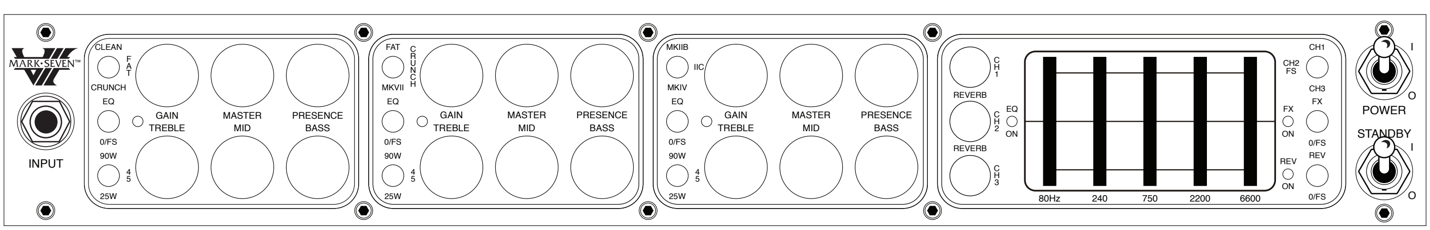
USER SETTINGS











DIAGNOSING PRE-AMP TUBE PROBLEMS

Because your amplifier is an all tube design, it is quite possible that you will at some point experience minor pre-amp tube noise. Rest assured - this is no cause for alarm and you can take care of the problem yourself in a matter of minutes by simply swapping tubes.

Let us begin by saying; It is a “very good” idea to keep at least a couple of spare pre-amp tubes on hand at all times to insure uninterrupted performance. These minor pre-amp tube problems can take many forms but can generally be described in two categories: Noise and Microphonics. Noise can be in the form of crackling, sputtering, white noise/hiss and/or hum. Microphonic problems usually appear in the form of a ringing or high pitched squealing that gets worse as the gain or volume is increased thus are more noticeable in the higher gain “HI” modes. Microphonic problems are easily identified because the problem is still present even with the instruments’ volume off or unplugged altogether - unlike pick-up feedback which ceases as the instrument is turned down. Microphonic noise is caused by mechanical vibration and shock: think of banging a microphone around and you’ll understand where the word came from.

The best way to approach a pre-amp tube problem is to see if it occurs only in one specific mode or channel. This should lead you to the tube needing replacement. Then all that remains is to swap the suspect tube for a known good performer. If you cannot narrow down the trouble to a specific mode or channel, the problem may be the small tube that drives the power tubes which is operational in all modes and channels. Though rare, a problem with the driver tube would show up in all aspects of performance - so if you can’t narrow the problem down to being mode or channel specific, you may want to try replacing the driver tube. driver problems generally show themselves in the form of crackling or hum in all modes of performance and/or weak overall output from the amplifier. Occasionally an anemic driver tube will cause the amplifier to sound flat and lifeless, but this is somewhat uncommon, as worn power tubes are a more likely suspect for this type of problem.

Sometimes making the diagnosis is more trouble than it’s worth and it’s faster and easier to merely replace the small pre-amp tubes ONE AT A TIME with a replacement known to be good. But MAKE SURE you keep returning the tubes to their original socket until you hit the one that cures the problem. You’ll notice that tubes located nearer to the INPUT jack always sound noisier...but this is because they are at the start of the chain and their noise gets amplified over and over by the tubes that follow. The tube that goes into this “input socket” (usually labeled V1) needs to be the least noisy of the bunch. The tube that goes at the end of the preamp chain - just ahead of the power tubes - can be quite noisy without causing any problem at all. The tubes in your amp have already been located in the most appropriate sockets and this is why you should NEVER pull them all out at once and ALWAYS swap them one at a time. ALWAYS return a perfectly good tube to its original socket. Also it’s a good idea to put the amp on STANDBY when swapping tubes to reduce the heat build up in the tubes themselves and to prevent explosive noises (which can still occur even if you are pulling the tubes away from their sockets gently) from coming through the speaker.

Remember, take your time, be patient and chances are real good that you can fix your amp yourself by finding and replacing the bad tube. It kills us to see someone who has shipped their amp back to us...and all it needed was a simple tube replacement! If you must send back your amp, remove the chassis from the cabinet by unscrewing the four mounting bolts on the bottom top. The chassis then slides back like a drawer and comes out from the back. Remove the big power tubes and mark them according to their location from left to right 1, 2 etc. They need to be wrapped separately with plenty of wadded up newspaper around them and put in a smaller box within the larger carton. Remove the Rectifier tubes and wrap them also. You can leave the preamp tubes in or remove them and wrap them separately being sure to label their location. (See tube Task Chart.)

To wrap the chassis, use plenty of tightly wadded up newspaper so there is at least six inches of “crush space” between the chassis and the cardboard box. Bubble wrap also works well, but please DON’T use styrene peanuts - they will shift during transit and get lodged inside your electronics as well as allowing your amp to end up at the bottom of the box unprotected and possibly damaged.

Pre-amp tubes don't normally wear out as a rule. Therefore, it is not a good idea to change them just for the sake of changing them. If there isn't a problem - don't fix it. If there is no result from your substitutions, it may be possible that you have more than one problematic tube. Though rare, this does happen and though it makes the troubleshooting process a little more intimidating, it is still possible to cure the problem yourself.

NOTE: It is normal to hear a slight metallic ringing sound when tapping on the preamp tubes. As long as the tube does not break into oscillation or start crackling or any other form of bizarre noise, it is considered normal and functional.

TUBE NOISE & MICROPHONICS

You may occasionally experience some form of tube noise or microphonics. Certainly no cause for alarm, this quirky behavior comes with the territory and the tone. Much like changing a light bulb, you don't need a technician to cure these types of minor user serviceable annoyances and in fact, you'll be amazed at how easy it is to cure tube problems...by simply swapping out a pre-amp or power tube!

First may we suggest that you set the amplifier up on something so that you can get to the tubes comfortably without having to bend down. It also helps to have adequate lighting as you will need to see the tube sockets clearly to swap tubes. Use caution and common sense when touching the tubes after the amplifier has been on as they may be extremely hot! If they are hot and you don't want to wait for them to cool off, try grasping them with a rag and also note that the glass down around the bulbous silvery tip is considerably less hot which makes it easier to handle. Gently rock the tube back and forth as you pull it away from its socket.

DIAGNOSING POWER TUBE FAILURE

There are two main types of tube faults: shorts and noise. Both large and small tubes may fall prey to either of these problems but diagnosis and remedy is usually simple.

If a fuse blows, the problem is most likely a shorted power tube and shorts can either be mild or severe. In a mildly shorted tube the electron flow has overcome the control grid and excess current flows to the plate. You will usually hear the amp become distorted and begin to hum slightly. If this occurs, quickly look at the power tubes as you switch the amp to STANDBY and try to identify one as glowing red hot. It is likely that two of a pair will be glowing since the "shorted" tube will pull down the bias for its adjacent mates, but one tube may be glowing hotter — and that one is the culprit. The other two are often fine — unless they've been glowing bright red for several minutes.

Because there is no physical short inside the tube (just electrons rioting out of control) merely switching to STANDBY for a few moments then back to ON will usually cure the problem...at least temporarily. Watch the tubes carefully now. Should the problem recur, the intermittent tube will visibly start to over heat before the others and thus it can be identified. It should be replaced with one from the same color batch, shown on its label. Call us and we will send one out to you.

The severe short is not nearly so benign. In the worst cases, a major arcing short occurs between the plate and the cathode with visible lightning inside the glass and a major noise through the speaker. If this is seen to happen, IMMEDIATELY turn the amp to STANDBY. By this time the fuse probably will have blown. Such a short is usually caused by a physical breakdown inside the tube including contaminate coming loose or physical contact (or near contact) between the elements. Replace it and the fuse with the proper slo-blo type and power up the amp using the power up procedure as we described earlier in this manual.

TUBE NOISE

Often caused by contamination within in a tube, the culprit can usually be identified, and by lightly tapping on the glass, you will probably hear the noise change. Hearing some noise through the speakers while tapping

on the 12AX7's is normal however. And the one nearer the INPUT will always sound louder because its output is being further amplified by the second 12AX7.

The power tubes should be all but quiet when they are tapped. If crackling or hissing changes with the tapping, you have probably found the problem. To confirm a noisy power tube, merely put the amplifier on Standby, remove it from its socket and turn it back on. It will cause no damage to run the amplifier briefly with one power tube missing. You may notice a slight background hum, however, as the push-pull becomes unbalanced. Whenever you are trying to diagnose a suspect tube, keep your other hand on the POWER and STANDBY switches ready to shut them off instantly in the unlikely case you provoke a major short.

If you think you've located a problem tube but aren't sure, we recommend substituting the suspect with a new one just to be sure of your diagnoses. You will be doing yourself and us a big favor by just following the simple guidelines previously mentioned regarding tube replacement. You'll probably be successful with much less effort than is required to disconnect everything and haul the unit to a technician who will basically perform the same simple tests. If the tubes are still within their six-month warranty period, we will happily send you a replacement. Just note the color designation on the tube label so that we can send you the appropriate match.

SPEAKER IMPEDANCE MATCHING & HOOK-UP GUIDE

IMPEDANCE

Wiring up speakers to provide the most effective load and making sure that all of them are in phase will help in creating the best sound possible. This is not too difficult, as long as you understand a few things about loading and how to connect your speakers to provide an optimal resistive load.

MESA/Boogie amplifiers can handle 4 and 8 ohms effectively. Never run below 4 ohms in a tube amplifier unless you are absolutely certain that the system can handle it properly; this can cause damage to the output transformer. A few amplifiers can handle 2 ohms effectively without damaging them (for example the MESA'S bass 400+). You can always have a higher resistance (16 ohms, for example) without damaging results, but too low of a resistance will likely cause problems.

MIS-MATCHING

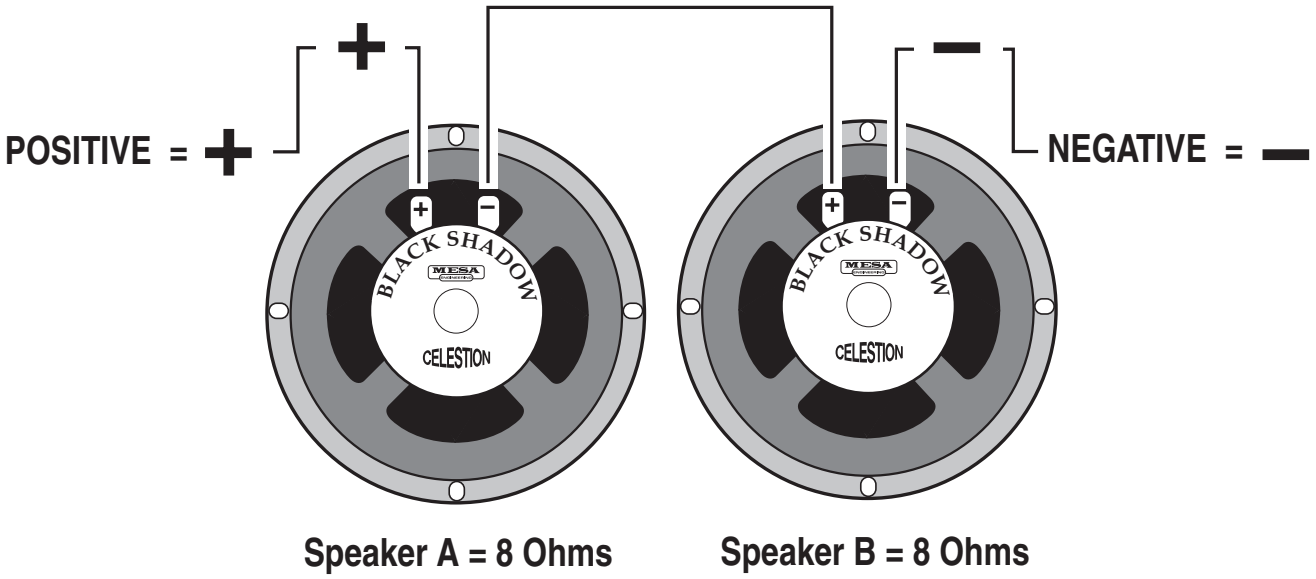
When running a higher resistance (for example: 8 ohm output into 16 ohm cabinet), a slightly different feel and response will be eminent. A slight mismatch can provide a darker smoother tone with a little less output and attack. This response is a result of the amplifier running a bit cooler. Sometimes when using more than one cabinet a mismatch will be the only option.

WHAT IS MY CABINETS IMPEDANCE?

If you have only a single speaker, you just match that single speakers impedance to the amplifier, and you are done. In many cases, you will have a number of speakers, and then you must calculate the "load" that the amplifier will need to support. There are generally three ways to wire multiple speakers together. They are as follows:

SERIES

When you wire (hook-up) speakers in series, the speakers resistance (as measured in ohms) is additive - i.e. putting two 8 ohm speakers in series results in a 16 ohm load.

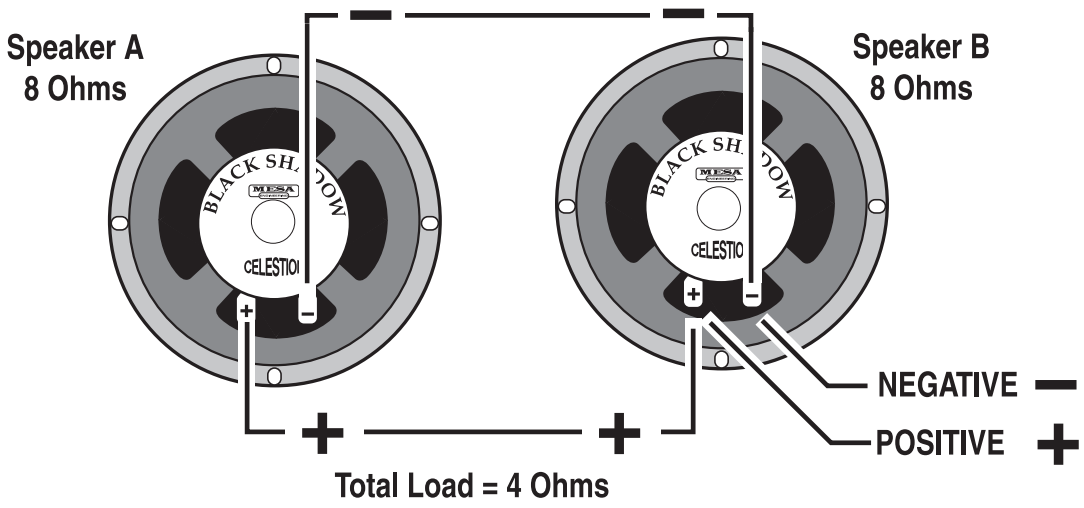


SERIES: Connect the Negative side of Speaker A to the Positive side of Speaker B

PARALLEL

When wiring in parallel, the resistance of the speakers decreases. Two 8 ohm speakers wired in (hooked-up) Parallel results in a 4 ohm load. It's easy to calculate the effect of a resistive load when all the speakers are all the same resistance. It is really not suggested to wire different resistive load values in Parallel (8 and 4, 16 and 8 etc.) The formula for figuring the total impedance in Parallel is the multiplication of the two loads divided by the sum of the two loads - i.e. putting two 8 ohm speakers in Parallel results in a 4 ohm load. Connect the Positive side of Speaker A to the Positive side of Speaker B - Connect the Negative side of Speaker A to the Negative side of Speaker B.

COMBINATION OF SERIES & PARALLEL



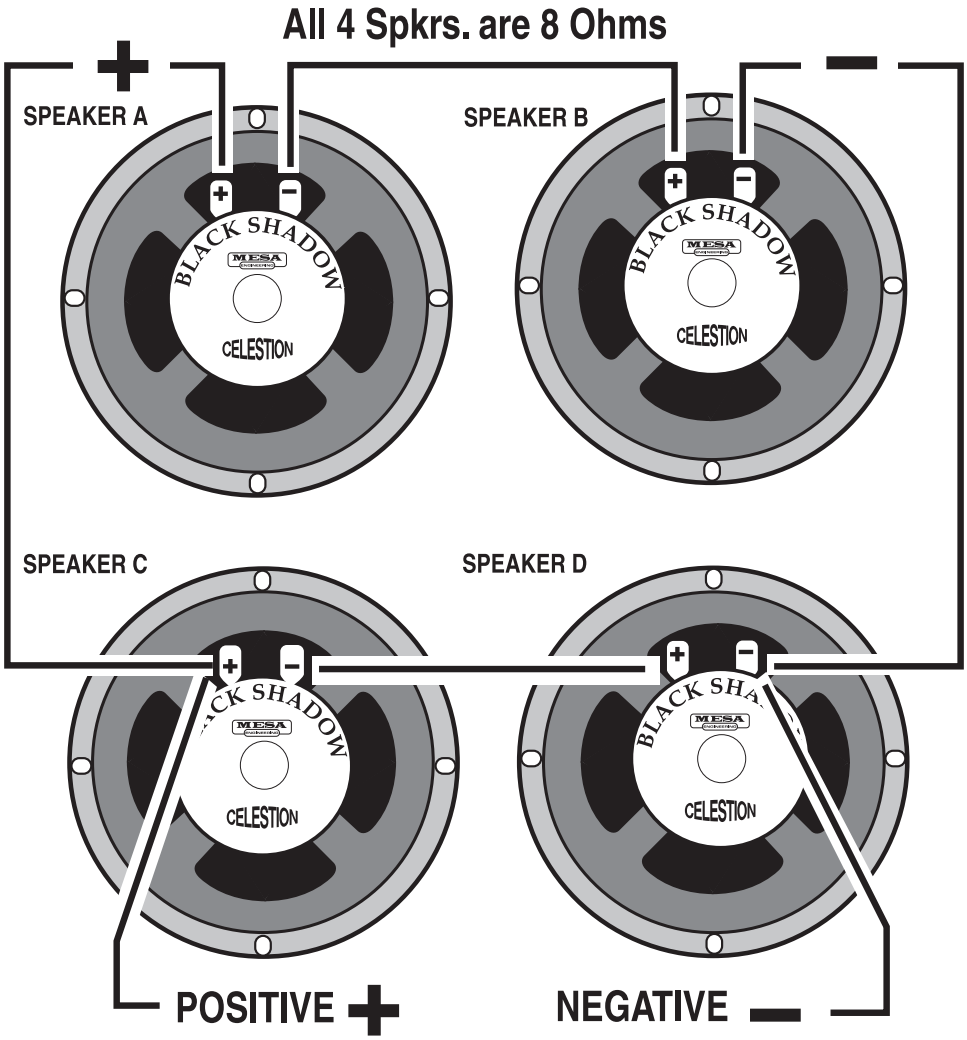
This is really just two sets of series wired speakers connected in Parallel. This is how you maintain a consistent load with multiple speakers. The importance of this is more evident when you have more than one cabinet to connect to your amplifier. This is when you need to figure out the loads and how to wire them up without applying too low of a resistance on the amplifier.

Simply connect the Positive side of Speaker A to the Positive side of Speaker C.

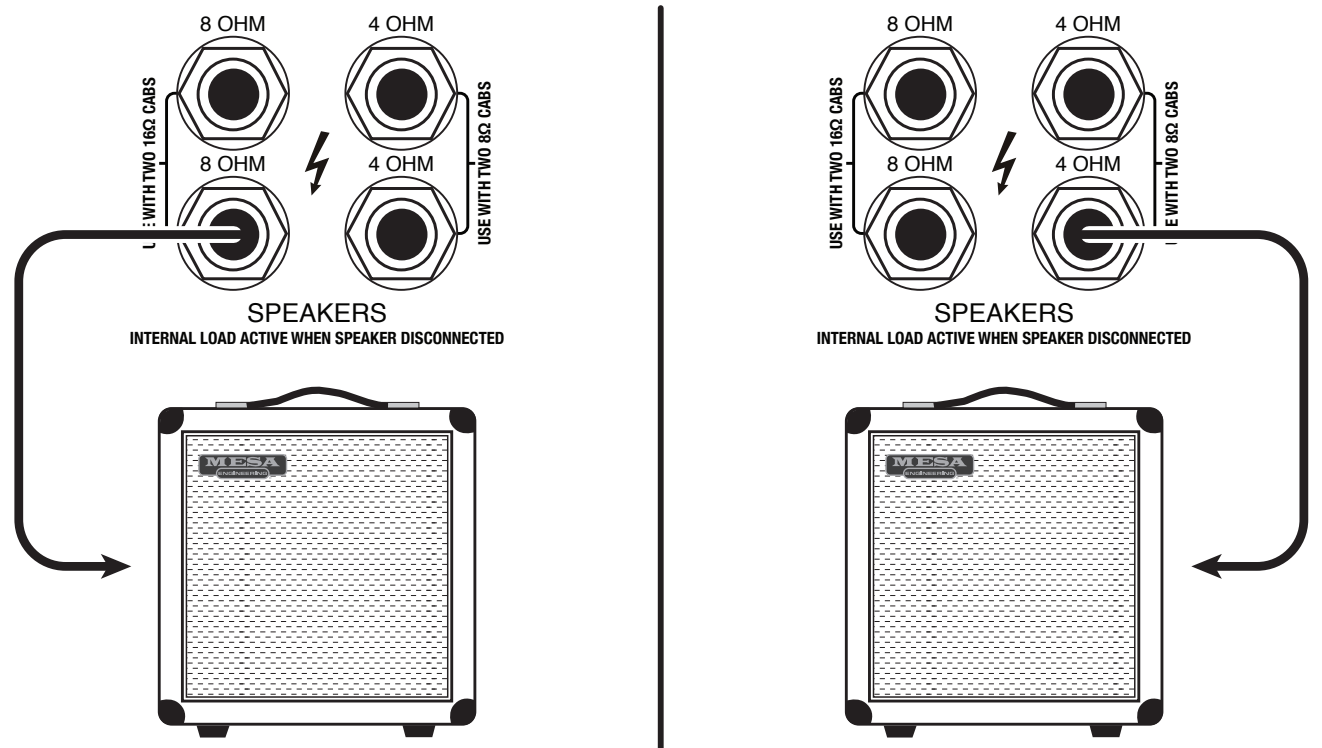
Connect the Negative side of Speaker A to the Positive side of Speaker B. Next, connect the Negative side of Speaker C to the Positive side of Speaker D.

And lastly, connect the Negative side of Speaker B to the Negative side of Speaker D.

4 Eight (8) Ohm speakers wired in series Parallel = a Total Load of 8 Ohms.



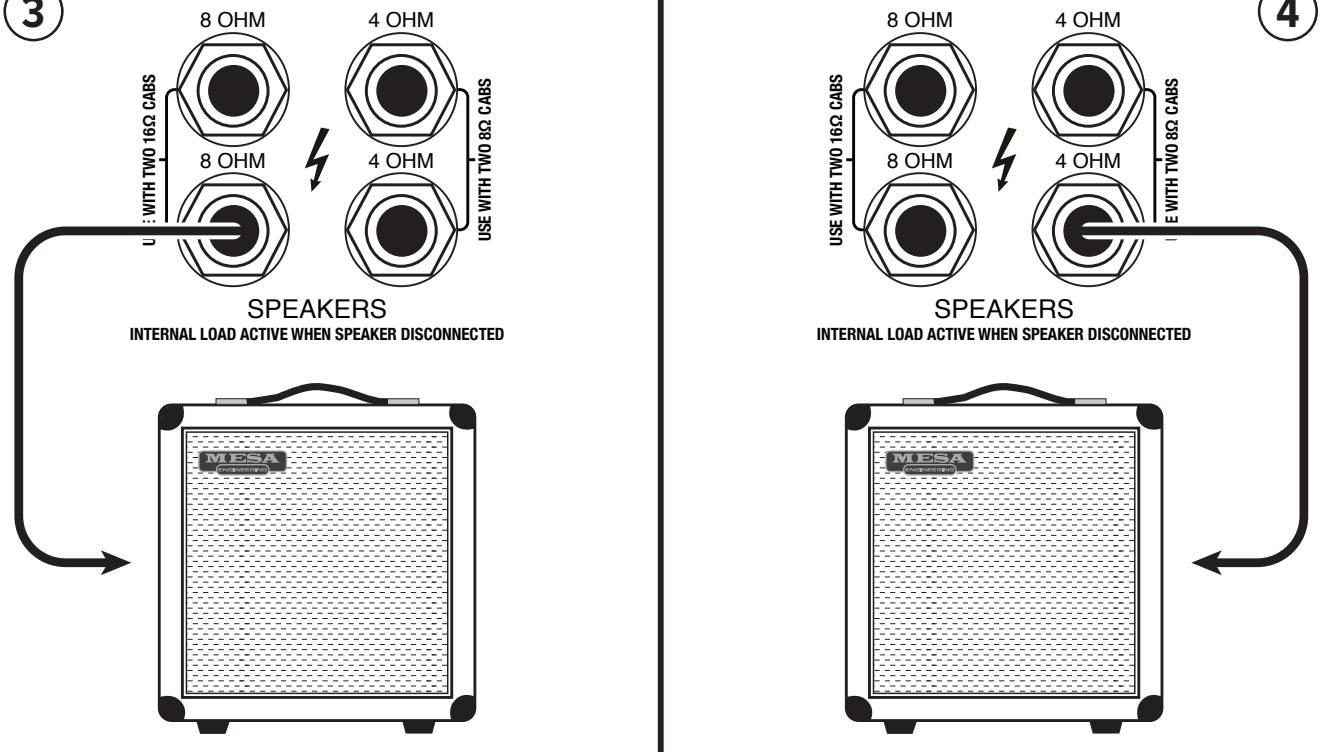
WIRING SCHEMES...Amplifier to Speaker Cabinets



1 **8 Ohm Cabinet**

4 Ohm Cabinet 2

3

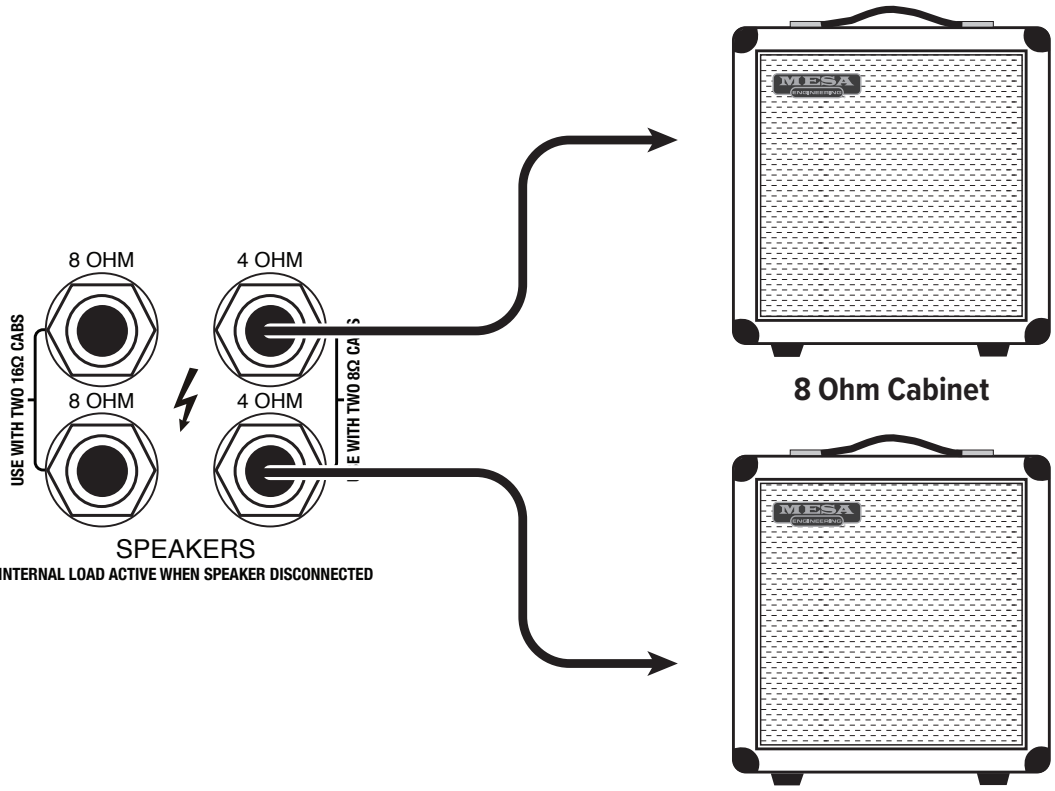


4

16 Ohm Cabinet
SAFE MISMATCH

8 Ohm Cabinet
SAFE MISMATCH

WIRING SCHEMES...Amplifier to Speaker Cabinets



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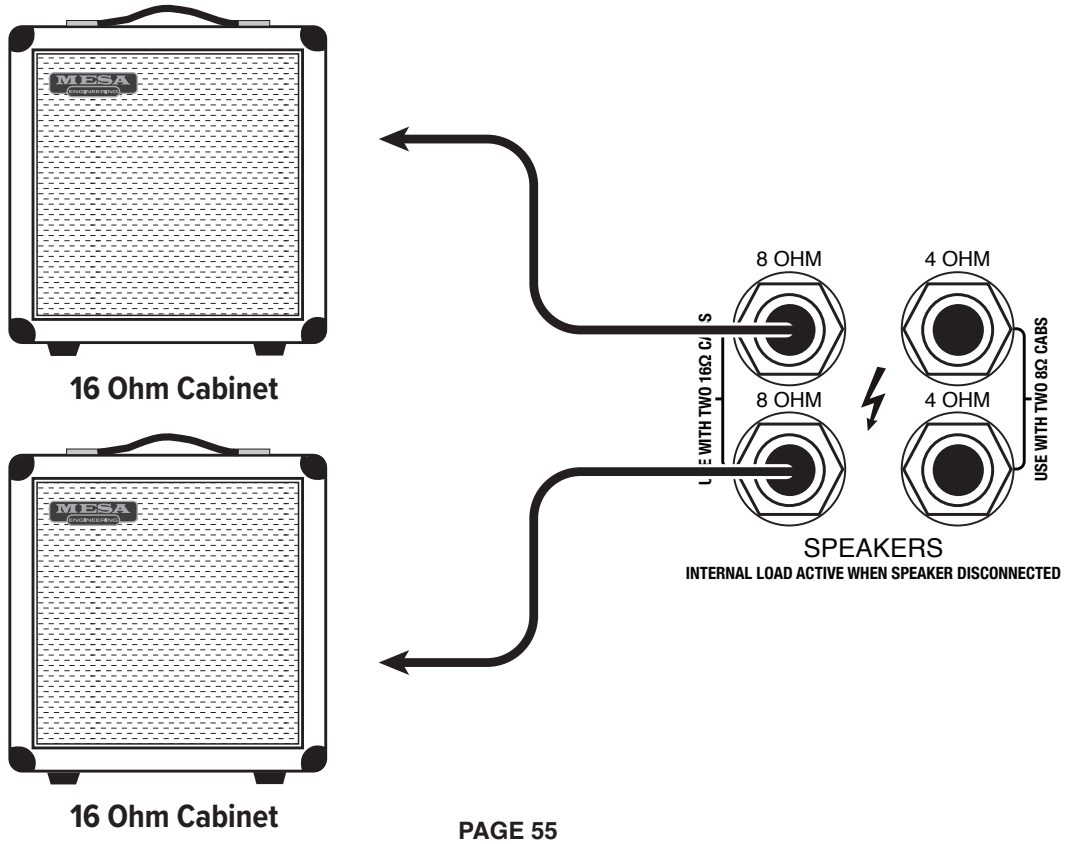
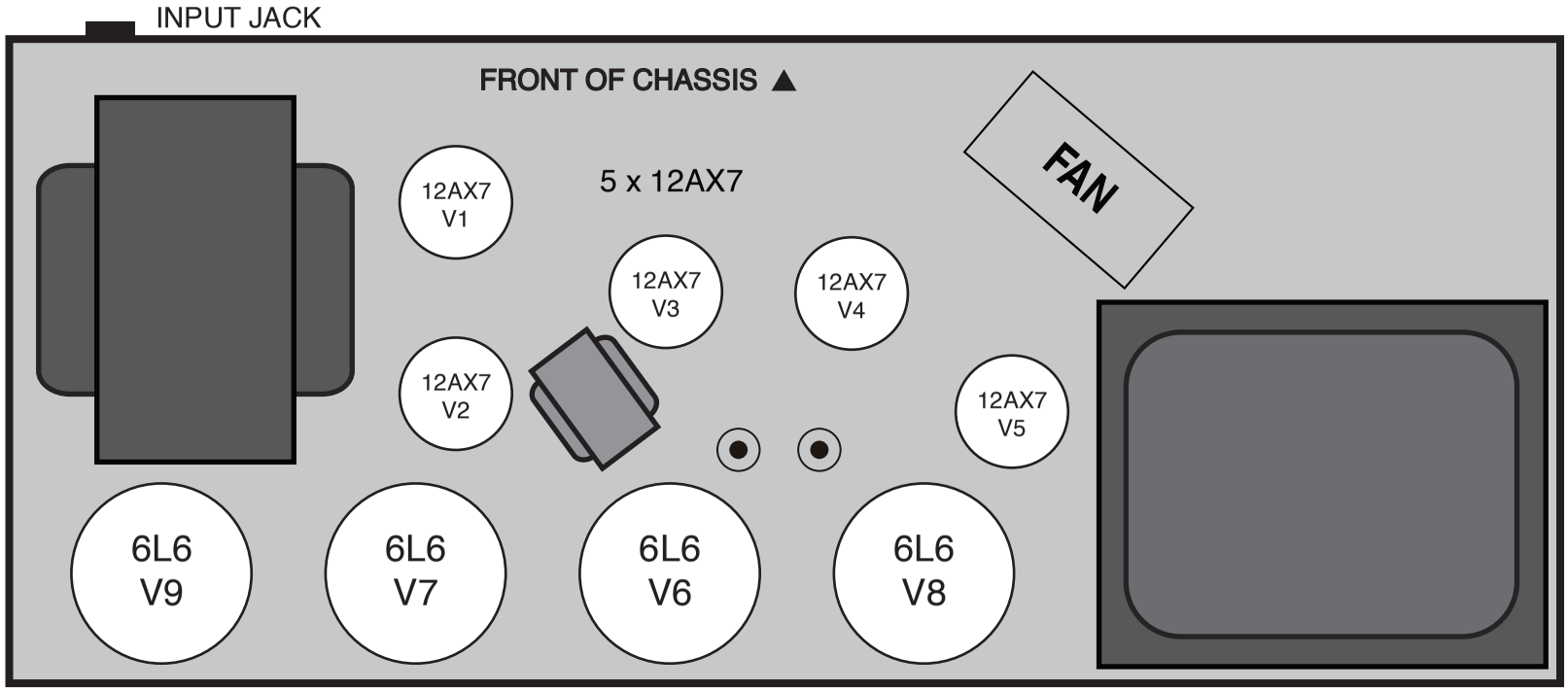


PLAYER NOTES AND REMINDERS

BEFORE CHANGING TUBES FLIP POWER & STANDBY SWITCH TO OFF

MARK VII™ TUBE REPLACEMENT DIAGRAM



PREAMP TUBES

V1A - Input stage all channels
V1B - 2nd Gain stage Clean and Fat, 3rd gain stage Crunch, 4th gain stage MKVII, 2nd gain stage CH3
V2A - FX Loop Return all channels
V2B - 3rd gain stage Clean and Fat, 4th gain stage Crunch, 5th gain stage MKVII, 4th gain stage MKIIB, 5th gain stage MKIIC and MKIV
V3A - Reverb Return stage
V3B - 2nd gain stage Crunch and MKVII, 3rd gain stage MKIIC and MKIV
V4A - 3rd gain stage MKVII, 3rd gain stage MKIIB, 4th gain stage MKIIC and MKIV
V4B - Reverb Send stage
V5A&B - Driver/Phase Inverter

POWER TUBES

90 Watts: V6 V7 V8 V9 PENTODE

45 Watts: V6 V7 PENTODE

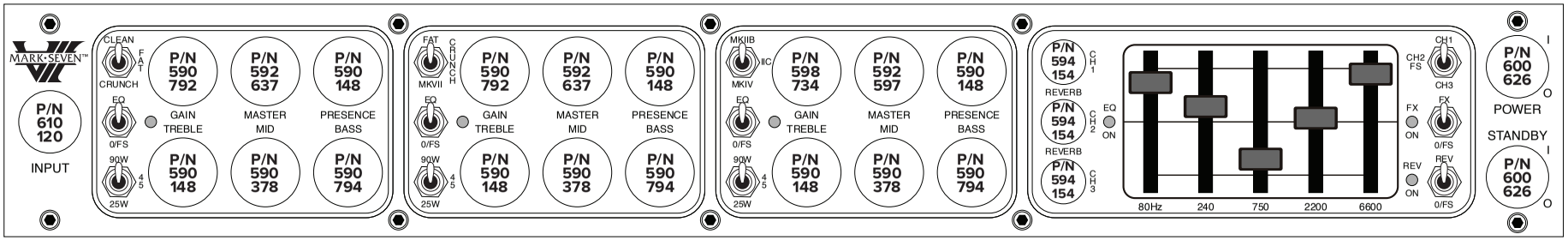
25 Watts: V6 V7 TRIODE

TO MAINTAIN WARRANTY, USE MESA/BOOGIE® TUBES WHEN REPLACEMENT IS NECESSARY
FOR CUSTOMER SUPPORT, PLEASE CALL 707-778-6565 MONDAY-THURSDAY 9-5 PST, OR VISIT WWW.MESABOOGIE.COM

FRONT PANEL: MARK VII

CHANNEL KNOBS #408601
REVERB KNOBS #408602
GRAPHIC EQ KNOBS #408555

CH1 LED #394232
CH2 LED #394251
CH3 LED #394201
EQ LED #394291
FX LED #394251
REV LED #394232



SWITCH x 3 #607433

SWITCH x 3 #607433

SWITCH x 3 #607433

CHANNEL SWITCH #607433
FX & REV SWITCH #607430

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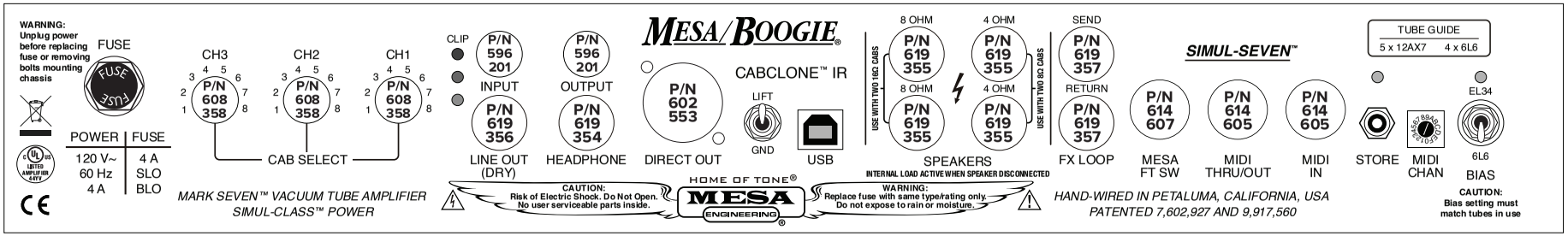
REAR PANEL: MARK VII

REAR KNOBS x 5
#409127

RED CLIP LED #394201
YELLOW CLIP LED #394251
GREEN CLIP LED #394232
STORE LED #394201
BIAS LED #394201



DOMESTIC FUSE HOLDER: 790347

EXPORT FUSE HOLDER: 790346

GROUND SWITCH #607334

USB JACK #613815

STORE SWITCH #607402

MIDI SWITCH #608460

BIAS SWITCH #607334

SERVICE INFORMATION

- **USA /CANADA CUSTOMER SUPPORT:**
  For technical support, troubleshooting, tone questions, settings help and more...
  Call us at 707-778-6565, Monday-Thursday, 9AM-5PM Pacific time, or email us at service@mesaboogie.com.

  NOTE: If a Product Specialist is not available when you call (helping other customers), PLEASE leave a voice message with a phone number and a good time to call and WE'LL CALL YOU BACK!

- **INTERNATIONAL CUSTOMER SUPPORT:**
  For warranty and technical support, please contact your LOCAL MESA DISTRIBUTOR.
  You may use this link to search the web for your local distributor's contact information:

www.mesaboogie.com/support/

MESA/BOOGIE®

Thank you *for trusting MESA/Boogie® to be your amplifier company and we wish you many years of toneful enjoyment from this handcrafted instrument.*

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