

MESA/BOOGIE

TRIAxis

Owner's Manual

The Spirit of Art in Technology



*1317 Ross Street Petaluma, CA 94954
USA*

Hello from the Tone Farm...

...You, smart player and all around intuitive human, have put your trust in us to be your amplifier company. This is something we do not take lightly. Our reward is that we've made a classic amplifier and by choosing this amplifier, you have become part of the MESA family...WELCOME! Our goal is to never let you down. Your reward is that you are now the owner of an archetypal guitar pre-amp, bred of fine all tube amp heritage...benefiting from the many pioneering and patented MESA circuits that led to the refinement of your new instrument. Feel confident, as we do, this amp will inspire many hours of musical satisfaction and lasting enjoyment. It was built with you in mind, by players who know the value of a fine musical instrument and the commitment it takes to make great music. The same commitment to quality, value and support we make to you...our new friend.

Your MESA/Boogie Amplifier is a professional instrument. Please treat it with respect and operate it properly.

USE COMMON SENSE AND ALWAYS OBSERVE THESE PRECAUTIONS:

Do not expose amplifier to moisture, rain or water, direct sunlight or extremely high temperatures.

Always insure that amplifier is properly grounded.

Always unplug AC power cord before changing fuse or any tubes.

Avoid direct contact with heated tubes.

Insure adequate air circulation behind amplifier.

Keep amplifier away from children.

Be sure to connect to an AC power supply that meets the power supply specifications listed on the rear panel of the unit.

If there is any danger of lightning occurring nearby, remove the power plug from the wall socket in advance.

To avoid damaging your speakers and other playback equipment, turn off the power of all related equipment before making the connections.

Do not use excessive force in handling control buttons, switches and controls.

Remove the power plug from the AC mains socket if the unit is to be stored for an extended period of time.

YOUR AMPLIFIER IS LOUD! EXPOSURE TO HIGH SOUND VOLUMES MAY CAUSE PERMANENT HEARING DAMAGE!

No user serviceable parts inside. Refer service to qualified personnel. Always unplug AC POWER BEFORE REMOVING CHASSIS.

EXPORT MODELS: Always insure that the unit is wired for the proper voltage. Make certain grounding conforms with local standards.

READ AND FOLLOW ALL INSTRUCTIONS OF PROPER USAGE.

TRIAxis™

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REAR PANEL

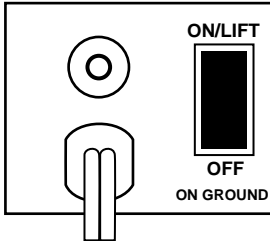
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TriAxis™

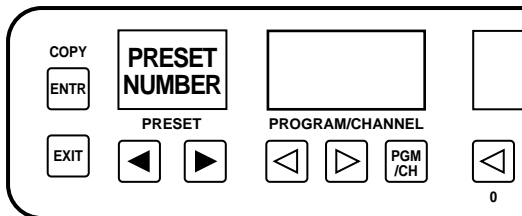
TURN POWER ON AT REAR OF UNIT:



NOTE: The AC Power Switch is a 3 position - center off type switch. Always try the ON/GROUND position first (switch down). If hum is noticed in the sound, then try the ON/LIFT position. Whenever possible it is best to use the grounded position for many reasons unless having TriAxis grounded creates noise problems such as buzz or AC hum.

NOTE: The A.C. power for TriAxis should be derived from the same power strip as that of the power amp in use. Any effects units used should also be plugged into this same strip. This close proximity of A.C. power supply for units within a system will prevent TONE degradation. Failure to follow this wiring scheme may result in harsh or excessively bright tonal characteristics.

RUN THROUGH FACTORY PRESETS 1-10

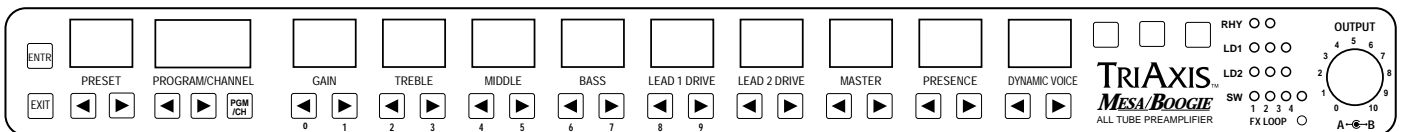


To do so use the Preset keys. (Notice that 11-20 do not sound very different unless TriAxis Switch 1 Jack is connected to a Mesa Switch Track power amp and Track Switching is used.)

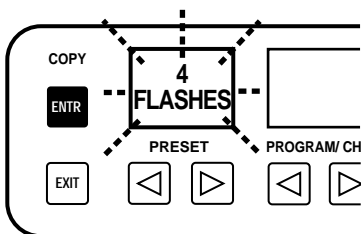
NOTE : Factory presets 1 thru 20 are Loaded automatically during power-up, but can be disabled or reloaded manually by user when defeat procedure is followed...see page 4 for directions.

TO INCREASE OR DECREASE

Presets, Programs or Parameters use any of the arrowed keys.

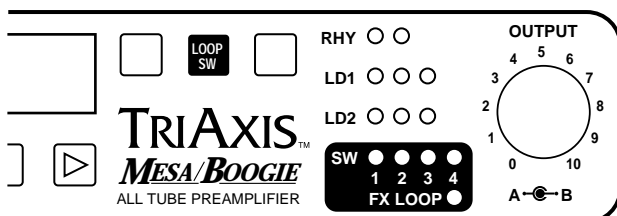


TO ENTER AND SAVE NEW PARAMETER SETTINGS



to an existing preset, press the key two times. If pressed one time Preset flashes to indicate it will be overwritten when you press key a second time. If you happen to change your mind or wish to hear the original preset, press the key while PRESET is flashing to return to the original settings and void any changes you had made.

TO ACTIVATE PROGRAMMABLE FX LOOP AND FUNCTION SWITCHES:

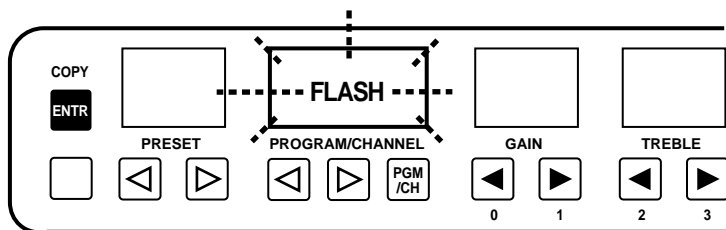


Press the key. This allows you to sequence through all the possible LOOP/SWITCH combinations. Press the key two times when the desired combination has been selected to store this combination.

FRONT PANEL: (Continued)

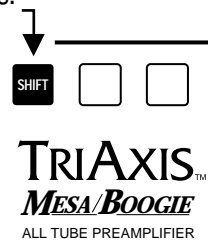
TO ACCESS PROGRAMS (via the numeric keys)

1. Press the **SHIFT** key one time to access the programs.



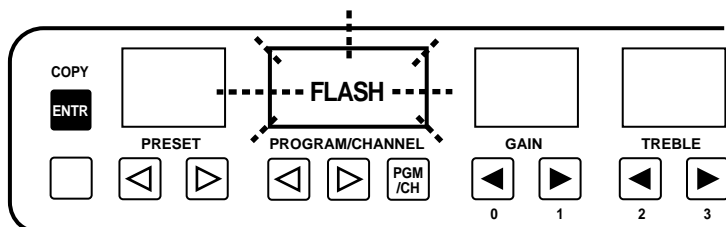
2. Select PROGRAM using numeric keys located below GAIN, TREBLE, MIDDLE, BASS, and LEAD DRIVE windows.

3. Press the **ENTR** key one time to access new PROGRAM number and audition the PRESET listed at that location.



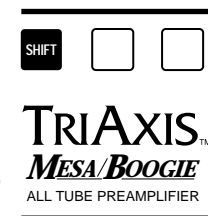
TO ACCESS PRESETS (via the numeric keys)

1. Press the **SHIFT** key two times to make PRESET the active window, then select the new PRESET using the numeric keys once again.



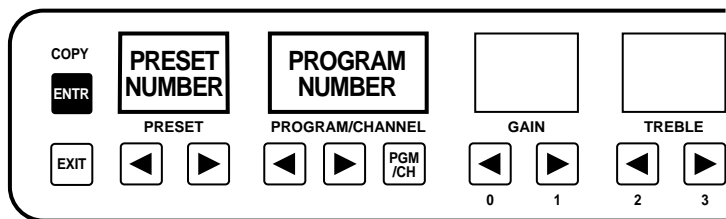
2. Press the **ENTR** key one time to listen to the displayed flashing PRESET.

3. Press the **ENTR** key two times to write displayed flashing PRESET to displayed PROGRAM number.



MAPPING A PRESET TO A PROGRAM

First understand that PRESETS are “SOUNDS” and that PROGRAMS are “Midi PROGRAM LOCATIONS.”



1. Call up the PROGRAM LOCATION number that you wish to write using the **◀ ▶** keys directly under the PROGRAM / CHANNEL window, a Midi Controller, or by using the numeric keys located directly under the GAIN thru LEAD 1 DRIVE keys.

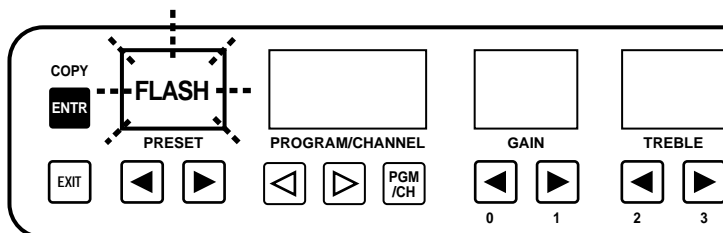
2. Choose the desired PRESET “sound” you wish to list under the Program Location number using **◀ ▶** keys directly under the PRESET window. Now you should see the PRESET you wish to map in the PRESET window and the Program Number you wish to write this PRESET under, in the PROGRAM / CHANNEL window.

3. Press the **ENTR** key two times. Procedure is now complete.

FRONT PANEL: (Continued)

COPY FEATURE

To copy one PRESET to another PRESET location: 1. Choose the PRESET you wish to copy.



2. Press **SHIFT** key and then press **ENTR** key. This "Source" PRESET now flashes four times.



3. Select the "Destination" PRESET using numeric keys located below the GAIN thru LEAD 1 DRIVE windows. You will now see the Destination PRESET in the PRESET window.

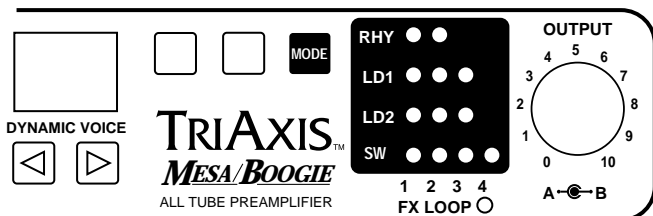
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4. Press **ENTR** key one time. The Destination PRESET now flashes indicating that the contents of the Destination PRESET will be replaced by the "Source" PRESET parameters. (If you want to stop this copy procedure and avoid overwriting the Destination PRESET, press the **EXIT** key and return to the "Source" PRESET.)

5. To complete the copy procedure, press the **ENTR** copy key one more time. The "Source" PRESET is now copied to the Destination PRESET and the PRESET display returns immediately to the "Source" PRESET. If you wish to check your work, toggle back to the destination PRESET and confirm the parameter values were copied.

MODE SELECTION

To sequence through the 8 modes, press the **MODE** key each time to select a new mode.



NOTE: Keep in mind the settings do not change with the **MODE** key, so if something sounds strange or if no sound is heard, check Mode/Parameter settings.

THE MODES ARE SHAPED AS FOLLOWS:

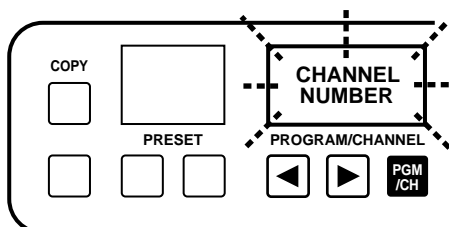
Rhy-Green=Vintage Fat Rhythm
Rhy-Yellow=Modern Bright Rhy
Lead 1-Green=Vintage Mark 1 Lead
Lead 1-Yellow=Gain Boost MK I Ld.

Lead 1 - Red = Dual Rectifier Vintage Channel
Lead 2 - Green = Mid Gain MK IV Lead
Lead 2 - Yellow = Classic MKII Lead (MK II-V)
Lead 2 - Red = Searing MKIII Lead

(For greater detail on individual modes, see the modes section in this manual)

PROGRAM / CHANNEL WINDOW



Feedback to the user regarding current Midi Program Number or current Midi Channel is displayed in this window.




NOTE: Remember User PRESETS are not to be confused with Midi Programs. Presets are created by you (or at the factory) and can then be assigned to a Midi Program number. In other words; Presets are sounds and Programs are Locations.

FRONT PANEL: (Continued)




PROGRAM / CHANNEL WINDOW: (Continued)

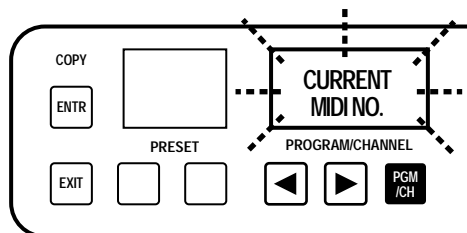
NOTE: From Power-up, the Midi Program number last used appears in the PROGRAM / CHANNEL window. To view the current Midi Channel that TriAxis is set to receive Program Change commands on... Press the  key below this window. The display changes to the current Midi Channel and the channel number flashes. Press the  key to return to the current Midi Program number.

REMINDER...The Midi Channel will not be displayed unless you push the  button.

TO CHANGE MIDI CHANNEL NUMBER

Press the  key. The PROGRAM display now indicates current Midi Channel number by flashing.

Use the   keys to change the CHANNEL number. When the desired channel is reached, press the  key to return the display to the PROGRAM number.




MIDI SYSTEM EXCLUSIVE DATA DUMP FEATURE

All of the information stored in memory, including PRESET/PROGRAM combinations and LOOP/SWITCH settings, may be dumped to an external storage medium such as an "Alesis Data Disk", personal computer or any other system with a Midi port and hard or floppy disk storage capabilities. These settings (information) can then be retrieved and loaded back into memory from the storage medium, providing backup and/or limitless expansion of the TriAxis memory.

NOTE: The manufacture's system exclusive identification code number for the TriAxis is 00004A. In case you ever need to list your files on a personal computer, this would be a possible title. However, the majority of owners will probably never need this number.

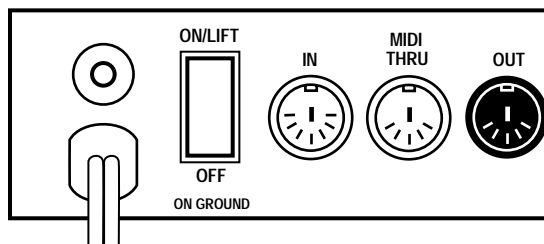
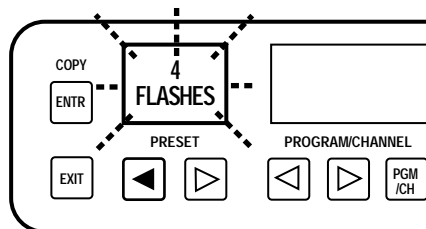
TRANSMIT DATA DUMP RECEIVE:

1. Connect a 5-Pin DIN cable from the TriAxis Midi Out Jack. Follow instructions as to how to set the storage medium's Midi IN port to the receive ready state.

2. Press the  key and then the PRESET down key (arrowed key facing to the left) on the TriAxis. You will now see the PRESET window display flash four times, indicating the "Dump" has been completed.



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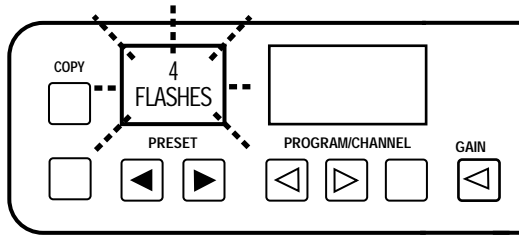


NOTE: You may possibly see the I.D. number appear on the screen of the destination unit and then something like "Dump Completed." The whole procedure takes about 500 milliseconds and all the information in the TriAxis memory is still intact. At this time you may write new presets knowing that all of your previous presets are safely backed up.

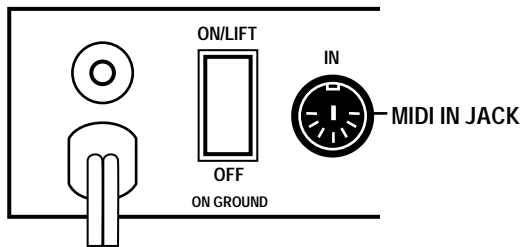
FRONT PANEL: (Continued)

RECEIVE (Loading)

To load all of your previously written sounds and information into the TriAxis, the procedure is very simple!



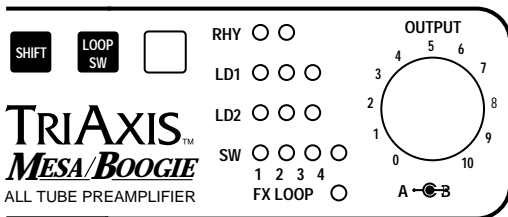
REAR PANEL



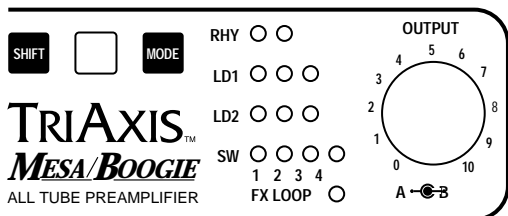
1. Connect storage medium's Midi Out jack to the TriAxis Midi IN jack.
2. Make sure storage medium is set to transmit the correct information (file)
3. Make sure the PRESETS currently in TriAxis are "Backed Up", as the load you are preparing to do will erase all existing information in the TriAxis memory.
4. Key in Transmit or Send on the storage medium. The previously stored info will be loaded into TriAxis. The PRESET display window will flash four times confirming that the transmission has been received.

DEFEAT /RECALL OF FACTORY PRESETS 01 -20

If you run out of Preset Memory using Presets 21 - 90 or you simply prefer to start writing your sounds at Preset 01, the first 20 factory presets may be overwritten and yet recalled for future comparison.



1. DEFEAT: Press the **SHIFT** key once, then the **LOOP SW** key. This defeats the factory preset power load-up command and makes it possible to write mode and parameter settings of your choice into PRESET locations 01 through 20. Remember the factory PRESETS will stay in these locations until you follow this procedure to defeat them.

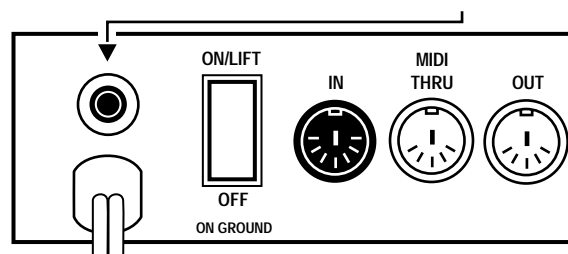


2. RECALL: To recall the factory PRESETS in their entirety, press the **SHIFT** key once, then press the **MODE** Key. Bear in mind this command wipes out all previously stored information in PRESETS 1 - 20, so be sure you have BACKED UP your memory if these are important PRESETS in these PROGRAM / LOCATIONS.

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REAR PANEL

PHANTOM POWER



The coax power jack above the A.C. line cord can provide power to a Midi foot controller, through the 7 pinMidi IN jack. This is accomplished by connecting an external A.C. to D.C. power adapter of correct voltage and polarity for whatever type of foot controller you are using to the coax jack on the rear panel of TriAxis.

The Mesa/Boogie Abucus foot controller requires the following power requirements: 12 Volts @ 500 ma, Tip = Ground and Sleeve = Positive.

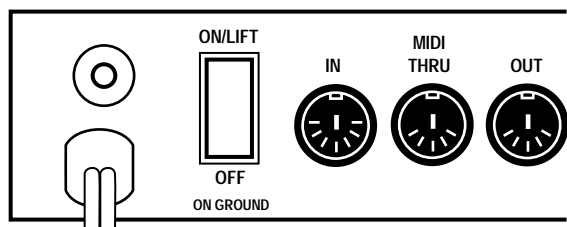
Connect a 7-pin DIN cable between the Midi In jack on the TriAxis and the

Midi Out jack on the foot controller. This negates the need for a clumsy power adaptor on the stage.

NOTE: 7 -Pin DIN cable will not fit into 5-Pin DIN jacks. Check to see that your foot controller accepts 7-Pin DIN cables and is wired to accept Power in this manner...and of the proper voltage match to TriAxis' phantom power output.

MIDI IN, THRU AND OUT JACKS

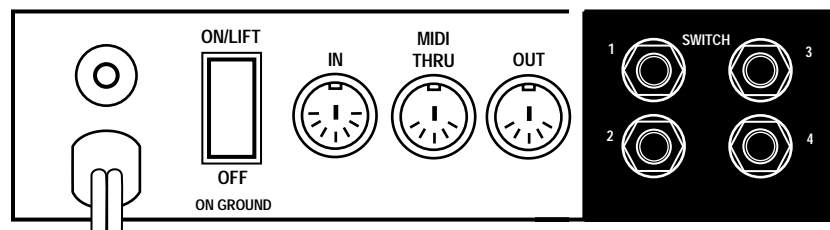
TriAxis provides the standard "Midi Interface" via these three jacks. Connect the 7-Pin DIN to the Abacus or similar foot controller. Then connect the next device's Midi In jack to TriAxis Midi THRU jack.



TriAxis's Midi "THRU" and Midi OUT jacks mirror all incoming Midi messages. The "THRU" jack will not send Data Dump or other similar command information. Use the Midi "OUT" for all such commands. The "OUT" also sends Midi program change messages when the Program keys are used on TriAxis' Front Panel.

SWITCH

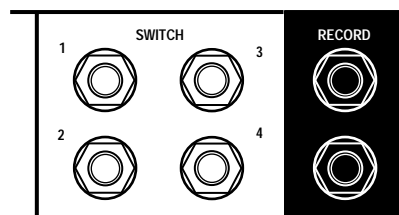
Switch Jacks 1 through 4 provide "Tip to Ground" function switches for controlling or activating external devices such as the "Switch-Track" voicing features that are incorporated into Mesa/Boogie Switch Track power amplifiers. They will also control



many, but not all, Bypass, Hold, Mute etc. function jacks found on many Non-Mesa products that do not use momentary logic. If they do not control a device that you own, we suggest calling that devices manufacture for specific voltage requirements, as TriAxis may not provide "ground" needed to control the particular device.

RECORD

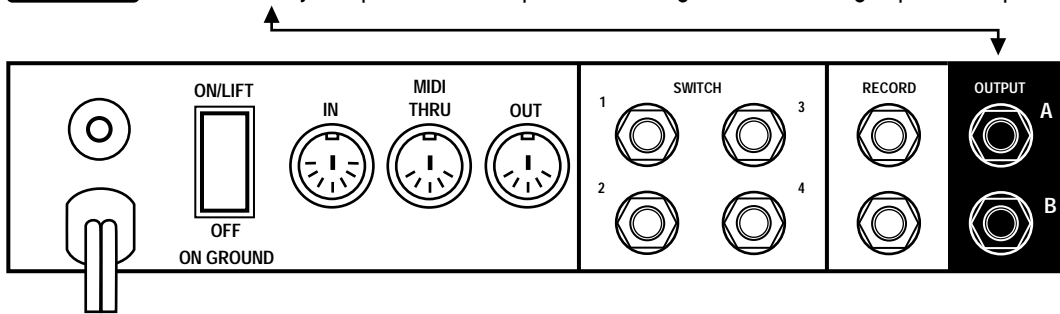
These jacks provide direct stereo interfacing to recording or live mixing consoles. They faithfully reproduce both lead and rhythm sounds similar to those you are accustomed to hearing from your power amp and speakers. The output level is determined by the front panel programmable MASTER control setting. At extreme settings it may be possible to overload the console's input circuit. Medium Master control settings are probably sufficient for most situations. Check your levels.



REAR PANEL: (Continued)

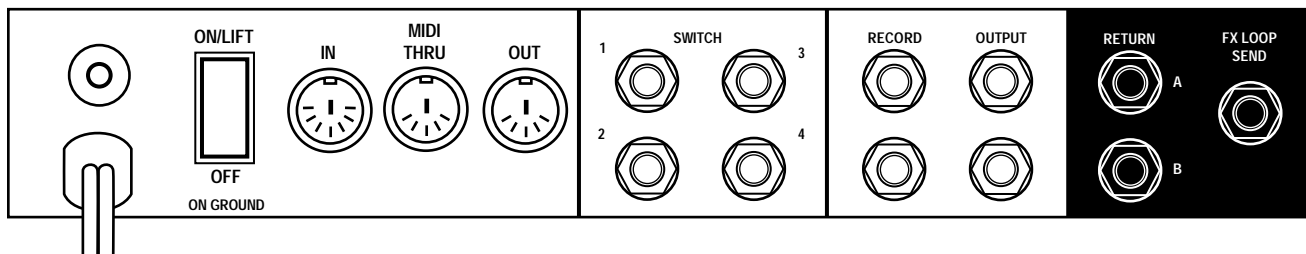
OUTPUT

These A/B jacks provide two outputs, left and right, for interfacing to power amplifiers or directly to your effects units.

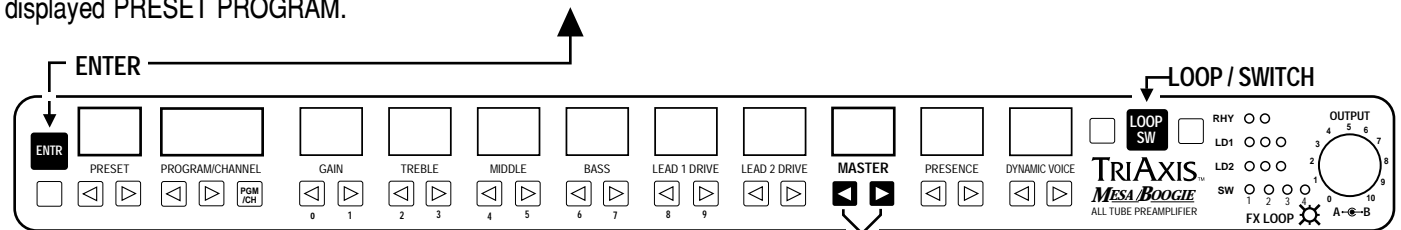


FX LOOP

These jacks provide a Mono send and Stereo return effects loop configuration. The LOOP is programmable via the LOOP/SWITCH and ENTER keys located on the Front Panel (see illustration below) and its' status determined per PRESET. The Front Panel programmable MASTER control determines the FX SEND LEVEL.



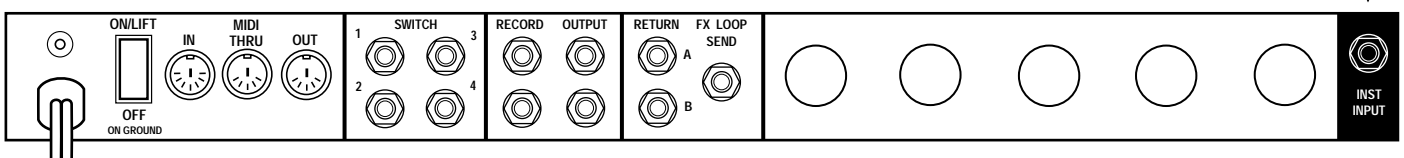
Press the **LOOP SW** Key to toggle between the desired combination of FX LOOP and Function Switches on a given PRESET/PROGRAM combination. To write this combination, Press the **ENTR** key two times. This LOOP/SWITCH combination is now stored under the displayed PRESET PROGRAM.



PROGRAMMABLE MASTER VOLUME:
Also acts as an FX Send Level Control.

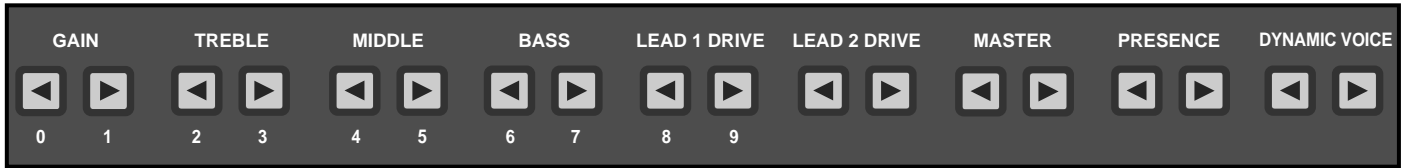
INSTRUMENT INPUT

The instrument jack is located to the far right on the Rear Panel.



TRiAXIS™

THE CONTROLS



This is by far the most critical and powerful of the controls in TriAxis. It not only determines the overall gain amount, shape and sensitivity of each mode...but it is sort of a Tone control as well. Generally speaking, whatever is dialed here ultimately determines the mode's personality. Set low, it allows "cleaner" brighter sounds with enhanced dynamic response, especially in the higher frequencies. Set high the whole personality of the mode becomes fatter and more overdriven. In TriAxis we worked hard to make sure the entire range of the Gain is usable and more importantly, musical. Don't think for a moment that this simple layout limits you as to the amount and texture of gain. Long neurotic hours were spent to ensure the frequencies, as well as the ranges, of gain available here were stylistically accurate. It's probably good to mention here that most of the great sounds can be found by setting the GAIN control moderately, especially in the 6 Lead modes. For example, somewhere between **2.0** and **8.0** in the Lead modes, and between **3.0** and **8.0** in the Rhythm modes. This reduces the likelihood of pesky tube microphonic problems occurring while at the same time making the modes easier to balance with each other in regards to volume and effects send level strength.



As with most all tube guitar amplifier, the TREBLE control is the strongest of the three tone controls. Its' setting in the TriAxis determines the blend and strength of the MIDDLE and BASS controls. Set high, it is the dominant control, minimizing the amount of MID and BASS possible in the mix. Set low the TREBLE becomes the recessive control and a warmer, darker blend is produced. Dial with care. Subtle tweaking of this control tends to produce the best results.



The MID control determines midrange punch and boldness in lower gain sounds and a smooth "vocal" blend in high gain sounds. It can be very effective in acting as a "cut through the band control" in certain situations. Dial to taste, remembering that the setting of the TREBLE control greatly effects its' strength. However...there is an exception...in the LEAD 1 Red mode the MID control is extremely powerful. Its action may be likened to that of the TREBLE control in all the other modes. The MID can completely re-shape the entire personality of this pre-tone gain mode simply by setting it either very low or very high. This difference is because in the other 7 modes, a standard MID value pot and circuit placement scheme is in place. When the Lead1 Red mode is selected, the MID control changes drastically and its placement in the circuit is moved.

Setting the MID very low in this mode scoops all the attack and lends a spongy liquid character to the sound. This type of setting works very well for single note work or very low gain rhythm playing. The strings will seem easier to play if the Mids are kept low in the Lead 1 Red mode. Setting the MID control high in Lead 1 Red adds extreme attack and aggression. In this range of settings, the GAIN and LEAD DRIVE controls can be set relatively high before any mush or lack of articulation is noticed. This type of MID setting also helps

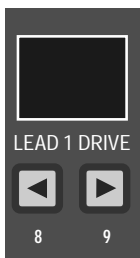
THE CONTROLS *(continued)*



the bottom end stay tight - even at rather high BASS control settings. Harmonic “chirping” and “held” note “harmonic leaping” are easier to obtain with higher settings of the MID control. In short, the MID control acts as the dominant tone shaping control in the LEAD 1 Red mode.

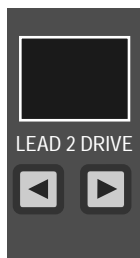


This control blends in the lower frequencies and its’ effectiveness, again, depends on the setting of the TREBLE control. It should be set with moderation as extreme settings in either low or high directions can produce an unbalanced tone. Be especially careful in higher gain settings of all modes except Lead 1 Red. Too much Bass will cause a flabby, unfocused sound that can’t be dialed out elsewhere because excessive Bass has been introduced early on in the circuit. Try setting the BASS control to **4.0** or **5.0** for clean sounds in the Rhythm modes and **3.0** or below when dialing up high gain overdrive sounds in these nodes. In the Lead modes, try setting the BASS somewhere between **3.0** and **6.0** depending on the amount of Gain and Treble that’s dialed up. Keep in mind that Lead 1 Red has its’ own dedicated range of the BASS control, **5.5** to **10**, as it can support higher BASS control settings than the other 7 modes. See explanation in the Modes section of this manual under “Lead 1 Red.”



This is the principal gain control for the Lead 1 group of circuits. It determines the amount of overdrive present at the most crucial pre-amp tube stage in these three lead modes. As we mentioned earlier in the Mode section of this manual (see Lead 1 Red), this controls’ location moves along with many other parts to better accommodate this pre - tone control type of architecture. In the Green and Yellow modes, LEAD 1 DRIVE affects the first tube stage of significance and high settings of the LEAD 1 DRIVE here, will produce rich warm gain that “fills in the holes” and blends the harmonics subtly. We feel the best sounds are achieved by matching the LEAD 1 DRIVE to the setting of the GAIN control (far left-front panel) or setting the LEAD 1 DRIVE slightly below that of the GAIN...for example, GAIN at **8.0**, Drive at **8.0** or GAIN at **8.0** DRIVE set at **6.0** etc. This scheme lends itself to the most focused, well balanced sound.

In the Red mode, the LEAD 1 DRIVE makes its’ move down the line to a later stage, where it can be more effective. At this point it is wise to mention once again that the GAIN control is a crucial part in the operation of Lead 1 Red. As we said earlier (see Modes section, Lead 1 Red) this location is usually a discreet resistor in pre-tone circuits, while in TriAxis, it is an adjustable pot. It is therefore important for you to set this GAIN control to the proper “fixed” resistance...at least to check it out before deciding to deviate from the recommended setting. Set the GAIN control at **6.0**, if you find this lacking (gain wise), increase the LEAD 1 DRIVE before increasing the Gain. This will ensure tight bottom end response while producing a less buzzy quality in higher frequencies.

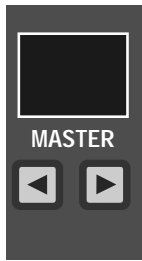


Once again, the Lead 2 group of modes are post tone control. Therefore, the fine tuning of overdrive must occur later in the circuit where it can focus on finer increments of gain. This Drive control meters the Gain in the third stage of the Lead 2 group of circuits. Its’ taper was chosen to deliver very fine increments of gain in the lower regions, **0.0** through **3.5**...small increments in the middle range of **4.0** through **7.5** and fairly substantial increments in the upper range **8.0** through **10**. As with many of the controls aboard TriAxis, moderation often produces the best results. Try using this control subtly in conjunction with the GAIN control. It is usually unnecessary to set the Lead 2 DRIVE above **8.0**, even for the most crazy rock sounds. If you are finding moderation to tame when using this control...perhaps it is time to take a look at other parts of your system, ie. your guitars’ pick-ups, speakers, power amps etc. In other words...there should be more than enough gain here to accommodate even the most extreme styles.

THE CONTROLS *(continued)*



Once again the two controls, GAIN and LEAD 2 DRIVE, work in tandem with each other and their mix is crucial to finding a specific sound. In general, the higher the Gain...the darker, fatter and more saturated the sound will be. The higher the LEAD 2 DRIVE...the brighter, more harmonic and aggressive the character becomes. We like to see a GAIN control setting of **7.0** or **7.5** for bluesy or medium gain solo sounds and **8.0** for the more high wire rock sounds. Then simply adjust the LEAD 2 DRIVE to taste. Many of the coolest sounds find the LEAD 2 DRIVE either equal to, or substantially lower than these aforementioned Gain settings. Specifically check the lower range of the LEAD 2 DRIVE where the threshold of distortion is incredibly smooth and single notes purr. Consult the factory presets for comparison purposes and as always...experiment.



The programmable MASTER control serves three purposes in the layout of the TriAxis. FIRST: It serves as a level balancing control for each of the eight modes. This enables a wide range of front end GAIN control settings to be matched to a given listening level and the relative level compared to the other modes. SECOND: It acts as an effects send control for each mode in the Effects Loop. As with many of the controls in TriAxis, the best results for balance and tone are usually found in the middle range of this control. THIRD: The MASTER is the Recording jacks' send level control. When using the direct Recording jacks found on the Rear Panel to interface directly to a mixing board or a recorder, this control will determine the amount of signal you will be sending via these jacks. In this application it is usually best to start with the MASTER control set to **0.0** and gradually increase it to the desired level. This minimizes the possibility of blowing speakers or eardrums in the event the engineer has an extremely sensitive input headroom setting in place at the console. Once again avoid setting the programmable MASTER above **6.0** in the Clean Rhythm modes (Green/Yellow) as high settings here can possibly overload the input stage of the DYNAMIC VOICE control, producing unwanted clipping.

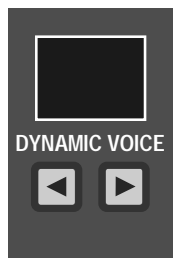


This control usually regulates either brightness or negative feedback in the power section of an amplifier. In the TriAxis a whole new approach to this traditional circuit was taken. An actual dynamic feedback loop that compresses the highs and upper treble frequencies makes this PRESENCE control the first of its' kind. In applying for the patent for this unique (high compression) circuit, we discovered that this same basic concept can apply to many parts of the tube amp in guitar amplification and your TriAxis is the first benefactor of such a breakthrough. With greater understanding and patent grants behind us, lets talk sound.

As the PRESENCE control is increased, more highs are allowed to pass. The lower the signal strength at the input of this control, the more highs pass through it. The lower region of the PRESENCE control dampens these high harmonics. The greater the signal strength at the circuit input becomes, the darker the sound becomes. So...if you set the PRESENCE control high and pick softly (sending a small signal through the PRESENCE control circuit) the highs will be very prominent in the mix. If you decrease the PRESENCE control and pick harder (increasing the signal strength at the PRESENCE control circuit input) the high harmonics will be very subtle. In other words, the PRESENCE control helps enhance whichever direction your're trying to go in with your sound and it does so dynamically! Most players love the way tube circuits react to subtle nuances in style...This PRESENCE control circuit takes that idea a few steps further. When you're "going off" on the treble strings in a solo and you go for an expressive bend and lay hard into the note...TriAxis works with you! If you picked the note hard with the PRESENCE control set low, that note would become bigger, rounder and more compressed.

Likewise, if you were doing some low growling work on the bass strings and the PRESENCE control was set high...you could relax into this segment and let the PRESENCE control make the edge. Most everyone that we know always wishes their high notes could be fatter and their low notes to be more discernable and articulate...highs where you need them, lack of highs where you don't. Make sense...? If not on paper, then you need to plug in and experience the way this dynamic PRESENCE control can enhance your playing, especially when you are soloing.

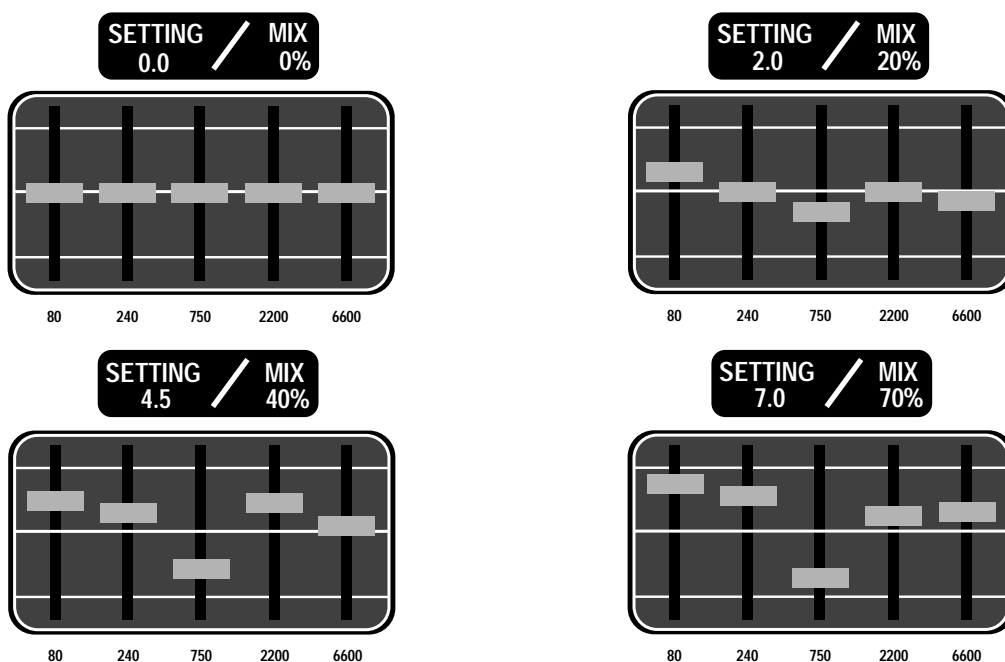
THE CONTROLS *(continued)*



This innovative circuit enabled the TriAxis' one space package to include all the power and sonic character of the 5 band graphic equalizer found aboard most Boogie combos and heads. Obviously there was no room to house the five sliders necessary to make this E.Q. circuit a graphic type...yet we were determined to find a way of fitting this valuable sound shaping tool into TriAxis. A creative approach led to a way of using an increment and decrement key to control all five bands at once! Better yet, the TriAxis' method actually blends the equalized signal with the "dry" signal. So, unlike our traditional Graphic equalizer - where the whole signal passes through the circuit once it is activated...the DYNAMIC VOICE circuit is an EQ and built in mixer all in one! As the DYNAMIC VOICE is increased, the "dry/wet" mix is increased proportionally. This set up lends some extremely cool and subtle sounds that can be obtained at the lower range of the control **1.0** through **4.0**. As the control is dialed through its middle and upper ranges, the mix becomes more predominantly e.q.'d and at a DYNAMIC VOICE setting of **10** the whole signal is passed through this circuit.

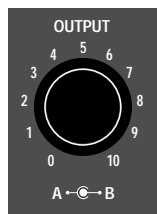
Simultaneous to this mixing action, the EQ "curve" changes proportionally. The DYNAMIC VOICE uses a preset curve that was chosen from countless hours of R&D and referencing hundreds of Boogie owners' favorite "curve". However, this curve changes depending on the setting of the control. At **0.0** the mix is at 0% and the curve is flat. At **10** the mix is at 100% and the low end is boosted, the midrange is cut and the highs are accentuated to promote that harmonic blend that's so crucial to high gain rock or metal sounds. Between the settings of **0.0** and **10**, there is a whole range of curves/mixes that can enhance both clean and overdriven sounds equally. We have found the best settings fall into a couple of setting areas: Clean sounds (though they are usually at their best without the DYNAMIC VOICE) work well with a setting of **1.0** or **2.0**. Lead sounds seem to support higher settings of **3.0** through **7.0** with the craziest sounds occurring at **6.5** through **7.0**. At settings this high, it will probably be necessary to reduce the programmable MASTER control in order to balance the volume level with other presets that do not use the DYNAMIC VOICE.

The DYNAMIC VOICE was designed to complement the Lead 2 modes in particular. This circuit is very effective in shaping the post tone control Lead circuits that make up Lead 2. As mentioned, these modes don't benefit from high settings of the BASS control, because large quantities of Bass dialed up early in the pre-amp, produce flubby indistinct attack characteristics. The pre-set curve in the DYNAMIC VOICE was custom tailored to add just the right frequencies of Bass, blended with specific highs to yield a huge low end, while retaining a tight focused attack. The Boosting with DYNAMIC VOICE occurs for these 3 modes late in the circuit, where it is most effective and least detrimental to the tight attack. However, don't let this dedication prevent you from experimenting with the DYNAMIC VOICE, as you will find it an enhancement in virtually all of TriAxis' 8 modes. We just wanted you to understand our thinking on this - in order to know best where to use the DYNAMIC VOICE and how much to use it, to obtain the best overall results from this intuitive equalizer circuit.



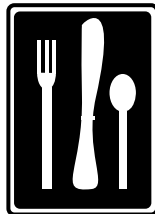
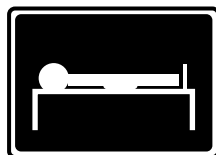
THE CONTROLS *(Dynamic Voice continued)*

NOTE: It is possible, either through a certified phone instructed technician in your area, or by sending your unit directly to us, to re-shape the existing pre-set curve slightly to fit your needs. This is somewhat of a hassle and is not covered under the warranty. (However, if you pay shipping both ways, Mesa will do this mod only, free of charge!...for a period of at least one year after your purchase date.) Before you even think of pursuing a change, let us tell you that 9 out of 10 players who have requested this change and have it done end up returning the unit to us asking, "Will we please put the DYNAMIC VOICE back to the stock curve." In fact, at the time of this manual's writing - with 3000 TriAxis' shipped - we are aware of only three players who have a personally requested curve aboard their unit. Two of them are Bass players and one is an acoustic player that uses his TriAxis for acoustic guitar sound reinforcement. Hopefully this will tell you that in the three and a half years of R&D time spent on TriAxis, we absorbed it and came up with the curve that seemed to cover most all the bases. Trust us! Try it at length and in depth before you change it. You'll most likely end up wanting it put back to stock like everyone else who requested a change. You might as well save yourself the hassle and shipping cost of this "iffy return" investment in tweakdom. This NOTE: is for you sick tone junkies, in that there may be peace of mind knowing that no, you aren't stuck with this curve and yes, you can change it with relatively little trauma or "time without TriAxis tone" whichever describes your feelings - and at very little cost to you. You can sleep now, you tone addict you.



This lonely knob is the TriAxis' final OUTPUT control or Overall Master. After the relative balance of the eight modes have been set with the programmable MASTER control, use this control to increase or decrease the listening volume level. It is also the effects return level control, though for you the player, this is an irrelevant point to know. It just makes for a more simple set up and one less knob to deal with when interfacing your favorite effects. Optimum setting depends on the size of the room, the input settings on your power amp and basically how loud you want to play. We like to see an OUTPUT control level setting of somewhere between **3.0** and **7.0**but adjust to taste.

REST AREA



TRiAXIS™

THE MODES

The architecture of TriAxis, though vast, is quite simple. Its' eight pre-amp circuits, or modes as we refer to them, are laid out in three distinct groups. These are Rhythm, Lead 1 and Lead 2. Each of these groups consists of pre-amp circuits that share similar circuit architecture, parts, and pre-amp tube stages. However, each mode has unique and specific "bones" that define its' character, personality, and all tube heritage. We grouped them together for many reasons, not the least of which is ease of recognition and familiarity. Upon hearing the TriAxis for the first time, the majority of players seem to immediately gravitate toward and identify with, one of the Rhythm modes and one group of Lead modes. Usually this preference is directly related to what type of amps a player came up playing. Players who have been Boogie conscious for years and worked their way through the various Mark I, II, III, and IV eras, find both Rhythm modes familiar, but tend to fall in love with Lead 2 Green and Yellow. There is a reason for this attraction, and we hope by reading this manual and experiencing the TriAxis yourself, you will come to understand these circuit differences and use them to your advantage - as they not only affect sound, but can actually affect your playing style.

All too aware of the effect amplifier styles have on players and playing styles, we endowed TriAxis from its' infancy with circuits that now redefine all the history-making classics with their authenticity. This allows players of all styles to find a home base or comfort zone right away, especially during the transition period from a conventional amplifier with knobs to the world of midi commands and programmable memory. It also helps facilitate learning the software and programming. A player can stick with his favorite modes and start applying them to his/her music right away, without having to know all eight circuits and their subtleties. In other words, smaller bites make digestion a whole lot easier. However...fear not! You have bought a piece of gear that can continue to soothe and satiate your appetite for new sounds for years to come. Remember, there are eight modes here - each a complete pre-amp in and of itself - each capable of many voices and personalities depending on how you choose to use them. Any time you are ready to start exploring your musical boundaries, TriAxis will prove to be a worthy vehicle. And you will find that if you spend the time to learn all eight modes and their capabilities, you will become a much better player and feel more confident about your playing, knowing for sure that everytime you play, your Tone is the best it can be.

So we encourage you to explore! Consult the glowing oracle, TriAxis. Learn from the stages of tube audio history we have assembled for you in this pre-amp. Whether on the stage or in the studio, this quiver of classic guitar sounds will help you rally the masses, outshoot the bad guys, get the girl/guy and save the day...well maybe not all that, but it will certainly make playing more fun and satisfying! What follows is an outline of the eight modes, their history and characteristics, so that you may come to understand and use TriAxis to its' fullest potential.

RHYTHM: This group consists of two modes, Rhythm Green and Yellow. Unlike the Lead modes, there was no need to completely re-arrange the circuit layout and call these Rhythm Modes 1 and 2. This enabled us to fit these circuits into a one space package and still achieve the vastly different rhythm sounds that we wanted to include. Rest assured, pre-amp tube stages move and many parts change when each of these is selected...but forethought and luck granted us a way to accomplish these without the need for two groups. Toggle the Mode Key from Rhythm Green to Yellow and you can hear the bottom-end fatness and top-end harmonics change substantially. Here's the difference:

RHYTHM GREEN: is the more vintage, "old Black Face" style circuit. Its' bass response is lower with quite a lot more of this sub harmonic bass available. Its' top-end harmonic frequencies are slightly lower than Rhythm Yellow's, but can seem higher or lower depending on how the MIDRANGE control is set. Generally, the lower this control is set, the higher and more sparkling these upper harmonics seem to become. Set this way and combined with lower settings of the GAIN Control, a beyond-vintage clean sound with bubbly, elastic highs and big breathy lows is proof that TriAxis is a serious contender to even the most prized vintage gems.

This mode also shines at many other settings as well. As the GAIN and MIDRANGE controls are increased, **5.5-7.5** a whole new flavor appears. This hotter region performs as a killer driving, yet still clean, rhythm sound. Bold and pushed, this dynamic range of tones works great for Blues rhythm grooves or more aggressive "alternative" clean parts or lines. This is probably the most powerful and widest of possible rhythm sounds aboard TriAxis, perfect for when it's in the spotlight.

MODES (continued)

Go ahead...Crank it! Rhythm Green loves to rock. With the GAIN Control at **10** and the Midrange also high, this mode is one of the coolest solo sounds around. Reduce the Bass a little and dial in the Treble to set your pick attack, and you have a touch-sensitive lead mode that won't completely saturate your guitars' natural sound. This is the sound that helped put Boogies in the hands of widely acclaimed guitar heroes of the 70's and early 80's, when Blues/Fusion changed and revoiced rock with tasty medium gain sounds. This circuit was sired by the classic 4X10 Fender Bassman and later redefined in Mark 1 Boogies. Classic, bare-bones, roots players will love how well this setting responds to pickup output. These virtuosos of the volume knob can take or leave footswitching in favor of a circuit that lets them ride the gain from their guitar. Rhythm Green works extremely well for this and will surprise even the most hardcore vintage heads. For a real treat, see the Version 2.0 section later in this manual and program in the great Cranked Vintage Sound that we have laid in as an example of TriAxis' versatility. This is the easiest way to demo the wide range of possibilities that this mode can produce as you sweep an expression pedal from a sweet, pristine, clean sound, up through the more pushed driving range, to the howling solo sound we just mentioned. Rhythm Green is all the amp a player could ever need, but should you desire more...read on!

NOTE: With a very high GAIN control setting in Rhythm Green, it will probably be necessary to reduce the MASTER Control substantially. The dynamic response of this mode makes it the hottest, output-wise, of the eight modes. Don't be surprised to see MASTER settings of **2.0** or even **1.0** at high Gain settings, when trying to balance the listening / FX Send level with other modes. This is normal and often ideal as too high of a GAIN and MASTER combination makes it possible to run out of headroom at the DYNAMIC VOICE input stage and produce unwanted clipping.

NOTE: The GAIN control has a Dynamic "Bright" circuit built into it. At low Gain settings the upper harmonics will pass freely through this control, producing the sweetest, brightest sounds. The more the GAIN control is increased, the less of these upper harmonics pass through this control and the warmer the sound becomes. All the way up on the GAIN control virtually removes these frequencies from the mix. You may want to use the PRESENCE control to put some of them back at the highest Gain settings. Use the MIDRANGE control in conjunction with the BASS control to balance the warmth with the upper harmonics at low Gain settings and possibly reduce the PRESENCE control until you achieve the desired blend.

RHYTHM YELLOW: delivers a much different response than that of the Rhythm Green mode. You will notice immediately a distinct change in both the amount and frequency of the bottom end. (Slightly higher and pulled back in the mix a bit.) This Rhythm provides a tighter, more urgent attack. The top end is quite different also, being both higher and more percussive than that of Rhythm Green. These differences tend to act in tandem to deliver a less compressed, more open, clean sound. This mode traces its lineage back to the Mark IV, III, and finally the IIC+. A favorite of Boogie addicts, this rhythm mode can have definite advantages in some situations over the looser, fatter sound Rhythm Green delivers. On large stages or arena type venues, the Yellow mode will "stay put" and behave better, producing less rampant low frequencies that can trigger unwanted subharmonic feedback from a stage full of live mics. Being narrower it will seemingly use less power per given watt from your power amp. This makes it seem a bit more "headroomy," especially in large bands where sub lows tend to get devoured by the keyboards and bass. In certain cases Rhythm Yellow can be the only way to get skinny enough to sit tight in a mix and not interfere with the other parts. Anyone who has done a lot of recording of rhythm tracks or live work in a funk or techno situation will confess it can be frustrating getting that "guitar direct into the board" sound, which is so essential to many projects. Even if this can be simulated, the feel of the strings can be horrible. Not so, however, with this cleaner-than-clean rhythm machine. We are talking pristine here...Lady Kenmore would be proud if she heard you groovin through Rhythm Yellow. Funksters love this mode for its articulate and oh-so-skankful persona. Dial the GAIN control down low **3.5 - 5.0** and dip the MIDRANGE control a bit and you'll win big points with the producer when your rhythm track is mix-ready before the engineer can get his tweaky little fingers on the EQ. Yellow also shines when it comes time to do a dub line with the bass on a reggae jam. It can be so mute you'll be swearing someone put a felt pad under the palm of your picking hand. There are many situations where fat is just that...too much. For all these sessions or gigs, Rhythm Yellow gives you that beyond-produced clean sound in a flash of the Program, but it doesn't end here.

MODES (continued)

Like Green, Yellow Rhythm includes a dynamic bright circuit that transforms the GAIN control into an additional tone control. Again, like Green, the lower the GAIN control is set, the more top-end harmonics are allowed to pass freely. The higher it is set, the less highs are allowed to pass and more lows and mids replace these as the dominant frequencies.

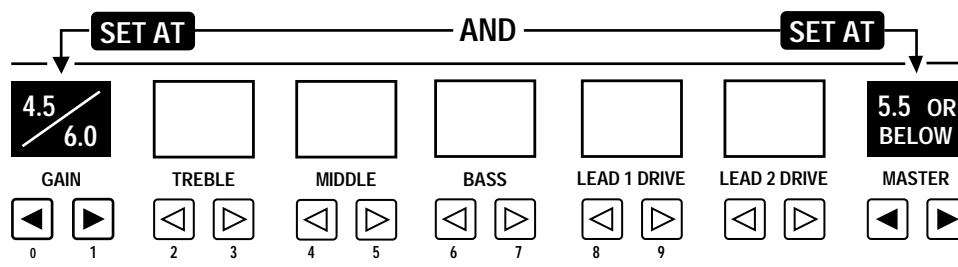
Therefore at higher settings, say **6.5** on the GAIN control and above, the whole attitude of Rhythm Yellow turns not-quite-so-mellow and puts on a darker, more aggressive face. Beginning around **6.5** through **8.5**, Yellow delivers that “threshold of distortion” mean semi-clean that so many industrial and alternative hits are based upon. It’s urgent and cuts through great live or on tape.

Above **8.5** the GAIN control in Rhythm Yellow almost becomes another Lead-Drive-of-the-Rhythm. It moves quickly past the threshold region into downright GAIN! Again, the MIDRANGE control becomes a powerful tool in dialing and defining the type and amount of Gain here. The higher you set the Mids, the more saturation will occur, disguising your guitar to taste. Much like Rhythm Green, the higher regions of Gain and Midrange will dictate a lower setting of the MASTER control in relation to other modes. Treble and Presence add the finishing touches to fine-tune the pick attack and openness. Yellow “maxed” is another formidable solo sound that definitely should not be overlooked!

So you can see that this mode has at least as many uses as Rhythm Green and many long time Boogie enthusiasts rely on this faithful sound as their workhorse rhythm.

NOTE: The far right parameter keys control the DYNAMIC VOICE which is an internal EQ circuit described earlier in this manual. It works similar to the 5-band graphic EQ that has become a powerful on board addition to many Boogie circuits. It increases both bass and treble responses simultaneously and gives the impression of widening and enlarging the sound. This being the case, Rhythm Yellow becomes the more likely candidate for positive enhancement since its’ inherent sound is “narrower” and “skin-nier.” Settings of **4.0** and below can have useful and interesting effects on clean rhythm sounds in this mode, with the tastiest embellishments occurring at **1.0** or **2.0** Rhythm Green, because of its fatter and more vintage character, shies away from the DYNAMIC VOICE, becoming tubby and bloated, especially at high settings. Consequently, we recommend using the DYNAMIC VOICE sparingly in the RHYTHM GREEN mode. If and when this becomes necessary, Rhythm Yellow would be the preferred choice to alter with this extremely powerful EQ circuit.

NOTE: Like the Green, Rhythm Yellow can produce signal levels too high to remain completely clean at the DYNAMIC VOICE Input Stage. To avoid this, follow a rule of balance. If you maximize the GAIN control and minimize the MASTER control, this will prevent unwanted clipping. For the “cleanest” clean sounds, try setting the Gain control between **4.5** and **6.0** with the MASTER control set at **5.5** or below. If this does not balance with your other settings it may be necessary to increase the power amps’ level controls and reduce the MASTER control setting on some or all of your other presets. This will give you the volume level you need and at the same time ensure optimum headroom for your clean rhythm sounds. Check out the example below for what we think is a perfect setting for the cleanest possible sound.



Now that you understand more about the layout and the individual personality of the two RHYTHM Modes, the only mystery left is where you’re going to find the countless hours of time to explore and enjoy them. Don’t worry, it will be there for you to dive into whenever you’re able to come up with some time, so don’t rush... relax and discover. We know what it’s like, believe us! We spent over a year just perfecting these two modes alone. Crazy? Neurotic? Maybe, but we prefer to use the term “committed.” With this acknowledgement, let’s move on to the LEAD Modes.

LEAD MODES: (Continued)

LD1 ○ ○ ○

This group of three modes is probably the older, more tradition based of the Lead Modes in TriAxis. They all have one thing in common and that is all three are what is referred to in amp freak circles as pre-tone-control gain circuits. This means the boosting of gain by progressively “slamming” the 12AX7 tubes occurs before the tone controls. This method of squeezing gain through the tone controls tends to lend itself to a larger, yet slightly less focused sound. Many players rely on this looser, more spread out sound to be able to get emotional with their soloing style. This circuit also delivers large amounts of bass very well. As opposed to a “rear end” style circuit, this type of circuit lets you pump larger quantities of bass through the tone controls without increased flub or cloudiness. Players that lean toward extremely high gain metal or hard rock sounds will find the Lead 1 modes much more suited to the maxed out regions of gain required to produce over the top, believable crunch and grind. We especially recommend the Lead 1 Red mode for this application. You will find that the DYNAMIC VOICE control may not be best suited for these modes and, in fact, we recommend working with these modes without the DYNAMIC VOICE first. This EQ was developed to work with the post-tone-control lead circuits of Lead 2 so that previous Boogie owners would find themselves at home...especially those players that used the Graphic EQ aboard their MK II, III, or IV. The DYNAMIC VOICE works fine with the Lead 1 modes and causes no problems of any sort, however, the frequencies chosen for the EQ points were dialed in for the Lead 2 modes. But don't worry...if you like or need the DYNAMIC VOICE with Lead 1...go ahead and use it...it won't hurt a thing. We just wanted to share our design concept with you regarding the DYNAMIC VOICE circuit.

LD1 ○ ○ GREEN:

This mode cries vintage! Based on a Boogie Mark 1, this is the mode that put us on the map. Carlos Santana heard this mode in 1970 and freaked! Abraxas (his album) came out and boom!...Boogie was on the road to making history. After all these years the Mark 1 is still a much sought after sound. In fact...so much that we had to re-issue it in 1990. Lead 1 Green is a faithful reproduction of Input 1 on a Mark 1. It cries the blues with its fat, warmth and roundness. Sweet, sparkling highs reminiscent of the Black face era are abundant in this gem of a mode. Green doesn't oversaturate your guitar's inherent tone, making it the choice for most blues or dirty rhythm work. It cleans up extremely well at low gain settings by simply rolling back on your instrument's volume knob. Roots players feel more at home with this circuit than the full blown modes that follow, cherishing the way Green can purr like a big kitty when set right. Here are some hints that will help you get the most out of this sensitive and most dynamic of the Lead Modes.

1. For those of you that are familiar with the Mark 1's Input 1, it should come as no surprise that the two volume or gain controls work in series. In other words, what ever you do to the VOLUME 2 control drastically affects the sound. In TriAxis, Lead 1 Green and Yellow work identically to the Mark 1's layout, though the Front Panel placement of the controls is essentially backwards. In Lead 1 Green the first control in the chain is actually LEAD 1 DRIVE. The second is the GAIN control. This was necessary for the inclusion of Lead 2. In the Mark 1 circuit the two controls decide in what stage and how much gain is produced. Mark 1 players know that the warmest fattest lead sounds are produced by having VOLUME 2 (Gain on TriAxis) set equal to - or higher than - VOLUME 1 (LEAD 1 DRIVE on TriAxis). This blend saturates the note more evenly and tends to bury any fret buzz or intermodulations. If you want more highs in the mix and want to reduce the saturation...reduce the Gain and leave the LEAD 1 DRIVE set slightly higher. Basically it's like this: Gain set higher than LEAD 1 DRIVE produces a more blended saturated sound. LEAD 1 DRIVE set higher than Gain, produces a brighter, slightly more hollow character. Dial to taste.

2. The TREBLE and MIDDLE controls are both very active gain controls in Lead 1 Green. Their respective regions of frequencies can be brought out while adding substantial gain. If you are looking for the maximum gain in a certain preset in this mode, try experimenting with these two as well as the GAIN and LEAD 1 DRIVE controls. They can deliver a type of gain in a certain place that you might not otherwise find. Setting the MIDDLE control to **10** and reducing or turning the and reducing or turning the Treble and Bass to **0.0** is also an interesting lead sound in this mode. It's probably the setting with the most focused saturation, although some players with darker sounding instruments might find this setting to be lacking some pick attack. Try dialing in some more Presence should you find this to be the case.

Again, experiment....Lead 1 Green is probably the most versatile of all the LEAD Modes found aboard TriAxis. It works great for all styles where complete saturation is not essential. You will probably come to appreciate all the countless hours we spent R&Ding

LEAD MODES: (Continued)

GREEN: (Continued) this mode, making sure it had the softest, sweetest clip possible from a group of tubes. We put it up against the tastiest vintage snakeskinned Mark I's, Deluxes, Super's, JTM 45's and any other vintage classic we could borrow or rent and found that Green was in most cases the better sounding of the bunch and in all cases a better feeling on the strings was totally evident. because it is called a Lead mode, don't be afraid to dial up some low gain threshold of distortion sounds in Lead 1 Green. It shines at these settings as well. It's no wonder this mode has become one of the standards by which we judge other circuits...it is inherently sooo right.

LD1 YELLOW:

The basic architecture of this mode is identical to Lead 1 Green so all the same qualities, attributes, and tips apply. However, several different parts switch in when Lead 1 Yellow is selected that give it a personality all its' own.

First, more gain is added in an early cathode stage which tightens and focuses the sound. This produces a more saturated quality that greatly enhances the sustain factor of a given note. Then, a boost in the medium midrange through medium treble regions is added. This changes the envelope of the attack making it less bright and more bold, and you could say, beefy. At the same time, these two working in conjunction with each other, give this mode a smoother more liquid sound when notes are held out. This is especially true when the Treble and Presence are set low, say **5.0** or below. Basically the overall voice of Lead 1 Yellow is darker, warmer and smoother than Lead1 Green. "Fusion" players love this mode because single note lines sing and soar. The tone is so wide it needs very little processing to produce a lead voice unrivaled in its authority. Yellow works great for more ominous rock solo tones as well-and if you really want to get out there, try setting the GAIN control and LEAD 1 DRIVE control high say **8.0** and dial in the Dynamic Voice. Some really crazy and truly huge crunch tones are produced in this way. Be careful with the Bass in this mode though. It is easy to make the sound tubby or flatulent with the BASS control set above **4.5** in a high Gain / Drive configuration in Lead 1 Yellow. The upper range of settings on the BASS control are specifically tuned and adjusted for use with Lead 1 Red. More on this later.

LD1 RED:

Insane, Over the top, Out of control, Straight up sick, Truly Heinous Gain. This is Lead 1 Red Its architecture is very different from all the other circuits in TriAxis. In fact, this mode gets its own complete circuit board. That's right! When you choose Red you are actually sending the whole audio signal up to a completely separate circuit board, that rides piggyback atop the mother audio board, with enough parts to be another stand alone pre-amp and then some. Red flips the pre-tone control circuit upside down and inside out to produce the biggest crunch we've ever produced in a pre-amp. This basic design was inspired by the Vintage / Orange channel of our Dual Rectifier Solo Head. It begins there...taking the basic gain structure, tone control values and shape. We then super tweaked it to respond better into many different types of power sections. (We still think it's at its' best when used with our Simul Class Stereo 290 Power amp.)

This mode is by far the most aggressive of the 6 lead modes. It has more bottom end than most players know what to do with. The top end is very attack oriented and should be dialed in with discretion. The MIDDLE control, as in the Dual Recto, is extremely powerful. At low settings, the mode is very sweet, scooped and almost liquid. As the Mid is increased you will hear the fury of Red kick in. With the Mid way up you'll be able to scare people with Red's agro-tude. This is definately the hyper-modified head crusher. This mode is crunch...redefined. Here are some hints to help you get the most out of Lead 1 Red.

1. The GAIN Control in this type of circuit is traditionally a stage that gets a discrete resistor value in most heads. In TriAxis, due to it being essential to the other modes operation, you have a "variable resistor" so to speak. This is not a case where "more is better". While this GAIN control can be dialed to achieve gain amounts previously unavailable in this style of circuit, it is not necessarily the key to the best tone or response. Similar circuits have a hard wired resistor here for good reason. This spot in the circuit is very sensitive and in fact, determines much about the characteristic of the whole mode or "amp". The attack is most affected by this value and if too much gain is dialed in here...no amount of tweaking later in the circuit can put the "attack back" in the right place. So...It is very crucial to set this control in the right place. A setting of **6.0** on the GAIN control chooses the discrete resistor

LEAD MODES: (Continued)

LD1 RED:

value most often found in this style of circuit. In fact it is the same value as that of the Recto's Vintage / Orange channel. Notice that the factory preset 01 uses this setting of the GAIN control. Countless hours of comparison testing, tweaking and re-testing enabled us to locate this value at that Gain setting location. Use the LEAD 1 DRIVE control as your main "GAIN" control and you'll probably get the most tone for the least amount of time spent tweaking...after all, isn't that the idea?

2. The BASS Control aboard TriAxis is actually schizophrenic. It performs dual functions depending on whether you are using Lead 1 Red or any of the other 7 modes. From **5.5** down to **0.0** the BASS control uses resistor values that coincide with those found in most other amplifiers. From **6.5** on up to **10** we have endowed this control with a whole set of values specifically designed to enhance the bass response of Lead 1 Red. This dual personality control works extremely well because in all seven of the other modes, bass should be used sparingly to avoid unwanted flub and flatulation. Because of the inherent warmth produced by our relentless toning of these 7 modes, it is generally not necessary or desirable to set the BASS control much above **5.0** when using these 7 modes. In Lead 1 Red however, massive amounts of Bass may be pumped through the tone controls before any tubbiness occurs. This enables the end all crunch to have a Godzilla size chunk on the two low strings and that resonant "hollow log" vibe on the two mid strings. This different range of bass resistances does nothing detrimental to the other seven modes because so rarely would the BASS control be set at **6.5** through **10** in these modes. It puts Lead 1 Red in the untouchable class though, now being capable of amounts of tight bottom simply not found in other circuits.

3. The PRESENCE Control is very late in the circuit to have much effect at all on the timbre of Lead 1 Red. It is virtually undetectable except for extremely low and high settings. This is normal and no cause for alarm. We have found the TREBLE and MIDDLE controls offer plenty of shaping. The PRESENCE control in circuits of similar nature to Lead 1 Red are always found in the power amp section of the amplifier. Use the PRESENCE control to fine tune the pick attack / noise of Lead 1 Red and an actual shaping tool in the other 7 modes that it was designed to enhance. Use the presence controls found on your power amp to add more attack and harmonics to Lead 1 Red.

As you can see Lead 1 is a group of three widely versatile choices in lead sounds. Truly it's like having three separate amplifiers that use pre-tone control circuitry to achieve their voice. Each has its' own forte, personality and voice. Being a TriAxis owner, we know you'll find a use and a home for each of these classic circuits.

LD2

In this group of three modes we pay tribute to a different type of circuit altogether. The Lead 2 group of modes use architecture that we refer to as a post-tone control gain circuit. In 1980 Mesa revolutionized guitar amplification by introducing the first dual mode footswitching amplifier, the Mark II. This patented "rear end" lead circuit changed the way we think about guitar amps by ushering in the era of amps with a dedicated lead sound that could be switched to without touching the knobs or interrupting the clean mode or channel. Fourteen years and several generations later, TriAxis obviously brings this idea to its' fruition. To this day this revolutionary circuit remains the sonic backbone of our amplifier design concept. With heralded veterans of this design the Mark II-B, II-C+, Mark III, and Mark IV...the rear-end lead legacy lives on...stronger than ever! It is in Lead 2 that we celebrate these classic lead sounds and offer up a couple variations on the theme. Again, these are the more articulate and focused lead sounds. Some players that grew up playing non-Mesa amplifiers may find these dry and stiff at first, but have patience, and you will come to enjoy these modes. There is simply less "slop around the note" in these modes making them a sort of magnifying glass for inaccurate playing. We like to think of these modes as having the built in qualities of a good teacher. What you put in is what you get out. However, should you spend much time at all plugged into these modes, we guarantee you will become a master of nuance. These modes are sure to make you a better player if you give them the chance. Though at times they are more revealing, you will find that they hold up better in a mix and are much more behaved on a stage full of live microphones. Usually they are also much better for any kind of rhythmic high gain playing where you need urgent attack and tight cut-off points. Use the DYNAMIC VOICE to enhance the lows and highs and you will find Lead 2 to easily have the hugeness of lows, but with an added tightness and articulation that simply can't be obtained in Lead 1. There are many times when these frequencies work much better in the studio or in a larger live band situation. They cut through and stay focused much longer allowing your part to be heard and yet not get in the way of other parts. In other words, Lead 2 sits nicely in a mix. So with this overview of this super cool group of lead circuits, lets get mode specific.

LEAD MODES: (Continued)

LD2 GREEN:

Unlike the Lead 1 modes, all three Lead 2 modes are actually very similar in their respective amounts of gain. In Lead 2, the gain is enhanced differently in each of the three modes by focused boosting of frequencies. This enables the player to choose a particular mode for specific ranges of the instrument or simply for a given song or a certain part therein.

Lead 2, as we said, was derived from the basic MK II style design, so we thought it fitting to dedicate two of the three modes to previously raved over classic Boogie amplifiers, the MK IV and the Mark II C+. These are represented in the Green and Yellow modes respectively. The Green circuit is taken directly from a Mark IV Lead channel. Green is focused gain. It uses the concept of the Mark IV's Mid Gain, a feature added in 1989, to enhance the attack and to lower the medium midrange "meat" of the sound. By enhancing this part of the spectrum a rich, bold, yet singing quality is produced. Thick would be the best way to describe its' character, while Punchy would accurately describe its' attack. It does saturate the note fairly completely, especially at high gain settings, but the attack envelope is so right at lower gain settings, that roots players usually love this Green mode. Its' thicker midrange punch really helps melody lines played on the high strings, particularly high on the neck. With higher Gain and Drive settings the high notes soar and sing, yet don't get too soupy to be heard in a big mix. Green is especially helpful in getting rid of unwanted fret buzz or other annoying idiosyncracies of an instrument that may be set up wrong. It tends to cover up buzz leaving just the note with greater purity. This is most apparent when a weak single coil is used for soloing. Lead 2 Green is the cure for this dilemma. It adds the needed frequencies and its' gain is the steroid habit these weaklings need to deliver a bold lead voice. Green is the mode of choice anytime you need to deliver a statement and you don't have the luxury of several tracks. It is single note authority at its' expressive best.

NOTE: As we mentioned earlier in the Lead 1 Red description, the setting of the GAIN control in all modes is crucial to achieving the sound you are looking for. Each mode has its' magical optimum setting for this control and we can only give you our view and a few factory settings to demonstrate our thinking on this. Ultimately, it may vary for each mode, guitar, player, and environment and it's on you to discover what fits your situation. In Lead 2 we have come to a simple "rule of thumb" you might say as to where we prefer the GAIN control to achieve the best blend of attack and quality of tone. Try this first, then deviate from there in all three Lead 2 modes. We like to see the Gain at either **7.0** or **7.5** (depending on your instruments output) for lower gain blues sounds or very articulate medium gain solo sounds. When higher gain or straight up radical rock sounds are in demand, a GAIN control setting of **7.5** or **8.0** again depending on pickup output) should be more than enough.

With higher than recommended Gain settings a flubby, indistinct attack will occur that the BASS control will have difficulty in removing. Lower than optimum Gain settings will produce excessive high harmonic content, thin the notes out and even add a buzzy quality to the sound. Like we said...Try these first. Check the factory settings, as they were created to demonstrate what a balanced tone would be for each mode. If you find these lacking, then by all means...EXPLORE!

LD2 YELLOW:

This is Boogie. This mode is the sound that started the craze that became what is slanged as the "California" sound or the "L.A." guitar tone. Lukather, Landau, Keaggy, Lynch, Gillis, Prince, and Metallica catapulted this sound into the forefront of hitmaking guitar sounds throughout the eighties. Metallica continues to search high and low for pristine C+ Heads to add to their amplifier collection - deeming them essential for recording, but you don't have to! The Yellow mode is the reincarnation of the fabled Mark II-C+ Lead mode. Its blend of bold punch and evenly stacked liquid harmonics produces a lead voice that transforms any player who spends enough time to let it...into a virtuoso of feeling, soul, and statement. It growls with ferocity in the low range, staying tight and urgent. A "thunk and chirp" is experienced traveling through the midrange frequencies. Then suddely, as if someone redialed for the highs, an explosive, yet liquid, top end comes ripping out as you squeeze every luscious note out of the treble strings. Sound almost sexual? Primal? Well many a II-C+ junkie...(there are roughly 4500 of them,) will confess...broken hearts are often cured from a couple weeks rocking with a C+. Seriously, the blend of this mode is so amazing that most players are finding new great sounds 2 and 3 years after their first ear to ear grin.

While the Yellow mode excels at medium to high gain settings because of these nicely stacked harmonics, don't underestimate Yellow for the rootsier low gain sounds. Sure as you can make high gain sounds chirp and squeal on command, low gain

LEAD MODES: *(Continued)*

LD2 YELLOW:

sounds possess the sting essential to tortured blues soloing. Yellow doesn't get as saturated as the Green mode in Lead 2 making it the choice for skinnier, more cutting and clean blues lines. The PRESENCE control works extremely well in the Yellow mode dialing in and out the harmonic content of a given preset. At low PRESENCE and TREBLE control settings the sound is more horn or voice like. With higher settings of the Presence and possibly Treble the character becomes much more searing and harmonic. Keep this in mind while tweaking!

So whether it's low gain preaching you're doing, elastic fusion you're crafting, tracking the huge grind or showcasing your smoldering single note machine...Lead 2 Yellow has the blend, subtle, but magic - that you'll need to shine. You will probably find this to be one of TriAxis' most valuable buried treasures.

HINT: The DYNAMIC VOICE Control was the one space programmable way to achieve the ever popular 5 band graphic equalizer so valued on Boogie combos and heads. This circuit works extremely well in shaping the post-tone control lead circuit that is Lead 2. Though it is shipped with a preset curve that boosts lows and highs while reducing midrange subtly, it is extremely well suited to the stronger mid range e.q. inherent in these three modes. Almost as if it were custom made for these modes, you'll find each increment delivers subtle, usable and musical enhancements to the existing modes' personality. Experiment completely and use this control as a customizer for your sounds. Should you find this preset curve unusable for your music after thorough experimentation, don't get upset...there is an answer! See the DYNAMIC VOICE outline in the CONTROLS section of this manual.

LD2 RED:

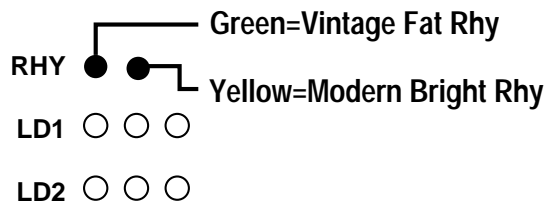
This mode is made for shred. In fact, it might be better named Lead 2 Shred. It is much more aggressive in the top end than its' yellow counterpart, boasting much enhanced upper harmonics. Though it shares almost identical basic architecture...additional parts switch in when Red is chosen that give this once balanced, well behaved mode a downright ugly attitude. Harmonics are boosted and a bit of lower treble is dipped to give this Red a sizzling edge that is unique to this mode only. The harmonic edge not only benefits high notes...It does wonders for the grinding "Z's" needed for bodacious low end crunch. This enhances the growl on the low strings as well as it adds cut and sizzle to the higher strings. The frequencies enhanced by this circuit are slightly higher than those found in conventional power section PRESENCE controls. They are also higher, more rebellious and defined than those adjusted by the action of TriAxis' PRESENCE control. These highs have that out-of-control-vibe to them, that falling-apart-yet-loosely-held-together quality that is often associated with modified early British heads using Euro-style EL34 power tubes for their ponies. This elusive sound affects the feel of the strings and players accustomed to such sounds have difficulty feeling at home on an amp that doesn't deliver these loose highs.

To be a complete array of guitar sounds, TriAxis had to address these classic heads. Lead 2 Red possesses most of, if not all the qualities we mentioned. If a player still finds Red to be lacking in this history making sound, there is always the DYNAMIC VOICE control to blend in some lower lows and higher highs, while dipping the mids and jacking the bottom simultaneously. If this still isn't exactly what turns you on...well you could go nuts, and use two TriAxis and a Mesa High Gain Amplifier Switch. (see rear of this manual) Use one TriAxis in Lead 2 Red and another TriAxis in Lead 1 Red, then blend the two by turning them both on at once! CRAZY? Don't laugh...you'd be surprised at the number of guys using two TriAxis' or a TriAxis and another head simultaneously. However, this gets pretty expensive and we find that mastering one TriAxis is enough of a challenge for anybody. Regardless, Lead 2 Red is perfect for any part where you need focus and urgency, but want a little bit of that edge for attitude. The same hints and suggestions apply to the Red in Lead 2 that we discussed for Green and Yellow. Work with the GAIN control carefully...check the factory preset that utilizes Lead 2 Red.

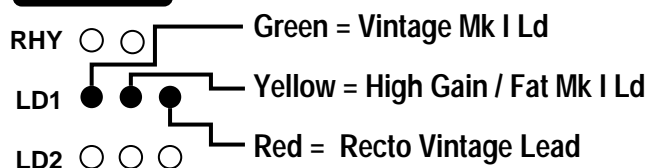
MODES OVERVIEW

Now that you've read about each mode in depth, you should be more familiar with them and able to choose the appropriate one for your particular style and sound of music. For quick referencing, the names of the modes should be of help to you.

RHYTHM



LEAD 1



LEAD 2



REMEMBER... these eight modes are each in and of themselves, complete pre-amplifiers. Each with their own personalities, voices and forte. It's up to you to decide how to best interface them with your sound and style of music. Hopefully by reading each description thoroughly and then experimenting, you will find every one a valuable addition to your musical soundscape. Don't let the names we've given them limit you to using them only as they are listed. By all means...solo in the rhythm modes...groove rhythm in the lead modes, these are mere reference titles. Each Mode was designed to be a versatile amplifier, capable of many sounds and feels. They should provide you with enough tone for years of exploration and fulfilling discovery. If you need additional information after reading this manual, feel free to call us and we will be happy to assist you in any way we can.

REST AREA

TRIAxis™

VERSION 2.0

CONTINUOUS CONTROL SOFTWARE

Your TriAxis now has the Version 2.0 software installed in its' processor. This software incorporates many improvements, both visible and invisible to the user. Among these, the most exciting is the ability to utilize Midi Continuous Control Messages. For those of you not familiar with Midi keyboards or more recent Midi effects processors, this gives you the ability to connect a pedal to a conversion device and control any, or all, of the TriAxis parameters simultaneously in real time!

Imagine! You can take a gorgeous, sparkling clean preset...gas the pedal-and suddenly you've got the singing "vintage amp cranked" solo sound without changing modes or presets. Likewise, you can achieve the opposite. Take your favorite lead sound and lower the Gain, drop the Mids, increase the PRESENCE and MASTER and now you have a great pushed rhythm sound. The possibilities are endless, as any or all controls can be programmed to respond in either up or down directions with one pedal.

Since the TriAxis is an all tube audio device, we have done the control change software the only way possible to keep your tone intact. Instead of the VCA method, we have basically enabled you to "turn your knobs" (keys in this case) and gradually arrive at your desired setting. Using this method we not only preserve the tube audio in its' purest form, but all the settings along the way can sound great too! With creative programming each preset you craft can be not one, but many great sounds. Now that you've got the idea how this can greatly expand your guitar system...Let's get busy.

First you will need an expression pedal. This can be a simple analog volume pedal. Next, you will need to convert this analog audio volume pedal into a voltage control pedal. This can be achieved by several means. Many midi foot controllers on the market today have such devices built right in and provide one and even two 1/4"jacks for just such applications. If you already own a foot controller that does not provide these jacks, don't worry, you aren't the only one. In fact, the Mesa/Boogie Abacus does not, as it was designed before there was control change software developed for Midi gear. There is a simple solution to this minor inconvenience. A company called Anatek makes the perfect device for us neanderthal Idiots called the Pocket Pedal ™. This little 3"x2"x1" box is made of plastic and can easily be velcroed to the inside of even the smallest racks. The Pocket Pedal derives its power from any effect unit via the Midi "Thru" or "Out" Jacks and provides a 1/4" pedal input as well as a 1/4" switch input. It makes using the control change a breeze and is a relatively inexpensive way to achieve the conversion.

NOTE: Make sure you get the actual Pocket Pedal! Pocket "Merge", Pocket "Switch" or any of the other Anatek "Pocket Family" devices will not provide the conversion you need.

Now that we have this taken care of, the next thing is to go over our control change lingo...so that there won't be any misunderstandings as to how to actually write a PRESET that will respond to these messages. Lets begin with an explanation of the terminology that we will be using:

1. BASE PRESET: This is a memory location in RAM (Random Access Memory) that contains all your custom settings, including the control change settings. There are 90 such locations in your TriAxis and these are "Home Base" when thinking about using control change. In other words, you start with your original PRESET and say..."When I accelerate on the pedal I want this and this and that, etc., to happen." When the pedal is fully backed off or " decelerated " you will be at the "BASE" or original PRESET. This is your "BASE" PRESET.

2. PARAMETERS: These are your Front Panel controls: GAIN, TREBLE , MIDDLE, BASS, LEAD 1 DRIVE , LEAD 2 DRIVE MASTER, PRESENCE and DYNAMIC VOICE.

3. MODULATION: This is the action that is taking place as you increase or decrease the pedal. You are modulating the parameters of a particular PRESET.

CONTINUOUS CONTROL SOFTWARE: (Lingo Continued)

4. CONTROLLERS: These are “Channels” which information travels upon in the Midi domain. The Midi Specification provides 120 such channels on which information can be sent and received. Some are permanently set for specific functions, others you can use for whatever you decide upon. Each TriAxis parameter can be set to receive on any of these 120 control channels. However, only one controller per parameter may be assigned per PRESET. All nine parameters can be assigned to one controller and controlled by one pedal, this is the most common application. Each of the nine parameters could be assigned their own controller number and dedicated pedal! CRAZY? However, the possibility of ultimate control on-the-fly is here. Granted, most players would find this a little extreme, but a dedicated pedal for say, MASTER, LEAD DRIVE and DYNAMIC VOICE, might make for some interesting “real time” soloing possibilities. Regardless of whether you’re a keep-it-simple one-pedal guy or a techno fiend multi-pedal-maniac...this software will support your habit. Most guitarists will find one or two pedals sufficient for ultimate expression.

NOTE: If you are going to use several expression pedals assigned to several controllers, you will need to have as many conversion devices, i.e.several “Pocket Pedals” chained together and set to transmit on the proper controller.

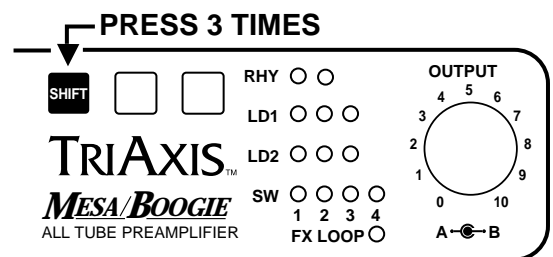
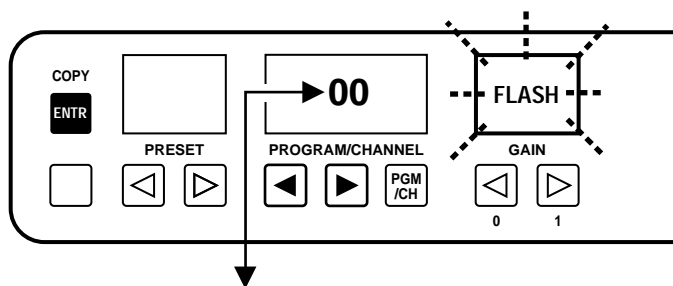
5. VALUE: After deciding what parameters you wish to modulate and assigning them controller numbers, you will need to “tell them what to do.” VALUE is simply the amount of change in either a positive or negative direction. A “positive” or “+” VALUE on the TriAxis is “turning up” the control. A “negative” or “-” VALUE is “turning down” the control. This is programmed by the ◀ ▶ keys located under the PROGRAM/CHANNEL window.

6. SUB-ROUTINE: This is a “Mode” or operational “Loop” in the software that is triggered by a Front Panel keystroke. Two such sub-routines would be the “Controller/Assign” sub-routine and “Value” sub-routine. There are other sub-routines used for other functions in the TriAxis such as the COPY function or the Numeric Keypad function, but for the control change programming you need only deal with the “Controller Assign” and “Value” sub-routines.

Now that we’re speaking the same language, here is a “STEP BY STEP” programming guide. Start with a PRESET that you like and think of somewhere that you would want to go with it. We will outline factory PRESET “4” and demonstrate one way that Control Change software may be used in a minute, but for now here is the sequence of keystrokes to put you in the Controller Assign Loop.

CONTROLLER ASSIGN SUB-ROUTINE

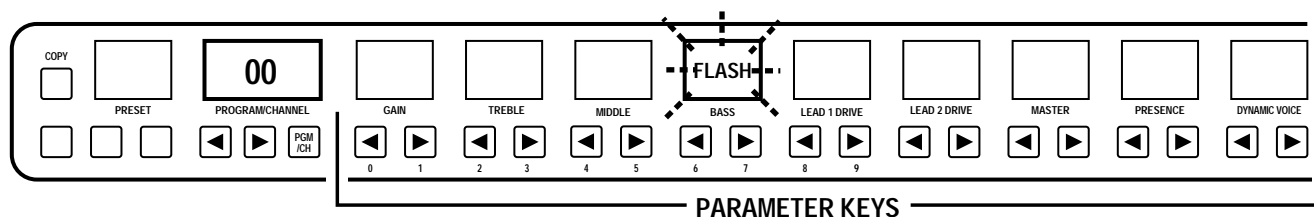
STEP 1. Press the **SHIFT** key three times. Upon the third keystroke, the “PROGRAM/CHANNEL” window will show **0.0** and the GAIN parameter will start flashing. You are now in the Controller Assign subroutine. This is where you decide what parameters will respond to your pedal(s).



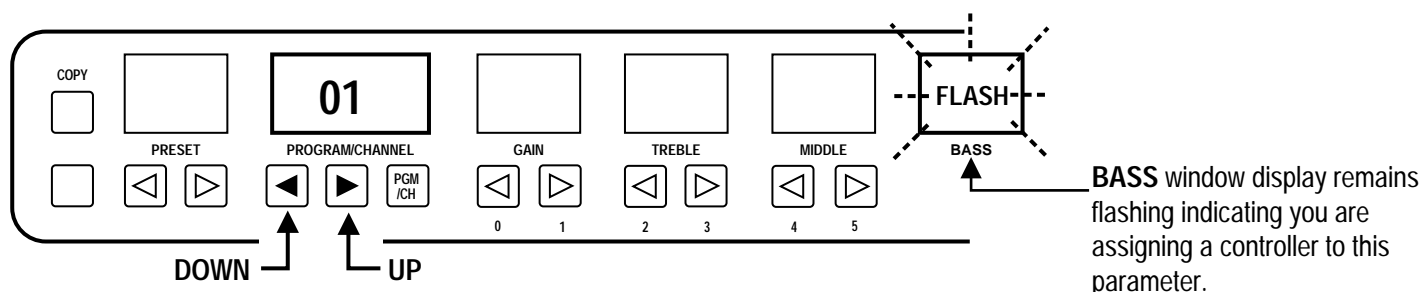
NOTE: These display values are normal for units that have never been programmed to receive continuous control messages. If someone has programmed a particular unit...this window might read other than **0.0**. This holds true for all parameters and is not a problem. Simply set the desired controller number and press the **ENTR** key one time to save your chosen controller number to that PRESET.

CONTROLLER ASSIGN SUB-ROUTINE *(continued)*

STEP 2 Choose a Parameter. Press any ◀ ▶ key under a parameter display and you will see the corresponding display window begin to flash. For now (because you are most likely dealing with a new unit that has never been programmed) all the parameters are set to Controller 00 (PROGRAM/CHANNEL window).

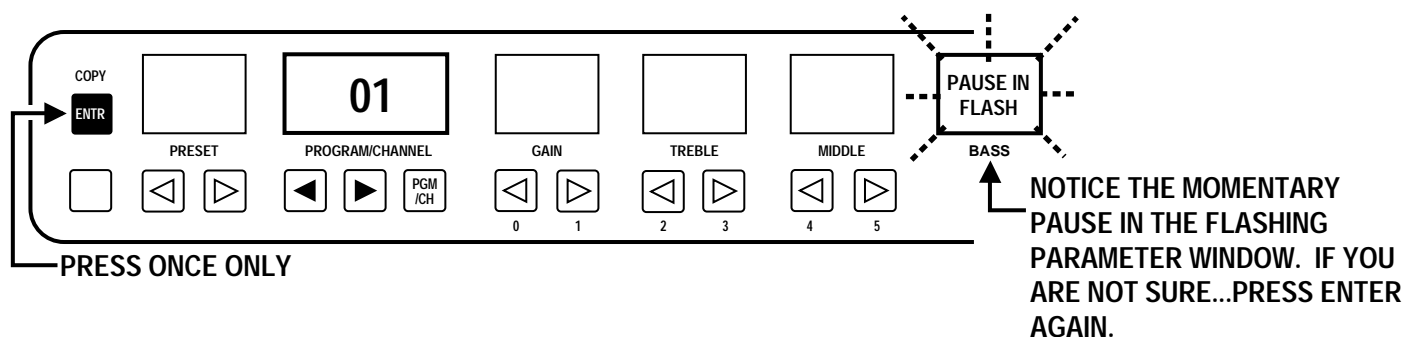


STEP 3 Choose a Controller. Press the ▶ key until the window displays the desired Controller number. Press the PROGRAM ◀ DECREMENT key if you go past the desired controller.



NOTE: Remember, the flashing window displays the setting of the parameter NOT the controller number. The Controller number is displayed only in the "PROGRAM/CHANNEL" window. Don't try to assign the controller to the flashing parameter window by using the ◀ ▶ keys below the parameter window...nothing will happen.

STEP 4 Press the **ENTR** key one time. The parameter flashing will stop flashing momentarily and the "Controller" number appearing in the "PROGRAM WINDOW" will be assigned to this flashing parameter in that preset only.



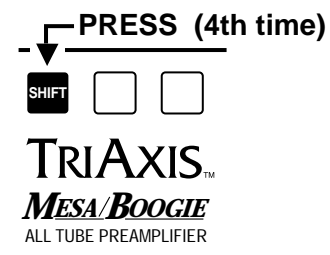
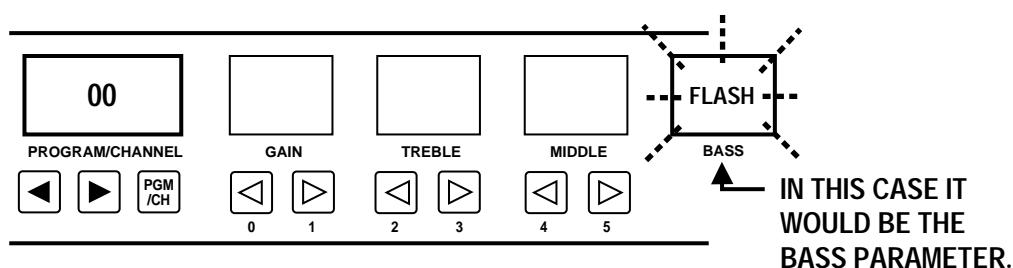
STEP 5 Repeat. Follow this same procedure for each parameter that you wish to modulate from Step 2 (do not press the **SHIFT** key at this time.) After each parameter/controller assignment, press the **ENTR** key. Make sure the parameter window stops flashing momentarily, indicating the assignment has been completed. With controllers assigned to all desired parameters, you are now ready to move to the Value subroutine.

IMPORTANT TO READ NOW! "RULES OF VALUES"

1. There are fifteen positions of change and it is possible to change in either a negative or positive direction.
2. "00" in the Program Window =No Change from your BASE Preset.
3. BASE! Your Preset is your BASE. If you don't connect your pedal, or you have the pedal calibrated so that "backed off" is "no control change message sent," the Preset will remain as it was before you assigned anything in the control change subroutines until you connect and use an expression pedal. This is your BASE Preset!
4. Anytime you assign a Value to a parameter the modulation will start at your BASE Preset and increase or decrease from there, the number of positions you assigned.
5. Positive "+" Values of change will display two digits in the Program Window **00** → **15**
6. Negative "-" Values of change will display three digits in the Program Window **00** → **115** with the leading digit "1" indicating negative "-" values of change.
7. Start the "Amount Count" at the next position on the parameter from the one in your BASE Preset. Don't count the position you're at currently. Example: Your "Gain Control" is set to **6.0** in your Preset. You want to go to **8.0** when you gas the pedal. Count this way: 6.5, 7.0, 7.5, 8.0. This modulation would require a Value of "4" in the positive direction. The Program Window would display **04**. If it was a Value of "04" in the negative direction the Program Window would display **104**.
8. REMEMBER THE HALF POSITIONS. The TriAxis has half position parameter values between **3.0** and **8.0**. Remember to count these when entering your modulation values.

VALUES OF CHANGE SUB-ROUTINE

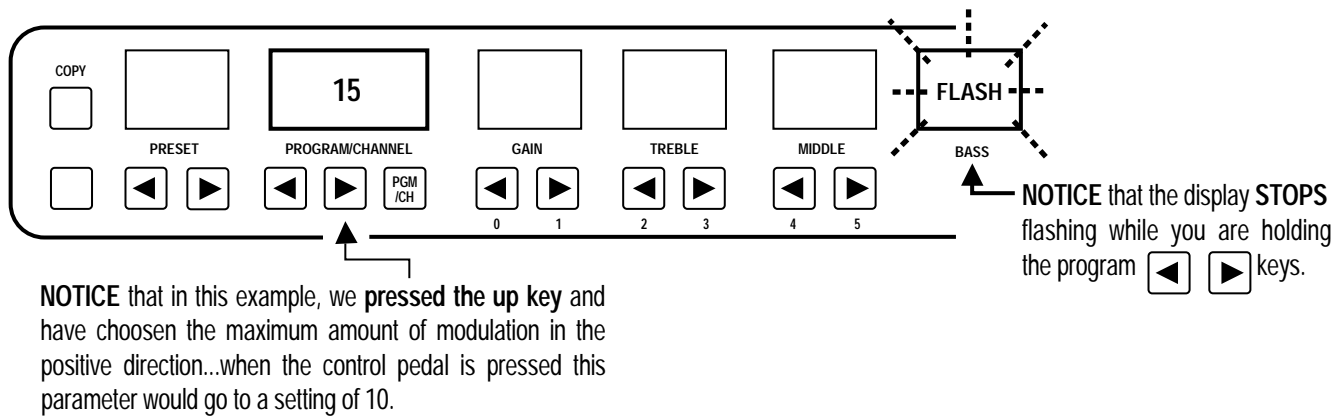
Press the **SHIFT** key again (fourth time). This last parameter you assigned a controller to will continue to flash. The PROGRAM WINDOW will display **00**. (Again, because the unit has probably never been assigned for control change reception.) You are now in the "Value Sub-routine". This is when you decide: 1. In which direction (Up, "Plus") or ("Down, "Minus") and 2. How much each parameter you have assigned a controller to will modulate (how many positions the parameter will modulate).



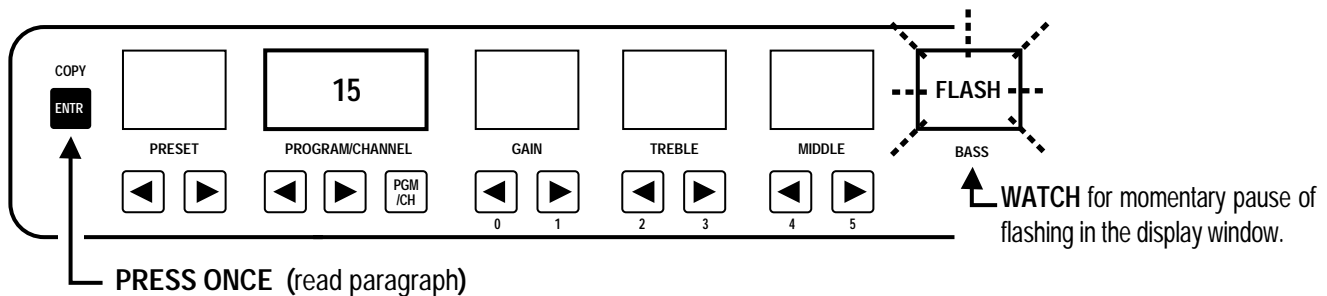
NOTE: Again, Negative values are indicated by a "1" in the leading digit place. For example, a value of negative 7 would be displayed as "107."

VALUES OF CHANGE: SUB-ROUTINE *(Continued)*

STEP 2. Assign a Value. Start with the first parameter that you assigned a controller to, “TRUST US ON THIS ONE”. Press one of the ◀ ▶ arrowed keys under this parameter. It will start to flash! Now Use the ◀ ▶ keys under the Program/Channel window to Decrease or Increase the parameter’s maximum modulated VALUE.

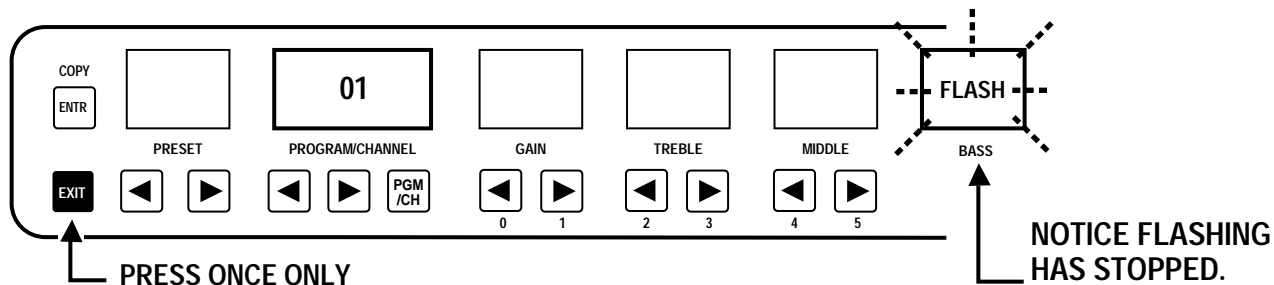


STEP 3. Press the **ENTR** key one time. The parameter you are assigning a VALUE to will stop flashing momentarily and the VALUE displayed in the PROGRAM WINDOW will be assigned to this flashing parameter in this PRESET only.



STEP 4. REPEAT: Do NOT press the **SHIFT** key again. Each time you assign a “VALUE” make sure that when you press the key the parameter display stops flashing momentarily. Always check this!!! Save yourself time. If you are unsure, simply press the **ENTR** key again.

STEP 5 EXIT and RETURN to normal “Parameter Routine”: After assigning all parameters that you wish to modulate with a Controller number, a VALUE, you are now ready to EXIT the VALUE SUB-ROUTINE and check your work. Press the **EXIT** key one time to Return to the normal Parameter routine. NOTICE FLASHING HAS STOPPED. With an expression pedal connected to a conversion device, you will now be able to modulate parameters on your first preset. Drive your rig!



NOTE: If the pedal works backwards, unplug it , back the pedal off and plug it back in...this recalibrates the conversion device and software interface.

Mindblowing! Just watching the display windows changing is worth all you coughed up for this baby, isn't it? What did you say ? you aren't getting anything cool...Let us help.

First...Make sure you read this whole section carefully and thoroughly.

Second...Here is an example of what you can do with the control change software. We'll take Factory Preset 04 and go from the sparkling clean sound that is the Base Preset and modulate almost everything to produce a low wattage, cranked vintage amp sound. Follow the 10-step procedure and assign the parameters as follows:

Before Modulation

Pedal Backed Off

Control Change Demo

04

PROGRAM / CHANNEL

◀ ▶ PGM CH

5.0

GAIN

◀ ▶ 0 1

5.0

TREBLE

◀ ▶ 2 3

3.0

MIDDLE

◀ ▶ 4 5

4.5

BASS

◀ ▶ 6 7

0.0

LEAD 1 DRIVE

◀ ▶ 8 9

0.0

LEAD 2 DRIVE

◀ ▶

5.0

MASTER

◀ ▶

7.0

PRESENCE

◀ ▶

0.0

DYNAMIC VOICE

◀ ▶

Controller Assign

Value Assign

Assign contoller to 01 in these parameter windows

Assign these Values to the following parameters

CONTROLLERS assigned to parameters

01

GAIN

08

01

TREBLE

05

01

MIDDLE

11

01

BASS

105

0.0

LEAD 1 DRIVE

0.0

0.0

LEAD 2 DRIVE

0.0

01

MASTER

106

01

PRESENCE

109

0.0

DYNAMIC VOICE

0.0

VALUES assigned to parameters

After Full Modulation Pedal Down

04

PROGRAM / CHANNEL

◀ ▶ PGM CH

10

GAIN

◀ ▶ 0 1

7.5

TREBLE

◀ ▶ 2 3

10

MIDDLE

◀ ▶ 4 5

1.0

BASS

◀ ▶ 6 7

0.0

LEAD 1 DRIVE

◀ ▶ 8 9

0.0

LEAD 2 DRIVE

◀ ▶

1.0

MASTER

◀ ▶

2.0

PRESENCE

◀ ▶

0.0

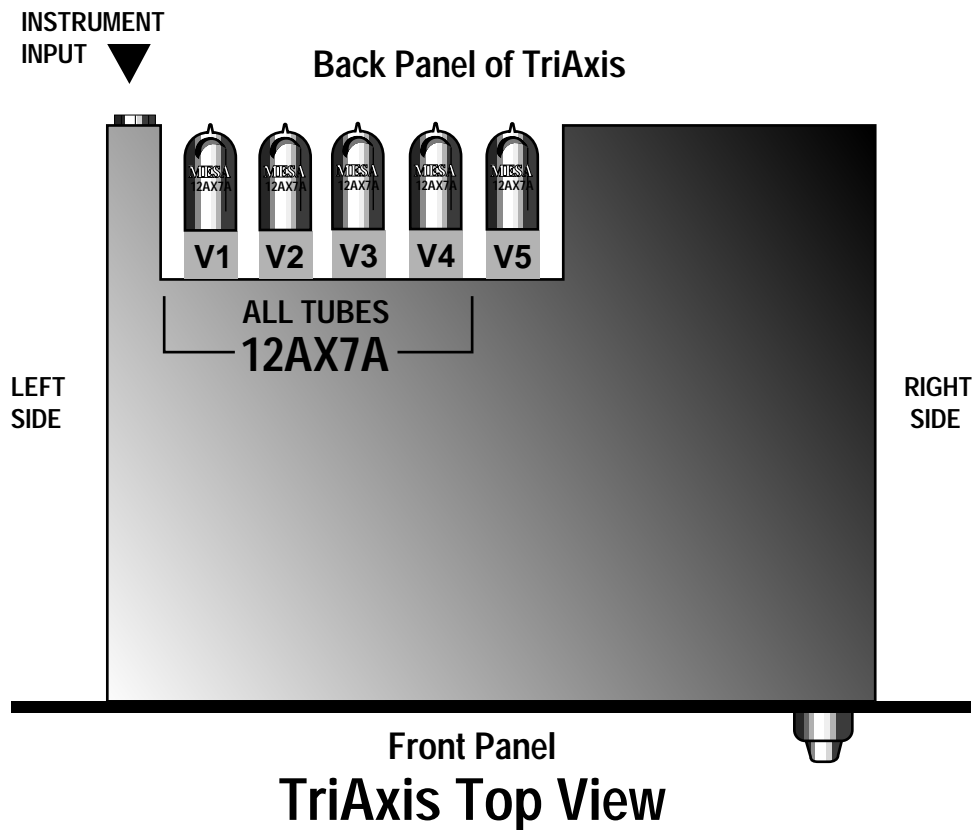
DYNAMIC VOICE

◀ ▶

The above clean sound (factory preset 04) after modulation

NOTE: If you did presets yet...upon your next power up you may lose your control change assignments.

TUBE LAYOUT and TASKS



TUBE ASSIGNMENT

V1 = LEAD 1 INPUT

V2 = INPUT FOR ALL OTHER MODES

V3 = LEAD AND RHYTHM MIXER

V4 = LEAD 2

V5 = EFFECTS RETURN STAGE

DIMENSIONS

WEIGHT: 9.5 pounds

HEIGHT: 1 rack unit

DEPTH: 14.3 inches

INPUT IMPEDANCE: 1 Mega-ohm

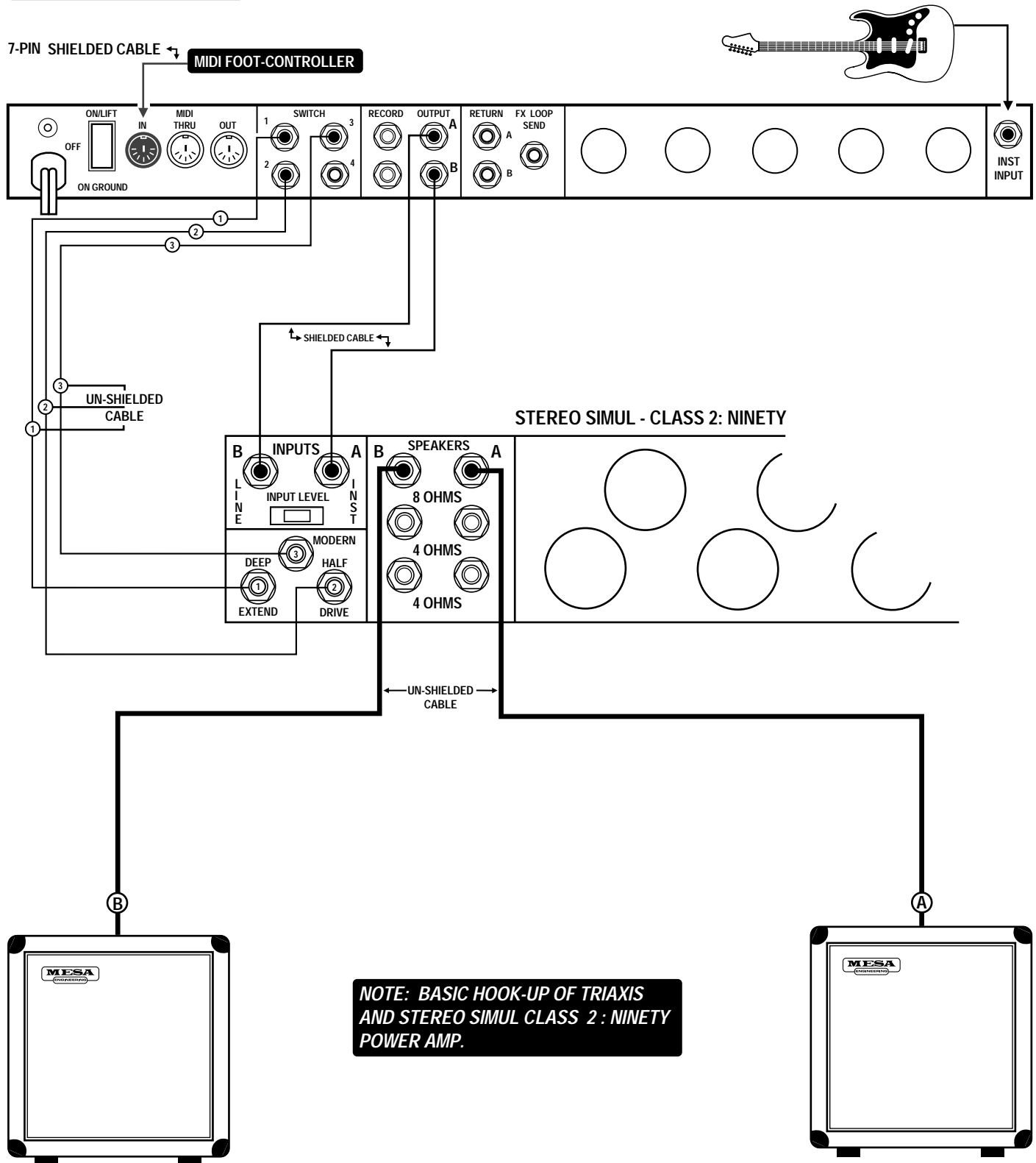
OUTPUT IMPEDANCE: 25 K Ohms at full Output Level settings

POWER REQUIREMENTS: (from AC mains) 30 watts

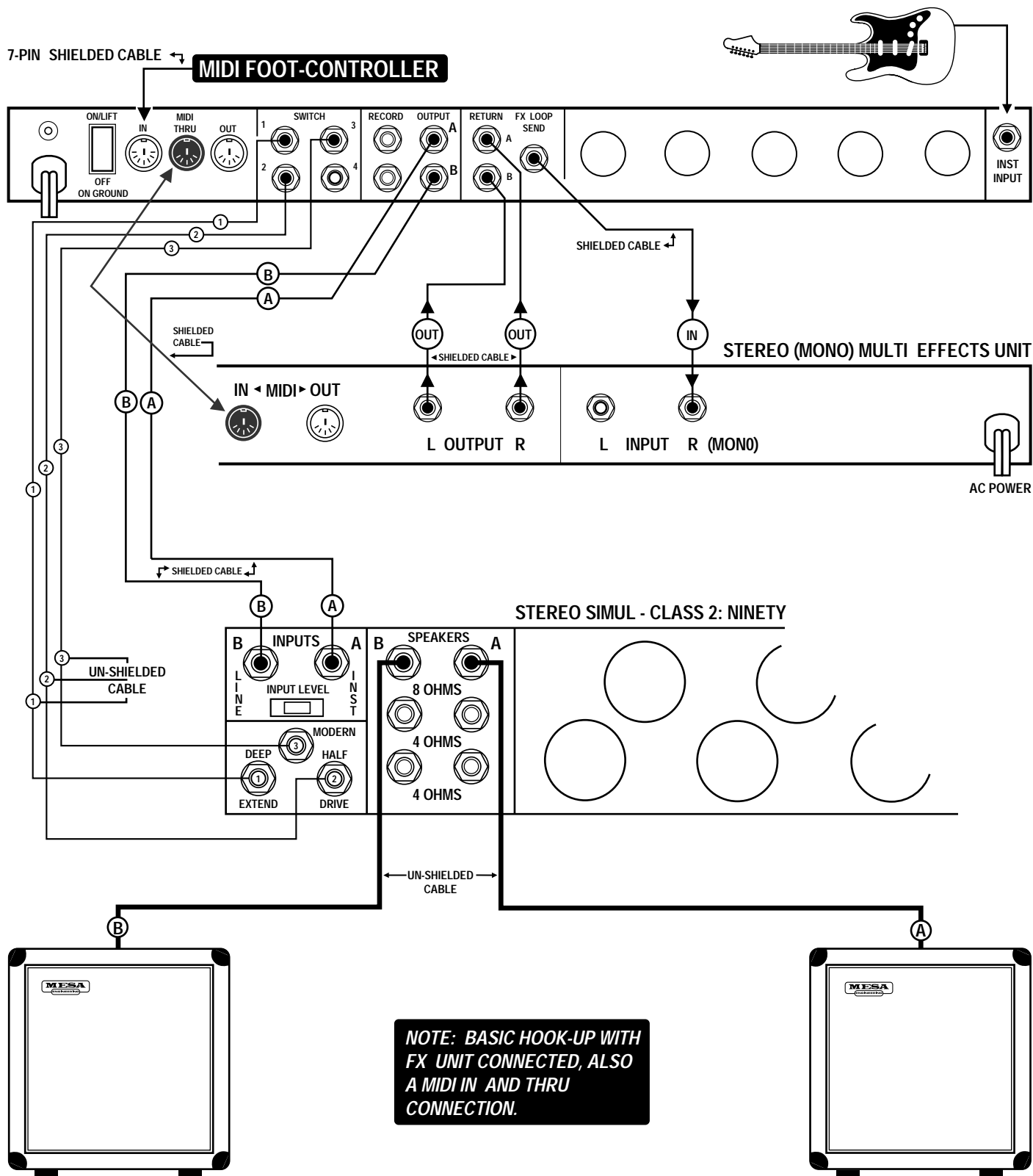
SPECIFICATIONS

TRIAxis™

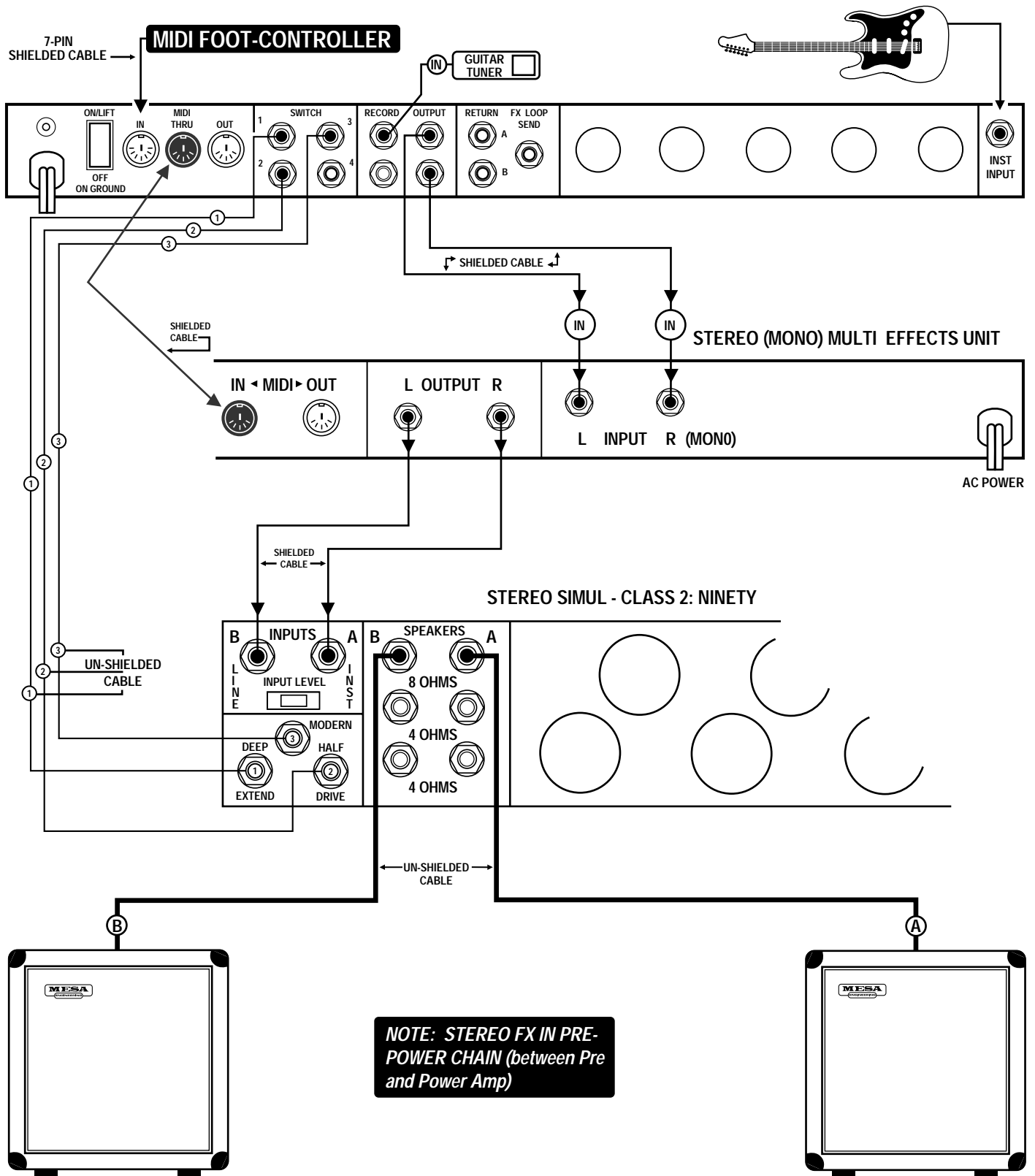
SUGGESTED WIRING #1



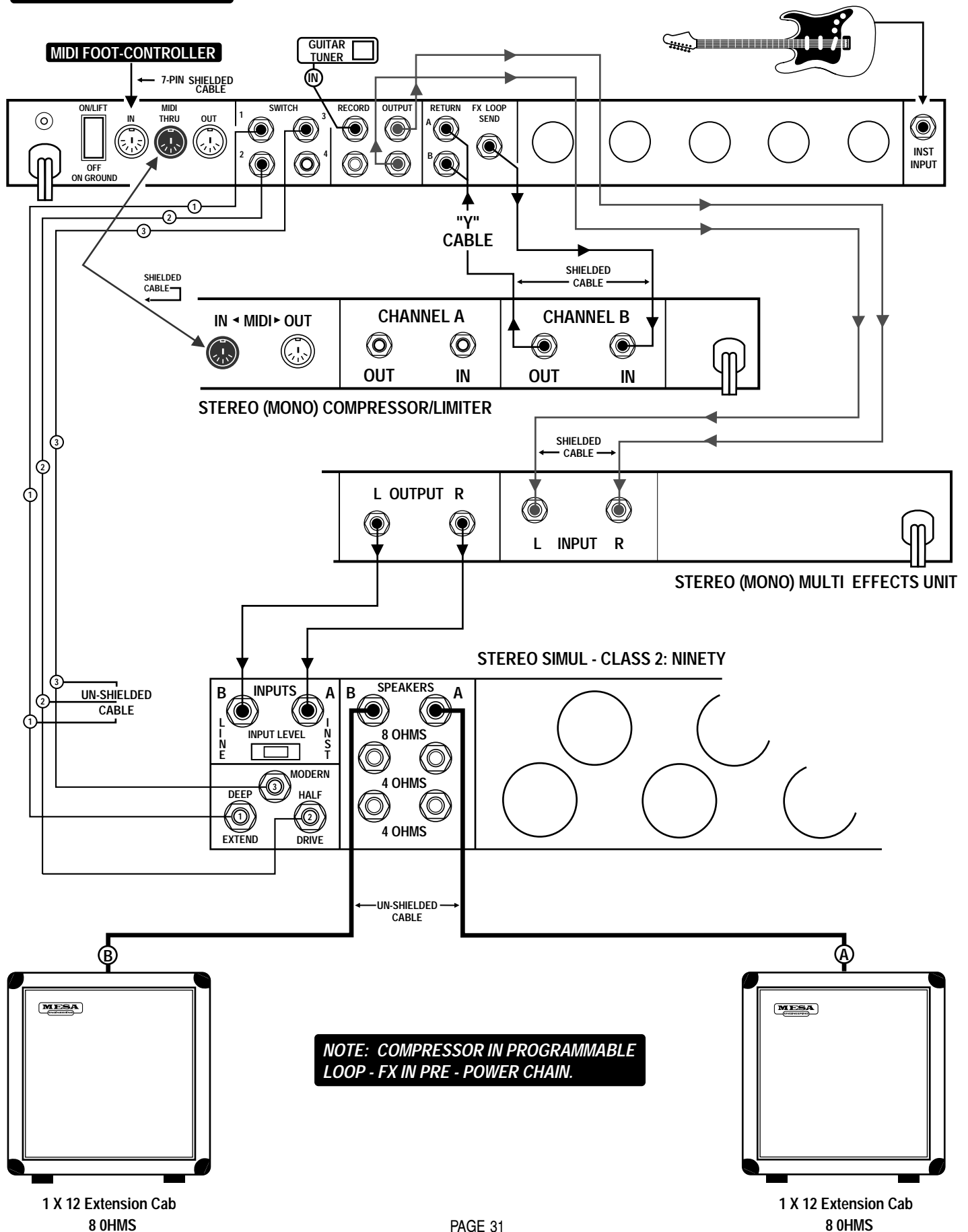
SUGGESTED WIRING #2



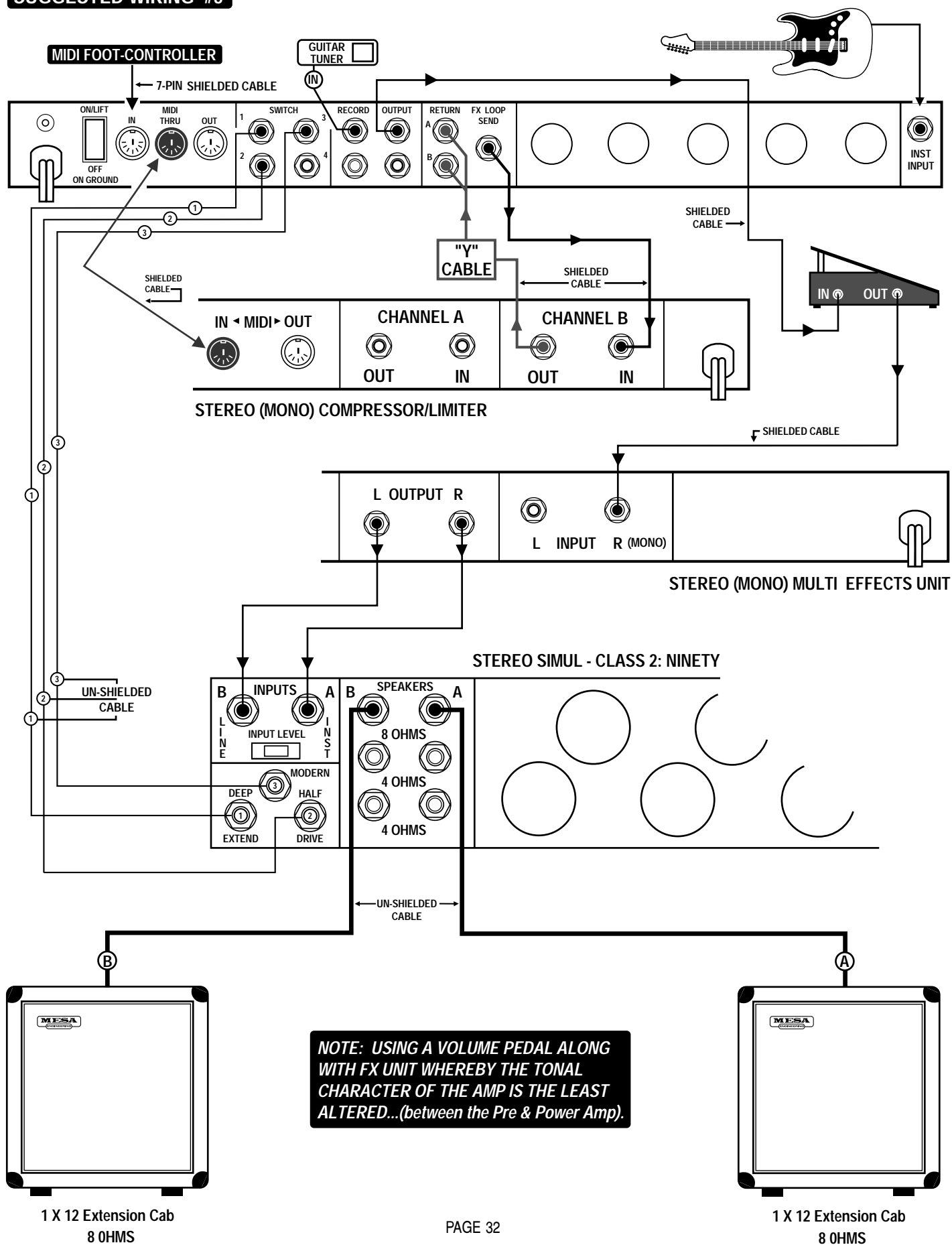
SUGGESTED WIRING #3



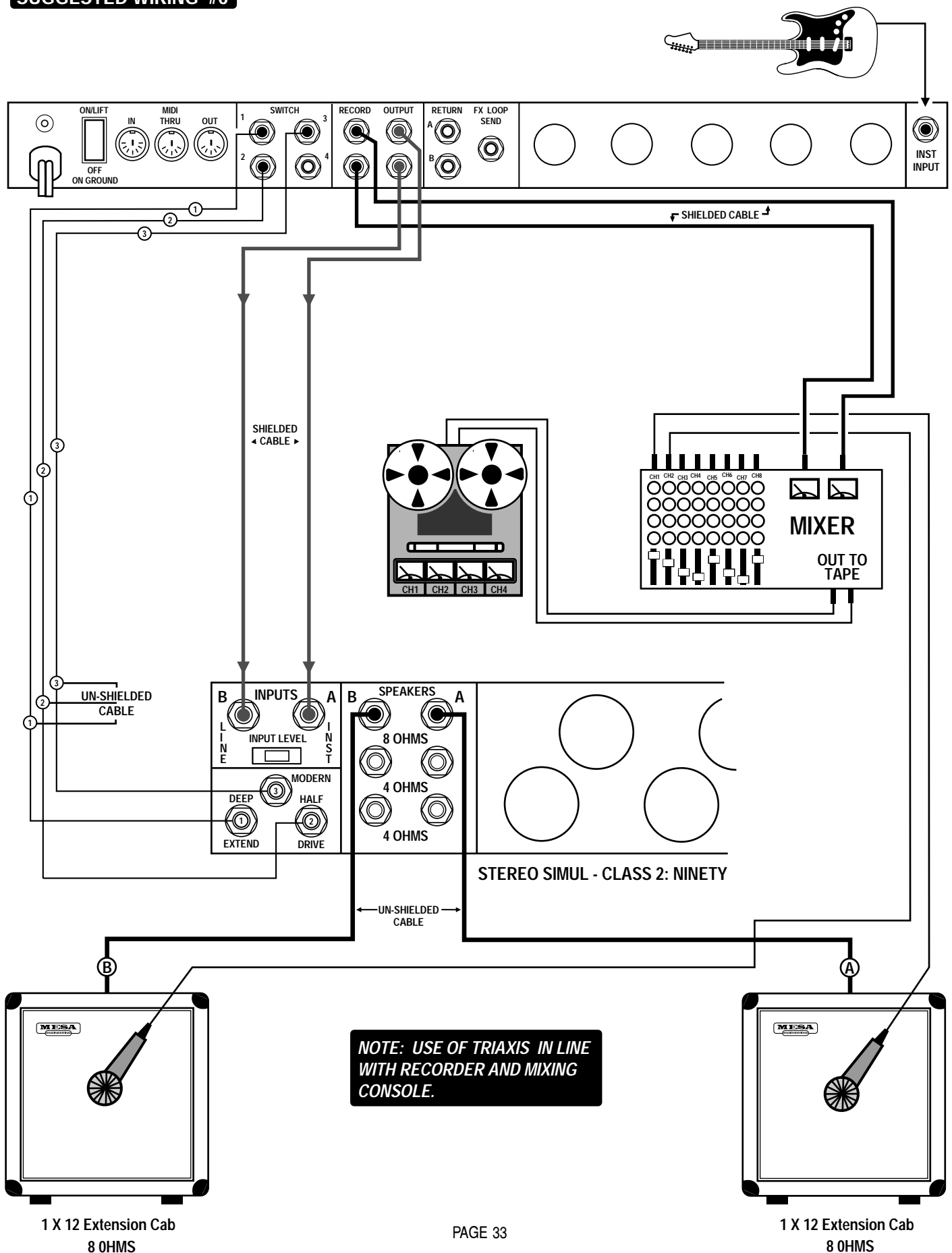
SUGGESTED WIRING #4



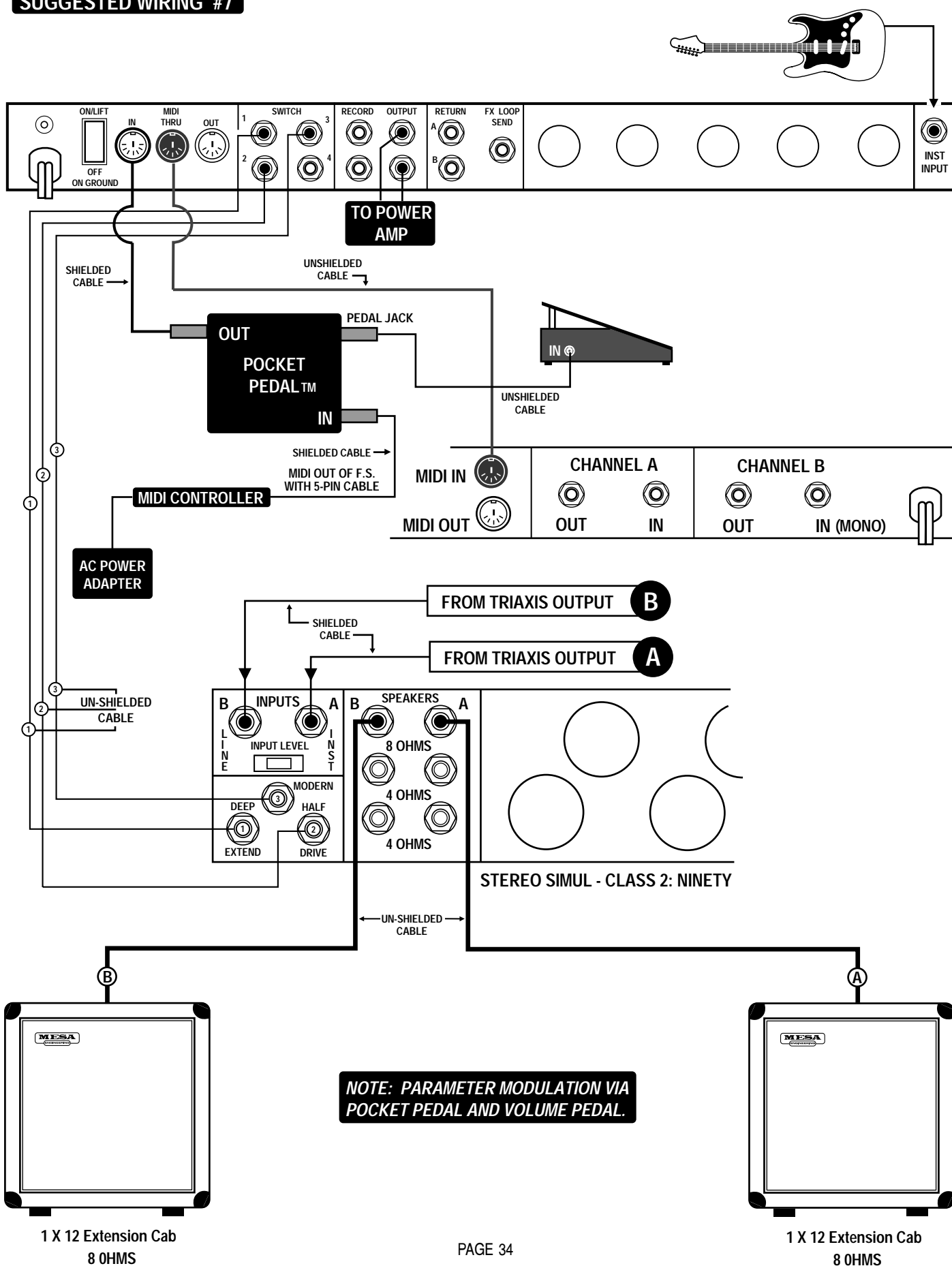
SUGGESTED WIRING #5



SUGGESTED WIRING #6



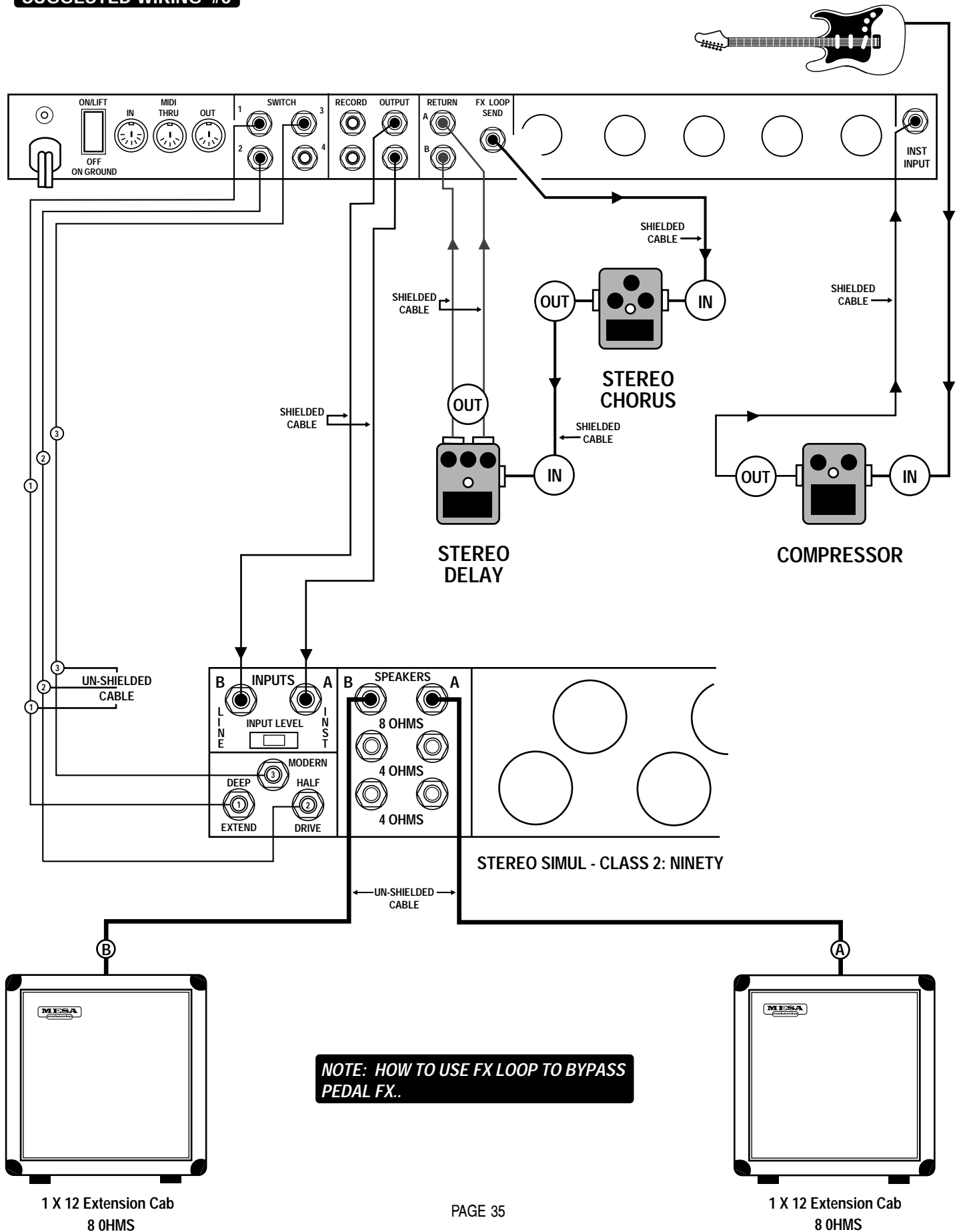
SUGGESTED WIRING #7



1 X 12 Extension Cab
8 OHMS

1 X 12 Extension Cab
8 OHMS

SUGGESTED WIRING #8



1 X 12 Extension Cab
8 OHMS

1 X 12 Extension Cab
8 OHMS

FACTORY PRESET LIST & SETTINGS 1 THRU 10

FACTORY PRESET 01 Dual Rectifier Crunch / Solo Sound **MODE:** Lead 1 Red **PICKUP** Rear Humbuck

01	6.0	5.0	7.0	7.0	6.0	0.0	5.0	5.0	0.0
PROGRAM / CHANNEL	GAIN	TREBLE	MIDDLE	BASS	LEAD 1 DRIVE	LEAD 2 DRIVE	MASTER	PRESENCE	DYNAMIC VOICE
◀ ▶ PGM ICH	◀ ▶	◀ ▶	◀ ▶	◀ ▶	◀ ▶	◀ ▶	◀ ▶	◀ ▶	◀ ▶
	0 1	2 3	4 5	6 7	8 9				

FACTORY PRESET 02 Mk II - C High Gain Lead **MODE:** Lead 2 Yellow **PICKUP** Rear Humbuck

02	7.5	5.0	4.0	5.0	0.0	6.5	4.5	3.5	0.0
PROGRAM / CHANNEL	GAIN	TREBLE	MIDDLE	BASS	LEAD 1 DRIVE	LEAD 2 DRIVE	MASTER	PRESENCE	DYNAMIC VOICE
◀ ▶ PGM ICH	◀ ▶	◀ ▶	◀ ▶	◀ ▶	◀ ▶	◀ ▶	◀ ▶	◀ ▶	◀ ▶
	0 1	2 3	4 5	6 7	8 9				

FACTORY PRESET 03 High Gain Fat Mk I Lead **MODE:** Lead 1 Yellow **PICKUP** Rear Humbuck
Neck Single Coil

03	8.0	7.0	3.0	4.0	7.0	0.0	4.5	3.5	0.0
PROGRAM / CHANNEL	GAIN	TREBLE	MIDDLE	BASS	LEAD 1 DRIVE	LEAD 2 DRIVE	MASTER	PRESENCE	DYNAMIC VOICE
◀ ▶ PGM ICH	◀ ▶	◀ ▶	◀ ▶	◀ ▶	◀ ▶	◀ ▶	◀ ▶	◀ ▶	◀ ▶
	0 1	2 3	4 5	6 7	8 9				

FACTORY PRESET 04 Sweet-Warm Vintage Mk I Clean **MODE:** Rhy Green **PICKUP** Neck Single Coil
All 3 Singles

04	5.0	5.0	3.0	4.5	0.0	0.0	5.5	7.0	0.0
PROGRAM / CHANNEL	GAIN	TREBLE	MIDDLE	BASS	LEAD 1 DRIVE	LEAD 2 DRIVE	MASTER	PRESENCE	DYNAMIC VOICE
◀ ▶ PGM ICH	◀ ▶	◀ ▶	◀ ▶	◀ ▶	◀ ▶	◀ ▶	◀ ▶	◀ ▶	◀ ▶
	0 1	2 3	4 5	6 7	8 9				

FACTORY PRESET 05 Tight-Bright Mk IV Clean **MODE:** Rhy Yellow **PICKUP** Neck Single Coil
All 3 Singles

05	4.0	5.0	3.0	4.5	0.0	0.0	6.5	6.0	0.0
PROGRAM / CHANNEL	GAIN	TREBLE	MIDDLE	BASS	LEAD 1 DRIVE	LEAD 2 DRIVE	MASTER	PRESENCE	DYNAMIC VOICE
◀ ▶ PGM ICH	◀ ▶	◀ ▶	◀ ▶	◀ ▶	◀ ▶	◀ ▶	◀ ▶	◀ ▶	◀ ▶
	0 1	2 3	4 5	6 7	8 9				

FACTORY PRESET LIST & SETTINGS

FACTORY PRESET 06 Vintage Amp Cranked

MODE: Rhy Green

PICKUP Neck Style

PROGRAM / CHANNEL	GAIN	TREBLE	MIDDLE	BASS	LEAD 1 DRIVE	LEAD 2 DRIVE	MASTER	PRESENCE	DYNAMIC VOICE
07	10	9.0		1.0				4.5	0.0
◀ ▶ PGM CH	◀ ▶ 0 1	◀ ▶ 2 3	◀ ▶ 4 5	◀ ▶ 6 7	◀ ▶ 8 9	◀ ▶	◀ ▶	◀ ▶	◀ ▶

FACTORY PRESET 07 Bluesy Mk 1 Lead

MODE: Lead 1 Green

PICKUP Neck Humbuck
Neck Single Coil

PROGRAM / CHANNEL	GAIN	TREBLE	MIDDLE	BASS	LEAD 1 DRIVE	LEAD 2 DRIVE	MASTER	PRESENCE	DYNAMIC VOICE
07	8.0	6.0	4.0	3.0	4.5	0.0	5.0	3.0	0.0
◀ ▶ PGM CH	◀ ▶ 0 1	◀ ▶ 2 3	◀ ▶ 4 5	◀ ▶ 6 7	◀ ▶ 8 9	◀ ▶	◀ ▶	◀ ▶	◀ ▶

FACTORY PRESET 08 Howling Blues Mk IV Lead

MODE: Lead 2 Green

PICKUP Neck Single Coil
Neck Humbuck

PROGRAM / CHANNEL	GAIN	TREBLE	MIDDLE	BASS	LEAD 1 DRIVE	LEAD 2 DRIVE	MASTER	PRESENCE	DYNAMIC VOICE
08	7.0	5.0	5.0	4.5	0.0	3.0	4.5	2.0	0.0
◀ ▶ PGM CH	◀ ▶ 0 1	◀ ▶ 2 3	◀ ▶ 4 5	◀ ▶ 6 7	◀ ▶ 8 9	◀ ▶	◀ ▶	◀ ▶	◀ ▶

FACTORY PRESET 09 Crazy Mk II - C Crunch

MODE: Lead 2 Yellow

PICKUP Bridge Humbuck

PROGRAM / CHANNEL	GAIN	TREBLE	MIDDLE	BASS	LEAD 1 DRIVE	LEAD 2 DRIVE	MASTER	PRESENCE	DYNAMIC VOICE
09	8.0	5.5	4.0	3.5	0.0	6.5	4.0	4.0	6.0
◀ ▶ PGM CH	◀ ▶ 0 1	◀ ▶ 2 3	◀ ▶ 4 5	◀ ▶ 6 7	◀ ▶ 8 9	◀ ▶	◀ ▶	◀ ▶	◀ ▶

FACTORY PRESET 10 Searing Mk IV Crunch

MODE: Lead 2 Red

PICKUP Bridge Humbuck

PROGRAM / CHANNEL	GAIN	TREBLE	MIDDLE	BASS	LEAD 1 DRIVE	LEAD 2 DRIVE	MASTER	PRESENCE	DYNAMIC VOICE
10	8.0	5.0	4.0	4.5	0.0	6.5	4.0	4.0	3.5
◀ ▶ PGM CH	◀ ▶ 0 1	◀ ▶ 2 3	◀ ▶ 4 5	◀ ▶ 6 7	◀ ▶ 8 9	◀ ▶	◀ ▶	◀ ▶	◀ ▶

PERSONAL SETTING PAGE

PERSONAL SET 1

MODE:

PICKUP

<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>
PROGRAM / CHANNEL	GAIN	TREBLE	MIDDLE	BASS	LEAD 1 DRIVE	LEAD 2 DRIVE	MASTER	PRESENCE	DYNAMIC VOICE
<div>◀▶PGM CH</div>	<div>◀▶01</div>	<div>◀▶23</div>	<div>◀▶45</div>	<div>◀▶67</div>	<div>◀▶89</div>	<div>◀▶</div>	<div>◀▶</div>	<div>◀▶</div>	<div>◀▶</div>

PERSONAL SET 2

MODE:

PICKUP

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PROGRAM / CHANNEL	GAIN	TREBLE	MIDDLE	BASS	LEAD 1 DRIVE	LEAD 2 DRIVE	MASTER	PRESENCE	DYNAMIC VOICE
<div>◀▶PGM CH</div>	<div>◀▶01</div>	<div>◀▶23</div>	<div>◀▶45</div>	<div>◀▶67</div>	<div>◀▶89</div>	<div>◀▶</div>	<div>◀▶</div>	<div>◀▶</div>	<div>◀▶</div>

PERSONAL SET 3

MODE:

PICKUP

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PROGRAM / CHANNEL	GAIN	TREBLE	MIDDLE	BASS	LEAD 1 DRIVE	LEAD 2 DRIVE	MASTER	PRESENCE	DYNAMIC VOICE
<div>◀▶PGM CH</div>	<div>◀▶01</div>	<div>◀▶23</div>	<div>◀▶45</div>	<div>◀▶67</div>	<div>◀▶89</div>	<div>◀▶</div>	<div>◀▶</div>	<div>◀▶</div>	<div>◀▶</div>

PERSONAL SET 4

MODE:

PICKUP

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PROGRAM / CHANNEL	GAIN	TREBLE	MIDDLE	BASS	LEAD 1 DRIVE	LEAD 2 DRIVE	MASTER	PRESENCE	DYNAMIC VOICE
<div>◀▶PGM CH</div>	<div>◀▶01</div>	<div>◀▶23</div>	<div>◀▶45</div>	<div>◀▶67</div>	<div>◀▶89</div>	<div>◀▶</div>	<div>◀▶</div>	<div>◀▶</div>	<div>◀▶</div>

PERSONAL SET 5

MODE:

PICKUP

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PROGRAM / CHANNEL	GAIN	TREBLE	MIDDLE	BASS	LEAD 1 DRIVE	LEAD 2 DRIVE	MASTER	PRESENCE	DYNAMIC VOICE
<div>◀▶PGM CH</div>	<div>◀▶01</div>	<div>◀▶23</div>	<div>◀▶45</div>	<div>◀▶67</div>	<div>◀▶89</div>	<div>◀▶</div>	<div>◀▶</div>	<div>◀▶</div>	<div>◀▶</div>

PERSONAL SETTING PAGE

PERSONAL SET 6

MODE:

PICKUP

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PROGRAM / CHANNEL	GAIN	TREBLE	MIDDLE	BASS	LEAD 1 DRIVE	LEAD 2 DRIVE	MASTER	PRESENCE	DYNAMIC VOICE
<div>◀▶PGM/CH</div>	<div>◀▶</div>	<div>◀▶</div>	<div>◀▶</div>	<div>◀▶</div>	<div>◀▶</div>	<div>◀▶</div>	<div>◀▶</div>	<div>◀▶</div>	<div>◀▶</div>
	0 1	2 3	4 5	6 7	8 9				

PERSONAL SET 7

MODE:

PICKUP

<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>
PROGRAM / CHANNEL	GAIN	TREBLE	MIDDLE	BASS	LEAD 1 DRIVE	LEAD 2 DRIVE	MASTER	PRESENCE	DYNAMIC VOICE
<div>◀▶PGM/CH</div>	<div>◀▶</div>	<div>◀▶</div>	<div>◀▶</div>	<div>◀▶</div>	<div>◀▶</div>	<div>◀▶</div>	<div>◀▶</div>	<div>◀▶</div>	<div>◀▶</div>
	0 1	2 3	4 5	6 7	8 9				

PERSONAL SET 8

MODE:

PICKUP

<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>
PROGRAM / CHANNEL	GAIN	TREBLE	MIDDLE	BASS	LEAD 1 DRIVE	LEAD 2 DRIVE	MASTER	PRESENCE	DYNAMIC VOICE
<div>◀▶PGM/CH</div>	<div>◀▶</div>	<div>◀▶</div>	<div>◀▶</div>	<div>◀▶</div>	<div>◀▶</div>	<div>◀▶</div>	<div>◀▶</div>	<div>◀▶</div>	<div>◀▶</div>
	0 1	2 3	4 5	6 7	8 9				

PERSONAL SET 9

MODE:

PICKUP

<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>
PROGRAM / CHANNEL	GAIN	TREBLE	MIDDLE	BASS	LEAD 1 DRIVE	LEAD 2 DRIVE	MASTER	PRESENCE	DYNAMIC VOICE
<div>◀▶PGM/CH</div>	<div>◀▶</div>	<div>◀▶</div>	<div>◀▶</div>	<div>◀▶</div>	<div>◀▶</div>	<div>◀▶</div>	<div>◀▶</div>	<div>◀▶</div>	<div>◀▶</div>
	0 1	2 3	4 5	6 7	8 9				

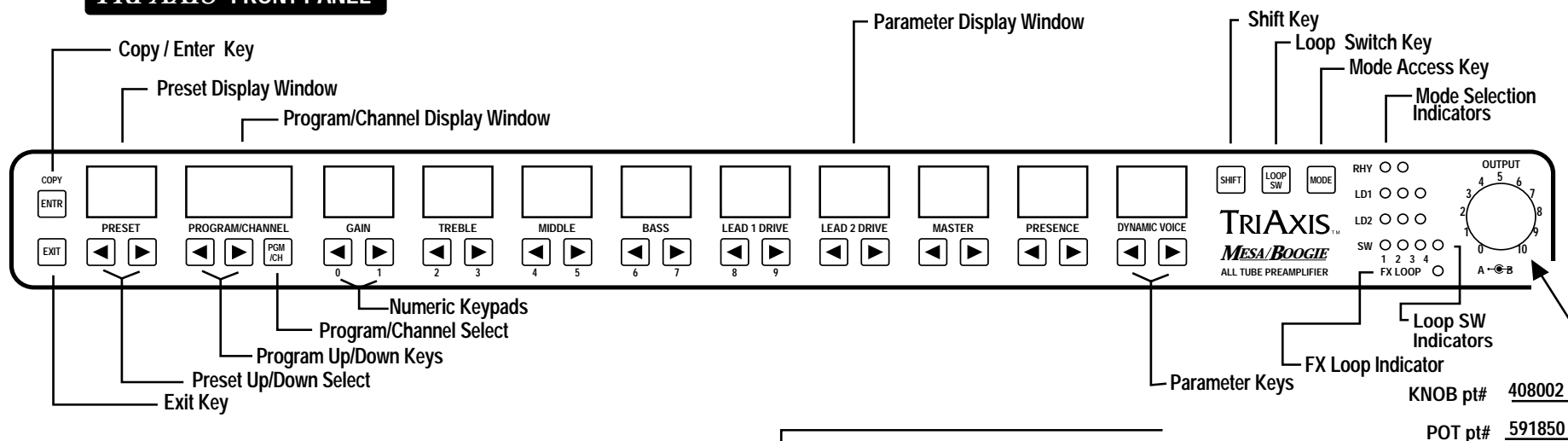
PERSONAL SET 10

MODE:

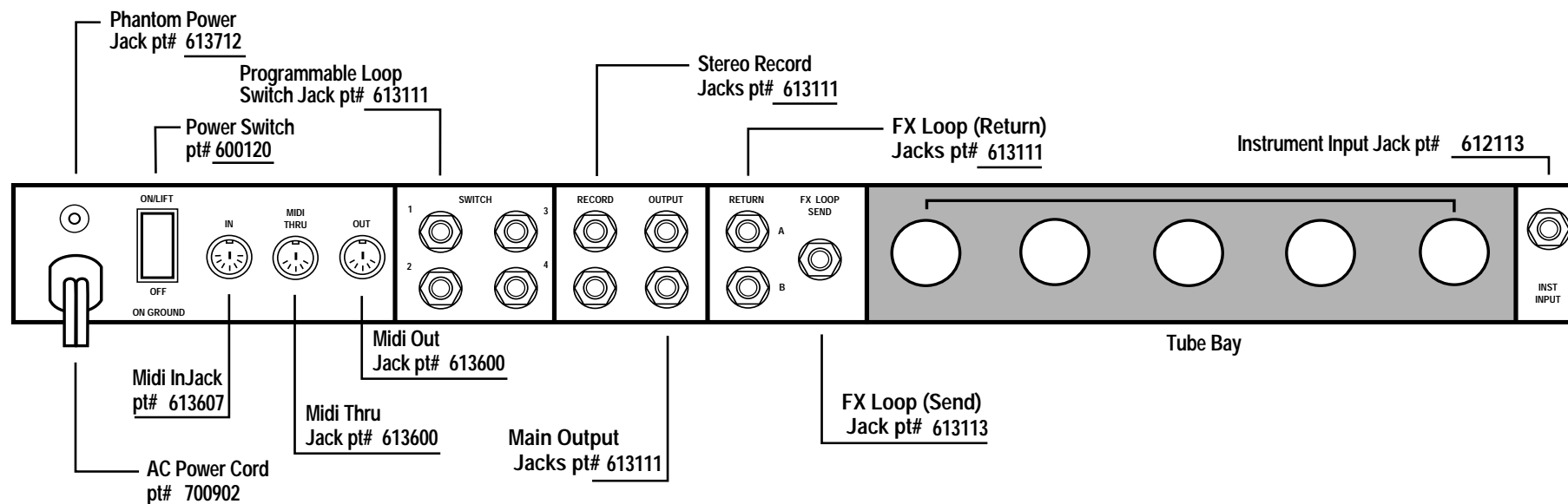
PICKUP

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PROGRAM / CHANNEL	GAIN	TREBLE	MIDDLE	BASS	LEAD 1 DRIVE	LEAD 2 DRIVE	MASTER	PRESENCE	DYNAMIC VOICE
<div>◀▶PGM/CH</div>	<div>◀▶</div>	<div>◀▶</div>	<div>◀▶</div>	<div>◀▶</div>	<div>◀▶</div>	<div>◀▶</div>	<div>◀▶</div>	<div>◀▶</div>	<div>◀▶</div>
	0 1	2 3	4 5	6 7	8 9				

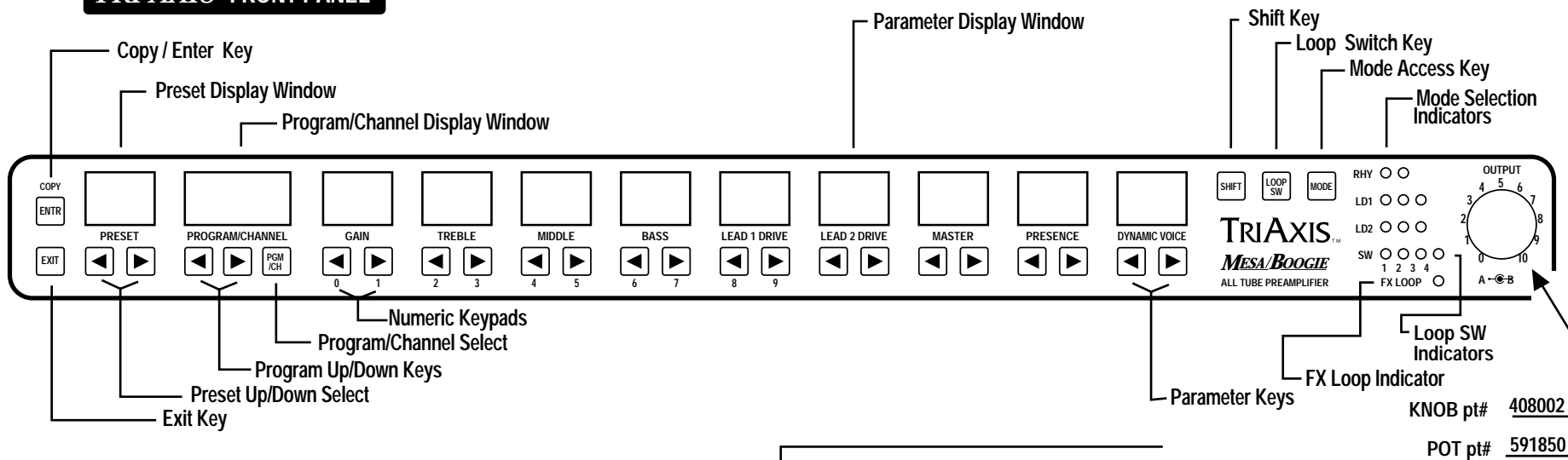
TRI AXIS FRONT PANEL



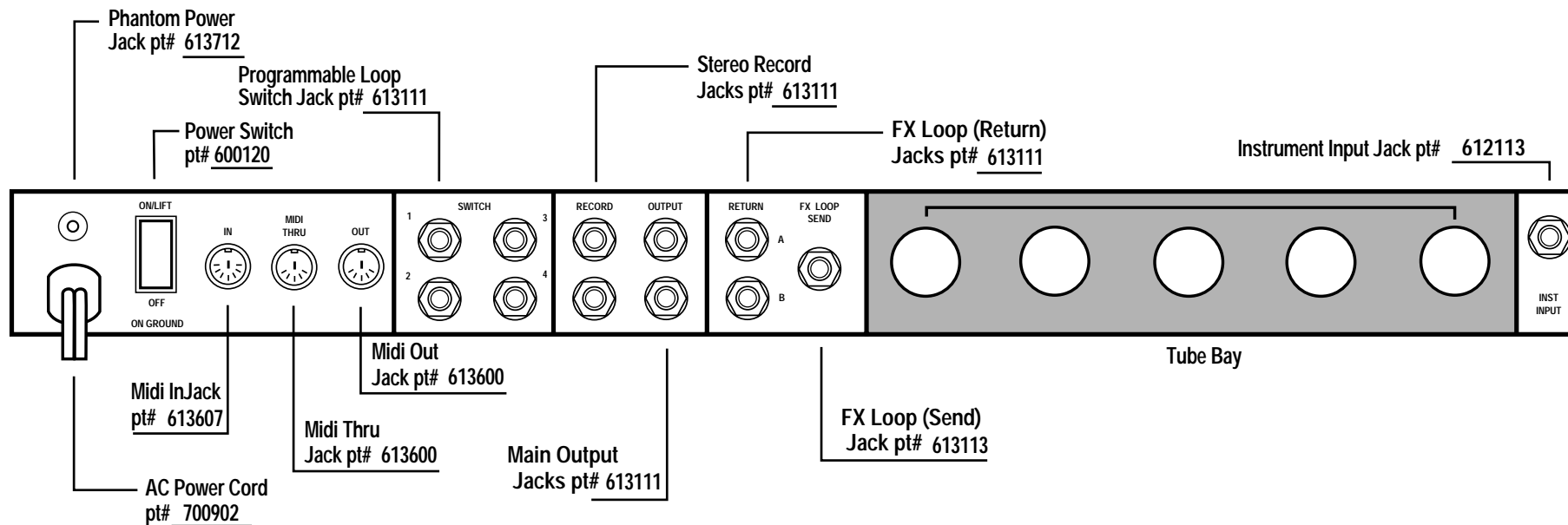
TRI AXIS REAR PANEL



TRI AXIS FRONT PANEL



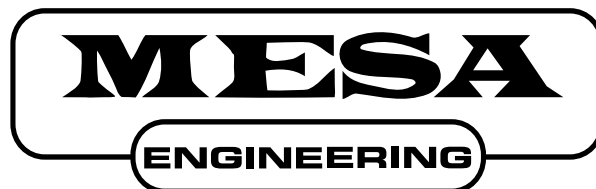
TRI AXIS REAR PANEL



MESA/BOOGIE

*This manual is meant to get you **TONE** with the least amount of reading and yet guide you with enough information to become a genuine tweakmaster. We are aware that some players will want even more technical info to wade through. We thought we would save the rest of your hours that might be better spent playing music. However...if you feel you need more help or have serious questions unanswered in this manual...please call us and ask for a product specialist...(707) 778-6565. Call us 10-5 California time, Monday through Friday.*

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



The Spirit of Art in Technology



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USA***