

MESA/BOOGIE

REVOLVER

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 a part of your musical voice. This is something we do not take lightly. Our reward is that we've designed and built another fine Mesa product that is destined to become a classic. By purchasing and choosing this unit, 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 not just another speaker but a newly designed rotational sound reinforcement speaker system, that will offer you some of the most exciting and rewarding sound possibilities you've ever heard. The REVOLVER is handcrafted and incorporates the same Mesa heritage and integrity...benefiting from the many pioneering and patented Mesa circuits and products that led to the refinement of this unit. Feel confident, as we do, the REVOLVER 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 REVOLVER is a professional instrument. Please treat it with respect and operate it properly.

USE COMMON SENSE AND ALWAYS OBSERVE THESE PRECAUTIONS:

- Do not expose to moisture, rain or water, direct sunlight or extremely high temperatures.
- Always insure that the unit is properly grounded.
- Always unplug A.C. power cord before changing/checking fuses.
- When replacing fuse, use only same type and rating.
- Keep the unit away from children.
- Do not throw or drop the unit, especially on living beings.
- Be sure to connect to an A.C. power supply that meets the power supply specifications listed on the rear 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 rotary controls.
- Remove the power plug from the A.C. mains socket if the unit is to be stored for an extended period of time.
- Do not use solvents such as benzene or paint thinner to clean the unit. Wipe off the exterior with soft cloth.
- Be sure to have the warranty card for this product filled out by the store at which it was purchased and return to Mesa Engineering.

THIS UNIT IS CAPABLE OF PRODUCING VERY LOUD VOLUMES! EXPOSURE TO HIGH SOUND LEVELS MAY CAUSE PERMANENT HEARING DAMAGE!

No user serviceable parts inside. Refer service to qualified personnel. Always unplug A.C. power before removing chassis.

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

READ AND FOLLOW INSTRUCTIONS OF PROPER USAGE.

REVOLVER

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REVOLVER Operating Instructions

Overview:

Congratulations on purchasing the REVOLVER. Mesa/Boogie has taken a new and innovative approach to spinning sound for guitar players. Unlike the traditional system which uses a stationary speaker with a rotating baffle to reflect its sound, the REVOLVER'S internal 12" speaker cabinet (which is tuned and has an open back,) actually rotates horizontally.

By spinning the enclosure and the speaker itself, the high end clarity, punch and overall sonic qualities of the host amplifier are preserved like never before. The source tone is retained while achieving gorgeously wide and natural three dimensional chorusing, or the fattest vibrato imaginable, all controlled by either the Footswitch or Continuous Control Pedal.

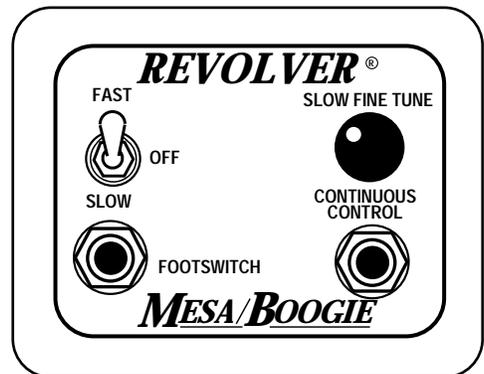
We're sure that with some on-hands experimenting, you will discover through the REVOLVER a whole new world waiting to unleash your creative musical ideas ! The simple to understand and usability of the REVOLVER, make it easy for you dive right in and start creating some really cool sounds, however, please read this manual carefully and observe all the safety instructions and precautions.

REVOLVER

All sides are cosmetically the same except for the control and jack panels.



FRONT PANEL →



REAR PANEL →



FRONT PANEL FUNCTIONS:

3 POSITION POWER SWITCH:

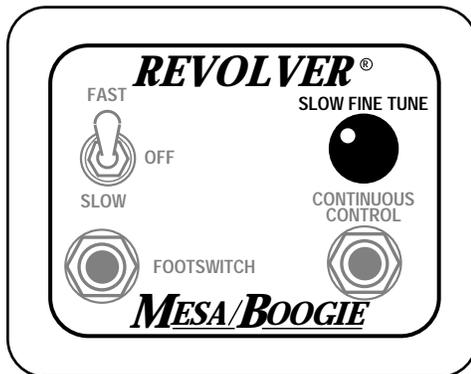
When using this 3 position switch manually (without footswitch,) and the toggle is set in the up position, the REVOLVER will be in its fast mode of operation. With the toggle set in its lower position, the REVOLVER will be set to run in its slow mode of operation. With the toggle set to its middle position the unit is switched to off.



NOTE: The 3 position power switch on the REVOLVER'S Front Panel must be in the SLOW or (down position) for either the Footswitch or the Continuous Control Pedal to function.

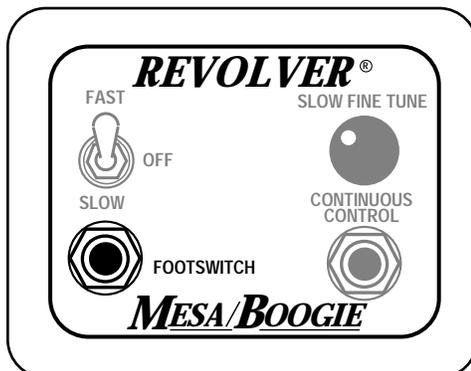
SLOW SPEED FINE TUNE CONTROL:

The function of this control is for fine tuning the REVOLVERS' rotational speed when it is in its slow mode of operation. It enables you to achieve preset effects ranging from extremely slow chorusing to fast vibrato. This controls' function is very useful when it comes to matching a songs tempo.



FOOTSWITCH JACK:

This is where the REVOLVER'S 1/4" Stereo footswitch cable plugs into the unit. (This jack is NOT to be confused with the speaker jack on the Rear Panel.)



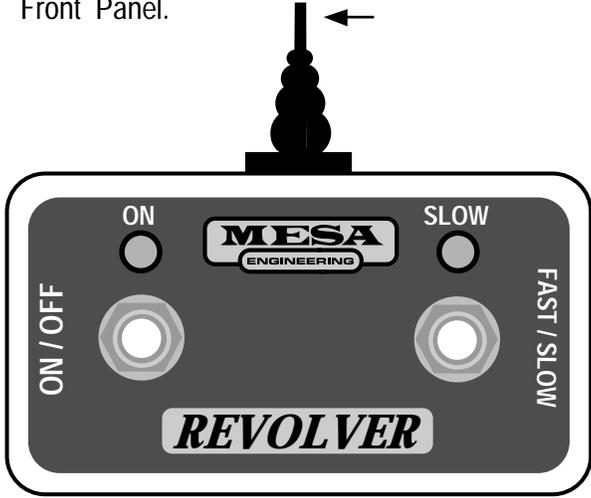
FRONT PANEL FUNCTIONS: *(Continued)*

FOOTSWITCH UNIT:

ON / OFF
 This button (switch) which is linked to the Red LED and is in its ON position when the LED is lit, activates the REVOLVER'S internal cabinet.

This is not a power ON / OFF switch, although it will stop the rotation of the internal speaker, it will not turn off the REVOLVER'S electrical circuitry.

Cable to Footswitch Jack on the **REVOLVER'S** Front Panel.



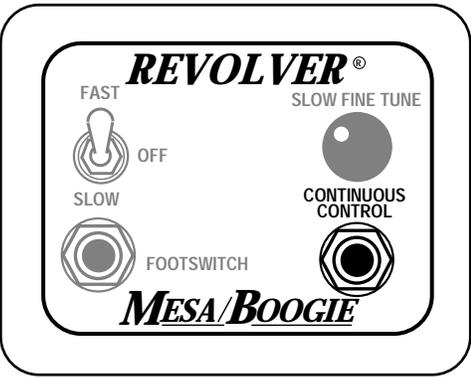
FAST / SLOW
 This button (switch) which is linked to the Green LED and is in its ON position when the LED is lit, controls the REVOLVER'S two speeds.

The REVOLVER is in its slow running mode when the LED is lit and in its fast running mode when unlit.

REMEMBER...in order to turn the REVOLVER off when it is not in use, always use the 3 position power switch which is located on the Front Panel.

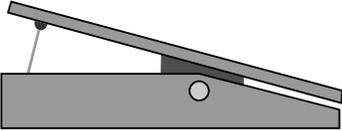
CONTINUOUS CONTROL JACK:

This is where the REVOLVER'S Continuous Control pedal connects to the unit. This is a standard 1/4 inch stereo jack.



CONTINUOUS CONTROL PEDAL:

This pedal allows maximum control over the REVOLVER'S rotational speed. It functions similarly to a normal volume pedal and is not unlike the gas pedal in a car. When it is pushed all the way forward (or down) the REVOLVER will operate at its fastest speed and at its slowest rate of speed when the pedal is pulled all the way back (or in its up position.)



Continuous Control Pedal in its slowest position

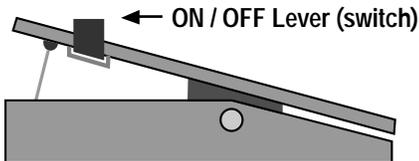
Be aware that the Slow Fine Tune Control on the REVOLVER'S Front Panel can be used as a Trim Control for the Continuous Control Pedal. If the Slow Fine Tune control is set low, the Continuous Control Pedals slowest and fastest speeds will both be slower. If the Slow Fine Tune control is set high, the Continuous Control Pedals slowest and fastest speeds will be faster.

FRONT PANEL FUNCTIONS: *(Continued)*

CONTINUOUS CONTROL PEDAL: *(Continued)*

This pedal is ideal for controlling speed swells in either direction from slow to fast and back or vice versa. Whatever position the pedal is left in will determine the speed at which the REVOLVER comes to rest at. This makes available many more speed settings than using only the footswitch...all of which are available on the fly.

The lever located on the Continuous Control Pedal, when pushed to the right with your foot, duplicates the ON / OFF function of the footswitch. When the Red LED on the pedal is lit the REVOLVER will rotate. Likewise, when the LED is unlit the REVOLVER will not rotate.



Like the footswitches ON / OFF button, this lever is not a power switch and will not turn the REVOLVER'S circuitry off when not in use. Again...always use the 3 position power switch located on Front Panel for this function.

BRAKE:

The REVOLVER has an automatic Brake System which is activated by both the footswitch and the Continuous Control Pedal when going from a faster speed to a slower speed. The Brake releases when the rotational speed which is determined by either the Slow Fine Tune or the Continuous Control Pedal has been reached.

REAR PANEL FUNCTIONS:

FUSE:

This is the A.C.'s (Alternating Current) main fuse and provides electrical current protection from outside A.C. fluctuations, as well as possible circuitry failure damage. Should the fuse blow, replace it with the same rating in a slo-blo type package. The Domestic U.S. REVOLVER'S requires a 1 Amp slo-blo fuse. The Export REVOLVER'S use a .500 Milliamp Slo-Blo fuse.



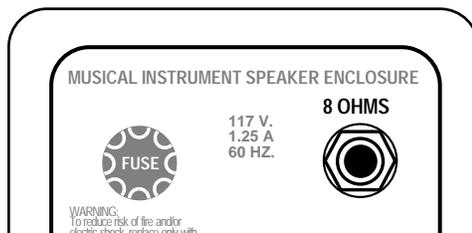
The REVOLVER is protected by two fuses one on the Rear Panel and one inside the cabinet. Should a problem arise, always check both fuses. As always, be sure to disconnect the unit to avoid possible injury and/or causing more damage to the REVOLVER.

NOTE: Like tires on a car, spare fuses are always a measure of good insurance. Your REVOLVER was carefully constructed with reliability in mind! Given the proper care and maintenance, it will deliver years of trouble free service. However, any pro guitarist who is out there gigging will tell you; spare tubes and fuses are a

must for the fabled cord bag and may someday be worth their weight in gold.

SPEAKER JACK:

The REVOLVER'S Speaker Jack is located beside the fuse holder. Do not confuse this jack with the Footswitch Jack located on the Front Panel. The REVOLVER is an 8 Ohm speaker cabinet and does not have its own amplifier.



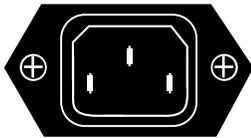
The stock speaker is a 90 Watt Celestion Black Shadow, which is made exclusively for Mesa/Boogie.

REAR PANEL FUNCTIONS: *(Continued)*

A.C. RECEPTACLE: The REVOLVER was designed with convenience in mind as well as practicality. Therefore an A.C. power receptacle was built into the cabinet and is located beside the Rear Panel. Be sure the power cable is firmly seated into this receptacle and it would be a good idea to have the REVOLVER'S power on switch in the OFF position in order to prevent a possible electric shock.

If you should lose your A.C. power cable or if the one that comes supplied with your new REVOLVER fails, just give us a call and we will be happy to send you a new one for a nominal charge.

NOTE: Never expose the power receptacle or A.C. power cable to moisture of any kind, severe electric shock may occur. Never alter the power cable or the receptacle in any way.



Back of Cabinet

TROUBLE SHOOTING:

WARNING: DO NOT REMOVE BOTTOM COVER OR GRILLES...INJURY MAY RESULT. THERE ARE NO USER SERVICEABLE PARTS INSIDE. REFER ALL SERVICING TO QUALIFIED TECHNICIAN.

NO POWER: Check the external fuse first. If this fuse is not blown, check the internal circuit board fuse and replace it if necessary. Remember, always replace fuses with the same type and rating.

NO SOUND: USE CAUTION when trouble shooting in this situation as the host amplifier may not have a proper load on it. Turn the amps volume down to a minimum output level so as not to damage the tubes or output transformer while you are looking for the problem.

Make sure that the footswitch and speaker cables are not reversed and that the speaker connector device is plugged in properly to the receptacle located at the bottom of the shaft.

KNOCKING: Knocking is usually caused by one of the bearings being loose on the shaft. There are two 3/32 allen set screws in the collar of each bearing which must be fastened tightly to the shaft. A small amount of loc-tite is recommended to keep them in place. These set screws can be accessed more easily by loosening the internal speaker cab on the shaft and sliding it away from either bearing.

Knocking can also be caused by the internal speaker cab already being loose on the shaft. There are two aluminum blocks inside the cab and each block has a 10/32 allen head set screw which must be fastened tightly to the shaft. A small amount of loc-tite is recommended on these screws as well.

TROUBLE SHOOTING: *(Continued)*

BELT NOISE: While a small amount of belt noise is normal, excessive ticking, scraping or squeaking can be eliminated by applying a small amount of WD-40 lubricant to the V-Belt itself. The belt tension should also be checked. There should be about 1/2" of play...(slightly looser than the fan belt on a car engine.)

BRAKE NOISE: A quiet, even rubbing sound is normal when the brake is engaged. If this sound appears to be excessively loud, the angle at which the brake shoe comes in contact with the motor casing can be adjusted. The shoe should drag against the casing and not "stub" into it.

If the Brake makes a loud thumping sound when it first engages, the distance between the Brake shoe and the motor casing is too great. This distance should be no more than 1/32" and can be adjusted via the bracket that the Brake shoe itself is fastened to. This adjustment may need to be made after 1 to 2 years of use.

STUCK IN FAST: Make sure the Slow Speed Fine Controller is not turned up too high. When using the footswitch make sure the 3 position toggle switch on the Front Panel is in the low or down position. If both of these controls are set properly and the problem persists, then it is likely that the small DC motor which controls the slow speed has failed or that the belt which runs this motor from the main shaft has broken.

CASTORS: IMPORTANT! The weight of the internal speaker cabinet is such that when it is in motion it is unsafe to leave the castors on the REVOLVER. Always Remove Castors Before Using. Also...make sure that each corner of the REVOLVER'S bottom is firmly seated on the floor to avoid excessive shimmying.

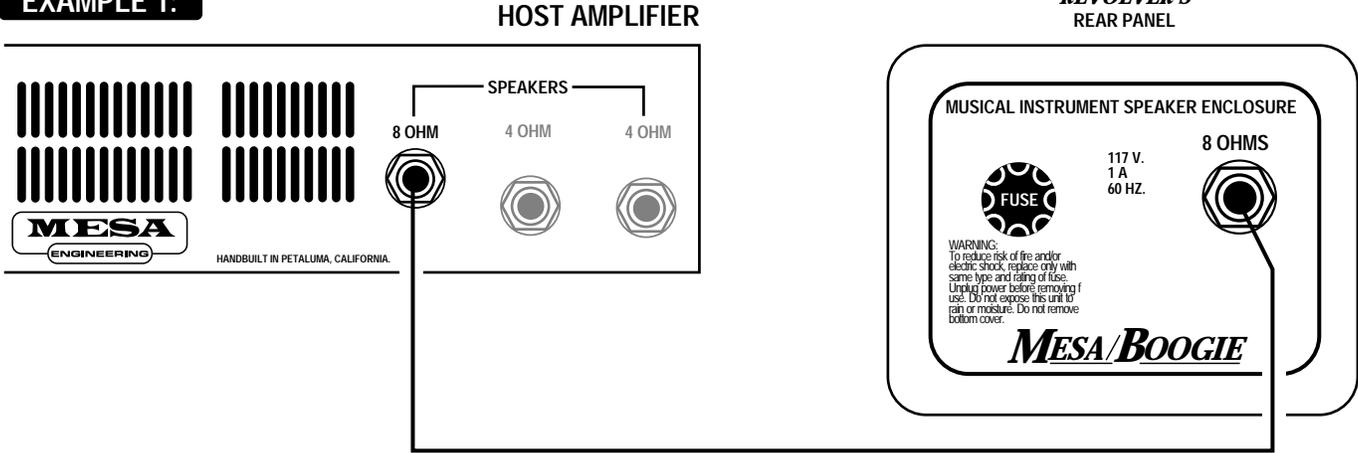
MIKING TECHNIQUES: For stereo miking, the best results seem to be attained by using two microphones panned left and right on opposite sides of the REVOLVER at a distance of 1 to 3 inches. Lowering the mikes closer to the center of the grille will result in a deeper effect with a greater amount of wind noise. Raising the mikes up to the top of the grille area will lighten the effect and eliminate wind noise. When using this placement scheme, it may be desirable to angle mikes downward slightly.

NOTE: The REVOLVER has many moving parts. While we have eliminated almost all excess noise, some minor mechanical sounds are unavoidable. Remember...there are no user serviceable parts inside and refer all servicing to a qualified technician.

HOOK-UP:

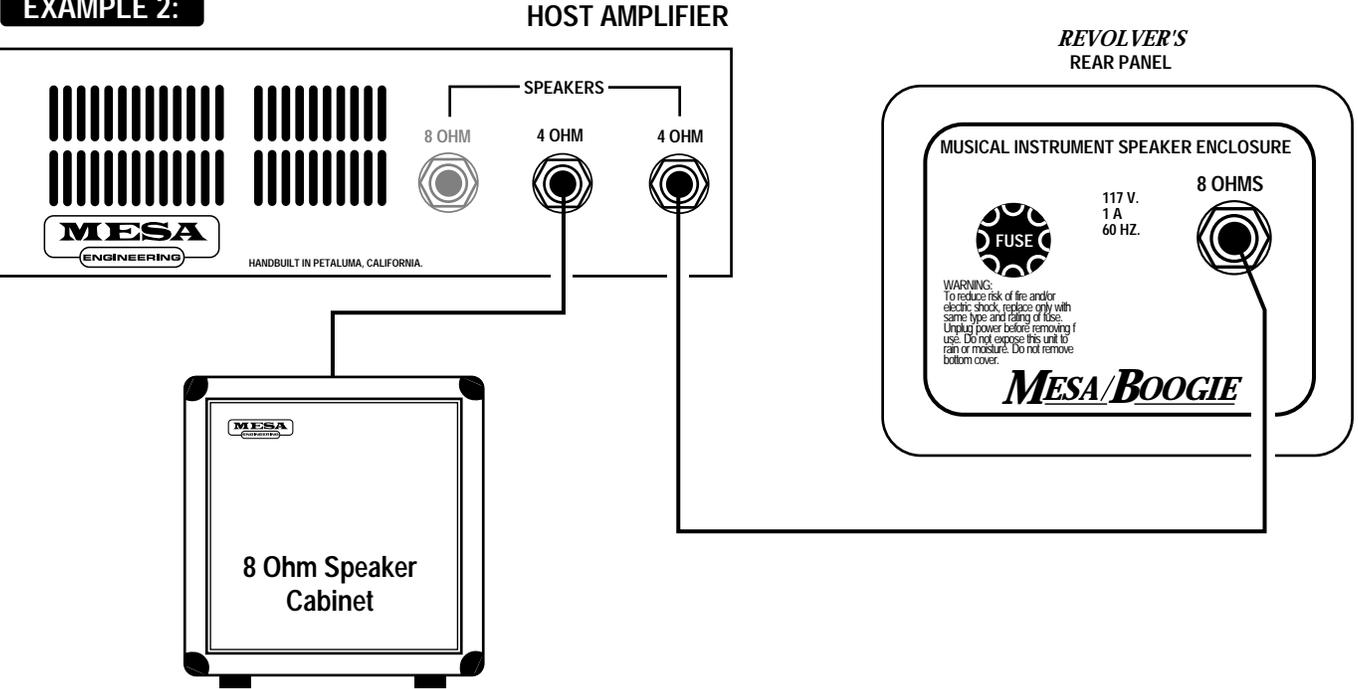
There are a number of possible Hook-Up options for the REVOLVER. The following diagrams outline the most common of these options and are accompanied by a brief description:

EXAMPLE 1:



Example 1 is the simplest Hook-Up option for the REVOLVER and yields a much deeper effect than when it's used simultaneously with a stationary speaker cabinet.

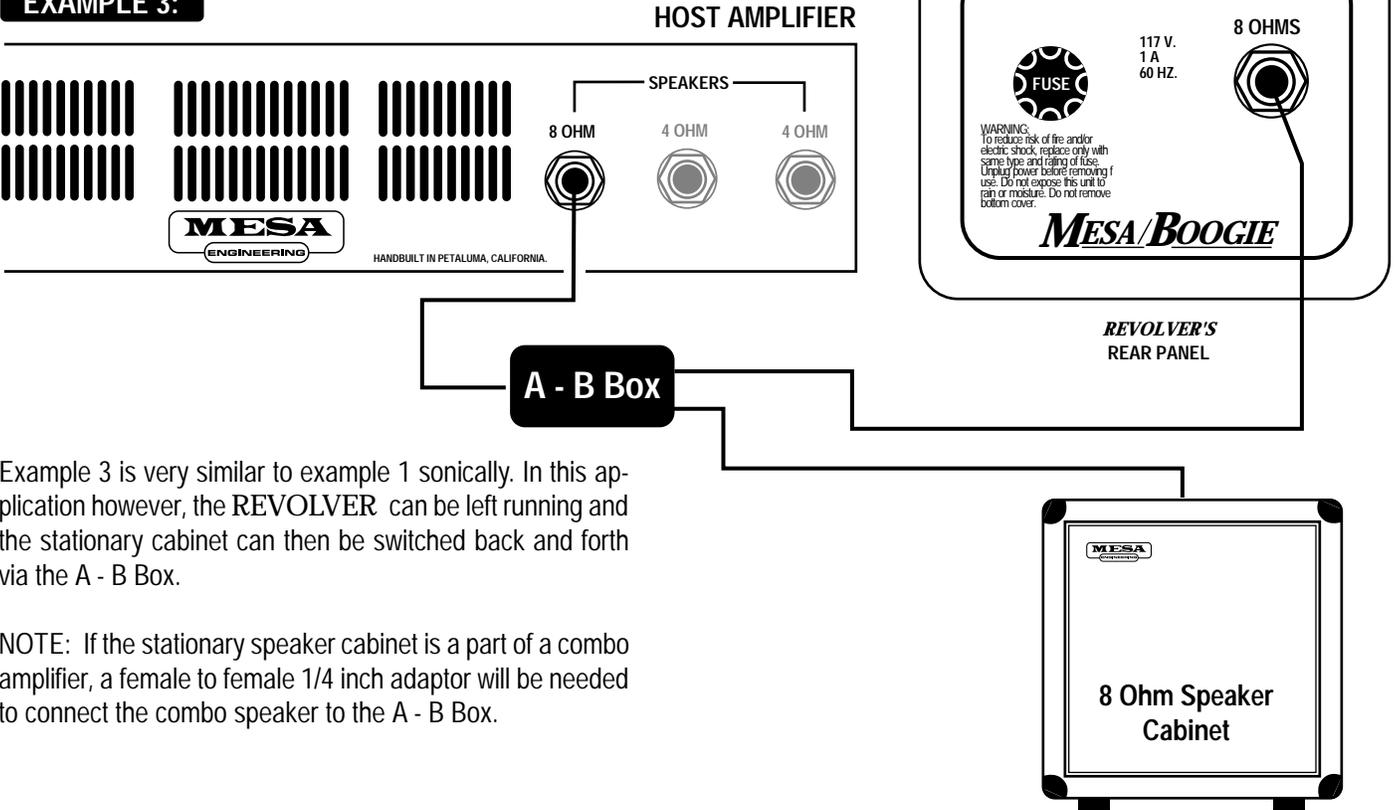
EXAMPLE 2:



Example 2 is another common and simple Hook-Up option and yields a wider stereo effect with less depth than example 1. It also provides more flexibility in a miked situation by allowing the sound engineer to have control over the mix between dry and effected cabinets. In this application it is a good idea to separate the stationary cabinet from the REVOLVER'S speaker stopping to rest and pointing in the opposite direction of the stationary speaker or speakers.

HOOK-UP: (Continued)

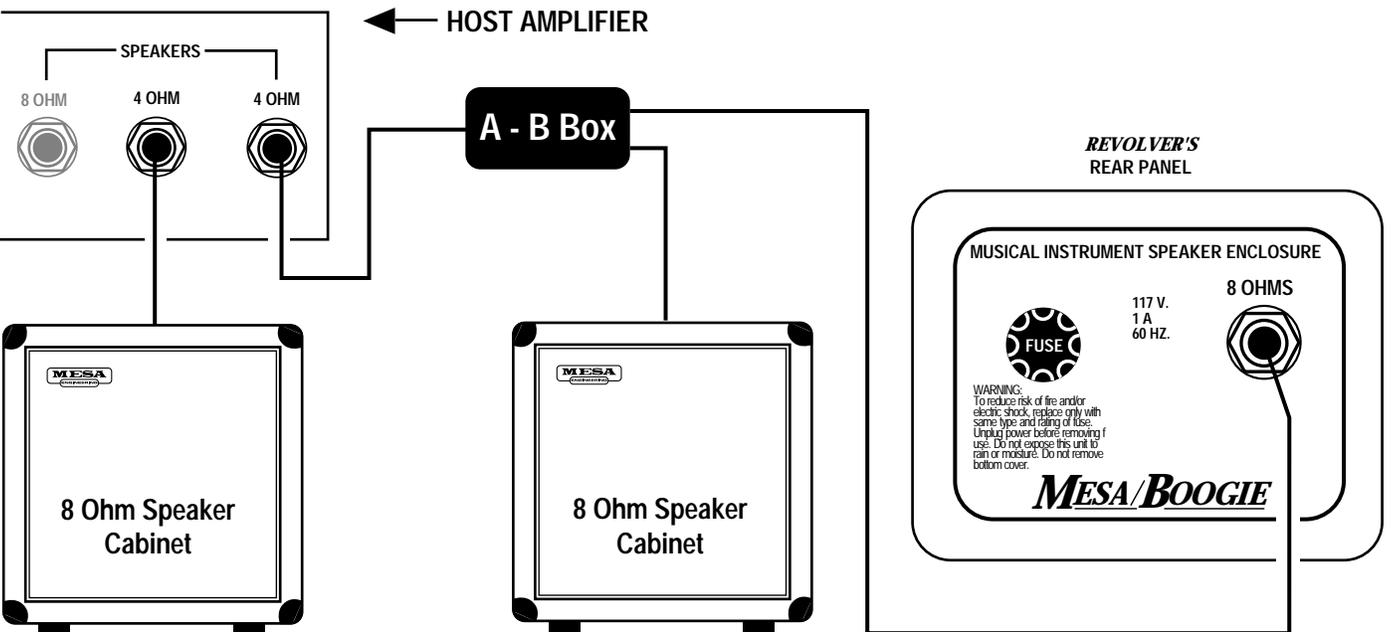
EXAMPLE 3:



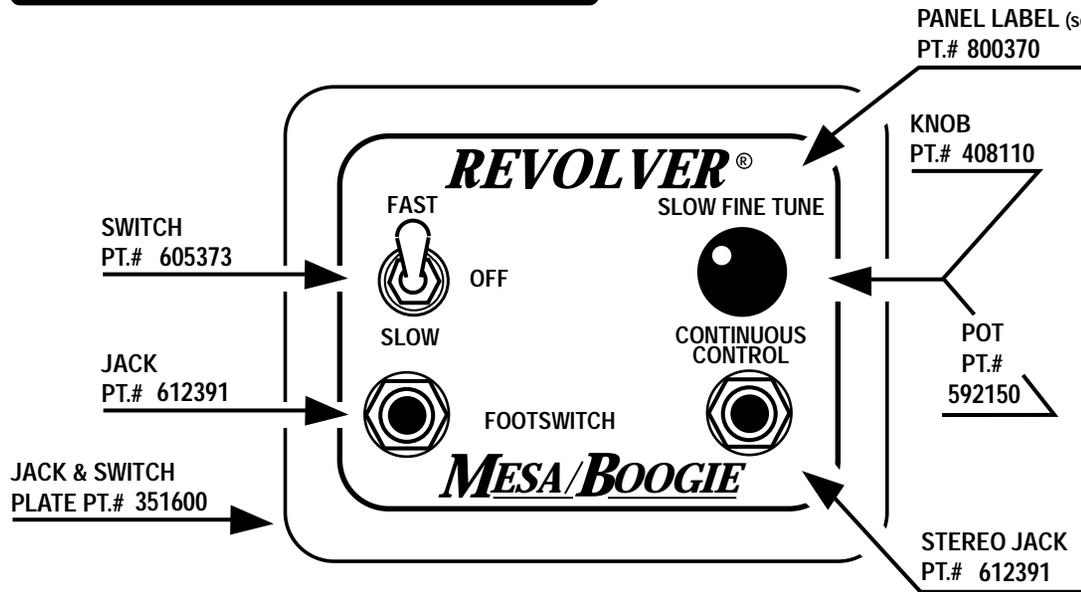
Example 3 is very similar to example 1 sonically. In this application however, the REVOLVER can be left running and the stationary cabinet can then be switched back and forth via the A - B Box.

NOTE: If the stationary speaker cabinet is a part of a combo amplifier, a female to female 1/4 inch adaptor will be needed to connect the combo speaker to the A - B Box.

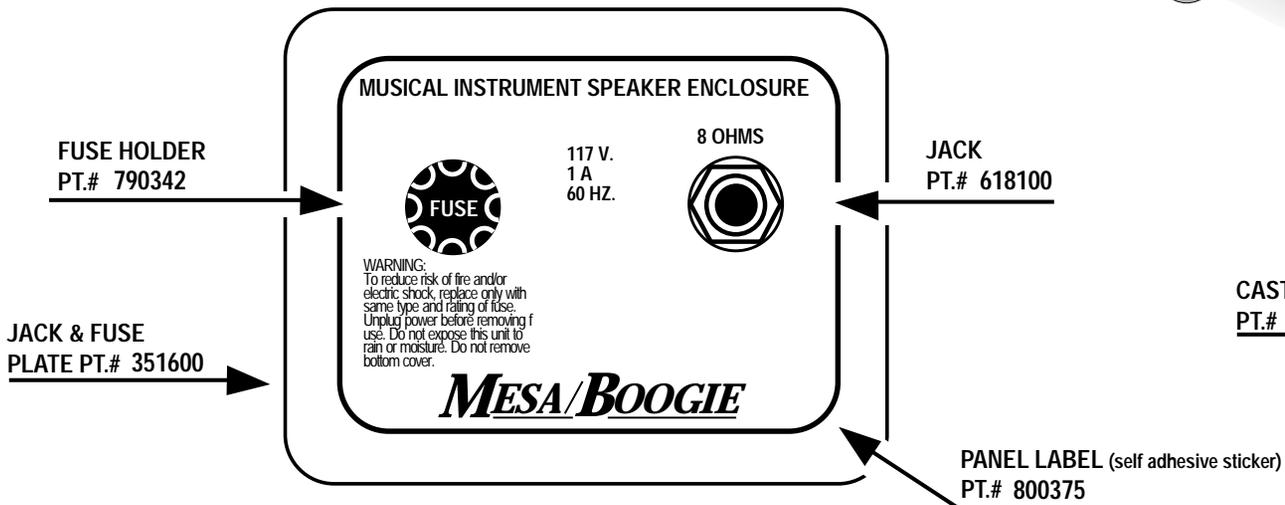
EXAMPLE 4: This Hook-Up scheme is very similar to example 2 sonically. In this application however, the REVOLVER can be left running and switched in and out via the A - B Box. This configuration is best if you already have a cabinet sound that you do not wish to change while adding the REVOLVER to your existing rig.



FRONT PANEL *REVOLVER*



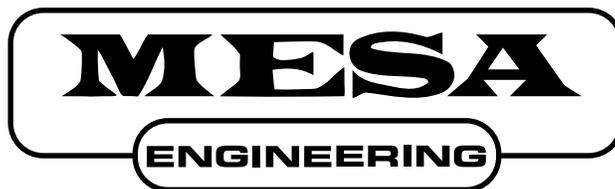
REAR PANEL *REVOLVER*



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



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