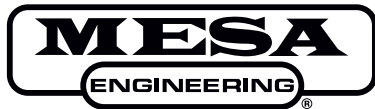


HEAD-TRACK™

HEAD + FX LOOP SWITCHER

Owner's Manual



SAFETY PRECAUTIONS

- Read these instructions.
- Follow these instructions.
- Heed all notes and warnings.
- Do not use this device near water.
- Clean this device only with a dry cloth.
- Keep these instructions for future reference.
- Damage to this device by improperly connected and/or grounded equipment is not covered under warranty.
- This device contains no user-serviceable parts and includes components which are susceptible to damage by electrostatic discharge (ESD).
- Be sure to use only a properly rated “wall-wart” power adapter or universal pedalboard power supply, with extra attention paid to the correct polarity, voltage and current. Applying the wrong polarity, improper voltage or insufficient current to this device may cause poor and/or inconsistent tone, performance, and even damage! Refer to the CONTROLS & CONNECTIONS and SPECIFICATIONS sections for more information.

WARNING AND LIABILITY NOTICE

- NEVER exceed the Maximum Amplifier & Load Power Rating! Refer to the SPECIFICATIONS section for details.
- ALWAYS use a speaker cabinet or load device with the HEAD-TRACK™, it is NOT a load box or a load device!
- NEVER connect an amplifier with a 2-prong AC power-cord plug to the HEAD-TRACK™. Consult a qualified technician to properly ground the amplifier before connecting it to, or using it with, the HEAD-TRACK™.
- NEVER defeat, remove or “lift” an amplifier’s safety ground, which is provided by the 3-prong AC power-cord plug! Doing so may not only be ILLEGAL, but it may also pose a SHOCK or ELECTROCUTION HAZARD.
- ALWAYS use the HEAD-TRACK™ with two amplifiers that are equipped and properly grounded with, a 3-prong AC power-cord plug. It is UNSAFE to use the HEAD-TRACK™ where one or both amplifiers are equipped with a 2-prong AC power-cord plug or whose ground-prong on the AC power-cord plug has been removed or “lifted”.
- MESA Engineering recommends the HEAD-TRACK™ be used with amplifiers that carry government electrical safety approvals such as UL, CSA or equivalent, otherwise you are doing so at your own risk. Investing in a “3-Prong Receptacle Tester” (available from www.amazon.com and many home/hardware stores...) for testing and verifying an AC wall outlet is wired properly, is also recommended.
- MESA Engineering accepts no responsibility (consequential or inconsequential) for damage or injury caused by improper connections, improperly grounded amplifiers, user error, or injury caused by failure of the HEAD-TRACK™ or any component inside the HEAD-TRACK™. Use of the HEAD-TRACK™ implies that the owner/user clearly understands and agrees to all of the terms stated within this user manual, has decided to use the HEAD-TRACK™ under these terms, accepts full responsibility for any damage or injury, and waives his/her rights to a liability claim against MESA Engineering (or associated companies, directors, or individuals) for any damage or injury caused while using the HEAD-TRACK™.

OWNER'S MANUAL & OPERATING GUIDE

Congratulations on your choice of MESA/Boogie and welcome to the MESA Family! The same passion for excellence, commitment to quality and dedication to customer satisfaction is present in each and every product we make in our one-and-only shop in Petaluma, California, U.S.A. Rest assured that the very same people that hand-build the finest amplifiers in the world, also built your HEAD-TRACK™ HEAD + FX LOOP SWITCHER and you have access to the same resources for help that all our customers do. Call on us anytime and enjoy!

OVERVIEW

The HEAD-TRACK™ is a guitar amp switcher that allows a pair of amp heads to share a single speaker cabinet or load device, eliminating the need for multiple space consuming cabinets. Included is a passive effects loop that allows sharing effects between the two amplifiers. The HEAD-TRACK™ effects loop is automatically switched in sync with the instrument and speaker level signals. Switching between the amplifiers is precisely timed and very quiet - no loud pops, drop-outs, hum or noise. The proprietary control and switching circuit has been in use for over 15 years and ensures only one amp will be active at a time, and protects the amp that is not selected, by connecting it to an internal load.

CONTROLS & CONNECTIONS

IMPORTANT: *Perform all of the following connections before applying power to the HEAD-TRACK™, with the amplifiers turned off, and the volume level controls set down to zero. Also, remember to wait for at least 15 seconds after taking the amplifiers off standby before switching between them - this will allow voltages in the HEAD-TRACK™ to stabilize, eliminating loud switching transients.*

1. Start by connecting either a guitar, or the output of the last pedal on a pedalboard, to the GUITAR INPUT on the HEAD-TRACK™.
2. Connect the TO AMP A INPUT jack to the guitar input of amplifier A.

3. Connect the TO AMP B INPUT jack to the guitar input of amplifier B.

Note: Use shielded 1/4" instrument cables for all the guitar and effects loop level audio connections, and always aim for the best quality and shortest length possible. This will minimize signal loss, particularly high frequency roll-off, due to the added capacitance in longer lengths of cable.

4. Connect the FROM A SPKR OUT jack to the speaker output jack of amplifier A.
5. Connect the FROM B SPKR OUT jack to the speaker output jack of amplifier B.
6. Connect the TO SPKR CAB/LOAD jack to the speaker cabinet or load device input.

Note: Use UNshielded 1/4" speaker cables for all of the high power speaker level audio connections, and always aim for the heaviest gauge (lower AWG number = heavier gauge) and shortest length possible. Never use shielded instrument cables for speaker level audio connections!

WARNING: A speaker cabinet or load device **MUST** always be connected to the TO SPKR CAB/LOAD jack otherwise damage to the selected amp and the HEAD-TRACK™ can occur!

7. Check to make sure that the speaker output impedance of both amplifiers are set so they match that of the speaker cabinet or load device. If a match is not possible, have a look at the IMPEDANCE MATCHING dialogue (below) for running mis-matched impedances.

Note: If neither amplifier has an effects loop - go to #11.

8. Connect the TO FX IN and FROM FX OUT jacks to the input and output jacks, respectively, of the shared effect pedal(s) or processor(s).

Note: If only one amplifier has an effects loop, we recommend connecting it as amplifier A, and skip #10.

9. Connect the FROM A SEND and TO A RTRN jacks to the effects loop send and return jacks, respectively, of amplifier A.
10. Connect the FROM B SEND and TO B RTRN jacks to the effects loop send and return jacks, respectively, of amplifier B.
11. **IMPORTANT:** Take a second look and make sure each amplifier is connected either as amplifier A or B. Accidentally swapping a single connection between amplifiers A and B can result in instant damage to both amplifiers and/or the HEAD-TRACK™.
12. Power-up the HEAD-TRACK™ first, followed by the shared effect pedal(s) or processor(s), and any other effect pedals. If the HEAD-TRACK™ is mounted on a pedalboard with a centralized power supply plug or switch, then power-up the entire pedalboard first.
13. Press the HEAD-TRACK™ stomp switch a few times and confirm the relays can be heard switching, there should be an audible click, and confirm the LED's are also being toggled on and off.
14. With the volume level control on both amplifiers set down to zero, power up the amplifiers - in standby!
15. Take both amplifiers off standby and wait for at least 15 seconds before switching between them - this will allow voltages within the HEAD-TRACK™ to stabilize, eliminating really loud switching transients.
16. Turn the volume level control on the selected amp up slightly and listen for any noise or other irregularities while playing.

WARNING: *If there's any noise or irregularities, immediately put both amplifiers into standby and turn them off! Check to make sure all cables are properly connected, and retry.*

17. Press the HEAD-TRACK™ stomp switch once to select the other amp, and turn its volume level control up slightly and listen for any noise or other irregularities while playing.

WARNING: *If there's any noise or irregularities, immediately put both amplifiers into standby and turn them off! Check to make sure all cables are properly connected, and retry.*

18. If all sounds good with both amplifiers, enjoy and switch away!

Note: *With so many cables in use, color coding the cable plugs in red (amp A) and blue (amp B) with either electrical tape, gaff tape or heat-shrink tubing, to match the HEAD-TRACK™ jack connections, would make setting-up and tearing-down much faster, and would minimize the possibility of an improper connection.*

USER I/O DESCRIPTIONS

LED A When illuminated, this red LED indicates amplifier A is on/active.

LED B When illuminated, this blue LED indicates amplifier B is on/active.

A/B SW This heavy-duty stomp switch toggles between which amplifier is on and actively driving the speaker cabinet or load device.

Note: *Wait for at least 15 seconds after taking the amplifiers off standby before switching between them - this will allow voltages within the HEAD-TRACK™ to stabilize, eliminating really loud switching transients.*

9VDC This standard female DC receptacle is the external power supply jack and accepts a 2.1mm x 5.5mm male barrel connector from a standard 9Volt DC “wall-wart” power adapter or universal pedalboard power supply, with a negative center polarity plug, and capable of providing 200mA of current. Refer to the SPECIFICATIONS section for additional information.

Note: *An external DC “wall-wart” power adapter is not included.*

Note: *If power is disconnected from the HEAD-TRACK™ while in use, it will default to amplifier A.*

WARNING: *To avoid immediate damage to this device and voiding the warranty, do NOT connect an AC-Voltage, or ANY*

other DC-Voltage power supply to this jack, other than that specified above and in the SPECIFICATIONS section!

REMOTE SWITCH This 1/4" TRS (tip, ring & sleeve) phono jack is an input to remote control the HEAD-TRACK™ using either the optional HEAD-TRACK™ REMOTE SWITCH foot-switch or a MIDI function switcher. This allows the HEAD-TRACK™ to be positioned next to the amps and the shared effect pedal(s) or processor(s), keeping cables tidy and short, and minimizing the chance of a cable being accidentally disconnected. Using this jack overrides the built-in stomp switch; A/B SW.

***Note:** When using a MIDI function switcher to remote control the HEAD-TRACK™, all that's needed is a simple "latching" switch-to-ground contact closure and a shielded 1/4" TS (tip/sleeve) instrument cable. Amplifier A is selected when the contact closure is open, and closing the contact closure or shorting the tip-to-sleeve, selects amplifier B.*

***Note:** When using the optional HEAD-TRACK™ REMOTE SWITCH foot-switch, a shielded 1/4" TRS (tip, ring & sleeve) cable will enable a dual-color LED, allowing each amp to have its own LED indicator; red = amplifier A and blue = amplifier B. If a 1/4" TRS cable isn't readily available, or is lost, a regular shielded 1/4" TS (tip/sleeve) instrument cable can be used instead, in which case LED indicator; red = amplifier A and none or off = amplifier B.*

INSTRUMENT I/O DESCRIPTIONS

Use shielded 1/4" instrument cables for all the guitar and effects loop level audio connections, and always aim for the best quality and shortest length possible. This will minimize signal loss, particularly high frequency roll-off, due to the added capacitance in longer lengths of cable.

GUITAR INPUT This 1/4" phono jack is an input and accepts the signal from a guitar or the output of a pedal.

TO AMP A INPUT This 1/4" phono jack is an output and provides a signal to the input of amplifier A. It also provides the HEAD-TRACK™, any pedals, and the guitar, with an earth ground reference, so ALWAYS connect it to the input of a properly

grounded amplifier, with a 3-prong AC power-cord plug.

TO AMP B INPUT This 1/4" phono jack is an output and provides a signal to the input of amplifier B. It also provides the HEAD-TRACK™, any pedals, and the guitar, with an earth ground reference, so ALWAYS connect it to the input of a properly grounded amplifier, with a 3-prong AC power-cord plug.

EFFECTS LOOP I/O DESCRIPTIONS

Use shielded 1/4" instrument cables for all the guitar and effects loop level audio connections, and always aim for the best quality and shortest length possible. This will minimize signal loss, particularly high frequency roll-off, due to the added capacitance in longer lengths of cable.

The effect(s) sharing capabilities of the HEAD-TRACK™ has been tailored for line level and instrument level effect pedals, which are usually ground referenced via their connection to an amplifier. When using some rack mount effect processors, a ground loop may occur, resulting in hum/noise. If this occurs, and the rack processor doesn't include a ground lift and/or an isolated input and output, then an external audio isolation transformer, such as the MESA Engineering CLEARLINK™ CONVERTER/ISO TRANSFORMER, would need to be connected between the rack processor's input and output, and the HEAD-TRACK™.

Most amplifiers have a simple, series effects loop design, and so the effects loop switching implemented by the HEAD-TRACK™ should work with most amplifier combinations. In situations where the two amplifiers have very different effects loop designs, such as series vs parallel, some extra care and attention to settings on the effect(s) and/or the parallel loop amplifier may be necessary. But even under normal circumstances, i.e. when not using a head-switcher, trying to share effects between amplifiers with different effects loop designs, can be difficult.

TO FX IN This 1/4" phono jack is an output and provides a signal to the input of the shared effect(s) that is routed from the

effects loop send of the selected amplifier. This jack is normalled with the FROM FX OUT jack, so not connecting an effect between the two jacks, would result in signal passing through.

FROM FX OUT This 1/4" phono jack is an input and accepts a signal from the output of the shared effect(s) that is routed back to the effects loop return of the selected amplifier. This jack is normalled with the TO FX IN jack, so not connecting an effect between the two jacks, would result in signal passing through.

TO A RTRN This 1/4" phono jack is an output and provides an effected signal back to the effects loop return jack of amplifier A, when selected.

FROM A SEND This 1/4" phono jack is an input and accepts a signal from the effects loop send jack of amplifier A. The signal will be routed to the input of the shared effect(s) via the TO FX IN jack, when amplifier A is selected.

TO B RTRN This 1/4" phono jack is an output and provides an effected signal back to the effects loop return jack of amplifier B, when selected.

FROM B SEND This 1/4" phono jack is an input and accepts a signal from the effects loop send jack of amplifier B. The signal will be routed to the input of the shared effect(s) via the TO FX IN jack, when amplifier B is selected.

SPEAKER LEVEL I/O DESCRIPTIONS

Use UNshielded 1/4" speaker cables for all the high power speaker level audio connections, and always aim for the heaviest gauge (lower AWG number = heavier gauge) and shortest length possible. Never use shielded instrument cables for speaker level audio connections!

FROM A SPKR OUT This 1/4" phono jack is an input and accepts a high power speaker level signal from the speaker

out Jack of amplifier A.

FROM B SPKR OUT This 1/4" phono jack is an input and accepts a high power speaker level signal from the speaker out Jack of amplifier B.

TO SPKR This 1/4" phono jack is an output and provides a high power speaker level signal, from the selected CAB/LOAD amplifier, either A or B, to a speaker cabinet or load device.

WARNING: *A speaker cabinet or load device MUST always be connected to the TO SPKR CAB/LOAD jack otherwise damage to the selected amplifier and/or the HEAD-TRACK™ can occur!*

IMPEDANCE MATCHING: *Always try to match the impedance of the two amplifiers to the speaker cabinet or load device being used. Most tube amplifiers are designed to feel, function and sound their best when the output and load impedances are matched. If this is not possible, consider the following mis-match, but before proceeding, consult the tube amplifier's specifications and/or contact the manufacturer to ensure the mis-match is within the tube amplifier's acceptable range; and expect an impedance mis-matched tube amplifier to have a slightly different feel and response. Connecting a tube amplifier to a speaker cabinet or load device that is twice the amplifier's output impedance (4 ohm amp → 8 ohm cabinet/load or 8 ohm amp → 16 ohm cabinet/load) will drive the tubes less harder, extending their lifespan. Do NOT skip an impedance value when running a mis-matched amplifier and load; for example, 4 ohm amp → 16 ohm cabinet/load, should NEVER be used!*

SPECIFICATIONS

- Minimum Operating Voltage: 9VDC
- Nominal Operating Voltage: 9.6VDC
- Maximum Operating Voltage: 12VDC
- Maximum Current Draw: 200mA @ 9VDC
- DC Adapter (Optional): 2.1 x 5.5mm Barrel Plug, Negative Center
- Amplifier & Load Rating: 4, 8 or 16 ohm @ 150W Max.
- Switching Technology: Electro-Optical & Electro-Mechanical
- Internal Load (protects the unselected amplifier and against connection errors): 8 ohm 50W
- Weight: 1.5lbs (680g)
- Dimensions (W x D x H): 7.10 x 3.86 x 1.96 inch (181 x 99 x 50 mm)
- Switch Height (not included in the above "H" value): 0.6 inch (16 mm)
- (Optional) HEAD-TRACK™ Remote Switch, Wgt.: 0.4lbs (180g)
- (Optional) HEAD-TRACK™ Remote Switch, Dim.: 4.38 x 2.38 x 1.88 inch (112 x 61 x 48 mm)

Note: *Device specifications are subject to change without notice.*

FAQ & HELPFUL HINTS

1. I'm using a switched-mode power adapter/supply (SMPS) and hear a high pitch "whine" or other noise, why is that?

Some of these SMPS adapters are noisier than others, especially those that aren't from a reputable or brand-name MI manufacturer. Another reason could be that you're trying to run too many devices from a single adapter. Though many of them have a high current output and tout being able to power many devices, doing so can result in the development and/or increase of noise, for some reason. If this is happening, we recommend either trying another adapter, or better yet - using a universal pedalboard power supply with enough isolated outputs to power every device on your pedalboard individually; better power = (less) noise = (more) tone!

2. One (or both) of my amps has a buzz/hum, how can I get rid of it?

First, make sure that both amplifiers are properly grounded, with a 3-prong AC power-cord plug! Refer to the WARNING AND LIABILITY NOTICE section for additional information regarding amplifier grounding and safety. The most common cause of buzz, hum, and noise when connecting two amps, is a ground loop, which the HEAD-TRACK™ design prevents with its switching circuitry. The only other place for a ground loop to develop is via the shared effect(s) connected to the HEAD-TRACK™. The effect(s) sharing capabilities of the HEAD-TRACK™ has been tailored for line level and instrument level effect pedals, which are usually ground referenced via their connection to an amplifier. When using some rack mount effect processors, a ground loop may occur, resulting in hum/noise. If this occurs, and the rack processor doesn't include a ground lift and/or an isolated input and output, then an external audio isolation transformer, such as the MESA Engineering CLEARLINK™ CONVERTER/ISO TRANSFORMER, would need to be connected between the rack processor's input and output, and the HEAD-TRACK™.

3. What happens if power is disconnected from the HEAD-TRACK™ while in use?

The HEAD-TRACK™ will default to amplifier A.

4. When using the built-in stomp switch, how far from the amps and speaker cabinet can the HEAD-TRACK™ be positioned?

The limiting factor here is the length of the UNshielded speaker cables. Here are some recommendations based on the gauge of the speaker cables being used; 16AWG@10ft, 14AWG@20ft, 12AWG@30ft and 10AWG@40ft.

5. What is the “speaker” impedance of the HEAD-TRACK™?

The HEAD-TRACK™ is NOT a load box. It MUST always have speaker cabinet or load device connected to the TO SPKR CAB/LOAD jack, otherwise damage to the selected amplifier and/or the HEAD-TRACK™ can occur.

6. How would I connect a pair of cabinets since the HEAD-TRACK™ has a single output jack for the speaker cabinet?

A fair amount of speaker cabinets have parallel jacks, which would allow connecting the HEAD-TRACK™ to the first cabinet, then connecting the two cabinets together using a parallel jack. Alternatively, a parallel speaker junction box could be purchased, or made, which would do the same thing.

7. Will the HEAD-TRACK™ allow me to play through two amps at the same time, like a regular ABY box?

No, the HEAD-TRACK™ allows only one of two amplifiers to be active at any given time, driving a single speaker cabinet or load device. To play through two amps at the same time, each driving its own speaker cabinet or load device, have a look at our SWITCH-TRACK ABY™. That said, if you want to switch between two amplifiers, each driving its own speaker cabinet, and only ever play through one at any given time, then you could use the HEAD-TRACK™. Simply don't use the three speaker level jacks, and certainly feel free to benefit from being able to share effects between the two amplifier's effects loops.

8. I've read that using a delay with a head-switcher is not possible, or can lead to problems, is this true?

With most other head-switchers, placing a delay or an echo or a reverb effect, between the head-switcher outputs and the amplifier inputs, or in the effects loop of the amplifiers, is certainly a problem! This is because the head-switcher would be unable to disconnect the effect from the amplifiers, and any signal continuing such as a slap-back or trail-off, after an amplifier has been deselected, can damage the amplifier, and/or possibly the head-switcher. This meant the only place that a delay could be used was before the input of the head-switcher, and anyone who has tried using a delay in front of

a high gain amp knows it just doesn't sound right when used this way! The HEAD-TRACK™ has solved this problem by incorporating an effects loop. It is switched in sync with the instrument and speaker level signals, allowing a shared delay, echo, reverb and/or other effects, to be used in the effects loop of the amps, where they sound best!

9. Is it possible to share effects between an amp that has an effects loop and one that doesn't?

While it is possible, depending on the effect(s) and the amplifiers being used, there may be an increase in transients when switching. But you won't know until you try, so here's an example of how you would go about it - lets assume amplifier B doesn't have an effects loop... Use a short 1/4" jumper cable and connect the TO AMP B INPUT jack to the FROM SEND B jack. Then connect the TO B RTRN jack to the guitar/instrument input of amplifier B. All of the other HEAD-TRACK™ connections remain as per the CONTROLS & CONNECTIONS section. This will route the shared effect(s) to the input of amplifier B when it is selected, or through the effects loop of amplifier A, when it's selected.

10. Can the HEAD-TRACK™ be remote controlled using a MIDI switching system or a generic foot-switch?

Yes, all that's needed is a simple "latching" switch-to-ground contact closure, connected to the REMOTE SWITCH jack with a shielded 1/4" TS (tip/sleeve) instrument cable. Amplifier A is selected when the contact closure is open and closing the contact closure (shorting tip-to-sleeve) selects amplifier B. Please note that using the REMOTE SWITCH jack overrides the built-in stomp switch. MESA Engineering offers an optional foot-switch, the HEAD-TRACK™ REMOTE SWITCH, which provides instant dual-color LED indication of the selected amplifier.

11. Can I use the HEAD-TRACK™ for my bass tube amps?

Yes you can, but make sure NOT to exceed the "Amplifier & Load Ratings" as outlined in the SPECIFICATIONS section.

12. Can I use the HEAD-TRACK™ to switch between a tube amp and a solid-state or transistor amp, or even two solid-state or transistor amps?

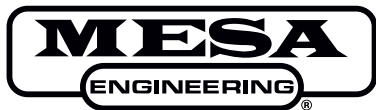
Yes, the HEAD-TRACK™ can be used with a tube amplifier and a solid-state or transistor amplifier, or two solid-state or transistor amplifiers. The HEAD-TRACK™ has an 8 ohm internal load which is designed to protect the unselected

amplifier, and against connection errors. Never, under any circumstance, go below a solid-state or transistor amplifier's minimum specified impedance.

Solid-state or transistor amplifiers should also be capable of an increased load impedance mis-match, as are tube amplifiers (see below), but they will sound quieter. Always consult the amplifier's specifications or contact the manufacturer to ensure a mis-match is within the amplifier's acceptable operating range.

IMPEDANCE MATCHING (Tube Amplifiers): Always try to match the impedance of the two amplifiers to the speaker cabinet or load device being used. Most tube amplifiers are designed to feel, function and sound their best when the output and load impedances are matched. If this is not possible, consider the following mis-match, but before proceeding, consult the tube amplifier's specifications and/or contact the manufacturer to ensure the mis-match is within the tube amplifier's acceptable range; and expect an impedance mis-matched tube amplifier to have a slightly different feel and response. Connecting a tube amplifier to a speaker cabinet or load device that is twice the amplifier's output impedance (4 ohm amp → 8 ohm cabinet/load or 8 ohm amp → 16 ohm cabinet/load) will drive the tubes less harder, extending their lifespan. Do NOT skip an impedance value when running a mis-matched amplifier and load; for example, 4 ohm amp → 16 ohm cabinet/load, should NEVER be used!

Application diagrams are available at www.mesaboogie.com



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