

HEADTRIP

Owners Manual

Document OM1102



2 Year Limited Warranty

Sound Sculpture Musical Instrument Products (Sound Sculpture) warrants the HeadTrip to the original purchaser to be free of defects in material and workmanship under normal use for a period of 2 year from the date of purchase from an authorized Sound Sculpture dealer or directly from Sound Sculpture.

Sound Sculpture's liability under this warranty is limited to repairing or replacing defective materials that show evidence of defect, and only if the product is returned for repair directly to Sound Sculpture or to the authorized Sound Sculpture dealer from which the unit was purchased.

Sound Sculpture reserves the right to make changes in design or make additions or improvements on the product without incurring any obligation to install the same on products previously manufactured.

Sound Sculpture shall not be liable for any consequential damage or loss of profits as a result of the use of this product even if Sound Sculpture is advised of the possibility of such damages or loss. In no event will Sound Sculpture's liability exceed the price paid for the product.

No other warranties are expressed or implied and Sound Sculpture neither assumes nor authorizes any person to assume for it any obligation or liability in connection with the sale of this product. In no event shall Sound Sculpture or its dealers be liable for special or consequential damages due to the use of this product. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above exclusions or limitations may not apply to you.

In Case of Difficulty

In the unlikely event that you experience problems with the HeadTrip, please refer to the section in this manual pertaining to the operation you are having difficulty with. Very often the difficulty is simply a result of improper setup or programming and can be resolved by studying this manual.

If, after reading this manual, you are unable to resolve the problem call Sound Sculpture at (303) 442-1954 during normal business hours. If we are unable to resolve your problem over the phone and determine that the unit needs repair, you will be given a return authorization number and further procedures for returning the unit. **UNAUTHORIZED REPAIR OF THE HeadTrip BY ANYONE OTHER THAN THE FACTORY VOIDS THE WARRANTY. NO UNITS WILL BE ACCEPTED FOR REPAIR WITHOUT FIRST CONTACTING THE FACTORY FOR A RETURN AUTHORIZATION NUMBER.**

Precautions and safety notes

To reduce the risk of fire or electric shock, do not expose this unit to rain or operate this unit in a wet environment.

Use only the power module supplied with the unit. Use of another module will void the warranty if damaged is caused by use of such module.

If the unit becomes physically damaged due to dropping or for other reasons, it should be returned to the factory for repair to avoid the risk of further damage to the unit or to attached units.

To avoid damage due to overheating this unit should not be exposed to, or operated in, direct sunlight for extended periods of time.

To avoid damage due to lightning, this unit should be unplugged during an electrical storm.

Copyright by Sound Sculpture Musical Instrument Products
4700 Sterling Drive Ste C - Boulder, Colorado 80301 - USA
(303) 442-1954

This publication may not be reproduced by any means in whole or in part except for personal use without written consent from Sound Sculpture Musical Instrument Products.

TABLE OF CONTENTS

OVERVIEW	3
FRONT PANEL INDICATORS	4
BACK PANEL DESCRIPTION	4
MIDI CONNECTORS	5
POWER CONNECTOR	5
INSTRUMENT INPUTS 1 AND 2	5
MONO EFFECT LOOPS 1 AND 2	5
FOOTSWITCH SIMULATOR JACKS	5
TO AMP HEAD INPUTS	6
AMP HEAD OUTPUTS (HIGH CURRENT CONNECTIONS)	6
SPEAKER CABS (HIGH CURRENT CONNECTIONS)	6
MIDI CHANNEL SELECTOR SWITCH	6
MODE SELECTOR SWITCH	6
BASIC SETUP	7
CABLING	8
GENERAL THEORY OF OPERATION	8
MODE SELECTION CHART	10
<i>FOOTSWITCH OPERATION ONE SPEAKER</i>	<i>10</i>
<i>FOOTSWITCH OPERATION TWO SPEAKERS</i>	<i>10</i>
<i>MODES FOR MIDI PROGRAM CHANGE</i>	<i>10</i>
<i>MIDI CONTROL WITH CONTROL CHANGE</i>	<i>14</i>
SPECIFICATIONS:	15

OVERVIEW

The HeadTrip is a powerful amp head/speaker routing system. The entire audio path of the HeadTrip passes through relays only (no electronics) for absolute signal purity. When the effect loops are set to the “bypass” state, there is a direct hard wired connection between the instrument and the amplifier to insure full fidelity and purity. All signals and grounds are isolated between amp heads, between instruments and between the audio and control circuitry to eliminate all ground loop problems. All foot switch simulator relays are isolated as well.

With the HeadTrip you can:

- Select either of two instruments
- Insert either or both of two mono signal processors in series into the audio path
- Route any one of up to three heads to a single speaker cabinet or two speaker cabinets
- Route any two of up to three heads to two speaker cabinets connecting any one head to one speaker and any other head to the other speaker.
- Fully protect the amp heads that are not currently selected by muting the inputs and loading the outputs
- Monitor the internal loads and mute inputs as required as added protection in the event of cable miswiring
- Switch up to 8 footswitch inputs of amp heads to replace mechanical footswitches for channel selection or reverb control
- Do all switching under MIDI control using either Program Change commands or Control Change commands (Instant Access switches)
- Do all switching using a dual momentary switch on the footswitch input with various combinations available using a Mode Selector Switch.
- The HeadTrip is capable of handling any of the following loads on it’s head to speaker audio path:
 - 1000 Watts into 16 ohms
 - 500 Watts into 8 ohms,
 - 250 Watts into 4 ohms, or
 - 125 Watts into 2 ohms
- In the event of power loss the HeadTrip automatically reverts to instrument 1, both effects bypassed, amp head A, speaker 1 and 2 and full load and mute protection on heads B and C.

FRONT PANEL INDICATORS

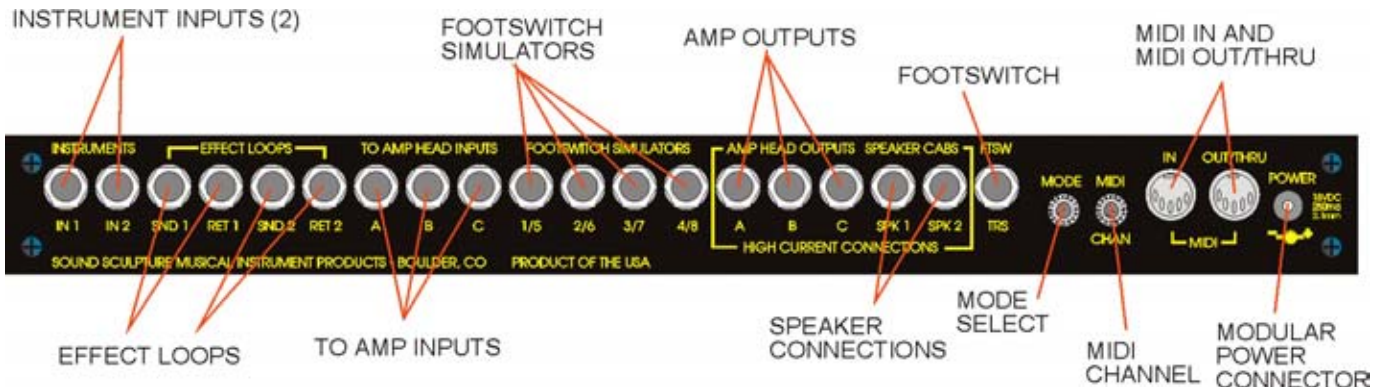


The front panel has 3 LED indicators offering a quick view of which of the 3 heads are selected. A single LED is illuminated if only one head is selected, or if two speakers are used and two heads are used to drive those 2 speakers, two LEDs will be illuminated.

MIDI DATA RECEIVE INDICATION: Whenever valid MIDI data is received, any LEDs that are not illuminated will flash momentarily to let the user know that the HeadTrip has recognized a command and has responded to it. Data is recognized if the command matches the channel that the HeadTrip is set to and if the data is a Program Change, or Control Change command in the range used by the HeadTrip and for the currently selected mode.

FAULT INDICATION: If there is a fault condition, then all 3 LEDs will blink at about a 1 second rate. A fault condition occurs if there is audio coming from an amp head that the HeadTrip feels should not have audio. A fault like this would be caused if the user inadvertently connected the wrong cables to the wrong heads. The user should immediately stop playing and check that all cables are hooked up correctly. A fault will cause all head inputs to mute to avoid damage to the amp heads or the HeadTrip. Powering down all amps, correcting cable connections, and then powering everything up again can correct a fault condition.

BACK PANEL DESCRIPTION



The rear panel consists of the following:

- Two instrument inputs
- Two mono effect loops
- Four footswitch simulator jacks connected to 8 relays using Tip-Ring-Sleeve connections
- Three amp head instrument input connections
- Three amp head speaker connections
- Two speaker cabinet connections
- Momentary footswitch input
- MIDI in and MIDI out/thru connectors
- Power connector for modular power supply

- MIDI Channel selector switch
- Mode selector switch

MIDI CONNECTORS

The MIDI IN connector is used to connect the HeadTrip to a MIDI foot controller or any MIDI device capable of transmitting Program Change commands or Control Change commands.

The MIDI OUT/THRU connector is used to connect the HeadTrip to other MIDI devices so the MIDI data from the MIDI foot controller can pass through the HeadTrip to effect other MIDI devices connected to the MIDI chain.

POWER CONNECTOR

This is the power module power input. You should use only the supplied power supply for powering the HeadTrip. If you choose to use your own power supply it must supply 18VDC-24VDC at 250ma minimum current with a 2.1mm connection center positive. Use of higher voltages can damage the HeadTrip and could void the warranty if damage occurs.

INSTRUMENT INPUTS 1 AND 2

These 2 inputs are TR (tip-ring) jacks that connect to two instruments. The HeadTrip selects either one or the other (but not both) inputs. Use these 2 inputs to select between 2 guitars for example. The two inputs are fully isolated from each other so that when one instrument is selected it's ground and signal are completely isolated from the other instrument to avoid any unnecessary stray signals from affecting the current instrument.

MONO EFFECT LOOPS 1 AND 2

These two loops are identical except that loop 1 is placed in the audio path before loop 2. In other words the two loops are wired in series. When these two loops are in the "bypass" state, then there is no connection between the effects and the audio path and the inputs to both effects are muted. When both loops are activated, then the audio signal passes from the selected instrument, through effect 1 first, then effect 2, then to the selected amp head. If only one loop is selected, then that effect is inserted only and the other effect remains unconnected and muted. To connect an effect, attach the "Send" from the HeadTrip to the input of the effect, and the "Return" to the output of the effect. If you are connecting a stereo effect, then only connect one channel of the effect.

FOOTSWITCH SIMULATOR JACKS

These four jacks are 1/4" stereo (TRS) that connect to the 8 relays that can be used to change the channels or reverb state on your amp heads. Each jack connects to 2 relays with the Sleeve connected in common to the two relays and the Tip going to one relay and the Ring going to the other. If you are using a head that has a stereo (TRS) footswitch input intended for use with a dual mechanical footswitch then use a stereo cord to connect the jack to the amp. If your amp has separate jacks for the channel and reverb, then you can use either a stereo to dual mono "Y" style cord, or you can simply use two mono cords and connect to two of the jacks on the HeadTrip. **You should not use a Y cord to connect a single jack to two heads as this will connect the grounds of the two heads together and cause a ground loop** (Although no damage will result if you do use a Y cord, you may hear a hum caused by a ground loop.). You should instead connect jack 1 to one head, jack 2 to another head and so on. The relays are steady state meaning that when activated they will either turn on and stay on or turn off and stay off (in other words, they will not pulse). This is what you need if you are replacing a push on/push off type of footswitch used by most amp manufacturers. If your amp requires a momentary switch for it's footswitch control then you cannot use the footswitch simulators.

TO AMP HEAD INPUTS

These three 1/4" mono (TS) outputs labeled A, B, and C connect to the instrument inputs of the three amp heads. If you are only switching between two amp heads, then leave head C disconnected. Use quality shielded 1/4" mono instrument cables to attach these 3 outputs to the three amp heads. If a head is not selected these connections mute the input to the unused heads.

AMP HEAD OUTPUTS (HIGH CURRENT CONNECTIONS)

These three 1/4" mono (TS) outputs labeled A, B, and C connect to the speaker connection on each of the three amp heads. If you are only switching between two amp heads, then leave head C disconnected. Use heavy gauge 1/4" mono speaker cables to attach these 3 outputs to the three amp heads. You should use shielded cables for these connections if you can get heavy gauge cables to prevent possible crosstalk, but unshielded cables work fine for this section. Be sure to use HEAVY double strand "speaker wire" type cables. **VERY IMPORTANT: BE SURE THAT YOU CONNECT THE "A" AMP HEAD OUTPUT TO THE SAME HEAD THAT YOU CONNECTED THE "A" "TO AMP HEAD INPUTS" CABLE. LIKEWISE FOR THE "B" HEAD AND THE "C" HEAD. IF FOR EXAMPLE YOU ACCIDENTLY CONNECT AN "A" CABLE ON THE INPUT TO THE HEAD AND A "B" CABLE TO THE OUTPUT OF THE HEAD, YOU ARE CAUSING A POTENTIALLY DAMAGING SITUATION AND THE HEADTRIP WILL GO INTO A "FAULT" MODE MUTING ALL INPUTS UNTIL THE SITUATION IS CORRECTED.**

SPEAKER CABS (HIGH CURRENT CONNECTIONS)

These two outputs connect to the two speaker cabinets. If you are only connecting one speaker, then connecting it to SPK1 and leave SPK2 disconnected. Use heavy gauge 1/4" mono speaker cables to attach these 2 outputs to the two speaker cabinets. You should use shielded cables for these connections but they are not required. Use HEAVY double strand "speaker wire" type cables.

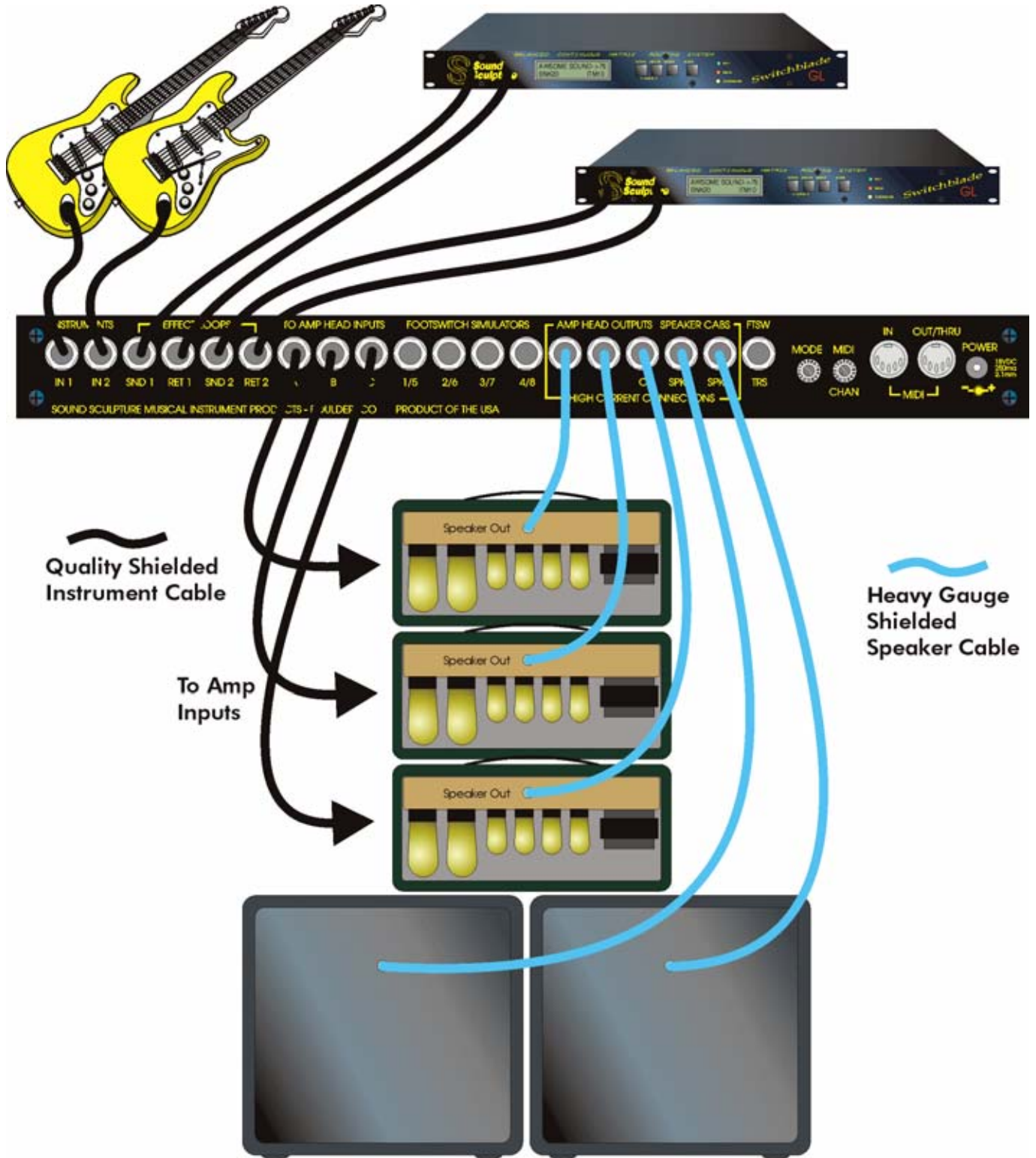
MIDI CHANNEL SELECTOR SWITCH

This switch is used to select the MIDI channel that the HeadTrip will respond to when receiving MIDI information. The Switch is labeled 0-9 and A-F representing MIDI channels 1-16. If more than one HeadTrip is connected to a MIDI port, than each HeadTrip may be assigned a unique MIDI channel if you wish to control each HeadTrip separately. You can set them both to the same MIDI channel if you wish to have both HeadTrips "track" each other where both units respond the same way when receiving a single Program Change command or Control Change command. Use a semi-fine screwdriver and gently turn the dial to select the MIDI channel. The channel is only detected during power up, so be sure to change the channel before power is applied. The Switch is set at the factory to MIDI channel 1 (0 on the switch).

MODE SELECTOR SWITCH

This switch is used to select one of several operating modes in the HeadTrip. Not all positions are used. A specific mode is selected depending on how you plan to use the HeadTrip. For example, if you are only going to control the HeadTrip with MIDI Program Change commands and/or Control Change commands (Instant Access Switches) and you are going to use it with 2 speaker cabinets, then you may select one of the modes appropriate for 2 speaker cabinets and MIDI control. If you will be using the HeadTrip with one speaker cabinet and MIDI control, you would select a different mode so that no amp signals go to the unused speaker output. If you are only going to use the HeadTrip with a dual momentary footswitch, then you will select the mode that will give you the desired functions when used with the Footswitch. You cannot control the HeadTrip using both the footswitch and MIDI Program Change commands since different mode settings are used for each of these, but you may use both the footswitch and Midi Control Change or MIDI Program Change and Midi Control Change. Refer to the Mode Selection Charts for all available modes and the best ones to use for your application.

BASIC SETUP



CABLING

Referring to the diagram, cable up instruments, amps, effects, and speakers as shown and described here.

FOR INSTRUMENTS, EFFECTS, AND AMP INPUTS USE QUALITY SHIELDED INSTRUMENT CABLES. LOW INDUCTANCE, LOW CAPACITANCE, DENSE SHILDING CABLES ARE BEST

Instruments: Connect one or two passive or active instruments to the instrument inputs labled IN 1 and IN 2.

Effects: Connect one or two signal processors to the two effects loops if you wish. Connect the Send (labeled SND 1 or SND 2) to the input of the effect device. Connect the Return (labeled RET 1 or RET 2) to the output of the signal processor

Amp Inputs: Connect the amp head instrument inputs of up to 3 amp heads to the jacks labeled A, B, C under the "TO AMP HEAD INPUTS" area.

Referring to the diagram, cable up the amp head speaker outputs and the speakers as shown and described here.

FOR AMP HEAD SPEAKER OUTPUTS AND SPEAKERS USE MEDIUM TO HEAVY GAUGE SHIELDED SPEAKER CABLES SUCH AS THOSE YOU MIGHT USE TO CONNECT HIGH WATTAGE HOME STEREO SPEAKERS. You may also use unshielded cable here, but to prevent feedback (howling) caused by crosstalk between the amp speaker signal and the amp input signal, use shielded cable.

Amp Speaker Connections: Connect the amp head speaker outputs of up to 3 amp heads to the jacks labeled A, B, C under the "AMP HEAD OUTPUTS" area. **CAUTION: BE SURE TO CONNECT THE SAME HEAD TO THE SAME INPUT AND OUTPUT LETTERS. FOR EXAMPLE IF YOU CONNECT THE "A" HEAD INPUT JACK TO THE AMP HEAD INPUT, THEN YOU MUST CONNECT THE "A" AMP OUTPUT JACK TO THE SAME AMP'S OUTPUT, DO THE SAME FOR "B" (SECOND AMP) AND "C" (THIRD AMP). MAKING A MISTAKE IN THIS AREA WILL CAUSE A FAULT CONDITION FORCING THE HEADTRIP TO MUTE ALL AUDIO TO THE HEAD INPUTS.**

Speakers: Connect one or two speaker cabinets to the speaker cabs jacks labeled SPK 1 and SPK 2.

GENERAL THEORY OF OPERATION

Every effort was made in the design of the HeadTrip to maintain the highest quality signal path for the best possible sound. Additional design features were added to enhance switching quality and for amp head protection.

The HeadTrip uses quality relays to pass the signal through various sections of the HeadTrip and at no time does the audio pass through any electronics or passive devices such as resistors or capacitors. Because of this the instrument is always directly connected to the input of the amplifiers (except when signal processors are inserted) for the most perfect purity available. If the effect loops are in the bypass state, the audio signal completely bypasses the effect to prevent any degradation of the audio signal.

To prevent ground loop problems which can result in hum, both ground and signal isolation is maintained between various sections of the HeadTrip. Full isolation of both the ground and signal lines are maintained between used and unused amp heads to prevent loops between amp heads. If two instruments are connected, then only the selected instrument is connected to the audio path and the unselected instrument is isolated (both signal and ground) from the audio path to prevent noise bleeding in from the unused instrument. Full isolation is also maintained between used and unused speaker cabinets. The footswitch simulator jacks are also similarly isolated from each other and from the rest of the HeadTrip circuitry to prevent ground coupling between two or more amps when the footswitch simulators are connected to the amps.

Although most modern amplifiers are protected in the event that the speaker output of the amp is disconnected from a load (the speaker) the HeadTrip integrates full amplifier protection to prevent amp damage for those amps that do not have integral protection. When properly connected, the HeadTrip will mute (short the input signal to ground) the input of any amplifier

heads that are not currently selected. In addition, an 8 ohm resistor load is connected to the speaker output of the unused heads. This load is removed via relays for all heads that are currently connected so only the speaker is connected to the amp head. The loading/unloading/muting sequence is timed such that the switching never leaves a head unloaded even momentarily. Since the inputs are muted, the load resistor does not have to be a high wattage device and will not generate any substantial heat so no ventilation or cooling is required. Since incorrectly cabled setups can cause the load resistors to get an amp output signal, the current through the load resistors is monitored and if any signal is detected across the resistors, optically coupled sensing circuitry will notify the processor to go into a fault detect mode and force all inputs to mute until the error is corrected. In addition, if the event that muting does not work for any reason, auto-reset fuses inserted in series with the load resistors protect the resistors from damage due to overheating.

PLEASE NOTE THAT THE PROTECTION SCHEME USED IN THE HEADTRIP IS NOT PERFECT AND MAY NOT PREVENT DAMAGE TO YOUR AMP HEADS IN ALL CIRCUMSTANCES. IMPROPER USE OF THE HEADTRIP THROUGH CABLE MISWIRING, OR TEMPORARY OR PERMANENT FAILURE OF THE HEADTRIP ELECTRONICS MAY CAUSE MISLOADING OF UNUSED AMPS WHICH CAN POSSIBLY LEAD TO AMP HEAD FAILURE. ALTHOUGH SUCH FAILURES ARE VERY UNLIKELY, THE POSSIBILITY OF SUCH FAILURE DOES EXIST AND FOR THIS REASON SOUND SCULPTURE CANNOT BE HELD RESPONSIBLE FOR AMP HEAD FAILURE IN THE EVENT OF TEMPORARY OR PERMANENT ELECTRONIC FAILURE OF THE HEADTRIP OR FOR FAILURES CAUSED BY THE USER IMPROPERLY CONNECTING THE HEADTRIP TO THE AMPLIFIERS AND SPEAKERS. IF YOU ARE CONCERNED ABOUT DAMAGE TO YOUR AMP HEAD IN THE EVENT OF A HEADTRIP FAILURE OR OTHER FAILURE OR DUE TO USER MISWIRING, THEN YOU SHOULD CONSULT WITH YOUR AMP HEAD MANUFACTURER TO DETERMINE IF THE AMP HAS BUILT IN PROTECTION OR WHAT DAMAGE IF ANY COULD OCCUR TO YOUR AMP HEAD IN THE EVENT OF OUTPUT UNLOADING.

MODE SELECTION CHART

Refer to this chart to select the desired mode of operation. To use the charts, first determine whether you will be operating the HeadTrip with a dual momentary footswitch or under MIDI control using Program Change commands. You cannot use the HeadTrip with both the footswitch and Program Change commands. You can use MIDI Control Change commands with all available modes since Control Change can be used in conjunction with the footswitch or with MIDI Program Change .

FOOTSWITCH OPERATION ONE SPEAKER

SWITCH 1 REFERS TO THE TIP-SLEEVE CONNECTION OF THE FOOTSWITCH. SWITCH 2 REFERS TO THE RING-SLEEVE CONNECTION OF THE FOOTSWITCH

FOOTSWITCH MODES FOR USE WITH ONLY ONE SPEAKER CABINET CONNECTED (SPK1 JACK).

MODE	SWITCH 1 OPERATION	SWITCH 2 OPERATION
4	Swap head A and B to speaker 1	Swap head C and A/B to speaker 1
5	Swap head A and B to speaker 1	Toggle effect loop 1 on/off
6	Swap head A and B to speaker 1	Rotate between effect loop 1, effect loop 2, and bypass
7	Swap head A and B to speaker 1	Toggle foot simulator relays 1-4 as a group
8	Rotate among head A,B, & C to speaker 1	Toggle effect loop 1 on/off
9	Rotate among head A,B, & C to speaker 1	Rotate between effect loop 1, effect loop 2, and bypass
A	Rotate among head A,B, & C to speaker 1	Toggle foot simulator relays 1-4 as a group
B	Toggle effect loop 1 on/off	Toggle effect loop 2 on/off

FOOTSWITCH OPERATION TWO SPEAKERS

FOOTSWITCH MODES FOR USE WITH TWO SPEAKERS CONNECTED. DO NOT USE THESE MODES IF ONLY ONE SPEAKER IS CONNECTED

MODE	SWITCH 1 OPERATION	SWITCH 2 OPERATION
C	Swap head A and B to currently selected speaker	Toggle between speaker 1 and speaker 2
D	Rotate among head A,B, & C to selected speaker	Toggle between speaker 1 and speaker 2

MODES FOR MIDI PROGRAM CHANGE

MODES FOR USE WITH MIDI CONTROL USING PROGRAM CHANGE COMMANDS

If you are going to use MIDI control using Program Change commands, then select the mode most appropriate to your setup.

MODE 0:

Use this mode if you are using 2 speakers and if you wish to have control over selecting which instrument, which effect loops, which of 3 amp heads, and which of two speakers you wish to select. This mode cannot be used if you wish to select the footswitch simulator outputs. The Program Number you will use determines which combination of devices are selected. There is a logic in how the Program number determines the selection in that bit 0 of the number selects the instrument (0=instrument 1, and 1= instrument 2), bit 1 determines if effect loop 1 is on or off and so on which makes it easy to remember the numbers if you have to, but for simplicity, all the program numbers and what they do are listed here.

PROG	INSTRUMENT	FX 1	FX 2	HD/SPK 1	HE/SPK 2	PROG	INSTRUMENT	FX 1	FX 2	HD/SPK 1	HE/SPK 2
0	1	OFF	OFF	MUTE	MUTE	64	1	OFF	OFF	MUTE	B
1	2	OFF	OFF	MUTE	MUTE	65	2	OFF	OFF	MUTE	B
2	1	ON	OFF	MUTE	MUTE	66	1	ON	OFF	MUTE	B
3	2	ON	OFF	MUTE	MUTE	67	2	ON	OFF	MUTE	B
4	1	OFF	ON	MUTE	MUTE	68	1	OFF	ON	MUTE	B
5	2	OFF	ON	MUTE	MUTE	69	2	OFF	ON	MUTE	B
6	1	ON	ON	MUTE	MUTE	70	1	ON	ON	MUTE	B
7	2	ON	ON	MUTE	MUTE	71	2	ON	ON	MUTE	B
8	1	OFF	OFF	A	MUTE	72	1	OFF	OFF	A	B
9	2	OFF	OFF	A	MUTE	73	2	OFF	OFF	A	B
10	1	ON	OFF	A	MUTE	74	1	ON	OFF	A	B
11	2	ON	OFF	A	MUTE	75	2	ON	OFF	A	B
12	1	OFF	ON	A	MUTE	76	1	OFF	ON	A	B
13	2	OFF	ON	A	MUTE	77	2	OFF	ON	A	B
14	1	ON	ON	A	MUTE	78	1	ON	ON	A	B
15	2	ON	ON	A	MUTE	79	2	ON	ON	A	B
16	1	OFF	OFF	B	MUTE	80	1	OFF	OFF	B	B
17	2	OFF	OFF	B	MUTE	81	2	OFF	OFF	B	B
18	1	ON	OFF	B	MUTE	82	1	ON	OFF	B	B
19	2	ON	OFF	B	MUTE	83	2	ON	OFF	B	B
20	1	OFF	ON	B	MUTE	84	1	OFF	ON	B	B
21	2	OFF	ON	B	MUTE	85	2	OFF	ON	B	B
22	1	ON	ON	B	MUTE	86	1	ON	ON	B	B
23	2	ON	ON	B	MUTE	87	2	ON	ON	B	B
24	1	OFF	OFF	C	MUTE	88	1	OFF	OFF	C	B
25	2	OFF	OFF	C	MUTE	89	2	OFF	OFF	C	B
26	1	ON	OFF	C	MUTE	90	1	ON	OFF	C	B
26	2	ON	OFF	C	MUTE	91	2	ON	OFF	C	B
28	1	OFF	ON	C	MUTE	92	1	OFF	ON	C	B
29	2	OFF	ON	C	MUTE	93	2	OFF	ON	C	B
30	1	ON	ON	C	MUTE	94	1	ON	ON	C	B
31	2	ON	ON	C	MUTE	95	2	ON	ON	C	B
32	1	OFF	OFF	MUTE	A	96	1	OFF	OFF	MUTE	C
33	2	OFF	OFF	MUTE	A	97	2	OFF	OFF	MUTE	C
34	1	ON	OFF	MUTE	A	98	1	ON	OFF	MUTE	C
35	2	ON	OFF	MUTE	A	99	2	ON	OFF	MUTE	C
36	1	OFF	ON	MUTE	A	100	1	OFF	ON	MUTE	C
37	2	OFF	ON	MUTE	A	101	2	OFF	ON	MUTE	C
38	1	ON	ON	MUTE	A	102	1	ON	ON	MUTE	C
39	2	ON	ON	MUTE	A	103	2	ON	ON	MUTE	C
40	1	OFF	OFF	A	A	104	1	OFF	OFF	A	C
41	2	OFF	OFF	A	A	105	2	OFF	OFF	A	C
42	1	ON	OFF	A	A	106	1	ON	OFF	A	C
43	2	ON	OFF	A	A	107	2	ON	OFF	A	C
44	1	OFF	ON	A	A	108	1	OFF	ON	A	C
45	2	OFF	ON	A	A	109	2	OFF	ON	A	C
46	1	ON	ON	A	A	110	1	ON	ON	A	C
47	2	ON	ON	A	A	111	2	ON	ON	A	C
48	1	OFF	OFF	B	A	112	1	OFF	OFF	B	C
49	2	OFF	OFF	B	A	113	2	OFF	OFF	B	C
50	1	ON	OFF	B	A	114	1	ON	OFF	B	C

51	2	ON	OFF	B	A	115	2	ON	OFF	B	C
52	1	OFF	ON	B	A	116	1	OFF	ON	B	C
53	2	OFF	ON	B	A	117	2	OFF	ON	B	C
54	1	ON	ON	B	A	118	1	ON	ON	B	C
55	2	ON	ON	B	A	119	2	ON	ON	B	C
56	1	OFF	OFF	C	A	120	1	OFF	OFF	C	C
57	2	OFF	OFF	C	A	121	2	OFF	OFF	C	C
58	1	ON	OFF	C	A	122	1	ON	OFF	C	C
59	2	ON	OFF	C	A	123	2	ON	OFF	C	C
60	1	OFF	ON	C	A	124	1	OFF	ON	C	C
61	2	OFF	ON	C	A	124	2	OFF	ON	C	C
62	1	ON	ON	C	A	126	1	ON	ON	C	C
63	2	ON	ON	C	A	127	2	ON	ON	C	C

MODE 1:

Use this mode if you are using only 1 speaker cabinet and you wish to have control over selecting which instrument, which effect loops, and which of 3 amp heads you wish to select. It is the same as Mode 0 except that there is no second. Instead the additional numbers are used to select groups of the Footswitch simulator relays. With this mode you can turn on or off the 1,2,3,4 relays as a group (to turn on or off the overdrive of all amplifiers) and also turn on or off relays 5,6,7,8 as a group (to turn on or off the reverb of all amplifiers).

PROG	INSTRUMENT	FX 1	FX 2	HD/SPK 1	1234	5678	PROG	INSTRUMENT	FX 1	FX 2	HD/SPK 1	1234	5678
0	1	OFF	OFF	MUTE	OFF	OFF	64	1	OFF	OFF	MUTE	OFF	ON
1	2	OFF	OFF	MUTE	OFF	OFF	65	2	OFF	OFF	MUTE	OFF	ON
2	1	ON	OFF	MUTE	OFF	OFF	66	1	ON	OFF	MUTE	OFF	ON
3	2	ON	OFF	MUTE	OFF	OFF	67	2	ON	OFF	MUTE	OFF	ON
4	1	OFF	ON	MUTE	OFF	OFF	68	1	OFF	ON	MUTE	OFF	ON
5	2	OFF	ON	MUTE	OFF	OFF	69	2	OFF	ON	MUTE	OFF	ON
6	1	ON	ON	MUTE	OFF	OFF	70	1	ON	ON	MUTE	OFF	ON
7	2	ON	ON	MUTE	OFF	OFF	71	2	ON	ON	MUTE	OFF	ON
8	1	OFF	OFF	A	OFF	OFF	72	1	OFF	OFF	A	OFF	ON
9	2	OFF	OFF	A	OFF	OFF	73	2	OFF	OFF	A	OFF	ON
10	1	ON	OFF	A	OFF	OFF	74	1	ON	OFF	A	OFF	ON
11	2	ON	OFF	A	OFF	OFF	75	2	ON	OFF	A	OFF	ON
12	1	OFF	ON	A	OFF	OFF	76	1	OFF	ON	A	OFF	ON
13	2	OFF	ON	A	OFF	OFF	77	2	OFF	ON	A	OFF	ON
14	1	ON	ON	A	OFF	OFF	78	1	ON	ON	A	OFF	ON
15	2	ON	ON	A	OFF	OFF	79	2	ON	ON	A	OFF	ON
16	1	OFF	OFF	B	OFF	OFF	80	1	OFF	OFF	B	OFF	ON
17	2	OFF	OFF	B	OFF	OFF	81	2	OFF	OFF	B	OFF	ON
18	1	ON	OFF	B	OFF	OFF	82	1	ON	OFF	B	OFF	ON
19	2	ON	OFF	B	OFF	OFF	83	2	ON	OFF	B	OFF	ON
20	1	OFF	ON	B	OFF	OFF	84	1	OFF	ON	B	OFF	ON
21	2	OFF	ON	B	OFF	OFF	85	2	OFF	ON	B	OFF	ON
22	1	ON	ON	B	OFF	OFF	86	1	ON	ON	B	OFF	ON
23	2	ON	ON	B	OFF	OFF	87	2	ON	ON	B	OFF	ON
24	1	OFF	OFF	C	OFF	OFF	88	1	OFF	OFF	C	OFF	ON
25	2	OFF	OFF	C	OFF	OFF	89	2	OFF	OFF	C	OFF	ON
26	1	ON	OFF	C	OFF	OFF	90	1	ON	OFF	C	OFF	ON
26	2	ON	OFF	C	OFF	OFF	91	2	ON	OFF	C	OFF	ON
28	1	OFF	ON	C	OFF	OFF	92	1	OFF	ON	C	OFF	ON

29	2	OFF	ON	C	OFF	OFF	93	2	OFF	ON	C	OFF	ON
30	1	ON	ON	C	OFF	OFF	94	1	ON	ON	C	OFF	ON
31	2	ON	ON	C	OFF	OFF	95	2	ON	ON	C	OFF	ON
32	1	OFF	OFF	MUTE	ON	OFF	96	1	OFF	OFF	MUTE	ON	ON
33	2	OFF	OFF	MUTE	ON	OFF	97	2	OFF	OFF	MUTE	ON	ON
34	1	ON	OFF	MUTE	ON	OFF	98	1	ON	OFF	MUTE	ON	ON
35	2	ON	OFF	MUTE	ON	OFF	99	2	ON	OFF	MUTE	ON	ON
36	1	OFF	ON	MUTE	ON	OFF	100	1	OFF	ON	MUTE	ON	ON
37	2	OFF	ON	MUTE	ON	OFF	101	2	OFF	ON	MUTE	ON	ON
38	1	ON	ON	MUTE	ON	OFF	102	1	ON	ON	MUTE	ON	ON
39	2	ON	ON	MUTE	ON	OFF	103	2	ON	ON	MUTE	ON	ON
40	1	OFF	OFF	A	ON	OFF	104	1	OFF	OFF	A	ON	ON
41	2	OFF	OFF	A	ON	OFF	105	2	OFF	OFF	A	ON	ON
42	1	ON	OFF	A	ON	OFF	106	1	ON	OFF	A	ON	ON
43	2	ON	OFF	A	ON	OFF	107	2	ON	OFF	A	ON	ON
44	1	OFF	ON	A	ON	OFF	108	1	OFF	ON	A	ON	ON
45	2	OFF	ON	A	ON	OFF	109	2	OFF	ON	A	ON	ON
46	1	ON	ON	A	ON	OFF	110	1	ON	ON	A	ON	ON
47	2	ON	ON	A	ON	OFF	111	2	ON	ON	A	ON	ON
48	1	OFF	OFF	B	ON	OFF	112	1	OFF	OFF	B	ON	ON
49	2	OFF	OFF	B	ON	OFF	113	2	OFF	OFF	B	ON	ON
50	1	ON	OFF	B	ON	OFF	114	1	ON	OFF	B	ON	ON
51	2	ON	OFF	B	ON	OFF	115	2	ON	OFF	B	ON	ON
52	1	OFF	ON	B	ON	OFF	116	1	OFF	ON	B	ON	ON
53	2	OFF	ON	B	ON	OFF	117	2	OFF	ON	B	ON	ON
54	1	ON	ON	B	ON	OFF	118	1	ON	ON	B	ON	ON
55	2	ON	ON	B	ON	OFF	119	2	ON	ON	B	ON	ON
56	1	OFF	OFF	C	ON	OFF	120	1	OFF	OFF	C	ON	ON
57	2	OFF	OFF	C	ON	OFF	121	2	OFF	OFF	C	ON	ON
58	1	ON	OFF	C	ON	OFF	122	1	ON	OFF	C	ON	ON
59	2	ON	OFF	C	ON	OFF	123	2	ON	OFF	C	ON	ON
60	1	OFF	ON	C	ON	OFF	124	1	OFF	ON	C	ON	ON
61	2	OFF	ON	C	ON	OFF	124	2	OFF	ON	C	ON	ON
62	1	ON	ON	C	ON	OFF	126	1	ON	ON	C	ON	ON
63	2	ON	ON	C	ON	OFF	127	2	ON	ON	C	ON	ON

MODE 2:

Use this mode if you are using 2 speakers and if you wish to use Program Change commands to select your heads and speakers only while using Control Change to select your instrument, effects loops, and footswitch simulator relays. Only Program numbers 0-15 are valid and program numbers higher than this will not be recognized.

PROG	HD/SPK 1	HD/SPK 2	PROG	HD/SPK 1	HE/SPK 2
0	MUTE	MUTE	8	MUTE	B
1	A	MUTE	9	A	B
2	B	MUTE	10	B	B
3	C	MUTE	11	C	B
4	MUTE	A	12	MUTE	C
5	A	A	13	A	C
6	B	A	14	B	C
7	C	A	15	C	C

MODE 3:

Use this mode if you are using 1 speaker cabinet and if you wish to use Program Change commands to select your heads only while using Control Change to select your instrument, effects loops, and footswitch simulator relays. Only Program numbers 0-3 are valid and program numbers higher than this will not be recognized.

PROG	HD/SPK 1
0	MUTE
1	A
2	B
3	C

MIDI CONTROL WITH CONTROL CHANGE**MIDI CONTROL USING CONTROL CHANGE COMMANDS**

If you are going to use MIDI Control Change commands to control the HeadTrip then use the following chart to determine which Control Change numbers to use to perform specific functions. Note that there are no specific modes when using Control Change although you may have selected a particular mode if you wish to use Control Change in conjunction with Program Change. If you chose to do this, then select either Mode 2 or Mode 3. You can also use Control Change in conjunction with the footswitch in which case you should select the mode most appropriate for your footswitch operation and use Control Change to handle operations not controlled by the footswitch.

CONTROLLER NUMBER	OPERATION (CONTROLLER VALUE <64)	OPERATION (CONTROLLER VALUE >=64)
0	INSTRUMENT 1	INSTRUMENT 2
1	EFFECT LOOP 1 BYPASS	EFFECT LOOP 1 INSERTED
2	EFFECT LOOP 2 BYPASS	EFFECT LOOP 2 INSERTED
3	FOOTSWITCH SIMULATOR 1 OFF	FOOTSWITCH SIMULATOR 1 ON
4	FOOTSWITCH SIMULATOR 2 OFF	FOOTSWITCH SIMULATOR 2 ON
5	FOOTSWITCH SIMULATOR 3 OFF	FOOTSWITCH SIMULATOR 3 ON
6	FOOTSWITCH SIMULATOR 4 OFF	FOOTSWITCH SIMULATOR 4 ON
7	FOOTSWITCH SIMULATOR 5 OFF	FOOTSWITCH SIMULATOR 5 ON
8	FOOTSWITCH SIMULATOR 6 OFF	FOOTSWITCH SIMULATOR 6 ON
9	FOOTSWITCH SIMULATOR 7 OFF	FOOTSWITCH SIMULATOR 7 ON
10	FOOTSWITCH SIMULATOR 8 OFF	FOOTSWITCH SIMULATOR 8 ON
11	SELECT HEAD A TO CURRENT SPEAKER(S)	SELECT HEAD B TO CURRENT SPEAKER(S)
12	SELECT HEAD GROUP A/B TO CURRENT SPEAKER(S)	SELECT HEAD C TO CURRENT SPEAKER(S)
13	SELECT SPEAKER 1 TO CURRENT HEAD	SELECT SPEAKER 2 TO CURRENT HEAD
14	SELECT ONLY ONE SPEAKER	SELECT BOTH SPEAKERS
15	UNMUTE	MUTE ALL HEADS
16	TURN FOOTSWITCH SIM RELAYS 1-8 OFF	TURN FOOTSWITCH SIM RELAYS 1-8 ON
17	TURN FOOTSWITCH SIM RELAYS 1-4 OFF	TURN FOOTSWITCH SIM RELAYS 1-4 ON
18	TURN FOOTSWITCH SIM RELAYS 5-8 OFF	TURN FOOTSWITCH SIM RELAYS 5-8 ON
19	TURN FOOTSWITCH SIM RELAYS 1,3 OFF	TURN FOOTSWITCH SIM RELAYS 1,3 ON
20	TURN FOOTSWITCH SIM RELAYS 2,4 OFF	TURN FOOTSWITCH SIM RELAYS 2,4 ON

SPECIFICATIONS:

MAXIMUM CURRENT CAPABILITY HIGH CURRENT SECTION	8 AMPS
MAXIMUM POWER CAPABILITY HIGH CURRENT SECTION	1000 WATTS INTO 16 OHMS 500 WATTS INTO 8 OHMS 250 WATTS INTO 4 OHMS 125 WATTS INTO 2 OHMS
AUDIO PATHS	ALL AUDIO PATHS RELAY BASED
FOOTSWITCH TYPE	TRS (TIP-RING-SLEEVE) ¼" JACK TO DUAL MOMENTARY FOOTSWITCH
POWER MODULE INPUT	18VDC-24VDC @>250MA
POWER MODULE CONNECTOR	2.1MM CENTER POSITIVE
DIMENSIONS	19" BY 5" BY 1.7" (1U HEIGHT)
WEIGHT	4 LBS
SHIPPING WEIGHT	7 LBS
WARRANTY	2 years