

# User's Manual

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GENESIS TO MUSICAL INSPIRATIONS



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# EXODUS MX 1602DSP

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## IMPORTANT SAFETY INSTRUCTIONS

**CAUTION:** To reduce the risk of electrical shock, do not remove the top cover (or the rear section). No user serviceable parts inside; refer servicing to qualified personnel.

**WARNING:** To reduce the risk of electrical shock or fire, do not expose this appliance to rain or moisture. The apparatus shall not be exposed to dripping or splashing and no object filled with liquids, such as vases, shall be placed on the apparatus.



This symbol, whenever it appears, alerts you to the presence of uninsulated dangerous voltage inside the enclosure-voltage that may be sufficient to constitute a risk of shock.



This symbol, whenever it appears, alerts you to important operating and maintenance instructions in the accompanying literature. Please read the manual carefully.

- Read and keep these instructions in a safe place for future reference.
- Heed all warnings and follow all instructions.
- Do not use this apparatus near water.
- Do not attempt to clean this unit with chemical solvents as this may damage the finish. Clean only with dry cloth.
- Do not block any ventilation openings.
- Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- Do not defeat the purpose of the polarized or grounding type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for the replacement of the obsolete outlet.
- Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- Use only attachments/accessories specified by the manufacturer.
- Unplug this apparatus during lightning storms or when unused for long periods of time.
- Always shut down power supply when not in use to save energy and for prolonged lifespan.
- **CAUTION** – These service instructions are for use by qualified service personnel only. To reduce the risk of electrical shock, do not perform any servicing other than contained in the operation instructions unless you are qualified to do so.

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## FOREWORD



Dear Friends,

Thank you very much for your confidence and support by purchasing quality products by **GECKO INSTRUMENTS**. I'm indeed very delighted that we have come this far, all the efforts that every member on the team has put in has borne fruits. All of our products are developed based on ideas, suggestions, feedbacks, and needs of musicians, recording artists, and sound engineers of this modern music world and recording industry.

We believe in giving the best of quality and features at the best affordable price. It's been our philosophy all this while that good sound can be achieved without having to burn a hole in your pocket. Our engineering team is constantly doing research and development to meet this objective. We thank God that with HIS grace, we have finally able to produce such high quality professional and studio grade audio equipment that is set to change mindsets.

Here, on behalf of **GECKO INSTRUMENTS**, I like to pledge our continuing commitment to uphold our traditions in serving communities around the world with more value-added quality products.

Thank you very much,

**Daniel Foo**  
**Founder/Chairman**  
**GECKO Group of Companies**

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# EXODUS MX 1602DSP

## 1. INTRODUCTION

### Ultra low noise 16-Channel Mic/Line Mixer

- 16 Mono input channels with gold plated XLRs and balanced Line Inputs
- Ultra-low noise discrete Mic Preamps with +48 V Phantom Power
- Extremely high headroom, offering wider dynamic range
- Balanced Inputs for highest signal integrity
- Peak LEDs on all Mono Channels
- 2 Aux Send per channel for external effects and monitoring
- Digital effect system incorporated
- Separated Master Mix, Control Room/Headphone Output
- Highly accurate 10-segment Bargraph Meters

## 2. INPUT CHANNEL SECTION

### 1. BALANCED INPUT (MIC)

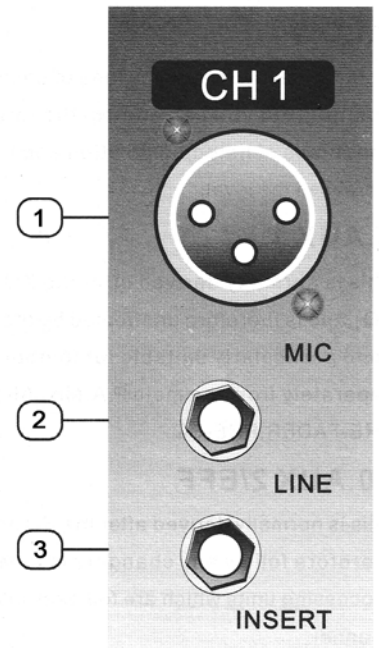
Electronically Balanced Input, accepting a standard XLR male connector.

### 2. LINE INPUT

The Unbalanced Mic input is provided for the use of an unbalance Mic and is designed to accept an unbalanced high impedance input signal. (e.g.: for connection of Deck, Turntable, Keyboard etc...)

### 3. INSERT

The INSERT is a break point in the input path. It allows the signal to be taken out from the mixer, through external dynamic processing equipment such as **GECKO INSTRUMENTS** ETERNITY CMP 2408 Compressor/Gate, and then back to the mixer to continue the final mix output.



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## 4. TRIM

This adjusts the input sensitivity of each channel and its constant signal input level.

## 5. LOW CUT

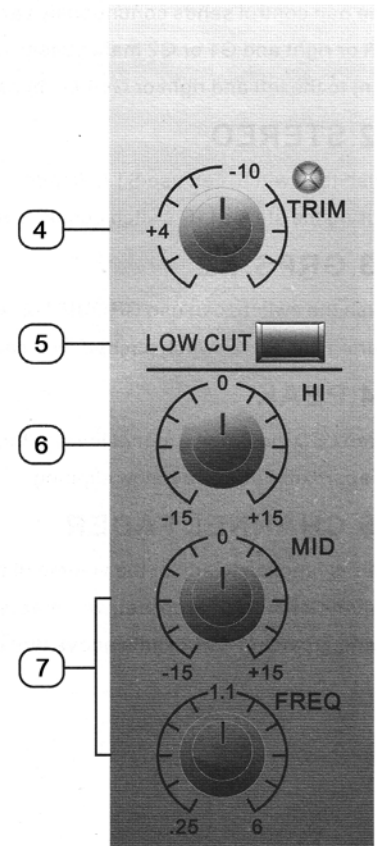
By engaging the slider-switch, it inserts the 18 dB per octave 75 Hz low cut filter in the signal path. This low cut filter is useful on live vocals to reduce stage rumble or “popping” from microphones. It can also be use to cut off low frequency hums.

## 6. HIGH

Control the high frequency tone of each channel. Firstly, set this control to the 12 o'clock position. Thereafter you can adjust the high frequency tone according to the speaker, the listening position and listener's preference.

## 7. MID and FREQUENCY

This equalization has a “bell” response i.e. having reached maximum amplification or attenuation at the selected frequency, the amplitude response returns to zero either side of that frequency. The FREQ at which this occurs is variable between 250 Hz. The Gain (MID) is variable between 15 dB at the selected frequency with a fixed of 1.5 Q.



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## 8. LOW

Control the low frequency tone of each channel. Firstly, set this control to the 12' clock position. Thereafter you can control the low frequency tone according to the speaker, the listening position and listener's preference.

## 9. AUX 1

This is normally derived after the EQ section and before channel fader (PREFADER, POST-EQ), and is therefore unaffected by the fader position and routing status. This makes the AUX 1 particularly suitable for fold back or monitor feeds, which need to be controlled separately from the main P. A. Mix.

## 10. AUX 2/EFF

This is normally derived after the EQ and channel fader (POST FADER, POST-EQ), and Therefore follows any changes in fader level. They are normally used to drive effect processing units which are fed back into the mixer and which must fade out with the input channel.

## 11. PAN

The PAN control sends continuously variable amounts of the post fader signal to either the left or right and G1 or G2 main busses. In the center position, equal amount of signal are sent to the left and right or G1 and G2 busses.

## 12. L-R

Push the switch to route channel signal to L-R fader.

## 13. G 1 and G 2

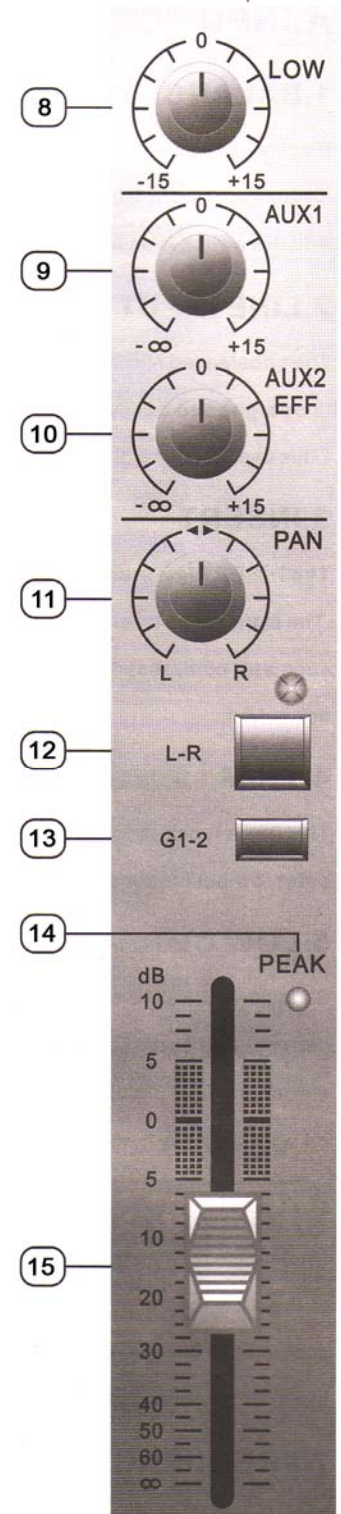
Push the switch to route channel signal to GROUP 1-2 fader.

## 14. PEAK

A red LED indicates a signal level at the insert return point. It illuminates at approximately 5 dB below clipping.

## 15. CHANNEL FADER

This adjust the volume of channel input signal and route it to the output bus of the master and/or GROUP 1-2 faders. Normal operating position is at the "0" mark, providing 4 dB of gain above that point, if required.



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## 3. MASTER SECTION

### 1. SEND/EFFECT

When this button is up, post signal will work as send signal. When this button is down, post signal will work as EFFECT signal.

### 2. AUX SEND/RETURN

This is used for adjusting volume of the AUX SEND and AUX RETURN signal to the corresponding jacks.

### 3. EFFECT SEND

This is used for adjusting the amount of DSP generated effect signal routed into the channel and EFFECT bus.

### 4. PROGRAM

You can select the effect presets by turning the PROGRAM control. The display flashes the number of the selected preset. To confirm the selected preset, press on the button. The flashing stops.

### 5. EFFECT LEVEL

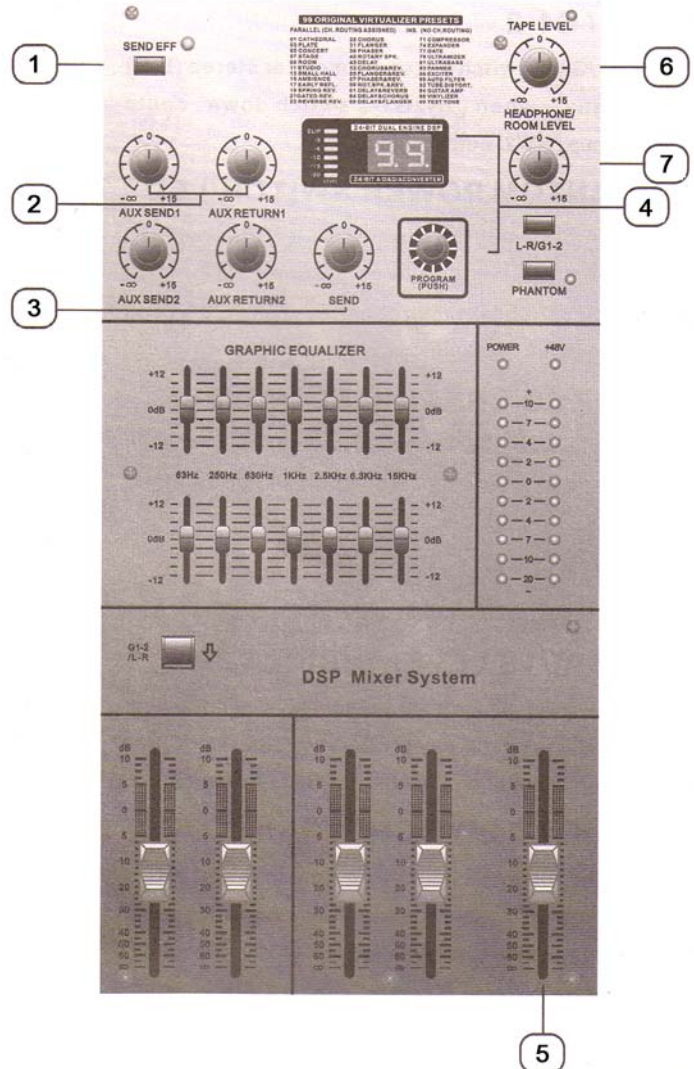
Use this fader control to adjust the signal level of the effect loop.

### 6. TAPE LEVEL

To adjust the volume of "TAPE IN" signal when connecting tape in.

### 7. HEADPHONE/ROOM LEVEL

A single volume control knob that sets the level to the headphones and main monitors.



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## 8. L-R/G1-2

When switch is up, it will monitor stereo (L-R) output signal. When switch is down, it will monitor group (G1-2) output signal.

## 9. PHANTOM POWER SWITCH/LED

Depressing this switch applies +48 VDC across all microphone input channels connectors for remote powering of condenser microphones. The LED will be lit when in operations.

## 10. STEREO GRAPHIC EQUALIZER

2 x 7-band equalizer is provided for precise frequency control over tone.

## 11. POWER LED

The POWER LED will be lit when in operations.

## 12. OUTPUT

A master level meter which usually indicates the output level of left and right channel condition during operation.

## 13. L-R/G1-2 SWITCH

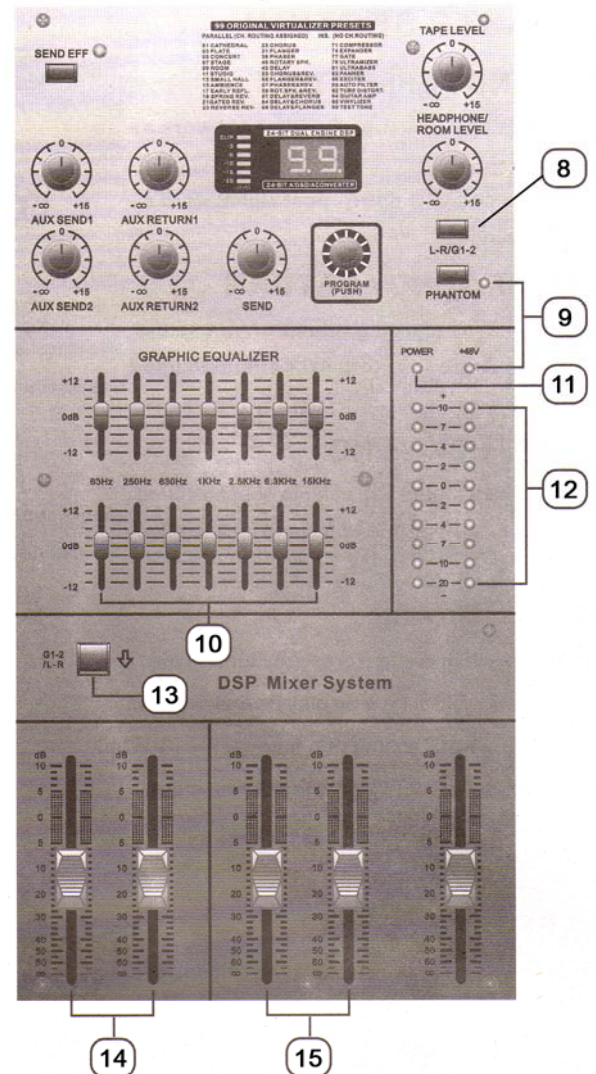
This switch routes the G1-2 mix output to the STEREO bus, allowing G1-2 bus to be used as two mono subgroups. Mixed down to a signal output when stereo is not required.

## 14. OUTPUT GROUPS 1-2 FADERS

Use this control to adjust G1-2 output level.

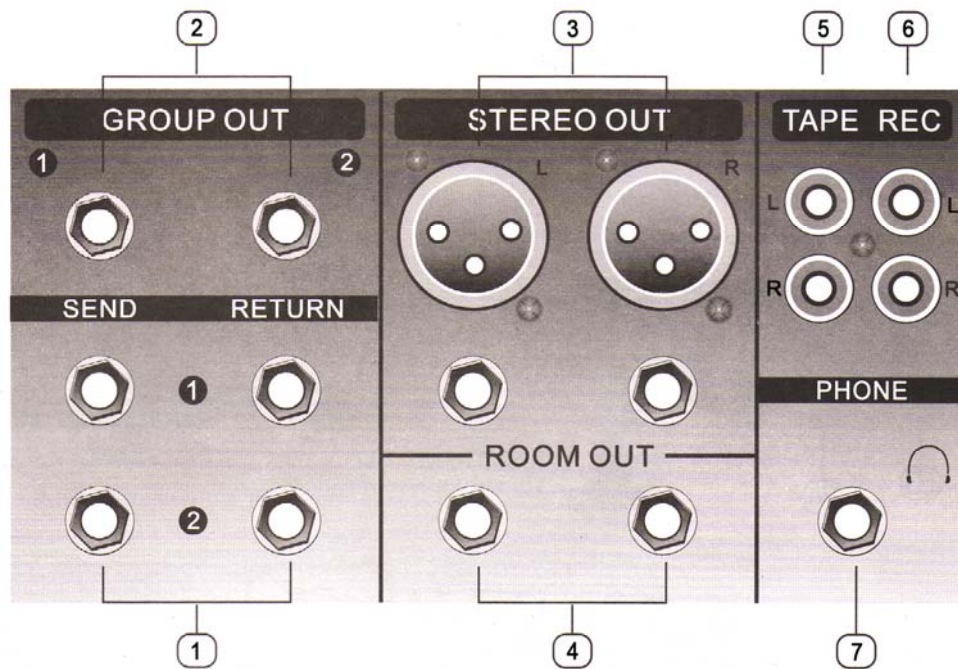
## 15. OUTPUT MAIN FADER (LEFT/RIGHT)

A master fader for adjustment of left/right output volume.



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## 4. MIXER OUTPUT SECTION



### 1. STEREO AUX RETURN & SEND

Use to connect all kinds of external auxiliary effects.

### 2. GROUP 1-2 OUTPUT JACK

Output signal from GRPS 1-2 board.

### 3. STEREO OUTPUT JACK (LEFT/RIGHT)

This allows the final confirmed sound to be sent to main amplifier through XLR and 1/4" TRS jacks.

### 4. ROOM OUTPUT JACK

This jack is used for monitoring the master signal and individually monitoring L/R and G1-2 channel.

### 5. TAPE INPUT RCA JACK

This jack is to be connected with cassette deck (or other playback device) for play back.

### 6. RECORD OUT RCA JACK

This jack is to be connected with cassette deck (or other recording device) for recording.

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## 7. PHONE JACK

The phones signal follows the control room output.

## 5. POWER SECTION

### 1. POWER SWITCH

Depress upper half (marked "1") to operate. The LED (See 3. MASTER SECTION, NO: 11) will be lit when in operation.

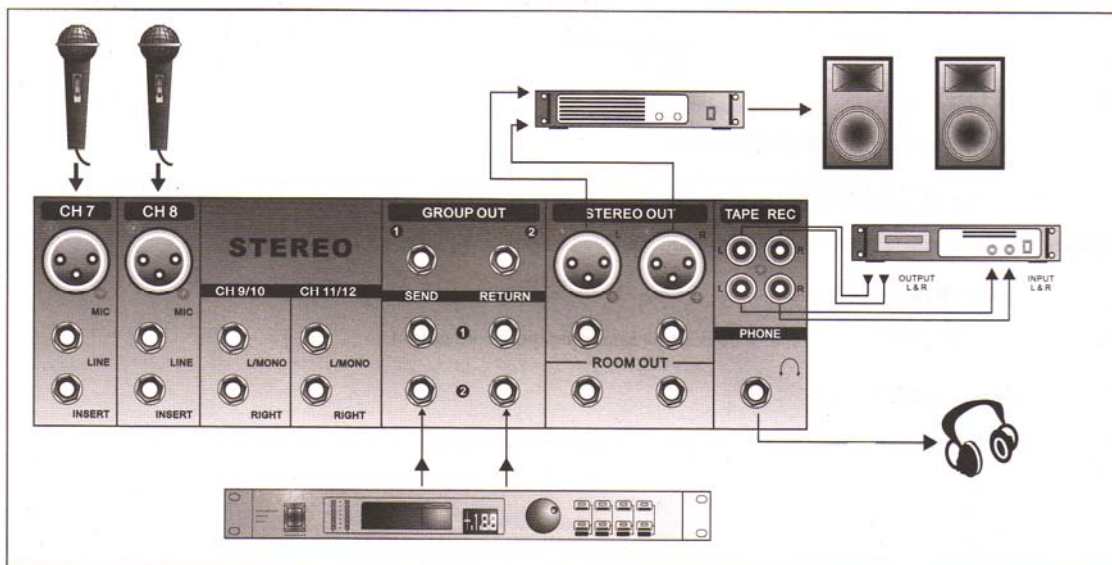
### 2. POWER JACK

To connect the unit to power supply (120 VAC or 230 VAC).



## 6. INSTALLATION

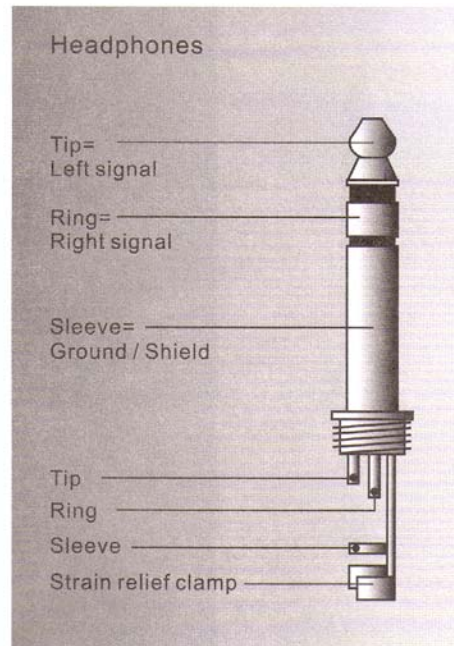
*Note: Common installation mistakes normally occur, especially in a studio environment, due to tangled cables.*



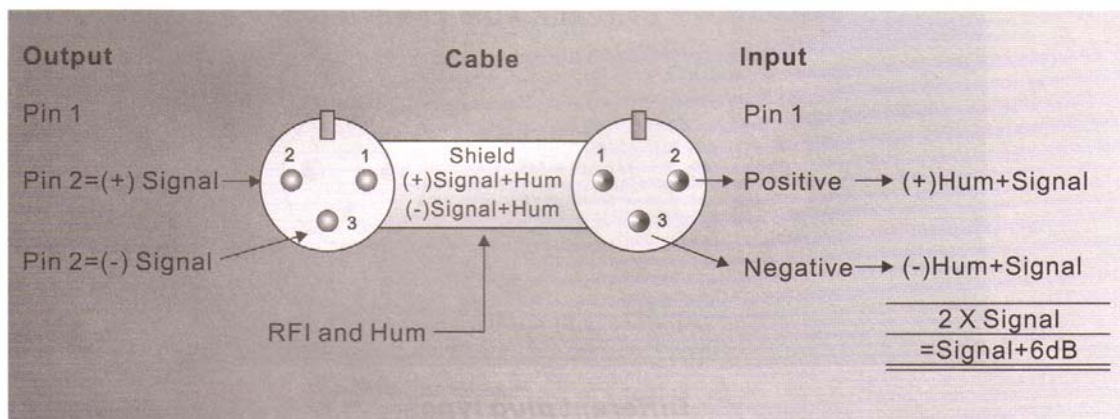
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## 7. CONNECTIONS

You will need professional audio signal cables and connectors to hook things up. We recommend that you use **GECKO INSTRUMENTS TRUTH T3AL** audio signal cable for professional installations. Use studio grade 1/4" TRS (stereo), 1/4" TS (mono), XLR (Male and Female) connectors for best results.

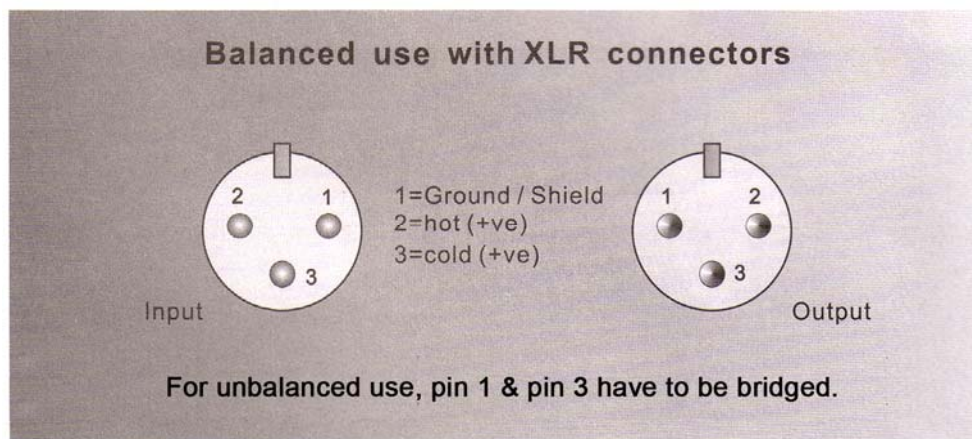
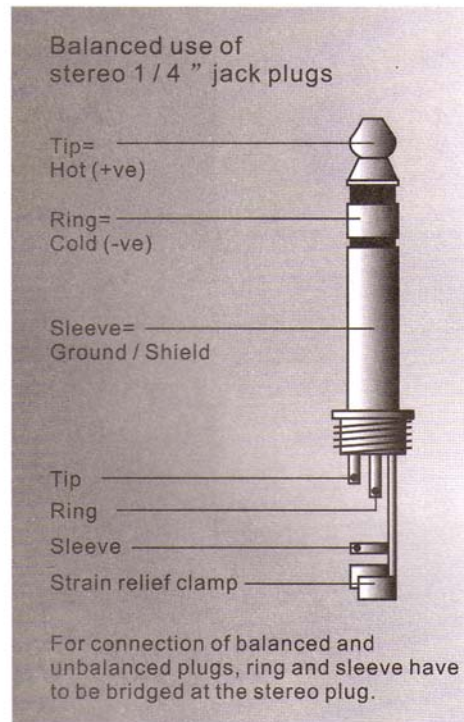
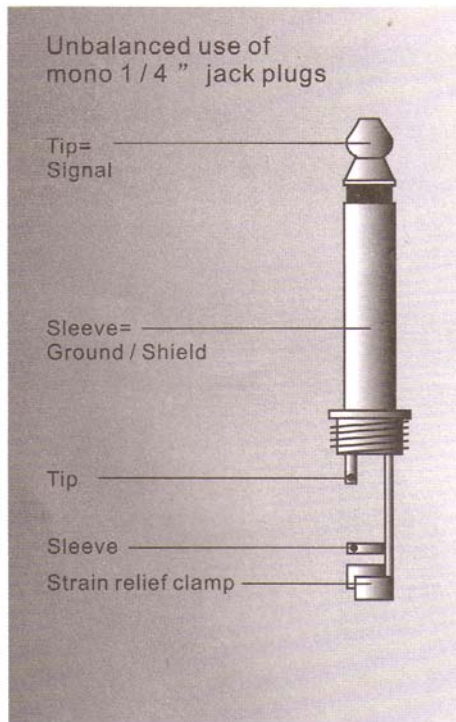


Headphone connection



Compensation of interference with balanced connections

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## Different plug types

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## 8. SPECIFICATIONS

<b>Mono Inputs</b>	Electronically Balanced, Discrete Input Configuration	
<b>Mic inputs</b>	10 Hz to 60 kHz $\pm 3$ dB	
<b>Bandwidth</b>	0.01% at +4 dBu, 1 kHz, Bandwidth 80 kHz	
<b>Distortion (THD&amp;N)</b>	-129.5 dBu, 150 $\Omega$	
<b>Mic E.I.N. (22 Hz-22 kHz)</b>	-117.3 dBqp, 150 $\Omega$ -132.0 dBu, Input Shorted -122.0 dBqp, Input Shorted	
<b>TRIM Range</b>	+10 dBu to +60 dBu	
<b>Line Input</b>	Electronically Balanced	
<b>Bandwidth</b>	10 Hz to 60 kHz, $\pm 3$ dB	
<b>Distortion (THO &amp; N)</b>	0.01% at +4 dBu, 1 kHz, Bandwidth 80 kHz	
<b>Line level range</b>	+10 dBu to -40 dBu	
<b>Equalization</b>		
Hi Shelving	12 kHz $\pm 15$ dB	
Mid	100 Hz-8 kHz $\pm 15$ dB, Constant Q @ 1 Oct	
Lo Shelving	80 Hz $\pm 15$ dB, Constant Q @ 2 Oct	
Lo Cut(High Pass) Filter	-3 dB at 75 Hz, 18 dB/Oct	
<b>Master Mix section</b>		
Max Output	+22 dBu, Balanced	
Aux Send Max Out	+22 dBu, Unbalanced	
Control Room Out	+22 dBu, Unbalanced	
<b>Power supply</b>		
Mains Voltages	USA/Canada	120 V~AC, 60 Hz
	U.K./Australia	240 V~AC, 60 Hz
	China	220 V~AC, 50 Hz

Manufactured under ISO9000 certified management system.

Note: Specifications subject to change without notice.

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## 9. APPENDIX

### 99 Original Virtualizer Presets

Parallel (Ch. Routing Assigned) Ins. (No Ch. Routing)

01-02 CATHEDRAL	54-55 FLANGER & REV.
03-04 PLATE	56-57 PHASER & REV.
05-06 CONCERT	58-59 ROT. SPK. & REV.
07-08 STAGE	60-61 DELAY & REVERB
09-10 ROOM	62-64 DELAY & CHORUS
11-12 STUDIO	65-68 DELAY & FLANGER
13-14 SMALL HALL	69-71 COMPRESSOR
15-16 AMBIENCE	72-74 EXPENDER
17-18 EARLY REFL.	75-77 GATE
18-19 SPRING REV.	78-79 ULTRAMIZER
20-21 GATED REV.	80-81 ULTRABASS
22-23 REVERSE REV.	82-83 PANNER
24-25 CHORUS	84-86 EXCITER
26-31 FLANGER	87-89 AUTO FILTER
32-36 PHASER	90-92 TUBE DISTORTION
37-40 ROTARY SPK.	93-94 GUITAR AMP
41-43 DELAY	95-98 VINYLIZER
44-53 CHORUS & REV.	99 TEST TONE

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## 10. WARRANTY

1. **GECKO INSTRUMENTS** warrants the mechanical and electronic components of this product to be free of defects in material and workmanship for a period of (1) one year from the original date of purchase, in accordance to the warranty regulations described below. If the product shows any defects within the specified warranty period, **GECKO INSTRUMENTS**, at its discretion, reserved the rights, either repair or replace the product using new or reconditioned parts. In the case that other parts are used which constitutes an improvement, **GECKO INSTRUMENTS** may, at its discretion, charge the customer for the additional cost of these parts.
2. Warranty services will be furnished only if the product is accompanied by an original copy of the retail dealer's invoice. Any product deemed eligible for repair or replacement under the terms of this warranty will be repaired or replaced. Product must be returned in original packing.
3. If the product needs to be modified or adapted in order to comply with applicable technical or safety standards on a national or local level, in any country which is not the country where the product was originally developed and manufactured, this modification/adaptation shall not be considered a defect in material or workmanship.
4. Free inspections and maintenance/repair work are expressly excluded in from this warranty, in particular, if caused by improper handling of the product by the user. This also applies to defects caused by normal wear and tear, in particular, of faders, cross faders, potentiometers, keys/buttons, tubes, guitar strings, illuminants, and similar parts.
5. Damages/defects caused by the following conditions are not covered by this warranty:
  - Improper handling, neglect or failure to operate the unit in compliance with the instructions given in **GECKO INSTRUMENTS** user or service manuals.
  - Connection or operation of the unit in any way that does not comply with the technical or safety regulations applicable in the country where the product is used.
  - Damages/defects caused by force of nature or any other condition that is beyond the control of **GECKO INSTRUMENTS**.
6. Any repair or opening of the unit carried out by unauthorized personnel (user included) will void the warranty.

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7. If an inspection of the product by **GECKO INSTRUMENTS** shows that the defect in question is not covered by warranty, the inspection costs are payable by the customer.
8. Products which do not meet the terms of this warranty will be repaired exclusively at the buyer's expense. **GECKO INSTRUMENTS** will inform the buyer of such circumstance. If the buyer fails to submit a written repair order within six (6) weeks after notification, **GECKO INSTRUMENTS** will return the unit C.O.D. with a separate invoice for freight and packing. Such costs will also be invoiced separately when the buyer has sent in a written repair order.
9. This warranty is extended to the original buyer (customer of retail dealer) and is not transferable to anyone who may subsequently purchase this product. No other person (retail dealer, etc) shall be entitled to give any warranty promise on behalf of **GECKO INSTRUMENTS**.
10. Failure of **GECKO INSTRUMENTS** to provide proper warranty service shall not entitle the buyer to claim (consequential) damages. In no event shall the liability of **GECKO INSTRUMENTS** exceed the invoiced value of the product.
11. Log on to [www.geckoinstruments.com](http://www.geckoinstruments.com) for the list of **GECKO INSTRUMENTS** authorized distributors.