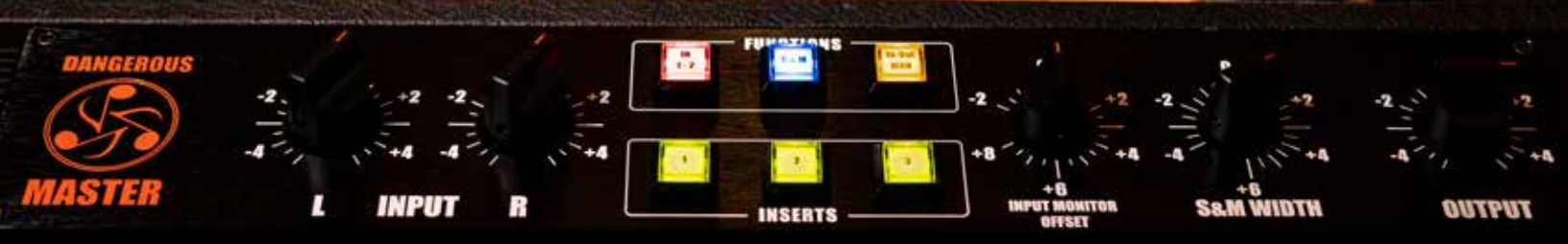


# MASTER USER GUIDE



## SAFETY REVIEW



The Exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying this product

Certain precautions should be taken when using electrical products. Please observe the safety hints by reading the manual and obtaining qualified help if necessary to adhere to the precautions.



1. Always use a properly grounded power supply cord with this product. Please do not defeat the ground pin on the mains plug. This connection provides earth to the chassis and signal grounds inside the device for clean and quiet operation.



2. Avoid high temperature operation in equipment racks by providing air circulation. The number one killer of electronic gear is HEAT. Vented rack panels may look like wasted space to an interior decorator, but they look like beauty to a technician or equipment designer! If the front panel is hot, it is roasting inside the box.



3. Avoid areas of high magnetic fields. The steel chassis is designed to shield the circuits from EMI and RFI (magnetic and radio interference). When installing equipment in racks, it is prudent to put power amplifiers and large power supplies at least several rack spaces, if not in a different rack, away from equipment that deals with low level signals. Separation of high level and low level equipment can preempt trouble caused by heat and EMI.



4. Care should be taken to avoid liquid spills around equipment. If a spill occurs, please shut off the gear and disconnect the mains. A qualified technician should investigate accidents to prevent further equipment damage or personnel hazards caused by spills.



5. If one is uncomfortable with opening gear and changing jumpers or making adjustments, please seek qualified help if necessary.



6. If adjustments or jumper changes are required, please disconnect the mains plug before opening the top. Dropped screws or tools on a live circuit board can manifest themselves as burn marks and smoked components. While we feel your pain, (been there) subsequent damage is not covered by the warranty.

Dangerous Music Group, LLC reserves the right to change the specifications or modify the designs of its equipment. Registering online is our way of keeping in touch with users of our equipment should this become necessary. Registration information is always kept confidential and never disclosed to third parties for any reason. Company contact information is on the last page of this manual.



The CE sign on this product signifies the fact that the **MASTER®** has been tested and verified to conform to the applicable standards of 89/336/EEC.EN55103-1 (emissions) EN61000-2 (immunity) and EN60065:2002 (safety requirements)



This product uses components of the types and quantities that comply with the EC RoHS standard 2002/95/EC. A list of suppliers and materials is available from DMG. We tightly control production to use top quality materials.

# THANK YOU

Thank you for joining the Dangerous Music family. You will receive years of reliable pleasure from our gear due to careful design, construction, and component choices by recording industry veterans.

The Dangerous Music MASTER transfer console represents the culmination of the design and real world implementation of custom mastering equipment throughout many of the world's premium facilities. Decades of experience have been distilled down into a two rack space unit of exceptional ergonomic and sonic performance at a price about a third of our designer's previous attempts. In conjunction with the Dangerous Music MONITOR-ST, the addition of one's favorite analog processing equipment and A/D/A converters, the MASTER makes the setup of a quality analog mastering system easier than it has ever been. This manual explains the features, controls, connections, and suggestions for the operation of this unit. Expansion is even possible with the addition of a [LIAISON](#).

Though the box is overwhelmingly simple in appearance, there are comprehensive tips and application notes in this user's guide, so don't skip the read. Crack a beer and get listening-

*marek stykos*

President and Audio Outlaw



**DANGEROUS  
MUSIC**

## ABOUT DANGEROUS MUSIC

Dangerous Music is composed exclusively of musicians, studio owners, producers and engineers - the very same group of people for whom Dangerous products are designed. That's the magic: living the recording experience on both sides of the control room glass and constantly working to improve it. Without shareholders pimping profit at the expense of the artists (us!) using the gear.

From the inception, building to a "price point" was ignored in favor of: Audio Quality First. Our brain trust at Dangerous determines the product's function, feature set and how to make it sound as transparent, musical and versatile as humanly possible. We build the gear we want to use.

Sacrifice Nothing®. This is our credo. The results are products that resurrect dynamic range, punch, intelligibility and emotion. These high-fidelity, uncompromising signal paths are achieved by harnessing over 30 years of Chris Muth's design wizardry; creator of infamous custom black boxes for world class facilities like Hit Factory, Masterdisk, Absolute Audio and Sterling Sound Mastering. He leads our design team into the future and once in beta, the critical listening skills of golden-eared luminaries are applied, with the result being musical tools that fulfill the actual needs of today's flexible computer based studio.

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# INSIDE THE BOX

[BUT PLEASE MIX OUTSIDE]



[01] MASTER UNIT



[02] POWER SUPPLY  
[03] POWER SUPPLY CABLE



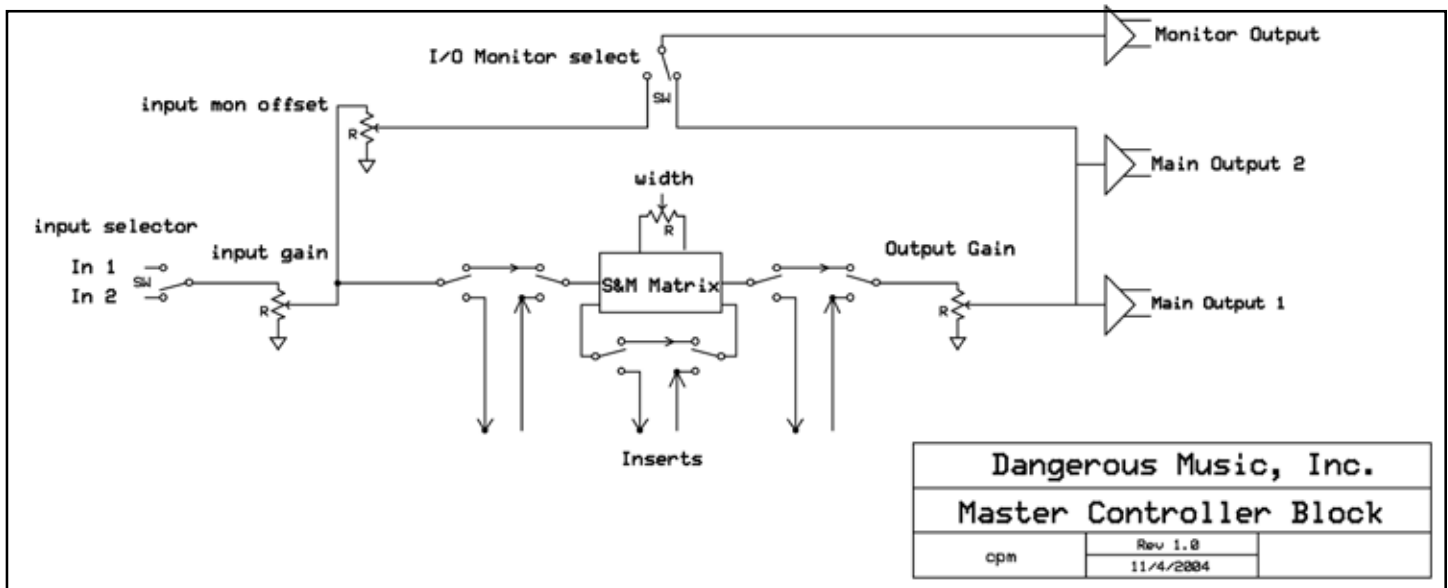
[04] MANUAL



[05] IEC CABLE

# OVERVIEW

The Dangerous MASTER is simple to install and operate. Designed to harness analog outboard processing, a D/A or analog source, and an A/D feeding your DAW it becomes the centerpiece of your mastering rig.



Send an analog source to one of the inputs. Adjust them in separate 0.5dB increments of gain control to precisely set the level and balance into the insert stack.

The inserts are to include analog processing equipment. It has been found by the authors after extensive experimentation that 3 insert loops provide the correct number of insert points to get the job done. More equipment is accommodated by ganging or adding a Dangerous Music [LIAISON](#). The insert points can be run to a patchbay if the added flexibility of patching is desired (to re-route the order of processing for instance). Of course, more connectors and cable may not equal better sound quality.

The 'AC IN' connector goes to the power supply. Please check that the supply is off before plugging in this cable. **Hot plugging will result in burned contacts** (like in your former life).

The writer's favorite suggested processing goes like this:

Insert 1 gets a stereo EQ to set the tone correct for the rest of the stack.

Insert 2 gets a parametric EQ, De-Esser, and Limiter to fix any problem with a mix.

Insert 3 gets a Compressor to control dynamic range for loudness.

The Output Gain control let's one precisely 'hit' the A/D converter at the correct level.

The Input/Output Monitor Selector let's one compare the dry and processed signal and there is an Input Monitor Offset control so that comparison can be made even after adding several dB of loudness to the mastered signal. This also allows an easy way to tell how much apparent loudness has been added to the signal (by matching the apparent levels and reading the difference on the INPUT MONITOR OFFSET gain control).

# REAR CONNECTIONS

## 01. DUAL STEREO INPUTS

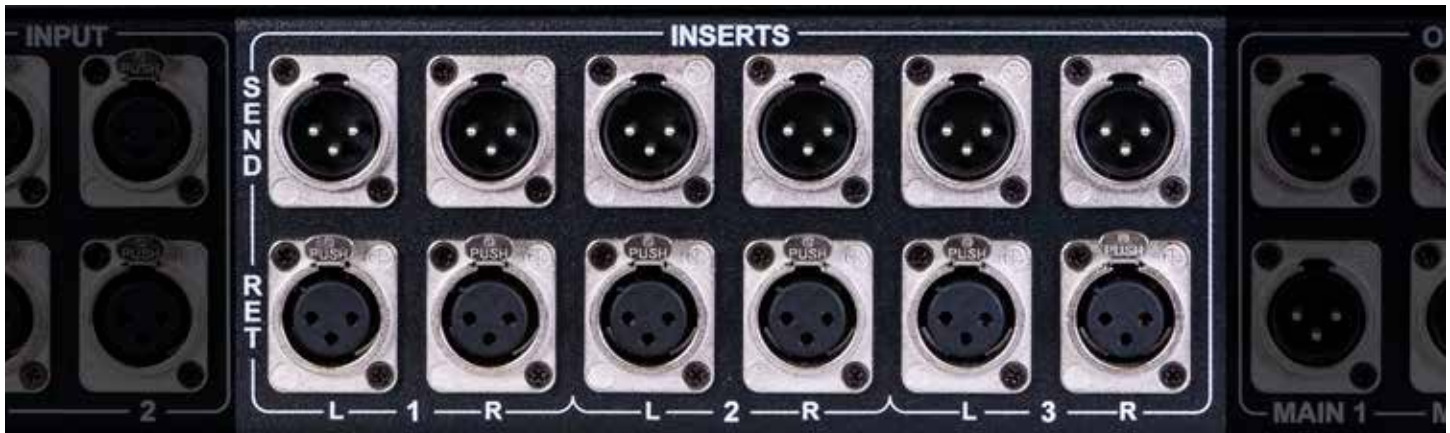


[STEREO INPUTS ONE & TWO PICTURED ABOVE]

**Feature:** Two stereo analog inputs, selectable from the 'IN 1-2' button on the front panel.

**Benefit:** Connect your D/A into the first input and wire the second input to a patchbay or tape machine or alternative D/A.

## 02. INSERT POINTS



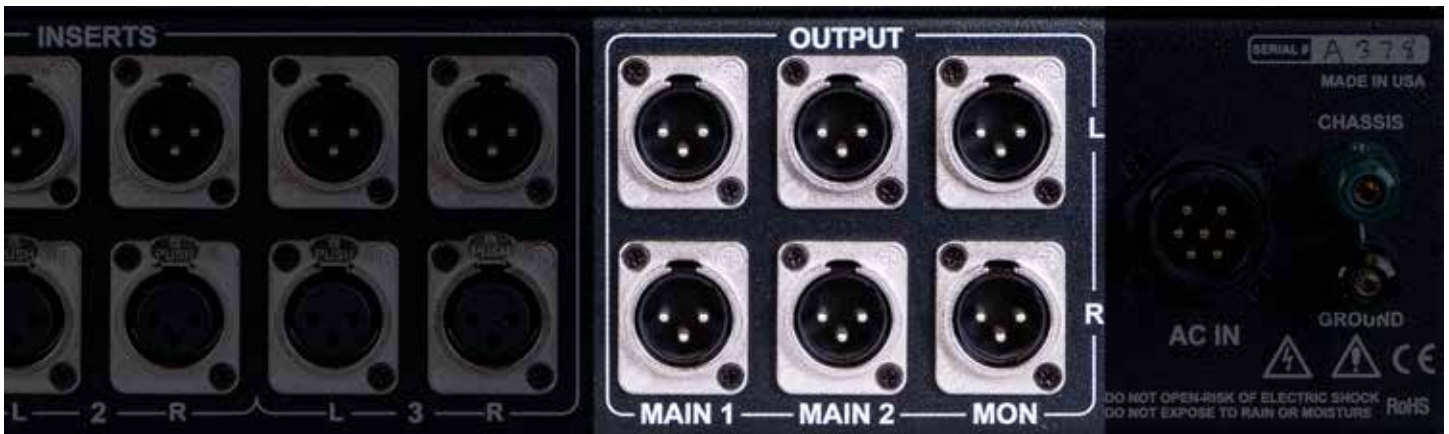
[THREE STEREO INSERT POINTS PICTURED ABOVE]

**Feature:** Connect your favorite analog processing gear at the inserts.

**Benefit:** Depressing an insert button engages that loop in line.

**Tip:** 📌 These are true hardware bypasses. This allows honest A/B comparisons by completely removing the hardware from the circuit. (Why can't we build a circuit for this in politics?)

### 03. DUAL MAIN AND MONITOR OUTPUTS



[DUAL MAIN AND MONITOR OUTPUTS PICTURED ABOVE]

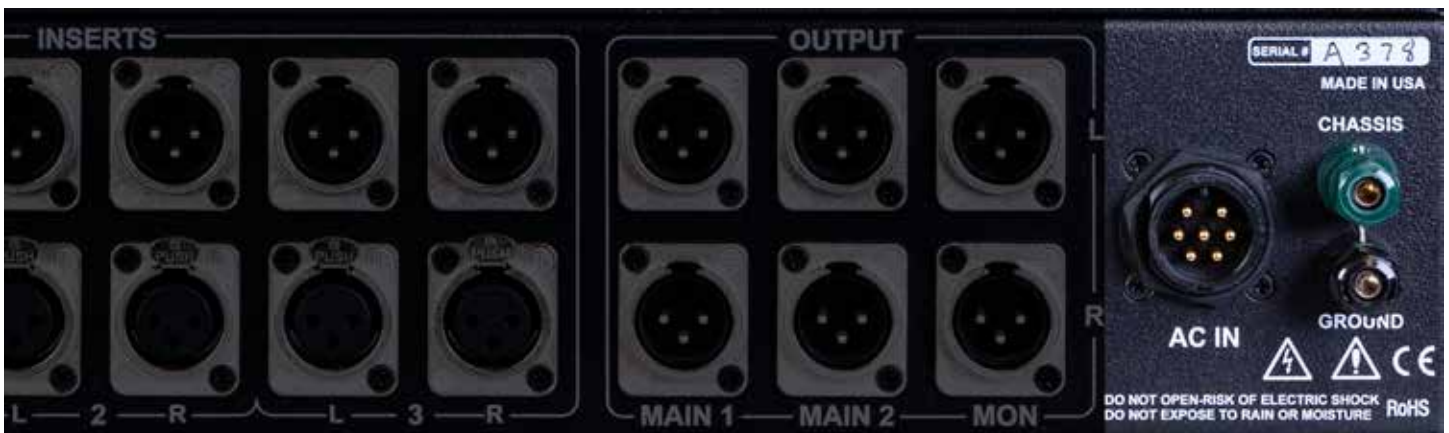
**Feature:** MAIN 1 & MAIN 2 stereo outputs can feed A/D Converters, a tape machine, DSD recorder, patchbay or your ego.

**Benefit:** No repatching. Often Mastering cats deploy two different A/D converter in order to select the flavor appropriate for the track, thus seamlessly A/B them.

**Feature:** The MON output feeds your monitor controller (like the Dangerous Music MONITOR-ST). Switch between the input signal (post Input level and Input Monitor Offset Level controls) or the output signal (post processing).

**Benefit:** Monitor your processing chain, before and after with the switch of a button.

### 04. AC INLET, CHASSIS & GROUND BINDING POSTS



[AC INLET, CHASSIS & GROUND BINDING POSTS PICTURED ABOVE]

**Feature:** AC Inlet with external supply.

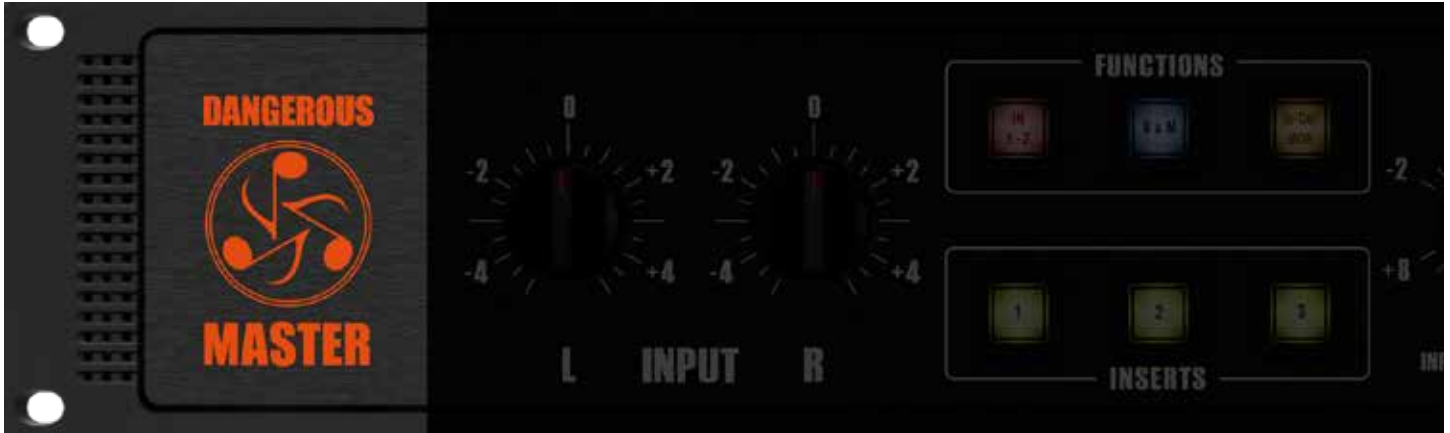
**Benefit:** Improved headroom and noise floor.

**Feature:** The CHASSIS and GROUND banana jacks are strapped together at the factory. The strap may be removed to isolate the chassis and audio grounds. (It's a physical wire connected between these two knobs and accessed from the outside, rear nuts.)

**Benefit:** The jacks can be used to quiet down a troublesome piece of audio equipment (ie Sontec) with a ground wire if necessary.

# FRONT CONTROLS

## 05. THE LOGO



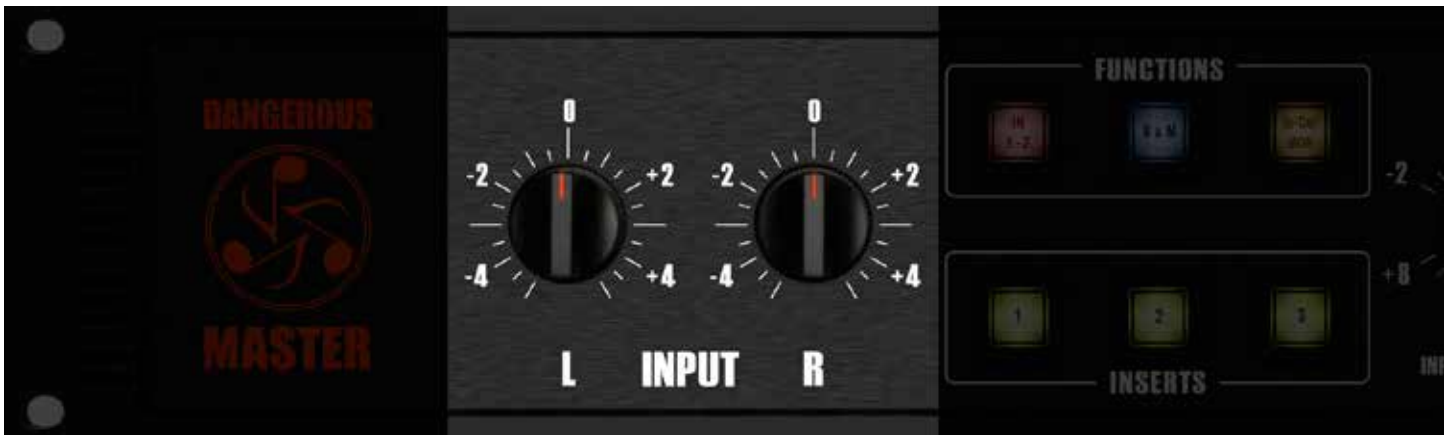
[DOUBLE WALLED MUSICAL HELIX PICTURED ABOVE]

**Feature:** Double walled circularly constructed logo

**Benefit:** Aids in the elimination of spurious magnetic fields like that of a current-carrying toroid ( $B = \mu nI$ ) though since illusory the tropospheric distortion is immeasurable even when employing the Audio Precision APx555B (pinnacle of technology at the time of printing) while maintaining the integrity of the music (thus the notes inside).



## 06. DISCRETE INPUT CONTROLS



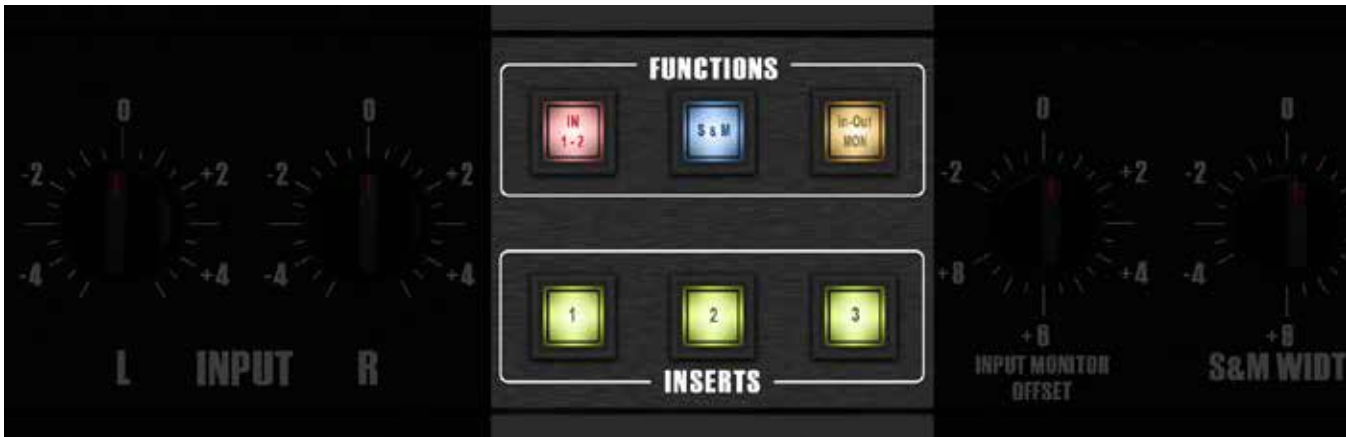
[DUAL INPUT CONTROLS PICTURED ABOVE]

**Feature:** Input Level Controls

**Benefit:** Set precise operating levels and perfect the balance between the left and right over a 10dB range in 0.5 dB steps.



## 07. FUNCTIONS & INSERTS



[FUNCTIONS AND INSERT BUTTONS PICTURED ABOVE]

The top row of FUNCTIONS buttons select the following:

1. 'IN 1-2' toggle between the two sets of stereo inputs.
2. 'S&M' switch between standard STEREO MODE or MIDDLE SIDES MODE for INSERT 2.
3. 'OUT MON' switch between the input signal (post Input level and Input Monitor Offset Level controls) or the output signal (post processing).

**Feature:** The second loop can work in stereo or “Sum And Minus” mode. In S&M, one can effect the center panning information of a mix without affecting the sides and vice versa.

**Benefit:** Perhaps the lead vocal is too bright but the guitars panned to the sides are dull? Use stereo EQ in S&M to fix both problems!

## 08. INPUT MONITOR OFFSET



[INPUT MONITOR OFFSET PICTURED ABOVE]

**Feature:** Adjusts the level of the unprocessed input.

**Benefit:** Match the input and output levels to listen to the effect of pre and post processing without the level difference clouding your judgment.

**Benefit:** Look down at the scale, and instantly determine the relative gain obtained from the mastering process. This control has a scale of -2 to +8dB in 0.5 dB steps.

**Tip:** 🖱️ This control only affects the MONITOR output, not MAIN 1 & 2.

## 09. S&M WIDTH KNOB



[SUM AND MINUS WIDTH CONTROL PICTURED ABOVE]

**Feature:** Increase or decrease the stereo image.

**Benefit:** Access real-time, analog S&M with precise width adjustments at the press of a button and twist of a knob. This Muth original analog design is sonically far more pleasurable than a plugin simulacrum.

**Tip:** 🖐️ Activating S&M without 'INSERT 2' selected still passes audio through the matrix. Remember, while S&M is fun, too much can prove dangerous.

## 10. OUTPUT KNOB



[OUTPUT KNOB PICTURED ABOVE]

**Feature:** Dial in the perfect final level presented to the A/D converter.

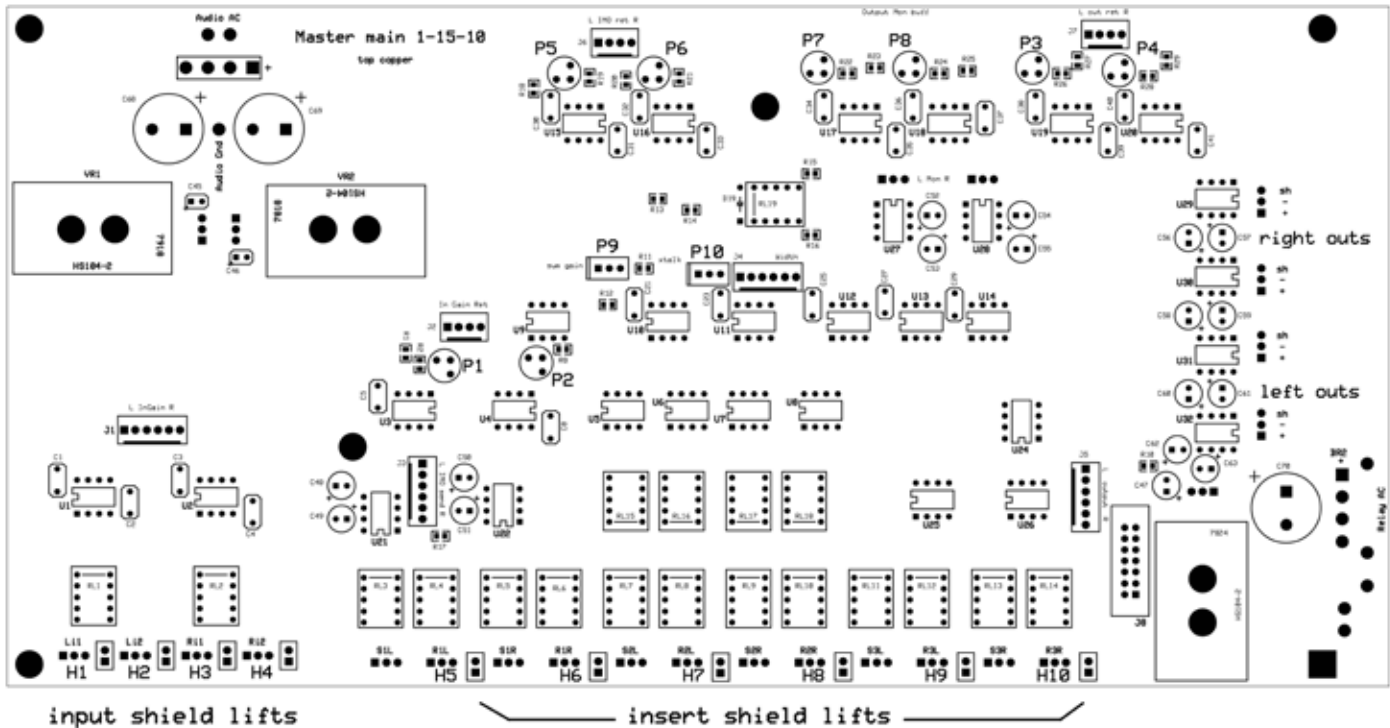
**Benefit:** The level controls are all stepped attenuators for accuracy, repeatability, and purest sound quality.

**Tip:** 🖐️ The range is 10dB in 0.5 dB steps.

**Tip:** 🖐️ The attenuators are built with what we feel are the highest quality switches and resistors available at any cost. It is useful to gently turn the switches through their travel every so often to spread the lubricants around inside and wipe the contacts clean. This helps keep the switches quiet. The use of contact cleaners is not necessary and will damage the switches by washing the grease out.

# INTERNAL JUMPERS & ADJUSTMENTS

The motherboard has input cable shield ground selection jumpers to accommodate different grounding schemes. It is recommended that all electrical equipment in the studio is properly grounded by making sure that power cables have 3 pins and that the third pin is connected to ground. The use of 'ground lifts' to clear up a buzz problem is frowned upon by the international consortium of electrical safety agencies. If a ground noise problem occurs, it may be cleared up by switching the jumper position on the connector associated with the piece of gear that is having the buzz problem.



The shield lift headers have 2 posts. A jumper placed over both posts connects the chassis ground to the cable shield. To lift a shield, pull the jump off of the posts. It is a good idea to put the 'unused' jumpers on one of the posts to keep from losing the jumper.

MASTER should not need to be calibrated but in case it does, here is the procedure:

1. Obtain a calibrated oscillator and level measuring device. These should be lab quality (HP, Tektronix, Neutrik, Audio Precision, etc.)
2. Place the Master on a clean, well lit table with a pad under it to prevent scratches.
3. Remove the top to expose the motherboard for calibration.
4. Hook up the power supply and turn on the unit.
5. Set all controls to unity gain with all Function and Insert switches out.
6. Set the oscillator for +4dBu and plug into Input 1. Feed both channels.
7. Activate 'INSERT 1' and measure the level coming out of the 'SEND 1' jacks.
8. Adjust P1 and P2 to measure +4dBu.

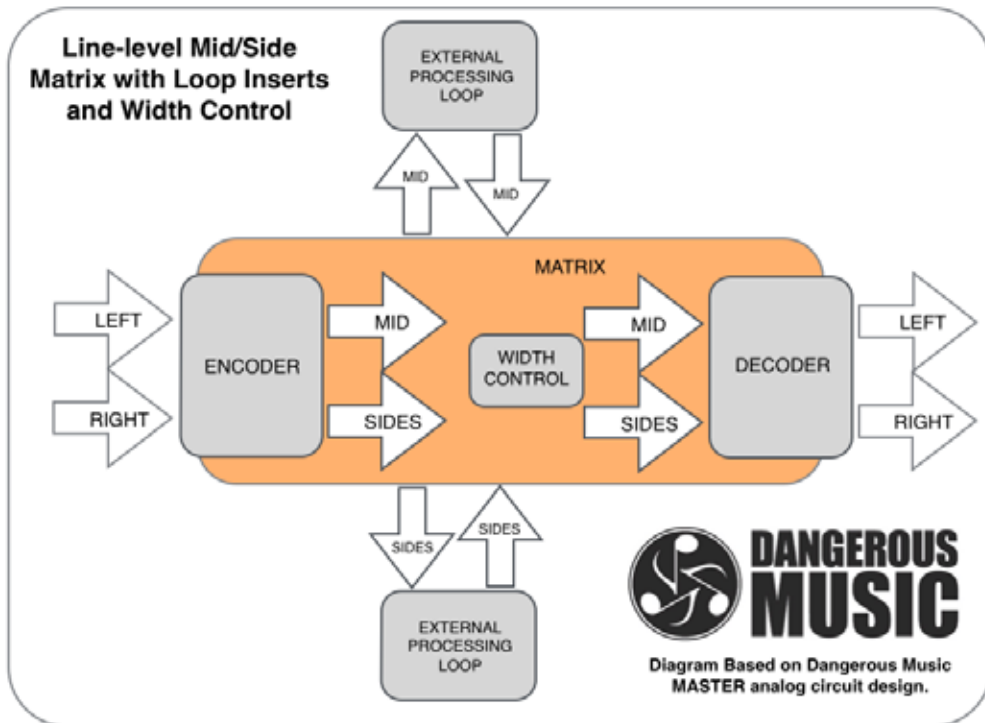
9. Deactivate 'INSERT 1' and adjust P3 and P4 to read +4dBu at 'MAIN OUTPUT 1'.
10. Adjust P5 and P6 to measure +4dBu at the 'MONITOR OUTPUT' jack.
11. Activate the 'OUT MON' function and adjust P7 and P8 to read +4dBu at the 'MONITOR OUTPUT' jack.
12. Pull the right channel's input. Activate the 'S&M' function. Adjust the 'xtalk' pot for minimum signal at the right output. The signal should null below -70dBu.

# SPECIFICATIONS

Note: Dangerous Music, Inc. publishes actual measured specifications, not theoretical numbers derived from data sheets published by chip manufacturers.

All measurements made with an Audio Precision 525 at a nominal operating level of +4dBu

Frequency Response . . . . .	10Hz - 100kHz within 0.15dB
THD+Noise . . . . .	22Hz - 22kHz 0.0017%
IMD60 . . . . .	4:1 0.0019%
Crosstalk Rejection . . . . .	> 110 dB
Headroom . . . . .	> +27dBu
Dynamic Range . . . . .	>118 dB
Power Consumption . . . . .	40 watts 100-130/200-250 volts, user selectable



# WARRANTY

Free 2 year extended warranty with online registration.

Standard warranty: 90 days parts and labor, subject to inspection.

Does not include damage incurred through shipping damage, abusive operation or modifications/ attempted repair by unauthorized technicians.

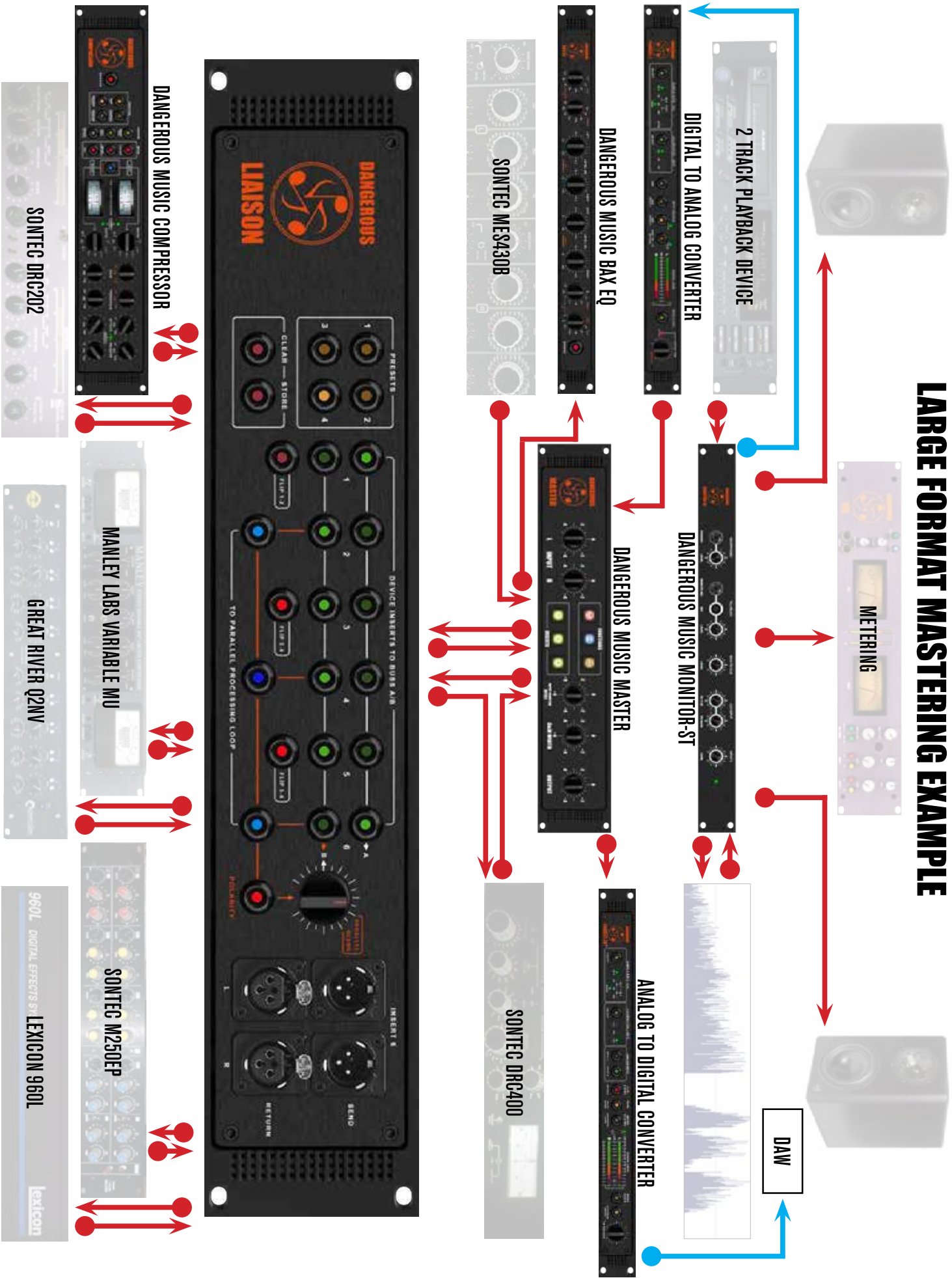
USA	EUROPE
Dangerous Music Group, LLC	Dangerous Music Europe
New City, NY 10956	Raderbergerstr.175
United States of Alliteration	50968 Cologne, Germany
Phone: 845.202.5100	Fon: +49 2236 393731
Fax: 845.818.4109	Fax: + 49 2236 393732
Email: support@dangerousmusic.com	E-mail: info@dangerousmusic.de

Dangerous Music Group, LLC reserves the right to alter the software, firmware and design of their equipment.

If after reading the manual more information for an is desired, please contact us via website for the quickest response.

- Factory contact for RA# must occur before shipping a unit to us for service.
- Please keep the original cartons in case storage or transportation of units is required.
- Always insure shipment as these damages are not covered by the warranty.
- Thank you for actually reading the manual. Now go make some dangerous music!

# LARGE FORMAT MASTERING EXAMPLE





HEAR EVERYTHING<sup>®</sup>



SACRIFICE NOTHING<sup>®</sup>