

# USER GUIDE



20th ANNIVERSARY  
LIMITED EDITION

*Chris Muth*

## 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 pre-empt 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 S&M® 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 shall receive years of reliable pleasure from our gear due to careful design, construction, and component choices by recording industry veterans.

The S&M is designed to activate your musical genes. No matter if you're on the road or in studio, the S&M is a great leap forward from the days of stone knives and bearskins- another tool in your arsenal to craft authentic, original sonics that translate your music to your audience.

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 (or...) and get listening-

*marek stykos*

President and Audio Outlaw



**DANGEROUS  
MUSIC**

## ABOUT DANGEROUS MUSIC

Born from the taproot of Mastering, developing \$250,000 custom designed transfer consoles and processing circuits for Absolute Audio, Masterdisk, Hit Factory and Sterling Sound, Dangerous Music introduced the recording and mixing world to a previously unexplored frontier of high fidelity.

Used across every single genre of music, on thousands of platinum, Grammy nominated and award winning tracks the clarity, tonality, articulation, silence and emotional impact have captivated the imagination of millions of listeners around the globe. Owned and operated by mercurial musicians whose nirvanic audio vision quest cannot be slaked by yesterday's best, they are perpetually pushing beyond tomorrow's.

At the core of every Dangerous design lurk Beautiful Circuits.

Neve gave us character, SSL provided workflow and Dangerous delivered audiophilia. Sonics previously only experienced within the closed chimerical chambers of the mastering laboratory opened up to the recording community. Thus today, you may hear everything, capture it gorgeously and craft it into your own, personal, signature patina; you at the helm as audio mixologist blending legacy colors with our modern innovative analog circuitry.

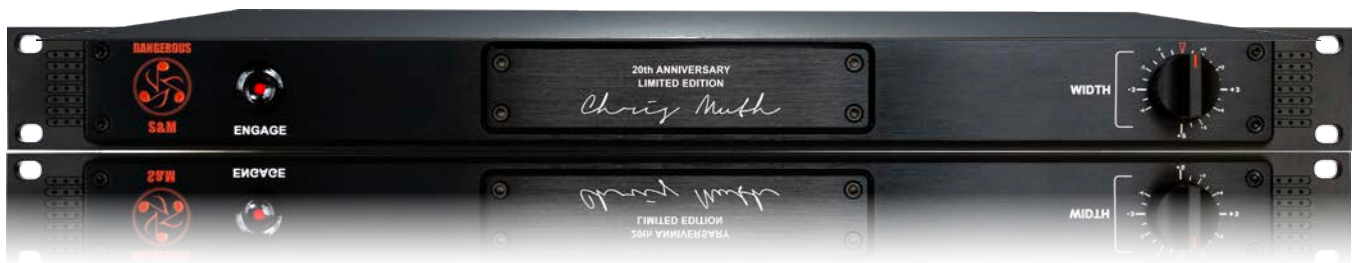
**TRACK · MIX · MASTER**  
**E X P L O R E**

# OVERVIEW

S&M stands for “Sum and Minus” and is a play of words on the techniques of Middle-Sides recording. This device, with the addition of appropriate analog processing gear allows the engineer to enhance the stereo effect of mixes or a pair of tracks in the mix.

One can correct subtle mistakes in a mix quickly without having to set it up and run it again or re-record tracks (don’t toss those keepers due to minor mistakes!) As a mastering device, the S&M can help an engineer correct even serious problems that would usually be thought of as ‘unfixable’ quickly and easily (i.e. vocals in the center too bright, guitars on the sides too dull).

A stereo pair of room mics that have the ‘perfect’ drum sound, except the snare is too loud, can be fixed easily with a limiter in the Sum channel, etc. The ground work for these techniques was invented in the 1930’s by Blumlein and resurrected in the 1990’s by Muth for modern rock and pop music recording and mastering as used by top engineers in the music industry using his custom equipment.



CONTENTS: Inside the box you’ll discover the S&M, this manual, a standard 3 Pin IEC power cable, a pair of commemorative button hole pins/cufflinks and a myriad of sonic sculpting opportunities.

Note: We recommend reading the entire manual before using the S&M so that you can get the most out of its unique and powerful sonics right away.



With Dangerous Music products, **audio** is always on the left and **power** is on the right to keep Church and State separate.

# S&M: DEPLOYMENT

## 01. JACKFIELD



[LEFT & RIGHT INPUT JACKS PICTURED ABOVE]

Deployment: The S&M is easy to use. Plug a stereo signal into the INPUT jacks.



[STEREO SEND & RETURN LOOP PICTURED ABOVE]

Put your favorite processor like an EQ, compressor, de-esser in the SEND and RETURN jacks. Check out the diagrams to see how to also use it in an insert on a MASTER console, or LIAISON matrix or stand alone.



[STEREO OUTPUT PICTURED ABOVE]

Feed the OUTPUT jacks to the next stage you are using in the signal chain.

## 02. ENGAGE BUTTON



[ENGAGE BUTTON PICTURED ABOVE]

**Feature:** True hard wire bypass switch.

**Benefit:** When the Mid-Side matrix is deactivated, the circuitry is entirely out of the signal path allowing use of the processors in the loop stereophonically.

## 03. WIDTH CONTROL



[WIDTH STEPPED ATTENUATOR PICTURED ABOVE]

**Feature:** Stepped attenuator in 1/2 dB increments.

**Benefit:** Precise and repeatable control with .02dB tolerances.

**Operation:** 12:00 noon is normal. Clockwise increases the width. Counterclockwise decreases it.

**Tip:** When working in S&M, a small twist of the Width control can really make the detail sparkle.

## 05. APPLICATIONS & EXAMPLES

In addition to enhancing stereo mixes, stereo instrument tracks, and creating interesting effects from subtle to not-so-subtle, the S&M is incredibly powerful when used to correct tracking and mixing oversights. A few usage examples will illustrate the principles.

01. You want to fix a mix that has too much 140 Hz mung on the bass guitar but not enough kick drum. At the same time, the guitars on the sides need some low end (160 Hz) to give them some beef. Big Problem? This one is solved with an EQ in about 1 minute by dialing out 140 Hz and adding 50 Hz and 3 kHz on the middle (left) channel, and adding 160 Hz shelving to the sides (right) channel. Instant mix fix.

02. You have a pair of room mics on the drums that sound really great when they are turned up in the mix but the snare is just too loud. This one's easy also. Hook a limiter into the S&M loop and set the attack time to be really quick and dial the middle (left) threshold down until the snare sits comfortably.

03. You're mastering a track and everything comes alive when you crank in a bunch of top end but the vocal is now cracking your eardrums. Hook a De-esser to the loop and solve that problem in 15 seconds or less.





# S&M STEREO WIDENER ONLY



FROM  
AUDIO SOURCE

CROSSPATCH OR  
NORMAL IT IN A  
PATCHBAY

TO  
AUDIO DESTINATION



ANALOG CABLE:   
DIGITAL CABLE:   
BLUETOOTH: 





# S&M • OUTBOARD

## SINGLE UNIT

FROM  
AUDIO SOURCE

TO  
AUDIO DESTINATION



ANALOG CABLE:   
DIGITAL CABLE:   
BLUETOOTH: 



# S&M • OUTBOARD

## MULTIPLE UNITS

FROM  
AUDIO SOURCE

TO  
AUDIO DESTINATION

MADE IN U.S.A.

NO USER SERVICEABLE PARTS INSIDE. RETURN TO AUTHORIZED PERSONNEL.

100-240VAC 47-63Hz  
CAUTION: DO NOT OPEN. ELECTRIC SHOCK

90-120VAC 2A 88 FUSE  
200-280VAC 1A 50 FUSE  
47-63 Hz  
CAUTION: DO NOT OPEN. ELECTRIC SHOCK

RETURN (Push) INPUT L R

SEND S/M M/U S/M M/U

RETURN (Push) INPUT L R

SEND S/M M/U S/M M/U

OUTPUT L R

OUTPUT L R

AC IN

MADE IN U.S.A.

NO USER SERVICEABLE PARTS INSIDE. RETURN TO AUTHORIZED PERSONNEL.

90-120VAC 2A 88 FUSE  
200-280VAC 1A 50 FUSE  
47-63 Hz  
CAUTION: DO NOT OPEN. ELECTRIC SHOCK

INPUT L R

OUTPUT L R

AC IN

MADE IN USA

EXTERNAL SIDE CHAIN

RETURN L R SEND L R

LEFT CHANNEL INPUT OUTPUT

RIGHT CHANNEL INPUT OUTPUT

METER ZERO L R

DANGEROUS COMPRESSOR SERIAL # Dangerous Music COMP 9147

CAUTION

WARNING: DO NOT OPEN-RISK OF ELECTRIC SHOCK

ATTENTION: RISQUE DE CHOC ELECTRIQUE - NE PAS OUVRIR

DO NOT EXPOSE TO RAIN OR MOISTURE

NO USER SERVICEABLE PARTS INSIDE

REFER ALL SERVICING TO AUTHORIZED PERSONNEL

MADE IN USA

AC IN



ANALOG CABLE:

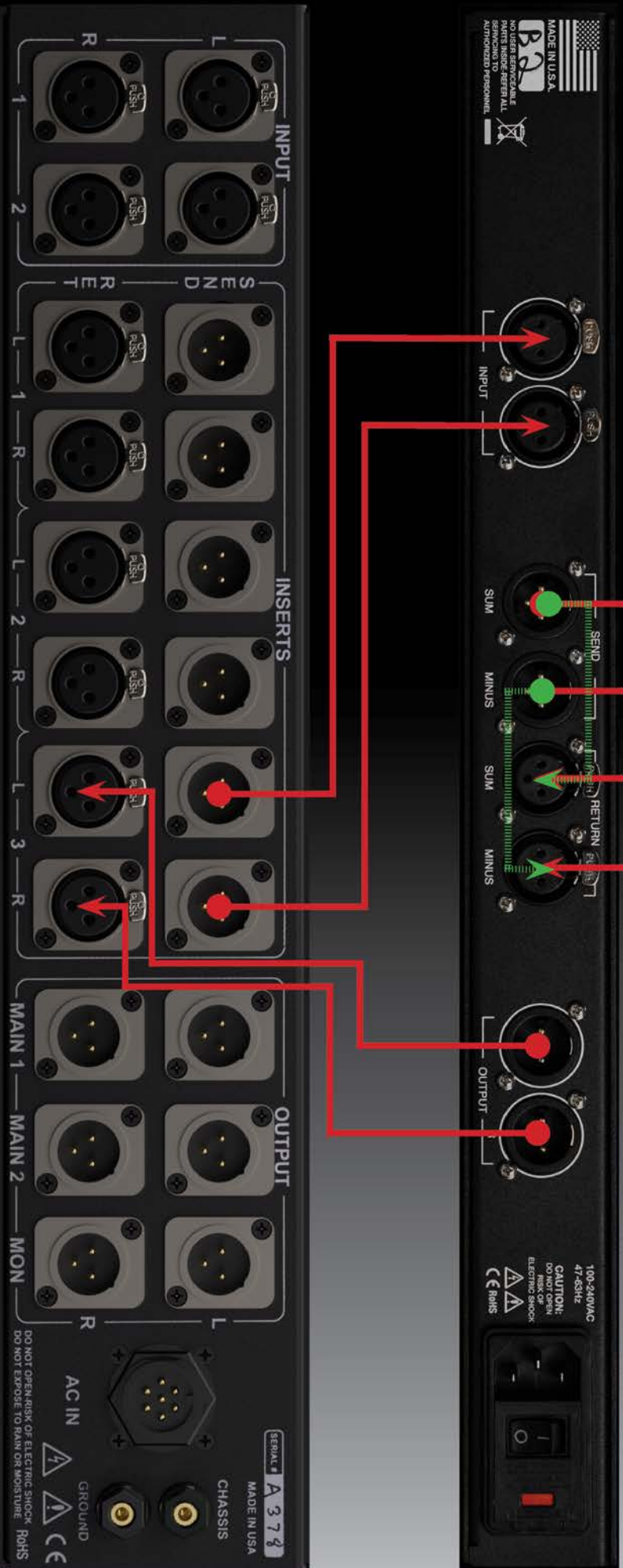
DIGITAL CABLE:

BLUETOOTH:

# S&M • MASTER

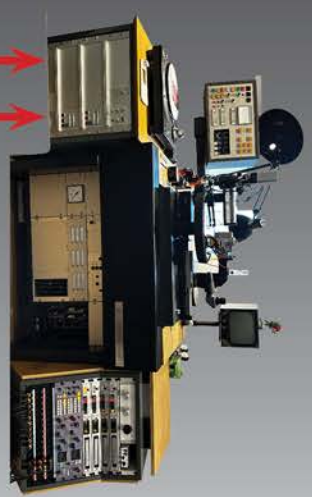


**CONNECT OUTBOARD  
OR CROSSPATCH OR  
NORMAL IN PATCHBAY**








# S&M • MASTER • LATHE



**CONNECT OUTBOARD  
OR CROSSPATCH OR  
NORMAL IN PATCHBAY**



**ANALOG CABLE:**   
**DIGITAL CABLE:**   
**CROSSPATCH:** 

DO NOT OPEN RISK OF ELECTRIC SHOCK R0HS  
DO NOT EXPOSE TO RAIN OR MOISTURE

SERIAL # A 378

MADE IN USA

CHASSIS

GROUND

AC IN

CE

100-240VAC  
47-63Hz  
CAUTION:  
DO NOT OPEN  
ELECTRIC SHOCK  
CE R0HS

**FROM  
AUDIO SOURCE**

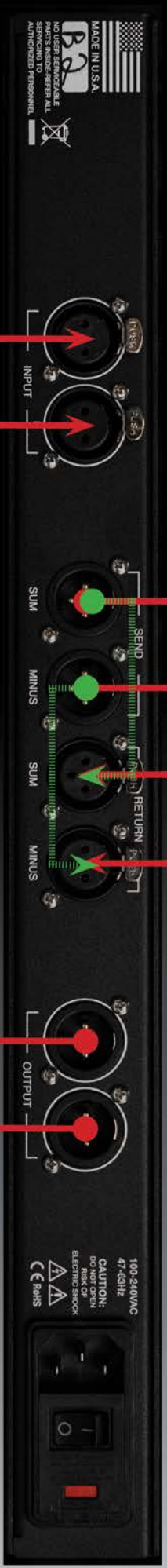
**TO  
AUDIO DESTINATION**



# S&M • 2-BUS+ MAIN INSERT



**CONNECT OUTBOARD  
OR CROSSPATCH OR  
NORMAL IN PATCHBAY**



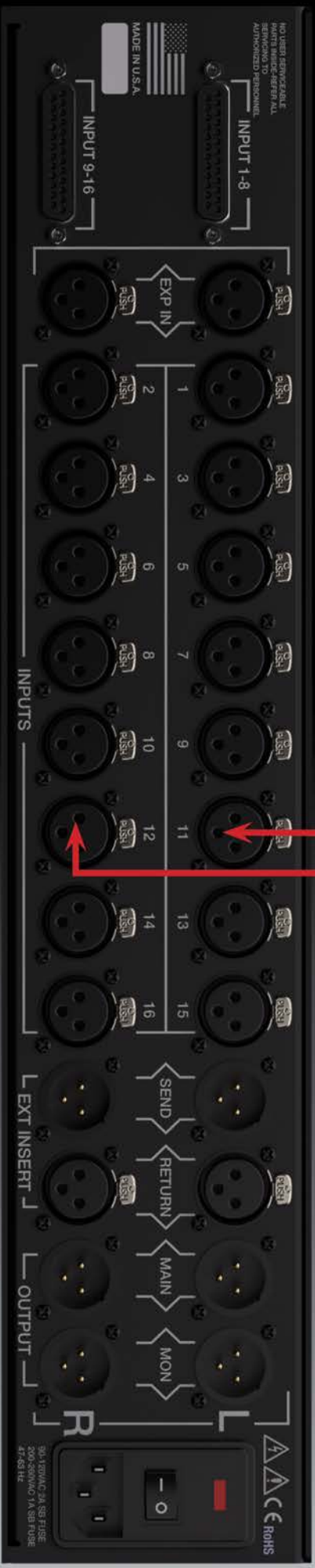
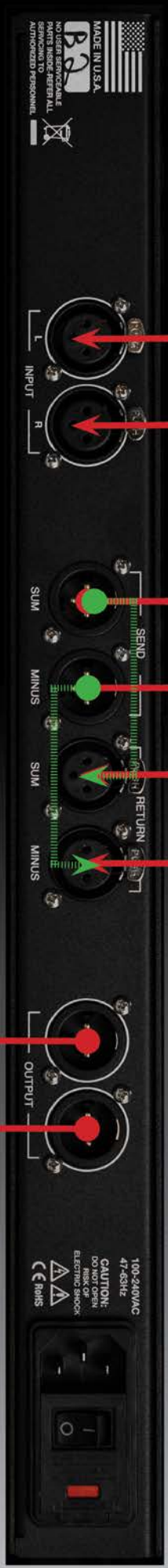


# S&M • 2-BUS+ CHANNEL INSERT

2 CHANNELS OF STEREO  
OUTPUT FROM YOUR  
INTERFACE



CONNECT OUTBOARD  
OR **CROSSPATCH** OR  
NORMAL IN PATCHBAY



PICK A PAIR OF  
CHANNELS BESIDES  
1-2 OR 9-10

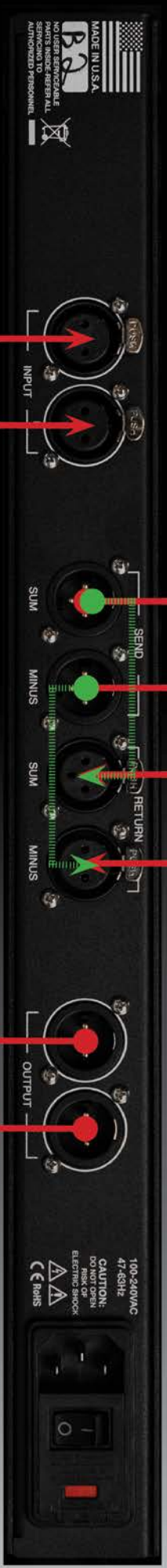
ANALOG CABLE:   
DIGITAL CABLE:   
CROSSPATCH: 





# S&M • 2-BUS-XT MAIN OUTPUT

CONNECT OUTBOARD  
OR CROSSPATCH OR  
NORMAL IN PATCHBAY



TO  
AUDIO DESTINATION

TO MONITOR  
CONTROLLER



ANALOG CABLE:   
DIGITAL CABLE:   
CROSSPATCH:

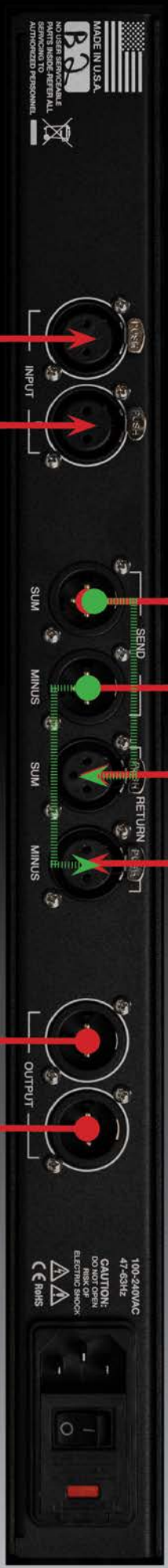




# S&M • D-BOX+ MIXBUS



**CONNECT OUTBOARD  
OR CROSSPATCH OR  
NORMAL IN PATCHBAY**



**TO  
AUDIO DESTINATION**



**ANALOG CABLE:** —  
**DIGITAL CABLE:** —  
**CROSSPATCH:** —

# 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.

Best way to connect for questions or repairs is by booking a zoom or call via

<https://calendly.com/dangerousmusic>

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Dangerous Music Group, LLC	Dangerous Music Europe
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USA	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 and design of their equipment.

- 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!

# SPECIFICATIONS

Note: Dangerous Music Group publishes actual measured specifications, not theoretical numbers derived from data sheets published by chip manufacturers when used at 273.15° Kelvin.

Frequency Response	Flat within 0.1dB from 1Hz -100kHz		
THD + NOISE	<0.002%		
IMD60 4:1	<0.002%		
Sum and Minus channel separation	-78dB		
Width control accuracy	0.02dBu		
Dynamic Range	108dB		
Nominal operating level	+4dBu		
Maximum Input Level	+23dBu		
Input Impedance	25K Ohms Balanced		
Output Impedance	50 Ohms Balanced		
Replacement Fuses:	AMERICAS	90-120VAC	2 Amp Slo-Blo fuse
	EUROPE	200-260VAC	1 Amp Slo-Blo fuse

HEAR EVERYTHING<sup>®</sup>



SACRIFICE NOTHING<sup>®</sup>