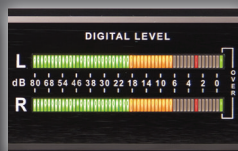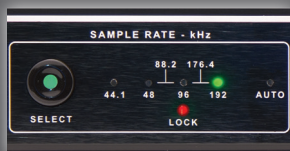# DANGEROUS MUSIC

CONVERT-AD+®

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 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 Incorporated reserves the right to change the specifications or modify the designs of its equipment. Sending in the registration card 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 this product 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 DMI. We tightly control production to use top quality materials.

RoHS COMPLIANT
2002/95/EC

THANK YOU

Thank you for choosing products from the exciting and innovative line of Dangerous Music recording equipment. Many years of reliable service can be expected from our gear. This is made possible through careful design, construction, and component choices by recording industry veterans.

Analog to Digital Conversion has been one of the biggest requests Dangerous Music has received from our end users. It has been love at first listen with our D/A Conversion, and now the same no compromise Dangerous quality is avalaible for capturing sounds the way the Universe intended. Whether used to return your summed mix back to digital, capture your finished master, or to track the perfect vocal, hear why no one does conversion like Dangerous Music. There are comprehensive tips and application notes in this user's guide, so don't skip the read.

If you have any suggestions for applications or future products, feel free to forward them. We are users like you.

DANGEROUS MUSIC

ABOUT DANGEROUS MUSIC
"Audio Integrity: non-negotiable." This is the credo upon which Dangerous Music is founded. Conceived and designed by end users–not by engineers in lab coats- the results are products that resurrect dynamic range, punch, intelligibility and emotion. These high-fidelity, uncompromising signal paths are achieved by harnessing over 20 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. Then 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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OVERVIEW

D/A Conversion has been an integral part of the Dangerous Music audio legacy since 2002, when the MONITOR® set the standard for mastering engineers worldwide. With these golden eared luminaries satisfied, Dangerous has unleashed it's quality upon the world of A/D Conversion. Designed without compromise, adhering only to the core philosophies of "transparent, yet musical" that have come to define Dangerous, the Convert-AD+ is profoundly detailed, to capture your sound with a richly defined low end and an unparalleled clarity that holds true from the midrange to the open top end. (Pronounced \kän- v rt\ or KHAN-vert as in a person who has changed to a different religion, belief, etc...)

Unpack this auditory truth sayer and celebrate. Inside the box you'll find the Convert-AD+, this manual and a standard 3 Pin IEC power cable.

Note: We recommend reading the entire manual (it's short- and so is life).

Convert-AD+: Front Panel Features & Benefits

1. SAMPLE RATE SELECT

[SAMPLE RATE SELECT SECTION PICTURED ABOVE]

Feature: Adjustable Sample Rate via the select switch.

Benefit: Cycle through the 6 sample rates and Auto Mode for universal compatibility with other devices.

Operation: For 88.2kHz both the 48kHz and 96kHz LEDs will light. For 176.4 both the 96kHz and 192kHz LEDs will light.

Tip: Auto Mode detects the appropriate rate from an external source and selects it automatically (except for ADAT*)

Tip: Lock Light turns green when the Convert-AD+ has achieved sync from an external source. (i.e. valid input data at selected sample rate). Red means there is no valid connection.

*Note: Since the ADAT lightpipe specification was never officially completed for sample rates above 48kHz, the sample rate must be selected manually. If the base rate from the ADAT source (i.e. 44.1kHz vs. 88.2kHz or 48kHz vs. 96kHz) and front panel settings match the lock light will turn green. If an incorrect base sample rate is selected, the lock light will turn red. The

audio will likely be garbled or distorted and channels may appear to be mixed together.

2. CALIBRATION

Feature: Selectable Calibration Level via the Select Switch.

Benefit: Cycle through the three calibration levels for compatibility with other devices. For example, while Avid is generally -18dBFS, Apogee is generally -16dBFS and much of the mastering community prefer -14dBFS. If ADCs are not calibrated, then the sonics will not translate to our ears equally (search "Fletcher-Munson curve" for more on this topic).

3. ANALOG INPUT SOURCE
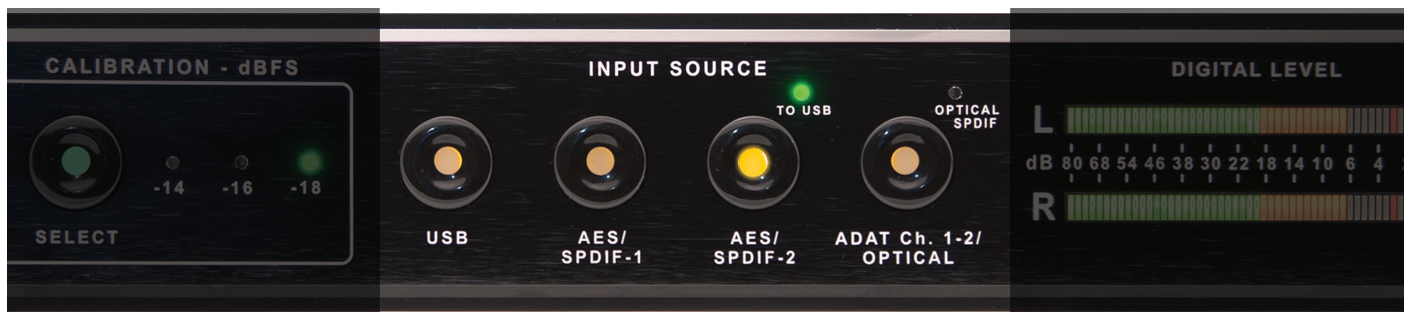
[INPUT SOURCE SELECT SECTION PICTURED ABOVE]

Feature: Two Selectable Stereo Inputs.

Benefit: Choose between two stereo input sources via XLR connections, allowing your favorite A/D conversion for two seperate purposes: (i.e. your mix buss after summing, and the output of two preamps for tracking)

Tip: ✌ Own a Monitor ST? Connect the remote to your Convert-AD+ so that you can switch between the two analog inputs from the ST's remote.

4. CLIP GUARD
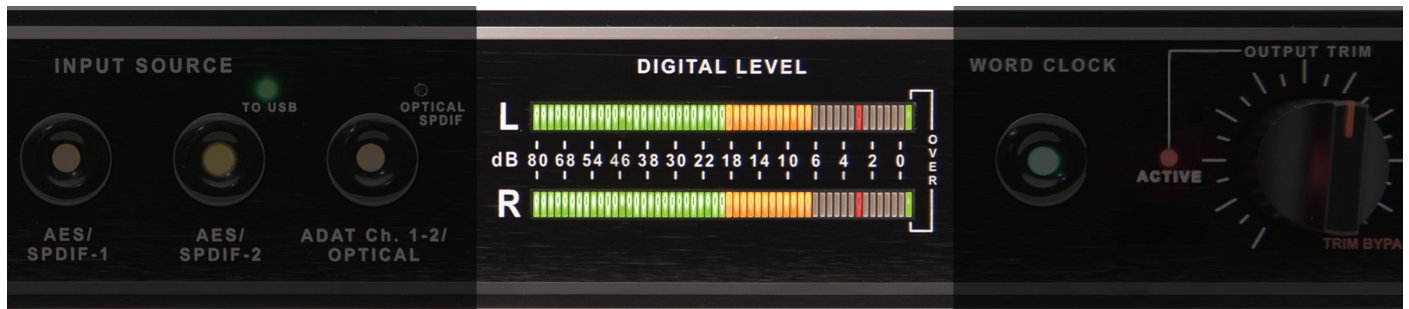
Feature: Inserts A Soft Limiter.

Benefit: Prevent overages from wrecking your perfect take.

5. PEAK & METER SCALING

Feature: Meter Versatility.

Benefit: Meter can hold peaks or reset them after 3 seconds depending on preference. Toggle between standard view, or zoom to get a finer view of your signal level.

6. CUSTOM METERING

[DIGITAL LED METER PICTURED ABOVE]

Feature: Premium custom crafted digital meter.

Benefit: Simultaneously view "Peak Over Average". This reveals the audio's crest factor by supplying both RMS information and Peak information, aiding the quest to retain dynamics and music's emotive properties.

Tip: The meters change from green to yellow at the user determined calibration point. In other words, -14dBFS, -16dBFS or -18dBFS depending on the Calibration selected (see section 2. Calibration).

Tip: At -6dBFS, the LEDs turn red and the scale changes: instead of 1dB steps per LED, they are very refined 0.5dB steps.

Tip: When the "3 Word Over Indicator" turns the last LED from green to yellow, this signifies that three consecutive samples have clipped. This is the limit of tolerance for a CD pressing to reject the project and a warning- cease flirting with digital overs.

6. WORD CLOCK

[WORD CLOCK SELECT SECTION PICTURED ABOVE]

Feature: 3 Modes: Normal, External and Master.

Benefit: Normal: Selecting this button press will make the Convert-AD+ sync to any incoming clock via any of the digital sources.

External: Deselecting this button will make the Convert-AD+ slave to an external word clock source. For example, if utilizing a master studio clock, this would distribute WC to the Convert-AD+.

Master: Depress the button for 5 seconds. The LED will blink. Now the Convert-AD+ is the master studio clock and other digital sources should slave to it. (Audition the difference.)

Note: When in Master clock mode, the sample rate must be manually selected and the destination devices must be set to the identical parameters (i.e. all units at 192kHz).

Tip: ✌ Try utilizing the Convert-AD+ as the master clock. Our high profile beta testers found it "remarkably revealing & detailed" and "...this is the best sounding clock auditioned to date- and we've tried everything."

Footnote: The Convert-AD+ leverages JetPLL technology, surrounding it with analog genius that execute it better than anyone. (JetPLL, JET and Jitter Elimination Technology are trademarks of TC Applied Technologies Ltd. JET is patented technology used under sublicense from TC Applied Technologies, and is the intellectual property of Sonopsis Ltd.)

7. X-FORMER INSERT & EMPHASIS
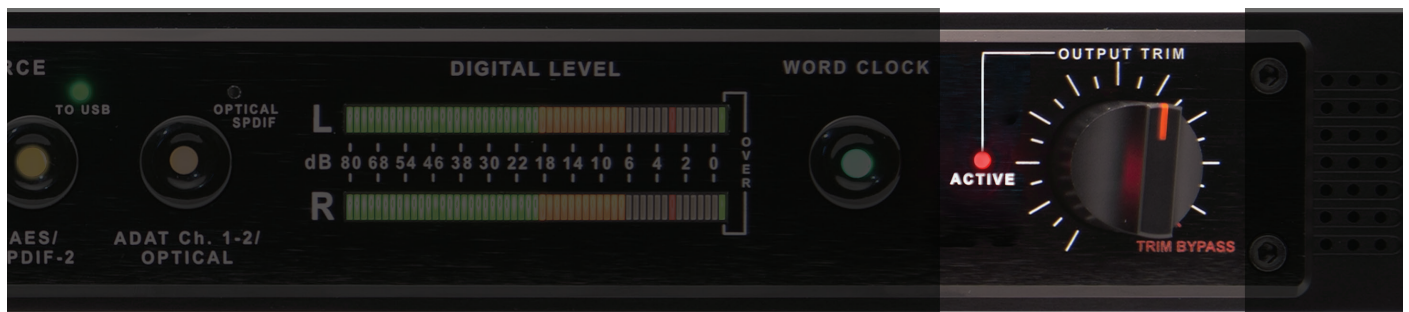
[OUTPUT TRIM SECTION PICTURED ABOVE]

Feature: X-Former utilizes a pair of customized CineMag transformers with a Chris Muth designed core saturation circuit that takes a unique approach to generating real analog artifacts and tone.

Benefit: When merely inserted and not driven, the CineMag transformers will add a subtle tightening to the low-end and will firm up the audio. By turning up the knob (EMPHASIS), you begin to drive the transformer in a controlled manner that eventually gives way to a unique analog distortion when fully clockwise.

Use: Insert the effect by selecting the X-Former Insert button, then starting with the knob fully counterclockwise (dry), turn it clockwise (wet) to introduce the effect.

Note: The X-Former is engaged even when the knob is fully counterclockwise (It is in series, not parallel).

Tip: ✌   Try working with the transformer circuit on, but turned fully counterclockwise. The subtle tightening of low end will often allow you to do less compressing to low end content, like bass and kick drums. Many vocal tracks will also pick up a hint of interest from a the subtle effects of running your mix through excellent transformers.

Convert-AD+: Rear Panel Connections

8. ANALOG INPUTS

[REAR PANEL ANALOG INPUTS PICTURED ABOVE]

Feature: Pro-quality XLR Connectors.

Benefit: More contact surface area for happy electrons to migrate through & no off-shore look-alike connectors that almost fit.

Note: All connections wired pin 2 hot as per AES standards.

9. AES OUTPUTS 1 & 2

[REAR PANEL AES/SPDIF INPUT 1 & 2 PICTURED ABOVE]

Feature: AES Outputs.

Benefit: Send the digital singal to your interface's AES input. Simply obtain the appropriate cable from your favorite audio grocer. When connecting AES, use a high quality 110 ohm (Jumperz Audio Cables and Redco both manufacture these).

10. ADAT OPTICAL OUTPUT

[REAR PANEL AES/SPDIF THRU 1 & 2 PICTURED ABOVE]

Feature: ADAT Optical Output.

Benefit: Leverage that unused ADAT input on your interface

11. SPDIF OPTICAL OUTPUT

[REAR PANEL ADAT OPTICAL 1-2 INPUT CONNECTOR PICTURED ABOVE]

Feature: SPDIF Optical Output.

Benefit: For use with devices that have a SPDIF optical input.

12. SPDIF COAX OUTPUT

[REAR PANEL WORD CLOCK INPUT & OUTPUT CONNECTORS PICTURED ABOVE]

Feature: Optical SPDIF COAX output.

Benefit: Another option for digital output, more common on modern interfaces than AES format.

Tip: Use a high quality, 75 ohm RCA - RCA cable (like those made by Jumperz Audio Cables and Mogami)

13. WORD CLOCK IN & OUT

[REAR PANEL OPTICAL SPDIF INPUT CONNECTOR PICTURED ABOVE]

Feature: 3 Modes: Normal, External and Master.

Benefit: Normal: Selecting this button press will make the Convert-AD+ sync to any incoming clock via any of the digital sources.

External: Deselecting this button will make the Convert-AD+ slave to an external word clock source. For example, if utilizing a master studio clock, this would distribute WC to the Convert-2.

Master: Depress the button for 5 seconds. The LED will blink. Now the Convert-AD+ is the master studio clock and other digital sources should slave to it. (Audition the difference.)

Note: When in Master clock mode, the sample rate must be manually selected and the destination devices must be set to the identical parameters (i.e. all units at 192kHz).

Tip: Try utilizing the Convert-AD+ as the master clock. Our high profile beta testers found it "remarkably revealing & detailed" and "...this is the best sounding clock auditioned to date- and we've tried everything."

14. USB OUTPUT
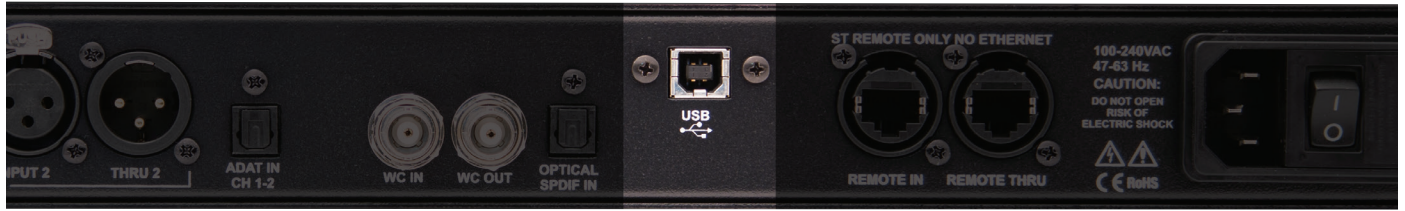
[REAR PANEL USB INPUT OUTPUT CONNECTOR PICTURED ABOVE]

Feature: USB Output.

Benefit: Connect the Convert-AD+ to any USB 2.0 compliant computer to receive input.

15. ST REMOTE I/O

[REAR PANEL MONITOR ST REMOTE IN & THRU CONNECTORS PICTURED ABOVE]

Feature: Connect the Dangerous Music Monitor ST here.

Benefit: Control the two analog input selection options on the Convert-AD+ directly from the Monitor ST Remote.

16. POWER & SWITCHING

[REAR PANEL 3 PIN IEC CONNECTOR PICTURED ABOVE]

Feature: Three pin IEC cable.

Benefit: Simple to replace if lost.

Feature: Switching power supply auto detects voltage.

Benefit: Travel with your favorite gear anywhere in the world while spreading the audio truth.

Operation: Unit ships with voltage appropriate fuse value. To change it, use a screwdriver to gently pry the mains inlet module's cover open and insert the correct voltage. Fuses for the alternate voltage are included in the shipping box.

Tip: ☝ The power switch is on the inlet module. Seat the AC cable completely and use properly grounded power mains for safe and quiet operation.

Tip: ☝ If the Convert-AD+ will not power on and the power is known to be good, check the fuses under the inlet module's

cover. Use 500 milliamp fast blow for 120V (America) and 250 milliamp fast blow for 240V (Europe). Check this data.

FAQ SECTION?

SPECIFICATIONS (missing)

Frequency Response	+- 0.25dB from 15Hz to 80kHz
Maximum level	> +27dBu
Noise floor	< -93dBu band limited from 22Hz-22kHz
THD+N	< 0.005%
IMD	< 0.007%
Crosstalk rejection	> 115dB@1kHz
Replacement Fuses:	USA 500mA fast blow for 120V
	Europe 250mA fast blow for 240V
Input Impedance:	20K Ohms
Output Impedance:	50 Ohms

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 Inc.	Dangerous Music Europe
231 Stevens Road	Stieleichenweg 55
Edmeston, NY 13335	50999 Cologne, Germany
	Fon: +49 2236 393731
	Fax: + 49 2236 393732
Email: info@dangerousmusic.com	E-mail: info@dangerousmusic.de

Dangerous Music, Inc. reserves the right to alter the software and design of their equipment.

If after reading the manual more information for an application is needed, please contact us via email 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!