DANGEROUS MUSIC



USER GUIDE

SOURCE®

The Truth is In Here



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 the SOURCE® 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.

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.

The Dangerous Music Source is designed to inspire your musical genes. No matter if you're on the road or in studio, Source allows you to hear with unparalleled accuracy, propelling composition, performance and mixing to new heights.

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.

If you have any suggestions for future products, feel free to forward them!

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

The Dangerous Source provides the critical link between your ears and the music. Every tracking and mixing decision hinges upon what you hear: how to locate the microphone's sweet spot for the perfect vocal, where to place the panning to define each instrument's space, creating the perfect marriage of kick and bass in the track...

Plug in two pairs of headphones and get inspired- serious amplification to turn up your creative heat.

Select any of the four sources individually or at the same time- plug your iPod into AN2 and jam along in AN1. There are 2 independent D/A converters built in, so you can monitor different digital inputs independently.

Listen to any combination of sources from either section. For example, let the singer hear their own personal headphone mix from the AN2 input, while you engineer the real mix, coming from the USB 2.0 compliant input.

There's even a line level control room output, mirroring the speaker selector for dubbing, sampling or running external meters.

Switch between two sets of speakers... or use one output for a subwoofer... or play them both at once to blow up the neighborhood.

Built for life on the road, slide the SOURCE into your backpack and hit the streets.



Inside the box you'll find the Source, a USB 2.0 compliant cable, 12 volt/2 Amp power supply (PSU-SRC) and the manual you're reading now.

NOTE:

Requires Mac OS 10.6 or higher for driverless plug and play

Windows requires a driver. Download from www.dangerousmusic.com (navigate to the Source product page)

Source: Rear Panel Connections



[REAR PANEL INPUTS PICTURED ABOVE]

1. ANALOG INPUTS

Feature: Analog Input 1 is on XLR / TRS combination connectors.

Benefit: Use gear with XLR balanced connectors, or TRS balanced connectors or TS unbalanced connectors.

Use: Connect audio feeds here, for example, the outputs of your computer interface, keyboard, guitar rack, sampler.

Feature: Analog Input 2 is on an 1/8" mini TRS connector.

Benefit: Compatible with portable playback devices.

Use: Plug in your iPod, SmartPhone, computer output etc... here.

Note: This input is set to unity gain for an iPhone. There is a header internally for setting it to a true -10 dBv.

Tip: Cables DO make a difference. Ask for Mogami interconnects.

2. DIGITAL INPUT



[REAR PANEL DIGITAL INPUT PICTURED ABOVE]

Feature: Digital input available on XLR / TRS combination connector.

Benefit: Use either AES or SPDIF coaxial, just get a properly wired cable (i.e. RCA-XLRM)

Note: SPDIF = 75 ohms, AES = 110 ohms. The origin, not the destination, will dictate the whether to use SPDIF or AES. In other words, if your interface is outputting SPDIF, then use 75 ohm cable. If it's outputting AES, use 110 ohm cable.

Use: Take the digital output from your computer interface and connect it here to monitor through the mastering quality D/A converter. This will provide an extremely accurate, yet musical representation of your audio that will translate across multiple systems (i.e. iPod, car stereo, home hi-fi...)



EXAMPLE 1:
AES CABLE
[AES XLR(F)-XLR(M)]



EXAMPLE 2:
ADAPT a S/PDIF CABLE
[RCA(F)-1/4"]



EXAMPLE 3:
AES to S/PDIF CABLE
[DIGITAL XLR(M)-RCA]

3. DIGITAL THROUGH



[REAR PANEL DIGITAL THROUGH PICTURED ABOVE]

Feature: Make AES or SPDIF connections here.

Benefit: Pass through the AES or SPDIF digital input signal.

Use: Monitor an external A/D converter while simultaneously sending to recorder or send the audio back into the session for more processing, or plug into an outboard digital meter or run into another SOURCE for expanded monitoring options.

4. USB INPUT



[REAR PANEL USB INPUT PICTURED ABOVE]

Feature: Connect the USB 2.0 compliant output from your computer here.

Benefit: Skip using an interface or use this to monitor an additional output source from your computer.

Use: Use one set of outputs to set up a custom headphone mix for the talent and use the USB output to monitor the main mix, leveraging the mastering grade converter in SOURCE. Or reference your masters and music library in high resolution up to 24 bit, 192 kHz via USB!

Note: Requires Mac OS 10.6 or higher for driverless plug and play

PC requires a driver. Download from www.dangerousmusic.com (navigate to the Source product page)

5. SPEAKER 1 & 2 OUTPUTS



[REAR PANEL SPEAKER OUTPUTS PICTURED ABOVE]

Feature: Two stereo outputs for connecting two sets of reference monitors.

Benefit: Compare and contrast your mixes on two sets of speakers using XLR and/or TRS connectors.

Tip: Use one output for speakers and the other output for a sub: turn the sub on or off whenever you need it. (Also, always hear the speakers in full range- some subs have a non bypassable crossover.)

6. SELECTED LINE OUTPUTS



[REAR PANEL SELECTED LINE OUTPUTS PICTURED ABOVE]

Feature: A pair of stereo outputs that mirror the speaker source selected.

Benefit: Send your selected source or sources to another destination (i.e. Front of House PA system, mixdown device like a CD Burner, iPhone or cassette deck- remember those?)

Note: These outputs are unaffected by the SPEAKER LEVEL KNOB.

7. POWER ADAPTOR



[REAR PANEL POWER SUPPLY CONNECTION PICTURED ABOVE]

Feature: Power supply is 12 volts, 2 Amps (part number PSU-SRC) and plug into either receptacle.

Benefit: The other is for possible future accessories that could run off the main power supply (shhh).

Source: Front Panel Features & Benefits

1. HEADPHONE OUTPUTS



[HEADPHONE SOURCE SECTION PICTURED ABOVE]

Feature: Headphone jack 1 & 2 sport a potent headphone amplifier.

Benefit: Loads of HEADROOM, to audition intelligibly, make intelligent decisions and drive an inspired performance. Please exhibit caution when selecting a level. (See "TIP")

Operation: First choose a source to monitor from, by depressing the appropriate **HEADPHONE SOURCE** button. Then determine a moderate listening level via the **HEADPHONE LEVEL** knob.

Tip: Always start with the level control completely counter clockwise (minimum). The headphone amplifiers are very powerful and there is no solution for destroyed hearing, even from the audio alchemists at Dangerous Music.

2. HEADPHONE SOURCE (TOGGLE & LATCH MODE)



[HEADPHONE SOURCE SELECTOR PICTURED ABOVE]

TOGGLE

Feature: Instantly and silently switch between four headphone input sources (ANALOG 1, ANALOG 2, AES/SPDIF and USB).

Benefit: While mixing, flip between a reference track. For example, CD source or iPod connected via analog INPUT ONE or INPUT TWO and your mix connected digitally via USB or AES/SPDIF.

Note: This is the default setup.

LATCH

Feature: Silently select or deselect any combination of 1, 2, 3 or 4 headphone sources (i.e. ANALOG 1, ANALOG 2, AES/SPDIF and USB).

Benefit: Monitor multiple audio inputs simultaneously. For example, feed the master mix into the USB input and the talent (i.e. vocalist singing now) into ANALOG 1 for zero latency monitoring. (See APPENDIX for more examples from DJ's to Producers).

Note: Requires SETUP. See the following section for details.

Tip: Headphone sources and Speakers sources are completely independent. (i.e. listen to different things from each).

3. HEADPHONE SETUP (TOGGLE TO LATCH MODE)



[HEADPHONE SETUP SOURCE BUTTONS PICTURED ABOVE]

Feature: Set the desired behavior for the HEADPHONE SOURCE BUTTONS: either TOGGLE or LATCH mode.

Operation: Simultaneously press and hold the bracketed SETUP buttons (AN 2 and AES/SPDIF) on the HEADPHONE SOURCE side. The SETUP LIGHTS will blink. Then press the button with the orange circle (AN 1) on the HEADPHONE SOURCE side to switch between TOGGLE mode (button unlit) and LATCH mode (button lit). Press either of the blinking SETUP BUTTONS (AN 2 or AES/SPDIF) to store and exit setup mode.

4. SPEAKER SOURCE BUTTONS (TOGGLE & LATCH MODE)



[SPEAKER SOURCE BUTTONS PICTURED ABOVE]

TOGGLE

Feature: Instantly and silently switch between four input sources that feed your speakers (ANALOG 1, ANALOG 2, AES/SPDIF and USB).

Benefit: While mixing, flip between a reference track (i.e. cd source or iPod) and your mix. Or setup two master faders in your recording software to compare two mixes: one with plug-ins instantiated and the original. (Just two suggestions).

Note: This is the default setup.

LATCH

Feature: Silently select or deselect any combination of 1, 2, 3 or 4 speaker sources (i.e. ANALOG 1, ANALOG 2, AES/SPDIF and USB).

Benefit: Monitor multiple audio inputs simultaneously. For example, feed the master mix into the USB input and the drummer's click track into ANALOG 1. Now you can turn the click off when you realize he'll never lock to it or continue to monitor it for places to punch-in and rescue. (See APPENDIX for more examples from DJ's to Producers).

Tip: Headphone sources and Speakers sources are completely independent. (i.e. listen to different things from each).

5. SPEAKER SOURCE SETUP (TOGGLE TO LATCH MODE)



[SPEAKER SOURCE BUTTONS PICTURED ABOVE]

Feature: Set the desired behavior for the SPEAKER SOURCE BUTTONS: either TOGGLE or LATCH mode.

Benefit: Simultaneously press and hold the bracketed SETUP buttons (AN 2 and AES/SPDIF) on the HEADPHONE SOURCE side. The SETUP LIGHTS will blink. Then press the button with the orange circle (AN 1) on the SPEAKER SOURCE side to switch between TOGGLE mode (button unlit) and LATCH mode (button lit). Press either of the blinking SETUP BUTTONS (AN 2 or AES/SPDIF) to store and exit setup mode.

6. SPEAKER SELECTION (TOGGLE OR LATCH MODE)



[SPEAKER SELECTION BUTTONS PICTURED ABOVE]

TOGGLE

Feature: Instantly and silently switch between your speakers using the SPEAKER SELECTION BUTTONS (SPKR 1 and SPKR 2) auditioning only one set of monitors at a time.

Benefit: A/B tracking and mix decisions between two different sets of speakers.

Note: This is the default setup.

LATCH

Feature: Silently select or deselect any combination of 1 and/or 2 speakers (i.e. SPKR 1 and SPKR 2).

Benefit: Audition through either set of speakers or both simultaneously (ie. for the control room and live room).

Tip: Use one output for speakers and the other output for a sub (not the sandwich): turn the sub on or off whenever you need it. (Also, always hear the speakers in full range- some subs have a non bypassable crossover.)

7. SPEAKER SELECTION (TOGGLE TO LATCH MODE)



[SPEAKER SELECTION BUTTONS PICTURED ABOVE]

Feature: Set the desired behavior for the SPEAKER SELECTION BUTTONS.

Benefit: Simultaneously press and hold the bracketed SETUP buttons (AN 2 and AES/SPDIF) on the HEADPHONE SOURCE side. The SETUP LIGHTS will blink. Then press the button with the orange circle (SPKR 1) on the SPEAKER SELECTOR side to switch between TOGGLE mode (button unlit) and LATCH mode (button lit). Press either of the blinking SETUP BUTTONS (AN 2 or AES/SPDIF) to store and exit setup mode.

8. MOMENTOGGLE (HEADPHONES SOURCE • SPEAKER SOURCE • SPEAKERS)



[HEADPHONES SOURCE, SPEAKER SOURCE AND SPEAKER SELECTION BUTTONS PICTURED ABOVE]

Feature: MOMENTOGGLE is built into all of the buttons above. It provides either a momentary or latching mode, at the user's discretion.

Operation: LATCH MODE. If the buttons are pressed and released quickly, they will latch.

TOGGLE MODE. If pressed and held for more than a second, the function remains locked until the button is released.

Uses: Create a talkback mic: Plug a mic and preamp into analog input two (AN 2). To communicate with the talent, just hold the AN 2 button on the HEADPHONES SOURCE side to speak directly into their cans. Release and it deactivates.

Subwoofer check: Plug your main monitors into SPKR 1 and the sub(s) into SPKR 2. Then hold the SPKR 2 button for as long as you'd like to check the low frequency content.

9. OPTIONAL RACK KIT



[OPTIONAL SRK RACK KIT PICTURED ABOVE]

Feature: Mount SOURCE in traditional racks or road cases with the optional 19" faceplate (part number SRK).

Benefit: Ability to tuck SOURCE into a 19" rack bag or into a fixed installation.

Operation: Remove the desktop front and install the single rack space faceplate as explained below.

(1) Gently pull off the two knobs

(2) Remove the two nuts from around phones jacks Remove the four main hex screws from the faceplate

(3) Remove the four main hex screws from the faceplate

(4) Remove the four feet

(5) Replace the phillip head screws in the former holes where the feet had been

(6) Install the one space rack panel

Source: Mac Setup

PRO TOOLS

Plug in SOURCE via USB to your Mac.

Power up SOURCE.

Launch Pro Tools.

Navigate to the "SETUP" menu.

Select "PLAYBACK ENGINE". (PHOTO OP 01)

A pop up screen will appear (PHOTO OP 02), select "PRO TOOLS AGGREGATE I/O" from the drop down menu. (PHOTO OP 03)

Select "Yes" from the pop up window (PHOTO OP 04)

Hit "OKAY" and the session will reopen with the new "PLAYBACK ENGINE"

Navigate to the "SETUP" menu again

Select "HARDWARE" (PHOTO OP 05)

Click on "LAUNCH SETUP APP" (PHOTO OP 06)

Click on "PRO TOOLS AGGREGATE I/O" from the left hand menu (PHOTO OP 07)

Select in the checkboxes all the interfaces you'd like to utilize, including "XMOS USB 2.0 AUDIO OUT" (PHOTO OP 07)

Hit "OKAY"

Start monitoring from Pro Tools!

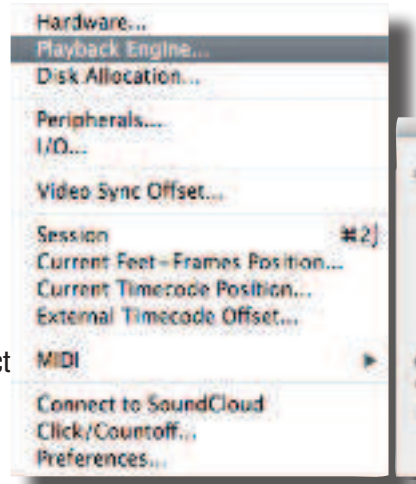


PHOTO OP 01

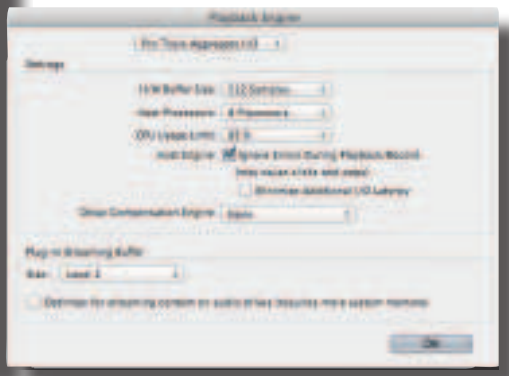


PHOTO OP 02



PHOTO OP 03



PHOTO OP 04

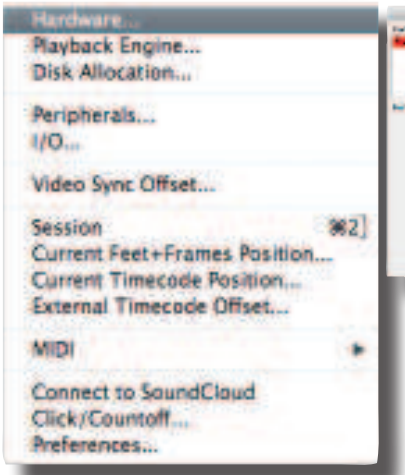


PHOTO OP 05



PHOTO OP 06



PHOTO OP 07

Source: PC Setup

Plug in SOURCE via USB

To install the driver, plug the USB port to the computer and power up SOURCE.

Double click on the CEUDUSB-7.4.2 icon and extract the driver installer file.

Double click on the extracted file and follow the directions. (PHOTO OP 01 & 02)



PHOTO OP 01



PHOTO OP 02

Accept the license agreement then click Next. (PHOTO OP 03)

Click Install. (PHOTO OP 04)

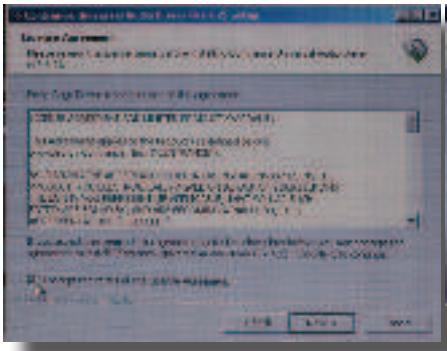


PHOTO OP 03



PHOTO OP 04

Continue anyway. (PHOTO OP 05)

Ignore the 'Readme' file like everyone else does. Actually, it contains important info. (PHOTO OP 06)

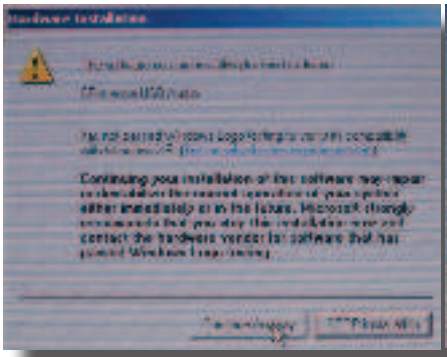


PHOTO OP 05

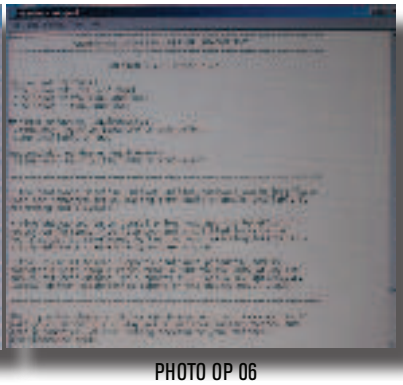


PHOTO OP 06

Finish the Wizard. (PHOTO OP 07)

You are ready to go. If you need to check on the CE control panel, it is in the Task bar.

Double click on the CE icon and it opens the control panel. (PHOTO OP 08)

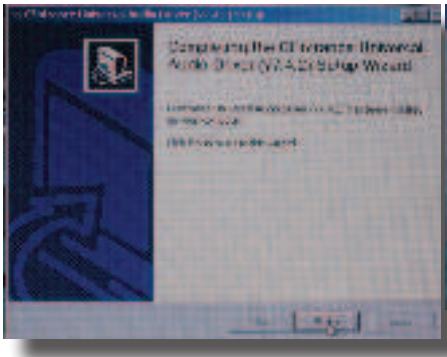


PHOTO OP 07

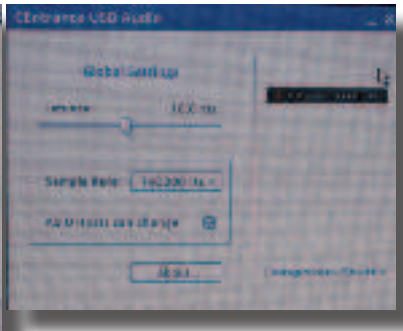


PHOTO OP 08

Set the rate (In this case auditioning a CD).
(PHOTO OP 09)

44100Hz selected (PHOTO OP 10)

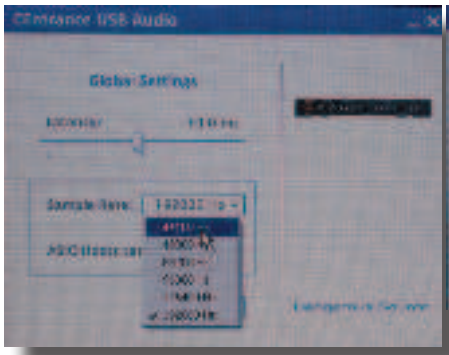


PHOTO OP 09

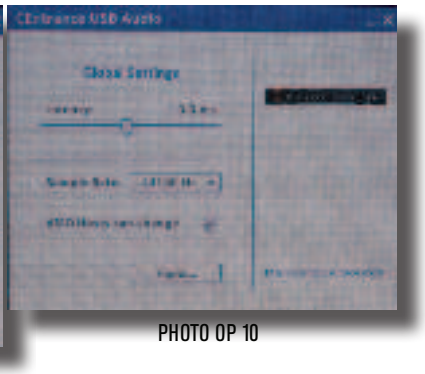


PHOTO OP 10

To select the USB card if you have multiple devices, open the Windows control panel.
(PHOTO OP 11)

Select 'Sounds and Devices'. (PHOTO OP 12)

Select the XMOS USB Audio 2.0 device. (PHOTO OP 13)

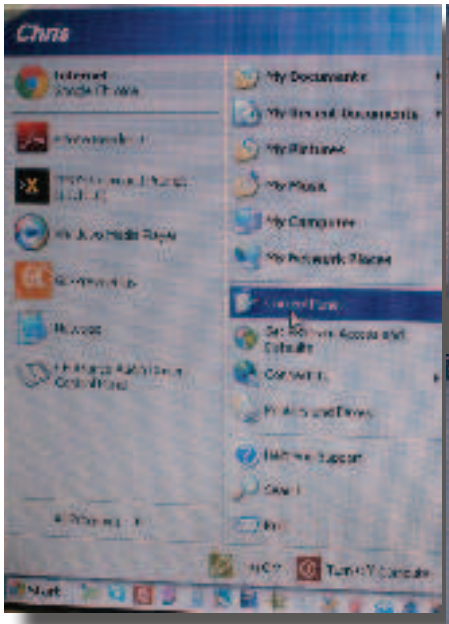


PHOTO OP 11

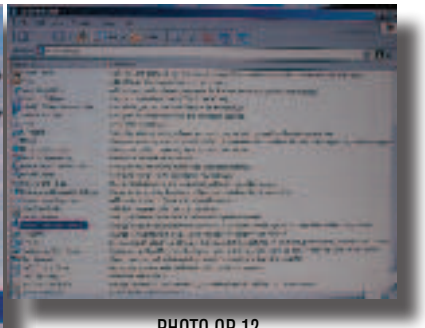


PHOTO OP 12

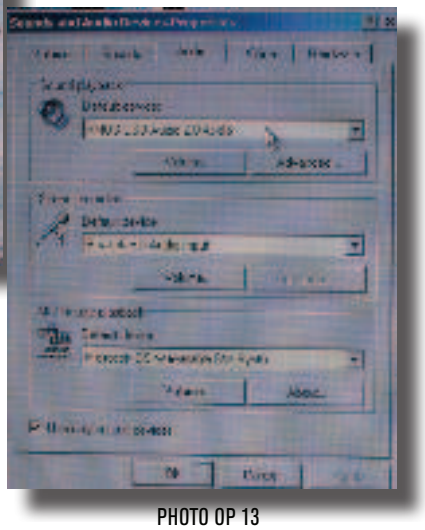


PHOTO OP 13

Play audio for one second so the USB card learns the sample rate and clocking information.

You are ready to rock.

Note: If you change the sample rate, you have to give the USB card a 1 second burst of "Play" again so it can adjust itself to the new condition.

Windows 8 is supposed to implement a USB Audio 2.0 system. The engineers at Dangerous chose Audio 2.0 because it runs higher sample and bit rates. PC users, welcome to the bleeding edge!

Source: Application Examples

The Producer

Talent is using headphones with ANALOG INPUT TWO (headphone mix out of the computer) and ANALOG INPUT ONE for zero latency vocals.

Producer is monitoring via speakers the usb for the master mix and ANALOG INPUT ONE for zero latency vocals.

The Road Warrior (traveling musician)

Monitor the music and click track while jamming guitar and looping it back into the session.

Laptop main session tracks connected via USB.

Click track connected via the analog output of the laptop to INPUT TWO.

Guitar processor plugged into INPUT ONE.

Headphones set up to monitor all 3.

Speaker outputs select USB and INPUT ONE.

SELECTED LINE OUT feeds a return back into the laptop to track session ideas.

The DJ

A laptop DJ, feeding SOURCE via USB (or any other input), could send this mix to the front of house for amplification, while they utilize the speaker levels for booth control and headphone levels for personal monitoring.

More applications to come!

We want to hear about your creative uses.

SPECIFICATIONS

INPUT 1 TO SELECTED LINE OUT AND SPEAKERS

Frequency Response	+0, -0.5dB from <10 Hz to >80 kHz
THD+N	< 0.0025% @+4dBu
IMD (SMPTE)	< 0.0025% @ +4dBu
Crosstalk rejection	>108dB
Noise	< -93 dB, unweighted

NOTE: Speaker outs can run at -6dB (factory setting) or unity gain (remove jumpers 3 and 4)

Maximum input level	> +26 dBu

INPUT 2 TO SELECTED LINE OUT AND SPEAKERS

Frequency Response	+0, -0.5dB from <10 Hz to >80 kHz
THD+N	< 0.0025% @ +4dBu
IMD (SMPTE)	< 0.0026% @ +4dBu
Crosstalk rejection	> -98dB
Noise	< -90 dB, unweighted

NOTE: Input 2 can run at -10dBV or -16dBV (by setting JP1 and JP2. Remove for -10dBV)

Default factory setting is -16dBV to accommodate 1/8" headphone outputs of iPhones and cell phones

Frequency response	+0, -0.5dB from <10Hz to >50kHz

OUTPUTS

The meter and speakers outputs are fully balanced and 600 ohm drive capable to >+26dBu.

Volume knobs track better than	+- 0.5dB from unity to -40dB.

The headphone amp can easily drive several sets of cans.

Maximum output level	> +26 dBu
Shipping weight (in carton)	7 lbs
Dimensions	12 3/4" wide X 8" deep X 1 5/8" high

DIGITAL INPUTS

The AES inputs lock from 32kHz to 192kHz sample rates with the following:	<0.004% THD+N
	-0.2dB at 10 Hz and 22kHz (48kHz sample rate)
	-0.2dB at 10Hz and 34kHz (higher rates)
Crosstalk rejection	>103dB
Power Supply:	12 volt, 2 Amp (Part number PSU-SRC)
Optional Rack Kit:	SRC (Source Rack Kit), $49.99

Now it's your turn to unleash the potential of SOURCE and tell us all the unusual applications you've utilized it in!

Experiment well beyond the pages of this manual. The Source is a still audio river that runs deep.

-The Dangerous Music Team



-you will hear the difference...

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
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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.
- Operating the device with anything other than the Dangerous Music Power Supply will void the warranty
- Thank you for actually reading the manual. Now go make some Dangerous Music!

revision 9.0 marek April 2013

DANGEROUS



MUSIC

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