

USB MATCHBOX II™

USB<>XLR MULTIMODE DIGITAL AUDIO CODEC

HENRY ENGINEERING

503 Key Vista Drive
Sierra Madre, CA 91024
Tel: 626.355.3656
Fax: 626.355.0077
www.henryeng.com

DESCRIPTION

The USB Matchbox II is a high-performance professional audio codec. Used in place of a computer “sound card”, it provides stereo analog inputs and outputs at professional studio levels, an AES/EBU output, and a Headphone output for critical monitoring. The USB Matchbox II yields superb “audiophile” performance with the convenience of USB interface to any Windows, Mac, or Linux based computer. The USB Matchbox II is compatible with virtually any audio recording/editing software that supports a USB sound device. No special software or driver is needed. A USB 1.1 (or higher) connection to the PC is required. The USB Matchbox II complies with the AES-48-2005 grounding standard.

INSTALLATION

ANALOG LINE INPUTS/OUTPUTS: Connect balanced analog inputs and output to the XLR connectors as follows:

Pin 1 = GND, Pin 2 = HI, Pin 3 = LOW.

NOTE: Ground loops cause hum, buzz, and other noises that are created by the computer mouse, drives, fan, and keyboard. **Prevent noise by connecting ground wires at one end only.**

The HEADPHONE output can be used to monitor the “play” output of the system. Use contemporary headphones with an impedance of 24 ohms or greater. Do NOT use older “8 ohm” headphones. The VOLUME control adjusts the headphone level. **Warning!** Excessive listening levels can cause permanent hearing damage.

DIGITAL OUTPUT: Connect to the AES/EBU digital output XLR connector as follows:

Pin 1 = GND, Pin 2 = HI, Pin 3 = LOW. (The AES/EBU output is transformer isolated.)

COMPUTER CONNECTION:

First, close any audio-related programs. Use a USB cable to connect the USB Matchbox II to any USB port on the PC. The computer should recognize the USB Matchbox II as “**USB Audio Codec**”. No additional software or drivers are needed. When audio software is started, it may be necessary to change its Settings to select the **USB Audio Codec** as its default.

WINDOWS* VOLUME SETTING

BEFORE USING USB MATCHBOX II, be sure to check the Windows “SPEAKER VOLUME” setting. The Speaker Volume can be accessed via the Windows Control Panel under “Sound and audio devices” or “Adjust the system volume”. Select “Volume” or “Set system volume”, then adjust the slider. **In most cases, the Speaker Volume should be set to MAXIMUM.** *Windows is a registered trademark of Microsoft Corporation.

OUTPUT LEVEL CALIBRATION

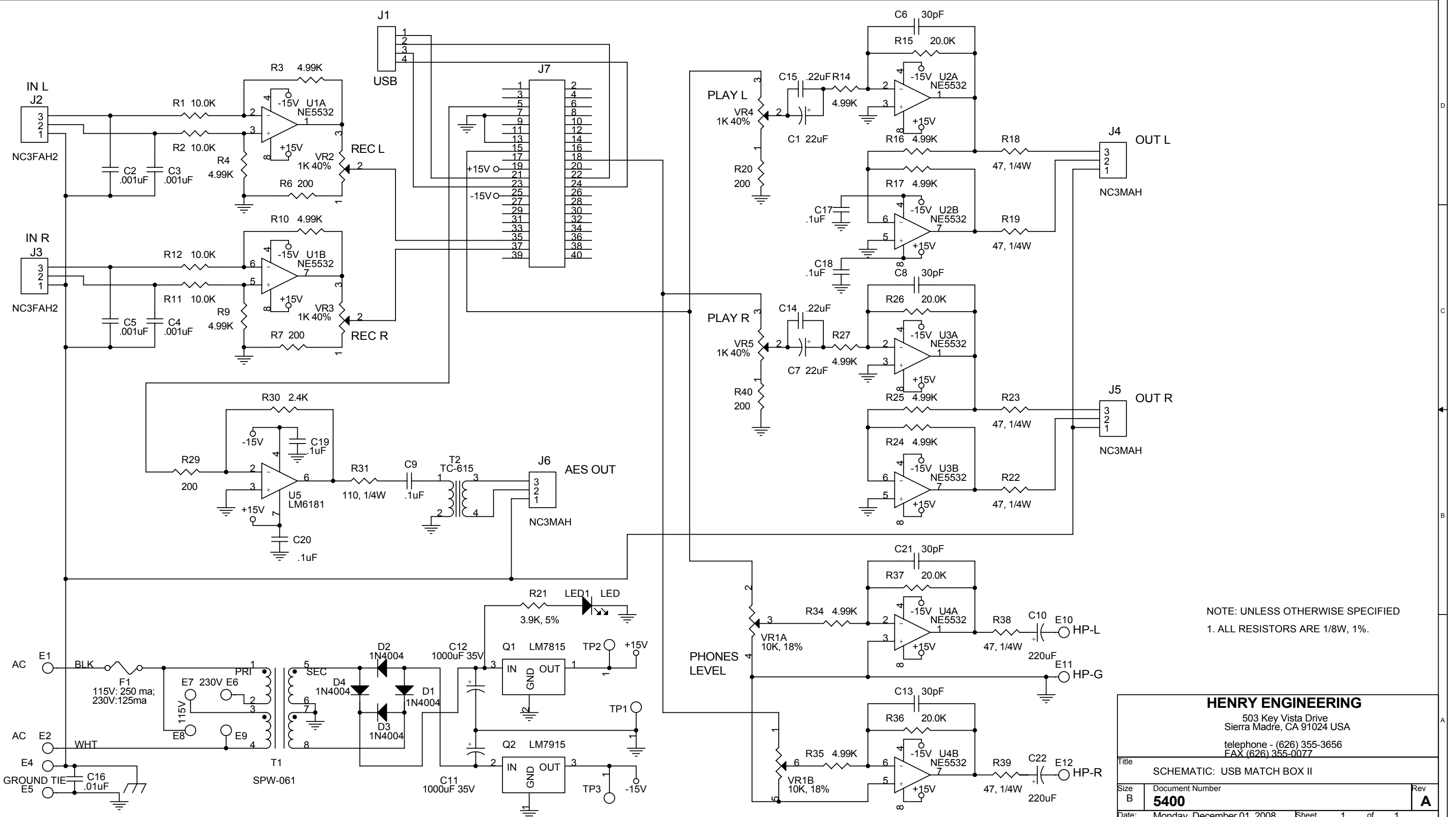
The USB Matchbox II is calibrated to operate with analog I/O levels of +4 dBu. Input and Output levels can be changed via the recessed trimmers; use a small screwdriver to carefully adjust. NOTE: There is 15 dB of digital headroom above +4 dBu: a calibration tone recorded at 0 dBfs will produce an output level of about +19 dBu.

OPERATION

To record, feed audio into the unit. Set the INPUT LEVEL trimmers as necessary, as indicated by the software being used. To play a recording, simply play the file. Audio will be present on the XLR analog outputs, Headphone jack, and on the AES/EBU digital output. (The Headphone output monitors “playback” audio only.)

SPECIFICATIONS

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|---------------------------|--|
| Balanced analog inputs | Stereo, nom. +4 dBu @ -15 dBfs, 20K ohms input impedance, XLR X 2 |
| Balanced analog outputs | Stereo, nom. +4 dBu @ -15 dBfs, +24 dBu max level, 600 ohms, XLR X 2 |
| AES/EBU digital output | Transformer isolated, 110 ohms, XLR connector |
| Headphones output | For headphones, 24 ohms or higher; 3.5mm stereo jack |
| Sample rates supported | 48, 44.1, or 32 kHz, software defined |
| Resolution, dynamic range | 16 bit stereo or mono, software defined |
| USB supported | USB 1.1 or higher |
| Power Input | 115 or 230 VAC, 50-60 Hz, 2W, + USB power |
| Approval | City of Los Angeles Electrical Test Lab |
| Physical | 5.75” w X 5.50”d X 1.60”h, 3 LBS |
| Construction | Steel enclosure |



NOTE: UNLESS OTHERWISE SPECIFIED
 1. ALL RESISTORS ARE 1/8W, 1%.

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 telephone - (626) 355-3656
 FAX (626) 355-0077

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|-------|---------------------------|-----------------------------|--------|
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