Dangerous Music D-Box DAW Interface FIELD TEST
by Barry Rudolph

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The Dangerous Music D-Box is a "greatest-hits" compilation that distills the company's existing product line into a single-rackspace unit. Designed for pro studios or compact/portable DAW rigs that require an all-in-one control center, D-Box combines an 8-channel analog summing system (input via DB-25 connectors), a stereo audio source monitor-speaker switcher/controller, separate headphone system, talkback system and a mastering-quality digital-to-analog converter for all incoming digital audio.

Even with all of those features, the D-Box is priced at a reasonable $1,699, yet there are no corners cut. The D-Box is a RoHS compliant unit (manufactured under The Restriction of Hazardous Substances guidelines) and borrows heavily for its design, components and construction from the flagship Dangerous 2-Bus, MQ and Monitor ST units. It uses the same THAT Corp. audio input receiver and output driver chips, the same Burr-Brown BB OPA134 op amps, hermetically sealed Aromat relays with silver contacts for switching audio and the same headphone power amps found in other Dangerous Music products.

D-Box is built in a rugged, all-steel chassis and uses a combination of 'thru-hole' and surface-mounted component technologies. It's powered by an OEM 100/240VAC external line lump power supply.

D-BOX CONTROLS

The summing section has eight signal-present LEDs, one per channel, that glow even when low, -28dBu signals are present. The first six summing channels' stereo bus pan positions are fixed: Channels 1, 3 and 5 are assigned to the left side, while channels 2, 4 and 6 are assigned to the right side of the stereo summing bus. Channels 7 and 8 both have panpots for manual placement in the center, using the center-detent or anywhere else across the stereo

field. A Sum Output Trim control attenuates up to -12 dB of the stereo summing bus output.

For communication between studio and control room, the D-Box offers two front panel headphone jacks, each with a separate level control. However, there is no rear panel line-level output for driving an external headphone amplifier. The built-in talkback microphone, front panel control for its level to the phones and a rear panel jack for remote operation are all first-class, professional features. The talkback system has two modes: 'peck' the button momentarily and it latches on for hands-free, long-winded producer dissertations or hold the button down for a second or more and it immediately releases like all other talkback buttons. The Talkback button lights only when in use. It should always light up so you could find it in a darken studio and then flash when in use so has to hurry up the person to stop using it. (Ha!)Next are the Mono monitoring and Alternate Speaker buttons. Mono provides a way to listen using a L+R channel sum while Alt Spkr switches between the main monitor loudspeakers and a second set; but there is no speaker mute button. In one-room studio setups, muting while keeping the same monitor level is handy when quickly going between overdubbing using headphones and doing speaker playbacks.

There are four LED-lighted push buttons that switch D-Box's monitor source between four stereo audio inputs. There are two analog sources labeled Sum, for monitoring the internal eight-channel summing bus, and Analog for monitoring any external +4dBu source like a 2-track tape deck (remember those?) The two digital input sources are called: DAW--for connection to the DAW's stereo digital output and CD--for monitoring the digital out of a CD player, DAT machine or DVR etc. Monitor is the largest knob on the D-Box and it sets the overall loudspeaker monitor volume level of any source selected.

D-Box rear panel jacks include XLR connectors for an external analog input, DAW and CD digital inputs, analog stereo sum output, and two sets of monitor speakers. A DB25 connector, using the standard Tascam protocol, provides for the eight analog channels from the DAW to the summing section.

Inside D-Box

An Analog Devices AD1854 DAC chip fed by a Cirrus Logic 8416 digital audio receiver/clock recovery chip handle the digital inputs. This converter will clock to incoming AES or S/PDIF signals with sample rates ranging from 32kHz to 100kHz. The ability to compare two digital audio sources using a common DAC is invaluable for the exact A/Bing of your DAW mixes to existing mastered CDs or other digital sources. By comparing between two digital audio streams, without using different DACs and other analog electronics that could alter the level or 'color' the sound, makes this method nearly scientific. Speaking things scientific, you could also use the D-Box's second digital input as way to check the quality of an attached ADC unit. The DAC in the D-Box will immediately 'resync' to the stereo digital audio stream coming from your 96kHz stereo mixdown ADC.

HIDDEN FEATURES

Simultaneously holding both the Mono and Alt Spkr buttons puts the D-Box in Setup mode, which lets you use two hidden features. In Setup mode, you can monitor multiple stereo audio sources at once, which is useful during ADR/ Foley sessions when you want to listen to your DAW's audio with the production sound arriving on the analog input. You can also add 11.7 dB of gain to the external stereo analog source input (normally set to +4 dBu) for using consumer-grade -10dBv devices.

ON THE ROAD WITH D-BOX

Rather than test this unit in my studio, I did a real-world test by installing it in a client's Pro Tools road rig. Essentially to record and provide the playback of loops and keyboard pads for all shows, this rig would consist of a MACTEL PRO, Digidesign HD2 Accel and HD192 I/O box, plus an Apogee Big Ben clock.

Installation went perfectly with the unit working 'as advertised' the very first time. The D-Box mounted just above the Big Ben, 192 and computer in a double-walled flight case. Using a short AES/EBU digital cable, I fed the XLR AES/

EBU (Enc) or Enclosure digital output on the HD192 to the first digital input of the D-Box. The digital output of a Tascam CD-01U CD player fed the unit's other digital input. Our FOH mixer burns a CD copy of the board mix from every show so we can quickly listen and pick exceptional performances of songs without finding and opening the Pro Tools session.

Since we are not mixing on the road, I intended using the eight-channel summing system differently. For certain songs, I mixed pre-recorded stems to feed our FOH and monitor mixing consoles. A DB25 "Y" cord is required to feed the snake cable to FOH and monitor consoles and the D-Box at the same time. Since we carry our own monitor and FOH mixers, this interfacing is nailed down and there was no need of isolation transformers for these balanced audio line level signals.

Using D-Box in this arrangement worked better than I thought. The D-Box has a clear sound with plenty of headroom; as hot as I like to print levels in Pro Tools, the summing inputs never distorted. All the controls and buttons worked smoothly without clicks or pops. The talkback system has an unusual clarity and presence with no loud popping when you push the button.

IT'S D-LICIOUS

Despite its flawless operation in my non-traditional application, I need to mention some very minor criticisms. For easier operation and confidence in any scenario, it would be nice to have a stereo audio signal-present LED indicator, a larger master volume knob and a power-on/off switch. But with its small size, transparent sound, elegant design, and simple hookup and operation, D-Box is packed with everything you need for studio or mobile apps, and nothing you don't need.

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