



Chandler Limited 16X2 Mini Rack Mixer



by [Barry Rudolph](#)

[Back To The Home Page](#)

This "mirrored" page is published through the kind permission of MIX Magazine and Intertec Publishing.

Visit MIX Magazine's WEB Site at: <http://www.mixonline.com>

[Mail A Link To This Page To A Friend!](#)

[Download](#) A Printer-Ready Copy Of This Review. You'll Need A [Free Acrobat PDF Viewer Plug-In](#) For Your Browser.

[Click On The Image Below To Return To The Mix Directory](#)

You Are Here: www.barryrudolph.com > [mix](#) > [chandlermixer.html](#)



Chandler Limited hit another one out of the park with the 16 X 2 Mini Rack Mixer; its great sound is only matched by its multi-function utility. Like the old wedding maxim, the Mini is "something old, something borrowed and something new" with Chandler's version of the classic TG Line Amp from the MKIV "Pink Floyd" EMI TG mixer, modular construction, and a modernized, compact 5U size. DAW users who ponder analog summing and a monitoring system or any studio considering an analog "sidecar" purchase will find the Mini Mixer irresistible.

CONSOLE IN A RACK

The Mini is a 14-slot card cage frame in a 19-inch, all-steel rack box that, fully-loaded, weighs 50-lbs mostly due to the 22 transformers that embody what Chandler considers the best of the Marinair/St. Ives transformers (used by Neve) and the best of the Gardeners (used by EMI). The frame also accepts the modular versions of the Chandler TG Channel and TG1 Limiter.

The Mini has eight single-slot, 2-channel line input modules, a single-slot talkback module, a single-slot control room monitor panel and a 4-slot master module. Even though the mixer is a rackmounted unit and ideal for portable DAW rigs, it can be positioned at a slight angle in a permanent desktop cabinet to work as a conventional mixer/console/desk. The Mini is powered by the PSU-2 external power supply that measures 10 X 8 X 4 inches. The PSU-2 runs hot to power the Mini's 20 discrete Class-A amplifiers; I recommend placing it in a well-ventilated place.

Each dual-line-input channel module has its own rear panel XLR connector and transformer-balanced input with an impedance of 10k ohms. All modules are identical; in fact, when a 0dBm, 1kHz test tone was presented to each input, all modules were within 0.5 dB of each another. Each channel has a level control with a "pull" mute switch and a red LED channel on its indicator, which I didn't like as it is hard *not* to move the level when pulling on the level knob. Also, the red LEDs should go *on* when you are muting and not the other way around.

The line module pan pot changes 6 dB in level, from center to full right or left. Most summing boxes have fixed L/R channels so you have to do all mid-left or mid-right pan positioning within the DAW using digital stereo buses. With the Mini, you can hard-assign tracks to direct outs--dedicated, mid-left and mid-right DAW outputs-- and dial in the exact stereo width, which is a wonderful mixing option.

The Mini uses a passive summing network with a Chandler amplifier to make up gain loss. The master bus level is controlled on the Master module using an Elma gold rotary contact switch with 1-percent resistors. Besides precluding manual fades, the rotary switch is also great for resetting output levels if they happen to be set below full clockwise. The master module also uses the same Elma switch configuration for volume control, allowing you to return to exact monitor levels, a very important practice during mixing. The Master module

features two illuminated black Sifam VU meters canted 90 degrees--exactly like the Chandler TG1 Limiter-- a speaker A/B switch with two sets of XLRs on the rear panel and an external stereo input switch.

MONITOR OPTIONS AND TALKBACK

The external input button disconnects the mixer's stereo bus from the monitor section. This feature is useful for monitoring an external DAT/CD/2-track analog deck, monitoring an in-the-box DAW stereo mix or using the Mini's mixer for mixing line and microphone recording sources simultaneously. When using the Mini as a mixer/summing system for master DAW mixes, the external input becomes a stereo bus insert, allowing you to insert a compressor and equalizer on the stereo bus. I suggest adding a second, dedicated external input to hear a CD or other external stereo source at a push of button.

The talkback module has a Talk button, a level control and a 1/4-inch TRS jack for any dynamic mic. A Shure SM57 worked for me, but during testing, a very loud pop was heard when I pushed the button. (Chandler says it has fixed this problem.) The jack should be replaced with a small mic and an external mic jack added to the rear panel, as well as a jack for an external talkback button. The last module has three monitor buttons: mute, dim (12dB drop) and mono for listening monaurally without affecting the stereo mix bus output.

IN THE STUDIO

Using a 1kHz tone at -20dB reference level (or 20dB headroom) from the Signal Generator plug-in on a Pro Tools|HD system, I carefully calibrated 16 channels on the Chandler and a '70s-era 40-input classic API console at LAFX Studios in Los Angeles. This vintage console uses API's 2550 amplifiers and is normalled to the HD's 192 I/O boxes, so I patched the same 16 channels/192 outputs to the Mini. The Chandler has loads of gain and its pots ended up only halfway up, while the API faders were at the -10dB position. Both mixers produced 0dB stereo bus level with their pan pots centered.

I connected the stereo output of the Chandler and the API (done on two of the multichannel buses as I didn't use the API stereo bus) to the API's monitor section so that they both came up as two different 2-track sources. This way, both would have an identical signal path through the monitor section to the Genelec 1031As and I could instantly A/B switch with no gap. This configuration ensured that I could use the same large VU meters on the API for all level measurements for both mixers.

I began my mix listening through the API. Once I had a mix and a good stereo level, I A/B'd between the mix summed in the Chandler and the API. There was no difference! Same loudness, same overall sound with all the clarity and punch an API is known for. This held true for different music sources from hard, percussive Rock music to softer acoustic instrumental songs. If there was any slight difference I'd say the Chandler was warmer but the differences are too close to call. Considering this huge API console once sold for +\$200K, I

was impressed!

Then I set up the Mini to act as a recording sidecar by connecting eight Neve 1084 mic preamp/EQ modules to eight line inputs. I recorded a drum kit using eight mics: kick, snare top and bottom, hi-hat, tom 1 and tom 2, and left and right overheads. With this simple setup, I got a great drum sound all down on a single stereo pair. The Mini channel controls had plenty of gain, and I could overdrive the stereo bus, pegging the Sifam VU meters to get a slightly distorted sound that is ideal for urban contemporary — style drum loops. I backed off the mic preamp gain and channel levels for the cleanest sound, getting responsive VU meter action; it was easy to see peaking tom-tom levels. The Mini was quiet--quiet enough to hear those old Neves' noise floor-- and the sound was natural and full.

The Chandler Mini Rack Mixer brings together classic circuit design and vintage sound in a modern package adapted for today's digital music production. By virtue of its dual purpose-- as a DAW monitor/controller with analog summing/mixer and as a source mixer--the Mini belongs in its own category of worthwhile analog signal processors. Price: \$7,200.

Chandler Limited, 319/885-4200, www.chandlerlimited.com.

Barry Rudolph is an L.A.-based recording engineer. Visit his Web site at: WWW.BARRYRUDOLPH.COM

[Click Here To Return To The Mix Directory](#)

This Review Is Copyright © 1995 Through 2005 By [PRIMEDIA Business Magazines & Media](#) All Rights Reserved.



[Back To Home Page](#)

[Back Up To The Top](#) 

[All Web Page Design Is Copyright © 1995 through 2005 By Barry Rudolph](#)