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## REVIEWS 302 Compact Production Mixer



The Sound Devices 302 mixer packs a lot of features and great audio performance into a 1.8-pound (with batteries) package.

### 302 Compact Production Mixer

Three-channel Field Audio Mixer • Sound Devices LLC, \$1395 • By John Garrett, C.A.S.

The 302's audio performance matches that of other Sound Devices products such as the smaller MixPre Compact Field Mixer and the larger 442 Field Mixer. In brief, the 302 is quiet, it's a monster amp, and it's all good. I got absolutely top-notch sound out of this mixer.

The three-input 302 makes a great alternative to the Shure FP33, a very common audio-for-video mixer. With its more modern design, the 302 is quieter, more flexible, and less expensive than the venerable Shure mixer.

This review goes into great detail about the features of the 302, mainly because I'm impressed that Sound Devices packed so many high-quality and usable features into such a moderately-priced and compact box. If you need it, it's in there.

#### Impressive Features

Let's look at how the mixer works, and how you work with the mixer. Each input accepts mic- or line-level signals and each is assignable to either XLR output. The inputs will deliver any combination of 12V phantom or T power for mics, or 48V phantom and T power, but not 12V and 48V phantom simultaneously.

Each input has a front-panel gain trim, input gain control, channel assign switch, and both peak and limiter-status LEDs. Input

channels have switchable 80 or 160 Hz high-pass filters at 12 dB per octave. Inputs also have individual peak limiters to protect from channel clipping. Both the channel 1 and channel 2 inputs can be ganged for XY or MS stereo operation, and the phase of channel 2 can be reversed, an impressive feature for a mixer at this price. But wait, there's still more! The tape returns can be configured as two additional unbalanced line inputs, and you can assign these to either or both output busses.

The meters are Sound Devices now-famous curved LED bar graph displays, capable of generating nearly any response you might want: VU only, peak (PPM) only, VU and peak, or VU and peak hold. A four-stage brightness control switches from nicely dim for use at night or when sitting in the dark corner of a studio to no-foolin' bright enough to read by. Further, the meters can be set to pre-fade listen (PFL) via the headphone monitor switch. The meters



The 302 works great in an audio bag, but is so small that you can use it in many ways. The compact size came in handy when I had to rig the mixer to fit in a small research aircraft.

Score: ♦♦♦♦



#### Pros

Sounds and works great. A lot of thought went into building this mixer. The only mixers that come close to the 302 in fidelity and functionality cost over \$3000. Need I go on?

#### Cons

I would prefer that the slate mic/tone switch have its momentary contact on the right and the locking toggle on the left. Because of the mixer's right-side protective panel, it's hard to unlock the switched setting. But really, I'm stretching here.

#### Bottom Line

The Sound Devices 302 is a rugged, compact, feature-rich field mixer with superb sound and great flexibility. Nothing anywhere near its price approaches it.

don't just tell you about signal levels though. They are used to select and indicate several user setup options, which we'll get to presently.

The rotary headphone monitor switch provides a good example of the 302's impressive flexibility. You can solo each of the three main inputs, which puts the meter into PFL mode; listen to either the left- or right-output bus; listen to left and right summed to mono; listen in stereo (or dual mono); listen in stereo to the return

### I got top-notch sound out of this mixer.

monitor; listen to the mid track of an MS stereo pair; listen to decoded MS from your MS stereo pair; or listen to the return monitor through an MS decoding matrix. There's even an LED to let you know when you're overloading the headphone circuit, which helps identify sources of audible distortion. Are you beginning to see what this thing can do?

Rounding out the front panel are the headphone level control, the frequency-selectable tone generator/slate mic switch and slate, the internal/external battery status switch, and the power switch. The power LED is located above the power switch and glows green until a user-selectable low threshold is crossed, when it begins flashing.

On the right side of the mixer are the output XLR connectors. The 302 will output line- or mic-level signals and anything in between, which is handy for jobs that require feeding, say, a miniDV camera. Most miniDV cameras are happiest when you give their line inputs -10 dB levels.

Next to the outputs is the battery tube. The 302 is powered by three AA batteries, but the case is so small that a tube extends about 1 inch from the mixer and is covered by a waterproof cap. It's prob-

ably the least attractive feature of the mixer, but that's like saying your favorite supermodel has flat feet. Not a problem.

Continuing to the second row on the output panel, we find separate L/R return input controls that double as the channel 4 and 5 input controls, the 3.5 mm return/channel 4-5 input jack, a mini XLR mix-input connector that is handy for chaining together multiple 302 mixers, LEDs to indicate whether channels 4 and 5 are activated and whether the output is attenuated from line level, another mini XLR for unbalanced tape or mix output, and a four-pin Hirose connector for fully-floating external power at 5-18 volts. The pinout diagram is even silk-screened onto the panel. If you accidentally happen to feed it too much voltage, an internal circuit breaker will trip and then reset itself when you get it right.

### User setup menu

I was going to go into a thorough discussion of all these options but there are so many other things to talk about with this mixer that there really isn't space here. You can get the full scoop by downloading the 302 user guide from the Sound Devices Web site. But the key point is that through the magic of software, you can customize the 302 to work the way you do. I will list a few of the 18 user-modifiable operating parameters accessible via the software setup menu: XLR output attenuation levels, output limiter threshold, tone oscil-

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lator frequency, channels 4 and 5 input setups, tone oscillator level, VU reference level, external battery voltage reference, and a default restore function, in case you get lost.

### In the field

I had a chance to field test the 302 mixer on a long shoot in the arctic this fall. It was a joy to work with and came in very handy. We did one setup that involved recording the intercom in a small research aircraft. The only problem was that there was no room for a camera or sound person in the cockpit. We rigged a lipstick cam in the cockpit, and I stuck a lavalier inside a headset earcup and sent it via wireless to the mixer and on to a BetaSP deck. Since I would have no way to monitor levels with the plane in operation, I backed the transmitter gain off, yelled into the mic, set approximate gain trims and input levels, and set four separate levels on the SP tape. The whole thing worked like a charm. I had other, more typical opportunities to use the mixer as well, and the 302 performed perfectly at all times. The Sound Devices 302 is a winner. ■

**John Garrett** C.A.S., a Boston-based production sound mixer, has worked in film, television, and music production for over 20 years. He is a member of the Audio Engineering Society and the Cinema Audio Society.



Each of the 302's three transformer-balanced XLR inputs (top) accepts either mic- or line-level signals and has its own peak limiter. The two line/tape/mic-level XLR outputs (bottom) are active balanced.