Sound Devices 664 Six Channel Portable Production Mixer with Integrated Recorder

The **664 Six-Channel Portable Production Mixer with Integrated Recorder** from **Sound Devices** has an unprecedented amount of functionality from a unit that can be battery operated. It starts with a low-noise, transformerless preamplifier section, continues to an intuitive mixing surface, adds a host of digitally-controlled routing features, allows room for analog inserts and aux busses, and finally terminates with versatile, plentiful output connectivity. By the way, the 664 can be configured to record digital audio to CompactFlash or an SD Card from any point in that signal flow.

The Sound Devices 664 has an input board that features six balanced XLR connections. Within the firmware, they can be selected to accept microphone or line level signals. Additionally, inputs 1 and 6 can configured to accept AES digital signals. Each channel has a direct output on an independent TA3 connector. There is also an input for a slate microphone, if you don't wish to use the 664's internal slate mic. Two headphone outputs are also provided.

The physical mixing surface of the 664 has the basic features you'd expect, such as trim pots, panning and level knobs. But it also has more advanced features, like sweepable high-pass filters and pre-fader listen switches on each channel.

The 664 has very flexible routing options within its LCD-based menu. When a channel's pre-fader listen switch is pushed to the right, it brings up that channel's menu options. Input level, pre/post track routing, aux buss routing, mix routing and polarity can all be adjusted. Channels can be paired in left/ride or mid/side modes. Phantom power can also be engaged at either 48V or 12V.

The Sound Devices 664 has many output options, from its balanced XLR main outputs to the unbalanced 1/8" stereo tape output. It can even send and receive word clock and timecode signals. Two Aux outputs on TA3 connectors allow custom track groups to be routed to external devices. The outputs can even be set to send AES digital signals of each buss and channel.

The 664 has an integrated recording system that tracks WAV files at up to 24-bit/48.048kHz resolution to CompactFlash or SD cards. The whole device can be powered by five AA batteries or an optional DC adapter.

Sound Devices 664 - Additional Features

- Dedicated COM send/return
- Three camera audio returns
- Dual headphone jacks
- USB type B port for keyboard connection
- X1 and X2 aux busses

Transflective LCD screen
Metalized, gasketed carbon fiber chassis

Connectivity	
Inputs	6 x XLR balanced - Mic/Line 1 x TA3 - Slate Mic In
AES Digital Audio Inputs	XLR inputs 1 and 6 can accept AES3 or AES42 signals (10V power), SRC
Return	1 x 1/8" TRS stereo input - Return B
Outputs	2 x XLR balanced - Master Outs L/R (Can also send AES3 digital signals) 2 x TA3 balanced - X1 and X2 (Line, -10, or Mic) 2 x TA3 balanced - Balanced Outs (Line, -10, or Mic level) 6 x TA3 balanced - Direct Outs
Other Connectors	2 x 10-pin connector *Each has a pair of transformer-isolated outputs and a stereo unbalanced Return input. Output levels are selectable between Line, -10, and Mic*
Headphone Outputs	1 x 1/4" TRS stereo 1 x 1/8" TRS stereo mini
COM Ports	1 x TA3 - COM Send 1 x TA3 - COM Return
Word Clock I/O	1 x 5-pin LEMO connector - Timecode I/O 1 x BNC - Word Clock In 1 x BNC - Word Clock Out
Link Input/Output	1 x 5-pin connector (links to Sound Devices 664, 552, 302, 442, or MixPre mixers)
Stereo Tape Outputs/Type	1 x TA3 stereo unbalanced tape level output 1 x 1/8" TRS stereo unbalanced tape level output
Compact Flash Slot	Compatible with Type I and Type II cards; high-speed UDMA cards are recommended for higher track count recording
SD Card Slot	Accepts SD / SDHC / SDXC cards, high-speed class 10 cards are recommended
USB Port	1 x USB type B (for factory use and keyboard connection with adapter)
Performance	
Input Impedances	XLR Mic: 4kΩ : *for use with ≤ 600Ω mics* XLR Line: 10kΩ : *for use with ≤ 2kΩ outputs* Returns: 30kΩ : *for use with ≤ 2kΩ outputs*
Maximum Input Level	XLR Mic: 0 dBu (0.78 Vrms) XLR Line: +40 dBu (80 Vrms) Returns: +24 dBu (12.4 Vrms)
High-Pass Filter	Sweepable 80 Hz to 240 Hz, -12 dB/oct @ 80 Hz, -6 dB/octave @ 240 Hz

Limiter	Individual input limiters on both trim and fader stages +16 dBu threshold, 20:1 limiting ratio, 1 mS attack time, 500 mS release time
Output Impedances	Line: 100Ω : *for use with ≥ 600Ω inputs* -10: 3.2kΩ : *for use with ≥ 10kΩ inputs* Mic: 150Ω : *for use with ≥ 600Ω inputs*
Clipping Level	Line Outputs: (1% THD) 20 dBu minimum with 10k load
Maximum Output Level	Line: +20 dBu (7.8 Vrms) -10: +6 dBu (1.5 Vrms) Mic: -20 dBu (0.078 Vrms) Tape Outs: +6 dBu (1.5 Vrms)
Limiter	Analog output limiter: threshold selectable from +4 dBu to +20 dBu, 1 dB steps, 20:1 limiting ratio, 1 mS attack time, 500 mS release time
Maximum Gain	Mic-In-to-Line-Out: 93 dB Mic-In-to-Aux-Out @ -10dBV: 79 dB Line-In-to-Line-Out: 39 dB
Frequency Response	20 Hz to 50 kHz ±0.5 dB
THD + Noise	0.09% max (1 kHz, 22 Hz to 22 kHz BW, fader at 0, 0 dBu output)
Equivalent Input Noise	-126 dBu (-128 dBV) max (22 Hz to 22 kHz bandwidth, flat filter, trim control fully up)
A/D - D/A Conversions	
Recording Tracks	10 tracks (6 inputs, 4 output buses)
A/D Conversion	24-bit
Sampling Rates	44.1, 47.952, 48, 48.048 kHz
Dynamic Range (Typical)	114 dB, A-weighted
Digital Outputs	AES3 transformer-balanced, in pairs; 1-2 XLR-L, 3-4 XLR-R, 5-6, multi-pin 1, 7-8, multi-pin 2, 110Ω, 2 V p-p, AES and S/PDIF compatible
File System Format	FAT32 formatted, will format memory cards on-board, WAV (Broadcast Wave File format) polyphonic
Accuracy	± 0.2 ppm (0.5 frames per 24 hours)
Timecode	Modes Supported: off, Rec Run, Free Run, 24h Run, External Frame Rates: 23.976, 24, 25, 29.97DF, 29.97ND, 30DF, 30ND Accuracy: Ambient Generator, 0.5 frames in 24 hr Time Code Input: 20kΩ impedance, 0.3 V to 3.0 V p-p (-17 dBu to +3 dBu) Time Code Output: 1kΩ impedance, 3.0V p-p (+12 dBu) Word In/Out: square wave; 10k/75Ω, 1-5V p-p input; 75Ω, 3.3V p-p output, at SR
General	
Power Supply	Isolated 10-18 V on locking 4-pin Hirose connector

	(sold separately)
Battery Operable	Accepts 5 x AA (LR6) batteries, 1.2 to 1.5V nominal (NiMH rechargeable compatible)
Operating Temperature Range	-4 to 140°F (-20 to 60°C), up to 90% relative humidity
Storage Temperature Range	-40 to 185°F (-40 to 85°C)
Dimensions (H x W x D)	2.1 x 12.6 x 7.8" (5.3 x 32 x 19.8 cm)
Weight	4.75 lb (2.15 kg)