633

Six-Input Compact Mixer with 10-Track Recorder

The 633 is a compact, six-input mixer with integrated 10-track recorder featuring PowerSafe technology. It offers six analog inputs and records to SD and CompactFlash memory cards. The 633 is designed for audio professionals requiring go-anywhere portability, without compromising recording or mixing capability.

The 633 offers three high-bandwidth mic/line inputs on XLR connectors, complete with phantom power, high-pass filter, input limiter and variable pan. Three additional line-level inputs on TA3 (mini-XLR) connectors offer flexibility for more complex productions. All inputs are assignable to its six output buses, Left/Right plus Aux 1/2/3/4.

Output Panel

Input Panel

All six inputs plus output buses Left/Right and Aux 1/2 can be recorded to individual tracks. The 633 offers 10-track 24-bit, 48 kHz uncompressed WAV recording (96 kHz and 192 kHz sampling up to six tracks) to SD and CompactFlash memory cards. The two cards can be set independently, recording either identical material for a real-time backup, or combinations of WAV and MP3 files.

Powered by a unique Quad Power supply with PowerSafe technology, the unit is operational from any of four power sources. Sources can include external DC (12-18 V), two removable 7.2 V L-type lithium ion cells, and six internal AA batteries. The 633 automatically switches from one power supply to the next when power is exhausted or removed. With its combination of power sources, the 633 can operate for a full production day on batteries alone.

When all power sources are removed or depleted, the unit's PowerSafe circuitry is activated. PowerSafe keeps the 633 operating for up to 10 seconds and ensures that all file operations are fully closed and the unit gracefully shuts down.

Description continued on back.

KEY FEATURES

- Six analog inputs (3+3); three full-featured mic/line preamps plus three line-level inputs, each with dedicated front-panel faders and PFLs
- 10-track recording, polyphonic or monophonic broadcast WAV files @ 24-bit 48 kHz (96 kHz and 192 kHz sampling for 6 tracks), time code stamped MP3
- Simultaneous or independent recording to SD and CompactFlash card
- 6 mix buses, left/right main plus Aux 1/2/3/4
- PowerSafe Circuitry offers complete file protection from power loss. Ten second internal power reserve closes files and shuts down unit.
- Quad Powering offers class-leading powering flexibility from four available power types, easily power the 633 for a full production day.
- Two second power on-to-recording. Never wait on sound!
- AES input, two-channel AES3 or AES42, four channels of AES output
- Accurate Time Code Master Clock generator and reader, 0.5 frame per day accuracy
- Clear, fast, easy to navigate controls and interface; visible in all light conditions, configurable metering and display
- USB Keyboard connection for quick and easy metadata entry.
- Input delay selectable on all six inputs plus output bus delay on all six buses.
- User-configurable headphone presets plus a headphone favorite mode for quick source selection
- Small, lightweight, compact chassis made from molded, metalized carbon fiber

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The 633 integrates a high-accuracy time code generator supporting all common rates and modes. In addition to time code, the 633 supports extensive file metadata. Metadata is entered from either the front panel or from an attached USB keyboard.

Designed to withstand the extremes of field production, the 633 offers easy-to-access controls and durable carbon fiber construction. It is built on Sound Devices strong heritage of high performance audio mixers, audio recorders, and video recorders.

CS-633
Production Case

SPECIFICATIONS

Frequency Response
10 Hz to 40 kHz ± 0.5 dB, -3 dB @ 65 kHz
(192 kHz sampling rate reference 1 kHz)

THD + Noise
0.09% max
(@ 1 kHz, 22 Hz–22 kHz bw, fader at 0, 0 dBu output)

Equivalent Input Noise
-126 dBu (-128 dBV) maximum. (22 Hz - 22 kHz bandwidth, flat filter, trim control fully up)

Inputs
XLR Mic: active-balanced for use with ≤600 ohm mics, 4k ohm actual; 12V or 48V phantom power, 10 mA max
XLR AES: AES3 or AES42 (10 V power), SRC
XLR Line: active-balanced for use with ≤2k ohm outputs, 10k ohm actual
TA3 Line: active-balanced for use with ≤2k ohm outputs, 10k ohm actual
RTN (3.5 mm): unbalanced stereo for use with ≤2k ohm outputs, 30k ohm actual

Maximum Input Level
XLR Mic: 0 dBu (0.78 Vrms)
XLR Line: +40 dBu (80 Vrms)
RTN (3.5 mm): +24 dBu (12.4 Vrms)

Maximum Gain
Mic-In-to-Line-Out: 91 dB
Mic-In-to-Aux-Out, -10 Out: 77 dB
Line-In-to-Line-Out: 39 dB

High-Pass Filters
Sweepable 80 Hz to 240 Hz, 12 dB/oct at 80 Hz,
6 dB/octave at 240 Hz

Input Limiters
Individual limiters on trim and fader, menu-adjustable parameters

Output Limiters
All outputs, menu-adjustable parameters

Digital Delay
Inputs: up to 30 ms per input in 0.1 ms increments
Output Buses: up to 10 frames in 1 frame increments

Output Type
Line (XLR): active-balanced for use with ≥600 ohm inputs, 100 ohms
-10 (XLR): active-balanced for use with ≥10k ohm inputs, 3.2k ohm
Mic (XLR): active-balanced for use with ≥600 ohm inputs, 150 ohms
TA3 Mic/Line: active-balanced, pin-2 and 3 driven, for use with ≥3k ohm inputs, 1k ohm
Aux 3/4 Outs (3.5 mm): unbalanced, stereo, use with ≥6k ohm input, 100 ohm actual
Headphones (1/4"): unbalanced, stereo, use with 8-2k ohm headphones, 100 ohms

Line Output Clipping Level (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)
Aux 3/4: +6 dBu (1.5 Vrms)

Recording Tracks
10 tracks (6 inputs, 4 output buses L/R, Aux1/2), WAV (broadcast Wave file format) monophonic and polyphonic, MP3 with time code metadata

A/D
24-bit, 114 dB, A-weighted dynamic range typical; sampling rates of 44.1 kHz, 47.952 kHz, 48 kHz, 48.048 kHz, 88.2 kHz, 96 kHz, 176.4 kHz, 192 kHz

Digital Outputs
AES3 transformer-balanced, in pairs; 1-2 on XLR-L, 3-4 on XLR-R, 110 ohm, 2 V p-p, AES and S/PDIF compatible

Recording Storage Type
SD, SDXC, SDHC Card
CompactFlash (CF)
FAT32 formatted for CF and SD <32 GB, exFAT for SD cards >32 GB, will format memory cards in-unit

Sample/Timecode 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 frame in 24 hr
Time Code Input: 20k ohm impedance, 0.3 V - 3.0 V p-p (–17 dBu - +3 dBu)
Time Code Output: 1k ohm impedance, 3.0V p-p (+12 dBu)

Powering
External: 10-18 V on locking 4-pin Hirose connector, pin-4 = (+), pin-1 = (-).
Removable x 2: 7.2 V (nominal) Sony L-type Li-ion, operational from 6.5–8.5 V,
Internal: accepts 6 AA-sized (LR6) batteries, 1.2-1.6 V nominal (NiMH rechargeable compatible)

Environmental
Operating: -20°C to 60°C, 0 to 90% relative humidity; (non-condensing)
Storage: -40°C to 85°C

Dimensions and Weight
Dimensions: 6 cm x 24 cm x 14 cm (H x W x D); 2.2" x 9.4" x 5.6"
Weight: 1.1 kg; 2 lbs. 9 oz. (unpackaged, without batteries)

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