

722

SOUND  **DEVICES**

Portable, High-Resolution Audio Recorder

2-TRACK FIREWIRE COMPACTFLASH INTERNAL HARD DRIVE



Description

The two-channel 722 is a powerful file-based digital audio recorder. The super-compact device records and plays back audio to internal hard drive, CompactFlash cards, or external FireWire drives. It records and plays uncompressed PCM audio at 16 or 24 bits with sample rates between 32 kHz and 192 kHz. Compressed (MP3) audio record and playback from 64 kb/s to 320 kb/s are also supported.

The 722 implements a no-compromise audio path that includes Sound Devices' next generation microphone preamplifiers. Designed specifically for high bandwidth, high-bit-rate digital recording, these preamps set a new standard for frequency response linearity, low distortion performance, and low noise.

No other recorder on the market matches its size or feature set. *Description continued on page 2.*

SOUND  **DEVICES**

300 Wengel Drive
Post Office Box 576
Reedsburg, Wisconsin 53959 USA
+1 608.524.0625 main
+1 608.524.0625 p

722 Key Features

- Two-channels of Sound Devices next generation microphone preamps with phantom, limiters, and high-pass filters
- Records to internal 40 GB hard drive, removable Compact Flash, external FireWire drives, or all simultaneously
- AES3 (XLR) or AES3id (unbalanced AES on BNC) digital inputs and AES3id outputs
- Programmable, sunlight-viewable LED level metering
- WAV format, mono or poly files, uncompressed PCM audio
- 24-bit or 16-bit (with or without dither) and sampling at 32 kHz-192 kHz
- MP3 encode and decode, 32 to 320 kb/s stereo file
- FireWire (IEEE-1394) port for high-speed data transfer to computers
- FireWire port for attaching external hard drive or DVD-RAM drives for additional file storage
- 6-pin modular C. Link serial input and output for unit linking and future control and expansion
- Removable Li-ion rechargeable battery compatible with Sony L-mount Li-ion batteries
- 10-18 VDC external input powers and charges on-board battery
- Aluminum & stainless-steel chassis for exceptional durability and light weight
- Class-defining compact size
- Designed for the same operational environmental extremes as Sound Devices field mixers

Discover more about Sound Devices products at www.sounddevices.com



Portable, High-Resolution Audio Recorder



Specifications

Inputs:

- Two-channel balanced mic/line inputs using Sound Devices next generation microphone preamps
- Analog inputs 1and 2 mic/line switchable on

Sampling Frequency:

- *Internal:* 32, 44.1, 47.95, 48, 48.048, 88.2, 96, 96.096, 176.4, 192 kHz
- *External:* 32–192 kHz via word clock input

Internal Data Path and Processing:

- 32 bit, 192 dB dynamic range

A/D, D/A Converters:

- 24 bit, 192 kHz sample rate maximum

A/D Dynamic Range:

- 114 dB, A-weighted bandwidth
- 110 dB, 20 Hz – 22 kHz bandwidth

D/A Dynamic Range:

- 112 dB, A-weighted bandwidth
- 108 dB, 20 Hz–22 kHz bandwidth

Frequency Res. Mic or Line:

- 10 Hz–40 kHz, +0.1, -0.5 (gain controls centered, Fs 96 kHz)

Equivalent Input Noise:

- Mic: -133 dBu max (-135 dBV), 50 ohm source, A-weighted filter
- Mic: -131 dBu max (-133 dBV) max, 50 ohm source, 20 Hz–20 kHz BW flat filter, gain fully up
- Mic: -130 dBu max (-132 dBV), 150 ohm source, A-weighted filter
- Mic: -128 dBu max (-130 dBV), 150 ohm source, 20 Hz–20 kHz BW flat filter, gain fully up

THD + Noise:

- Mic: 0.004% max (1 kHz, 22 Hz–22 kHz BW, gain control down, -15 dBu input)
- Line: 0.004% max (1 kHz, 22 Hz–22 kHz BW, gain control down, +16 dBu input)

Gain: (input dBu to -20 dBFS)

- Mic (normal gain mode): 25 to 70 dB; mic (low gain mode): 10 to 55 dB; line: -6 to 18 dB, 0.1 dB increments

Input Clipping Level:

- Mic input: -5 dBu minimum (normal gain mode, gain control fully down); mic input: +10 dBu minimum (low gain mode, gain control fully down)

- line input: +26 dBu minimum (gain control fully down)

High-Pass Filters:

- 40, 80, 160, 240 Hz @ 12/18/24 dB/oct (all menu selectable)

Mic Powering: (Each XLR selectable)

- 48-volt phantom through 6.8k resistors, 10 mA per mic available, menu-selected per channel in mic or line level positions

Mic Input Limiters:

- Analog (pre-A/D converter), dual-stage optocoupler and FET
- -4 dBFS threshold
- 20:1 limiting ratio
- 5 mS attack time
- 200 mS release time

Analog Line Output Clipping Level:

- +24 dBu minimum, 10k ohm load
- Attenuation & Resolution 0 to 40 dB, 1 dB increments

I/O – Digital:

- AES3-id 75 ohm, 0.5 V p-p, S/PDIF compatible with RCA adapter

Digital Storage:

- Internal hard drive ATA-5 interface, 2.5-in hard drive 4200–7200 RPM supported, FAT32 formatted
- CompactFlash CF type I, II, and + (microdrive) compatible, FAT32 formatted; file types: WAV, mono or polyphonic; MP3 @ 64, 96, 128, 240, or 320 kb/s stereo; utilities: format, speed test, and repair utility for internal HD and CF volumes

Data Transfer / Control:

- FireWire peripheral-mode, IEEE1394a compliant, 6-pin FireWire, Windows 2000, XP, Mac OS X only: C. Link 6-pin modular input and output, RS-232 machine control, word clock, time code transfer

Metering:

- 76-segment (4 x 19), sunlight-viewable, selectable peak, VU, or peak (with or without peak hold) with VU ballistics, variable brightness

Powering:

- Operating cell, removable 7.2 V (nominal) Sony M- or L-type Li-ion, operational from 6–8-volt

- Time code battery, 1.2 V AA nickel metal-hydride; power supply (external) 10–18 V, 1 A minimum, via locking 4-pin Hirose connector, use Hirose #HR10-7P-4P (DigiKey# HR100-ND) for locking mating DC connector; pin-4 = (+), pin-1 = (-) or pin-3 = (+) and pin-2=(-).

Environmental (Operation and storage):

- ambient temperature 5–55° C, relative humidity (non-condensing) <80%

Other:

- LCD Display 202 x 32 pixel, extended temperature, backlit display; tone oscillator 100 Hz–10 kHz, variable output, assigned to tracks or outputs (menu-selectable)

Dimensions and Weight:

- 45 mm x 209 mm x 125 mm (H x W x D)
- 1.8" x 8.2" x 4.9"
- 1.2 kg, (2.6 lbs) without battery

Description Continued

In addition, its learning curve is short—powerful does not mean complicated. While the 722 is a very capable recorder by itself, it truly excels when used in conjunction with an outboard audio mixer such as Sound Devices' own 442 or 302.

Its two internal drives (hard drive and Compact Flash) are highly reliable, industry standard, and easily obtainable. The removable, rechargeable battery is a standard Sony-compatible Li-ion camcorder cell. The 722 interconnects with Windows and Mac OS computers for convenient data transfer and backup.