702

SOUND DEVICES

Portable, High-Resolution Audio Recorder

2-TRACK | FIREWIRE | COMPACT FLASH

Description

The two-channel 702 is a powerful file-based digital audio recorder. The compact device records and plays back audio to cost-effective, removable CompactFlash cards and/or external FireWire drives, making field recording simple and fast. It writes and reads uncompressed PCM audio at 16 or 24 bits with sampling rates between 32 kHz and 192 kHz. Compressed (MP3) and lossless compressed FLAC formats are also supported.

The 702 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.

Description continued on page 2.

702 Key Features

- Two-channels of Sound Devices next generation microphone preamps with
- Records to removable CompactFlash cards for convenient file audio file storage; can also record directly to external FireWire drives
- 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 from 32 kHz to 192 kHz MP3, MP2 decoder, 64 to 320 kb/s stereo file
- FLAC file recording and playback
- FireWire (IEEE-1394) port for high-speed computer access to the CompactFlash card
- 6-pin modular C. Link serial input and output for unit linking and control with the CL-1
- 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

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

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

702

SOUND DEVICES

Portable, High-Resolution Audio Recorder

[Back Panel]

[Right Panel]

[Left Panel]

Specifications

Sampling Frequency:
- Internal: 32, 44.1, 48, 48.048, 88.2, 96, 96.096, 176.4, 192 kHz; external: 32–192 kHz via word clock input

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

File Storage:
- Compact Flash CF type I, II, and + (microdrive) compatible, FAT32 formatted

File Types, Playback and Record:
- WAV, mono or polyphonic
- MP2/MP3 @ 64, 96, 128, 240, or 320 kb/s stereo
- FLAC mono and poly

File Utilities:
- Utilities: format, speed test, and repair utility for CF cards

Data Transfer / Control:
- FireWire peripheral-mode,IEEE-1394a 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 pass-through

Metering:
- 38-segment (2 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-on, operational from 6–8-volts
- Time code battery, 1.2 V AA nickel metal-hydride
- Power supply (external) 10–18-volt, 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
- 1-bit 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”
- mass unpackaged: 1.0 kg, (2.1 lbs) without battery

Description Continued

No other recorder on the market matches its size or feature set. In addition, its learning curve is short—powerful does not mean complicated. While the 702 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 Compact Flash storage is a highly-reliable industry standard. The removable, rechargeable battery is a standard Sony-compatible Li-ion camcorder cell. The Compact Flash card appears as a removable storage devices when connected via the FireWire port to Windows or Mac OS computers.