FIELD PRODUCTION AUDIO

PROFESSIONAL, PORTABLE, PRODUCTION

SOUND DEVICES®

Performance

The heart of Sound Devices products is performance. When portability, durability, and no-compromise audio fidelity matter most, Sound Devices delivers. With their great preamplifiers, limiters, and headphone amps, there is never a question about Sound Devices mixers and recorders delivering the best performance.

Quality

Every Sound Devices product is designed and built to withstand punishing extremes, beyond your ability to abuse them. Assembled with parts from world-class suppliers, Sound Devices products are built by skilled assemblers in Reedsburg, Wisconsin.

Sound Devices was founded in 1998 to fulfill a single, promise – build field-production products that improve our customer's work life. Today, the Sound Devices' family of portable audio mixers, digital audio recorders, video recorders, preamps, and computer interfaces is trusted by professionals worldwide.

Control

Sound Devices audio mixers and recorders are designed with easy to access controls, big informative level meters, extensive I/O, and the right features to handle anything you may encounter in the field.

Anywhere

Sound Devices products are used around the world in a wide range of applications including Single-Camera ENG-Style Production, Multi-Camera Interviews, Feature Film Production, Documentary Film and Video Production, Sports Broadcasting, Sound Effects Gathering, Acoustical Test and Measurement, and Live Music Recording.

SOUND DEVICES

7-SERIES DIGITAL RECORDERS

High-Resolution, Totally Portable, 7-Series Digital Recorders

The high-resolution 7-Series recorders shatter the size, performance, and feature-set paradigms of previous generations of audio recorders. These incredibly compact recorders deliver performance that exceeds most studio gear. The two-track 702, 702T, 722, four-track 744T, and eight-input, twelve-track 788T record and play audio files with either 16- or 24-bit depth at all professional sampling rates up to 192 kHz.

Audio Inputs

The 7-Series recorders use Sound Devices' next generation, high-resolution analog microphone preamplifiers. Designed specifically for high-bandwidth, high bit-rate digital recording, these preamps set a standard for linearity, distortion performance, and low-noise gain — leaving only your microphone as the limiting factor.

Controls

The 7-Series user-interface is fast and intuitive with easy to access buttons and an informative front panel display. Recording engineers don't need to learn a new way to work. The 7-Series tape recorder-like controls, short learning curve and quickly navigable feature set make certain that you don't get distracted in run-and-gun situations.

Size

With documentary and ENG recording engineers in mind, we kept the recorders as small and lightweight as practical without compromising their usability. No other audio recorder approaches their size/performance ratio. Take your 7-Series to every job, big or small.

Extend the flexibility of the 7-Series recorders with Sound Devices 302 and 552 audio mixers. By using one of our field mixers, you gain even more audio I/O and control.

Data Storage

The 7-Series recorders write to industry-standard Broadcast Wave, MP2, or MP3 files. Audio data files are recorded to the internal drive (722, 744T, 788T) or to user-supplied CompactFlash and external FireWire storage devices. For maximum redundancy, up to three drives can be activated, providing RAID-1 level of reliability for recording. Audio files can be transferred over FireWire directly to a computer for post-production or archiving.

788T MULTI CHANNEL RECORDER

The 8-Input, 12-Track, High-Resolution Digital Recorder

The 788T is a powerful eight input, 12 track digital audio recorder designed for production sound. Building on the success of the proven 7-Series architecture, the 788T offers greatly expanded input and output connectivity while continuing the 7-Series heritage of extensive control in a compact chassis. Its eight full-featured inputs have superb audio quality and accept microphone, line-level, AES digital, and AES42 digital signals. Peak limiters and 48 V phantom power are available for analog inputs, plus fully adjustable high-pass filters.

788T Input Panel

788T Back Panel

788T Output Panel

Extensive routing flexibility allows each input to be routed to any track for recording iso-tracks, mixed tracks, or both isos and mix simultaneously. Either inputs or track assignments can be sent to its analog and digital outputs.

The 788T has three options for recording storage, internal SATA hard drive (internal SSD available in the 788T-SSD), CompactFlash cards with UDMA support, or an external FireWire hard drive or DVD-RAM (with bus powering). Any or all of these can be used simultaneously. Additionally, when connected to Mac OS or Windows over USB or FireWire 400/800, the 788T functions as a high-speed mass storage device.

The 788T can be clocked from AES, external word clock, or video sync. Asynchronous digital sources can be connected with the 788T's onboard sampling rate converter.

Like the 702T and 744T, the 788T has a high-accuracy time code reader/generator. It includes an auto-record feature that chases external rec/run video sources. To simplify metadata entry the 788T directly accepts USB keyboards. Keyboard shortcuts can be programmed to control menu items and machine transport. The power of the 788T accommodates nearly any production sound setup.

Input Settings

The 788T inputs are quickly and easily set by toggling the Input Selector Switch. When an input is active, controls such as input type, phantom power, polarity, high-pass, and track assignment are set.

Time Code Master Clock

Stable time code is essential for synchronization of multiple cameras and recorders. The 788T uses the industry-leading Ambient Time Code circuitry for zero drift time code accuracy.

High-Speed File Transfer

FireWire 400, FireWire 800, and USB 2.0 offer ultra high-speed access to record sound files. UDMA CF support provides >40 MB/s transfer speeds.

XL-88 Breakout Cable 788T-specific breakout cable for the DE-15 multi-pin connector. XLR connectivity to AES inputs 1 through 8, plus XLR output for AES 5/6. A 4-pin Hirose female connector accepts 10-18 VDC input. Lead for Logic In and Out.

788T SYSTEM

Optional Add-On Components for the 788T Recorder

CL-9 Linear Fader Controller

The CL-9 Linear Fader Controller is a dedicated mixing surface for the 788T. With the addition of a CL-9, the already powerful 788T becomes a complete mixer / recording system, perfect for audio capture in sound-for-picture and music-oriented productions.

The heart of the CL-9 is its eight low-latency linear faders and rotary input trim controls. Critical gain changes are fast, smooth, and precise. With a CL-9 connected the 788T adds a single band parametric EQ for each of its eight inputs. EQ frequency, level, and width are adjustable. Additionally, the CL-9 adds input pan to the 788T.

A wide range of 788T menu-based controls are accessible with convenient knob control on the CL-9. These controls include output level control of the six outputs, dedicated L / R and Aux 1 / Aux 2 output level controls, track-record enabling for each of the 12 record tracks, and one-touch soloing of inputs or tracks.

Bus-powered by the 788T, the CL-9 is connected by a single USB cable. Additional monitoring features are available with the 788T headphone output connected to the CL-9.

The 788T can be connected to a Mac OS or Windows computer running Wave Agent, Sound Devices popular file librarian. When in Wave Agent Control Mode, all 12 record tracks can be metered, time code values are displayed, and record and stop control are also available.

CL-8 Controller for the 788T

The CL-8 is the perfect controller when 788T is in a production bag. Its large rotary faders and push buttons bring extensive mixer-type control to 788T inputs. The lightweight CL-8 can be used either mounted or remote from the 788T.

The CL-8 features eight large, rotary faders to adjust levels of input-to-master-track (L/R) and input-to-aux-track levels (post-fade). With its tactile buttons, control over each input's high-pass filter, limiter, polarity, mute status, and routing is quick with visual indication on the CL-8 front panel. The CL-8 provides shortcuts to route inputs to the left/right mix tracks and Aux1 and Aux2 tracks.

Wave Agent Control Mode

Available at the App Store

With a CL-WiFi connected to a 788T, the 788T is controllable by Apple iOS devices, such as an iPad, iPhone, or iPod Touch (iOS version 4 or greater required). Users can control a 788T with the free CL-WiFi Controller application available at the Apple app store.

788T **KEY FEATURES**

- Eight mic/line inputs, each controlled with front panel pop out level controls
- Each input has solo headphone monitoring, 48 V phantom, limiter, polarity reverse, high-pass, adjustable delay
- User-selected input-to-track routing
- Backlit LCD display viewable in any environment
- 8 x 13-segment peak/VU meters with track arm LED
- Word clock in and out with video sync support
- Time code generator supports all frame rates
- Internal Li-ion battery holds time code for six hours with no power sources attached
- Internal 2.5-inch SATA hard drive or SSD (788T-SSD)
- CompactFlash slot (full height) with ultra-high-speed UDMA support
- Powered by removable Li-ion rechargeable battery
- External DC power input operates unit and charges Li-ion battery
- Back panel multi-pin connector for one-cable connection to digital mixing board (AES input/output, power, switch closure in/out)
- FireWire 400/800 and USB 2.0 for ultra-fast computer connection to CF and HDD
- USB input for CL-8, CL-9, keyboard, and Wave Agent control
- User defined file name, scene, and take number
- Large, extended-temperature range LCD display
- 6-pin modular C. Link connection for multi-unit linking
- MS stereo matrix
- Field upgradable via downloadable firmware updates
- 10–18 volt DC input for external power and battery charging
- Stainless-steel and aluminum chassis for lightweight durability

702T AND 744T PORTABLE RECORDERS

Portable, High-Resolution Audio Recorders with Time Code

The multi-channel Sound Devices 702T and 744T are powerful file-based digital audio recorders with time code. These super-compact devices record and play back to convenient, removable CompactFlash cards (the 744T includes an internal hard drive), making field recording simple and fast. Time code makes these two recoders ready for any double-system recording environments—from over-the-shoulder to cart-based production.

744T Input Panel

744T Back Panel

744T Output Panel

The two-track 702T and four-track 744T are the perfect file-based audio recorders for double-system film and video production. Their on-board time code reader and generator allow for great flexibility in time code-based workflows. With the diverse time code setups encountered in production the 702T and 744T can accommodate all of them: rec run, free run, with/without smart slate, or multiple camera with “lockits”. Files recorded on these recorders are available for immediate importing in Broadcast Wave-aware editing applications such as Avid and Final Cut Pro.

2-TRACK | FIREWIRE | COMPACTFLASH | TIME CODE

4-TRACK | FIREWIRE | COMPACTFLASH | TIME CODE | INTERNAL HARD DRIVE

CS-3 Production case with high-quality strap for use with the two and four track 7-Series recorders, 302 mixer, and MixPre-D. Includes an NP-type battery compartment and accessory pouch for wireless. Built for Sound Devices by CamRade.

Time Code and Data Cables

XL-LL LEMO®-5 to-LEMO®-5 coiled-cable for time code interconnection of multiple recorders or to Ambient Time Code products and Aaton cameras; 24-inch coiled; 55-inch full extension

XL-LB2 LEMO®-5 to BNC input and BNC output cable for time code jamming of audio and video equipment with BNC connectors, for SMTPE time code; 31-inch.

XL-LX LEMO®-5 to XLR-M and XLR-F cable for time code jamming of audio and video equipment with XLR connectors; for SMTPE time code; 25-inch to XLR-M, 14-inch to XLR-F

XL-BNC BNC-to-BNC cable for digital connection of AES3id and word clock signals; 25-inch.

702 AND 722 PORTABLE RECORDERS

Two-Channel, High-Resolution Audio Recorders

The 702 and 722 sound amazing. Their no-compromise audio circuitry includes Sound Devices' high-performance transformerless microphone preamplifiers. Designed specifically for high bandwidth, high bit rate digital recording, these preamps set a standard for frequency response linearity, low distortion performance, and low noise.

702/722 Input Panel

702/722 Back Panel

702/722 Output Panel

2-TRACK FIREWIRE COMPACTFLASH

2-TRACK FIREWIRE COMPACTFLASH INTERNAL HARD DRIVE

The world becomes your recording studio with the portable, two-channel 702 and 722 recorders. Recording uncompressed WAV files to removable CompactFlash cards, internal hard drive (722-only) and external FireWire storage devices is fast and convenient. Powered by removable, long running Li-ion rechargeable batteries, these recorders deliver an incredible 114 dB of dynamic range and ruler-flat frequency response (5 Hz to 40 kHz).

Specifications aside, the 7-Series microphone preamps, digital converters, and output section have quickly gained worldwide respect for their superb sound quality. Now, only your microphone's resolving power limits the quality of your recordings. Taking advantage of the speed and plug-and-play convenience of their FireWire connection, sound files can be transferred easily to and from the recorder and Mac OS or Windows computers. File transferring and archiving couldn't be easier.

Key Features

- Two high-performance microphone preamps with 48 V phantom power, limiters, and high-pass filters
- Records uncompressed PCM audio files in WAV format with Broadcast Wave and iXML file metadata
- Selectable pre-record buffer up to 10 seconds
- MP3, MP2, and FLAC recording and playback
- 16-bit or 24-bit recording bit depth
- Sampling rates from 32 kHz to 192 kHz
- User defined file name, scene, and take number
- Large, extended-temperature range LCD display
- 6-pin modular C. Link connection for multi-unit linking and connection to a CL-1
- MS stereo matrix
- Field upgradable via downloadable firmware updates
- 10–18 volt DC input for external power and battery charging
- Stainless-steel and aluminum chassis for lightweight durability

WAVE AGENT

WAV File Librarian for Mac OS and Windows Computers

Designed for Production Sound Mixers and Post Production Editors, Wave Agent provides a comprehensive and indispensable range of tools for preparing audio file for problem-free passage through complex production workflows. Wave Agent can play any WAV file generated from any 7-Series recorder.

Wave Agent Control Mode provides additional flexibility for 788T users. Controls such as record start/stop, track naming, input routing, and level meter display are all available when running Wave Agent. Wave Agent is an essential, time-saving tool for anyone working in Production Sound.

Wave Agent **Key Features**

- Playback of polyphonic/monophonic BWF and standard WAV files from any source, up to 12-tracks
- 788T Control Mode for record start/stop, level metering, file naming
- Mac OS and Windows compatible
- Supports up to 12-track WAV files
- View and edit metadata
- Editing of file time code stamps and frame rates
- BWF split and combine via matrix
- Batch editing, file-renaming and mono/poly file conversion
- Create customized PDF or text sound reports
- Multi-channel file track metering & track level control
- User-configurable graphic user interface (GUI) with drag-and-drop operation.

Wave Agent is available as a free download at **www.waveagent.com**

7-SERIES COMPARISON CHART

There are many options to consider when choosing the right 7-Series recorder for the job. The chart below helps to illustrate the shared and unique features of each model.

	702	702T	722	744T	788T
I/O					
Balanced analog inputs	2	2	2	4	8
Microphone preamplifiers with 48 V phantom power, high-pass filter, limiters	2	2	2	2	8
Headphone output with selectable source (connector)	3.5 mm	3.5 mm	3.5 mm	3.5 mm	3.5 mm and 1/4-inch
Balanced line-level analog outputs (channels)	2	2	2	2	4, 2 unbalanced
Digital Inputs (channels)	2 - AES3	2 - AES3	2 - AES3	4 - AES3	8 - AES3
Digital Outputs (channels)	2 - AES3id	2 - AES3id	2 - AES3id	4 - AES3id	6 - AES3
Display/Metering/Control					
Extended temperature, back-lit LCD viewable in all lighting conditions	✔	✔	✔	✔	✔ multi-color
Sunlight viewable LED PPM, VU, or combination PPM/VU level metering	✔	✔	✔	✔	✔
LED peak/limiting indication per channel	✔	✔	✔	✔	✔ at input control
Audio File Storage					
Internal HD, 2.5-inch hard drive, FAT32 volume	-	-	✔	✔ B	✔ or SSD
CompactFlash card slot (type I, II, and micro drive compatible) for removable recording medium	✔	✔	✔	✔	✔ with UDMA support
External FireWire drive support, FAT32 hard drive or DVD-RAM with FireWire bus powering	✔	✔	✔	✔	✔ high bandwidth
Record/mirror to all available storage mediums simultaneously	✔	✔	✔	✔	✔ plus track-to-media assignment
File Formats					
Broadcast Wave format (.WAV extension), mono or poly files, uncompressed PCM audio with IXML metadata written to header, 16- or 24-bit	2 track 192 kHz max	2 track 192 kHz max	2 track 192 kHz max	4 track 192 kHz max	up to 12 track 96 kHz max (8-track)
MP2, MP3, FLAC recording	✔	✔	✔	✔	-
MP2/MP2 file playback at 64, 128, 192, 256, or 320 kb/s, stereo file	✔	✔	✔	✔	✔
External Data Interface / Transfer / Control					
FireWire 400 (IEE-1394a) port for high-speed data access to CF card and internal drives (for units with internal drives), Mac and Windows support	✔	✔	✔	✔	✔ plus FW800 and USB 2.0
Wave Agent Control Mode and CL-WiFi wireless control	-	-	-	-	✔
Time Code / Word Clock					
Ultra-stable, temperature compensated (<1 ppm) crystal clock generator	-	✔	-	✔	✔
TC rates of 23.976, 24, 25, 29.97DF, 29.97, 30, 30DF	-	✔	-	✔	✔
Word clock input and output	✔	✔	✔	✔	✔ plus video sync
Powering					
Removable, rechargeable powering using Li-ion battery, built-in charger	✔	✔	✔	✔	✔
10-18 VDC external input powers unit and charges battery	✔	✔	✔	✔	✔

FIELD MIXERS

The Standard in Portable

Our MixPre-D, 302, 552, and 664 field mixers are built to perform well beyond your ability to abuse them. Whether you are in Africa or Antarctica, these mixers excel in a wide range of production applications from simple, single microphone stand ups to complex multi-camera productions. Sound Devices field mixers are, quite simply, the most complete choice.

Audio Quality

At the heart of Sound Devices mixers is a superb microphone preamplifier. Sound Devices' mixers accommodate a wide range of input types with huge headroom reserves. Precision sealed-conductive-plastic gain controllers provide smooth, accurate level control. High output, low-noise headphone amplifiers are designed for critical listening.

Powering

Sound Devices field mixers are power-efficient tools. Powered from either AA batteries or external DC sources, mixers can run for a production day on internal cells, and for days from external DC battery supplies.

Linking

When more inputs are needed, mixers can be linked. Mixers can be linked to add input channels to the 302, 552, or 664 mixers. Inputs appear at the master mixer's outputs.

Metering and Monitoring

Seeing levels and hearing your mix are essential functions of a field mixer. Sound Devices level meters are the most accurate and informative available. The microcontroller-driven meters provide an incredible "view" of the audio signal under all lighting conditions.

The headphone amplifiers in Sound Devices mixers are well-respected and essential tools. These headphone amps provide the accuracy required fo an engineer to make critical gain and microphone placement decisions. There is no more important judge than the engineer's ears.

664 FIELD PRODUCTION MIXER

The Six-Channel Portable Production Mixer with Integrated Recorder

The 664 Field Production Mixer is the flagship in Sound Devices' line of portable audio mixers. Building on the foundation of the popular 552 mixer, the intuitive 664 has six inputs channels and four output buses. All inputs and outputs are recordable to both CF and SD cards. This unprecedented amount of I/O connectivity and recording capability makes the 664 perfect for any production application.

664 Input Panel

664 Back Panel

664 Output Panel

The 664 has six ultra-low noise, high-dynamic-range analog inputs. These transformer-less preamps accept mic or line-level signals, and include analog peak limiters, high-pass filters, input trim controls, and direct outputs. Input connectors 1 and 6 can be selected to accept AES42 or AES3 digital signals.

In complex, multi-camera productions, output flexibility is essential. The 664 can send its main left/right outputs to three cameras simultaneously. Two additional output buses, X1 and X2, appear on balanced TA3 connectors. AES3 digital outputs are individually selected to appear on the main XLR and multi-pin output connectors.

The 664 can record each of its inputs and its four output buses, for 10 record tracks. Recordings are saved to CompactFlash and SD cards. Recordings are either 16- or 24-bit Broadcast WAV files with extensive metadata. All popular production sampling rates are supported. When used with an attached **CL-6 Input Expander,** the 664 gains six line-level inputs and can record records 16 tracks, 12 inputs and four output buses.

With the mixer's built-in, rock-steady Ambient time code generator, multiple devices can operate in synchronization. The 664 operates as either a time code master clock or its clock can be jammed from external time code. A helpful time code compare utility shows the difference between internal and external time code.

The 664 was designed with knowledge gained from the industry's top engineers and from Sound Devices' expertise in portable mixers. Because sound engineers operate in fast-paced environments, important controls are on dedicated knobs and switches, while additional features are quickly accessed through the intuitive LCD-based menu control.

CL-6 Input Expander for 664 Field Production Mixer. Adds six recordable, line-level analog inputs, LED output metering, and additional recording transport controls.

CS-664 Production case with high-quality strap for use with the 664 with the CL-6 Input Expander; accomodates NP type battery and includes doors to access word clock and talkback send/receive connections. Includes large detachable wireless bag; by CamRade for Sound Devices.

664 Key Features

- Six high-bandwidth, low noise microphone preamplifiers with phantom, limiters, high-pass, pan, and direct outputs per channel
- Four output buses, Left, Right and Aux 1, Aux 2; transformer-balanced for freedom from ground loops; multiple output connectors, including dual multi-pin
- Built-in recorder, records all inputs and output buses: 10 tracks total. With CL-6 attached: 16 tracks total.
- Broadcast WAV recording to dual memory card slots, CF and SD
- Record different track combinations and to each card type
- High-precision, Ambient Recording-based time code generator/reader with auto-recharging of internal TC battery
- Time code compare tool to measure offset from internal and external time code
- Quick, intuitive interface via sunlight readable, transflective LCD menu control
- Main controls on dedicated knobs and switches
- Two AES42/AES3 digital inputs (input connectors 1 and 6)
- AES3 output selection, up to eight channels of AES out (XLR, multi-pin)
- Expanded return monitoring capabilities, with three camera returns
- Dedicated communication circuit (PL)
- Built-in slate microphone and external slate microphone input connector
- Powered by AA-battery x5 or isolated (floating) external DC, 10-18V
- Metalized, gasketed carbon-fiber chassis panels for light weight and durability

552 FIELD MIXER

Five-Channel Portable Production Mixer with Built-In Recorder

The five input 552 Production Mixer provides professionals a superb sounding, compact, lightweight and power-efficient mixer that is equally at home in simple run-and-gun applications or in complex multi-input, multi-output production setups.

552 Input Panel

552 Back Panel

552 Output Panel

Sound Devices presents the 552 Production Mixer, a technologically advanced portable audio mixer designed specifically for professional sound engineers. The five-channel 552 is equally at home in simple run-and-gun applications and in complex multi-input, multi-output production setups.

The 552 contains five, precision, high-dynamic-range transformer-balanced microphone inputs with expanded gain and headroom. The studio-grade inputs have their own limiter, sweepable high-pass filter, and pre-or-post-fade direct output.

Additionally, the 552 has a built-in integrated digital audio recorder writing industry-standard Broadcast Wave files to SD and SDHC cards. The recorder is ideal for applications where a high-quality, 24-bit local recording is required. Either the outputs or combinations of inputs and outputs can be assigned as record sources.

The 552, like all Sound Devices products, is designed to withstand the physical and environmental extremes of field production. Top and bottom chassis panels are made from molded, metallized carbon fiber for superior durability and weight reduction. The front panel is gasketed for water resistance. The unit is powered by four AA batteries or external 10-18 VDC.

552 Key Features

- Five high-performance mic/line inputs with limiters
- Direct outputs per input, pre/post and mic/line selectable
- Ultra-light and strong metallized-carbon-fiber top and bottom chassis panels
- Integrated two-track 16- or 24-bit audio recorder to SD/SDHC cards, Wave or MP3
- 44.1, 48, 48.048, 88.2, and 96 kHz sampling rate
- Four-track AES3 digital output running at same SR as recorder
- Front-panel control of mic/line input and phantom status with LED indication at each input
- Sweepable high-pass filter with silent engagement
- 92 dB of gain (maximum) from input to analog output
- Sunlight-viewable, 21-segment Peak/VU meters with zoom mode
- Stereo linking of inputs 1 & 2 and 3 & 4
- Two return audio inputs for two-camera confidence monitoring
- Extensive headphone monitoring including input solos, record source, and return audio
- Powered by four AA batteries or external 10-18 VDC

XL-10 Multi-Pin Snake Cable The XL-10 is a high-quality multi-pin breakout and extension cable designed specifically for Sound Devices 552 Field Mixer. The XL-10 provides easy access to the balanced outputs and stereo return A connection on the multi-pin of the 552.

XL-TA55 & XL-TA35 Links field mixers together to make a 10-input system with master buses and headphone circuits linked.

CS-5 Production case with removable dividers; designed for use with the 552 Field Mixer or 788T Recorder. With integrated dividers for an NP-sized battery compartment. Built for Sound Devices by CamRade.

302 FIELD MIXER

Three-Channel Portable Production Mixer

The 302 is stunning in size, flexibility, control and performance; it is the most compact and cost-effective battery-powered professional audio mixer in its class. With important features to accommodate nearly any over-the-shoulder production, the 302 interfaces with any professional microphone, wireless system, and camera/recorder input.

302 Input Panel

302 Output Panel

Developed specifically for audio-for-picture applications, the 302 mixer is the perfect tool for production companies and camera operators wanting to take control of their audio. The 302 is stunning for its size, flexibility, control and performance; it is the most compact and cost-effective battery-powered professional audio mixer in its class.

With important features to accommodate nearly any over-the-shoulder production, the 302 interfaces with wireless transmitters and receivers, camera audio inputs of all kinds, and external audio recorders. Its microphone inputs are the same superb circuitry of all Sound Devices field production tools.

The 302 has a complete feature-set in a compact, functional design. The high-efficiency power circuitry runs the mixer from either three internal AA batteries or external 5-18 VDC.

XL-NPH Power Adaptor NP-type battery cup with 24-inch cable terminated in a Hirose 4-pin locking DC connector at the equipment end. For use with Sound Devices MixPre-D, 302, 552, and 7-Series recorders.

XL-3R TA3-F to right-angle 3.5 mm cable. Used to connect Tape Output to consumer-level recorders.

XL-14 3.5 mm male TRS to 1/4-inch female TRS jack for headphone extension, 12-inch. Perfect for the 302 and 7-Series recorders. (Included with 302).

302 Key Features

- Transformer-balanced mic/line selectable inputs
- Two-stage level control with input trim and fader for precision, low-noise gain
- 48-volt or 12-volt phantom power
- “Unclippable” input peak limiters, dual-mono or stereo linked operation
- Input panning to Left, Center, or Right outputs
- Mid-Side Stereo (MS) matrix with width control and front-panel channel flip
- Return can be used as ch3/ch4 aux-level inputs, selectable pan and level control
- High-pass filters, 80 Hz or 160 Hz
- Slate microphone and tone oscillator
- Headphone monitoring of program audio or external return audio
- Sunlight-viewable, 16-segment GaN LED output meter with adjustable brightness
- Internal battery-power from two AA
- External power input, 10-18 VDC
- High-strength, extruded aluminum chassis with metal connectors

MixPre-D

Two-Channel Portable Mixer

The MixPre-D sets a new standard for compact, high-performance portable audio mixers. Designed specifically for audio professionals needing the most flexible connectivity, the MixPre-D is ideal for any production application where capturing great sound is important, but size and weight are a concern.

MixPre-D Input Panel

MixPre-D Output Panel

At the heart of the MixPre-D are two studio-grade mic/line inputs with limiters, high-pass filters and available phantom power. Inputs can be linked in standard or MS mode for stereo recording applications. All input functions are configured with front panel controls.

To accommodate the increasing variety of cameras and devices used in production, the MixPre-D has incredible output flexibility. Outputs include balanced mic/line XLR, digital AES (XLR), dedicated consumer mic-level on a locking TA3 connector (designed specifically for DSLR-type inputs) and an aux-level output on 3.5 mm connection.

The “D” in MixPre-D indicates the infusion of extensive digital technology. In addition to 24-bit AES digital outputs, USB audio streaming is provided for Mac OS, Windows or Linux computers. When the MixPre-D is connected to a computer with a USB cable, the operating system recognizes it as a USB Audio Class compliant device. No driver installation is required.

A wide range of additional features in the MixPre-D make it a great complement to larger mixers, such as Sound Devices 302 Compact Production Field Mixer or 552 Portable Production Mixer. These features include: MS stereo matrix, tone oscillator, internal slate microphone, return monitoring of both analog and USB audio, high-gain headphone output and two-AA battery or external 10-18 VDC powering.

The MixPre-D continues the heritage of Sound Devices original MixPre, which has been the go-to mixer for audio professionals that need the lightest, simplest and highest performance mixer available.

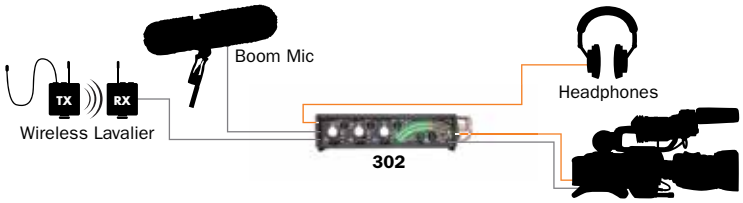
XL-CAM Accessory Mount The XL-CAM attaches to the top of the MixPre-D and allows for solid mounting to cameras and tripod heads.

MixPre-D **Key Features**

- Transformer-balanced mic/line selectable inputs
- 48-volt or 12-volt phantom power
- “Unclippable” input peak limiters, dual-mono or stereo linked operation
- Input panning to Left, Center, or Right outputs
- Mid-Side Stereo (MS) matrix with width control and front-panel channel flip
- Return can be used as ch3/ch4 aux-level inputs, selectable pan and level control
- High-pass filters, 80 Hz or 160 Hz
- Slate microphone and tone oscillator
- Mic/Line/AES digital selectable outputs, digital SR of 44.1, 48, or 96 kHz
- 24-bit, class-compliant USB streaming output for interconnection with Mac OS, Windows, Linux, and select iOS devices, computer audio in MixPre-D headphones
- Dedicated mic-level output on locking TA3 connector for unbalanced camera inputs
- Headphone monitoring of program audio or external return audio
- Sunlight-viewable, 16-segment GaN LED output meter with adjustable brightness
- Powered by either internal battery-power from two AA or external DC 10-18 VDC
- High-strength, extruded aluminum chassis with metal connectors

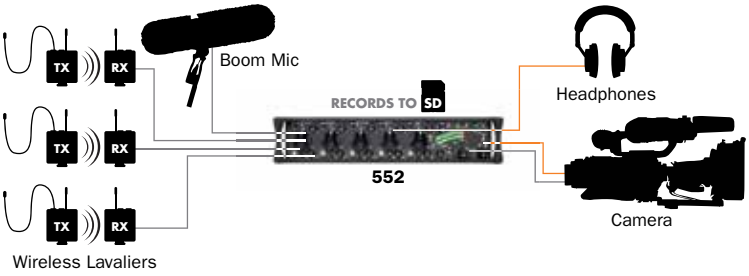
COMMON MIXER SETUPS

Sound Devices mixers are truly portable mixing consoles, far more flexible than simple ENG mixers. Their input gain control, high-pass filters, limiters, and ability to monitor in so many configurations makes them the right portable choice for any production application. The diagrams below illustrate a few common setups.



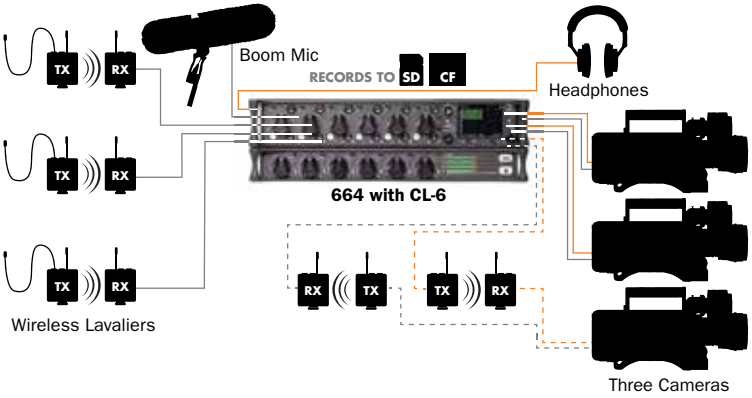
ENG The 302 excels in “run and gun” production environments. Its big, informative meters and limiters are essential to monitor and control unpredicable levels. Great for news stand-ups, interviews, and voice-overs.

- Hard-Wired Boom Mic
- Wireless (or Wired) Lavaliers
- Headphone Monitoring
- Battery Powering
- CS-3 Production Bag



Field Production The 552 performs for applications such as multi-talent interviews, commercial (advertising), and documentary film/video. Its built-in two-track recorder is the perfect backup recorder.

- ENG setups, plus...
- Wireless Camera Links
- Monitor Return for Confidence Monitoring
- AA Battery or External Mixer Powering
- Larger Format Bag Production



Studio/Cart Production When the producer wants everyone boomed AND laved, plus feeds sent to transcription, video village, multi-track, and camera(s), the 664 (with CL-6) is an outstanding choice.

- ISO recording of each input
- Field Production Setups, plus...
- Monitor Return from Three Cameras
- Stereo (XY or MS) Ambience Mics
- Wireless Booms
- A linked MixPre-D or 664
- Direct Output Feeds to Multi-Track
- Wireless IFB Feed for Talent and Crew
- Distributed Power for All Audio Gear

FIELD MIXER COMPARISON CHART

There are many options to consider when choosing the right portable field mixer for the job. The chart below helps to illustrate the shared and unique features of each model.

	MixPre-D	302	552	664
Inputs				
Balanced analog inputs, mic/line switchable	2	3	5	6 (+6 line w/ CL-6)
Dual-stage gain control with trim and fader	-	✔	✔	✔
Maximum gain, input to output	66 dB	75 dB	93 dB	93 dB
12 V T-Power	-	✔	-	-
High-pass filters	two-position	two-position	sweepable	sweepable
Input limiters	✔	✔	✔	✔
Stereo linking and MS matrix	✔	✔	✔	✔
Mix in for multi-unit linking	-	✔	✔	bus I/O
Output				
Direct Outputs	-	-	✔	✔
Transformer-balanced XLR outputs	-	-	✔	✔
Active balanced XLR outputs	✔	✔	✔	✔
Output limiters, programmable	✔	✔	✔	✔
Multi-pin “camera link” outputs, transformer-balanced	-	-	✔	✔
Unbalanced “aux level” outputs	✔	✔	✔	✔
AES3 balanced digital outputs (channels)	1x2	-	2x2	8x8
USB output, class-compliant for Mac OS, Windows, Linux and iOS	✔	-	-	-
Display / Metering / Control				
Sunlight-viewable LED metering	16-segment	20-segment	21-segment	multi-segment LCD
LED peak/limiting indication per channel	✔	✔	✔	✔
Tone oscillator and slate microphone	✔	✔	✔	✔
Monitoring				
Return input for external source monitoring	✔ plus USB playback	✔	2 sources	3 sources plus PL
Solo monitoring per input	-	✔	✔	✔
Voice-navigated menu and status reports	-	-	✔	-
Mechanical Construction				
All-aluminum construction	✔	✔	-	-
Aluminum alll-around with carbon fiber top/bottom panels	-	-	✔	✔
Recording Features				
Built-in recorder	-	-	2-track	10 or 16 track
Powering				
AA (LR6) batteries	2	3	4	5
DC input for external power	11-17 VDC	5-18 VDC	10-18 VDC	10-18 VDC

USBPre® 2

Microphone Interface for Computer Audio

Sound Devices' USBPre® 2 is a high-resolution, portable hardware interface for Mac- and Windows-based digital audio. The USBPre® 2 is the industry's highest performance and most flexible portable interface, connecting professional microphones, line-level sources, consumer audio electronics, and S/PDIF digital sources with Mac OS and Windows computers via USB.

USBPre 2 Input Panel

USBPre 2 Back Panel

USBPre 2 Output Panel

USBPre® 2 includes two discrete-transistor microphone preamps with 24-bit converters and sampling rates up to 192 kHz. These preamplifiers provide the highest performance in any portable interface. Their topology is shared with Sound Devices award-winning 7-Series Recorders. Peak limiters, high-pass filters, and a 15 dB pad add overload protection. All analog-to-digital and digital-to-analog conversion is performed by the USBPre® 2 for superior audio performance.

USBPre® 2 is a class-compliant audio device. This allows for simple plug-and-play connection to computers running Mac OS, Windows, and Linux. There are no drivers to install and there are no software-only features. All additional controls and settings are available on back panel DIP switches. The USB port also provides power to the unit, both when connected as an audio interface and when used in Stand-Alone operation.

To interconnect with sound systems big and small, the USBPre® 2 includes numerous output connection types, including balanced mic- or line-level on XLR, unbalanced consumer line-level on RCA, S/PDIF coaxial (RCA) and optical (Toslink). The outputs have their own, dedicated front-panel level control. Use the balanced line-level signals to connect to powered loudspeakers. Use the optical S/PDIF to connect to hi-fi systems. Use the coaxial S/PDIF output in Stand-Alone mode for a portable microphone preamplifier with digital output for any production application.

The USBPre® 2 can be used in Stand-Alone mode where it operates as a high-quality, portable microphone preamplifier and analog-to-digital converter. Digital signals connected to the USBPre® 2 are converted to analog and available at the headphone, XLR, and RCA outputs. Stand-Alone operation requires the unit to be connected to a USB power source. Stand-Alone mode is a great option when an additional microphone preamplifier, A-D converter, or D-A converter is required.

USBPre® 2 Key Features

- Extended bandwidth, low-noise microphone preamplifiers with 48 V phantom, limiters, high-pass filters, and 15 dB pad.
- Dynamic range greater than 114 dB (in 24-bit operation).
- Flat 10 Hz to 40 kHz (@96 kHz SR) audio bandwidth with very low distortion characteristics.
- Each input individually selectable between microphone, line, and aux level signals (both channels selected simultaneously for S/PDIF connections).
- Precision, 23-segment, multicolor LED peak/VU meter, selectable between input and output sources.
- High-output headphone amplifier can drive a wide range of headphones.
- Balanced outputs on XLR connectors with dedicated level control can be used to drive line- or mic-level inputs.
- Mix control enables zero-delay monitoring of source audio, computer audio, or a mix of both source and computer audio for multitrack recording or computer telephony.
- Phono (RCA) jacks connect Aux Output to external loudspeakers or preamplifiers.
- Bus powering via USB for convenient, single-cable connection to the computer.
- In Stand-Alone mode the USBPre 2 operates as a microphone preamplifier and analog-to-digital converter.
- Hardware loop-through for test & measurement to send computer audio directly back to an input.
- High-strength extruded aluminum chassis.
- Mac® OS X 10.4+, Windows®XP/Vista/7, 8, and Linux, class-compliant audio device.
- Additional features controlled by hardware DIP switches on the back panel; no software-only features and no control panel.

PRODUCTION ESSENTIALS

The Standard in Portable

Simplicity, durability, and audio quality are the distinguishing trademarks of Sound Devices' field production tools. The MM-1 and HX-3 – along with our first product the MP-1 – have become indispensable tools for sports television production and broadcast remotes. Their unrivaled reliability has earned them first unit status in some of the most complex productions in the world.

MM-1

Versatile Mic Preamp and Headphone Amp

Highly versatile and portable, Sound Devices' MM-1 is a single-channel, portable microphone preamplifier with a powerful headphone monitoring function.

The MM-1 is at home in high-definition television production, corporate/industrial video, and radio/television announce booths. Its headphone monitor is an advantage in applications where communication channels or mix-minus feeds need to be monitored in headphones. Users can control both microphone audio and external audio sources in headphones. The high-quality microphone preamplifier's transformer-balanced inputs and outputs produce low-noise and low-distortion gain at all switch positions. It features an "unclippable" dual- stage limiter and two-position high-pass filter. Microphone powering options include phantom power at 48 volts or 12 volts and T-power (12-volt). It is powerable from two AA batteries or external 5–18 VDC.

MM-1 Back Panel

SOUND DEVICES

HX-3

Portable, Battery-Powered Headphone Distribution Amplifier

The compact HX-3 Headphone Distribution Amplifier is the perfect accessory to quickly provide three high-quality stereo headphone feeds with individual level controls from line-level sources. The HX-3 can produce very high headphone levels with extremely low noise and distortion.

Great for radio, television, film, and music production applications, the battery-powered HX-3 accepts balanced XLR line-level inputs or unbalanced 1/4-inch and 1/8-inch stereo inputs. Its 1/4-inch loop-out can connect multiple HX-3's for additional headphone outputs. Headphones are connected to panel-mounted 1/4-inch stereo connectors. The HX-3 is powered by 2 AA batteries or external 5-18 VDC.

HX-3 Input Panel

HX-3 Output Panel

MP-1

Portable, Battery-Powered Microphone Preamplifier

Simple to use, the MP-1 provides up to 66 dB of clean, nearly noiseless gain.

MP-1 is an ideal line-driver for critical television, radio, and film applications. Its transformer–balance microphone preamplifier offers a two-position high-pass filter, selectable peak limiter, and 48 V phantom power.

The MP-1 is extremely durable and easy to use. With rugged mechanical and electrical construction and high-quality components it will provide years of superb audio performance under the most punishing field conditions. Powered by two AA batteries.

MP-1 Back Panel

SOUND DEVICES

ADDITIONAL ACCESSORIES

Sound Devices offers a range of helpful accessories.

Electronic Accessories

CL-1 Keyboard interface and remote roll accessory for all 7-Series recorders; connects with C. Link connector; includes XL-RJ cable.

CL-2 Remote level control fader for the 788T; 30mm linear fader; two, two-position programmable toggle switches can be assigned for device control or to activate menu selections.

XL-DVDRAM External, bus-powered FireWire DVD-RAM drive for use with all 7-Series recorders.

XL-SATA Drive interface to provide an internal connection to 2.5-inch SATA (serial ATA) drives for 722 and 744T models originally equipped with PATA/IDE internal hard drives. Drive not included.

Carrying Cases

CS-MAN Convenient, padded carry/storage case with handles; fits all 7-Series recorders, 302, MM-1, MP-1, HX-3, MixPre-D, and USBPre 2; handy to store wallets, keys and mobile phones; handcrafted in China.

CS-W Removable accessory case for the CS-5 Production Case; designed to hold wireless transmitters and receivers and provides the appropriate cable routing for interconnection of wireless, mixers, and recorders. Built for Sound Devices by CamRade.

Power Accessories

XL-AB Power cable; Anton Bauer D-Tap connector to Hirose 4-pin connector.

XL-B2 Spare battery pack for 7-Series and PIX video recorders; compatible with Sony L-type camcorder mount; 7.2 V, 4600 mAh.

XL-B3 Spare battery pack for 7-Series and PIX video recorders; compatible with Sony L-type camcorder mount. 7.2 V, 6600 mAh.

XL-CHARGE Two-up battery charger for Sony L-compatible Li-ion batteries, 100/240 VDC input, 1.7 A output.

XL-DC Bare Switchcraft power connector for use with the MM-1 and HX-3; also works with early serial number MixPre and 442 mixers.

XL-H Bare Hirose HR10-7P-4P connector to mate with all field mixers and 7-Series recorders.

XL-H4 Hirose 4-pin connector to XLR (male) 4-pin connector. 6 in. length.

XL-WP3 45 W in-line AC-to-DC power supply; coaxial DC plug; detachable IEC power cord; for Sound Devices MM-1 and HX-3. 100ñ240, 50/60 Hz.

XL-WPH3 45 W in-line AC-to-DC power supply; Hirose 4-pin DC plug; with detachable IEC power cord; for all Sound Devices mixers and recorders. 100ñ240, 50/60 Hz. Included accessory with all 7-Series recorders.

XL-1394 Power conditioner for use when powering bus-powered external data drives with the 702, 702T, 722, and 744T; use for realtime recording to external drives.

Audio Cables & Interconnects

XL-1B TA3-F to TA3-F Cable, 552 and 302 mixer linking, also used to connect 552 direct outputs to 744T and 788T TA3 inputs; 12-inch.

XL-2 TA3-F to XLR-M (male) cable; 25-inch; connects balanced TA3 to XLR inputs; package of two cables

XL-2F TA3-F to XLR-F (female) cable; 25-inch; connects balanced TA3 to XLR inputs; package of two cables.

XL-2X Universal TA3-F to XLR-M (male) or XLR-F cable; 25-inch; connects balanced TA3 to XLR inputs or outputs

XL-3 3.5mm to TA3-F link cable for MixPre Tape Output to 442/302 Mix In; 12-inch

XL-3R 3.5mm to TA3-F link cable. Same as XL-3, but with a right-angle 3.5 mm connector.

XL-4 Bag of four (4) TA3-F (type) connectors.

XL-5 5-pin XLR-M to left/right XLR output cable; connects output of the PIX 220 or PIX 240 video recorders to balanced, line-level, XLR inputs.

XL-7 TA3-F to 3.5-mm female cable for use with 302; 12-inch; to connect unbalanced, stereo TA3 tape out to unbalanced, stereo 3.5-mm inputs.

XL-14 3.5 mm male TRS to 1/4-inch female TRS cable for headphone extension; 12-inch; Perfect for the 302 and 7-Series recorders.

XL-TA25 552-specific link cable. Links Sound Devices MixPre to the 552 to add inputs. TA5 to 3.5 mm male.

Time Code and Data Cables

XL-RJ Modular cable for unit-to-unit linking via C. Link; 6-inches.

Mechanical Upgrades

XL-K3 Replacement fader knobs for the CL-9; adjustable resistance using magnets; kit of eight knobs.

XL-LCD Protective, clear Lexan LCD cover for 7-Series recorders; protects the LCD glass from scratches and water; kit of four covers.

AUDIO & VIDEO PRODUCTION PRODUCTS

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