

# QUICK START GUIDE

# 664

12-Input Mixer with  
Integrated 16-Track Recorder



**SOUND**  **DEVICES**



# Welcome

Thank you for purchasing the 664, a 12-input portable production audio mixer with 16-track recorder. The 664 is an extremely versatile device with many advanced features and capabilities. It records 16- or 24-bit polyphonic or monophonic broadcast WAV files, with extensive metadata, to SD and Compact-Flash memory cards. It can also simultaneously record MP3 files.

Included with your purchase:

QUANTITY	ITEM
1	664 Portable Mixer and Recorder
1	Cable (USB standard A to USB standard B) 2M length RoHS
1	Connector (USB 2.0 A female to A female)
2	Link port cover
1	LCD protective cover
4	Adhesive rubber “bumpers”
>1	Colored dot stickers
>1	Promo stickers
1	Product registration card
1	664 Quick Start Guide

This Quick Start Guide provides the initial steps necessary to set up and begin using the 664 right out of the box. It also provides a brief overview of features, plus warranties and licensing information.

For a full description of all product features, user-based procedures, specifications, and any safety information, please refer to the product’s User Guide located on the Sound Devices website; use the QR code or respective link to access and download the guide.

# Read and Register...

Sound Devices strongly encourages you to register your product. Registration extends your warranty and ensures you will receive timely product updates.

Full User Guide:



[http://www.sounddevices.com/download/guides/664ug\\_en.pdf](http://www.sounddevices.com/download/guides/664ug_en.pdf)

Register Your 664:



[www.sounddevices.com/support/registration/](http://www.sounddevices.com/support/registration/)

Email Support:



[support@sounddevices.com](mailto:support@sounddevices.com)

Call Support:



1-608-524-0625  
1-800-505-0625

# 664 Key Features

- 16-track mixer/recorder
- Six high-bandwidth, low noise microphone preamplifiers with phantom, limiters, high-pass filters, pan, and direct outputs per channel; direct outputs can be switched to operate as additional line inputs 7-12.
- Expandable with optional CL-12 linear fader controller, which adds 12 smooth-gliding linear fader controls, sunlight-viewable LED metering, back-lit Record / Stop transport controls, and many other illuminated quick-access buttons for key functionality
- Expandable with optional CL-6 input controller, which adds six dedicated, full-sized, rotary fader controls for channels 7-12, sunlight-viewable LED metering, and back-lit Record / Stop transport controls
- High-precision Ambient™ timecode generator and reader supporting all common rates and modes, with auto-recharging of internal TC battery
- Expanded return monitoring capabilities, with three camera returns, plus built-in slate microphone and external slate microphone input connector

## 1. Connect Power

The 664 is powered from any external DC power source (from 10-to-18 V DC) or from internal AA batteries. When both sources are connected, the 664 will use one source at a time, using first external power, then the AA batteries.

### To connect the 664 to external power:

- ▶ Connect a DC power source (not included) to the 10-18 V DC input on the right panel.

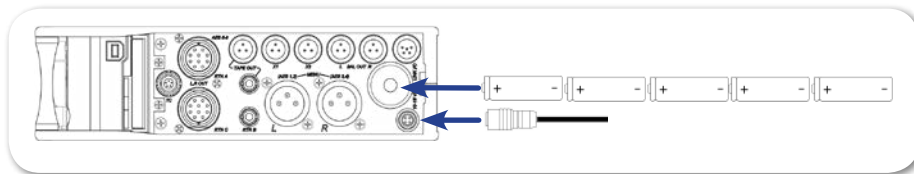
*Note: Pin-4 of the locking, Hirose connector is positive (+) and pin-1 is negative (-).*

The 664 uses five AA-sized batteries as a back-up in the event that external power is removed or depleted. While alkaline AA batteries may be used, NiMH batteries are preferred.

Depending on the battery, run times could vary. For alkaline, run time will be limited to between 10 and 15 minutes, based on settings. NiMH and lithium batteries offer up to 90 minutes of run time.

### To insert AA batteries:

1. Unscrew the battery cap (counter-clockwise).
2. Insert five AA NiMH batteries (not included) into the battery tube. Orient the batteries with the positive (+) end facing in and the negative (-) end facing out.



## 2. Power Up

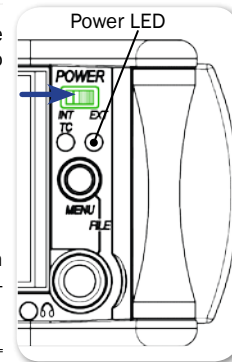
The Power switch selects the power source, either internal or external. There is a large enough power reserve to switch back and forth from one source to the other without interrupting mixer operation.

### To turn on the 664:

- ▶ Slide the Power button to the right for external power.
- ▶ Slide the Power button to the left internal battery power.

The power LED illuminates yellow then green. The Sound Devices splash screen appears briefly on the LCD, and then the Main screen will be displayed.

*Note: The firmware version is shown on the splash screen at startup and via Menu > System > Version Info. Ensure you are using the latest firmware, which is available as a free download from the Sound Devices website.*



### 3. Activate an Input

To activate an input:

1. If the Trim control for an Input is recessed, push it in and it will pop out.
2. Turn the Trim control clockwise until it clicks to activate the input.

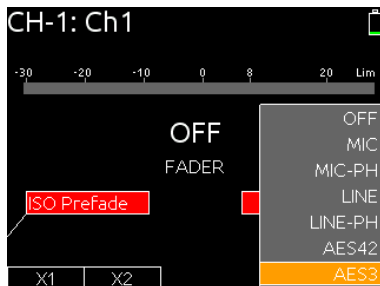
*Note: The input is deactivated whenever the Trim control is fully rotated counter-clockwise.*

### 4. Select an Input Type

To select an input type:

1. Slide the Pre-Fade Listen (PFL) switch to the right to access the Input Settings screen for that input (1-6).

*Note: Step 1 is based on factory defaults, in which case the Input Mode is set to 6 Channels, so sliding the switch to the left activates PFL on the input without leaving the Main screen, and sliding it to the right displays the Input Settings screen for inputs 1-6. An alternative 12 Channel option sets the PFL switch so that sliding it left activates PFL and displays the Input Settings screen for inputs 1-6, and sliding the switch right activates PFL and displays the Input Settings screen for inputs 7-12, respectively.*

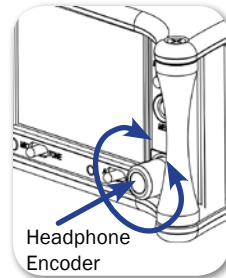


2. Press the Headphone encoder to display the list of available input types.

3. Turn the encoder to highlight an input type and press it in to make your selection.

- OFF – Use to deactivate an input without having to change trim.
- MIC – Use for dynamic microphones or mic-level sources.
- MIC-PH – Use for microphones requiring phantom power.
- LINE – Use for analog line level sources.
- LINE-PH – Use for phantom-powered condenser microphones. Provides 48V or 12V phantom power, but at a line-level gain range. Useful in high sound-pressure-level environments.
- AES42 – Use for digital AES42 (Mode 1) microphones.
- AES3 – Use for a digital AES3 source.

4. Slide the PFL switch to the left again to return to the Main screen.



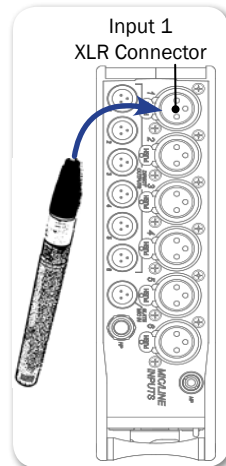
### 5. Connect Audio Source

On the left panel, there are six XLR-3F connectors for balanced microphone or line-level inputs, and six TA3-F connectors for direct outputs of 1-6 or for additional line level inputs (7-12).

To connect an audio source:

- ▶ Use a standard XLR cable and connect a microphone or line level analog source to an Input XLR connector.

*Note: Input 1 or 6 can also accept AES3 or AES42 (Mode 1) signal. If set, then 2 and 5 will allow AES3 or AES42 signals via 1 and 6 XLR. [Pin-1 ground, pin-2 positive, pin-3 negative.]*

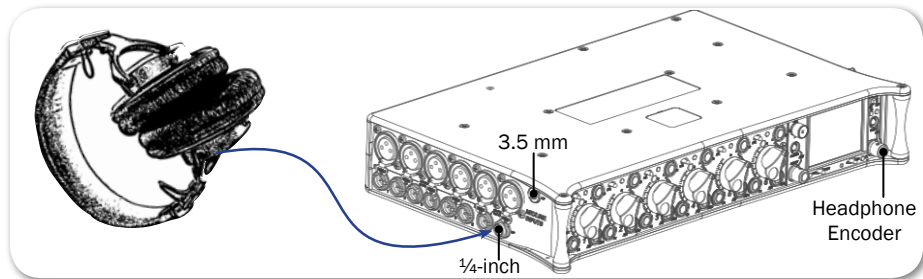


## 6. Connect Headphones

Be careful of high headphone levels when connecting your headphones.

### To connect headphones:

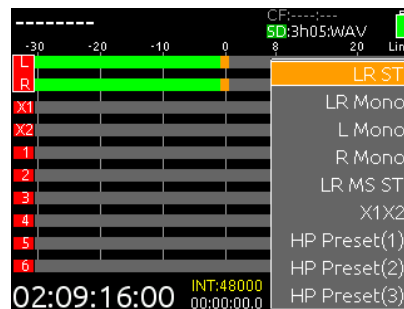
1. Prior to connecting your headphones, turn the Headphone encoder counter-clockwise until the LCD shows the headphones off.
2. Connect headphones to either the ¼-inch or 3.5 mm headphone outputs, located on the left panel of the 664.
3. Turn the Headphone encoder clockwise slowly until the level you want is reached.



## 7. Select a Headphone Source

### To set up the headphone source:

1. Press the Headphone encoder to display the list of available sources. The list will auto-close if no selection is made within a few seconds.
2. Turn the encoder to choose LR ST, the master left and right stereo bus.
3. Press the encoder to confirm selection.

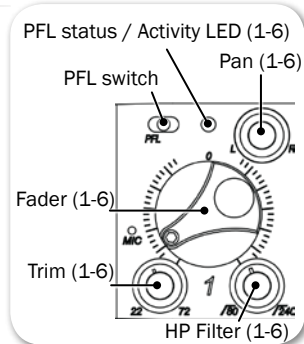


## 8. Adjust Trim and Fader Controls

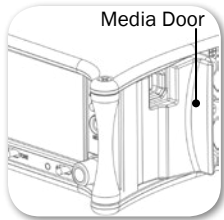
The gain of an input is adjusted by two controls, Trim and Fader. This two-stage architecture is identical to the topology of large mixing consoles and provides a great deal of control. Trim is often thought of as a coarse gain control and the Fader as the fine gain control.

### To adjust trim and fade:

1. Set Fader control to 0 dB (12 o'clock).
2. Adjust Trim control clockwise until optimal level is achieved on metering and in headphones.



## 9. Insert and Format Media

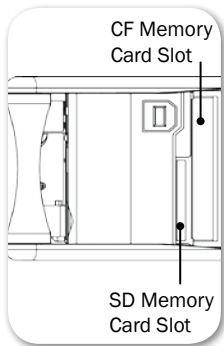


The slots for CompactFlash (CF) or Secure Digital (SD) memory cards are located on the right panel behind the Media Door, which is held closed magnetically.

### To install media:

1. Firmly pull open the Media Door.
2. Insert your choice of media memory card into the slots provided.

When inserting the SD card, ensure the bottom of the card (the side with metal contacts visible) is facing the rear of the unit. When inserting a CF card, ensure the top of the card (the side with the branding label) is facing the rear of the unit.



*Note: Sound Devices Quality Assurance engineers perform extensive testing to ensure media approved for use with the 664 works reliably and provides the best performance. When choosing media, please refer to the Approved Media List available on the Sound Devices website at: [www.SoundDevices.com/Approved](http://www.SoundDevices.com/Approved).*

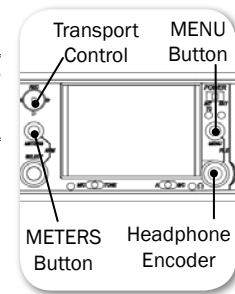
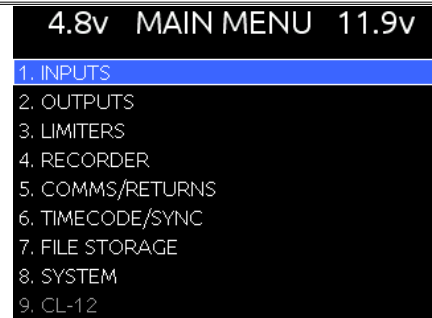
The SD or CF card must be formatted by the 664 before recording.

*Warning: Reformatting a card will erase all data on the card.*

### To format an SD or CF card:

1. Press the MENU button to view the Main menu.

*Note: On the 664, the Main Menu screen displays both internal and external voltage levels to the left and right of the MAIN MENU header, respectively. In the sample image, these numerical readings show battery power (4.8v) and 11.9 volts of external power.*



2. Turn the Headphone encoder and press it to select File Storage.
3. Do either of the following:
  - Select Erase/Format CF to reformat a CompactFlash card.
  - Select Erase/Format SD to reformat an SD, SDHC, or SDXC card.
4. Press the Headphone encoder to begin the formatting process.
5. Follow the message(s) that appear on screen and press the Headphone encoder to continue.
6. Press the METERS button to return to the Main screen.

## 10. Start and Stop Recording

### To begin recording:

- ▶ Push up the Transport control to record.

### To stop recording:

- ▶ Press in the Transport control to stop recording.

While recording, both the Take name background color (top of Main screen) and Timecode counter (bottom left of Main screen) are red, and the absolute time counter (bottom of Main screen) runs. Additionally, the CF and SD indicators will glow amber when media is being accessed.

## 11. Remove Media to Transfer Files

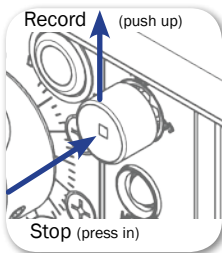
When recording is complete, ensure the CF and SD indicators (in top right corner of Main screen) are no longer glowing amber before removing the memory card(s). Once removed from the 664, the memory cards may then be connected to a computer for transfer and backup of recorded files.

### To remove the CF card:

- ▶ Open the Media Door and pull out the card.

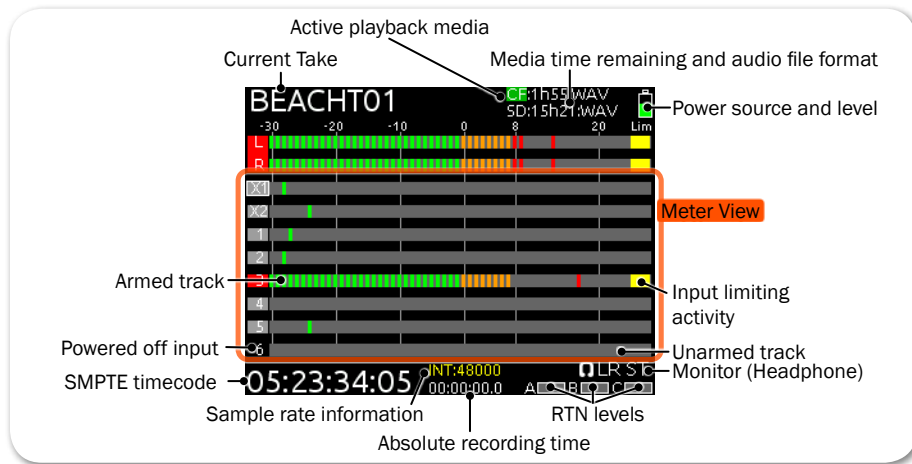
### To remove the SD card:

1. Open the Media Door.
2. Push it in to release the card, and then pull it out.



## Main Screen

The Main screen displays important information at-a-glance. The Main screen can be accessed quickly from any other screen by pressing the METERS button. Press and hold the METERS button, and then slide the AB/C switch (below the screen) to the left to toggle between display of timecode frame rate and sample rate. This sample image shows default settings.



Meter style can be changed to solid, and track names can optionally be shown in the meters.





Pressing the METERS button from the Main screen cycles through three Meter Views. Use the Main menu option: System > Meter Views to define which one of various configurations is used by each Meter View.







For complete information on the features of the 664 as well as procedures, tips and more, read the 664 User Guide, available in PDF format from the company's website:

[http://www.sounddevices.com/download/guides/664ug\\_en.pdf](http://www.sounddevices.com/download/guides/664ug_en.pdf)

# Accessories

The 664 works with various accessories which may be purchased separately and used to further enhance your field mixing and recording experience.

ACCESSORY	PHOTO	DESCRIPTION
CL-12		This optional linear fader controller attaches to the the 664 and adds 12 dedicated, smooth-gliding linear faders, sunlight-viewable LED metering, big, back-lit Record and Stop controls, and other illuminated quick-access buttons for key functionality.
CL-6		This optional input controller attaches to the top or bottom of the 664 and adds six full-sized tactile fader controls, sunlight-viewable LED metering and big, back-lit Record and Stop controls. When the CL-6 is attached to a 664, inputs 7-12 have dedicated fader controls, PFL switches and LEDs to indicate various input signal and track activity.
CS-688		This production case, designed by PortaBreach for Sound Devices, may be used for either the 664 or 688 and accessories, such as the CL-6 or the SL-6 (pictured here with the 688). The case has several attached pockets, zippered sides, a removable windowed cover, and is made from durable waterproof nylon, with anti-skid material on the bottom.
Wave Agent		Sound Devices Wave Agent, a file librarian for computers, provides a comprehensive range of tools for preparing audio files for problem-free passage through complex production workflows. For more a free download, visit <a href="http://www.waveagent.com">www.waveagent.com</a> .

ACCESSORY	PHOTO	DESCRIPTION
XL-TA55		A 12-inch TA5F to TA5F cable, used to link the 664 to another 664 or 552 mixer.  Other such cables for linking mixers, which may be used with the 664, include the XL-TA25 and XL-TA35.
XL-2		A 25-inch TA3-F to XLR-3M cable, used to connect the TA3 auxiliary outputs to third-party devices with XLR-3F inputs. Each package contains two cables.
XL-2F		A 25-inch XLR-3F to TA3-F cable, used to connect mixers and other devices with XLR-3M outputs to the TA3 7-12 inputs on the 664. Each package contains two cables.
XL-4		Bag of four (4) TA3-F-type connectors.
XL-H		Bare Hirose 4-pin locking DC connector (HR10-7P-4P).
XL-NPH		An NP-type battery cup with 24-inch cable terminated in Hirose 4-pin locking DC connector (HR10-7P-4P).



ACCESSORY	PHOTO	DESCRIPTION
XL-WPH3		The XL-WPH3 is an AC-to-DC (in-line) 100-240V power supply unit with 50/60 Hz input, a 12 VDC 3.75 A (45 W) output, and a Hirose 4-pin DC plug. It comes supplied with a 3-pin IEC cord.
XL-LL		LEMO@-5 to LEMO-5 coiled cable for timecode interconnection between the 664 and other devices.
XL-LB2		LEMO-5 to BNC input and BNC output for timecode interconnection between the 664 and other devices.
XL-LX		LEMO-5 to XLR-3F input and XLR-3M output for timecode interconnection between the 664 and other devices.
XL-10		Hirose 10-pin to two-XLR (balanced L/R) and 3.5 mm plug (stereo return A and C) breakout cable; includes in-line 20-foot extension cable. The XL-10 is a high-quality multi-pin breakout and extension cable designed specifically for Sound Devices field production mixers. It provides easy access to the balanced outputs and stereo return A and C connections.

This table is not an all-inclusive list of accessories available for use with the 664. For the latest information, visit the Sound Devices website at: [www.sounddevices.com](http://www.sounddevices.com).

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Declaration of Conformity



Manufacturer's Name: Sound Devices, LLC  
 Manufacturer's Address: E7556 State Road 23 and 33  
 Reedsburg, WI 53959  
 USA

**Declares under sole responsibility that the product as delivered**

Product Name: 664 Portable Mixer and Recorder  
 Model Number: 664  
 Description: 12-input field production mixer with integrated 16-track recorder.  
 Product Options: This declaration covers all options of the above product.

**complies with the essential requirements of the following applicable European Directives, and carries the CE marking accordingly:**

EMC Directive (2014/30/EU)  
 EN 55022:2010  
 EN 55103-2:2009



This Declaration of Conformity applies to the above-listed product(s) placed on the EU market after:

August 29, 2012

Date



Matt Anderson  
 President  
 Sound Devices, LLC

# Warranty and Service

Sound Devices, LLC warrants the 664 against defects in materials and workmanship for a period of ONE (1) year from date of original retail purchase. Users who register their product directly with Sound Devices Technical Support by mail, online, or phone will receive an additional ONE (1) year of warranty coverage, extending the complete warranty period to TWO (2) years from the date of original retail purchase. In order to extend the warranty coverage period, registration must be completed within the initial ONE (1) year warranty period. Products must be purchased through authorized Sound Devices resellers to qualify for Warranty coverage. Damage resulting from the opening of a Sound Devices product or attempted repairs by a non-authorized Sound Devices repair technician will void warranty coverage.

This is a non-transferable warranty that extends only to the original purchaser. Sound Devices, LLC will repair or replace the product at its discretion at no charge. Warranty claims due to severe service conditions will be addressed on an individual basis.

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For all service, including warranty repair, please contact Sound Devices for an RMA (return merchandise authorization) before sending your unit in for repair. Product returned without an RMA number may experience delays in repair. When sending a unit for repair, please do not include accessories, including SSD drives, CF cards, batteries, power supplies, carry cases, cables, or adapters unless instructed by Sound Devices. Sound Devices repairs and replacements may be completed using refurbished, returned or used parts that have been factory certified as functionally equivalent to new parts.

Sound Devices, LLC  
Service Repair RMA #XXXXX  
E7556 State Road 23 and 33  
Reedsburg, WI 53959 USA  
Telephone: (608) 524-0625

## Technical Support / Bug Reports

For technical support and bug reporting on all Sound Devices products contact Sound Devices, LLC at:

E-mail: [support@sounddevices.com](mailto:support@sounddevices.com)  
Website: [www.sounddevices.com/support/](http://www.sounddevices.com/support/)

To report technical errors in this guide,  
email: [techpubs@sounddevices.com](mailto:techpubs@sounddevices.com)

Phone: +1 (608) 524-0625  
Toll-free: +1 (800) 505-0625 — in USA only  
Fax: +1 (608) 524-0655

Sound Devices hosts a user support forum. The URL is: <http://forum.sounddevices.com>.

## Legal Notes

**Product specifications and features are subject to change without prior notification.**

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[www.sounddevices.com](http://www.sounddevices.com)

Part # 6579.001

