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Quick Start Guide



X-LIVE

X32 Expansion Card for 32-Channel Live Recording/Playback on SD/SDHC Cards and USB Audio/MIDI Interface



8. Não instale perto de quaisquer fontes de calor tais como radiadores, bocas de ar quente, fogões de sala ou outros aparelhos (incluindo amplificadores) que produzam calor.

9. Não anule o objectivo de segurança das fichas polarizadas ou do tipo de ligação à terra. Uma ficha polarizada dispõe de duas palhetas sendo uma mais larga do que a outra. Uma ficha do tipo ligação à terra dispõe de duas palhetas e um terceiro dente de ligação à terra. A palheta larga ou o terceiro dente são fornecidos para sua segurança. Se a ficha fornecida não encaixar na sua tomada, consulte um electricista para a substituição da tomada obsoleta.

10. Proteja o cabo de alimentação de pisadelas ou apertos, especialmente nas fichas, extensões, e no local de saída da unidade. Certifique-se de que o cabo eléctrico está protegido. Verifique particularmente nas fichas, nos receptáculos e no ponto em que o cabo sai do aparelho.

11. O aparelho tem de estar sempre conectado à rede eléctrica com o condutor de protecção intacto.

12. Se utilizar uma ficha de rede principal ou uma tomada de aparelhos para desligar a unidade de funcionamento, esta deve estar sempre acessível.

13. Utilize apenas ligações/acessórios especificados pelo fabricante.



14. Utilize apenas com o carrinho, estrutura, tripé, suporte, ou mesa especificados pelo fabricante ou

vendidos com o dispositivo. Quando utilizar um carrinho, tenha cuidado ao mover o conjunto carrinho/dispositivo para evitar danos provocados pela terpedação.

15. Desligue este dispositivo durante as trovoadas ou quando não for

utilizado durante longos períodos de tempo.

16. Qualquer tipo de reparação deve ser sempre efectuado por pessoal qualificado. É necessária uma reparação sempre que a unidade tiver sido de alguma forma danificada, como por exemplo: no caso do cabo de alimentação ou ficha se encontrarem danificados; na eventualidade de líquido ter sido derramado ou objectos terem caído para dentro do dispositivo; no caso da unidade ter estado exposta à chuva ou à humidade; se esta não funcionar normalmente, ou se tiver caído.



17. Correcta eliminação deste produto: este símbolo indica que o produto não deve ser eliminado juntamente com os resíduos domésticos, segundo a Directiva REEE (2012/19/EU) e a legislação nacional. Este produto deverá ser levado para um centro de recolha licenciado para a reciclagem de resíduos de equipamentos eléctricos e electrónicos (EEE). O tratamento incorrecto deste tipo de resíduos pode ter um eventual impacto negativo no ambiente e na saúde humana devido a substâncias potencialmente perigosas que estão geralmente associadas aos EEE. Ao mesmo tempo, a sua colaboração para a eliminação correcta deste produto irá contribuir para a utilização eficiente dos recursos naturais. Para mais informação acerca dos locais onde poderá deixar o seu equipamento usado para reciclagem, é favor contactar os serviços municipais locais, a entidade de gestão de resíduos ou os serviços de recolha de resíduos domésticos.

18. Não instale em lugares confinados, tais como estantes ou unidades similares.

19. Não coloque fontes de chama, tais como velas acesas, sobre o aparelho.

20. Favor, obedecer os aspectos ambientais de descarte de bateria. Baterias devem ser descartadas em um ponto de coletas de baterias.

21. Use este aparelho em climas tropicais e/ou moderados.

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1. Introduction

The X-LIVE interface card expands on the already stellar performance of the X-USB card that has been standard in X32 consoles for years. The same 32-channel bi-directional audio I/O via USB 2.0 is available, providing 32 channels for recording and playback, plus remote operation of your DAW via HUI/MackieControl emulation. The addition of twin SD/SDHC slots now provides fully independent, uncompressed recording/playback of up to 32-channels in consistent sessions up to the max capacity of the SD cards. Multi-channel recording without the need for a laptop, as well as virtual sound checks and live backing track support, accurate marker handling and adjustments, and full remote operation from apps or X-TOUCH control surfaces are only some of the new possibilities X-LIVE offers.

2. Installing the X-LIVE Card

Please make sure the X32 series mixer firmware is updated to the most recent release version. Check the product page on behringer.com for the latest available firmware.

CAUTION: Before installing the interface card into the console, make sure that the console's power switch is turned off. Malfunctions or electrical shock may occur otherwise.

Installation process:

1. Make sure that the mixer's power is turned off.
2. Remove the outer screws that hold the current card or slot cover in place.
3. Gently slide the card out of the slot and set it somewhere safe along with the fastening screws.
4. Before removing the X-LIVE card from its protective bag, touch the metal chassis of the console to prevent electrostatic discharges from affecting the sensitive electronic components. Hold the card by the face plate or the two small handles, avoiding contact with the components on the circuit board.
5. Align both edges of the card with the guide rails inside the slot and carefully insert the card into the slot. Push the card fully into the slot so that it sits flush against the console's rear panel, ensuring that the contacts are properly connected internally. The screw holes should be naturally aligned.
6. Fasten the card with the included screws, or with those that originally held the old card in place. Damage or malfunctions may occur if the card is not fastened.
7. Place the old card into the protective bag that the X-LIVE card was packed in, and repackage for safe storage.

3. Recommended Minimum Hardware

Windows

- Core 2 Duo CPU, 2 GHz
- USB 2.0
- 1 GB RAM

Mac

- 1.5 GHz CPU
- USB 2.0 port
- 512 MB RAM

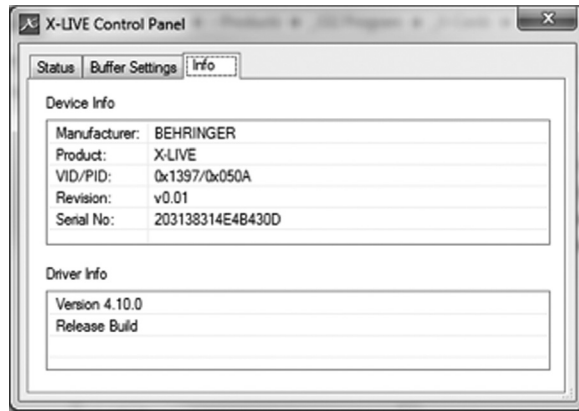
See Specifications for recommended operating systems.

4. USB Operation

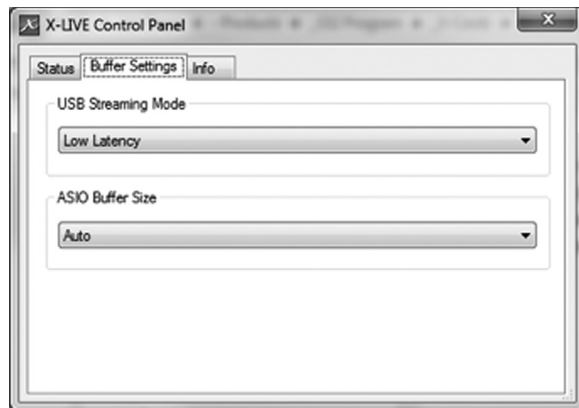
The USB connection on the X-LIVE card provides 32 channels of bi-direction audio I/O via USB 2.0, as well as MIDI I/O and remote DAW control via HUI/MackieControl emulation. Make sure to download and install the free ASIO driver from behringer.com if you are using a Windows PC. The X-LIVE is CoreAudio compliant and therefore does not need a driver for use on Mac computers.

4.1 Driver Control Panels

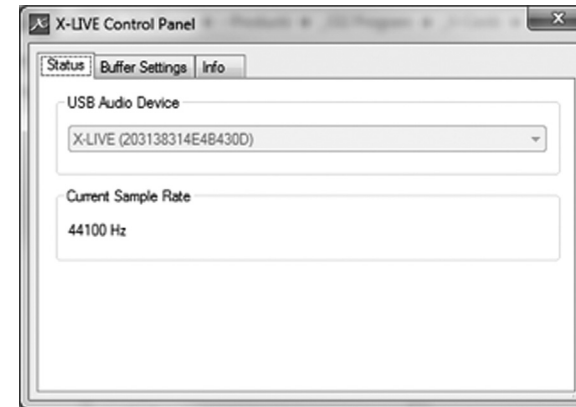
Once the driver is installed, you can open the control panel by double-clicking on the small tray icon. These screens will allow configuring the X-LIVE card in the X32 as an audio interface for your computer.



Info – displays the driver version number and device IDs.



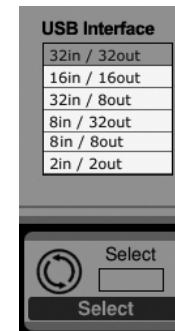
Buffer Settings – allows the stream and ASIO sound buffers to be set. Use small buffers for short latency when monitoring through the PC. Use large buffers and longer latency for preventing audio glitches on old, low-performance PCs.



Status / USB Audio Device – displays the card name and serial number.

4.2 USB Configuration

After the console has booted up, you can access the Setup screen and navigate to the Card tab to select the USB interface input/output configuration. Depending on your application, you may want to select an option other than the maximum 32 x 32 channel count to preserve system resources.



32 in / 32 out – This mode allows the full potential of the interface to be tapped. Note that the computer needs to be able to handle that amount of concurrent I/O stream without any glitches. Depending on its speed and memory configuration, some optimization for audio recording might be required.

It is also possible to run a virtual sound check of all 32 input channels by recording them directly to a computer during a brief line check. The performers can leave the stage while you play back the recorded instruments from the hard drive and tweak the sound accordingly.

16 in / 16 out – If you don't actually need more than 16 concurrent input and output tracks to be exchanged between the console and your PC, then this mode might be more appropriate for you. First, it will slow the required bandwidth on the interface down. Second, there will be no excessive I/O tracks in your DAW configuration that might clutter your setup. Third, it allows you to run a fully-featured zero-latency overdub setup, which would be impossible if signals were run through the computer. In this case, the 16 input signals are put on channels 1-16, while the tape (card) returns are put on channels 17-32. The monitoring is directly fed from Ch1-16 as usual, including all processing and effects. It remains independent from any computer audio latency, even though you can hear back all the recorded tracks without any re-patching.

32 in / 8 out – This mode is tailored to suit a typical studio and overdub recording situation, with many input channels but only a few output channels for monitoring of previously recorded takes.

8 in / 32 out – This is a useful mode for utilizing the excellent audio engine and effects processing of the console during final mixdown of your project. All 32 tracks would be fed from your DAW into the console where all the magic happens. Then only 2-8 tracks of the complete mixdown would be sent back to the DAW.

8 in / 8 out – This setting is light on processing power while still providing enough I/O for tracking drums or multiple mics on an acoustic guitar or piano.

2 in / 2 out – For recording just the main stereo mix, or playing back from typical media player applications where often only two channels are needed. Use this mode in order to remove all unused channels that would otherwise clutter your PC's audio applications.

Note that the Routing / Home and Card Out tabs allow audio from your computer to be sent to the desired destination. The Routing/home tab now offers to select two alternative input assignments, separately for Recording and Playback operation. See chapter 5.3 for details.

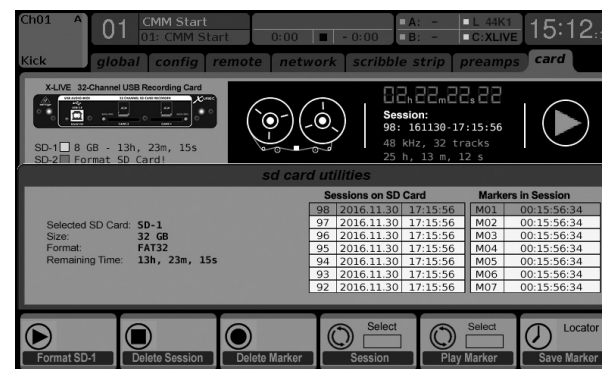
5. SD Card Operation

The X-LIVE card features a pair of SD/SDHC slots that provide 32 channels of multitrack recording and playback. Simple session management and up to 100 markers allow playback from any desired point, easily cueing up certain songs or backing tracks. Automatic or manual switching from recording to playback routing presets makes it easy to monitor input channels directly while recording, and then listen to the playback from the card returns. The SD cards operate independently from the USB connection, giving you many options for how you incorporate outboard plugins, multichannel input and live recording.

5.1 Overview

Most of the configuration and operation for the SD card slots and USB connection are handled on the Setup/Card page of the console. From this page, the SD slot or USB can be selected for playback, SD slot 1 or 2 can be selected for recording or marker editing, and the channel count can be specified for recording.

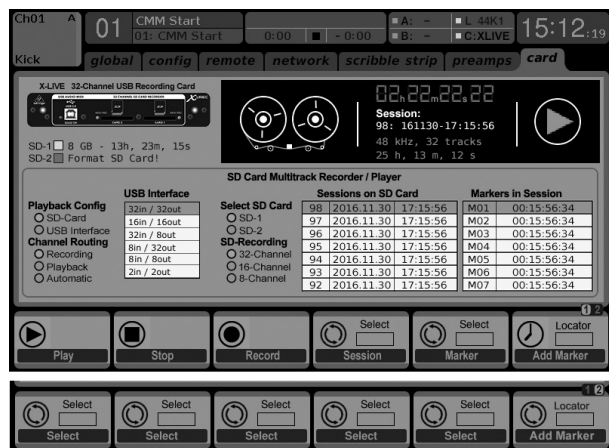
A properly installed and formatted card will appear near the top with a green square, with its file size and remaining recording time indicated. SD cards up to 2 GB and SDHC cards up to 32 GB are officially supported, for use with FAT32 formatting.



It is best practice before important recordings to press the console's Utility button and format the card. Formatting will delete all data to remove fragmentation and to ensure proper write performance.

A list of recorded sessions and markers for the currently-selected session are listed below the recorder graphics. Transport functions are controlled with the first 3 encoders. Markers can be added to a session during recording or playback to indicate the start of a song or set. Press the page down to the 2nd layer of controls to make changes to the configuration.

The 'Channel Routing' section is explained in chapter 5.3.



The SD operation can also be controlled by any of the remote apps, as well as MIDI and the onboard assignable controls.

In the X32-Edit software, most of the configuration settings are made on the Setup/Card page, while the recording functions and marker management are done in the Recorder window.

5.2 Recording and File Management

Audio recording on the X-LIVE card can accommodate either 8, 16, or 32-channel sessions of 44.1/48 kHz / 32-bit PCM WAV files. As soon as recording is initiated to one of the SD cards, a new session is automatically created, allowing the entire take to be organized cohesively. To ensure continuous recording of the entire performance, a recording session that has started on one card can seamlessly span over to the other card slot when the first becomes full. In this case, the same session name will appear on both cards.

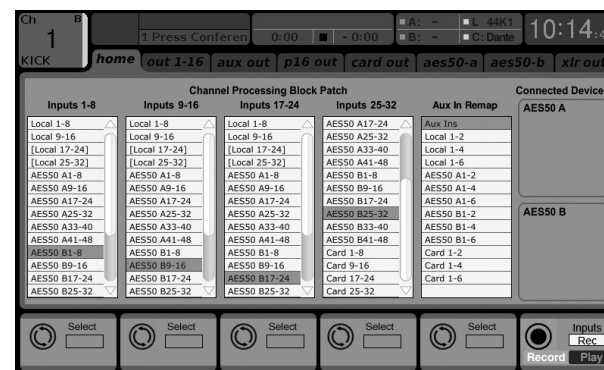


Since a single session may include a full set of songs, markers can be placed during recording or while listening to playback. They can also be adjusted using the remote apps by using the 'Edit Marker' section. This makes it easy to organize the set and quickly jump to a particular section of the recording for playback.

5.3 Channel Routing

The X32 has a convenient routing preset that allows the input channels to quickly flip between the desired monitoring for the recording process, and the playback from the X-LIVE card once recording is finished. While Playback would typically be used to assign the card outputs to the mixer inputs, Recording would patch those signals to channel inputs that shall be on mix, i.e. not necessarily the ones being recorded on X-LIVE.

On the Routing/Home page, select 'Record' with the 6th encoder and adjust the input routing using encoders 1-5 (most likely Local or AES50 from a stagebox). Then turn the 6th encoder to select 'Play' and press the encoder. Now Card 1-8, 9-16, etc. can be selected using encoders 1-5 for the playback preset.



On the Setup/Card page, you can now use the 'Channel Routing' section to quickly flip between these 2 routing scenarios. Keep in mind that the Record/Play presets can be toggled using an assignable control button, scene/snippet automation, or even MIDI command.

A third option on the Setup/Card page, 'Automatic', allows the shift from input monitoring to playback monitoring to follow the current operation. When Stop or Record is pressed in the transport control, the 'Record' routing will be assigned, and when Play or Pause is active, the 'Play' preset will be used.

5.4 Separating WAV Files

After recording is complete, the session can be separated into individual WAV files in several ways:

- Play the audio from the SD card directly into a DAW program, e.g. Traktion, Reaper, ProTools, Cubase, Logic, Ableton (just to name a few) via the USB connection
- Directly open the multi-channel file using Audacity (brilliant open source audio editor available from www.audacityteam.org/)
- Using our Python scripts, downloadable from behinger.com

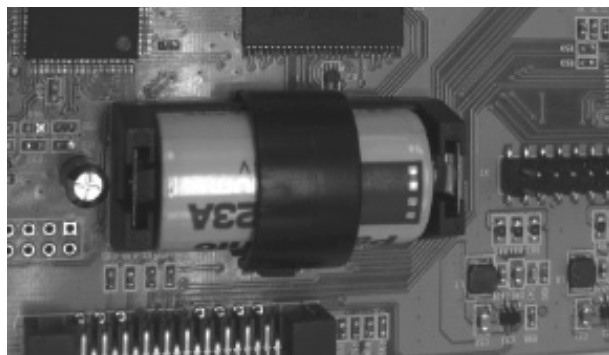
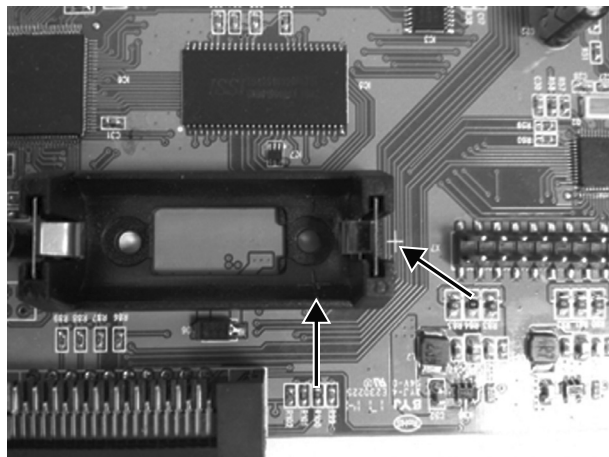
Visit the wiki page at behingerwiki.music-group.com for more information about separating WAV files.

6. Battery Option

The X-LIVE has a battery slot that can accommodate a CR123A Lithium cell battery. This provides protection in case of power blackout, ensuring secure file handling.

To attach the battery, first turn the console power off and remove the X-LIVE card from the expansion slot. Locate the battery slot and install the battery, making sure to orient the positive end toward the “+” mark on the slot.

Reinstall the X-LIVE card as described in chapter 2.



7. Firmware Update

Download the latest firmware package file from the X-LIVE product page on behringer.com. Unpack the zip folder and load the firmware file onto the flash drive's root directory. Plug the flash drive into the X32's top panel USB port.

Press and hold the USB View button while powering on the console. The console will automatically begin updating the firmware, which can take several minutes to complete. When finished, power the console off and on again and resume normal operation.

NOTE: make sure the update files for card firmware and console firmware are not used in the USB root directory at the same time. Do one update after the other, making sure to remove the firmware file from the flash drive after successful installation. You may, however, copy the console firmware file into any subfolder on the USB drive and start the update from Setup/Global console UI.

1. Introducción

La tarjeta de interconexión X-LIVE amplía el ya increíble rendimiento de la tarjeta X-USB que ha sido un standard en las mesas X32 desde hace años. Dispone de la misma entrada/salida de audio bidireccional de 32 canales vía USB 2.0, le ofrece 32 canales para grabación y reproducción y control remoto de su DAW a través de una emulación HUI/MackieControl. La inclusión de dos ranuras SD/SDHC le ofrece ahora grabación/reproducción completamente independiente y sin comprimir de hasta 32 canales en sesiones consistentes, hasta la capacidad máxima de las tarjetas SD. Grabación multicanal sin la necesidad de un portátil, comprobación de sonido virtual y soporte para pista de acompañamiento en directo, gestión precisa de marcas y ajustes y control remoto total desde apps o superficies de control X-TOUCH son solo algunas de las muchas posibilidades novedosas que le ofrece la X-LIVE.

2. Instalación de la tarjeta X-LIVE

Asegúrese de que el firmware de su mezclador X32 series esté actualizado a la última versión disponible. Vaya a la página del producto en la web behringer.com para descargarse el último firmware disponible.

PRECAUCIÓN: Antes de instalar esta tarjeta de interconexión en la consola, asegúrese de que la consola esté apagada. En caso contrario se pueden producir errores, averías o una descarga eléctrica.

Proceso de instalación:

1. Asegúrese que la mesa de mezclas esté apagada.
2. Quite los tornillos exteriores que sujetan en su sitio la tarjeta instalada o la tapa de la ranura.
3. Suavemente extraiga la tarjeta de la ranura y colóquela en un lugar seguro junto con los tornillos de fijación.
4. Antes de extraer la tarjeta X-LIVE de su funda de protección, toque el chasis metálico de la consola para evitar que una descarga de electrostática pueda afectar los sensibles componentes electrónicos de la tarjeta. Sujete la tarjeta por la placa frontal o las dos pequeñas asas, evitando tocar los componentes o la placa de circuitos.
5. Alinee los dos extremos de la tarjeta con los raíles guía que hay dentro de la ranura e introduzca con cuidado la tarjeta en la ranura. Empuje sobre la tarjeta hasta que quede totalmente introducida en la ranura y plana en el panel trasero de la mesa, asegurándose de que los contactos queden así correctamente conectados. Al hacer esto, los agujeros de los tornillos deberían quedar perfectamente alineados.
6. Sujete la tarjeta usando los tornillos incluidos o los que sujetaban originalmente la antigua tarjeta. El no sujetar correctamente la tarjeta en su posición con estos tornillos puede dar lugar a daños o averías.
7. Introduzca la tarjeta antigua en la funda de protección en la que venía la X-LIVE y vuelva a guardarla en su embalaje para que esté segura.

3. Hardware mínimo recomendado

Windows

- CPU Core 2 Duo, 2 GHz
- USB 2.0
- 1 GB RAM

Mac

- CPU a 1.5 GHz
- Puerto USB 2.0
- 512 MB RAM

Vea en las especificaciones técnicas los sistemas operativos recomendados.