



Behringer X32 (Full-Size)

Practical Manual (Basic)

Introduction · Task Index · Workflows · Glossary



Created by the StageAID.de team

www.StageAID.de

Table of Contents

Part 1 — Introduction and Workflows: Working with the X32	3
About This Manual	3
1. Console Layout	3
2. Basic Principle: Signal Flow	4
3. Output Routing: From Bus/Matrix/Main to the XLR Outputs	7
4. Practical Workflow: The Process at a Glance	8
4.1 Preparation: Establish a Safe Starting State	8
4.2 Patching and Labelling Channels	8
4.3 Preparing Buses and Output Routing	9
4.4 Gain Staging	9
4.5 Setting Up a Basic Monitor Mix	9
4.6 Channel Processing: EQ and Dynamics	10
4.7 Setting Up Effects	10
4.8 Full Soundcheck	10
4.9 Saving the Scene	11
4.10 Live Mix	11
4.11 Shutdown and Backup	11
5. Common Mistakes and How to Avoid Them	11
6. Basic Rules for Safe, Clean Operation	12
Outlook: Further Specialist Topics from the Field	12
Part 2 — Task Index (A–Z)	13
Part 3 — Glossary	18
Part 4 — Practical Additions for Beginners	25
E1 — Quick Start: Your First Sound in Ten Minutes	25
E2 — Rear Panel: Identifying Connections Safely	26
E3 — Signal Present but No Sound: Systematic Troubleshooting	26
E4 — Understanding Pre-/Post-Fader Correctly	28
E5 — Setting Up a Complete Monitor Path: Bus 1 to XLR Out 1	28
E6 — Switching Phantom Power (+48 V) Safely	29
E7 — Gain, Trim, Fader, Send and DCA: Basic Terms Compared	31
Editorial Information & Notes	32

Part 1 — Introduction and Workflows: Working with the X32

About This Manual

This manual is intended for beginners and users who want not only to operate the Behringer X32 Full-Size, but also to understand its signal paths and workflows with confidence. It combines an accessible introduction with practical workflows, an alphabetical task index and a glossary for quick reference.

- **Part 1** – Introduction and Workflows: explains the control surface, signal flow, output routing and a complete practical workflow in eleven phases, with examples and common sources of error.
- **Part 2** – Task Index (A–Z): lists individual tasks alphabetically and briefly explains what to do.
- **Part 3** – Glossary: explains technical terms and links related topics.

Blue, underlined terms are internal links (jump links). Clicking them takes you directly to the relevant section. Depending on your Word settings, you may also need to hold down the Ctrl key when opening a link.

Source note: The content and illustrations were created and checked against the official Behringer documentation and the general operating logic of the X32 series (Full-Size). Individual menu names may differ slightly depending on the firmware version; if in doubt, refer to the firmware currently installed and the official Behringer manual. Figure 1 is based on a product image of the Behringer X32 and has only been supplemented with editorial markings. All other diagrams and schematic graphics are original editorial illustrations.

1. Console Layout

Although the models differ (X32, Compact, Producer, Rack), the basic operating logic is similar across the entire series. On the X32 Full-Size, the control surface is divided into the following recurring areas:

Behringer X32 Full-Size – Control Surface Overview

Original image unchanged – technical areas marked only by coloured outlines

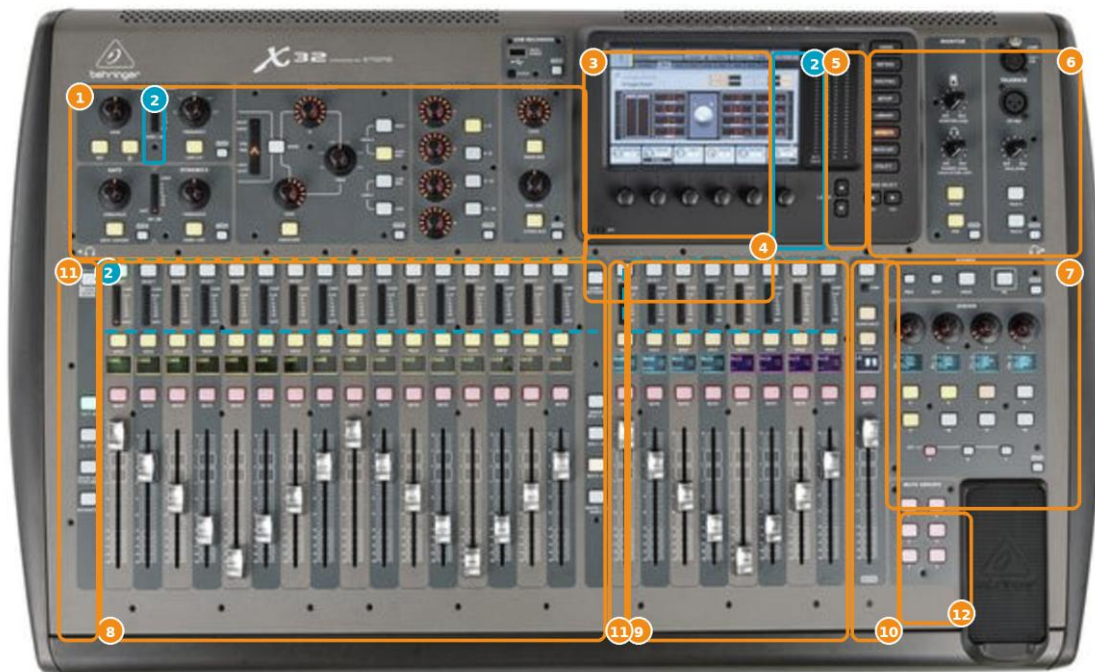


Figure 1: X32 Full-Size control surface with function areas marked schematically. The original image of the console has not been altered; coloured frames and numbers are used solely for orientation.

1. **Channel Strip (top left, above the 16 input faders)** – the physical processing block for the currently selected channel, with six subsections: Preamp/Config (Gain, +48 V, Polarity, Low Cut), Gate (Threshold control and View button; gate and ducker functions are available in the display), Dynamics (separate compressor/expander section with View button), Equalizer (four bands), Bus Sends (four banks of four encoders each) and Main Bus (assignment to the main mix). The View buttons open the corresponding processing page in the main display. The USB recorder is not part of the Channel Strip, but a separate function (USB port with Record/Play controls) on the control surface.
2. **Level meters** – in the Channel Strip, an LED chain shows the level of the currently selected channel. The channel strips in both fader banks have additional LED meters whose function depends on the selected layer. To the right of the main display is the Main/Solo meter: during normal operation it shows the Main stereo level and, when Solo is active, the PFL/AFL level. The Meters page in the main display provides an additional overall view.
3. **Main display** – a 7-inch colour TFT display showing the processing page for the selected channel or bus. Important: it is not a touchscreen; it is operated using fixed buttons and encoders.
4. **Six push encoders** – directly below the display; they control the parameters shown along the bottom edge of the screen. Layer Up/Down buttons (when more than six parameters are available) and Page Select buttons are used to move between screen pages.
5. **Category selection buttons** – eight buttons next to the display (HOME, METERS, ROUTING, SETUP, LIBRARY, EFFECTS, MUTE GRP, UTILITY) that jump directly to the required screen page.
6. **Monitor/Talkback section** – next to the display: Monitor Level, Headphone Level, mono summing, Dim button, plus the Talkback input with Talk Level and Talk A/B destination buttons.
7. **Scenes/Assign section (to the right of the bus faders)** – contains the Scenes buttons for loading and saving scenes, plus three selectable Assign layers A/B/C. Each layer provides four encoders and eight buttons, for a total of 36 freely assignable controls.
8. **Left fader bank with 16 motorized faders** – switchable between four layers: Channels 1–16, Channels 17–32, Aux In/USB/FX Returns or Bus Masters.
9. **Right fader bank with 8 motorized faders** – switchable between DCA 1–8, Bus 1–8, Bus 9–16 and Matrix 1–6/Main C.
10. **Master fader** – the separate ninth fader immediately to the right of the 8-fader bank; permanently assigned to the Main LR mix, with its own Select, Clear Solo, Solo and Mute buttons.
11. **Bank/Layer selection buttons** – to the left of each fader bank; they switch the left and right banks independently between their layers. The right layer strip also includes the Sends on Fader button.
12. **Mute groups** – six separate buttons below the Scenes/Assign section. They mute all channels and buses assigned to the respective mute group.

The X32 Full-Size therefore has 25 motorized faders in total (16 + 8 + 1), distributed across two separate fader banks – not 17, as a first glance might suggest. Each channel fader also has its own Select, Mute and Solo button, a small Scribble Strip display, and Gate and Comp LEDs. Eleven View buttons are also distributed around the console, each located directly beside its function area (Channel Strip, Bus Bank, Assign, Monitor/Talkback, etc.); they jump directly to the relevant display page. The six Mute Group buttons form a separate area below the Scenes/Assign section.

Important for understanding: the 16 faders on the left never control all 32 input channels at the same time – the [Layer](#) selection buttons switch between the four layers (see Glossary: Layer). The 8-fader bank on the right operates independently and switches between the DCA, Bus and Matrix/Main C layers.

2. Basic Principle: Signal Flow

Before touching the first control, it helps to understand how a signal travels through the console. Each input channel passes through several stages in this standard order:

Signal Flow in the X32 — Part 1: Channel Strip to Sends

Continued in Figure 2b: buses, FX rack, matrix and output routing



continued in Figure 2b: mix buses, FX rack, matrix, output routing, physical outputs →

Figure 2a: Signal flow through the channel strip up to the sends (tap points). Original simplified illustration, not an official Behringer graphic.

Area in Figure 2a	On the actual X32
Microphone/Line	Rear-panel XLR inputs and input routing
Preamp/HPF	Config/Preamp section
Gate	Gate section and View button
EQ	Equalizer section
Dynamics	Dynamics section
Fader/Pan	Fader of the selected channel and Main Bus section
Sends	Bus Sends section or Sends on Fader
Insert	Config/Home page of the channel, bus or matrix

Signal Flow in the X32 — Part 2: Buses, FX Rack, Matrix, Output Routing

Continuation of Figure 2a (channel strip to sends)

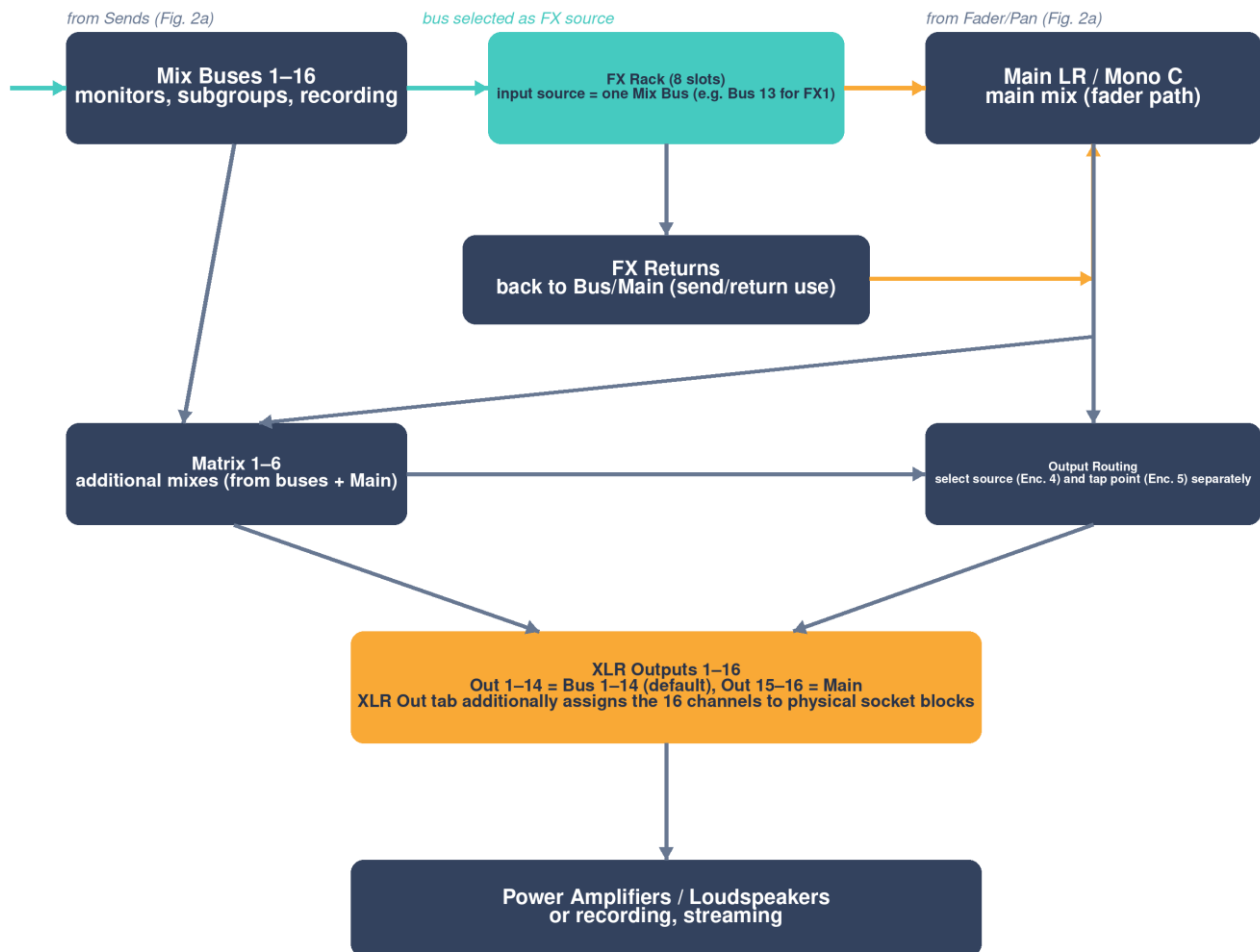


Figure 2b: Buses, FX rack, matrix and output routing up to the physical output (continuation of Figure 2a). Original simplified illustration, not an official Behringer graphic.

- **Preamp/Gain** – analogue amplification of the input signal, before any digital processing.
- **HPF/Low Cut** – the subsequent digital filter that attenuates low frequencies below a selectable cut-off frequency.
- **Gate** – suppresses unwanted background noise/bleed below a threshold.
- **EQ** – tonal shaping using a 4-band parametric equalizer.
- **Dynamics** – compressor/limiter used to control level peaks. The order of EQ and Dynamics can be swapped using the Dyn. Pre button.
- **Fader/Pan** – volume and pan settings, at the end of the actual channel strip.
- **Sends** – the channel signal can be tapped at several selectable points and sent to the mix buses; assignment to the Main mix is independent of this. An FX slot does not receive a direct channel send; instead, a mix bus is used as its input source (see [4.7 Setting Up Effects](#)).
- **Matrix** – an additional mix stage that can be fed from both the 16 mix buses and the Main LR/Mono C mix.
- **Output routing** – determines which internal signal (Bus, Matrix, Main, Direct Out) is present at which physical XLR output (see [3. Output Routing: From Bus/Matrix/Main to the XLR Outputs](#)).

Important for understanding: Figures 2a and 2b are original summary graphics designed to illustrate signal flow. The X32 itself does not have a single screen page that shows the entire path in this form at a glance. The individual stages are found on the separate Config, Gate, Dyn, EQ, Sends, Effects and Routing processing pages, which are selected using the relevant View or category selection buttons.

The key term here is tap point (see Glossary: [Tap Point \(Pre/Post\)](#)): each send from an input channel to a mix bus can be tapped independently at different points in the channel strip. Typical options are Pre-EQ, Post-EQ, Pre-Fader and Post-Fader. It is therefore incorrect to assume that sends are always located after the fader; this is only one of several selectable settings. An FX slot is never fed directly by a channel send, but always indirectly via a mix bus (see below).

The FX rack consists of eight true-stereo effect slots, technically divided into two groups. FX slots 1–4 are send/return slots: in the FX rack, a mix bus is assigned as the slot's input source (by default, for example, Bus 13 is the source for FX slot 1). Channels use their normal bus sends to feed this bus, and the FX return comes back to Main or a bus through a dedicated fixed stereo return (RTN fader). These four return paths exist as fixed connections for FX 1–4 only and cannot be moved to FX 5–8. Alternatively, FX slots 1–4 can be inserted directly into the signal path of a channel, bus or matrix – but this uses one of the few send/return-capable slots. FX slots 5–8, by contrast, are dedicated insert slots: without a return path of their own, they cannot technically be used as send/return effects and can only be inserted directly into the signal path of a channel, bus or matrix. The 31-band graphic EQ is not a separate tool built into every bus, but an effect algorithm that is often loaded into one of insert slots 5–8, for example to process a monitor path selectively.

3. Output Routing: From Bus/Matrix/Main to the XLR Outputs

Mixing a bus, matrix or the Main mix is not enough on its own – for a signal to come out of a socket, the output routing must also be correct. This step is omitted from many quick guides, but in practice it is the most common cause of a missing output signal.

Procedure: press the ROUTING button and open the Analog Out (OUT 1–16) tab. Encoder 1 initially selects only the logical output channel to be configured (OUT 01 to OUT 16) – not yet the physical socket. Encoder 3 selects the source category for this logical channel (Main, Mix Bus, Matrix, Direct Out, Monitor and others), while Encoder 4 selects the specific source within that category. The tap point (Pre-EQ, Post-EQ, Pre-Fader, Post-Fader) is then selected separately with Encoder 5. Only the separate XLR Out tab assigns this logical channel to a physical block of XLR sockets (see below).

Factory setting on the X32 Full-Size: OUT 1–14 are assigned by default to the corresponding mix buses (Bus 1 to OUT 1, Bus 2 to OUT 2, etc.), while OUT 15–16 are assigned by default to the Main LR mix. There are also six separate Aux outputs on jack sockets, each assigned by default to its corresponding insert point. Any of these assignments can be changed freely.

Important for understanding: Analog Out (OUT 1–16) and the XLR Out tab are two fundamentally separate layers, not a main function and an additional function. Analog Out determines which internal signal is logically assigned to each of the 16 output channels. XLR Out additionally determines which of these 16 logical output channels actually appears on which physical block of XLR sockets (in groups of four). In the factory settings, both layers are linked 1:1, which makes the process feel like a single step. If a signal is missing from a socket, always check both tabs, not only Analog Out.

Example: the drummer's monitor path is on Bus 3. To ensure that the stage-monitor amplifier actually receives a signal, set the logical output channel OUT 5 to the source Bus 3 in the Routing menu, set the tap point to Post-Fader, and then check on the XLR Out tab that OUT 5 is actually assigned to the socket connected to the monitor wedge.

Avoid:

- Assuming the output routing is correct without actively checking it – a perfectly mixed bus is useless if it is not assigned to a physical output.
- Forgetting that the factory assignment (OUT 1–14 = Bus 1–14) often needs to be changed when additional matrices or direct outs are used.

4. Practical Workflow: The Process at a Glance

Almost every event – whether a church service, concert or conference – follows the same broad sequence in eleven phases. Treat this order as a guide: in practice, some phases overlap, particularly as the basic monitor setup often begins while patching is still in progress.

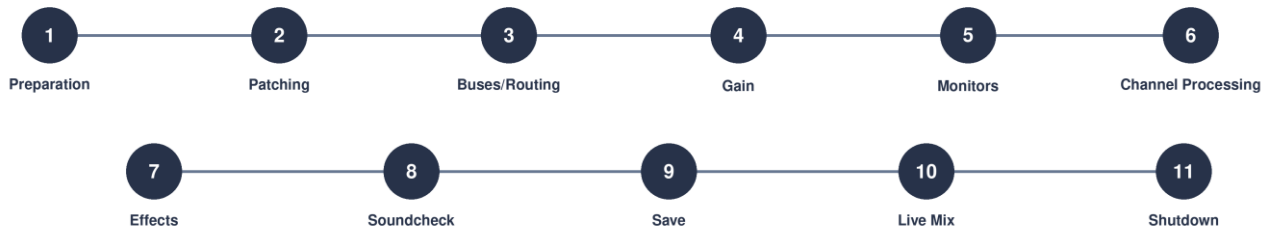
X32 Workflow (11 Phases)

Figure 3: The eleven phases of a typical X32 workflow, from preparation to shutdown. Original illustration.

4.1 Preparation: Establish a Safe Starting State

Before the actual setup, switch on the complete system in a controlled sequence. The order matters to avoid power-on pops and possible loudspeaker damage: source devices and the console first, power amplifiers or active loudspeakers last. When switching off, use the reverse order.

Then load a suitable scene – either a blank starting scene or the saved scene from the last comparable event. Establish a safe starting state before anything goes live: pull down or mute the Main fader and bus/matrix outputs, and switch off Talkback. Only then check the routing and gain channel by channel and open each path deliberately – not the other way round.

Example: before a church service, load the “Standard Setup” scene from the previous Sunday. Keep the Main fader and all bus outputs down or muted while checking the routing and gain of each channel one after another.

Avoid:

- Switching the console on last or switching it off first – this can produce audible and potentially damaging switching transients in the loudspeakers.
- Leaving all outputs open immediately after loading an unfamiliar or old scene without checking routing and levels first – this is the most common cause of feedback or unexpectedly loud signals.

4.2 Patching and Labelling Channels

Microphones and instruments are connected to the 32 XLR preamps – either directly on the console or through a stagebox connected via [AES50](#) (see Glossary: AES50). Use the ROUTING button (or the Config page for an individual channel) to check and, if necessary, change which physical input is assigned to which channel.

Immediately afterwards, label each channel on the Config page (name and colour for the Scribble Strip). This makes soundcheck, live operation and handover to another technician considerably easier. A written patch list (channel number, source, microphone type, position) is a useful addition.

Example: connect the lead singer’s vocal microphone to Local Input 1. Channel 1 receives the signal provided that its routing is set to Local In 1. Label the channel “Vox Lead” immediately.

Avoid:

- Failing to keep a patch list and leaving channels unlabelled – this causes confusion at the latest during soundcheck or troubleshooting.
- Enabling phantom power (+48 V) on sources that are not designed for it (for example, certain ribbon microphones or line-level signals) – this may damage equipment.

4.3 Preparing Buses and Output Routing

Before processing individual channels in detail, establish the broad mix-bus structure: which bus will be used for monitoring, which as a subgroup, and which for recording or a streaming feed? Then check the output routing for every required path straight away (see [3. Output Routing: From Bus/Matrix/Main to the XLR Outputs](#)) – not just before soundcheck.

Example: configure Bus 1–2 as a stereo subgroup for the drums and assign it to the Main LR mix. Use Bus 3 as the drummer’s monitor path and route it to a suitable XLR output. Bus 15–16 form a stereo feed for recording or streaming and, depending on the system used, are routed to the expansion card or a suitable output.

Avoid:

- Waiting to set up the bus structure and output routing until the musicians are already on stage expecting a monitor mix.

4.4 Gain Staging

Gain staging is one of the most important foundations of clean sound. On the Config/Preamp page of the relevant channel, have the source produce the loudest expected level (loudest note, loudest drum fill, etc.) while adjusting the Gain control so that the channel meter (the LED chain in the Channel Strip or the Meters page) reaches the green to slightly yellow range.

Rule of thumb: peaks should reliably fall between approximately -18 dBFS and -6 dBFS. This provides enough headroom for dynamic peaks without risking digital clipping.

Example: when checking a vocal microphone, ask the singer to perform the loudest passage briefly. Set the Gain so that the meter reaches a peak of approximately -12 dBFS.

Avoid:

- Setting the Gain too high so that the red Clip LED lights or flashes – digital input clipping cannot be repaired afterwards.
- Leaving the Gain too low and later raising the fader or digital gain instead – this unnecessarily amplifies the noise floor.

4.5 Setting Up a Basic Monitor Mix

Before detailed channel processing, set up an initial basic monitor/IEM mix so that the musicians can orient themselves on stage as early as possible. On a channel’s Sends page, set the send level for each bus and also select the tap point (usually Pre-Fader for musician monitors), so that later FOH fader movements do not change the musicians’ mix.

This initial mix does not need to be perfect – refine it with the musicians during the subsequent soundcheck.

Example: for the drummer’s monitor path (Bus 3), create a rough mix of kick, snare and overheads with the tap point set to Pre-Fader before processing the remaining channels in detail.

Avoid:

- Leaving all monitor paths untouched until soundcheck – the initial setup then consumes valuable time with the musicians.
- Leaving the tap point set to Post-Fader even though the path is intended as a musician’s monitor mix.

4.6 Channel Processing: EQ and Dynamics

For tonal shaping, first check whether a Low Cut filter (HPF) is appropriate. For speech and many instruments, a cut-off frequency between approximately 80 and 100 Hz can be a useful starting point; however, the correct setting depends on the source, microphone and application. Then use the 4-band EQ for targeted adjustments: the Mode button selects the filter type, Freq sets the frequency, Q sets the bandwidth, and Gain controls boost/cut.

In the Gate section, quiet interference and bleed are attenuated. The separate Dynamics section contains the compressor or limiter used to control level peaks. The Dyn. Pre function in the display determines whether Dynamics is processed before or after the EQ.

Example for spoken voice: HPF at 100 Hz, a slight cut around 300 Hz to reduce muddiness, and a slight boost around 3–5 kHz for more presence. The compressor uses a 3:1 ratio, with the threshold set so that gain reduction reaches approximately 3–6 dB during loud passages.

Avoid:

- Setting the EQ and compressor by guesswork without using the IN button to compare the processed and unprocessed signals.
- Excessive compression or extreme EQ adjustments that make the source sound unnatural.

4.7 Setting Up Effects

The X32 provides eight internal true-stereo effect slots (FX rack), permanently divided into two groups. For a classic reverb/delay effect in FX slot 1–4, load an algorithm and operate it as send/return: in the FX rack, assign a mix bus as the slot's input source (by default, for example, Bus 13 is the source for FX slot 1). Channels then feed this exact bus using their normal bus-send levels, while the FX return comes back to the Main mix or a bus through one of the four fixed stereo RTN faders. FX slots 1–4 can alternatively be used as inserts (which then consumes a send/return slot). FX slots 5–8, by contrast, are insert-only slots with no return path of their own and cannot technically be used as send/return effects – they are inserted directly into the signal path of a single channel, bus or matrix. A 31-band graphic EQ is often loaded into one of slots 5–8 for a typical insert application.

Example: load a reverb preset (Vocal Plate) into FX slot 1. Bus 13 is the factory-default input source for FX slot 1. Send the vocal channel there at a moderate level using its Bus 13 send, with the FX1 return fader assigned to Main LR. In addition, load a graphic EQ into FX slot 6 and insert it into the monitor path (Bus 3) to attenuate a specific feedback frequency.

Avoid:

- Applying too much reverb to too many channels – the overall mix quickly becomes muddy and unclear.
- Forgetting to check the return level of a send/return effect, causing the effect to be either inaudible or far too loud.

4.8 Full Soundcheck

First monitor each channel individually using PFL/Solo (see Glossary: [PFL/AFL/Solo](#)), then listen to it in the context of the complete mix. Refine the monitor paths together with the musicians.

When time is short, a virtual soundcheck can help: previously recorded multitrack test signals are played back so that gain staging and a basic mix can be prepared without the musicians present. Important: a true virtual soundcheck using individual channels requires a multitrack recording made through an expansion card (X-USB or X-Live). The built-in USB stick recorder captures only a two-channel stereo signal and is not sufficient.

Avoid:

- Skipping soundcheck entirely under time pressure – minor problems (hum, incorrect routing, insufficient gain) will otherwise only become apparent during the event.
- Planning a virtual soundcheck with the simple stereo USB recorder, even though a multitrack expansion card is required.

4.9 Saving the Scene

After a successful soundcheck, save the complete console state as a [Scene](#) (see Glossary: Scene). Snippets are suitable for individual recurring situations (only a subset of parameters), while Cues combine a Scene and a Snippet for automated workflows involving multiple scene changes.

Example: save the scene “10 – Soundcheck Complete”. Also create a snippet called “Speaker Only” for the sermon.

Avoid:

- Failing to save a named Scene after soundcheck. Although the X32 will generally restore the last working state after a normal restart, a saved Scene provides a clearly named restore point and offers better protection against accidental changes or faulty loading operations.

4.10 Live Mix

During the event, focus on the level meters (Meters page or channel LEDs) and Clip LEDs, small fader corrections, and targeted use of Mute Groups for fast transitions (for example, muting all stage microphones during an announcement). Use Talkback to communicate with the stage or control room.

Avoid:

- Adjusting many individual channels at once instead of using DCA groups for global changes.
- Accidentally leaving Talkback open so that internal communication can be heard through the PA.

4.11 Shutdown and Backup

At the end, save the current Scene one final time. Then export the complete Show with Scenes, Snippets and Cues to a USB stick; back up important channel, routing and effect presets separately if required. After exporting, check that the files are actually present on the USB stick. Switch off the console in the correct order: power amplifiers/active loudspeakers first, then the console. Document the patch list and any special settings for the next event.

Avoid:

- Failing to back up the scenes – if the console fails, weeks of fine-tuning may otherwise be lost.

5. Common Mistakes and How to Avoid Them

In summary, the most common pitfalls when using the X32 – many of which have already been mentioned in the individual phases:

- Gain set too high or too low.
- Phantom power enabled on unsuitable sources.
- Incorrect power-on/power-off sequence for the system.
- Leaving all outputs open immediately after loading an unfamiliar scene without checking routing and levels first.
- Assuming output routing is correct without actively checking it in the Routing menu.
- Failing to back up the current Scene, Show file and important presets regularly.
- Monitor sends using the wrong tap point (Post-Fader instead of Pre-Fader).
- Setting EQ and compressor by feel without comparing via the IN button.
- Accidentally leaving Talkback open.
- Monitoring at excessive volume through headphones/PFL without considering hearing protection.
- Planning a virtual soundcheck with the simple stereo USB recorder instead of a multitrack card.
- Having no plan for a technical failure (for example, backup scene, replacement console).

6. Basic Rules for Safe, Clean Operation

- Use hearing protection and choose an appropriate monitoring level, especially with PFL/headphones.
- Power-on/power-off sequence: switch on the signal chain from source to loudspeaker; switch it off in the reverse order.
- After loading a scene, always keep the Main/bus outputs down and check routing/levels before opening them.
- Regularly back up the current Scene, Show file and important presets to a USB stick or computer.
- Keep patch lists and give scenes meaningful names instead of merely numbering them.
- Always check new or unfamiliar scenes offline before using them live.

- If menu names or button combinations are unclear, consult the official Behringer manual for the installed firmware version.

Outlook: Further Specialist Topics from the Field

This manual covers the use of a single X32 Full-Size as a stand-alone console. In practice, work with the X32 often goes far beyond this – from digitally networking several consoles to streaming and monitoring applications. StageAID continually collects further practical topics for future guides, for example:

- Cascading multiple stageboxes via AES50 – routing, cable lengths and clocking.
- Operating FOH and monitor consoles together – digital splitting of input signals, gain sharing and talkback to the stage.
- Virtual (silent) soundcheck – playing back previously recorded tracks and preparing the mix without the musicians present.
- In-ear monitoring for complete bands – stereo buses, P16 and personal mixes.
- Livestream and hybrid setups – a separate mix for streaming software alongside the venue PA mix.

These five examples are only a selection: StageAID has more than 20 specialist event-industry topics on its list. Stay up to date at www.StageAID.de – the place for exciting topics from the world of event technology.

Part 2 — Task Index (A–Z)

Alphabetically arranged quick instructions for individual tasks on the console. Each entry links to the more detailed explanation in Part 1 and/or the relevant glossary terms.

Assigning an Assign Control (User Assign)

- Use the Set Select buttons to choose the required set (A, B or C) – each set provides twelve controls (four encoders and eight buttons), for a total of 36.
- Open the Assign screen and assign the required function (for example, Mute Group, Talkback, Tap Tempo) to the selected encoder or button.

See also: [Assign Section](#)

Starting a Recording (Stereo USB or Multitrack Card)

- **For simple stereo recordings:** connect a USB stick, press the View button in the USB Recorder section and start recording on the Recorder page that opens.
- **For multitrack recording or a true virtual soundcheck:** install a suitable expansion card (X-USB or X-Live) and use the recording software or card menu.

See also: [USB Recorder](#) · [X-USB/X-Live \(Expansion Cards\)](#)

Setting Up Output Routing (Assign Bus/Matrix/Main to an XLR Output)

- Press the ROUTING button and open the Analog Out (OUT 1–16) tab.
- Encoder 1: select the logical output channel (OUT 01–16) – not yet the physical socket. Encoder 3: select the category (Main, Bus, Matrix, Direct Out, Monitor). Encoder 4: select the specific source.
- Encoder 5 (separate step): select the tap point (Pre-EQ, Post-EQ, Pre-Fader, Post-Fader).
- Check the factory setting: Out 1–14 = Bus 1–14, Out 15–16 = Main. If there is no signal, also check the XLR Out tab, which assigns the logical OUT channels to the physical socket blocks. Both layers are linked 1:1 in the factory settings but may have been changed independently.

See also: [Output Routing: From Bus/Matrix/Main to the XLR Outputs](#) · [Tap Point \(Pre/Post\)](#)

Using Aux In/Out

- Connect playback devices (for example, music from a laptop) to the six physical Aux inputs. They appear on the console together with the two USB playback channels as a dedicated Aux In/FX/USB layer with named channels such as Aux 1, Aux 2, etc. – not as Channels 33–34.
- Aux outputs are separate jack sockets, assigned by default to the corresponding insert points – change this in the Routing menu if required.

See also: [Aux In/Out](#) · [Setting Up Output Routing](#)

Setting a Bus Send (Selecting the Tap Point)

- Select the channel and open the Sends page.
- Select the destination bus and set the level using the encoder.
- Choose the tap point (Pre-EQ, Post-EQ, Pre-Fader, Post-Fader) to suit the intended use.

See also: [Preparing Buses and Output Routing](#) · [Send \(Bus/Aux Send\)](#) · [Tap Point \(Pre/Post\)](#)

Creating a Cue

- Open the Scenes page and select the Cues tab.
- Assign a Scene and, optionally, a Snippet to a Cue slot.

- Recall the Cues in sequence for an automated show workflow.

See also: [Cue](#)

Assigning a DCA Group

- Set the right fader bank to DCA 1–8 (select the DCA layer).
- Hold down the SELECT button of the required DCA group while pressing the SELECT buttons of the channels or buses you want to assign.
- The DCA fader then controls all assigned channels together without changing their individual mix.

See also: [DCA](#) · [Creating a Mute Group](#)

Assigning an Effect (FX) to a Channel (Send/Return or Insert)

- For send/return: possible only with FX slots 1–4. Load the effect, assign a mix bus as the slot's input source (by default, for example, Bus 13 for FX slot 1), raise the source channel's bus-send level to this exact bus, and route the FX return (fixed RTN fader) to Main LR or a bus.
- For insert: possible with any of the 8 slots; the only option for FX slots 5–8. Insert the FX slot directly into the insert point of the channel, bus or matrix (no bus required as an intermediate step).

See also: [Setting Up Effects](#) · [FX Rack](#)

Setting the EQ

- Select the channel and open the EQ page (or use the fixed EQ encoders in the Channel Strip section).
- Use Mode to select the filter type, Freq to set the frequency, Q to set the bandwidth, and Gain to control boost/cut.
- Use the IN button to switch the EQ section on and off and compare the processed signal with the unprocessed signal.

See also: [Channel Processing: EQ and Dynamics](#) · [EQ \(Equalizer\)](#)

Switching the Fader Bank/Layer

- **Left bank:** select CH 1–16, CH 17–32, AUX IN/USB/FX RETURNS or BUS MASTERS (4 layers).
- **Right bank (independent):** select DCA 1–8, BUS 1–8, BUS 9–16 or MTX 1–6/MAIN C.

See also: [Bank](#) · [Layer](#)

Setting Gain (Preamp)

- Select the channel and open the Config/Preamp page.
- Have the source play/sing at the loudest expected level.
- Set Gain so that peaks fall approximately between -18 dBFS and -6 dBFS.

See also: [Gain Staging](#) · [Gain \(Preamp Gain\)](#)

Activating the Gate/Expander

- Select the channel and press the View button in the Gate section, or open the “gate” page in the main display.
- Set the Threshold so that background noise below it is attenuated while the desired signal passes through unhindered.

See also: [Channel Processing: EQ and Dynamics](#) · [Dynamics](#)

Using a Graphic EQ (GEQ) as an Insert

- Select an available FX slot 5–8. Slots 5–8 are suitable for a typical insert application; load the 31-band graphic EQ there.
- Insert the slot into the required channel, bus or matrix.
- Attenuate individual frequency bands selectively, for example to combat feedback in a monitor path.

See also: [GEQ \(Graphic EQ\)](#) · [Setting Up Effects](#)

Checking the Main Output (Main LR)

- The permanently assigned Master fader on the far right always controls the Main LR mix. Its SELECT button opens the corresponding parameters in the display.
- Check the level using METERS and the output routing using ROUTING.
- The additional Main C mono/centre mix is available separately on the MTX 1–6/MAIN C layer.

See also: [Main LR/Mono Centre](#)

Labelling a Channel (Scribble Strip)

- Select the channel and open the Config page.
- Enter a name and colour – they appear on the digital nameplate above the fader.

See also: [Patching and Labelling Channels](#) · [Scribble Strip](#)

Muting a Channel

- Select the channel and press the Mute button in the channel strip.
- The button remains illuminated while the channel is muted.

See also: [Creating a Mute Group](#)

Setting the Compressor

- Select the channel and open the Dynamics page.
- Set Threshold, Ratio, Attack and Release until the gain reduction is moderate during loud passages (approximately 3–6 dB).

See also: [Channel Processing: EQ and Dynamics](#) · [Dynamics](#)

Using the Headphone/Solo Function (PFL/AFL)

- Press the Solo button on the required channel or bus.
- Listen through the headphone output or Control Room output and keep the volume moderate.

See also: [Full Soundcheck](#) · [PFL/AFL/Solo](#)

Setting Up a Matrix Output

- Set the right fader bank to MTX 1–6 and select the Matrix channel.
- The available sources are the 16 mix buses and the Main LR/Mono C mix (not individual input channels directly).
- Check the output routing to ensure that the Matrix is assigned to a physical socket.

See also: [Matrix](#) · [Setting Up Output Routing](#)

Connecting and Patching a Microphone

- Connect the microphone to an available XLR preamp (locally or on the stagebox).

- Use the ROUTING button to check which channel the physical input is assigned to and change it if necessary.

See also: [Patching and Labelling Channels](#) · [Patch/Routing](#)

Setting Up a Monitor Path (Mix Bus)

- Set the right fader bank to BUS 1–8 or BUS 9–16.
- On the source channel's Sends page, raise the send to the required bus.
- Set the tap point to Pre-Fader if the path should remain independent of the FOH fader.
- Check the output routing to ensure that the bus is actually assigned to a physical socket.

See also: [Setting Up a Basic Monitor Mix](#) · [Bus \(Mix Bus\)](#) · [Tap Point \(Pre/Post\)](#)

Creating a Mute Group

- Press the MUTE GRP category selection button to open the Mute Groups overview.
- Assign channels/buses to one of the six Mute Groups (MG1–MG6).
- One of the six physical Mute Group buttons in the Scenes/Assign strip activates the corresponding group directly during live operation; a User Assign button can also be assigned to it if desired.

See also: [Mute Group](#) · [Assigning an Assign Control \(User Assign\)](#)

Activating Phantom Power (+48 V)

- Select the channel and open the Config page.
- Enable +48 V only for condenser microphones or active DI boxes that require it.

See also: [Phantom Power \(+48 V\)](#)

Inverting Polarity (Phase)

- Select the channel and open the Config page.
- Activate the Polarity switch, for example for signals captured with opposite polarity (such as top and bottom snare microphones).

See also: [Polarity/Phase](#)

Checking/Changing Input Routing

- For an individual channel: select the channel, open the Config page and change the signal source using the source encoder.
- For complete blocks at once: press the ROUTING button. Physical inputs (Local, AES50-A/B, Card) are assigned to internal channels in blocks of eight.
- Both methods produce the same result but differ in scope: Config patches one channel, while the global Routing menu patches eight at a time.

See also: [Patch/Routing](#) · [Setting Up Output Routing](#)

Using Sends on Fader (Fader Flip)

- Select the required Mix Bus 1–16 and activate the Sends on Fader button (also commonly called Fader Flip).
- The 16 faders on the left now show the send levels from all channels to this one bus – ideal for fast monitor mixing.
- Press the button again to return to the normal channel faders.

See also: [Sends on Fader](#)

Creating a Scene and Show Backup

- Connect a USB stick and open the appropriate import/export function for Scenes or Shows on the Scenes page.
- First save the current Scene, then export the complete Show with Scenes, Snippets and Cues. Back up important channel, routing and effect presets separately if required, then check that the files are present on the USB stick.

See also: [Shutdown and Backup](#) · [Backup](#)

Saving/Loading a Snippet

- Open the Scenes page and select the Snippets tab.
- Select the required channels/parameters to include in the Snippet, then save or load it.

See also: [Snippet](#)

Stereo-Linking Two Channels

- Select two adjacent odd/even channels (for example, 1/2).
- Use the View button in the Config section to activate Link.
- After linking, the main processing and operating parameters of both channels are controlled together. The Pan controls then function as stereo balance controls. Check any differing existing settings before linking.

See also: [Link \(Stereo Link\)](#)

Loading a Scene

- Open the Scenes page and select the required Scene from the list.
- Before loading: ensure that the Main/bus outputs are down or muted.
- Confirm with Go or Load, then check routing and levels before opening the outputs.

See also: [Preparation: Establish a Safe Starting State](#) · [Scene](#)

Saving a Scene

- Open the Scenes page and select Store.
- Choose a memory location, enter a clear name and save the Scene.

See also: [Saving the Scene](#) · [Scene](#)

Setting Up Scene Protection (Global Filter and Scene Safe)

- In the Scenes menu, select the required level of protection: Global Filter for parameter groups excluded globally, or Scene/Channel Safes to protect specific channels and parameters.
- The protection functions take effect when a Scene is loaded and are not part of the saving process itself. Before use, check which parameters remain unchanged during a recall.

See also: [Global Filter/Scene Safe](#)

Using Talkback

- Hold down or activate the Talkback button.
- Speak into the microphone connected to the Talkback XLR input after setting the Talkback destination and Talk Level.

See also: [Talkback](#)

Using the View Button / Changing the View

- Press one of the 11 View buttons distributed around the console beside the relevant function area.
- The display immediately changes to the corresponding overview.

See also: [View Button](#)

Part 3 — Glossary

All technical terms explained alphabetically, with thematic cross-references to related terms.

AES50

A digital audio network used to connect the X32 to stageboxes or additional mixing consoles. Each AES50 port on the X32 carries up to 48 audio channels in both directions at 48 kHz.

See also: [Patch/Routing](#) · [Ultranet](#)

Assign Section (User Assign)

An area with three selectable sets (A/B/C), each providing twelve freely assignable controls (four encoders and eight buttons) – 36 assignments in total. Each control can be assigned a frequently used function, such as a Mute Group, Talkback or Tap Tempo for a delay. Use the Set Select buttons to switch between the sets.

See also: [Mute Group](#) · [Talkback](#)

Output Routing

The assignment between internal signals (Bus, Matrix, Main, Direct Out) and the physical XLR/jack outputs – two separate layers: ROUTING > Analog Out (OUT 1–16) sets the logical source and tap point for each output channel (using two separate encoders), while ROUTING > XLR Out additionally determines which OUT channel appears on which physical block of sockets. Factory setting on the X32 Full-Size: Out 1–14 = Bus 1–14, Out 15–16 = Main LR, with both layers linked 1:1.

See also: [Tap Point \(Pre/Post\)](#) · [Patch/Routing](#)

Aux In/Out

Additional analogue inputs and outputs, physically separate from the 32 microphone preamps and the digital mix buses. The six Aux inputs appear together with the two USB playback channels on a dedicated Aux In/FX/USB layer with named channels (Aux 1, Aux 2, etc.) – not as additional Channels 33–34. Aux In is often used for playback devices, while the six Aux outputs are assigned by default to the corresponding insert points. Digital mix buses, rather than the Aux sockets, are normally used for monitor/IEM paths.

See also: [Bus \(Mix Bus\)](#) · [Output Routing](#)

Backup

A reliable backup consists of several elements: the current Scene, the complete Show file with Scenes, Snippets and Cues, and – if required – additional channel, routing and effect presets. Export the files to a USB stick and check that the backup is complete after exporting.

See also: [Scene](#)

Bank

One of several assignments of a fader bank. The 16-fader bank on the left switches between four layers: Channels 1–16, Channels 17–32, Aux In/USB/FX Returns and Bus Masters; the independent 8-fader bank on the right switches between DCA 1–8, Bus 1–8, Bus 9–16 and Matrix 1–6/Main C.

See also: [Layer](#)

Bus (Mix Bus)

An internal summing point to which several channels can be mixed together, for example for monitor paths, subgroups or recordings. The X32 provides 16 mix buses, controlled using the 8-fader bank on the right (in two layers of 8).

See also: [Send \(Bus/Aux Send\)](#) · [Matrix](#)

Cue

Combines a Scene and, optionally, a Snippet in a single memory location. When a Cue is loaded, the Scene is loaded first, followed by the Snippet. Up to 500 Cues are available – useful for automated show workflows.

See also: [Scene](#) · [Snippet](#)

DCA (Digitally Controlled Amplifier)

A fader group on the right fader bank that controls the levels of several channels together without changing their relative mix – comparable to a VCA group on an analogue console.

See also: [Mute Group](#) · [Bank](#)

Direct Out

A tap from an individual channel, usually used for separate recording or external processing independently of the rest of the mix. It can be selected as the source for a physical output in the output routing.

See also: [Insert](#) · [Output Routing](#)

Dynamics

A collective term for a channel's level-processing tools: Gate/Expander attenuates quiet signals, while Compressor/Limiter controls loud peaks. On the console, Gate and Dynamics are separate processing sections, each with its own View button; the corresponding pages in the main display are “gate” and “dyn”. Their order relative to the EQ can be changed using Dyn. Pre.

See also: [EQ \(Equalizer\)](#)

EQ (Equalizer)

Tone control used to boost or attenuate individual frequency ranges. Each channel, bus and matrix has a 4- or 6-band parametric EQ. An additional 31-band graphic EQ is available as an effect algorithm in the FX rack and is often used in one of insert slots 5–8.

See also: [HPF \(Low Cut\)](#) · [GEQ \(Graphic EQ\)](#)

FX Rack

Eight internal true-stereo effect slots (including reverb, delay, modulation and graphic EQ), technically divided into two fixed groups. FX slots 1–4 are send/return slots: each slot is assigned a mix bus as its input source (by default, for example, Bus 13 for FX slot 1). Channels feed this bus through their normal bus sends, while the return comes back through one of four fixed stereo RTN faders. These four return paths are hard-wired and cannot be moved to FX 5–8. FX 1–4 can also be used as inserts. FX slots 5–8, by contrast, are insert-only slots with no return path of their own and cannot technically be used as send/return effects – they are inserted directly into the signal path of a channel, bus or matrix.

See also: [Send \(Bus/Aux Send\)](#) · [GEQ \(Graphic EQ\)](#) · [Insert](#)

Gain (Preamp Gain)

Analogue amplification of the input signal at the microphone preamp, before any digital processing. When set correctly, it provides a clean signal with sufficient headroom.

See also: [Trim](#) · [Phantom Power \(+48 V\)](#) · [HPF \(Low Cut\)](#)

GEQ (Graphic EQ)

A 31-band equalizer with fixed frequency bands. Unlike the parametric EQ in each channel or bus, the GEQ is not a fixed component but a loadable effect algorithm in the FX rack. For monitor paths or room tuning, it is often used in one of insert slots 5–8.

See also: [EQ \(Equalizer\)](#) · [FX Rack](#)

Global Filter/Scene Safe

Global Filter determines globally which parameter groups are not recalled when Scenes are loaded.

Scene/Channel Safes protect specific complete channels or individual parameters. Both protection levels take effect during recall and are separate from saving a Scene.

See also: [Scene](#) · [Recall Safe](#)

HPF (High Pass Filter/Low Cut)

A filter that attenuates low frequencies below a selectable cut-off frequency. For speech and many instruments, it can reduce footfall noise and rumble; the cut-off frequency must be set to suit the source, microphone and application.

See also: [EQ \(Equalizer\)](#) · [Gain \(Preamp Gain\)](#)

Insert

An insertion point in the signal path of a channel, bus or matrix at which external equipment or an FX rack slot can be inserted. Its position (before/after EQ or Dynamics) can be selected freely.

See also: [Dynamics](#) · [Direct Out](#) · [FX Rack](#)

Layer

The currently active assignment of a fader bank. The left bank has four layers: Channels 1–16, Channels 17–32, Aux In/USB/FX Returns and Bus Masters; the right bank has the layers DCA 1–8, Bus 1–8, Bus 9–16 and Matrix 1–6/Main C.

See also: [Bank](#)

Limiter

A special type of compressor with a very high ratio that applies a hard limit to level peaks and protects against overload – often used at the Main output as a final safety stage.

See also: [Dynamics](#)

Link (Stereo Link)

Links two adjacent channels or buses so that the main processing and operating parameters are controlled together; the Pan controls then function as stereo balance controls. This is the basis for true stereo processing, for example with a stereo piano or overheads. Check any differing existing settings before linking.

See also: [Bus \(Mix Bus\)](#)

Main LR/Mono Centre

The console's main mix, normally routed to the main PA. In addition to the stereo mix (LR), a Mono/Centre mix is available, for example for delay loudspeakers or subwoofers. The 25th fader is permanently assigned to the Main LR mix.

See also: [Matrix](#)

Matrix

Six additional output buses fed from the 16 mix buses and/or the Main LR or Mono C mix (not from individual input channels) – for example, for a separate recording, streaming or foyer mix. Depending on the configuration, sends to the Matrix can be tapped Pre- or Post-Fader.

See also: [Main LR/Mono Centre](#) · [Bus \(Mix Bus\)](#) · [Output Routing](#)

Meters Page (Level Overview)

The X32 (Full-Size) does not have a continuous physical meter bridge. Instead, the levels of all 32 input channels and buses are shown on the Meters page in the main display (opened using the METERS category selection button), supplemented by a small LED chain for each selected channel in the Channel Strip and a small Main/Solo meter beside the display – important for quickly checking gain staging and clipping.

See also: [Gain \(Preamp Gain\)](#)

Multitrack Recording

Simultaneous recording of many individual channels (rather than only the stereo mix) through an expansion card (X-USB with a computer, or X-Live to an SD card). Required for a true virtual soundcheck and for post-production in a studio.

See also: [USB Recorder](#) · [X-USB/X-Live \(Expansion Cards\)](#)

Mute Group

A group of channels/buses that can be muted together using a single button – useful for recurring situations such as stage changes or announcements.

See also: [DCA \(Digitally Controlled Amplifier\)](#)

Patch/Routing

The assignment between physical inputs (local or through a stagebox) and the console's internal channels. It is managed globally on the ROUTING page (in blocks of eight) or individually for each channel on its Config page. The corresponding function on the output side is Output Routing.

See also: [AES50](#) · [Output Routing](#)

PFL/AFL/Solo

A function for monitoring an individual channel or bus in isolation through headphones or the Control Room output without affecting the Main mix. PFL listens before the fader, AFL after it.

See also: [Meters Page \(Level Overview\)](#)

Phantom Power (+48 V)

Power supply for condenser microphones and some active DI boxes, switched on or off individually for each channel. It can damage unsuitable sources.

See also: [Gain \(Preamp Gain\)](#)

Polarity/Phase

Reverses the polarity of the signal. This is commonly described as a 180-degree phase reversal. It is used when two microphones capture the same source with opposite polarity (for example, top and bottom snare microphones) to avoid cancellation.

See also: [EQ \(Equalizer\)](#)

Recall Safe

Protects selected channels or parameters from being changed when a Scene is loaded. Unlike a Global Filter, this protection is applied specifically to the relevant channel or parameter.

See also: [Global Filter/Scene Safe](#)

Scene

A complete snapshot of virtually all console parameters – from routing and fader positions to EQ settings. Up to 100 Scenes can be stored.

See also: [Snippet](#) · [Cue](#) · [Recall Safe](#)

Scribble Strip

The digital nameplate above each fader, displaying the channel name and colour – it makes orientation on the console considerably easier.

Send (Bus/Aux Send)

The proportion of a channel's signal sent to a mix bus. Whether this level is affected by the channel fader position depends on the selected tap point: a Pre-Fader send remains independent, while a Post-Fader send follows the channel fader. A channel never sends directly to an FX rack; instead, a mix bus is assigned as the input source for an FX slot.

See also: [Bus \(Mix Bus\)](#) · [Tap Point \(Pre/Post\)](#) · [Sends on Fader](#)

Sends on Fader (Fader Flip)

A mode in which the 16 faders on the left temporarily display and control the send levels from all channels to a selected bus instead of the channel volumes. "Fader Flip" is the commonly used shorthand for the same function, not a separate feature.

See also: [Send \(Bus/Aux Send\)](#) · [Layer](#)

Snippet

Stores a freely selectable set of parameters (for example, only the faders and Mute status of specific channels) without affecting the rest of the Scene. Loads immediately with no fade time.

See also: [Scene](#) · [Cue](#)

Talkback

An external microphone connected to the Talkback XLR input for internal communication. The Talkback signal can be routed specifically to selected buses or outputs; set the Talk Level and destination in advance.

See also: [Bus \(Mix Bus\)](#)

Tap Point (Pre/Post)

The point in the signal path at which a send or output taps the signal: Pre-EQ, Post-EQ, Pre-Fader or Post-Fader (or pre/post Mute for output routing). The selection determines, for example, whether a monitor path is affected by subsequent fader movements.

See also: [Send \(Bus/Aux Send\)](#) · [Output Routing](#)

Trim

Digital level adjustment within the mixing console. It takes place after analogue preamplification and does not change the head-amp gain. This distinction is especially important when several consoles share the same stagebox preamp: analogue Gain affects all connected consoles, whereas each console can set its digital Trim independently. Depending on the signal source and operating mode, the X32 displays Gain or Trim at the Preamp control.

See also: [Gain \(Preamp Gain\)](#)

Ultraset

A proprietary digital format for transmitting up to 16 audio channels to compatible P16 personal monitor mixers, distribution units or suitably equipped loudspeakers.

See also: [AES50](#)

USB Recorder

Built-in recorder that records a two-channel stereo WAV file to a USB stick or plays one back from it. It is suitable for simple recordings, but not for multitrack recording or a virtual soundcheck with individual channels – a multitrack expansion card is required for this.

See also: [Multitrack Recording](#)

View Button

One of eleven buttons distributed around the console, each located beside its function area and used to make the display jump immediately to the corresponding overview (for example, Channel, Bus or Meters view).

X-USB/X-Live (Expansion Cards)

Plug-in cards for the console's Card slot that enable multitrack recording – X-USB directly to a computer via USB 2.0, or X-Live additionally as a stand-alone recorder to an SD card, including an integrated virtual soundcheck without an external computer.

See also: [Multitrack Recording](#)

Part 4 — Practical Additions for Beginners

This supplementary section leaves the existing content unchanged and specifically closes the gaps that most often cause problems for beginners in practice: getting the first sound, identifying the rear-panel connections, systematic troubleshooting, understanding the two Pre-/Post-Fader points, setting up a complete monitor path and using phantom power safely.

If this is your first time using the X32, start with E1. As in the rest of the manual, the following blue terms are internal jump links that lead directly to the relevant section.

Quick navigation: [E1 First Sound](#) · [E2 Rear Panel](#) · [E3 No Sound](#) · [E4 Pre/Post](#) · [E5 Monitor Path](#) · [E6 +48 V](#) · [E7 Basic Terms](#)

E1 — Quick Start: Your First Sound in Ten Minutes

This quick start uses the shortest, easiest-to-follow signal path: one dynamic microphone connected to Local Input 1 and two active loudspeakers connected to XLR Out 15 and 16. Assigning Main L/R to these two outputs corresponds to the factory setting. After loading an unfamiliar Scene or changing the routing, check this assignment first.

Quick Start: The Shortest Path from Microphone to Loudspeaker

Factory settings or a freshly initialized Scene; check output routing before opening levels



Set Gain correctly first, then open the Channel and Main faders.

No sound? Do not turn controls at random – troubleshooting in Supplement E3 follows the signal path.

Figure 4: The simplest signal path from the microphone through Channel 1 and Main LR to the active loudspeakers. Original simplified illustration.

- First switch off all devices. Turn down the input controls on the active loudspeakers and keep the X32 Main fader and Channel 1 down or muted.
- Connect the microphone to Local Input 1 using an XLR cable. Connect the active loudspeakers to XLR Out 15 and XLR Out 16.
- Switch on the X32 first, followed by the active loudspeakers. Use the reverse order when switching off.
- On the left fader bank, select the CH 1–16 layer and select Channel 1 using SELECT.
- On the Config page, check that Channel 1 uses Local In 1 as its source. Also check that the channel is assigned to the Main LR mix.
- Speak into the microphone at the expected performance level. Set Gain so that peaks are approximately between -18 dBFS and -6 dBFS and no red Clip indicator appears.
- Unmute Channel 1 and set its fader to approximately 0 dB. Keep the Main fader down for now.
- Unmute Main LR and raise the Main fader slowly. Then carefully raise the active loudspeaker input levels to the required setting.
- Check the sound and level. Add EQ, compressor or effects only after the signal path is working correctly.
- Save the working basic setup as a separate Scene before continuing.

Important: if there is no sound, do not change Gain, faders and routing randomly at the same time. Supplement E3 allows you to narrow down the fault step by step along the signal path.

Avoid: loading an old or unfamiliar Scene and immediately opening all outputs. The routing, Mute Groups, DCA assignments or output levels may be set up completely differently.

See also: [Gain Staging](#) · [Output Routing](#) · [Main LR/Mono Centre](#) · [Saving a Scene](#) · [No Sound: Troubleshooting](#)

E2 — Rear Panel: Identifying Connections Safely

The front panel shows what is being processed. The rear panel determines where a signal physically enters and leaves the console. For beginners, the following groups of connections are sufficient at first. The graphic is intended as an orientation aid and deliberately shows a simplified rear panel.

X32 Full-Size Rear Panel: The Most Important Connection Groups

Simplified overview based on the original layout – positions and groups follow the actual rear panel

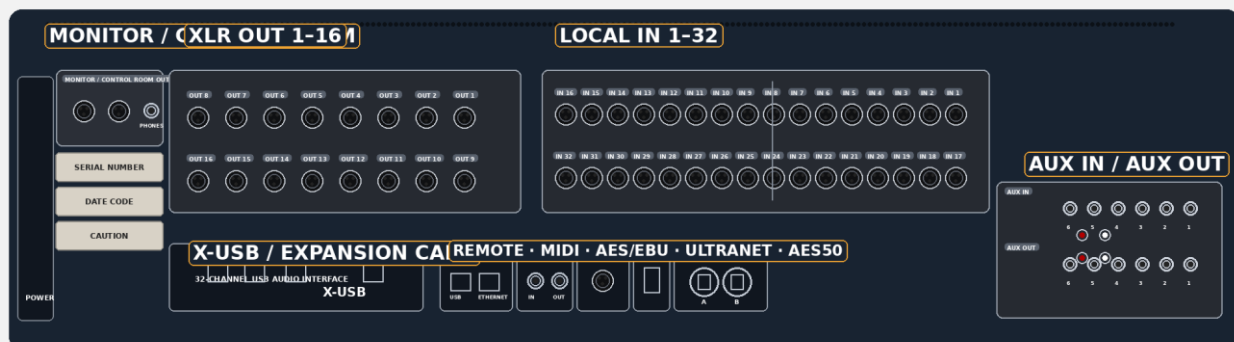


Figure 5: The most important groups of connections for beginners on the rear panel of the X32 Full-Size. Original simplified illustration, not to scale.

- **Local Inputs 1–32** – 32 XLR inputs with remotely controllable microphone preamps. Connect microphones and suitable balanced line-level signals here.
- **XLR Outputs 1–16** – physical outputs for active loudspeakers, power amplifiers, stage monitors or other audio equipment. The output routing determines which internal signal is present there.
- **Aux In and Aux Out** – six additional jack inputs and six jack outputs. Aux In can be used for playback devices, for example; Aux Out is not the same as the 16 internal mix buses.
- **Monitor/Control Room outputs** – separate monitoring paths for control-room or studio monitors. They are not automatically the main outputs of the PA system.
- **AES50 A and B** – digital network connections for stageboxes or additional compatible consoles. They carry many audio channels but are not an ordinary computer network.
- **Ultranet** – 16-channel output for P16 personal monitoring and compatible devices.
- **Expansion Card** – slot for cards such as X-USB or X-Live. It enables multitrack recording, playback and virtual soundcheck.
- **Ethernet** – network connection for remote control using X32-Edit, a tablet or other control devices. Ethernet and AES50 must not be confused despite their similar connectors.

Important: XLR Out 15 and 16 carry Main L/R only if the assignment is correct. The socket number alone does not permanently determine which signal appears there. If there is no sound, always check both Analog Out and XLR Out.

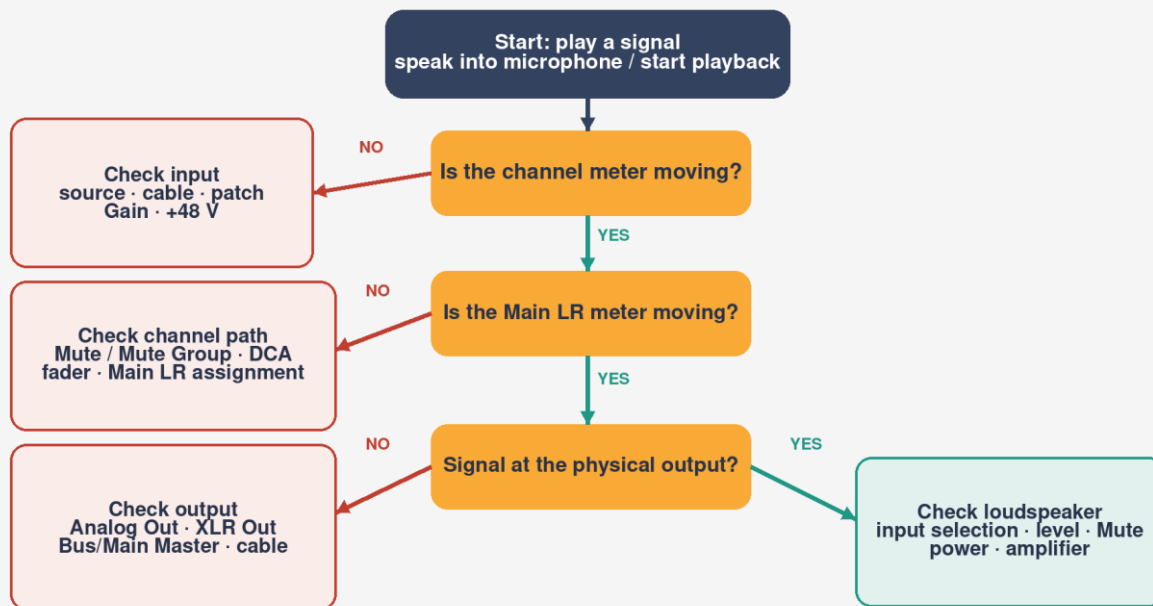
See also: [Console Layout](#) · [Aux In/Out](#) · [AES50](#) · [Output Routing](#) · [X-USB/X-Live](#)

E3 — Signal Present but No Sound: Systematic Troubleshooting

On the X32, a correct signal can be visible at several points even though nothing reaches the loudspeaker. The fastest method is therefore not trial and error, but checking in the same order in which the signal travels through the console.

Signal Present but No Sound: Troubleshooting Along the Signal Path

Always check from left to right – do not change several points at the same time



Additional check: is "Sends on Fader" still active? The left faders may be controlling a bus send.

Figure 6: Troubleshooting a missing sound – from the input meter through Main LR and output routing to the loudspeaker. Original illustration.

1. Is the selected input channel's meter moving?

- No: check the signal source, cable and connection. Does the channel source on the Config page match the Local, AES50 or Card input being used?
- Check Gain. For a condenser microphone or active DI box, check whether +48 V is required and activated correctly.
- Listen using PFL/Solo. If nothing can be heard there either, the fault is very likely before or at the input of the channel strip.

2. The channel meter is moving, but Main LR is not?

- Check the channel Mute, Mute Groups, and any DCA group that may be pulled down or muted.
- Check that the channel is assigned to the Main LR mix and that both the channel and Main faders are open.
- Check that the correct fader layer is currently displayed. Depending on the layer, a motorized fader may control a completely different function.

3. Main LR shows a level, but nothing reaches the XLR output?

- Check ROUTING > Analog Out: is the required source assigned to the logical output?
- Check ROUTING > XLR Out: is the logical OUT channel actually assigned to the physical block containing the XLR socket being used?
- Check the Main or Bus Master, Mute status, cable, active loudspeaker input level and power supply.

4. Is only the stage monitor silent?

- Check the relevant channel's bus send, tap point, Bus Master and Bus Mute.
- Activate Sends on Fader and check whether the channel is actually being sent to the correct monitor bus.
- Then trace the complete path: Bus → Analog Out → XLR Out → cable → monitor.

Important: if a Solo button is lit or Sends on Fader is still active, the control surface may respond differently than expected. Before troubleshooting, clear Solo and return to normal fader mode.

Avoid: initializing the console out of uncertainty during an event. A reset may remove the fault, but it also removes the routing, Scenes and all working settings.

See also: [Common Mistakes](#) · [Meters Page](#) · [Mute Group](#) · [DCA](#) · [Sends on Fader](#)

E4 — Understanding Pre-/Post-Fader Correctly

The term Pre- or Post-Fader appears in several places on the X32. This can quickly seem contradictory to beginners: a monitor path should be Pre-Fader, yet the same monitor bus is often set to Post-Fader in the output routing. In fact, these are two different tap points.

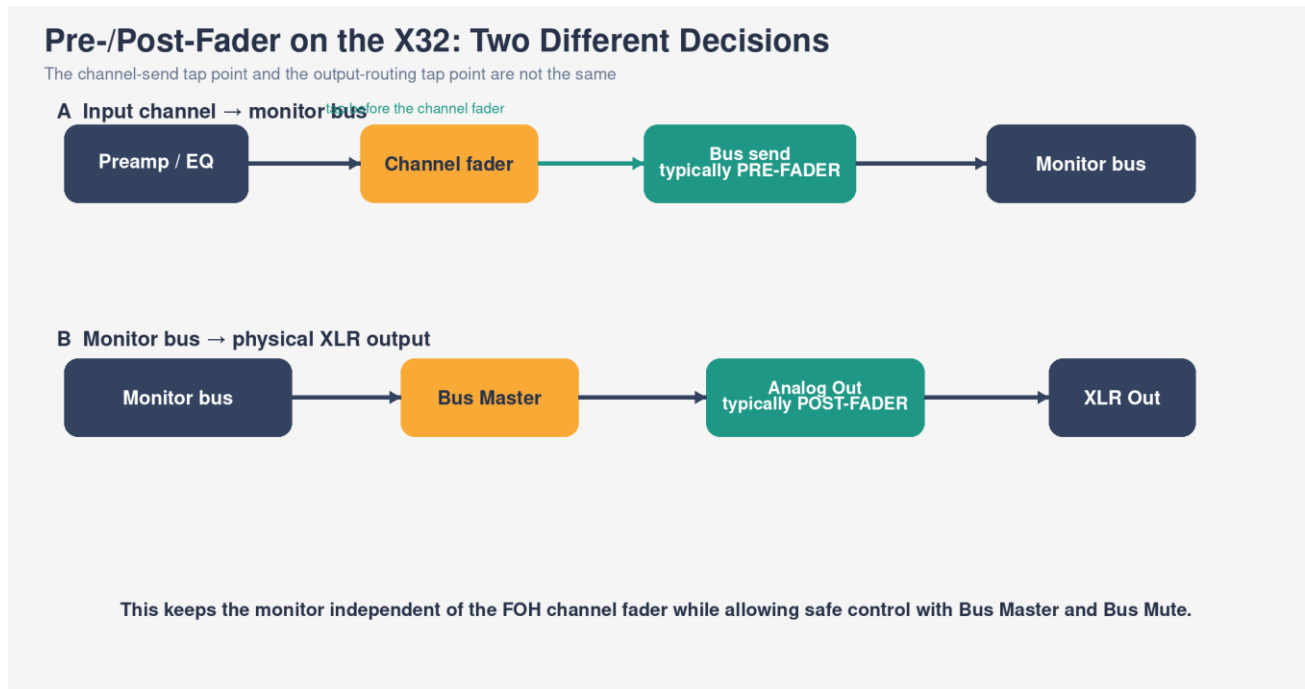


Figure 7: Two separate Pre-/Post-Fader decisions – channel to bus and bus to physical output. Original illustration.

- **Channel → monitor bus:** the send is normally tapped Pre-Fader. Movements of the FOH channel fader therefore do not change the musician’s monitor mix.
- **Monitor bus → XLR output:** the output is normally tapped Post-Fader. This allows the Bus Master and Bus Mute to continue controlling the complete monitor path.
- **Effect send:** reverb or delay is often fed Post-Fader so that the effect level becomes quieter or louder together with the dry channel signal.
- **Exact tap point:** you can also choose between Pre-EQ, Post-EQ, Pre-Fader and Post-Fader. “Pre-Fader” therefore does not automatically mean that the signal is also tapped before EQ or Dynamics.

Example: the vocal is sent Pre-Fader to Bus 1. The FOH engineer briefly pulls the vocal down in the room, but the singer continues to hear the same level in the FOH monitor. Bus 1 is then assigned Post-Fader to OUT 1, so the Bus Master can still control the monitor level safely.

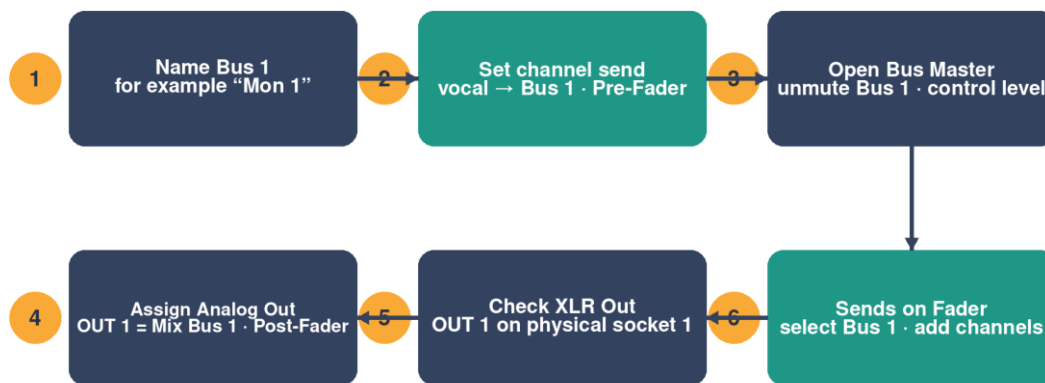
See also: [Tap Point](#) · [Setting a Bus Send](#) · [Setting Up a Basic Monitor Mix](#) · [Output Routing](#)

E5 — Setting Up a Complete Monitor Path: Bus 1 to XLR Out 1

The following example combines all individual steps into a complete workflow. The objective is a stage monitor on Bus 1, output through physical XLR socket 1 and independent of the FOH channel fader.

Setting Up a Complete Monitor Path: Bus 1 to XLR Out 1

The steps follow the actual signal path from the input channel to the stage monitor



At the end, switch off “Sends on Fader” again. Otherwise the left faders will continue to control the monitor bus.

Figure 8: Complete monitor path from the channel sends through Bus 1 and the output routing to XLR Out 1. Original illustration.

- **1. Connect and secure the monitor** – connect the active monitor or power amplifier to XLR Out 1 and initially turn its level down. Keep Bus 1 and the connected output muted.
- **2. Prepare Bus 1** – set the right fader bank to BUS 1–8, select Bus 1 and give it a meaningful label, such as “Mon 1”. Use the bus as a mono monitor path.
- **3. Set channel sends to Pre-Fader** – on the vocal channel, open the Sends page and set the send to Bus 1 to Pre-Fader. Add other required channels later in the same way.
- **4. Set the output routing** – under ROUTING > Analog Out, assign logical OUT 1 to Mix Bus 1 and select Post-Fader as the output tap point. Under XLR Out, check that OUT 1 is assigned to physical XLR socket 1.
- **5. Open the Bus Master** – unmute Bus 1 and set the Bus Master to a controllable output level. Only then carefully turn up the active monitor or power amplifier.
- **6. Use Sends on Fader** – select Bus 1 and activate Sends on Fader. The 16 faders on the left now show the channel send levels to Bus 1 rather than the Main mix. Add the vocal and other sources as required.
- **7. Check and return** – switch off Sends on Fader again, check the monitor mix together with the musician and save the working setup as a Scene.

Important: the channel fader in the Main mix, the channel send to Bus 1 and the Bus 1 Master are three separate level controls. A correct monitor signal requires all three levels to be open only where they actually belong in the signal path.

Avoid: leaving Sends on Fader switched on after monitor mixing. Subsequent fader movements will then change the monitor bus rather than the Main mix without you noticing.

See also: [Setting Up a Monitor Path](#) · [Sends on Fader](#) · [Output Routing](#) · [Bus](#) · [Understanding Pre/Post](#)

E6 — Switching Phantom Power (+48 V) Safely

Phantom power supplies condenser microphones and some active DI boxes through the microphone cable. On the X32, it is switched individually at the relevant channel preamp. Switching can produce audible transients, so the correct sequence matters more than speed.

Switching Phantom Power (+48 V) Safely

The correct sequence prevents loud switching transients and protects connected equipment



Before disconnecting: mute → switch off +48 V → wait a few seconds → only then unplug the connector.

Figure 9: Safe sequence for switching phantom power on and off. Original illustration.

- Mute the affected input channel, monitor paths and Main output. As a precaution, reduce the headphone or PFL volume.
- Connect the microphone or DI box completely before switching on +48 V.
- Check whether the connected device requires phantom power and is approved for it. Passive dynamic microphones do not normally need it; for ribbon microphones, line-level devices or unknown sources, check the manufacturer's specifications first.
- Select the channel, open the Config/Preamp page and activate +48 V. Wait briefly for the power supply to stabilize.
- Only then set Gain and open the channel and required paths in a controlled manner.
- Before disconnecting, reverse the sequence: mute, switch off +48 V, wait a few seconds and only then unplug the XLR connector.

Important: with a stagebox, phantom power is switched at the microphone preamp in the stagebox, even when controlled from the X32. Before activating it, always make sure which physical input is actually patched.

Avoid: connecting or disconnecting plugs while loudspeakers are open and phantom power is switched on. This can produce very loud transients and, in an unfavourable case, place strain on loudspeakers or hearing.

See also: [Phantom Power in the Task Index](#) · [Phantom Power in the Glossary](#) · [Patch/Routing](#) · [Gain Staging](#)

E7 — Gain, Trim, Fader, Send and DCA: Basic Terms Compared

Many operating errors are caused not by pressing the wrong button, but by confusing different level controls. The following overview shows which control acts at which point.

Control	What it changes	Do not confuse it with
Gain	Analogue amplification at the input. Determines headroom and noise.	A clipping input cannot be fixed by lowering the fader.
Trim	Digital level correction after the preamp.	Trim is not a substitute for correct gain staging.
Channel fader	Channel volume in the Main mix or in Post-Fader paths.	Does not affect a Pre-Fader monitor send.
Bus send	Amount of a channel in a specific bus.	Do not confuse it with the Bus Master.
Bus Master	Overall level of the complete monitor, subgroup or recording bus.	Controls all signals in this bus together.
Main fader	Overall level of the Main LR mix.	Does not change the Gain of individual inputs.
DCA	Remote control of several channel or bus faders as a group.	A DCA does not carry an audio signal itself.
Mute / Mute Group	Mutes one or more paths.	Always check this when there is “signal present, no sound”.

Table 1: Direct comparison of the most important level controls and group functions on the X32.

Important: if the input is already clipping, reduce the analogue Gain. Lowering the Channel, Bus or Main fader makes the downstream signal quieter, but it does not remove the overload at the preamp.

See also: [Gain](#) · [Trim](#) · [Bus](#) · [DCA](#) · [Main LR](#) · [Mute Group](#)

Editorial Information & Notes

Note: This independent practical manual was created by the StageAID team. Product and brand names are used solely for unambiguous identification. StageAID has no commercial affiliation with the manufacturer. Figure 1 is based on a product image of the Behringer X32 and has been supplemented with editorial markings. All other diagrams and schematic graphics are original editorial illustrations. The product image on the cover is an editorially designed representation and not an original image supplied by the manufacturer.

Version 1.1 (Basic) · July 2026

Editorial team: StageAID.de

Technical basis: Behringer X32 Full-Size, Firmware 4.x

Outlook: further specialist topics from the field are already in preparation (see [Outlook: Further Specialist Topics from the Field](#)) – stay up to date at www.StageAID.de.



Created by the StageAID.de team



www.StageAID.de

Contact: info@stageaid.de

Coming soon: further specialist topics from the event industry