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Behringer X32 Mixer Training Course Curriculum

Course Overview

This course trains users to confidently operate the Behringer X32 digital mixing console in live sound environments. Students will learn signal flow, routing, gain structure, EQ, dynamics, effects, monitor mixing, scene management, and troubleshooting.

Module 1: Introduction to the X32 Console

Lesson Topics:

- Overview of Behringer X32 console models (full size, Compact, Producer, Rack)
- Physical layout of the console:
 - Channel strips
 - Display and navigation controls
 - Fader banks
 - User assignable controls
- Power-up and shutdown procedures
- Console safety and best practices

Hands-On:

- Identify all surface controls
- Safe startup and shutdown practice

Module 2: Digital Audio Fundamentals

Lesson Topics:

- Analog vs digital audio
- Sample rate and bit depth (44.1kHz, 48kHz, 24-bit)
- Latency basics
- Gain structure principles

Hands-On:

- Identify clipping/distortion
- Practice proper gain staging

Module 3: Signal Flow on the X32

Lesson Topics:

- Input path overview: Mic → Preamp → Processing → Fader → Bus → Output
- Channel strip processing order
- Pre-fader vs post-fader signals
- Tap points and signal pick-off locations

Hands-On:

- Trace signal flow through the console
- Route a test signal through a full channel path

Module 4: Input Channels & Preamps

Lesson Topics:

- Connecting microphones, DI boxes, and line-level sources
- Phantom power (+48V) operation
- Head amp controls (gain, polarity, pad)
- Digital trim

Hands-On:

- Patch microphones and instruments
- Set gain structure using PFL/SOLO meters

Module 5: Channel Processing

Lesson Topics:

- High-pass/low-cut filter usage
- 4-band parametric EQ
- Gate basics and applications
- Compressor basics and applications
- Using channel presets

Hands-On:

- EQ vocals and instruments
- Configure gates for drums
- Set compressors for vocals and bass

Module 6: Bus & Monitor Mixing

Lesson Topics:

- Mix Buses vs Main LR
- Pre/post fader bus configuration
- Monitor sends (wedges and IEMs)
- Using “Sends on Fader” mode
- Bus linking for stereo monitors

Hands-On:

- Create at least 3 monitor mixes
- Practice “Sends on Fader” workflow

Module 7: Effects & FX Rack

Lesson Topics:

- Internal effects engines
- Reverb, delay, chorus, and dynamics FX
- Insert vs send/return effects
- FX library and presets

Hands-On:

- Assign reverb to vocals
- Set up delay throws on lead vocals

Module 8: Routing & Patching

Lesson Topics:

- Inputs page overview
- Outputs page overview
- Card outputs and USB routing
- Direct outs and tap point selection

Hands-On:

- Route channels to buses and matrices
- Patch outputs to physical XLRs

Module 9: DCA Groups & Mute Groups

Lesson Topics:

- Difference between DCA and audio subgroups
- Setting up DCAs
- Mute groups for quick control
- Spill feature

Hands-On:

- Create DCAs for drums, band, vocals
- Program mute groups for FX and monitors

Module 10: Scenes, Snippets, and Presets

Lesson Topics:

- Scene vs Snippet vs Channel Presets
- Saving, recalling, and managing scenes
- Scope and safe functions
- USB and backup workflows

Hands-On Lab:

- Create and recall multiple scenes
- Backup and restore show files

Module 11: Live Sound Workflow

Lesson Topics:

- Soundcheck procedure
- Line check best practices
- Ringing out monitors
- Mixing strategies during live performance

Hands-On:

- Simulated soundcheck
- Live mix practice session

Module 12: Recording & Virtual Soundcheck

Lesson Topics:

- USB card recording setup
- Multitrack vs stereo recording
- Virtual soundcheck setup using DAW

Hands-On:

- Record and play back multitrack audio

Module 13: Networking & Remote Control

Lesson Topics:

- Ethernet setup
- Using X32-Edit software
- iPad/Android control apps
- User access levels & console locking

Hands-On:

- Control console from computer or tablet

Module 14: Troubleshooting & Maintenance

Lesson Topics:

- No sound troubleshooting flow
- Dealing with feedback
- Wireless interference basics
- Firmware updates & backups

Hands-On:

- Diagnose signal loss scenarios
- Fix routing and gain errors

Final Assessment

Practical Test:

- Set up a basic live mix from scratch:
- Setup Input/Output Routing
- Build In Ear and Stage Monitors
- Apply FX Properly
- Setup Multi Track Recording
- Save your Show and Scenes