Online Broadcast Mix Basics

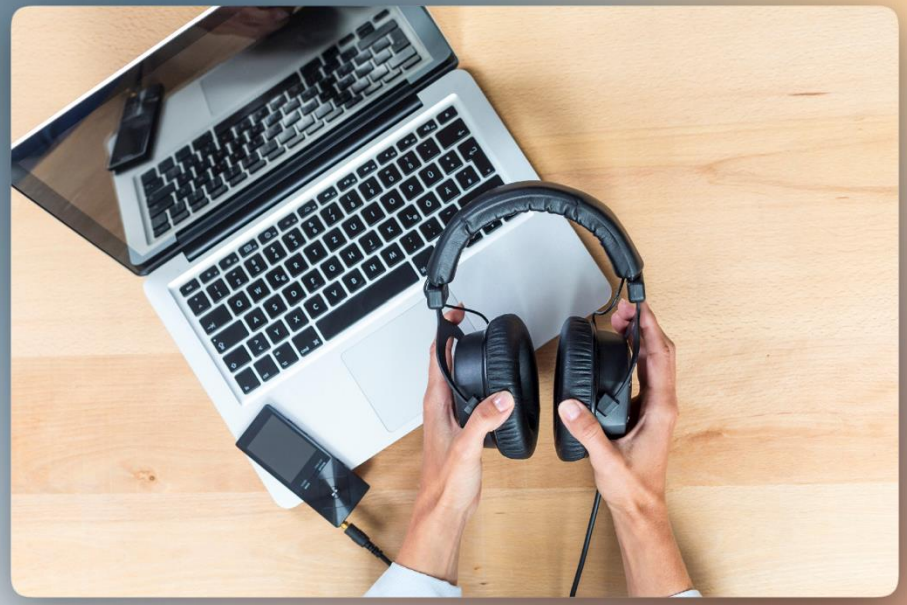
How to Build a Clean, Professional Livestream Audio Mix

Presenter – Gary Saunders

Why Broadcast Audio Is Different

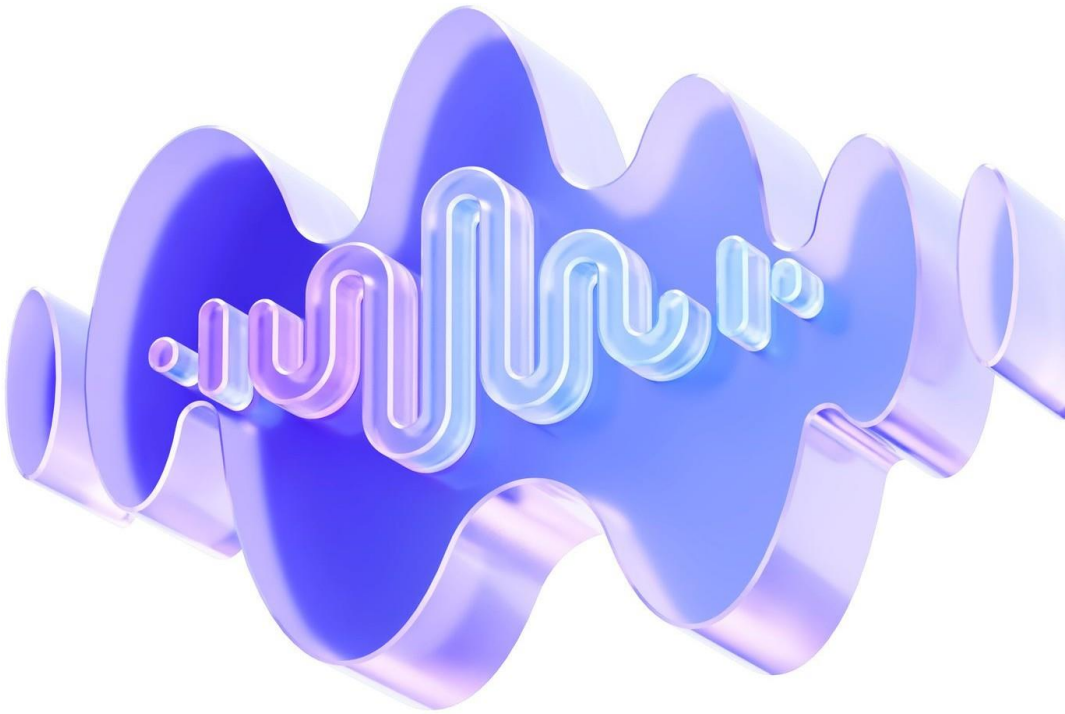
- FOH mix is for the room
- Broadcast = headphones & speakers
- Room adds reverb and energy – stream does NOT

Build for headphones, not the sanctuary.

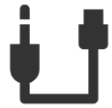


Basic Signal Flow

- Console → Aux / Matrix → Encoder → Stream
- Do NOT send Main L/R out directly



Ways to Create a Broadcast Mix



Stereo Aux Send

Use a dedicated stereo aux mix to tailor the sound for online listeners.

Matrix Output

A matrix mixes several groups for more control and flexibility.

DAW or Hybrid

Combine digital audio workstation tools with your mixer for pro-level results.

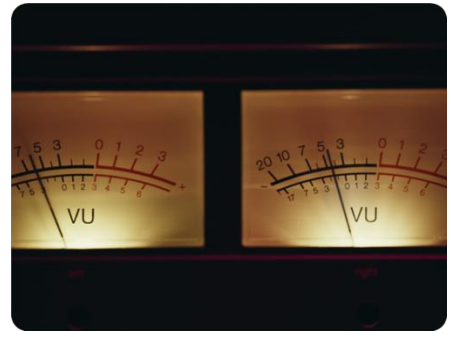
Gain Structure Matters

- Input Gain → Channel Fader → Bus Level → Encoder
- If gain is wrong, NOTHING else will fix it!

Essential Monitoring Tools

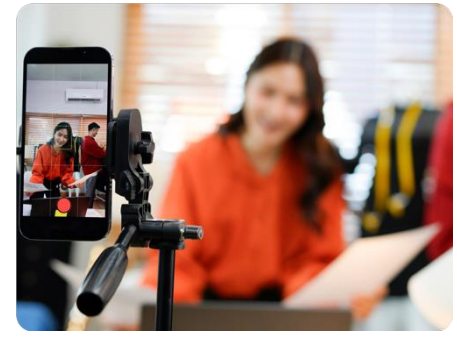
Headphones

Always listen through quality headphones for the truest broadcast sound.



Encoder Meters

Monitor levels to avoid accidental clipping and distortion.



Stream Return

Regularly check your actual stream feed to catch issues before listeners do.

Start With Vocals

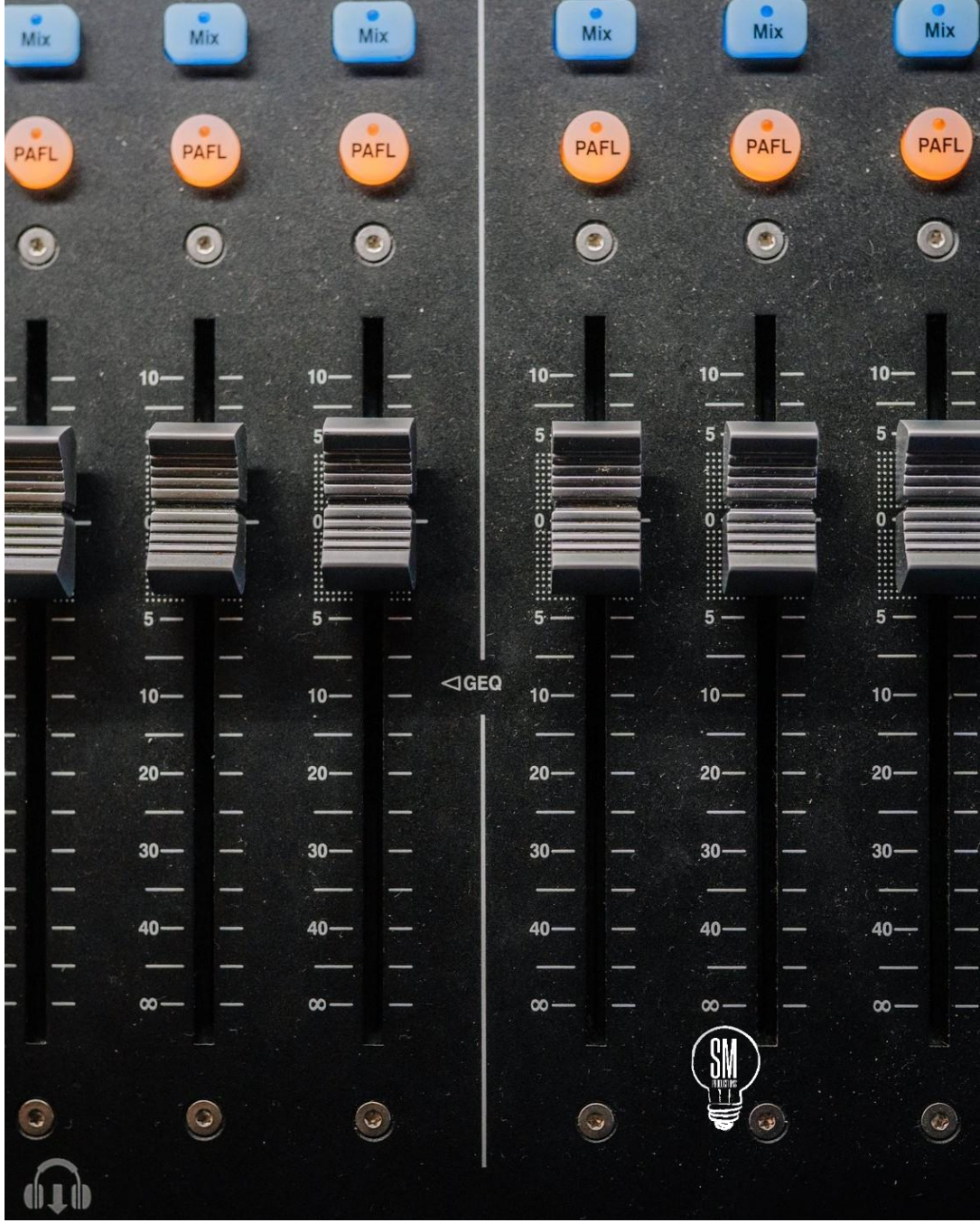
Vocals should always be clear, forward, and understandable.
Vocals are everything.

Balance the Band

- Instruments should support the vocals
- Control drums and stage bleed
- Manage low-end – don’t let it build up

Stereo Image Essentials

- Center: Lead vocal, kick, bass
- Light panning: Guitars, pads
- Never extreme pans



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"A great mix makes worship powerful—without distracting from the message."

— Church Audio Engineer

EQ: Cut the Mud, Not Just Boost

Start by cutting problem frequencies. Clear muddiness before adding clarity.

Vocal EQ Basics

- High-pass: 80–120 Hz
- Cut mud: 250–400 Hz
- Add clarity: 3–5 kHz
- Light air: 8–12 kHz

Compression Must-Knows

Basic Compression

3:1 ratio, medium attack/release, 3–6 dB reduction. Aim for control, not squashing.

Bus Compression

2:1 ratio, gentle glue, smooth peaks. Avoid heavy limiting that kills energy.

“

"It’s better to prevent problems in a mix than to fix them later on."

— Broadcast Audio Proverb

Why Does the Stream Sound Thin?

- Add low-mid warmth (100–300 Hz)
- Apply gentle compression

What If Vocals Get Lost?

- Raise vocals by 2–3 dB
- Reduce guitars and pads in the mix

Distortion & Reverb Issues

- Distortion: Lower bus, check encoder input
- Too much reverb: Shorten decay, lower reverb send

Golden Rules for Broadcast Audio

- Vocals first, always
- Build for headphones
- Cut before you boost
- Compression controls, not crushes
- Less reverb than the room

Excellence in audio supports excellence in ministry.