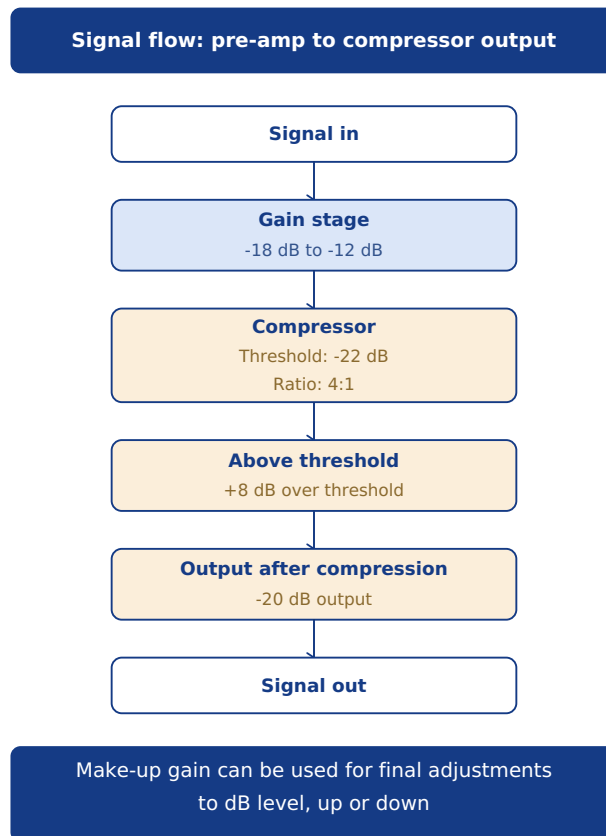


Signal Flow: Pre-Amp to Compressor Output

A quick-reference chart for volunteer sound techs | Earl Arnold

Gain staging and compression trip up a lot of volunteer techs — not because the concepts are hard, but because nobody ever draws the signal path out. This chart walks a signal from the pre-amp all the way through the compressor, showing exactly what happens at each stage using a real-world setting: **threshold at -22 dB, ratio at 4:1**.



Reading the chart

- **Gain stage** — set the input trim so the signal is arriving hot enough to work with, typically -18 dB to -12 dB, before it ever hits the compressor.
- **Compressor** — the threshold (-22 dB) is the ceiling. Anything below it passes through untouched. The ratio (4:1) decides how much gets tamed once a signal breaks that ceiling.
- **Above threshold** — in this example, the signal peaks 8 dB above the -22 dB threshold, meaning it's trying to hit -14 dB.
- **Output after compression** — at 4:1, only 2 of those 8 dB make it through ($8 \div 4 = 2$), so the output lands at -20 dB instead of -14 dB.
- **Make-up gain** — since compression quiets the loud peaks, make-up gain lets you bring the overall level back up (or trim it down) to match the rest of your mix.