

MIXING & MASTERING

CHEAT SHEET BINDER



MAKE MIXING & MASTERING
FEEL LIKE CHEATING

Mastering
com

Hey friend,

Rob Mayzes here, CEO of Mastering.com!

I'm incredibly excited to welcome you to the Mastering.com community. I know you're eager to dive into your brand new Mixing & Mastering Cheat Sheet Binder...

But before you do, I just wanted to remind you that you also get access to an in-depth, over-the-shoulder video course that goes with this binder.

Inside you'll find:

- ✓ Demonstrations of key concepts inside the DAW
- ✓ Step-by-step walkthroughs with practical demonstrations
- ✓ Learn the principles behind the cheat sheets so you can get a deeper understanding
- ✓ Additional tips and tricks not covered here

This course is included with your purchase.



Just scan the QR code or
go to mastering.com/binder

You don't need to enter your email address or anything like that – you can start watching right away!

Okay, that's it from me. Enjoy!

Rob Mayzes, CEO - Mastering.com

A handwritten signature in black ink, appearing to read 'Rob Mayzes'.

TOTAL MIXING WORKFLOW



★ STEP 1: INITIAL OBSERVATION

GET & SET EXPECTATIONS
Collect client notes

COLLECT THE FILES
Multitracks, references, rough mix

IDENTIFY THE GAP
Can mixing bridge the gap?

NO
Educate & push back on rec/editing

YES
Go to step 2

FINISHING
Make final adjustments using the listen-thru method

BLOCK PROCESSING
Process instrument "blocks" using the fix-first method

INITIAL BALANCE
Balance the tracks using no-plugin mixing

PREP
Set up and organize your session

STEP 2: MIXING PROCESS

NO
Educate & push back on rec/editing

YES
Go to step 4



STEP 3: FINAL OBSERVATION

HANDLE REVISIONS
Can they be done in mixing?

BOUNCE & DELIVER
Export 24-bit wavs and send to client & wait for revisions

DOUBLE CHECK
Fades at all cut points and room compensation is off

NO
Educate & push back on rec/editing

YES
Revise & redeliver

STEP 4: PACKAGING & DELIVERY



STEP 1: Arrange your tracks by instrument. Extra points if you order them the same way for every mix.



STEP 2: Relabel tracks. Make sure they're understandable, not 12_kick.aiff.



STEP 3: Color code tracks. Again, extra points if you color them the same way for every mix. This will help you find things quickly.



STEP 4: Delete empty or unwanted tracks. If it's not going to be in the mix, it doesn't need to stay in your session.



STEP 5: Hide unused tracks. If you want it in your session for safekeeping, make sure you hide it from view.



STEP 6: Send your individual instruments to buses. Having everything under one fader will speed up your mixing.



STEP 7: Insert fades and crossfades. At least 10 ms at the beginning and end of each region should be enough.



STEP 8: Gain stage your files. Reduce the gain of channels that peak above -6dBFS, and add gain to channels that peak below -30dBFS.

120 BPM

4/4

STEP 9: Input tempo data and time signature. Without them, editing and automation will be extremely difficult.



STEP 10: Create song section labels. Knowing where your choruses are is invaluable when you're mixing quickly.



STEP 11: Make sure the buffer size is high. Set it to 1024 to keep your CPU usage low.



STEP 12: Import your reference tracks. Find some mixes similar to yours and listen to them throughout the process.

HOW TO GAIN STAGE YOUR MIX



STEP 1:

Load up a gain plugin at the top of any tracks that are peaking above -6dBFS.

STEP 2:

Put a VU meter at the beginning of your stereo output and calibrate it to -18dBFS.

STEP 3:

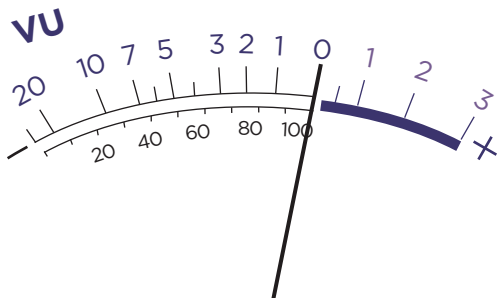
Solo the loud tracks one by one, and play it around its loudest point.

STEP 4:

Turn the volume of the gain plugin up or down until the volume of the track is around 0 dB on the VU meter.

STEP 5:

Find any channels that are peaking below -30dBFS and repeat steps 1-5, this time turning the channels up instead of down.





STEP 1:

Look for any channels that are peaking and reduce the gain with a gain plugin.



STEP 2:

Loop the loudest section of the song.



STEP 3:

Turn the faders all the way down.



STEP 4:

Listen to a few reference tracks to prime your ears.



STEP 5:

Decide on the most important channel (your vocal, snare, etc.) and set it to 0 dB.



STEP 6:

Bring in the second most important channel and balance its volume with the first channel.



STEP 7:

Continue in this manner, bringing up channels in order of importance.



STEP 8:

Once all the channels are up, spend at least 10 minutes adjusting the balance.



STEP 9:

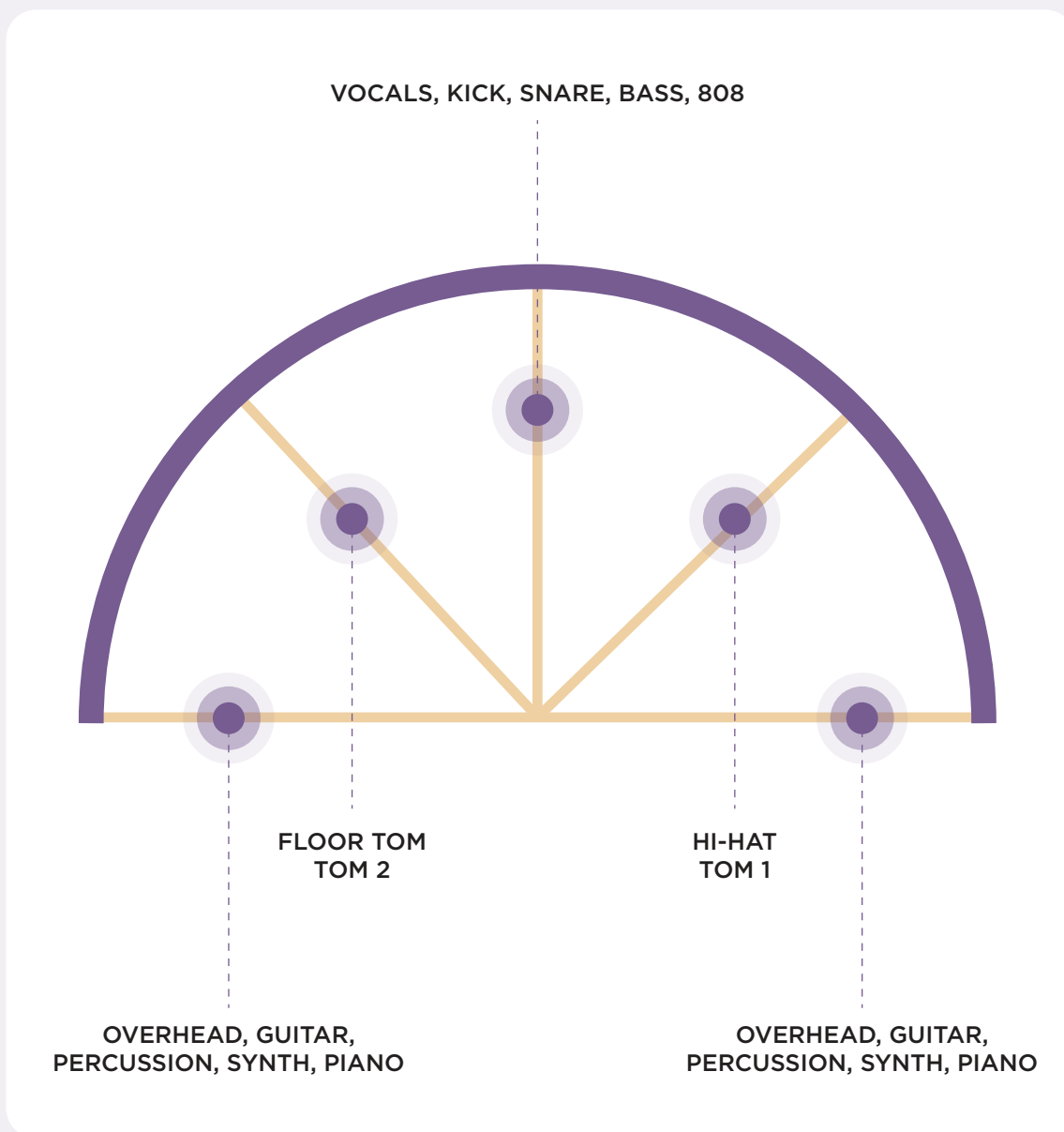
Take a short break and listen again. You will likely find some final tweaks to make before you move on.



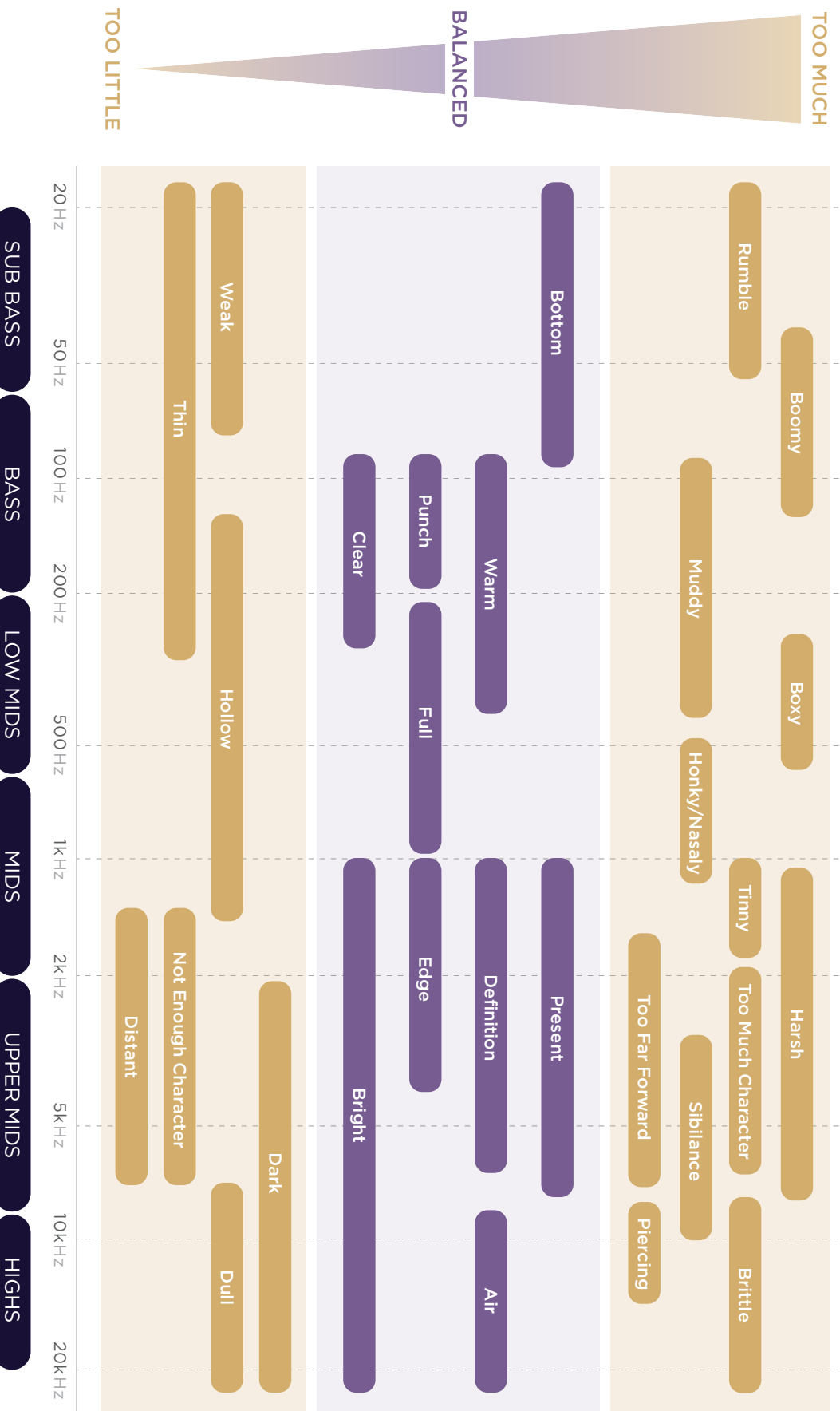
STEP 10:

Once you've finished your initial mix, play the song from the beginning and automate the volume of each instrument to fit.

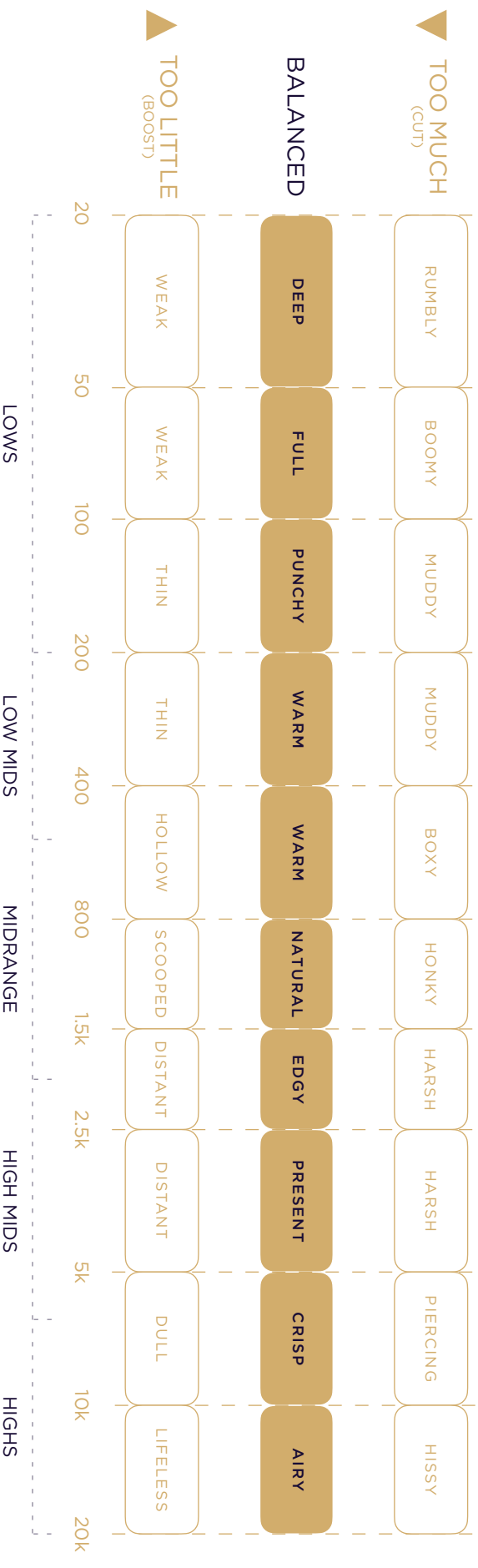
Use LCR panning (hard left, dead center, or hard right) for most elements. Then have one or two elements panned halfway either side. This creates a wide mix that still uses the full stereo field.



FREQUENCY SPECTRUM

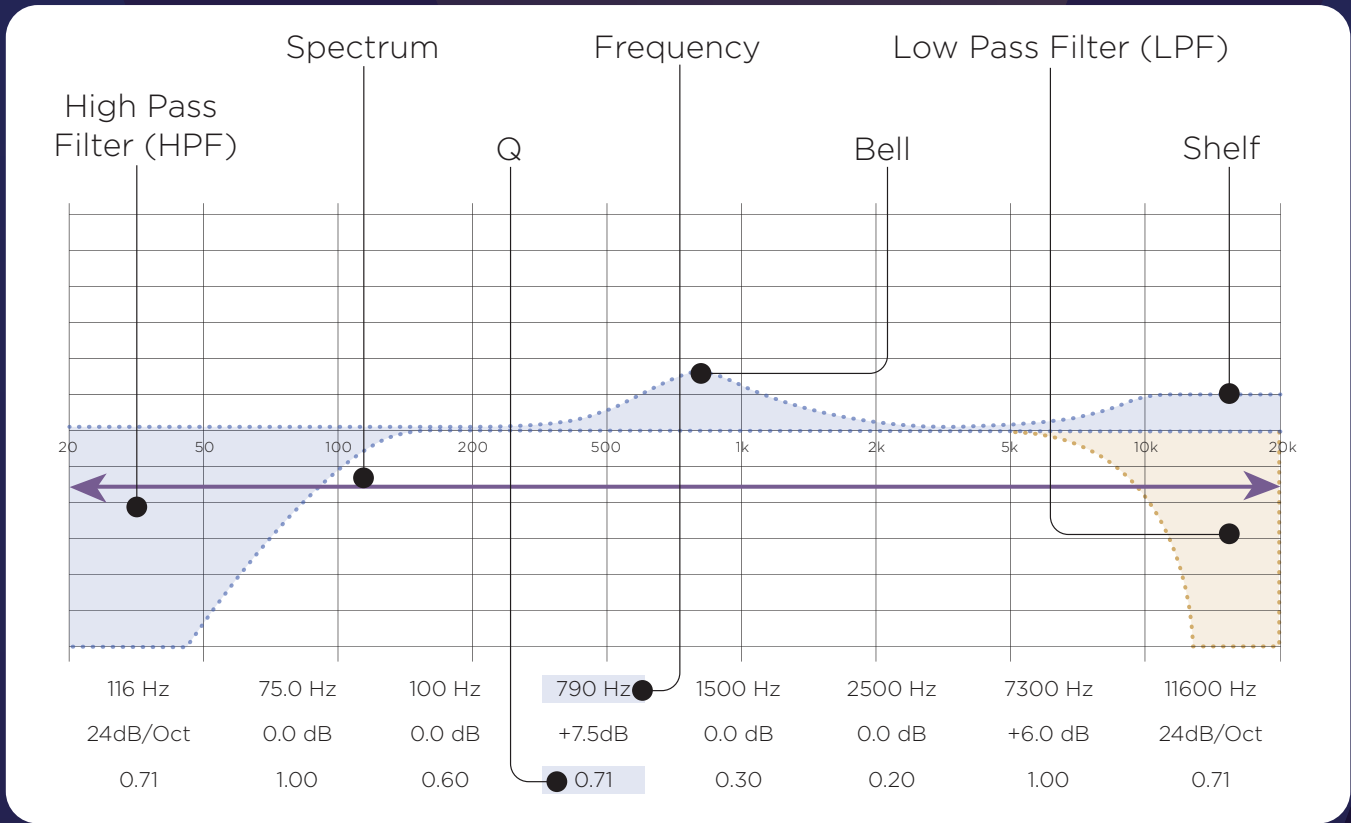


FREQUENCY BALANCE CHART



FREQUENCY RANGE CHEAT SHEET

LOW END 20-200HZ	HP @ 20-35hz	2 main instruments (kick & bass) each in separate parts of the spectrum	808s, kick, floor toms, bass, mud in guitars, doors closing, wind/pop in microphones
LOW MIDS 200-500HZ	Cut or Boost	Transients (drum punch) and most of the actual notes of instruments live here	Bass, toms, snare punch, kick punch, acoustic guitar body, warmth, fullness
MID RANGE 500-2K	Cut or Boost	Most frequency info is found here and doesn't necessarily need to be addressed	Almost all instruments have a piece of themselves that live in this range
HIGH MIDS 2-6K	Cut or Boost	Danger zone! Our ears are most sensitive to this range; boost or cut and people will notice	Electric guitars, vocals, snare presence, synth bite, things that tend to sound harsh
HIGH END 6-20K	Boost	Where most of the magic happens; "taking the blanket off the speakers"	Hi hats, shakers, percussion, cymbals, synth sheen, acoustic guitar clarity, sibilance



High Pass Filter (HPF)

A filter that cuts the entire low end, letting the highs pass through.

Spectrum

Encompasses all of the soundwaves that humans can hear (20 Hz-20 kHz).

Q

How wide your filter is. The lower the number, the wider the filter.

Frequency

The area of the spectrum that you are affecting.

Bell

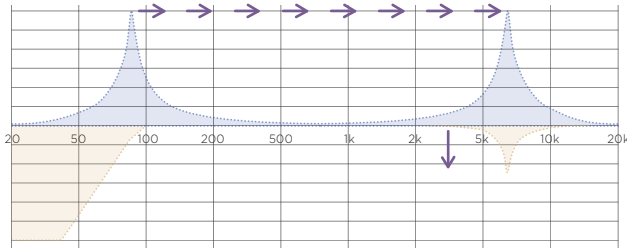
A filter centered around a single frequency. The most common EQ filter.

Low Pass Filter (LPF)

A filter that cuts the entire high end, letting the lows pass through.

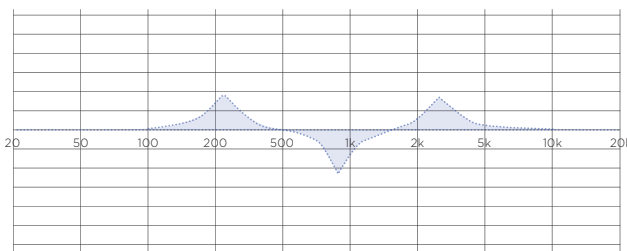
Shelf

A filter on the high or low end of the spectrum that cuts or boosts frequencies using a flat line.



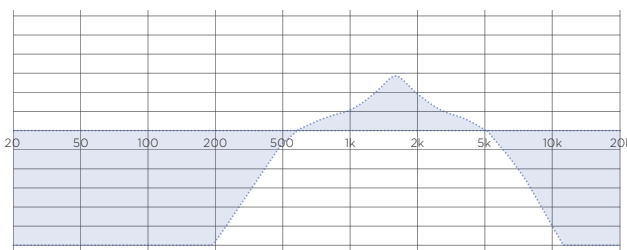
#1 REMOVE THE GROSS STUFF.

- ✓ Use narrow cuts to remove “room resonances.”
 - To find these, use an EQ sweep.
 - Boost a bell all the way with a Q of 1.5 and move it slowly from the left to the right.
 - If a small area gets extra loud or sounds “nasty” to your ears, cut it.
- ✓ Use a high pass filter to remove low end noise (but only when needed).



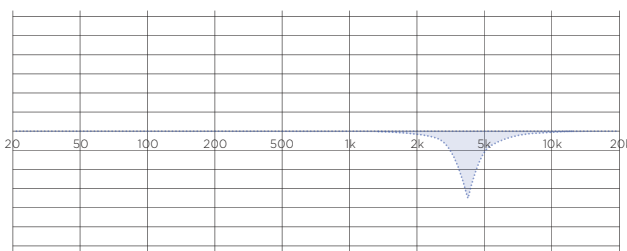
#2 ENHANCE THE GOOD STUFF.

- ✓ Use wider cuts and boosts (0.1-2.0 Q) to shape the tone.
 - Do an EQ sweep to find areas that sound good to your ears, and boost them. Start with around 3dB and tweak to taste.
 - If any areas sound like they’re a little overpowering, and cut them. Start with around 3dB and tweak to taste.



#3 MAKE THINGS SOUND DIFFERENT.

- ✓ For example, filtering the lows and highs and boosting the mids will create the classic megaphone sound on vocals.



#4 CREATE SPACE IN THE MIX.

- ✓ Carve out space in the spectrum of certain instruments to make space for other, more important instruments.
 - For example, try cutting around 4 kHz in your acoustic guitar to make space for your vocals.

MIXING EQ ARSENAL

TRANSPARENT

Stock Channel EQ

FabFilter Pro-Q

Slate Infinity EQ

iZotope EQ

Waves Renaissance EQ

TONAL

Stock "Analog" or "Vintage" EQ

SSL 4000 E Series
(Waves, UAD, Slate FG-S)

API 500 Series
(Waves, UAD, Slate FG-A)

Neve 1073
(Waves Scheps 73, UAD,
Slate FG-N)

Pultec
(Waves Puigtec, UAD)

HARMONIC

Stock Saturation

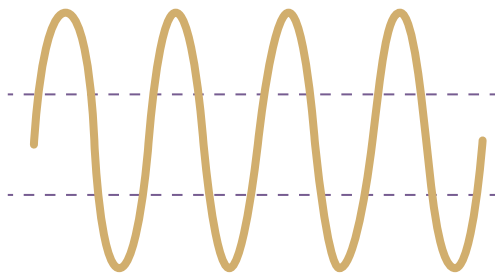
Kush
(Clariphonic, BLYSS, Omega
Preamps)

Waves
(MaxxBass, J37 Tape)

Slate
(VCC, VTM, VTC, Revival)

Soundtoys
(Decapitator, Devil-Loc, Radiator)

FabFilter Saturn



ORIGINAL SIGNAL

This is an example of what the original signal might look like with no dynamic processing.



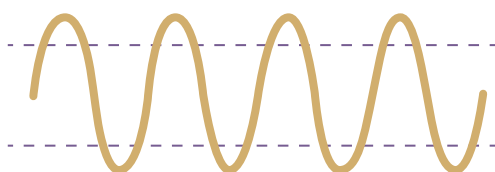
LIMITED SIGNAL

Limiting turns the signal down as soon as it hits the threshold. It can be used to tightly control dynamics. Great for individual tracks during mixing and an essential tool for mastering.



CLIPPED SIGNAL

Instead of turning the signal down, clipping chops off the peaks as they hit the threshold. It can be used for controlling dynamics while maintaining punch or loudness. Great on drums and percussive elements in the mix, and handy for mastering as well.



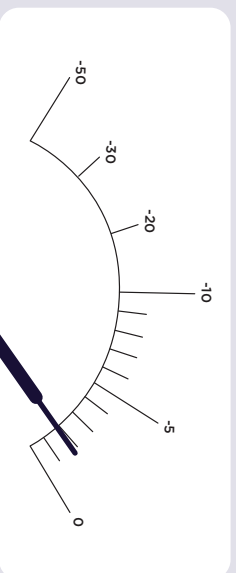
COMPRESSED SIGNAL

Compression is great for more subtle dynamic control, or for accentuating transients. Different compressors have their own character, so it's wise to try different types to see how the signal reacts.

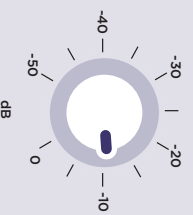
ANATOMY OF A COMPRESSOR

GAIN REDUCTION METER

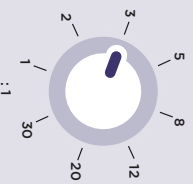
- ✓ How much volume level is being reduced by the compressor.
- ✓ The more volume is reduced, the harder the compressor is working.



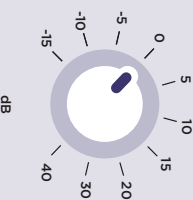
THRESHOLD



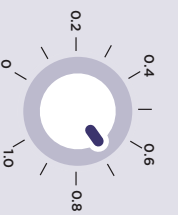
RATIO



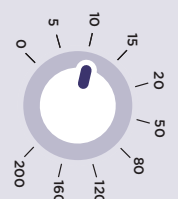
MAKEUP GAIN



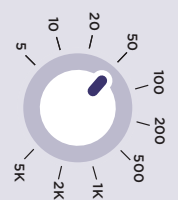
KNEE



ATTACK



RELEASE



THRESHOLD

- ✓ Determines the volume level where the compressor turns on.
- ✓ When the audio is louder than the threshold level, the compressor turns on.
- ✓ The lower the threshold, the more the audio is compressed.

RATIO

- ✓ Determines by how much the volume is reduced.
- ✓ The higher the ratio, the more aggressive the compression.
- ✓ To read a ratio, flip the numbers around. For example, a ratio of 4:1 means that for every 1dB that goes above the threshold, 1/4th of a dB comes out.

ATTACK TIME

- ✓ The amount of time it takes the compressor to apply the full dose of compression after the audio gets louder than the threshold.

RELEASE TIME

- ✓ The amount of time it takes the compressor to fully recover from gain reduction.

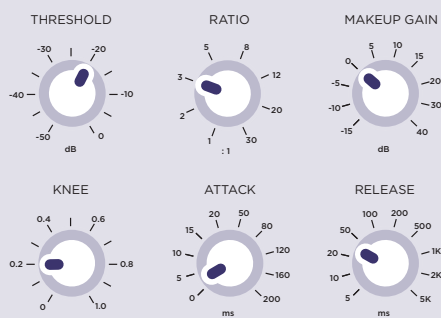
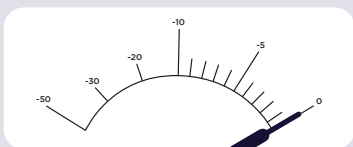
KNEE

- ✓ Turns the threshold from a single number to a range of numbers.
- ✓ A "hard knee" (0:0) keeps the threshold a single number. The compressor is more accurate, but more obvious.
- ✓ A "soft knee" (1:0) turns the threshold into a large range. The compressor is less accurate, but more subtle.

MAKEUP GAIN

- ✓ Increases the output level to compensate for the loss in volume due to compression.
- ✓ Use makeup gain to keep your instrument from getting quieter in the mix.

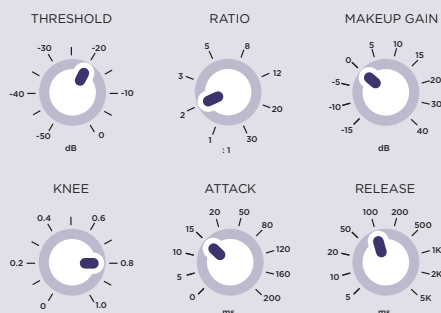
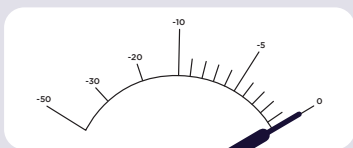
THE 3 WAYS TO USE A COMPRESSOR



METHOD 1:

TO CONTROL THE DYNAMIC RANGE OF AN INSTRUMENT.

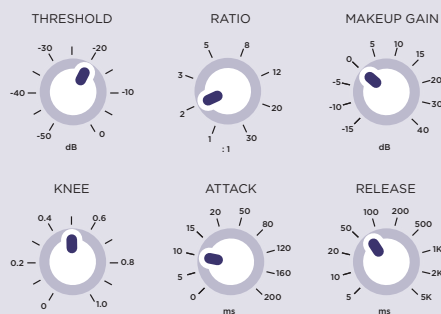
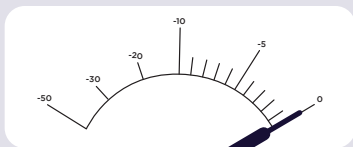
- ✓ Settings:
 - faster attack
 - faster release
 - harder knee
 - higher ratio
- ✓ This is to make the recording more consistent, helping it to sit in the mix.



METHOD 2:

TO SHAPE THE SOUND OF AN INSTRUMENT.

- ✓ Settings:
 - slower attack
 - slower release
 - softer knee
 - lower ratio
- ✓ This “colors” the sound of an instrument, giving it more character and excitement.
- ✓ Use an analog compressor if possible.



METHOD 3:

TO “GLUE” INSTRUMENTS TOGETHER.

- ✓ Settings:
 - medium attack
 - medium release
 - medium knee
 - lower ratio
- ✓ Use on instrument buses or the mix bus.
- ✓ Helps to make several instruments feel like they’re all performing together.

HOW TO SET UP MIX BUS COMPRESSION

STEP 1:

Set the ratio to 3:1.

STEP 2:

Lower the threshold until you're getting around 10 dBs of gain reduction.

STEP 3:

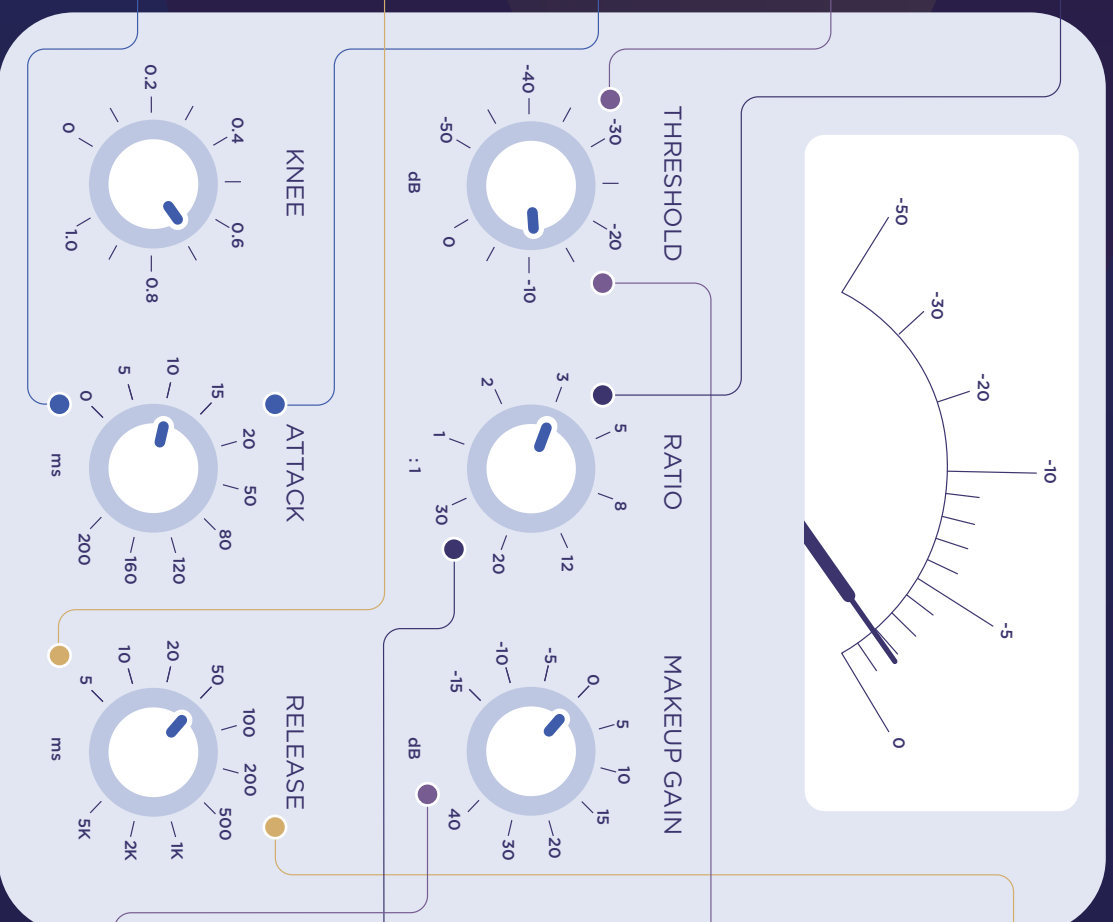
Set your attack time very slow (100 ms).

STEP 4:

Set your release time very fast (5 ms).

STEP 5:

Decrease the attack until you hear the transients of the mix become dull and lifeless, then back off a bit.



STEP 6:

Increase the release until the compressor is "breathing" in time with the song. Try soloing the kick and snare - make the gain reduction meter fall back to zero between each hit.

STEP 7:

Increase the threshold until you get the desired amount of aggression, thickness, and dynamic control - usually around 1-2dB of gain reduction.

STEP 8:

Adjust the ratio to taste. Lower the ratio (2:1) if you want more subtle compression. Raise the ratio (4:1) if you want more aggressive compression.

STEP 9:

Apply makeup gain to compensate for the volume you lost during compression.

MIXING DYNAMICS ARSENAL

UTILITY

Stock
(Compressors, Limiters)

FabFilter
(Pro-C, Pro-L)

iZotope
(Compressors, Limiters)

Waves
(L1, L2, R-Vox, R-Comp)

LoudMax Limiter

COMPRESSION

1176
(Stock, Waves, UAD, Slate Digital)

LA2A & LA3A
(Stock, Waves, UAD, Slate Digital)

DBX160
(Waves, UAD, Slate FG-401)

SSL 4000
(Waves, UAD, Slate FG-DYN)

API 2500
(Waves, UAD)

Distressor
(Empirical Labs, UAD, Slate FG-Stress)

Fairchild
(Waves Puigchild, UAD, Slate FG-MU)

SATURATION & CLIPPING

Stock
(Tape, Distortion, Saturation, etc.)

FabFilter
(Saturn)

Kush
(Omega TWK, Pusher, Novatron)

Tape Emulation
(Waves Kramer, Waves J37, Slate VTM)

SoundToys
(Decapitator, Devil-Loc, Radiator)

Sonnnox Oxford Inflator

Dada Life Sausage Fattener

JST Clip

WHAT IS REVERB?

Reverb is the sound of the room. When reverb is added to an instrument, that instrument sounds like it's in a new space.

WHY SHOULD I USE REVERB?

- 1 To push things back in the mix.
- 2 To control the tone of the mix.

HOW TO CREATE A ROOM REVERB FOR YOUR MIX.

STEP 1:

CREATE TWO AUX CHANNELS.

Label one "Ambience" and the other "Room Tone." Place a reverb plugin on each.

Bus 1 | Bus 2

Reverb | Reverb

Ambience | Room Tone

STEP 2

SET UP YOUR TWO CHANNELS.

■ AMBIENCE

REVERB TYPE | ROOM

Pre-delay | Decay time | Reflections | Distance | Balance

0 ms 500 ms 0 sec 5 sec early late 1% 100% dry wet

- ✓ Balance: **100% wet**
- ✓ Type: **Room**
- ✓ Decay time: **250-750 ms**
- ✓ Pre-delay: **2-25 ms**
- ✓ Reflections: **More early, less late**
- ✓ Distance: **1-5%**

■ ROOM TONE

REVERB TYPE | ROOM, HALL, OR CHAMBER

Pre-delay | Decay time | Reflections | Distance | Balance

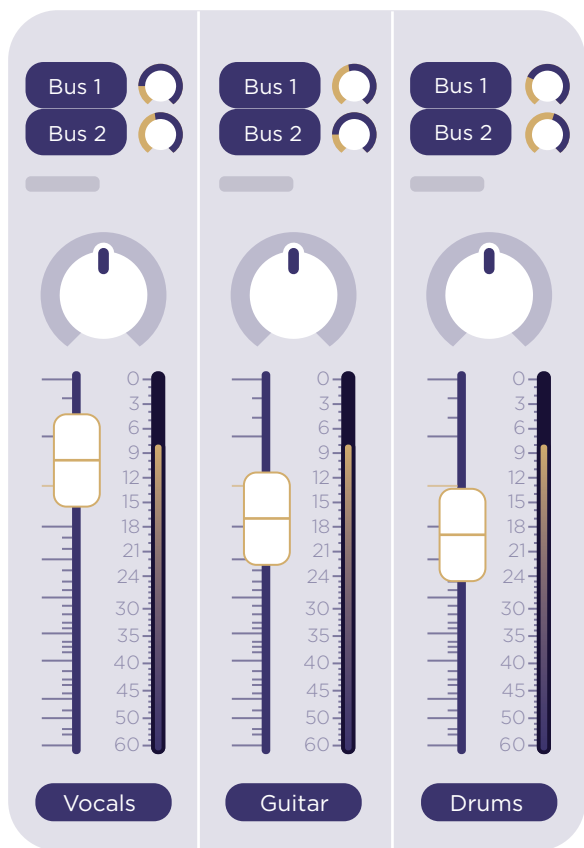
0 ms 500 ms 0 sec 5 sec early late 1% 100% dry wet

- ✓ Balance: **100% wet**
- ✓ Type: **Room, hall, or chamber**
- ✓ Decay time: **500-3000 ms**
- ✓ Pre-delay: **0-75 ms**
- ✓ Reflections: **Less early, more late**
- ✓ Distance: **15-50%**

STEP 3

SEND SOME OF EACH INSTRUMENT TO THESE TWO AUX CHANNELS.

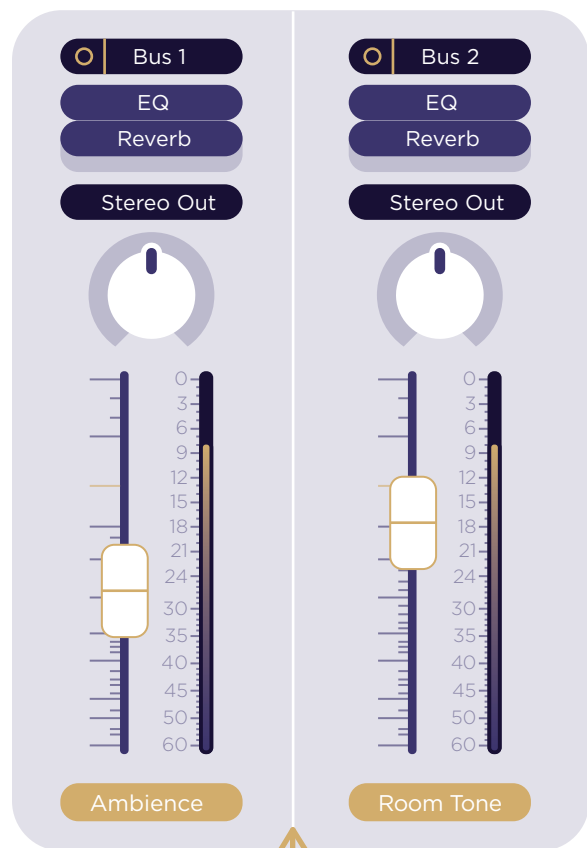
- ✓ If you want to push an instrument back in the mix, send more of it to the Ambience channel.
- ✓ If you want the instrument to have noticeable reverb, send more to the Room Tone channel.



STEP 5

BALANCE THE VOLUME IN YOUR MIX.

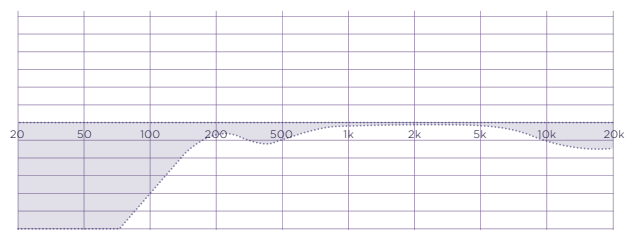
- ✓ Turn the volume of the aux tracks all the way down.
- ✓ Then turn them up slowly until they sound nice to your ears.
- ✓ Then turn them back down 1-2dBs for safety.



STEP 4

PUT AN EQ BEFORE THE REVERBS.

- ✓ Move a high pass filter up until the mix starts to sound too thin.
- ✓ Listen to your overall mix. Is it sounding too dark? Try boosting the top end of the reverbs with a shelf. Is the mix sounding too bright? Try cutting with a shelf instead.
- ✓ Are the reverbs making your mix sound muddy? Try cutting 3-10dBs in the low mids.



REVERB

Stock

Slate Verbsuite

Any Valhalla Reverb

Any Lexicon Reverb

Any Seventh Heaven Reverbs

FabFilter Pro-R

SoundToys Little Plate

UAD EMT 140 & 250

Altiverb

DELAY

Stock

Slate Repeater

SoundToys Echoboy

Valhalla Delay

Waves H-Delay

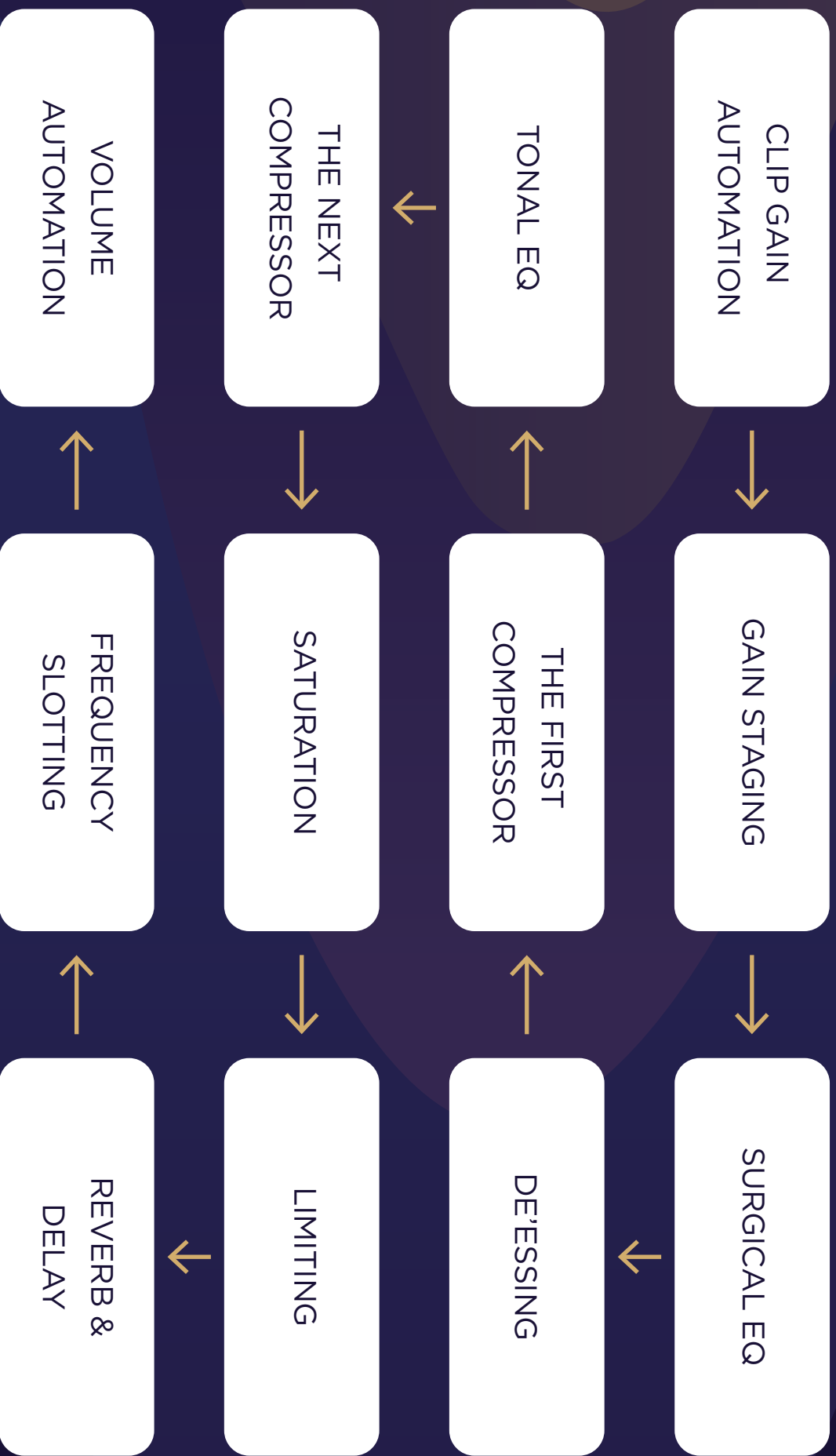
Waves Manny Marroquin Delay

FabFilter Timeless

UAD Galaxy Space Echo

Kramer Tape

THE VOCAL MIXING FORMULA



HOW TO CREATE A VOCAL DELAY

This is a great way to create a sense of space around a vocal if you want an exciting, up-front vocal sound.

Stereo Link

LEFT DELAY		RIGHT DELAY		OUTPUT MIX	
Delay Time 75.0 ms	Feedback 5%	Delay Time 100 ms	Feedback 5%	Left 100%	Right 100%

STEP 1

STEP 2

Input 1 | Bus 1

Stereo Delay

Bus 1

Stereo Out | Stereo Out

0 3 6 9 12 15 18 21 24 30 35 40 45 50 60

M S | M S

Vocals | Delay

STEP 1

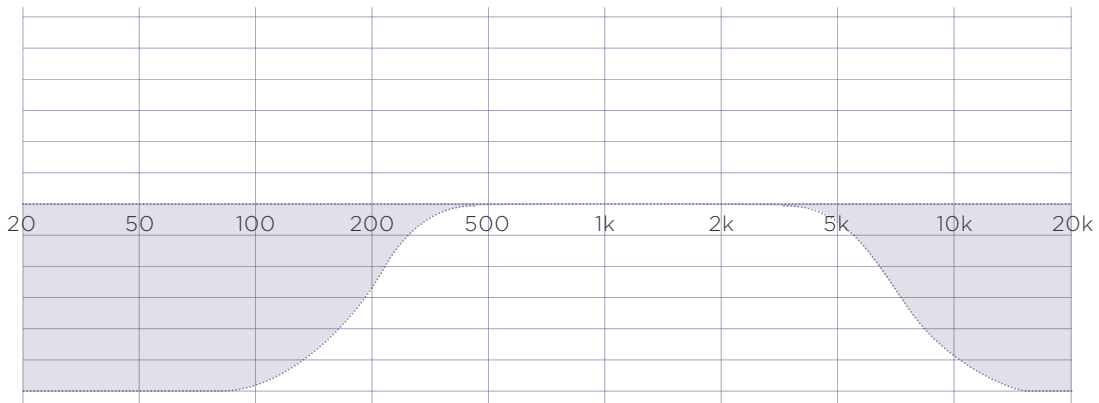
AUX

- ✓ Create an aux track to put your stereo delay on.
- ✓ Send your vocal to that aux track.

STEP 2

DELAY

- ✓ Set your delay to 100% wet.
- ✓ Unlink the left and right channels.
- ✓ Set one side to 50-200 ms.
 - **PRO TIP:** The longer the delay time, the more obvious the delay will be.
- ✓ Set the other side 20-50 ms behind.
 - **PRO TIP:** The farther apart the second channel is, the wider the vocal will sound.
- ✓ Set the feedback to 0-15%, depending how natural you want it.



STEP 3

STEP 4

STEP 3

EQ

- ✓ Put an EQ before the delay.
- ✓ Move a low filter up until the mix starts to sound too thin.
 - **PRO TIP:** Try not to cut higher than 300 Hz.
- ✓ Move a high filter down until the delay gets too lost in the sound of the vocal.
 - **PRO TIP:** Try not to cut lower than 3 kHz.

STEP 4

VOLUME

- ✓ Turn the volume of the aux track all the way down.
- ✓ Then turn it up slowly until it sounds nice to your ears.
- ✓ Finally, turn it down a few dBs for safety.


HOW TO CREATE A VOCAL REVERB

This is a great way to create a sense of space around the vocal if you want a more natural, less up-front vocal sound.

REVERB TYPE


PLATE

Pre-delay




0 ms 500 ms

Decay time




0 sec 5 sec

Reflections




early late

Distance



1% 100%


Balance



dry wet

STEP 1

STEP 2



STEP 1

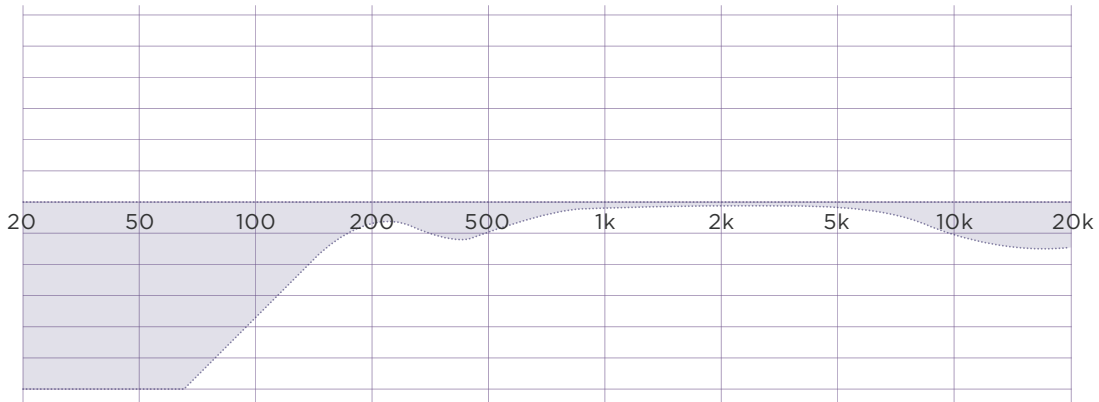
AUX

- ✓ Create an aux track to put your reverb on.
- ✓ Send your vocal to that aux track.

STEP 2

REVERB TYPE

- ✓ Set your reverb to 100% wet.
- ✓ Try each reverb type (room, hall, chamber, or plate) and pick your favorite.
- ✓ Set the reverb time to 4 seconds, then slowly move it down until it sounds natural with the rest of your mix.
 - **PRO TIP:** Usually shorter reverb times work best on vocals. Try something between 0.5-1.5 seconds.
- ✓ Increase the pre-delay until the vocal is standing out from the reverb.
 - **PRO TIP:** Usually a pre-delay of 30-100 ms is good.
- ✓ Adjust the distance (or early/late reflections) to taste.
 - **PRO TIP:** Further distance or more late reflections will sound lush, but will push the vocal in the mix.



STEP 3

STEP 4

STEP 3

EQ

- ✓ Put an EQ before the reverb.
- ✓ Move a high pass filter up until the mix starts to sound too thin.
- ✓ Listen to your vocal. Is it too dark or too bright? If it's too dark, boost the highs with a shelf. If it's too bright, cut the highs.
- ✓ Is the reverb making your vocal too muddy? Cut 3-10 dBs in the low mids.

STEP 4

VOLUME

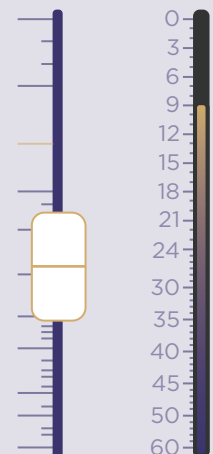
- ✓ Turn the volume of the aux track all the way down.
- ✓ Then turn it up slowly until it sounds nice to your ears.
- ✓ Finally, turn it back down a few dBs for safety.

○ Bus 1

EQ

Reverb

Stereo Out



Reverb



STEP 1: Optimize your listening space. Mastering in an untreated room will make your song fall apart in any other space.



STEP 2: Finish your mix. You can't master until the mix is done!



STEP 3: Check the levels. Make sure none of your faders are clipping. Also, the loudest part of the song should be peaking between -4 dB and -6 dB on the mixbus.



STEP 4: Bounce down your stereo track. Make sure it's exported at the same bit and sample rate as the session. It needs to be a .wav or .aiff file.



STEP 5: Take a break. Give your ears a break. Wait at least a day.



STEP 6: Create a new project and import your references. Using reference tracks will make a huge difference in the quality of your master.



STEP 7: Listen for the first time (and take notes). You'll hear 80% of the problems in this first listen.



STEP 8: Make a full analysis. Listen to your references, then listen to the mix again. Check your mix in several different spaces. Write down what you hear.



STEP 9: Control the dynamics. Use a compressor to lightly compress the mix. 1-2 dBs of gain reduction is fine.



STEP 10: Fix the tone. Use an EQ and multiband compressor to match the tone of your references.



STEP 11: Enhance the mix. Use tools like saturation and stereo widening to color the mix. This is optional.



STEP 12: Limit the mix. Use a limiter to increase the loudness of your mix. Shoot for 2-3 dBs of gain reduction at the loudest points.

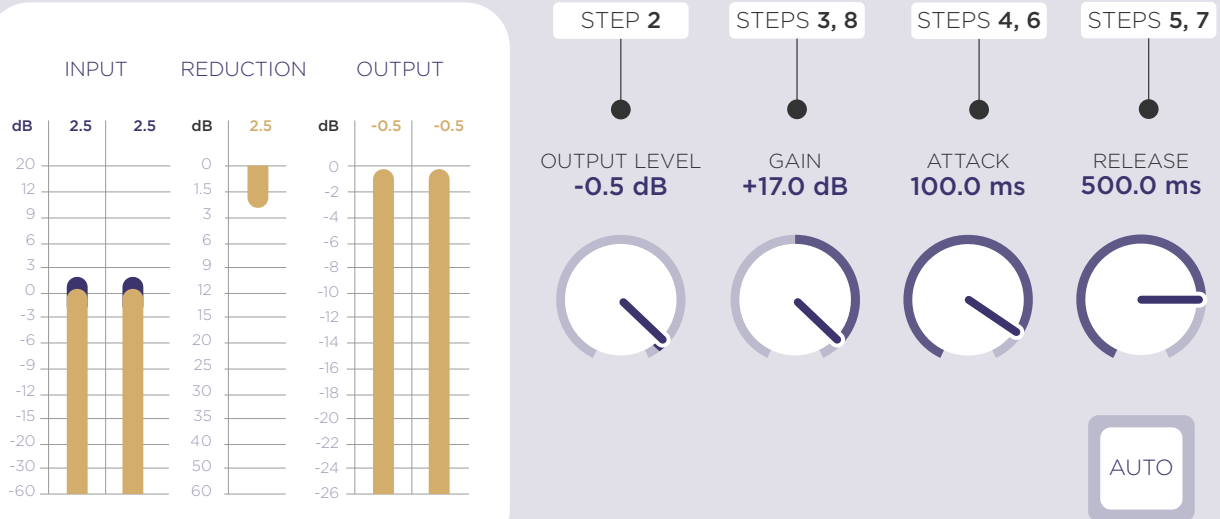


STEP 13: Make your final checks. Use a meter like MAAT DRMeter MkII to make sure your dynamic range is adequate.



STEP 14: Bounce it. Export your mix at 16 bits and 44.1 kHz. Don't forget to dither!

HOW TO USE A LIMITER WHEN MASTERING



STEP 1: Add the limiter as the last plugin in your chain.

STEP 2: Set the output ceiling at -0.5 dBFS.

STEP 3: Increase your input gain until you're getting about 10 dBs of gain reduction.

STEP 4: Set your attack very slow (100 ms).

STEP 5: Set your release very slow (500 ms).

STEP 6: Decrease the attack as much as possible until you hear the mix start to lose impact, then back off a bit.

STEP 7: Decrease the release as much as possible until you begin to hear your mix distorting, then back off a bit. You could also use the auto function to let the compressor do it for you.

STEP 8: Decrease your input gain until you're getting 2-3 dBs of gain reduction.

GATE | **DUCKER**

Threshold **-15 dB**

Reduction **-25 dB**

Hysteresis **-6 dB**

OPEN ● | CLOSE ●

Attack **3 ms**

Hold **130 ms**

Release **40 ms**

Lookahead **5 ms**

Sidechain **None**

Monitor **OFF**

High Cutoff **20000 Hz**

Low Cutoff **20 Hz**

THE BASICS

THRESHOLD

- ✓ If the incoming audio signal is louder than this dB level, the gate stays open. If it falls below this level, the volume is reduced.

REDUCTION

- ✓ The amount of volume the audio signal is reduced by if it falls below the threshold.

ATTACK

- ✓ Sets the time it takes to fully open the gate after the audio signal goes above the threshold.

HOLD

- ✓ Determines the minimum amount of time that the gate stays open before releasing. This prevents “chattering,” or the unnatural sound of the gate rapidly opening and closing.

RELEASE

- ✓ Sets how slowly the volume is lowered after the audio signal falls below the threshold again.

EVERYTHING ELSE

HYSTERESIS

- ✔ Turns the threshold into a range instead of a single number. If an audio signal goes above the threshold level, the gate opens. The gate only closes if it goes below the range set by the hysteresis.
- ✔ Example: Let's set the threshold to -15dB and the hysteresis to -5dB. The gate will now open when the audio signal gets louder than -15dB, but will only close when it falls below -20dB.
- ✔ This also helps prevent "chattering".

SIDECHAIN

- ✔ Allows you to link the gate to another audio source, closing the gate only when the newly sidechained instrument goes below the threshold.

FILTERS

- ✔ Filters the incoming audio signal to solo out the frequency area that you want to register the gate. These filters don't affect the tone of the instrument, they only affect how accurate the gate is.
- ✔ Often used on drum recordings where other drums in different parts of the frequency spectrum are accidentally triggering the gate to open. For example, for a snare recording you might set your low filter at 100Hz to ignore the kick and your high filter at 300Hz to ignore the cymbals.
- ✔ If the gate is using a sidechain, then the sidechained audio is filtered instead.

MONITOR

- ✔ Allows you to hear what the filters are doing to the incoming audio signal so that you can fine tune them. Make sure to turn this off once you've finished.

GATE/DUCKER

- ✔ Selecting "Gate" will lower the volume when the audio is *quieter* than the threshold.
- ✔ Selecting "Ducker" will lower the volume when the audio is *louder* than the threshold.
- ✔ Ducking is most useful when using a sidechain. For example, a common technique is to sidechain the vocal to the guitar, so that the guitar drops in volume when the vocal comes in.

LOOKAHEAD

- ✔ Controls how far ahead the gate analyzes the incoming signal.
- ✔ A large lookahead will make the gate more accurate, but it will also increase the CPU load on your computer.

OPEN/CLOSE

- ✔ Shows whether the gate is currently open or closed.

STEP 1:

Lower the reduction level.

Set it to the lowest possible setting.

STEP 2:

Lower the threshold.

Set it where only the desired sound is opening the gate.

STEP 3:

Adjust the attack time.

If it's percussion, use a very fast attack. If it's a slower instrument (like strings or a pad), use a slow attack.

STEP 4:

Adjust the hold and release time.

Make it long enough for the desired sound to pass through naturally, but short enough that the unwanted noise is cut off.

The screenshot shows a noise gate plugin interface with the following settings:

- Threshold:** -15 dB
- Reduction:** -25 dB
- Attack:** 3 ms
- Hold:** 130 ms
- Release:** 40 ms
- Sidechain:** None
- Monitor:** OFF
- High Cutoff:** 400 Hz
- Low Cutoff:** 100 Hz
- Hysteresis:** -6 dB
- Lookahead:** 5 ms

STEP 5:

(optional) Adjust the hysteresis.

Start at -6dB's and move it around until the gate sounds more natural (while not letting any unwanted noise pass through).

STEP 6:

(optional) Adjust the filters.

Turn on the Monitor button first. Use the filters to focus in on the desired sound. Then turn the monitor button off.

STEP 7:

(optional) Adjust the lookahead.

Usually a few milliseconds is fine.

STEP 8:

(optional) Increase the reduction level.

A small amount of the original level should be let through. This will help the gate sound more natural.

REFERENCING CHEAT SHEET



PRODUCTION

- ✔ What's the recording quality like?
- ✔ Is it more modern or more old school?
- ✔ Is it mostly live sources or samples?



MIX

- ✔ What is the balance between the instruments?
- ✔ Which instruments are placed loudest?
- ✔ Is there a lot of volume automation?



FREQUENCIES

- ✔ How is the sonic spectrum overall?
- ✔ Are there a lot of lows, mids, highs?
- ✔ What does the spectrum look like on the analyzer?



DYNAMICS

- ✔ How are the dynamics overall?
- ✔ Is everything locked in place or is there room to breathe?
- ✔ Does it sound punchy or thick?



SPACE

- ✔ How wet or dry is the track?
- ✔ How long are the reverb tails?
- ✔ Which elements have noticeable reverb?