Bass Guitar Mixing

- Setting up audio tracks
- Setting up mixer strips
- Setting up plugins
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Mixing bass guitars

Before you start please watch this interview: 🔗 Metal Recording - Production - Live Sound - Working with Bassists! Interview with Jason Frankhouser!

Interview is about Metal Music, but don’t bother about that, principles are the same for any music genre. For example: every instrument have own place in mix. I’ve pasted this link because it will help you to better understand what is going on down below. My knowledge in topic and English language are not the best and I’m not able to cover this topic properly, so here is the link.

Setting up tracks

For Bass guitar we need three audio tracks, you can record one track and duplicate it two times or record three audio tracks at once. Which method you choose is up to you.

On First track we will work with Low frequencies, on second we take care on Mid frequencies and third High frequencies. You can name them as you like, but choose something which don’t confuse you later. I name them:

- Bass – LOW
- Bass – MID
- Bass - HIGH

Low, Mid and High are written uppercase because it’s easier for me to spot right config in saved presets list later. For example: Metal, Bass – MID preset in Calf Equalizer 12 band. It’s for speed up process in new sessions, so you don’t need to bother about it now.

New audio tracks don’t have playback set yet (if Ardour is not set to connect everything automatically), but don’t bother we will plug them in a minute to Audio Buss and then to Master Bus.

```
[ Bass – LOW ]
[ Bass – HIGH ]
```
We have already audio track set and now we need to create **Audio Bus**. We will use it to mix **Low**, **Mid** and **High** audio track before signal go to **Master Bus**.

While audio tracks are set to be **Mono**, for **Master Audio Bus** we need to set **Stereo**. I've set Pin Mode to Flexible, because after adding Plugins, **Pin Connections** will automatically connect. If you don't have Bass guitar group created already you can do it from **Group** here.
As you see, we have **Guitarix** plugins here and with except **GxCabinet** they are for electric guitar, but we will use them to emphasize **Mid** and **High** frequencies. And don't worry, this doesn't turn your Bass line into electric guitar.

For this setup concept is simple: isolate Low, Mid and High frequencies from each other, then work with each one and then mix all together (Mid a bit lower than Low and High) in **Bass - Master** strip and finally route signal to **Master bus**.

Panners in Low, Mid and High strips are bypassed because we don't need to specify how signal should be routed there. Panner in **Bass - Master** will handle it at the end.

**Bass – LOW Plugins:**

- Glame Lowpass Filter
- Calf Compressor

**Bass – MID Plugins:**

- Glame Lowpass Filter
- Glame Highpass Filter
- Gx Studio Preamp

**Bass – HIGH Plugins:**

- Glame Highpass Filter
- guitarix_distortion
- Calf Equalizer 8 Band

Before you start. Adding all plugins at once with the same setups from tutorial will only create huge mess. Proper way it should be done is building/shaping sound from ground to top. Plugin after plugin. At first do Bass - LOW, Bass – MID, then Bass HIGH. When they are set use faders to blend them (Bass - MID should be set a bit lower than LOW and HIGH to create "space" for guitars.), when you'll be satisfied with result go to Audio Bus (Bass – Master) and setup plugins like in LOW, MID and HIGH (plugin after plugin). If after setting up you will be not happy how they blended or sound, make needed changes. Remember that mixed bass guitar don't need to sound good solo, it should sound good in mix with other instruments. Fader in Audio Bus will be used only to set created Bass guitar in mix.
Before we go to plugins setup, first let’s connect all mixer strips together.

Click on Audio Bus strip name and choose Inputs... option.

Then in Inputs window navigate to Ardour Tracks tab and select Left and Right channels for all mixer strips:

- Bass - LOW out
- Bass - MID out
- Bass - HIGH out
Now click on Master Bus name and choose Inputs... option to connect Bass - Master mixer strip to Master Bus.

In Inputs window navigate to Ardour Busses tab and connect Right and Left channel in Bass - Master (Stereo) out.
Bass LOW Plugins

**Glame Lowpass** - This is pretty easy, all we need to do here is isolating Low frequencies. You can set plugin same as me but better way will be to adjust filter to your guitar setup (amplifier, preamp, effects, "knobs" on Bass guitar). Listen and move slider to the point when you hear Low tons rumbling. Don't leave any Low Mid frequencies. I'll explain it widely in compressor setup.

**Calf Compressor** - I think it depends on music genre (song type a bit too) how low frequencies should be compressed and what we need to do here is changing dynamic of them. What I've learned is: in Metal songs low frequencies in bass guitar shouldn't be dynamic too much or maybe will be better said, they should be flat.

For Rock or Blues probably will be better to leave some dynamic here but will be good if you do some research and don't be surprised when find that Bass guitar can be mixed on many ways. Anyway, if low frequencies rumbling on accents etc. it means that dynamic should be decreased a bit. Let's back to the topic. I mean basics rather will be the same but people do own tricks to achieve sound they want. What is more than sure, low frequencies shouldn't kill speakers when you turn audio volume loud, so turn up volume up from time to time.
**Bass MID Plugins**

**Glame Low and Highpass** - Our job here, is cut of Low and High frequencies and leave only Mid (~200-4300 Hz) which will be base for Bass guitar sound. People use different terms for naming this audio track for example "Body", so if you hear that somebody talk about sound base or body it means Mid frequencies. If you like you can use Calf equalizer here instead GLAME filters and trim High frequencies a bit more but it will make attack weaker, so you need to find optimal position or don't touch it at all.

**Gx Studio Preamp** - I use preamp to tune a bit Mid tons and make them a bit better (round or sharp if you like), if you turn a bit rest of knobs mid tone will be more crunchy. I use here only Middle knob because it's working with audio track I've recorded, didn't try yet, but with a bit of tuning it should give pretty good results for clang. If you have other preamp plugins it's worth to try them.

The preamp works here like an equalizer with its own color, depending on what equipment you have, using a clean eq (Calf, EQ10Q) may be enough for your purposes.
Bass HIGH Plugins

**Glame Highpass** - What we need to do here is cut everything under 500 Hz. If you need preview click on **Plugin analysis**.

**guitarix_distortion** - I've chosen this plugin because it's don't mess up signal much, we need here only a bit of distortion to emphasize High frequencies. I need to admit here that recorded Bass guitar track which I use in guide is far from be good and this preset will not work with you track unless your Bass guitar was recorded with a bit of High tones. Then it should work with small changes.
**Bass Master Plugins**

**GxCabinet** - This cabinet impulse is simple to figure out and don’t need explanation, just set it to your needs. If you’ll don’t overkill setup it should add extra color for your Bass sound which we lost while doing stuff in LOW, MID, HIGH mixer strips.

**Calf Equalizer 12** - Before we go further lets clean a bit our Bass sound. At first, we can remove some Low frequencies with Highpass and set it on 80 Hz (or something similar) to make space for Kick.
This will prevent Kick and Bass guitar from blending and bumping up Bass guitar by Kick. Next are Mid frequencies on something around 670-680 Hz. Ok, now it’s time for wheezing frequencies on 2110-2120 Hz and 3460-3500 Hz. You don’t need to stick strictly to these values, as you noticed in screenshot I’ve modified it as well. We almost done here, now we will cut High frequencies on something around 6150 Hz which we don’t need in Bass guitar. Recorded Bass guitar in example don’t have much high tones, so I don’t stick to these values exactly.

**Calf Multiband Compressor** - There are many dedicated plugins for this what we will do here, but they are not available natively for Linux which is a shame but not necessarily a problem. So, plan is we need to make Bass guitar flat and less dynamic which means Low, Mid and High frequencies will be on similar level.

We’ve made Low frequencies already pretty stable, fader stick to one level and don’t jump too much in Bass Low mixer strip and now we will do some correction on Sub and Low Bands to hold them down a bit more, and make Mid and High bands louder. In Bass - LOW mixer strip we’ve changed Sub and low bands equally and now we’ll tune them separately.
**Sub Band** - I didn't touch it much because main work is done by Lowpass filter and Compressor in Bass LOW strip. Important thing here (for me) is threshold. Sub tones are mostly jumping on Knee and don't go much higher, so they are mostly pretty much on same level. I can turn up audio volume loud and don't be worried about speakers start dancing on desk.

**Low Band** - I've made similar thing here like in Sub Band but Knee is set smooth, so at the end Low Band and Sub Band are on similar level most of the time because Low Band level is rising a bit slower.
**Mid Band** - I've added here a bit of Makeup and changed Ratio to get Mid frequencies louder but not on the same level as Low ones. Now they are present but don't blend with Mid frequencies from Electric guitars.

I didn't remove Ratio completely, because I need to kinda “slow” it down before it reach top volume level.

**High Band** - As I mentioned before, there is not much of High frequencies in recorded Bass track, so they are not present in mix, so I've added Makeup and left Knee in position where pick level is slightly above Knee and don't rise to much. It prevents High frequencies to be louder than cymbals, hi-hat and guitars.