# DIY Home Recording Tips And Hacks

Hey!
Making demos at home is becoming more and more popular, as recording equipment is more accessible than ever.
I receive a lot of messages and emails about people wanting to make demo's at home before they come into the studio and there is always a common set of questions.

"WHY DO I SOUND ROOMY?"

"Where did my files go?"

"How do I make this sound better?"

So I thought I would put together this little document to help out with the basics of making your demo sound that much better.

# Equipment

1

For making demos at home, I would suggest **Logic Pro X** as your recording software, this is also known as a DAW. As it comes with some great built in guitar/bass amps and effects pedals, a drum beat generator, tonnes of synth patches and plenty of mixing tools like compressor's, eq's and reverbs.

2

So now you have software you need to be able to get sound in and out of your computer, this is achieved with an audio interface.
For the purpose of recording at home and making demo's
I would invest in a **Focusrite 2i2**, it has as it has 2 clean sounding preamps, outputs for headphones and speakers,
lastly it comes with some great third party plugins.

3

Being at home most people don't have the room for a home studio or they don't have an ideal space to place speakers, so **headphones are a great alternative**, Reason being is that it cuts the room acoustics out of the equation which is a very deep hole to go down and you can work at anytime time of the day.

When buying headphones make sure they are comfy and **sound right to you.**
We are all different and have different views of what sounds right.
It's worth researching in your price bracket and trying a few that suit you.

**"I'm currently using my KRK 6400's and they sound great to me".**

My Home Setup:
Apple iMac
Logic Pro X
UAD apollo twin
Yamaha HS 80's
KRK 6400
Shure Sm7b

4

When demoing at home most of us don't have the luxury
to record loudly, so drums aren't really a viable option.
So this narrows things down to what microphones your going to need.

What are you most likely to be recording at home?
Perhaps a vocal? acoustic guitar?
and if the neighbours are out, a guitar amp?
So I would go for one of 3 options, a **Rode NT1-A** a microphone
which sounds cool on vocals and acoustic guitars,
or an **Aston Stealth** or the legendary **Shure SM58**.

The 2 later options are better if you are going to be recording
guitars and louder screaming vocals.

But go with either and your gonna be in a good spot to make these demos!

# Workflow

A lot of problems I hear from people is how to organise their sessions, what file types to use?, and that they can never find files and bounces.

For me this all easily solved with setting the project up correctly at the start. This is going to be based upon Logic Pro X's menu's and terms.

## Tip #1

Keep the file type as 24bit/ 44.1khz, set it and forget, don't stress about this at all.

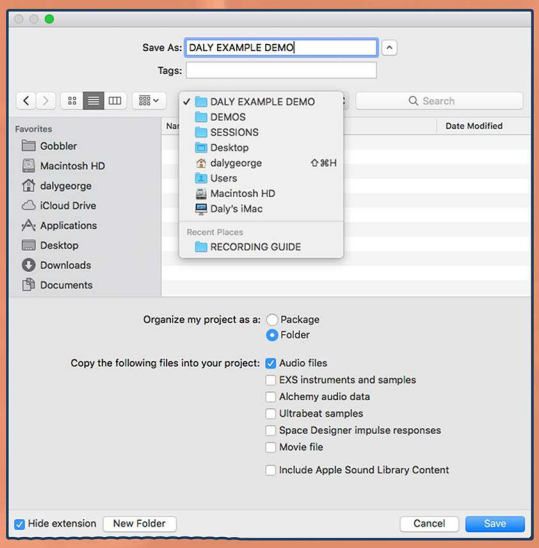
## Tip #2

Make a new logic session,
**save the it straight away**, even though there isn't any files in Logic yet.

**Save it as a folder**, to do this click:

File, Save, Select- Folder, Highlight- audio files
and lastly name the session with a good name, not demo 1,

The reason for saving it as a folder,
you can save it at several stages of the process ie.
drum beat, guitar recording, guitar edit, vocals, vocal edit.




This means you can go back to any stage of process and not lose any files.

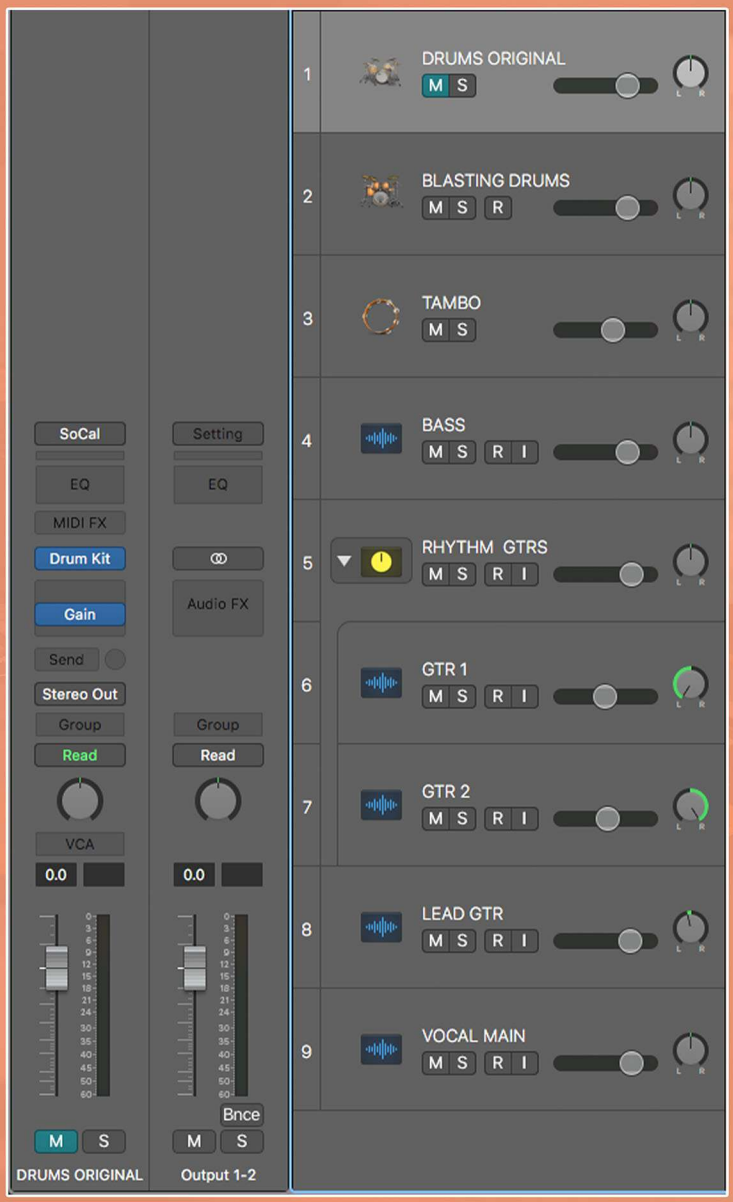
## Tip #3

Dedicate a place on your hard drive where all of your demos are going to based, and folder them in a system that works, and that is simple for you.

I have had many emails asking '**WHERE DID I SAVE MY SONG?!**'.

## Tip #4

Lastly, **label your tracks**, when you **make a new track label it straight away**, this will save you  the trouble if you need to find a file at any time, the worst thing is searching for audio file #449.



# Recording Drums

I would advise to you to use midi drums as it requires little noise using an Electric drum kit or manualy insert drum patterns with a mouse.
Using midi drums is brilliant for making demos as it prodvides so much flexibility.

How many times have you been down the road of writing you song and wishing there wasn't a kick drum on a beat, with midi you can simply delete that midi note.

One thing I would say to be careful with, is to create parts actually possible to play by a human. Make sure that you or your drummer is to play these parts and **practice these written parts before heading into the studio.**

A few drums programmes I would recommend to use are:
**Room Sound and Get Good Drums**.
Both have several amazing packs available at a very good price.
Or use the built in drum machine in Logic which works perfectly fine too!

# Recording
## 'Audio'

A common thing I see all the time is
the recording of audio at incositent levels throughout projects.

With every channel get a healthy amount of signal into your DAW,

Aim for the peaks of the audio to hit around -10db in the mixer window,
this will give you plenty of headroom incase there is an instant spike of volume.

This also your means your not recording too quiet and
you won't have to apply a lot of gain later on,
this is where a lot of noise can be introduced.

# Recording
## Guitars and bass

Most demos I receive are recorded with amp simulations which means all you have to record is the direct signal out of you guitar.

The best signal path would be to have your guitar go into a pedal tuner, then directly into instrument input. If you don't have a pedal tuner you can use the built in software plugin but I would recommend getting a tuner like the **Boss TU-3**.


From the tuner go directly into the instrument input of your audio interface, Head to the plugin section and load a aim sim you wish to use. Logic comes with some handy emulations but personally I have better luck with some 3 party plugins.


The best results I have had with amp simulators have been with: **Bias Amp 2** by **Positive Grid**, **Achetype- Plini Darkglass Ultra** by **Neural DSP** and the **STL Tonehub**.

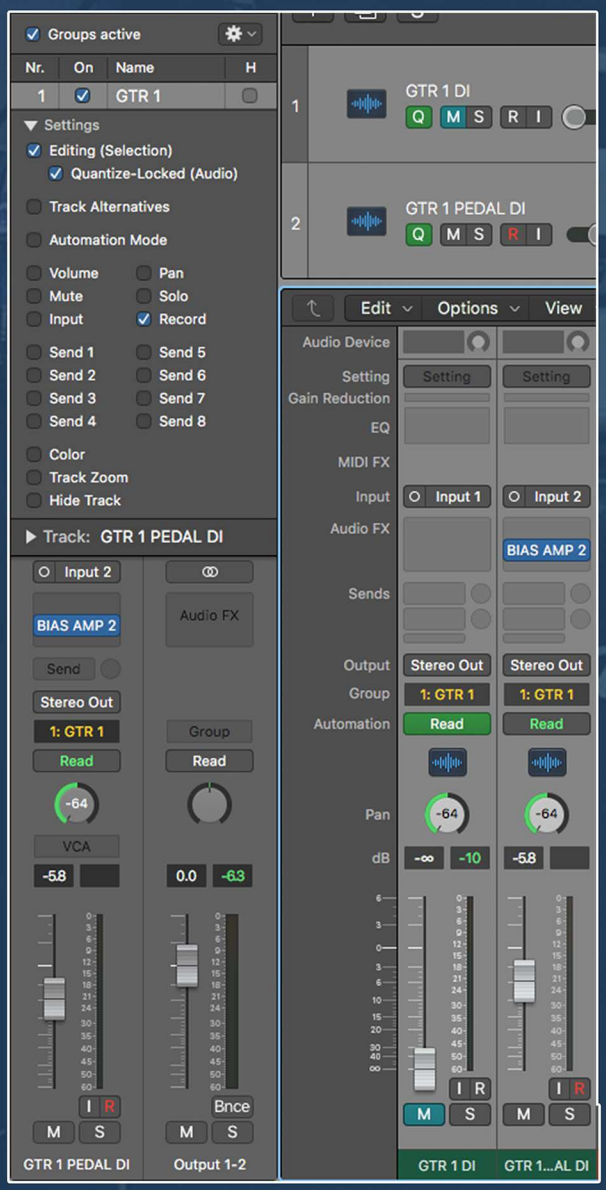
All these companies offer a free trial, so try and see what works for you.

Lastly if your wanting to incorporate pedals to your tone like a reverb, delay etc you can use the built in pedal plugins or use a physical pedal.

To do this, after the tuner run cables to whichever pedals you wish to use and then put the output of the last pedal into the audio interface,

**I would recommend recording a dry signal too as it acts as a backup**.

This is simple to achieve if you have a boss TU-3, run a simultaneous cable out the bypass into the audio interface and group the 2 channels in your DAW with the following settings and mute the DI track.




# Guitar Tips

## #1

You wont need as much gain as you think

## #2

If your getting interference from the pickups, have a spin in your chair, find where it is most quiet.

## #3

Tune up as hard as your playing, or tune a little flatter to the desired pitch, this will help if your playing hard.

## #4

Try and get as close to the guitar sound you want with the guitar and amp model, EQ other mixing tools aren't go to help here if the tone isn't right!

# Vocals

A **big** problem I hear people have concerning vocals is positioning them selves in relation to the microphone and the position of the microphone in the room too.

**So how far should you be from the microphone?**, this can be different for every singer but for the purpose of making a demo I would start around **6 inches away**. With a **pop filter** in between your mouth and mic. Keep the microphone at mouth level but if you have a sibilant voice tilt the microphone down from you mouth at a small angle, this tends to help toning those 'S' downa little bit.

Vocals tend to be pretty dynamic so watch your headroom in your DAW aim for the loudest part to be hitting around -10 on your fader.

When recording vocals, remember to label channels correctly, try to label like this:
**Vocal, Double, Triple, Harmony, Harmony 2, Pad, Pad 2**
for whatever the part it is, things can get confusing quick when tracks stack up.

"With the room, a good hack is to build a little fort out of a duvet. Put it over the doors of a wardrobe and put yourself in there with a microphone".

"Also try not to sing in the dead centre of room as in a typical square room most problems that will effect vocals will be in that area".

# Prep

So you have recorded all of your demo or a part of it and want to clean up the files but you don't know what order to do things in. Here is a **simple** step by step guide in how to do so.

I'm going to use a vocal that has been recorded a few times as an example.

#1 Save your logic session under the new name "**vocal comp**".

#2 Now highlight the performance that you wish to use. You can break this up as much as you want, by section, line or even word (this might sound unnatural) **but if it works it works**.

#3 Save a new session again "**vocal edit**".

#4 The next step is to flatten the folder and adjust any timing issues. Cut any dead space out of the files where the vocal isn't performing, I use the **marquee tool** as my **command click tool** as you can highlight, move and delete with ease.

#5 Now make fades in and out of **every region** by using the **fade tool** or by selecting all vocal regions and doing it globally in the inspector window.

#6 It's time to join them all together so it's one continuous file. Highlight all regions, right click, **Bounce and Join**- and hit **Join per track** and lastly **create**.

#7 If you wish you can can tune the vocal by using **flex pitch** or a 3rd party plugin like **auto tune** or **melodyne**, but I'm not getting into that, that's a whole thing in itself.

I find doing this directly after every part I record a good time to practice this method as it keeps the song sounding as good as it can be or I will do it when I'm not feeling inspired and do it all at once.

**This method can be applied to anything that you are editing !**

# Mixing

So we're finally here, where everything comes together
and you make your demo sound presentable and
closer to **what's in your head**.
However it's where a lot of people are **overcooking** it, which is
making things harder and more frustrating for themselves.

We're not trying to create the final picture here,
we just want it to have the vibe that you see the final product being like
and it being audible for your producer to have a clear image.

**1.** Before starting, have a listen to a song that
you feel is somewhat similar in what you are trying to achieve.
Is it **bright**, **dark**, **soft**? Are the drums **roomy**? Are the guitars **wide**?
Is there a noticeable **reverb** on the vocals?
If so is the reverb realistic like a room or is it **ethereal**?
Make a mental or physical note of the main elements and then **move quick!**

**2.** Keeping your speakers or headphones at a **comfortable level**,
get a balance of everything playing at once, **forget eq**, **forget compression**.
Using just your faders and pan pots move tracks up and down, left and right
until it starts to **feel like a song**.

**3.** Do elements feel **clouded**, **dull** or to **bright**?
If so we can look at applying so **EQ** to your tracks.
A good idea when using EQ is to try and not listen to individual tracks in **solo**,
and listen to the **whole mix**,
You will then be in a much better **postion** to make your EQ moves and
hear the real benefits of your **decisions**.

## EQ tips-

Filter out low frequencies on elements that don't need a lot low end (vocals)
Feeling muddy? look at cutting the mud in the 200-500hz area
Wanting more clarity? boost around 1-3khz
To harsh on your ears? cut some frequencies around 3-7khz
To dark? boost around 8-10khz
For more shine boost around 14- 16khz

Remember, not everything can have loads of the same **frequency**.
So listen to that reference, note what is sitting where in the mix.
Are the guitars upfront with loads mid range or are they more scooped letting the vocals through?

Now heres one element that everyone thinks is going to solve everything, **compression**.
Yeah it can sound amazing but you've got to pick where you want to be applied.
Tonnes of compression on cymbals does not sound good at all.
If something is too quiet trying **turning it up** or **turn something else down** before reaching for compression.

**Logic** comes with some great compressors and useful **presets**.
If unsure how to use a compressor scroll through presets and compressor types until you have a **desired result**, then refine from there.

**Compression 101:**
Slower the attack, faster the release the more **aggressive** something will sound
Faster the attack, slower the release the more **consistent** it will feel

Another tip! When using tools like EQ and compression, make sure when applying them that the **output** is the same with it **engaged** and **bypassed** by adjusting the **output volume**, You can then easily see if what you're doing is **helping** or **hindering**.

**'A few extra bits of extra advice when it comes to mixing your demos'**

Use buses (auxiliary channels) for sending things like vocals, snare drums to reverb's and delays.
This will save you a lot of computer power instead of having loads of plugins loaded.

Use panning to your advantage, don't be afraid to hard pan, elements of a mix get built up quick so spread similar sounding elements out.

A reference is a great tool but don't try and recreate it, take the main elements that you need and apply them to your mix.
Are the guitars panned hard left and right? Are the cymbals smooth and behind the guitars? Do the vocals sit on top or are they in the mix?

# 'Mastering'

**We're not going to call this mastering**.
However, just to make sure we're not all cranking up our headphones
and not left wanting for things to sound a little sweeter,
we should look at applying something to the stereo output.

When mixing give your stereo output **headroom**,
keep the **peaks** of your audio around **-6db** without any limiting or compression.
T.his will help you in the **long run**,
as you will always have room to turn up elements
without causing damage to your signal.

## #1

I would look at using something like the Vintage Tube EQ to shape the mix,
if this hasn't already nailed with the previous steps.
Look at boosting around 14 or 16 kHz add a little sheen and air.
If you need a little more low end have a play with that too,
but a little goes a long way!

## #2

We can look at a tad of compression on the stereo output,
one that I like is the **Studio VCA**, it's really clean and doesn't colour the mix.

**A good starting place:**

Ratio- 1.5/2
Attack- 30ms
Release- Auto or 5ms
Pull the threshold down until its doing 1-2db of compression

## #3

The last step is to add a **limiter** to the end of your chain to help catch
any of those loud peaks, I prefer to use the **adaptive limiter** in Logic.
Set it so that it is only hitting the kick and snare hits.
if you hit this stage to hard **distortion** will be applied to the mix.

# Thanks

And **there you go**, a demo ready to send to your band mates, the **producer** you're going into the **studio** with or whoever **you** wish to send it too.

Have fun, and best of luck!

**Daly George**

**To get in touch**:


www.dalygeorge.com

dalyjgeorge@gmail.com

dalyjgeorge

dalygeorgeproducer