The crucial 5 steps

The essential starting guide to create your own legendary studio

The moment you feel it, you know it.

Mission

before

after

The irresistible moving spirit to challenge the status quo as a musician, producer or songwriter

From the very day I started out as a musician I was dreaming of creating an environment for myself and others that offers perfect conditions to make & record music - in a way that not only feels natural and puts as little as possible between me and the moment when inspiration strikes , but rather **becomes part of my inspiration itself.**

Other than probably some of you I consider myself a digital native, so naturally my approach on creating music was based on using a computer and plugins. Plugins that for a good part emulated vintage analog gear.

Even though the possibilities were overwhelming - and yes I'm aware that only 15 years ago musicians, song-writers & producers would have dreamed of having the tools we have at hands today - **I still felt something essential was missing.**

Of course that was at the very beginning of my journey when I didn't know anything about recording tech- niques, room treatment, studio gear etc. **I'm sure all of you either were in that same position once, or maybe you still are now.**

But back in 2011 I had an experience that **changed my life as a musician and the view on how music can be created:** My band and I had the chance to fly over to Los Angeles to work with a legendary producer and record an album in a mostly analog studio **with a lot of that amazing vintage gear I only knew as plugins until then.**

The first crucial insight that struck me was the huge difference in the process of dialing in the sound by turning physical knobs instead of going through various drop down menus fumbling around with the mouse. Making it a tangible haptic experience with instant amazing results.
That was the very moment I knew exactly what I really wanted...

why

Because - you remember that movie „Cast Away" when Tom Hanks finally managed to lighten the fire with his own two hands and he ran around shouting:

„I HAVE MADE FIRE!"

Can you imagine the feeling?

Picture it...

...that's why :D

Seriously - there's nothing more empowering than pushing your own boundaries and not only being creative, but becoming a creator.

Returning back to the basics - what are the most important links?

Ok, I know for some of you who have worked analog long before the so called „digital revolution" came along or those of you who already own or work in bigger studios this might sound a little weird. **But for me, hearing our music coming out of the headphones already sounding like a record while performing live in the studio was a true revelation!** And there might be a good chance you either know exactly what I mean or are actually longing for an experience like this.

Long story short: that is why I started working on the dream of having my own studio with vintage analog gear as soon as I returned from LA. The problem was of course: these legendary pieces of equipment were **either unobtainable or so prohibitively expensive, they were completely out of my reach.**

But now - only 5 years later I did it. And not only at a fraction of the cost but also attended by an absolutely incredible learning experience in a field I knew nothing about (and never thought I could master). **If you follow me along, I'll show you how.** Anyways, enough of me, this is about you and your vision. What does your perfect studio environment look like?

Try to picture it.

Before we go on - no matter your skill level or experience, I guess it can never be a bad thing to take another look at the basics. So I'd like to step back and focus on what actually comes first. **What are the core elements of a good recording chain and what are the most important links?** Talking of signal chain - often times I hear people mentioning the

mic as the first link, followed by the preamp and so on. But I guess you'll agree the **single most important link to get a great sound without having to twist and bend the actual signal, is the talent in front of the mic.**

So many times in the past I experienced what a huge, huge difference it made if the musician really mastered the instrument. And by that I mean not only that he or she is a great player or singer, but also knows exactly what he or she sounds like - wants to sound like - how the instrument sounds and finally - **how to make it sound.**

If that's the case you'll find your job as a recording engineer extremely easy. Now, one could say up next in the chain would be the mic then, which I agree can be - behind the vocals - the second most important link.

The core elements of the recording chain
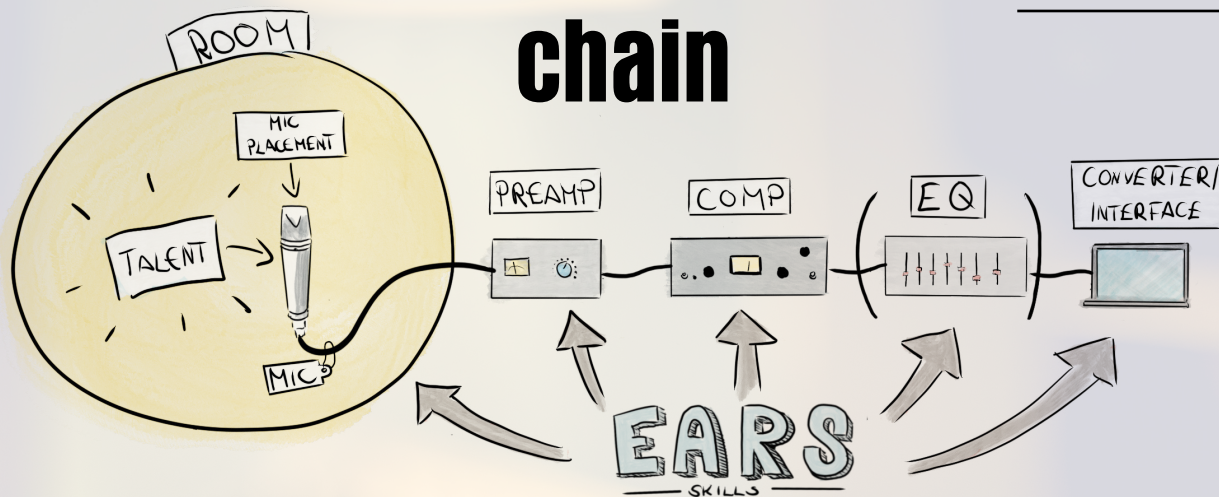
Basics

But depending on what you are trying to capture it might share it's position with something else - just as important: **The room.**

Before I built my studio I highly under-estimated the importance of a good sounding room! Just like the talent - if the room sounds great, your work will be a lot easier, that's why I'll cover more on that in further detail a little later.

Right after the mic your outboard gear comes into play - namely the preamp, the compressor - maybe an EQ and finally the A-D converter. While without the first and the last you won't even be able to record a single bar at all, a good comp before hitting the converters in my humble opinion can be very helpful, especially when dealing with extremely dynamic signals. **And a tube compressor such as the LA2A really can make your signal sing.**

A good analog EQ on the other hand is very nice to have, but if I had neither and had to choose, I would always go for a good compressor first. As nowadays, a very usable interface with solid preamps and converters can be had for a relatively reasonable price, **I'd consider the compressor the first dedicated piece of analog gear to get.**

But there's still something that comes before, which I'll cover on the next page.

my top 5
Lessons learned

There's no such thing as the one and only truth when it comes to music production, but for newbies and experts alike, there's a lot of room for mistakes...

That little something I was referring to on the previous page are our ears and the skills to translate from what we hear to what a mix or a song needs following certain sound aesthetics. How we bring selected ingredients together to finally come up with the sound we actually wanna hear.
Like a painter using his color palette and brush to create blends that help him express what he wants to deliver.

I know this is very basic now, but I think it's important to point out since one of the **core differences between the old school way of working analog, and the digital world** is, that in the latter we're creating music not only with our ears, but also very much with our eyes.
Try to switch off your screen while mixing and you'll be amazed how much we depend on visual feedback of a graphic user interface nowadays.
That's why plugins need to look better and better ;-)
Anyway, this brings me to the following chapter which I rudely called: „Lessons learned".

1. Getting Fooled By Marketing Hype:
Starting out as a newbie I felt it was particularly easy to fall for all kinds of marketing tricks & online forum hype, as I had no idea what really matters. Plugins were advertised with flowery descriptions such as „warmth", „world-class", „gold-standard" or „authentic".
While at the time I had no idea what „warmth" really meant in terms of music, I kind of bought it, especially since there was always at least one big name producer assuring „this time they absolutely nailed it" (NOT).

Later I found out that apparently they pretty much nailed everything all the time and if there was a V2 of a plugin they nailed it even more! (still NOT ;D)

But this goes not only for plugins, of course - also for other pieces of gear such as converters. By nowadays technical standards I'd say, if your recording sucks, it's most definitely not the converters!

2. Getting Lost In Options:
This is a big one. While being at the mercy of the above mentioned hype I completely overlooked that my DAW of choice already came with a boatload of tools and gadgets. And that even the most basic DAW setup offers so many options it's almost self-evident you either get completely lost, or you don't even bother to dive into it and go with 3rd party tools that imply an easier way to get there.
One of my personal key moments when working on an analog console with analog outboard gear for the very first time was: My options were limited.
That simple fact helped me tremendously in making decisions and focusing on what was essential. And the instant feedback triggered by a haptic experience made me get my head around certain things much faster - which gave me better results in less time altogether.

3. Overdoing It
Having thousands of options at hands in combination with the „visual" way of working mentioned at the beginning of this chapter, for me personally led me to overdoing my mixes.
I edited all tracks to perfection, cleaned every single spot and corrected all mistakes. The record ended up to be technically perfect, but overall pretty much lifeless and sterile. During my first time working in that studio in LA I learned from our producer that **music is not about perfection, but about vibe and that too much perfection will completely kill the vibe!**

4. Underestimating Room Treatment
As mentioned in the beginning, I highly underestimated the significance of a treated room.
Many times I followed some forum discussions about which mic, which preamp or which converter gives you more of that 3D sound than others. And more often than not, the photos people posted of their setups showed some kind of expensive high-end converters while the room treatment was reduced to putting some foam on the walls.
Depending on your default room situation, a workable or even **a very good room sound can be achieved with DIY methods in relatively little time,** and I'll share some helpful links on that topic in a future article.

5. Underestimating Mic Placement
One more mistake I made in the past certainly was underestimating the position of the mic. Sometimes moving the mic only a couple of inches or tilting it slightly can be enough to drastically change the tone or character of a signal.
Spending a little more time here before finally hitting record **can literally save you hours trying to EQ or compress certain signals** to make them sound in the mix.

A thousand options to waste your time

What about you?

What are your 5 biggest lessons learned?

What would you change in your setup to streamline your workflow?

How many of your plugins you wouldn't have bought if it wasn't for a voucher or special discount?

How many of them do you really use in your daily work?

Roadmap

Lets say you are like me and you also want to enable yourself to create your own perfect studio - or you simply want to upgrade your existing studio - here's a quick overview of my roadmap:

Ok, here's the thing: I introduced you to what was my personal motive to go on this trip building my entire studio from scratch. If you've been reading up to this point I'm pretty sure you know exactly what your own motivation is.

Even though to some, much of it may look pretty basic - as mentioned earlier, I want to take it one step further. By **„building a studio from scratch"** I mean building pretty much everything you need to make the dream of your own studio come true - **even the legendary analog gear.**

I know this might sound like a insuperable obstacle, but I can assure you it's not. I did it, many others did it before (many of whom never expected themselves to be capable of it) and if you follow me along **I'll take you on a trip at the very end of which you'll find yourself on a whole new level.**

During this trip you'll have the chance to learn about building your own acoustic modules, to find out how some legendary pieces of vintage gear actually work, how you can build them for yourselves from scratch and what it means to switch on one of them for the very first time.

The first fundamental trick is to make this massive undertaking which initially looks like this:
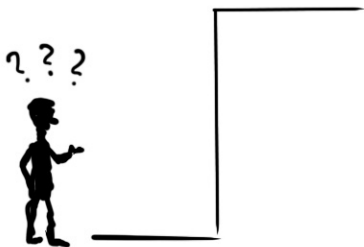
turn into this:

Breaking it down to smaller steps is essential because otherwise the risk of losing track and finally motivation is very high. See the steps I came up with in the box below.

The order of most steps needed to reach our final goal is interchangeable - depending on what is more appealing to you - and if you find one of them to be too extensive still, just break them down to an even smaller set of steps with dedicated (simpler) tasks.
What I believe should always be the first step though is to outline your status quo vs. your vision, because it makes it a lot easier to create a roadmap if you know your destination, right? ▶

Next, visualize what your studio should look like.
Nowadays there are plenty of apps out there that help you develop your designs, but of course you can also do it analog with a pencil and some sheets of paper.
The most important thing here is to visualize your thoughts, to actually bring them „on paper" because thats when they manifest themselves for the first time and become a solid foundation for further ideas. I totally loved that part because it made me feel like the studio was now becoming reality.
If you're starting out with a shell only like I did, it's now time to deal with basic construction work, proper electricity in the room, laying cables and so on.

Create an inspiring signal chain

Steps:

• *outlining the status quo & your vision*

• *visualizing your studio layout*

• *building up the basics*

• *treating your room(s)*

• *setting up your primary signal chain*

• *building our own legendary gear*

Followed by further room treatment, such as measuring the room, building absorbers etc. Bass traps are essential and some room situations can even make it hard to tame the low end without extensive bass trapping. Pretty obvious, but still I see it happening a lot: **the goal is not to end up with a dead room with no reflections at all.**
It's rather a balanced mixture between diffusing and absorbing sound. This can be very complex and I'll talk about that in more detail in a future article.

Finally we can setup our primary signal chain. Now, this isn't meant to be a shopping guide for studio monitors or soundcards etc. You get plenty of those anywhere on the web. My only advise here - and this not only concerns the essential pieces of gear, but the entire

studio setup: **keep it simple.**
(you remember we talked about getting lost in options...)
I was told it is important to set up a simple yet solid signal chain, and I can confirm that's true. But from what I learned in the past, I would go one step further: **create an inspiring signal chain**.

What exactly that means I'll cover in the next chapter...

Legends

Asking prices for vintage recording gear reached astronomical heights lately - but there's a solution

Bringing history back to life

You know the experience when you're in a recording situation and your voice or your instrument sounds so amazing through your headphones you're **instantly inspired to make up new lines** and try out things you haven't tried before?

Well, I remember two specific moments: one of them was during my first "analog" session back in 2011 when the engineer plugged in an LA2A into the signal chain, the other one was the first time singing through my U47.

I agree not everybody can afford to buy an LA2A and a U47 as a part of their primary signal chain, and it doesn't necessarily have to be there's plenty of other great gear out there, but the point is:
if you can create an inspiring signal chain, it may be the first big step that'll change the way you create music.

I just said - it doesn't have to be an LA2A - but maybe **we can work on that**. After all, the ultimate challenge is to build your studio including the gear.

But what is it that makes above mentioned and other similar tools so special? Well, there's something about certain pieces of vintage gear that gives them a reputation beyond being solid or even high-end - for the younger ones among us, almost something mythical. **Used on countless famous records** from the 60s to the present day, most of them - after being regarded merely as paper weights or even junk in the meantime when tubes were replaced by transistors - turned into something highly sought after, and **finally became legendary.**

Because of being audible on so many recordings we all know, there's something about the s**ound of these gems seeming so familiar.** But the problem is, the hype that's been created ever since led to asking **prices on the used market skyrocketing** to a point where it's absolutely getting ridiculous. Last time I checked a vintage UA176 went for $8900 USD!!

And that very fact, drove me to finding out how these things worked, how they were built and how to recreate them for myself. And I mean not just kind-a-like clone, but **true-to-the-original** in every aspect. (original components, custom designed chassis, etc).
And if you stay with me I'll show you, how you can recreate every single one of these vintage beauties pictured on the right (and more) down to the very last screw, with your own two hands...
...so stay tuned!