

Mixing & Mastering Studio

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## Start now and use what you have to earn money for what you want!

1	Computer / Laptop
	I guess you already have one! Start with it and upgrade later.
1 2	Recording Software (DAW)
	Choose one and really learn how to use it. Don't switch from one to another too often. I'm a Cubase User and if you want to make it yourself easier to implement some of my tutorials I'd recommend using Cubase too.
3	Audio Interface
	The biggest difference when it comes to interfaces these days is the number of Inputs and Outputs. Think about how many In's and Out's you might need.
3 4	Microphone(s) with cables and stands
	There are really good budget microphones out there. If your room isn't treated very well yet, start with a universal dynamic mic like a Sure SM58.
5	Headphones
	The most important thing about headphones is you need to know them. Use headphones in your home studio you're usually listening to music on.
	Nice-To-Have
	👉 monitors (studio speakers) 👉 acoustic treatment 👉 MIDI controller 👉 external harddrive
in .	2333 3 2000



... much more than just a studio it's a statement!



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## 1. Computer / Laptop

When setting up a computer or laptop for music production, there are several key factors to consider. First and foremost is the processing power of the system. A robust CPU, such as an Intel Core i7 or AMD Ryzen processor with multiple cores and high clock speeds, is essential for running your digital audio workstation (DAW) smoothly and processing audio plugins without latency.

Alongside processing power, sufficient RAM is crucial for handling memory-intensive tasks associated with music production. Aim for at least 8GB of RAM, though 16GB or more is recommended for smoother performance, especially when working with large projects or multiple tracks simultaneously.

Storage is another critical aspect to consider. Opting for a solid-state drive (SSD) over a traditional hard disk drive (HDD) ensures faster loading times and better overall performance. Consider the capacity of the SSD based on the size of your audio files and sample libraries.

Having an adequate number of ports is essential for connecting your audio interface, MIDI controllers, and other peripherals. Ensure your computer has enough USB ports, and consider the benefits of Thunderbolt or USB-C ports for faster data transfer speeds, especially when using audio interfaces or external drives.

When choosing between Windows and macOS, consider your familiarity and preference for each operating system. Most music production software is compatible with both, so the decision often comes down to personal preference. Windows systems offer a wide range of hardware options and can be more budget-friendly, while macOS is known for its stability and user-friendly interface.





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While a dedicated graphics card is not as crucial for music production as it is for tasks like gaming or video editing, it can still improve overall system performance, especially when working with visual elements in your DAW or plugins.

Embracing limitations in your setup can foster creativity and innovation in your music production process. When you're forced to find creative solutions within the constraints of your equipment or resources, you're more likely to experiment with unconventional techniques and discover unique sounds that define your artistic style. Additionally, limitations encourage focus by narrowing down your choices and preventing decision paralysis, ultimately leading to a more defined and cohesive sound in your music.

In summary, when setting up a computer or laptop for music production, prioritize processing power, RAM, storage, and connectivity. Consider your preference between Windows and macOS, and embrace limitations as a catalyst for creativity and innovation in your music production journey.

## 2. Recording Software (digital audio workstation - DAW)

When it comes to music production, one of the most critical decisions you'll make is choosing the right Digital Audio Workstation (DAW). With a plethora of options available, each boasting unique features and workflows, selecting the perfect DAW can be a daunting task. In this guide, we'll explore some popular DAWs and discuss why Cubase might be the ideal choice, particularly if you're about to watch more of my mixing and mastering tutorials.

### 1. Understanding Different DAWs

DAWs come in various shapes and sizes, catering to different preferences and production needs. Some of the most well-known options include:





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<u>Ableton Live</u>: Known for its powerful live performance capabilities and innovative session view. <u>Pro Tools</u>: A staple in professional studios, revered for its robust editing and mixing features. The industry standard and used in most commercial studios.

<u>Logic Pro</u>: Exclusive to macOS users, offering a comprehensive suite of tools for music production. <u>FL Studio</u>: Popular among electronic music producers for its intuitive workflow and extensive plugin support.

<u>**Reaper**</u>: Known for its lightweight yet versatile nature, suitable for a wide range of audio tasks.

2. Why Choose Cubase for Your Music Production?

As a Cubase user myself, I understand the importance of selecting the right tools for your music production journey. Here's why I believe choosing Cubase is a smart decision, especially if you're looking to implement the tips and techniques from my tutorials into your workflow:

Familiarity and Continuity: By using Cubase, you'll be working in the same environment as the tutorials you're following. This creates a seamless experience, allowing you to directly apply the concepts you learn without the need for translation to a different DAW. The continuity ensures that you can implement my tips effortlessly and see immediate results in your projects.

Hands-On Learning: Cubase offers a comprehensive set of features and tools for music production, making it an ideal platform for hands-on learning. As you follow along with my tutorials, you can practice and experiment within the same software environment, reinforcing your understanding and skill development. This direct application of knowledge accelerates your learning curve and empowers you to become a more proficient producer.





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Community and Support: As part of the Cubase community, you'll have access to a wealth of resources and support networks. Whether you're seeking advice, troubleshooting assistance, or creative inspiration, the Cubase community is there to guide you every step of the way. By aligning yourself with this community, you gain valuable insights and connections that enhance your learning journey and fuel your growth as a music producer.

Professional-Grade Tools: Cubase is trusted by professional producers and engineers around the world for its powerful capabilities and intuitive workflow. By using Cubase, you're harnessing the same tools and techniques employed by industry professionals to create hit records and groundbreaking music. This professional-grade software empowers you to elevate the quality of your productions and achieve your musical aspirations with confidence.

In summary, choosing Cubase for your music production endeavors offers a host of benefits, including familiarity, continuity, hands-on learning, community support, and access to professional-grade tools. By embracing Cubase as your DAW of choice, you're not only investing in a powerful software platform but also setting yourself up for success in your creative journey.

I'm excited to see how Cubase transforms your music production experience and helps you unlock your full potential as a producer. Let's embark on this journey together and create something truly extraordinary!

#### 3. Evaluating Your Needs

Ultimately, the right DAW for you depends on your specific needs, preferences, and workflow. Consider factors such as:





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Feature Set: Assess the features and tools offered by each DAW and determine which ones align with your production requirements.

Workflow: Pay attention to the workflow and interface of each DAW. Choose one that feels intuitive and conducive to your creative process.

Compatibility: Consider the compatibility of your chosen DAW with your hardware, plugins, and third-party software.

Remember, the best DAW is the one that empowers you to unleash your creativity and bring your musical vision to life.

### 3. Choosing the right interface

An audio interface serves as the central hub of your home studio setup, facilitating communication between your computer and external audio devices such as microphones, instruments, and studio monitors. But what exactly is an audio interface, and why is it essential for your music production endeavors?

What is an Audio Interface?

At its core, an audio interface is an external hardware device that converts analog audio signals into digital data that your computer can process, and vice versa. It serves as the bridge between the analog world of sound and the digital realm of your digital audio workstation (DAW).

Selecting the perfect audio interface is a crucial step in setting up your home studio. Whether you're recording vocals, instruments, or electronic music, the right interface can make all the difference in





capturing high-quality audio and maximizing your creative potential.

In this guide, we'll explore key factors to consider when choosing an audio interface and why certain features, like DSPs, can enhance your recording experience.



This is Steinberg's UR44C interface, my main interface at the time I'm writing this guide.

I've chosen this interface for it's number of In's and Out's (I/O's), for it's DSP power and for the two separate headphone mix possibilities.





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#### 1. Consider Your Recording Needs

Before diving into specific features, it's essential to assess your recording requirements. Ask yourself questions like:

- What type of connection do I need (USB, Thunderbolt, ...)
- What instruments or sources will I be recording?
- How many simultaneous inputs do I need?
- Do I need phantom power / mic preamp's?
- Will I be recording solo or with a band?
- Do I require MIDI connectivity for controlling virtual instruments?
- Will I use external hardware for mixing
  Understanding your recording needs will help narrow down your options and ensure you choose an interface that suits your workflow.
- 2. Choosing the Right Inputs and Outputs

When selecting an audio interface, the number of inputs and outputs is a critical factor to consider. Here's a basic guideline:

Inputs: Determine how many simultaneous recording channels you'll need. For solo artists or small projects, 2-4 inputs may suffice. If you're recording a full band or multiple sources, like a complete drum kit, simultaneously, opt for interfaces with 8 or more inputs.





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Outputs: Consider your monitoring setup and whether you need multiple outputs for speakers, headphones, or external effects processors. Most interfaces offer at least two outputs for stereo monitoring, but larger setups may require additional outputs.

### 3. Understanding DSPs

Digital Signal Processors (DSPs) are onboard processors found in some audio interfaces. These processors handle real-time effects processing and mixing without taxing your computer's CPU. Here's why DSPs can be beneficial:

Low Latency Monitoring: DSPs allow for near-zero latency monitoring, enabling you to hear yourself or other performers in real time without delay. This feature is invaluable when recording vocals or live instruments, ensuring optimal performance and accuracy.

Onboard Effects: Many interfaces with DSPs come bundled with built-in effects, such as EQ, compression, and reverb. These effects can be applied during recording or monitoring, providing instant polish and enhancing the overall sound quality of your recordings.

### 4. Similarity Among Interfaces

In recent years, audio interfaces have become increasingly similar in terms of basic functionality and features. This convergence is largely due to advancements in technology and manufacturing processes. Here's why most interfaces are pretty similar these days compared to twenty years ago:

Standardization: Industry standards and protocols, such as USB, Thunderbolt, and ASIO drivers, have contributed to a more uniform user experience across different interfaces.





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Advancements in Technology: Improved circuitry, converters, and preamps have led to higher-quality audio reproduction and reduced the need for external processing or signal conditioning.

Cost Efficiency: Advances in manufacturing have made it more cost-effective to produce audio interfaces with a wide range of features and capabilities, resulting in greater accessibility for musicians and producers.

In conclusion, choosing the right audio interface requires careful consideration of your recording needs, inputs/outputs, DSP capabilities, and budget. By understanding these factors and staying informed about technological advancements, you can make an informed decision and select an interface that empowers you to unleash your creativity and achieve professional-quality recordings in your home studio.

## 4. Microphones with cables and stands

Selecting the perfect microphone(s) is essential for capturing pristine audio recordings in your home studio. With a myriad of options available, each with its own unique characteristics, choosing the right microphone can seem overwhelming. In this guide, we'll explore different microphone types, the benefits of dynamic microphones in untreated rooms, why the Shure SM58 is a versatile choice, and considerations for microphone stands and cables.

### 1. Understanding Microphone Types

Microphones come in various types, each suited to different recording scenarios:





Dynamic Microphones: Known for their durability and versatility, dynamic microphones are ideal for capturing loud sound sources and performing on-stage. They can handle high SPL (Sound Pressure Level) and are less sensitive to ambient noise, making them suitable for recording in untreated or noisy environments.



A typical dynamic microphone: Sure SM58

A large diaphragm condenser tube mic: Se 2200T

Condenser Microphones: Condenser microphones are prized for their sensitivity and accuracy, making them ideal for capturing vocals, acoustic instruments, and studio recordings. They require phantom power and are more sensitive to handling noise and room reflections, making them better suited for controlled studio environments.

Ribbon Microphones: Ribbon microphones offer a warm and vintage sound character, making them popular for recording vocals, brass instruments, and guitar cabinets. They are delicate and require careful handling, but they excel at capturing nuanced performances and adding a touch of analog warmth to recordings.





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#### 2. Benefits of Dynamic Microphones in Untreated Rooms

In untreated or acoustically challenging environments, dynamic microphones offer several advantages:

Durability: Dynamic microphones are rugged and resilient, making them less susceptible to damage from mishandling or accidental drops. This durability makes them ideal for live performances and recording in less-than-ideal acoustic spaces.

Off-Axis Rejection: Dynamic microphones exhibit excellent off-axis rejection, meaning they capture sound primarily from the direction they're pointed while minimizing pickup from the sides and rear.

This helps reduce unwanted room reflections and ambient noise, resulting in cleaner recordings in untreated rooms.

3. The Timeless Versatility of the Shure SM58

The Shure SM58 is a legendary microphone renowned for its durability, reliability, and versatility. Here's why it's always a good choice:

Robust Construction: Built like a tank, the SM58 can withstand the rigors of live performance and frequent use in the studio. Its rugged construction ensures consistent performance even in demanding environments.

Sibilance Control: The SM58 features a tailored frequency response that minimizes sibilance and feedback, making it an excellent choice for vocalists and public speakers.





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Universal Application: With its cardioid polar pattern and frequency response tailored for vocals, the SM58 is suitable for a wide range of applications, including live vocals, studio recording, podcasting, and broadcasting.

4. Considerations for Stands and Cables

When choosing microphone stands and cables, consider the following:

Stands: Invest in sturdy microphone stands that provide stability and adjustability. Boom stands are versatile for positioning microphones at different angles and heights, while tripod stands offer stability for stationary setups.

Cables: Choose high-quality XLR cables with durable connectors to ensure reliable signal transmission and minimize interference. Opt for cables of sufficient length to reach your audio interface or mixer without tension or strain.

In conclusion, selecting the right microphone(s) is crucial for achieving professional-quality recordings in your home studio. Consider your recording environment, application, and budget when choosing between dynamic, condenser, and ribbon microphones. The Shure SM58 stands out as a timeless choice for its durability, versatility, and consistent performance across a variety of applications. Pair your microphone(s) with sturdy stands and high-quality cables to complete your setup and unleash your creative potential in the studio.





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## 5. Headphones

Selecting the perfect pair of headphones is essential for critical listening and monitoring in your home studio. With an array of options available, it's important to consider factors like headphone type, familiarity, and the necessity of headphones in a home studio environment. In this guide, we'll explore the differences between closed and open-back headphones, the benefits of choosing familiar headphones, and why headphones are a necessity in a home studio setting.

1. Understanding Closed-Back and Open-Back Headphones

Headphones come in two primary designs: closed-back and open-back. Here's a brief overview of each:

Closed-Back Headphones: Closed-back headphones feature sealed ear cups, providing isolation from external noise and preventing sound leakage. They are ideal for tracking, mixing, and monitoring in environments where sound isolation is critical, such as recording sessions or live performance settings. By the way: some vocalists even prefer open-back headphones, which makes them also hearing their voice better in the room, but it can cause that the microphone is also capturing the sound of the headphones, so called microphone bleed.

Open-Back Headphones: Open-back headphones have perforated ear cups that allow air and sound to pass through. This design creates a more natural soundstage and prevents sound from being trapped inside the ear cups, resulting in a more spacious and transparent sound. Open-back headphones are preferred for critical listening and mixing in controlled studio environments.





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2. Benefits of Choosing Familiar Headphones

Opting for headphones that you're already familiar with can offer several advantages:

Consistency: Familiar headphones provide a consistent reference point for your listening experience. You're accustomed to their sound signature and characteristics, allowing you to make more accurate judgments when mixing and monitoring your music.

Comfort: Comfort is key during long recording or mixing sessions. Familiar headphones that fit well and feel comfortable on your ears ensure you can focus on your music without distractions or discomfort.

Confidence: Using headphones you know well instills confidence in your decision-making process. You trust your familiar headphones to deliver accurate and reliable sound reproduction, enabling you to make informed mixing and mastering decisions with confidence.

3. The Necessity of Headphones in a Home Studio

Headphones play a crucial role in a home studio environment for several reasons:

Isolation: Headphones provide isolation from external noise, allowing you to focus on your music without distractions from your surroundings. This is especially beneficial in home studio setups where ambient noise can be a challenge.

Privacy: When recording vocals or instruments, headphones allow performers to monitor their performance without audio bleeding into microphones. This ensures clean recordings and enables precise control over monitoring levels during tracking sessions.





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Reference Monitoring: Headphones serve as an essential tool for reference monitoring during mixing and mastering. They provide an alternative listening environment to studio monitors, allowing you to check your mix for balance, stereo imaging, and tonal accuracy from a different perspective.

In conclusion, choosing the right headphones for your home studio requires careful consideration of factors like headphone type, familiarity, and the necessity of headphones in your workflow. Whether you opt for closed-back or open-back headphones, prioritize comfort, consistency, and confidence in your decision-making process. With the right pair of headphones, you'll be equipped to make informed mixing and monitoring decisions and achieve professional-quality results in your home studio.

### Nice to have but not a necessity

While the essentials like a computer, DAW, and audio interface form the foundation of your home studio, there are several optional accessories and equipment that can elevate your setup and enhance your music production experience. In this guide, we'll explore some nice-to-have items that can take your home studio to the next level.

#### 1. Acoustic Treatment

While not essential, acoustic treatment can significantly improve the sound quality and acoustics of your home studio. Acoustic panels, bass traps, and diffusers help absorb and diffuse sound reflections, reducing room resonances and improving the accuracy of your monitoring environment. Consider adding acoustic treatment to your studio space for a more professional and balanced listening experience.





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#### 2. Studio Monitors

While headphones are sufficient for monitoring in many home studio setups, studio monitors offer a different listening experience and can provide a more accurate representation of your mix. Investing in a pair of studio monitors allows you to check your mix for balance, stereo imaging, and tonal accuracy in a different listening environment, complementing your headphone monitoring setup.

#### 3. MIDI Controller

A MIDI controller adds a hands-on element to your music production workflow, allowing you to play and control virtual instruments, synths, and samplers with greater expression and flexibility. Whether it's a keyboard controller, pad controller, or MIDI drum pad, adding a MIDI controller to your setup opens up new creative possibilities and enhances your interaction with your DAW and virtual instruments.

4. Hardware DAW Controller

A hardware DAW controller provides tactile control over your digital audio workstation, allowing you to manipulate parameters, adjust settings, and navigate your DAW more intuitively.

While not essential, a hardware DAW controller can streamline your workflow and make tasks like mixing and automation more efficient and enjoyable. Consider adding a hardware DAW controller if you prefer hands-on control over your software.





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#### 5. External Effects Processors

While most DAWs come bundled with a variety of built-in effects and plugins, adding external effects processors can expand your sonic palette and add character to your recordings. Hardware compressors, EQs, reverbs, and delays offer analog warmth and coloration that can enhance your mix and bring out the best in your tracks. Experimenting with external effects processors can spark creativity and add a unique touch to your productions.

#### 6. Instrument Collection

Building a collection of instruments, both virtual and physical, can enrich your music production toolkit and inspire new ideas. Whether it's guitars, keyboards, drum machines, or ethnic instruments, having a diverse range of sounds at your disposal allows you to experiment with different textures and genres and tailor your productions to your creative vision.

In conclusion, while the essentials form the backbone of your home studio, adding optional accessories and equipment can enhance your setup and elevate your music production capabilities. Whether it's acoustic treatment, studio monitors, MIDI controllers, hardware DAW controllers, external effects processors, or instrument collections, consider incorporating these nice-to-have items into your studio setup to unleash your creativity and achieve professional-quality results in your home studio.

### And that's it

It's actually not that much you really need in the beginning. Remember: just start and use what you have to earn money for what you want. Many great records are done with cheap and simple equipment. You just have to learn how to properly use what you have.

