

# Hip Hop Music Technology and Blowing Up

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Hip hop music production has changed drastically in the past decade as the advent of digital computers and the Internet have changed the face of music production. Tools and sounds once reserved for six-figure production facilities are now readily available to the amateur producer willing to spend several thousand dollars outfitting his own personal studio. Even cheaper, software-only packages lower the entry level even further with some incredibly powerful packages selling for less than fifty dollars. But high-priced production facilities have spawned a new market of even better, faster, more capable, and expensive equipment to replace the equipment that has become cheap enough for everyone to buy.

Questions concerning equipment and its role in hip hop have never been more relevant. With access to computers becoming cheaper and those computers becoming faster and more powerful, more hip hop producers now have access to the process of *high-fidelity* hip hop music production. Especially with the advent of the Internet, where sounds and software can be exchanged as easily as pieces of email, it is not difficult for an aspiring teenager with a networked computer to get his or her hands on the necessary tools to create high-fidelity hip hop sounds.

Hip hop production has always been intimately tied to technology. However, it is impor-

tant to note that hip hop production has never required the latest and greatest equipment. The earliest pioneers of hip hop used the analog hardware abandoned by the recording industry who were in search of even better equipment; two turntables and a microphone have been the equipment of choice for many a hip hop artist.

Newer, digital technology has certainly begun to make its impact on hip hop music production. The beats of Timbaland introduced us to a much cleaner, tighter, more *perfected*, sound. His beats are the byproducts of high-end, high-fidelity, precision engineering. This hyperprocessed sound, which is becoming more and more popular among hip hop producers, requires the latest and greatest digital music hardware to produce.

However, not all artists have bought into the processed sound. The superproducers Chad Hugo and Pharrell Williams, known as the Neptunes, have taken the hip hop scene by the throat with their distinctive sounds, including an aggressive, analog sound and style that uses technology to create a more acoustic, real sound.

In this essay, I concern myself with the role that technology plays in leveling the playing field and determining who “blows up” and who remains a bedroom producer. I contacted several independent hip hop producers who are part of a ever-growing, vibrant, virtual community of bedroom producers on the Internet. However, few of these bedroom producers will ever reach any noteworthy level of fame. What kind of access do these bedroom producers have to equipment and does this affect their prospects? Why have the Neptunes escaped Virginia and taken over the world of hip hop beats while countless other hip hop beat chemists have been left behind?

# Equipment

In evaluating the role of equipment technology, its important to understand the landscape of that technology. The music equipment industry has changed drastically in the last decade, directly in response to the demand for equipment to produce hip hop music.[1] Equipment from popular manufacturers like Akai, E-mu, and Korg make up production systems ranging from those of bedroom producers all the way to those of high-end studios. Another important change in the industry has been the increasing role played by software, which can be attributed to software's greater flexibility (though usually less fidelity) when compared with hardware's lack of flexibility. The price and availability of this new wave of equipment determines who can produce these new sounds.

Today hip hop producers can chose from a broad range of equipment. For the hip hop producer, the sampler is certainly the central piece of hardware as it allows samples to be recorded, resampled, reproduced, and regurgitated, all in one box. Another piece of equipment, the sequencer, allow a producer to coordinate many pieces of hardware to produce a entire song. Increasingly, software sequencers are replacing hardware sequencers because software sequencers are much easier to learn and use. Korg keyboards (think pianos) are incredibly popular, and usually come with built-in samplers and sequencers as well. A hip hop producer will also own his fair share of effects boxes, effect plug-ins, sound cards to expand the sonic memory of his keyboard, and sample libraries from which elementary sounds, like kicks and snares can be found.

Of the independent hip hop producers that I contacted, all of them owned a sampler (usually an Akai or E-mu) or a sampler-enabled keyboard, several effect boxes, handfuls of

software plug-ins, and gigabytes of sample kits. Rock It Productions, whose beats are among the most popular and most downloaded on MP3.com, provided me with their equipment list which provides a glimpse into the equipment world of a independent hip hop producer.

Korg Triton 61 key, E-MU Mo Phatt module, Roland XV-3080 module, Behringer eurorack 8 channel mixer, NUMARK TT1600 turntable, RCA Stereo Pre-amp, AKG K-220M Headphones, HP Pavilion Computer, Cool Edit Pro 2, Sound Blaster Extigy, StudioPhile M-Audio Monitors, Kenwood HIFI Component System w/ Bass Reflex Speaker System.[4]

The above equipment list would cost an estimated \$6,000. An interesting comparison can be drawn between this setup and the setup of a large, professional sound recording studio, whose equipment list are typically valued in the high six figures or low seven figures.[2]

Below is a list of typical equipment used to produce hip hop music. The top half is a list of hardware and the bottom half is a list of software.

Table 1: Equipment Prices [3]

Hardware	
Tascam SX-1SE Digital Workstation	\$8,699.99
Akai MPC4000 Studio D Production Station	\$3,399.99
Akai MPC2000XL Sampler	\$1,399.99
Akai DPS24 24-Track Digital Personal Studio	\$5,499.00
Korg TRITON Studio 88-Key Workstation/Sampler	\$3,399.99
Software	
ProTools	\$11,995.00
Cubase VST	\$499.99
Logic Audio Platinum	\$499.99
Emagic EXS24 Software Sampler	\$299.95
FruityLoops 3	\$49.00

The more expensive items in the software and hardware categories are usually reserved for the recording studio. Surely, budding hip hop producers do not have access to such equipment. ProTools and FruityLoops provide an interesting comparison.

ProTools is a suite of software that integrates with ProTools hardware to allow a music producer to conduct an entire recording session on a powerful computer rather than a bogging array of separate hardware. Expensive plug-ins are available for ProTools that do a variety of things including adding reverb and echo, auto-tuning, auto-mixing, compression, and equalizing or “sweetening” sounds. ProTools cost so much money because it can do all of these effects in real time at the highest level of fidelity available. FruityLoops is also combined sequencer/sampler software application that supports the VSTi plug-in interface which allows it to work with plug-ins of varying quality. Because of FruityLoops cheap price, it has become the most popular software sequencer amongst amateur and smaller independent hip hop producers. However, to even an untrained ear, there is a noticeable difference in sonic fidelity produced by ProTools and FruityLoops. This implies that the restrictive cost of ProTools limits who can use it and more importantly, who has access to producing that high-fidelity sound. It is necessary to note that the difference in fidelity is not always this profound. Of the producers I talked with who were semi-professional, most owned a professional grade sampler and therefore had access to a higher degree of professionalism. However, there is still a sonic differential between ProTools and a Akai sampler.

While there have been huge advances in technology, the equipment is still a barrier because the equipment determines the quality of sound that can be produced. Fidelity has become a barrier for bedroom producers in their quest to enter the big time. No matter

how good your beats or bass lines are, an unprofessional sound will always prove a stumbling block. The important question then becomes, how does access (or lack of access) to technology help (or hurt) someone's chance to blow up?

## Equipment and Blowing Up

By far the most enlightening of my correspondences was with Carlos Bess.[1] Carlos is a studio engineer/producer who has worked on 15 platinum and 6 gold records, and has received 7 Ampex Golden Reel Awards, 5 3M Visionary Awards, a Brit Award nomination and a Grammy nomination. Carlos is best known for his work with the Wu-tang Clan as a studio engineer on their "Enter the Wu-tang" album.

In discussing hip hop equipment with Carlos, I was most interested in determining, in his opinion, how much of a role equipment had in leveling the playing field. Was it easier now more than ever to make it big with all this "cheap" equipment available?

Carlos commented that, while high-end digital hardware and software was becoming cheaper, its price tag was still out of the range of the beginner producer. Carlos, who has spent the last 10 years as a studio sound engineer, was convinced that skill was a better determining factor when judging whether someone could escape the bedroom and enter the big time. Carlos clarified his stance when he bet that he could buy a four track for \$800 and out mix anyone who bought a 48-track digital workstation who tried to replicate his technique. Carlos even went so far as to say that he felt that the new equipment simply created lazy producers who could only produce *more* beats, not *better* beats.

Technology changes not only the sonic nature of the music it produces but it also changes

the landscape of the music scene by allowing more people to produce music at a near-professional level. Therefore, technology results in more beats in the beat marketplace, most of which, as Carlos believes, will be derivative and worthless. Nonetheless, with more beats comes more competition for attention, requiring that successful beats be engineered with a distinctive style that sets them apart from the rest. Execution of one's style in music certainly requires a level of mastery of one's equipment, regardless of whether that equipment is the dusty, antiquated analog or the new, shiny digital.

Carlos' opinion that skill is paramount leads to some important questions. Is the success of say, the Neptunes, attributable in the largest portion to their skills as producers? What about connections? Or pure luck?

The Neptunes are certainly skilled and their success in the late nineties can certainly be linked to their skill. However, it can not be overlooked that the Neptunes are informal members of a network of hip hop artists based in Virginia. The Neptunes hit the big time when they were invited by Teddy Riley (Virginia-based owner of Future Recording Studios) to produce Blackstreet's 1994 debut album. Along with other artists like Missy Eliot, the Neptunes have surely benefited from these "Virginia" connections. Had the Neptunes been from somewhere other than Virginia, would they have blown up?

Regardless, we cannot understate the importance of style. With regard to the Neptunes, what about their production style sets them apart from other hip hop producers? Carlos Bess attempted to explain by discussing the production methodology of Wu-tang.

"Wu-Tang is more into what [they're] feeling at the moment and capturing the essence instead of concentrating on how it sounds. Good compositions are good

compositions regardless of how correct [they] sound. It is still going to touch you.” [1]

In relation to what sets apart the Neptunes, Carlos insinuates that the production process is defined more by its goal than by which software it uses, which hardware it employs, and which knobs are tweaked. Regardless of whether the resulting sound is electronic or analog, smooth or rough, professional music is recorded, engineered, and mastered by skilled, professionals on professional equipment. When the Neptunes produced “Pass The Courvoisier Part 2” for Busta Rhymes, the resulting beat is an engineered anarchy, its roughness explicit. Therefore, style requires skill to execute that style.

Of the hip hop artists that I contacted on MP3.com, most of them will never blow up. While they use equipment that is comparable to the equipment that more famous artists use, they still operate on a smaller budget that limits their access to the best technology. It is arguable that if an artist has skill, that skill will better manifest itself when coupled with the best equipment. Therefore, despite technology seeping into the bedroom, that technology is still sonically inferior to the best technology reserved for the big timers.

And despite skill, a talented hip hop artists still needs to be heard by the “right” people in order for them to even have the opportunity to blow up. This requires either incredibly good luck or good connections of the sort the Neptunes have. The Neptunes’ success can be attributed to skill, style, luck, and connections.

The production of hip hop increasingly relies on the latest, digital technology, slowly abandoning its original, analog history of using machines such as the four track, turntable, and microphone. Arguably, while the lyrical content of hip hop has not completely aban-



done on the street, the technology behind it certainly has. The new technology behind hip hop music requires a new set of skills to create a new array of styles. Although the best equipment is still behind a high-priced barrier, the biggest barriers to success for the up-and-coming hip hop artists are still skill, style, connections, and a bit of luck.

## References

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