

Jillian Reddy  
21M.380  
11/23/2009

## From Kitsch to Kanye: The Meteoric Rise of the TR-808

"Everybody gettin' down make no mistake / Nothing sounds quite like an 808."  
-Beastie Boys, "Super Disco Breakin'"

The Roland TR-808 is perhaps the most iconic piece of musical technology to emerge since the advent of the electric guitar. First debuted during the 1980s, it quickly swept the music industry leaving in its wake a variety of never before heard genres such as techno and a bolstering of those which, like hip hop, were in dire need of some fresh beats. The 808 has a rich history intertwined with the development of many other electronic synthesizers. However, the mark of a great instrument is defined not by its past, but rather by its continued relevance years after it is first unveiled. Consequentially, "After a 28-year journey through the subterranea of electro, techno, and regional hip-hop, the 808 has achieved an influential presence in today's popscape" (Richards). Of course, the "popscape" as a whole can be analyzed to enumerate the countless individual examples of 808 uses, but as has been the case for pop throughout the ages, it is an area which can be defined not as an entity, but rather by merely one person. Love him or hate him, the current ruler of the pop kingdom is none other than Kanye West, and if he uses the TR-808 to make beats, which indeed he does, it must, by association, have risen through the ranks of instrument mediocrity and escaped its former kitsch to become relevant to today's music.

The TR-808 came into existence during the 1980s, however it is the descendent of a long line of technology which came before it and led to the

machine's ultimate development. Rhythm machines, the original term for today's drum machines, date back to the 1940s with the invention of the Chamberlin Rhythmate (Brend 60). Originally this, and other rhythm machines, were developed with the home organist in mind by creating a rhythmic accompaniment such that one person could become an entire ensemble. The Rhythmate did not use electronically generated tones, but rather a series of continuously running tapes. As such, no drum machine technology spawned directly from it; however it was indeed crucial in implanting the idea of rhythm providing machines into the minds of the public (60). In addition, both the Rhythmate and its distant cousin the Mellotron, which also used tape loops, birthed the idea of looping to create rhythms. This idea would later be implemented extensively in the use of the 808 and in many different genres of music, hip hop especially.

Following the Rhythmate, and in an effort to increase the versatility of rhythm machines, a series of pseudo-electronic and electronic machines were created during the 1960s. The first of these was the called the Wurlitzer Sideman and again, it appealed to home organists searching for a way to both add texture and keep time in practice and performance. The Sideman produced electronically generated sounds and had a series of 12 preset popular rhythms such as waltz and foxtrot (61). It was much more widely known and sold than the Rhythmate but perhaps the Sideman's most important contribution was its impact on a competition between the companies known later as Korg and Roland, the latter of which would eventually develop the 808 as a direct result of said competition. Ikutaro Kakehasi and Tsutomu Kato, founders of Roland and Korg respectively,

were each witness to the numerous drawbacks of the Sideman and were thus inspired to expand upon its technology (61). Katoh, the owner of a both a nightclub and a music shop, was approached by Tadashi Osanai, an accordionist, about creating an instrument for accompaniment which would be less limiting than the Sideman. These two men opened the Keio Electronics Lab, later known as Korg for 'Keio Organ,' and produced the DA20 DoncaMatic Disk Rotary Electric Auto Rhythm Machine in 1963 (Reid). The DoncaMatic was similar to the Sideman except that it used a rotary disc instead of tapes, thus the name DoncaMatic deriving from the 'donca, donca' sound which the machine made as the disc spun (Reid). The unit sold quite well in Japan because it was the first of its kind to be produced in the country. Two years later, Roland's predecessor, the Ace Electronics Company led by Kakehasi, created the world's first fully electronic rhythm machine, the Rhythm Ace. This instrument proved to be a financial disaster due to the fact that it had no presets and was thus impossible for an organist to play, unless, of course, they had an extra set of arms. In response to the Rhythm Ace's fully electronic capability, Katoh released an electronic version of the Donca Matic in 1966. It was the first drum machine to be fully automatic and mass produced and it also came in different varieties and sizes for different musician's needs (Brend 63). For example, a small portable version was released and aimed at guitarists to aid in keeping the time of complex rhythms while practicing (Gordon Reid). Finally, in 1967, a new version of the Rhythm Ace was released featuring 16 preset patterns, as well as tempo settings for each and defeat buttons allowing the user to mute certain sounds, if

for instance, the sound of the clave was not crucial to the rhythm which they were trying to achieve (Brend 64). It was indeed this machine which first provided the user with adequate control over their rhythms and thus paved the way for the 808.

Although during the 1970s, many drum machines were in production, these instruments still remained a relatively unused technology in music recording and performance. Also, the development of new drum machines during this period dropped to a minimum with Roland, the new Ace Electronics moniker, putting only one or two new models into production during this time. However, the popularity of the drum machine would greatly change with the introduction of the Roland TR-808 in 1980.

Although 1980 also saw the advent of another popular drum machine, the LinnDrum, the TR-808 won the market with its smaller size and much more affordable price (808 Statement). At the time, the LinnDrum cost \$2,495 and sold 5,000 machines whereas the 808 cost only \$1,000 (Colbeck) and sold countless more units. The low price allowed up and coming hip hop artists to make use of drum machine technology. The first of these artists was Afrika Bambaataa with his 1982 hit "Planet Rock," which is widely regarded as the first use of 808 in a hip hop track (Richards).

In addition to its relatively low cost, the TR-808 had many distinct features which made it such a popular machine. It allowed the user to compose various rhythms and store them in the unit's memory to later arrange them for use in song composition. It could play single songs of up to 768 measures in length, or

up to 12 songs of 64 measures in length. Another feature inherent in 808 design was the fact that each quarter note beat could be divided into 3, 4, 6, or 8 steps such that rhythms could encompass up to 32<sup>nd</sup> notes (TR-808 Operation Manual 1). This feature allowed for the 808 to perform extremely complex rhythms that a live drummer could perhaps not accurately play, thus creating one use for the TR-808 in live performance.

According to the TR-808 users manual, the 808 is “A unique and versatile rhythm device” (1). Indeed, with its ability to play 32 different percussive rhythms using 11 different sounds and accents, the 808 was the most adaptable drum machine to ever hit the market (1). These sounds included bass drum, snare drum, a variety of toms and congas, rim shot, claves, hand clap, maracas, cowbell, cymbals, and hihats (1), many of which sounded nothing like their acoustic counterparts but would nonetheless later become quintessential sounds of various genres. “Whereas drum machines like the Linn were trying to sound like a real drummer playing real drums, the 808, intentionally or not, turned that idea on its head” (808 Statement)

Of the preset sounds which made the 808 so distinctive, perhaps the most recognizable is the bass drum. The TR-808 originally attempted to model an actual bass drum using a bridged T-network, essentially a resonant filter of sine wave feedback. However, the 808 gave the user control far outside the parameters of the analog bass drum thus creating an entirely new sound (Sigman). This sound, when amplified, created a loud “boom” which became a signature of booty-shakin’ rhythms.

As with most good technology, the TR-808 was soon overtaken by a newer and shinier model. Although, “The 808 was easy to use...the percussive sounds that came spurting out of the machine felt artificial and bizarre,” (Richards) and thus the new model, the TR-909 was designed to sound more similar to analog drums. It was produced to compete with a newer version of the LinnDrum. As such, musicians clamoring to get the latest technology, “Dumped their TR-808s like yesterdays news, and many of them ended up in the hands of up-and-coming New York and Detroit dance and hip-hop producers” (Sigman). Many of these new artists were able to use the kitsch of the 808 to their great advantage. In fact, it would seem as if the 808 became even more popular posthumously, as hip hop grew into a more prevalent genre with the help of the 808 sound. “For a while, the trend was to program drum machines to sound as much as possible like a live drummer. Now much contemporary music that uses electronic percussion has reverted to...using electronic rhythm as an alternative to a live drum kit, not an imitation of it” (Brend 69).

Thus the 808 gained its fame in the late 1980s with the rise of hip hop. But like neon sweatbands, big hair, and glam rock, artifacts of the decade quickly faded away. This is exactly the reason why the 808 is so important. Instead of fading into yesteryear’s hall of fame only to be recalled with a groan when Auntie Cathy takes out the high school photo album, the 808 has in fact stayed the course. A quick search of eBay will reveal that used TR-808s, for Roland stopped producing the units a mere four years after the first models rolled off the assembly line (Richards), sell for upwards of \$2,000, which with inflation is equal

to, or perhaps more, than they cost when brand new. This begets the question of what exactly modern 808 use is, and more importantly, whether or not it is still relevant.

The answer to the question of relevance is a resounding yes. Indications of the continued popularity of the TR-808 are present in many facets of pop culture. The 808 still gets referenced in hip hop lyrics such as Atmosphere's cry to "Give me more 808 and turn up the guitars," ("Full Moon") and even in pop music as Britney Spears' "Heart [is] beating like an 808" ("Break the Ice"), although as a disclaimer, it cannot be proven that Britney has ever actually seen an 808. Perhaps even more remarkable than the lyrical shout-outs to the 808, is the number of software programs which have been created to emulate its sounds on the computer. These programs, aside from being simply fun to play around with, are even more easy to obtain than the inexpensive, used 808s of the late 80s pawnshop heyday. In fact, websites such as Hobnox.com even allow anyone with internet access to lay down 808 beats free of charge. Therefore, the music world has seen an increase of TR-808 presence from the bottom up, aptly signaling that the TR-808 has indeed entered the 21<sup>st</sup> century, and that yes, people are still interested.

Even more indicative of the TR-808's continued relevance to music than a few musical references and an unwavering army of computer savvy enthusiasts is its seamless integration into today's popular music. To illustrate this integration one must consider the present, in which Kanye West is a household name. On November 24, 2008 Kanye released a new album called *808s and Heartbreak*

(Greenblatt). It is remarkable that nearly 30 years after the TR-808 was introduced, it is still in use not only by nostalgic small bands playing coffee houses and trying to harness that vintage feel, but also by the man, the legend, the self proclaimed “number one artist in the world” (Rosen), Kanye West. The author reserves all commentary on personal opinion of Kanye’s musical talent and ignores the mediocre, and in some cases glaringly awful, reviews which the album in question received but it cannot be denied that Kanye defines the mainstream and thus the 808 is still very much a part of it.

*808s and Heartbreak* is not a title which merely namedrops the TR-808, but rather actually uses it for rhythm on all of the album’s 12 tracks (Rosen). According to album producer Mike Dean, “Every song ha[d] to have an 808 in it...no typical hip-hop beats. They [had to] be tribal drums” (qtd. in Shaheem Reid) and Kanye himself states, “I wanted my tracks to be minimal and functional. So like the function is the 808, the snare, and it gives you the groove. It doesn’t confuse your ear” (“Kanye West”). In fact, according to many, it is these 808 rhythms alone which save the album from sheer vocoder death at the hands of T-Pain.

“Love Lockdown,” a single from *808s and Heartbreak*, presents a prime example of the use of 808 and in particular, its use to implement Kanye’s minimalist idea. The track begins with the quintessential 808 bass drum in a duet with a synthesized bass guitar backing Kanye’s vocals. The 808’s looping technique is put to good use here as the same rhythmic line repeats for the entire front side of the song. Once the chorus comes in, the piece increases its groove



by implementing a second 808 rhythm loop with a more “tribal” feel to it, and this time featuring the unmistakable 808 snare. This bass line, simple and indeed minimalist in its repeated rhythms and easily distinguishable timbres, provides an interesting addendum to the song. It perfectly fits the approach of electronic creation, hallmarked here by the auto-tuned vocals, while still managing to not sound overly produced. Indeed, “West, to his credit, manages to make the machine's artificial throb sound both alien and pedestrian all at once,” (Richards) on “Love Lockdown.” Richards further goes on to say that “Having adopted the 808's heartbeat as our own, it's hard to tell what sounds fake and what sounds real,” in the song. Of course, the bass and the snare of the 808 still sound nothing like the originals, but in a world where virtually no sound from a radio is as it first came out of the instrument, the 808 fits in better than ever.

The TR-808 is everywhere. It is perhaps unnoticeable at first due to the fact that it fits perfectly into the fabric of popular music, but listen a little closer and its distinct sounds are unavoidable. The 808 has grown from a mediocre Roland product to a hot commodity on which pop artists are willing to spend thousands. Yet the TR-808 has managed to not become stale in its old age, but rather to flawlessly enter the computer age with software alternatives. It is the willingness of the general public to savor the sounds of the 808 in today's popular music, exemplified by Kanye's *808s and Heartbreak*, which keeps the tradition alive. The Roland TR-808 is therefore indeed still relevant, and perhaps more importantly in regards to its modest hip hop roots, the 808 is still in fact totally hip.

## Works Cited

- "808 Statement." *Sound on Sound* May 1997. Print.
- Atmosphere. "Full Moon." Rec. Dec. 2007. *Strictly Leakage*. Rhymesayers Entertainment, 2007.
- Brend, Mark. *Strange Sounds Offbeat Instruments and Sonic Experiments in Pop*. New York: Backbeat Books, 2005. Print.
- Britney Spears. "Break the Ice." Rec. 28 Mar. 2008. *Blackout*. Jive Records.
- Colbeck, Julien. "Linn Electronics LinnDrum." *Electronic Musician*. 1 Apr. 2001. Web. 21 Nov. 2009.
- Greenblatt, Leah. "808s and Heartbreak." *Entertainment Weekly*. 29 Nov. 2008. Web. 21 Nov. 2009.
- Kanye West. *808s and Heartbreak*. Roc-a-Fella Records, 2008. CD.
- "Kanye West." Interview. *MTV News RAW*. 19 Nov. 2008. Web. 21 Nov. 2009.
- Reid, Gordon. "40 Years of Korg Gear." *Sound on Sound*. Oct. 2002. Web. 21 Nov. 2009.
- Reid, Shaheem. "Kanye West's 808s and Heartbreak." *MTV*. 15 Oct. 2008. Web. 21 Nov. 2009.
- Richards, Chris. "What's an 808?" *Slate*. 2 Dec. 2008. Web. 23 Nov. 2009.
- Roland. *TR-808 Operation Manual*. Roland. *Roland TR-808*. Web. <<http://www.smd-records.com/Websites/TR-808/>>.
- Rosen, Jody. "Kanye West: 808s and Heartbreak." *Rolling Stone*. 11 Dec. 2008. Web. 21 Nov. 2009.
- Sigman, Mitchell. "We Like the Boom." *Keyboard* Jan. 2007: 68. Print.

MIT OpenCourseWare  
<http://ocw.mit.edu>

21M.380 Music and Technology (Contemporary History and Aesthetics)  
Fall 2009

For information about citing these materials or our Terms of Use, visit: <http://ocw.mit.edu/terms>.