

by Dan Wothke

Berliner U77 Multipattern Tube Microphone

The U77 is an admirable choice as your one and only truly high-end tube microphone.

Berliner Microphones — named in part after Emile Berliner, one of the first builders of microphones via a telephone transmitter in the late 1800s (which was eventually acquired by Bell Telephone) — completely skipped the cluttered budget microphone pool and jumped right into the elite world of high-end, hand crafted, European-designed tube microphones. According to the manufacturer, the company name became a no-brainer as the capsules and transformers for its high-end offerings wound up being manufactured in Berlin — just call it nomenclatural destiny.

I spoke at length with Dana Paul, the man behind Berliner, to voice my concerns about investing the dollars to purchase a product — the U77 multipattern tube microphone — from

a startup company such as his; it was a concern that I felt was justified. Dana assured me that Berliner was created out of a passion for creating music, as he himself is a producer and has a large collection of modern and vintage microphones. He has many other successful ventures and has not put his eggs all in the Berliner basket. I say this because I have personally reviewed equipment from startups in the past to find that only a few months after print, the company's doors

are closed. For Berliner, those concerns are put to rest; should the mic ever have any trouble, it will be covered under its lifetime warranty from the Berliner US support center.

FEATURES

The U77 is just over 9 1/2-inches long, weighs 11 pounds and 5 ounces and is constructed of 'duraluminium' and stainless steel. It is right at home in its U47-style shock mount with hinged clasps to assure a good grip on the microphone.

It boasts three patterns — omni, figure 8 and cardioid — with a frequency response of 30 Hz to 20 kHz. Connectivity between mic and power supply is provided with a GAC7 10m Gotham cable using a 7-pin Tuchel connector. The brick-style power supply is encased in a thick black aluminum enclosure with the internal parts accessible via four

screws. The single PCB is roomy in layout with all components well spaced out and easy to follow traces located on the bottom of the board. The outside end of the power supply has a standard IEC power connector, selector for 115/230V A/C, power switch and indicator light. The other end consists of the 7-pin female Tuchel connector, female Neutrik XLR and pattern selector switch.

Overall, this is a very well designed and constructed mic with no low dollar Asian components. Even the transformer is hand wound in Europe and fully inspired by the original M7/49, credited in large part to its smooth and natural sound. Included with each microphone is a custom frequency response plot.

During my time at Masterfonics, there were many days where I found myself locked down in the shop with a vintage, high dollar tube mic disassembled on the bench while I tried to track down various problems. Whether testing and replacing tubes, fixing cold solder points or testing the components, I became quite familiar with the build and quality of vintage German microphones and even the latest high dollar microphones. Here, I decided to put that experience to work, taking apart the Berliner microphone for look under the hood.

Inside, the mic looks similar to many of the classic mics with hand crafted point-to-point wiring accompanied by two easy to follow circuit boards. Clear Plexiglas dividers separate the diaphragm from the electronics and reinforce the construction of the microphone. The Raytheon NOS 5703 military-grade tube is hard wired due to the power requirements of the tube. This tube is known for its low noise and long life span and is similar to the original M49 tube, the AC701K. The capsule is hand-built and skinned by ex-Neumann engineer Siegfried Thiersch, one of the original builder of the M7 capsule. The U77 is built exactly the way

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FAST FACTS

APPLICATIONS

Studio, project studio, audio for broadcast

KEY FEATURES

Omni, figure 8, and cardioid patterns; 30 Hz to 20kHz frequency response; Raytheon NOS 5703 military-grade tube; 'duraluminium' and stainless steel construction; Mic-power supply connectivity via GAC7 10m Gotham cable with 7-pin Tuchel connector; brick-style power supply; shockmount; waterproof case.

PRICE

\$3,495

CONTACT

Berliner Microphones | ☎ 888-MIC-THIS
 ☞ www.berlinerusa.com

he built the original M7 — the Berlin double ring type — with the exception of using Mylar instead of PVC, which deteriorates over time and is subject to environmental conditions such as heat or moisture. [According to the manufacturer, PVC components are one of the reasons why the original M7 sounded slightly different from one another — Ed.]

Even the U77's case was designed with excellence in mind; it utilizes 600 and higher denier nylon, DuPont Cordura, highest quality 1/2 to 3/4-inch plywood, high-quality vinyl, polyester and leather with complete protection against humidity and other elements. Although I was not brave enough to try, it is claimed that the case can be fully immersed in water without the mic even getting damp.

| IN USE

My first test for the U77 was a female vocal on a song that ranged from low and raspy to high and, if not careful, ear piercing high-mids. I tried a few other low to mid-priced condenser microphones on this par-

ticular vocal and each time I was fighting to calm down the sonics. The signal chain was the U77 to a Summit 2BA-221 dialed completely into the solid state circuitry followed by a dbx 160XT compressor set to just barely grab the loudest points of the vocal.

After listening to a dry run, it was decided that no external EQ was necessary. The intimacy in the lower part was beautifully captured with the U77. Proximity really exposed the vulnerability the singer was imparting when the pop filter was 1 and 2-inches away from the microphone. The true test was when the belting started in the higher ranges. The U77's character really shone as what are usually offensive frequencies were naturally smoothed out; not dulled in any way, but more like the harshness was rounded off.

This was also the result with a male singer with more of a baritone/alto range; the mic was superb in capturing the performance while naturally rounding out what are often troubled frequencies without the assistance of equalization.

The mic was lent to another engineer to use on some overdubs consisting of banjo, acoustic guitar and violin. The basic signal path included the U77 into a combination of mic pres from API and Millennia, a dbx 160 for compression and, occasionally, the A-Designs Hammer HM2EQ tube EQ for



Berliner U77 On The Bench

added coloration to taste. Regardless of the chain, the results were excellent in each instance. So far, the U77 was really proving itself to be a great mic to have on hand for all applications. A testament to that was the violinist — a mainstay in the Nashville recording community — had such high affection for the results that he inquired about how he may acquire a U77 for his personal collection. This unsolicited endorsement spoke highly of the microphone capturing the body and fullness of the violin.

| SUMMARY

Like all microphones, the Berliner U77 has a character and color all its own. Whether or not it sounds like the M7 capsule is up for debate as I have heard M7 capsules and many other vintage mics that don't sound like each other due to age and wear. The selling fact for this microphone is I would not hesitate to line it up with its vintage and modern counterparts in a shootout to find the best microphone for the desired result. For a facility where only one high-end tube microphone is an option to have on hand, the U77 is a admirable choice that would not disappoint as the primary go-to mic. In the "put your money where your mouth" is department, that is just what we did at our studio: we made the U77 our primary microphone for spoken word, vocals and a plethora of instrumentation — and have not once regretted the decision.

Dan Wothke runs the gauntlet of all things media-related at Nashville's Belmont Church in his role as Media Director. He invites you to e-mail him at dwothke@yahoo.com.

THE PERFECT MIX

hear back.

- Unlimited system size
- Local control of eight channels (stereo mix and six "more-me's")
- ADAT, analog, HearBus inputs are switch-selectable from front panel
- Built-in DSP Limiter with threshold adjustment



- Master Volume
- Stereo AUX In
- Balanced Line-Outputs
- Built-in Mic Stand Mount
- Standard CAT5e power

mix back.

- Affordable, flexible 16x12x2 monitor mixer
- 16 Mic/Line inputs each with passive split and two stereo and twelve mono level controls
- Pin 1 lift and Mic power switches per channel
- Dual switch-selectable effects sends
- Stereo Aux inputs
- Channel Inserts
- Four-band EQ with dual sweepable mids
- Talkback with intercom and optional remote
- 16 master outputs each available as analog, ADAT, and HearBus



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