Groove Tubes Condenser Microphones

by Daniel Kumin

It's true that I'm something of a microphone Luddite. I figure, if I can't get the goods with my aging pair of AKG C1000 condensers and a trio of Shure SM57s, I am doing something wrong. (Hey, when all you've got is a hammer, pretty much everything looks like a nail.) So when the editors asked me to overview a quartet of new Groove Tubes mics, I accepted with alacrity.

Groove Tubes, now distributed for the most part by M Audio, like a number of other makes in recent years, has turned to China for the manufacture of this high-value family. But don't take this the wrong way: This is some serious hardware, and these mics show every sign of having been carefully made using top-grade materials.

Features

There's a lot of ground to cover here, so lets lay out the basics. Groove Tubes' GT33 is a 3/4-inch, gold-evaporated capsule "top-firing" condenser mic with Class A topology, FET-based solid state electronics. You get a very solidly made mic with all-metal internal rails, metal sleeve and screens, respectably heavy-looking transformer and tidy board layout with careful wiring and soldering inside, whose features are confined to switches for sensitivity - pad and bass rolloff (both solid-feeling, metal micro-toggles.) GT's paperwork notes the rolloff as working below 75 Hz, and the GT33's pad as 15 dB, which my trials tended to confirm; however, the graphic screened on the mic itself reads "10 dB." The GT33 is packed in a rather fancy, fabric-covered clasp-case, with a classy metal-based standmount.

Next up is the GT44: self-same mic, but with 6204 tube internals. Same capsule, same rolloff and pad switches, same mechanical construction, but finished in silver (even nicer, to my eye) in place of the FET mics' flat-black. The tube version's internal construction is similar to the 33's, with the same transformer, but of course with that magical tube in place of the FET stage. The subminiature 6204 is soldered to the board, so tube replacement (if you live that long) would not be for the faint of heart (or near of sight). The GT44 kit is packed with an appropriately-sized, elastic-trap shockmount (again, all-metal save the rubber bands), and, of course, a brick-size (and weight) AC-powered phantom power supply that sends the requisite voltages down the pipe to the GT44's tiny vacuum tube. A 30-foot 7-pin cable is provided to tether the mic to the supply, as is an IEC AC cable.

Product Points

Applications:

Studio, broadcast, location

Key Features:

GT33: 0.75-inch "top-firing" true condenser mic with FET Class A electronics; 15 dB pad; 75 Hz low-cut filter.

GT44: 0.75-inch "top-firing" true condenser mic with vacuum tube electronics; 15 dB pad; 75 Hz low-cut filter; tube supply, shockmount, and cables included.

GT57: Dual-sided 1.1-inch true condenser mic with FET Class A electronics; 15 dB pad; 75 Hz low-cut filter, multipattern (cardioid, omni, figure 8).

GT67: Dual-sided 1.1-inch true condenser mic with vacuum tube electronics; 15 dB pad; 75 Hz low-cut filter, multipattern (cardioid, hypercardioid, omni, figure 8); tube supply, shockmount, and cables included.

Prices:

GT33: $399 GT44: $699; GT57: $799; GT67: $999

Contact:

M Audio at 800-969-6434, Web Site.

REVIEW SETUP:

JoeMeek mic preamp; JVC XD-Z505 DAT deck (employed as DAC); Korg 1212-I/O (employed S/PDIF in/out); Mac 9600/G3 running MOTU Digital Performer 2.4; Energy Veritas 2.3 monitors; Grado SR80 headphones.

Move up to the GT57, another FET-based mic, and we are talking a dual-sided 1.1-inch gold-evaporated solid-brass capsule half the thickness of the GT33/44s (3

microns versus 6), with the attendant polar-pattern selector marked with little omni, cardioid, and figure 8 graphics. Groove Tubes integrates a "Disk Resonator" into its large-diaphragm mics for "extended frequency response ideal for accurately capturing the realism of just about any sound source." (Conceptually, I believe that this is not entirely dissimilar to the "whizzer cone" sometimes used to extend the effective response of a one-way speaker.) The GT57 includes the same pad (10 dB) and rolloff switches as the other GT mics, but the bigger mic comes with an all-metal screw-in stand mount. The 57's innards, though built along more or less the same lines as the '33's FET stage, are completely different, and the larger mic employs a toroidal transformer that I'm guessing features a lot more iron (the 33's transformer is an E-core item, I believe).

Lastly, we come to the GT67, which is, you guessed it, the tube version of the GT57. It is the same mic, but with the 6204-based tube electronics, large, toroidal internal transformer, and packaged with the same power supply and cables as the GT44 single-capsule tube model, but with the addition of a "proper," screw-on, full-suspension cat's cradle shockmount. One other, more technically significant difference is that the GT67 adds a super-cardioid position as a fourth pattern option, selected via a fourth mini-toggle switch.

I messed about with these GT mics for the better part of two months, mostly on acoustic guitar, Fender bass (well, G&L, actually), and vocals. I was more than mildly impressed. There is an enormous palette of sound-shading colors here, but in every case I heard smooth, flat response and very good noise performance. A bit surprisingly, Groove Tubes does not appear to publish full technical specs for these mics in the paperwork accompanying them, nor on the web site. So I cannot list their rated impedance, self-noise, output, sensitivities, or anything else. But none of these mics struck me as noisy in the slightest, and I would not expect them to limit dynamic range. (However, knowing the technical details would be important in critical applications, as careful mic/preamp matching can sometimes gain a precious few dB more dynamic range.)

I did find specs only for maximum SPL and frequency response on the web site of M-Audio, Groove Tubes' distributor, and they are as follows. GT33: 150 dB SPL maximum with pad, 20 Hz - 18 kHz ±1.5 dB; GT44: 145 max SPL with pad, 20 Hz - 20 kHz ±1.5 dB; GT57: 148 dB max SPL with pad, 20 Hz - 18 kHz ±1.5 dB; GT67: 147 dB max SPL with pad, 20 Hz - 20 kHz ±1.5 dB. Groove Tubes states that all of these mics are available in certified matched pairs at no additional charge, and that each one shipped, whether in pairs or in onesies, is within ±1 dB of a "gold" standard reference.

In Use

So how do these Groovers sound? I can say that, to relate just one example, recording male vocal and acoustic guitar using just the GT67 for the former and the GT57, at a moderately close-in distance on the latter, produced astonishingly good-sounding takes. The balance of guitar plectrum sound to sustained tones, from just the single mic, was the most surprising thing I heard. Overall, the recordings I made this way were entirely record-store-plausible, with both GTs set to cardioid and both low-cut switches engaged (the guitar in question, a mid-60s D-18, has low-end to die for on its own merits). As to the vocals, the artist (myself) literally never sounded

so good: warm and depth-y without excess heaviness, but intimately detailed - now if only he could sing a lick!

I confess to having been a bit overwhelmed by the sheer number and variety of mics confronting me. Consequently, I decided to try something completely different, which I report here with flame suit hanging at the ready. I played a really fine 96/24 recording (not mine!) of a jazz piano trio, mixed to mono, via a single very high quality monitor, and set up a single boom-stand in what my ear judged to be the sweet spot relative to the speaker, to minimize room sound. I then recorded the same three minutes of music with each mic in turn (I kept all the mics set to cardioid, with pads out and low-cuts engaged), headed by tones for level-matching. I adjusted mic-placement only enough to accommodate the mics' different physical forms and patterns, printing each "take" to an independent track in Digital Performer (I'm still only 48/16, alas, but that's still enough to resolve most mic differences). The idea was I would then synch up the tracks and normalize levels to the tones. Then, by soloing each of the four tracks, freely, I could "hear" one mic against each of the others.

A wacky idea? Absolutely. Scientific? Of course not! Conclusive? Very doubtful. Interesting and fun? You betcha!

Here's a distillate of my listening notes. Keep in mind, of course, that your mileage will vary, and that these comparisons are only valid for this one trial in this one room on this one system - I'm not even saying anyone else will find analogous differences among these four microphones. But that is, indeed, the nature of microphones, and the crux of the partisan appeal the hold for us.

GT33: Focused; discernibly brighter than the others, and thus with the most exciting hammer-attacks. A little sizzly on big cymbal hits, but tight, in-the-room stand-up bass reproduction. Very snappy on kickdrum hits.

GT44: Not surprisingly, just like the GT33 but warmer, and with a "deeper" feel to midrange timbres. (This is probably frequency response effects at work, but this is why folks love tube mics.) Still very open and involving up top, but a bit more relaxed-sounding.

GT57: Quite different from the GT33/44: a bigger "image" altogether (if such a thing is possible in mono!), and decidedly less bright, at least in this setup, than the smaller diaphragm mics. Really good bass sounds: "tight-yet-warm," "quick," "meaty"; all the good things we dream up to characterize satisfying bass sounds. (The GT57 was my choice for recording electric bass using an amp, too: It made my "house" G&L via my Fender "Vibro-clone" home-brewed Vibroverb record better than I have previously heard it. Nice!)

GT67: Less change from the GT57 than I expected; a smaller difference, relatively speaking, than that I heard between the GT33 and GT44. A little sexier mids; a bit more "singing" tone from legato piano playing; and a little gooier feel on hi-hat rides and soft cymbal work, but otherwise pretty tough to call. I felt that the GT57 sounded a little snappier dynamically, which I guess makes the 67 "warmer"; this also probably explains why I preferred the FET version on bass.

I want to reiterate, in all seriousness, that I do not mean to suggest this exercise as a scientific way to judge microphones. But it sure was fun and it does prove that mics, like speakers, really do all sound different.

Summary

Bottom line is, I was rather taken by the Groove Tubes mics. It's no secret that some dramatically high-value mics are coming from mainland China today, and these models have got to be near the tops of their classes for price-performance. What's more, the level of fit and finish I observed on these Groove Tubes mics simply was not a whole lot less refined than what I expect from zos' leetle Sviss mic makers in all those Alpine countries. Across the board, the GTs' metalwork and assembly were impressive.

With mics like these readily available prices like these--and the Groove Tubes are not the only examples--unless you've got the stupid-money budget of a big-studio builder, it's got to be awfully hard to force yourself to shell out ten grand for a Schmecklegrüber U-571 (or equivalent). And when I stop to think that the GT57, probably my pick for the best bang-per-buck of this quartet, sells today, in adjusted dollars, for about what a new SM57 cost in 1974 or so, it makes me want to weep. Now, where's my hammer?

Daniel Kumin writes for both consumer and pro audio publications and is a regular contributor to Pro Audio Review.