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# REVIEW

BY PAUL VNUK JR.

## Cloud Microphones 44-A Ribbon Mic

An homage in name and a bold new direction for a classic ribbon design



It's hard to believe it's been four years already since we took our first look at Rodger Cloud's aptly named Cloud Microphones. Reviewer and ribbon aficionado Scott Dorsey gave us a detailed runthrough of the company's inaugural offerings, the JRS-34 and JRS-34P ribbon microphones, as well as the Cloudlifter, in our June 2010 issue.

We looked in on Cloud again in our December 2012 issue, when I reviewed the Cloudlifter-Z. Like the original Cloudlifter, this is a phantom-powered box that adds boatloads of clean gain to any passive ribbon or dynamic microphone, with the Z adding the sonic benefits of variable impedance and high pass filtering.

This time around, Cloud returns with a brand-new microphone that blends the look, feel and build of the JRS-34, elements found in the Cloudlifter-Z, and one of the most classic ribbon mic designs of all time. This new model is the Cloud 44-A; its name gives away both its inspiration and its lineage as it pays homage to the classic RCA 44A of yesteryear.

### All in the family

Cloud has a direct link to RCA in the form of Stephen Sank, whose father Jon R. Sank was RCA's head of acoustical engineering. He was directly responsible for many of the company's later BK series designs, and it is the BK-11 that his son used as his initial inspiration for Cloud's JRS-34 mics.

In his review, Scott Dorsey felt that the JRS-34 really did capture the sound and vibe of the older RCA microphones. He was impressed, and our readers know that Scott is a hard man to impress!

The Cloud 44-A looks similar to the BK-inspired JRS-34/P, but inside it's a whole new... or, I guess I should say, a whole *old* ball game, yet still with a few new tricks up its sleeve. The Cloud 44-A, like the JRS-34, is an active ribbon design that makes use of the company's Cloudlifter technology to give it loads of clean gain.

This is a ribbon microphone that will not care what preamp you pair it with. Even if it's just a low-cost desktop audio interface with a built-in phantom-powered mic preamp, this mic will be up to the task.

The secret weapon of this mic—which is, as far as I know, a first in the world of modern ribbon mic designs—is that it also takes a cue from the filtering technology found in the Cloudlifter-Z and offers a choice of two different microphone voicings. The first is labeled M, for Music, and is the full open classic ribbon sound that you would expect from a design of this type. The second setting, labeled V for Voice, cuts the microphone's low end and proximity effect to give you a mic better suited for modern vocals and up-close instrument use.

### Out of the box

The Cloud 44-A ships in a high-quality wooden box that is classy enough to be mistaken for a small humidifier. Inside, the mic and its accessories sit snugly in an impeccably done foam enclosure. If it seems like I am making a big deal about this, I am. I think it speaks volumes about a company's attention to detail when you get a storage box that is display quality, as opposed to many of the cheap overseas thrown-together cases with bad jointing and crummy foam that are literally bursting at the joints.

Also in the box is one of Cloud's blue cloth microfiber protection bags, as well as a Cloud U1 shock mount. The new U1 shock mount also needs its own paragraph, as this is not your average overseas-sourced elastic-band shockmount that sags on the third use and drops your mic on the tenth. The U1 is actually a Rycote Lyre shock mount, designed specifically for Cloud and complete with the Cloud logo. On their own these shockmounts are a \$149 purchase, and if you happen to be in a session that doesn't require the 44-A, you should know that like the Lyre, the U1 is a universal mount that can be used with many of your large-diaphragm condenser mics, making it a nice extra value.

## Classic look and classic motor

Using the same body, grille, and stand mount design as the JRS-34, the Cloud 44-A's black body and silver perforated grille do bear a passing resemblance to the RCA 44B of old. However, the Cloud 44-A is actually only about half the RCA mic's depth, measuring 6<sup>1</sup>/<sub>2</sub>" tall by 2<sup>7</sup>/<sub>8</sub>" wide and just over 1<sup>3</sup>/<sub>4</sub>" deep. Also, the 44-A does not make use of the old large yoke system of the RCA models. When not used with the U1, it can mount directly on a mic stand, thanks to an attached adjustable pivot mount.

One of the things that made the Sank-designed RCA BK-11 and the modern Cloud JRS-34 so special was a rounded magnet design in the ribbon motor. The BK-11 had some rounded magnets and surface areas in the motor, but had non-rounded pole pieces. The JRS-34 extended this idea; in its motor, the sides of the magnets near the ribbon are also rounded. According to Rodger Cloud, this has the benefit of deflecting most of the indirect sound waves away from the magnets and the ribbon.

For the new 44-A, Cloud returns to the classic motor design found in the old RCA 44A as well as many of the RCA PB series mics. In this motor design, the magnets/pole pieces have a sharp hard edge and more surface area. On the one hand

it would be easy to see this as a flawed design, due to secondary reflections which would effect EQ and imaging. On the other hand, if that was truly an issue that resulted in "bad sound", well, feel free to throw your vintage RCA 44A mics in a box and send them to me! It's important to note that this was and is integral to the vintage ribbon sound that we remember. For better or worse, in the audio world it's often the sonic imperfections of old that we long for.

The ribbon element in the Cloud 44-A is 1.9 inches wide, 2.35 inches long and 1.8 microns thick. It has a 20 Hz to 20 kHz frequency response, a maximum SPL of over 138 dB, and an output sensitivity of -25.3 dBV/Pa. Like most ribbon mics, it has a figure-8 polar pattern.

Another difference between the JRS-34 and the new 44-A is in the microphone's transformer. The JRS-34 used a transformer with a ratio of 1:35, while the 44-A has a ratio of 1:28. While this winding is closer in spec to that of a vintage 44, that means it also has a lower output. However, thanks to the active circuitry in the new 44-A, having this low level before the head amplifier is a non-issue. You get gobs of clean gain that will work nicely with any preamp, while retaining the sonic characteristics of the older style transformer.

## Well, not exactly...

Okay, so I've spent some time explaining how the Cloud 44-A is obviously inspired and influenced by the RCA ribbon mics of old. Now it's time to move to the other side of the aisle and explain why and how the 44-A is its own beast and not a clone of the classic RCA design.

First, due to the differences in the dimensions of its grille enclosure, there will be subtle sonic differences between the Cloud 44-A and old RCA mics. Second, and much more dramatically, the 44-A has that Cloudlifter active circuitry on board; as an active ribbon, it will be both louder and cleaner than most classic vintage ribbon mics. This has the follow-on effect that the Cloud 44-A is not subject to the wonderful and often unpredictable world of varied mic preamp impedance, where finicky classic ribbons can sound brilliant on one preamp and terrible on another. To some engineers, this freedom from variability will be a strength; to others, the loss of potential tonal variation is a weakness.

According to Rodger Cloud, this microphone was based on modified versions of the classic RCA 44A rather than a stock original, and it's not based on the later RCA 44BX version either.

So what's involved in the modification in question? It involves removing all of the internal grilles and metal mesh screening that surrounds the ribbon element, and then



## Cloud Microphones 44-A Ribbon Mic

replacing it with special fabric to keep airborne particles out of the ribbon assembly. This is not a new idea; Rodger points out that similar modifications to the grilles date all the way back to the 1940s, and in fact he recommends it highly to anyone who still owns a vintage RCA 44A or PB series mic and is more interested in using the mic than keeping it pristine.

RCA, of course, got hip to this idea themselves, and removed the additional metal grilles in the 44BX models. However, RCA also altered the motor assembly in the BX, which resulted in a 12 kHz bump. To this day, Rodger prefers the more natural openness of a modified RCA 44A vs the later BX variants, and this was the impetus for the design and construction of the Cloud 44-A.

### Sound

Of course, we can talk vintage vs. modern designs and modifications vs. stock setup for weeks, but ultimately it all comes down to how a mic sounds. So what do we get when we listen to the Cloud 44-A?

The minute you plug in the 44-A, the classic ribbon sound is right there front and center. To put that into more tangible terms, the 44-A in its M setting is huge, full, smooth, weighty, and

clear as a bell. It is both balanced and focused-sounding and has a very big bottom end. Unlike many cheap globally-sourced ribbons, however, it is not a smoky or muddy sound that tries (and fails) to pass itself off as "vintage" or "vibey" sounding—although, to be fair, those mics have their uses too!

On the other hand, the 44-A does not have the modern sound of many current ribbon mics that tout bright and forward, almost condenser-esque, top ends. While I use the word "classic" as a point of reference, the 44-A is not "vintage sounding" at all. I would say that the Cloud 44-A sounds like a good, well-maintained, top-shelf ribbon mic from any era, not just the RCA age.

### Flipping the switch: M mode

In M mode I put the 44-A to use on drums (both as an overhead and front-of-kit mic), on guitar cabinet, on acoustic guitar, banjo, and vocals. In each case it was full and natural with a nice rounded presence. It is a great choice on drums, especially as a front-of-kit/room mic, and it is perfect for Bing Crosby or Norah Jones-style vocals.

On guitar cabinet, about 2-3 feet back, it works great alone or coupled with a dynamic



mic like a Shure SM57 or an Audix i5. It also plays very nicely with a Royer R-121 up on the grille; the two ribbons together, one modern and one leaning toward a more classic sound, make a great choice for huge clean jazz guitar and slightly over-driven blues tones. However, as is the case with many other ribbons, I found M mode too big for closeup acoustic guitar work and even a bit much for banjo when said instruments need to seat well in a mix.

### Flipping the switch: V mode

In V mode, the bottom end rolls off drastically and the mic becomes more intimate and able to cut through a mix. Please note that unlike many multi-voiced condenser mics, this is not a “brightness” switch. The high end retains its silky ribbon roundness while the low end clears out. In V mode, rather than a huge low-end proximity, you get easygoing clarity instead.

This setting is very nice for both male and female pop vocals, as well as for acoustic guitars and yes, banjo. Sources retain a smooth natural tonality, but are much easier to place into a modern mix without excessive eq.

In either mode, the 44-A has an excellent off-axis rejection that can be used to great effect. Its deep side nulls are fantastic for applications like tracking multiple musicians in a room, or tracking a musician who sings and plays an instrument simultaneously.

The proximity effect in M mode is smooth and even and extends out a good couple of feet, as you’d find with most old large-ribbon designs. In V mode, however, the proximity effect only kicks in when you are less than an inch or so from the mic. Of course, as with most ribbons, I don’t recommend getting right up on the mic with any source that can produce bursts of air (they can damage the ribbon), but I will say that I was quite pleased by how close a well-trained vocal talent could get for singing and/or voiceover work.

### Bottom line

This is a very beautiful microphone that hints at classic tone, but is not hampered by it. It is smooth and well-rounded, actually a tad tighter and more focused-sounding than much of the competition. I was most impressed by the fact that it does its own thing and as such lives comfortably alongside AEA, Royer, Coles, and—yes—RCA mics, providing its own signature without simply aping their sounds.

With the two available voicings there is no source it cannot excel in capturing, and it could easily be a studio’s one and only ribbon mic. When you add the shock-mount and case, this is one classy package all around, and an excellent investment for almost any serious studio. ➤

**Price:** \$1899

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