

TAPE OP

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gear reviews

MagREELS

by MDI PrecisionMotorWorks

REVIEWED BY GARRETT HAINES • MARCH 18, 2013

\$329.00 MSRP

MagREELS are precision auto-centering NAB adapters for the ATR-100 series tape machines. Machined from a solid block of 6061-T6 aluminum alloy, these hubs boast concentricity and axial run-out tolerances of less than 0.003". They are designed to speed reel changes, improve tape packing, and minimize any out-of-round contributions to wow & flutter. Available in black, red, and blue steel, they look like really cool cast-alloy wheels.

To install the MagREEL, simply push it down on the spindle. Each ATR-100 turntable has two 3/16" holes in the platter. Extending straight down from the MagREEL is a stainless steel drive pin. This pin slides into one of the 3/16" holes, effectively mating the MagREEL to the ATR. Included with the kit are two rubber O-rings and two MagLOCK retention rings to hold the MagREELS down. Some people use one or both. On my ATR- 104, I didn't need either, but the MagLOCK is a nice option for those 7" plastic reels.

Once you have the MagREEL installed, simply drop a reel over it. Three hardened-steel drive pins and three stainless-steel ball detents are embedded in the perimeter of the hub. These lock the tape reels and provide dynamic centering. That's it. Removal is as simple as pulling up on one side and lifting off to unload the reel. The MagREELS "Basic Set" covered here is made for 1/4" tape. An optional machined spacer is available for 1/2" and 1" reels.

In use, the MagREELS reduce reel run-out, speed up reel changes, and improve tape packing. One of the claims made on the MDI website comes from a user who maintains that his fast-rewound tapes look like slow library winds. Initially, I wanted to call "foul" on this claim. The reason deals with the speed of fast rewinds. Even on the best machines, there is a layer of air that forms a tiny pillow beneath the tape as it packs. Above a certain rotational speed, the air can not get out of the way of the tape fast enough to allow the tight packing obtained by slower rewinds. However, using the MagREELS at fast speeds does indeed come very close to slow-rewind packing. And at slower speeds, the tape pack looks like a solid wedge of brown metal. Very impressive.

During the review period, I used the MagREELS on more than 200 tape transfers. One of my first thoughts was, "Why didn't these come stock with the ATR-100 machines?" After all, Ampex seemed to think of so many other things. Nonetheless, MagREELS are here now.

I also had an important discovery for archivists and anyone who deals with older tapes. I was working with a tape that we had baked to address the sticky tape shedding. During playback of a particularly sticky tape, the reels were fluttering with the MagREELS. It made an audible "bling-blang" causing the tension arms to flutter. This triggered the tension fault in the servo, thereby causing the machine to shut down. Of course, this ruined the intake.

I got mad, incorrectly blaming the MagREELS. So I replaced them with my original ATR hubs. At first, the tape played well. I could see times when it wanted to bind, but I put extra pressure on the hubs and forced the tape to continue. Then I heard the dreaded snap as the tape broke. It was a learning moment. The MagREELS were more sensitive to the tape tension, helping to prevent playback attempts that exceed the physical strength of the tape. It turned out that this particular tape required more time in the baking process. It was at this point that I started writing a check to the manufacturer for my MagREELS. Until this point, they were super-nice to have, but not a necessity. But anything that protects my clients' assets from unintended damage is crucial gear in my estimation.

If you rely on your ATR-100 deck for restoration or mixdown, you might want to consider the MagREELS. They really speed up reel changes, reduce warble, and definitely improve wind and rewind packing. Add the fact that they make the transport more sensitive to older tape's health, and you have a very useful accessory. Now, if I can convince MDI PrecisionMotorWorks to make me a set in Treelady green.

(BASIC SET INCLUDES PAIRS OF MAGREELS, MAGLOCKS, AND O-RINGS, \$329 DIRECT; COMPLETE SET ADDS A PAIR OF 1/4" SPACERS, \$379; WWW.PRECISIONMOTORWORKS.COM) -GARRETT HAINES <WWW.TREELADY.COM>

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