Produce SHARPER strobe readings for your old 78s

By Craig Merz

The old 78-rpm phonograph records seem to have taken on a new life recently among collectors and music buffs. However, one problem in replaying them is that prior to adapting the standard of 78.26 rpm, manufacturers sometimes recorded at speeds above or below that standard. For instance, some of the early Victor records gave the speed on the label if it was other than 78 (mostly 80, 82, or 84). In fact, some reached 90, and I've even heard of a 120-rpm record!

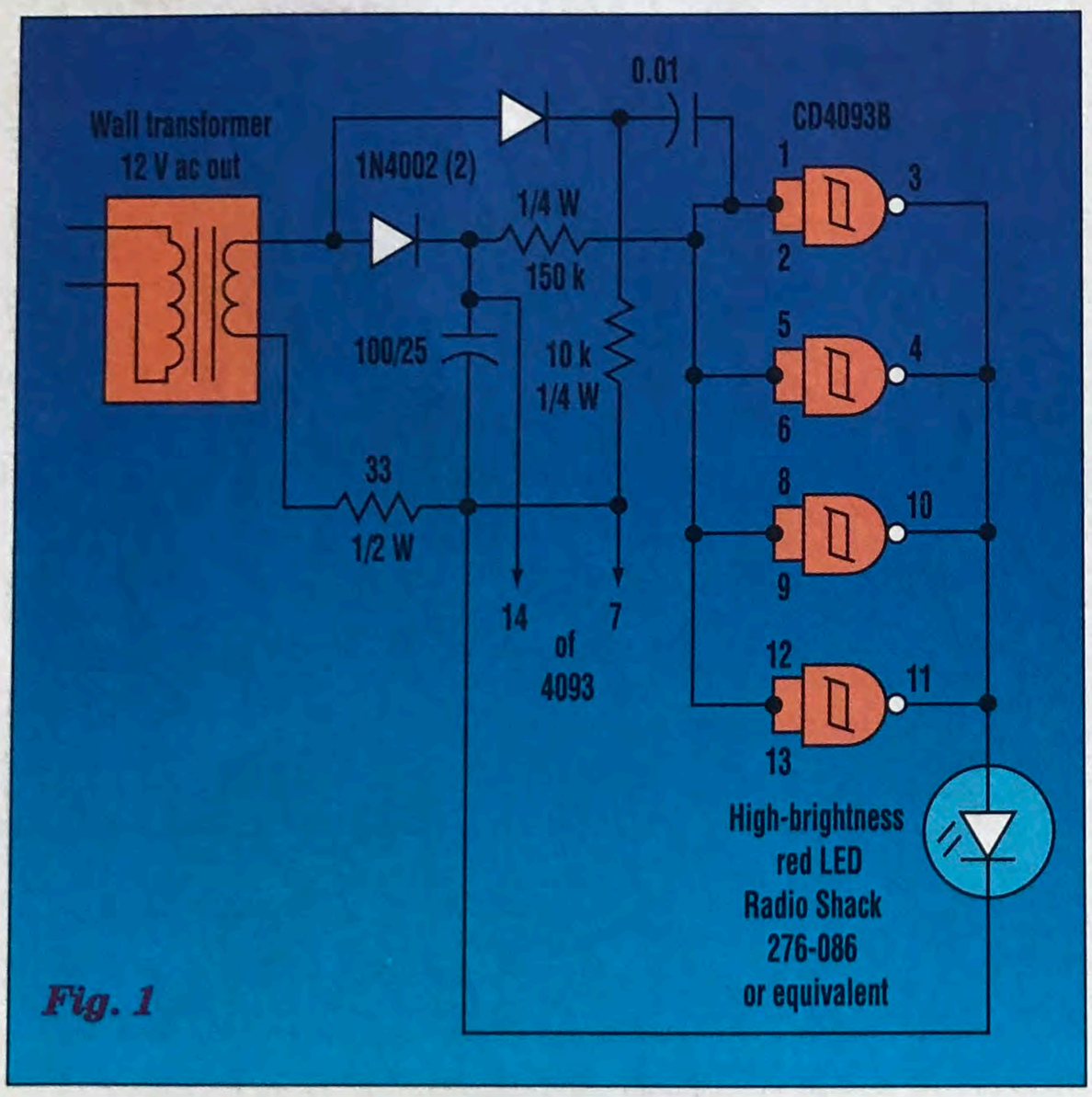


Fig. 1

The standard strobe disks for setting turntable speed, which have been in use for many years, are based on 120 pulses/s (twice the 60-Hz line frequency). However, the disks are nearly impossible to read under incandescent light, due to the lamp filament's thermal lag time. Even neon or fluorescent lamps are unable to produce a sharp image.

One easy way to make the image more distinct is by using a narrow (less than 2 ms) high-energy pulse and a high-brightness LED *(Fig. 1)*. The circuit uses a CMOS 4093 Schmitt-trigger chip. Although it produces 60 pulses/s, it will work with the conventional strobe disk, because 120 is an even multiple of 60.

Taking this one step further, a strobe disk with number patterns on it can be created so that the numerical speed may be seen at a glance *(Fig. 2)*. By using 60 pulses/s, only one half the number of marks are required.

Fig. 2

Full-size disks, which measure 10" in diameter, are available from K-A-B Electro-Acoustics, Plainfield, N.J.; (908) 754-1479.

For more information on this design idea, Craig Merz can be contacted at R.L. Merz Co., P.O. Box 311, Califon, NJ 07830; (908) 832-9344; Internet: http://www.rlmerze-e.com.

CONFERENCE CALL

The Fourth Annual Meeting of the Council on Ionizing Radiation Measurements and Standards (CIRMS) will be held Nov. 12-14 at the National Institute of Standards and Technology's headquarters in Gaithersburg, Md. The purpose of the conference is to advance and disseminate the physical measurements and standards needed for the safe and effective technological application of ionizing radiation. Topics to be discussed include medical applications, occupational radiation protection, and radiation effects. For more information, contact Bert Coursey, NIST, C229 Radiation Physics Bldg., Gaithersburg, MD 20899-0001; (301) 975-5584; e-mail coursey@micf.nist.gov.

The Second International Conference on the Science and Technology of Display Phosphors will be held Nov. 18-20 at the Hyatt Islandia Hotel, San Diego, Calif. The conference is expected to draw physicist, chemists, materials scientists, display engineers, and manufacturing planners together to discuss subjects such as plasma, CRT phosphor technology, EL devices, and low-voltage properties of FED phosphors. Over 250 tutorial and research papers have been submitted for discussion. For more information, contact Bill Klein, Palisades Institute for Research Services, Suite 1006, 201 Varick St., New York, NY 10014; (212) 620-3377; fax (212) 620-3379.

K-A-B SPEEDSTROBE™ DIGITAL TURNTABLE SPEED READOUT

I don't know how you analog types feel about it, but checking the speed on my turntable is a gigantic pain in the ass. I still use my old Ariston strobe disc that came along with the RD90 Superieur I used to run with a Zeta arm. Even Dr. Forsell uses exactly the same disc, but I noted with some amusement that he blacked out the now-defunct Scottish firm's name on it.

Of course, the disc is only half of it—you still need a proper light source. And therein lies a saga unto itself. I went through two or three fairly expensive [*expletive deleted*] light-bulb–sized fluorescents—the coiled-tube types—but none of them worked! I just couldn't figure it out. When I explained my frustration to a smiling clerk at Just Bulbs, he told me that what I needed was a *mechanical* ballast model—electronic ballast doesn't cut the analog mustard, for some reason. *Another* thirty-five bucks! I finally wound up with a Panasonic BFT15LE-T-C 15W 120V 60Hz Warm Color Light Capsule that worked. It was big and heavy, and required a lampholder fitting with an electric cord to operate.

Almost as soon as I screwed it into the lampholder, the Push/Push actuator on the cheap fitting started to act up—it became difficult to turn on and off. And each time I managed to get it on or off, it thumped the system in an alarming way. I finally resorted to screwing the "light capsule" in and out to actuate it, thus bypassing the switch. And as I held it over the spinning platter, I always had to be careful that the electrical cord didn't foul the dental-floss belt of the Forsell! Gimme a break awreddy!

And then...how do *you* spell analog relief? K-A-B SpeedStrobe! Yesssss!

Manual: "The K-A-B SpeedStrobe™ makes checking and setting turntable speed easy. Features a large 10" digital readout disc and quartz-locked strobe light. In use, the turntable speed is read directly from the disc, glowing bright red against a black background. Battery-operated, the SpeedStrobe™ works anywhere in the world! Verifies speed accuracy to 0.03% or better. 1 year warranty." Hoo-hah! I love it!

The precision 10" disc shows all standard speeds as well as incremental steps between 70 and 90rpm for vintage collectors. When the speed readout is stationary, the turntable is 100% accurate. "Basic accuracy can be checked by timing the drift movement over 1 minute. Broadcast accuracy is 0.3% and is met if less than 10 numbers pass the illuminated spot in 60 seconds. Less than 3 numbers is 0.1% and less than 1 number is 0.03%."

It's just fantastic. You bring your 'table up to speed with the disc on the platter, and aim the small control unit at the disc. When you press the button, the red-lit speed numbers jump out at you in a super-easy-to-read fashion. It looks cool, and it's a snap to perfectly set the speed.

K-A-B caters to the record collector and offers a (free) catalog filled with analog goodies. Give 'em a call and order yours today. "A great gift for *your* analog crazy!" says Kathleen.

K-A-B ELECTRO-ACOUSTICS SPEEDSTROBE

Editor:

First, a big thank you to *Hi-Fi News & Record Review* for publishing our press release on the K-A-B SpeedStrobe.™

Second, a big thank you to Jonathan Scull for reading about the K-A-B SpeedStrobe in *HFN/RR*. "Why not *Stereophile*?" he asked. "That's what I'd like to know," I said, "since I'm certain I sent one along with the requisite 8x10." Question: Just who is the "New Products Editor" for *Stereophile*? *[We don't have one, but all press releases end up on Wes Phillips's desk. —Ed.]*

Since the review reflects the fun and satisfaction everyone experiences when they use the K-A-B SpeedStrobe, I thought I'd use this opportunity to share the interesting way in which this product was developed.

In November '93, I was approached by a customer as dismayed as Jonathan was by the lack of a good light source for strobing. This customer is technically adept in electronics, so I encouraged him to develop the idea. The first solution was a high-brightness LED triggered by the AC line current. I bounced this idea off my professional customers. They like the bright pin-spot light, they don't like the power cord! They want portability and convenience.

Okay. Well, a battery-operated strobe is a good idea because it could be very accurate via quartz crystal, would work anywhere, and something else — all strobe discs to date are based on 120Hz illumination. With a quartz reference, we could use 60Hz and reduce the number of marks on the disc by half, thus making the disc very easy to read. In fact, with the additional space we could replace those hypnotic bars with actual speed numbers. Now *that* would truly be something special.

Okay. Now let's find a graphic artist skilled in the computer art to do it. Luck prevails and the product is complete one year later — October '94. Incidentally, the K-A-B SpeedStrobe disc is professionally silk-screen – printed on precision die-cut plastic. My customer is now a technical associate of K-A-B Electro-Acoustics. Thanks, Craig, very nice work indeed!

Coming in '96, a super class-A amplifier and fascinating phono preamp.

K-A-B Electro-Acoustics serves the music collector and sound enthusiast with products that Preserve, Enhance, and Restore.

Thank you very much!

KEVIN A. BARRETT
President, K-A-B Electro-Acoustics

-K-A-B->

K-A-B ELECTRO - ACOUSTICS

OPERATING INSTRUCTIONS
KAB SPEEDSTROBE™ DIGITAL PHONOGRAPH SPEED READOUT

Congratulations! You have just purchased the most sophisticated yet economical digital speed readout ever offered for checking phonograph speed accuracy.

PRODUCT DESCRIPTION

The KAB SpeedStrobe disc will verify all standard speeds as well as incremental steps between 70 and 90 RPM for vintage collectors.

The KAB Quartz Lock Strobe Light produces an intense red beam locked to a precision quartz crystal controlled circuit. It is very accurate and it's battery operated so it can be used anywhere.

OPERATION

Slide battery compartment cover off and install 9V battery. The Push button turns the strobe light on and off. The light pulses are of very short duration resulting in low battery drain and long battery life.

Place the SpeedStrobe disc on the turntable. Aim the Strobe light and read the speed direct from the disc.

If the speed readout is stationary, the turntable is 100% accurate. If speed is adjustable, set the control for the desired speed while watching for the corresponding readout to become stationary.

ACCURACY

Basic accuracy can be checked by timing the drift movement over 1 minute. Broadcast accuracy is 0.3% and is met if less than 10 numbers pass the illuminated spot in 60 seconds. Less than 3 numbers is 0.1% and Less than 1 number is 0.03%. Readout drifting left indicates fast, drifting right indicates slow.

PITCH

A speed change of approx. 6% will alter pitch one half tone Sharp/Flat. Each readout band from 70 - 90 RPM represents an average change of 2.2%.

WARRANTY

Your SpeedStrobe Quartz Lock Strobe is warranted to be free from defects for one year from date of purchase. Should the unit fail for any reason, KAB will repair or replace the Strobe unit at our option. Save your sales receipt to verify proof of purchase.

COPYRIGHT WARNING

Orders & Correspondence: P.O.Box 2922, Plainfield, NJ. 07062-0922 USA

K-A-B

K-A-B ELECTRO-ACOUSTICS

P.O. BOX 2922, PLAINFIELD, NJ 07062-0922

908-754-1479

Speed Strobe

For Use with Special Design Strobe Light

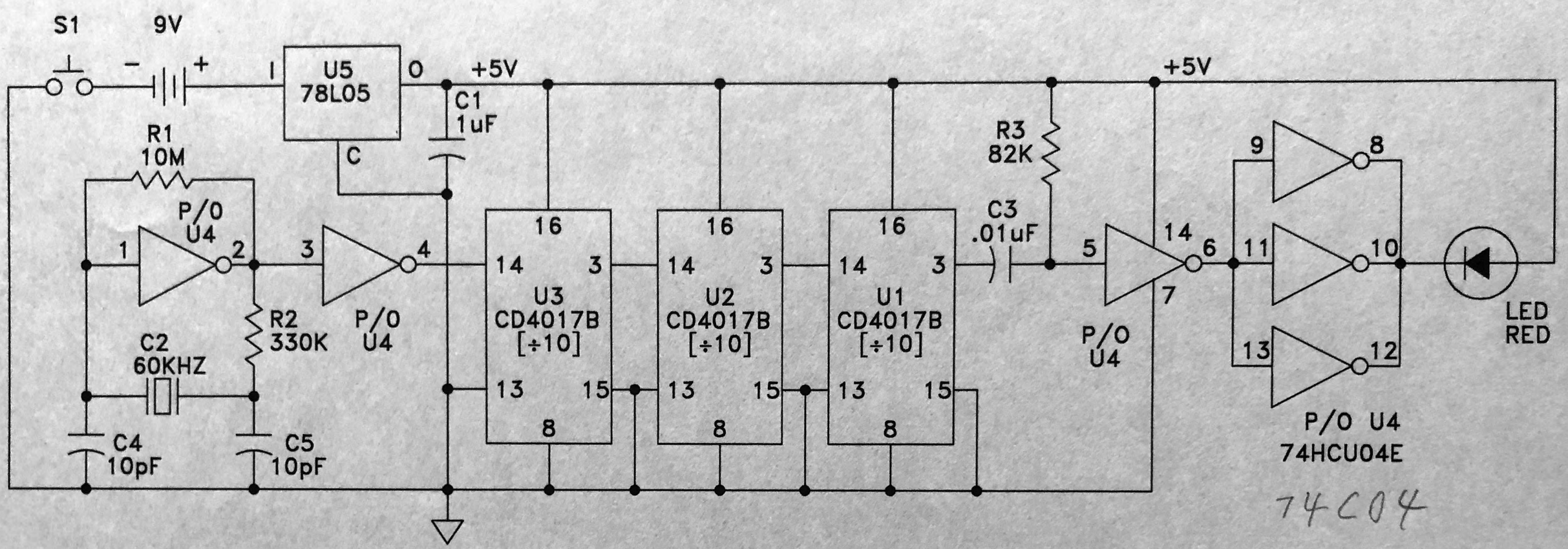
Speeds (Label: Actual): 33: 33.33, 45: 45.00, 70: 70.59, 72: 72.00, 73: 73.47, 75: 75.00, 76: 76.59, 78: 78.26, 80: 80.00, 81: 81.82, 83: 83.72, 85: 85.71, 87: 87.80, 90: 90.00. Outer marks represent 16.66 rpm.

KAB

SpeedStrobe

www.kabusa.com

Speeds (Label: Actual): 33: 33.33, 45: 45.00, 70: 70.59, 72: 72.00, 73: 73.47, 75: 75.00, 76: 76.59, 78: 78.26, 80: 80.00, 81: 81.82, 83: 83.72, 85: 85.71, 87: 87.80, 90: 90.00. Outer marks represent 16.66 rpm.



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BATTERY STROBE