

45rpm Phono Gazette

Show us your workbench!

Testing the vacuum tubes

By Phil Vourtsis!

Take a picture of your workbench and send it to me. I'm sure we could give each other some tech hints and helpful info doing this. This is my workbench in South Carolina. The house does not have a basement but it does have a separate 30' x 40' building which my wife and I use for our hobbies. She is into quilting and has a 10 foot wide quilting machine that is computer controlled.

Besides playing with antique radios and phonographs, I keep a vintage 1967 Tempest convertible in running condition and bring it to occasional car shows. This building is a dream come true with its own heat, air conditioning, 3 car bays and bathroom. I make the most of every inch of space by installing shelves everywhere I can. The workbench is an old formica kitchen benchtop from the 1980s that was used in the kitchen when I was living in New Jersey.

A good workbench should have some test equipment. Mine is equipped with a digital meter that can measure capacitance and frequency, Eico RF generator and capacitor tester, Heathkit Signal Tracer, Techtronics dual trace scope, and resistive and capacitive decade boxes. It's also important to have a good supply of wire, clip leads, and a good soldering station. Lighting is important too. I've found the best bet is an articulating lamp that has a built in magnifier. You will also need plenty of outlets and a decent power supply setup. I recommend both a variac and a series safety lamp. The variac will supply any AC voltage you want up to 120 volts and the safety lamp would go in series with the device under test providing safety if the electronics under test were to short out.



Myrtle Beach Workbench, no matter how much space you have you can always use more.

All models of the RCA Victor 45rpm music system use vacuum tubes. The only solid state device that was sometimes used was a selenium rectifier. Because the tubes have a limited lifetime, all RCA Victor sets used tube sockets for easy removal and replacement. This can be both a blessing and a curse. While replacement was easy, maintaining good connections can be a problem. Especially when the set is over half a century old.. When repairing or restoring one of these sets it is essential to remove each tube, make sure the pins are straight, and clean the pins and socket with a good quality electrical contact cleaner (Deoxit is recommended). While you have the tubes in your hand it is a good idea to clean the glass but be careful! The writing on the tube can very easily come off when it gets wet. It takes some practice but you can clean most of the tube wet and then lightly wipe the writing with a dry cloth. Next the tubes should be tested. As with most things, there are cheap and expensive tube testers. The more expensive ones measure the emission of the tubes in micromhos and provides the needed voltages to most of the pins so that the tube is operating as if it were in the amplifier. The cheaper sets do less but they all apply voltage to the heater and have some form of pass/fail test. Many testers allow you to test for shorts between the tube pins. When testing for this it is a good idea to tap the tube to see if a short occurs in this fashion. Another important test is checking for a gassy tube. This is when air leaks into the tube rendering the tube useless. Once all the tubes are checked and cleaned make sure you put them back in the proper sockets. If you make a mistake here you can easily burn up other components when you plug it in. SPECIAL NOTE: Early models used 50B5 as the output tube. Within a short time the 50C5 was introduced and most circuits started using the 50C5 as the output tube. Even though both tubes have the same characteristics, they have different pin connections inside the tube. If you plug a 50C5 in an amplifier that calls for the 50B5 you will blow out other components. So keep track of the tubes and their locations when you are working on the set.



Hickok, one of the better tube testers

45rpm Phono Gazette

What Phono to Buy in 1949

Newspaper article, origin unknown from Monday, Aug. 01, 1949.

Like a dervish whirling at three different speeds at once, the U.S. record industry has begun to come apart at the seams. Its head, RCA Victor, has gone flying off at 45 r.p.m.; its right arm, Columbia Records, has spun away at 33 $\frac{1}{3}$ -r.p.m. The body of the industry, including a good part of the Victor and Columbia product, has continued to turn at 78 r.p.m. But one by one, other record companies have been dragged after the two big innovators. Last week Capitol Records, which had already begun to press at the 45 speed on Victortype, seven-inch discs, decided to pattern its classical catalogue after Columbia's LP (Long Playing) records. For the record-buying public, this schizoid spectacle has been confusing, to say the least. Why go on buying the old 78s, when 45s or 33 $\frac{1}{3}$ s are obviously the coming thing? But which of the two new types to buy? Columbia's Long Playing 33 $\frac{1}{3}$ s, whose microgrooves can hold a whole symphony on two sides, have an advantage in convenience over Victor's small 453 for long classical selections. Also, Columbia's seven-inchers are quite as good for popular music as RCA's seven-inchers, though there are as yet few automatic record changers on the market which will take the Columbia product.

So why not buy a Columbia 33 $\frac{1}{3}$ -r.p.m. turntable, plug it into the old 78 r.p.m. machine, and call it a solution? Nearly a million record buyers have done just that. But millions of others have hesitated. RCA Victor has by far the world's largest recording roster of fine artists. Would the rest of the industry be pulled into RCA's strong orbit? Until they had the answer, many record collectors stopped buying altogether.

To exorcise the speed demon, top executives of RCA Victor, Columbia and Decca have been huddling in quiet meetings. Last week there was still no agreement. Until the industry pulled itself together, record fans had two sensible alternatives: postpone buying or buy a turntable that plays all three speeds. There are about ten on the market, ranging in price from \$15 to more than \$50.

The entertainment trade magazine Variety, a little dizzy from watching the industry spin, saw still another possibility: the public

might say "aw-nuts to the whole thing and [go] back to just playing the radio."

Editors comments;

Columbia 7 inchers were introduced one day before RCA Victor's introduction of the 45 rpm 7 inchers. They were not successful because you could only play the Columbia records one at a time, while you could play up to 10 RCA's in sequence.

When this article was written Columbia seemed to be winning the speed war, but in September 1949 RCA dropped the price of their players in half and started a huge advertising blitz. In time both formats were accepted by the public and were successful for the next 30 years until the digital compact disk made its debut in 1982.



The earliest Columbia 7 inchers had one song per side to mimic the 45. This one has 3 per side. Some have bumps near the label which are supposed to prevent slippage. RCA chose to prevent slippage on the 45 by using a specially formulated paper for the label. During the first year of production RCA changed the label a few times before they got it right.

The 45 rpm Phono Gazette is a quarterly publication since 1995. \$7/\$9 for 4 paper issues, \$14/\$18 for 9 paper issues. (USA/Int'l)

Send to Phil Vourtsis,

2514 Bear Stand Trail, Myrtle Beach, SC 29588

or you can use Paypal (Account is pvourtsis@optonline.net,
(no credit cards please))

Please note!

If you would like to **renew** your subscription with an 'online' copy there is **no charge**. Just send me your email address.

RCA ad from Saturday Evening Post in 1950.

The ad was in a larger format and it was hard to scale it down, so sorry for the imperfections.

This RCA Victor "45" record changer, model 9JY, can be attached to any radio, phonograph or television set. It plays up to 10 of the new, illustration-free 7-inch records, costs only **\$1295**

Have you met —with Burr characters? See television stars

New, 16-inch television console shown here from RCA Victor's brilliant "Lancaster" series. Pictures are always steady because they're locked in tune by RCA Victor's Eye Witness Picture Synchronizer. There's a built-in antenna, personalized tone control, a place to plug in the RCA Victor "45" record changer. **\$42950†**
 Plus \$1.78 Fed. Tax
 Factory Service
 Contract extra*

Also in RCA Victor's "Lancaster" series —the newest, finest 16-inch television— is another strikingly beautiful console, the RCA Victor 9TC275, not shown. Its 18th Century-style cabinet has beautifully figured doors. Choice of hand-rubbed finishes— mahogany, walnut or for slightly more, blond. **\$46950†**
 Plus \$1.78 Fed. Tax
 Factory Service
 Contract extra*

These Christmas Stars are "Gifts that keep on Giving!"

Youngsters can grow up with music when they have an RCA Victor "45" of their very own! A 4-year-old's tiny hands can easily put the non-breakable, 7-inch records on the big center spindle . . . press a button just once up to 50 minutes of music from the world's finest, fastest, completely automatic record changer. In ivory-finish, also decorated with Walt Disney's best loved characters: RCA 9EY35 or with Roy Rogers and his wonder-horse, Trigger (RCA Victor 9EY36). AC.

Also, at no extra charge, a Walt Disney or Roy Rogers story book and 75¢ —subject change without notice— and eight copies of the beautiful . . .

RCA VICTOR

The 45rpm Phono Gazette

WANTED	WANTED	SERVICES	SERVICES
<p>Bob Becker (201.391.2971) 7 Woodland Road Woodcliff Lake, NJ 07677 rdbecker@aol.com Beige knob for 8EY4FK Large tuning or vol knob for 9Y510 6JM25 Ding Dong Slideomatic 7HF45 Oak or Maple preferred 8EY4DJ gray plastic front Decca blk/red portable 45 player</p> <p>Charles Cummins (817-732-4313) 3912 Calmont Ave Fort Worth, Texas 76107</p> <p>David Cox (937)484-3241 1407 Knight Road Urbana, OH 43078 dcc49@yahoo.com 45 spindle for Admiral 5W12N 2-speed record player Bakelite lid for Zenith twin 7 Outer concentric radio/phono knob for Emerson 635</p> <p>Dennis D'Amico 11892 Pine Street Los Alamitos, CA 90720-4163 lionelguy@yahoo.com</p> <p>Bill Gourd (989-832-2934) 1024 West Park Drive Midland, Michigan 48640 <u>In priority order:</u> 8EY4, 7HF45 (wood case) 8HF45P (portable) 4Y511 (radio/phono)</p> <p>Hank Granse (360-871-9014) 6751 View Dr. SE Port Orchard, WA 98367 hgranse@wavecable.com</p> <p>Bob Green (570-366-3949) 1711 Breezy Acres Rd Orwigsburg, PA 17961 For Sale- 15E Demonstrator rcgreen@schmobile.com</p>	<p>Doug Houston (248-627-4141) 3441 South Hadley Ortonville, Michigan 48462 HoustonD@tacom.army.mil</p> <p>Bob Kolba 904.285.5483 161 Twelve Oaks Lane Ponte Vedra Beach, FL 320082 Rkolba0211@aol.com</p> <p>John Lee 314 East 11th St. Upland, CA 91786 Nipper45@verizon.net Can scan other character model decals in exchange for Snow White</p> <p>Paul Childress (804.271.7842) 6632 W. Denny Ct. Chesterfield, VA 23832 pchildress@prodigy.net</p> <p>Bob Reck (410)647-1849484 Botteford Court, <u>Severna Park, MD</u></p> <p>Doug Robinson 2609S. 800E. Salt Lake, Utah 84106 Doug45rpm@hotmail.com</p> <p>Dan Saporito (732.513.5698) 1225 NW 21st ST Apt. 302 Stuart, FL 34994</p> <p>Ray Tyner (614-475-1697) 4709 Wendler Blvd Columbus Ohio 43230-1642 rcray45rpm@msn.com Birch 45 player, Steelman 45 player</p>	<p>Willie Bosco 707.923.3897 1588 Miller Creek Rd. Garberville, CA 95542 williamjbosco@gmail.com Cam kits, and Lowrider cartridges available again!</p> <p>Tom Paruta (716.264.4035) 127 Creekside Drive Amherst, NY 14228 TomTMP58@aol.com Looking for Zenith T545 Zenith Twin Seven I do 1940s thru 1960s phono restorations. Call for quotes.</p> <p>Retro-Tronics Custom radio backs and phono bottoms for 45EY2, 7EY series www.retro-tronics.com</p> <p>James Romano Phono_restoration_company 301 Haynes Run Medford, NJ 08055 (856-220-9588) Restoration of RCA 45rpm phonos & knock off models. Repair on any changer or turntable. JUKEBOXJUNKIE@aol.com Webpage: http://www.turntablefactory.com/romano.html</p>	<p>Vintage Electronics 9 Crane Park Hattiesburg, MS 39402 601.264.4755 phonoed@aol.com www.vintageelectronics.com Rebuilding Service - Idlers, cams, cartridges <i>Flash- NOS Sonotone 1P carts for the better sounding 45 players</i></p> <p>V-M Audio Enthusiasts (248-478-0990) eves/wkends 37530 E. Meadowhill Northville, MI 48167 info@thevoiceofmusic.com www.thevoiceofmusic.com Repair parts including both V-M and RCA 45 players.</p> <p>Phil Vourtsis (732-208-4284) 13 Cornell Place Manalapan, NJ 07726 philvourtsis@gmail.com Books signed by author The Fabulous Victrola '45', Schiffer Publishing LTD. \$25 plus \$4 shipping</p> <p>West Tech Services 43734 Marietta Road Caldwell, Ohio 43724 TELE/FAX: 740-732-6056 westtechservices@yahoo.com Rebuilding Service Idlers, cams, cartridges</p>
<hr/> <h2>FOR SALE</h2> <hr/> <p>15E Demonstrator Both turntables restored Amplifier rebuilt Tweeters added to speaker system 45 Changer has 'see through' spindle cap And metal spindle. Featured in Oct 2009 Phono Gazette \$1500 856-220-9588</p>			
			