

Issue No. 148  
\$5.99

NAY NASSAR & LARRY STIDOM

# ECHOES OF THE PAST



BILL KEITH & POOKIE



- IN THIS ISSUE:**
- Magnificent Men
  - 75th Birthday of 45 RPM
  - The Laurie Label
  - Bill Keith Story
  - More Cool Stuff!



# Happy 75<sup>th</sup> Birthday 45 RPM Vinyl Record

by Charlie Horner

with contributions from Pamela Horner

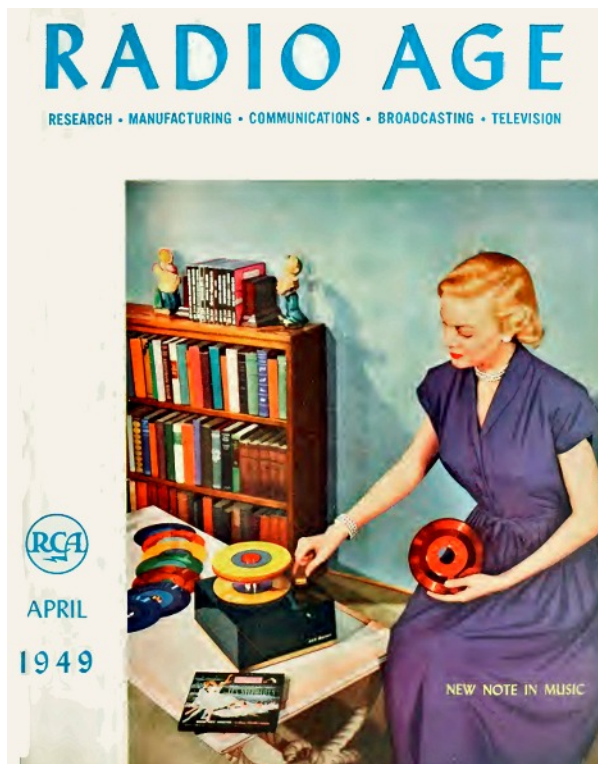
**Happy 75<sup>th</sup> Birthday to the 45 RPM vinyl single record!** That wonder of technology was introduced by RCA Victor on March 31, 1949 – 75 years ago. As I was born eight months later, there was never a time in my life that the 45 didn't exist. I'm glad, because much of my life has revolved around this tiny, yet hugely important plastic disc. You might say I was born to collect records. My mother kept a baby book where she wrote about the key moments of my infant life. On occasion of my second birthday she wrote, "Charlie has a bunch of phonograph records and he can identify each one by the first note!" Now, I must admit, they were children's records that spun at 78 RPM. But what fascinated me was they were 7" discs made of red and yellow colored vinyl. Well, I became a record collector. I now have over 55,000 45s. I realize my collection is small compared to many of you reading this article, but I wanted to keep it at a manageable size. So, why was the invention of the vinyl 45 so important? To find out, let's go back to the beginning.

## Early Recorded History in a Nutshell (or in a Lac Shell - you'll get this later on)

In the beginning there was no recorded sound, just sheet music. Well, OK, there were piano rolls that reproduced piano music on player pianos. But the human voice went unreproduced. Then in 1877, Thomas Edison invented the phonograph. It was just a sheet of tinfoil wrapped around a cylindrical brass drum which, when turned by a handle,



Thomas Edison's wax cylinder and case



April 1949 cover of Radio Age magazine

rotated under a metal stylus. It was only good for reproducing the phrase "Mary had a little lamb," and even that was barely audible. Edison thought it might be useful as a dictation machine but he left the invention go idle as he worked on the incandescent light bulb.

Saving the phonograph invention, fell to Alexander Graham Bell and Charles Tainter who over the next ten years changed the cylinder composition to a hard wax – hence the term wax cylinders. Wax was not the best medium for recording, but at least you could cut grooves into it. Today, no records are made of wax, but the term is still incorrectly used to describe records (ie., "colored wax" "dead wax"). Edison jumped back into the wax cylinder business in the 1880s, but by then a new modification was taking hold.

Avoiding Edison's patents, Emil Berliner developed his gramophone, which used a flat circular disc (similar to records today) instead of a cylinder. By electroplating his original discs, he was able to make a "stamper" for mass reproducing his gramophone discs. Before long Edison and others also moved into flat discs also.

## Speeds (RPM) and Size (Diameter)

From the beginning, there was always a trade-off between speed and size. The faster a disc spun, the better the sound quality reproduction. However, the faster the speed, the quicker the stylus reached the end of the record and the less music you could put on it. Early gramophone disc speeds ranged from 60 to 82 revolutions per minute (RPM). Early disc diameters ranged from 5 inches to 12 inches or larger. In 1925, 78.26 RPM was chosen as a standard for motorized phonographs, because it was suitable for most existing records, and was easily achieved using a standard 3600-rpm motor and 46-tooth gear ( $78.26 = 3600/46$ ). Standardization of disc size arrived gradually but by the 1920s most popular recorded records were 10 inches in diameter. That dictated that 78 RPM speed records of 10 inch diameter fit about 3 minutes of song per side. From that point on, popular songs were written and recorded to be about 3 minutes long. It was a case of technological limitations dictating art.

## Composition of 78s

Between 1896 and 1949, the most commonly used material to produce recording discs was something called shellac. Actually, shellac itself is just one of several materials that make up the composition of a “78,” but it’s an important one because it’s the resin that holds the others together. So, what is shellac? Shellac is a resinous compound secreted by a disgusting looking bug – a tree insect called the lac, native to India and Southeast Asia. The secretion from this bug forms a protective shell to protect the insects’ unhatched eggs. This shell-lac is then scraped off the tree branches and shipped as a dry powder. Shellac records were heavy, very brittle and extremely fragile (breakable). They also produced relatively noisy recordings. Still, in the years



Lac Bug (top) and secreted Lac Shell



The author holding an early 1940s 16-inch red Vinylite radio transcription in CUH Archives.

before synthetic (thermo)plastics, they were a popular form of home entertainment.

## Vinyl Records

There are several types of materials that we refer to as vinyl. The first, polyvinyl chloride (PVC), was first discovered in 1872, several years before Edison’s phonograph. That vinyl was brittle and unusable until 1926, when it was plasticized and made flexible. I’m a Ph.D. synthetic organic chemist, but I realize many of you are not, so I’ll try to simplify this. All “vinyls” are polymers – infinitely long strings of repeating molecules (monomers). Vinyl polymers are called thermoplastics (plastics for short) because they can be melted and cooled to take various shapes. By the 1930’s, researchers at several companies were racing to develop vinyl records. The researcher who succeeded and who deserves the title, “Father of Vinyl Records,” was Frazier Groff. Frazier Groff was working for Union Carbide in 1931 when he started compounding phonograph records using a co-polymer of 70% vinyl chloride and 30% vinyl acetate. The new material was called Vinylite.

The RCA Victor Corporation was one of the first to adopt the new material for phonograph records. In 1931, they introduced 12-inch diameter (and later 16-inch diameter) 33½ RPM discs made of a vinyl composition called Victrolac (incorrectly called Vitrolac) that could hold up to 15 minutes per side. They were used mostly for radio transcriptions - whole 15-minute pre-recorded radio programs. RCA Victor tried to introduce these discs for use by the general public but the timing was wrong. This was during the Great Depression and people couldn’t afford to purchase the new record players to play them.

At about the same time, RCA Victor's main competitor, Columbia also started experimenting with longer playing records. In 1932, Columbia also made 12-inch 33 1/3 RPM records (composition unknown to me) for use at motion picture intermissions. Again, it never caught on, for the same reasons as with RCA's product.

Still, neither RCA Victor nor Columbia gave up trying to revolutionize the phonograph market. Both companies talked about working together to jointly introduce a new product. But both knew that an inevitable clash of the titans was coming. But first something happened that upended the world and put everything else on hold. World War II.

With the world at war, President Franklin Roosevelt, ordered a 70 percent cut in the production of new audio records. Shellac was needed for military production, including artillery shell coatings, and signal flares. Even before that, the supply of shellac from overseas was increasingly harder to acquire. Then record companies realized they could grind up old records and melt them down to make new ones. Of course, grinding up old records meant that the paper labels and filler also got ground up, and when repressed, the new record was noisier than one made from virgin shellac. Still, with shellac at a shortage, record companies had no choice. Older recordings were seen as having no worthwhile value, while the value of new records to the morale of both service and civilian populations was well documented. In June of 1942 a non-profit patriotic organization named "Records for Our Fighting Men, Inc." was formed to make record salvage a war effort

operation. Kay Kyser, Kate Smith and Gene Autry were named president and vice-presidents and many other performers joined the efforts. "Records for Our Fighting Men, Inc." recruited the American Legion to handle the actual collection of the discs. The salvaged shellac was sold to record manufacturers, who recycled it to make new records. The money raised was used to buy new records to be sent to our fighting men overseas. In some cases, you weren't allowed to buy a new 78 unless you turned in an old one for recycle. It's estimated that hundreds of thousands, possibly millions of old shellac records were recycled to make new ones.

### Petrillo's Recording Ban

In August, 1942, American Federation of Musicians (AFM) president, James C. Petrillo called for a ban on record making by all instrumentalists (except harmonicas). The AFM was the trade union of the country's musicians and the nation-wide strike further shut down the record industry. Petrillo argued that records were going into juke boxes at such large numbers that musicians were losing live gigs. Of course, acappella groups like the Four Vagabonds, who could imitate orchestras vocally, kept recording and made out quite well. And instrumentalists were still allowed to record if, and only if, the records were being made to ship to our fighting troops. Thus, by October 1943, the U.S. War Department took over producing and sending records to our military personnel. The records were called V-Discs.

### V-Discs

Shipping boxes of very breakable shellac 78s to active war zones was in itself tricky. The solution was V-Discs that were 12-inch in diameter and made of "unbreakable" vinyl compound. V-Discs were pressed by RCA Victor and Columbia, the two rival companies that had done the most research in vinyl record manufacture. Both companies now saw the future of commercial records being made of vinyl. The race was on between them to be the first to introduce a new vinyl record to the consumer market.

### The War of the Speeds: Columbia Strikes First

Columbia struck first, introducing 10-inch and 12-inch 33 1/3 RPM vinyl Long Playing (LP) records in the Fall of 1948. Actually, Columbia had made 33 1/3 RPM records way back in 1932 for intermission music in motion picture theaters. Back then, the discs played from the center out. But work



1940s V-Disc by the Mills Brothers



Columbia's 10-inch, 33 1/3 RPM album by the Golden Gate Quartet

on the new LPs began in 1939, interrupted only by the war years. Then, in 1948, Peter Goldmark and William S. Bachman developed for Columbia a new 33 1/3 RPM design with "microgrooves." The old shellac 78s had between 96 and 125 grooves per inch. That was all they could do with shellac because the medium was so brittle. But using vinyl, they could increase the grooves to between 250 and 400 grooves per inch. That meant they could have more music on the record with better fidelity.

Columbia partnered with Philco, manufacturer of record players. Since the general public only had 10-inch 78-speed players with heavy tone arms that would wreck microgrooves, Philco started making consoles with 33 1/3 and 78 RPM speeds and dual tone arms, one for each speed. Since the new records retained the small hole like a 78, the turntable itself remained the same. They also offered a \$29.95 adapter turntable that could be connected to an existing console to play the new 33 1/3 vinyl microgroove records.

Columbia quickly prepared a catalogue of 110 albums, mostly classical or show tunes. Only 11 were initially in the pop field. And while the classical albums were often 12-inchers, most of the pop albums were of 10-inch diameter (similar to 78s). Realizing the public's switch to the new records would take time, Columbia announced they would also continue making their music available as 78s for the time being.

The 10-inch albums contained five or six songs per side. At first they had printed paper sleeves, later issued with more elaborate cardboard

sleeves having color printed pictures on one side and track listings and liner notes on the reverse.

On June 21 and 22, 1948, Columbia held a two-day convention in Atlantic City where 400 record distributors were invited to preview the new microgroove records. Attendees were given promotional kits and watched dramatic skits that poked humor at Columbia's competitors. They were also treated to two nights of performances by Columbia recording stars including Gene Krupa, the Modernaires, Roy Acuff, Tony Pastor, Buddy Clark and many others. This was all part of a \$3 Million promotion campaign. Smaller record labels began announcing their intent of making vinyl albums.

### RCA Victor Strikes Back: Madame X

The last six months of 1948, were filled speculation and rumors of what RCA Victor was up to. Everyone knew RCA was going to introduce a competitive product, but no one outside of RCA knew what it would be. Then, The December 4, 1948, issue of Billboard Magazine leaked the work that RCA would soon introduce a 45 RPM vinyl single. The public would be faced with a choice of three speeds – 78, 33 1/3, and 45 RPM. Not since the 78 had battled it out with the wax cylinder, had the recording industry faced such a dilemma.

The secret research project at RCA Victor was code named "Madame X." On January 10, 1949, RCA revealed what Madame X was, at a high-powered showing in New York City. The new product was a 45 RPM vinyl 6 7/8-inch two-sided single. What's more, the "45" had a large 1 1/2-inch center hole that required a special record changer /



RCA Victor ad for Project Madame X



The new RCA Victor Record Changer

player. Stressed as a revolutionary development, the automatic changer mechanism had a 1 ½-inch red plastic-capped center spindle which housed a trigger-fast drop mechanism that held up to eight records. RCA's new 45s were paper thin, unbreakable and had a raised area on the non-playing surface to prevent scratching of the groove area when the records were touching. Like the Columbia albums, the 45s contained microgrooves. RCA Victor indicated the new 45s and changer-player would be ready for distribution by April.

Although RCA's new records were still four months out, the "war of the speeds" was on. Edward Wallerstein, chairman of the board of Columbia Records Inc., commented, "We are unable to fathom the purpose of the records revolving at 45 revolutions per minute, which we understand are to be released sometime in the spring."

Frank M. Folsom, RCA president, explained that RCA had participated in meetings with Columbia before the latter introduced its 33 1/3 records, but RCA decided not to go along. He said that in past years, RCA had tried such a record and decided that the Madame X development was superior. Folsom denied that there was "any warfare or feud" between Columbia and RCA, claiming it was just normal commercial competition.

### Columbia Strikes Back: The 33 1/3 RPM, 7-Inch Single

Meanwhile, Columbia must have realized the attraction of smaller singles. In the same week that RCA announced the 7-inch 45, Columbia announced the release of their 7-inch 33 1/3 RPM vinyl singles. Utilizing their microgrooves, the Columbia singles retained the same small hole as their 33 1/3

albums and 78s. These singles were released in a 1-100 series containing classical, popular and folk (country & western) releases. Throughout 1949 and 1950 close to 100 records were released on this series, although later releases were also pressed in different forms (as we'll see later). Group harmony fans will appreciate Columbia 7-inch 33 1/3 RPM small hole singles by the Charioteers, Ravens, and gospel records by the Golden Gate Quartet and Mello-Tones.

### The War of the Speeds Heats Up

The February 1949 issue of *Television Digest* stated, "It's open warfare, all right, between Columbia Records with its 33 1/3 RPM long-playing record and player and RCA Victor with its 45 RPM record and player. Caught between them, reluctant allies of both, are big radio-phonograph manufacturers, Being wooed as allies are other record makers. Standing by are the consumers." Mercury Records, specializing mainly in classics, went with Columbia. Capitol Records adopted RCA's 45. Decca was still making up its mind. Meanwhile, Columbia chairman Edward Wallerstein called it "a war that Columbia Records had not initiated and in which it can not be defeated."

*[The Story of the Birth of the 45 and the War of the Speeds continues on Page 25.]*



Columbia's 7-inch 33 1/3 single. "A Kiss And A Rose" by the Charioteers

**[The Birth of the 45. Continued from page 9]**

The April 1949, introduction of the new RCA Victor 45s offered another surprise. Unlike most prior records made of black material, the new 45s were made of translucent vinyl in different bright, cheerful colors. The selection of colors resulted from a study by a board of color and design experts headed by John Vasson, a nationally known industrial designer. A different color was assigned to each of the seven classifications of recorded

music. The board decided on the best psychological and aesthetic color match for each music genre – ruby red for Classical; midnight blue for Semi-Classical; jet black for Popular; lemon-drop yellow for Children's; grass green for Western; sky blue for International; and cerise (fluorescent orange) for Blues and Rhythm. Labels for each category were of a color blending harmoniously with the hue of the vinyl. The new colored records were intended to aid

<b>RCA 50-xxxx Series: The First 20 Releases</b>			
50-0000	Arthur "Big Boy" Crudup	That's All Right	Orange Vinyl
	Arthur "Big Boy" Crudup	Crudup's After Hours	Orange Vinyl
50-0001	Arthur "Big Boy" Crudup	Katie May	Orange Vinyl
	Arthur "Big Boy" Crudup	Boy Friend Blues	Orange Vinyl
50-0002	Big Maceo	If You Ever Change Your Ways	Orange Vinyl
	Tampa Red	Chicago Breakdown	Orange Vinyl
50-0003	Arbee Stidham	My Heart Belongs To You	Orange Vinyl
	Arbee Stidham	I Found Out For Myself	Orange Vinyl
50-0004	Jazz Gillum	Signifying Woman	Orange Vinyl
	Jazz Gillum	Take A Little Walk With Me	Orange Vinyl
50-0005	Sonny Boy Williamson	Little Girl	Orange Vinyl
	Sonny Boy Williamson	Bring Another Half A Pint	Orange Vinyl
50-0006	Eddie Boyd	What Makes These Things Happen	Orange Vinyl
	Eddie Boyd	Chicago Is Just That Way	Orange Vinyl
50-0007	Big John Greer	Long Tall Gal	Orange Vinyl
	Big John Greer	Drinkin' Wine Spoo Dee O Dee	Orange Vinyl
50-0008	Four Tunes	Careless Love	Orange Vinyl
	Four Tunes	You're Heartless	Orange Vinyl
50-0009	Johnny Moore's Three Blazers	This Is One Time Baby	Orange Vinyl
	Johnny Moore's Three Blazers	A New Shade Of Blues	Orange Vinyl
50-0010	Jesse Stone & Orch	Do It Now	Orange Vinyl
	Jesse Stone & Orch	Cole Slaw	Orange Vinyl
50-0011	Illinois Jacquet Orch.	Adam's Alley	Orange Vinyl
	Illinois Jacquet Orch.	Black Velvet	Orange Vinyl
50-0012	Rose Murphy	Honeysuckle Rose	Orange Vinyl
	Rose Murphy	You Were Meant For Me	Orange Vinyl
50-0013	Arthur "Big Boy" Crudup	Crudup's Vicksburg Blues	Orange Vinyl
	Arthur "Big Boy" Crudup	Shout Sister Shout	Orange Vinyl
50-0014	Five Trumpets	Oh Lord	Orange Vinyl
	Five Trumpets	Don't Let Nobody Turn You Around	Orange Vinyl
50-0015	Freddie Evans Gospel Trio	Down On My Knees	Orange Vinyl
	Freddie Evans Gospel Trio	I'm Going To Rest From My Labor	Orange Vinyl
50-0016	Four Tunes	My Last Affair	Orange Vinyl
	Four Tunes	I'm The Guy	Orange Vinyl
50-0017	Jazz Gillum	Take One More Chance With Me	Orange Vinyl
	Jazz Gillum	Look What You Are Today	Orange Vinyl
50-0018	Johnny Moore's Three Blazers	Bop-A-Bye Baby	Orange Vinyl
	Johnny Moore's Three Blazers	What Does It Matter	Orange Vinyl
50-0019	Tampa Red	Come On If You're Coming	Orange Vinyl
	Tampa Red	When Things Go Wrong With You	Orange Vinyl
50-0020	Eddie "Sugarman" Penigar	Lost And Blue	Orange Vinyl
	Eddie "Sugarman" Penigar	Easy Baby	Orange Vinyl

consumers and record store owners alike in identifying, storing and displaying the records by genre.

RCA Victor made elaborate plays for its participation in the National Association of Music Merchants (NAMM) trade show in July 1949. A woman dressed as the mysterious Madame X handed out \$10 bills to those who could answer questions about the new 45s. Visitors to the show were handed free packagers of Life Savers, the result of joint advertising between RCA and the candy maker. The wrappers read, "45 RPM System: Life Saver of the Record and Phonograph Industry." *[If anyone has one of these wrappers, we need it for our archives!]*

### The War Rages On

By the end of 1949, many labels like London were issuing records on all three speeds – 78, 33 1/3 and 45. What's more, new record players were emerging that could play records of all three speeds. In mid-1950, RCA Victor began issuing vinyl LP albums at 33 1/3 RPM speed though they still pushed 45s for singles. Only Columbia persisted on pressing 7-inch singles at 33 1/3 RPM speed.

### The War Ends

Then on August 12, 1950, Columbia Records head, Edward Wallerstein made the following state-

#### Male Vocal Quartets on the 50-000 Series

50-0008	Four Tunes	Careless Love	Orange Vinyl
	Four Tunes	You're Heartless	Orange Vinyl
50-0014	Five Trumpets	Oh Lord	Orange Vinyl
	Five Trumpets	Don't Let Nobody Turn You Around	Orange Vinyl
50-0016	Four Tunes	I'm The Guy	Orange Vinyl
	Four Tunes	My Last Affair	Orange Vinyl
50-0034	Five Trumpets	Sign Of The Judgement	Orange Vinyl
	Five Trumpets	Swing Low Sweet Chariot	Orange Vinyl
50-0042	Four Tunes	The Lonesome Road	Orange Vinyl
	Four Tunes	I'm Just A Fool In Love	Orange Vinyl
50-0072	Four Tunes	Am I Blue	Orange Vinyl
	Four Tunes	There Goes My Heart	Orange Vinyl
50-0077	Cats & A Fiddle	I Miss You So	Orange Vinyl
	Four Clefs	Dig These Blues	Orange Vinyl
50-0078	Deep River Boys	Free Grace	Orange Vinyl
	Deep River Boys	If You Love God - Serve Him	Orange Vinyl
50-0080	Five Trumpets	When The Saints Go Marching In	Orange Vinyl
	Five Trumpets	Preach My Word	Orange Vinyl
50-0085	Four Tunes	Kentucky Babe	Orange Vinyl
	Four Tunes	Old Fashioned Love	Orange Vinyl
50-0111	Starlight Spiritual Sgs	Step By Step	Black Vinyl
	Starlight Spiritual Sgs	This World Won't Stand Much Longer	Black Vinyl
50-0114	Friendly Brothers Qrt	Soldier Go Ahead	Black Vinyl
	Friendly Brothers Qrt	Journey To The Sky	Black Vinyl
50-0121	Starlight Spiritual Sgs	Somehow	Black Vinyl
	Starlight Spiritual Sgs	I've Got Heaven On My Mind	Black Vinyl
50-0122	Friendly Brothers Qrt	There Must Be A City	Black Vinyl
	Friendly Brothers Qrt	Woman At The Well, The	Black Vinyl
50-0127	Red Caps, S.Gibson &	I'm To Blame	Black Vinyl
	Red Caps, S.Gibson &	Sidewalk Shuffle	Black Vinyl
50-0131	Four Tunes	Carry Me Back To The Lone Prairie	Black Vinyl
	Four Tunes	May That Day Never Come	Black Vinyl
50-0133	Starlight Spiritual Sgs	Awful Day Will Surely Come	Black Vinyl
	Starlight Spiritual Sgs	God Will Bring Things Out Alright	Black Vinyl
50-0138	Red Caps, S.Gibson &	Would I Mind	Black Vinyl
	Red Caps, S.Gibson &	When You Come Back To Me	Black Vinyl
50-0140	Friendly Brothers Qrt	Hide Me In Thy Bosom	Black Vinyl
	Friendly Brothers Qrt	Tree Of Lebanon	Black Vinyl





Four Tunes' "Careless Love" (50-0008)  
was the first R&B vocal group 45.  
Notice how hard it is to read the label.

ment. "Having developed a better 45 RPM record, CRI [Columbia Records Inc.] will release two of its current popular hits on 45 RPM microgroove records in several test markets." The two records were "Goodnight Irene" by Frank Sinatra and "Sometime" by the Mariners. The "War of the Speeds" was over. The winners were both Columbia's 33 1/3 RPM LP and the RCA Victor 45 RPM single. The only loser was the shellac 78 (by then also being presses in vinyl) which would be phased out over the next 8 years.

### **RCA Orange Vinyl Blues & Rhythm Series**

If you're like me, the most interesting of the first RCA Victor 45 series is the Blues & Rhythm 50-0000 series. These records were issued in cerise (RCA's term for fluorescent orange) vinyl. While the vinyl is a true work of art (worthy of any museum), the labels were a disaster! They had gold print on shiny light gray paper labels. If you wanted to read the name of the artist or song title, you had to have exceptional eyesight and tilt the record at a specific angle to any incoming light. And if the label was a little worn, you pretty much had to play the record to find out what it was. Later in the series, RCA wised up and changed to silver print on darker paper.

The first record on the series (#50-0000) was "That's Alright" by Arthur "Big Boy" Crudup. You know, the same song Elvis later made famous.

When Pam and I visited Graceland some years ago, they had a box of Elvis' 45s on display. I wanted to flip through them to see if Elvis had an orange vinyl copy of (#50-0000) but they wouldn't let me.

Anyway, the first R&B vocal group record ever pressed as a 45 was the Four Tunes' "Careless Love" (#50-0008). Counting R&B and Gospel genres, there are 10 male vocal group records on orange vinyl in this series (see the discography). I have most of them, but am still looking for the Cats & the Fiddle release on orange vinyl. The next hardest to find is probably the Deep River Boys release. I do have that one but I can only read the label by tilting the record at 30 degrees to the horizon at the exact moment of the Summer solstice.

All told, there are 142 releases in the 50-0000 series. Somewhere between 50-0101 and 50-0111 RCA stopped the orange vinyl and went to black vinyl.

### **Dealing with Spindle Size**

The only question left was how to deal with spindle size. The RCA Victor 45 changer-players with the large spindle were fine for playing 45s. However, if you wanted to play 33s and 78s you needed a thin spindle. Then, you needed to adapt the 45 to a small hole. Some early 45s had a small center hole with a pre-cut larger hole that could be punched out. Of course, once you punched out the center hole, you couldn't go back to the smaller hole.

### **The 45 Adapters**

The earliest 45 adapter was a steel circular plate that could be snapped into place in a 45 to make it fit a small spindle. These were horrible things, for you couldn't get them out of the record without damaging the center hole. Next came the plastic adapters which were easier to remove but could still harm the records if you weren't careful. Finally, adapters were developed that fit over the spindle instead of inside the 45. This subject requires more depth than can be supplied in this article. Perhaps I'll discuss them in the future.

### **Final Thoughts**

The 45 went through a few scary moments in its 75-year life. There was the 8-track, cassette tape, the CD and of course downloads and streaming. Fortunately, vinyl sales are picking up again and the future looks bright. **Happy Birthday 45!**



RCA Victor's first 45s. Clockwise from upper left: Green Country & Western; Red Classical; Dark blue Semi-Classical & Big Band; Black Pop; Yellow Children's; Sky blue International.