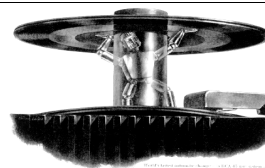


The 45rpm Phono Gazette

Challenge in 1939: Build a more dependable record changer that won't jam and break the records



"Chief" Benjamin Carson, lead engineer and designer of all record changers at RCA from the 1920's through the 1950's. Courtesy of Camden County Historical Society.

In 1939 RCA Victor issued a challenge to their chief engineer, Benjamin Carson, to build a record changer that would not break or damage records. At that time the record they were talking about was the brittle 78 rpm 10 inch and 12 inch record. Ben Carson had a lot of experience in this area, since he had designed all RCA Victor changers since the 1920's including the "Magic Brain". His response to the challenge was, "It can't be done. The only way to improve the record changer is to redesign the record and the record changer. He was given the go-ahead on this secret project that was known as Project "X". Now that the "Chief" was given a free hand on both the record and the player, he took maximum advantage of the latest materials and techniques. The record would be smaller, lighter, break-resistant, with low distortion and quieter playing surface. Vinyl was expensive, but since the record would only be about 7 inches in diameter, the cost was acceptable. In order to make the new changer more reliable, the record dropping mechanism was put inside a large center spindle. This would do away with clamps and stabilizers that were needed to balance and separate the old records. The new changer would not

have to determine the size of the record, since only one size would be used. In order to make the mechanics of the changer as simple and trouble free as possible, the automatic shutoff feature was not part of the new design. The prototype of the new changer was smaller, cheaper and faster acting than previous record changers. The speed of the changing mechanism was considered important because there would be less dead time between classical music selections.

A prototype of the new record and record changer was ready in 1942 and was shown to company management. They were impressed with the design but things had changed since the challenge was issued. Now RCA Victor was in the middle of World War II and it was decided to keep project "X" secret and revisit it at a later time.

Stay tuned for part 2 of this story, which answers the question, Why did RCA Victor wait so many years before introducing the new 45 rpm record and record playing system?

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JERSEY/NEIL GENZLINGER

Radio Days or High-Tech, It's All the Same

THOSE of you who are still hoping that computers, cellphones, digital cameras and other modern gadgetry are passing fads and that we will soon return to the simpler days of a half-century ago might have been dismayed with what Phil Vourtsis had on display at the David Sarnoff Library the other day.

The event was a combination exhibition and radio-repair clinic, with members of the New Jersey Antique Radio Club doing the honors. Mr. Vourtsis, the club's president and the author of "The Fabulous Victrola 45," had a display related to the dear departed 45-r.p.m. record that was fascinating and hilarious, but also depressing.

The hilarity came from a 1949 promotional film in which an impossibly earnest fellow was extolling the virtues of this new way to listen to music. "Distortion-free records!" he exclaimed. And indestructible. "Bend 'em, bounce 'em; nothing happens!"

The depressing part was Mr. Vourtsis's sampling of newspaper articles from the period. It turns out the innocent little 45 wasn't so innocent after all; it was part of a war between RCA-Victor (which made many of its breakthroughs at labs in New Jersey) and Columbia for the ears of America. The new 45 from RCA was competing with a seven-inch disc Columbia had just introduced as well as Columbia's LP's, and all were different from older-style records - different speeds, different needles, different players.

"The record-playing public," read one account, "which buys from 200,000,000 to 300,000,000 new disks a year, is faced with three mutually exclusive methods of reproducing music from records. Neither of the two new records can be played on conventional phonographs or radio-phonographs, nor can either be used on competing record-playing machines."

It sounded, in other words, dismayingly

like the technological warfare that bedevils us today: VCR's vs. assorted types of DVD's, CD's vs. MP3's, Windows vs. Macs, attachments that won't open, digital cameras that won't download. Evidently there never really was a simpler time; products have always tried to push one another out of



the marketplace, and frustrated consumers have always been left to play catch-up.

"Only today the turnaround on a product is much faster," Mr. Vourtsis said.

His club (www.njarc.org) has about 200 members, and watching them have fun with antique radios and other ancient technology makes you wonder what people will be doing a few decades hence with old cellphones. (Notice how primitive the ones from the 90's already look?) Lately, for instance, they've been having a contest to see who can pick up the most distant radio signal on a vintage receiver. When conditions are right, noise from Chicago or Canada or Mexico might squawk through the classic sets.

At the Sarnoff event, in Princeton, the club's experts ran a repair clinic where people could bring old radios for free doctoring.

Some who brought in sick sets were fellow hobbyists, but others were hoping to revive a personal keepsake.

A lot of old radios are being unearthed these days in New Jersey and everywhere else as the radio-crazy generation dies off and its offspring inherit attics full of stuff. Mr. Vourtsis said that at first the repair clinics were just for club members, but then it seemed there might be laymen out there in need of vacuum-tube and soldering-gun assistance.

"It's pretty rewarding when we're able to help them out because they feel like they've reconnected with something from their childhood," he said.

Certain radios can be worth thousands of dollars, he said, though many more models were just as mass-produced as anything today and are worth less than a first-generation digital camera. Also, some antique sets might prefer to remain idle. For instance, someone once brought in an Emerson Catalin that gave Mr. Vourtsis pause.

"It was the kind of thing where I really didn't want to get the radio working again because heat from the radio could damage the cabinet," he said, "and with the Catalin that's where the value is."

One other booth from the Sarnoff event is worth mentioning, what with Valentine's Day not far off. It was a display of valentines, sheet music and such with radio themes, from the days when radio was new. "There's a Wireless Station Down in My Heart," was one song title. A card read, "Over the radio you can hear me pine, I want you for my Valentine."

Apparently, linking romantic sentiments to the high-tech device of the moment gives them extra credibility. So here's an assignment for the season: Use the words iPod, memory stick, mini-DVD and MP3 in a love poem. Give it to your sweetie. Then duck.

The Workbench

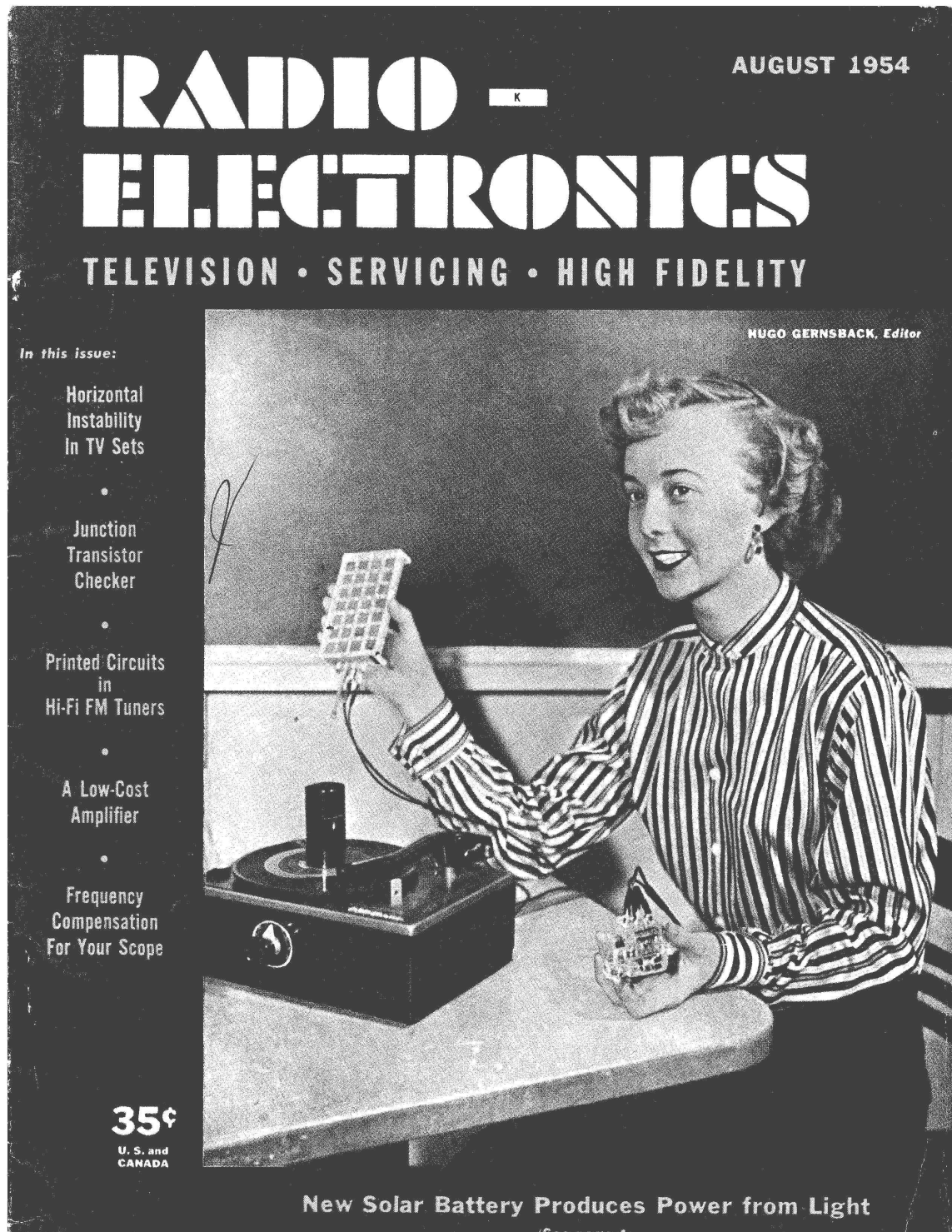
How to make those tinny table models sound their very best!

Many of the more reasonably priced 45 players have pretty flat sounding amps and speakers. Models like 45EY2, 45EY3, and 7EY1 fall into this category. The single ended amps are driving small 4 inch or 4 by 6 inch speakers in a plastic or bakelite

cabinet. But it's amazing what you can do with the placement of the machine within the room you are using. Here are three things you can try to improve the low end response on your phonograph.

Place the unit in a corner of the room. What little bass there is will be reinforced by the two walls joining at the corner. Another trick is to place the phonograph in a wood cabinet or shelf. The sound will then

use the cabinet to increase the low end. The last trick is provided by Doug VanCleave. Find or build a speaker cabinet with an 8 inch hole for the speaker. Remove the speaker so the box is empty. Place the box so the speaker hole is facing upwards. Place the phonograph over the speaker hole. The sound emitting from the bottom of the phonograph will enter the speaker hole and use the cabinet as a baffle.



The famous rp-190 record playing attachment was even used to test newly developed photo cells in 1954.