

# The Jersey Broadcaster

NEWSLETTER OF THE NEW JERSEY ANTIQUE RADIO CLUB

October 1998

Volume 4 Issue 10



**CHARLES "TONY"  
FLANAGAN**

**1942 - 1998**

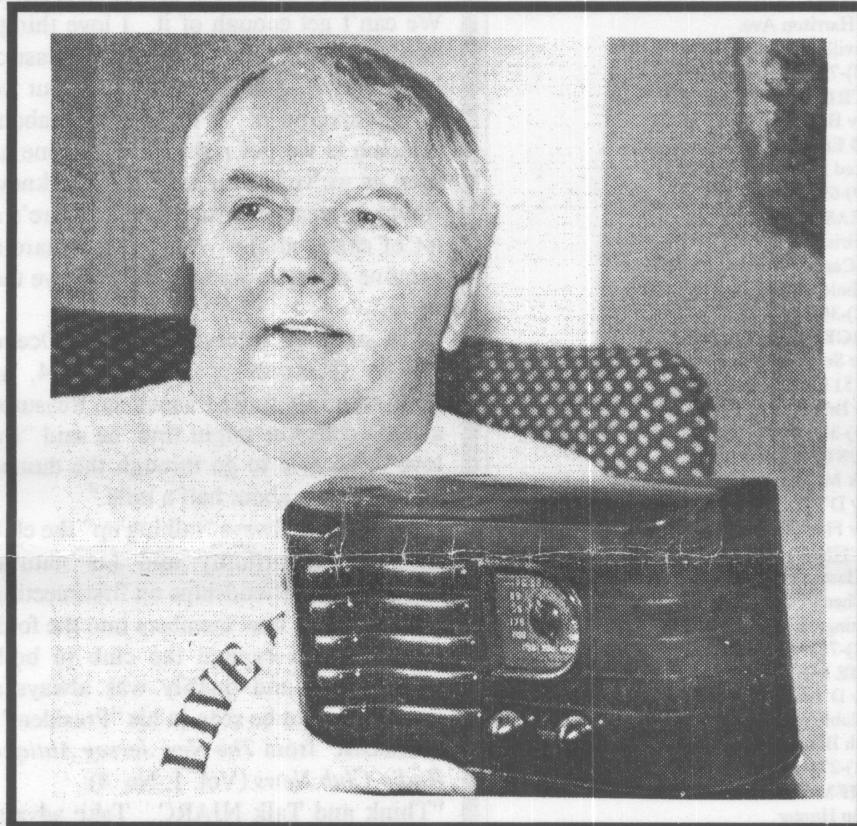
Tony was a special agent with the U.S. Secret Service for 20 years until 1991. After his retirement, he was a special agent in charge of the Philadelphia office of the U.S. Railroad Retirement Board Office of the Inspector General for six years, retiring in 1998. He dedicated his life to law enforcement and his family. He was a founder and first president of the New Jersey Antique Radio Club, Freehold NJ, and one of the founding members of the Federal Law Enforcement Officers Association. He was a member of the American Legion Post 54, the AMVETS, the Federal Officers Policemen's Benevolent Association Local 121, the Tri-State Association of Criminal Investigators, the Ocean-Monmouth Investigators and the Vidocq Society. He was a former member of the Freehold Township Little League Board of Directors. He served in the Air Force and was a graduate of Northwest Missouri State University. Born in New Brunswick, he lived in East Brunswick, Roselle Park, Spotswood, Howell and Oak Grove, Mo., before moving to Freehold Township 14 years ago. Contributions in Tony's memory may be made to the Greater Monmouth VNA Hospice, 111 Union Ave., Long Branch, NJ 07740.

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From its humble beginnings at the Monmouth County Library on July 16, 1992, 15 prospective members gathered to form the New Jersey Antique Radio Club. Charter member Mark Mittleman noted that he had to direct traffic outside of the library to ensure that the club didn't lose anyone who was at least able to find the parking lot. Present membership now averages about 150, with the club standing on a solid organizational and financial foundation for years to come. But what is most unique about the NJARC and what makes it stand out from other radio clubs is

## MEETING NOTICE

The next meeting of the NJARC will take place on Friday, October 9th at 7:30 PM in the Grace Lutheran Church, corner of Route 33 and Main Street in Freehold. Contact Marv Beeferman at 609-693-9430 or Phil Vourtsis at 732-870-7104 for directions. An Executive Board meeting is scheduled for 6:30 PM. The technical program, "Home-brew Crystal Detectors" will be presented by Al Klase and will cover suitable minerals, obtaining specimens, mounting and effective homemade stands. A tribute to Tony Flanagan will also be presented.



that its roots were solidly established and its branches lovingly nurtured by an individual who was not an "experienced" radio collector - Charles A. "Tony" Flanagan. With only limited technical and restoration experience and little familiarity with the thousands of radio makes and model numbers, he was able to convince and provide the inspiration for collectors

with 15 to 20 years of experience to form and support a club.

In an *Asbury Park Press* interview on October 9, 1992, a day before the club's first flea market at VFW Post 4374 on Waterworks Road, Tony said that he had only been collecting radios for about three years. He purchased his first radio at an antique radio show in Nashua, N.H. and

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**OFFICERS, BOARD OF DIRECTORS AND PROGRAM COORDINATORS**

**PRESIDENT/VIDEOS:**

Phil Vourtsis  
13 Cornell Place  
Manalapan, N.J. 07726  
(732)-446-2427

**VICE PRESIDENT:**

Jim Fisher  
344 Harrison Ave.  
Manville, N.J. 08835  
(908)-725-7476

**SECRETARY/EDITOR:**

Marv Beeferman  
2265 Emeralda Park Drive  
Forked River, N.J. 08731  
(609)-693-9430

**TREASURER:**

Sal Brisindi  
203 Cannon Road  
Freehold, N.J. 07728  
(732)-308-1748

**SERGEANT-AT-ARMS:**

Dave Snellman  
Box 5113  
New Britain, PA 18091  
(215)-345-4248

**TRUSTEES:**

Mark Mittlemen (908)-431-1324  
Gary D'Amico (732)-271-0421

Tony Flanagan (908)-462-6638

**TECHNICAL COORDINATOR:**

Al Klase  
22 Cherryville-Station Road  
Flemington, N.J. 08822  
(908)-782-4829

**TUBE PROGRAM:**

Gary D'Amico  
84 Noble Street  
South Bound Brook, N.J. 08880  
(732)-271-0421

**SCHEMATIC PROGRAM:**

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knew immediately that "this was for me." "I just have this dedication to restore old things and preserve the past," said Tony, who used to restore old furniture. Noting that furniture had taken a back seat after stumbling upon his first antique radio, Tony commented, in his own inimitable way, "You can't turn on a chair." Eventually, the furniture connection led to his specialization in Emerson wood tabletop models with Ingraham cabinets.

Tony understood the radio collecting passion well and how important a club was in sharing that fervor. He called the club a "therapy group" for our "once you get into it, you can't quit" addiction, admitting that even he had to get his fix every couple of weeks. He once said in an interview in the *News Transcript* on November 4, 1992:

"With all of us, it's like an obsession. We can't get enough of it. I love things that are wood, some people like plastic. It's hard to explain the attraction, but we all understand it. What's special about the club is we get right on the phone as soon as we've seen a radio that we know would interest other members. There's a lot of camaraderie. And we all share a genuine desire to restore and preserve the radio."

In another interview in the Ocean County Observer in January 1994, as Tony wistfully mused about the treasures a radio collector might find, he said "I'd love to be able to go through the dumps and dig down about half a mile."

Tony was always "talking up" the club at every opportunity and his natural ability to seal friendships on first meeting brought many new members into the fold. His desire to expand the club in both membership and quality was always a priority, as can be seen in his "President's Broadcast" from *The New Jersey Antique Radio Club News* (Vol. 1, No. 4):

"Think and Talk NJARC. Take advantage of our new club business cards, and take them with you and use them. I still (and this puzzles me) meet people who haven't heard about 'the club.' Do what I do: Tell 'em!!! Tell everybody. You never know what good might come of it. Bring a friend to a meeting. If everybody brought in just one new member, by next year, we'd be over 200....They're out there...Let's make it our job to bring 'em

in."

Tony gave to the club and hopefully the club gave to Tony. Regarding his early experiences with radio restoration, Tony once said: "...this is therapy for me. I could never do this before. Learning stuff like this is a whole new thing for me...I'm learning so much. I'm like a little kid, I get so excited." In a short time, Tony went on to teach others how to restore wooden cases and make reproduction plastic dial covers.

In offering our condolences to Tony's wife Kathleen, let's not forget her role as Secretary/Treasurer in the club's early years. As Tony once remarked: "She has been my emotional support during times when running this club seemed to require more energy than I had to devote to it. Kathleen has kept the books and attended to innumerable administrative details, and she's done a great job of it." I hope that, in a small way, we can honor Tony by being part of Kathleen's emotional support during this trying time.

I'm sure I can speak for all of us by saying "Thank you, Tony" for leaving us with just a small part of the fruitful legacy that you have left for both your family and all who knew you in the form of the New Jersey Antique Radio Club. Your vision and enthusiasm which brought the club into existence in 1992 will serve us well to maintain its growth many years into the future.

Marv Beeferman

**A MESSAGE FROM  
THE PRESIDENT**

It is unfortunate that my first column as President must cover the passing of the club's first and founding President, Tony Flanagan. I met Tony in 1992. He was being interviewed about the New Jersey Antique Radio Club which had recently formed and his picture was in the newspaper. Since I had a collection or "pile" of old radios, phonographs, and God knows what else, I read the article with interest and attended the Fall Swap Meet the next Saturday afternoon. Tony (Continued on page 4)



"Talking Up" the NJARC at the  
July, '93 Meet



A Quiet Moment with Kathleen at the June '94 Meet



Tony Compares Notes with DVHRC and MAARC  
Fellow Presidents at the March '96 Meet



Radio Collector Comrads-In-Arms, November '94

*(President's Message...continued)*

was quite friendly and "gently" twisted my arm to attend the next club meeting. I felt out of place at the meeting and was not planning on coming back. Then Tony announced the "Technical Talk" and by the end of the meeting I was hooked. Early on, Tony's knowledge of radios was slim, but he had exceptional talents to motivate the charter members and get the club started. Later on he became quite accomplished at refinishing his radio cabinets and he shared some of that expertise with me. Whenever we would get together he would tell me how he couldn't wait until retirement so he could spend more time working on his collection. Unfortunately those plans have been forever changed by forces beyond our control. Tony, you will be missed. Your club has continued to grow and is a strong and vibrant organization thanks to past President Jim Whartenby and his Executive Board, and now myself and the new Executive Board. Most importantly, so many of the people you recruited have remained faithful to the club and hardly ever miss a meeting. So if you happen to glance down at us the 2nd Friday of the Month, you can smile knowing that your club is still planning swap meets, giving tech talks and enjoying all aspects of Radio!

Phil Vourtsis



**MEETING/  
ACTIVITY  
NOTES**

By Marsha Simkin and  
Marv Beeferman

September's meeting opened with a request from our host, the Grace Lutheran Church, to please be careful in handling old equipment with rubber feet. The black marks left on tables are very difficult to remove. In addition, the club requests to please remember to place trash only in the black plastic bags supplied by us - we don't want to be responsible for the removal of anyone's garbage (except old radios) other than our own.

Of course, you should be considering making your reservations for the upcoming

Fall swapmeet on October 10th. Kenny's Kitchen will be supplying snacks and Jeff Welsh, Dave Snellman, Bob Hamilton, Jerry Dowgin and Marsha Simkin have volunteered to help. It would be nice to have two or three extra hands for those last minute emergencies, so give Marv Beeferman a call (or see him at the Friday meeting) if you care to sign up.

A Board meeting is planned for 6:30 PM preceding the monthly meeting and all Board members are requested to attend. Some of the topics for discussion will be review and acceptance of minor changes to our constitution and a new swapmeet site (the present Freehold Armory rental fee is \$450 and rising). If you have any other suggestions that you would like the Board to discuss, please contact one of its members listed on page 2 of the *Broadcaster*.

Al Klase reported brisk selling and slim pickings at the AWA meet in Rochester. Ray Chase gave a good example of proper care and feeding of your swapmeet table. A crystal set reported missing from one table was sold by the sticky-fingered culprits to another vendor who immediately displayed it for resale. Although the ruse was worked out, it probably resulted in two happy thieves and two very unhappy collectors. Ray reported that 600 auction lots realized \$60,00 with 153 paper lots alone. The communications auction had 55 entries and netted \$3800. Auction highlights included a \$500 audion, a \$360 book on early wireless and a \$2600 Canadian set. Marv Beeferman summarized an excellent lecture which added credibility to Mahlon Loomis (1826-1886) as the real father of RF modulation and transmission.

Ray Chase offered an All-American 6 to anyone who could remove its numerous unwelcome decals and Sal Brisindi accepted the restoration challenge. Jon Butz Fiscina also offered some "freebies" to club members. (I can't be positive, but I thought I noticed a deco-type offering at the bottom of the pile covered in a very pretty, mirror-like blue glass, but it was grabbed too quickly for me to examine it more closely...Ed).

Al Klase, editor of the DVHRC *Oscillator*, announced that Jerry Simkin had submitted the winning (and only) entry in the newsletter's first "Name the

Person" contest. Jerry identified the lovely lady as Harriet Hilliard (later known as Harriet Nelson of Ozzie and Harriet fame) and was awarded an appropriately named "Simkinite" detector crystal. Jerry, who has also entered Al's next contest and hopes to repeat as a winner, says he has this one-of-a-kind item proudly on display.

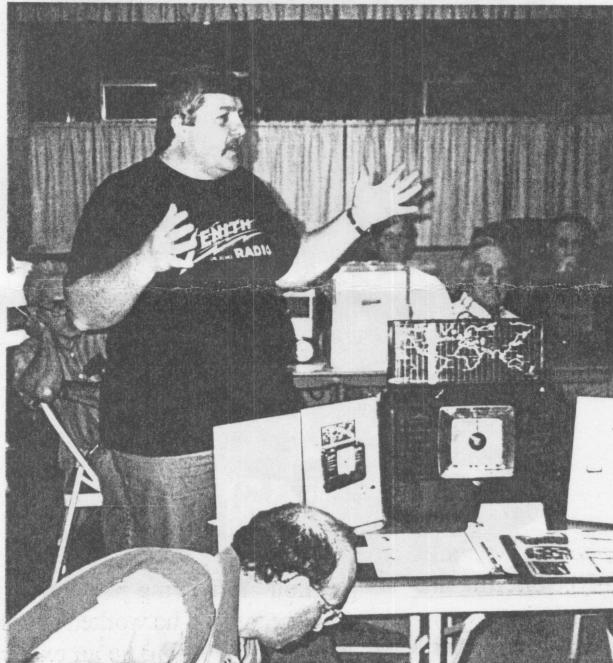
Our evening's Show and Tell program was again a wonderful blend of technical interest and casual lightheartedness.

- **Marty Friedman** demonstrated a quick and easy way to play those old time radio programs from cassette recordings through your favorite vintage radio equipped with a phono input - simply add an RCA phono plug to your tape recorder's output line and connect it directly to the radio's input jack.
- **Frank Feczko** displayed the Zenith model L507 "Meridian" Transoceanic that won 3rd Place at the recent AWA Rochester meet. Frank rescued the radio in 1969 from the attic of a friend of his father and it exhibited the typical intermittent characteristics of a bad selenium rectifier. Little did Frank know at the time that a trip to Canal Street to obtain a replacement would result in a prize winner some 30 years later!
- **Rick Weingarten's** showed how his early 50's record player was equipped with the unique capability to automatically open and close its lid at the beginning and end of each record (in this case, "Santa Baby" by Eartha Kitt). Rick found the phono at the Rova Farms Flea Market in Jackson.
- **Issac Blonder** captivated his audience with his "radio age" stories direct from the front lines. With a major in physics and a Master's from Cornell, obtaining a job at a GE radio factory put him in the precarious position of knowing just a little more than the people he worked for (sound familiar?). Picking up an example at a recent swapmeet of a typical radio made at the same factory, Issac was reminded of his days in the inspection area with rejects running "close to 250%." Acceptance was based on the NWT (Noisy When Tapped) test

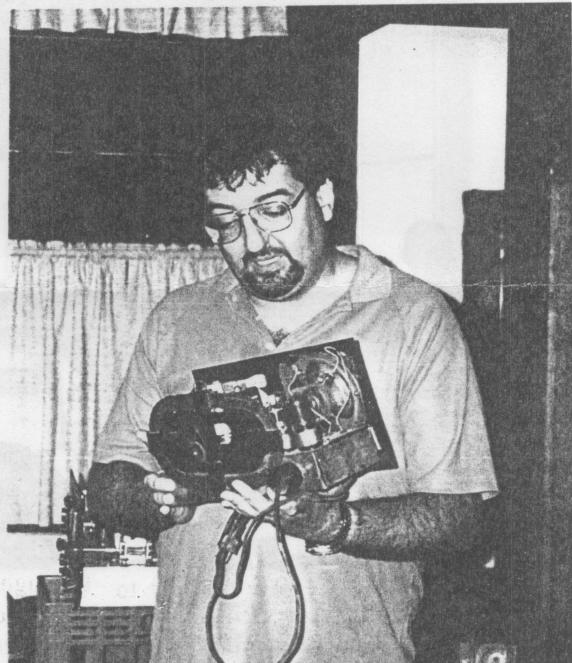
when spot welded chassis leads easily came lose. Some sets without enough IF gain from bad tubes had to have their stages detuned to get them out of the factory. Problems were never the fault of the Engineer – the factory was blamed for everything. But at a time when hourly workers were sent home if parts ran low, the most minor complaint would get a worker fired. So what did Issac do – write a scathing report to Dr. Baker (father of the NTS system) on the shortcomings of the factory. Issac said that "I was invited into a conference room where 50 foremen called me a liar and I was rewarded by being made the foreman of the parts department!" Limited space prevents a replay of Issacs' experiences in England as a radar officer – but I'm sure he would accommodate anyone who might appreciate his adventures.

- **Al Klase** exhibited a very early (1948?) "slicer" (GE type TRS-1) for SSB reception, probably made for such sets like the Super Pro 400, SX-28 and RME-45. And what does a single sideband selector do? I'm afraid you'll have to ask Al about that one.
- After the German company making Mende radios was bombed during WWII, it later arose from the ashes with the familiar Normende signature. Thanks to **George Shields** and the Internet, a beautifully restored 1938 example of this SW table model (185W) under the Mende name still survives. This 4-tube (3 tubes used for reflex regeneration) had the capability to select either long waves (a standard not used in this country) or medium waves, was fitted with a record player pickup and was 220/110 V selectable. George noted that although good quality raw materials were used in the radio's construction, while incorporating advanced Telefunken multi-element tubes and offering a beautiful sound, its use of crude technology and inexpensive tack soldering made it somewhat of a "weird" set. George also noted that markings indicated that the radio's license fee and tax had been paid (based on the number of tubes) and how the ingenious circuits of the 2-tubes "Volkes" radio avoided 50% of this cost.
- **John Ruccolo** gave a little demonstration of what he termed "The Dark Side of Radio," displaying some homemade sets where all caution was thrown to the wind and whatever could be found in the kitchen, medicine cabinet or garden shed was thrown into the witches brew. John is looking for volunteers who are willing to place him as a beneficiary on their life insurance policies to "fire up" these sets.
- Additional contributions were provided by **Jon Butz Fiscina** (Atwater Kent raffle card, Emerson model 539 cabinet, catalin estchuchen from an unknown radio and a "Majestic 5" battery set), **Edith Chase** ("male chauvinist pig" transistor set found in Texas), **Sal Brisindi** (20's to 60's tube display) **Phil Vourtsis** (table top "Ristaucrat" jukebox) and **Mary Beeferman** (Atwater Kent battery eliminator).

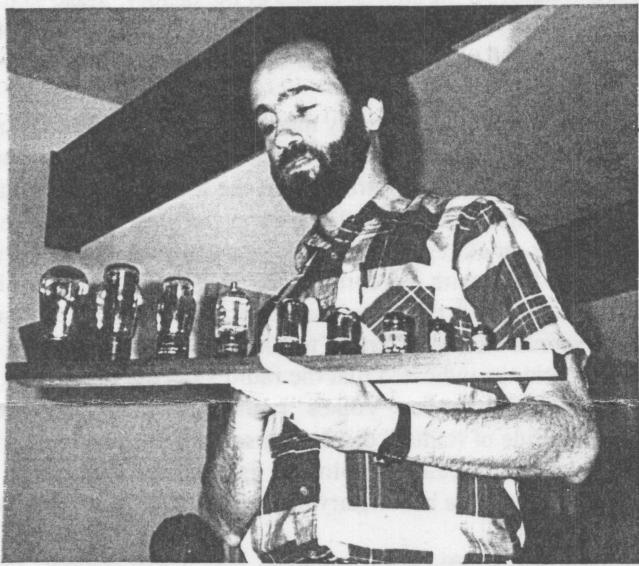
Thanks to all who added to a most enjoyable evening.



Frank Feczko talks about "the one that didn't get away"



John "Darth" Ruccolo and the DARK SIDE of radio



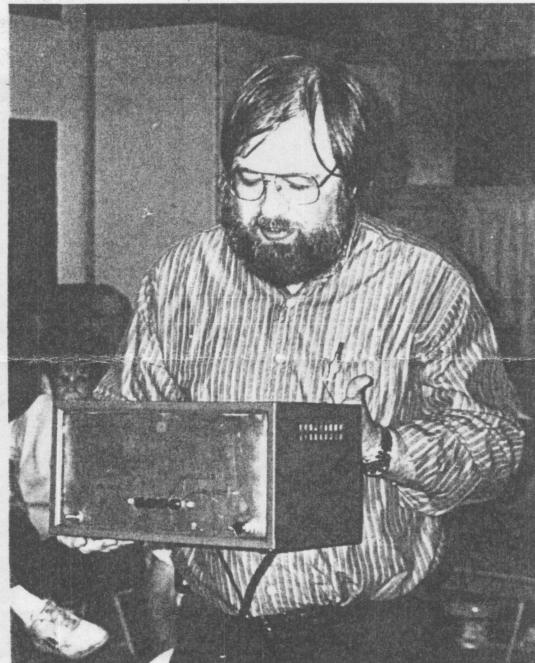
**Sal Brisindi's tube display**



**Edith Chase's "male chauvinist pig" transistor set**



**George Shields' 185W Mende**



**Al Klase and a very sharp looking "slicer"**

## THE 1935 METAL TUBE WARS

### Part II

By Mary Beeferman

#### At 400 miles per hour You'd Appreciate Metal Tubes!

*A POWER DIVE in a pursuit plane is something to write home about! Your engines roar...the wind shrieks and screams...the airspeed indicator climbs past 300, 350, 400 toward terminal velocity. As you ease back on the stick to pull her out, enormous stresses wrench at the vitals of the plane - and at every piece of equipment inside! Is it any wonder that both the Army and the Navy specify metal tubes for military radio equipment - ?*  
(RCA ad for metal tubes appearing in the May, 1942 IRE Proceedings.)

Who won the tube wars of 1935? Well, by mid-1937, the feud of glass versus metal tubes started to simmer down a bit with glass still out in front. Less than 25% of the total production for this year was metal, with 90% being used by RCA and GE. Most new receivers used a combination of glass and metal tubes, although there were some sets using all glass and a few using all metal (except for the rectifier and tuning indicator). Although metal tubes were used extensively for low level amplification, detection, and oscillation, glass envelope tubes were invariably used for the rectifier and final audio output stage although metal versions were indeed available. John Stokes points out in his *70 Years of Radio Tubes and Valves* that, viewed in hindsight, producing output tubes and rectifiers in metal form did not serve any useful purpose other than to allow RCA to offer a full range of tubes in the new metal format.

As many radio manufacturers were turning away from metal tubes, they were beginning to turn to the glass tube in its new form - the octal base or "G" type. So popular was this type of construction that 90% of the tubes used in new receivers for the 1937 season was of this type, with the exception of those produced by RCA and

GE. Although the G type tube was a little different internally from the older glass form, it was found to be a great step forward in receiver servicing and quickly became a standard. While all new tubes were being introduced in their metal overcoats at the beginning of 1937, by mid-year new arrivals were being placed on the market only in their octal-base glass form, with no metal counterparts. Many interpreted this as a decided trend away from metal construction.

At the same time, GE and RCA, pioneer proponents of the metal tube, discontinued the use of the 5Z4, 6J7 and 6L6 and had almost entirely dropped the 5W4 for reasons of cost and poor performance as compared with equivalent glass envelope tubes. Although the early problems with the 6F6 pentode and 5Z4 rectifier were soon corrected, the bad taste was still lingering in manufacturer's mouths and the "G" type sounded the death knell for at least the 5Z4. The 6A8, 6C5, 6F5, 6F6, 6H6, 6K7 and 6L7 were still being retained at this point.

By late 1938, RCA capitalized on the development of its "single-ended" design by releasing four new types of metal tubes - the 6SJ7, 6SK7, 6SF5 and 6SQ7. Single-ended construction (which would have developed even if the metal tube was never introduced) offered improved performance and dispensed with the need for top cap connections which were formerly used on RF pentodes and first-stage RF amplifiers. In the case of the 6SF5 and 6SQ7, the heater leads and base pins were kept adjacent to each other to avoid the problem of excessive hum in high gain circuits (attributed to widely spaced lead wires and base pins in the original double-ended design). The 6SJ7 and 6SK7 RF pentodes saw improved characteristics in their metal versions, with increased mutual conductance at a lower plate current. At approximately the same time, high gain pentodes 1852 and 1853 (6AC7 and 6AB7) were released and intended for television use.

With the outbreak of WW II, it was basically the physical aspects of metal tubes that ultimately proved their worth. The metal "stem" was one of the important factors that permitted the construction of a small tube and gave greater support to internal parts (it permitted the entire

weight of the electrode structure to be supported by members welded directly to the steel head). Glass stems required a skirt of tubing between the lead-in wire press and the flare to reduce the danger of cracks and strains when it was being sealed into a bulb. There was no need for this in a metal tube since the stem and bulb were both made of steel and could be welded together without transmitting strains to the seal members. By eliminating this "re-entrant" form of glass stem, a reduction in the length of leads and tube size was possible.

Close basing (the ability to locate lead-in wires at advantageous positions not necessarily in a straight line or circle) also allowed a reduction in size and use of a smaller base. This type of basing also shortened the length of the tube because the top cap could be made flat. (Flat surfaces were not generally practical in glass bulbs because of the weakness introduced.)

The steel shell was another factor permitting the construction of a small tube. The shell simultaneously performed the function of internal shield, bulb and external shield, resulting in a space saving. In addition, the ability to fabricate steel to very close dimensions allowed the tube to meet design clearances more easily. In addition, the steel shell allowed the secure lodging of the top of the electrode structure. This produced a strong and rigid tube in which looseness of parts and microphonic troubles were minimized.

Because of the tube's rugged construction and smaller size, more compact and efficient equipment able to withstand the jars, shocks and harsh environmental extremes of warfare could be produced for aircraft, ships, vehicles and field use. Indirectly, this may have contributed to longer operating tube life, freedom from microphonic noises and better stability. As evidence of the tubes' strength, engineers were reporting that the base of an all-metal amplifier can be knocked off without necessarily injuring its operating stability.

By 1945, post-war preferences began to take their toll. In his excellent reference *Tube Lore*, Ludwell Sibley notes that "metal tubes continued to be registered up to the start of WW II, and even a few variant types afterward, but other designs took

**CONNECTIONS**

Free exposure for buyers and sellers! Unless requested otherwise, each ad will run for two months in both the *Jersey Broadcaster* and the *Delaware Valley Oscillator*. All buying and selling transactions are the responsibility of the parties involved.

**FOR SALE**

Check out NJARC's capacitor program for those most commonly needed replacements. Contact John Ruccolo at any club meeting or call him at home (609)-426-4568 to find out what's available. All proceeds go to the club.

over." In a survey among radio repairmen in the *Sylvania News* for April, 75% said they preferred glass tubes to metal.

The metal tube never took its expected place on the evolutionary tree of technology where it might have forced the glass tube to lose all resemblance to its ancestor, the incandescent lamp. It just became a branch, and a small one at that. But originally, there were high hopes, perhaps best summarized by the following comment from the May, 1935 issue of *Electronics*:

"The position in which the metal tube finds itself is something like that of the automobile. The early horseless carriages followed closely the design and construction of their horse-drawn buggy predecessors. It is really not until the last few years that the automobile has been wholly designed as an automotive vehicle, rather than as a modified carriage. Glass tubes have clung equally tenaciously to the materials and forms of the incandescent lamps from which they sprang. But now the new metal tube represents a design advance comparable to the stream-lined air-flow auto."

Automobiles had many critics and detractors - in 1907. Then it was not uncommon to find everywhere prophets of a gloomy future for the auto, in comparison with Dobbin. 'Get a horse!' was familiar

The ever-handy reference *Tube Lore* gives 186 pages of insightful scoop on about every North American tube there is. Reviewed by Eric Barbour in *Vacuum Tube Valley* as "an instant classic." Available from Ludwell Sibley, 102 McDonough Road, Gold Hill, OR 9725-9626 for \$19.95 postpaid in the U. S. and Canada, \$24.95 by air overseas. Clubs get a discount on multiple copies. (3/98)

The NJARC tube program offers clean, tested, boxed tubes at very reasonable prices with availability at any club meeting (no dealers, please...not for resale). Proceeds go to the club. Of course, donations of radio-type tubes in any condition are welcome. See Gary D'Amico at the next meeting.

to embarrassed motorists of those days, when the motor failed to move. But today automotive transportation rules the roads."

Who won the 1935 metal tube wars? Probably no one, since a new adversary was soon to clear the battlefield of all contestants - the transistor.

**References (for Parts I and II):**

*Sylvania News*, April 1945 (Survey among Radio Repairmen Reveals Interesting Facts)

*Proceedings of the I.R.E.*, May 1942 (RCA metal tube ad)

*Radio-Craft*, Dec. 14, 1937 (Letter from McMurdo Silver)

*Electronics*, August 1937 (1938 Radio Receivers)

*Wireless World*, July 23, 1937 (The Metal Valve Situation)

*New York Herald Tribune*, Nov. 19, 1935 (GE metal tube ad)

*CR Bulletin*, Vol II, No. 2, Nov. 1935 (Metal Tubes - "Radio's Newest Miracle")

*New York Times*, Sept. 11, 1935 (Davega ad)

*New York Times*, July 21, 1935 (New Devices Spur Business)

*New York Times*, July 19, 1935 (All-Metal Tubes Feature New Sets)

*Radio News*, June, 1935 (New Metal

Communications, military and test equipment. Send long SASE for revised list and lots of new items. Also: Zenith oval shaped console 9-S-263, 9-tube Robot-Dial w/motor tuning. In original showroom condition - \$995 - or best offer. Eveready battery set (uses type 240 tubes), good condition - \$100 -. Pair of Electro-Voice Aristocrat corner enclosures with University 312, 8-ohm, 25 watt triax speakers...sound is great, condition is good - \$300 -. Ray Chase, 1350 Marlborough Ave., Plainfield, N.J. 07060. (908)-757-9741. (12/98)

**WANTED**

Spare room in Freehold for the night (prior to swapmeet) of October 9th. Al Klase, (908)-782-4829.

**Tubes**

*The Silver Times*, May, 1935 (Metal Tubes Soon to be Introduced)

*Electronics*, May, 1935 (All-Metal Receiving Tubes - the Industry Viewpoint)

*New York Times*, April 8, 1935 (Philco ad)

John Stokes, *70 Years of Radio Tubes and Valves* (Second Edition)

Ludwell Sibley, *Tube Lore* (Sept. 1966)

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