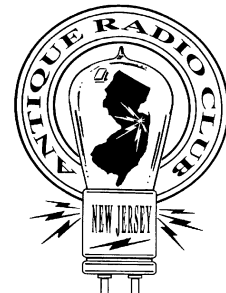


The Jersey Broadcaster

NEWSLETTER OF THE NEW JERSEY ANTIQUE RADIO CLUB

November 2007

Volume 13 Issue 11



MEETING/ ACTIVITY NOTES

Reported by Marv Beeferman

THE ON-LINE BROADCASTER

The New Jersey Broadcaster is now on line. To date, 80 of your fellow NJARC members have subscribed, saving the club some \$1,400 per year. Interested? Send your e-mail address to: mbeeferman@cs.com Be sure to include your full name!

The October meeting featured show-and-tell collectables with an RCA theme and our members stepped up to the plate with some very unique and interesting items:

- Steve Calandra, affectionately known as the "loopmaster," returned us to those retro 70's days by displaying a fully functional RCA "Vibra" 8-track tape player. With 5 heads in the tape cartridge, the player will play 5 to 8 tracks successively. Steve says that he gets a great response when he uses the player at car shows and in his DJ work.
- Darren Hoffman specializes in early broadcast and recording equipment. His 1950, bound catalog of "RCA Broadcast Equipment for Radio and TV Studios" provides a great resource for anyone's "wish list" with an interest in the technology of the early broadcast industry.
- One of the many interests of our Technical Coordinator, Al Klase, is military electronics. He showed us a fully restored SCR-288 portable receiver/transmitter (BC-474) which included the hard-to-find legs. This RCA unit covers 2.5-6.3 MHz with a 455 KHz IF on AM and CW. It requires 6.3 and 285 VDC provided by dry batteries and comes with a GN-44A hand generator.
- Mike Littman showed us a group of RCA items including a lead catacomb warranty seal that he removed while restoring his



MEETING NOTICE

The next meeting of the NJARC will take place on Friday, November 9th, at 7:30 PM at the David Sarnoff Library in Princeton, NJ. Contact President Phil Vourtsis at (732)-446-2427 or visit us at <http://www.njarc.org> for directions. This month, NJARC webmaster Dave Sica will offer a presentation on the activities at this year's television convention.

RCA AR-812 radio (see the September 2007 *Broadcaster*). He also displayed an early pair of RCA earphones and a Victor suitcase 78 rpm phonograph that was popular with the troops during WW II. Mike noted that the steel needles were good for about 5 plays which prompted a great discussion of the pros and cons of various needle materials.

•Phil Vourtsis also provided a potpourri of RCA collectibles including a model 67QR 73FM-M radio (of French origin?), key chains with miniature RCA records, and matchbooks and poker chips with the RCA logo. Included was what Phil described as a 45 player prototype with no internals that might have been used for demonstration purposes when the "45" idea was still in its conceptual stage.

•Walt Heskes displayed a restored RCA 9BT9H "Transistor Six" pocket radio. Walt found the usual problems; leaky electrolytics, bad volume control, etc. Its 2 AF stages and 9-volt battery provided enough to pull in some signals even in the Sarnoff Library.

•Mark Bizuga showed us an RCA promotional pamphlet for its new line of transistorized radios, TV's, etc.

•What an introduction for new member Alex Harvilla. His beautiful RCA 1939 "World's Fair Radio" was a Christmas gift from his father-in-law who used his TV repairman skills to restore it to full operation. This radio was released as a promotion for RCA's television debut at the New York World's Fair. It prominently displays the fair's Trylon and Perisphere trademarks. To the far right, near the tuning dial, is a supplementary rendering of RCA's exhibition building.

•John Ruccolo exhibited a contrast in extremes - an RCA 2N32 point contact transistor and a 3-inch 5820A image orthicon (television camera tube). The image orthicon was used for broadcast quality pictures in the most expensive cameras of the 1950s and 1960s. It was a great improvement in design over the pre-WW II designs such as the Image Dissector and Iconoscope and their derivatives. John reminded us that the tube must be kept vertical to avoid damaging its photosensitive surface.

•Robert Flory's grandfather, Leslie Earl Flory, worked closely with Zworykin on developing workable camera tubes for high resolution television transmission. In addition to television, Les also worked on night vision, digital computing, reading aids for the blind, medical electronics, airborne astronomy, and electronic vehicle control.

Robert offered a rare treat - a 1932 orthicon prototype made by his grandfather at RCA in 1932. Referencing the photo, the image enters through the window on the flat side of the bulbous part of the tube.

•One of the advantages of meeting at the David Sarnoff Library is the ability to take advantage of many of the first-hand resources of its Executive Director, Alex Magoun. Alex provided a wonderful display and presentation on the development of RCA's video disc system.

"Selecta Vision" was RCA's brand name for the Capacitance Electronic Disc (CED), a playback system in which video and audio could be played back on a TV using a special analog needle and high-density groove system similar to phonograph records. Alex explained that e-

THE JERSEY BROADCASTER is the newsletter of the New Jersey Antique Radio Club (NJARC) which is dedicated to preserving the history and enhancing the knowledge of radio and related disciplines. Dues are \$20 per year and meetings are held the second Friday of each month.

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PRESIDENT:

Phil Vourtsis
(732)-446-2427

VICE PRESIDENT:

Richard Lee
(845)-359-3809

SECRETARY/EDITOR:

Marv Beeferman
(609)-693-9430

TREASURER:

Sal Brisindi
(732)-308-1748

SERGEANT-AT-ARMS (WEST):

Dave Snellman
(215)-345-4248

SERGEANT-AT-ARMS (EAST):

Rick Weingarten
(732)-370-8206

TRUSTEES:

Ray Chase (908-757-9741)
Gary D'Amico (732)-271-0421
John Ruccolo (609)-426-4568

TECHNICAL COORDINATOR:

Al Klase
(908)-782-4829

TUBE PROGRAM:

Gary D'Amico
(732)-271-0421

SCHEMATIC PROGRAM:

Aaron Hunter
(609)-267-3065

CAPACITOR PROGRAM:

John Ruccolo
(609)-426-4568

RESISTOR PROGRAM:

Walt Heskes
(732)-205-9143

WEB COORDINATOR:

Dave Sica
(732)-382-0618
<http://www.njarc.org>

MEMBERSHIP SECRETARY:

Marsha Simkin
33 Lakeland Drive
Barnegat, N.J. 08005
(609)-660-8160

search started in 1964 but was slow; by 1972 a disc capable of holding ten minutes of color video (part of a "Get Smart" episode) was ready. Disc material was revised from a multi-layered, nickel substrate to PVC blended with carbon to prevent layer separation and player damage. A caddy was developed to prevent signal degradation from too much handling.

The first CED player was released in 1981. But sales for the system were nowhere near projected estimates, perhaps influenced by the advent of videotape. By 1986, RCA discontinued the project and issued the commemorative disc *Memories of VideoDisc* to employees involved in the project.

Ray Chase reports that this year's Haunted Hotel "Mad Science Lab" at InfoAge was four times better than last year. The Al Klase "brain" display, audio sounds, lissajous pattern display and strobe pictures of hands etc. were great and we should build on them for regular science lab displays. Many visitors

wanted to discuss how we were doing various things and at one point we had an audio class going. On the last weekend, Phil brought in a digital explosion that was added to the brain display with great results. We also discovered that we could demonstrate audio standing waves in the room with low frequency sound. The low frequency thump-thump would resonate (no pun intended) with today's kids.

For next year we should integrate the explosion effect, get a remote switch for the strobe and figure out how to shade the strobe better so we don't blind people. Since we are on the end of the line of the tour, a lot of groups get bunched up and really don't get to see all our effects. On balance, though, it seems a good time was had by all.

With the Haunted Hotel display over for another year, it's time to put the Mad Science Lab to bed and restore the hands-on room displays. We have ideas to make this more kid friendly and instructive, but we need to construct more interesting dis-

plays. To do so, we could use some specific hardware items, so if in your travels you happen to come across any of the following items, please keep us in mind: Vacuum pumps and bell jars, high voltage (neon) transformers (15 Kv and up), fractional horsepower AC or DC motors, small compressors, variacs (large & small), Physics & Chem lab glassware, stands, etc., magnets, sheet & rod Plexiglas, large simple (5" or more) oscilloscopes (working, minimal bandwidth), and audio oscillators. Please, no junk - we need to make operative and professional looking displays.

Over 160 people of all ages turned

out for the David Sarnoff's Library theatrical broadcasts of the Orson Welle's version of *War of the Worlds*. The performance was staged by the Hunterdon Radio Theatre in conjunction with the NJARC. Besides providing technical support, the club provided 16 period radios which broadcast

the performance throughout the auditorium. See page 8 of this month's *Broadcaster* for photos.

In closing, please make your plans for our annual holiday party scheduled for December 8th. I will be held at the David Sarnoff Library, with cocktail hour at 5:00 and dinner at 6:15. Members are free (spouse is included free only with a family membership); non-member adults and children under 12 are \$10 each; children under 12 are \$5 each.

Space is limited to 80 people (no exceptions) so you must reserve early. You will be sent a reservation request in about two weeks. It is important to remember that **you must return your reservation form even if you are a member and are not bringing a guest!** You should also be thinking about a radio-related gift for our Mystery Grab Bag contest (about \$20 in value).



Theremin and synthesizer players, direct from their last engagement on Mars, provide pre-broadcast entertainment.

SHOW AND TELL



Steve Calandra



Darren Hoffman



Al Klase



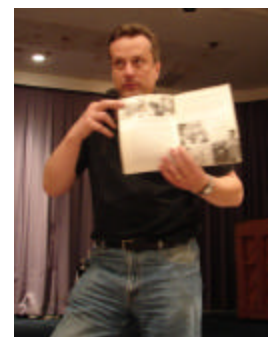
Mike Littman



Phil Vourtsis



Walt Heskes



Mark Bizuga



John Ruccolo



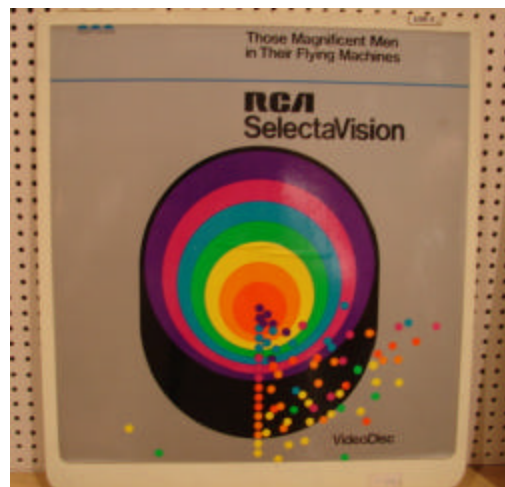
Alex Harvilla



Rob Flory



Alex Magoun



TOP 10 WAYS To Get Your Wife to Let You Buy Another Old Radio

Edited by
Marv Beeferman

President Phil Vourtsis reminded me that we were approaching the 15th anniversary of the NJARC. Since we've had quite an increase and turnover in our membership, I thought it would be fun to look back on some past issues for a repeat performance. The following article, written purely for amusement and which appeared in the May 2000 Broadcaster, was adapted from the July 2000 issue of "Muscle Car Review." It seems that all collectors share a common problem with convincing their better half to add "just one more" addition to a hobby that appears on the surface to be getting out of hand...Ed

THE BOAT ANCHOR SHELL GAME - Here's a nice little ruse that draws on her confusion. If you've already got an inventory of boat anchors in the basement, so much the better. The object of this game is to get a revolving door of radios flowing in and out of your house. Store your friends' boat anchors for a while, then move them out. Bring in new junkers and basket cases that you're storing for a friend "just for a few weeks." Every few days rotate the field; in come a couple of new radios, out go a few old friends. The idea is to get her so confused that she's lost track of which radios are yours and which ones are just visiting. Chances are pretty good that she wasn't paying real close attention before this monkey business got underway, so when the smoke clears and all the other radios have moved on, voila! Somehow you've picked up an extra! Or did you? It's hard to tell since your basement was like Grand Central Station. But be warned. This maneuver has high stakes. A worst-case scenario is that,

unbeknownst to you, she knew you were up to no good, was watching the inventory like a hawk, and the arrival of this new, unannounced bundle of joy is just what she's been waiting for to lower the boom.

IT'S AN INVESTMENT - Try playing the financial angle. It packs a powerful punch to everyone born and raised on good ol' red-blooded capitalism, especially women who consistently balance their checkbooks to the penny. Investment-mania is running full bore and you don't want to miss out on your piece of the pie. So, you're not going to frivolously broadside your checking account. Not at all. Rather, you're going to add a classic radio collectible to the asset ledger of your balance sheet. Remember to get the semantics right - you're not "buying a radio," you're adding vintage assets to your net worth. Throw in lots of hoopla about how fast these rare collector's items are increasing in value and how one just like it sold at auction for 85 times the ask-

ing price of the radio you've got your eye on. And while you're trying to swing the deal based on financial prudence, don't forget to point out that you won't lose an ocean of cash to depreciation, unlike that SUV she's driving. Of course, working the investment side of the road assumes that at some point in the not-too-distant future, you'll sell to realize that promised profit. And of course, you have no intention of selling, so don't get pinned down to a firm date of sale, and for cryin' out loud, detour the discussion around all those "rapidly appreciating collectibles" you already have in the basement.

DAMN THE TORPEDOES. FULL SPEED AHEAD!

- Here's a real macho trip where you just buy the darned thing, consequences be hanged. On the plus side, you get your radio, and you also get some high-powered bragging rights about how, by golly, if you want to buy another old radio, by golly, you're gonna by golly do it. Real manly stuff, great for impressing your NJARC pals when they come over for a little collection-warming celebration. The obvious downside is that you can be sure it's going to wipe out all those "goodwill credits" you banked biting your tongue during your mother-in-law's latest six-week stay, and it can land you in the doghouse for a long time. But if you pretty much live there anyway, what's to lose? Just grab your soldering iron and you and Rover can get right to work getting the old basket case restored.

HONEY, YOU'VE GOT TO SNAP OUT OF IT!

- You'll have to psych yourself up (down, actually) for this one. After completing some mental preparations, you're going to mope around for three or four days in a colossal funk. You know - despondent, lethargic, bummed out big time. When she asks what the heck's the matter with you, tell her how you're depressed, how you feel like a caged beast, how life just seems to have lost its thrill. Play to her sympathies. She does have some, right? You know her hot buttons, so press 'em all. When you sense you've tugged on her heartstrings, suddenly the solution hits you! A Zenith TransOceanic would be just the thing to snap you out of it. What a lift it would be to your state of mind, to your job, to your romance and

marriage. Yeah, throwing in that marriage stuff is sinking pretty low, but desperate times call for desperate measures.

I COULD BE OUT DRINKING - And maybe you should be. Better yet, develop a sudden interest in skydiving, shark hunting, or some other harrowing sport. You know—buy a couple videos, leave some magazines lying around. Float a few trial balloons until you find the activity that makes her skin crawl. That's the one you pursue with full vigor. Pretend to be obsessed. Talk about it at dinner, and several times during the day. Of course, the goal is not to actually engage in the activity, just to make her



think that you really want to. And don't forget to freak her out with the outrageous costs. "Honey, come here quick. Look at the ad in the back of this magazine! I can get a Gyrocrash 2000 Stunt helicopter kit for just \$88,000!" Naturally, she'll be mortified and try to talk you out of it. At the right time, you'll "give in" to her oh-so-practical logic and allow yourself to be talked out of it, settling instead for a much cheaper, much more practical AK breadboard. She "wins," but you, big guy, make out like a bandit!

I DID IT FOR YOU, BABY! - Of course you did. She loves Victorian antiques, flashy jewelry, new furniture, and shoes, shoes, shoes. That's why it makes perfect sense for you to buy her an Atwater Kent 55 enclosed in a Pooley console cabinet that's missing its grille cloth, hasn't played in 60 years, and looks like a

herd of buffalo stampeded over it. Remember when Homer Simpson bought Marge a bowling ball for her birthday that was drilled for his hand, not hers? Danger! This post-purchase story isn't just half-baked, it's never seen the inside of an oven. But the primary objective here isn't to get her to believe the poppycock, just to create a bit of doubt for cover to deflect the full brunt of the storm. Best-case scenario: She buys it hook, line, and sinker, thinks you're so-o-o sweet, and can't wait until you've got the relic fixed up so the two of you can enjoy it as the focal point of the renovated guest room (don't hold your breath). Worst-case scenario: Her BS alarm rings off the wall, and she's even more disgusted because you actually thought she was dumb enough to swallow such a crock. She's miffed and refuses your generous gift. So, to your great disappointment, you'll just have to keep the radio for yourself.

AIN'T TOO PROUD TO BEG

- This is a pretty cool idea, and actually has a good chance of working. Keep in mind this one requires some setup time, so factor that into your schedule and don't plan on using it for those "I gotta have it right now" deals that pop up at the worst times. Here's how it works: Find a radio for sale that you really don't want, but looks like something she'd believe that you do want. Take her to see the radio at an NJARC swapmeet or a friend's house and gush about how you really want this model. Do the puppy-dog eyes, the pouty lips, anything in your bag of tricks that's a proven winner. She, of course, opposes the idea, and you're initially crushed, but eventually come around to her way of thinking. Repeat the process every month or two. After a few cycles of dummy requests, she'll eventually begin to feel that you've denied yourself a lot lately, and you're due for a treat. Bingo!

ROSY-COLORED GLASSES - Wouldn't she just freak if you came home from work one night and couldn't wait to talk about all that women's stuff that she never tires of but just bores you to tears? "Hi Honey. Tell me all about your shopping. Then let's talk about our relationship, and I can't wait to tell you about my plans for remodeling the bathroom. And it is just

me, or does the house need painting?" Pardner, this is Texas-sized pandering, the reason being that even a dreaded restoration project looks better when she views it from Cloud Nine. Realize you're biting off a lot here, and you're going to have to make good on at least some of it. The challenge, guys, as I'm sure you've already figured out, is to sit still and act genuinely enthusiastic as she explains in excruciating detail how Bon Bon Brothers had pillowcases on sale for 40 percent off that match the bedspread in the guest bedroom; how apricot-scented soap was two-for-one; how she really liked that robin's-egg-blue seashell print wallpaper for the bathroom, but maybe the green aquarium scene would better match the linoleum. Don't drum your fingers, don't roll your eyes, don't sigh and look at your watch, and don't forget to nod your head every few minutes and say, "Oh yes, you're absolutely right, dear. I couldn't agree more." Man, if you can sit through that, you deserve another radio.

OK, WE'LL GET NEW CARPET, TOO - Ah, the ol' barter system. You scratch my back... No real strategy involved here, just multiplying the cost of your radio times four. Unless you can turn the tables. Has she made a sizable purchase lately? New living room suite? Caribbean Cruise? Pearls? (Vacuum cleaners, microwaves and refrigerators count, too.) Well then, it's only fair that you should get something for yourself too, right?

HUMANITARIAN OF THE YEAR - Allow a few words to be put in your mouth. "Baby, the last thing I wanted to do was buy that old radio. I went to look at it just for the heck of it, and oh! Honey! If only you could have seen how poor those sellers were! They needed money to pay for grandma's mounting medical bills. She'd been hospitalized a couple of times for, uh... Honey, what's liposuction? The air conditioner in their

doghouse was on the blink and they hadn't been out for mozzarella sticks in a week! Anyway, Honey, they really needed the money. I'm sure you understand that I just couldn't bear to let their suffering continue." Yep, buying that radio was one heroic act of self-sacrifice. Don't be surprised if the mayor and a film crew from Action News show up to shake your hand. If only everyone could follow your example.

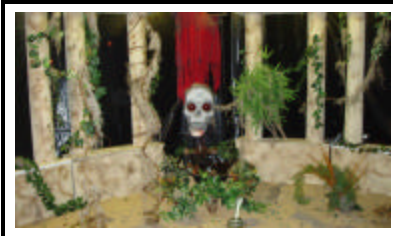
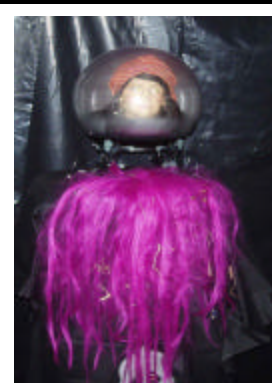
There you have it, gang. Use each strategy only once, and you'll have 10 more additions to your collection! Or combine them for even greater effectiveness. Before long, your basement, garage, living room and bathroom will be overrun with vacuum tube gems. Does life get any better?

Now, if we could just figure out why this country has so many marriage problems...

HALLOWEEN AT INFOAGE



The NJARC "Mad Scientist" display.



OF MARTIANS AND DEATH RAYS

By Marv Beeferman

It was sweeping round swiftly and steadily, this flaming death, this invisible, inevitable sword of heat. I perceived it coming towards me by the flashing bushes it touched, and was too astounded and stupefied to stir. I heard the crackle of fire in the sand pits and the sudden squeal of a horse that was as suddenly stilled. Then it was as if an invisible yet intensely heated finger were drawn through the heather between me and the Martians, and all along a curving line beyond the sand pits the dark ground smoked and crackled. Something fell with a crash far away to the left where the road from Working station opens out on the common. Forthwith the hissing and humming ceased, and the black, domelike object sank slowly out of sight into the pit.

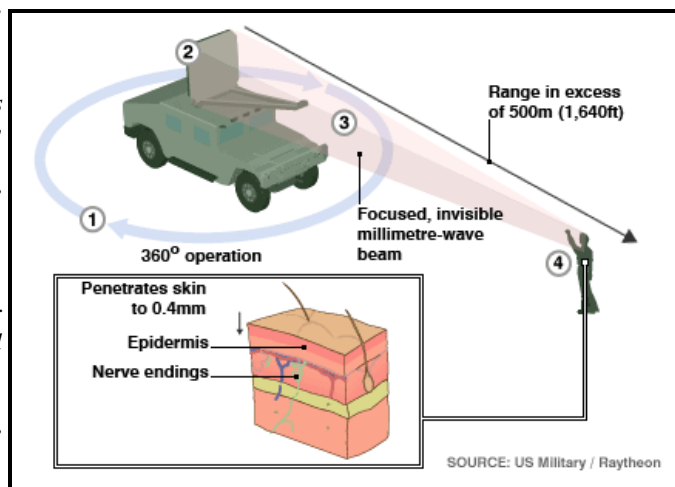
War of the Worlds, H.G. Wells, 1898

Events of the last week of October seemed to represent, for me at least, a confluence of ideas that first took root in 1898. Work once again prevented me from attending the annual re-creation of the Orson Welles "War of the Worlds" historic radio broadcast at the David Sarnoff Library, but I hear it was another crowd pleasing event.

As most radio enthusiasts know, the first half of the 60 minute broadcast was presented as a series of news bulletins, and suggested to many listeners that an actual Martian invasion was in progress. As the news reports grow more frequent and increasingly ominous after a meteorite lands in Browns Mills, New Jersey, a crowd gathers at the landing site. The events are related by reporter "Carl Phillips" until the Martians incinerate curious onlookers with their "Heat Rays." (Later surveys indicate that many listeners heard only this portion of the show before contacting neighbors or family to inquire about the broadcast. Many of these peo-

ple contacted others in turn, leading to rumors and later confusion.)

What originally started as science fiction fancy in 1898 came full circle the same week as the Sarnoff re-creation. The US military gave its first public display of what it said is a revolutionary heat-ray weapon (informally called a "pain ray" by Raytheon) to repel enemies or disperse hostile crowds - a sort of a "radio gun." The beam was fired from a large rectangular dish mounted on a Humvee. The most determined volunteer lasted only a few seconds.



The weapon, or Active Denial System (ADS), works by directing electromagnetic radiation at a frequency of 95 GHz toward its subjects. The waves excite water molecules in the epidermis to around 130 degrees Fahrenheit, causing an intensely painful burning sensation. At 95 GHz, the frequency is much higher than the 2.45 GHz of a microwave oven. This frequency was chosen because, due to the stronger absorption of water at those frequencies, they penetrate the skin to a depth of less than 1/64 of an inch which is where the nerve endings are located.

But H.G. Wells was not the only "heat ray" visionary. Hugo Gernsback is well known to radio collectors, mostly as an editor and publisher of such magazines as *Electrical Experimenter*, *Modern Electronics*, *Radio and Television*, *Radio Craft*, *Radio News*, etc. But despite his many colorful achievements, it is for his association with science fiction that Gernsback is generally remembered. This line was sometimes crossed in some of his so-called "technical articles," but his vision and imagination was in later years found

to be very close to the mark.

For example, many science fiction fans believe that Gernsback came up with the idea for radar. From the standpoint of the history of ideas, this is probably not true; however, he may have conceived of the idea independently.

In the June, 1928 *Radio News*, Gernsback ran an article entitled "The Radio Gun - The Silent Weapon of the Future," with the further subtitle "How Concentrated Radio Impulses Might be Made to Act as 'Death Rays'." The article reported:

About six years ago, the world was startled to read of the invention, by an Englishman, of a so-called "death ray," to which the press attributed lethal powers far wider and more terrible than those possessed by any known weapon of destruction. The news of the advent of this allegedly-deadly ray caused a great deal of excitement, in the American daily newspapers, at least; but this quickly petered out when inquiring reporters learned that no demonstrations of the ray's effectiveness could be given and that the inventor himself

was about the only person who had ever been convinced of its effectiveness at all.

The article goes on to discuss research into *ultra-short radio waves* (microwaves, in today's terminology) and other experiments that had cooked apples and killed rats in the laboratory. But in contrast to the article's rather balanced text, the captions for its accompanying illustrations portray a vivid, gee-whiz future which we came to realize just a few weeks ago:

The radio gun lays down a silent, invisible barrier which nothing living may cross.

The ADS is certainly not the "death ray" envisioned by writers of years past. It was developed as a non-lethal weapon that could be potentially used for dispersing crowds in conflict zones such as Iraq or Afghanistan. But one can never know the true course that developments like these can ultimately take. From the looks of things, H.G. Wells and Hugo Gernsback got the ball rolling, if not only in concept. Today, it appears that we're at least half way there.



"Death ray, fiddlesticks! Why, it doesn't even slow them up."

War of the Worlds at Sarnoff

