



# OSCILLATOR

The Official Newsletter of the DVHRC

Vol. 8. No. 9, Sept., 2000

## Next Meeting

The September 2000 DVHRC meeting will be held at 7:30PM, Aug. 8, at the Telford Community Center. The usual auction will follow the meeting.

## AUGUST MEETING NOTES

by Dave Snellman

Tuesday, August 9<sup>th</sup> saw members of the DVHRC gather in Telford for their regular monthly meeting. It was the last meeting of the summer and the last meeting before the AWA Conference, better known as “Rochester.” From a show of hands at the meeting, DVHRC will be well represented.

We started out with some “show-and-tell” items. Dave Abramson provided some information on one of his recent acquisitions. It’s a *SiteMaster* Vanity Mirror TV. The model is “Americana.” From his description, it sounds like a real interesting set.

Bill Overbeck obviously got over the withdrawal of not buying any radios recently. He had three items to show. First, a portable audio console (audio mixer) probably used at remote broadcast sites. What was really neat was the call letters on the unit – “WFIL.” Next up was an original copy of “Radio Enters the Home” – a book chock full of radio related information from the 20’s! This book has been reprinted by Vestal Press, but Bill has an original. Looking through this book makes you want to go right out and order the parts needed to build a radio of your own. It also lists stations you might find on the air in the early days of broadcasting. For those tired of radios (no one belonging to DVHRC) Bill has an exciting game. From around 1926 or 27, a radio-ring-toss game should keep Bill busy for hours! Neat stuff, Bill.

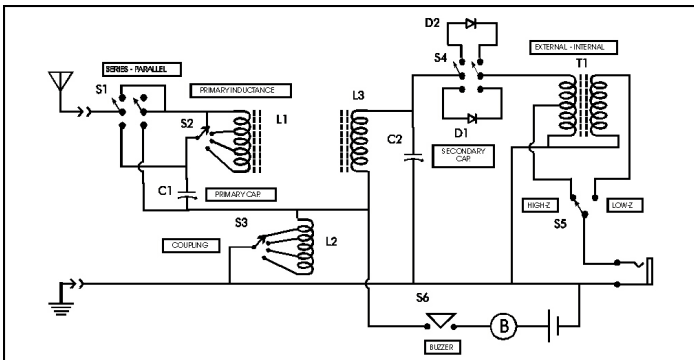
Lewie Newhard brought along two radio sets. A Philco 90 cathedral and a Lafayette set. Lewie had both of the sets working and looking good. Nice job.

Pete Grave brought along a “hacker.” Not a computer geek, but a multi-band portable radio made in England by Hacker. A really good looking portable.

Our technical presentation was something a little different for us. Dan Schwartzman made arrangements for Mr. Arthur Sussman to talk about his days at WPIX, channel 11 from New York. He worked for WPIX from 1948 to 1987. Arthur regaled us with tales of working as a cameraman, as a “video man,” and finally as a technical director. He stated work in radio and then heard about a job at WPIX and, as they say, “the rest is history.” WPIX was an independent station and had to produce much of its own programming. While some work was studio-based, Arthur talked about the pitfalls of doing “remotes” in those days. Early on he’d have to carry

### COMING EVENTS

6-9 September	AWA Conference, Rochester, NY
8-9 September	Mil. Radio Collectors—Tobyhanna, Pa
12 September	DVHRC Meeting, Telford Pa.
15 September	NJARC Meeting, Freehold, NJ
16 September	Hamfest, Schnecksville, NJ
23 September	NJARC Swap Meet
24 September	Hamfest, Bowie, MD
1 October	Hamfest, Wrightstown, Pa.
10 October	DVHRC Meeting, Telford Pa.
13 October	NJARC Meeting, Freehpld, NJ
22 October	Hamfest, Sellersville, Pa.



## **THE OSCILLATOR**

*Newsletter of the  
Delaware Valley Historic Radio Club  
P.O. Box 847  
Havertown, Pa. 19083*

The *Oscillator* is published monthly by members of the non-profit DVHRC. Its purpose is to provide a forum to educate, inform, entertain, and communicate with collectors and preservers of vintage radio technology.

We welcome and solicit information relating to radio history or collecting. Submissions should be carefully researched, typed and accompanied with clear photographs or diagrams. Material on-disc (3-1/2" DOS/Win95) is particularly welcome.

Unless copyrighted by the author, material in this publication is available for attributed reproduction for nonprofit purposes. (For convenience, the editor can supply copy on-disc.)

Personal views, opinions and technical advice offered in this newsletter do not necessarily reflect those of the members, officers or Board of Directors of the DVHRC, nor is the organization responsible for any buying or selling transaction incurred.

To join: DVHRC dues are \$15 per year. The membership year runs January-through-December. Please mail to the club PO box above.

Meetings are held the second Tuesday of the month at 7:30 PM

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**COPY DEADLINE:** The 20th of each month.

(Continued from page 1)



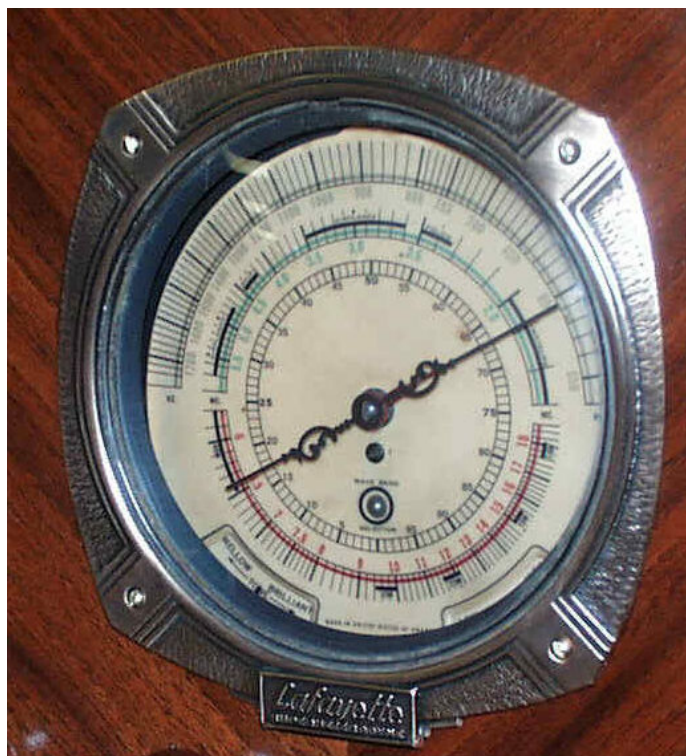
black and white orthicon cameras that weighed in around 100 pounds to the shoots. He said they did a lot of sports: baseball, basketball, hockey, and the "fights." They used RCA equipment as well as CDL (Canadian) equipment. Black and white was used quite a bit. Color came into the picture around 1953. One particular interesting story he told involved the Ali fight in Manila. Billed as the "thriller in Manila," the shoot was really a challenge. One of the cameras refused to work as it was "too hot." One of the cameramen put his arms around the camera to use his body heat to "cool" it off! Arthur topped off his talk by answering a number of questions from the audience. Thanks Arthur. Thanks Dan for arranging the presentation. Also, thanks to Frank Johnson for driving Arthur to the meeting.

Other things to report from the meeting included the meet at Kutztown, PA on August 19<sup>th</sup>. DVHRC members were there in force, with a few brave souls camping out the night before. It was perfect weather for a radio meet. DVHRC coffers are a little fuller as a result of the auction at Kutztown. Pete Grave served as auctioneer. Jan Grave, Ted Sowirka and Dave Snellman served as clerks. Look for the next meet at Kutztown in May of 2001.

As always, we close out our monthly meetings with the usual auction of items brought in by members. That's it for August. Our next meeting is September 12, 2000 in Telford. Rochester will be over by then, so I'm sure we'll hear tales from those who attend.

**FOR SALE:** Military TRC-8 consisting of T-30 Transmitter, PP-115 Power Supply and CY-52 Transit Case. This is 230-250 Mhz point to point comm. gear from WWII. 120 volt ac powered, in new original condition, 25" x 18" x 16.5", about 80 lbs., have two of these, \$100.00 each. Matching R-48 Receiver, also part of the TRC-8 system, 120 volt ac powered, 23" x 19" x 17", about 60 lbs., new in CY-51 transit case, \$100.00. All above are pick up only. Ray Chase, 1350 Marlborough Ave., Plainfield, NJ 07060, (908) 757-9741, [www.enrpnr@erols.com](mailto:www.enrpnr@erols.com).

**FOR SALE:** Hallicrafters "Boat Anchor" communications receivers S-37, S-27, S-36A, SX-24, SX-25, SX-28 (2) and SX-42. Also a RBL-5 14kc to 640kc receiver made by National, with some spare parts. No shipping, pick up at my QTH or will deliver to local radio meets. Call for price and condition. Ray Chase, 1350 Marlborough Ave., Plainfield, NJ 07060, (908) 757-9741, [www.enrpnr@erols.com](mailto:www.enrpnr@erols.com).



**Lewie Newhard's Lafayette**  
See page 1.

**WANTED:** for RCA TK-11 Camera restoration: oak field tripod (Mitchell?), chrome script "television", chrome 1.1" RCA logos, viewfinder hood, and old network logo panels. Dave Abramson, 610-827-9757 [dtatv@worldnet.att.com](mailto:dtatv@worldnet.att.com)

**WANTED:** Information, circuit diagram, and purpose of the following set. 30-50 MC FM monitor Kinight model KG-220 by Allied Radio, Chicago. Service number: 8343111-610003-6N Alton A. Dubois, Jr., 67 Peggy Ann Rd., Queensbury, NY 12804

**WANTED:** AM-FM-PHONO-AUX selector switch for a Sherwood Model S-7650CP stereo receiver. Fred Saul, 610-481-5034 (days)

**FOR SALE:** Military WWII RAK-7, CND 46155 low freq. 6 band 15khz to 600khz receiver with matching CND 20131 power supply and cable, all in "like new" condition; made by Andrea. \$100.00 Ray Chase, 1350 Marlborough Ave., Plainfield, NJ 07060 (908) 757-9741 e-mail: [enrpnr@erols.com](mailto:enrpnr@erols.com).

# An RME Story

By Al Klase

When I wrote a piece on the National HRO-500 receiver for John Dilks' column in QST magazine, I was asked to supply a photo of myself. When I set up the shot, I made sure some of my juicier specimens were visible on the shelves.



The Navy RAL in the foreground brought a letter from a gentleman in NYC with an offer of its brother the RAK. (I haven't taken him up on that yet.) A second letter, forwarded from ARRL headquarters came from an oldtimer claiming to have helped build one of my radios in the 1930's. W9GLW wrote:

*The RME-69, sitting on the shelf just beyond your left ear on page 80 of February QST, brought back memories of economic hardship as well a personal success.*

*As a 19-year-old technician I built the prototype of the "69" under the guidance of W9RGH (Russ Plank, RME cofounder – ed.). The year was 1934, and times were tough.*

*Production was begun with guarded expectations. Failure meant irrevocable fiscal disaster.*

*In production I specialized in construction of the HF tunable oscillator, mixer, and antenna amplifier as well as the associated switch. Each solder connection was wiped clean while still hot.*

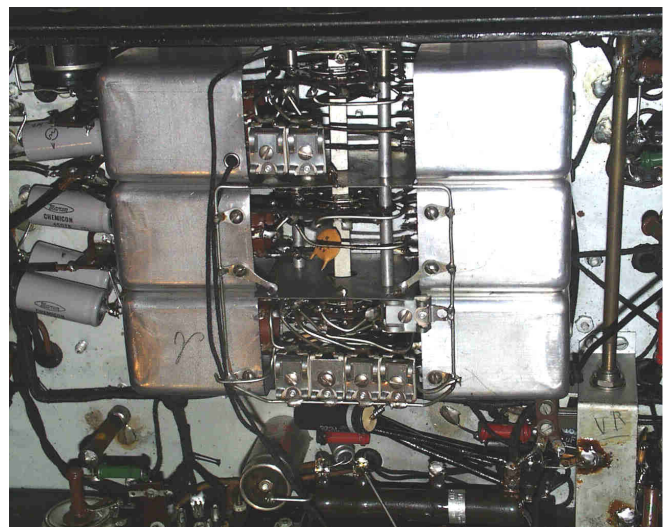
*Upon completion of each assembly, one of the aluminum shield cans was initialed with a measure of pride. It is likely the radio pictured has my initials.*

*The RME-69 was sold world wide for commercial as well as amateur high-frequency communications.*

*The pay was not great, but never the less, RME was good to me. A college degree was made possible and entry into the wonderful world of electronics was assured.*

*73, Clint, W9GLW*

I pulled the bottom cover off my radio. Sure enough, there were initials on the shield, but I couldn't relate the hieroglyph to Clint's name. Well, my radio was purchased in 1937, and he was talking about 1934. I shot some pictures, and lost the whole thing on my desk for several months.



The folder resurfaced in a recent clean up, and I wrote to Clint, and enclosed the pictures. He replied promptly. What I had been taking for a stylized "Y" or "V," was actually an upside-down "cb" for Clinton Bowman. He further informs me that the "VR" on the bracket was Vern Rogers, who wired the remainder of the set.

I am extremely gratified to have established this personal link with the distant past. Thank you Clint!



## The Image Problem

The basic strategy of the super-heterodyne receiver is to convert the desired signal, by mixing it with a signal from a "local oscillator", to a, usually lower, "intermediate frequency" where filtering, amplification, and detection can be more easily accomplished. The problem is that the system responds to signals at two frequencies,  $LO + IF$  and  $LO - IF$ .

A typical broadcast-band super-heterodyne receiver, with an intermediate frequency of 455KHz, tuned to station on 1000 KHz will have the LO running at 1455 KHz. There will be an unwanted image response at 1910 KHz (signal frequency plus  $IF \times 2$ ). A simple LC tuned circuit at the input to the mixer can suppress the image to a high degree because the image is separated from the desired signal by 91% of the filter center frequency.

Now consider the same superhet tuned to 10,000 KHz (10 MC). The LO is now running at 10,455 KHz. The image will still be 910 KHz away, but that's only 9.1% of the input filter's center frequency. The classic solution is to add a tuned RF amplifier stage before the mixer. There will now be two cascaded tuned circuits trying to suppress the image. The problem becomes still more acute as the signal frequency increases.

More stages of preselection help, but they must be kept in alignment, consume power, and cost money. Increasing the intermediate frequency of the design will reduce the image difficulties, but the desired IF selectivity may be impossible to come by at the higher frequency and, a 0.5 to 30 MHz receiver will most likely need to tune across its own IF, with the possibility of oscillation.

The ultimate solution to the image problem does not appear in main-stream communications receivers until after WWII with the introduction of multiple-conversion superhets by Collins Radio and others.

## RME's of the 1930's

By Al Klase

Radio Mfg. Engineers of Peoria Illinois was the smallest of the four best-known communications receiver builders of the 1930's. The others are National, Hammarlund, and Hallicrafters.

RME's initial receiver product was the RME-9 Single-Signal Super, a 9-tube design with a single "airplane" dial, calibrated directly in frequency, and incorporating a crystal filter for single-signal CW performance. It sported a built-in power supply, band switching as opposed to plug-in coils, one RF and two IF stages, and a BFO for code reception. BFO frequency and RF peaking controls were on the front panel. Frequency coverage was 540 KC – 22 MC in five bands. The RME-9 was first advertised in QST in December 1933. A modified RME-9 appears in the May 1934 issue. It added a second ganged tuning condenser and airplane dial, for "electrical" band spread, and an "R" meter to indicate signal strength.

Refinement of the basic design continued, and October 1934 saw the introduction of the RME-9D. This landmark radio was the first to include all the features one now expects to find in a proper communications receiver in a single instrument. The addition of switch-selected automatic volume control to the expanded RME-9 design established a receiver architecture that would endure well into the 1960's.

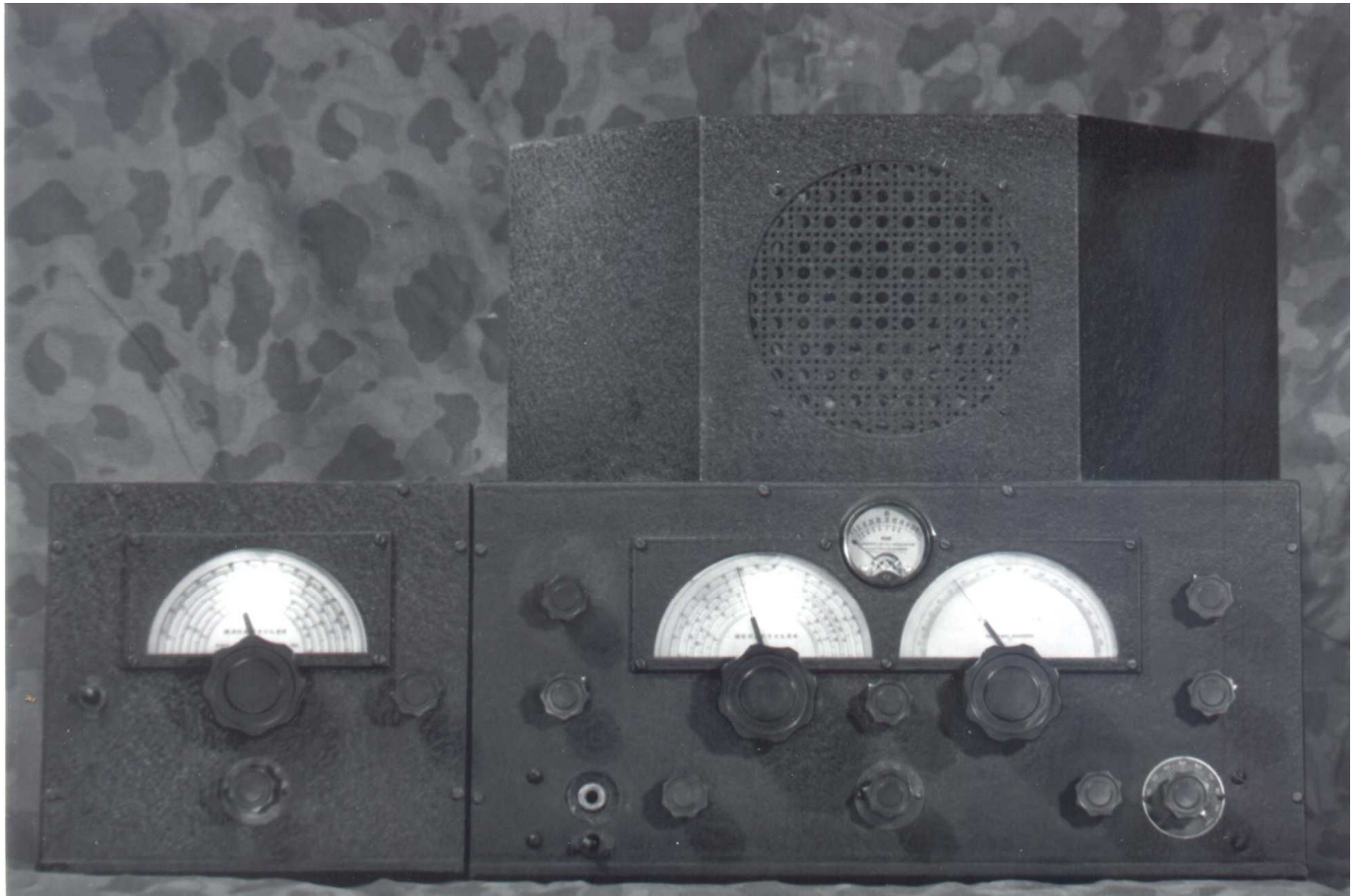
1935 brought an upturn in sun-spot numbers and increased amateur interest in 10-meter (30 MC) operation. To meet the 10-meter challenge, RME introduced the RME-69 six-band nine-tube receiver. This expanded frequency coverage to 32 MC. The somewhat passé airplane dials of the 9D were replaced with the large and distinctive "half moons."

The single RF stage in the RME-69 resulted in questionable image rejection on 14 MC and nowhere near enough on 28 MC. Other designs like the National HRO and the Hammarlund Super-Pro, with two RF stages, worked well enough on 14 MC, but still left a lot to be desired on 28 MC.

RME's solution was the DB-20 preselector. This self-powered external unit, with styling to match the RME-69, added two additional stages for a total of three amplifiers and five tuned circuits before the mixer. This is a level of RF preselection unrivaled by the competition.

Other RME-69 accessories included the LS-1 noise silencer, and a unusual trapezoidal metal speaker enclosure that apparently was intended to "horn load" the back of the speaker in conjunction with a nearby wall for improved bass response.

These sets were produced until 1940. Raymond S, Moore, in Communications Receivers of the Vacuum-tube Era, tells us that 6500 were produced. The RME-69 surely remains one of the classic communications receivers of the golden age.



DB-20 Preselector, RME-69, and speaker

## FIRST CLASS MAIL

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