



the RARRA RAG

Published by

ROCHESTER AMATEUR RADIO ASSOCIATION, INC.

VOL. 37

APRIL 1985

NO. 8

RaRa MEETS APRIL 5th ANNUAL OLD TIMER'S NIGHT

Its that time of year again, time for our renown Old Timer's Night presentation by our Club Historian and Curator of the Antique Wireless Museum in East Bloomfield, New York, Bruce Kelley, W2ICE. The meeting will start promptly at 8 p.m. at the 40/8 Club, 933 University Avenue.

The program this time, however, won't be one program, but two. Don't let this scare you. They are both short and move at a brisk pace.

The first will be the story of the famous Transatlantic Test of 1921, an event which changed the history of amateur radio and influenced future commercial operation. This demonstration proved to commercial interests that DX could be worked on shortwaves. It is an unusual documentary with original pictures.

The other half of the program is quite different. Members can sit back for 20 minutes and see colorful radio magazine covers flash on the screen. Pathos and humor are mixed with pleasant music.

After the program will be the award of the *chair* and, of course, the refreshments provided by our own George Muller, WA2IEO.

Also at this meeting there will be a report from the Nominating Committee and nominations for office will be opened from the floor.

PICNIC REMINDER

Mark your calendar now for the Annual RaRa Picnic!

Date: June 1, 1985

Place: Powder Mills Park

Stay tuned for more details next month!

Rochester HAMFEST

MONROE COUNTY FAIRGROUNDS
May 17-18-19, 1985

RRRA TO HOST TOUR OF 911 FACILITY, APRIL 19th

The April meeting of RRRA will take the group to the Public Safety Building for a tour of the new 911 Emergency Dispatch system for Monroe County. If you are planning to attend, you should get there between 7:30 and 8 p.m. Listen to 146.88 for instructions pertaining to parking, etc. Thanks to Lenny Gessin, WA2ZNC, for arranging this tour for us.

SILENT KEYS

LINCOLN A. CUNDALL, W2LC

February 23, 1985

Linc would have been 86 in June, one of our most senior members, yet continued to be most active. The call W2LC was heard on most amateur bands and participated in VHF contests and Annual Field Days. His greatest interest was historical radio and his activity in the Antique Wireless Association, of which he was co-founder and officer.

Linc was first licensed in 1916 under the call 8ADI. He held many calls with the most recent being W2QY and W2LC. He was past president of RaRa and recipient of the "Amateur of the Year Award". The Association has lost a valuable member.

BEN FROMMER

W2RQF

Moravia, NY

GEORGE E. POPPLEWELL

WB2YHD

Canandaigua, NY

SAM FONTANA

WA2URB

Penfield, NY

the **RARA RAG**

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RC-850 CONTROLLER INSTALLED ON N2JC/R 146.28/88

by Ron Jakubowski, K2RJ,
RRRA Technical Director

If you are on 2-M FM, you should be enjoying the new features that should be in place by now on the N2JC Repeater. The unit was received March 4th, and was fired-up and given an initial test the next day. Surprise! -- No smoke!

The circuit boards are very professionally designed and built, and the documentation is very good - over 100 pages - but very good. My spare time the next two weeks was taken up figuring out how we wanted the features programmed - 10 ID sequences, 10 courtesy tones, 13 tail messages, etc. It was akin to learning a new computer programming language, and after a few days tickling the old tone-pad most of the important things were programmed.

Next I have to set-up the valid telephone exchange tables for the autopatch, choose the user and control operator prefix codes and a few more odds and ends. Coincident with the new controller will be the addition of a 440 MHz control receiver for primary control. By the time you read this, all this should be complete. See a related article for the new FUZZ BUZZ operation.

LICENSE CLASS

by Ed Holdsworth, N2EH

The spring classes got underway on Monday, February 25, 1985 with the start of the Novice and Technician/General courses. We have 26 registered in the Novice and 27 in the Tech/General. The Advanced course started on Monday, March 4th with 13 people registered and at the time this was written we had 7 registered for the Extra course. This gives us a total of 61 registrants for the Spring class. This added to the 74 that were registered for the Fall courses gives us a total of 135 that have taken advantage of our instruction.

I think we owe a great deal to the instructors and those that have assisted in making these classes the continued success that they are. The instructors for the Tech/General class, Ed Gable K2MP, theory and Bud Young WA2UGE, code, Russ Foster NE2B Novice code, Dave Hassett K2SQI, Advanced and Ron Jakubowski K2RJ, Extra. Those that assisted at registration and in the club station on Monday evenings Ed Maher WB2ZJY and Lloyd Caves WB2EFU. The classes could not continue without the continued dedication of all involved.

THE RaRa RAG 20 YEARS AGO —

APRIL 1985

by Ed Gable, K2MP

“*How to Use an Oscilloscope*” was the theme of the April 2nd meeting at the Farm and Home Center. The speaker was more than qualified as it was Glenn Jaun, K2GEO, from the Tektronix Company.

Dick Bourne, WA2HUV, in his RDXA News, reported that two wandering people from RF Communications gave local DXers quite a bit of fun. Roger Bettin, WA2HOK, was on from 3A2DD, while Elmer Schwittek, K2LAF, managed to get on from 5N2 and TRB. New RDXA members are Corny Unruh, WA2EOQ, and Louis Minsk, K2OUS.

The Nominating Committee reported the following candidates: Moving to President is Harold Smith, WA2KND, VP is Jack Morse, K2KFN. Henry Kreutter, WA2IKB, has been re-nominated for secretary, while Henry Schwalenstocker, WA2RXL, yens for the Treasurer position. For Executive Committee is outgoing President Cliff Milner, K2SKO, along with Pat Hennessy, WB2FVG, Russ Heuer, K2PLO, Bill Kuehne, WA2ZQN, Gordon Bull, WB2HZM, Mary Chambers, WB2QVA, and Ernie Crewdson, WA2FVG.

The Rochester Peanut Whistle Net held its Net Dinner with Les Hultman, WA2ABF, as Master of Ceremonies. Paul Modern, K2GWT, gave up his long standing net director position in favor of Don Degen, WA2EPE.

A lengthy and humorous article on using your four automobile tires as phased antennas on 50 MHz appeared by an anonymous local ham. The May 22 Hamfest was announced, much more on that in the May issue.

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APRIL RAG CALENDAR

- 5 - RaRa meeting, 8 p.m., 40/8 Club, 933 University Avenue
Annual Old Timer's Night
- 10 - RaRa Board of Directors meeting, 7:30 p.m., Annual Dinner Meeting
- 11 - Rochester Packet Radio Club meeting, 7:30 p.m., Tele-Connect Systems, 320 South Avenue
- 12 - Rochester VHF Group meeting, 8 p.m., County Social Service Building, 111 Westfall Road
- 12 - April Rag Deadline
- 15 - RDXA meeting, 8:15 p.m., Colonial Hotel, 1127 Empire Blvd.
- 19 - RRRRA meeting, tour of 911 Center, Public Safety Building, Plymouth Avenue, Downtown, 8 p.m.

26,27,28 - Dayton Hamvention, Dayton, Ohio

HAM FINED \$2000 FOR RUNNING OVER 20KW

Jerry R. Dyke, WB5LEU of the Houston suburb of Spring, Texas, has been fined \$2,000 by the FCC for overpower operation in the amateur 80-meter band. The Notice of Violation was issued for running excessive output power on January 15, 1985, between the hours of 9:01 and 9:30 p.m., CST on a frequency of 3895 kHz.

The station had been under FCC observation for several months. Dyke was monitored by the FCC's Houston field office. Engineer-in-Charge, Dan Cantrell said “*the power level was measured in excess of 20,000 watts.*” The investigation was initiated by complaints from other amateurs.

Dyke was found operating a Collins S-Line which was driving a Drake R4B linear amplifier. The linear, in turn, was driving a 3XC10000T transmitting tube with a capacity of some 48,000 watts. The carrier power of the home brew amplifier was measured at 25 KW.

It appears that the high power station was built to retaliate against harassment by other amateurs utilizing the same 3895 frequency. The FCC said they wanted to make it very clear that no one has exclusive pre-emptive rights to any amateur frequency “*no matter how noble the service performed by a network. The spectrum belongs to everyone and amateurs must work together.*”

Tnx W5YI REPORT

LEGAL LINES

by Sherwood Snyder, W2KFU

Some Hams are concerned about RF exposure to nonionizing radiation. Surveys have shown that nonionizing radiation can hurt people when it causes a build-up of heat in some parts of the body.

In a recent case, which is the only case on record that I could find, a decedent was a radio technician assigned to a special service unit which monitored and repaired microwave transmission units at his employer's television transmission facility. He worked on this facility on a daily basis and with considerable overtime.

Each of the microwave units he worked on had a parabolic reflecting dish. Protruding from the center of each dish was a klystron tube that emitted the microwave transmissions.

One of the crucial questions presented, and one which resulted in conflicting views, was the amount of microwave radiation to which decedent was exposed. Prior to 1968, decedent's health was good. In that year, at age 57, he began to suffer a drastic deterioration of hearing, sight and coordination so that he was unable to perform his duties. He retired in 1971 and died three years later.

His widow filed a claim with the Workers' Compensation Board for death benefits contending that the decedent's death resulted from his exposure to microwave radiation. Testimony was lengthy and conflicting. The Administrative Law Judge awarded claimant benefits and the Workers' Compensation Board affirmed, finding that the decedent's death resulted from an occupational radiation disease and his ultimate death was directly related to his exposure to microwave radiation while employed.

The employer's experts maintained that the decedent suffered from Alzheimer's Disease. The claimant's experts provided the Board with ample evidence of the existence of a disease identified as microwave or radiation sickness.

On appeal, the decision of the Workers' Compensation Board was affirmed. The Appellate Court concluded that there was substantial evidence to establish the necessary casual relationship between decedent's exposure to microwave radiation, the development of the occupational disease and his ultimate death.

Workers' Compensation benefits, under the Workers' Compensation Law, are the exclusive remedy for the claim of an injured worker against his employer or fellow workers in New York State.

SIGN-UP NOW FOR FOURTH OF JULY CAMPOUT, HOLIDAY HILL, SPRINGWATER, NEW YORK

The result of an informal pole are in. Most people asked indicated a marked preference for a campsite within an approximate two hour travel time. This year we will revisit a campsite which has been a favorite amongst our experienced, stout hearted family campers, Holiday Hill in Springwater, New York.

Holiday Hill offers spacious campsites with electricity and running water, clean restroom and shower facilities and a beautiful view of the countryside of one of New York State's southern tier counties. Planned recreation for the young, not so young, and the young at heart will be a part of the Bill-of-Fare for this memorable extended holiday weekend. Not to be forgotten are activities available at nearby places of interest that can make for a fun filled day-time excursion.

Not to forget the Ham at this campout, Holiday Hill has quite good possibilities for portable antenna farms. Make certain to add aerial materials and your favorite "portable" rig(s) to your camping list if you haven't already.

We are planning this spectacular campout for the Fourth of July Holiday this year. We will be setting out for Holiday Hill on Wednesday evening, July 3, after work and stay through Sunday the 7th. Many special activities will be taking place that weekend that will enhance your camping pleasure.

You can sign-up at our next two meetings or contact Keith Freeberg, N2BEL. Group rate camping information will be available at our April meeting. See you there.

73, Keith, N2BEL

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WHAT'S DX?

by Fred Gern, KB2SE

As a member of a DX club, I find my interest sway my opinions about other ham activities. This is not a rare occurrence in our hobby because of the staggering array of different operating choices available: Phone, CW, RTTY, Packet, etc.

I like to work DX. Because of the type of conditions encountered by the DX stations (pile ups of W's and VE's) there are a limited number of ways to work them. Almost anything can create a pile-up on a DX station; he's in a rare place, he's on a rare band or conditions have been poor and everyone is starving for a DX contact. So, to work the station you must be willing to try to crack the pile-up. If you do not have a super station (very few do) you will find a sense of elation at "getting through".

The other way to work DX is to participate in low band contests. For some reason a contest always pulls out some rare DX and a whole bunch of un-rare ones for the taking. It is noisy, but buried in the noise are some good finds.

Recently I heard of a new way to work DX. In fact it makes wonder if I am really a DXer at all. Frank Polino, K2OS, recently earned an award that many DXers do not even apply for, Worked All Continents (WAC). So, what's the big deal? Well, ladies and gentlemen, Frank did it on 144 MHz.

Work the other side of the world and you work a path about 12,500 miles long. Work someone in Europe via moonbounce and you work a radio path 235,000 miles long – one way! Now that is DX. Worried about a 3db line loss at UHF? How does a round trip path signal loss of 252db sound?

The members of the Rochester DX Association are proud and happy to have Frank as a member and think that 144 MHz WAC #13 in the world and the first in the Second Call District is a super feat. Frank uses 4-14 element beams driven with an 8877 amplifier. KB2SG (Frank's attorney) just informed him that their legal action against the town of Ogden was settled in Frank's favor. Now he no longer is classified as a TVRO station and can raise his antenna over its present 10 foot height.

Now he can really work some DX.

WANTED: Someone familiar with receiving Weather Satellite transmissions. Contact Jim Shipkowski, WB2WWV, 227-3084.

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(AT BULLS HEAD)

MOBILE RADIO BAN INTRODUCED IN ARIZONA

A proposal has been introduced in the Arizona state legislature which would prohibit the operation of mobile communications equipment, including Amateur Radio equipment, in a moving vehicle.

Designated S.B. 1346, the proposed legislation states "A driver of a vehicle shall not operate a car telephone unless the vehicle is stationary and at a location which does not interfere with other traffic. For the purpose of this subsection, 'car telephone' means a device which is attached to a vehicle and in which sound is converted into electrical impulses for transmission without a wire and includes citizen band radios or other similar mobile radios."

The bill would also prohibit operating a motor vehicle equipped with a television receiver which is visible to the driver.

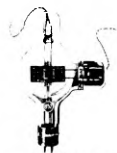
The proposed legislation would not apply to authorized emergency vehicles, vehicles operated by an employee of "a political subdivision" of the state or vehicles operated outside the boundaries of an incorporated city or town.

Tnx ARRL LETTER



THE VACUUM TUBE

Editor: Bro. Patrick Dowd, F.S.C., W2GK

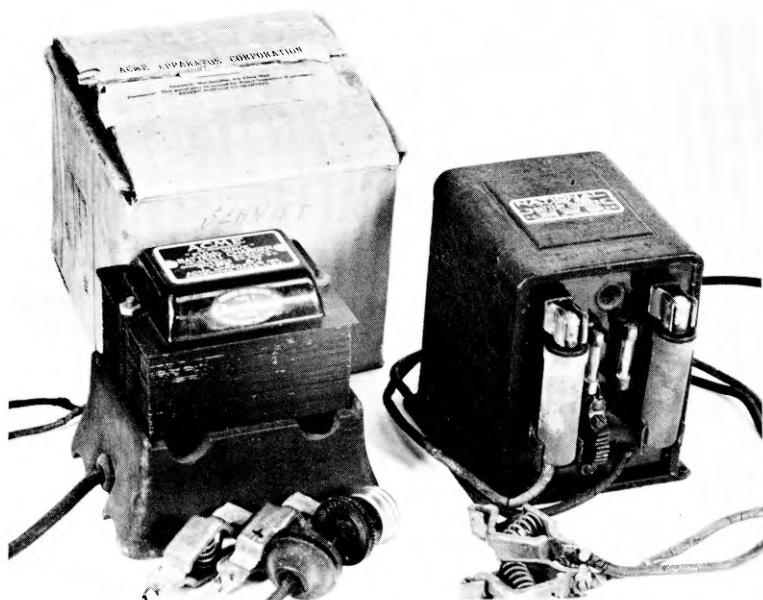


THE RAYTHEON "A"

by Alan Douglas

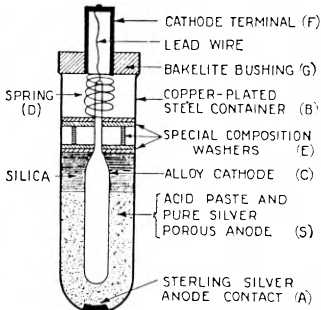
In the history of rectifiers, the Raytheon "A" cartridge has one of the shortest chapters: a bare five months of commercial use. It promised a revolution in battery chargers and A-supplies, being compact, efficient, and low-priced, and a number of manufacturers designed equipment around it, such as National, Acme, Briggs & Stratton, Mayolian, and Thordarson.

The story begins in early 1923, when Mr. Henri André of Paris began experimenting with metallic colloidal suspensions as rectifiers. After 2½ years he had found that colloidal silver in strong sulfuric acid with a silver anode and inert cathode would work well, and had joined La Radiotechnique, a well-known tube manufacturer, which brought out a battery charger using his principle in October 1925. André sent a communication to the Académie des Sciences in August, and read a paper to a radio society in December (Société des Amis



Acme and National power supplies using Raytheon "A"

Reproduced from the *Old Timer's Bulletin* published by The Antique Wireless Association, Inc.



Raytheon A
2 1/2 Amps.

A REVOLUTIONARY SCIENTIFIC ACHIEVEMENT in high current, low voltage rectification

Raytheon A-2½ amps. is revolutionary in principle, in construction, in performance. It is an unbreakable metal cartridge, compact and simple, without liquids or filaments.

Above all, it is The Efficient Rectifier. Its operating cost over the period of a year, compared with that of other types of rectifiers designed for similar uses, will show a cash saving of many dollars.

Raytheon A-2½ amps. was invented by Monsieur André of La Radiotechnique in Paris, and developed by the Raytheon Research Laboratories with his co-operation.

Battery chargers and "A" power units using this remarkable rectifier will bear the same seal of approval that distinguishes all Raytheon-equipped power devices.

de la T.S.F., published in their journal *L'Onde Electrique* in January 1926).

La Radiotechnique's new charger was advertised for only one month, but that was enough to attract the attention of Laurence Marshall, who headed Raytheon. On a European trip, he persuaded André to return with him and develop his rectifier at Raytheon (one of the few companies doing research at that time), as a workable low-voltage rectifier was in great demand for radio A-supplies and battery charging. By June 1927 André had perfected his device. With suitable fanfare, it was introduced to the radio public "in spite of many heated arguments between the few of us determining Company policy," to quote C. G. Smith, inventor of the S-tube and BH rectifiers.

After quite a number of A-eliminators had been sold, the reason for Smith's distrust became evident: if the materials used were not sufficiently pure, the rectifiers could explode. Complaints multiplied, and because one woman

blamed her miscarriage on her exploding radio, the "A eliminator" was soon known in the factory as the "baby eliminator." A smooth-talking salesman was dispatched with a satchel of cash and settled all complaints but one (which resulted in a \$10,000 damage verdict; very many of those would have wiped out the company). After October, Raytheon returned to advertising only tubes, and André presumably returned to Paris.

References:

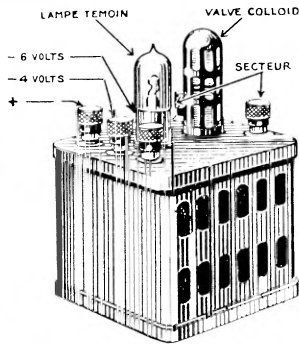
L'Onde Electrique, Oct. 1925, pp 454-55. Jan. 1926, pp 28-46.

Radio Broadcast, July 1927, pp 143-45.

Radio News, Aug. 1927, pp 128-29, 176-77.

The Creative Ordeal, Otto J. Scott, Atheneum 1974

(this history of Raytheon quotes a 1967 interview with Marshall and a 1951 manuscript of Smith. While Smith's statements are usually accurate, Marshall's are anything but).



La Radiotechnique's original charger using Andre's colloid valve. The lamp functioned as an ammeter and current regulator.



Closeup of Type "A" rectifier.

NEW CONTROLLER ENHANCES FUZZ-BUZZ ON N2JC/R

With the installation of the new RC-850 repeater controller on the 88 machine, the FUZZ-BUZZ capability has been enhanced significantly. Besides having access to the county emergency dispatcher connected to the 911 facility, we now have access to Irondequoit Police, Greece Police, Gates Police, State Police, Ontario County Sheriff and Wayne County Sheriff.

In addition, there is access to New York State Thruway recorded information and to a local weather forecast.

NEW FUZZ-BUZZ CODES

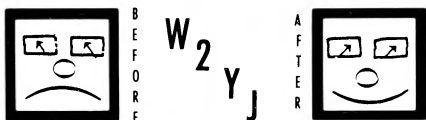
Access Code	Voice Response	Activity Dialed
911	911 Operator	Emergency Dispatch
912	IPD	Irondequoit Police
913	GRPD	Greece Police
914	GAPD	Gates Police
915	STPL	State Police
916	BRPD	Brighton Police
917	ONTS	Ontario Cty Sheriff
918	WAYS	Wayne Cty Sheriff
919	NYST	Thruway Information
910	Weather	Local Weather Forecast

A leading # is no longer necessary, but is ignored, so that the old #919 will also work, however the touch-tones may not be muted, depending on how the control states are set.

FOR SALE: Complete set of Hustler mobile whips, 10-20-40-75 meters with foldover mast, ball mount and coax. \$45. Chet Selbert, WB2ZFS, 663-0305.

Editor's note: This above is one of the last things left from the estate of Al Mumby, WB2MCP. According to Chet, Stevie, Al's widow, is doing very well and wishes to say hello to all of Al's old friends.

COMMERCIAL COMMUNICATIONS



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PUBLIC SERVICE

by Ed Holdsworth, N2EH

I listed the Public Service events in last months *Rag* and since then we have added two more. I had the sign up sheets out at the March 1st meeting and am sorry to report to those of you that were not there, that we are filled up on two events already, so, if you are planning on working on one or more— you better get out to the April meeting so that you will not be disappointed.

I will list them again for your info:

Heart & Sole Classic	April 20
Susquehannock Pro Road Rally	June 8-9
Mendon Pony Rally	June 8-9
Scotch Bonnet Light Yacht Race	June 14-16
Mendon Pony Club Regional Rally	August 10
Hamlin Beach Triathlon	August 25
Pittsford (Walnut Hill) Driving Competition	August 15-18
Palmyra Canaltown Days	September 14-15
Diabetes Bike-A-Thon	September 22

I am sure there will be more to come— so get out to the meeting and get signed up.

FOR SALE:

Heathkit - RX-1 Receiver, 160-30 M (includes 11M); HX-10 Transmitter, 80-30 M. Good Condition. Both \$95.00 or best offer.

Wilson - 1402 SM, 2 M (6Xtl pairs) with drop-in charger, case and rubber duck. \$60.00 or best offer.

Mal Smith, K2DVA, 716-323-2657.

FOR SALE:

Azden PCS 300, 2M, FM, Portable, LCD read-out, 8 memories, scan, spare battery, speaker, mike. \$200.00

Yaesu 227R, 2M FM mobile 1/10 watts, TT mike. \$150.00

Standard 450 FM mobile 1/10 watts, 5 memories, scan, C7800. \$200.00

TSS20 Kenwood 80 to 10 meters special Hi output tubes and speech processor, all filters. \$450.00

Heath SB301 Receiver, w 3 filters & speaker. \$250.00

Dectran GL1000 80 to 10 meters amplifier. \$225.00 \$225.00

Len Gessin, WA2ZNC, 248-2511.

**FOR SALE and WANT ADS
free to RaRa members!**