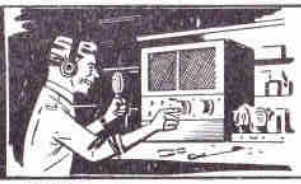


HAM HUM

Published by
AK-SAR-BEN RADIO CLUB, INC. - Omaha, Nebr. 68101
Post Office Box 291 - Downtown Station

September 1969

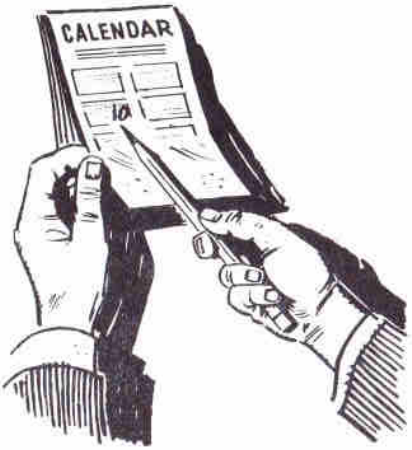
Vol. XIX
No. 9

Next meeting October 10th at

Red Cross Headquarters

(39th and Dewey)

8:00 P.M.



Keep that date open!

HAM HUM is the official organ of the Ak-Sar-Ben Radio Club, Inc., of Omaha, Nebraska, mailed monthly to all members and to others upon request.

Next copy deadline: September 26th

Published by
AK-SAR-BEN RADIO CLUB, INC.
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BUSINESS: 553-4700 - EX. 331

Ak-Sar-Ben Radio Club
Editor – Ham Hum
Post Office Box 291
Omaha, Nebr. 68101

Dear Honorable Ed,

Would you believe I just put the old Galaxy V in the Toyota. We are heading for the high country in Colorado.

The Toyota Land Cruiser body is essentially a box, so the antenna had to be mounted on a vertical side panel. The usual problems cropped up. One was solved simply and it might be worth repeating in Ham Hum, like as follows.

A Hint For The Mobileer

If you have been troubled with your mobile mount slipping, glue may be your answer. It is difficult to tighten the mounting nut when the mounting surface is vertical or nearly vertical.

Epoxy Resin Glue can bond the mounting insulator to the ball and make the base rigid.

After the antenna and mounting are assembled and preliminary alignment is made, disassemble the main mounting nut and remove the ball.

Drill a few shallow holes (1/16" deep) into the insulator inside the area covered by the ball. These will provide bite for the glue. Then fill the hollow of the ball with Epoxy glue and quickly reassemble. Tighten the mounting nut and align the antenna. Let the car set as long as the directions on the glue container indicate. Then your problems are solved.

73,
John W. Orr, WØPHW
8310 Emmet
Omaha, Nebr. 68134

****

COUNTY HUNTER'S EXPEDITION

Members of the Pioneer Radio Club from the Fremont area will make a County Award expedition into Washington County on Sept. 27th. Call used will be WØRCH/Ø and they will be near the town of Arlington. Operation will begin at about 1900 of this date. Listen in on 75 m. and 2 m. for any further details.

de KØJFN

****

AUGUST MEETING

The August meeting was held at the Red Cross Building, August 8th.

Arrangements for the Picnic were discussed by the President, Royce Johnson.

Movies were shown by Bob Lockwood, of the Hamfest at Victoria Springs. Bob also showed movies from Field Day held in June.

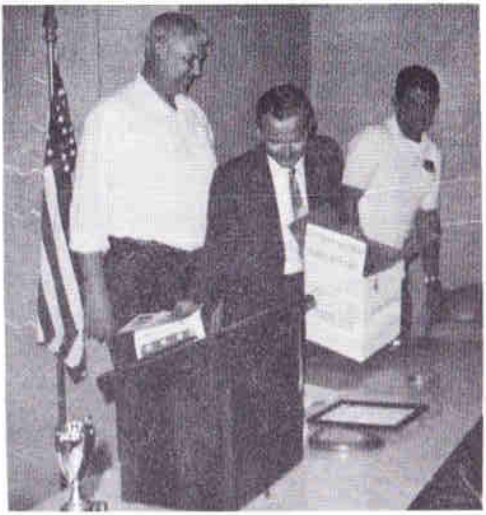
The Club was treated to a firsthand view of Galaxy's FM-210, a unit designed for regular FM and FM repeater operation on 2 meters. Bud Henley, WAØPZV, was the main speaker, with technical backing by Chuck Connors, W8DZS/Ø. The FM-210 will help populate the FM portion of 2 meters. Its low price and crystal prices make the unit look real attractive.

Jim Droege, WØYCP, demonstrated his crystal oscillator for tune-up purposes.

Refreshments and good old eye-ball QSO followed the meeting.

Bud Henley, WAØPZV

Bud Henley, WAØPZV, explaining the FM Tranceiver



L to r: Norval Bowen
Bud Henley
Royce Johnson

View of spectators

A Certificate of Appreciation was presented to the Ak-Sar-Ben Radio Club, Inc. by Lt. Ave Brooks, Co-Chairman of the Explorer Scout Canoe Race, for assistance given by members of the Club in connection with the Eighth Annual Explorer Scout Canoe Race held on June 7, 1969.

Also a beautiful walnut plaque was presented to the Club by John J. O'Flynn, Co-Chairman of the Explorer Scout Canoe Race, in recognition of services rendered.

In addition, Joseph Bosiljevac, Explorer Advisor of Post 58, expressed appreciation to members of the Club for participation in covering the canoe races. (See photos on next page)

****

Is that kitchen drawer cluttered with old trading stamps and you just don't know what to do with them??????????

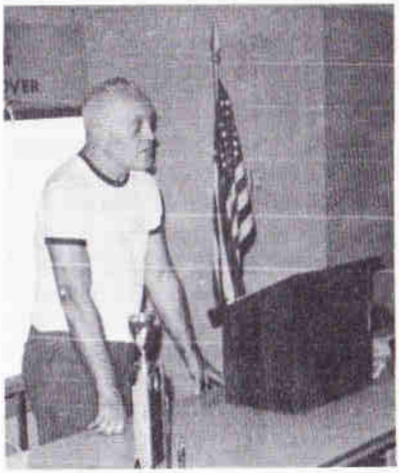
Solution----------

Bring them with you to the next meeting.

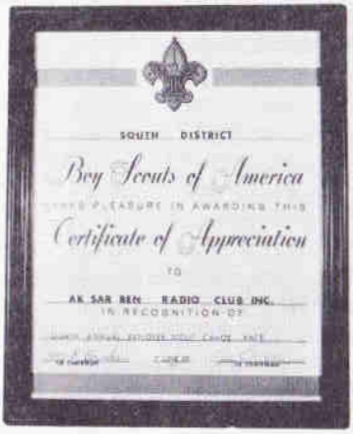
****

Lt. Ave Brooks presents Certificate of Appreciation President Royce Johnson.

Mr. John J. O'Flynn presents a beautiful walnut plaque to President Royce Johnson.



Mr. Joseph Bosiljevac expresses appreciation to Club members.



Dayton L. Phifer, WØVEA
East Tryon Route
North Platte, Neb. 69101

August 10, 1969

Editor Ham Hum:

Hi:

My apologies to anyone who thought I reported a gain on vertical antennas over horizontal. At no time have I built a vertical that compared with the horizontal for gain. The gain reported was above the maximum recorded from a vertical dipole or ground plane. One other point I wish to make is that readings from the test setup during the morning hours were much higher than readings from the same setup during the late afternoon. Only more noticeable change with vertical than horizontal antenna. That this is a normal condition is apparent from comparison of signals on the railroad 160 MHz band between train radios and the signals heard at the North Platte Yard. During the afternoon, a train moving from North Platte will lose the local chatter in fifteen to twenty miles; other hours the distance may increase to thirty or thirty-five miles, and on rare occasions, fifty to sixty miles.

After four days of adjusting, building, testing, I have more sunburn than gain with vertical antenna.

At this point, for simplicity, signal strength, 52 ohm feed, mobile, portable, omnidirectional, 2 meter antenna, my vote goes for the "J match." It gave better reading than a ground plane, not quite so good as ground plane with reflector. Just an overall good antenna for local mobile and portable. Easy to build, load, mount. From any VHF handbook.

Briefly, ¾ wave driven element; ¼ wave grounded side; about ¼" spacing between the elements.

Have you noticed the number of cars with amateur licenses who, from all appearances, must be using the "Hidden Mobile Antenna," QST, April, Page 50, by W4TZB?

73,
Dayton, WØVEA

****

August 15, 1969

Editor Ham Hum:

Hi:

A P.S. about the two-meter J vertical antenna. Standard cut length, from TV antenna elements, ¼" spacing gave a field strength reading about the same as a vertical dipole, or ground plane – ½ of one point on F.S. meter.

Lengthening both the stub and the driven element to 24" stub, 61" driven element, and using two J match antennas, one on transmitter, one on F.S. pickup, and lengthening both, gave increased reading to 1½ points on F.S. meter. Spacing about an inch between elements. Tried several crystals, 144.175 through 145.350, no change on loading of transmitter, and F.S. meter read the same. Appears the J match has advantages for omnidirectional receiving both mobile and portable, even fixed. It may also be used with reflectors for more gain.

73,
Dayton, WØVEA

****

CHANGE OF ADDRESS FOR ROSTER

Robert H. Schellhorn, WØYSX
3612 Stuart Blvd.
Council Bluffs, Iowa 51501
Phone: CB – 366-0784

****

LB 334

It has come to my attention that LB 334 has just recently been passed on Final Reading by the Legislature. LB 334 has to do with the transmission or reception of law enforcement messages, also some exceptions and penalties.

I asked Sen. Bill Bloom to send me a copy of this legislation which he very kindly did. After reading over the bill, it doesn't seem to make much sense to me. Conceivably, an amateur operator having 144 mhz. or 450 mhz. equipment in his auto or at home could be arrested under the provisions of this law and his equipment could be forfeited or destroyed. In my personal opinion this is a poor and badly written piece of legislation. *Please write* your State Senator for a copy of this bill and see what you think. Presumably, this legislation was aimed at the "ambulance chasers" and other thrill seekers, but under certain interpretations it could be very bad for the licensed amateur.

John Snyder, WØWRT

****

WANTED

Model 15 or 19 RTTY at reasonable cost for use by HI8XRM in Santo Domingo, Dominican Republic, during hurricanes and other emergency services in cooperation with Dominican Red Cross and Civil Defense.

Rubert Meyer, HI8XRM
2533 South 10th Street
Omaha, Nebraska 68108
Phone: 345-4347

****

IT PAYS TO ADVERTISE

In the last issue of Ham Hum one of the members ran an ad that an antenna party was wanted. Shortly after Ham Hum came out he was contacted and the party was planned. Those attending were Dick, WØYZV, Harold, WAØDGA, Norval WAØNPF, and me.

We met at the fellow's house, completed the antenna work in very short order, and then got down to the business at hand. We really enjoyed the cake, ice tea and coffee, but I think most of all the rag chewing that went along with the work and refreshments. To me this was a real enjoyable way to spend an evening.

Royce E. Johnson, WAØKIL

****

OFFICIAL BULLETIN NR 234 FROM ARRL HEADQUARTERS NEWINGTON CONN AUGUST 14 1969 TO ALL RADIO AMATEURS BT

Public service communication has been a traditional responsibility of the amateur service since the very earliest days of our hobby. The Amateur Radio Public Service Corps implements this function. ARPSC is discussed in detail in the ARRL Public Service Communications booklet, a complete manual for amateur radio emergency and traffic operation. This publication is available without charge from ARRL Headquarters, 225 Main Street, Newington, Connecticut 06111. An addressed legal size envelope with twelve cents United States postage will help to expedite your copy AR

****

THE FM PRIMER

INTRODUCTION

For point-to-point communications, FM is the *now* mode. And the reasons are many and varied. Band noise – one of the most undesirable characteristics of AM radio – is virtually nonexistent with FM. Efficient squelch circuits are standard equipment on FM receivers. They keep all audio from the speaker until an intelligible signal appears on the channel. FM receivers are typically more sensitive than their AM counterparts, too. This fact, coupled with the inherently lower noise of FM, means greater range for a given operating power. Reliability is another key advantage. FM units are built to withstand the adverse environments of vibration, dust and dirt, heat, and shock.

Unlike AM, FM operation employs the "channel" concept. Transmitters and receivers are crystal-controlled to operate on one frequency. So there is never a need to "tune in" a station or zero-beat a carrier. Since FM channels are standardized on the amateur bands, new operators need but to crystal up on one of the popular FM channels, and their "tuning" days are over.

FREQUENCY

There are 31 standard FM channels on two meters. The first, channel 1, is 146.04 MHz. These channels are spaced 60 KHz apart, and continue up through channel 31, which is 147.84 MHz. Not all FM channels are active yet, but a growing number of them are. In the greater Los Angeles area the most popular channels are 13 (146.76), 14 (146.82), and 16 (146.94). Nationally, the most popular channels are 6 (146.34), 12 (146.70), 13, 14, and 16. Across the country, channel 16 is the most common and is referred to as the "calling" frequency. Amateurs use it for point-to-point communication as well as repeater operation.

REPEATERS

Many metropolitan areas (L.A. is an exception) are active around two-meter repeaters. The standard repeater input is channel 6; output is channel 16. This idea was adopted so that an FM'er, operating through a repeater in his own area, could travel to other states and retain the usefulness of his equipment. Since not all cities have repeaters, an FM'er who wants to get the most out of his gear will select an FM unit with two-channel transmitting capability. He'll select, say, channel 16 as his basic transmit and receive frequency, and use channel 6 as an alternate transmit frequency. In this way, he'll be able to use existing repeaters or operate straight simplex (point-to-point). Unfortunately, as mentioned earlier, Los Angeles is one of the few cities without an open repeater. So if you plan to operate strictly in this general area, be sure to crystal up on one or more of the three basic channels in use here: 13, 14, and 16.

DEVIATION

In FM circles, the term deviation is roughly comparable to modulation level of AM. Deviation, however, is a function of frequency variation rather than audio amplitude. The standard deviation level for amateur operation is 12 KHz. A transmitter set up for anything much greater may be so

broad as to be undetectable by other stations. Less deviation will decrease the apparent audio level. At 12 KHz, a fully modulated signal should just fill the passband of a standard FM receiver. The result is optimum audio quality and level, and minimum distortion. You probably won't need any special test equipment to adjust deviation. This can be done while you're on the air.

EQUIPMENT

The most popular makes of FM equipment are Motorola and GE. Handbooks and schematics are readily available and the units are well-engineered – which makes them serviceable.

(Reprinted from copy on file at W6ORW's.)

– de Simi Valley Sig. Clipper

****

FOR SALE

NC-300 receiver $130.00
Apache TX-1 transmitter . . . $ 75.00

Call 346-3497
Gene Carvalho

****

I would like to thank the following members of the Ak-Sar-Ben Radio Club for a fine antenna party:
Royce Johnson, WAØKIL
Harold McClenahan, WAØDGA
Norval Bowen, WAØNPF
Dick Eilers, WØYZV

My TA33 talks real good. Many thanks!

Jay C. McAleer, WAØLLQ

****

OFFICIAL BULLETIN NR 232 FROM ARRL HEADQUARTERS NEWINGTON CONN AUGUST 1 1969 TO ALL RADIO AMATEURS BT

The FCC has released the following information. The ITU has been recently informed of the withdrawal of restrictions regarding radio communications between amateur stations in Thailand and those in other countries. Authorization will be granted for the Thai nationals only. However, for any foreign national a reciprocal agreement is required. This information updates the list appearing on page 82 of August QST AR

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OFFICIAL BULLETIN NR 233 FROM ARRL HEADQUARTERS NEWINGTON CONN AUGUST 7 1969 TO ALL RADIO AMATEURS BT

All amateurs are invited to participate in the ARRL September 13 Frequency Measuring Test. W1AW will transmit signals for measurement at 0130 GMT September 13, which represents the evening of September 12 for most United States and Canadian amateurs, on approximately 3557 7089 and 14,068 kiloHertz. A second series of signals for measurement will be transmitted at 0430 GMT on approximately 3568 7088 and 14,091 kiloHertz. Although Official Observers only will receive individual reports, any amateur may submit his results for possible QST Honor Roll listing. In addition, the official readings will be transmitted via a special W1AW bulletin on or about September 25. Further information appears on page 100 of August QST AR

****

Mid-west Amateur Radio Service 7258 Khz. "MIDCARS"

The MWARS is a volunteer group of radio amateurs who have agreed to monitor the frequency of 7258 Khz for purpose of providing assistance or information to any amateur, citizen, or organization requesting it. We make no claim to the frequency, nor do we have any intention of trying to push anyone off of it. However, no matter what the frequency, we feel that public service should take precedence over routine rag-chewing. Amateur radio exists because it provides a public service.

The success of an operation of this type depends heavily upon the ability of a calling station to accurately zero-beat the monitored frequency, especially under the crowded conditions which exist on weekends and during the evening. It is equally important for monitoring stations to be sure that they are monitoring the correct frequency. For this reason some sort of frequency marker, such as substituting a 7258 crystal in a conventional calibrator should be used by participating stations. Vatican Radio provides a convenient frequency standard for zero-beating such a marker.

The MWARS is not intended to be an outlet for routine third party traffic. We feel that there is a sufficient number of regular traffic nets which are better organized and motivated to handle this type of traffic. Individual members of the service are not bound by this, but if they wish to handle routine third party traffic when the frequency is busy, we request that they use 7258 Khz for a calling frequency only, and that the traffic be handled on another frequency in order to leave 7258 open for its primary purpose.

The following are recommended procedures –

1. Break, Break, Break, W9XYZ mobile 9 – for emergency use only.
2. Break, Break, W9XYZ Mobile 9 for priority or urgent traffic.
3. Listen for breakers – never transmit more than one brief sentence without letting VOX drop out or releasing PTT.
4. Breakers who do not sign their call letters are inviting a citation and so are stations who answer them.

Amateurs interested in participating are invited to write for additional information: K9DDT Nick Geer, 432 Addison, Elgin, Ill. 60120 (Net control manager); W9WWE Marv Cook, Box 82, Seaton, Ill. 61476 (Secretary).

de Lincoln Log

****

NEW MEMBERS ADDITIONS TO ROSTER

Kermit H. Durr, WAØPJP
3105 Fontenelle Blvd.
Omaha, Nebraska 68104
Phone: 451-4522

David A. Gautier, WAØMDZ
7601 South 50th Street
Omaha, Nebraska 68157
Phone: 733-3037

Roy M. Kaiser, KØIPV
5834 Western Avenue
Omaha, Nebraska 68132
Phone: 551-0942

****

HANNA HINTS

When an amateur radio operator thinks of a crystal, his first thought is that this is a device to control the frequency of a transmitter. He next will visualize a piece of quartz cut to a thin wafer about 3/8 to 1/2 inch square and held in a holder between two plates. Many years ago they were much larger. Today the pressure held crystals are mostly World War II surplus and the newer crystals are sealed in cans that are soldered tight shut and you can't see what is inside.

Also now crystals are used for more things than just controlling the frequency of a transmitter. Many are still used for this purpose, such as CB, marine transmitters, two-way, just to name a few. They are used also in most of the receivers in the previously mentioned services. Many now find their way into filters, especially in sideband transmitters and receivers wherein they control the bandwidth.

The service to which a crystal is to be put goes a long way toward determining how it will be cut from the quartz in order to obtain the desired characteristics. The important ones are operating frequency, frequency tolerance and temperature coefficient.

Operating frequency is the series or anti-resonant frequency at which the quartz crystal will oscillate. This crystal alone does not determine the desired results. The capacity in the circuit plus the crystal plates, the can and the leads all enter into the picture. When ordering crystals, the type of circuit must be specified, and the capacity.

The frequency tolerance is the amount of frequency deviation (plus or minus) from the desired operating frequency at a particular temperature. Accuracy requirements for crystal tolerance are expressed in percentage and can be had as high as plus or minus 0.0005 percent. Real good.

The temperature coefficient is the frequency stability or deviation with a change in temperature and is expressed in parts per million per degree centigrade. Frequency change with temperature can be either positive or negative and should not be confused with frequency drift.

Many other factors affect crystals. One that gives trouble is overdrive where the crystal current becomes too high and causes excessive heating. This happens to many CB sets when they are run with 18 volts to get higher output and there are people who do this.

Good crystals are aged as long as 45 days before being placed in the end equipment. This would be especially true of crystals used as clocks in frequency counters and other exotic equipment.

Some of the information here was gleaned from a brochure by TRW Crystal Plant.

Ralph Hanna, W8QUR ARNS

(from: "Ham Shack Gossip," Toledo, Ohio and FEARL News, Japan)

****

Teacher: "Who can spell 'straight'?"

Small boy: "S-t-r-a-i-g-h-t."

Teacher: "Correct. Now what does it mean?"

Small boy: "Without water." (W7SPB)

****

OFFICIAL BULLETIN NR 235 FROM ARRL HEADQUARTERS NEWINGTON CONN AUGUST 21 1969 TO ALL RADIO AMATEURS BT

The twelfth Boy Scout Jamboree on the Air will be held from 0001 GMT October 18 through 2359 GMT October 19, 1969. Several special stations will be on the air for the occasion, including 4U1ITU at Geneva, home of the World Scout Bureau, and K2BFW, headquarters station of the Boys Life Radio Club. A fraternal get-together rather than a contest, it provides an opportunity for scout to scout chats and for amateurs to demonstrate ham radio to scouts. For help in locating a scout unit near you, try the local Scout office listed in your phone book or write ARRL. Further details will appear in October QST AR

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CLASSES TO BEGIN AT WRL

World Radio will begin classes for those interested in code or amateur radio. This is for Novice class license and will include code to 5 words per minute, plus some theory applicable to Novice class license.

There is no charge for attending this class.

The class meets *each Monday evening, 6:30 to 8:00 P.M.* at WRL (34th & Broadway) for *8 weeks,* starting *Sept. 15th.*

Sincerely,
Alan McMillan, WØJJK

****

OFFICIAL BULLETIN NR 237 FROM ARRL HEADQUARTERS NEWINGTON CONN SEPTEMBER 5 1969 TO ALL RADIO AMATEURS BT

A new challenge for awards minded amateurs comes into being officially on January 1, 1970, with the inauguration of the ARRL Five Band Worked All States Award. Only contacts made after that date count towards this new achievement. All fifty states must be confirmed on each of five separate bands to qualify. Full rules will appear in October QST AR

****

REFLECTED and DIRECTED

George H. Goldstone, W8AP
1010 Burnham Road
Bloomfield Hills, MI 48013

INVITING FCC VIOLATIONS

The chance to make a buck is not only an incentive for many to help themselves; it also can encourage the sale of devices that are designed to violate the law. We would like to comment this month on transmitting equipment which is obviously designed to violate the regulations of the FCC limiting power.

Many hams who have enjoyed receiving radio parts catalogs from a large Milwaukee mail order supply house were surprised this year when they received two catalogs – one for ham equipment, and one for CB equipment. Curiousity being what it is, probably every ham looked over the CB gear shown in this second catalog. Having in mind the 5 watt limitation on input applicable to all CB equipment but the "business band" gear, we were not a little surprised to see linear amplifier after linear amplifier offered for sale! Here are a few: Courier ML-100 (200 watts P.E.P.); Sonar BR-21 (150 watts "input"); Shoebox linear (150 watts P.E.P. input); Skyhook II Linear (150 watts P.E.P. input); Contex Apollo linear – (up to 100 watts output); and finally, the Contex 500 linear, pproximately 500 watts P.E.P. input").

Along with the power input (or output) claims, are these little notations, tucked into the specs: "Not legal for use on the Citizens Band in the U.S.; Illegal for use on 11 meters"; and finally, this bib plug for the Shoebox and Skyhook:

"Put more PUNCH in your signal with a LINEAR AMPLIFIER. Never go barefoot again.....Get a SHOEBOX or SKYHOOK II Linear Amplifier and really Stomp Out!.....

This is the monster that the FCC spawned when the Commission took hams out of 11 meters, and gave the frequencies there to CB use! How FCC must wish the Citizen's Band had never been born!

Not that the vendors of ham equipment are always modest. The instruction manual for the Henry 2-K Linear that we looked at a year or so ago had alternate methods of tune-up. After describing one method which would obviously produce more than the legal input, the manual stated blandly that this could only be done with a dummy load, since such tune-up would result in input over the legal limit. Reminds one of articles by certain militant groups on how to make Molotov cocktails!

If anyone has any simple solution to this problem, the FCC would probably be delighted to know what it is. We can't see any easy way out, except that possibly an FCC regulation might state that possession of equipment with more power capability than permitted by one's license class – making allowance for tune-up variations above the limit – would constitute prima facie evidence of operation with excess power. So far as we know, FCC field engineers are presently saddled with the requirement of proving that excess power was actually used at a given time. This isn't easy! W8AP

****

ARRL REPORT

FCC has denied the petition by the League, indexed as RM1352, regarding allowing full use of the six-meter band by all holders of renewable FCC licenses, 50.0 to 50.1 MHz frequencies are therefore restricted to use by Extra and Advanced Class licensees under the provisions of Docket 15928 which became effective November 22, 1968.

Financially, the ARRL has not done quite as well as predicted in the "budget" announced last April. The operating statement for the third quarter of 1968 shows a loss, after deductions of Board-authorized expenditures, of about $39,000. Gen. Mgr. Huntoon attributes this loss to two principal factors: first, the attorney's fees involved in the Miller (W9WNV) case cost the League somewhat over $7,000 and, second, another $7,000 loss was occasioned by the transfer and sale of certain securities, plus a "one-shot" expense in the stocking of 25 and 50-year membership pins.

Some recouping is expected to occur with the rises in the prices several publications. Mr. Huntoon sa that this situation is no cause for alarm: regarding the League's financial condition.

Official Bulletin No. 202 deals with the fact that some telephone companies have tariffs with the FCC and they have been allowed to go into effect, though many matters are in dispute. It says that "devices such as phone patches will be permitted through an interface leased from the phone companies. Installation charges vary widely, but monthly rentals of the interface are expected to be about fifty cents.

– Auto-Call
de SARA Slip, Illinois

****

NEW ADDRESS

Dear Friends:

I have just moved to California and will not be able to attend any more Radio Club meetings, but I would like to continue receiving Ham Hum at my new address until my membership expires. Hope to set up operations out here as soon as possible, too.

My new address is:

Griffith L. DeGolier
12389 Telephone Ave.
Chino, Calif. 91710

Sincerely,
Griffith L. DeGolier

****

ON THE SICK LIST

Will Wentworth, WNØJMA, is in St. Joseph's Hospital because of a leg infection.

Ed Donze, WØYEV, is in Clarkson Hospital, after surgery.

Get well wishes to you both.

****

FOR SALE

18 AVQ vertical, new 15 mtr. trap, complete with guys and instructions – $25.00.

Don McMinds, WAØLGS
Phone: 331-4607

****

OFFICIAL BULLETIN NR 236 FROM ARRL HEADQUARTERS NEWINGTON CONN AUGUST 28 1969 TO ALL RADIO AMATEURS BT

Attention contesters. Upon recommendation of the ARRL Contest Advisory Committee, the 1969 Sweepstakes Contest will be run on a trial basis without power multipliers. The phone portion of the Sweepstakes will take place the weekend of November 8 and 9 and the c.w. portion November 15 and 16. All those participating are urged to report their views on the trial elimination of the power multiplier, following the SS, to the Contest Advisory Committee. Information on the CAC appears on page 62 of March QST. Full rules for the 1969 Sweepstakes will appear in October QST AR

****

The Des Moines Amateur Radio Association is now the ARRL QSL Bureau for the WØ's. Send SASE's to P. O. Box 88, Des Moines, Iowa 50301.

Bill Dennis, KØUKN

****

FOR SALE

Hy Gain 15 meter beam $20.00
Televex 6 element
meter beam $35.00

Jay C. McAleer, WAØLLQ
839 South Polk Street
Papillion, Nebraska 68046
Phone: 339-3448

****

QUESTION CORNER

Q. For me, amateur radio is a hobby – pure and simple. Why should I get involved in all that ARRL stuff that doesn't interest me?

A. That would be fine if it were really that simple. You hold an FCC license issued "in the public interest and necessity." It is an inescapable fact that you will continue to have a license to operate only so long as our governments continue to believe it is indeed in the public interest and necessity. It is also a fact that ARRL has for half a century been the primary means chosen by thoughtful, responsible amateurs to demonstrate fulfillment of that requirement. ARRL is your best insurance of continued access to bands.

Reg – W4ILE
de Florida Skip

****

Doctor: "What was the most you ever weighed?"

Patient: "154 pounds."

Doctor: "And what was the least you ever weighted?"

Patient: "8 and one-fourth pounds." (W7SPB)

****

TV announcer: "We have just received a bulletin about a catastrophe, the like of which has never been known to mankind – but first a word from our sponsor." (W7SPB)

****

A long time ago, the good old days were called these trying times.

de FEARL News, Japan

****

Great NEW Values from World Radio!

Write for Free 1969 Catalog—

WIRED—Ready for Operation

Designed for the Amateur whose interest is 80 and 40 meter SSB. Here's power and performance at a very reasonable cost! Power to make good contacts...a selective Receiver, Stability and compactness! (5"x11¼"x10"). Weight 11 pounds. Smaller by far than anything in its power class. Beautifully finished...a Fantastic performer! Available in both Fixed Station and Mobile Packages (not shown).

THE BEAUTIFUL NEW

Duo Bander "II" TRANSCEIVER

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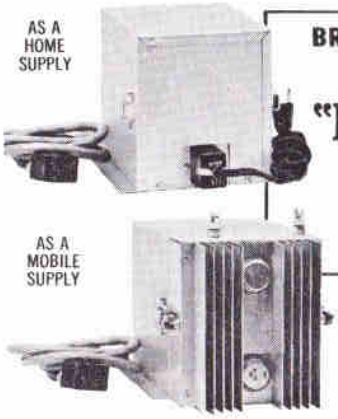

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