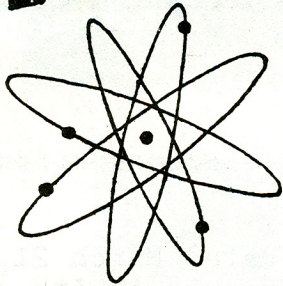
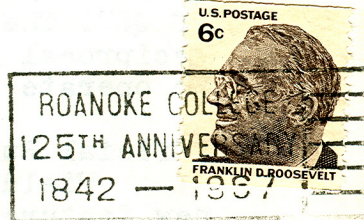


W4CA LOG



*Amateur Radio News in
The Roanoke Valley*

W4CA LOG
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ROANOKE, VA.



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Volume I Number 5. May, 1968

Official ARRL Bulletins.

Official Bulletin Number 160 dated March 21, 1968

FCC has made minor amendments to its rules governing the moving of a station from one permanent address to another. An application for modification must be submitted within four months after the move, and before any operation takes place from the new address. On the other hand, there is no longer a limit to the time such a station may operate as a portable once the application has been filed, and the operator need send a notice only to the district engineer having jurisdiction over the new address. Also, FCC has codified its rules for preferred call signs into a new section 97.53, without changing its previously informal ground rules. Both matters will be covered in the May issue of QST. The governments of Switzerland and Canada have agreed upon reciprocal licensing. Operators of one country may secure permission to operate in the other, effective immediately. AR

Official Bulletin Number 161 dated March 28, 1968

Field Day 1968, June 22 and 23, will incorporate a number of new features. Suggestions from the field should make this annual test of emergency gear particularly challenging this year. Significant changes include combining class D and class E home stations into one category eligible for the D.C. input and emergency power multipliers. The Field Day period will be limited to 27 hours, including set-up time. Power multipliers have been rearranged to break at 10, 50 and 200 watts. Increased points for traffic and 100% emergency power will be offered. In addition, the 1.5 battery multiplier will apply to the under 10 watt class A as well as class B and C stations. Full rules will appear in May QST. AR

Official Bulletin Number 161 dated April 4, 1968

Attention VHFers. The first edition of the ARRL directory of stations active on 220 Mc. and higher is now available. The comprehensive information includes station, location and bands as well as operator interests in meteor scatter, moonbounce and Oscar work. Further details on antenna information also appear. United States and Canadian amateurs

(ARRL Bulletins con't)

may obtain a copy without charge by sending a large self-addressed envelope, with 12 cents U.S. postage, to ARRL 225 Main Street, Newington, Connecticut 06111. AR

FCC Disciplinary Actions.

It is encouraging to note that the FCC has made a crackdown on a number of violators of FCC Regulations. It has required the help of law abiding amateurs to aid in bringing this about. Whether we like it or not, it is essential that we do some self-policing if we are to continue to participate in amateur radio.

FCC disciplinary action has resulted in the suspension of licenses of three amateurs in Garden Grove, Costa Mesa and Temple City, California. Other cases are in process in the Southern California area. Fines of up to \$100 have been levied recently against Southern California amateurs for failure to reply to FCC letters. A Sacramento amateur has lost his license for deliberate interference, and three W7's have lost their licenses for over-power and false call signs.

If you wish to help the FCC in the prosecution of offenders, a procedure has been developed with the approval of the U.S. Attorney and the Department of Justice. Briefly, when a clear violation is observed, the observer should prepare an affidavit setting forth time, date, frequency, type of emission, calls of other amateur stations participating, their locations, type of equipment used by the observer, type of measurement of direction finding techniques used and similar data. Next, a concise statement of what was observed as a violation, stating exactly what was said or done by each person. These statements must not contain any assumptions, or beliefs, or reasons but must be solely what the person making the affidavit actually saw, heard, or observed. If more than one observer witnessed the violations, affidavits should be made by all of them. Send the affidavits as a group to the nearest FCC Field Engineering office with a request for action. Send copies to ARRL General Counsel, Robert Booth, for follow-up in Washington, D.C., and to your nearest local Radio Club for local Assistance.

From Southwest Division Director's ARRL Membership Bulletin

Virginia

Amateurs in the Virginia Section are invited and encouraged to participate in the many operating and public service activities available. To join the Amateur Radio Emergency Corps (AREC), contact Ethel Smith, K4LMB, 2012 Rockingham St., McLean, Va. 22101. We have

daily nets operating on 3935 kc. at 6 and 10 p.m., and on 3835 at 7 p.m. (W4OKN, Manager); cw nets being at 6:30 p.m. nightly at slow speed and a regular session commences at 7 p.m. on 3680 kc. (K4MLC and WA4EUL, Managers). All amateurs in Virginia are welcomed and those who can devote one night per week to operate both modes are especially needed. We have a number of station and leadership appointments available. Qualifications for these appointments are varied and a card or radiogram to the SCM (address page 6, QST) will bring you the details. 73 H. J. Hopkins, W4SHJ, SCM.
From the ARRL Roanoke Division Membership Letter

Incentive Licensing:

While nearly everyone finds some fault with certain aspects of the FCC's incentive licensing regulations announced last Fall, the majority of amateurs appear to be taking the offensive by upgrading their tickets. Sales of the revised license manual since last November have reached almost the 100,000 figure. Extra class holders topped 5,000 last month, with approximately 40,000 amateurs currently holding advanced class licenses. November 22, 1968, is the date on which the first frequency restrictions will go into effect.

Here are the frequency restrictions that become effective next November 22:

For Amateur Extra Class only: 3500-3525 kc., 3800-3825 kc., 7000-7025 kc., 14,000-14,025 kc., 21,000-21,025 kc, and 21,250-21,275 kc.

For Amateur Extra Class and Advanced Class: 3825-3850 kc., 7200-7225 kc., 14,200-14,235 kc., 21275-21,300 kc., and 50.0 to 50.1 mc.

Additional segments are scheduled to be set aside for the higher grade licenses on November 22, 1969, although FCC has indicated that it "intends careful review and if it is determined that there is insufficient occupancy of any part of the reserved frequency segments then the effective date of the implementation schedule will necessarily be stayed in whole or in part, as appropriate."

From the ARRL Roanoke Division Membership Letter.

Roanoke Division Convention:

September 28-29 are dates to circle on your calendar now! The 1968 Roanoke Division Convention will be held in Greensboro, North Carolina, under auspices of the Greensboro Radio Club, Inc. Vice Director phil Wicker, W4ACY, will preside over a program including RTTY, DX, RACES, MARS, VHF, Mobile and Traffic sessions. Watch QST for further particulars, and do make your reservations early for what promises to be a wonderful get-together.

Wham Bam --- Cooked Ham

It is a well known fact that large filter capacitors as used in high voltage power supplies can fail in a rather spectacular way. The display of noise, smoke, and flying particles is well known to some hams who were fortunate enough to be far away at the time and not injured. For those who have not had this eye opening experience, a means to keep you ignorant of the details follows.

A capacitor is a device that is used to store electrical energy and consists of two plates of some conducting material separated by some non-conducting material. This non-conducting substance is called a dielectric and may be glass, mica, rubber, air, or others too numerous to mention. The insulating properties of these materials vary and some amount of pure resistance exists in each case as the perfect insulator does not exist. Every capacitor thus has some value of resistance associated with it and will pass some current. Although this resistance has a very high value for most capacitors, the fact that it exists cannot be forgotten or ignored. Large electrolytic filter capacitors as are often used in high voltage power supplies have a value of resistance that could present problems if a series connection were made involving two or more capacitors. The series connection of capacitors to increase the voltage capabilities has become common since the swing to SSB. The high current peaks of a SSB signal can be obtained by using large values of filter capacitance to store current between peaks. This allows use of small transformers and compact desk top kilowatt linears.

As an example of poor design and the results of this, assume two electrolytic capacitors of 20 mf each were connected in series. If each has a voltage rating of 450 volts, the two when connected in series should have a capacitance of 10 mf. and be able to stand 900 volts. At first glance this appears to be a simple statement of fact; however, the internal resistances of the two capacitors has not been taken into consideration. If we assume one capacitor has an internal resistance of 50 megohms and the other has 100 megohms, a dangerous situation design wise exists. when the two capacitors are connected in series and the 900 volt is applied to the top of the combination, the voltage drops across the capacitor of 50 megohms resistance will drop across it a part of the 900 volts equal to 50 megohms divided by 50 plus 100 megohms (the total series resistance). This amounts to 50/150 or one third of the total 900 volts. because one third of 900 volts is only 300 volts this capacitor is working well below its 450 volt rating. The capacitor that has 100 megohms internal resistance will drop 100 megohms divided by 50 plus 100 megohms or 100/150 of the total voltage. This amounts to two thirds of the 900 volts which is equal to 600 volts. Because this 600 volts is far above the 450 volt rating of this capacitor it will fail. The failure may be gradual or spectacular.

To prevent this failure in many cases a simple design feature may

Wham Bam --- Cooked Ham (Con't)

be incorporated. Across each filter capacitor a resistor of proper wattage having a value of about 100K may be connected. This resistor would thus appear to be in parallel with the internal resistance of the capacitor. From our laws we know that resistors in parallel have a total resistance that is less than the value of the lowest resistor. Thus the value of the resistance in the capacitors can be made lower than 100K ohms by the addition of this resistor across each. A rule of thumb would indicate that two resistors connected in parallel have a total value very close to the smaller of the two when the resistance of one is at least ten times greater than the other. Since a value of 50 to 100 megohms is greater than ten times 100K the addition of this resistor across the capacitor reduces the total resistance of the capacitor to very near the 100K value. If each capacitor has the 100K resistor across it, the voltage will divide almost equally across the two series capacitors. To allow for tolerances the voltage applied to a series string of capacitors should be less than the sum of the capacitor working voltages. Some allowance must be left for the slight differences and for voltage surges in the transformer primary.
Form the Soughern Calif. VHF Radio Club Reporter)



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By Roanoke Valley Amateur Radio Club, Inc.



The Widders News

THE "WIDDERS" HELD THEIR MEETING AT THE CLUB HOUSE ON APRIL 12th WITH 11 MEMBERS PRESENT.

WE VOTED TO CONTINUE TO HOLD OUR MEETINGS ON THE 2nd FRIDAY OF EACH MONTH UNTIL NOTIFIED OTHERWISE.

NO DEFINITE PLANS FOR THE HAMFEST WERE MADE AT THIS MEETING AS THE MEN'S PLANS WERE NOT COMPLETED. A SPECIAL BUSINESS MEETING WILL BE HELD ON MAY 10th TO MAKE PLANS FOR THE HAMFEST TO BE HELD MAY 25th AND 26th.

HAPPY ANNIVERSARY TO BETTY & GEORGE CHILMAN ON MAY 6th.

HAPPY BIRTHDAY TO HILDA FERRELL WHO WILL BE ? ? ON MAY 30th.

PLEASE PLAN TO ATTEND THE BUSINESS MEETING ON MAY 10th TO HELP WITH THE PLANS FOR THE HAMFEST. IT WILL BE SHORT.

SALLY BOBBITT, REPORTER

INDUCTION CIRCUITS

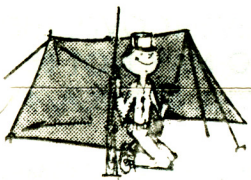
OUR OWN SAM KENT HAS, I BELIEVE, CHOSEN A MOST INTERESTING SUBJECT FOR THIS MEETING.

FROM WHAT I HAVE HEARD SO FAR THE ACTIONS THAT TAKE PLACE WHEN COILS ARE ENERGIZED ARE ASTOUNDING. IT WOULD BE IMPOSSIBLE TO RELATE ANYTHING FURTHER, AS TO DO SO WOULD BE INFRINGING ON THE TOPIC THAT SAM CAN SO ABLY DESCRIBE.

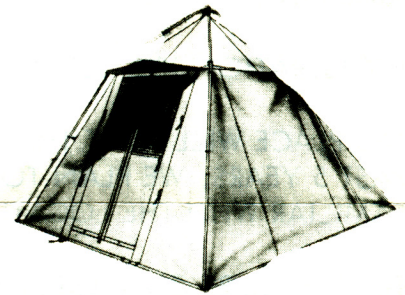
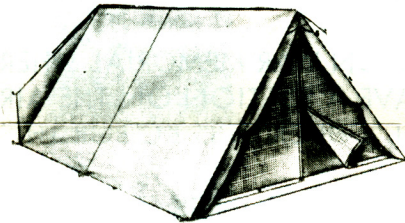
THE BACKGROUND FOR THIS SUBJECT IS SAM'S DAILY WORK AND I AM SURE THAT WE ALL WILL BENEFIT FROM THE INFORMATION THAT IS COMING OUR WAY.

FOR THOSE OF YOU WHO HAVE NEVER HAD THE PLEASURE OF HEARING SAM HAVE A REAL TREAT IN STORE. SO LETS MAKE EVERY EFFORT TO ATTEND THIS ONE AND BE AMAZED BY ALL THAT TRANSPIRES IN THESE TYPES OF CIRCUITS.

BILL JOHNSON W4NLC



FIELD DAY
FIELD DAY



THE TIME FOR OUR ANNUAL OUTING ON BENT MOUNTAIN IS RAPIDLY APPROACHING AND NOW IS THE TIME FOR ALL OF YOU GUYS TO START THINKING AND GETTING YOUR GEAR TOGETHER FOR THE BLAST.

AS YOU KNOW OUR CLUB HAS ALWAYS, IN THE PAST, MAINTAINED A FAIRLY HIGH STANDING, SCORE WISE, IN THE FOURTH CALL AREA AND WE CERTAINLY DON'T WANT TO DO ANY LESS THIS YEAR. FROM WHAT THE WRITER UNDERSTANDS A CERTAIN OPERATOR, SSB OF COURSE, HAS ALREADY PLANNED TO COMPLETELY OVERSHADOW ALL PREVIOUS EFFORTS TO MAKE SOME OF US LOOK LIKE INFANTS IN THIS CONTEST BUSINESS.

HOWEVER, THIS ADVANCED NOTICE HAS NOT GONE UNNOTICED SO LOOK TO YOUR LAURELS MEN AND GET HUMPING. THE POOR CW GROUP HAS BEEN SERVED NOTICE THAT THEY HAVEN'T A CHANCE. CW, WHATS THAT? AH, WELL, REMEMBER THE STORY OF THE TORTOISE AND THE HARE. HI

THIS YEAR PROMISES TO BE THE BEST YET SO WITHOUT FURTHER ADO FELLOWS DONT FORGET THE WEEKEND OF JUNE 29 and 30.

SEE YOU ALL THERE.

BILL JOHNSON W4NLC

HAMFEST TIME IS HERE AGAIN - COME ONE COME ALL

HAMFEST MAY 25 & 26

JUST A REMINDER THAT MAY 25 AND 26 IS JUST AROUND THE CORNER AND NOW IS THE TIME TO MAKE PLANS FOR ATTENDING THE ANNUAL HAMFEST AND MEET THE FELLOWS YOU TALK WITH ON THE AIR.

THE ROANOKE VALLEY AMATEUR RADIO CLUB HAS BEEN HOSTING THIS PROGRAM FOR QUITE A FEW YEARS NOW AND HAS ALWAYS COME UP WITH AN INTERESTING PROGRAM, EXCELLENT SOCIAL EVENING WITH DANCING ON SATURDAY EVENING FOR THE EARLY BIRDS AND GOOD FOOD AVAILABLE FOR THE FAMILY ON SUNDAY.

THIS YEAR IS NO DIFFERENT. OPEN HOUSE WILL BE SATURDAY AT 7:00 PM EDST AND WILL ENABLE YOU ALL TO STRETCH YOUR LEGS ON THE DANCE FLOOR. HI. A CHICKEN BUFFET WILL BE AVAILABLE ON SUNDAY FOR THE MAIN MEAL. THIS AT THE LOW PRICE OF \$1.25.

REGISTRATION IS \$1.00 IN ADVANCE OR \$1.50 AT THE DOOR. QUANTITY DISCOUNT of 4 for \$5.00

THE PLACE WILL BE AT THE VINTON WAR MEMORIAL WHERE WE HAVE HELD THIS EVENT OVER THE PAST 5 YEARS. WE PLAN TO HAVE A STATION ON THE AIR TO DIRECT THOSE WHO MAY NOT BE FAMILIAR WITH THE LOCATION. CHECK 3935 KC FOR THIS STATION. THE CALL WILL BE W4CA/4

THERE WILL BE CONTESTS AND NET MEETINGS ON SUNDAY MORNING WITH THE IDEA OF SOMETHING FOR EVERYONE. SO PLEASE COME ON OUT AND JOIN THE GANG. BRING THE KIDS THERE'S PLENTY OF ROOM FOR ALL.

SEE YOU THERE!!!

BILL JOHNSON, W4NLC
ACTIVITIES CHAIRMAN

**ROANOKE MAY 25-26
HAMFEST
BLUEFIELD AUG. 25**