THE HAMPDEN COUNTY RADIO ASS'N. Inc.

SPRINGFIELD, MASSACHUSETTS

ZERO BEAT

31st year ARRL Affiliated

FEBRUARY 1979

Winner, Certificate of Merit, N.E. Newsletter Competition, 1978

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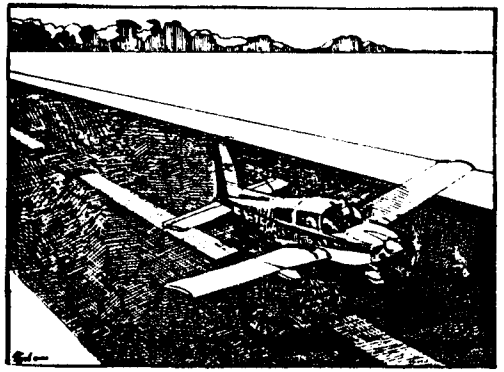
CLUB OFFICERS

President	Larry Soltz	WB1CJH	567-6707
Vice-president	Ron Beauchemin	WB1ETS	593-9852
Secretary	Frandy Johnson	N1FJ	584-9005
Treasurer	Steve Shore	WA1ZEV	(203)243-3030



NEXT MEETING:

FRIDAY, FEBRUARY 2ND

HAM PILOT'S NIGHT!!!

FAA FILMS FLYING SLIDES

FEBRUARY ZERO BEAT 1979

PRESIDENT'S CORNER

We have been given the opportunity to show the public the story of amateur radio-who we are, and our importance in serving the general public. These opportunities are few and far between. Therefore it is important for us to take full advantage of it. It's necessary to often remind ourselves of the danger of losing frequencies to other services. We need the support of the general public. We have been invited to demonstrate our hobby at the Science Happening", (emphasis on science), at the Springfield Science Museum, March 24, 25. Help is going to be needed to set up, plan, and man the exhibit. (See article below) Get involved by offering your help!

73,

Larry, WB1CJH

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W1NY/1; SPRINGFIELD SCIENCE MUSEUM

On Saturday and Sunday, March 24,25, from 10 am to 4 pm, the HCRA will be part of an exhibit in the Springfield Science Museum. At the "Science Happening", astronauts and other space goodies will be shown from all over the country. Over 10,000 people saw this show last year! It's a great chance to show off amateur radio, and a cheap reason to have a special event station! Get in on the fun. Here are our tenative plans:

Chairmen: Larry, WB1CJH; Jeff K1BE

Old Time Radio Exhibit; circa 1910 ham station, with special effects. K1BE Nostalgia radio goodies- (W1CJK) (W1MM)

Ham Radio Brochures, etc: Usual stuff from the ARRL that we've given out in the past. K1YQQ, K1WTA, Ron Joubert. (more help needed)

HF Station: Operating W1NY portable from the museum. (licensed club members only are to transmit.) WB1CAC, KA1APR, (AC1T), WA1CYK, WA1ECR

OSCAR Station: W1KK, WA1RWU

Two Meter Station: WB1ETS, WB1FIP, WB1EMN For repeater use mostly.

QSL Card Exhibit: K1IJV, K1IJU

Morse Code Oscillator:Other electronic goodies for the public to play with. WB1BZW, (WA1PGT)

OSCAR 8 Slide Show: WB1CJH To be supplied by the ARRL

Publicity: WB1EMN
Photos: (K1ZQB) (W1RBU)
Correspondence: (N1FJ)

Logistics: WB1CJH

NTS Liason: (W1BVR) (WB1AUV)
Future QST article: (K1BE)

( ) means "draft choice" due to special knowledge, brains, and inability to say "NO!".

We need volunteers for all phases of the operation. Professional quality posters explaining ham radio are urgently requested. Any other ideas for exhibits??? Contact Larry or Jeff. This will be discussed at February and March meetings.

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FROM THE MAILBAG

TO ALL DX'ers IN THE CLUB:

I will be leaving on January 22, 1979 again for Barbados, (8P6) land for a two week stay. I will have my rig with me so anyone who needs Barbados cna contact me at 1200Z most days at 14280 plus or minus. Can set up sked-will work phone or cw any band 80 thru 10 meters. I am in hopes of getting my old call back, which was 8P6EZ! For those working five band DXCC, it can't be made any easier for you.

Let's hear from you,
Don Gleason, W1RED

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Dear Editor,

Just a little note to let you know "I'm Out"! I'm going to be taking it easy for a month. Please thank all the guys who sent me cards, (most of them I don't even know). It was nice to be remembered. I'll get on the net Sunday and say "Hi" to all.

Again, Thanks,

Eleanore,
Mrs. QSL Bureau

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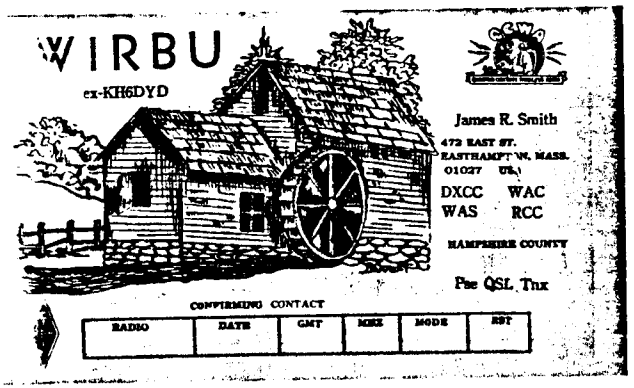

A DISTINCTIVE QSL CARD OF AN HCRA MEMBER.

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Dear Editor,

Just a few words to convey the warm sunny breezes of the Caribbean to the wintry shores of Massachusetts. Keep "ZERO BEAT" hard to beat!

73,
W1KK, ART and ALICE

JANUARY - MEETING REPORT

A speaker from STCC spoke on "Fibre Optic Communications. Thank you, K1YQQ for all your work in lining up the program. Then Frank Potts, WA1RWU addressed the large group about the VHF Sweepstakes. Judging from the large amount of activitie on the air this year, he got through to you. Scott, WB1CAC showed a film of the QSO Party at W1NY in September, and slides of the ten meter contest at WA1RWU. Frank sure loves to put antennas! Coffee and donuts rounded out a fun evening.

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BOARD DIRECTIVES

The Board of Directors meets each month in order to conduct club business. Minutes are available for inspection. Pursuant to our by-laws, a membership vote is required at the February meeting on the following question:

DUES SHALL BE RAISED FROM THE PRESENT FIVE DOLLAR ($5.00) LEVEL TO SEVEN DOLLARS ($7.00) EFFECTIVE JANUARY FIRST, 1980.

Please note that this is about eleven months away. Dues have been $5.00 for almost ten years, and we can't make expenses right now, even with the many generous gifts from club members. If you can't attend the meeting you can vote by postcard.

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CALENDER OF EVENTS!

Feb. 2- Ham Pilot's Night; FAA films, slides of our flying club members. (N1FJ, K1BE)
March 2- Bruce Johnson of the ARRL. He's the international representative of the League. His talk will cover WARC, and how we hams are going to lose their third party traffic privilages through their own stupidity. (WB1CJH)
April 6- Tom McMullen, W1SL of Ham Radio magazine. Tom's a very popular speaker with our club. (WB1FIP)
May 4- Our annual Flea Market, being organized by WB1BZW and WB1EMN. Rules are being changed, No Junk this year.
June - Our Annual Banquet. Election of new officers.
June 23, 24- Field Day. (Some interesting sites being considered.)

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WE WELCOME THE FOLLOWING NEW MEMBERS:

Bill Porter
Joe WA1WRM
Ray KA1AVL
Len, N1CM
Ron Joubert
Larry Morse
Don, K1ITU
Ted Stefanik
Francis, KA1CAX
Bob, WB1EQS

Jack, WB1GTR

Would you be interested in a ten week Advanced/Amateur Extra Licensing course??? Let us know.

CLEARING THE AIR

Lately I have been rather disturbed by some of the operating practices I have heard on some of the local repeaters. It would seem that many of the operators on repeaters forget that they are on the air and not on the phone. As a result, many seem to forget to identify themselves properly according to FCC rules. Generally, what is heard is a failure to identify properly when answering another station, but I have heard at least one case where a station completed a short QSO without identifying himself even once. Obviously illegal!

The FCC Rule which covers station identification for Amateur Radio stations reads as follows:
97.87 Station Identification.

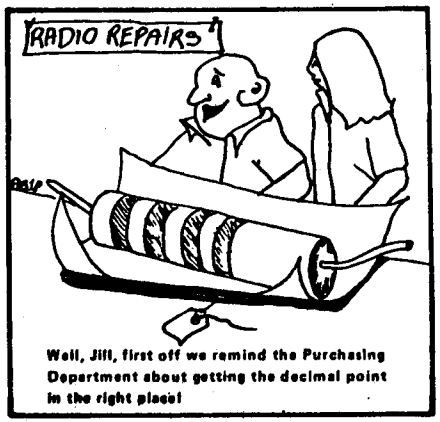
(a) An Amateur station shall be identified by the transmission of its callsign at the beginning and end of each transmission or exchange of transmissions and at intervals not to exceed 10 minutes during any single transmission or exchange of transmissions of more than 10 minutes duration. Additionally, at the end of an exchange of telegraphy (other than teleprinter) or telephony transmissions between amateur stations, the call sign (or the generally accepted network identifier) shall be given for the station, or for at least one of the group of stations, with which communication was established.

In simple language, this means you must identify yourself when you begin a QSO with another station or group of stations. You must identify yourself at least every ten minutes during any QSO, though not after every transmission. Finally, you must identify yourself and one other station you are in QSO with, or yourself and the name of the net you are in, when you complete a QSO. That's the rules, guys, and even though a repeater often feels the same as operating on the telephone it is still Amateur Radio, and your operations reflect on Amateur Radio as a whole as well as your own individual license.

Along the same lines, please be sure to leave a pause between transmissions. Not too long ago I needed help in an emergency and it took me three tries to break a QSO. When I finally did get in and report the problem, the station responding had not even managed to pick up my callsign, much less anything else. By this time the police had already shown up, so I did not bother to continue my efforts. We hear a lot about the public service of Amateur Radio and the value that repeaters can be, but I wonder how many opportunities we miss because of the operating practices on this mode.□

Thanks to Wellsley Amateur Radio Society's "SPARK GAP"

HAM'S PILOTS NIGHT
FRIDAY FEBRUARY 2nd!!



Well, Jill, first off we remind the Purchasing Department about getting the decimal point in the right place!

"timeout!"

By Mike Adlerstein, K1FB

There has recently been quite a splash made by the so called narrow band voice modulation (NBVM) concept. A cryptic cover story and two more detailed technical articles appeared in three separate issues of QST (Dec. 1977, Nov. 1978, Dec. 1978). The fundamental advantage claimed for the technique is that is provides a means of reducing the bandwidth required for intelligible single sideband voice transmissions from 2400 hz to 1600 hz. The reduction permits the use of narrower i.f. or audio filters in the receiver with accompanying reduction of voice and adjacent channel splatter.

The technique has been patented and is being promoted by its inventors, the VBC Corporation of Santa Monica, California. They have a strong assist from the ARRL, who has rated the technical advancement with the advent of single sideband voice (as opposed to AM). This is probably an overstatement. However, the League undoubtedly sees Amateur involvement in development and acceptance of the new technique as a technical contribution by hams to be pointed to at this important period in the history of Amateur Radio (WARC?).

It is difficult to fully evaluate the NBVM system without having tried it in ones own station, but I have tried to digest the concept to get a feel for its potential and limits.

The normal communications quality bandwidth for voice is 2400 hz. That means that speech energy between 0 hz and 2400 hz must be received to provide intelligible results. The inventors of NBVM noted that there is a selective "hole" in this band where the frequency components do not carry much necessary information (600-1600hz). This region they filter out. Next they take the remaining speech components above 1600 hz and slide them down into the gap (there is also frequency inversion in doing this). The now redundant voice energy above 1600 hz is now chopped off with a narrow filter.

All this happens before the audio enters the transmitter. This processed 1600 hz wide audio goes into the microphone jack and is transmitted by single sideband. At the receiver end, the process is reversed between the receiver and the speaker.

The general concept of reducing bandwidth is obviously a good one. Unfortunately, most Amateur receivers do not have a 1600 hz filter to take advantage of the narrower incoming signal. Nor is the sharpness of the skirts (filter shape factors) sufficiently good for most available amateur filters. To remedy this, audio filters are provided in VBC's "black box". This approach tends to throw away some of the advantages of the NBVM since out of band signals (those between 1600 and 2400 hz) will still be detected by the receiver and cause pumping of the automatic gain control. Any users of presently available audio filters are familiar with the effect. The question of reproduction quality of the audio is still open. It appears that the 1600 hz bandwidth may be just slightly too narrow. As a hedge, VBC includes a 2100 hz and a 2500 hz filter in their "black box". The implication of their article is that most users would prefer the wider bandwidths to the 1600 hz filter. Unfortunately, there is little difference between the wide audio filters and presently common SSB 2400 hz i.f. filters (with the exception of slightly poorer i.f. shape factors in some rigs).

Another element in the "receiver black box" is a so called "amplitude compander". This appears to be nothing more than a low noise threshold type amplifier which would appear to add little to system performance.

Looking into my crystal ball, it is hard to say if NBVM will catch on. It might offer relatively little advantage to the average ham. Also, stations using standard SSB can not easily communicate with those using NBVM. This was not true during the transition from AM to SSB in the 1960's. The systems were compatible and the advantages more clearly demonstrable. □

Thanks-SPARK GAP!

MISCELLANEOUS NOTES FROM 1964 ZB!

January '64- Silent key Doc' Tadgell, W1AGM missed by all... February-Fred LaValley K1FUA doing a great job on ZB...W1NY on 160 meters cw.... Members buying HCRA QSL cards at a discount... Jean, K1IJV spoke to the radio club of Nashua...Bob Phoenix, SWL and John Dumont, K1ZQB accepted into the club...Barry Goldwater quoted as saying he'll put a ham shack in the White House if elected...WHCRA certificate rules...May-Good article to be re-printed on DXing...June-Bob White spoke on DXCC. He administers this at the ARRL...Club instructors thanked by students, too many to list...September-Auction rules all set...Silent Keys Miles Allen, K1CER and Rich Stearns, K1BBD missed by friends... President is Norm Peacor, K1IJU, VP, Bill, K1RPB, Sec'y, George, K1PMK, Treas., Wes, W1LRE...K1IJV's beam stuck pointing at Europe... Dues are $3.00, but expenses listed per member are $4.30! Auctions, raffles, flea markets, donations made up the rest, then as now. Ten meter net uses club call, WA1BTU/1...Postage stamps honoring ham radio being issued...Club meetings are now at the Feeding Hills Congregational Church. Days of the Captain Leonard House are gone...Members helped the AAU with communications during a marathon...Field Day in Middlefield a huge success, W1MDM, W1GIV, K1PKZ, K1JUI, K1LDT, K1KBQ, and K1HYI totaled up 3,824 points. ...New England Woman's Air Races aided by K1IJV and W1UKR... November-Brad Rohrer, K1CTK of National Radio spoke on the new NCX-5 transceiver, and possibly will show the new HRO-500 rcvr... Last month Dick, W1QWJ and Pete, W1RVW demonstrated by tape recording the improvements made in six meter receivers. Phase lock also shown...Hartford RC again challenging the club in the VHF SS.You'd think they'd be tired of losing by now...Club net on ten meters going strong, with lots of technical info...Christmas meeting will have underprivilaged children in to share in the fun...December-Santa talked in by ham radio and the kids were thrilled...Silent key Carl Morris, W1BVG missed by all...Ed Stefanick, WN1CYK and Bob Young, K1NWE accepted as members..."DC bands" again mentioned in this issue, what are they? ..Editor) .. Editorial laments situation on 11 meters; 1½ million CBers, bedlam of rude people, linears calling CQ DX, and intrusion into the amateur ten meter band...W1NY, Hank expressed his appreciation for the dinner in his honor for fifty years of service via amateur radio.

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FOR SALE: Transmitter, Gonset GSB-100. SSB, CW, PM, AM, 100 watts SSB & CW. With new power transformer and solid state rectifiers. wtih book. $150.
Receiver- National NC-2-40D 10-20-40-80 meter bands plus general coverage 490-30,000 Khz. With matching speaker and Select-O-Jet. with books $150.00 W1MM Bob Stephens, 532-6020

RECOLLECTIONS OF THE 1931 EVENT

By Percy Noble W1BVR

The following is as I remember my activity with the U.S. Air Force at Bowles Airport in 1931. I believe it was our total air force at that time and they had no radio equipment.

How I got invited to be part of it I don't remember, but I did ask my superintendent of schools,(I was then teaching principal at the school in Blandford.) if I could be released for two days to take part in air force activities. Being a reserve officer in the army, he agreed, and no docking of my pay! He was the reserve officer, not me.

The city of Springfield had set up a small building for our radio shack. W1ASY, (Now W1RB) loaned his transmitter. I don't remember who loaned his receiver. The ARRL station, (W1MK I think.) would keep in touch with us for relay if necessary.

Harry Fisk, W1DR of Westfield and I made up one team. We copied coded material (5 letter groups) for an hour at a time, alternating turns. At the end of each run we took our coded material to the sergeant in the main building. I believe the station we copied was NAA. Unfortunately, I can't recall who made up the other teams. (Too busy that day myself!) My wife tells me I've always been self-centered, and I guess she's right.

One afternoon an officer came into our shack, saying he knew we had a receiver, but did we have a transmitter? He asked us to relay a message for him to Long Island. We agreed to try and relayed his message. He told us a plane had just come in and smashed its' propeller. He gave us the number of it and requested that a replacement be sent up.

We sent a message to W1MK to relay. Some time after that, and I don't think it was too long, the officer again came in and told us the new propeller had arrived. HAM RADIO SCORES AGAIN!

At the conclusion of the excercises, some of the crew got an airplane ride to New York. I declined because I didn't trust airplanes then, and I still don't! You and I both know it's impossible to take a heavy plane, load it with a great many people, and get it off the ground. (Or am I just not keeping up to date?)

Sincerely and 73,

Perc W1BVR

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Dear Editor,

January issue of Zero Beat excellent, something for Novice and Extra alike!

73,

Fred LaValley, K1FUA

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MULTI - USE ELECTRONIC VOLTAGE REGULATOR

By: John Balboni - AC1T

There comes a time when the typical ham shack could use a well-regulated, low voltage, power supply. This article illustrates a simple voltage regulator, using the Radio Shack 723 IC. Standard parts are used, and the circuit layout is not in the least bit critical. A socket for the IC is strongly recommended, however. I have built two complete power supplies, using these regulator circuits. No major problems were encountered. The basic circuit is very stable, allowing it to be used with simple power supplies. The output voltage of the regulator is continuously adjustable from 6 volts to the maximum input voltage of the supply.

The power supply used with this regulator can be almost anything, provided that it is well filtered, and it has an output voltage from 25 to 35 volts. Many of the inexpensive battery chargers and/or eliminators contain the necessary transformer and rectifier. A suitable capacitor can be added, as shown in figure 5b. In some units, a filter circuit is already there, and no external capacitor is necessary, as shown in figure 5a.

Figure 1 shows the basic regulator circuit. An input voltage of 25 to 35 volts is necessary for stable regulation. Below 20v, input, the regulation will be poor. Above 40v, the IC burns out. Q_1 can be any general purpose NPN transistor, capable of dissipating 300 to 400 ma, from collector to emitter. R_1 is 10k and can be a mini trim-pot or full sized control. R_2 determines the current limiting. Its value is best chosen by experimentation, but it should cause the output voltage to substantially drop when the current rating of the supply is exceeded. Typically, R_2 will be from .05 to .1 OHMS. C_2 and C_3 serve to bypass RF.

Several options are available for the regulator circuit. Figures 2, 3, and 4 show different arrangements of pass transistors, depending on the maximum current drawn. In each case, a good heat sink should be used. For a 10 amp regulator, two Radio Shack 276-1361 heat sinks can be used, with one transistor mounted on each. A suitable heat sink could also be constructed using pieces of aluminum, or the power transistors could be mounted on an aluminum chasis. The transistors must be isolated from ground by using a mica washer between each transistor and its respective heat sink. The application of "transistor grease" will increase the heat transfer and allow the transistors to run cooler. In no case should the transistors be excessively hot. If they are, a bigger heat sink and/or a small cooling fan is in order.

The low ohmage resistors are easily constructed by using appropriate lengths of enamelled copper magnet wire. If normal insulated wire is used, the insulation should be capable of withstanding some heat. The wire can be loosely coiled, but for long lengths, I prefer to wrap it around a porcelain antenna insulator. When more than one pass transistor is used, the resistors in the emitter leads are necessary, as they equalize the current flow through each transistor.

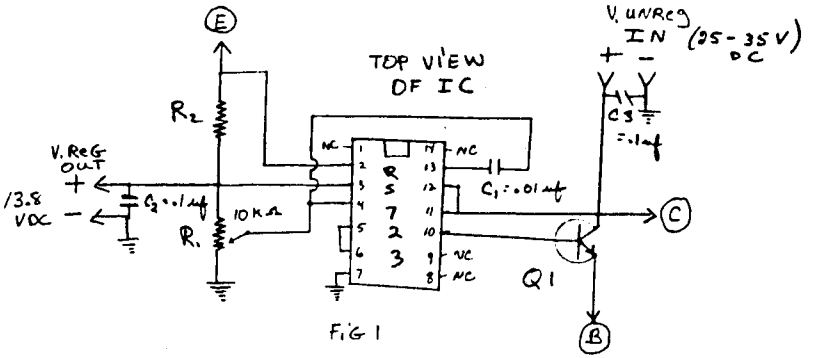


Fig 1

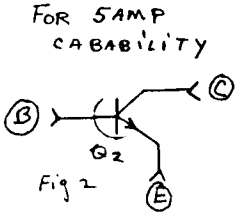


Fig 2

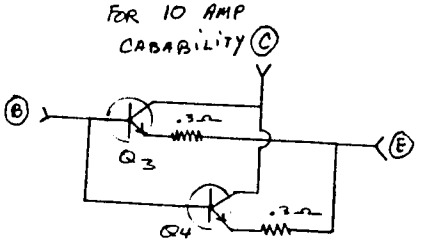


Fig 3

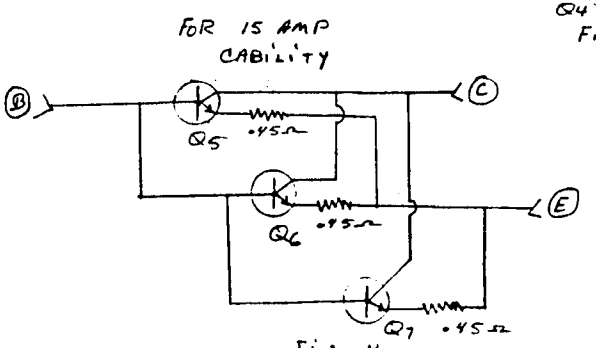


Fig 4

PART	Discription
IC	276-1740 RADIO SHACK
R_1	10,000Ω VARIABLE ½ WATT
C_1	.01μf, 30 VDC
Q_1	NPN, 10W POWER DISSIPATE 300-400MA
Q_2 TO Q_7	2N3055, 2N3772, 2N3773, S7004 HIGH POWER NPN
C_2	.1μf, 30 VDC
C_3	.1μf, 30 VDC Value NOT CRITICAL

FOR LOW OHM, WIRE WOUND RESISTORS:

NO. 18	6.510Ω / 1000 ft	NO. 26	41.62Ω / 1000 ft
NO. 20	10.35Ω / 1000 ft		
NO. 22	16.46Ω / 1000 ft		
NO. 24	26.17Ω / 1000 ft		

For a .3Ω resistor, using NO. 24 wire

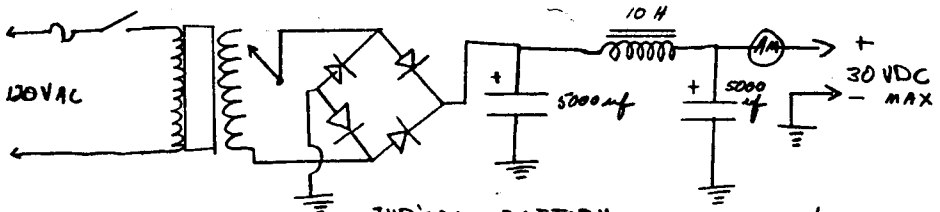
$.3\Omega \times \frac{1000\text{ ft}}{26.17\Omega} = 11.46\text{ ft}$ use of wire, NO. 24 gage

(wind on a nonflamable insulator, as it will get hot!)

One test is necessary before the supply is completed. A milliammeter is connected between pin 10 and the base of Q_1. The output voltage of the supply is set to 13.8v. Gradually, increase the load on the output of the regulator, until the maximum current rating of the power supply is reached. In no case should the maximum load cause the milliammeter to exceed 150 ma. If this happens, a different transistor should be tried for Q_1, or else the IC will be destroyed.

Different variations of this circuit are possible. This design is one of the simplest. If current limiting is not desired, R_2 is eliminated, and no connections are made to pins 2 and 3. Point E would be connected directly to the +(plus) lead of V. Reg. Out. Happy homebrewing!

Fig 5A AC1T 1/11/79



TYPICAL BATTERY ELIMINATOR/CHARGER (WITH VARIABLE TRANSFORMER)

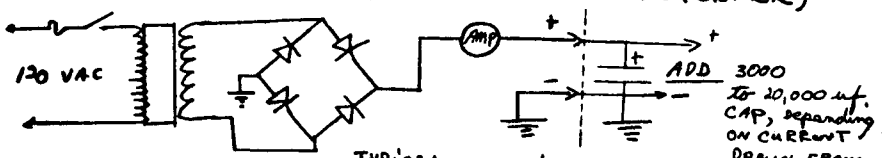


Fig 5B TYPICAL, NON FILTERED, BATTERY RECHARGER

Pictured receiving Morse code here is Arthur Zaverella of Station WIMNG, Agawam. Art has been licensed for ham operation since 1922. He holds the position of Agawam Civil Defense director and has, in his spare time, made radio contacts all over the world, contacting such far places as the Belgian Congo and New Zealand.

Radio 'Hams'

Ham radio operators have pioneered general radio broadcasting since 1917, when wireless was the means of local and world-wide communications. The significance of the word "ham" originated, interestingly enough when the British added an "h" to some of their words, resulting in "hamateur" being abbreviated to "ham," indicating a person new and inexperienced in the field. Actually, a true ham radio operator, unlike a commercial two-way radio operator, is licensed to operate radio units up to 1000 watts, permitting world-wide communication. He must also be proficient in his knowledge and use of the Morse code. Western Massachusetts has many FCC licensed operators, some of whom are shown in this roto feature. Photos by Simon Shadbegian.

BOOK REVIEW

Looking back, here are what could have been the ten best sellers of 1978, had they been published.

1. Choosing a Field Day Location, K1BE
2. Contest Operating, for the Beginner, WA1RWU
3. Finishing Those Unfinished Projects, W1KK
4. Short Speaches, WB1CJH
5. Buying That New Rig, WB1ETS
6. Simple Antennas That Survive Windstorms, KA1APR
7. Everything You Wanted to Know About Repeaters But Were Afraid to Ask, K1YQQ
8. A Look At Those FCC Exams, WB1EMN
9. RFI Made Easy, WA1ZKT
10. DX 15 Meter Ground Dipole, AC1T

MISCELLANEOUS TIDBITS

Use of the 40/00 autopatch should be easier now that the deviation levels of the tone decoders have been readjusted. . . Recent checkins to the HCRA 2m net have included W1UPH, WA1VAH, WA1RWU, WB1APD, WB1EHS, W1UKR, W1KUL, W1ZI, AC1T, W1QWJ, W1KK, and WB1DOH - FB - the informal group meets Thursday evening at 8:00 p.m. on 144.250 usb. . . Rumor has it that should the VHF SS effort at WA1RWU get boring, they have three kegs of beer to fall back on. . . WB1CJH makes regular phone patches into South America, great p.r. Larry!. . . WB1FIJ also getting his feet wet in phone patching, however, he has a problem talking Spanish. . . W1KK and XYL just returning from their annual cruise in the Caribbean (next year, pse take the rig too). . . When in QSO, on any band, using any mode, always leave a pause between transmissions. . . Don't forget, amateurs are required by law to use the minimum power necessary for communications - linears and high power are to be used only under adverse conditions, when communications cannot be established with low power levels. . .

XIII OLYMPIC WINTER GAMES LAKE PLACID 1980

FEBRUARY ZERO BEAT

Radio Memories by W1MM

Early "Wireless" Interest Prior to WW1

One of my friends had an older brother who had a spark transmitter and a crystal detector receiver with which he could communicate around town. This greatly intrigued my friend and myself. We attempted to build smaller versions of this station and copied equipment as shown in Boys Life Magazine, without any real success other than learning the Morse Code.

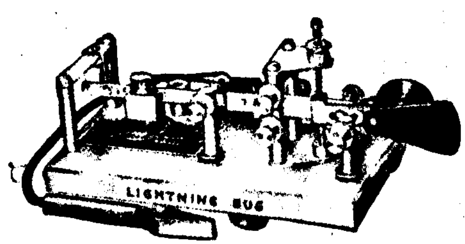
WW1 Wireless Operation

While attending Hastings, Neb. High School in the Fall of 1917, all male students were required to take military training in the Student Army Training Corps, and to drill for one hour each morning before regular classes. Our Physics professor was one of the drill instructors, and informed his classes that anyone interested in Wireless would be assigned to a special Signal platoon, and thereby get out of the regular infantry drills. He had no trouble getting recruits and thus in place of drilling, our drill periods were taken up in learning the code and code practice. The class also put together spark coil transmitters and crystal detector receivers. Some of these were assembled into boxes with carrying handles. As part of the morning drills, this "portable" equipment was carried a few blocks away and communications back to the base station in the Physics lab were made. This training continued up until the end of the War.

Post WW1 Wireless Operation

After lifting the ban on Amateur Radio, our Physics class instructor obtained a school radio club license with the call 9OT. Along with most of the other fellows in the class I obtained an Amateur Radio Operators license. We spent many hours at 9OT operating its ½ KW spark transmitter. In the mean time I had put together a 1 inch spark coil transmitter and a crystal detector receiver, and soon obtained my own license 9AVC. To the best of my knowledge and from notations on photographs of my station, this license was issued late in 1919. Late that year I put together a 1 KW spark transmitter, with home built rotary gap, and photographic glass plate with tin-foil and immersed in oil for the condenser, Thordarson transformer and pancake oscillation transformer. Antenna was a 4 wire flat top up about 45 feet. The receiver was a one tube Audion which had double filaments (one a spare) and homemade spider web coils.

The homemade rotary gap was very noisy and was soon replaced by an enclosed Benwood gap, and the receiver grew into a good sized one with detector and 2 stage amplifier. I have photos of this rig captioned "Bob and His Bug", 9AVC, 1919-1920.



In the summer of 1922 the spark set was scrapped in favor of the new mode CW. A transmitter using a pair of 203s was constructed and a new receiver using a "Reinartz" tuner and several stages of audio replaced the older receiver. Needless to say, this equipment ran rings around the older spark outfit. Now in place of only a few hundred miles, it was no problem working either coast. The rectifiers for the HV power supply were so called "slop jar" rectifiers made up of aluminum and lead strips immersed in a solution of water and soda. These created quite a visual effect with a scintillating glow on the electrodes as the power supply was keyed. Voice communication was also possible by modulation of the carrier by means of an absorption loop modulation with parallel carbon microphones in series with the loop and inductively coupled to the antenna coupler coil. 9AVC went QRT in 1924 when I went away to the Univ. of Nebraska at Lincoln.

Post College Radio Amateur Activity

Upon graduation, I was employed by the General Electric Co. in Schenectady, N.Y. as a test engineer and upon completion of the test program was employed as a regular Electrical Engineer. Shortly thereafter I was married to my present XYL who was also from Hastings, Neb. With a permanent place of residence, I again turned to Ham Radio and obtained a new call, W2AEW. I started off again with a home brew rig using a UV210 and a SW3 receiver, also home brewed. I guess none of my rigs ever stayed the same over a few months, as I was a dyed in the wool builder of both transmitters, receivers, and antennas.

In 1935 GE transferred me to Pittsfield, Mass. where I soon received the call W1JLT. Later when the call W1AEW was vacated, I applied for it and held that call for some time. After obtaining my Extra Class license, I applied for a two letter call and got W1MM in February of 1969.

In 1955 GE transferred me to their Holyoke, Mass. plant. I retired in 1967 after being with GE for nearly 40 years.

My main Ham Radio interests have been CW work, building all kinds of equipment and antennas, rag chewing, radio club work, DX and contests, some traffic work and a very little of phone and UHF activity.

Now that I am retired, had hoped to have more time for Ham Radio, but find that I spend about the same amount of time at it, as I did when working at a regular job. Other interests and hobbies seem to be taking up the slack that was available when the regular job chores ceased.

******************* Robert M. Stephens, W1MM, Amateur Extra Class Lic.
Ex 9AVC, W2AEW, W1JLT and W1AEW
First Licensed Amateur Radio Operator 1919
W.A.S., W.A.C., W.A.Z., DXCC #321
QCWA #3156 OOTC #416

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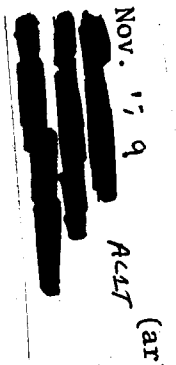
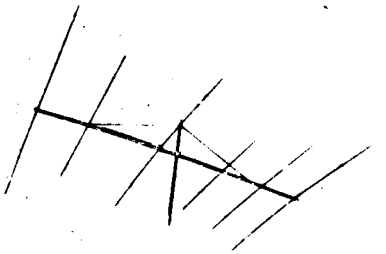
Thanks Bob for F.B. article! Any other "old timers", we'd love to hear your memories. . . . . . . Editor

FIRST CLASS MAIL

FEBRUARY ZERO BEAT

HAMPDEN COUNTY RADIO ASS'N
J.J. DUQUETTE
P.O. BOX 346
SOUTHWICK, MASS 01077





THE H.C.R.A. DX CORNER

By WB1EMN (Al) and WB1ETS (Ron)

This is the first of what we hope to be a monthly feature in ZERO BEAT. The information will hopefully be up to date and of some use to the local DX-er.

The year 1979 looks to be a DX-ers holiday as many prefixes not heard for quite some time are beginning, through DXpeditions, to show on the HF Bands.

BOUVET: Those of you who have not yet snagged this rare one should not give up in despair, word has it that 3Y1VC will remain on Bouvet and will spend 90% of his operating time on CW about 30KHZ above the low ends of 10, 15, and 20 meters. The remaining 10% will be spent on SSB near 14,300, 21,300 and 28,600 KHz. Operating time will be pretty much limited to 1600 - 2200 UTC. QSL 3Y1VC via LA5NM. Should be active until mid-March.

BEATA ISLAND: 25 - 28 January. HI1RCD on all bands and both modes. Not a new country but Island Hunter's will be interested in this first ever HI1 activity and stamp collectors will appreciate a new commemorative stamp honoring the event.

IRAQ: For those of you who have missed YI1BGD, you will be glad to hear that Majid and the members of the Radio Club of Baghdad are showing almost daily (except never on Saturday) with an improved signal. Look for them from 1400 - 1600 and occasionally as late as 2300 UTC either between 14,203 - 14,215 or near 14,225 - 14,310 KHz. QSL to P.O. Box 5864, Baghdad.

KERGUELEN: FB8XU occasionally appears above 14,200 KHz for brief periods after 1300 UTC, but obviously prefers 14,120 KHz. QSL via F6FLZ. FB8XV was worked on 14,205 KHz at 1400 UTC. QSL via F5VU.

LACCADIVES: This DXpedition was supposed to show on or about 10 January. To date they have not been heard. Hang in there, your patience will be rewarded. Look for VU4ART. Additional preparations for at least two more Laccadives DXpeditions are being talked about for the immediate future.

SERRANA BANK: It appears that this DXpedition has been put off for at least one to two months. This operation was supposed to run from 18-21 January. Who knows, they may still pull it off on schedule.

SOUTH GEORGIA: VP8PL will be departing South Georgia on 31 January. Because of SSB pileups, he is trying to satisfy a maximum number of DX-ers via CW near 14,025 KHz daily for extended stints between 0100 and 0700 UTC. QSL via G3LIK.

WALLIS ISLAND: FW8AC is regularly found near 14,225 KHz from 1100 UTC (long path) and frequently joins W7PHO's net near that frequency a bit later. His QSL arrived last week via F6BWX.

AFRICANA NET: Anyone who enjoys being home during the day should check into the African Net. It is held daily from 1800 UTC. Ten calls from each of the ten call districts are taken in a most orderly manner. The net is handled by W2PPG, W6AXC and WB0WNG. Many a U.S. ham has gotten a new one on this net.

Well so much for this month. Hope to have more in next month's Zero Beat.

(We wish to acknowledge the Long Island DX Association)