

ZERO BEAT

HAMPDEN COUNTY RADIO ASSOCIATION, INC.

SPRINGFIELD, MASS.

ARRL AFFILIATED, 32nd Year

FEBRUARY, 1981

***** HOME ARE THE BRAVE ***** FREEDOM IS PRICELESS *****

PRESIDENTS CORNER

The speaker for the February 6 meetings has changed since last month's Zero Beat went to press. Bill Poellnitz, K1MM, is leaving on a business trip to Japan the evening of February 6.

Bill went to great lengths to avoid having to leave on February 6. He went so far as to attempt to try to cancel his flight and rebook it for the morning of February 7, but was unable to make all the flight connections necessary for the flight to Japan.

We are in the process of rescheduling Bill for a meeting later this year and have been assured by Bill that he will be happy to speak at a future meeting.

Although Bill will not be able to speak at the February meeting, the meeting will still be a super meeting on a different subject. Gent Lam, who has written many super articles for Zero Beat will be speaking on the subject of home brew projects.

In addition to the featured speaker, all those attending will be able to avail themselves of the opportunity to win an Icom IC2-AT, Rinso Ranser or U.S. callbook. This opportunity will present itself in the form of raffle tickets which may be purchased for \$1 each or as a book of 6 for \$5.

Members are urged to support this raffle as this and similar type efforts serve to offset expenses and keep dues low.

In closing, I would like to leave you with two final but important requests. Please do not, repeat, do not call Eleanore or any member of the 451 bureau regarding your 451 cards. Instead write to H.C.R.A., Box 216, Forest Park Station, Springfield, Ma. 01108. Finally if you are interested in sorting for the 451 bureau, contact WB1ETS, by mail, phone or at the club meetings.

73,

Ron, WB1ETS

CW FANS TAKE NOTE

Here is your chance to have a CW rag chew with no QRM. An informal group will be meeting on Thursday night at 9:00 PM on 28.130 MHz. Everyone is welcome! Break in and enjoy!!

SPECIAL

It is rare that we hams can render life-and-death services via amateur radio. Several club members performed above and beyond the normal duties of an amateur during the recent disastrous Italian earthquake. Our SCM, Art Zavarella, W1KK, presented these Certificates of Merit at the February meeting:

"Certificate of Merit awarded to Florian DiRoma, K1EPI, in recognition of outstanding service to amateur radio for diligence in establishing two-way voice contacts with Italian amateurs in the vicinity of the recent earthquake disaster there and passing of urgent information on the status of family relatives of local citizens in the stricken area. His comments and the views of his station on TV Channel 22 WWLP November 26th were a great credit to amateur radio."

"Certificate of Merit awarded to Al Purseglove, W1YI, in recognition of outstanding service to amateur radio by his membership and participation in the New England Teleprinter Net and liason to his local Red Cross chapter with long lists of casualties from the recent earthquakes in Italy."

" Certificate of Merit awarded to Larry Soltz, W1CJH, in recognition of outstanding service to amateur radio for his initiative and skill in handling official phone patch communication between Springfield area Italian consul Giupponne and his home office during the recent earthquake in Italy when normal diplomatic lines of contact were inoperative. His commentary and camera close-ups of his station on TV channel 40 November 28th gave amateur radio invaluable public exposure."

All club members join in thanking these fellow hams who contributed so much to relieve the suffering here and in Italy.

WESTERN MASS SPEAKER'S BUREAU

Our ass't SCM, K1BE is putting together a Western Mass Speaker's Bureau list which should help local clubs in finding guest speakers for their meetings. If you are interested, please send via letter, postcard or a radiogram, the following information to K1BE:

TOPIC	NAME	ADDRESS	CALL	TELEPHONE
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We'll send the list to Western Mass clubs, with a notation that it would be expected that gas costs and/or supper would be provided. You can put down more than one topic.

K1BE's address is: JEFFREY J. DUQUETTE, K1BE
 P.O. Box 346
 Southwick, Mass 01077
 Or on WMN early in the week! Telephone 413-569-6739.

MORE POWER TO YOU

Recently Zero Beat published my article on a junkbox crystal checker and secondary frequency standard. At the last HCRA meeting, a few comments were passed regarding the power supply I had used for the above circuit. Apparently, many hams are not aware of the variety of three terminal regulators that are commercially available and relatively easy to use.

To the casual observer, these regulators appear to look like TO-220 or TO-3 cased transistors. However, they are very sophisticated yielding highly stable output voltage with output currents up to 3-5 amps (1 amp nominal) with built in current limiting and thermal shutdown. Quite impressive for a self contained package no larger than a postage stamp (at almost the same price).

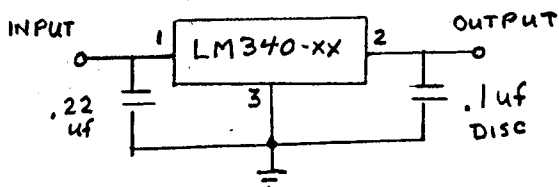
With the use of external components, the capabilities of these nifty devices can be enhanced to provide higher output current, variable output voltage, current regulation, short circuit current limit, and many other modes.

The following table lists some of the more common types of three terminal regulators;

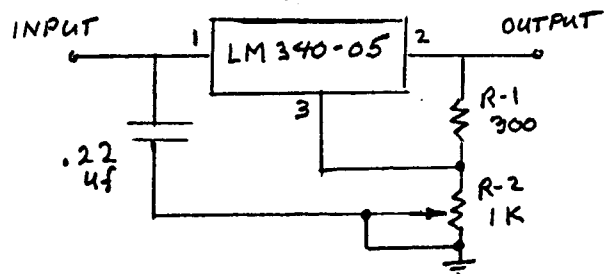
<u>Type</u>	<u>Output Voltage</u>	<u>Output Current</u>	<u>Case Style</u>
LM340T-xx	xx	1A	TO-220
LM340K-xx	xx	1A	TO-3
LM309K	5	1A	TO-3
LM723	2-37	150 ma	dip or metal can
LM317K	1.2-37	1.5	TO-3

xx = Desired output voltage

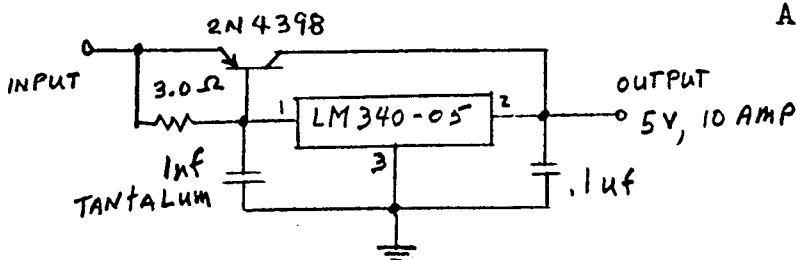
Some typical applications are:



Basic Regulator



Adjustable Output Regulator



High Current Voltage Regulator

(POWER CONT.)

The D.C. input for the regulator is comprised of rectifier and filter which are well covered in publications such as the handbook and will not be discussed.

Numerous articles have been published in amateur and other electronic periodicals concerning complete power supplies using these regulators. It is suggested that you read a few of these to learn more about guidelines regarding the use of the devices and other associated circuits such as overvoltage protection.

Considering the rising cost of all products, it may behoove you to do a little judicious horestrading for parts to build your own 13.8 v 4 amp overvoltage protected power supply rather than plunk down \$ 50 for what may be a marginally constructed and rated manufactured unit. The regulators are widely stocked by Radio Shack, Norbill's, Sydlee's and other suppliers. Besides, it sounds good when you can announce over the air "rig here runs off a homebrew power supply thrown together with junkbox parts."

Gent, W1LCQF

MAGIC GENIE!

Did you ever have a "dog" repair problem that you wanted to turn over to a magic genie to fix? Well, a genie in a bottle is available. A freeze spray that will cool parts to -50°F is sold. A less expensive one in a regular can with a seam will cool things to -20°F . How can they perform like magic?

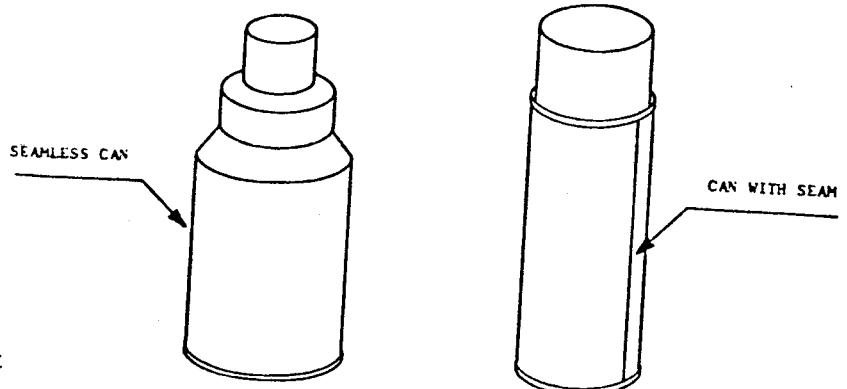
One of the worse repair jobs is a thermal intermittant. The rig works great until it warms up and then dies. Put the transceiver in a "hot box" under a heat lamp and wait for the problem to occur. Take the freeze spray and zap one component at a time until it comes alive. Replace that part and usually the problems are solved! Never spray a tube or it'll implode from the sudden cold. Shield them with cardboard when working near them.

A similar problem is a rig that only works after it's warm. On cold mornings you can forget working the repeater mobile. Warm the rig up and freeze spray the parts until it dies. There's the problem component! Did you ever have to solder a solid-state device into a circuit board with no room for a heat sink? Zap it with the freeze spray and solder away! Or solder it and zap it to cool it quickly.

Got hairline cracks in a PC board? Freeze spray the copper foil and they'll stand out like the Grand Canyon. Got a bushing that won't come out of its' housing? Heat it with a propane torch and then freeze spray it. It suddenly comes out.

When working on that circuit and the transformer starts to smoke, remove power and freeze spray it. Unless it's a short, the transformer is usually saved. In fact, most freeze sprays are excellent fire extinguishers, and leave no residue. I'd recommend trying it before you need it in an emergency.

Area stores for electronic components stock this genie in a bottle. Go on out and get your own Alladin's lamp!



Freezing spray containers

MILITARY SURPLUS "JUNK"?

Your own complete radar station? Yep, the military still sells great amounts of surplus electronics. New England in particular has the radios and test equipment. Most of it is sold as "excess", which means that it works but they've got too many. Even the basket cases have a multitude of worthwhile parts for the few builders left among us. Large amounts of microwave components are now starting to come on the market. Complete radar stations are available, including radar dishes. These are at premium prices in the surplus market, though!

To bid on items, you've got to have a bidder's number. Write to:
 DOD SURPLUS SALES
 P.O. BOX 1370
 BATTLE CREEK, MICHIGAN 49016

They'll send you an application. Don't request bulletins on everything, they'll quickly purge you off the list. Fair Radio Sales is the basic reference to find out what the military item is, and how much its' worth. Their catalog will also tell you which items can be converted to other amateur uses and cites the ham publications by name and page that explain how to do it. Filters are an item that comes to mind. Their catalog is a bonanza of hard-to-get parts for builders and experimenters, and that's why these hams make wide use of it. The catalog is free and the address is listed in QST every month.

When you get an auction bid notice, called an IFB, one of the problems is that the goodies are often too far away to transport easily. Another glitch is that you can't usually buy one radio, you've got to buy ten or fifty! For the casual buyer, you're better off getting items at a flea market. A friend of mine in Ohio who does this as a business has an axiom: "If you're getting too many bids, you're bidding too much!" Some people pay crazy prices for useless equipment. Forget about buying jeeps for \$50.00, they can't be sold for use on public highways anyway.

Local auctions are held about every month. The items for sale are varied, with almost no worthwhile electronic stuff. You have to be there to bid, and you'd better know what the item is. Unlike the sealed bid mail auctions, the descriptions are very sparse in the local auction catalogs.

Even if you don't want to be an auction bidder, it is worth your while checking out what some of these surplus rigs can be used for.

FM rigs for 10 meters are readily available for about \$40.00. 4000 watt SSB transmitters can be bought for about \$1,000! You've got to know what it is and what it does, though. Good luck if you decide to try this out.

SAMPLE LISTING FROM AN IFB

- You bid on the entire lot by number.
- for 450 lots offered in the typical IFB, there are about 400 bidders.
- Attendance at a local auction averages 50-150 bidders. That notice would list this as "Electronic Equipment, Lot 179".

ITEMS 179 THRU 181 ARE LOCATED AT WRIGHT-PATTERSON
 AIR FORCE BASE, AREA C, OH.

179. ELECTRICAL AND ELECTRONIC COMPONENTS: Including transformers, switches, line sections, pulse generator, connectors and printed circuit cards. Inside - A021346A1 - Packed in cartons, boxes and bags (which are included in the weight and sale) Unused - Good Condition
 Total Cost \$86,243
 Est. Total Wt. 2525 lbs. 1 LOT

The following articles apply:
 AI - Military Munitions List Items
 AK - Certified and Noncertified Radiation Emitting Electronic Products

TIDBITS

Pam Gray is now a novice with the call KA1GGW...NI1CQ on the DXCC list with 175 confirmed...W1ALMJE, K1JHC on the Public Service Honor Roll...K1BE has designed a solar heated addition to the home QTH, just needs the interest rates to go down to build it...W1ALPUX travelling in his job...W1JJP out in the cold ice fishing...W1GLZ used his two meter antenna on the car in the VHF SS by parking under the window and running the coax in through the kitchen window... Send you VHF Sweepstakes in today to the ARRL. The club needs everyone's score!...N9AGV upgraded to general. Dave's very active in Air Force MARS...W1TM had -14°F in Great Barrington, good thing the linear heats the ham shack. Bill...K1IJU has a new TV game to play with...K1ALCPG has his new homemade tower solidly up..... K1BUB has a new baby boy six months old named John...Do any HCRA members remember listening to the Sputnik in 1957? How about sending a report/comments to K1BE for an article in ZB?

JANUARY'S MEETING

Stu Leeland, W1JEC, who writes the "Hints and Kinks" column in QST spoke on what goes into each column, how it's prepared and showed us some nice ideas to use around the shack. A preview of the next column was passed around to help out anyone who's problem might be in it. Stu, who I thought was another one of the new "youngsters" at the league, turned out to be an old tube rig! Nothing solid-state about him and a genuinely warm human being. Hope he stops up for more meetings in the future.

FOR SALE: Muffin Fans, \$10.00; Wattmeter, dummy load, 0-150 watts, \$50.00; RT-68 Jeep radio transceiver and power supply, covers 38-54 Mhz, 1 or 14 watts FM, with jeep rack, speaker, microphone, Schematic. WORKS FB! use on 6 meter FM. \$40.00; Hewlett-Packard Digital Voltmeter, \$75.00; Hewlett-Packard VTVM \$50.00; Aluminum canoe 17' poor cx, \$150.00 Jeff K1BF 569-6739 Evenings

W1KK has shown this in the club to many of us. It may be submitted to the "Hints and Kinks" column soon:

Cut a "V" groove with a file here.

TNX,ART!

Solder braid there and smooth with a file. This makes a much more solid contact!

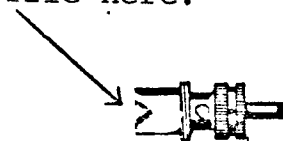


2) Bare 5/8" of center conductor - don't nick conductor. Trim braided shield 9/16" and tin. Slide coupling ring on cable.



3) Screw the plug assembly on cable. Solder plug assembly to braid

Solder conductor to contact sleeve. Screw coupling ring on assembly.



QSL CARDS WITH THE CLUB NAME

The Little Print Shop will still print the club card up special for interested club members. Anyone interested should contact W1UPH or myself K1ALCPG for more information.

LETTERS TO THE EDITOR

WINY

The January 1981 VHF contest has come and gone. It was a fun contest with good club participation. This year, the HCRC decided to mount a special effort to achieve a total of 200,000 points and possibly gain the top position in the country. To help augment this effort, it was decided to put your club station, WINY, on the air. This was a sizeable undertaking and I would like to formally acknowledge those who contributed their time, effort and equipment.

First of all, thanks goes to the Civil Defense units of Longmeadow and Agawam. Longmeadow CD allowed us to use their, Kenwood TS-600 and Agawam their mobile emergency van. This equipment not only allowed us to operate the contest but also demonstrated our ability to erect and operate a self-contained communication center suitable for service in any civil emergency. Our two meter system was a home brew rig constructed and loaned by WIJP. Many thanks Bill. Rounding out our radio equipment was my own one watt TR-22 FM transceiver that performed beyond my fondest expectations.

Antennas came from several people including Art WIKK and Frank WAIRWU. Mechanical assistance came from Glen, mechanic for the CD van and special thanks to Joe Napolitan for allowing us to operate from his excellent hilltop site at St. Anne's Golf Course.

Equipment for this type of operation is certainly essential but what makes it gel is what I call "Cohesive Direction". This special quality belongs to only one man -- Art WIKK. Without his assistance, direction, technical know-how and planning, the effort would have resulted in a random mass of miss-directed electro magnetic chirps. Many thanks Art!

I would finally like to thank the operators who manned the equipment through approximately twentyfour hours of contest time. These would be: Bob KIBUB and John KIGTE who helped us with some excellent CW contacts. Fran KAICAX and Les KAIDNK, two newcomers, who helped assemble antennas at 0°F and who operated through the wee hours. Finally, Ted WAIGZO who was wounded during setup but nevertheless went on to operate our 2 meter FM equipment with excellence.

Our final point score was certainly below my optimistic expectations but should help the club in its attempts to gain a top spot in the competition. In any event, the effort was a great learning experience and should provide a basis for bigger and better efforts in the future.

AL WB1GLZ

SUBJECT	Barbados- 8P6EZ	DATE	Dec.29-80	Reply Message
FOLD V	MESSAGE			

Dear Ray, Just a note to let the gang know that I will be back in 8P6 land this coming February. We will be leaving on the 5 th of February and I should be on the Air again down there for the weekend of Feb. 7 th and for 3 weeks- We may go to the U. S. Virgin Is. After for a while or some of the other Islands down there. Will have a morning sked weekdays with KLVK and KLMAL at 6:30 AM Local time up around 14290 Plus or minus.

Will be on "CW" most of the time during the day- Look for us around 14C38 will try 15 and 10 meters 21038 or 28038

Thanks

Don WIRED
SIGNED



HEARD ON THE AIR

Another DX-expedition for Norm, Jean, Bill and Heather
 Departure Date Feb.20,1981
 Return Date March 9
 Place Bequia
 They will be on 28.7 MHZ at 7 AM EST

CALLS
 Bill J87BL
 Heather J87BM
 NORM J87BN
 JEAN J87BO

FOR SALE BY WA1CCP
 WILSON HT, Touch Tone, Ext. Mike
 nicads, desk charger, duckie, case,
 monolithic filter, 34-94, 40-00, 19-79
 52-52 \$100.00
 KENWOOD TS520s and CW Filter
 \$500.00
 POWER SUPPLY 13.8 volts @ 20 amps.
 fully metered and overvoltage
 protected
 \$85.00
 Nicad Battery pack 12 volts
 @ 2.4 amhrs. (24 D size
 Eveready nicads) \$ 12.00
 Call Gent 737-9426

FOR SALE BY KIBBE
 PRC 9 TRANSCIVER FM 27-39 MHZ
 continuous tuning, FM on 10 meters
 Schematic, handset, battery case
 Base or mobile
 Checked \$30.00
 Unchecked \$20.00
 Simpson Field Strength, Grid Dip,
 Modulation Meter MDL 380
 case, coils, calibration charts
 goes up to 420 mhz. \$100.00
 Call Jeff evenings 569-6739

FOR SALE
 HUFCO Digital Frequency
 Counter, Model Mark II, TWS-600
 including operation manual. \$ 75.
 POLAROID Pathfinder Land
 Camera, Model 110A, Rodenstock-
 Ysarex 1:47 lens. Included is
 wink light, tri-pod attachment,
 manuel & carrying case. \$ 110.00
 Call WALYK, Jack, (413) 786 2556.

FOR SALE BY WB1GTR
 ROBOT 70B SSTV MONITOR
 with view finder and video
 graph modes
 mint condition \$ 275.00
 HALLICRAFTER HT-37
 Transmitter with HO-10
 Heath Monitor \$ 140.00
 Call Jack, WB1GTR 739-2926

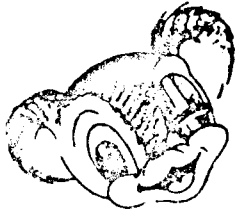
IMPORTANT MEETING NOTICE SEE PRESIDENTS CORNER

NEXT MEETING FRIDAY FEB. 6, 1981

FEEDING HILLS CONGREGATIONAL CHURCH
CORNER ROUTES 57 & 187
FEEDING HILLS, MASS.
TIME 8 PM

SPEAKER GENT IAM WAICQF

TOPIC HOMEBREWING
HOPE TO SEE YOU THERE



FRANK H. KOZAK
LORRAINE KOZAK

"Quick As A Wink"

PRINTING & SALES CO.
TEL. (413) 736-8184

454 MAIN STREET
WEST SPRINGFIELD, MA. 01089

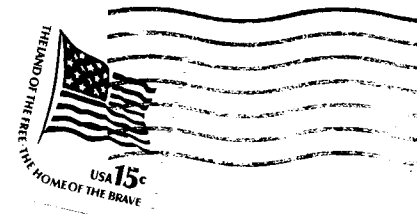
FREE PARKING
AT OUR DOOR

Hampden County Radio Association, Inc.
Ray Morin, KALCRG, Editor
97 Brookhaven Drive
East Longmeadow, Mass. 01028

SO YOU THINK THE ICOM 2at
is small read this one

5000-circuit chip

IBM has put enough circuits on a single chip of silicon to handle the data flow of its System/370 computer. The device measures 7 mm square and contains the equivalent of 45,000 components. The company says that the chip can be produced in existing manufacturing facilities, and uses gate-array techniques. If successful, it could reduce much of the main-frame processor to a single chip. □



FIRST CLASS MAIL

AC1T

11/81

FEBUARY ZERO BEAT

WHEN YOUR CALL TURNS BLUE YOUR DUES ARE DUE