

ZERO BEAT

4-83

HAMPDEN COUNTY RADIO ASSOCIATION, INC

W1-QSL BUREAU

SPRINGFIELD, MASS

ARRL AFFILIATED, 35th YEAR

Next Meeting

Carl Prairie, N1AHW, will be speaking on amateur television

Friday April 1, 1983 Feeding Hills Congregational Church, 8:00 PM

Ham Of The Year

The Board is taking nominations for the HCRA Ham of the Year award. Please contact any officer or board member regarding your nomination.

No Code Licensing

Please write the FCC concerning your comments regarding the proposal for no code licensing. The affects will affect many and ultimately, the structure and existence of amateur radio as we know it. Consult the March 1983 issue of QST for details regarding this important subject.

Stolen

Recently stolen from Ed, WA1PLS was a Midland 220 mhz transceiver, model 513 sn 8700-1355. Contact Ed at 788-0393 or local police if you come across the rig. As a reminder-keep records regarding equipment serial numbers and provide some means of positive identification such as inscribing your social security number on the inside of the rig.

Area Public Service Participation

The HCRA and local radio clubs are often called upon to provide communications for local events. Monitor local nets for requests for volunteers. Even if you can't participate for a complete day or full duration of the event, a couple hours of your time would be greatly appreciated-more than you realize.

April Issue

Considering that this is the annual April issue, everything except "Soon to be Released" is on the up and up. Don't want anyone to misconstrue that anything else was written in the vain of an April Fool joke.

HELP !

The flea market for this year has all the earmarks for a highly successful event. To insure its success, we are looking for some volunteer help on that day-someone to give directions via 2 meters, people to help clean up after the event, etc. If interested please contact Gent Lam, 737-9426.

SOON TO BE RELEASED

It seems as though as soon as one manufacturer releases a new piece of equipment, another manufacturer will come out with new gear boasting of a few more bells and whistles than its competitor. Just as in the past, this year is no different and here's a few glimpses at upcoming stuff.

Yahoo Radio will announce a new line of UHF and VHF radios with built in code readers to copy the identifier so that no code licensees will be able to know which repeater they're working. In keeping with their motto of "AScii and you shall receive", the code reader will also be able to copy AScii transmissions from 110 to 19.6 kbaud. Included at no extra cost is the BHR (bureaucratic hogwash rhetoric) compiler used extensively by some agencies while filing "notices of propaganda rule making".

Can-Wud Radio has still under wraps a neat piece of gear designated the "Bells and Whistles" line which does everything except to operate as a radio. Configured to look like a state of the art transceiver, it boasts dual time zone digital clocks, simulated QRM background noise generator, and cryogenic heat exchanger which serves to keep a 12oz 807 cold or heat a cup of coffee. Keep your eyes on QRM magazine for an in depth product review.

Tan-Tack will release its new "Gutless Wonder" which will have a neat appearing front panel and inside circuitry built from contest entries in a recent "How few components can you make a radio with?" contest. Promises to be a troubleshooter's delight since there will be hardly anything to fix. Engineering estimates for MTBF (mean time before failure) is .25hr because that's how long it should take to take it out of the box and plug it in.

ATV Enterprises has released a UHF fast scan TV transmitter with a 3 dimensional model of a home showing front porch, back porch, pedestal and other components of TV waveforms which most people mistaken for real estate.

Any resemblance to currently marketed equipment is purely coincidental and the editor cannot vouch for accuracy in this article. Welcome to the new frontier!

73, Gent

*****DAYTON HAMVENTION BUS RIDE*****

N.A.R.L. (Newington Amateur Radio League) is sponsoring a bus to the Dayton Hamvention. Two nights, April 29th & 30th, 1983. The bus leaves promptly from ARRL HQ, Newington, CT at 6:30 PM, Thursday, April 28, arriving in Dayton approximately 12 noon Friday. Side trips planned also. PRICE: \$125 round trip (includes room and bus) double occupancy or \$250 per couple. A \$50 deposit is required to hold your reservation. First come, first served basis. Bus holds 48 passengers, and we have 24 rooms available at Dayton.

To reserve your seat now, please make checks payable to: Bob Andersen, and remit to this address-P.O. Box 11043, Newington, CT 06111. For further details, contact K1BRD, Bernice, on the W1AW Repeater 145.450.

COME ONE, COME ALL!!!! Bring your picnic lunch for the ride or 807's. A good time is planned on the trip.

For those of you who have never been to Dayton, Ohio Hamvention, it is considered to be the largest and biggest ham event of the year with many DXers from around the world, contesters and the largest flea market anywhere. So make your reservations early!!!!

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Hampden County Radio Association, Inc.
DX Contest

This is open to all DX-ers— Spell out HAMPDEN COUNTY using the first letter of the prefix of DX calls or the first letter of a countries name! NO QSL's required, just short notations from your log of things like date, time, QTH, and anything else of interest. The prize is as yet undetermined, but at a minimum will be an ARRL handbook. (depends upon the degree of interest shown.) Here's what an entry might look like:

H - Worked HZ1LB on 14.270, Feb. 28, at 0001Z.
 A - Worked etc etc
 M - Worked etc, etc
 P - Worked etc etc
 D - Worked DJ1AU on 20 meters, name of Otto, QTH Hamburg
 E - etc, etc
 N
 C - Worked CX4CT on 10 meters at 0807Z on March 10.
 O - etc, etc You get the idea of how it works!
 U
 N Send entries to: ZERO BEAT
 T c/o Gent Lam
 Y 38 Porter St
 Springfield, Mass 01104

Contest period: Feb 1 to MAY 25. Enter as many times as you wish.
 All acceptable entries will go into a hat and one lucky winner will be drawn at random during the June banquet.
 You can not use the same contact more than once. No QSL's required.
 Open to any radio amateur. WARC band QSO's count. Questions? K1BE 569-6739

H	- HA, HA, HB, HB, HC, HCS, HE, HI, HE, HK, HL, HM, HP, HR, HS, HV, HZ, HX, HT, H5, Hungary, Haiti, Honduras, Hawaiian Is., Heard Is., Hong Kong.....26
A	- A2, A3, A4, A5, A6, A7, A9, AP, Andorra, Antarctica, Azores, Argola, Amsterdam Is., American Phoenix Is., American Samoa, Alaska, Argentina, Austria, Aland Is., Asiatic SPSR, Azerbaijan, Armenia, Australia, Antigua, Anguilla, Andaman Is., Afghanistan, Aves Is., Albania, Ascension Is., Auckland Is., Agalega, Annobon, Algeria, Abu Kil.....35
Z	- Z1, Mozambique, Morocco, Macao, Madeira Is., Mayotte, Martinique, Malpelo Is., Minami Torishima, Mongolia, Midway Is., Mariana Is., Marshall Is., Market Reef, Mount Athos, Mali, Moldavia, Mellish Reef, Maquarie Is., Montserrat, Mexico, Marion Is., Monaco, Mauritius, Malagasy Rep., Mauritania, Malawi, Maldiva Is., Malta, Melilla.....30
P	- P2, PA, PD, PE, PI, PJ, PY, PY, P3, Pakistan, Portugal, Panama, Philippines, Palmyra Is., Puerto Rico, Peru, Papua New Guinea, Pitcairn Is., Paraguay, Prince Edward Is., People's Dem. Rep. of Yenan.....22
D	- D2, D4, D6, DA, DE, DM, DF, DJ, DK, DL, DT, Dominican Rep., Djibouti, Dominica, Deschevo Is., Denmark, Pöccanese Is.....17
E	- EA, EA6, EA8, EA9, EI, EL, EP, ET, Easter Is., Ethiopia, Europa, England, Ecuador, Egypt, European Russian SPSR, Estonia, Equatorial Guinea, East Malaysia, East Kiribati.....19
N	- Nauru, New Caledonia, Northern Ireland, Navassa Is., Norway, Netherlands, Neth. Antilles, Norfolk Is., Nevis Is., Nicobar Is., New Hebrides, Nicaragua, No. Cook Is., Niue, New Zealand, Nigeria, Niger, Nepal, Namibia.....19
C	- C2, C3, C5, C6, C9, CE, CE9, CE9A, CE9X, CE9Z, CK, CC, CH, CP, CR9, CT, CT2, CT3, CX, CR3, CR5, China, Chile, Cuba, Cape Verde Is., Comoros, Canary Is., Ceuta, Crozet, Corsica, Clipperton Is., Columbia, Czechoslovakia, Crete, Cent. Kiribati, Costa Rica, Cocos Is., Cameroon, Cent. African Rep., Congo, Chad, Canada, Christmas Is., Cocos-Keeling Is., Chagos, Cayman Is., Campbell Is., Cook Is., Cyprus.....49
O	- OA, OB, OD, OE, OH, OH, OJ, OK, ON, OX, OY, OZ, Oman, Ogasawara.....14
U	- UA, UK, UV, UY, UN, UR, US, UY, UC, UD, UP, UC, UE, UI, UJ, UL, UK, UO, UP, UQ, UR, United Arab Emirates, Uruguay, Ukraine, Uzbek, Upper Volta, United Nations Sq., Uganda.....28
N	- repeat
T	- T2, T3, T31, T32, TA, TB, TC, TI, T19, TJ, TL, TM, TR, TT, TU, TV, TZ, Tonga, Taiwan, Tromelin, Thailand, Trinidad Is., Tuvalu, Turkey, Tokelau, Tadzhik, Turks & Caicos Is., Tristan da Cunha, Tokelau Is., Timisia, Tanzania, Togo, Trinidad, Tobago.....34
Y	- Y, YA, YB, YC, Y1, Y2, YN, YN, YC, YS, YU, YV, YZ, Yenan.....14

Total.....308

-1100J-

Field Day 1982

Heard at 2100Z on 27 June: "Darn, it's all over. Have to wait a whole year till we can do it again."

The single operating activity that draws the most amateurs is Field Day. This was the 46th annual event which is sponsored by the American Radio Relay League. And there is no other activity that calls for such teamwork and results in such camaraderie as Field Day.

The purpose behind all the fun is to operate equipment away from normal station locations and minus commercial power. The 27-hour drill is "to meet the challenge of emergency preparedness," according to the ARRL.

Held the last full weekend each June, the Summer Classic pits the amateur and gear against the weather and fatigue. The beating sun and biting bugs, balky generators and "who forgot the fuses?" It all adds up to: a good time was had by all.

Underneath all the camping out or picnic-like atmosphere is a serious foundation. It all dates back to the early '30s. In those days, amateurs hauled bulky equipment to hilltops to communicate with the outside as the valleys were flooded.

Through the years, the amateurs have become the communications "quick reaction force." In practically every emergency the amateurs are called upon by either city, state or federal officials. When other communications facilities have become overcrowded or disabled, the amateurs can always "get the message through."

The ability to do so comes through practice. Pre-planning and the knowledge of how to improvise on the spot are the keys to being able to provide emergency services to government and relief agencies.

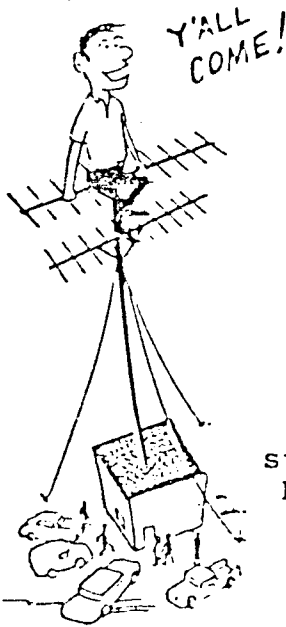
The history of Amateur Radio is a shining example of what heights people can reach. Those who volunteer to assist others, at a sacrifice to themselves and with no possible gain to be obtained, are to be admired.

On Sunday afternoon, the pegs were pulled from the ground, the tents folded and masts taken down. Before going home, a search was made for a drugstore to get some sunburn lotion. Thoughts had already begun on "how to do better" next year.

Field Day. It's photographs passed around at the next club meeting, waiting for the results to come out in QST, elation at your score, or saying "We don't go out to win."

It's 2,000 groups of people. It's an outing, excitement, a challenge, a competition — some of the above or all of the above. There's as many attitudes as there are groups, from frantic to laid back.

For most clubs it is indeed the event of the year. And there may be some truth to what the old sage said, "If your club doesn't go on Field Day, you don't have a radio club." □



FIELD DAY 1983

We're planning another fun-time-on-the-old-bands-tonight up at Middlefield! A supper is on for Saturday evening, where we can sit around and chew the fat. (Price of fat's gone up too!) Band captains can sign up for any of these by contacting K1BE at 569-6739 evenings. As a BC, you'll provide a complete station with operators to run all of Field Day. Here's what's available:

- 160 meters
- 80 meters
- 40 meters BC: W1ZKT, W1CQF
- 20 meters K1BE, W1PUX
- 15 meters
- 10 meters
- 2 & 6 meters
- NOVICE STATION
- OTHER _____

FIELD DAY!

IF THE BAND YOU WANTED TO OPERATE IS TAKEN, CONTACT THAT BC ABOUT A JOINT OPERATION, OR TAKING THE CW PORTION, ETC.

ONCE A BAND CAPTAIN SIGNS UP

IT IS UP TO THEM TO DECIDE HOW THE STATION(S) ARE RUN, SET UP, ETC.

AS USUAL THE CLUB WILL SUPPLY ALL LOGS AND CHECK SHEETS. WILL EACH BC MAKE WAS THIS YEAR????

TIDBITS

N1CQ worked Africa on 80 meters. Bill is also looking for operators for the March 5-6 ARRL DX contest...KA1ERS is looking to exchange ten-ten numbers. Meet Bill during the HCRA club net, Thursday evening on 28.650 USB at 9 pm local time...NCS WB1FXI wants to list your goodies on the Provin Mtn Hoss Trader's Net Thursday evenings at 8 pm on the .10/.70 machine...WA1VAH worked Japan for the first time...W1JWV, WB1DLH and other club members were surprized by the number of contacts made during the VHF SS just using FM on 2 meters...Do you receive other ham newsletters? Pass along old copies to yon ZERO BEAT editor, for possible articles. WA1PUX sent in a years' worth of the League's QEX, which you will see articles from...A new OSCAR project tenatively called PACSAT, will have an AMSAT "electronic mailbox" over the earth that we all could use..."VIC 20 USER GUIDE" is now available from McGraw-Hill (\$14.95)...Are any club members using packet radio yet? How about an article?...Club member W1VD is an ARRL technical advisor on receiver design and performance, FB, Jay...If you are planning to build the six meter linear which will be in Zero Beat, you can request a full-size schematic...

VHF SWEEPSTAKES REPORT

Snow, snow, and more snow! No cabin fever that weekend! We had a contest to operate. Maine was rare DX again this year. E. Mass elusive but not impossible. With the Mt. Tom and Provin Mtn club efforts, it was easy to work 75± on just two meter FM! Many worked EPA on 2 and some of the all-nighters even snagged states out West.

The club scores look up for everyone! Expect a new club record, which we won't know until the June QST. A "well done" and "thank you" to all who helped.

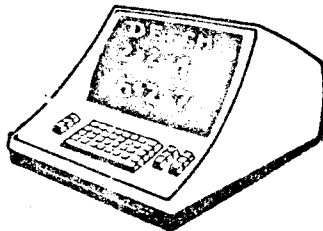
**HAM
RADIO
Flea
MARKET**

Computer



SATURDAY MAY 14TH
10AM TO 4PM
AT

SPRINGFIELD LODGE OF ELKS
440 TIFFANY STREET
SPRINGFIELD, MASS



WE NEED YOUR HELP
ADVERTISING THIS!!
PLEASE SPREAD THE
WORD!!!!

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PLENTY OF FREE PARKING! EASY ACCESS! FOOD AND DRINK!

SPONSORED BY: **HAMPDEN COUNTY RADIO ASSOC. INC.**

"Quick As A Wink" Printing & Sales Co.

573 Union Street West Springfield, Ma. 01089



Dear Gent:

I whomped this program up to make quick calculations for an Australian Ham I have skeds with. He and his XYL are touring Europe in an RV with one of Dick Austin's Featherweight Beams. In return for his present location, I can give him bearings for other locations about as fast as I can enter their Lat and Long. I thought there might be Club members who could use it.

It is written in MBASIC, so some modification may be needed for other BASIC formats. There is no discernable run-time, i.e. RUN-TIME=PRINT-TIME.

Sincerely yours,

Bergen R. Suydam

WB D TZ

Make to following changes to run on TI computer

```
220 Input "other latitude-deg;min":A,B
250 Input "other loggitude-deg;min":A,B
330 If abs(d1)<3.14159 then 350
350 T= cos(d1)/tan(c1a)
360 phi=atn(T)
390 if c<0 then 600
400 if d1<0 then 600
441 Print:::::"Great circle bearing in degrees=";c
600 gosub 601
601 c=c+3.14159
602 return
```

```

TYPE GCIRBR.BAS
10 'THIS PROGRAM CALCULATES THE GREAT CIRCLE BEARING OF ANY POINT ON THE
20 'GLOBE RELATIVE TO THE ORIGIN DEFINED IN STATEMENT "500 DATA"
30 '
40 'PROGRAMMED BY: B.R.SUYDAM (FOR MATH, SEE e.g. ARRL ANTENNA BOOK)
50 '
60 '
65 DEFSTR Q:DEFSNG A-D
70 PRINT "IS YOUR ORIGIN LAT. AND LONG. ENTERED AS DATA ('NO' OR <CR>)"
80 INPUT Q
90 IF Q="NO" THEN PRINT "THEN ENTER IT!":GOTO 510
100 PRINT CHR$(12) 'CLEARS SCREEN
110 PRINT "NORTH LATITUDE IS + ; SOUTH LATITUDE IS -"
120 PRINT "WEST LONGITUDE IS + ; EAST LONGITUDE IS -"
130 PRINT:PRINT
150 READ A,B
160 GOSUB 290
170 ALA=A
180 READ A,B
190 GOSUB 290
200 ALO=A
210 PRINT:PRINT
220 PRINT "INPUT OTHER LATITUDE (DEG,MIN):":INPUT A,B
230 GOSUB 290
240 CLA=A
250 PRINT "INPUT OTHER LONGITUDE (DEG,MIN):":INPUT A,B
260 GOSUB 290
270 CLO=A
280 GOTO 320
290 A=A+SGN(A)*B/60 'THIS SUBROUTINE CHANGES THE ANGLE TO RADIAN
300 A=A*3.14159/180
310 RETURN
320 DL=ALO-CLO
330 IF ABS(DL) < 3.14159 THEN GOTO 350 'ASSURES: -180 < DL < +180
340 DL=-SGN(DL)*(6.28318-ABS(DL))
350 TANPHI=COS(DL)/TAN(CLA)
360 PHI=ATN(TANPHI)
370 TANC=SIN(PHI)*TAN(DL)/COS(ALA+PHI)
380 C=ATN(TANC)
390 IF C<0 THEN C=C+3.14159
400 IF DL<0 THEN C=C+3.14159
410 PRINT:PRINT
420 PRINT "C (IN RADIAN) = ";C
430 PRINT:PRINT
440 C=C*180/3.14159
450 DEG = INT(C)
460 MIN = INT((C-DEG)*60)
470 PRINT "C (IN DEGREE) = ";C
480 PRINT
490 PRINT "OR C = ";DEG;"DEG";MIN;"MIN"
500 DATA 38,0,7,0, 'THIS ORIGIN REPRESENTS SOUTH PORTUGAL
510 END

```


I get the feeling that there may be a great deal of misconception about the use of SWR meters and tuners to reduce the SWR. Maybe I'm wrong. If everyone understands that an SWR meter gives information that applies directly to the exact point in the transmission line where it is inserted and no place else, then the rest of this article can be ignored. If you were unaware that an SWR meter inserted at any appreciable fraction of a wavelength away from the finals of your rig does NOT show the reflected wave seen by your finals, then you had best read on.

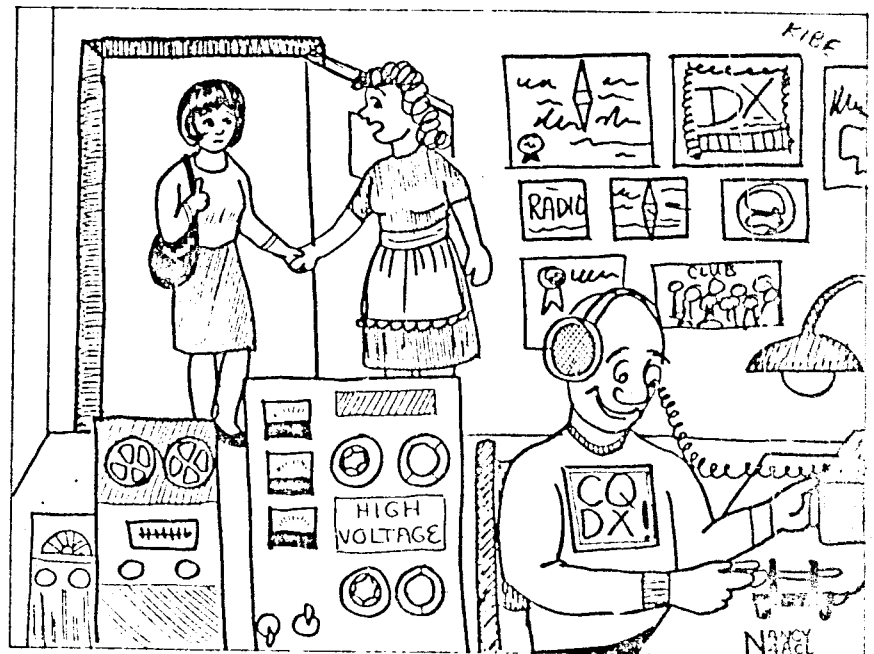
Any conditions at the antenna that result in a reflected wave set up a standing wave ratio on the transmission line. As the name implies, the ratio of outgoing to incoming voltage varies from point to point along the line, but at any fixed point it remains constant. A tuner inserted in the line can be adjusted so that its' output appears to be at a different location of the SWR curve. It most emphatically does NOT make SWR disappear! If the tuner is adjusted so that its output is at a null, a meter at that point will so indicate, but a meter a quarter of a wave length further on will show a maximum. If that is where your transmitter is, you have done more harm than good!

A tuner can be inserted in the transmission line where ever it is physically most convenient in the ham shack, but the SWR meter should be as close as possible to the final output as you can. If you have a linear with a built in SWR meter it tells you just what your finals see no matter what any meter farther along the line may say. So if you buy or build an SWR meter, put it as close to the RF as you can. If the meter is built into your tuner, then this applies to the tuner as well.

TEN YEARS AGO IN ZERO BEAT

Ollie Quist, K1HYL was president, Al Hall W1IUB was club treasurer...First guest speaker of the season was Ed Tilton, W1HDQ...Banquet was held at the Collegian Court, where the Brown Baggers meet today...Six meter gas company radios were going on the air...Top club scorers by license class in the VHF Sweepstakes that year were: WA1GIZ, W1MTV, WA1ECR, W1MDM, W1KK, WA1LFR..... Field Day chairman was K1PKZ...OSCAR 6 due to launch soon.....

**DROP
US A
LINE!**



"Come on in, dear, but whatever you do, don't ask about ham radio!"

TIDBITS

WA1YCA got married, FB, Tryon!...Do we need the code requirement?? Extras are getting licensed by memorizing BASH books, and now people are using pocket cassette recorders to tape the code exam, transcribing it, and giving the answers to friends. One "ham" was caught handing in a 100% perfect answer sheet, too bad it was for a different Extra class code test!...W1KK is building another linear amplifier...WA1JUJ has two beautiful little girls...MT Tom ARA helped out the St. Patrick's Day Parade in Holyoke again, FB to one and all...Have you sent in your entry for the HAMPDEN COUNTY contest yet? Just spell out the name using the first letter of the DX country worked or the first letter of the stations call sign and send it in...KA1GUC passed Tech, FB Barb, we're sure



hubby John is proud!... W1FAB went to Florida, got to visit Tom, Eunie, and Bob...WA1ZKT Is all set to go fly fishing. Are they good eating, Paul?...W1QWJ and XYL are happy in New Hampshire, Dick just finished another amplifier...WA1DNB has TVI when on ten meters, but was able to get into the HCRA ten meter net anyway...W1QWJ's demo of his new

VIC-20 on cw has got W1KK interested in getting one. Sounds like a perfect op' is on the key...

Wanted: I have a carton of transformers, transistors, resistors, diodes, capacitors, etc... All assorted values and most brand new. If you have a spare desk mike (high impedance) collecting dust, I would like to swap with you as I am in need of one and the components I listed are also collecting dust, as I don't homebrew.
Russ, KA1GIP, 467-3425

Hampden County Radio Assn
WA1CQF, Gent Lam, Editor
38 Porter St.
Springfield, Mass. 01104



April 1983 Zero Beat

ACIT E 10/83