

ZERO BEAT

HAMPDEN COUNTY RADIO ASSOCIATION, INC

JUNE 82

OSL BUREAU

SPRINGFIELD, MASS

ARRL AFFILIATED, 34th YEAR

THE HAMPDEN COUNTY RADIO ASS'N. INC.

SPRINGFIELD, MASSACHUSETTS

ANNUAL BANQUET, FRIDAY JUNE 4th

DOOR PRIZES

ELECTION OF OFFICERS

Dinner 7:00 pm

15 Second Talk by WB1ETS!

"Ham of the Year" Award to be Presented!



Come and enjoy a sitdown dinner of Round Roast of Beef, tossed Salad, Potato, butter and rolls, and dessert for only \$7.00 each.

Contact Jack Dumont, K1ZQB for tickets now so you won't be disappointed! (or Ron, WB1ETS at 593-9852)

FIELD DAY '82

We're all set for a fun time up at the Middlefield Fair grounds again. There will be a supper Saturday night, with the usual tall tales being swapped. Here's the list of bands that we need captains for:

160	cw/ssb	
80m	cw (W1TM)	ssb
40m	cw (W1ZKT)	ssb (W1CQF)
20m	cw	ssb
15m	cw	ssb
10	cw/ssb	
2m	cw/ssb	6m ssb
Novice station		other _____

If we have no other takers, you'll be able to sign up for as many bands as you want to. A band captain gets to provide a complete station with operators for FD, and is in charge of his operation. SEE YOU THERE!!!

SERVICE TO THE AMATEUR COMMUNITY

Have you ever wanted to buy a piece of used gear but you wern't sure of its condition?

Have you ever needed service on your equipment but didn't know where to get reliable help?

Now there is an easy answer to your problem.

Two of our own members have decided to band together to provide a service to the amateur community. Gent, WAlCQF, and Paul, WAlZKT, have joined together to form a partnership that will provide sales of used equipment with a guarantee and equipment service at reasonable rates. Gent and Paul will also distribute the complete line of Austin Custom Antennas in this area.

If you have equipment you want to sell or are looking for used equipment or repairs, contact Gent at 737-9426 or Paul at 568-8291 for more information.

TIDBITS

NlBA, WBlDTZ, KlBE, WAlPGT, and NlFJ all belong to the Northampton computer club...WlJP, WBlABF out enjoying their sailboat...KAlEBU has a new TA33jr up...KAlBNN gearing up for general class... WlQWJ working on a linear amp for the handbook...KAlAPR has his own-design antenna working on six...XYL of WlKK is a collector of "Queen Elizabeth II" memorabilia...NOBARC will sponsor a one day flea market this summer...WAlZEV getting married, congrats, Steve...

The following people were nominated for the HCRA Ham of the YEAR:
WlTM ACIT KlBE WAlRWU WlMM WBlETS

This will be awarded at the June fourth banquet!

RESULTS: JANUARY VHF SWEEPSTAKES

BELIEVE IT!!!!!! HCRA NUMERO UNO IN THE COUNTRY!!!!!!

New club record score of*****282,094***** Points!
45 entries
Top club Single op- WBlFVS, Tom, one of our new members!!

NUMBER ONE MULTI-OP IN THE COUNTRY! NUMBER ONE IN NEW ENGLAND!
SETTER OF A NEW ALL TIME HIGH DIVISION SCORE!

OUR VERY OWN !!!!!!!WAlRWU!!!!!!

CONGRATULATIONS TO ONE AND ALL AND MANY THANKS FOR THE GREAT JOB!!



American Scene

In the Caribbean: Hams and Goats

The only possible landing at the island is not a landing in the usual sense of the word but a place where a boat can be held long enough for men to jump on a wire rope ladder that dangles about 40 ft. from a cantilever catwalk. There is constant danger of the boat being broached by the incoming swell, being smashed against the cliff, being caught and crushed under the cliff or being engulfed by the receding backwash.

—U.S. Coast Guard Warning

That hint of danger had not dissuaded the nine Americans, most of them normally sedentary landlubbers, from boarding the sturdy 48-ft. fishing trawler *Gabriella* in Kingston, Jamaica, and heading into the windswept Caribbean on a stomach-churning 124-mile, 15-hour voyage to U.S.-owned Navassa Island, 30 miles west of Haiti. Unaccountably cheerful through the stormy night, the five-man Jamaican crew and the boat's Kingston owner, Gilbert Thompson ("I couldn't trust the responsibility of this trip to just the crew"), kept the craft on course toward its tiny target: a flat-topped limestone rock merely one mile wide and two miles long, with sheer cliffs plunging to the sea. And as the deck of the *Gabriella* heaved in the 10-ft. waves, so too did many of the Americans.

Why were they spending precious vacation time to live for a week on a hot, deserted pile of boulders and brush? All were amateur radio operators, and each was pursuing the arcane joys of one of that burgeoning hobby's most popular specialties. It is called DXing, meaning long-distance communications. The obsessive goal of diehard DXers is to make at least one contact with each of the 318 "countries" recognized by hams around the world. Under criteria established by the American Radio Relay League, the largest ham organization, Navassa qualifies as one such country because it is more than 225 miles from its governing mainland. But no ham can talk to Navassa unless other amateurs go there to put it on the air. That was the aim of this "DXpedition."

Approaching the island after dawn, the intrepid hams quickly discovered that the Coast Guard's warning had been apt. The wire ladder was there, all right, but the backwash was violent. Transporting gear, including 50 boxes of electronic equipment, three rotatable-beam antennas, two gasoline-powered generators weighing about 150 lbs. each, plus assorted 20-ft.-long steel pipes, bamboo poles, 250-lb. gasoline drums, kegs of drinking water and a week's food supply, looked impossible. Just getting to the

swaying ladder seemed daunting enough.

But the expedition's gruff leader was unfazed. John Ackley (call sign: KP2A) had made a fortune by selling his New Jersey computer firm in 1976, then founded the tax-exempt International DX Foundation to promote worldwide good will by sponsoring such DXpeditions. His foundation had supplied all of the radio gear, while the trip's cost (more than \$10,000) was split among the nine operators. Ackley set off with two crewmen in a 12-ft. dinghy, powered by a 25-h.p. outboard motor. One crewman skillfully maneuvered the tiny craft through the heavy seas to put Ackley at the ladder on the crest of a wave. He scrambled up the

16 suspended steps—and the ladder held.

For the next eight hours, the precarious unloading of the *Gabriella* by slow trips in the pitching dinghy continued, with one wholly unexpected assist. As the hams began setting up the first of four operating sites on a plateau some 100 ft. above the water (but 200 ft. beneath the island's flat top), they heard a warning horn blast from the *Gabriella*, then a shout on the short-range radio: "Two men are climbing the ladder."

Two frail-looking wooden fishing boats had rounded a rocky point, and their seven occupants were coming ashore. Were they Haitians determined to assert their nation's unsupported, 124-year-old claim to the island? Perhaps an advance party of pirates known to seize foreign small craft in the area? No. They pointed to the gear, then to the block and tackle hoisting it and finally to themselves. Stu Greene (WA2MOE), a lawyer

from Peekskill, N.Y., managed to bargain in fractured French. The visitors were from Haiti and would help unload the boat for \$20. The tenderfoot hams were amazed at how their helpers could toss a 75-lb. equipment box on one shoulder and stride barefoot over the sharp rocks to help set up the stations.

By nightfall the hams were on the air, and the strange ritual of DXing began. "This is KP2A-portable KP1," one of the operators said quietly into a microphone. That call signaled the DXpedition's presence on Navassa. Almost immediately occurred what hams call a pile-up. The whole ham world, it seemed, was shouting at Navassa on the same frequency, each foreign operator yelling his call letters phonetically. Apart from the roar of the numerous U.S. hams, the voices of Japanese amateurs were particularly prevalent, mingling in a hummingbird cacophony strange to the Western ear.

Each contact lasted fewer than ten seconds. Each was then logged by the hams on Navassa; when they returned to the mainland, they would send a QSL ("I acknowledge your transmission") card to each operator confirming the contact. The goal is to collect as many of these cards as possible. Some 200 enthusiasts have cards from all 318 "countries."

For six days, 24 hours a day, the rapid-fire transmissions continued. The island's plentiful goats, graceful V-winged birds and night-prowling rats must have been startled by the strange sounds breaking their normal silence: generators that putt-putted like suburban lawnmowers; American voices repeating over and over.

FOR SALE

FLESHER TERMINAL UNIT
FOR RTTY

MODEL TU170

\$150.00

CALL RON BEACHEMIN

593-9852

HAMPDEN COUNTY RADIO ASSOCIATION, INC.

Board of Directors and Officers for 1981-82

Ron Beauchemin WB1ETS - President . . . 593-9852
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HAMPDEN COUNTY REPEATER ASSOCIATION

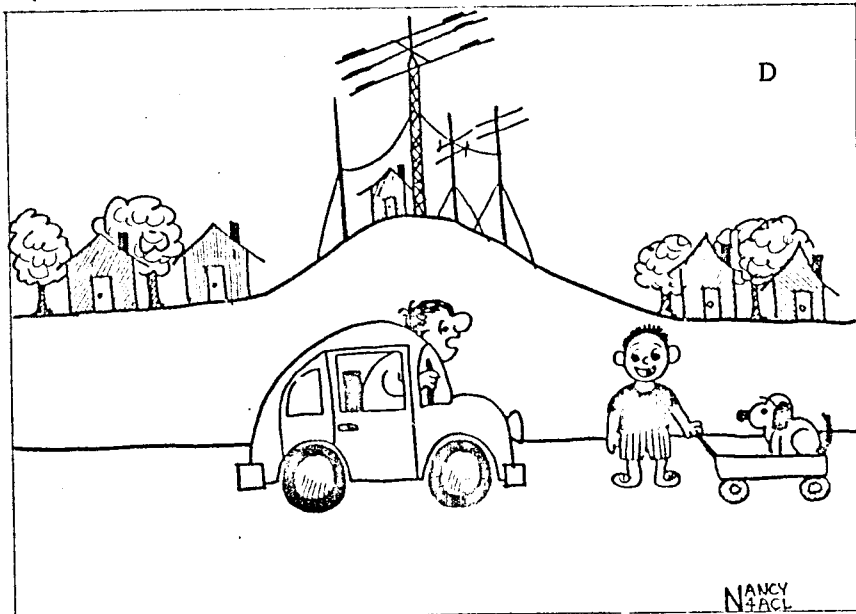
Well, gang, we've had quite a bit of feedback on this! (No one showed up with a paper bag of money yet, though...) Several ideas and questions were raised: An autoalarm feature operates on a frequency different from the repeater. For example, if it was on 146.52 direct, you'd leave your scanner's squelch up high, and when an alarm was sounded, it would transmit an "alert" tone at 1,000 watts, breaking the squelch. Then you'd tune to the repeater to see what's happening.

Another member wanted to know the difference between phone patch and autopatch. Autopatch is access to the phone system through a touchtone pad, usually when you're mobile. Phonepatch is access to the repeater through the phone line. (It would also require an ID to access) The bulletin board would record messages and announcements either over the air or on the phoneline. Imagine looking for someone, telling the bulletin board, and when the other ham came on, the BB would deliver your message. You have to keep in mind that everyone has an individual number, so the computer "knows" who's using the repeater.

The weather and time would just put that info on the repeater whenever you punched in the call out code. i.e. "1,2,#" for wx, "3,#" for time. All this and more would be possible by using a microcomputer to run the machine. ASCII, RTTY, code training, ATV,, computer forums, etc would be available on the repeater.

Two members complained about the "closed machine" idea. Perhaps we could make it "open" on weekends, then if the weirdos showed up, shut it off to open access. We could also set it up so that you could talk to your friends by making one access good for say, ten minutes, that way non-members could use it as long as you were there. However, closed repeaters are the wave of the future!

P.S. Leave the paper bag of money on my backdoor step!

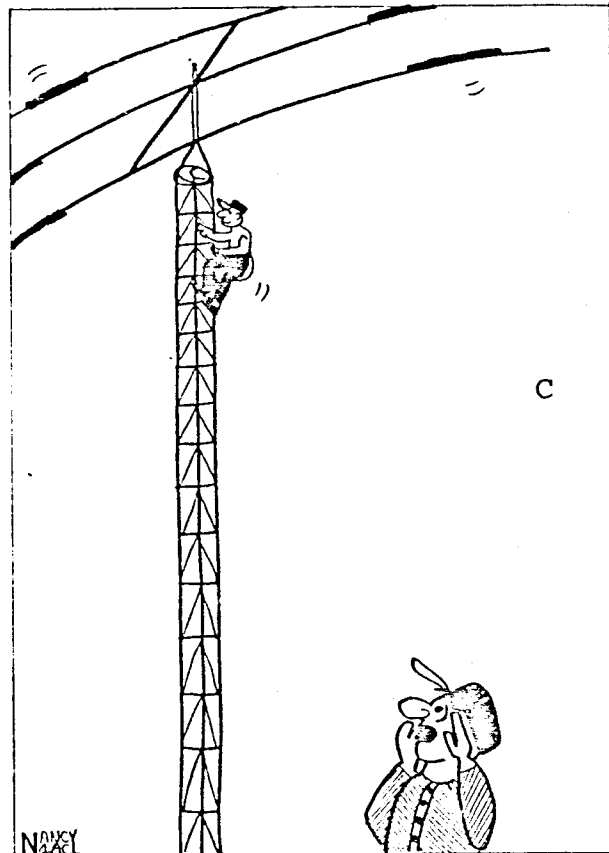


"Hey kid! Would you happen to know where my ham friend lives?"

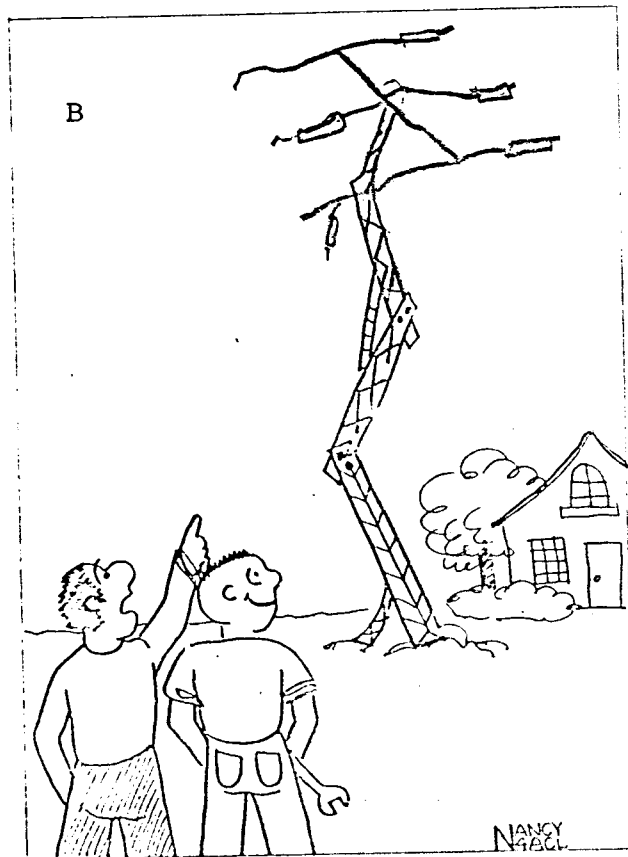
QUIZ: Match the description with the cartoon!

1. W1KK's QTH _____
2. N1CQ's DX special _____
3. WB1ETS' tower _____
4. HCRA Field Day _____

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"If your insurance agent knew you were a DX-er, he'd cancel your policy!"



"So you put up your tower by yourself, Ed?"

SUBSCRIPTION TELEVISION EDUCATION MANUAL- BOOK REVIEW

The SUBSCRIPTION TELEVISION EDUCATION MANUAL provides a comprehensive overview of the subscription television industry and practices. The manual includes the following sections:

THE FCC, STV AND OTHER LAWS: Overview of rules and regulations. It is very important that individuals understand and read this section before any attempt to build, buy, or use any decoder or unauthorized subscription television receiving device. This section is presented to help you stay within the scope and intent of the law.

STV SIGNAL TRANSMISSION: Methods of delivering a subscription television signal to your television receiver. Examples of MDS, ITFS, UHF, and cable services are defined and analyzed.

STV SIGNAL CAPTURE: How to capture the scrambled signal for educational analysis and experimental decoding. Detailed circuits illustrate theory and practice. A 63 MHz IF AMP WITH VIDEO DETECTOR circuit is presented to show an actual example of this process.

ENCODING TECHNIQUES - OVERVIEW: Two popular subscription television encoding methods are analyzed. Video and sound scrambling systems are identified for both the sine wave and pulse encoding techniques. The SINE WAVE SYNC SUPPRESSION method (the DAK system) uses a 15.750 KHz sine wave to suppress or cancel the horizontal sync pulse. The GATED PULSE system (used in some cases by Magnavox and Jerrold) uses a pulse train "gated" or keyed to the sync pulses to scramble the video. The audio signal may be hidden on a subcarrier in the sound channel. Both systems are explored in depth.

DECODING SINE WAVE ENCODED TRANSMISSIONS: Analysis, theory, and circuits used to decode video and sound components of a sine wave encoded signal are presented. An example of a SINE WAVE ACTIVE BANDPASS FILTER and SCA DECODER circuits are presented for analysis.

DECODING PULSE ENCODED TRANSMISSIONS: Analysis, theory, and circuits used to decode video and sound components of a pulse encoded transmission are presented. FM STEREO DEMODULATOR and MULTIVIBRATOR circuits are illustrated as common circuit functions in educational analysis of gated pulse encoded transmissions.

DECODING SYSTEMS: How the various functional areas of an educational decoding system fit together.

COMPONENT DEALERS: List of companies selling decoders, decoder kits, or components which may be adapted for educational use. You might use this list as a starting point in further investigation and education of scrambled television technology.

You will notice that the above sections contain no "exotic" or "secret" circuits or techniques. This is due to the fact that most of the circuits used to decode scrambled television signals have their basis in common signal processing technology. Our educational manual explores these circuits and techniques and illustrates common technology applications in scrambled television theory and practice. Are you interested in learning more about this fascinating area of electronics?

ABEX

ORDER FROM:

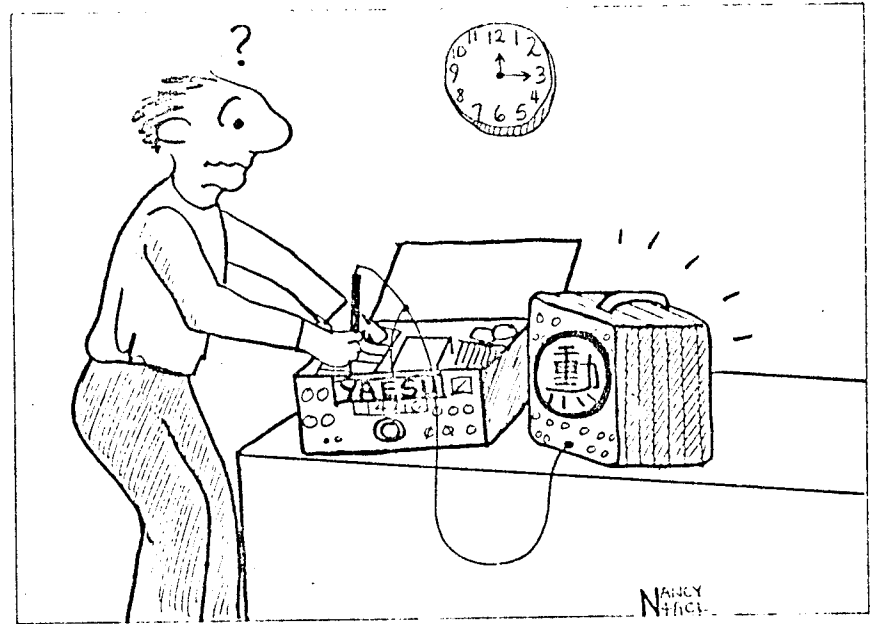
P.O. BOX 26601
SAN FRANCISCO, CA 94126-6601

\$14.95

<u>COMPANY</u>	<u>PRODUCTS</u>
SCIENCE WORKSHOP P.O. Box 393 Bethpage, NY 11714	Offers "hard to find" parts for decoders including UHF tuners and TV IF strip. Speciality is mail order electronics.
GW ELECTRONICS P.O. Box 688 Greenwood, IN 46142	MDS microwave receiving antennas and down converters. Also offers completed descramblers for UHF TV stations. Send details of your descrambling needs when requesting information.
COLLINS ELECTRONICS P.O. Box 6424 San Bernardino, CA 92408	Plans and kits for sine wave modulated UHF decoders. Other plans and kits are also available.
C & D COMPANY P.O. Box 26 Hudsonville, MI 49426	Cable TV product line includes frequency converters. A gated pulse descrambler for cable use is offered in plans and kit form.
JOE P.O. Box 61 Cumberland, RI 02864	Plans and circuit boards for gated pulse descrambling systems.
ETCO P.O. Box 762 Plattsburgh, NY 12901	Cable TV frequency converter offered in large electronic catalog. Also a source for UHF tuners and misc parts.
SOUTH FLORIDA SATELLITE TECHNOLOGY CORP. P.O. Box 523153 Miami, FL 33152	Microwave receiving equipment and systems. Covers frequencies from 2000 MC to 2500 MC. This would include MDS, ITFS, amateur and limited satellite downlink frequencies.
MICRO MART 552 Summit Ave. Westfield, NJ 07090	Gated pulse video and audio descramblers for inside the television. Output may be used to drive another television.
LAB-TRONICS Box 171 Rogers, MN 55374	Microwave TV downconverters, preamps, parabolic dish antennas for the 2 GHz band. Write for information.
SCR ELECTRONICS 9533 Valley View St. Cypress, CA 90350	UHF sine wave decoder kits, MDS antenna, downconverter kits available. Parts also available. Will not currently ship to any California address.
QUEST ELECTRONICS P.O. Box 1722 Costa Mesa, CA 92627	Decoder circuit designs, Parts suppliers, and technical advice.
MARBEL ELECTRONICS 32 Sea Street North Weymouth, MA 02191	Microwave antenna kits for weather and TV satellite transmissions. 1.7 GHz and 4 GHz feed and mounting systems are available.
SATELLITE TELEVISION RD 3 Box 140 Oxford, NY 13830	Satellite television information. Good overview of satellite television is available for \$4.00. Contains list of satellite receiver sources.
PETER-SCHMITT ENTERPRISES P.O. Box 07071 Milwaukee, Wis. 53205	Sells electronic designs. An RF amplifier design is offered as part of a wide ranging group of interesting plans.
DON BRITTON ENTERPRISES PO Drawer G Waikiki, Hawaii 96815	Plans for video sync restorers as well as MDS and satellite antenna, LNA, down-converter plans. Provides "engineering assistance" with plans.

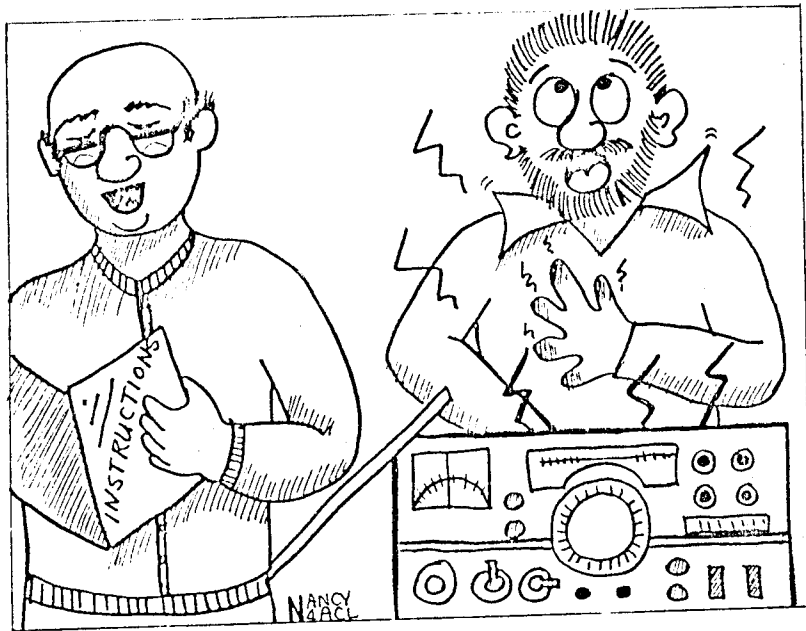


"Do you finish repairs someone else has already started?"

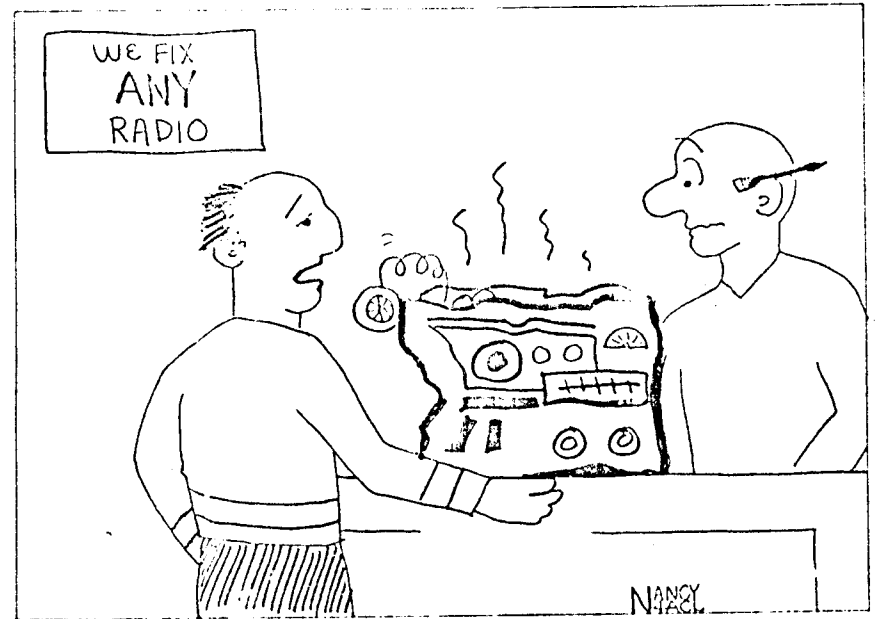


CARTOON LOOK AT RADIO REPAIR

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"...but before adjusting that pot, be sure to de-energize the power capacitors..."



"I used to fix it by tapping on it..."

HAM GEAR INSURANCE HIGHLIGHTS

The ARRL is now offering an insurance package to its members to protect your ham gear against fire, theft or other losses. The package does *not* include antenna systems, but it covers your rig and accessories whether at home, in your car, or even at a Field Day site. ARRL officials describe the package as being better coverage at lower cost than others currently on the market. The plan was designed specifically for "Hams" and its success is directly related to the number of members that participate.

Most ARRL members have already received a brochure describing the insurance package, but for your convenience, we will reprint key parts of it here.

PERILS COVERED:

This policy insures against direct physical loss or damage caused by:

- (a) Fire, lightning;
- (b) Tornado, cyclone, windstorm, hurricane, hail;
- (c) Explosion;
- (d) Collision of the transporting vehicle with any other vehicle or object, it being understood that the Company shall not be liable for loss or damage caused by the load or any portion thereof coming in contact with any other object unless the transporting vehicle also collides with such object, coupling of cars not to be deemed collision;
- (e) Overturning or upset of the transporting vehicle;
- (f) Collapse of bridges, trestles, culverts, elevated roadways, manhole covers and roadway drain basins;
- (g) Riot, riot attending a strike, and civil commotion;
- (h) Aircraft or by object falling therefrom;
- (i) Smoke (meaning only smoke due to a sudden, unusual and faulty operation of any heating or cooking unit, only when such unit is connected to a chimney by a smoke pipe, and while in or on the premises described in this policy, excluding, however, smoke from fireplaces or industrial apparatus);
- (j) Earthquake, volcanic eruption, subterranean disturbance or other convulsion of nature;
- (k) Stranding, sinking, burning or collision of vessels, including general average and salvage charges incurred;
- (l) Theft.

CLAIM SETTLEMENT BASIS:

Covered claims will be settled on a "replacement cost" or equivalent basis. Equipment is *not* depreciated at claim settlement time as is with most homeowners coverage.

DEDUCTIBLE:

Ten Percent (10%) of the insured value, subject to a \$50.00 minimum per loss. Deductible does *NOT* apply if homeowners deductible is paid.

PREMIUM COST:

\$1.00 per \$100.00 of replacement value. (Minimum premium is \$10.00, regardless of coverage in amounts less than \$1000.00 replacement cost.)

POLICY YEAR:

Policy will become effective on the first day of the month following receipt of the premium and application. (Please allow at least sixty (60) days from the date the application and check are mailed for the policy to be issued.)

All coverages and provisions under this policy are subject to the usual and customary exclusions.

QSL CARDS

ITS THAT TIME AGAIN
H.C.R.A. BANQUET
FRIDAY JUNE 4, 1982
FEEDING HILLS CONGREGATIONAL CHURCH
SIT DOWN DINNER 7:00 pm

Family style roast beef dinner
with tossed salad, vegetable, potato
beverage & desert.

\$7.00 per person

tickets available at the coffee
bar during the flea market
and from officers and board members

by mail send s.a.s.e. to

Ron Beauchemin
56 Acrebrook DR.
Chicopee, Mass. 01020

ALL TICKETS MUST BE PURCHASED
BY MAY 26

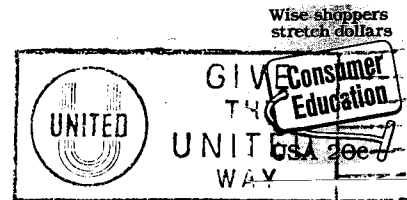
AS LOW AS \$22.45 FOR 1,000 !!!
FOR MORE INFO. CALL 413-736-8184

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FEATURING OUR FAMED "SUDDEN
SERVICE"

HAMPDEN COUNTY RADIO ASSOCIATION INC.
RAYMOND A. MORIN , EDITOR
97 BROOKHAVEN DRIVE
EAST LONGMEADOW, MASSACHUSTTS 01028



JUNE 1982 ZERO BEAT

ACIT 10/82