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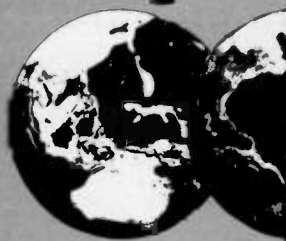
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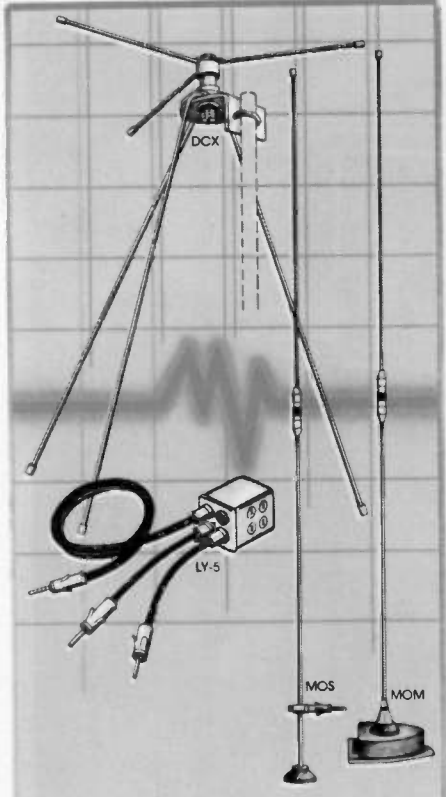
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CIRCLE 8 ON READER SERVICE CARD

# S9 HOBBY RADIO

AMERICA'S OLDEST AND LARGEST CB MAGAZINE

VOLUME 21 NUMBER 11

NOVEMBER 1981

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Cover photo courtesy of Audrey, Trenton, N.J.

**WARNING:** INDIVIDUALS INSTALLING CB OR OTHER ANTENNAS ON THEIR HOMES SHOULD BE CAUTIONED THAT CONTACT WITH POWER LINES MAY CAUSE SERIOUS INJURY OR DEATH. READERS ARE ADVISED TO HANDLE ANTENNA INSTALLATIONS WITH GREAT CARE, AND TO WEAR INSULATED BOOTS AND RUBBER GLOVES WHILE WORKING NEAR POWER LINES.

# S9-CB NEWSWIRE

YOUR CB NEWSPAPER

NOVEMBER 1981

## "13" IS UNLUCKY FOR WASHINGTON D.C. MAN

A would-be thief got what for him was a nasty surprise when he tangled with a 13-member Indiana family visiting relatives in the Washington area.

The William Sweet family of Indianapolis parked their 1976 Chevrolet Impala station wagon on 18th Street in Crystal City and took the Metro into the District for a day of sightseeing. When they returned, they found an addition to their car—a man in the driver's seat who allegedly was unscrewing a CB radio from the dashboard.

"We were coming back to our car and the kids ran ahead and said, 'Somebody is in our car,'" said Judith Barreda of Alexandria, a cousin the family was visiting.

The 13-person group quickly surrounded the car, surprising the man, and politely asked what he was doing in their car.

Family members said the man, who police identified as Richard Gerald, 27, appeared stunned but replied, "I was just using the lighter to light my cigarette."

Seeing no cigarette, William Sweet and his oldest son, Gary, motioned to the man to get out of the car. With the family providing a buttress, the two men pinned the suspect against the car, while two family members went to call the police and get a security guard.

When Arlington County police arrived, they found another CB radio in the shoulder bag the suspect was carrying and the screw from that radio on the dashboard of the station wagon.

"He was real happy to get away from that family," said the arresting officer, Frank F. Carver, of the suspect.

"The Sweets did a real good job."

Gerald was booked on charges of attempted grand larceny and possession of burglar's tools. He was being held on a \$3,000 bond.

Meanwhile, the Sweets—all 13 of them—have a different sort of memory to bring home from their trip to the Washington area. Said 14-year-old Tammy Sweet, "My friends would never believe this, so I took pictures of the whole thing."

## FLORIDA YOUTH KILLED BY LIGHTNING

A 15-year-old boy aboard a fishing boat off Elliott Key was struck by lightning and killed as thunderstorms lashed southern Florida.

Dade Public Safety Department officer J. Courtney identified the dead youth as Douglas Grace of Miami. Police said he was holding onto the metal steering wheel of the open-decked boat when lightning struck the craft's radio antenna, melting it and killing the youth.

## SMOKEY REPORT BRINGS FINE

The final score: Bears—1, breakers—0.

That is the outcome in Harry D. Jamieson's bad news bear tale about how the long arm of the law reeled him in for giving "bear reports"—police sightings—over his CB.

Jamieson, of Newton Falls, Ohio, was fined \$500 and sentenced to 30 days in jail by Municipal Court Judge Murray F. Hallett.

Of that fine, \$350 was suspended.

The 30-day jail sentence was suspended on the condition that Jamieson not commit a similar offense within a year.

A charge of obstructing official business was dismissed, but Jamieson was fined \$50 and court costs for the failure-to-comply charge.

Jamieson was arrested on charges of obstructing justice, obstructing official business and failure to comply with the orders of a police officer.

Police officials said that Jamieson was notifying other drivers that police

officers were using radar equipment to nab speeding drivers and that he refused to pull off to the side of the road.

Jamieson was on his way to work as a computer systems analyst when he was followed by a city police cruiser and the arrests were made.

Jamieson withdrew not guilty pleas that he had entered on all of the charges in Newton Falls Municipal Court.

He vowed originally that he would fight his case in court and before City Council.

He also contacted club officials and city councilmen following his arrest.

And he said that he would complain to Council about the city ordinances under which he was charged.

(Jamieson may have been unaware that local police do not have the authority to regulate the information which may and may not be sent out over an FCC licensed radio transmitter—Editor.)

## OPEN LETTER TO ALL CONCERNED CB'ERS

*From Harry B. La Rocca  
Tempe, Arizona*

Dear CB'ers,

The best defense is a good offense. If you want to defend a position or a goal, the best possible defense is to keep the opposition's offense off the field. 30 million CB'ers verses the FCC, the odds on favorite should be the CB'ers; however, so far the favorites have shown little or no offense and as a result of this decided lack of consolidated, centralized action, the CB'ers are literally being "battered" on all fronts. What courses of actions or options do 30 million citizens have in order to begin to mount a logical offense? First we must carefully and clearly define the immediate goals that we desire to attain. By doing this we begin to consolidate our position and establish a base from which we can start to operate. Generally speaking most CB'ers desire to: (1) exercise the right, a privilege we would cherish, to speak over the radio to anyone in this world. In other words, no limit on distance. (2) have more frequency space to operate in. 40 more channels would insure the most economical and efficient utilization of this frequency space. (3) operate with more power, not thousands of watts like the Hams, nor only 4 watts as presently authorized, but somewhere around 100 watts which would provide reasonably reliable communications. (4) have rules and regulations that reflect a common sense approach to CB radio as a hobby. It is not unusual nor abnormal to change conceptual rules and regulations to meet present day requirements; however, it is abnormal to ignore and stubbornly resist this change for years and years, especially considering numerically that it involves some 20 to 30 million people.

Our approach to obtain these goals should be carefully planned and use all options available to us because the avowed position of the FCC, as related to me by a Field Office Supervisor, is to seek heavy fines and imprisonment for CB'ers who violate the FCC's rules and regulations. Their offense is already in full swing. Thousands and thousands have lost their licenses, many have lost their equipment and some have been

sentenced to jail. The FCC would like us to believe that the reason they vigorously enforce the Rules and Regulations (outside of just doing their job) is because they hope to drive 5 million off-frequency operators back down into the legal 40 channel area; however, the real, real, reason is simply self preservation of the Bureau. If they were to authorize 40 more channels, more power and long distance talking, they would no longer have a large ripe field from which they could reap huge statistical gains each year. Statistically, without gains each year (more violators caught, more convictions of violators) the FCC not only would be unable to justify their present budget, but in no way could they ask for additional funds every year, and this is the name of the game for bureaucratic self preservation.

It appears to me the most effective way to get the attention of a bureau is through their pocketbook (budget) by congressional action or through the President by executive order. If you ignore a Presidential order heads will roll, and on the other hand if you fail to respond favorably to congress you might well become the subject of congressional hearings, and have your budget cut. These obviously would be the most drastic actions that could take place relative to this problem, and our leaders would probably choose a lesser but just as effective course of action. In order for us to attain the goals we have set forth: additional frequency space, unlimited transmission distance, a reasonable amount of power, and logical common sense rules and regulations, we must concentrate all of our weight on two focal points—the office of the President and the Congress (Senators and Representatives).

For what reason would our elected leaders be likely to take action on our behalf? There are quite a few real good reasons why they would be inclined to help us: the government could save millions of dollars, stop a bureau from needlessly violating citizens' civil rights, and satisfy a logical, legal request of some 20 to 30 million citizens.

Today, as we all know, the economic climate in Washington, D.C., is especially receptive to plans that will eliminate wasteful bureaucratic spending and save money. It would take a one time expenditure of several hundred thousand dollars to move the few government agencies, that have frequency assignments in the upper 40's, to another band. By assigning these frequencies to the CB Radio Service the laborious, self imposed work load of the FCC to chase down and prosecute some 5 million "outbanders" would be eliminated, thus saving millions of dollars each year. The addition of 40 channels would stimulate the CB industry in manufacturing, service and sales, thus helping our economy.

If we are to win our objectives and goals so that we can operate our radios in a normal and relaxed manner, without the constant fear of "Uncle Charlie" knocking at the door, we must act now. If you are a serious CB operator, involved in CB radio as a hobby, take the time now to clip this letter out, sign it, and send it to your Representative, Senator and the President. This is what our elected leaders want, our true feelings on an issue, and if only half of the CB'ers out there, say 10 or 15 million, respond we might have a chance to keep our opponent off the field for years, and years, and years...

A genuinely concerned CB'er,  
Harry B. LaRocca

P.S. A show of strength will insure our victory. Make three copies, address your letters to:

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White House  
Washington, D.C. 20500

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Representatives Ofc. Bldg.  
Washington, D.C. 20515

Senator \_\_\_\_\_  
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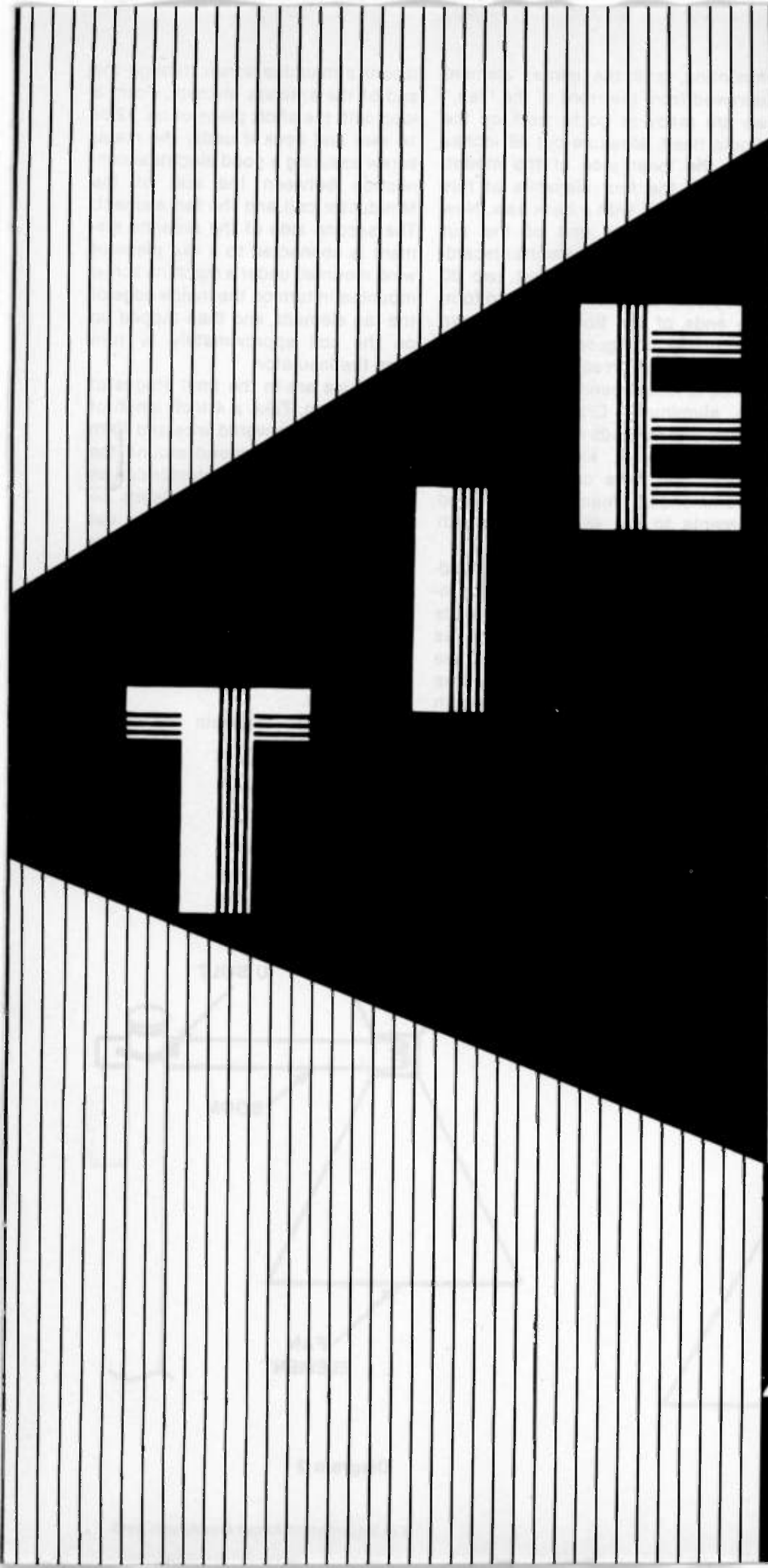
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If you are an apartment dwelling CB'er, or you live in an area where any outside antenna, even the standard ground plane or vertical half wave, cause neighbors to point at your house with scorn and mutter "there's the thing that messes up my television," you have problems!

If you aren't causing TVI, but the neighbors still accuse you of devilry because of your antenna, here is just the ticket for you. The Bow-Tie loaded dipole antenna is designed to look like a TV antenna (at least the standard TV viewer won't notice the difference) and it is in fact constructed from a standard TV antenna of a type familiar to every suburbanite.

The Bow-Tie is a 'loaded' antenna. In other words it is not full size. In fact it is far from full size. To make up for its 'shortened condition' the antenna is coil loaded at the center. Except for the loading coil, it may be considered to be a standard dipole, with one minor modification. Its fan elements tend to broadband it, thereby giving you a flatter (lower) SWR across the band.

#### CONSTRUCTION

The parts list for the Bow-Tie CB antenna is listed below. The total cost will be small, with the major expense being the conical or similar "basic" TV antenna. It should not cost you over \$20, and the odds are very good you can buy it for considerably less or get it free from the junk pile of a TV shop. In the absence of a suitable TV antenna, you can build your own fan shaped elements from scrap aluminum.

By **Bill McGuire,**  
**SSB-3A777**

Diagram 1 shows the actual electrical design of the CB Bow-Tie. Note this is not a folded dipole antenna but actually a standard dipole, with a loading coil in the center. The antenna is coupled to the coaxial feedline with three turns of no. 14 plastic covered wire. Be certain you use insulation covered wire here—bare wire will short out to the B&W link, causing some pretty severe problems!

#### FIRST

Cut the rear element (reflector) from the conical boom. If your particular conical happens to have triple elements on each side of the "fan," remove the center element. Now re-drill the boom for the U-Clamp on the conical two inches down from the end from which you have removed the TV reflector element, so the holes line up as shown in figure 2. You will be rotating the boom 90 degrees, as shown, so as to vertically polarize the fan elements as figure 2 shows. The boom, as you know, is drilled so as to mount the antenna in the horizontal pattern. This you have just changed.

With the boom re-drilled for vertical

mounting, and the center element removed from the front of the "fan," we are ready to go to work on the dipole itself. Measure out 48 inches from the inner side of the mount. Chop off the four elements at this point on each, with a hack saw. Now flatten the outer end of the cut elements for 1 inch. From the discarded aluminum elements cut two 30 inch pieces and fashion them to form the ends of the Bow-Tie as shown electrically in figure 1. Flatten the ends for 1 inch on each 30 inch piece (a vise is recommended for flattening the aluminum). Drill the 30 inch pieces and the ends of the 48 inch fan elements for a size of machine screws you have on hand. 6-32 is recommended. Mount the 30 inch end elements to the 48 inch fans with these screws.

Now mount the two 1-inch stand-off insulators 3 inches apart on the insulating board. The Miniductor coil is mounted on these insulators as photo 2 shows. One end of the Miniductor is connected to one of the antenna sections with a short length of bare no. 12 or 14 wire. Drill and

mount a machine screw through the end of the antenna element. Form a loop with the short piece of no. 12 or 14 wire and hook it under the metal screw assuring a good electrical connection between the end of the Miniductor coil and the fan element. The second side of the antenna element is connected to a like piece of wire, mounted under a machine screw mounted in turn on the inside edge of the fan element, and then tapped up on the coil approximately 1/2 turn from the insulator.

Now we are in the final stages of construction. Take a 4 inch length of No. 14 plastic covered wire and form a three turn link wound around the center of the B&W Miniductor coil as photo 2 shows. Bring the leads on each end of the no. 4 wire link out through the back side of the insulator board to a two-terminal tie-strip mounted there. Solder one side to each of the two terminals, in turn soldering the shield on your R6-58/U or R6-8/U coax to one side and the center conductor of the coax to the second side.

In order to maintain the center

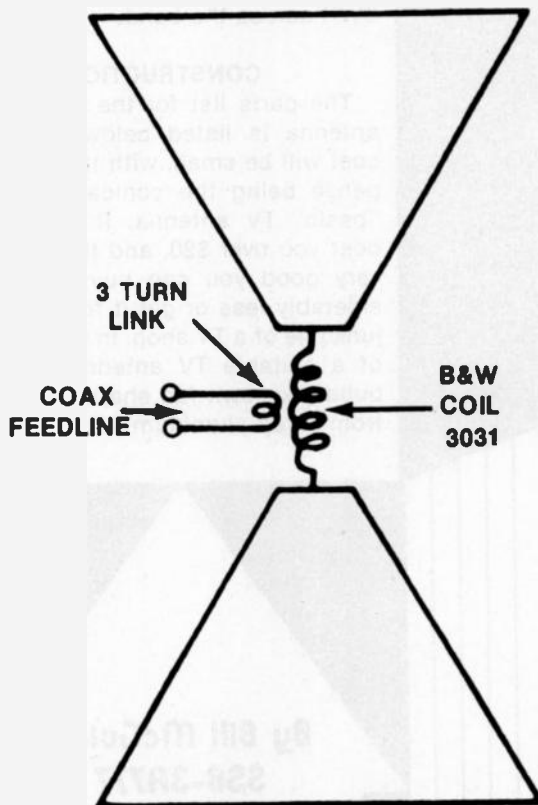


Diagram 1

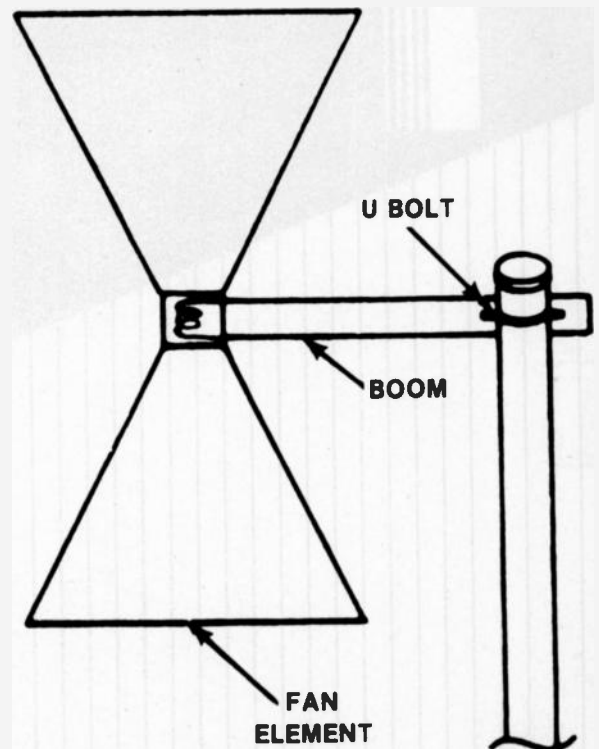


Diagram 2

position of the no. 14 wire link on the Miniductor coil, take a few drops of good grade rubber cement and make your connections secure.

**TUNE-UP**

Because there will be some variations in every system, a method of tuning for *minimum* SWR (standing wave ratio) is suggested. Three factors will determine the match to your antenna. The position of the link, the number of turns in the link, and the position of the tap on the Miniductor. It is suggested that prior to coating the antenna with Krylon, an SWR meter which indicates both forward power and reflected power be inserted into the coaxial feedline at the transmitter. First try sliding the tap on the Miniductor coil back towards the insulator. It may be necessary to go all the way to the insulator itself to obtain best SWR. When you get the lowest SWR (reflected power) reading, solder the tap wire into place.

Now try reducing the number of turns in the link to two turns. As a last resort to bring SWR down, increase it to four.

None of this will be necessary if your SWR comes within the acceptance levels shown in chart number 1. This chart was worked up from two "CB Bow-Tie Antennas" constructed for testing. These SWR values are read thusly. The standing wave ratio is read vertically in the left hand column. The frequency (CB channels) on which the reading was made is shown along the bottom on the horizontal line.

**MOUNTING**

As with all antenna installations, take care not to attempt to mount this antenna at a location where it could possibly topple over into an electrical power line during or after installation. The shocking result of such contact could cause your immediate departure from the 27 MHz scene in a most devastating manner.

**Bow-Tie Parts List**

- 1—TV conical antenna or similar type
- 1—Barker and Williamson No. 3013 miniductor coil (12 turns No. 16, 1 inch diameter, 3 inches long) or equivalent.
- 2—ceramic stand-off insulators, 1 inch high.
- 1—2 terminal tie-point.
- Miscellaneous hook-up wire.

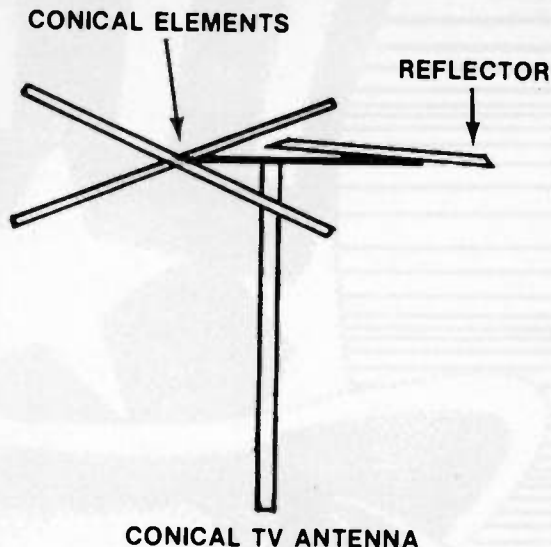
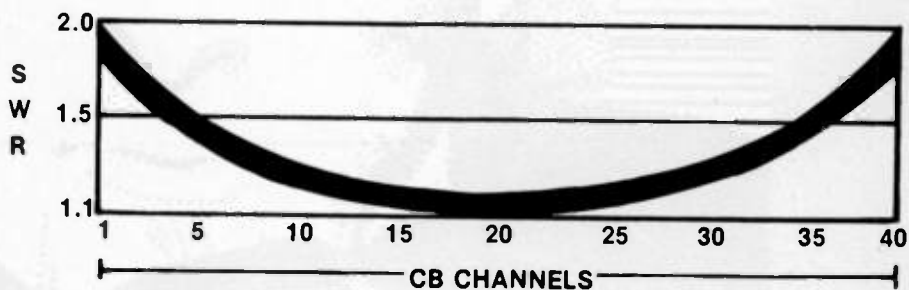
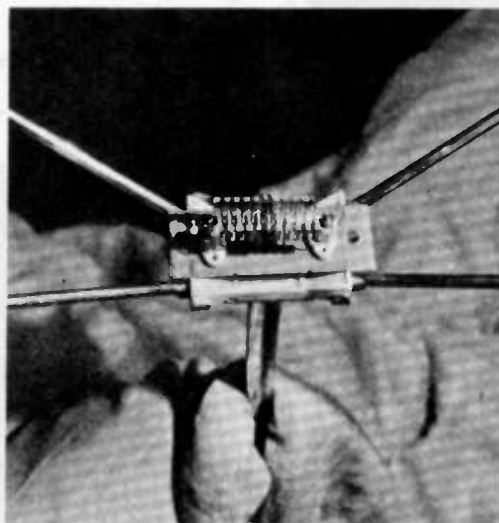


Diagram 3



BLACK AREA INDICATES ACCEPTABLE SWR

Chart 1



CLOSE UP— COIL MOUNTING



# New Book Lets YOU Tune In On Uncle Sam!



**W**ill make you into a Scanning Superman" is how *Popular Mechanics Magazine* described Tom Kneitel's "Top Secret Registry of U.S. Government Frequencies," and the new 4th Edition of this popular book is like giving Superman a heaping spoonful of Wheaties, spinach, and

vitamins! It's dynamite!

The new 4th Edition is housed in a handy 5½ by 8½ inch size, and it's 120 pages thick, containing about 50,000 listings (that's a lot of listings). In its basic premise, the book is a listing of the known scanner band (25 to 470 MHz) communications fre-

quencies of a myriad of federal agencies including the FBI, Secret Service, Customs Service, Bureau of Prisons, Alcohol Tobacco and Firearms, FCC, FAA, NASA, CIA, U.S. Marshal, Nuclear Regulatory Commission, ICC, Border Patrol and Immigration, the U.S. Mint, the White House Staff,



1) This bounty of confiscated communications equipment is shown here being checked out by FCC agents. The agency's communications are regularly monitored by communications enthusiasts via scanners.

Defense Civil Preparedness Agency, all military services and even agencies such as the Dept. of Agriculture, National Parks, and National Science Foundation. But, in actuality, it's much more than that.

Right from the start of the book, the introductory material, there are extensive changes. The chatty and informative intro has been expanded to include lots more information on equipment, scramblers and voice security (including a listing of special codewords used during many surveillance operations) and *all* of the information you need to become expert enough to not only follow what's going on in this exciting aspect of scanner operation, but to discover newly emerging frequencies! There's even a wonderful special section showing actual monitor reports of federal station activities taking place in the pioneer days, the 1930's!

The next section is an A-to-Z listing of major governmental installations, both military and civilian, showing all of their known operating frequencies between 30 and 470 MHz, and any information known about the uses of specific frequencies at those installations. This section includes highly



2) In the new 4th Edition of the "Top Secret" Registry, worldwide military aeronautical HF/SSB frequencies are included, along with other HF/SSB frequencies of interest. (USAF photo).



3) The new edition now lists many frequencies used by hurricane hunter aircraft, severe weather research and forecast laboratories, astronomical observatories, oceanographic research institutions, and other scientific institutions.

detailed information on the elusive UHF aero band (225 to 400 MHz) plus hi/low band scanner frequencies used by federal interests at various airports (*other* than the regular 108 to 136 MHz VHF aero band). Tom has now (for the first time) added in frequency data concerning private companies doing research, development, and production for the federal govern-

ment in fields such as communications, avionics, electronics, aerospace and missiles, ordinance (firearms, explosives, ammunition, missiles, etc.), ship building, plus all sorts of scientific labs doing work in nuclear energy, astronomy, marine research, etc. This section is so detailed and probing that it even includes the FBI Academy, the CIA



4) Surveillance and stake-out frequencies as well as the "lingo" often used for undercover operations is included in the new edition.



5) A special section in the new 4th Edition offers some fascinating excerpts concerning the monitoring of federal stations, as reported in radio hobby magazines of the 1930's! These pioneers were the roots of our present day scanner enthusiasm.

School, the Federal Law Enforcement Training Center—even the EPA's Auto Emission and Mileage test center! I mean, it's really got just about *everything!*

Next we get to the "Frequency Free For All," which is a frequency-by-frequency listing of the known channels used by agencies doing tactical work, espionage, surveillance, investigations, enforcement and intelligence gatherings, using "bugs." There are *thousands* of listings here. Oh well, they're listening to you, so why not "listen back"?

A listing of the FAA's UHF aero band Air Route Traffic Control frequencies is next, complete with remote transmitter locations for these stations which are used to com-

municate with military aircraft.

Next we get an updated look at the world's artificial satellites which are (or were) operating below 470 MHz. This section includes "uplink" and "downlink" frequencies for military and non-military "birds." Many of these frequencies are not made available to the public at this time by NASA.

The Federal Callbook section has been noticeably enlarged this time around with lots more information, especially for the FBI, Immigration, and Border Patrol, as well as other agencies. This time, too, there is detailed information on those coded "tactical" identifiers used by the FCC at their various field offices and monitoring stations!

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6) The bright red/white cover of the new 120-page 4th Edition is an eye-catcher, but what's inside is what you'll find to be most intriguing!

There are all sorts of other treats to be found throughout this book, including illustrations of a couple of dozen QSL cards obtained from federal stations. As a bonus, Tom tosses in more than 100 "Top Secret" SSB frequencies in the HF spectrum (that is, below 25 MHz) which can be tuned in on a communications receiver. These include those used by drug smugglers, (and the Customs and DEA aircraft patrols looking for them), the FBI, the FAA, NORAD, Hurricane Hunters, Air Force 1 (and other military units worldwide, including the AWACS "spy" planes), the Space Shuttle, National Weather Service, Disaster Radio Service, CAP, etc., etc.

Actually, it's a book which is chock full of information specifically designed to open up the wide world of governmental monitoring to the communications enthusiast. Tom offers countless tips and techniques, addresses of suppliers (covering everything from scramblers to descramblers, scanner clubs to security transceivers, preamplifiers to programmable scanner frequency expanding data sources, and more). There are specific brand names mentioned in the fields of antennas and scanners so you'll know where to get the best buys, even some sources for those rare UHF aero band receivers.

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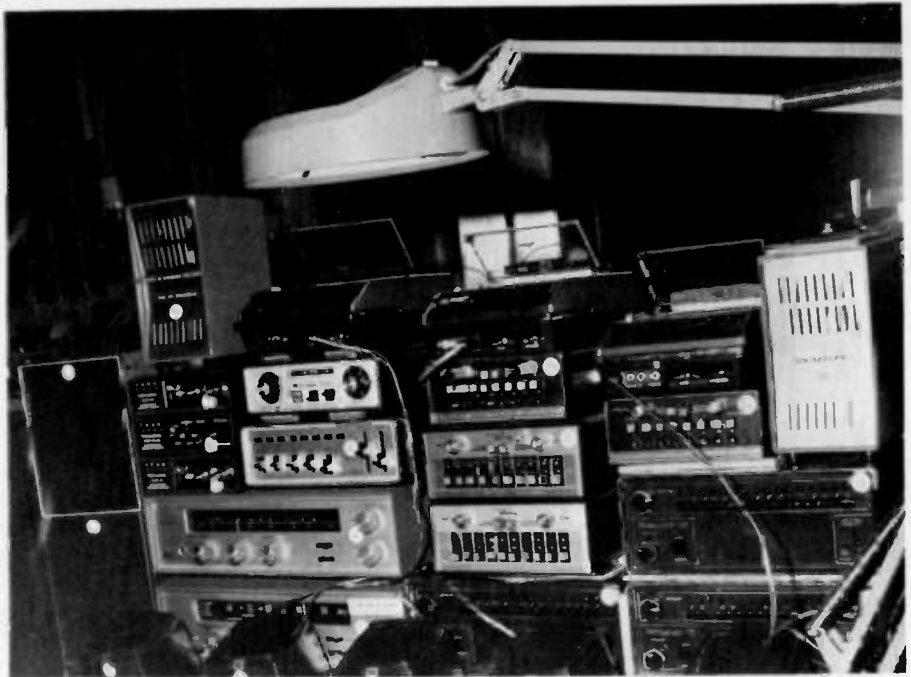
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7) Blow the dust off those scanners, guys! There are so many listings in this new edition that you won't have an open frequency to spare!



8) Like the man said. If you think that they're listening to you -- listen back!

marize all that this new edition has to offer, except to say that I can't imagine that anybody owning a scanner would or could imagine that they are getting the maximum use out of their equipment without this information. Did you, for instance, know that more than half of the communications frequencies lying within the bands covered by modern scanners are used for communications by federal government stations? The 4th Edition

of the "Top Secret" Registry of U.S. Government Radio Frequencies is your key to these communications.

This new 120 page book is now available at many communications and scanner stores, or may be obtained by mail at \$9.95 per copy (add \$1 if you want it sent to you by First Class Mail) from CRB Research, P.O. Box 56, Commack, N.Y. 11725. It's a sure winner!

—Reviewed by Rick Maslau, KNY2GL



# HELLO SKIPLAND!

By Craig, VX-42/Unit 342-X-ray/SSB-7042

Readers of this column are requested to let us know any overseas addresses they come across or hear on the air. We would also like to receive copies of any DX cards received by our readers so we can run them in the Hello Skipland Column. Since we don't wish to be responsible for the "safety" of any rare DX QSL's we request that readers send in copies (Xeroxes or other office type copying machine prints are fine) and not the original cards.

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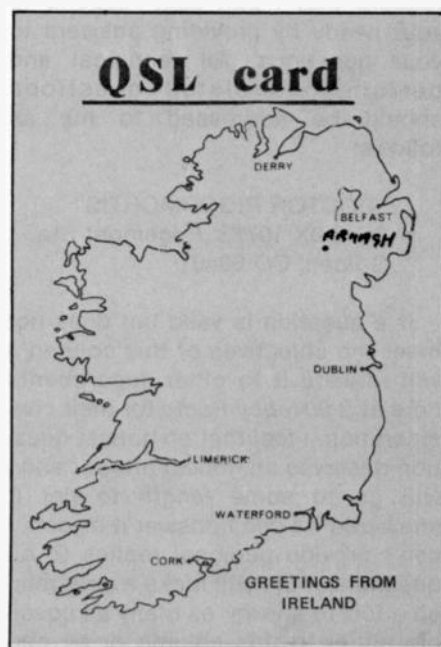
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# SHOP TALK

## On The Technical Scene of HOBBY RADIO

By Doctor Rigormortis, the Radio Doctor  
PO Box 10723, Edgemont Sta., Golden, CO 80401

Hi! Last month we explored certain weaknesses which can be found in virtually every type of radio station: CB, Freeband, Amateur, commercial, and even SWL and Monitor stations. We focused upon the various accessories often used "in line" between the radio and antenna. Examples of these accessories include wattmeter, frequency counter, monitor scope, coaxial (antenna) switcher, and SWR meter. We discussed the potential of any accessory connected in the coax line to steal a portion of the transmitted or received signal. A simple test was presented for any operator to determine the extent of any adverse effect caused by his station accessories.

This month we will probe a little deeper into *how much* station performance can be affected by accessories and other equipment connected in the signal path between transceiver and antenna.

First, a pause is needed to remind readers that I can best respond to your needs by providing answers to your questions. All technical and performance-related questions should be addressed to me as follows:

"DOCTOR RIGORMORTIS"  
PO BOX 10723, Edgemont Sta.  
Golden, CO 80401

If a question is valid but does not meet the objectives of this column, I will forward it to other departments here at *S-9/Hobby Radio* for their consideration. I feel that an honest question deserves an honest answer and I will go to some length to get it answered if I can't answer it myself. I can't provide personal replies to all questions, but I will make a determined effort to answer as many as possible either in this column or by personal mail as time and space limita-

tions permit. Try to keep inquiries as specific as possible so that answers can be specific and to the point.

### PERFORMANCE THIEVES, Part II

Any device and material connected "in line" between antenna and radio will absorb a portion of the signal which passes through it. In most cases, this means that both transmitted and received signals will be attenuated by the device. A wattmeter or frequency counter, for example, typically requires 5% to 10% of the signal passing through it. Normally this is such a small portion of the total signal that for all practical purposes, the effect on total performance can be considered negligible. Unfortunately, situations where losses are negligible are rare simply because a few "negligible" losses add up to a measurable degradation of performance. Here is why. All accessories use at least two connectors for the purpose of connection to the coaxial line. Any PL-259/SO-239 connector combination has a calculated loss of about 0.1 db to 0.2 db. If six connectors are used in line between radio and antenna, the loss can add up to 1 db or more from connectors alone. This loss is to be added to the "normal" insertion loss of the accessory, thus the cumulative effect of several points of "negligible" loss can be very significant. This problem is compounded when other accessories are connected in line such as TVI (loss pass) filter; linear amplifier; receiver preamplifier; and splices or barrel connectors. Each of these items can be considered to have a minimum of 0.2 db insertion loss, often more! When considering system losses, we also have to account for the "natural" loss occurring in any type of coaxial cable. Some types of coax have much more lossy than others. As a general

rule, RG-58 coax is more lossy than RG-8 cable, however much of the RG-8 sold in CB stores is no better than a medium grade of RG-58. Another rule of thumb is that the larger the diameter of the coax, the better quality it is, but this is sometimes wrong. One must examine the shield and center conductor of any coax before judging it worthwhile for purchase. The shield should *completely* cover the white inner insulation (dielectric) and the center conductor should consist of stranded wires. Cables recommended for general station use are in order as follows: 1) RG-214; 2) Belden 8214; 3) RG-8/U; 4) RG-58C/U; 5) RG-58 B or A/U. Cable marked RG-8 or RG-58 isn't worth keeping except maybe for use as loudspeaker wire or something like that.

To crystallize the point of what we are discussing, perform a quick analysis of your station's losses: assign a loss factor of 0.1 db for every connector between antenna and radio; Add 0.2 db for every accessory used in the line; Add yet another 0.2 db for every relay the signal must pass through (linear amplifiers and receiver preamplifiers use relays); then add a final 0.2 db for every ten feet of coax between antenna and radio. Now add up all these numbers and if the total equals or exceeds 2.0 db, your performance loss could be significant. Table 1 shows the relationship of db-loss to percent-loss:

TABLE 1

db loss =	% loss	db loss =	% loss
0.5 db	11%	2.0	37
1.0	21	2.5	44
1.5	29	3.0	50

MORAL: Some stations with 4 watts at the output of the transmitter will be fortunate to find 2 watts at the

antenna. I recently tested a fine-appearing, well put-together station, finding 875 watts at the output of the equipment, but only 380 watts into the antenna! The remedy for this 3.6 db loss was replacement of a faulty coax (antenna) switcher and two corroded connectors. Input to the antenna was then measured at 790 watts. In another instance, a transmitter had 3.8 watts at the output of the radio but a mere 1.4 watts into the antenna for a loss of 4.3 db. I removed his frequency counter from the signal path and the input to the antenna went up to 3.5 watts! Thereafter the operator could receive a station 85 miles away with an S-2 signal where before it could not be heard at all! Subsequent inspection of the frequency counter showed poor design, but no malfunction.

Next month we will examine some alternative methods of operating accessory equipment in a radio station. We will explore some economical ways of reducing system losses. We will continue to firmly establish one of the primary objectives and purposes of radio: transmission of a quality signal as far as possible; and reception of the weakest signals as well as the strongest.

#### TIP OF THE MONTH

Obtain a few alligator-clip leads (Radio Shack #278-1156 or equiv.). Connect one clip to the meter chassis of each and every equipment used in the station. Connect the other ends of all these clips to a single 14-ga or larger copper wire conveniently placed behind the station equipment. Then connect a grounded 14-ga or larger copper wire to this common wire behind the equipment to which all the alligator clips are attached. Result: all station equipment will have a common ground point. This alone will solve strange and odd problems such as RF feedback, squeals, and overall performance will sometimes improve dramatically. Cost: less than \$4.00.

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CIRCLE 7 ON READER SERVICE CARD

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## IT'S A PITY IF YOU CAN'T READ RTTY

One of the images many of us have fixed in our minds is that of a busy newsroom—teletype machines clattering away pouring out an endless barrage of news bulletins. Or maybe you picture a teletype machine located in an embassy rattling out information which may be under discussion a week before it makes it into the headlines. Perhaps you can image a teletype machine at a remote military installation, or aboard a naval vessel, receiving a message from its command post. The FCC uses teletype for communications between its monitoring stations—INTERPOL uses it, the FBI uses it, and today even ham operators have discovered the use of teletype.

While some teletype messages are sent via landline (such as Ma Bell's TWX system), a great deal of international traffic is sent via radioteletype ("RTTY"). For a long time if a person wanted to find out what was being said over RTTY, circuits had to face up to several things. For starters you had to wade through lots of technical literature to understand (in detail) things like Baudot Codes, frequency shift keying, and the like. Then you had to learn about demodulation devices and machines that could actually print out the teletype messages—to say nothing of locating sources of the equipment. You had to have a reasonably good knowledge of the techniques of RTTY and also had to be somewhat of a mechanic. That's all changed—now it's a snap with some of the new RTTY devices available to the radio hobbyist.

## WHAT YOU NEED NOW

These days you can use any decent communications receiver (it should have good frequency stability and be designed for separate reception of USB and LSB signals) as the primary ingredient of a RTTY monitoring station. While there are several

approaches you can take from that point, one of the most painless and effective ways of getting in on RTTY monitoring is also not too heavy on your wallet nor demanding of your technical expertise.

Of the several methods of reading RTTY currently available, you could be in operation fastest, easiest and with the least amount of expense with the Microcraft Corporation's "RTTY Reader" device. The *only* connection to the communications receiver goes to the loudspeaker terminals (or into the headphone jack)—that's it! It's ready to go! Costs roughly \$270 wired and tested.

The RTTY messages appear on an 8-character LED display right on the front of the unit, moving from left to right at a speed which is easy to read. I'll get back to Microcraft's clever device shortly.

Another piece of hardware which reads out RTTY (but also CW) on 10-LED's is produced by Kantronics, 1202 East 23rd St., Lawrence, KS 66044. The Kantronics reader runs about \$470.

Those who have Radio Shack TRS-80 computers can obtain "interface" devices which will put the RTTY readout right on the TRS-80's viewer. Instead of the letters moving past on LED's, the CRT will display what amounts to a complete written page of whatever is being received via RTTY. Companies which offer designs along those lines include Macrotronics (P.O. Box 518, Keyes, CA 95328) and Info-Tech (2349 Weldon Parkway, St. Louis, MO 63141). A unit produced by Microlog Corp. (4 Professional Drive, Gaithersburg, MD 20760) lets you read out the RTTY on a standard TV set's CRT screen. Depending on the various models from these manufacturers, prices run up to the \$500 range.

The Microcraft unit (made by Microcraft Corp., P.O. Box 513, Thiensville, WI 53092) presently seems to be the *most* economical way of approaching RTTY monitoring. And even if you're all thumbs or can't read a schematic from a menu, you can get going without any grief at all. If you're on the handy side, however, you can actually build the Microcraft rig from a kit they supply for about \$190—but my suggestion is that unless you're an experienced builder of advanced kits you'd do best to stick with the factory wired/tested version.

## WHAT IT DOES

RTTY is transmitted in several different forms; right now there is no international "standard," but the basic idea is that a coding system (such as the so-called Baudot binary system) is used to cause letters, digits, and punctuation symbols to appear at some distant point on a printout or readout device. The speed of transmission can be as slow as 60 WPM or perhaps as fast as 100 WPM. The technique of transmitting the signal over the air via the popular "frequency shift keying" (FSK) method requires the actual shifting of the transmitted signal away from the "center slot" of the carrier frequency—this shift can be within a bandwidth as narrow as 170 Hz or as wide as 850 Hz, with the most popularly used bandwidths being 170, 425, and 850 Hz. The carrier shift most commonly encountered (the so-called "American" or "normal" shift) requires that the USB/LSB mode on the receiver be set at LSB; stations which transmit with their signals shifting to the other side of the carrier are said to be transmitting "reversed" and require that the receiver be tuned to the USB mode.

A device which is intended to discern RTTY, therefore, has to be able to cover all of these variables since each RTTY station employs its own characteristic combination of techniques. For the most part, Hams (who use RTTY in the 80 and 20 meter bands) run 170 Hz shift combined with a 60 WPM speed. The majority of commercial stations run 425 Hz shift at 67 WPM (sometimes 100 WPM) speed with about equal popularity for "normal" and "reversed" FSK direction. There are, of course, stations which don't fit these popular patterns—stations which run 400 or 600 Hz shifts. As I said, there are no standards to rely upon, and lots of totally oddball combinations are employed for security/privacy and other reasons; naturally you can't really expect to monitor absolutely *everything* that's going out over RTTY, but all commercially available RTTY readers provide for coverage of the majority of transmission techniques and combinations you'll encounter. But some stations are simply too esoteric to be able to be copied on RTTY gizmos available to the general public.

One other thing I might mention, speaking of what can and can't be monitored, is that even though you can (from a technical standpoint) get a good readout on your unit, you must face up to the fact that everything that's going to come through isn't in the English language—RTTY has lots going out in English, but there are many transmissions in Spanish, French, German, and other languages. Some transmissions, which are nominally in

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English, are sent out in coded form either for privacy or to provide a condensed format, and you'll see such transmissions as gibberish on your monitor. Some transmissions that look like either random combinations of letters comprising "meaningless" words will be messages sent out in alphabets which your device is not programmed to "understand"—like Arabic (which "writes" left to right) and several forms of Cyrillic (used for Russian and other eastern European texts). Basically, you'll be able to *fully* monitor transmissions sent in plain English which are being transmitted in the most popular modes—and that takes in a lot of monitoring! If you can read languages other than English, you've got an extra bonus.

### WHAT'S LEFT?

What's left are all sorts of news transmissions, ham operators, ship/aero operations, some weather broadcasts, MARS, and all sorts of business, military, personal, governmental, embassy, telegrams/messages/traffic—all there for the tuning. There is really much to hear (or "watch") between 2 and 27 MHz, with some portions of the spectrum clattering away with wall-to-wall RTTY day and night.

### PUTTING IT "ON THE BAND"

The Microcraft unit, as mentioned, hooks to a communications receiver in a matter of seconds. It has its own internal power supply. The instructions which come with the set are easy to understand and complete, although I did find that it took me an hour or two of "getting the feel" of the device before I was able to become reasonably comfortable with its operation and what it could do.

Tuning the receiver across the spectrum, it isn't difficult to spot RTTY signals when your receiver is set up in one of the SSB modes. There are a few other types of data transmission systems you'll encounter (such as Morse code, twinplex, frequency or time division multiplex facsimile, frequency shift CW, etc.) other than RTTY, and you'll soon learn to sort such signals out by their distinctive "sounds" (facsimile—sending photos by radio—sounds like a squeaking wheel).

In order to get copy out of an RTTY transmission, the receiving equipment must be tuned right to a specific point within the signal—it's like SSB, tune a little too much one way and the SSB'er sounds like a chipmunk, too much the other way and he sounds like Lurch from the Addams Family. Since you don't have a voice to zero-in on, the Microcraft unit has two little lights on the front

panel; one says "Mark" and the other says "Space." I won't go into an explanation here as to what these represent, from a technical standpoint; suffice it to say that in order to hope to copy anything being sent via RTTY both of those lights have to be lit and flashing in time with the audio of the incoming RTTY signal. If you can't get them both to flash at the same time then you have to try changing the bandwidth setting on the front panel of the reader unit. If the lights both flash simultaneously and you still can't make sense out of the words and letters, then you can try different speed settings and/or the normal/reverse FSK switch—if there's a message being sent in English that's how to snag it.

I found that for getting started in monitoring RTTY there was some advantage in leaving the Microcraft reader in 425 Hz bandwidth and 67 WPM position, since the majority of stations heard by the beginner run those modes. Whenever I tuned onto a station which couldn't be copied at 425/67, I would try other bandwidth/speed combinations. Although the Microcraft unit has speed settings for 5 different speeds, you will find no occasion to use it in the 75 WPM or the ASCII positions as it does not seem that either of these two particular modes are currently used in RTTY techniques.

Certain areas of the spectrum are more highly populated with RTTY than are others and during daylight hours this would include frequencies which lie between the 15 and 20 meter ham bands, while at night there's plenty of RTTY concentrated in clusters between about 6.500 MHz and 11 MHz. It's fun to just tune around at random but monitoring RTTY can be made far more interesting and exciting if you have some inside information on which stations are where, and what they're used for. The primary source and reference guide for this is Perry Ferrell's excellent book "Guide To RTTY Frequencies." The new second edition of this book lists thousands of worldwide RTTY stations along with their frequencies, call signs, locations, transmitting characteristics, and information on who operates them or the type of traffic which they send. There is a special section listing all of the "Z" codes used in RTTY operation, as well as a terrific introduction explaining RTTY and how/why it works and the best ways to copy it—the intro is by RTTY expert Webb Linzmayer and it's written so that you don't have to be an engineer to know what he's talking about. The "Guide To RTTY Frequencies" 2nd Edition is available from Gilfer Associates, P.O. Box 239, Park Ridge, NJ 07656, and I recommend it very highly to anybody working with RTTY or even considering setting up for this bold new

aspect of radio hobbying. The price of the new 2nd edition had not been finalized at our press time. Check with Gilfer for details.

RTTY is constantly finding new uses and applications and while so much in the way of long-haul communications has been shifted away from the shortwaves and onto satellites, RTTY seems to be continually expanding on shortwave and is now popping up in lots of other places too. An FM broadcast station in Philadelphia has recently started running RTTY over their "SCA" subcarrier frequency—the purpose of the transmission is to bring radio to the deaf! More than 1,000 "listeners" are tuned in daily for these RTTY programs which consist of news, talk programs, recipes, etc.

### SOME STATIONS HEARD

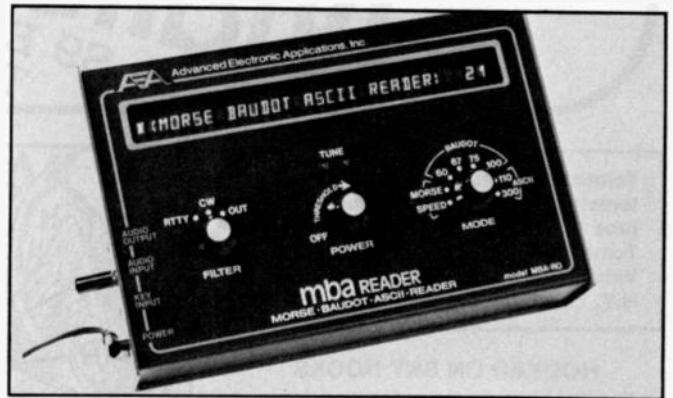
Within the first couple of days that I had a RTTY reader device hooked to the ol' communications reader, my logbook shows I copied dozens of stations including CFH in Halifax, Nova Scotia; GFL22 in Bracknell, England; 6VU in Dakar, Senegal; GBW34B in London; 5YD7 in Nairobi, Kenya, plus a whole batch of American stations such as WFA46, WFK34, WFE34, WEY35, WFD76, and WFD58. I picked up a "mystery" station on 17.617 MHz with the callsign Y3H2, the INTERPOL net on 5.208 MHz, a spy station on 18.961 MHz, and the U.S. Embassy in Bonn, West Germany on 7.866 MHz. There are several FBI RTTY frequencies apparently to be heard and I'm looking those frequencies over, and it seems that several terrorist organizations run RTTY transmissions within the 20 meter ham band. I'm checking those out too. The "Guide To RTTY Frequencies" reports that the 20 meter ham band has attracted all manner of bootleg RTTY operations that can't be found elsewhere.

My logbook records several American military RTTY networks, including a number of stations on 12.957 MHz—which is a frequency used for RTTY communications between the naval forces of several western nations.

The FCC's several RTTY frequencies have been tuned, however when I listened they were running encrypted (coded) transmissions; although I understand that there are times when messages are sent in uncoded form.

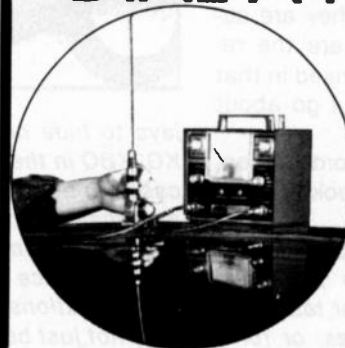
In addition to actual messages, telegrams and news/weather transmissions, a great many RTTY stations are noted running a repeated "test slip" ID tape to "hold down the frequency" when they have no traffic to send or when waiting for other stations to contact them with traffic. In most cases this consists of the callsign of the station followed by a

lengthy string of the letters "RY" repeated over and over. Some stations send out "typewriter foxes" ("THE QUICK BROWN FOX JUMPS..." etc.) but the "Guide to RTTY Frequencies" reports that the U.S. Naval RTTY station in Balboa (Panama) has been noted with a wide assortment of innovative and novel "test slips" ranging from "MERRY CHRISTMAS" to "OF ALL THE FISHES IN THE SEA THE MERMAID IS FOR ME."



This new combo CW/RTTY "reader" has just been introduced by Advanced Electronics Applications Inc., P.O. Box 2160, Lynnwood, WA 98036. The unit, called the Model MBA-RO, can copy RTTY at 60/67/75/100 WPM and CW up to 99 WPM.

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CIRCLE 12 ON READER SERVICE CARD

# Tomcat's Mailbag

By S9 Editor  
Tom Kneitel



Tomcat answers some of his more interesting mail in this column from time to time. Address your letters to Tomcat's Mailbag, S9 Magazine, 14 Vanderventer Ave., Port Washington, N.Y. 11050.

## HOOKED ON SKY HOOKS

I've got several antenna designs which I believe to be unique, and a radical new approach to achieving considerable signal gain in a limited amount of physical space. Although these might be adaptable to several radio services, I envisioned and am designing them for 27 MHz operation. At this time they're still on paper; however, I now want to obtain an Experimental Radio Service license in order to test them when they are actually constructed. What are the requirements for getting licensed in that radio service and how do I go about doing it?

Bradford Carson,  
Keokuk, Iowa

The FCC issues licenses in the Experimental Radio Service for those who can display a need for testing or developing new RF devices, or for a new application of an existing RF device. They'll also issue these licenses to communications retailers who wish to demonstrate equipment which they are offering for sale. A special form must be submitted to the FCC explaining the need for the license and outlining a general plan, showing the goals of the experimental program and how they are hopefully to be achieved. Actually the FCC is pretty liberal with what they will accept as a reason, all the way from serious stuff such as using radio for treating cancer (license KG2XBH on 433.90 MHz) to something as flighty (and nutty) as using radio to study the abilities of blue-



jays to hide nuts in a forest (license KG2XBQ in the 150 MHz band). In your case, no sweat—since your proposed antennas are made for use in limited space; I assume that they would not fly in the face of the FCC's standard CB regulations for 27 MHz antennas. Why not just build them and test them under your regular CB license on CB frequencies? There really wouldn't be any need to get an experimental license to do it, and I doubt if you'd receive an experimental license for it anyway. If they work and you then wish to test them out on other bands, you might then approach the FCC with your test results on 27 MHz and outline your plans to try other frequencies. And good luck with your project!

## LONG LIVE 49 MHz!

I'm looking for any information I can find on the 49 MHz QRP hobby band; equipment, antennas, installations, operating procedures, operators. I

would like to compile a list of active operators in the United States and hope to hear from other persons interested in no-license 49 MHz operation. Please ask them to contact me.

Dan Houlihan, N9DHIKXL8374  
1537 McKnight St.  
Galesburg, Ill. 61401

There are seemingly loads of people out there interested in this band and it seems odd that manufacturers have done little, at this point, to respond to the public's interest. Certainly the regulations are more favorable to homebrew gear, yet I still think that some clever manufacturer could take the lead in getting 49 MHz off the ground with accessories tuned to this exciting band. From time to time S9 will continue to offer 49 MHz hobbyists coverage of this band and we invite stories and articles from readers relating to those things outlined in Dan's letter.



## LOPEZ FILTER

I'm writing because I heard and read that there are some low pass filters which aren't so good and that there are many other ways to clear up TVI before resorting to a LP filter since the use of a filter cuts into the signal the transmitter is sending out. Is this true, and what are some of the other methods you'd use first.

Manny Lopez,  
Ciudad Juarez, Mexico

*Manny, there are more ways to attack TVI than there are beans in a taco, and you can try everything from troubleshooting to wrapping the TV set in aluminum foil. I can't say that there aren't some educational and entertaining benefits from these stunts, however the quickest and easiest way of attacking the problem at the transceiver end of the matter is by getting a quality low pass (LP) filter such as those produced by B&W, Gold Line, Radio Shack, CPI, Drake and a few others. Be sure that the filter you get can handle at least 10 watts of power, unless you're pushing a bit of the ol' wattage and in that case get one rated to handle whatever power you're using. I think the big B&W filter should probably handle as much power as any sane person might try to run between 26 and 30 MHz. Forget about the filter cutting into the outgoing signal strength, you're talking about "insertion loss," and it's so minute an amount that it can barely be measured, let alone be noticed. You're mainly interested in knowing how much rejection the filter offers (as stated in DB) at the cutoff frequency of 50 MHz. Keep in mind that 60 DB is a reduction in power of any unwanted signals you're generating (those which could cause TVI) by 1-million times, and that 30 DB is a thousand times. The higher the DB rating at 50 MHz, the more effective is the filter. Hook it to the coaxial connector of your rig with a short coax patch cord or a coax "barrel" connector, and ground it to a nearby cold water pipe or other suitable ground connection. Of course, I am assuming that you have eliminated high SWR as a possible cause of TVI, and that your equipment is well matched to your antenna. A high pass filter attached to the tuner of the offended TV set is often a significant aid, however leave that job to a qualified TV service technician. A high-pass filter attached to the TV set's*

*antenna terminals instead of the tuner input could possibly offer a cure if the problem isn't too horrendous.*

## HOW HIGH IS UP?

A couple of issues back you commented on communicating over light beams and even laser beams. I realize that these are forms of radiation similar to radio waves, except at some point as you get higher in frequency the radiation crosses over from being "radio" and turns into visible light. Just how high can you go in frequency and still be considered "radio," and therefore bound by any regulations of the FCC, or do you need some kind of license to talk on a light beam?

Joe Alexandre,  
Detroit, Mich.

*No, so far as I know you don't need a license to hold a QSO via light waves. On the other hand the FCC is sort of cagey as to just how high in frequency their claim to regulate goes. I have never seen any FCC authorization which specifies any discrete frequency above 300 GHz, in fact licenses for operation on those frequencies simply state "above 300 GHz," and that leaves it all vague and open ended. Even ham licenses grant operation "above 300 GHz" without any further explanation or limitation. Of course our own technologies at this point are the true determination as to how high in frequency one can go and still produce what could be described as a "radio signal—and working at such extremely high frequencies is a stunning challenge. While CB signals are actually radio waves 11 meters in length (about 36 feet), the current high end frontier seems to be radio waves only about a single millimeter in length—that's one thousandth of a meter, less than 4/100ths of an inch! The military is interested in such signals because they can be fired off in a straight line without the requirement of a huge microwave dish and since the waves don't scatter they're immune to unwanted monitoring. And they can't easily be jammed. On the flip side of this, equipment generating millimeter signals tends to overheat under the large amount of power to generate signals there. Even with lots of power the signals can't seem to get past about 10 miles in our atmosphere because minute particles floating in the air distort the signals; the hope is that they might be more successfully*

*used for point-to-point communications in outer space, where no atmosphere exists.*

*In the meantime, don't fret about all of these signals catching up with light waves, they're still a relatively long way up the frequency scale from such experiments.*

## IT'S CONTAGIOUS?

As a boater I must advise you that CB operating "lingo" is being brought into use in the VHF marine radio service frequencies. I don't know if this is strictly local in southern California or if it is something which is taking place throughout the United States, but it certainly doesn't sound like the marine communications band of several years ago!

G.V. Silva,  
Oxnard, Calif.

*Righto, Skipper, but you don't say whether you're bragging or complaining about it! And, by the way, it's not local; it's something which seems to be a national phenomenon. I've heard VHF marine channels ring out with the likes of "10-4," "breaker-breaker," "that's a four," "has anybody out there got a 10-36?" and worse. Not long ago a guy on a boat in contact with the Coast Guard on Channel 22-A kept addressing the Coast Guard operator as "goodbuddy," and finally signed off with a hearty, "have a good day today, and a better day tomorrow." The Coast Guard took it all without comment, but privately those fellows freely admit that they don't much care for CB-type lingo, nor for the practice of boaters calling them for constant routine "radio checks" on VHF Marine Channel 16. They lay all of these practices at the doorstep of CB and the fact that many boaters learned these operating practices on CB before they fired up on the marine frequencies. On the other hand, if you listen to some of the salty language used on the frequencies populated by the commercial fishing boats, you'll hear some pretty fancy language which would hardly be tolerated on any CB channel. So if your letter is a complaint, I would suggest that your house cleaning of the VHF marine channels start with a good sanitizing, before you get around to repelling the invasion of the "10-4 people." And by the way, I'm a boat owner myself so I'm speaking from experience.*

### HIDDEN MEANING

The rock album *Moving Pictures* (Mercury label) by Rush features a piece with the unusual title "YYZ." After hearing it several times I realized that "YYZ" 's opening sounds on the drum are actually a CW message. The message? It's in code, but it sounds like the letters "YYZ" to me. Since those aren't the initials of any of the members of Rush, I was wondering what it means, oh Great and Omnipotent Decipher of Communications.

Scott Moscovitz,  
Skokie, Ill.

*After checking with the CIA and the FBI, neither of which could decipher it, I listened on my aero band scanner and noticed that YYZ is the identification used by the VOR navigational facility at the Toronto International Airport in Ontario (117.4 MHz). Since Toronto is where Rush hails from, I suspect that "YYZ" is their very "in" way of paying tribute to Toronto—or else drummer Neal Pert is a pilot or an aero band scanner fan. Suggest you don't reveal this secret decoded message to anyone else.*

### AXE THE COAX

The nice weather is upon us and it's time to attend to my antenna. Not only has it been giving me faithful service for seven years, last January was its winter of discontent. Ice bent the radiating element of my 5/8-wave GP! This time I'm going to put up the Moonraker I've always wanted! Here's my question: can I continue to use the existing coaxial cable which was used with the old antenna or do I need new cable, and if so, what kind do you suggest? The type which I am presently using is RG58/A-AU, and it's a 110-foot run from my rig to the top of the tower.

Ted Griffing, UNIT 2277-J,  
Elkins, W.V.

*Coaxial cable starts to give increasingly poor performance as it ages and I would estimate that a 7 year old coax is the equivalent of 150 in human years. Replace it, but I would seriously consider getting a different type since it appears as if you're assembling a dream station of some sort. All coaxial cable extracts losses from signals which pass through it. The amount of loss varies with the type of cable you're using and the length of the cable. Keeping in mind that a 3 DB loss means chopping your outgoing power*

*down to half (and doing the same for incoming mail), a 100 foot run of RG58/A-AU cable (even when in its peak condition—before aging) has about a 2.12 DB loss! RG-58 with foam dielectric is better with only about 1.64 DB loss per 100 feet. I don't know if you're running power, but if you are I would suggest that you move up to a heavier and more efficient type of coax, especially considering the length of the cable run you've got there. RG8/A-AU cable, which costs considerably more than RG58 types, has .945 DB loss per 100 feet, while RG8 with foam dielectric has a mere .868 DB loss for 100 feet. RG8 types should be used with rigs running more than about 250 watts, regardless of the length of the run. Those readers wishing to computer coax losses at shorter lengths than Ted's installation can figure on a percentage basis. A typical 50 foot run will have only half the loss of a 100 length of coaxial cable. Ted's 110 foot run of 7-year old RG58A-AU cable is probably as efficient as a piece of damp string.*

### LIKE A WHISPER ON THE WIND

The FCC regulations state that the callsign of a CB station must be announced at the end of each communication. I do not care for that regulation as I think it was only put there to intimidate operators into following a bunch of regulations which they would not otherwise follow. My solution is simple, inasmuch as the rules do not specify the loudness of the voice at such times as the callsign is being announced. I whisper my callsign. If you're within a couple of blocks of my location, you could probably copy it during my sideband transmission; however, anything further away than that and it can't be copied.

J.W.R.,  
Humboldt, Iowa

*You didn't elaborate on exactly what you were doing which caused you to worry about having your station identified by means of call letters, however I can only wonder about why you're so hung up on figuring out a way to announce your callsign within the regulations. If you're breaking a dozen other regulations then why bother with the callsign at all? The only way they'd ever catch you is by monitoring from close enough to locate you, and at that point, your whispering stunt would lead them to your door!*

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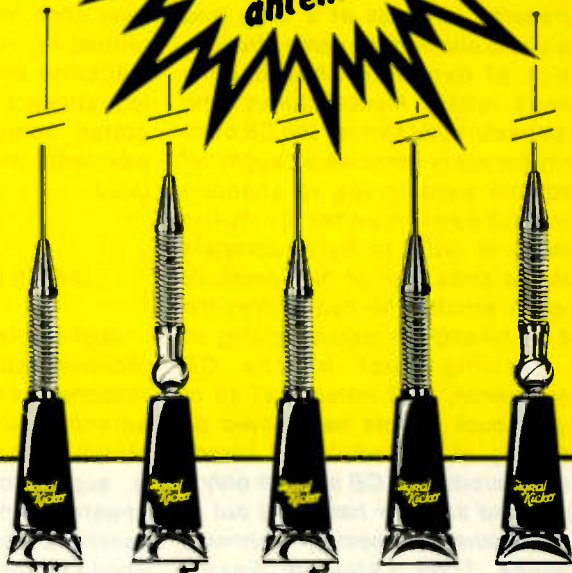
Exclusive roof top mount (patent no. 3,492,769) allows quick, solid mounting on vehicle surface.



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SK211  
Trunk lip  
with  
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Combo.  
trunk &  
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SK261C  
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## THEIR LOSS IS OUR LOSS

I couldn't agree more with your *Tomcattin'* column when you said that the people with the *goodbuddy* mentality had drifted away from CB and were amusing themselves by wearing 10-gallon hats, designer western jeans, and custom made boots - playing at being cowboys the way they pretended they were radio operators and/or truckers from 1975 to 1978. I always called these characters "Super-truckers," with their phoney baloney "mercy sakes" and "rake the leaves." But I think that, in your retrospective look at them, perhaps you were a bit more harsh with *Supertrucker* and his *goodbuddies* than these folks deserved. This crowd, if you will recall, did pour millions of dollars into the CB industry and in many ways made CB well known.

E.S. Parmentier  
(ex-goodbuddy)  
Marion, Mo.

*And it was Bonnie and Clyde who brought fame to a number of hitherto anonymous banks throughout the midwest - a fame which they would probably have been better off without. The millions of dollars which were quickly poured into the CB industry, in looking back at it, may have been a mixed blessing. Lots of people thought it was too much, too fast. It took an industry which had been plodding and progressing upwards at a sane and orderly rate and had the same effect as a stick of dynamite shoved up a donkey's nostril. Manufacturers who had been dutifully serving the CB community for many years were caught off guard and were forced to abandon their laid-back manner of doing business in order to try to compete against a solid wall of high-pressure fast-buck artists who had written the book on hit-and-run merchandising. In the settling dust of the CB "phenomenon," CB noted that all of the fast buck people had moved on -but many of CB radio's old friends were left producing CB sets on only a very limited scale or had gone out of CB altogether! Remember Johnson, Browning, Tram, Lafayette, Pearce Simpson, Sonar and the others? Come to think of it, a few of these companies closed their doors entirely! This cannot be considered as being anything but a great loss to all of us and to the CB service as a whole. Some of these companies were devastated by their own instant success.*

## CQ-GURGLE-GURGLE-DX

I don't deny it, I'm an *Outlander*. I suppose I'll have to live with my little sin. Here's why I'm writing: during a recent skip opening I noted a rather large amount of activity on 27.880 MHz. These appeared to be maritime stations and they sounded like Aussies, but I don't think it had anything to do with CB. I heard stations VKG, VM6FM, and VH7WG, also some vessels identifying by name. What is this frequency? S.T.O.  
Wickenburg, Arizona

*How about that, S.T.? Looks like you stumbled onto the frequency used in Australia for small boat calling and emergencies. WKG is the "Water Police" in Sydney, VM6FN is in West Australia, and VH7WG is in Tasmania. Actually it's a rather busy frequency and is filled with Coast Guard stations, none of which have any connection with outbanding or any other form of hobby use of radio, legal or illegal. While it makes for an interesting challenge to see what you might be able to hear on this frequency, my suggestion is that you avoid using it during your efforts to work the world on these unauthorized frequencies.*

## PULLING POWER

I wanted to thank you for all you have done for my hobbies. Since you printed my name and address in the magazine and mentioned that I collect stickers from radio stations, I've gotten some hundred letters with wonderful stickers from all over the U.S.A.

Charlie Bauer, 13-E-198,  
P.O. Box 1232,  
D-6312 Laubach, West Germany

Just a note to let you know that I've received quite a bit of mail in response to my article on great circle antenna pointing which ran in the March issue of S9. I quickly ran out of a supply of Xeroxed information sheets I had prepared, and after obtaining a new supply at a local print shop I finally caught up with the mail.

Bill Johnson, N5KR,  
Las Cruces, N.M.

Thank you for your mention of our publication TAP on page 54 of your February issue of S9. You presented a fair appraisal of TAP and (more importantly to us) you listed our address

and subscription rates. We have been flooded with new subscriptions as a direct result of your mentioning TAP in S9 Magazine.

Tom Edison, Editor/Publisher,  
TAP,  
147 West 42 St. (Room 603),  
New York, NY 10036

*S9 readers have always been very responsive to products and services which appear in our pages; we have a reputation for letting our readers know what's happening and how to find out more about various things of interest to communications hobbyists. It isn't accidental, we have spent almost 20 years building the confidence our readers have in S9's advice and suggestions. A few years back we mentioned a new antenna and within a few weeks after the issue came out the fellow with the antenna was "bought out" by a major manufacturer who had read about it in S9—not only that, they put the inventor on their staff as a designer!*

## SIGNAL LOSS VIA SIDING?

In an effort to save myself some money spent on heating, I have recently had aluminum siding installed on my home. Now my problem is that at least half of the operators I've spoken to say that this siding will kill part of my signal on 27 MHz. The others say that it will make no difference at all to my signal. I am going to put up a dual polarization beam which will be at the legal limit above the house which could possibly bring it into proximity with the siding. Should I expect signal trouble?

Quint H.,  
Montrose, Colo.

*I wouldn't think that you'd have any more trouble than anyone else. While the aluminum siding might (or might not) reduce the signal potential if the antenna were inside the house, the only effect to expect with the antenna clear above it, is for the siding to act as a "virtual ground." This would show up as a higher angle of radiation than you might otherwise get, which would slightly reduce your ground wave coverage and increase your skip coverage by one S-unit. Were the antenna more than 8 feet from the nearest siding I wouldn't expect any effect at all from the siding. Don't worry about it.*

# The Radar Column

## by "Jammer"

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### **CALIFORNIA RADAR**

Recently, there have been numerous inquiries regarding the use of radar by the California State Patrol. Annually, the Patrol tries to pass legislature to approve radar for enforcing the 55 mph speed limit and each year they run into a battle against the Teamsters and Lou Papan, chairman of the Assembly Rules Committee. This year, CHP Commissioner Glen Craig says it isn't worth the fight since there's been no significant change in the attitude of the people he needs the commitment from.

Even though the California Highway Patrol does not use radar, motorists must be advised that the majority of cities and municipalities do employ radar's use.

### **TRUCKER FINED IN FIRST IOWA RADAR JAMMER CASE**

An Eagle Grove trucker was recently fined \$100 for using a radar jamming device to foil state troopers.

Officials stated that it was the first conviction in the state of Iowa on a charge involving a radar jammer.

Robert Reekie, an independent trucker, was found guilty of interfering with official acts, which is a simple misdemeanor under a law also covering other acts of interference with officers.

The magistrate ruled that Reekie "did intentionally interfere with Trooper Jack Ward in the performance of his duty." Reekie paid the fine and costs and has 10 days to appeal the verdict.

### **NEW SPEEDING LAW IN WASHINGTON**

Speeding is no longer a crime in the State of Washington, but it's still illegal—and in many cases more expensive!

Washington state law was revised to decriminalize most traffic offenses. In most instances, the penalty is the same or more than the bail for similar offenses under the old law.

The philosophy behind the new program appeals to Cowlitz County District Court Judge Ronald Huntington. "A person shouldn't be considered a criminal for running a stop sign or speeding," he said.

Traffic violators notice the difference from the moment a ticket is issued. Policemen used to hand out traffic tickets. Now they issue a Notice of Traffic Infraction.

The back of the notice tells violators of their options:

Option #1: is to pay the penalty, closing the case.

Option #2: is to request a mitigation hearing. Drivers agree they committed the infraction, but they want to try to convince a judge there were mitigating circumstances. If a judge agrees, he might suspend part or all of the fine.

Option #3: is to request a hearing to contest the infraction notice.

### **SOME POLICE TO STOP USING RADAR**

Big Spring, Texas, patrol personnel have been issued a directive to stop using radar "until further notice" on FM 700 between Gregg and Cedar.

The directive, written May 6th by Captain Claude Morris under the direction of Chief Elwood Hoherz, says in part "there has been numerous complaints from citizens who receive radar tickets." Hoherz said the memo was issued until he can talk to the traffic commission about getting a new traffic survey done in that area. He also said that if the commission doesn't want to change the speed limit, he'll go back to using radar.

Hoherz cautioned that even though his men are not using radar, they are writing tickets.

### **TICKETS HELP PAY FOR A CITY**

Motorists who get caught exceeding the posted limits in the tiny hamlet of Waldo, Florida call it "a speed trap" but police chief R.W. Moorhous says he's just enforcing limits set by the state.

Despite the chief's disclaimer there's no disputing that heavy-footed drivers, who must quickly slow from 55 to 30 mph, contribute the largest share of the village's annual budget.

In fiscal 1979-80, 34 percent of the village's revenue of \$201,000 came from traffic tickets. The next largest contributor was state revenue sharing funds, which made up 23 percent of the town's income.

*(continued on page 32)*

# TOMCATTIN' WITH TOMCAT!

ACROSS THE CHANNELS WITH S9'S EDITOR  
TOM KNEITEL, TOMCAT/SSB-13



**I**MAGE DEPARTMENT: Many years ago I wrote an editorial in S9 which complained that despite all the things which CB is and could be, you could ask 10 random people to tell you something about CB radio and 8 or 9 of them would instantly advise you that they never heard of it. At that time I commented that CB sure had an identity crisis.

Now, here it is perhaps 10 years later, and we still have a problem. Not so much one of identity as one of image. Today I can't imagine that you could find one person in 100 who would give you a blank stare when you mentioned the words "CB radio," and asked for some sort of description. Probably 10 or 12 of those 100 people are or have been CB operators within the past 5 years. The remaining 90 or so folks will give you a wide variety of answers, but only about 20 will provide an answer which could be related to by anybody who has been an active operator. At least 70% of those you ask will probably describe 27 MHz communications as one or more of the following:

1. Some sort of joke mobile telephone system used by tobacco chewing truckers.
2. A radio you use to get "Smokey Reports."
3. A nationwide party-line radio telephone system used in various rural areas by persons who talk like truckers and spend 20-hours a day racing pickup trucks and listening to country music.

Let's face it, none of these three descriptions are 100% inaccurate if you are going to relate any of them to a very limited segment of the CB population, however it hardly seems to be an accurate picture of where CB is these days on an overall basis. This image is hardly one which any of us can expect to gain any clout with the FCC, an agency which has never really understood the CB service or its users. Secondly, such an inaccurate image isn't very conducive to bringing "new blood" into the fold, it really doesn't sound like a recommenda-

tion designed to get folks excited about joining in to the activities on 27 MHz.

Ham radio has a totally different image, and yet if one were to listen to the activities on a 2-meter band ham repeater and then to a 27 MHz Sideband frequency, there would indeed be few differences noted as to the adeptness, courtesy, or knowledge of the operators. As one FCC Commissioner put it last year, "the only difference between CB'ers and hams are the things they talk about."

Fact is that there are many people operating on 27 MHz who would say that much of the communication which takes place on their frequencies is often a lot more intelligent than some of the antics which can be encountered at times on ham bands. People are people, and the type of license issued for personal communications or the frequency generated by the transmitter over which the message is sent doesn't change the fact that the things we do over the air do not vary that much.

However, as I said, hams are not generally pictured in the minds of the public as truckers or any of the other things which CB'ers *seem* to be. What has caused this? Several things.

One thing is that CB's massive popularity was caused by the media zeroing in on truckers during their various unified protest activities during the mid-70s—this carried over to the so-called gas shortage. Truckers and their CB radios and colorful "lingo" were a natural for the media treatment, they were (as we were told) the modern day cowboys. It was a fantasy which was a natural for the public, and those who didn't or couldn't drive an 18-wheeler, could at least buy one of the little radios they used and sound like one! Nashville and Hollywood both shifted into high gear and backed all of this up with a parade of ditties and unmemorable films, all showing CB as the one great common denominator which connected these col-

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orful "cowboys of the Interstates," all of whom were insultingly portrayed as irresponsible, womanizing, beer-swilling Neanderthals. Although such a description doesn't fit too many truckers I've ever met, the truckers revelled in this image which had been thrust upon them and they put on a great show of living up to the image, at least for the media!

The amount of musical garbage which was churned out by Nashville to meet the challenge of CB was amazing. The likes of Mel Tillis, Red Sovine and other stalwarts were put to use in tying the knot tighter between CB radio and the free wheeling truckers. We heard how CB helped truckers to crash through road blocks, help dying children, and do everything else from drink beer to "shake the leaves and rattle the trees" (or whatever). The TV industry backed all of it up with CB in use on every silly *sitcom* from "Alice" to "The Dukes of Hazzard."

Meanwhile, back on the channels, CB'ers were (it cannot be denied) using their radio gear for plenty of enjoyment, however we were also racking up lots of points in the area of public safety. It's safe to say that more public-oriented helpful deeds were performed via aid from CB radio than with the aid of any other radio service, including ham radio. This would include rescues, searches, aid to victims of natural disasters (floods, earthquakes, etc.), neighborhood problems (riots, blackouts, and so on), and highway safety patrols. Unfortunately, nobody noticed or cared that while all this was going on we were permitting those persons associated with the CB service to be perceived by the public as being something either humorous or maybe even silly—but in any case, certainly not to be taken seriously; at least not as seriously as (for instance) the ham operators, who probably didn't even realize how much like truckers they could sound if they called female operators "beavers" instead of "YL's" or "XYL's."

The bottom line is that there are many good potential members of the CB community out there who have been turned off (or maybe frightened off) by the false impression of what CB is as has been presented in the mass media. All this to say nothing of the fact that even *Uncle Charlie* hardly seems to take CB very seriously. The recent FCC action (or inaction, I should probably say) regarding the new frequencies for Sidebanding should be bla-

tant enough proof that there is little regard for anything relating to CB radio. If they figured we had any intelligence at all they would have withheld most of their comments relating to the denial of the proposal for fear of insulting that intelligence. Obviously they feel we've got no intelligence which might be insulted.

In truth, the CB community has probably given more direct benefit to the public in the form of emergency communications services than the members of any other radio service, including the ham operators—and I would like to add that hams have not been at all lacking in their efforts and enthusiasm in this area.

Maybe it's that 27 MHz operators must try to take an objective look at how others perceive us and then consider the possibilities that it's not anything we are doing wrong, except for sitting by quietly and permitting our radio service and our efforts to be shown to the public in a manner which has been against our best interests. It then becomes a matter of what to do about it, keeping in mind that it's unfortunate that the 27 MHz community is not too well stocked with folks who are willing to do much more than agree with something and hope that the other fellow will rise up in outrage and finally take matters in hand.

Maybe you've got some suggestions. I'd very much like to hear them.

**THE ROBERTS FOLLOW-UP.** In late July, Carlos Roberts confirmed what had been speculated upon for several months and which we mentioned in this column here a few issues ago as being a popular (but unconfirmed rumor)—that he was leaving the FCC for a job in the private sector. Roberts himself had staunchly denied such rumors in the past, although obviously the word had been circulating for several months prior to his announcement.

Roberts, who had been Chief of the Private Radio Bureau (which administers the CB service) since 1978, will now become the Director of Land Mobile Development at M/A-COM Corporation. Personally I felt that Roberts was one of more dedicated and above-board people at the FCC whose duties related to 27 MHz operation. He was, in fact, one of the driving forces behind the movement (such as it is, at this point) to obtain additional operating privileges for Sidebanders on exclusive SSB frequencies between 27.410 and 27.540 MHz. Carlos' departure from the FCC certainly drives the pro-

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posal a few notches further away from reality than it has been at any time since it managed to get put on "hold" at the hearings last year.

We wish Carlos Roberts well in his new endeavor. Carlos Roberts' replacement will be, as had been speculated right along, none other than "the CB'er's friend," Jim McKinney, former head of the FCC's Field Operations Bureau. The fox is now guarding the chickens.

Filling in on McKinney's old job at the Field Operations Bureau will be Richard Smith, formerly the Deputy Chief of that operation under Jim McKinney. Smith, who is a licensed ham operator, will now assume the duties of running one of the most controversial operations which the FCC has going for itself—that of running the various mobile monitoring squads and so-called "strike forces." We wish him well.

*Tomcat!*

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## The Radar Column [continued]

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### POLICE "SPRING" MOTORISTS FROM SPEED TRAP

Twenty five lucky motorists will get to tear up their speeding tickets, thanks to Lower Providence, Pennsylvania's Police Chief Robert Furlong.

Furlong admitted that he made a "boo-boo" one day while setting up a speed monitoring machine on S. Trooper Road.

The device utilizes two strips, taped to a roadway a certain distance apart.

The machine then registers the vehicles' speed based on the time it takes to travel between the two strips.

One of the officers assisting Furlong noticed that the strips were 60 inches apart, one foot shorter than the necessary distance.

This made the machine show vehicles traveling nine mph faster than they were actually traveling.

Furlong notified District Justice Bernard Maher and told him to invalidate the citations.

Furlong added his personal note of apology by calling the cited motorists to tell them "their troubles were over."

### PEOPLE WHO LIVE IN GLASS HOUSES SHOULDN'T THROW STONES

Wisconsin Senator David Berger (D. Milwaukee) says he has dropped his practice of sending "friendly reminders" to motorists who speed past him on the highway.

Berger was arrested for driving while intoxicated, pleaded guilty, and was fined \$147.00. The week before, Berger had been ticketed for speeding. That charge has still not been resolved.

Berger recently acknowledged that for several years he had jotted down license numbers of cars who passed him and sent out "friendly reminders" stating that speeding is a violation of the law.

Berger said he gave up the letter writing because he had a lot of other things to keep him busy. His own traffic problems had nothing to do with it.

### RADAR'S ACCURACY ATTACKED IN ENGLAND

Mr. Desmond Hughes, an Electrical Engineer from Cardiff, recently was successful in getting a judge to call for stricter guidelines for the police in the use of their radar. Mr. Hughes said his test case would open the door to other drivers who suspected the radar equipment of giving false readings.

Judge Charles Pitchford said that certain safeguards should be used by the police operators in the future. He recommended the following:

- The police should test the radar device against a vehicle traveling at a known speed.
- Officers should test the site being monitored for possible sources of radio interference.
- The officer's radio equipment should not be used near the radar.
- The officers should take care that there was a suitable period of time before the figure shown on the radar was locked into the mechanism to give a final reading.

In his decision, Judge Pitchford also awarded all costs to Mr. Hughes.

### OKLAHOMA'S BILL TO BAN RADAR DETECTORS KILLED

Oklahoma's House of Representatives recently rewrote Senator John Luton's bill (S. 243) and eliminated a proposal to ban the use of radar detectors.

The House agreed to retain the section that banned "jamming devices." Luton sponsored this bill at the request of the Department of Public Safety.

Oklahoma's Governor is expected to sign the bill in the very near future.



# THE MONITOR POST

RICK MASLAU/KNY2GL SCANS THE CHANNELS

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## READING THE MAIL

Scanner owner Henry Abbott, who lives in Texas, says that he frequently hears police dispatchers end their transmissions with what sounds to him like the word "tay" or "kay." He wonders if we can identify the mystery word and explain what it means since a number of stations are heard to use it. Fair enough, Hank. We suppose that what you're hearing is the 11th letter of the alphabet, "K," being tagged to the end of those transmissions. It's one of those strange crossovers from the world of code (CW) into voice communications—much like the so-called "Q" code which is generally used in phone communications by Ham operators and 27 MHz Sidebanders. While "K" has never caught hold with the Ham and Sidebander crowd, it has long been used in public safety dispatching. Simply put, and in voice or CW, it means "over," or "over to you," and is an invitation for the other station in the contact to respond to the transmission which has just been sent.

Bruce McQuesten, of Des Moines, Iowa, sends along a listing of Ham communications he has picked up on several frequencies between 167 and 168 MHz, and wonders if this column can explain how and why he hears these stations in that frequency range inasmuch as the nearest Ham band is nowhere near this part of the spectrum. Although Bruce didn't mention the type of scanner he has, we would venture a guess that it is a keyboard programmable type. Such units, while they do have certain convenience advantages over crystal-controlled units, are often prone to presenting their owners with various types of "phantom signals." In your instance, Bruce, it would appear that the scanner is presenting you with an unwanted view of several 2-meter band Ham repeaters operating at about 146 MHz. If your set has a 10.7 MHz IF, that should place those images at about 167.4 MHz and up, which is the IF frequency doubled and added to the Ham repeater frequency. If your scanner has a 10.8 MHz IF (Bearcat uses this IF), these phantom signals probably show up starting at 167.6 MHz. This same quirk produces phantom transmissions from nearby aircraft stations which appear in the VHF aero band (2 times the IF frequency deducted

from the actual 144 to 148 MHz carrier frequencies).

This curious but not uncommon phenomena is actually put to use by some scanner enthusiasts. Realizing this design by-product for what it is, they have not regarded it with annoyance. For instance, most do not include in their UHF coverage the fascinating federal government communications band which lies between 406 and 420 MHz. Listeners have found that by programming their scanners to search between about 427.4 MHz and 441.4 MHz (for a 10.7 MHz IF design, such as used in Radio Shack or Regency units—or 427.6 to 441.6 MHz for Bearcats) they can monitor these frequencies "by proxy" and the grace of their scanners' abilities to reproduce phantom signals at twice the IF frequency away from the actual transmitting frequency. Of course, if your scanner's UHF coverage starts at 440 MHz (as some do) then you can only try this trick between 440 MHz and 441.4 or 441.6 MHz.

Most monitors, however, would just as soon their keyboard programmable scanners *didn't* do this trick but they eventually accept it as a fact of living with one of these units. Crystal type scanners are generally not plagued by this problem and if you have a favorite frequency which is constantly chopped up by another busy frequency used in your area, the only effective long term solution is to monitor it with a crystal-controlled scanner or a keyboard programmable having a different IF. In my own case, for instance, a favorite VHF Coast Guard frequency is wiped out by aircraft contacting an FAA ARTCC "center" facility down in the 135 MHz area. That Coast Guard frequency is now monitored on a crystal type scanner—no sweat!

Steven Vitenzia's problem isn't unique at all, in fact it's rather commonly mentioned to us. Steve says that one of the frequencies used by the New York City fire department is interesting enough to listen to, however there is another weaker distant station operating on the NYC FD's "City Wide" channel, which is of no interest to him, and which he isn't interested in monitoring from his Connecticut location. Steve's scanner locks onto the NYC FD channel (154.43 MHz) to hear this unwanted communications station, even when the NYC FD

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CIRCLE 5 ON READER SERVICE CARD

# CB Usage Tips From S9

(CUT OUT & PLACE AT OPERATING POSITION)

**Preferred & Designated Channels**

- Channel 8 Agricultural operations
- Channel 9 Emergencies and travel info.
- Channel 13 Maritime and RV's
- Channels 16 to 18 Single Sideband only
- Channel 19 Trucks/Vehicles in transit\*
- Channels 31 thru 40 Single Sideband Only

\*Note that in many areas there are also 1 or more additional channels designated and/or normally used for in-transit vehicles, often Channels 10 and/or 12. This is especially true in metro areas and their suburbs where Interstate Highways are on 19 and secondary roads such as parkways are on alternate channels. Base stations are requested to avoid using all area in-transit vehicle channels in order to permit their full, free, unobstructed and exclusive use by in-transit vehicles.

Stations using power mikes should be cautious that their audio levels are set to a level which will not cause voice distortion, over modulation, or splashover on adjacent channels.

Single sideband stations now generally operate on Channels 16, 17, 18, and 31 through 40, although this may vary in specific areas. Stations using standard AM transmission are requested to avoid use of local Sideband channels, likewise Sidebanders are requested to confine their transmissions to those channels established locally for their use.

station isn't transmitting. What, sez Steve, can be done to end this unwanted chatter? The problem is probably that your antenna is simply too darn efficient, or else you are so far outside of the primary coverage area of the NYC FD that you're picking up the coverage of another station off into the distance, away from the NYC FD station. No doubt these two stations can't even hear one another, but you're in the middle and can hear them both.

If you are using an omni directional antenna, you might try lowering it in the hope that you'd be able to hear the powerful NYC station; but you will have your antenna too low to pick up the unwanted station, which you did say was weaker than the NYC station. You might also try using a beam or yagi type directional scanner antenna aimed at New York City; such an antenna is made by Grove Enterprises in Brasstown, N.C., and you can write to them for specifications and prices. The problem of hearing unwanted stations operating on commonly monitored frequencies seems to be rather prevalent in populated areas and all too often there is really little which can be done about it without seriously impeding the overall receiving capabilities of the scanner installation.

George Merton, who lives in Maryland, says that his local police department runs a UHF repeater. It is licensed on and operates on only one single transmitting frequency, that being in the 453 MHz band. The input frequency to the repeater, which is used by the mobile units, is on 458 MHz. There are no other frequencies licensed or authorized for this department, and yet he says that their mobile units can sometimes be heard "switching to Channel B." That's the mystery since the only channel it would seem the mobile units operate on is the one which feeds into the repeater. Yet when they switch to Channel B, they don't come through the repeater and can't be heard by George. Chances are George, that Channel B is the repeater's output frequency on 453 MHz, and if you had a better or higher antenna you'd hear some of those transmissions. This so-called "talk around" method of operation is sometimes used by mobile units for short-distance communications. The mobile units can copy one another within a limited area, and yet they can also monitor the repeater's operational output frequency for any calls of interest. The second-best guess is that Channel B is a frequency contained within the communications system of a county or state agency; sometimes local departments participate in such operations for wide-area communications between different area agencies.

\* \* \* \* \*

# ON THE COUNTERS

## S9'S MONTHLY PRODUCT REVIEW



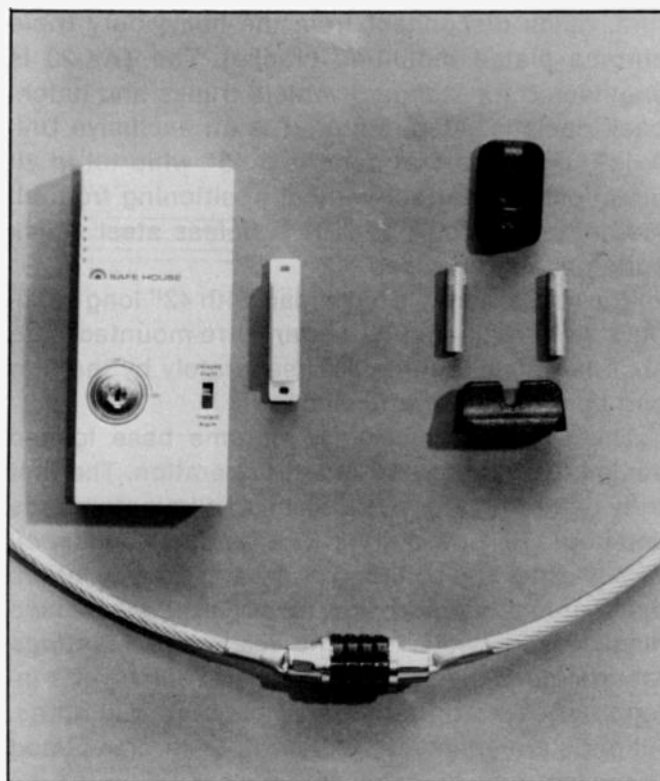
### REMOTE CONTROL

Remote control by voice via radio or telephone is now possible with the Covox Model I Voice Controller. Low in cost and fully self-contained, this speaker independent and highly noise and click resistant system extracts the voicing component of speech from low grade voice communication circuits in the manner of a human listener. The primary measure of voicing duration is modified and corrected through cross correlation with vowel sounds characterized by the spoken words "dih" and "dah." Spoken Morse, Binary, or RTTY codes are reliably recognized with considerable tolerance of the particular speaker and voice channel quality. A 16 word vocabulary will control anything that can be switched, whether it be lights, a remote transmitter, garage doors, wheel chairs, etc. Or use the fundamental pitch output for proportional control tasks, such as varying motor speed or dimming lights. Low power requirements make it ideal for portable systems using mobile, marine, aircraft, amateur, or CB radio. The system is flexible with applications to such diverse tasks as driving external vibrators for aiding the deaf through the sense of touch, or working in conjunction with a host computer to achieve a high degree of security in telephone or radio identification. The system comes complete with AC adapter, microphone, and users manual. Contact Covox Company, P.O. Box 2342, Santa Maria, CA 93455, or mark 45 on Reader Service.

### LOW-COST ELECTRONIC DOOR ALARM, CABLE LOCK AND THEFT-RESISTANT CAR DOOR LOCK KNOBS

Radio Shack is adding three new items to its line of security products.

The Safe House™ electronic door alarm (49-421) offers reliable, low cost burglar and intruder protection for the home or apartment. This battery-operated door and window alarm is easy to install, with no wiring required. A magnet (included) is used to determine that the window or door is closed; if opened, a loud, shrill alarm scares off the intruder. The alarm can be set to sound instantly when a door or window is opened, or with an automatic delay that lets the user leave and return without setting off a false alarm. The alarm's on-off switch is key operated. This compact electronic door alarm measures just 5½ by 2¼ by 1¼ inches. Despite its sophistication, it is remarkably simple to install and operate and low-priced at Radio Shack stores and participating dealers.



Radio Shack is also offering two new non-electronic security items.

A four-foot plastic sheathed steel cable with a user-settable 4-digit combination lock (49-025) is intended to secure bikes, motorcycles, gardening tools and equipment, barbecue wagons and other easily-removable items. It's available now at Radio Shack stores and participating dealers.

The other new security offering is a set of two theft-resistant door lock knobs (49-701) that make car doors nearly impossible to enter from the outside, protecting both the car and its contents. They install in minutes without tools, and fit most domestic and imported cars, trucks and vans, including GM products since 1959, and Ford and Chrysler products since 1949. These theft-resistant door lock knobs are also available now at Radio Shack stores and participating dealers.

#### EXTRA LOW-PROFILE TRUNK & LIP MOUNT ANTENNA

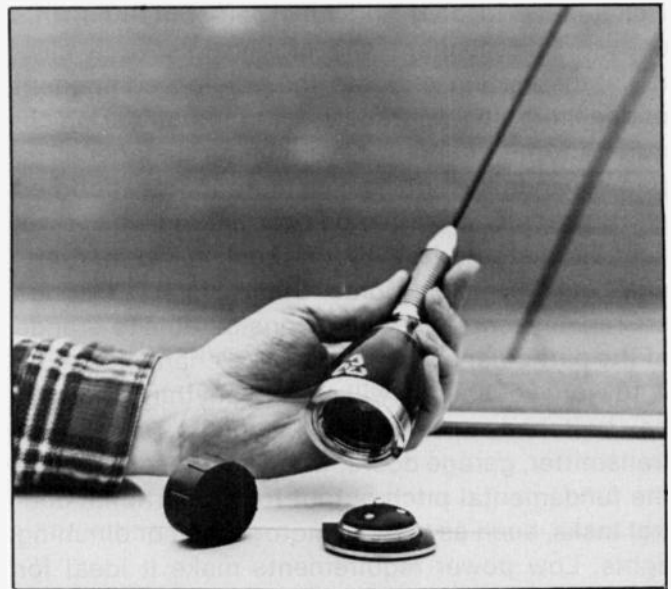
The new 40-channel plus TAK-20, extra low-profile Trunk/Lip Mount, 26.5-28 MHz mobile CB Antenna introduced by Armstrong Industries, Division of MCS, Inc., Watseka, Illinois features high performance, water tight construction and only 1 3/4 turn, quick disconnect from the heavy-duty triple chrome plated mounting bracket. The TAK-20 is engineered for standard vehicle trunks and hatchback designs. Also, featured is an exclusive Uni-Axis® ball joint that permits a 45° whip tilt in all directions for perfect vertical positioning from all mounting angles. A 17-7PH stainless steel shock spring is also provided.

The new antenna's base load with 42" long semi-rigid whip may also be instantly re-mounted onto six other style mounts sold separately by the firm and operate at top efficiency.

The attractive black and chrome base loaded design is shunt fed for quieter operation. The first truly hollow coil form is utilized to eliminate losses and boost RF pow output. A heavy duty copper coil wire is used. The coil form and water tight cover are made of high strength, low loss NORYL glass-filled plastic impervious to the elements. Wattage ratings are 500 watts continuous or 1000 watts intermittent with a lifetime coil burn-out guarantee. All parts are stainless steel or triple chrome plated to prevent rust.

The new TAK-20's 17-7PH stainless steel whip is tapered to achieve optimum efficiency due to whip deflection at road speeds. "Q" tests of the new antenna indicate full frequency coverage with an SWR below 1.21 to 1 from 26.500 MHz to 28.000 MHz. Whips are pre-set at the factory assuring less than 1% variance from antenna to antenna, according to Armstrong Industries.

Copper plating of the whip adds a full 1 dB gain. An anti-static tip is furnished on the factory pre-tuned antenna. No soldering is required for installation and 18-feet of braided RG Grade 58-AU type cable with stranded inner conductor and in-line coax connectors to simplify installation are also provided. A two-year warranty, unlike others, also covers antennas installed by the ultimate consumer. With the quick-disconnect design feature the TAK-20 antenna can be disassembled for storage or transferred to another type of Armstrong mount on another vehicle. A black weather-proof plastic cap is provided for covering the mount of the TAK-20 when the antenna is removed.



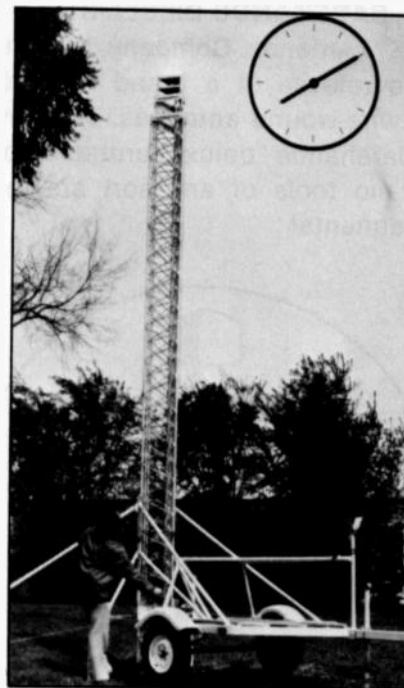
The CB antennas are clear packaged with instructions, trunk/lip mount, mounting cable and Allen wrench on an attractive red, white and blue colored display card for protection and easy selection. The Armstrong antenna is available from its nationwide distributors.

For more data on this new CB antenna and other antennas in the "All-American" line, contact Armstrong Industries, Div. of MCS, Inc., Route 24, PO Box 237, Watseka, IL 60970.

## TRAILERED TOWERS ERECT FAST

Trailer mounted antenna towers can be erected by a single person in record time as was recently demonstrated at Telex/Hy-Gain. From the time the trailer was parked, to the full extension of the tower, only 15 minutes had passed. The company also demonstrated that these self-supporting crank-up steel towers are easily trailered even by passenger cars. According to the manufacturers, the trailer towers are exceptionally well suited to microwave tower surveys, their construction or repair, for site evaluation of two-way radio repeaters, for emergency or security field communications for remote AM, FM or TV broadcasts at special occasions such as large outdoor concerts, fairs or sports events or can be used as temporary light-support systems.

Towers are mounted on the trailer by a method which requires only one winch to tilt and erect the tower to its full height. Single axle trailers, complete with legal running lights, accommodate medium to heavy-duty towers to 52 feet (15.85 m). Two axle heavy-duty trailers with towers to 70 feet (21.3 m) are also available. Antenna rotators, winch motors, and other accessories are optional.



For full information contact Clyde Blyleven, Hy-Gain, Division of Telex Communications, Inc., 8601 N.E. Highway Six, Lincoln, NE 68505, or mark 57 on the Reader Service.

SPECIAL  
PUBLICATION

### NEW YORK CITY METRO FREQUENCY PROFILE

SECOND EDITION

SYSTEMS RESEARCH GROUP  
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NEW YORK, NEW YORK 10009

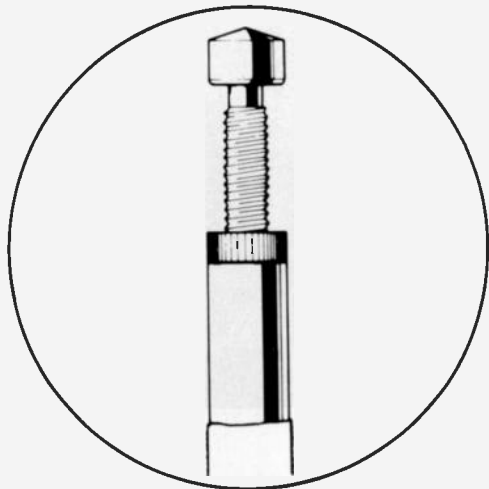
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## NEW YORK LISTINGS

New York City scanner owners should be happy to hear that a new edition of the Digicom/Systems *New York City Metro Frequency Profile* has been announced. This is a 19 page publication showing over 500 new listings for fire, police, EMS, volunteer and commercial ambulance services, hospitals, transit, and other services of interest to scanner owners. The new publication also includes an extended "service search" section detailing high activity groupings in the N.Y.C. metro area. The price of this publication is \$9.00, which includes postage. The book was compiled by Michael Esposito and is available from Digicom/Systems, P.O. Box 1175, New York, N.Y. 10009. Esposito's publication looks to be far more detailed and potentially more useful than the weak and too-frequently incorrect data for New York City which is usually to be found in so-called "mass market" scanner publications which appear to be intended for the beginner or unsophisticated "man in the street" casual scanner user who is neither experienced nor very demanding.

## BAREHANDS DIESEL-STIK

'Firestik®' Antenna Company is proud to announce the release of a brand new concept in fiberglass wire-wound antennas. The new innovation is a "Barehands" deluxe turntable tip antenna. Absolutely no tools of any sort are required to make adjustments!



The 'Diesel-Stik<sub>TM</sub>' will have a tunable range of 800KC which allows for VSWR from 26.800 MHz up to 27.600 MHz. Also the brass tip receiver on the top of the heavy duty 19 gauge wire-wound antenna acts as a super heat-sink and will dissipate the heat generated from a 1000 watt source.

Another custom feature of the 'Diesel-Stik<sub>TM</sub>' is the "Trucker-Twist" wire wrapping technique. Every antenna starts at the base with an internally tested pair of wire turns which absorb the vibrations and whipping motions from even the roughest imaginable conditions. This feature is one more of the exclusives available only on antennas built by 'Firestik®' Antenna Company.

To further insure a high quality product, both the antenna base and the tuning tip receiver are attached to the shatterproof fiberglass rod with a specially formulated space-age epoxy.

For a final touch, each 'Diesel-Stik<sub>TM</sub>' is sealed with a wide temperature range, high impact polyolefin covering which eliminates static. They are also supplied with a 2" 'super-tip' which will protect the tuning mechanism from adverse weather. Usage of the tip is at the option of the user.

Initial release of the new antenna will be in a 4 foot model which will be white with a red tip. The

'Diesel-Stik<sub>TM</sub>' will be available singly or in a complete kit with the new heavy-duty 'Quick-Grip<sub>TM</sub>' truckers mirror mount with K-4 or K4A stud, 18 foot of 'Fire-Flex<sub>TM</sub>' coax cable and a "Free" stainless steel heavy-duty spring.

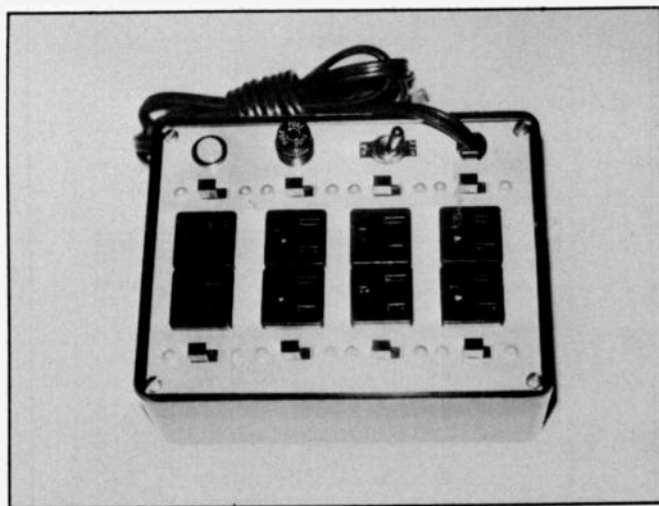
For more information on the 'Diesel-Stik<sub>TM</sub>' antenna and other 'Firestik®' products see your dealer or write to: 'Firestik®' Antenna Company, 2614 East Adams, Phoenix, AZ 85034, or mark 54 on Reader Service.

## RF "HASH" FILTERS, ETC.

Kalglo Electronics Co., Inc. has developed a product especially designed to protect sensitive and expensive electronic equipment such as ham radios and transmitters from power line transients and high voltage surges.

Designated the "SPIKE-SPIKER" (T/M) they are designed to provide RF "HASH" filtering between the electronic device and motorized equipment in the vicinity to help prevent interference.

The SPIKE-SPIKERS are available in 3 models, the Deluxe Power Console, which comes equipped with (8) individually switched 120 VAC outlets divided in 2 rows of separately filtered circuits, a main on/off switch, fuse and indicator light. The MINI-I and MINI-II models are 2 socket wall mounted versions of the Deluxe Power Console.



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# WASHINGTON OUTLOOK

## WHAT'S HAPPENING AT UNCLE CHARLIES'

### FCC SUSPENDS LICENSES FOR MALICIOUS INTERFERENCE

The FCC suspended the licenses of two Amateur Extra Class operators and is considering revocation of their amateur radio station licenses. The two operators involved in this action are Gerard J. Morin (W1GM) of Sanford, Maine and Leonard R. Boucher (K4MME) of Cantonment, Florida. Information received by the Commission revealed that both licensees deliberately interfered with the transmissions of other operators who were participating in radio "network" operations. This interference occurred at various times from August, 1980 to May, 1981 on 14.313 MHz and adjacent frequencies.

Information before the Commission indicates that Morin and Boucher operated a split-frequency scheme to "maliciously interfere with the Maritime Mobile Radio Net." This was accomplished by operating on frequencies adjacent to 14.313 MHz, thereby causing "splatter" which interfered with network public service communications. Specifically, this scheme delayed the United States Coast Guard in California from obtaining assistance from the net on May 17, 1981.

The Commission views the conduct of Morin and Boucher warranted suspension of their operating privileges. Consequently, the Commission ordered that the amateur operator licenses of Gerard J. Morin and Leonard R. Boucher be suspended for the remainder of the license terms. The Commission also ordered the two operators to SHOW CAUSE why their amateur radio station licenses should not be revoked.

Either licensee may seek a hearing on the suspension and revocation proceedings by filing a written request within thirty (30) days. If this right is waived and statements are not submitted on their behalf, the suspension will become effective 30 days after the licensees receive

notice of this action. At that time, the revocation proceedings will be certified to the Commission for administrative disposition.

### WHITELAND, IND. RENEWAL OF LICENSES DENIED

FCC Administrative Law Judge Joseph F. Gonzalez has denied the renewal application of Charles F. Reed, Whiteland, Ind., for Amateur radio station WA9FVR and Technician Class Amateur radio operator license.

In November 1980 the Private Radio Bureau designated the application for hearing to determine if Reed had attempted to fraudulently obtain an Advanced Class Amateur radio operator license without an examination, in violation of the Rules, whether Reed had actively participated with Herschel McKenzie in this attempt, and whether grant of the application would serve the public interest, convenience and necessity.

In February the Bureau filed a motion for summary decision based on certain facts admitted by Reed which demonstrated conclusively that he had attempted to obtain an Amateur license by fraudulent means. Reed filed a statement arguing that his admissions did not acknowledge a violation of the law and asked that he be permitted to present evidence at a hearing with respect to these charges.

In April the presiding judge granted the Bureau's motion in part, but held in abeyance a ruling on the public interest issue, to afford Reed the opportunity to submit information with respect to the nature of the documentation he proposed to submit, at a hearing in support of his claim that a grant would serve the public interest.

In view of the fact that Reed has failed to provide any information that would indicate the need for a hearing on this issue, Judge Gonzalez granted the Bureau's motion, resolving the public interest issue in its

favor, and denied the license renewal application of Reed.

### LICENSE OF CLOVIS, CALIF., RADIO OPERATOR REVOKED

FCC Administration Law Judge Frederic J. Coufal has revoked the license of Russell E. Jantzen, Clovis, Calif., for Amateur radio station W5V-QI and affirmed the suspension of Jantzen's Amateur Advanced Class radio operator license.

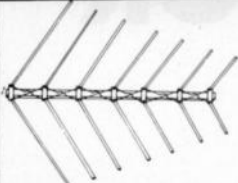
In October 1980 the FCC Private Radio Bureau specified issues to determine whether Jantzen operated radio transmitting equipment on August 21, October 10 and October 16, 1979 in willful violation of the Amateur Rules; whether in light of his 1968 suspension he can be relied upon to operate a station in accordance with the Commission's rules; whether he possesses the qualifications to remain a Commission licensee; and whether his license should be revoked.

The Bureau served Jantzen with a request for admission of facts and genuineness of documents to which he responded in January. In April the Bureau filed a motion for summary decision based on Jantzen's response to the request, as well as other affidavits executed setting forth additional facts. Jantzen did not respond to the motion.

Judge Coufal found that Jantzen did operate radio transmitting equipment on the above dates in willful and repeated violation of the amateur rules, decided that in view of his 1968 suspension and past assurances he cannot be relied upon to operate his station within the Commission's Rules, and determined Jantzen does not possess the requisite qualifications to remain a Commission licensee.

Judge Coufal granted the Bureau's motion, revoked Jantzen's license for station W5QVI, and affirmed the suspension of his Advanced Class Amateur radio operator license.

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CIRCLE 2 ON READER SERVICE CARD

## RELEASE OF 250 CHANNELS IN 800 MHZ RESERVE USE PROPOSED

The FCC has proposed new rules for the release, allocation and criteria for use of the 250 remaining channels previously authorized for "slow growth" services.

The 250 reserve channels would be allocated among four service categories of "pools" in the following manner:

Public Safety/Special Emergency: 60 channels; Industrial/Land Transportation: 70 channels; Business: 50 channels; Specialized Mobile Radio and Community Repeater Systems: 70 channels.

This proposal is the latest in a series of actions begun in 1976 when the Commission began assigning frequencies in the 806-821 MHz and 851-866 MHz bands to private land mobile users according to policies adopted in Docket 18262.

The FCC initially released 300 of the 600 channel pairs available in the 800 MHz band, designating 200 of these channels for trunked systems and 100 channels for conventional systems. In 1978 an additional 50 channels were released for conventional systems. Since trunked systems were new to land mobile, there was some uncertainty about both their actual performance and their degree of user acceptance. Even though trunked systems are theoretically a more efficient use of the spectrum than conventional systems, the Commission decided in Docket 18262 that it should wait until a number of trunked systems had been constructed and operated before making a decision on releasing the remaining channels.

On November 6, 1980, the Commission set aside 50 of the 20 remaining reserve channels for local government slow-growth systems in order to save spectrum space for these types of users who could not compete for existing channels with the same speed in application submissions as Business and Specialized Mobile Radio System (SMRS) users.

Several parties have asked the Commission to reconsider its past actions in this proceeding. They argue that the Commission has arbitrarily distinguished between local government requirements and circumstances and those of non-government concerns. They said the

equitable approach would be to release channels to all services that require them while incorporating into this release the recognition that many systems in many services have longer lead time requirements than Business and SMRS licensees.

The Commission agreed that some modifications in its approach would be appropriate and has proposed, in addition to the establishment of the four service categories mentioned above, that the FCC:

- Still assign the initial 150 conventional and 200 trunked channels;
- Allow the applicant to select frequencies from the new 250 channels and permit frequency coordination;
- Make the 250 channels available for conventional or trunked assignments as the applicant desires;
- Allow users with exclusive channel assignments greater flexibility in the use of the channel;
- Eliminate the boundaries between the service groups at the end of three years and make the remaining channels available to all eligible users;
- Change the limit on trunked systems that can be licensed to manufacturers from one nationwide to one per market area;
- Arrange the 250 channels into ten 20-channel blocks plus 50 contiguous frequencies. Applications would be considered for a minimum of three and maximum of five trunked channels at a time and when the loading criteria is met for the initial channels, the applicant could file for up to five more channels;
- Reduce the maximum number of conventional channels that may be assigned to a single licensee from five to two. Requests for a third channel would require changing to a trunked system;
- Modify the present loading standards so that the minimum loading standards required to obtain an exclusive channel (conventional or trunked) would be increased, while the time in which the minimum loading could be achieved would be shortened;
- Increase conventional system loading; and
- Establish channel allocation for the heavily used southern California area, including channels exclusively for San Diego to provide needed spectrum relief.



# ON THE SIDE

S9'S MONTHLY COLUMN FOR SIDEBANDERS  
BY BILL SANDERS / SSB-295, KW-5304, KBAH6794

## RADIO SHACK COMMUNICATIONS RECEIVER

Radio Shack's DX-302 all-band communications receiver is of interest to all SSB fans. The DX-302 features quartz-controlled frequency-synthesized tuning for accurate coverage of 10 kHz to 30 MHz in thirty tunable ranges.



This general coverage receiver uses five 7-segment LEDs in a large digital frequency display to indicate the exact frequency tuned.

The DX-302 offers excellent selectivity and image frequency suppression due to its high performance triple-conversion design and its IF band width filters. A two position IF bandwidth control selects either a six or nine element ceramic filter for wide or narrow selectivity. All silicon solid-state circuitry is used throughout for maximum efficiency with minimum noise. Dual MOSFETS employed in the critical RF mixer stage are said to reduce cross-modulation undesirable RF distortion. Emergency operation is automatic switching over to battery back-up if AC power fails.

Other user features are: key jack that allows Morse code practice by plugging in an (optional) code key, a tape output jack for off-air taping, built-in speaker, external speaker jack, RF gain control, combination signal strength/battery meter, six band RF preselector with calibrated tuning dial, BFO pitch adjustment, and signal attenuator switch.

The DX-302 can receive AM, upper and lower sidebands and CW (code) signals and will operate from 120

VAC, 12 VDC or from eight self-contained "C" cells.

Specifications are given as: Sensitivity for 10 dB S/N: AM 1 $\mu$ v 900 kHz, 0.5  $\mu$ v at 3.1 MHz and above; SSB 0.5  $\mu$ v at 900 kHz, 0.3 at 3.1 MHz and above. Selectivity: wide IF  $\pm$ 1.75 - 6 dB, narrow IF  $\pm$ 1.25 kHz - 6 dB, wide IF  $\pm$ 3.0 kHz - 60dB, narrow IF  $\pm$ 2 kHz - 60 dB. Frequency stability within 1.0 kHz after 60 minutes warm up. Comes in heavy-duty metal cabinet. The Realistic DX-302 general coverage communications receiver is available from Radio Shack stores and dealers, nationwide.

### FIXEM-UP: GETTING NATIONAL NUMBERS

Single Sideband operators don't use "handles." Instead we identify by special sideband numbers. Those many readers who write to us asking how they may obtain a set of these numbers are advised that we recommend obtaining a set of permanent national numbers from the SSB Network, which is the largest, most prominent, and oldest Sidebanding organization in the world. There are no dues! We suggest that ALL Sidebanders now avail themselves of the opportunity to become part of the vast network—future sidebanders, new sidebanders, and even experienced old-timers with "this many" local and regional numbers. A self-addressed stamped envelope sent to The SSB Network, P.O. Box 908, Smithtown, N.Y. 11787, will bring you information on how you can become a vital and important part of the national Sidebanding movement, and at last obtain a number which is part of the uniform international Sideband Identification system, recognized throughout the world.

### MAKE NOTE

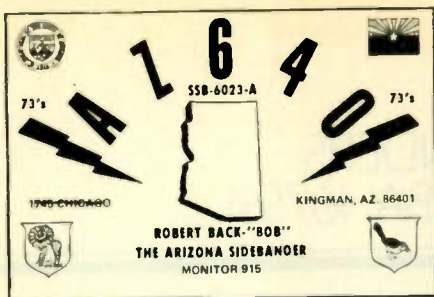
A few issues back on down the line we discussed the use of numerical prefixes which many Sidebanders like to use to indicate their general geographic location (state/nation). This brought in some amount of comment, the most noteworthy being related to Sideband operations in Scotland. Basically, we learn from a large group of Sidebanders in the *Land of the Thistle*, that upon seeing this list, either one of two things took place, neither of which has made them particularly overjoyed. Commenting through their central organization, and relayed to us via



the SSB *Network*, it seems that these operators have come to the conclusion that the listing of designators has either A) Left them out in the cold and ignored them; or B) Implied that Sidebanders in Scotland are expected to use the numerical location identifier prefix "70," shown on the listing as being used for "England."

The Sidebanders in Scotland pointed out that Scotland is a separate nation from England and should have been shown with its own numerical designator, and that perhaps those who prepared the listing were unaware that Scotland and England are, in fact, separate countries. Without getting into any of the highly charged emotions relating to the relationship between England and Scotland, as seen by the citizens of each, suffice it to say that the best information available A) would indicate that a listing such as we presented should have shown Scotland, and shown it with its own listing, and B), the reason it was not shown was most likely because when the listing was compiled in about 1974 there weren't any Sidebanders in Scotland and little thought that there might be any there in the future.





I would tend to strongly doubt that there were any political overtones or undertones to the omission since the listing was prepared by American operators who certainly would have been happy to be as all inclusive as possible and keep everybody pleased. I would, in this connection, point out that hams in Scotland are assigned their own unique and distinctive prefix and Scotland is traditionally regarded as being an individual nation in all matters relating to ham radio contests, awards, etc.

Nevertheless, the fact was that somehow the popularity used listing for Sideband operators on 27 MHz did not include Scotland, and there was the question of what to do about it. After some communication with SSB Network, the idea arose to utilize the numerical location designator "116" for Scotland since it would not conflict with any other listing in the roster of nations in general use, and furthermore, that designator actually relates to Scotland in the listing produced by the *Earth International Group*, a large worldwide DX organization headquartered in Brazil which prepared its own location identifier numerical list which (unfortunately) does not generally correspond at all with similar numbers used by any other groups known to us!

Here is a perfect example of how international cooperation between dedicated Sideband organizations solved what might well have been a tacky situation. Our congratulations to the *Scottist DX Club* (clo Danny Docherty, P.O. Box 19, Rutterglen, Glasgow, Scotland G-73 5-PE) and the *SSB Network* (P.O. Box 908, Smithtown, N.Y. 11787) for working this out so well. Jim Gibson, SSB-9, of the *SSB Network*, adds that the *Scottish DX Club* is an affiliate of *The British Sideband Network* (clo Albie Vickers, SSB-0011, 15 Carman Walk, Broadfield, Crawley, West Sussex, Great Britain) which, in turn, is an affiliate of *The SSB Network*.

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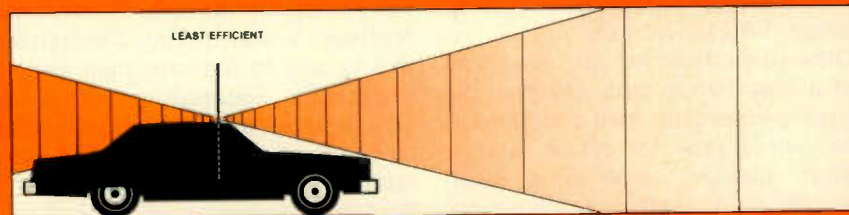
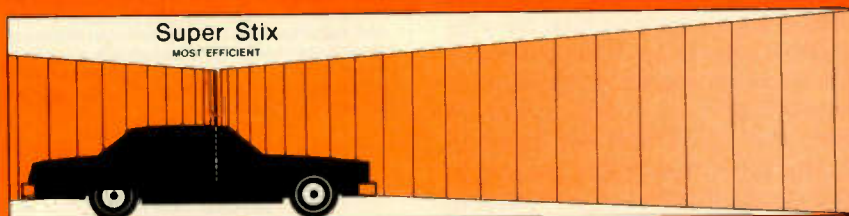
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# coming events

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## DECEMBER

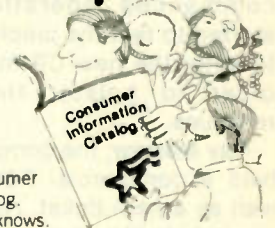
**Daytona Beach, Florida.** SIDEBAND New Year's Vacation Gathering. Dec. 27 thru Jan. 2. Special LOW motel & campground rates for reservations made NOW thru us. Send SASE for reply to: "Sideband Gathering," Care of P.O. Box 691, Port Orange, FL 32019.

## JANUARY

**Apache Junction, Arizona.** 2nd Annual C.B. Jamboree, January 9 & 10, 1982, Moose Lodge, 350 West 16 Avenue. All tickets 5/\$6.00. Trophies, door prizes, and a Saturday night dance with live country music. For more information write P.O. Box 935, Mesa, Arizona 85201.

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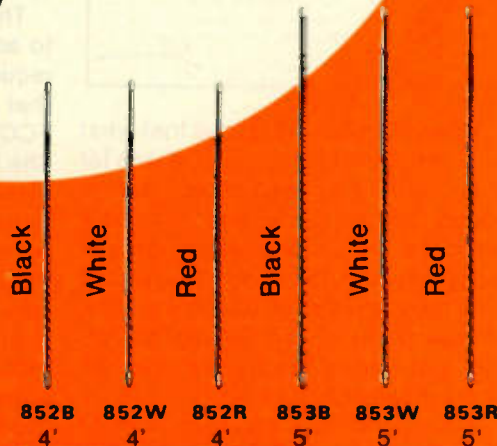
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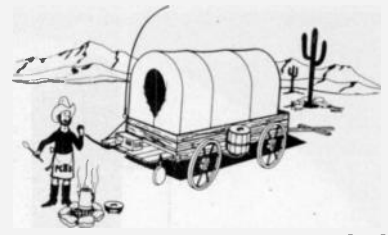
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# THE CB PIONEERS' CORNER



By Judy, SSB-99/PCBS-99

## THE FCC PUTS A MANUFACTURER OFF THE AIR!

Of the many rules and regulations set down by the FCC, one of the ones which few of the early CB people ignored most was the one which said: "All transmitters in the Citizens Radio Service must at all times be under the control of the licensee. The licensee shall not transfer, assign, or dispose of, in any manner, directly or indirectly, the operating authority under his station license." In plain language, they didn't want anybody loaning their callsign to another person. But lots of folks did it anyway.

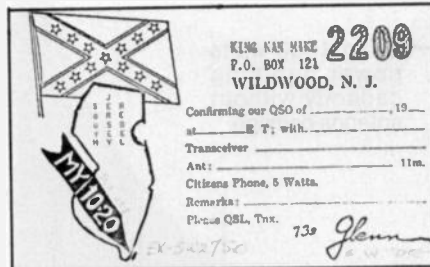
One of the most talked about FCC actions in the early days of CB was concerned with that regulation. It was FCC Docket 13373 and was directed against the Morrow Radio Manufacturing Company, and Ray E. Morrow, Salem, Oregon.

Morrow Radio was founded by Ray Morrow in 1946. The company was comprised of 50 share holders, mostly local people, and employed an average of 45 persons. The company devoted most of its efforts to the production of communications equipment for the Forestry Radio Service, and for the Amateur Radio Service (anybody out there ever hear of the *Morrow Twins*?).

As more and more manufacturers commenced operation, Morrow started to feel the pinch and decided to enter the new CB marketplace in order to bolster their sagging revenues.

Ray Morrow, the company founder, held a commercial FCC license as well as a ham ticket. He felt that CB would help his company in a big way, but he also felt that maximum potential could be realized from CB if something could be done about the very lengthy time it took the FCC to process CB licenses, which was a 90-day ordeal. So on June 24, 1959 he wrote to the FCC with a proposal. Morrow suggested that the FCC issue him licenses for 150 units on each of

the two applications which he had enclosed. His idea was that at such time as a person purchased a Morrow CB radio they would come under one of these licenses and could commence operation rather than having to sit out the 3-month FCC processing time.



Morrow probably realized that what he was suggesting to the FCC was far afield with their regulations, but he hoped for a quick and favorable response from the agency since it really seemed to be an idea whose time had arrived. In the meantime, Morrow went ahead selling his CB rigs and letting the buyers' use the Morrow callsign.

It took the FCC only 108 days to respond to Morrow! On October 9th, they returned his applications. They also told him that not only was his idea a violation of their CB regulation (Section 19.93), but it was in violation of the Communications Act, section 310(b): "No construction permit or station license, or any right thereunder, shall be transferred, assigned, or disposed of in any manner, voluntarily or involuntarily, directly or indirectly, or by transfer of control of any corporation holding such permit or license, to any person except upon application to the Commission and upon finding by the Commission that the public interest, convenience and necessity will be served thereby."

The FCC's harsh letter was never answered and by December the FCC was faced with a bulging file full of evidence that Morrow Manufacturing

Company had been selling CB sets and lending callsigns to purchasers, and was apparently continuing to do so! On December 11, the FCC sent one of its famous Registered letters, return receipt requested, to the Morrow Company warning them that evidence had been obtained which showed the company to be in violation of FCC section 19.92 and 310(b) of the Communications Act. *Still* no response from Morrow. On January 29, 1960, a Notice to Show Cause why their licenses should not be revoked was issued to the company.

The Morrow Company then went into action. They engaged an attorney, requested a hearing, and contended that they had never received the FCC's letter of December 11, 1959. The FCC produced the return receipt signed by an employee of the company. *Still* no one at Morrow remembered seeing the letter. The FCC countered by asking Morrow why he had continued to loan licenses after having received the FCC notice sent in October. Evidence proved that the callsigns had been used by at least 9 different persons in November with another 3 in December. Morrow protested that they were discontinuing the practice but that it was taking some time to do so.

However, despite his pleas, and information relating to the company's financial hardships, his good intentions and past record, the case was decided against Morrow Manufacturing and on March 22, 1961, their licenses were revoked. Not long after that Morrow's brand of CB equipment was no longer to be seen in the fledgling new CB service.

Morrow's equipment was bright and innovative. The Model 5W3 transceiver was a 3 channel unit selling for \$179.50. Operating from 6 or 12 VDC and 110 VAC, the set had a switch which could cut the power input so the normally 5 watt rig could become a 100 milliwatt low-power set

for short-range operation, thus reducing frequency congestion! Morrow was also one of the first manufacturers to produce a transistorized CB transceiver—in 1961 they did it with their Model VP-100 hand-held unit (\$149.50).

As ahead-of-their-time as the Morrow equipment may have been, it was their other advanced ideas which got them into trouble with the FCC. Today, of course, the concept of instant-licensing in some radio service has been smiled upon by the FCC! In the marine radio service and the CB service it is possible to operate with "interim" (temporary) authority during the time it takes the FCC to process the licenses. Exactly how and why the FCC was unwilling and/or unable to present an alternate approach to Morrow's idea of getting people on the air fast in 1959, when 20 years later they thought it was a workable idea, remains a mystery! And all it cost CB was a very innovative early manufacturer, Ray Morrow and his Morrow Radio Manufacturing Company of 2794 Market Street, Salem, Oregon.



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Hi, I'm Dick Cowan. I'm the publisher of S9. I'm also one of the country's most ferocious ferroequinologists. You don't recognize the word? It translates out to "collector of old toy trains."

Anyway, I have bought hundreds of old trains from S9 readers in the past six years, but my hunger for a bigger collection keeps growing. That's why I want you readers to know that I'll pay enormous prices to add good trains to my collection.

What am I looking for? Primarily Lionel, and that includes O gauge or standard gauge. But I'll also consider old Marklin, Ives, pre-war American Flier, and several others. No HO or N gauge, please. I wouldn't know what to do with them.

How much will I pay. Perhaps a few hundred dollars, perhaps a few thousand. It depends on what you've got and what condition it's in. Just as an example, a Lionel 5344 engine can bring a thousand dollars or more, and lots extra for the freight or passenger cars. A 400E will bring at least as much. Complete sets, especially in the original boxes and set cartons can be worth as much as \$5,000. In other words, I'm very serious about this whole train collecting thing.

If you've got old trains stored away in the basement or attic, just jot down the numbers on the engines and cars. A polaroid picture will help, but it isn't all that necessary. I want those trains and I'll go to any lengths to get 'em. Why not drop me a line, or better still, give me a call.

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# Cardswappers Unlimited

## S9's Column for QSL Cardswappers

Conducted By: Dorothy Ferrentino



The Cardswappers Unlimited Column is dedicated to the hobby of swapping or exchanging CB QSL cards (wallpaper). The below listed CB'ers have submitted their names to this column to indicate that they invite other CB'ers to send them QSL cards for swapping purposes, and will respond to all who do so with a QSL of their own. Those readers wishing to swap cards with these people, should mail QSL cards directly to the addresses indicated, and NOT to the offices of CB RADIO/S9. Readers wishing to be listed as Cardswappers are requested to obtain a copy of our rules and standards for becoming a part of this column. These rules were outlined in the December (1979) issue of CB RADIO/S9; a reprint is available for 25 cents and a self-addressed stamped envelope. Address all requests to: Dorothy Ferrentino, Cardswappers Unlimited, CB RADIO/S9, 14 Vanderventer Ave., Port Washington, NY 11050.

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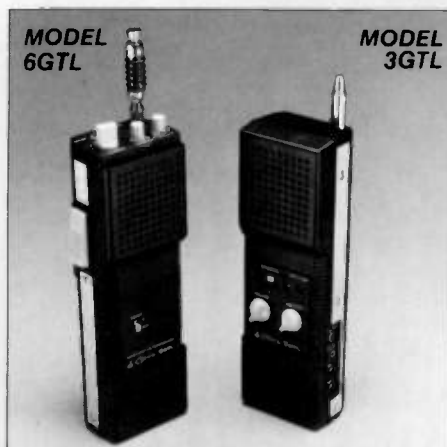
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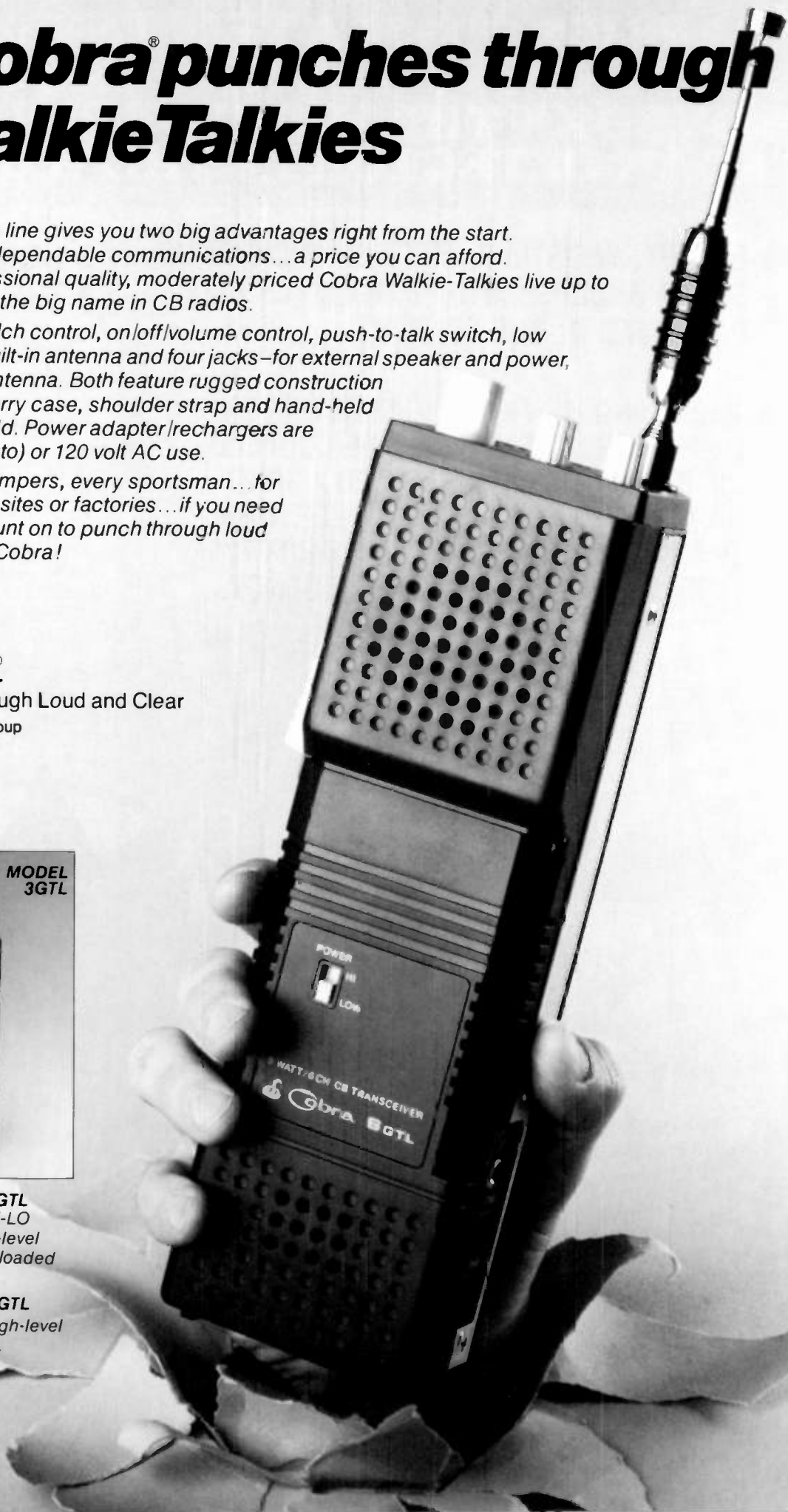


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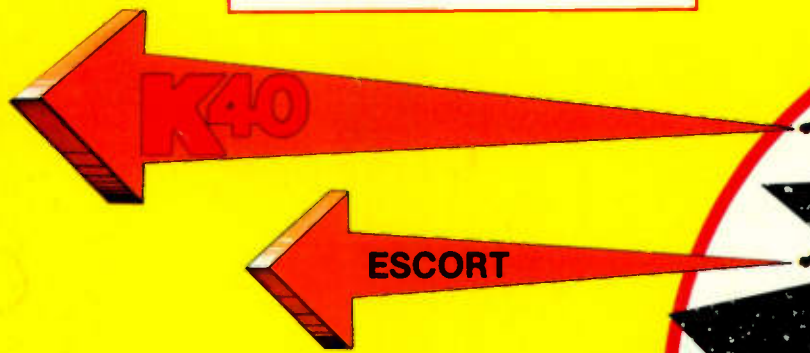
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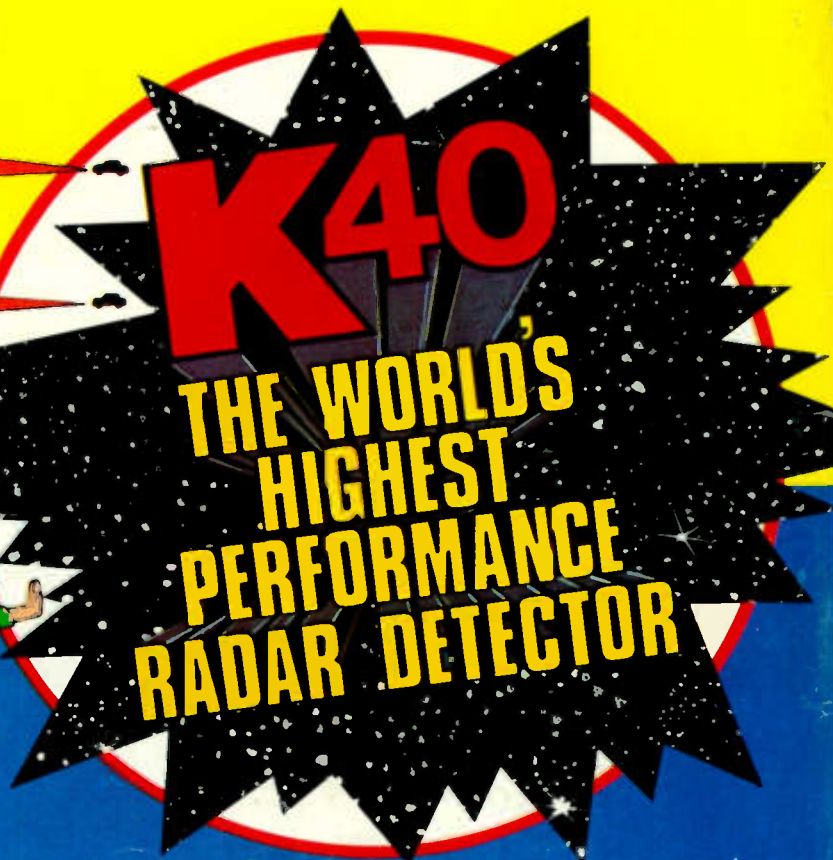
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