INVISIBLE MOBILE ANTENNA — P. 24

S9

the citizens band journal

MAY 1965

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Special Section: CB MOBILE '65

The OFFICIAL CB RADIO MAGAZINE

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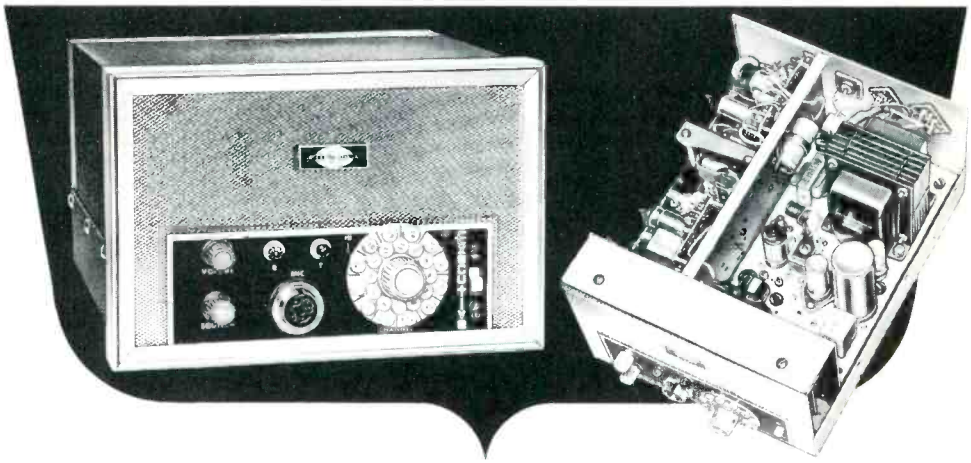

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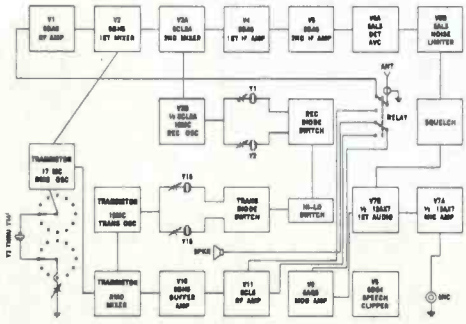

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S9 the citizens band journal

Vol. 5, No. 5

May, 1965

S. R. COWAN, KBI7182, PUBLISHER

Cover design by Frank B. Mathews, this design is available on his QSL cards.

14 Vanderventer Ave., Port Washington, N. Y.

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READER MAIL

IT CAN'T BE DONE

Dear Tom:
Your article in the March issue of *S9*, page 12, "Sharpen Up The Single Conversion Rig" is error heaped upon error in misinformation. Selectivity is a function of circuit "Q" and, as such, can be designed into equipment without any conversion. Apparently the author of this article is totally unaware of the aspects of either conversion or selectivity. Therefore we question the acceptance of such an article for general publication.

William McNeil, Sales Engineer
Multi-Elmac Company
Oak Park, Mich.

Dear Tom:
The article . . . contains a sentence: "Most of these broad sets are so because they are only single conversion, and if dual converted the tuning becomes razor sharp."
This is a common misconception and probably persists because most dual conversion sets *are* sharper than a single conversion set, but *not* because they are dual conversion.

Richard G. Covell, Pres.
RC Electronics
Lake Hiawatha, N. J.

Dear Tom:
I've just tried the dual conversion in your March issue. So far it works like a jewel, giving me much greater selectivity than I formerly had. I'm running a single conversion rig with 1650 kc/s for the IF coupled to an RCA hi-fi AM tuner. Adjacent channel reception is reduced by about 95% —before it was really m-u-r-d-e-r. I would advise anyone who has adjacent channel interference problems to give this idea a try. All it took was 5 feet of wire and 10 minutes. Thanks for printing it.

Donald T. Wilson, KKM7376
Birmingham, Ala.

The proof of the pudding is in the eating. The author of the article in question, George Kunzman, has a First Class Radiotelephone license and is in the CB business—his circuit was tried successfully here at our lab before the article ran, and we received many "thank yous" from readers who also obtained satisfactory results. Adding the circuit to a single conversion set with a 1650 kc/s IF did add another conversion and did improve selectivity. When added to a set with 455 kc/s IF's, the circuit added additional tuned circuits to the CB rig and also improved selectivity, although to a lesser extent. We disagree with the manufacturers' statements that the number of conversions has nothing to do with receiver selectivity in all cases. It's no secret that many single conversion receivers do not have the selectivity of the majority of dual conversion receivers. Whether this is a result of the number of conversions or the color of the knobs is a matter for the engineers to hassle out. Our article was directed at people who had single conversion rigs who wanted better selectivity—we feel that this objective was accomplished. Perhaps the choice of words in Mr. Kunzman's article ruffled a few feathers—I wish we could run 10 articles as successful in each issue.

ACHTUNG!

Tom:
I am at present a CB'er serving with the Royal Canadian Army Medical Corps in Germany. I've been here for 6 months (only 30 left to go—hi) and the page worn copy of your magazine that made the historic flight over here with me has long since been "borrowed."
Believe me, it's miserable to be stuck over here and not be able to hear that crackling hash from a CB loudspeaker. Send a subscription form, I can't last much longer without both CB *and* S9.

Pte. Dorward, XM49947
Fort Chambly
Soest, W. Germany

US, UNFAIR?

Don't you think you are being unfair to the newsstand readers by offering some of those free goodies to subscribers *only?*

Paul E. Taylor, KHC6389
Rushville, Ill.

No.

KING OF THE BAND

Dear Sir:
I would like to comment on your article in your February issue on how to be "King of The Band." There is a station located here in Nassau County (N.Y.) that is trying hard to live up to this article. He thinks he owns the band and, although many people have tried to reason with him, he just doesn't care. If the FCC would drive by his base and see that antenna and many other things which are illegal, he would be off the air for good. If anyone wants to see a *real* CB "King of the Band," let them contact me.

Paul Drattell, KMD0435
No. Bellmore, N. Y.

This article drew one of the heaviest batches of reader mail we've ever had. Apparently every reader thinks he knows the CB'er which the author was describing. Guess it goes to show that there are many "Kings of the Band" out there in CB land.

ALLEN GREENFIELD

Dear Sir:
The March issue had a most interesting article by Allen Greenfield ("Rational vs. Irrational: The FCC and CB Radio"). Congratulations.

Ray Bouchard
Ft. Lauderdale, Fla.

Dear Tom:
Hats off to Allen Greenfield. He came flat out and said what everyone has been beating around the bush for years. No matter what anyone says, Greenfield is right, and deep down inside everyone knows it in his heart.
Would it hurt the FCC to allow a few channels for "hobby" use. Five channels on a part time basis wouldn't create any hardships.

Don Huntley, KDD1522
Asheville, N. C.

Gentlemen:
I feel that S9 has done a major service to CB by publishing Allen Greenfield's article and Mr. Greenfield, too, has done well to bring this important issue out in the open. I do feel, however, that if the problems facing CB are to be discussed and solved, the tone of exchanges should be less inflammatory and more constructive.

Charles W. Bollinger, KMD1355
Albany, N. Y.

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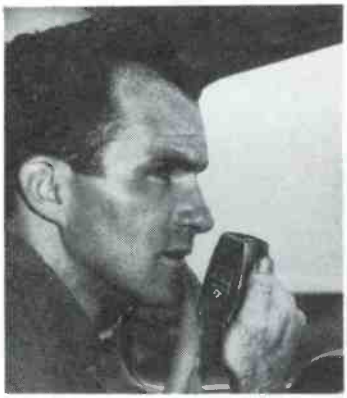

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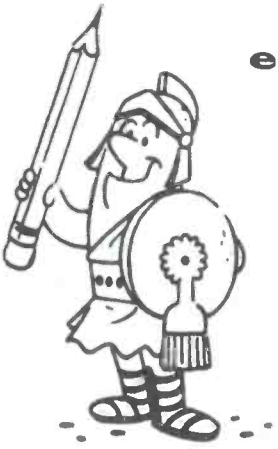


editorial

KBG4303 rides again!

by TOM KNEITEL
EDITOR, S9

EXCELSIOR ! !

I was going to hold off on my annual "state of the union" message until S9's third birthday issue in July but the wait was just too long for me to bear. Fact of the matter is that we have come up the road a piece since last year and the prospects look good for the future.

For one thing, from now on we have the option to run full color covers on S9 whenever the mood strikes us—hopefully we will have a sufficient number of worthwhile color illustrations and photographs to be able to take advantage of the color on at least *most* of the issues coming up.

Next, even though we had to put 10,000 additional copies on the newsstands in the Autumn of last year, the demand has again risen to the point where our distributors were making angry telephone calls and sending threatening letters to us for not providing them with a sufficient number of copies to meet their demands and obligations. So, effective now, we are offering *another* 10,000 copies per month for newsstand consumption. If your local newsstand or magazine store still tells you that he is unable to obtain S9 for you, send me his name and address so that I can pass it along to our Circulation Department which will be only too pleased to send around the *Cosa Nostra* to see what can be done.

From the staff standpoint, during the past year we achieved one of those rare coups in publishing which nets one magazine the star performer from another. As most of you know, we used every low trick in the world to lure Jim Kyle away from his editorship post at another CB publication so that he could join our staff. If you have been following Jim's columns in our recent issues, I'm sure you'll agree that our efforts were justified. We have several other sneaky bits presently going on behind the scenes here to bring you even further refinements in our coverage. More about these as they come to pass.

Lilia

Susan

We have also found it necessary to add some more decoration to the editorial office staff. Lilia was bordering on the verge of delirium from trying to coordinate the approximately 954 departments, offers, decals, awards, files, reader letters, and whatever. A few weeks ago, when she finally was covered over by the debris on her desk, we thought it was time to seek additional office help. Taking a look for potential staff members, we used up the supply of job seekers from about six employment agencies before we realized that it was the 300 pounds of papers on Lilia's desk that was scaring off potential secretaries. Finally, having been blacklisted by all employment agencies in the county, we cleared off Lilia's desk, pinched her cheeks to revive her, and called up the model agency which had sent us Susan Henriksen for last month's S9 cover photo. Under the guise of using her for another photograph, we had the agency send her back to the office. Well the rest is history, Sue was last seen sinking below a

Continued on page 67

ATTENTION ALL MOBILES FOR

"REACT, STANDING BY"

By WILLIAM S. GRAVES, KKI4118

"This is KUY1169, R.E.A.C.T. Control, Wheaton, Maryland, standing-by for emergency communications."

With this initial transmission on December 11, 1964, the first around-the-clock R.E.A.C.T. (Radio Emergency Associated Citizens Teams) station was commissioned on the East Coast. Since that day, the station has been manned continuously. It has *never* been off the air.

Operating from a *Howard Johnson's Motor Lodge*, this Citizen's Band emergency facility serves the Washington, D.C., area with its population of more than two million. Monitoring Channel 9, R.E.A.C.T. Control logged almost 600 road assist and emergency calls during its first 50 days of operation.

Space for the "shack" was donated by the Motor Lodge which is in an ideal location for the propagation of radio signals. The eight-story building, which is topped by a CLR-2 and a Pro-27 antenna, is located on high terrain overlooking a relatively flat area.

The two antennas, which serve the station, could not be better positioned if they were mounted atop the 555-foot high Washington Monument.

Channel 9 has been designated by the National R.E.A.C.T. Headquarters as the National CB Emergency channel. While only the Federal Communications Commission (FCC) can make such a proclamation official and thus binding upon CB operators, it is becoming more and more an accepted fact in the Washington area as CB'ers become aware of the great service offered by their local R.E.A.C.T. facility.

Much of the credit for the station's existence goes to the local *Hallicrafter* distributor, Noel Nelson, KKI3386, of *Uncle George's Ham Shack*. The *Ham Shack* picked up the tab for the equipment.

"Getting the station on the air was a real job," said Bob Bradshaw, KKI2086, President of the National Capitol Regional R.E.A.C.T., "but once operating, we found our work was just beginning. We had to educate the public as to who we were and what we were trying to do."

The first few days for the Wheaton station were unfortunate. "We had some over-ambitious public servants," is the way Bradshaw put it.

The trouble started when the duty monitor at

National Capitol Regional R.E.A.C.T. President Bob Bradshaw explains the radio log to a new monitor, Douglas A. Ward, KLV0294. Each monitor stands one watch a week.

R.E.A.C.T. Control asked a couple of CB'ers if they would move their chitchat to another channel as 9 was reserved for emergency communications. That did it. The channel became alive with indignant operators. Carriers flew every which way. "Who gave you the exclusive right to channel 9," and "I've got as much right here as you do," could be heard through it all.

Needless to say, the law was on the side of Mr. John Q. CB'er. The boys at R.E.A.C.T. Control had pushed too hard and were off to a poor start.

From then on it was a public relations job for R.E.A.C.T. Never again would a monitor ask a person to stay off of Channel 9.

Bradshaw and his colleagues then laid down the law on radio procedures. Transmissions wou the law on radio procedures. Transmissions would be short, courteous and to the point. All calls would be answered promptly and efficietnly. "Explain our function yes, but no arguments," were Bradshaw's orders.

In handling emergency communications, the average call follows this format: The call comes into R.E.A.C.T. Control requesting assistance. The station takes the message and calls the police, rescue squad, wrecker or whatever is appropriate. Then the station reports back to the calling unit that the authorities have been notified and requests that the unit stand-by until they arrive. When the authorities are on the scene, the calling unit passes this information

A mobile unit calls in a report to R.E.A.T. Control. Harold "Doc" Farnham operates this mobile unit which is the backbone of the R.E.A.C.T. system.

back to R.E.A.C.T. Control. R.E.A.C.T.'s mission has been completed and the mobile unit continues on his way.

In the first 50 days of operation, R.E.A.C.T. Control answered 237 emergency calls. Ninty-five percent of these involved automobile accidents of one degree or another.

One such emergency call was the report of a car-truck collission. After R.E.A.C.T. Control had notified the police, the on-scene CB unit called back to report great amounts of gasoline pouring from the disabled truck. The emergency station immediately called the fire department and trucks were dispatched.

This observation and quick action on the part of the alert mobile CB'er is credited with preventing a serious situation from becoming an explosive one.

On another occasion, R.E.A.C.T. Control received a request from a local hospital to obtain a rare type blood that was needed urgently. The station put out the call and the requirement was filled in less then an hour.

In a study of the station log, Bob Bradshaw noted that the busiest time of the day was around 11:00 a.m. and 5:00 p.m. Slack times were usually around 5:00 a.m. and, "surprisingly enough, 9:00 p.m.," said Bradshaw.

So far the station has averaged between 40 and 50 calls—of all kinds—in a 24 hour period. However, this figure is steadily increasing.

Though R.E.A.C.T. Control is primarily set up to receive emergency traffic, the station did log more than 300 "assists" in the first 50 days of operation. These include relaying road information, giving directions and generally helping confused Washington visitors—and residents.

Bradshaw is particularly proud of one incident in which R.E.A.C.T. Control played a major role. The station was requested to assist in locating a motorist for an urgent message who was passing through Washington driving from New York to Florida.

The station broadcast the description of the car, and sure enough, before the day was out the car had been spotted by a mobile CB'er. The New York driver was most grateful for the services of the station and the alert operator of the CB equipped mobile unit.

The local police and other authorities also had to be informed of what R.E.A.C.T. was all about and how this Citizen's Band organization could assist them. To accomplish this, the Regional Vice President, Harold M. "Doc" Farnham (KKI1433) made personal visits to the Police Chiefs and other regional safety officials.

How well Farnham and others sold R.E.A.C.T. Control was obvious on the night the station went on the air. Among the guests at the opening ceremony were city, county, and state police officials. The sheriff's office was represented as were several fire departments and rescue squads. Hallicrafter, national sponsor of R.E.A.C.T., sent three men out from the home office in Chicago. There were also three officials from the FCC.

The FCC has gone on record as endorsing the R.E.A.C.T. program. A spokesman for the Commission in Washington, commenting on the Wheaton station said, "The program is consistant with the Commission's feelings on the use of the Citizen's Band. We highly favor this use of the frequencies."

The station uses two Hallicrafters CB-3A's (seven channel units). Each has an external speaker. One monitors 9, the other 11. A large area map hangs on the "shack's" wall. Other equipment in front of the duty operator is a call-reminder clock, a phone and a log sheet.

Everything is either home-made or donated. The phone bill is paid out of funds of local teams.

"Doc" Farnham, along with being Vice President of the Regional, is also the Chief Communications Officer of the station. This gives him the responsibility of making out the watch list. "We draw from all seven R.E.A.C.T.s in the area," said Farnham, "and it averages out to one four-hour watch per week per man—or woman."

Farnham's crew of monitors number 42. They are plumbers, carpenters, iron workers, heavy equipment operators, government workers, one college professor—a speech professor at Maryland University—an ex-U.S. Marshal, retired people, newspaper men, housewives and several policemen.

Farnham himself is a Lab Supervisor at the National Institutes of Health. Four evenings a week he plays a piano in an Italian restaurant in the Georgetown section of Washington. If this were not enough to keep him busy, he is also Vice President of his CB club—RAMCO, Radio Association of Montgomery County.

Chief Electronic Engineer for the Regional is Park Bedford, KKI2419. Bedford has drawn up By-Laws of Incorporation for R.E.A.C.T. Control.

Monitor Douglas A. Ward logs radio transmission at R.E.A.C.T. Control.

Monitor Douglas A. Ward adjusts a base unit at R.E.A.C.T. Control while a second monitor Harold "Doc" Farnham phones in an accident report to police officials.

They state the purpose of the facility as: the "furtherance of the public welfare through the application of two-way CB radio communications, to aid and abet normal communications media in time of local or regional emergency, disaster or individual need . . . all on a voluntary basis."

The Articles of Incorporation also state that R.E.A.C.T. Control is to "promote the general understanding among non-radio users . . . as to the potentials of the Citizen's Band Radio Service."

Washington's R.E.A.C.T. Control already has plans for expansion. They now have a station operating 12 hours a day in Port Tobacco, Maryland, south of Washington. Farnham said, "when the boating season opens on the Potomac, that station will be on the air 24 hours a day." It now operates from a donated house trailer.

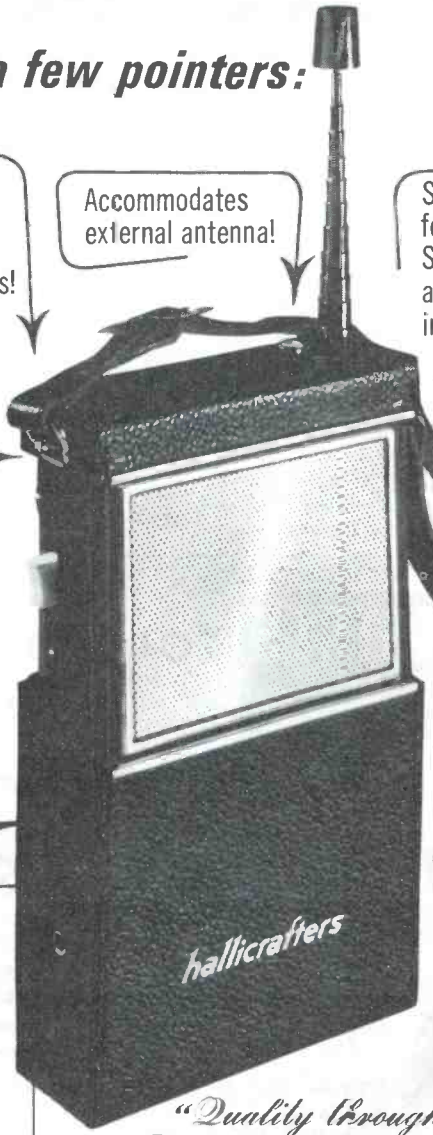
The group hopes to set up two other satellite stations in the area. One in Arlington, Virginia, across the river from Washington, and a second in Southeast Washington. This will make it possible for any CB unit, regardless of its location in the Washington area, to reach R.E.A.C.T. Control.

Thousands of travelers will be pouring into the Washington area this summer. If you as a mobile CB'er are among them, remember that road assistance is close at hand via your two-way radio. A call to KUY1169 will bring an answer from a friend who is donating his time to your safety.

S9

Looking for superior performance in a two-channel, hand-held transceiver?

Here are a few pointers:



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"SWR" SIMPLIFIED

EVER WONDER HOW TO PERK UP YOUR SIGNAL?

By DOUG DE MAW, W8HHS

One of the most talked about . . . but least understood subjects relating to CB radio operation is SWR; or if you please . . . *standing wave ratio.*

Understanding the cause, effect and cure for this undesirable malady will provide you with the knowledge required, for better communication effectiveness. But first . . . let's define SWR.

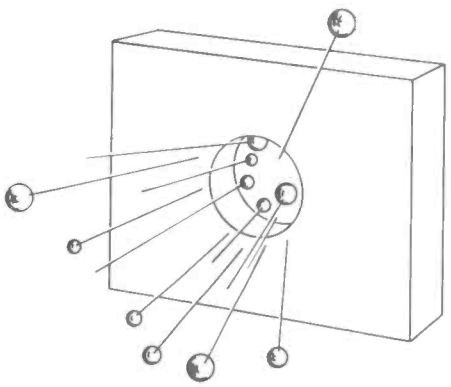


Fig. 1

SWR is the ratio of difference between the power being supplied to the antenna (from the transmitter) and the unused portion of that same power, which the antenna is unable to accept and radiate into the ether. The unused radio frequency energy rejected by the antenna, is passed back down the feedline to the transmitter in much the same manner as a rubber ball, bouncing off a wall. Suppose for a moment that you were holding 10 golf balls in your hand. 20 feet away stood a wall with a hole in it, the diameter of a bushel basket. With great accuracy, you threw the balls toward the hole in the wall, hoping to be lucky enough to have them all end up on the opposite side of the wall. As fate would have it, 5 of the balls went through the hole and 5 hit around the edges of the hole, bouncing back toward you. (Fig. 1) The ratio between the balls which succeeded in reaching their destination as compared to the number of balls which bounced back, is 2:1 . . . or a loss of 50 per cent. Had the hole in the wall been larger, it would have matched the dispersed pattern of the golf balls and chances are, all of them would have made

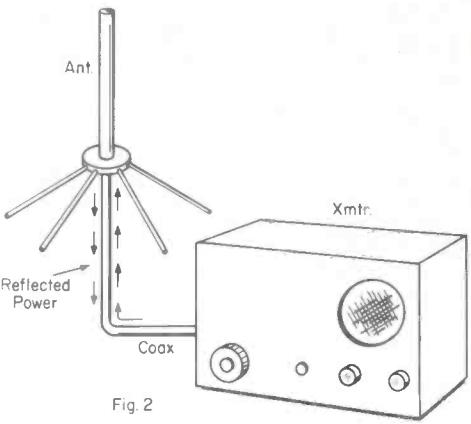


Fig. 2

it to the opposite side of the wall. Had this happened . . . your score would have been 100 per cent. In SWR terms, you would have a 1:1 match.

Radio frequency energy, in a manner similar to golf balls, must be able to arrive at the antenna and be accepted, rather than being bounced back down the feedline to the transmitter. (Fig. 2) Such unused energy is wasted, causing a loss in your signal's strength at the other end of the line. The amount of signal loss is proportional to the power which the mismatched antenna cannot digest and radiate toward the station you are in contact with. Thinking along these lines, it is conceivable that a mis-match could be so severe, that none of your transmitter's power would ever be radiated by the antenna. Fortunately, instances of this variety are few and far between. An absurd situation of this type might occur if the antenna feed point was accidentally "shorted" or "grounded" to the metal supporting structure.

Some fellows are confused by antenna terminology. The power which is returned back down the feedline in cases of high SWR, is known as "reflected power." For clarity, it is best that you think of the unused power in this manner. The 5 golf balls which bounced off the wall can be classified as "reflected power."

WHAT CAUSES SWR?

Earlier in the text, I mentioned the term, "mis-matched." This is precisely what causes a standing wave ratio, other than 1:1. A mis-

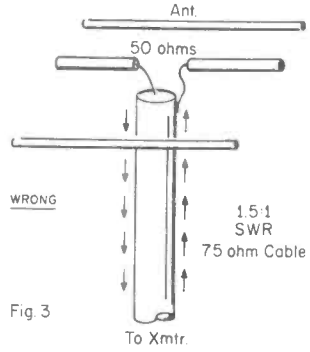


Fig. 3

match will occur at any time when an antenna of a given impedance (resistance) is attached to a feedline characteristic impedance. (Audio and RF energy are AC in nature, hence resistance is referred to as impedance.)

Suppose you purchased a 3 element beam antenna of commercial origin. The advertised specifications state that the feed-point impedance of the product is 50 ohms. When you install it, you mistakenly attach a 75 ohm coaxial feedline (Fig. 3). Your SWR bridge meter shows a standing wave ratio of 1.5:1. This means that a small portion of your power is being reflected back down the feedline, and wasted. If you had installed the correct type of line (50 ohms), it would have matched the 50 ohm antenna and your SWR reading would have been a proper 1:1. A 50 ohm antenna and a 50 ohm feedline, connected together, represent a theoretically perfect match, hence: no reflected power.

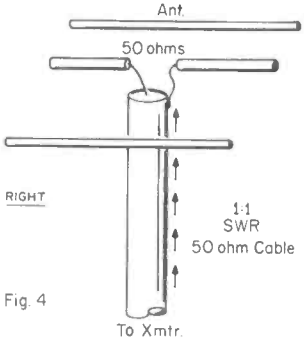
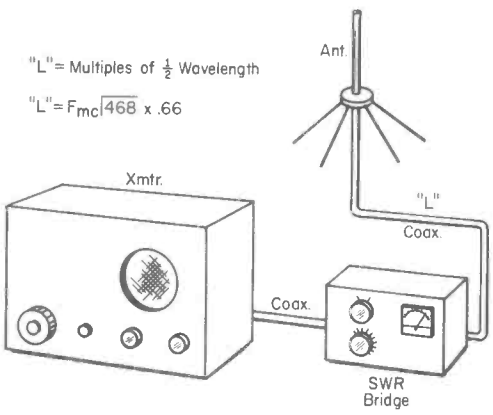


Fig. 4

Now, let's imagine you bought a quality antenna whose resistance was known to be 50 ohms. At the same time, you purchased 100 feet of 50 ohm coaxial cable to use with it. After carefully installing the antenna system, you learn to your horror, that you have a 2.5:1 SWR. You tell yourself, "this cannot be!" Yet, there it is, defying you to explain its origin. Sadly enough, this sort of thing happens, more often than not. Before you condemn the poor manufacturer however, let me explain just how this can occur.

When a manufacturer designs and perfects an antenna for use by CB'ers, he does it under ideal conditions. That is to say, he makes engineering tests and adjustments on a specially prepared test range. The antenna is usually situated a wavelength or more, above ground level. There are no surrounding objects such as power lines, trees, buildings and utility poles. He attempts to simulate a "free space" condition for the antenna under test. After carefully determining the final design considerations and adjustments, he arrives at a set of conditions which will result in a 50, 75 or 300 ohm terminal impedance. The antennas are then manufactured to these test range specifications and advertised to have a certain impedance. Fine and dandy! You're impressed and rush out and buy one of these "super-duper, signal scoopers." Being an average "city dweller," you are compelled to mount the antenna a few feet from a tree and quite near the roof of your house. Other "clutter" is within a few feet of your antenna. You turn your transmitter on and discover a 3.5:1 SWR. You gasp as you realize that 30 per cent of your power is being reflected back down the feedline and wasted. The reason? The close proximity of the objects near your antenna have de-tuned it, introducing considerable reactance, which has shown up as SWR. Without proper measuring equipment, it would be difficult to determine just what impedance the antenna had become, at your operating frequency.



USING THE SWR BRIDGE

The SWR bridge is inserted between the transmitter (or transceiver) and the transmission line going to the antenna. (Fig. 5) A short length of coaxial cable (same impedance as your feedline), connects the bridge to your equipment. Place the bridge's "Forward-Reflected" switch in the "Forward" position. The sensitivity control, which regulates the "swing"

of the meter, should be set at minimum. The transmitter is turned on and the sensitivity control is advanced until the meter reads "full-scale." By switching next to "reflected," you may read the SWR, directly from the meter scale. If the meter falls to zero, you're in good shape and have a proper "match." If it doesn't your antenna and feedline need attention.

If the antenna is properly "matched," you have what is known as a "flat" line . . . permitting you to insert the SWR bridge into it, at any random point. Regardless of where it is placed, your readings should be accurate. A mis-matched antenna, will give you different readings, depending upon the point at which it is installed in the line, due to the location of current and voltage nodes present on the line. In order to accurately measure the SWR in an antenna system where standing waves exist, it is necessary to insert the instrument into the line at a point which is one half-wave from the feed point of the antenna; or an even multiple of half waves from it. This enables the transmission line to repeat what it "sees" at the antenna. Example: If you were operating a 2 meter ham rig on 145 mcs., one half wave would be approximately 38.5 inches long. In computing the length of coaxial lines in terms of wavelengths, you must first calculate the length by dividing the frequency of operation (in mcs.) into 468, which gives you a half wave dimension. Since a half wave of coax is different than a "free space" half wavelength, due to its capacity between conductors and other related conditions, a velocity factor of .66 must be included in the formula. Example: 145 mcs., divided into 468 . . . times .66 = 2.17 feet (26.13 inches). This is the proper length for a half-wave section of coax cable at 145 mcs. Installing the SWR bridge in the feedline, at any multiple of this figure, will result in accurate readings, telling you if your antenna is properly matched to the feedline.

THE EFFECTS OF SWR

Normally, a standing wave ratio less than 2:1, will not seriously deteriorate the performance of CB gear, or any other equipment operating below 50 mcs. As you enter the VHF/UHF spectrum, losses of this type become more intolerable and one should strive to secure a perfect match. A 2:1 SWR indicates a 10 per cent power loss. If your transmitter delivers 10 watts to the input of the feedline, 9 watts will reach the antenna. A 6:1 standing wave condition represents a 50 per cent power loss, a signficant drop in signal level, especially under marginal conditions. The receiver suffers a similar loss in efficiency, when attached to the

Continued on page 18

*se·lec·tive (sĭ lĕk′tĭv) adj
having the function or powe
of selecting; making selectio
characterized by selection.
Radio. having good selectivity
of bei . 2. *Elect*
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*CONTACT!-23

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The Contact!–23 has achieved exceptional selectivity through the use of a true Mechanical Bandpass Filter — similar to that found in far more expensive ham equipment.

AND THERE'S LOTS MORE TO THE CONTACT!-23

You get crystal control on all 23 channels, both Transmit and Receive, via a synthesized circuit — all crystals included.

- Illuminated, angled front panel
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- Illuminated S & RF meter
- Modulation indicator
- Transistorized power supply, 12V and 110V
- Cigar lighter plug-in
- Electronic switching
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- PA system jack

Complete with: microphone, cords and snap lock mounting brackets.

USL CONTACT!-23 $199.50

USL CONTACT!-8 $149.50

Illuminated, angled front panel. 23-Ch. tunable receiver with illuminated dial. 8-Ch. crystal-controlled transmit & receive. 1-Ch. external crystal socket—transmit & receive. Transistorized power supply. Illuminated S & RF meter. Crystal spotting. Electronic switching. PA system jack. Complete with: microphone, cords, 1 pr. of crystals and snap lock mounting brackets. Cigar lighter plug-in, easy to install. Nuvistor low noise front end.

USL T 1050 A $119.95

23-Ch. tunable receiver with illuminated dial. 6-Ch. crystal-controlled transmit & receive. Illuminated S & RF meter. Crystal spotting. Earphone jack. Nuvistor low noise RF front end. 6V or 12V power supply available (optional extra). Unit comes complete with: microphone, AC and DC cords, 1 pr. of crystals and mobile mounting brackets. Squelch & full series noise limiter. TVI trap. Signal-to-noise ratio: better than 10 db at 1 microvolt. Full plate modulation.

USL

UNITED SCIENTIFIC LABORATORIES, *(KKD5719)*

Division of Vernitron Corporation

35-15 37th Avenue, Long Island City 1, New York

Dealership inquiries invited

SWR

Continued from page 16

same antenna. It could mean the difference between being "copied" or not being heard at all.

The higher the quantity of reflected power, the more difficult it becomes to transfer the power from the transmitter to the antenna. With high-powered equipment, excessive reflected power can cause heating of the p.a. tank circuit; damage the p.a. tubes or melt the transmission line. At VHF and UHF, receiver performance becomes impaired through reduced sensitivity and higher SNR (signal-to-noise ratio), as the mis-matched condition is reflected into the receiver's input circuit. In some instances, the transmitter's operation becomes erratic, causing TVI. Also, the RF energy being reflected back down the line, is often "forced" into the audio section of the transmitter, causing howling and squealing while you are transmitting. None of these effects should occur, if the SWR is within reasonable limits.

CB operators cannot afford to waste power through poor performance in the antenna system, since they are limited to low power by law. Every watt counts and proper antenna matching is *vital.*

Avoiding SWR

The following rules will resolve most SWR problems.

1—Avoid purchasing "bargain" priced antennas (few are properly engineered).

2—If possible, purchase or build an antenna which has an adjustable matching network such as a gamma or "T" match. This will enable you to compensate for reactance which may crop up in your particular installation.

3—Do not splice sections of transmission line unless you use coaxial fittings at each junction.

4—Use top quality transmission line (polyfoam type preferred).

5—Mount antenna as high and in the clear, as possible. (Avoid placing it near trees, power lines, etc., by at least several wavelengths.)

One final word of caution: If your transmitter has a higher than average quantity of harmonic energy in its output, false SWR readings will be obtained. Example: our transmitter is operating at 27 mcs. You have a strong second harmonic at 54 mcs. The antenna is designed to operate at 27 mcs., hence the 54 mcs. energy is repelled when it reaches the antenna. This energy is reflected back down the feedline and shows up as SWR. In a situation of this type, you could actually have a perfect 1:1 SWR at the operating frequency, but the harmonic energy would cause you to secure an SWR reading of 2:1, or higher.

BLAST THE QRM

WITH YOUR

TOROID TENNA

Here it is! The one that separates the men from the boys — the milliwatts from the kilowatts, or "killer-watts" as CB'ers have come to call the signal from the Toroid Tenna. Yes, don't throw out that "old" CB rig because it can't compete with the newer ones with the souped up audio. A Toroid Tenna makes any rig sound like a ton of bricks — not by accident, but because we have given it 2 million miles of field testing, pampering, pruning, tuning and tinkering to give it a whopping 30 to 70% greater transmitting distance.

Don't go away because that's not all (as if it wasn't enough)! Because of the unique highly efficient toroidal transformer we use in the antenna, you'll find that the Toroid Tenna has less outside noise pickup. In addition, it will not (because it cannot) corrode like most other antennas; it requires no clipping and pruning because you can peak it in seconds with only a screwdriver. The 42½ inch size permits mounting on any convenient spot. Sound fantastic? It is! It's one of the few real luxuries in CB that everyone can afford — in fact, with the new FCC rules jamming everyone into only 7 channels, the Toroid Tenna may be the deciding factor between communications and confusion.

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THE VARI-TUNER

VARIABLE TUNING FOR YOUR TRANSCEIVER

By JAMES HILL

Is your transceiver one of the models which features crystal receiving only, with no provision for tuning all the way across the band to see what's happening in a hurry?

If it is, here's a gadget you may be interested in. You can put it together in a single evening, and when you're done you'll be able to tune across all 23 channels (with a little extra at each end). Best of all, it requires no tubes or transistors and merely plugs into your set like a crystal. Some sets, however, require one additional connection under the chassis for best results.

To build the *Vari-tuner* the first thing you need to do is collect all the parts. You'll need a 15-mmf variable capacitor, of the best quality you can find. A Hammarlund HF-15X is excellent. In addition, you'll need two 82-mmf silver-mica fixed capacitors, and one 51-mmf unit (also silver mica). A 0.47-microhenry variable inductor (J. W. Miller Part No. 40A-77CBI is recommended), a dial such as the National MCN, and a case to hold it all complete the parts list.

Drill the case to hold the dial, following the template furnished with the dial you purchase, and make a mounting bracket from heavy (at least 1/16-inch) aluminum strap to hold the capacitor in place behind the dial. Mount the variable capacitor on the bracket, and drill a holl for the coil form in the back of the case. Also drill a 3/8 inch hole for the output coax near the coil-form hole, but be sure to leave enough clearance that the coax can't rub against the coil.

Wire the variable capacitor in parallel with the coil, using wire of at least No. 16 size for the leads. Everything inside the box must be stiff and unable to vibrate if you don't want to have "vibrating signals" after everything is complete. Wire one of the 82-mmf and the 51-mmf silver micas in series and connect them across the coil also. Then wire the other 82-mmf silver mica from the stator of the variable capacitor to the end of the connecting coax (a single-point tie strip comes in handy here but is not absolutely necessary if you cut the capacitor leads short. The frame and rotor of the capacitor connect to the shield of the coax, which also grounds to the metal case.

At the other end of the coax, connect the shield braid to the grounded side of a receiving-crystal socket and the center conductor to the "hot" side of the crystal socket. This completes installation for most sets.

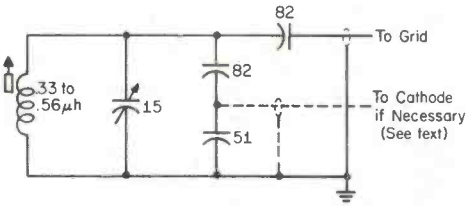


Figure 1. Schematic diagram of vari-tuner. All leads should be as short as possible, and all parts must be mechanically solid so that they can't vibrate. Otherwise construction is not critical.

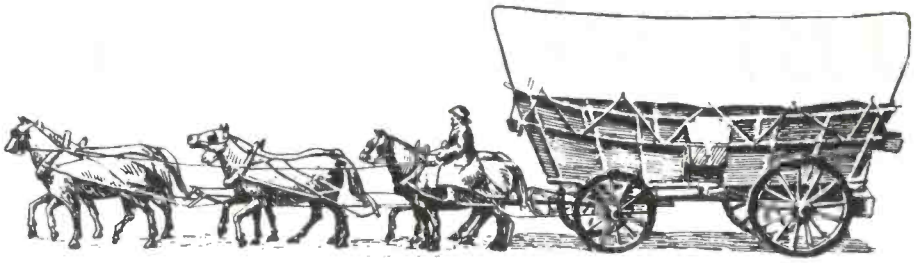
To check out and adjust the *Vari-tuner* you'll need either a signal generator or a grid-dip meter to give you a source of variable-frequency signals in the 11-meter band. Start by turning everything on and sweeping the signal generator frequency across the band to find out what part of the spectrum you're receiving.

If you don't get any response, your transceiver may be of the type that requires an under-chassis connection. Trace out the crystal-oscillator wiring in the receiver portion; if an RF choke is between the oscillator cathode and ground, you need a second length of coax to the vari-tuner. The shield of this coax is also grounded; the center conductor ties the oscillator-tube cathode to the junction of the 82- and 51-mmf capacitors in the vari-tuner. Wiring inside the transceiver is not disturbed by this connection; the coax simply connects to the cathode in addition to any other wires already there.

When you get a response, check the frequency to which the signal generator is set. If it's near the 11-meter band, you're ready to go. If, on the other hand, it's in or near the 10-meter ham band, tune the signal generator low and find another response near 11 meters. This is the one to use.

Now set the signal generator to the frequency of Channel 1 (better yet, use an extra transmitter with a Channel 1 crystal in it) and set the vari-tuner capacitor so that it is about 10 per cent short of being fully meshed. Adjust the

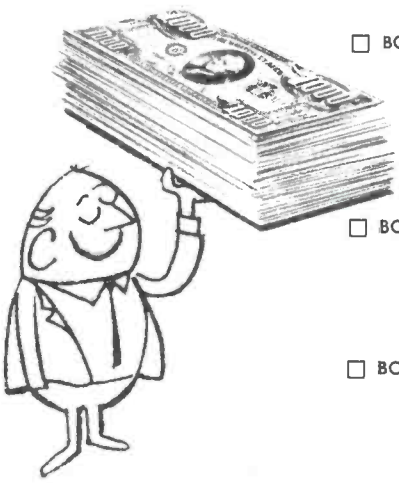
Continued on page 68



READERS' BONANZA!

TAKE YOUR PICK OF THESE GIFTS!

For some time now we have been offering all kinds of free goodies with new subscriptions and renewals, we vary them each month. But we always seem to get requests for bonus items which haven't been offered for several months and that sends the Circulation Department into a tailspin. So here it is, a grand round-up of all the various offers, tied in with an exciting offer for you to get several of these things FREE with your subscription or renewal.



☐ BONUS ITEM #1 — Large 3 inch, 3 color, "Monitor Channel 9" decal. Regularly sells for 50¢.

☐ BONUS ITEM #2 — 50 Project Aid cards which you are required to use to notify the FCC whenever you use your CB rig to help a stranded motorist or for any emergency use. These sell for $1.00.

☐ BONUS ITEM #3 — Membership in the Association to Condemn Detrimental Associations (ACDA), now the world's largest do-nothing CB club. No officers, no program, it was patterned after one of the so-called "national" CB clubs. You get a big red and gold certificate for your wall with this one.

☐ BONUS ITEM #4 — Do-It-Yourself-S9-Editor-Kit — Yes, an official multicolored S9 Press Card which will get you on buses (show it when you pay your fare), also a 10-code card, plus one of our now famous green and white "Wall Certificates."

☐ BONUS ITEM #5 — Our new insanity, the KING OF THE BAND certificate; something to hang on the wall of your shack to let visitors know that you've earned yourself a place in the sun. You get your call letters lettered across the throne. Regularly 50¢.

With a 1 year subscription or renewal you get your choice of any one of these items; with a two year subscription or renewal you get your choice of any THREE items, and a three year subscription earns you not only all FIVE items FREE, but we will bow towards your 10-20 once a week (on payday). Just check off the item or items you want, rip out this page and enclose it in the postage-paid envelope (in this issue) when you send in your subscription.

JUST ONE MORE TIME!

Despite the "hard" April 18th closing date for names in our "Who's Who in CB" directory, we have received several requests from CB clubs who are trying to round up as many of their members as possible for inclusion in the book. They asked if we could hold off for a few more weeks and we agreed. We will now accept applications until May 18th—but under no conditions will this deadline be extended. If you wanted to make the scene and forgot, *this* is your *last* chance, *right now!*

As mentioned previously, this book will be a guide to the most active CB'ers on the band—the most "in" directory ever attempted, containing personal data on the CB'ers listed.

All we need to put such a directory together and send it on its way to fame and immortality is—*YOU!* Yes, the only one who can give us accurate information on you and your CB operation is none other than little old you. To obtain this information, we offer here a questionnaire which you may complete and return to our offices so that we may "set you in type." This form will be published only this month and next month, and clubs are requested to run it in their newsletters (together with the information on how to submit the form to us). If you don't wish to cut your copy of S9, you may duplicate the form in ink or typewriter.

Each CB'er listed in the directory has a chance to pass along to the CB world a 50-character message (letters, numbers, and spaces count as one character). This message might be something like: "The coffee pot is always on," or "All QSL swap requests answered 100%," or "Let's swap tape recordings," or "Give us a buzz when passing through Omaha." We reserve the right to edit any messages which in our opinion are either in questionable taste or outside the scope and spirit of the publication.

We are making every effort to include in this directory only those CB'ers who are going to list accurate information and not make attempts at being funny with clever answers to the questionnaire. We are therefore asking that when you return the form, you enclose $1 in cash, check, or money order (which will be put towards printing the book). This $1 will be deductible from the final sale price of the book—so if the final price should turn out to be, say, $3—those listed in the book would pay only $2. Husbands and wives wishing two separate listings can submit both together for $1.50 (this would still allow $1 off the price).

In order to be listed in the 1965 "Who's Who in CB" Directory, do the following, and do it *NOW!* Fill out the form which accompanies this article (you may skip any questions which you don't want to answer), enclose $1, send this to: "Who's Who in CB," % S9 Magazine, 14 Vanderventer Avenue, Port Washington, N. Y. 11050. Remember, the faster we get this information from you, the faster we can go to press!

"WHO'S WHO IN CB" QUESTIONNAIRE

IT IS *NOT* NECESSARY TO ANSWER EVERY QUESTION, BUT PLEASE TYPE OR PRINT PLAINLY IN INK FOR ALL QUESTIONS YOU DO ANSWER. TO BE LISTED IN THE 1965 "WHO'S WHO IN CB" DIRECTORY, RETURN THIS FORM AS SOON AS POSSIBLE (BUT NOT LATER THAN APRIL 18th, 1965) TO "WHO'S WHO IN CB," c/o S9 MAGAZINE, 14 VANDERVENTER AVENUE, PORT WASHINGTON, N. Y. 11050. ENCLOSE $1, WHICH YOU MAY DEDUCT FROM THE FINAL SALE PRICE OF THE BOOK SHOULD YOU DECIDE TO PURCHASE IT.

CB Call:_____, **Name:**_____.
Address:_____.
City:_____, **State:**_____, **Zip:**_____. **Tel. No.**_____.
Occupation:_____, **Hobbies:**_____.
Wife/Husband's name:_____. **Do you swap QSL's? Yes** ☐, **No** ☐.
CB Club(s):_____, **I monitor channel:**_____.
Former CB calls held:_____. **Ham call:**_____, **band:**_____.
Message (50 characters maximum; letters, numbers, spaces count as 1 each); all messages are subject to editing at our discretion: _____

MR. BUSINESSMAN, DO YOU HAVE "WHO-DAT-ITIS"?

What do CB'ers say when they hear your name? Do they shrug their shoulders and say "Who dat?" while you lose business? *S9* to the rescue with a quick and easy way to cure "who-dat-itis?" And this applies to *all* CB'ers in business, not only CB dealers and manufacturers—printers, coffee shop owners, service stations, etc., can take the cure.

Very shortly, *S9* Magazine will publish a big "Who's Who in CB Directory," a guidebook which will be constantly used by thousands of CB'ers in the U.S. and Canada throughout the next year. We will be accepting ads in this volume at the lowest cut-rates ever available anywhere in the CB field—in fact, these are "display" ads at "classified" rates.

1-inch high by 2½-inch wide ad in the *S9* "Who's Who in CB Directory/1965" will look like this:

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OR EVEN

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LUNCHEON from $1.50
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Seats 270 Persons

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What do you think it will cost? Sorry, Charlie—this time you goofed, baby. These ads are only $10—that's T-E-N. Crazy? *Yes*, but you get the breaks because we expect to print so many copies that the price-per-copy of the book will permit such unheard of goings-on.

Here's how to let CB'ers know that you're "on the map." Don't be a "who dat?" anymore. First ads received here get the choicest locations. All ads are payable in advance; sorry no photographs in the ads at these rates. Rush the form to us to take advantage.

"Who's Who in CB Directory/1965"
Cowan Publishing Corp.

14 Vanderventer Avenue
Port Washington, N. Y. 11050

Enclosed is $10 and my ad copy for "Who Who in CB Directory/1965." The following is the ad copy:

Name: _____.
Company: _____.
Address: _____.
City: _____, **State:** _____, **Zip:** _____.

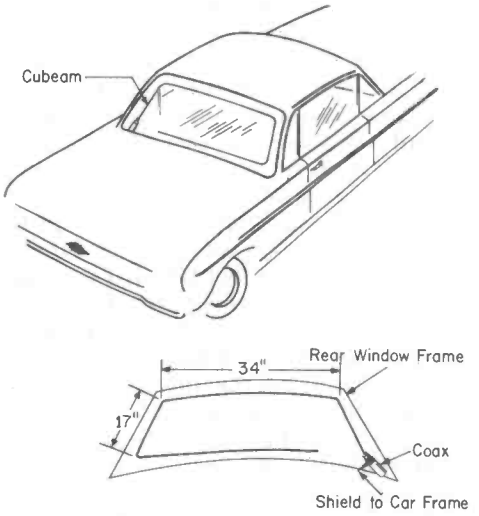
THE CUBEAM

AN INVISIBLE MOBILE ANTENNA

by DICK TURPIN, KCF2700

The XYL had made a definite taboo on drilling holes in the family cruiser—what's more, she wasn't particularly keen on even the most "innocent" looking bumper mount or small antenna. As a matter of fact, she didn't even want a CB rig in the car at all.

I finally convinced her to at least give CB a try, providing that I could come up with a way to do it without an antenna showing outside of the car. Well that was a kicker, because I had seen indoor base station antennas printed in every type of technical journal, but I had yet to come across one which would do the job in a mobile unit. Putting the ol' noggin to use, I was able to invent my own indoor hidden mobile antenna. It wasn't the world's most efficient sky hook, but it *did* load up and it *did* give me a chance to give the rig a try. I call it the *Cubeam*.



WHAT IT IS

The problem which faced me was to take something the length of a CB whip, find a place for it inside of the vehicle where it would both fit and radiate. Obviously the most logical place would be near one of the windows —the front or rear. The front window was dropped from consideration because of problems with the Motor Vehicle Bureau which doesn't permit anything which might hinder the view of the driver. So the rear window it was.

How to make a CB antenna out of the rear window is what it boiled down to, as idiotic as it may sound. Come to think of it though, the perimeter of the rear window measured out to roughly the size of a CB whip; if I could bend a CB whip into a rectangular shape I could place it in the rear window. But why bother with bending up a beautiful whip when I could use enamelled copper wire to serve the same purpose.

So that was it. I installed the rig and ran the coaxial lead up to the rear deck. I decided that the antenna would have to be at least 17 inches high at each side and 34 inches across the top and bottom. This would equal 102 inches for the radiator. The shield side of the coax would be easily attached to one of the Phillips head screws near the window.

The wire chosen for the radiator was some regular hookup wire which I had in the shack and it attached to the window easily by means of a few pieces of *Scotch Brand Magic Tape*. Actually the best placement for the antenna would keep it at least two or three inches away from the metal window frame at all points to minimize capacitance, and my window allowed this amount of clearance.

The Cubeam was connected to the radiating element at the bottom of one of the vertical portions, although it could probably be connected to the bottom section without making very much difference in performance.

We tried the Cubeam in various cars with different size windows and found that some vehicles didn't have windows of sufficient size to accommodate a Cubeam. All we did was to use the same length radiator, but with the "far" end (that is, the end not connected to the coax) had to be bent up to form a third vertical section.

OPERATION

As I said before, this antenna is no world beater, but it does get out—after a fashion. I found that it was quite directional towards the rear of the vehicle, but it did give me a few miles range. Oh, by the way, the XYL realized the benefits of CB and then asked why we couldn't attain the same range as some of the other locals. Guess what? I won my outside antenna.

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12 OR MORE $1.69 EA.

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100% TESTED!

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CB MOBILE'65

SPECIAL HANDBOOK SECTION

by JIM KYLE, KEG3382

CONTRIBUTING EDITOR

The assignment *looked* simple enough. "How about a mobile special?" said T.K.'s note. "Try to get a lot of good new data on getting rid of alternator noise. This seems to be giving everybody fits."

Simple. Yeah. For years now, I've been writing that installing an alternator was the ultimate answer to generator noise. Noise from alternators? This bears looking into!

A couple of weeks and several dozen conversations later, I was convinced. Today's alternators *do* make noise. Sort of a whine, very much like the generator noise of old, except much more resistant to cure. Next question: How can it be stopped?

The people who have been dealing with alternators and radio longer than anyone else are those fellows who install and service commercial two-way gear—police, fire, taxicab, etc. Their customers were using alternators many years before Detroit got around to putting the devices on at the factory. If anyone knew how to get rid of alternator noise, I figured, these people would.

I was wrong. Every one of them I asked had the same answer—"Alternator noise? Never ran into it."

Most of them felt that the new rash of complaints about noisy alternators were due to operators' inability to distinguish one kind of noise from another. (They were wrong—the real reason was far different, as I found out a little later.)

This part of the research was not, however, totally wasted. One of the two-way people told me about a gadget he had developed which will track noise throughout a car, letting you pinpoint just which wire has the noise on it and which one is clean. What's more, he told me how to build it, and the total cost is under $10. The details appear farther down the way in this article.

The main problem, that of curing alternator noise, was no nearer solution than ever, though. In desperation, I contacted a buddy who makes his living working on aircraft radio. Few airplanes use alternators yet, but I thought he might have some ideas.

This was the jackpot. Seems he had made an experimental installation of a standard Delco auto alternator in a plane not long ago—and had found nothing *but* noise. What's more, he had cured it. Here's how:

CURING ALTERNATOR NOISE

Before we get into the gory details, it's best to point out that this worked on an airplane; it hasn't been fully tried on a car. Airplanes have aluminum frames, which are all bonded together, and in general present a much better situation for radiomen than do autos with their riveted iron frames and poor body bonding. When the radioman makes a ground connection to the airframe, he knows it's a good ground. The same is not necessarily true of an automobile.

The alternator installed was a standard 70-ampere Delcotron, much the same as those fitted to General Motors autos at the factory. Presumably the same measures would work with Chrylser Corporation products, but we must emphasize that this is only an educated guess.

The reason for all the noise turned out to be, not the alternator itself, but the regulator. The Leece-Neville alternators used by emergency vehicles employ a special type of regulator which is remarkably noise-free. In addition, they use an older type of rectifier system which tends to damp out a lot of any noise which might be present.

The newer factory-equipment alternators, however, use magnetic regulators much the same as those used for so many years with ordinary generators. These regulators are prolific noise producers. In addition, they use silicon rectifiers built into the alternator case to change the AC

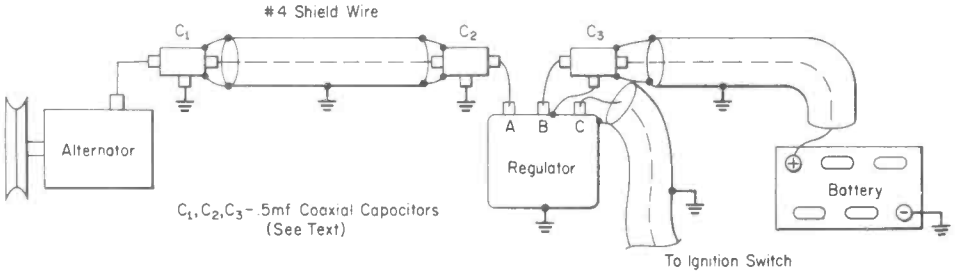


Fig. 1 - Alternator De-noising Hookup

to DC, and silicon rectifiers are notorious for their ability to produce RF interference. Put the two together, and you have a problem.

The first step taken after the noise was discovered was to install a .5-microfarad 100-ampere-rated coaxial bypass capacitor (similar to the Sprague 48P18, which is rated at 40 amps current capacity and should do for auto use) at the alternator's output terminal. The case of the capacitor was bonded to the airframe near the alternator, rather than to the alternator frame itself, for convenience. In an auto, connection to the alternator frame would probably do as well.

This reduced the noise somewhat, but it was still far too great. The next step was to install an identical capacitor at the regulator, in the lead from the alternator. Again, improvement was noted, but noise remained.

Step number three was to replace the lead from alternator to regulator with a length of shielded No. 4 cable, made by pulling half-inch woven shield braid over standard No. 4 insulated wire. The shielding was bonded to the case of the capacitor at each end, and to the airframe at several points along the way.

This made marked improvement, and allowed unrestricted use of the airplane's VHF radio gear. At lower frequencies, though (especially the 200-400 kc weather-and-beacon band), the noise was still excessive.

A third bypass capacitor was placed in the lead from the regulator to the battery, and this lead was also shielded. Both the bypasses at the regulator were mounted as close to the regulator as was physically possible, and their cases bonded to the metal regulator cover and to ground. The bond from the regulator cover to ground was made from a length of copper strap about an inch wide—and made as much improvement as any other single step of the de-noising process!

Finally, the control wire from the regulator to the ignition switch was shielded. The result? Total lack of audible alternator noise anywhere in the RF spectrum.

"The requirement for no noise from 200 to 400 kc is what made the job so rough," reports the man who did it. "For 27-Mc operation, you might not need to do nearly so much. However, I tried to take out the noise on my Chevy by this technique (for 6-meter ham use) and ran into some trouble from the iron frame."

He went on to suggest that, if all else fails, a strap of copper at least 2 inches wide be run from alternator case to regulator to firewall, to provide a truly low-resistance ground path for the noise.

"Some of the steps seemed silly at the time, and I felt like a fool putting that bypass on the battery lead—but it helped, so I left it in," he reported. Like most experienced technicians, he wasn't letting theory stand in the way of getting workable results.

This fits in with some of my own experiences with alternator-equipped vehicles—specifically, the Valiant. Though it doesn't apply directly to CB gear, it may be of some help here and there.

At the time, I was working with a factory that made, among other things, electronic sirens. These sirens consist of a tone generator connected to a high-power audio amplifier, which feeds a heavy-duty speaker. And we were having trouble.

The trouble was showing up only on alternator-equipped vehicles, and was always the same. As sirens, the gadgets were fine. But they had a PA feature too, using the amplifier with a mike and the speaker—and in this mode the gadgets were *still* acting like sirens. A constant tone, which varied with engine speed, blocked out the voice.

It looked to be a clear case of alternator whine getting into the amplifier. However, when we made a temporary installation on the chief engineer's Valiant and wheeled a lab scope out to the parking lot on a wintry cold day to see just what was happening, we were surprised.

No traces of alternator whine showed up on the screen. What *did* appear was a huge square-wave caused by the breaker points in the ignition system. It amounted to nearly 500 volts at the points themselves, was still around 3 volts at the battery terminals, and averaged between 30 and 40 volts on all the rest of the "low-voltage" wiring under the hood.

Naturally, when the transistorized amplifier had this crud on its input-power leads, it couldn't help reproducing it. On an 8-cylinder auto, the points operate four times for each revolution of the crankshaft, so that when the engine idles at 900 rpm the points are producing a 60-cycle-per-second square wave. At higher engine speeds, the tone is higher.

Our cure for it was to put together a simple L-section filter and hook it into the siren's power lead. The schematic of this filter appears in Figure 2. We never did find out why the trouble failed to appear on generator-equipped autos, nor did we find out how to get rid of the problem at its source. Transistor ignition systems might help, but it's only a guess.

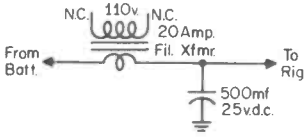


Fig. 2—Noise Filter

"This is all interesting," you may be thinking, "but what in the world does it have to do with CB mobiles? I'm never going to put in a siren!"

True enough, but consider. A number of manufacturers are already putting out "full-power" all-transistor rigs for mobile use. More are in the mill. And the same thing that plagued us with the siren can happen to any all-transistor piece of equipment. Do you want to siren-modulate Channel 9?

ABOUT ALL-TRANSISTOR RIGS

As just mentioned, a number of firms are now manufacturing "full-power" all-transistor transceivers. Quite a few of the better-known firms who haven't yet joined the crowd have similar rigs on the drawing boards and in advanced field tests. How do these rigs stack up to the tried-and-true tube variety?

In general, the answer is "Excellently." Transistorized transceivers for CB use got off to a bad start several years ago, because the first ones were introduced without quite enough testing behind them and didn't quite live up to their specifications. In addition, at that time it was more than just a little bit costly to find transistors capable of handling 5 watts of power at frequencies as high as 27 Mc.

But those times are long past, and today's transistors can handle much more than 5 watts and much higher frequencies. An efficient transistor for CB final-amplifier use now costs very little more than the corresponding tube—and the rig itself can be built for less, since there's no need for an expensive power supply. The 12-volt auto battery is ideal.

The transistor rigs all offer one important advantage; they take far less room than any corresponding tube-type transceiver. At least one outfit is marketing a 5-watt pack portable, using transistors, and the battery is far and away the heaviest part of the whole thing.

So far, though, the advantage of compactness and the novelty of all-solid-state construction have been the biggest things offered by transistor transceivers. The little extra "frills" available on tube rigs haven't yet showed up on transistor sets. If you want 23-channel synthesizer operation, then you'll have to put up with tubes. And few of the transistor units have had the option of tunable receivers (though several *do* have this feature).

Transistors differ from tubes in one important characteristic besides their size; semiconductors don't like heat. Since temperatures inside a parked car, in summertime, can get well above 100 degrees, this is something to keep in mind. Any time you're comfortable in the car, the transistors will be too—but be a little bit slow about turning on the radio when you come out after a long day at the office.

Some rigs feature *silicon* transistors rather than the more common germanium variety, and these can withstand heat to a far greater extent. It's worth paying a little extra if you live in the hotter parts of the country.

So far as the details of installing and operating a transistor rig are concerned, they're not at all different from those of a tube transceiver. The smaller size of the transistor unit makes it easier to shoehorn in under the dash, however.

One other area in which transistors have made a relatively recent appearance in otherwise all-vacuum-tube rigs is in the power supply. The vibrator is rapidly becoming extinct; almost all of the newer set designs use transistorized power supplies, and in addition a number of firms sell transistorized "vibrator replacements" which plug into the vibrator socket.

TRANSISTORS IN THE POWER SUPPLY

When the vibrator is replaced with a pair of transistors, a number of advantages are picked

up. Foremost is the elimination of "wear-out." The vibrator has a
between two contacts. Both the reed and the contacts will eventua
erratic operation. More often, one of the contacts welds shut for some

With transistors, however, there are no moving parts. It's all elec
life of a transistor power supply ought to be indefinitely long.

But in practice it doesn't always work out that way. The heat proble
and if anything at all goes wrong in the circuit to increase the amount of hea
sistors must handle, your next step will be to (1) find the defect and (2) replace
At present prices, one pair of transistors is about equal to four vibrators—which
anything happens to blow the transistors before you would have replaced the vib
fifth time, the transistors have cost you more.

This isn't as much of a disadvantage as it might appear, since things don't often go wrong with the power supply circuit. Most frequently, the transistors will turn out to be far less expensive in the long run.

Another point of difference between transistors and the vibrator is in the amount of noise created. If you've ever heard a vibrator power supply in action, you're familiar with its slight background buzz. This is a quick way to tell if the gadget is actually working; no buzz, it's on the fritz.

Transistor power supplies, too, have this effect, but with them the resulting sound isn't so much a buzz as it is a whine. The vibrator operates at about 100 to 150 cycles per second, which is a relatively low-pitched tone. The transistor supplies operate from 400 to 3000 cycles per second, much higher in pitch. The same amount of sound will sound much louder at the higher frequency, because of the differences of sensitivity of our ears to sounds of various pitch. Many transistor power supplies have been banished to the trunk, or under the hood, simply because passengers couldn't stand the noise.

This is more of a problem when one of the vibrator substitutes is used than when a fully-transistorized power supply is employed, since the transformers in the transistor-designed unit are built to minimize noise, while those in the vibrator supply are not necessarily built to hold noise in the upper-frequency regions to low levels.

Some of the vibrator substitutes get around the noise problem by being designed to operate at lower, rather than higher frequencies. This, however, leads to new problems.

The basic mode of operation of the transistorized power supply is that of a *switch*. Each transistor is either on, or off. When on, there is almost no voltage across it and as a result it can carry high current without excessive heating. When off, current flow is almost nil and so the voltage can be relatively high, again without heat.

But during the switchover from *off* to *on* and back again, both voltage and current can be high enough to cause destruction of the transistor, should the changeover take any appreciable length of time.

At high frequencies, the switchover time is very short indeed. At the lower frequencies, it's longer.

So long, in fact, that one super-low-frequency vibrator substitute tested by an associate of the author had a service life of approximately 30 seconds before the transistors expired from overheating. Acting on the assumption that something had been defective about the first unit, another of the same make was tried. Same result.

Needless to say, not all of them are so poorly designed. But these *are* things to keep a lookout for when considering the use of transistor vibrator substitutes. As in anything else, you get just about what you pay for.

If you want to experiment a bit, Figure 3 is the schematic diagram for a transistorized vibrator substitute adapted from a Motorola design. I haven't tried it out so I won't guarantee its effectiveness, but it won't cost over a couple of bucks if you use "bargain" transistors such

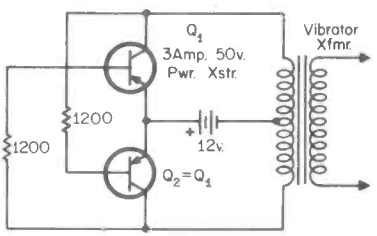


Fig. 3—Simple Vibrator Replacement

n experimenter packs by Lafayette, Radio Shack, Poly-Paks, and a number of order firms. I *have* built transistor power supplies using this same basic circuit, and work. You can have fun working with it, at any rate.

HOW ABOUT SOME ACCESSORIES FOR THE MOBILE?

Somehow it appears that the gadgeteers seem to forget all about the mobile operator when they dream up new devices to hang on a rig. The base station can be surrounded by all sorts of stuff, but there's precious little oriented to mobile use.

One accessory that *is* available, finally, is a boom-mike so that the driver can operate the rig without having to take his hands off the wheel. These are now marketed by a number of firms; some of them are excellent, and others leave something to be desired.

Unless you just like to experiment, steer clear of the "telephone operator's headset" type of boom mike. The telephone system uses carbon microphones exclusively, and no modern CB rig will accept a carbon mike. You must either change the mike element to a ceramic or dynamic unit, or build up an outboard adapter to allow the carbon mike to be used.

Figure 4 is the schematic of just such an adapter. In addition to permitting use of the carbon mike, it adds a controllable amount of compression, which can boost your talkpower surprisingly. Since it's transistorized and powered by its own battery, it should work equally well with almost any rig.

Construction isn't critical in any respect. The whole thing can be put together on a perforated phenolic board and housed in a Minibox. When completed, hook everything up and set the compression control all the way off. Increase the setting of the output control for full modulation of the transceiver. Then adjust the compression control for the desired amount of boost, and lock both adjustments.

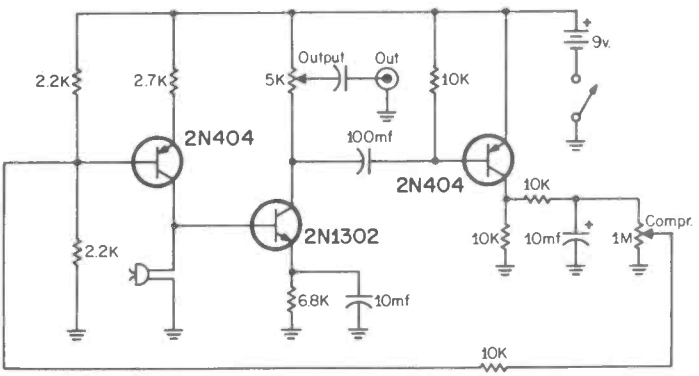


Fig 4—Carbon Mike Adapter (Experimental Circuit)

For any other type of mike, a compression amplifier or a clipper is a worthwhile investment since it helps overcome the basically poorer radiation situation of the mobile rig. In motion, you need all the talkpower you can get.

And this is about the right place to talk about another "accessory"—the noise tracker mentioned at the beginning of this article.

THE NOISE TRACKER

If you've ever tried to take noise out of an automobile—and what mobile CB'er hasn't?—you undoubtedly would have given your right arm for some device that would pinpoint the exact physical location of each noise source, and the route by which the noise was reaching the rig.

Well, it doesn't take your right arm to get one. All it costs is about $5 to $15, depending on how well stocked your junkbox happens to be. That's how inexpensive the Noise Tracker is. Why didn't someone think of it before?

The Noise Tracker (the brainchild of one Elmo Black, of Mobile Service Inc. in Oklahoma City) is basically a wide-band radio receiver fed from a small pickup loop, and whose output goes to a headphone. The small loop limits pickup range to only a few inches. When the noise source is within a few inches of the loop, you will hear the noise loud and clear in the phones. As you move the loop away, the noise diminishes.

The heart of the instrument is a military surplus radar IF strip. These can be located in

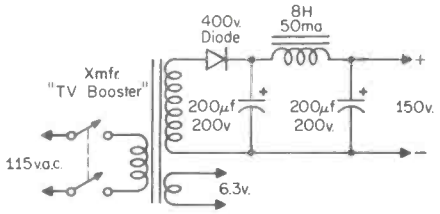


Fig. 5—Tracker Power Supply

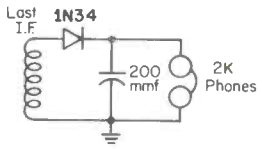


Fig. 6—Detector Circuit

almost any surplus store; they come in 30-Mc, 60-Mc, and 100-Mc models. If you have a choice, take the 30-Mc variety—but any of them will do. Normal price for the strip, complete with all tubes, ranges from $1.50 to $5.

To go with it, you'll need a power supply delivering 6 volts for filaments and 150 volts or so for the plates. This you must build up; the schematic appears as Figure 5.

In addition, if the IF strip you get doesn't have a diode detector at its output, you'll have to add one. Figure 6 shows how, and also details the connection of the headphones whether you have to add the detector or not.

The loop consists of several feet of coax, of any type, connected to the input terminals of the IF strip at one end and terminated in a loop as shown in Figure 7 at the other end. Be sure that the shield doesn't short out when bending the loop, but also take care to see that as little wire is left unshielded as possible. Figure 8 shows the entire Noise Tracker hookup in block-diagram form.

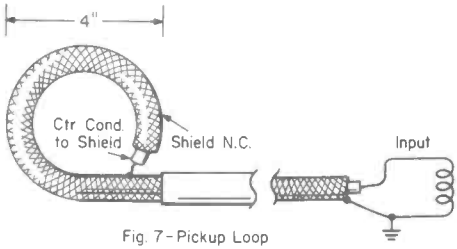


Fig. 7 - Pickup Loop

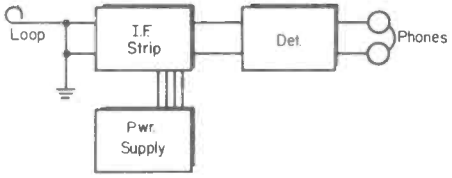


Fig. 8—Complete Noise Tracker

To use the Noise Tracker, start the car engine and hold the pickup loop near suspected noise sources while listening with the headphones. Move the pickup loop, and compare loudness of the noise. The noise will be loudest when the loop is closest to the noise source.

Only a small amount of practice is necessary to be able to determine which of several wires is carrying the most noise, and where the noise is strongest. Bypass capacitors of the coaxial type should be installed at each point where a noise peak is found; they will be most effective at these locations.

With the Noise Tracker, enough bypass capacitors, and enough patience, you can make even the noisest vehicle as quiet as a kitten's purr throughout the RF region. However, for most of us absolute quiet will be a bit overmuch to shoot for. It's much less costly (in bypasses and time) to simply bring noise down to a livable level.

MOBILE ANTENNAS

One facet of mobile CB seems to be always changing, yet remaining pretty much the same year after year. This is, of course, the subject of mobile antennas.

Viewed over the entire history of Class D CB, mobile antennas show a rather definite pattern. The original antenna—and still pretty much the standby standard—was the quarter-wave 108-inch whip on the back bumper.

However, right from the first a whole rash of new designs, aimed primarily at requiring less physical space, sprang up. Every year a new group has appeared, and the less good of the older designs have been dying out.

As of this spring, the apparent standard is the shortened, loaded rooftop whip. This one has much of the efficiency of the full-length radiator, and its location gives it punch that the lower-mounted bumper whip can't hope to approach.

But the new designs keep springing up, and the multiplicity of possible choices leaves the new CB'er, especially, in the position of having the maximum amount of confusion possible. Which should he buy, who should he believe?

Despite anything you may hear to the contrary, Alford's Law of Antennas is still true. This says, "The more wire, the better." While Alford enunciated this law back in the days of spark-gap wireless when huge wire antennas were the only kind known and mobile operation hadn't been dreamed of, if you substitute "straight metal" for "wire" in the law it applies to mobile whips as well.

However, antenna engineers are a skillful breed, and they have worked out ways of making shortened, loaded whips which are *almost* as efficient as long, straight, unloaded rods.

Note that "almost." All other things remaining equal, the full-length whip will still give you the strongest signal. Unfortunately, in practical situations, all other things don't remain equal. A nine-foot whip perched atop an auto is a cumbersome thing to behold—and even more cumbersome if you park your car in garages or commercial indoor-parking places.

This is why the short whip, atop the vehicle, has displaced the full-lengther on the back bumper as today's standard. The short whip is almost as efficient as the full-length one; its location atop the car is far *more* efficient than the bumper spot required by the nine-footer, and the combination of short whip on the roof is a far better performer than the full-lengther on the bumper.

Shortening can, however, be carried too far. If for any reason you can't get along with a 3- or 4-foot catwhisker on the roof, you'll probably do better to use a similar length on the front cowl than to try a super-short rooftop unit. Again, it's a matter of whip-plus-location. When the whip efficiency drops too low, then the location advantage can't save it.

So far as the various types of loading—base, top, center, and distributed (helical)—are concerned, all have distinct advantages; they also have their disadvantages too. In general, distributed loading is most efficient with center loading coming second, and top and base loading working out to a close tie for third. However, these are *theoretical* considerations, and in practice a well-designed base or top loaded antenna can easily outperform a poorly conceived distributed-loap whip.

In making your choice, the best bet is to be familiar with the reputatino of the manufacturer, and to consult other CB'ers whom you know have tried the antennas you have in mind. Any other approach can prove costly in terms of poor performance.

One trick with mobile antennas which has received considerable attention in recent months —though the basic principle is far older than CB itself—is that of *phasing* two or more antennas to provide some gain and directionality.

Though much has been written on the subject of phasing, and the author of this article has already done more than his share to popularize the idea, there's still a lot left to be said. This is as good a spot as any to say a bit more on the subject.

SOME OTHER ASPECTS OF MOBILE OPERATION

So far in these pages, we've stuck pretty much to the technical aspects of mobile operation. While important, they're certainly not all that's involved.

Unlike the base-station operator, the mobile operator is a part of his environment in that while operating, he is also (usually) driving. This calls for some special safety precautions.

Many states still have laws prohibiting the drivers of motor vehicles from using two-way radio while in motion. The idea is that the driver should concentrate on traffic, alone.

If this is the case in your state, there are only two things you can do. One is to obey the law while it remains on the books, and the other is to campaign to your legislators to get the law changed. With boom mikes and foot-operated push-to-talk switching; there's no more hazard in mobile CB'ing than there is in listening to broadcast radio while driving. The trend of modern BC programming being what it is, we might even say the hazard is less!

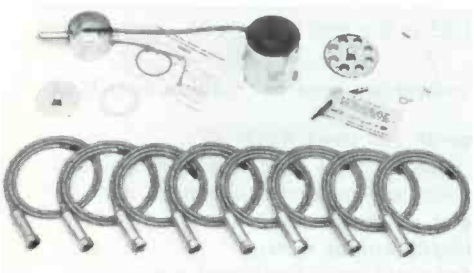
In addition, mobile operators should be prepared to assist in case of emergency. At the very least, you should carry an inexpensive fire extinguisher and first-aid kit. Many CB groups have made arrangements with law-enforcement officials to furnish warning flares to mobile operators, so that the CB'er can help keep order if he runs across an accident—at least until officials arrive, summoned by CB radio.

Well worth investigating is the new H.E.L.P. program sponsored by the Automobile Manufacturers Association. This is one of the biggest unsolicited boosts that CB radio has ever received, and those of us who are interested in keeping CB radio alive and growing need to get behind and push the project. Contact the A.M.A. at 320 New Center Building, Detroit, Michigan, zip 48202, if you haven't already received details of the program.

Which brings us to the end of the allotted space, and the completion of a simple-looking assignment that turned out not to be so simple after all. Hope you learned as much in reading it, as I did in getting the material together! And happy mobiling during 1965.

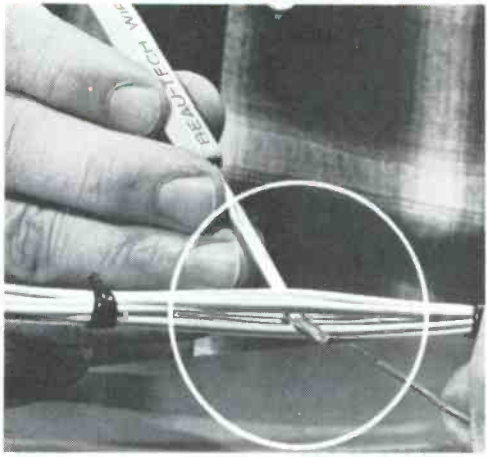
ON THE COUNTERS

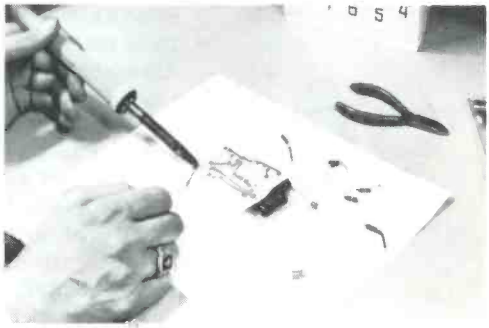
The American Microphone Division of Electro-Voice, Inc., Buchanan, Mich., has announced the production of a novel speech clipping transistorized mike, the Model D-501K. Containing two semiconductors, the D-501K can double the "talk-power" of a CB rig, claims the manufacturer; and can be substituted for the existing mike on just about all rigs. The unit has a cast aluminum case, PTT switch, and is powered by an internal long-life cell which should last for several months and may be easily replaced. The output level is adjustable through an internal potentiometer which also sets the degree of clipping. List price is $49.50.



A new mobile noise suppression kit, the Electro-Shield, is now offered by Estes Engineering Co., 1639 West 135th St., Gardena, Calif. 90249. The unit is partly assembled, requiring only the trimming of spark plug cables to correct length, installation of fittings at distributor, and the insertion of cables into distributor shield. No special skills or tools are required. Each kit fits a wide variety of engines.

A new wiring aid is now available from Beau-Tech Tools, Laconia, N. H. This tool simplifies adding new wires to an existing wiring harness, manipulating wire in confined areas, and is handy in servicing, experimenting and manufacturing. Two models are available. The $1.19 Model SH-40-B has a bifurcated manipulator and wiring guide on one end and a desoldering aid on the other. The 98¢ Model SHO40-BSE has the wiring guide only.





A "do it yourself" kit to enable experimenters and designers to whip together on-the-spot flexible circuits was recently brought out by the G. T. Schjeldhal Company, Northfield, Minn. The kit enables you to put a circuit together without effort and test it within a few minutes. It's really something new and different and if you like to tinker around with circuits we suggest that you contact the manufacturer for details. It sells for about $35.

Francis Industries, 25 East Depot St., Pataskala, Ohio 43062, has come up with a way to mount a CB antenna on the body of a car without any drilling. Their new E-Z Mount attaches to the fresh air intake grill and is held securely in place with two plated bolts. On cars where the motor and grill are in the rear the job is a snap. If the grill is in the front, near the windshield, the mount is placed at one side of the grill so as not to interfere with the driver's view of the road. Further details are available from Colonel Dick Francis at the company.

Turner Microphone Company, 909 17th Street N.E., Cedar Rapids, Iowa 52402, will be happy to send you their new 16 page four color catalogue covering mikes for CB, Ham, broadcasting, recording, etc.

Chemtronics, Inc., 1260 Ralph Avenue, Brooklyn, N. Y. 11236, devised something called "No-Arc," an insulating spray in an aerosol can. Only one schpritz of this stuff on high voltage electronic components and you're instantly protected against arcing and corona shorts while also providing a rugged coating of insulating against humidity and weather. An 8 oz. can sells for $2.79 at many distributors and CB shops.

International Crystal Mfg. Co., 18 North Lee, Oklahoma City, Okla. has a new CB rig called the EXECUTIVE 660. This one is fully equipped with 23 channels, an S-meter, squelch, noise liimter, delayed AVC, 100% modulation with Zener Speech Clipper. The set combines the best in transistor and tube circuits and is housed in a nifty cabinet only 14" across, 6½" high, and 13" deep. It comes with mike, all crystals, and 115 VAC power cord. Suggested retail price is $279.50. Uncle George will fill you in with more details if you contact him at International. Be sure to ask him to send you the fantastic used equipment list they have. Some real nice prices.

New data sheets are available on the low cost Pacer and Mustang CB rigs from Regency Electronics, 7900 Pendleton Pike, Indianapolis, Ind. Gang, it's interesting to see how much CB rig you can get for less than $100. You'll be pleasantly surprised at the specs on these two rigs. Tell them that S9 sent you.

Word just in from Bernie Sussman, Sales Manager at United Scientific Labs. (39 Central Avenue, Farmingdale, N. Y.) gives us the scoop on a new rig they have called the "Contact H.E.L.P." This rig, which will sell for less than $100 was specifically designed to be used with the H.E.L.P. program. It will have one or two channels with a minimum of cost-adding frills—just right for the motorist who wants to do nothing more than to "push a button and get a message through."

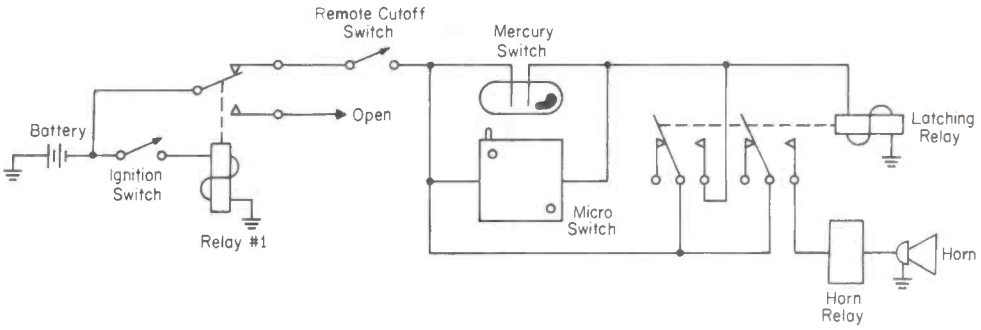
For those of you who are members of the ACDA and have written to ask about obtaining Ratfink emblems, we have news for you. One of our staff members discovered an iron-on Ratfink emblem done in red, green and black. It's about 7¼" square and is quite nice. Ours is labelled as a "Mani-Yack" transfer and we understand that these are generally available for less than 50¢ in "dime" stores. Manufacturer is the Kaumagraph Co., Toy Division, 200 Fifth Avenue, New York, N. Y. The emblem is applied by the heat from an iron to polo shirts, sweaters, etc.

An easy way to let other mobile CB'ers know who you are is by means of a flashy "I-dent-o" sign for your rear window. This sign works both day and night because you can light it up with 12 volts. For home use, there a 115 VAC model. Your call is in black letters about 3 inches high. The device attaches to your window by means of suction cups—it's 12 inches across. Can be seen at big distances. These are available for $4.95 (mobile model) and $5.95 (home model) from H & S Products, Box 825, Lima, Ohio.

For showing off your callsign at CB Jamborees we suggest that you look into the new tie-tak with personalized CB callsign being made by Apollo Engraving, P.O. Box 81, Brooklyn, N. Y. 11204. These are $1.50 each.

OPPS!!

WE GOFFED!!



That ol' CB gremlin was lurking around the drafting department last month when they were working on the schematic for "The Tooter" burglar alarm. It seems that if you had installed the alarm, as shown, in your vehicle, it would have been great cause for rejoicing among the burglar fraternity. Anyway, the wiring to the latching relay was pretty far out. Here is the corrected schematic for those of you who took the trouble to let us know about our goof.

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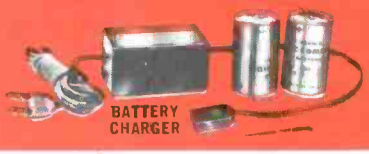

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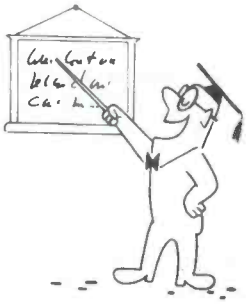


KYLE'S KORNER

WRITE TO:

JIM KYLE, KEG3382
% S9 MAGAZINE
14 VANDERVENTER AVE.
PT. WASHINGTON, N. Y. 11050

Wow! Your response has been more than slightly staggering. I'm still reeling under the impact of all the questions that have landed in my lap, so if you don't find an immediate answer it's not because I don't like you. With so many inquiries pouring in, naturally it's going to take a little while to work down through the stack.

However, T.K. assures me that he's happy with your reaction to this department, and that he's going to try to make enough space available so that we don't have to leave anyone out along the way. So keep those questions coming in. As I've said before, if I don't know the answer I'll find someone who does.

Enough chatter; with so many inquiries, there's not room to waste!

LOADING SHORT ANTENNAS

I would like to see an article on how to load an 11 meter signal into one of those short rooftop antennas such as the 2-meter job. I think this would be popular because of the shorter antenna and no loading coil on top of the car. The loading coil should be in the feedline. I am constantly breaking my antenna because of the bulky loading coil.

G.B., Gilman, N. J.

"You're right, this sure would be popular. Seems like nobody really likes bulk in an antenna—but neither has anyone figured out how to miniaturize a radio wavelength. Now it's not too hard to make a short antenna; the 8-foot whips the hams use on 75-meter mobiles are as short, electrically, as a 19-inch rooftop catwhisker would be on 11 meters. However, with such a short antenna the radiation efficiency drops to startlingly low values. Hams find they need hundreds of watts to get out reliably, due primarily to the huge losses in the short antenna. For example, if you put 4 watts of RF into a properly loaded 19-inch whip at 27 Mc, you could expect to get about 160 *milliwatts* of it radiated. The rest would go to heat up the loading coil and the rooftop of the car!

If you're still interested, the way to do it is to base-load. Just get a length of B&W or Airdux coil stock, around 2 inches long and about an inch in diameter. Hook the center conductor of the coax to one end of it, and tap the antenna onto the coil. Move the tap a turn at a time until you get the strongest radiated signal, and you have it made. You might also manage it by trimming the coax to some critical length, without loading other than that provided by mismatched feedline—but this approach would take laboratory equipment to check out. Your best bet, really, is an 18-inch helical or "distributed-load" whip such as Mark Mobile used to put out; don't know if it's still available or not, but it's a winner. If you can get one, do!

A DIFFERENT TVI SITUATION

I have a neighbor about 200 feet away operating a CB rig. Since he has been on the air I have been unable to use my television. His signal completely overrides the sound on our local station, and also completely blots out the picture with a maze of horizontal lines. I have spoken to him about this, and he has offered to stop using the CB. However, I do not want him to have to do this, if there is any other way we can eliminate the trouble.

My TV has an IF of 25.75 Mc on the video and 21.25 Mc on sound; apparently his signal is getting right on through the IF. A high-pass filter does not help. Is there any way to install a tuned trap which will let Channel 7 in while keeping the CB out? If not, what can we do?

L.E.H., Panama City, Fla.

Let me start out by complimenting both you and your neighbor on your approach to what all too often becomes a messy problem for everyone. The spirit of cooperation evidenced in your letter is the *right* way to approach interference cases. Now to what you can do: Your guess is probably right; a strong 27-Mc signal can ride right on through and play hob with the video and audio circuitry of your set. One way out would be to invest in a newer TV, with

a different IF frequency (the 20-25 Mc region was abandoned for TV IF use when the problems first became evident several years ago) but this is a mite expensive.

Your tuned trap idea is fine, provided that his signal doesn't get directly into the TV either by pickup in the chassis or by conduction through the power line. To check, remove any antenna and see if he still comes through. If he does, you might try a line filter (schematic around here someplace, or you can buy them at industrial supply houses) and if this reduces but does not eliminate the trouble, have him try a line filter too.

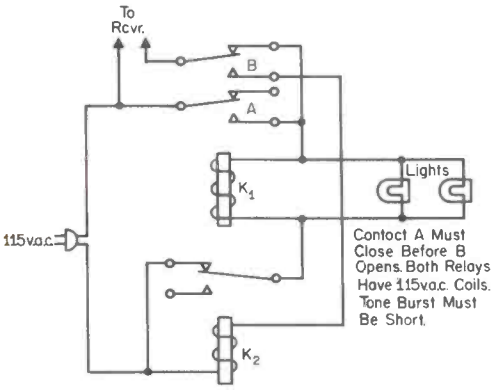
If your set is picking him up direct, without the antenna, you can cover the inside of the cabinet with aluminum foil and connect it to the chassis to provide a shield. This is an awkward thing to do but it works! Then installation of a wavetrap in the antenna lead should do the trick.

Wavetraps are made by the J. W. Miller Co., among others. Write to Bill Courtney, their chief engineer, at 5917 S. Main Street, Los Angeles, California, for his recommendations on part numbers and for the name of your local Miller distributor. They also make line filters, incidentally.

REMOTE LIGHT CONTROL

I have a project that I have been trying to build but I have been unable to find anyone with the right answers. Maybe you can help me. I want to build a transistor radio-control receiver that will turn my dock lights off and on from a distance of 2 miles by a signal transmitted from the 5-watt CB in my boat. Can you give me a schematic and parts list for such a rig or can you tell me where I can secure them?

S.M., Spokane, Washington



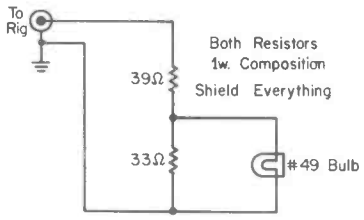
Well, as I've said before, I can't go into detailed designs on every question. If I tried, we'd never get anything else done! However, if the information is already in print some-

where, I can and will tell you where to find it. This time, we're lucky. General Electric's newest edition of their "Transistor Manual," the seventh in the series, which can be obtained from any G-E distributor for $2, has just what you're looking for on page 384, as Fig. 15.21. It's a four-transistor 27-Mc receiver which ends up in a reed relay; when the proper tone to actuate the relay is received, it will fire. The relay stays closed only so long as the tone is transmitted; to make the dock lights stay on, use the G-E circuit to trip the latching relay circuit shown around here somewhere. This circuit gives alternate action; that is, the first signal turns it on, the next turns it off, the third on again, etc. Keep in mind that there's no antenna height restriction on any installation used for receiving only, and you should have no trouble getting a 2-mile range over water.

CORRECTION—ACKNOWLEDGED

RE your reply to a question about "Downward Modulation" in the January issue, I think a little farther clarification is in order. Your definition of this phenomenon was quite good, however, a field strength meter or an SWR bridge is not a reliable indicator of this problem as most CB'ers do not use a pure sine wave to test modulation. This may easily result in unsymmetrical modulation patterns which would cause such a meter to move down even though the power is actually increasing. I think the cheapest and by far most reliable test of modulation is still the good old No. 47 light bulb. I have seen many rigs modulate meters downward, while operating into a No. 47 which was blinking brightly enough to nearly blind me! If a No. 47 dims when the rig is modulated, you can be sure *you have problems. Scream HELP!*

T.S., Long Beach, Calif.



Correction noted and acknowledged. You're right, of course. The whistle or loud talk can make a meter kick down (because of meter time constants, etc.) even when the rig is modulating properly. The bulb, by its blink, gives the true answer. But have you seen this variation of the simple light-bulb load? The resistors make the bulb look more like a true RF resistance, and the blink is as bright as ever. I found it in an old *Popular Electronics*, and since I built mine I've used nothing else to check modulation, power output, and for a general load. Only costs pennies more than the bare bulb, too.

CORVETTE HELP

In your January 1965 column there was a question from M.V., Bangor, Maine, about ignition noise on the Corvette, and you asked for help in answering. The needed information appears in the magazine Corvette News, Volume 7, No. 4, and the magazine can be obtained from any Chevrolet dealer. I hope this information will be of help to you. Keep up the good work.

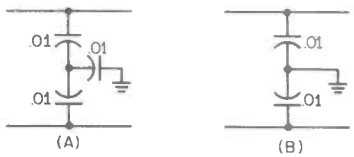
R.L.H., Waukegan, Ill.

Thanks for the tip; all Corvette owners can take note of the availability. Thanks also to the fellows who suggested specific types of equipment with which they had success. As I've said before, if I don't know the answers I'll find someone who does—even if it has to be through going to the readers! Who said CB'ers don't help each other?

BYPASSING INTERFERENCE

In the February S9 there was an article on interference which used a .01-mf capacitor across the power line to bypass fluorescent-lamp noise. If this capacitor blew, wouldn't it cause a complete short? It looks to me as if it would be safer to use three .01 capacitors, one connected to each side of the line and the thrid connected to ground, with the free ends of all three connected together as drawn in the enclosed schematic. What do you think?

T.C., Coshocton, Ohio



You're right, but you don't have to use three capacitors. Two will do, by grounding the center connection as shown at B in the schematic (A is your verison). In fact, dual .01 and .05 capacitors are available from most supply housesfor this specific purpose, and many such units are used on TV's and other gear. The

danger of shorting out still exists, but most of these bypass capacitors are rated at 500 volts and will withstand a 1000-volt transient. The rest of the house wiring is likely to let go before the capacitor does. Ceramic capacitors, too, don't short by themselves nearly as readily as do the older paper types. And mylar-film capacitors are almost short-proof. It's a good idea, though, to bypass each side of the line to ground individually; that way, interference has no chance to sneak by on the unbypassed side.

INTERESTED IN BEAMS

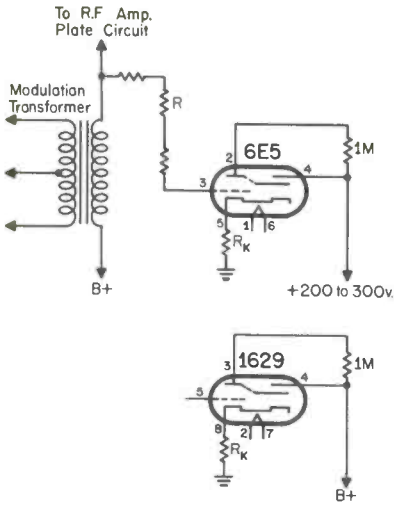
Would you please advise me if it would be possible to construct an efficient 3-element beam at one full wave length in a permanent direction on poles? This would be a horizontal beam using wire. If so could you give me the element length and spacing? Also I would like to have the specifications on construction of a standard 5-element beam. Would appreciate any information or where I could get same; thank you.

H.L.K., Louisana, Missouri

The book on beams, though it's oriented more to ham use than to CB, is Bill Orr's "Beam Antenna Handbook," published by Radio Publications, Inc., Wilton, Conn., and priced at $2.70 according to my copy. I believe you can get it through the publishers of S9. His specification for a 3-element beam for 27 Mc, which will cover the entire band nicely, are a reflector length of 18'6", a driven element of 17'7", and a director length of 16'5". Spacing is 5'2", for both spacings. Wider spacings could be used, but won't get you any increase in efficiency For a bigger beam, he recommends a 6-element. The details are on page 82 of the book. He doesn't give specs for 11 meters, but the 10-meter dimensions should be good enough if you simply add two inches to each figure. Despite general opinion, there's nothing very critical about beam design. Differences in location, such as nearby trees, guy wires, the kind of soil beneath, etc., make far greater variations in performance than do an inch or so of error in element length.

MODULATION MONITOR WANTED

I am very interested to know if you have any information on an in-line modulation monitor which utilizes a VU meter. I am using boosted modulation and I would like to keep an eye on it so that I don't have any trouble in splattering any adjacent channels. Please advise if you know of a commercially made modulation monitor which could be mounted in the coax line and also mounted in a panel.



You might also advise if anything like this has been or is going to be published soon.

J.W.H., Iowa City, Iowa

Almost, but not quite, are we able to deliver the goods on this one. Hallicrafters makes (for the ham market) a modulation monitor which attaches permanently in the line and does an excellent job—but it doesn't use a VU meter. Instead, it uses a EM84 "blue bar" indicator tube, which flashes at you every time the modulation exceeds 100 per cent. I like this better than a meter; so does the FCC, since they require every broadcast station to have something similar in plain view of the engineers.

So far as do-it-yourself monitors go, it's the same story. Nothing with a VU meter. Fellow author Herb Friedman did describe one in *Electronics Illustrated* a couple of years ago, but it's more in the line of test gear than it is as an in-line monitor. The majority of such circuits out and around use either magic-eye tubes or neon bulbs. One such circuit appears on page 180 of "CQ Anthology II," put out by the publishers of S9 and available from their book division for $3. The schematic is around here somewhere. Note that this connects to the modulation transformer rather than into the line; this should be no drawback, though, in a base installation such as you described.

ANTENNA PHASING (AGAIN)

In the January issue I read your comments on "Phased Antennas." I would like to know if it is possible to phase two 102-inch Black Beauty whips on the rear fenders of my Chevy II. I have been told by some people that it cannot be done because the whips have to be nine feet apart; however, others say that it can be done. Could you affirm this? If so, could you tell me how this can be done? Also could you tell me if I'll need a co-phaser box? I would appreciate any information or help that you could give me.

B.G., Tyler, Texas

Well, to start with, it *can* be done. You can even phase a pair of antennas that are side-by-side—but whether it's worth while would be the color of a different horse. When the spacing gets below ⅛ wavelength, which at 11 meters would be about 4½ feet, the effectiveness of phasing becomes almost undetectable. Even with ⅛-wave distance between the antennas, the most you can get in the way of gain or loss is 3 db. To get more then one true null, the antennas must be a half wave apart, which is not nine but 18 feet, and a bit far for any mobile use. Still, 3 db amounts to a doubling of your power—and this can often be considered well worth while.

At close spacings, the number of degrees of phase difference introduced in the feedline becomes rather critical. While the Co-Phaser box would not be an absolute necessity, it would sure make things easier. Should you find that even it doesn't have enough range to get the proper adjustment for your needs, you can always stick a ⅛-wave length of coax in one of the two feedlines (with RG-58, this would be about 3 feet. With the Co-Phaser, the length would not be critical) to put a constant amount of phase shift in and thus move the Co-Phaser's "zero shift" point around.

If you want to try it without the Co-Phaser, cut one feedline to length and leave the other one about 24 feet longer. Then trim the longer one, a few inches at a time, trying it out between each cut, until you get the performance you are after. This is wasteful of coax, and a bit tedious, but when you're through with the job you'll have a permanent installation with no controls for somebody to mess up. If you do this, and drop me a note with the final dimensions, I'll put it in so other Chevy II owners can have the use of your work. If I had accurate dimensions on hand, I would give them now instead of recommending cut-and-try.

Well, this almost cleans out the box for this month. If you have sent in a question (before March 15th) and don't see an answer, send it again because it may have gotten lost in the shuffle. And if you haven't sent one in yet, think up a few and let me at 'em. Digging out the answers keeps my wits sharpened—and I like it!

Till next time, then, I'b 10-10, % S9. See you!

CB CHIT-CHAT

INDIVIDUALS AND CLUB MEMBERS!!
SEND US ITEMS FOR THIS COLUMN!

Address correspondence to:

JOHN KREJC, KBI8077
60 DIVISION AVENUE
GARFIELD, N. J.

A.P.R.E. BULLETIN BOARD

New appointments this month to the A.P.R.E. Program include: Frank Loftis, KCJ7145, 809 Comm. Sq., Box 641, F.E. Warren AFB, Wyoming; Wilbur C. Waltz, KID4068, 715 Harrison Ave., Scranton, Penna.; Colleen M. Berlier, 3616 Riehle Road, Cincinnati, Ohio; Donald Barry, KLK3718, 135 N. Washington, Carpenterville, Ill.; Paul T. Schonstrom, Jr., 720 Duclo Ave., Manitou Springs, Colo.; Bradford E. Levy, KLQ0889, AF12243661, CMR #1 Box 313, APO, Seattle, Washington, 98742; William S. Graves, 2001 Columbia Pike, Arlington, Virginia; Edwin C. Samson, KFJ0695, 1504 15th So., Great Falls, Montana.

NORTHERN

The **Pennridge Radio Club** was organized in February, 1962, by 15 CB'ers from the local area. In a short 3 years, the membership has now grown to 127 members. The Club participates in civic activities as well as social events.

Newly elected officers for 1965 are as follows: President, Clarence Applegate, **KCD3747**; 1st Vice President, William Wright, Sr., **KCD5222**; 2nd Vice President, Donald Heimbach, **KCD2233**; Secretary, Lois Lowell, **KCD6109**; Treasurer, Kenneth Schroy, **KCD-0124**; The Board of Directors: D. Berle C. Kooker, R. Bartholomew, E. Ganssle and W. Savage.

The club meets every second Thursday of each month at 7:30 P.M. at the First Federal Savings & Loan building, 6th & Market Streets, Perkasie, Pa. ALL VISITORS AND GUESTS ARE WELCOME.

In Somerset, Pennsylvania the **Roof Garden Area Citizens' Band Radio Club** was just organized. The club has a senior and junior membership. The officers elected for the 1965 fiscal year are: Senior President, Fred A. Livengood, Sr., **KLP6468**; Senior Vice President, Ray R. Ream, **KLP9839**; Senior Secretary, Camille Rauch, **KNP0576**; Club Treasurer, Charles Green, **KLQ0178**; Junior President, Edward R. Zeigler, **KLP-9148**; Junior Vice President, Gary J. Rauch, **KLP9296**; Junior Secretary, Jerry Morin, **KLP1595**; Sgt. At Arms, Jack Humberson.

The club has formed committees for Publicity, Rules and Regulations, Membership, By-Laws, and Radio. The club meets twice a month on Monday evenings.

The **C.B.R.R.L. Inc.** announces its elected officers for 1965. President, Charles Schwab, **2Q5623**; 1st Vice President, Edward Pardocchi, **2W7173**; 2nd Vice President, Angelo Pollocino, **KKD4039**; Treasurer, Eugene Hurkin, **2W440/2**. Appointed Executive Secretary, Elsie Ortland, **KBI2244**.

A unique feature of the annual election is the triple envelope system to insure each member receiving a ballot and the stamped-addressed return envelope containing an unmarked envelope in which the secret ballot is protected.

The **Mobile-Ears Club** was formed over two years ago, and since that beginning, has proved to be one of the strongest clubs in Long Island, although still not the largest.

This club has been an asset to the community, on many occasions.

At Christmas of 1963, they had a very successful drive for toys which were donated to a local orphanage. The same orphanage benefited again last Thanksgiving when the membership donated chocolate turkeys to each of the 150 children. Now, a fund-raising drive to supply schoolbags for these children is in progress, sponsored by the club.

In the spring of 1964, the club was very active in aiding the Suffolk County Medical Society at the time of their Sabin Oral Sundays, when club members transported personnel and supplies. They were also of great value in being able to relay exact accountings of people vaccinated, from each of the sites to the central office, as there was no telephone communications at most schools. The club received high praise for this participation.

The club is an active member of the Tri-State Conference of Clubs, meeting semi-annually with other clubs for discussion of ways to improve the CB Radio Service. Mobile-Ears were host to this conference in May 1964.

Having their elections each year in October, the officers for this year are Art Silvia, **KKD0540**, Pres.; Steve White, **KKD6826**, Vice-Pres.; Bill Farewell, **KKD-2928**, Treas.; Margaret Symmonds, **KBG6329**, Rec. Secy.; and Terry Doxey, **KBI8283**, Corr. Secy.

The members have monthly business meetings, with other meetings held at monthly intervals for the purpose of socializing, when they have guest speakers, films, coffee breaks, etc.

The clubs emergency system, known as "MEEN" (**Mobile-Ears Emergency Net**) has been in operation since March 1964, and has been responsible in aiding the local police department and fire department, in several instances.

Guest at the February 7th meetings of the **C-Banders Radio Club, Inc.** were from the 5-11 Club and the A.V.C.R. Clubs. Skating parties are among the winter activities planned for the club. Next party was planned for the 28th of February. The club hails from McKeesport, Penna.

The **Glens Falls Area Walkie Talkie Club** held their first get-together Jan. 21, 1965. There were over twenty-five young people in attendance.

Their first meeting to elect officers was on Feb. 14, 1965 at 2 P.M. Fifteen members were there to elect their new officers: President, Peter Havens; Vice-President, Gary Hoag; Secretary, Cindy Springer; Treasurer, Wayne Springer. Senior advisors are: John Romp, Jim Sabia, and Ray Randall.

The Walkie Talkie is a Junior group of the **Glens Falls Area CB'ers**. President, Herb Colvin, **KIC2999**; Vice-President, Harley Hermance, Jr., **KJI2772**; Treasurer, Edward Pratt, **KIE0139**; Secretary, Ruth Colvin, **KIC2999**.

The **Tri Valley CB Club of Poultney, Vermont**, held their first meeting of January 1965. The meetings are on the second Thursday of the month about 7:30 P.M. Newly elected officers: President, Art Moyer, **KLP0254**; Vice-President, Frank Campney, **KID0822**; Treasurer, Roy Currier, **KLP1178**; Secretary, Lora Butler, **KLP-6486**; Heading the Food Committee, is Alta Jordan, **KID6370**.

President of the **North Country C-Bees** is R. White, **KBC2530**; Vice President, P. Lefevre, **KBA6904**; Secretary, S. Lefevre, **KBA6607**; Treasurer, D. Lemire, **KBA8364**. Notice of their 2nd Annual Spring Round-Up was received to late for April publication. Event took place April 11th.

Officers of the **Grape Belt CB Radio Club** are President, Roger Steger, **20Q2652**; Vice President, Walter Schulze, **20W3947**; Secretary, John W. Hall, **KID7345**; Treasurer, Lamont Brown, **KLQ0132**. The membership is at 100 as the club meets the second and fourth Wednesdays of each month at Lucky Lanes Bowling, in Dunkirk, New York. Club paper is the "BREAKER."

The Allegany County Radio Emergency Service, Inc., of Wellsville, N. Y. had its annual elections for the 1965 year. Officers for this year, under a revised constitution, are President, Howard Bergerson, **KLP2252**; Secretary-Treasurer, Edward Lathrop, Jr., **KLQ1123**;

Pictured above from left to right: Troy Cosner, KKI2311; Mr. Ivan Loucks, KCF0001; Mrs. Fay Benedict, KCF2574; Mr. James Cross, KCF0823. Photo was taken while the group was attending the dinner-meeting at the Shady Rest Motel and Restaurant, November 14th.

and Robert Boyd, **KIC6708**; Vice-President (APRE S9).

In addition, it was officially confirmed that **ACRES, Inc.** is a **REACT** team, and will stand by on Channel 9. Guests at this meeting, which are held every third Sunday at the Wellsville Moose Club, were from the Hornell, N. Y. Radio Club (**HARES**) and from Addison, N. Y. (**Twin Rivers CB Club**).

A family group plan for membership was discussed and adopted. Movies were shown to the members and guests, with plans for further radio and communication movies to be obtained.

Recent elections of the **Pine Tree Five Watters CB Radio Club** are: President, Edward Millett, Jr., **KBC-0238**; Vice President, Lloyd Mann, **KKA1222**; Secretary, Loeta Dutch, **KBC6234**; Treasurer, Frank Andrews, **1Q7202**.

The Canoe City CB Club of Old Town, Maine, were honored by a visit from Mr. E. V. Staulburg, Eng. in Charge of the F.C.C. Monitoring Station at Prospect Harbor, Maine. Highlights were a question and answer period. The Bangor and Brewer areas are looking forward to a return visit from Mr. Staulburg in the near future.

President of the **Bay State Emergency CB Club** of Fall River, Mass. is Ed Martin.

The Providence R. I. **CB REACT Team** has taken the name **JFK REACT** and monitors channel 9.

The Bristol County CB Radio Club of R. I. has elected the following officers: President, Tony Goulart, **KBA4207**; Vice President, Al Salvaggio, **KBC3262**; Treasurer, Michael W. Mello, **1Q5758**; Secretary, Seth B. Paull, **KBC8691**, S9 A.P.R.E. The group is working on plans for controlling this year's July 4th parade, as they have done in the past.

Also readying for the July 4th parade is the **Warren CB Club of R. I.** who will have their 4th float in the same amount of years. Good luck to the group.

Newly elected officers of the **Grape Vine CB Radio Club of Penn Yan**, New York are: President, Calvin Crosby, **KLF9152**; Vice President, Ralph Schofield, **KID9701**; Recording Secretary, Minnie Perry, **KIC4567**; Treasurer, Beulah Willoughby, **KID5582**. Meetings are held every third Sunday of the month.

Newly founded—**The Thousand Island CB Club.** President, Leland Davis, **KLP7762**; Vice President, Solon Hafferberth, **KID8958**; Treasurer, Worth Davis, **KLP9842**; Secretary, Polly Hafferberth, **KID8958**. Meetings are held every 1st Wednesday of the month.

They won't take a penny—their services aren't for sale. But you'll see these young men at accidents and fires, or patrolling state and federal highways in one of their three mobile units.

They are members of the **S9 Citizens Band Radio Club and Emergency Team** and they've been organized since August.

David Yetman of Melrose, 20 and married, club president, summed up the groups' purpose this way: "A non-profit public service. This shows teen-agers that they can do something constructive for their community without expecting pay. You know—I changed your tire—that will be two bucks."

The emergency team boasts 12 base sets and three mobile units with hopes of adding a fourth in the near future.

When they respond to emergencies they are well prepared. All units carry first aid kits, fire extinguishers, flares, blinking lights.

The following is information about the **Citizen's Band Radio Society**. This 4th Annual C.B.R.S. Rally to be held Sunday, August 8, 1965 at Newhart's Lodge on Connecticut Hill, Ithaca, New York. Possibly we will include Saturday, August 7, 1965 in our schedule, so as to make this a two-day affair, but this will be decided at a later date.

The newly elected C.B.R.S. officers were sworn in by Tompkins County Sheriff Howard Harvey at the January 1965 meeting: President, Clyde Snowberger; 1st Vice President, Albert Hill; 2nd Vice President, Charles Phillips; Club Secretary, Mrs. Clyde Snowberger; Treasurer, Mrs. Wesley Pendell.

Newly elected members to the Board of Directors are: Mrs. William K. Card, Rolf Holtkamp, John Maloney, Wesley Pendell and Secretary to the Board, Mrs. Donald Drake.

Standing members of the Board are: Chairman, Robert Curtis, also V. W. Alling, Chauncey Bennett, Donald Drake and Earl Smith.

The Endless Mt's CB Club of Pa. will sponsor a CB Spring Festival on Saturday, May 1st from 10 A.M. until 8 P.M. at the Nicholson Fire Company grounds, Nicholson, Pa.

The grounds are located directly off route US 11. The grounds will be advertised along all the highways leading to the Festival area.

The club is arranging for concessions covering everything concerning CB from A to Z. There will be prizes and surprises as well as displays and edible goodies.

The monitor channels for directions and information will be channels 9-11-21.

For further information contact the club president Emerson F. Stanton, **KID0435**, at P.O. Box 162, Waverly, Pa.

WESTERN

Officers of the **Sherman Texas Citizen Band Club, Inc.** include: President, Otto M. Vehle; Vice President, Robert Mercer; Secretary-Treasurer, Frances Meece; Membership, Mack Snider; Technical, Marvin Arnold. Interested CB'ers in the area wishing to join should contact: P.O. Box 975, Sherman, Texas.

Officers of the **West Kern REACT** of Bakersfield, California are President, Bud Loving, **KFA9220**; Vice President, Chuck Nugent, **KFA4951**; Secretary, Beverly Lehr, **KKX1948**; Treasurer, Paul Wilcox, **KFA4064**; Co-ordinator, Harland Lehr, **KFA6744**; Publicity, Betty Hogan, **KKX6113**. The unit meets the 2nd Wednesday of every month at the P. G. & E. Auditorium, 20th and H Streets at 7:30 p.m.

All out of town CB'ers can have a free cup of coffee courtesy of the **Rose City Five Watter CB Club** in Tyler, Texas. Free coffee is being served to CB'ers at the Carnation Ice Cream Store at 514 South Beckham in Tyler, Texas. All you have to do is sign the back of the check with your name, call and address and give it to the cashier.

The Frontier CB Radio Group of Cheyenne, Wyoming was established in late 1963, to provide emergency communications for any type of disaster. The club has 21 members all with mobile equipped cars. The club has aided the local police department in searches for lost or missing persons in this area. Recently elected officers of the **FCBRG** are: President, John Halderman, **KLE0418**; Vice-President, Max Wiser, **KLA2311**; Secretary-Treasurer, Bill Birnie, **KHB1649**. Meetings are held the 1st Tuesday of the month at 8 p.m. (MST). The club monitors channel 9. Club address: 410 W. 17th Street, Cheyenne, Wyoming. This data from Frank Loftis, **KCJ7145**.

Recently, a new **REACT** Team was formed at Vandenberg AFB, California. The first meeting was held at the home of Donald Brown, **KKX4620**. The newly formed Team would like to invite all interested CB'ers in the area to contact either Donald Brown, TR Space 183 of Earl Hintz at TR Space 400, Vandenberg AFB.

The Mountain Airs CB Club is currently sponsoring a Red Cross First Aid Class, being conducted by two of the club members who are qualified Red Cross Instructors. Classes end Feb. 21st. In addition, since the first of the year, and under a reorganization program, this club has had a dinner dance, which was well attended, two caravans, and two minor organized

searches. This club is not at the present time associated with **REACT, MCEU, CAP,** or Civil Defense, however, they are working closely with county and city officials for various emergency operations.

The Redwood Citizen Banders had a Valentine Ball on February 13th. I understand they had a real good turnout and everyone had loads of fun! The RCB is incorporating! The papers should be ready for signing by their meeting in March. Rich Jarose, **KFD3680** has replaced George Nelson, **KLA3453** as Exec. at Large. Brad Canutt, **KFD0740** has resigned as editor of "Whispering Redwoods," the club paper, due to his recently elected position as President of the newly formed Westerners Lodge in Crescent City, California. Brad did a very fine job as editor of the club paper and will be greatly missed. Now, the RCB is looking for a new editor for "Whispering Redwoods."

REACT OF RIDGECREST, 10/20 Ridgecrest, California. Effective March 1, 1965 is in the process of reorganization under the leadership of: Glenn V. Greenfield, **KKX8292,** President; Ted L. Wright, **KFA2936,** Treasurer.

Sidewinder Citizens Radio Club, 10/20 China Lake, California. Effective March 1, 1965 will monitor Ch. #11 as a club channel, former monitoring channel for this club was Channel #20. Reason for recent change was for the purpose of better CB coverage of this area. **REACT,** this area, covers Channel #9 and club members feel that they can be of assistance to traveling units entering this as these units seem to all use Ch. #11. Club membership records as of Jan. 1, 1965 showed a total of 27 paid-up members.

CENTRAL

Newly reporting club is the **Signal 8-11 Meter Radio Ass'n** of Kankakee County, Ill. Officers are: President, Jay Copeland, **KLL0826;** Vice President, Tom Allison, **KBH1661;** Secretary-Treasurer, Jerry Whalen, **KHD-4867;** Reporter, Don Nelson, **KHC1936.**

The Central Michigan Quinwatters, Inc., meet the second Saturday of every month. President, Frank Bushre, **KHH2826;** Vice President, Ken Broaker, **KNM-1469;** Secretary, Violet Becker, **KHJ0005;** Treasurer, Bertha Batchelder, **KHG4287;** Communications Officer, Bob Seamen.

Recently organized is the **Bay County Radio REACT and Relay Team.** Under the leadership of Walter M. Dow, **KLN9723,** the club is on a big recruiting drive in Bay County, Michigan. The BCRRT is dedicated to the proper use of Citizens Band radio and is on the list of **REACT** teams throughout the nation. The members all monitor Channel 9 and work with local and state law enforcement agencies. Meetings are held every Saturday at 1:30 P.M. at the home of Walter Dow—1600½ Columbus Avenue in Bay City. Planned for the future are emergency action and communication drills, first aid classes, and 24 hour a day monitoring serves both on radio and telephone. Women are most welcome to join as their services as on the spot first aid will be considered most valuable.

The Michigan Wolverine Radio Club was organized with 14 members in August of '63. Since that time we have grown to 100 members. The primary purpose is both for social activities and highway emergency first aid. We now have 21 members who have passed the Red Cross Training Program. 15 have taken and passed the Civil Defense Medical Self Program. We are now associated with Civil Defense with a standby emergency radio set up in their office plus several monitor stations set up throughout a 25 mile area. More classes are now being set up along the red cross and civil defense programs.

Flint is a participating member of the channel 17 emergency units. Over 20 law enforcement agencies throughout Michigan now have CB in their headquaters and monitor 17-24 hours a day to give assistance when they are called on 17.

The following is a list of some of the Chicago area clubs and when, where they meet.

Goodfellows CB Club, Mages Bowling Alley, Winston Park Shopping Center, North Ave., Melrose Park, 2nd and 4th Friday of the month.

Montclare CB Club, 2924 N. Southport Ave., Chicago, 1st Monday of each month.

Tri-County 5 Watters, Woodstock Sportsman Club, 2nd Saturday of each month.

Chicago Citizens Radio League, 1440 Devon Ave., Chicago, 4th Wednesday of each month.

Northwest 5-Watters, Rolling Meadows Bank Building, 4th Thursday of each month.

Yes, even the clowns read S9.

Newly elected officers of the **Land of Lincoln CB Club** are: President, Frank Reed, **KHD6023;** Vice President, Lou Chappell, **KHC4185;** Secretary, Barbara St. Clair, **KLJ6105;** Ass't Secretary, LaVerne Cookson, Treasurer, Darrell Furry, **KHC0305.**

Newly elected officers of **Chicago Citizens Radio League** are: Jerry Feldman, **KHB2699,** Pres.; Bob Wolf, **KHE0278,** Vice Pres.; Barney, **18QA0200,** Recording Secretary; Dewey, **18QA1271,** Treasurer; Rene, **KHC9387,** Corresponding Secretary; and Art, **KLK1549,** Red, **18QA1282** and Doug, **KLK3384** are Sergeants at Arms. Beecher Ruh, **KHD3625** is Chairman of the Membership Committee.

The first Chicago meeting of the **Midwest CB'ers C-19 Horizintal Club** was held Mar. 21. Wayne and his Magic entertained. The club's next meeting is to be

CB SUPPORTS DRIVE—Citizens band team, REACT of Orange County has given its full support for the National Foundation of the March of Dimes in Orange County. Recently the radio communications team canvassed the mobile home communities with the March of Dimes containers, distributing them to park owners and managers. Pictured (from left) is Mrs. Helen Hadley, Continental Mobile Manor, Santa Ana, Calif., with Mr. and Mrs. Don McCuiston also of Santa Ana. (Mary Ann Leuenberger photo).

held in Kalamazoo. John Rahue, **KHA8512** is the West Director. Members are from the 18th and 19th call area.

The **Twin Cities CB Radio Club** elected 1965 officers are: Sgt. of Arms, Lloyd Hass, **KLN4832** and Gordon Remus, **KHJ4897**; Chairman of Refreshment Comm., Richard Kling, **KHJ2346**. Business meetings are held the 1st Saturday of the month and Social meetings are held the 3rd Thursday of the month. Club reporter is Stella Hardin, **KHG4644**.

ATLANTIC

The Space Capitol Jamboree Association, of Huntsville, Alabama, meets twice monthly to continue planning for the forthcoming 2nd annual Space Capitol CB Jamboree. To be held May 29 and 30, this event promises to be even better than that of the previous year. Activities start promptly at 9 a.m. each day and include live entertainment for everyone, conducted tours of the Marshall Space Flight Center and its Space Museum on Redstone Arsenal. Prize drawings will be held 5 times each day for adults and 3 times a day for children. The grand prize will be a 1965 automobile. Other prizes include a minimum of 6 CB sets. Admission is free with tickets for the prizes available at the gate. All proceeds will go to a recognized charitable organization selected by a majority vote of the Association members.

The Association, a non-profit organization composed of individual CB'ers in the Huntsville area, was formed in the fall of 1963 and held its first Jamboree in May, 1964. It proved to be successful and the members feel that they are now well on the way toward building this event into one of the major Jamborees of the South.

The event will take place in the Madison County Coliseum, just off Highway 72 West in Huntsville. Jamboree Control, **KKM5938**, will monitor channels 9 and 11 to provide information and assistance. Mailing address for the Association is P.O. Box 1184, Huntsville, Ala. Anyone desiring to place exhibits at the Jamboree should contact B. Powell, Exhibit Committee, at the above address. Lois Baker, Accommodations, will handle hotel, motel and trailer park reservations for those who wish to have this arranged in advance.

Officers of the **Windy City CB Club** include: President, Burl Shelton; Vice President, Bob Haynes; Secretary-Treasurer, Ann Haynes: Sgt. at Arms, Howard Simmons; News, Charles Burton, Jr.; Proj. Officer, Edd Haynes; Refreshment Comm., Mr. and Mrs. Charles Warren. The club boast a present membership, which is very active of 50.

The Tri-County Communication Association is primarily dedicated to Public Service. Started about four months ago, they were faltering due to lack of interest. After re-organizing about two months ago, with Thirteen Charter Members, they now have a total of twenty-six members and more joining us at each General Meeting; which is held on the third Sunday of each month at the TRIANGLE-DUMPHIES FIRE DEPARTMENT, in Triangle, Virginia.

The Association has five Working Committees, which are Public Relations, Emergency Resources, Social, Communications, and Special Projects; a Club Newspaper, "The Tri-County Beam," and receive coverage in a local newspaper. Through combined efforts and visitations, they have established Inner-Locking Communications with other Clubs in this area. On several occasions, have worked with the Police, and Fire Departments in this area.

The present officers: Earl Payne, **KKI0246**, Chairman; Nick Nixon, **KKI0020**, Vice Chairman; Lena Long, **KCG2965**, Secretary-Treasurer.

All visitors are more than welcome to General Meetings and Social get-to-gathers. All correspondence should be sent to the Public Relations Chairman, Bob George, **KKI3099**, 1420 Maryland Ave., Woodbridge, Virginia.

The Chesapeake CB Radio Club, Inc. of Havre de Grace, Maryland recently held elections of officers for the forthcoming year. Those elected were: President, Howard Puckett, **KCG0972**; Vice President, Bill Windle, **KCF1225**; Secretary, James "Smitty" Smith, **KCG-4234**; Treasurer, Chess Roberts, **KCG2310**; Sergeant-at-Arms, "Blues" Ross, **KCH0230**.

On Feb. 14, the **Tidewater CB Clubs** of Norfolk, Virginia met. This club consists of the President and Vice President of each club of which there are at present 7 included. Listed as follows: Old Dominion Citizens Radio Club, Inc., Virginia Beach Citizens Band Radio Club, Inc., Norfolk Citizen Band Club, Inc., TERAC, and Dismal Swamp CB Club. Their purpose is to co-ordinate area activities, air complaints of each others club members, keep each others club members informed and choose club channels. At this meeting it was decided to compile a roster of all CB'ers. In the area and to hold meetings every 2 months instead of three months apart. The next meeting will be held on April 11th at 2 p.m., at the Red Cross Building, Norfolk, Virginia.

On Feb. 17th the **Old Dominion Citizens Radio Club, Inc.** held their meeting at the Red Cross Headquarters. Bob Wade, **KCJ5820**, reports ticket sales for the Jamboree to be held in Suffolk, Virginia, March 27th and 28th are really good. Any member of the Peanut City CB Club or the Old Dominion Citizen Radio Club, Inc. may be contacted for further information.

Bob tells me that they are all out for new members and are currently holding a membership drive. Meetings are held on the first Sunday of each month at 3 p.m. and on the 3rd Wed. of each month at 8 p.m. at the Red Cross Headquarters, Norfolk, Virginia.

The Tidewater Emergency Radio Rescue and Assistance Club (TERRAC), of Norfolk, Virginia held its annual elections on Dec. 11, 1964, and elected the following to office for a year: Blake M. Fritz, **KKK3915**, President: Fred Bryant, Vice President, **KKK7179**; Joe Mosbaugh, **KKK5164**, Secretary; and C. R. Poythress, **KCJ9595**, Treasurer; Ernie Hamel, **KKK6014**, Communications Officer.

On Feb. 6, 1965 a dinner and dance was held in the Marine Room of the Giant Open Air Market and a good time was had by all.

At the Feb. 12th meeting, discussion was held on clearing up the time on channel 11. Welcome aboard Richard Stillwell, **KKK7646**.

On Dec. 4th the **Portsmouth CB Club, Inc.** held its annual elections at its club house at 417 County Street, Portsmouth, Virginia. Those elected for the 1965 term of office were: Robert Weisel, **KCJ5576**, President; Billy Boyd, **KCJ6369**, Vice-President; Robert Nelms, **KKK1130**, Secretary; N. H. Blow, **KCJ6008**, Treasurer; Bud Fox, **KKK0336**, Communications Officer.

The club is very active in Civil Defense work and just recently took part in a city mobilization alert.

During Christmas the club had a drive to collect clothes and food for an Indian Reservation in Arizona. A total of six thousand pounds has been shipped to date.

A chicken dinner was held on Feb. 20th and everyone sure had their fill of some excellent food.

The club meetings are held on the first Friday and third Thursday of each month. Visitors are welcome.

Just give them a call on channel 18 when passing thru.

The new **Dismal Swamp Citizen Band Radio Club** in Chesapeake, Virginia, with President Jack Lowther is really a going group of CB'ers. Only formed a short time ago they are already building their own club house. To help the club along you can get your QSL's printed by them. At present, meetings are held the 1st Wed. of each month in a member's home.

More new clubs are being formed in the area all the time and your new A.P.R.E. Bob Smith, **KKK6249** will keep you informed as to what is going on.

The first quarterly meeting of the **Alabama Association of Rescue Squads** was held February 13 in Huntsville, Alabama. Host for the event was the Madison County Rescue Squad.

Among the local supporters of the rescue effort who were on hand to greet the more than 500 attending the meeting were the Chairman of the Madison County Board of Commissioners, the Mayor of Huntsville and the County Director of Civil Defense. Among the major items of discussion were the adoption of a code of ethics for units affiliated with the Association and the selection of a common channel for operations.

A barbecue supper, handled by the Madison County Rescuettes, was followed by entertainment by folk and gospel singers, a rock and roll band and country muisc.

The Association, with an active membership of 19 Rescue units, was organized for the purpose of creating a better understanding between the various units and the Public of Alabama. It seeks to increase the efficiency of its affiliated units through education and personal contact. As a means of reaching this goal, the Association meets each quarter and meets in convention each year. Highlights of the convention is the First Aid contest between various units. The Association, known as the A.A.R.S., also publishes a quarterly bulletin, "The Alabama Rescuer," which is distributed to all individual members through their parent units.

In the event of a disaster beyond the capabilities of a single unit to handle satisfactorily, the A.A.R.S. is capable of moving its affiliated units with their manpower and equipment into any area within the state in a short period of time.

Executive office of the A.A.R.S. is located at 212 Sunset Street, Centre, Alabama.

Following the meeting, the headquarters of the Madison County Rescue Squad was opened for inspection of the building and equipment.

For several days the rain came, the small streams emptied into Virginia's Clinch River, bringing to the Clinch valley one of the worst floods in history.

From the Virginia office of civil defense, Ralph F. Dougherty, 5W1315 as control, called J. C. Quillen, **K4LXK-5W1322** and Kyle Flanary, **6W6859** radio officers for Civil Defense and **REACT** for a situation report flying over the valley in a small plane equipped with CB, 5W1315 received information that the town of Clinchport was flooded, the roads were covered with water, the people should be evacuated, water was rising fast, for some it was up to their door.

Scott County Emergency Plan was put into operation, all services were alerted. Rescue with boats, State Police with traffic control and Warden service were now in the valley, a number of patrol units with CB were giving the control information where needed. Ezra Cox, **5W3201** called control, a small stream was flooding a home of a elder man and his wife, they were moved to higher ground just before the muddy water swept through their home.

Land line service was lost with its office under water, all communication, police, amateur and CB were carrying all traffic in and out of the disaster area, a helicopter with CB watched over the operation.

This writer honestly believes that the operation of CB communication did save life and property, the muddy men that did take part in this disaster must have our gratitude for serving so well, Richard Byrd, Lawrence Ramey, **5W3806** with others served around the clock.

Today the sun shines brightly, the homes have been repaired and rebuilt, the damage was in thousands, but no lives were lost.

Members of **REACT** and Civil Defense are one and the same with trained alertness to serve our fellow man.

Thank you muddy men for your battle with the muddy river.

SOUTHERN

January 30, 1965—Time: 17:00 Hrs. is a night we of the **West Coast Mobile & Marine Patrol** will not be forgotten, for this, is the night we received over Channel Nine (9), "**CODE 10-70**," which every Citizen Band Radio Operator knows, means "FIRE," we were traveling East on Upton Road, toward the Howard Frinklen Bridge, which connects St. Petersburg with Tampa, Florida, or better known as, Inter-State Road Four (4), on a Routine Patrol. Looking to our right we spotted what looked like a large fire burning, from our 10-20 we were able to pin point the location of this fire, and knowing from past experience that a dirt road ran about two (2) miles South of this fire area and into a city dump, we made our decision, that's where we would go and remain, until help could arrive. Units that had received the same call reported in and were assigned to areas where the spectators had gathered to witness the fire, were instructed by Law Enforcement Officers to keep the crowd outside the fire area. Channel 9 was designated as a net-control station, and Channel 13 as an alternate if needed.

Above photo shows the officers of the Spokanes Westerners Lodge #4, branch of the Westerners International CB Corp. Left to Right: Secretary, Jo Black, KLD1261; Treasurer, Mary Hagy, KFJ0103; President, Harry Walters, KGA0133; Vice President, Danny Black, KFJ1558. The club boast a present membership of 27.

After reaching the city dump area we found that there were, many unauthorized cars in that area, our task, move them out. No Law Enforcement Officers had arrived at this section, as yet.

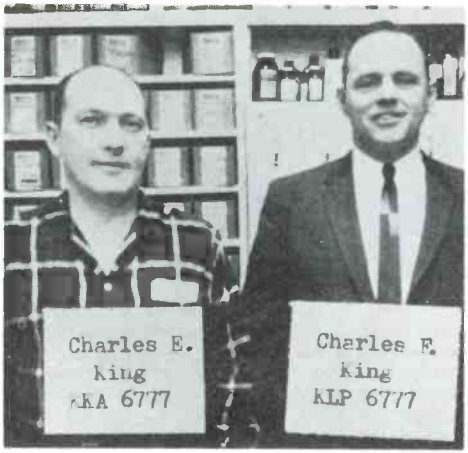
I instructed one of the men to move these cars out. In my own investigation I discovered a dirt road which led directly to the center of the fire area. I knew definitely then, this road section could be used for additional emergency equipment, needed badly to continue to fight, the now out of control brush fire. I was told by one of the Firemen that some 90 acres had burned, later, with the cooperation of everybody in the restricted area, which were mostly spectators, we were able to clear both of the roads leading into the area in about five to ten minutes, and additional equipment needed to fight the blaze rolled in. Many of these spectators in the fire area who were not affiliated with and Emergency Groups cooperated 100%. Our hats off to these spectators who did a splendid job in cooperating with all of us.

The main reason the fire burned out of control for so long a time was do to the fact we had a Northeast wind blowing approximately 10 to 20 miles an hour. Suddenly out of no where it began to rain, first lightly, and then very heavy, and continued to rain heavily for about an hour, and finally putting the fire out and giving the many fire-fighters the blessings all of us had prayed for.

Houston, Texas has a Citizens Band Radio Operators' organization which is State Chartered (we feel this is important from an individual membership standpoint of any organization). We are the **Communications Corps of Harris County, Inc.** (Trade Name "Comm Corps"). Our operations are subsisted by dues, donations of equipment and money which is used for purchasing equipment to be used by the organization only on training practice runs and emergencies.

We are located at 3911 Daphne Street, Houston, Texas. Interested parties may contact the Corps at this address.

We are geared for emergency communications, upon call from civil authorities for assistance. Our membership is limited by Constitution and By-Laws to 58 members, 48 male and 10 female, who participate in training



Will The Real Mr. Charles King, please stand-up. Pictured above: left to right, is Charles E. King, KKA6777 is from Old Town, Me. and Charles F. King, KLP6777 is from Glens Falls, N. Y. This is an interesting coincidence. As you can see, both have practically the same name and call numbers.

programs to improve our radio techniques and knowledge of the area in which we are working, to better serve our families, communities and country when the real emergency arises. When the real time comes, today or tomorrow, we are ready for action.

Our files contain the necessary letters authorizing us to enter a disaster area, and our members hold the personal credentials to enter these areas. To our knowledge, we have the only chartered organization of this type in Harris County, and are pleased to be of assistance in such times as stated above.

Officers of the **Q-SO Club of the Gulf Coast** are: President, Carl Rossell, **KEE3585**; Vice President, L. E. Reagan, Jr., **KEE3905**; Secretary-Treasurer, Farrell Atkinson, **KEE3978**; Sgt. At Arms, John Gunthrie, **KKT3573**. The club boast a very well written and respectable club paper and wishes to exchange with other clubs. Contact: **Q-SO Club of the Gulf Coast**, P.O. Box 5042, Houston, Texas 77012.

Recently elected officers of the **Citizens Radio Club, Inc.** of Pensacola, Florida are: President, John J. Aguilar, **KEA2524**; Vice President, Ronald E. Kaser, **KEA2525**; Secretary, Sherine Kuhnke, **KKR5398**; Treasurer, Wayne R. Barr, **KEB2486**. The club publication is the 10-23 NEWS. Mailing address for interested parties contact: P.O. Box 374, Pensacola, Florida.

Dade County REACT elected the following officers for 1965. Director, Fred Muller, **KDH1404**; Deputy Director, Thomas B. Magnano, **KKP4430**; Secretary, Sara Muller, **KDH1404**; **Treasurer**, Jerry Escobar, **KDH3098**. Chairman of the Board of Directors is John Hendry, **KDI1946**. Dade County **REACT** operates a motorist aid program on U.S. 41 (Tamiami Trail) on weekends. Members patrol this desolate road in order to help stranded motorists. George Williams, **KKP5213**, director of the Motorists Aid Program, reports that this has become a valuable service to the community and is operating successfully despite a serious shortage of manpower. Dade County **REACT** meets the fourth Monday of each month at the Eagles Lodge, 750 NW 72nd Ae., Miami.

Kingdom of the Sun CB Club of Ocala, Florida, which gets its name from Marion County, whose nickname is the same. Officers are Charles Hamer, President; Dr. Robert Nichols, Vice President; Grant W. Cooper, Treasurer; Marquerite Reeh, Secretary. The club monitors channel 9 with a membership of 45.

PACIFIC

The McKenzie Citizens Band Radio Association closed out 1964 on a happy and successful note. Having dedicated our Assoc. to community service, we assisted local law enforcement agencies in Nov. and Dec. Halloween night some twenty-five members were on patrol for vandalism in Eugene-Springfield area. Many community sponsored activities kept the damage to a minimum however. The week before Christmas was a tragic one locally as well as much of the Northwest as it brought flood and disaster to many families of Lane County. Several of our members working with members of the Oregon Volunteer Emergency Mobile Squad—a neighbor organization of Springfield spent two days and nights on duty or call to assist the authorities and the Red Cross. A tremendous job done by all.

We got off and running for '65 by furnishing communications and assisting with collections in the March of Dimes campaign for Lane County. Fifty CB'ers, both members and interested people, worked diligently for twelve hours and bless their kind hearts collected over two thousand bucks to help children afflicted with birth defects.

The recent flood disaster made many of us a little more conscious of the need for first aid training, so we now have twenty members in the process of completing basic first aid courses. Most plan to follow through with the advanced course.

Our next community project is furnishing communications network for the famous McKenzie White Water Parade on April 11th. We invite all CB'ers traveling through to stop and take in this masterpiece of nature. We'll be too busy to eyeball during the parade—but will be most happy to do so after the work is done.

Newly elected officers of the **Yankee Citizens Radio Club** are: President, Jack Thorton, **KLA4173**; Vice President, Gene Wulff, **KFD1943**; Secretary, Beverly Wulff; Treasurer, Larry Horton, **KLA1145**. Yankee officers report that the Yankee Emergency Team (Y.E.T.) was called into help recently in a search for a lost child by the local police dept. The child returned safely during search. The club meets on the 2nd Wednesday of each month at the Santa Clara County Fairgrounds in San Jose, California. Monitoring channel is 14.

Officers of the **Tri County Transceivers** of Aumsville, Oregon are: President, Clarence Brown, **KLC0682**; Vice President, Ray Moore, **KLC1784**; Secretary, Judy Monette, **KFG1774**; Treasurer, Carol Miller, **KFF0588**. One of the clubs annual events is furnishing communications for the North Santiam Whitewater Run which is held on Memorial Day (May 30th) above Gates, Oregon.

The Oregon Trail CB'ers of the Dalles, Oregon are now a member of **REACT** and are now monitoring Channel 9 on a 4 hour a day basis in this area. During the recent floods that took place in the State of Oregon, the CB'ers in this area met the crisis and set up a network of stations, both base and mobile, to help relay messages and locate trouble spots, thus taking some of the burden off the already overloaded communications centers.

Recognizing the value of this type of communication in emergencies, The Oregon Trail CB'ers voted unanimously at their last meeting to join and were accepted to membership in **RACES**. A new fall-out proof communications center is being built by the Civil Defense Organization to replace the present center and will house the CB equipment as well as other **RACES** gear. This unit will be operational for all emergencies thus linking all communications sources together under one command for a more efficient protection for the community and surrounding areas.

We are looking forward to anyone passing through this area to give us a 10-8 on Channel 9 and we will be glad to give them a report on road conditions, directions, or assist them in anyway possible to make their journey more enjoyable.

The Officers of The Oregon Trail CB'ers are: Pres., Daryl King, **KKV3966**; Vice-Pres., Wm. McClennen, **KFG0656**; Sec., Mrs. J. Denslinger, **KFF0456**; Treas., Mrs. C. Hurd, **KFG1118**; and LeRoy Anderson, **KLC-1188**, as Sgt. at Arms.

Officers of the **Cascade County CB Radio Club** include: President, Warren Sporleder, **KLD0570**; Vice President, Marvin McDonald, **14Q1347**; Secretary, Darrell Thomas, **KFJ1966**; Treasurer, Henry Reihl, **KFJ1604**. Present membership is 39 and the unit is quite active in community affairs.

COMING EVENT CALENDAR

ATTENTION JAMBOREE CHAIRMAN

Jamboree Chairman wishing the exhibit of S9 Magazine should contact: S9, Club Editor, J. F. Krejc, 60 Division Ave., Garfield, New Jersey. S9 is equipped to attend many jamborees, providing they are not 3,000 miles away. We will be represented by our Club Editor and many of his Area Public Relaions Editors. Last year, we attended 43 Jamborees in the Northeastern United States and we are hoping to broaden the scope. Contact John Krejc above if you are interested.

If your jamboree notice does not appear, it's not our fault. Why has everyone else sent theirs in? There are a few missing, which your Club Editor will track down, and some that never made the publishing deadline. Why, or is your club one of these?

Lanaster County CB Radio Club will hold its annual Jamboree, July 4th. More info forthcoming.

State of Vermont Jamboree. The Otter Valley **CB Radio Club** will sponsor the event, June 27th, State Fairgrounds, Rutland, Vermont. Contact: Box 669, Rutland, Vermont.

The Lake City CB Club and the **McDowell County Rescue Squad** will sponsor jointly the **2nd Annual Grandfather Mountain CB Jamboree,** June 11, 12, and 13. Place: Mac Rea Meadows on the slopes of Grandfather Mountain. Contact Blanche Wilkerson, 308 Vale Street, Marion, N. C.

June 26th and 27th, the **Illinois Valley CB Club** will be celebrating their **5th Annual Get-To-Gether.** More info will be forthcoming. No site has been selected.

The Heart of Dixie CB Club of Pell City, Alabama is planning to hold its first annual Jamboree the weekend of May 22nd and 23rd. Contact Louis Tovel, Route 1, Box 237 A, Pell City, Alabama.

Central Indiana CB Club will hold their Jamboree, Sunday, June 27th, Newton County Fairgrounds, Kentland, Indiana. Monitoring channel 9. Plenty of displays, camping facilities and food.

Richard W. Long, of the **Queen City 5 Watters** is planning a **National Jamboree.** Plans are incomplete, but why not contact Dick for the best advice. Contact 711 N. Mechanic Street, Cumberland, Md.

The Southeastern Michigan Jamboree will be held at Swiss Valley Park, Utica, Michigan, June 5th and 6th. Chairman: Stanley Skoczen, 17542 Nine Mile Rd., East Detroit, Michigan.

Lake Erie CB Radio Club will hold its 1st Annual National Jamboree, July 17th and 18th at El Ray Grotto Park, at the corner of state Routes 113 and 58, just south of Lorain, Ohio. Contact: Michael Salzman, P.O. Box 5, Lorain, Ohio or Jon Batley, 29803 Lake Road, Bay Village, Ohio.

The Space Capital CB Jamboree Ass'n, Inc., will hold its **2nd Annual Jamboree** at the Madison City Coliseum, Huntsville, Ala., May 29th and 30th. Contact P.O. Box 1184, Huntsville, Alabama.

The Rock River Valley CB Club is going to hold their Jamboree, May 23rd, Illinois National Guard Armory, 605 N. Main St., Rockford, Ill. Contact: Earl Swanson, 918 Blenheim Drive, Rockford, Illinois.

The Tri County CB Radio League of Akron, Ohio will hold its Jamboree, June 6th at Chippewa Lake Park, near Medina, Ohio. Contact: P.O. Box 1301, Akron, Ohio.

Giant National CB Jamboree and Campout, July 17th and 18th. Location . . . Routes 58 and 113, West of Elyria, Ohio, at the beautiful Grotto Park. Contact: Lake Erie CB'ers, Inc., P.O. Box 5, Lorain, Ohio.

Tri-County Citizen "D" Banders, Inc. will hold their gigantic Jamboree, July 18th at the Mannington Fairgrounds, Mannington, W. Va., on US 250. Contact: Route 3, Box 173, Bridgeport, W. Va.

The Sioux Empire Citizens Communication Ass'n will sponsor the **2nd Annual Great Plains CB Radio Convention** at the Fairgrounds at Sioux Falls, South Dakota, June 18th to 20th. Contact: A. C. Sando, 1100 Sunset Drive, Sioux Falls, S. D.

The Town and Country CB Radio Club, Inc., will sponsor a 2 day coffee break and pancake supper on May 22nd and 23rd at the Fairgrounds in Hemlock, New York. More info to follow.

Quincy Area CB Club will sponsor their 2nd annual Jamboree, August 22nd at Eagles' Alps. More info forthcoming.

Kern County Citizens Radio Ass'n is again planning its **3rd Annual CB Jamboree,** at the Kern County Fairgrounds, Highway 99 and Casa Loma in Bakersfield, California. May 29th and 30th are the big dates. Jamboree will be held inside 25,000 sq. ft. building with air conditioning.

Wayne County REACT will hold their Jamboree, May 29th, and 30th. Wayne County Fairgrounds in Wooster, Ohio. Rain or shine. Contact: **Wayne County REACT,** P.O. Box 281, Wooster, Ohio 44692.

The Fort Findlay CB Club, Inc. of Findlay, Ohio will hold their **Annual CB Jamboree,** June 6th at the Hancock County Fairgrounds, Contact: P.O. Box 123, Findlay, Ohio.

The Shanadoah CB Radio Club of Hopewell Junction, New York will hold 2 Jamborees this summer, May 16th and August 1st at Charlets Grove, Route 82.

The Five Watters of Lake County, Willoughby, Ohio, are planning a Jamboree for July 30, 31 and August 1st to be held at the Fairgrounds in Painesville, Ohio, Route 20, (Mentor Ave.) one mile west of the town. Contact: P.O. Box 489, Willoughby, Ohio.

The Shiawassee County CB Club, Inc., will sponsor the Central Michigan largest Jamboree, June 19th and 20th, County Fair grounds, Corunna, Michigan. Contact: James Hardwick, 1507 Lynn St., Owasso, Mich.

The Citizens Band Radio Club of Fresno, California will hold their Jamboree, June 5th and 6th at the Wildwood Beach Country Club. More info coming.

Plan a Canadian Vacation, July 2nd, 3rd and 4th. **G.R.S.—CB Campout** at Strafford, Ontario, Canada. **The South Western General Radio Ass'n** and the **Straffordville Channel Jammers** are the sponsors. Contact: Peter Harding, 26 Grosvenor St., London, Ontario, Canada. Monitoring channel 18, Jamboree Control.

The Cee-Banders Radio Phone Club of Birmingham, Alabama will hold its **2nd Annual Jamboree,** June 5th and 6th at Camp Cosby. More info coming. Contact: P.O. Box 563, Birmingham, Ala.

The Chenago County CB Radio Club, Inc., will hold its **CB Rally and Get-To-Gether,** Sunday, June 27th, on Route 12, Community Field, Green, New York. Big attraction, sky divers. Contact: P.O. Box 141, Oxford, New York.

Pike County CB Radio Club will hold their annual Jamboree, June 13th. More info forthcoming.

June 13th, the **Bradford CB Radio League Inc.,** will hold a **COFFEE BREAK,** 12 to 5 P.M., Marshburg GO-KART Track on Route 59 Main Route, New Kinzua Dam, Penna. Trophy for largest Club Caravan. Monitor channels 9 and 11.

The Five Watt Wizards, Inc. of North Central, Missouri will hold their annual picnic, May 23rd, at the General John J. Pershing Memorial Park on U.S. Highway 36, five miles west of Brookfield, Missouri. Contact: 621 South Main, Brookfield, Mo.

The Texas CB Ass'n and local Texas area clubs are planning the first **Texas National Jamboree,** tentative dates, June 11th, 12th, and 13th in Dallas, Texas. More info coming. Contact for further info: P.O. Box 678, Carrollton, Texas. Tentative door prize—a 1965 Auto. They say things are big in Texas.

Lawrence County CB Radio Club, Inc. is sponsoring a CB Jamboree, Sunday, June 27th at Harbor Road, between Routes 18 and 422 West. Rain or Shine. Contact: Box 404, New Castle, Penna. 16101.

The Jacksonville CB Radio Club of Jacksonville, Ill., will sponsor their Jamboree, June 6th at the Morgan County Fairgrounds. Contact: Albert H. Gourley, 2010 Plum St., Mound Heights, Jacksonville, Ill.

The Five Watters of Lake County in Painesville, Ohio are holding their Jamboree, July 30, 31, and August 1st at the

Is it time to renew your S9 subscription?

Lake County Fairgrounds, Route 20, Mentor Avenue, Painesville, Ohio. Contact: P.O. Box 489, Willoughby, Ohio.

The Tri-County CB Club and Emergency Unit will hold their **3rd Annual CB Jamboree,** Sunday, June 13th at the 4-H Fairgrounds, 3½ miles south of Bedford, Indiana near junctions of highways 37 and 50. Monitor Channel 11. Contact: P.O. Box 21, Heltonville, Indiana, or Orval McLaughlin, 222 Lincoln Avenue, Bedford, Indiana.

The Tri County CB Club is sponsoring a CB Jamboree, May 1st and 2nd, which will be the first annual Jamboree to be held in the famous Thermal Belt of North Carolina. Place: Harmon Field in Tryon, North Carolina, at the intersection of highways 176 and 108. Prizes and fun for all.

The South Central Iowa Emergency Auxiliary Radio Club will sponsor a CB Jamboree, July 10th and 11th at the Fairgrounds in Indiaola, Iowa. Many prizes, camping facilities and fun for all. Remember July 10th and 11th.

The Civil Air Patrol and the **90 Meridan Citizens Band Radio Club Rally Fly-In, Drive-In, Breakfast,** Sunday, June 6th, Reedsburg Airport, Reedsburg, Wisconsin, 7:00 A.M. to 12:00 A.M.

The Manchester Radio Aid is holding a **CB Carnival,** June 13th. Contact: 335 Lake Ave., Manchester, N. H. As per correspondence received here, no place was mentioned. Site should be sent to this writer, so proper credits can be given.

The Grape Belt CB Radio Club will hold its first **Coffee Break,** Sunday, June 13th, County Fairgrounds, Dunkirk, New York. The Fairgrounds are easily reached by the N. Y. Thruway, exit 59, straight ahead at the exit, thru the Dunkirk-Fredonia Plaza to the end, turn right, then 300 feet on the left is the site. The Club will monitor Channels 9 and 11. Contact: John W. Hall, 420 Swan Street, Dunkirk, New York.

The Sociable 5 Watts Club will hold their annual picnic, August 28th and 29th, at the Big Beaver Fire Hall and grounds, near Beaver Falls, Penna. Contact: Roy Shetler, Enon Valley, Penna.

Music City CB Jamboree, sponsored by **the Donelson CB Radio Club,** June 25th, 26th and 27th at the Tennessee State Fairgrounds Coliseum. The Coliseum is located in Nashville, Tenn. Many should remember the 1964 Dixie CB'O Ree. This should be even better. Contact: Music City CB Jamboree, P.O. Box 2301, Nashville, Tenn.

Tullahoma Jamboree, July 31st and August 1st, at the Big Springs Park, 3 blocks to motel, 6 blocks down-town. Camp area and trailer parking. Monitoring channel 11. Contact: Burl Shelton, Route 3, Tullahoma, Tennessee.

The Tri-State 11 Meter Club will hold their **5th Annual CB Jamboree** at the National Guard Armory, Steubenville, Ohio, Sunday, May 2nd. Monitoring channel 9 and 11. More info contact: Tri-State 11 Meter Club, P.O. Box 13, Steubenville, Ohio 43952.

Land of Lincoln CB Radio Club Jamboree, June 5th and 6th at Macon County Fairgrounds, Decatur, Ill. Contact: President, Frank Reed, P.O. Box 152, Dalton City, Ill.

The "23" Citizens Band Radio Club of N. Central, Mass., will hold their gala CB Jamboree, June 20th, Notre Dame Athletic Field, South St., Fitchburg, Mass. on June 20th. Contact: Jamboree Chairman, 76 Chester St., Fitchburg, Mass.

The Little Washington CB Radio Club of Washington, Penna. will hold their 2nd Annual Jamboree, June 6th at the Washington County Fairgrounds. Jamboree control channels 9 and 21. Contact: P.O. Box 251, Washington, Penna.

Big Jamboree, sponsored by **the Tupelo Signal Tracers** of Tupelo, Mississippi. Tupelo Fairgrounds, June 19th and 20th. Jamboree control on channels 1-11 and 13. Contact: Signal Tracers, P.O. Box 1084, Tupelo, Miss. 38801.

Central States Jamboree, sponsored by the **Michigan Wolverine Radio Club** will be held July 24th and 25th at the Dixie Speedway, half way between Flint and Saginaw, Michigan. Exhibits and entertainment galore. Contact: Nels Savoix, KHG7216, 3249 Leith Street, Flint, Michigan.

The "Michigan Water Wonderland Jamboree," sponsored by the **CB Communicators** of Berrien Springs, the **Twin City CB'ers** of Benton Harbor—St. Joseph, and the **Tri-County CB Club** of Coloma, Michigan, will be held Sunday, June 6th at the Berrien County Youth Fairgrounds, Berrien Springs, Michigan. Entertainment all day. Contact: Ed Newton, 2120 Irving Drive, Benton Harbor, Michigan.

Aurora Five Watters CB Jamboree, June 13th, at Phillips Park, Route 30, Aurora, Ill. Monitoring channels 9 and 12. Admission is free. How about that. Contact: Kathleen Turner, 2330 Brentwood, Aurora, Ill. Remember June 13th.

The Airways CB Club of East Central, Missouri will hold its **1st CB Jamboree and Equipment Show,** May 28th, 29th and 30th at Wright City, Missouri. The Jamboree will be held in Wright City's recently completed city park, parallel to US 40 and interstate 70 about 50 miles west of St. Louis. Contact: C. H. Vogelsang, 1437 Plaza Place, Wentzville, Missouri.

Mid-States CB Jamboree to be held at the Wayne County 4-H Grounds, Centerville, Indiana, June 13th. The event is sponsored by the **Wayne County CB Club** of Richmond, Indiana. Contact: Mid-States CB Jamboree, 422 S. 14th Street, Richmond, Indiana. Prizes galore. Live entertainment.

The Bi-County Citizen Band Radio Club will hold their 1st CB Jamboree, Sunday, May 2nd at the Holmes County State Park between the hours of 9 A.M. and 4 A.M. The site is located three miles south of Durant on Highway #51. May 1st, there will be a dance at the National Guard Armory. Top band from Greenwood, Mississippi will entertain. Jamboree control on channel 11.

CB Picnic of the **Springfield Area Citizens Radio Ass'n** and **REACT of Clark County,** Ohio, May 23rd at the Clark County Fairgrounds, Ohio. Monitor channel 11. Contact: Mona E. Garland, 518 Ludlow Ave., Springfield, Ohio 45505.

Monmouth County Emergency Aid Network, Inc., will sponsor their 2nd Annual picnic, Saturday, June 13th at the Shady Rest Inn Picnic Grove. The location is 3 miles east of the Freehold traffic circle on N. J. Highway 33. Admission will include food, beverage and entertainment. Contact: MCEAN, P.O. Box 712, Freehold, N. J.

Montclare CB Club of Chicago will have their annual May dance and coronation of the May Queen, May 15th.

The Montclare CB Club of Chicago will hold their annual **Father's Day Picnic and Jamboree,** Sunday, June 20th at Fox River Grove. Because of the huge attendance last year, they will utilize Groves 2 and 3.

The Beaver Valley Citizens Radio Ass'n will hold its CB Jamboree, Sunday, June 13th at Economy Park, Ambridge, Penna. Monitor channel 9. Main prize: color TV.

Bux-Mont Keystone Jamboree, May 16th at Lakeview Amusement Park, near Royersford, Penna. Contact: Keystone 11 Meter League, P.O. Box 45, Pottstown, Penna.

The Milwaukee Citizen Band Club will hold their CB Jamboree, July 24th and 25th at the Milwaukee, Wisconsin State Fair Park. Contact: P.O. Box 1277, Milwaukee, Wisc.

3rd Annual Southwestern Ohio CB Ass'n (SWOCBA) Nationwide CB JAMBOREE, Saturday and Sunday, August 21st and 22nd, to be held at Warren County Fairgrounds, State Route 48, Lebanon, Ohio. 9,000 CB'ers attended last year from 34 states and Canada. RAIN OR SHINE. Free Entertainment. Monitor channels 6-9-11-18. Contact: Nationwide Jamboree, Box 231, Mason, Ohio.

3rd Annual Mass. Jamboree, Sunday, July 18th. Chicken Bar-B-Que. Contact: **The Five Watt Whips,** P.O. Box 201, Lowell, Mass. More info to follow.

The Citizens Band Radio Club of Fresno, California is planning its **3rd Annual Jamboree,** June 5th and 6th, at Wildwood Beach Country Club, Highway 41, at the San Joaquin River. Contact: Jamboree, 614 N. Sierra Vista, Fresno, California.

2nd Annual Jamboree of the **Houston CB Radio Club,** July 24th and 25th at Spring Creek Park, Tomball, Texas, just 25 miles northwest of Houston. Contact: Houston CB Radio Club, P.O. Box 10590, Houston 18, Texas.

The Hall of Fame CB Radio Club will hold Ohio's largest CB Jamboree Picnic, June 13th at Meyers Ocean Lake Park, 12th Street, N.W., Canton, Ohio. Contact: Roiland and Mary Dill, 1410 Vive Ave., S.W., Canton 6, Ohio.

The Fort Henry CB Radio Club, Inc., will hold their annual CB Picnic, July 25th, White Palace, Wheeling Park, Wheeling, West Va.

11 Meter Monitor CB Radio Club, Inc., of Mechanic Falls, Maine, **2nd Annual Jamboree,** May 29th at the Oxford County Fairgrounds, corner of Fair and Paris St., Norway-So., Paris, Maine Line. Contact: Elaine Pray, secretary, 21 Highland Ave., Mechanic Falls, Maine 04256.

The Covered Bridge CB Radio League, Inc., will hold its annual Citizens Band Jamboree at the Turkey Run State Park in Marshall, Indiana, Sunday, June 27th.

CB Festival, May 1st, at the Nicholson Fire Co. Fairgrounds, just off Route 11, Nicholson, Penna., sponsored by the **Endless Mountain CB Club.** Contact: P.O. Box 162, Waverley, Pa. Monitor channels 9, 21 and 11.

Lancaster County Citizens Band Radio Club, Inc., will hold their **2nd Annual CB Jamboree** July 4th at Rocky Springs Park, Lancaster, Penna. Right in the historic Penna. Dutch Country. Contact: Lancaster County CB Radio Club, P.O. Box 236, Lancaster, Penna.

The Fountain City CB Club of Prattville, Alabama will sponsor their **3rd Annual "CBQ"** on May 15th, 16th at Pratt Park in Prattville. Camping facilities will be available. Contact: "CBQ" Chairman, Charles Downs, KDB7344, Route 2, Box 218, Prattville, Alabama.

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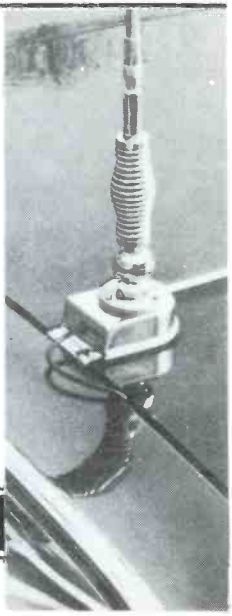

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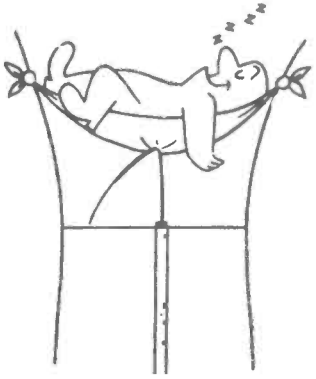


ANTENNAS

by LEN BUCKWALTER, KBA4480

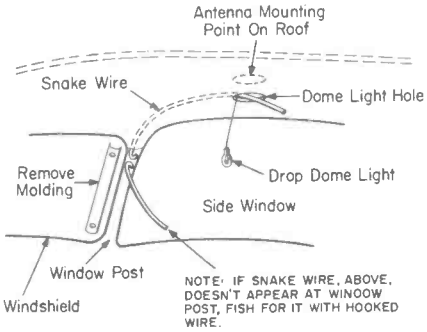
CAR ROOF MOUNTING

More antenna manufacturers are coming out with whips for mounting in the middle of the car roof. There's good reason: it's the hottest performing location on the car. With metal on all sides of the whip, the signal digs in and takes off equally in all directions. Also, added height gets the signal above the trunk or other obstructions. So why haven't more CB'ers picked this mounting position? For one, it means punching a hole in the roof. It also calls for some tricky maneuvering of cable. et, both problems can be solved.

If you think the hole will affect the car's resale value, consider the possible remedies. Check, first, with a local body-and-fender shop. Repairing the hole isn't a major job. (One CB'er claims it cost him $5 but this may be on the optimistic side.) A handy CB'er could do the job himself with one of the small repair kits sold in auto accessory shops. A spray-can of "Dupli-Color" will match the car's paint. In any case, the problem can be less serious than you might suspect.

The second consideration—actual mounting of the antenna—can also be checked out before the whip is purchased. Roughest part of the job is installing the cable from the antenna mount on the roof to the CB rig. The cable runs between the headliner (that mouse fuzz or vinyl material overhead) and the metal roof. If your car has a dome light under the center of the roof, the job is much simplified since the headliner will rarely have to be removed. Try a dry run by unscrewing the dome light and dropping the fixture a few inches. This should permit you to poke your finger into the hole and touch the underside of the car roof. (Push aside any insulation, if present.)

Second important point is at the windshield. There should be a removable molding running up each side, or window post. Remove either one, usually done by taking out a few screws. Now for the critical test, shown in the illustration. It's done with a piece of heavy wire, say No. 10 aluminum, the kind used for grounding.



View from Inside of Car

Insert it into the dome-light hole and attempt to snake it through the roof toward the window post where you removed the molding. If you can complete this path, routing the antenna cable will be fairly simple. The cable is securely taped or hooked to the snake wire, pulled through the roof, then fed down the window post where it can be retrieved.

Watch out for two things as you snake the wire through the roof. Push it very gently or it's liable to curl and poke a hole in the headliner. Another precaution: there are usually metal rods which arch through the headliner. If they obstruct the path of the snake pull back and forth a few times until the wire passes over them. It may be difficult to push the snake over the last few inches where it emerges at the window post. If this happens, withdraw the wire and bend a small hook in the end. Snake it through again until it stops. It should now be possible to fish for the hidden end with another piece of wire which has a similiar hook bent in its end.

If these snaking operations are successful, the actual antenna installation should pose no serious problems. There will be variation in one car to the next—like no dome light in the middle. Here, the snake wire may be introduced through the hole cut in the roof for the antenna mount. Only as a last resort should you try to drop even a small part of the headliner. In most cars it is nearly impossible without going through a major removal and re-in-

CB IN ACTION

By Les Hench, KHA3272
Sales Manager
Pearce-Simpson, Inc.

"H.E.L.P."

The American motorist is going to get H.E.L.P. (Highway Emergency Locating Plan) —and he certainly needs it! This new plan which has been making headlines for the past few months has gained the backing of the Automobile Manufacturers Association (an organization supported by the major automobile producers).

The program calls for the use of Citizens Band two-way radio equipment to set up a nation-wide communications network on a specific channel allocated for emergency use only. The radios will be monitored in private passenger cars by law enforcement agencies, hospital emergency dispatch units, civilian defense, garages and voluntary CB organizations.

An Automobile Manufacturers Association executive sums it up by saying, "The plan has grown out of the increasing concern over the lack of emergency communication facilities for motorists." H.E.L.P. will provide *rapid* communications for the motorist in distress—provide road service for stalled vehicles and most important supply rapid assistance and medical care for ill or injured persons due to accidents or other causes. H.E.L.P. will be as near as your Citizens Band radio!

We urge all of you to support the H.E.L.P. program in its entirety. This network will strengthen the Citizens Band Radio Service and demonstrate the importance of CB, its clubs and its emergency organizations to members of the community who have previously attacked or downgraded their value. Remember—the groundwork for the H.E.L.P. program was laid many years ago by interested citizens who realized what CB really meant for the community. Please send us your comments and opinions concerning H.E.L.P.

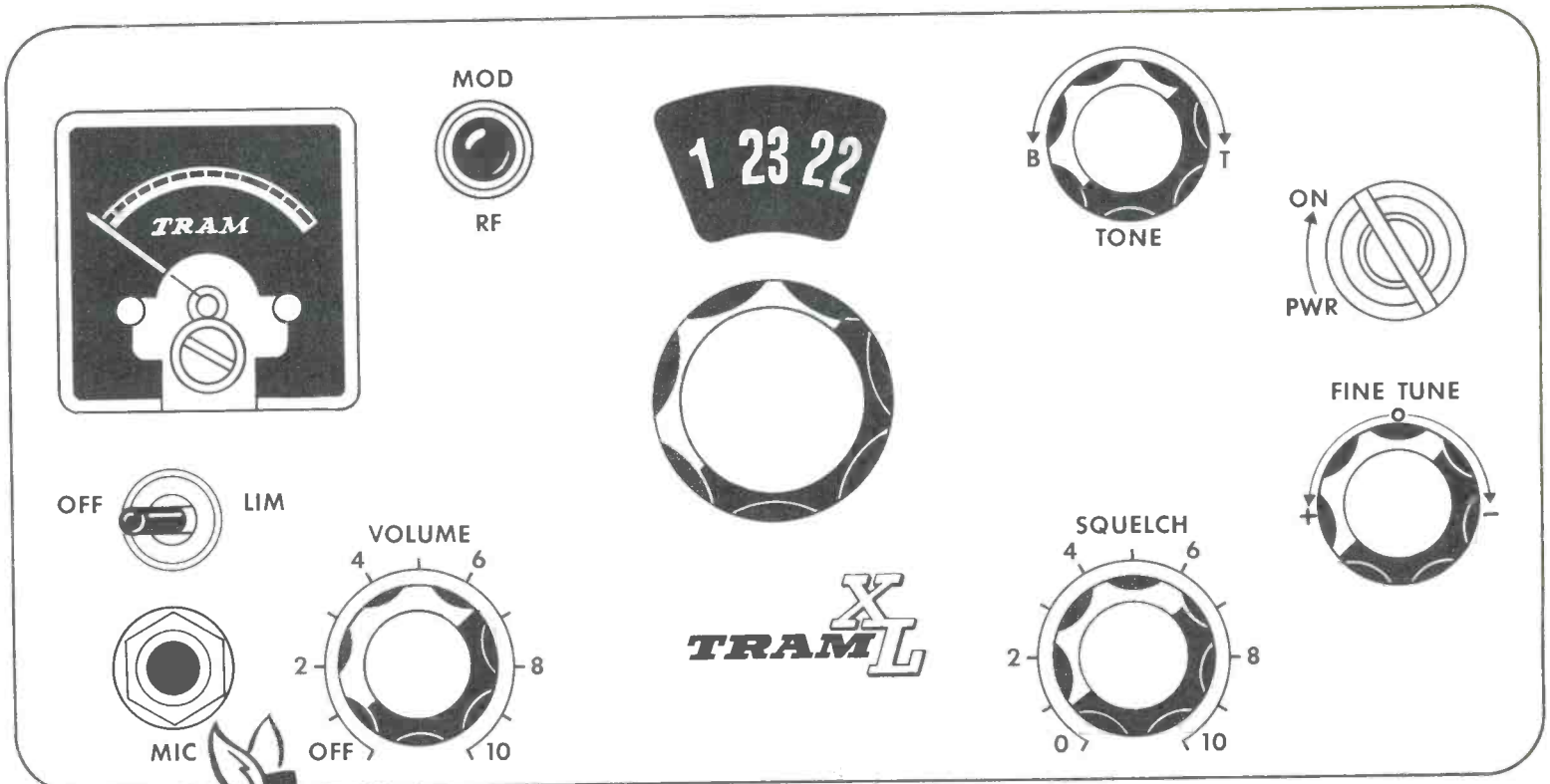
WIN A COMPANION II

You can win a new COMPANION II with your CB in Action story. Simply tell us how you helped an individual or your community with CB. Write to Les Hench, National Sales Manager, PEARCE-SIMPSON, INC., 2295 N.W. 14th Street, Miami, Florida 33125.

stallation job. Better check first with your friendly serviceman—he might have the shop manual on your car. It usually illustrates the headliner in detail.

The second phase of the roof-mount involves punching the hole in the car roof. Wear sneakers when you get up on the roof, but just as important, don't walk around up there. Especially along the edges of the roof you can easily press a permanent dent in the thin metal. Distribute your weight on both feet and knees. And don't attempt to drill a pilot hole without first lightly hammering a small dimple in the metal with a nail or center punch. It'll keep the drill from skittering across the curved roof with disastrous results. Use very gentle pressure, virtually allowing the drill bit to bear down under its own weight. Otherwise it might slice clean down through the headliner.

The final hole size depends on the particular antenna to be installed. Some require a $\frac{5}{8}$" hole, others might require $1\frac{3}{16}$". A drill attachment known as a hole saw might be used for this step, but I've never seen one that really works like the picture on the box. Don't use it unless you know it can do the job. A far better approach is to use a tube-socket punch which makes a perfectly clean hole. A 9-pin miniature tube socket punch, for example, cuts precisely the required hole for a $\frac{5}{8}$" mount. It is also possible to widen a hole made by a tube punch with a rat-tail file. Once the hole is completed, it's important to expose some bare metal at the *underside* of the hole. Sandpaper or another abrasive can be inserted and used to remove gook from the metal which could interfere with a good electrical ground.



(ACTUAL SIZE)

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CARD SWAPPERS UNLIMITED

Swappers Awards are given to those readers who have sufficiently proven that they have reached certain specified levels of achievement in QSL card swapping. There are 19 different and distinctive Swappers Awards, and if you would like a complete set of rules, address your request together with a stamped, self-addressed envelope, to: Swappers Awards, S9 Magazine, 14 Vanderventer Ave., Port Washington, N. Y. 11050. Here are the winners of the black, red and gold certificates for the past month.

SACA
219 Dale Fletcher, KKX5201, Yucca Valley, Calif.
220 O.J. Wakeman, KHG3318, Battle Creek, Mich.
221 Robert Shultz, KLJ1143, Shipman, Ill.
222 Byron Orge, XM23-597, Alberta, Canada
223 Gerald & Sylvia Cote, KKA0658, Keene, N.H.

PX-25
436 Richard Moore, Wilmington, Del.
437 Robert Haught, KKB2813, New Britain, Conn.
438 James Walker, KLH3541, Biloxi, Miss.
439 Jack Rosenstock, KCJ9282, Petersburg, Va.
440 Harold Rumer, KBG5624, Brooklyn, N.Y.
441 John Walmsley, KKA1204, Manchaug, Mass.
442 Jimmy Chocklett, KKK0745, Wilson, N.C.
443 Byron Orge, XM23-597, Alberta, Canada
444 Paul Miller, KLP3111, Canton, N.Y.
445 Steve West, KCI6261, Staunton, Va.
446 Stephen Scherer, KLK3190, Fowler, Ind.
447 Charles Sisler Jr., KNM2322, Mingo Junction, Ohio
448 Gerald & Sylvia Cote, KKA0658, Keene, N.H.

PX-50
375 Richard Moore, Wilmington, Del.
376 John Flynt Jr., KKA7402, Weirs Beach, N.H.
377 James Walker, KLH3541, Biloxi, Miss.
378 Robert Gallery, KCG3236, Chevy Chase, Md.
379 Harold Rumer, KBG5624, Brooklyn, N.Y.
380 Byron Orge, XM23-597, Alberta, Canada
381 Gerald & Sylvia Cote, KKA0658, Keene, N.H.

PX-75
289 James Walker, KLH3541, Biloxi, Miss.
290 Raymond Gould, KLM3971, Kalamazoo, Mich.
291 Robert Gallery, KCG3236, Chevy Chase, Md.
292 Byron Orge, XM23-597, Alberta, Canada
293 Gerald & Sylvia Cote, KKA0658, Keene, N.H.

PX-100
264 James Walker, KLH3541, Biloxi, Miss.
265 Robert Gallery, KCG3236, Chevy Chase, Md.
266 Byron Orge, XM23-597, Alberta, Canada
267 Gerald & Sylvia Cote, KKA0658, Keene, N.H.

PX-125
192 James Walker, KLH3541, Biloxi, Miss.
193 Robert Gallery, KCG3236, Chevy Chase, Md.
194 Arthur Cates, KED0572, Baytown, Texas
195 Robert Shultz, KLJ1143, Shipman, Ill.
196 Byron Orge, XM23-597, Alberta, Canada
197 Paul Cross, XM-22444, Edmonton Alta., Canada
198 Jean DuBois, KKD6389, Middletown, N.Y.
199 Gerald & Sylvia Cote, KKA0658, Keene, N.H.

PX-150
152 Arno Feltner, KED0775, New Braunfels, Texas
153 Robert Gallery, KCG3236, Chevy Chase, Md.
154 Robert Gillespie, KHG1923, Willowick, Ohio
155 Bill Howell, KDB0371, Aiken, S.C.
156 O.J. Wakeman, KHG3318, Battle Creek, Mich.
157 Larry Maiden, KKK0717, Raleigh, N.C.
158 Robert Shultz, KLJ1143, Shipman, Ill.
159 Duke Banks, KKA4451, Westfield, Mass.
160 Byron Orge, XM23-597, Alberta, Canada
161 Evans Johnson, KLN9155, Manistee, Mich.
162 Bob Denholtz, KBI8237, Short Hills, N.J.
163 Paul Cross, XM-22444, Edmonton Alta., Canada
164 Jean DuBois, KKD6389, Middletown, N.Y.
165 Gerald & Sylvia Cote, KKA0658, Keene, N.H.

PX-175
131 Dale Fletcher, KKX5201, Yucca Valley, Calif.
132 Robert Gallery, KCG3236, Chevy Chase, Md.
133 Larry Maiden, KKK0717, Raleigh, N.C.
134 Burrell Buffington, KID8628, Crayville, N.Y.
135 Hugh Jackson, KLP2385, Pipersville, Pa.
136 Gerald & Sylvia Cote, KKA0658, Keene, N.H.

PX-200
119 Robert Gallery, KCG3236, Chevy Chase, Md.
120 Marilyn Wise, KKX4804, Anaheim, Calif.
121 Bud Fowkes, KLP5005, Duncansville, Pa.

PX-225
110 Robert Gallery, KCG3236, Chevy Chase, Md.
111 Marilyn Wise, KKX4804, Anaheim, Calif.

PX-250
106 Walt Wise, KFA4659, Anaheim, Calif.

MSA
158 Eddie Davis, KFA1739, Santa Ana, Calif.
159 William Hughes, KKK5114, Mebane, N.C.
160 Byron Orge, XM23-597, Alberta, Canada
161 Robert Thatcher, KBG7687, Hudson, N.Y.
162 Edward Litke, KKD2992, Beacon, N.Y.
163 Barney Ross, KCG1087, Washington, D.C.

SSC-1
178 Bob Denholtz, KBI8237, Short Hills, N.J.
179 Robert Gillespie, KHG1923, Willowick, Ohio
180 Burrell Buffington, KID8628, Crayville, N.Y.
181 Glenn Davis, 18B2648, Chicago, Ill.
182 Byron Orge, XM23-597, Alberta, Canada

SSC-2
142 William Hughes, KKK5114, Mebane, N.C.
143 Duke Banks, KKA4451, Westfield, Mass.
144 Robert Thatcher, KBG7687, Hudson, N.Y.

SSC-4
114 Edward Litke, KKD2992, Beacon, N.Y.
115 Barney Ross, KCG1087, Washington, D.C.

SSC-5
109 Barney Ross, KCG1087, Washington, D.C.

SSC-7
108 Edward Litke, KKD2992, Beacon, N.Y.

SSC-9
105 Walt Wise, KFA4659, Anaheim, Calif.
106 Bud Fowkes, KLP5005, Duncansville, Pa.

SSC-10
106 Bud Fowkes, KLP5005, Duncansville, Pa.

If you would like to be listed as a QSL card swapper in our monthly listing, you must do the following: send us a separate card for each month you would like to be listed (you may send several month's worth of cards at the same time), and enclose 10¢ *in cash* (*no* stamps, checks, or money orders) for each month you are to be listed. Try not to write on your cards and don't Scotch Tape your dime to the card. Address the material to: Card Swappers Unlimited, 14 Vanderventer Avenue, Port Washington, N. Y. 11050. Deadline for listing in the July issue is May 12th.

Here are this month's swappers:

1Q4271 Henry Sowa, P.O. Box 571, Holyoke, Mass.
1Q5295 John Hart, 9 Carlton Terrace, Lynn, Mass.
1W6216 Errol Engraving, 36 Hampden St., Westfield, Mass.
2Q0152 Karl Weiss, Jr., 245 Ashmore Ave., Trenton, N.J.
2Q1147 George Delaney, 308-47th St., Union City, N.J.
2Q1911 William Plog, 11 Gould Rd., Centereach, L.I., N.Y.
2Q5468 Walt Alexander, 1233 Woodruff Ave., Hillside, N.J.
2Q6980 Jon Morgan, 144 Wilson Ave., Kearny, N.J.
2W8966 Helen Hiatt, P.O. Box 482, East Setauket, L.I., N.Y.
3Q1618 Everett Lindsey Jr., R.D. 1, Mount Holly, N.J.
4B5372 Jim Cross, 755 South Potomac St., Hagerstown, Md.
6W7515 Terrell Craven, Route 1 - Box 32, Royston, Ga.
8Q1009 Sid Coryell, 4502 W. 29th St., Little Rock, Ark.
9W1506 Earl Bethscheider, 1006 Kress St., Houston, Texas
11Q1313 George Strainline, 1171 W. Miracle Mile, Tucson, Ariz.
11Q2714 Eileen Inns, 530 Catalina Dr., Newport Beach, Calif.
11W8551 Bob Blakeley, 3064 Royce Lane, Costa Mesa, Calif.
11W9751 George Strainline, 1171 W. Miracle Mile, Tucson, Ariz.
12Q1341 Dave Jensen, 815 "B" Street, Yuba City, Calif.
12Q2070 Gaston Dorisse, 19794 Stanton Ave., Castro Valley, Calif.
17W5449 Henry Hawkins, R.R. One - Box 86, Fair Grove, Mo.
18B2648 Glenn Davis, 6143 N. Rockwell St., Chicago, Ill.
18B2698 Maxine Dick, P.O. Box 167, Kokomo, Ind.
18Q4913 Tom Leadbetter, R.R. 4-Box 40, Muncie, Ind.
18Q8866 Richard Cary, Route 4- Box 176, Russell Springs, Ky.
19A5551 Steve Yankee, 357 1st St., Manistee, Mich.
19A5964 Stan Sickler, 2310 Commor, Hamtramck, Mich.
19A7903 Jim Nestor, 611 Lambert St., Belpre, Ohio
19Q0707 Jim White, Box 108, Syracuse, Ohio
19Q4842 James Humburg, P.O. Box 647, Benton Harbor, Mich.
19Q8152 John Kasten, 5916 Westbrook Dr., Brookpark, Ohio
19Q9470 Adrian Fallert, 121 N. "C" St., Hamilton, Ohio
19W7489 Dick Holman, 1917 Murdoch Ave., Parkersburg, W.Va.
20Q1360 Ivan Smith, 419 Water St., Danville, Pa.
20Q4816 J.F. Simpson, Box 56, R.D. 3, Everett, Pa.
20W6677 Frank Rodgers, 1910 Columbia Ave., Tyrone, Pa.
KAG2607 Ernest Sawyer, P.O. Box 146, Marshall, N.C.
KAK1840 Francis Penotte, 63 Eastholm Ave., Akron, Ohio
KAP2563 Burl Davis, Route 5, Parkersburg, W. Va.
KBA0231 Charlie Adams, 691 Marlboro St., Keene, N.H.
KBA2894 Charlie Ambush, 31 Pleasant St., Cambridge, Mass.
KBA5557 Ted Cummings, Bellflower Rd., Billerica, Mass.
KBA6883 Andy LaMarche, 8 Perrotto Ave., Claremont, N.H.
KBA8595 Lee Aspinall, 20 Forest Ave., North Haven, Conn.
KBA9005 Tom Lunt, 14 Jacobs Ave., Camden, Maine
KBC0734 Steven Feyman, 79 Banks Rd., Swampscott, Mass.
KBC4768 George Sherman, 25 Church St., Rutland, Vt.
KBC6510 Ralph Bryant, 716 Riverside Dr., Fairfield, Conn.
KBC6692 Mert Swett, RFD 1 Raymond Hill Rd., Uncasville, Conn.
KBC6819 Robert Giustina, 68 Dunmoreland St., Springfield, Mass.
KBC8093 Dennis Cidale, 17 Water St., Stonington, Conn.
KBC8494 Ray Blanchard, 4 Chelsea St., Worcester, Mass.
KBC9193 John Weigel, 119 Shaw St., New London, Conn.
KBD0423 Ernest Ford, 28 Bowdoin St., Providence, R.I.
KBD0585 Paul Roy, 225 Elm St., Southbridge, Mass.
KBD0747 Herb Girard, 348 Carrington Ave., Woonsocket, R.I.
KBD1222 Judy Bloxsom, 1647 Park Ave., Bridgeport, Conn.
KBD1300 Ray Grele, 9 Argyle Circle, Seymour, Conn.
KBD2689 L. Dawson, R.F.D. 3, Houlton, Maine
KBD2925 Ronnie Sauriol, 62 Circuit Ave. N., Worcester, Mass.
KBG1595 Gary Weber, 133 Branton St., Brooklyn, N.Y.
KBG4667 John Krueger, 23 Standpipe Rd., Freehold, N.J.
KBG5169 Ivan Ensler, 203 Canterbury Gate, Lynbrook, LI., N.Y.
KBG6576 Charles Arnwine, 725 South Broad St., Trenton, N.J.
KBG7180 Pat Purcell, 99 Harvard Dr., Hartsdale, N.Y.
KBG7387 Gerry Schechter, 3535 Kings College Pl., Bronx, N.Y.
KBG7687 Robert Thatcher, R.R.1 - Box 59-B2, Hudson, N.Y.
KBG8079 Alvin Allen, 610 Prospect Ave., Spring Lake Hgts, N.J.
KBG8153 Betty Krueger, 23 Standpipe Rd., Freehold, N.J.
KBG8713 Joe Peller, MD 25 Overlook Dr., Newburgh, N.Y.
KBH0301 Jack Whittier, 2400 Johnson St., Janesville, Wisc.
KBH0853 Tom Walton, 324 Kenilworth Rd., Louisville, Ky.
KBH1426 Fred Stearman, R.R. 1 - Box 16, Erie, Ill.
KBI0275 Hank Mancura, 64 Meadow Lane, Levittown, L.I., N.Y.
KBI0854 George Raybin, 1367 Sheridan Ave., Bronx, N.Y.
KBI1349 Jack Hopp, 240-19 144 Ave., Rosedale, N.Y.
KBI2123 Richard Rios, 2897 Ardsley Rd., Wantagh, L.I., N.Y.
KBI2251 Mona French, 19 Essex Lane, Old Bridge, N.J.
KBI3455 John James, 299 1/2 Lark St., Albany, N.Y.
KBI3792 Alan Geidosch, 1314 Bright St., Hillside, N.J.
KBI5592 George Gross, Waring Road M.D. No.5, Newburgh, N.Y.
KBI6373 Charles Bennett, 89 Valley Rd., Haworth, N.J.
KBI6480 Art Scheid, 2 Essex Place, Hartsdale, N.Y.
KBI8077 John Krejc, 60 Division Ave., Garfield, N.J.
KBI8797 Jo-Jo Tybush, 20 South St., Albany, N.Y.
KBJ0326 Joan Tybush, 20 South St., Albany, N.Y.
KBJ0565 Gary Feinstein, 83-11 Kent St., Jamaica, N.Y.
KBJ1238 Mike Ensler, 203 Canterbury Gate, Lynbrook, N.Y.
KBJ1331 Mike Cournoyer, 2505 Fourth Ave., Watervliet, N.Y.
KBJ1722 George Hunt, 353 Highland Ave., Middletown, N.Y.
KBJ2055 Harmon Heller, 610 East 20th St., New York, N.Y.
KBJ2088 Joseph Luisi, 216 Perry St., Trenton, N.J.
KCA0312 Tony Formichelli, 46 Glenwood Blvd., Hudson, N.Y.
KCA0345 Erwin Davis, 22 Parkwood Blvd., Hudson, N.Y.
KCC1541 Donald Berle, 228 California Rd., Quakertown, Pa.
KCC2969 Bob Stouch, R.D. 1, Box 120, East Stroudsburg, Pa.
KCC3957 Lee Headley, 309 St. Louis Ave., Pt. Pleasant Beach, N.J.
KCD1896 Howard Taylor, South DuPont Rd., Penns Grove, N.J.
KCD3262 Dick Davis, 232 E. Garfield St., Shippensburg, Pa.
KCD3398 May Miller, R.D. 2, Kempton, Pa.
KCD4352 Marge Headley, 309 St. Louis Ave., Pt. Pleasant Beach, N.J.
KCD4540 Mike McClatchy, Bowker Rd., Medford Pines, N.J.
KCD4579 Elwood Lefever, R.D.2-Box 28, Dover, Penna.
KCD5154 Earl Rogers, 224 Tuscany Rd., Maple Gardens, Chester, Pa.
KCD5178 Bernie Thomas, R.D. 3, East Stroudsburg, Pa.
KCD5222 William Wright, R.D. 1, Green Lane, Penna.
KCD5385 William Wright Jr., R.D. 1, Green Lane, Penna.
KCD5491 Bernie & Phyllis, 1509 Bondridge Rd., Wilm, Del.
KCE0001 Tom Gerhart, 38 E. Lincoln Ave., Robesonia, Pa.
KCF0329 Willie Lindsey, 63 W. St., Annapolis, Md.
KCF0692 David Clowser Sr., Plainfield Dr., Rt.3, Winchester, Va.
KCF0823 Jim Cross, 755 S. Potomac St., Hagerstown, Md.
KCF1224 Harold Channell, P.O. Box 4124, Alexandria, Va.
KCF2446 Bob Crigger, 411 S. Mount St., Baltimore, Md.
KCG1087 Barney Ross, 425 Garden St., Washington, D.C.
KCG1648 J.W. Smith, R.R. 2, Jane Lew, W. Va.
KCG1835 Edsel Peacemaker, Route 2, Winchester, Va.
KCG2891 Edith Becker, 4305 Franconia Rd., Alexandria, Va.
KCG3068 Ricky Lowman, 1001 W. Addition St., Martinsburg, W.Va.
KCG3236 Bob Gallery, 5013 Westport Rd., Chevy Chase, Md.
KCG3569 Charles Berry, Jr., Nomreh Rd. Rt.3, Salisbury, Md.
KCG4106 Dave Royer, Route 1 - Box 133, Finksburg, Md.
KCI1656 Allen St. Clair, 2847 Cannady Rd., Roanoke, Va.
KCI2842 Clarence Moore, Route 4, Box 34, Thomasville, N.C.
KCI5210 Red Cheek, 214 North Elm Dr., Winston-Salem, N.C.
KCJ0690 James Deavers, Box 214, Bladenboro, N.C.
KCJ0869 Jim Nix, 2621 Plum St., Charlotte, N.C.
KCJ2292 Hazel Stubbs, P.O. Box 1076, Rockingham, N.C.
KCJ2621 Sam Moser, Rt. 7-Box 154, Nylon Dr., Winston-Salem, N.C.
KCJ2780 R.K. Harris, 513 McDonald Ave., Charlotte, N.C.
KCJ3076 Jim Hilton, 3806A Roads View Ave., Hampton, Va.
KCJ3095 Donald Kelley, Glen Allen, Virginia
KCJ3880 Lee Willick, 3709 Hester Circle, Raleigh, N.C.
KCJ4079 Jack Kirby, 3601 North Ave., Richmond, Va.
KCJ4911 Jearl Bishop, 1801 Chatham Ave., Charlotte, N.C.
KCJ5002 J.L. Kirkland, Route 7, Raleigh, N.C.
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KCJ6180 Buddy Williamson, 604 Gillespie St., Greensboro, N.C.
KCJ6682 Ken Booth, Concord, Va.
KCJ6987 Tommy Pollok, Gladys, Virginia
KCJ8021 E.B. Baker, Box 2660 Va. Tech Sta. A, Blacksburg, Va.
KCJ8638 Roger Duncan, 610 Church St., Spray, N.C.
KCJ8782 Wilma Nix, 2621 Plum St., Charlotte, N.C.
KCJ9372 Gene Andrews, Rt.5, Box 204, Glen Allen, Va.
KDA0119 Jack Hall, 32 Pickard Circle, Lexington, N.C.
KDB0371 Bill Howell, 545 Palmetto Lane, SW, Aiken, S.C.
KDB7921 Jack Calverts, 278 Moreland Way, Hapeville, Ga.
KDB9372 Claude Hooper, RFD 3, Box 130, Sylva, N.C.
KDC0390 Jerry Pater, 1195 Dale Rd., Hamilton, Ohio
KDC0614 Clarence Hnanicek, 10809 Prince Ave., Cleveland, Ohio
KDC1255 Ben Hefner, 1804 Lennox Ave., Lima, Ohio
KDC1358 W.L. McKeever, 408 Lynn Ave., Lakeside, Ohio
KDC1371 Fred Matyas, 1220 S. River Ave., Toronto, Ohio
KDD1805 Freddie Martin, 897 North Highland Ave. N.E., Atlanta, Ga.
KDD2134 Michael Ashby, 316 S. Franklin St., Tullahoma, Tenn.
KDD8403 Lloyd Coop, 506 E. General St., Tullahoma, Tenn.
KDD9708 Stuart Cash, 1109 Mississippi Ave., Chattanooga, Tenn.
KDE0565 Rodney Wise, P.O. Box 2953, Asheville, N.C.
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KDE4328 Gene Knight, P.O. Box 331, Haleyville, Ala.
KDH1030 Danny Yant, 2815 Bowdoin Place, Bradenton, Fla.
KDH1201 W Morton, 802 Madison Street So., New Port Richey, Fla.

KDI3211 Donna Wiley, 1601 Cimarron Trail, Wichita Falls, Texas
KDI3558 Tom Smith, 1626 N. Bumby Ave., Orlando, Fla.
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KEE2099 Bill Hills, 181 Linda Circle, Ocean Springs, Miss.
KEE3243 Jesse Meadows, 7307 Adelbert St., Houston, Texas
KEE3761 H. Broaddus, 1300 Kyle Rd., Clute, Texas
KEH0445 Wally Williams, 1428 Purdue, Oklahoma City, Okla.
KEH1105 Fred Kimbro Jr., 213 N. Edmond, Muskogee, Okla.
KEH4157 Bill Shoemaker, Rt. 1, Box 144, Skiatook, Okla.
KEH5846 Kenneth Bales, Box 295, Guymon, Okla.
KEH5930 Billy Mann, 3502 W. 7th St., Texarkana, Texas
KEH7235 John Glover, 2428 Hugo St., Dallas, Texas
KEJ0071 Melvin Nutting, 932 Western Ave., Colton, Calif.
KEJ5828 John Hamner, 12350 So. Fern Ave., Ontario, Calif.
KEJ5869 Johnnie France, Box 4146, Riverside, Calif.
KFA0654 Gary Enderle, 6219 N. Sultana, Temple City, Calif.
KFA1739 Eddie Davis, 1609 W. 10th St., Santa Ana, Calif.
KFA2338 Frank Whetzel, 916 Larker Ave., Los Angeles, Calif.
KFA3071 Dennis Hook, 391 Freear Dr., Buellton, Calif.
KFA4077 Smitty Smith, 11142 Penn St., Lynwood, Calif.
KFA4167 Mike Daugherty, 2736 E. Fairmount, Phoenix, Ariz.
KFA4659 Walt Wise, 613 No. Glenwood Place, Anaheim, Calif.
KFA9144 Thomas Couch, 9422 Blackley St., Temple City, Calif.
KFA9923 Helen Morse, P.O. Box 1395, Ontario, Calif.
KFB0396 Ron Federico, 815 No. Palisade Dr., Santa Maria, Calif.
KFC3866 Rex Mathews, 407 Potomac Ave., Sacramento, Calif.
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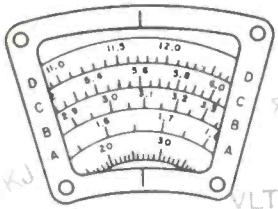
KLH7945 James Price, 3409 East 7th St., Kansas City, Mo.
KLH8133 Norman Royal, Syracuse, Nebraska
KLH8375 Mike Anthes, 7804 Bloom Dr., Normandy, Mo.
KLI0112 Marv-Matt Wilkinson, 1100 31st, West Des Moines, Iowa
KLI1365 Glenn Earney, 928 Olympia Dr., Ferguson, Mo.
KLJ0255 Bob Price, 182nd St., Box 382, Lansing, Ill.
KLJ0440 Don Thielsen, 2803 Iroquois Trail, McHenry, Ill.
KLJ0585 Ralph Buikema, 97 Keystone Ave., Fox Lake, Ill.
KLJ1323 Gloria Wright, 1336 Blaine Ave., Janesville, Wis.
KLJ1650 Dan Wright, 1336 Blaine Ave., Janesville, Wis.
KLJ2067 Butch Felmeten, 4401 West Shore Dr., McHenry, Ill.
KLJ2946 Harold Bjorkquist, 8878 South 84th St., Franklin, Wisc.
KLJ3291 Dave Merry, 642 118th St., Whiting, Ind.
KLJ3382 Earl Gordon, 419 W. Grand Ave., Decatur, Ill.
KLJ3945 William Turner, 1728 Ford Ave., Owensboro, Ky.
KLJ4142 Jon Kramer, R. 1, Box 45J, 606 Highland Dr., Trevor, Wis.
KLJ4661 Don Hyland, R.F.D. 6, Decatur, Ill.
KLJ5993 Bob Frankowiak, 1722 Brown Ave., Whiting, Ind.
KLJ6057 Myrtle Hittle, 1601 So. 4th St., Richmond, Ind.
KLJ6147 Nick Shepherd, Pottawattomie Park, Michigan City, Ind.
KLJ7357 Bud Bachman, 2725 Vinton Ave., Rockford, Ill.
KLJ8388 Tom Ebert, 2217 Cliff Road, Burlington, Iowa
KLJ8683 Rick Sherrill, Box 46, Mexico, Ind.
KLJ9180 Jerry Gaughan, 1826 Davis Ave., Whiting, Ind.
KLJ9747 Leonard Fairley, R.R. 2, Chatsworth, Il.
KLK1408 Pat Adams, 509 May St., Sumner, Ill.
KLK1581 Frank Hawley, 2313 Johnson St., Keokuk, Iowa
KLK1975 W.H. Willett, Lewisport, Kentucky
KLK2079 Russell Smith, 107 So. State St., Louisville, Ky.
KLK2149 Rexford Niccum, R.F.D. 1, North Manchester, Ind.
KLK2458 Lincoln Ide, 7842 So. McVicker, Oak Lawn, Ill.
KLK3138 Chuck Brown, 2817 Ruby Ave., Racine, Wis.
KLK3310 Tom Wells, 911 Oakley St., Evansville, Ind.
KLK3372 Don Minnerick, R.R. 6, Connersville, Ind.
KLK3619 Matt Loeffler, 2169 South 64th St., West Allis, Wis.
KLK4399 Virgil Watts, 4255 E. Lincoln, Decatur, Ill.
KLK4588 Ruth Copple, 1749 W. Ravina Park Rd., Decatur, Ill.
KLK4598 Jerry Gentry, 7807 Yates Blvd., Chicago, Ill.
KLK4886 Charlotte Stearman, P.O. Box 326, Albany, Ill.
KLK5585 Lloyd Aumock, 840 1/2 E. Pleasant St., Freeport, Ill.
KLK5768 John Paida, 2840 So. Kenneth Ave., Chicago, Ill.
KLK5976 Marje Engel, P.O. Box 130, Berwyn, Ill.
KLK6006 Bob Hertzberg, 5213 W. Parkview Dr., Mequon, Wis.
KLK6778 George Joslyn, 4819 Wright Terr., Skokie, Ill.
KLK7004 Wm. Porath, 985 Reddin Ave., Neenah, Wis.
KLK7035 Lyle Munson, 112 Hickory St., Crystal Lake, Ill.
KLK7288 Bill Ohnesorge, 55 1/2 Bluff St., Dubuque, Iowa
KLK8104 Bob Chamber, R.R. 2, Bloomington, Ill.
KLK8405 Betty Dungan, 208 N. Main St., Dunkirk, Ind.
KLK8815 Dick Hadley, 607 Wesley St., Huntington, Ind.
KLK9539 Mike Geiger, Box 83, Culver, Ind.
KLL0077 Don Field, 112 Monee Rd., Park Forest, Ill.
KLL0146 David Greer, 708 Peveler Dr., Russellville, Ky.
KLL0228 Leonard Westemeyer, 509 1/2 W. 8th St., Dubuque, Iowa
KLL0483 Bruce Swantek, 4349 Bobolink, Skokie, Ill.
KLL0681 Dick Stichter, 851 E. Pleasant St., Freeport, Ill.
KLL0809 Fritz Stearman, Albany, Ill.
KLL1090 Reid Kenley, P.O. Box 427, Maywood, Ill.
KLL1281 Tom Wilson, 1603 Ruth Ann Drive, Centralia, Ill.
KLM3483 Dick Fox, 11516 Headley Ave., Cleveland, Ohio
KLM3893 Robert Elam, 714 Livingstone, Pontiac, Mich.
KLM3971 Ray Gould, 1806 Kim Ave., Kalamazoo, Mich.
KLM4842 Bessie Hazen, 231 North Mead St., Zanesville, Ohio
KLM5051 Jim Swart, 62 Stadium Dr., Tallmadge, Ohio
KLM5233 Cecil Campbell, 5687 Eldridge, Pontiac, Mich.
KLM7311 Richard Heysek, 2430 West Sprague Rd., Parma, Ohio
KLM7450 Bill Piper, Rt. 5-Box 414, Swanton, Ohio
KLM7763 Jim Warner, 836 Pensacola, Pontiac, Mich.
KLM7788 Charles Holland, 942 Lingle Ave., Owosso, Mich.
KLM8313 Bob Sizemore, 7807 Hope Ave., Cleveland, Ohio
KLM8896 Mike Fugitt, 464 Airview S.E., Grand Rapids, Mich.
KLM9197 Bob Fritz, 801 Chestnut St., Coshocton, Ohio
KLM9517 Jim Rollins, 805 W. Lawrence Ave., Charlotte, Mich.
KLN0692 Bob Hayes, 29070 Bretton, Livonia, Mich.
KLN0934 Leonard Beaudry, 32821 River Road, E. Rockwood, Mich.
KLN1446 Andy Berry, 1067 Truxell Rd., Peninsula, Ohio
KLN1595 Florence Shane, Route 1, Lakeville, Ohio
KLN1831 Roy Bullock, 5th Street Road, Corbin, Ky.
KLN1971 Bill Rusnell, 501 Fairview N.E., Grand Rapids, Mich.
KLN2082 Bob Browning, 1217 North Ave. N.E., Massillon, Ohio
KLN2595 Bob Levy, 2728 Burnaby Dr., Columbus, Ohio
KLN3127 Jim Stroud, 10 Hunttington Place, Kettering, Ohio
KLN3288 Frank Neer, 2231 Prame Ave., Cleveland, Ohio
KLN3731 Norm Sieggreen, 1532 N. Bond, Saginaw, Mich.

KLN4091 Clare Wilson, 94 E. Colgate, Pontiac, Mich.
KLN4366 Grant Bryan, 669 Harvard St., Akron, Ohio
KLN4898 Ernie Zam, 2737 Northvale Road, Oregon, Ohio
KLN5237 Ken Hess, 2005 Beal Ave., Lansing, Mich.
KLN5410 Bill Schmidt, 734 N. 11th St., Miamisburg, Ohio
KLN5598 Rawlings Funeral Home, London, Kentucky
KLN5768 Jim Nooney, Falling Rock, West Virginia
KLN5795 Mike Salzman, 2854 Lincoln St., Lorain, Ohio
KLN6130 Jerry Hayes, P.O. Box 1331, Sta. A, E. Liverpool, Ohio
KLN6155 Bob Mills, 3802 Ash St., Kalamazoo, Mich.
KLN6235 Fritz Caccia, 3749 Longfield, Ravenna, Ohio
KLN6367 Tom Getgood, 426 Mitchell St., Sanford, Mich.
KLN6383 Robert Saltsman, 412 Water St., Salineville, Ohio
KLN6401 Don Goretzki, 605 McEwen St., Sandusky, Ohio
KLN6563 Clyde Huskonen, Linna Dr. Lake Rd. W., Ashtabula, Ohio
KLN6856 Bob Brown Jr., P.O. Box 169, Ravenna, Ohio
KLN7841 Grace Beaudry, Route 1, Rose City, Mich.
KLN8105 Gabby Rodabaugh, 10078 E. Coldwater Rd., Davison, Mich.
KLN8264 G Schroeder, 4016 St. Joseph Ave., Berrien Springs, Mich.
KLN8383 Jim Samuell, 3503 Orchard, Portsmouth, Ohio
KLN9152 Carl Lockhart, Box 28, Coolville, Ohio
KLN9155 Evans Johnson, 115 McKee, Manistee, Mich.
KLN9288 Bill Roy, N 17 Baseview Trailer Ct., Emerado, N. Dak.
KLN9664 Donald Hyland, 5184 Cosgray Rd., Amlin, Ohio
KLN9798 Gene Neumann, Box 294, Bucyrus, Ohio
KLN9961 Orville Bluhm, 1483 F. Bellum, Muskegon, Mich.
KLO0175 Paul Manville, 1736 Lombardy, East Highland, Mich.
KLO0370 Jerry Stewart, 1330 Phoenix St., Niles, Mich.
KLO0598 William Lechner, 4441 Parnell, Pontiac, Mich.
KLO0660 Earl Sayres, P.O. Box 83, Marietta, Ohio
KLO0754 Marvin Goff, 1524 Maryland Ave., Springfield, Ohio
KLO2394 Howard West, 3711 Van Stone Dr., Milford R.3, Mich.
KLO2476 Barbara Race, R.R. 3-Box 135, Vicksburg, Mich.
KLO2622 Bob Massey, R.R. 4 - Box 305, Coldwater, Mich.
KLP0319 Pete Hons, 614 Main St., Portage, Pa.
KLP0990 Robert Eddy, Rt. #2, Guys Mills, Pa.
KLP1285 Doug Williams, Eleven Oakdale Rd., Johnson City, N.Y.
KLP1619 Joe Martin, 500 1/2 Porter St., Watkins Glen, N.Y.
KLP3111 Paul Miller, 8 Clark St., Canton, N.Y.
KLP3284 James Phillips, 599 West 8th St., West Wyoming, Pa.
KLP4213 Dennis Cray, 3750 W. 10th St., Erie, Penna.
KLP4360 Earl Bonenblust, 515 Whiting Rd., Webster, N.Y.
KLP4695 Dan Cunningham, 185 Ogden Center Rd., Spencerport, N.Y.
KLP4976 Dick Todd, 157 Hobart St., Utica, N.Y.
KLP5005 Bud Fowkes. 1031 5th Ave., Duncansville, Pa.
KLP5102 Bob Vann, 102 Haller Blvd., Ithaca, N.Y.
KLP5525 Bonnie Beeke, 11 Maple Dr., Bath, N.Y.
KLP5686 Charles Johnson, 332 Huron Ave., Renovo, Pa.
KLP5748 Butch Frazier, Halfacre, R.D. 3, Auburn, N.Y.
KLP5750 Harlen Wood Sr., Box 526, Star Lake, N.Y.
KLP6039 William McKenna, 1354 Davis St., Elmira, N.Y.
KLP6486 Harry Butler, West Fort Ann, N.Y.
KLP6626 Wallace Nolen, 12 Chase St., White Plains, N.Y.
KLP6639 Don Berman, 121 W. Ross St., Wilkes Barre, Pa.
KLP6705 John Fox, P.O. Box 92, New York Mills, N.Y.
KLP7228 Jim Elwood, R.D. 1, Rathbone, N.Y.
KLP7326 Robert Hurley, R.D. 1, Waynesboro, Pa.
KLP7459 Jim Stadtmiller, 9 Kress Hill Dr., Spencerport, N.Y.
KLP7578 David Moss, P.O. Box 61, Endicott, N.Y.
KLP7749 Ray Bronder, 416 9th St., Monessen, Pa.
KLP7848 Bryan May, 147 Old River Rd., Wilkes-Barre, Pa.
KLP8083 William Davidson, 26 Knight St., Glens Falls, N.Y.
KLP8105 Alan Rubin, 12 Grandview Terrace, Cobleskill, N.Y.
KLP8118 Stan Gordon, 81 Northmont St., Greensburg, Penna.
KLP8509 Leonard Doty, Monessen, Pa.
KLP8570 Dick Moriarty, 220 Saint Clair Ave., Renovo, Pa.
KLP8791 Jim Smith, R.D. 3, Fort Plain, N.Y.
KLP8809 Don Shumaker, 147 Greenbrier Dr., Carnegie, Pa.
KLP9091 Tom Ewigs, 1627 Crawford Ave., Altoona, Pa.
KLP9135 Tom Bryan, 409 West 4th St., Erie, Pa.
KLP9151 Robert Lance, 10 Fredella Ave., Glens Falls, N.Y.
KLP9534 Steve Delorm, 258 Spencer Rd., Rochester, N.Y.
KLP9557 George Booth, 971 Sweeney St., No. Tonawanda, N.Y.
KLP9618 Bill Lohnes, Box 176, Round Lake, N.Y.
KLP9656 Irvin Kimmel, P.O. Box 14, Tire Hill, Pa.
KLP9765 Lewis Valachovic, 110 Burton St., Johnstown, N.Y.
KLP9773 Ron Crown, 764 Merchants Rd., Rochester, N.Y.
KLQ0114 Roger Hamm, 1447 Union Center, Maine Hwy, Endicott, N.Y.
KLQ0343 Dave Rhodes, 30 Garden Terr., Pittsburgh, Pa.
KLQ0391 Jim Conners, 10 Tobes Hill, Hornell, N.Y.
KLQ0457 Charles Goughnour, 207 Coldren St., Johnstown, Pa.
KLQ1132 Gerald Bach, 206 Ottawa St., Johnstown, Pa.
KLQ1173 Lester Finnegan Sr., 8171 Main St., Williamsville, N.Y.
KLQ1294 Koffee Hound, Box 241, Frankfort, N.Y.
KLQ1560 Jud Kurlancheek, 242 East Dorrance St., Kingston, Pa.
KLQ1624 George Thayer, 62 Clinton St., Salamanca, N.Y.
KLQ1850 Mike Raspatello, 336 Dewey Circle, Ridgway, Pa.
KLQ1985 Ronnie O'Neill, 72 Academy St., Wilkes-Barre, Pa.
KLQ2202 Raymond Vonada, 304 James St., Flemington, Pa.
KLQ2302 Bill Caccia Sr., Box 67 - R.D. 4, Greensburg, Pa.
KLQ2519 Dick Pomerleau, 88 1/2 Lincoln Ave., Saratoga Springs, N.Y.
KLQ2575 Pete Gabrielli, 751 Parsells Ave., Rochester, N.Y.
KMA0173 Joe Witek, 40 Daniel St., Indian Orchard, Mass.
KMA0265 Mike McMullan, 304 Westfield Rd., Holyoke, Mass.
KMA0678 Dave Thomas, 13 Lucian St., Manchester, Conn.
KMA0731 Ralph Panagrosso Jr., 50 Marlen Dr., North Haven, Conn.
KMA0862 Joan Savides, 59 Baldwin Dr., Hampden, Mass.
KMA1395 Ray Martel, 143 Parker St., New Bedford, Mass.
KMD0173 Monte Capri, 4622 16 Ave., Brooklyn, N.Y.
KMD0252 Mike Shannon, 637 C 2nd St., Somerville, N.J.
KMD0428 David Bellask, 1159 E. 42 St., Brooklyn, N.Y.
KMD0681 Vinnie Henry, 221-02 133 Ave., Laurelton, N.Y.
KMG0107 Dick Kreider, 374 S. Main St., Manheim, Pa.
KMG0791 Gregory Pace, 910 Redwood Dr., Carlisle, Pa.
KMK0568 Jack Pridgen, 408 W. 19th St., Lumberton, N.C.
KMM0184 Bob Menendez, 1029 Gordon St., Memphis, Tenn.
KMP0458 Dave Pushrod Pybus, 122 Keystone Plaza, Panama Ct., Fla.
KMR0261 Harry Mills, 818 Shumacola Trail, Tupelo, Miss.
KMX0684 Lois Fletcher, P.O. Box 924, Yucca Valley, Calif.
KNJ0122 Glenn Flury, 936 Rock St., Dubuque, Iowa
KNJ1768 Weldon Coldren, 10 No. East St., Wabash, Ind.
KNM1400 Gerald Kocher, Route 7, New Martinsville, W.Va.
KNM2202 Duffy Duffield, 121 Laverne Lane, Akron, Ohio
KNM2398 Cy Swegert, Hamilton, Ohio
KNP0061 Roy Reynolds, Box 14, Elbridge, N.Y.
KNP0457 Jeff Ohlsson, 86 Bowen St., Jamestown, N.Y.
XM112045 Lloyd Tait, 2088 E. 26th Ave., Vancouver, B.C.
XM231020 Byron Orge, P.O. Box 1122, Medicine Hat, Alberta, Can.
XM41747 Captain Blood, R.R. 1. Orillia, Ont. Canada
XM411442 Verna Massam, 66 Guthrie Ave., Toronto, Ont. Canada
XM412800 Skippy Massam, 66 Guthrie Ave., Toronto, Ont. Canada
XM431311 Peter Walton, 421 Lodor St., Ancaster, Ont. Canada
XM522987 Lorne Rother, 5590 Beaminster Place, Montreal, Que., Can.
XM53534 Francois Goyer, 259 Rue Moisan, Drummondville, P.Q.
XM56066 Gilles Petit, 409 St. Joseph, La Tuque, P.Q. Canada
XM65140 Vaughan DeMerchant, P.O. Box 13, Perth, N.B. Canada
Atl.1515 Rob Dalton, Bland, Virginia
Cent.2340 Dave Coyle, 602 Elm, Coffeyville, Kansas
Cent.3250 David Sigo, Rt. 1 - Box 153, Goodland, Ind.
North3020 Robert Ream, 608 High St., Lancaster, Pa.
North3205 Hot Rodder, Box 824, Utica, N.Y.
North3206 Korky, Box 241, Frankfort, N.Y.
North3300 Tom Bolling Jr., 233 Temple St. Fredonia, N.Y.
North4066 Wayne Myers, 150 N. College St., Carlisle, Penna.
WPE1GCC Terry Henry, 17 Kenworth Ave., Keene, N.H.
WPE2LUX Komical Kube, Box 241-A, Frankfort, N.Y.
WPE2NHW Gerry Schechter, 3535 Kings College Pl., Bronx. N.Y.
WPE3FSC Robert Ream, 608 High St., Lancaster, Pa.
WPE4ENC Jimmy Bullock, 1628 Long Ave., Nashville, Tenn.
WPE4HIL Glenn Strickland, Rt. 4, Box 205, Louisburg, N.C.
WPE4HYO William Cody, Box 412, Jamestown, Tenn.
WPE4IIT Charles Johnson, 314 - 6th St. S.W., Charlottesville, Va.
WPE6EPN Howard Lichtig, 1123 Via Granada, Livermore, Calif.
WPE6ETT Harry Okey Jr., P.O. Box 1526, La Jolla, Calif.
WPE6FOS Jim Hope, 356 N. Fuller Ave., Los Angeles, Calif.
VE3PE1SM Bob Wood, Box 67, Tilbury, Ontario, Canada
VE1PE6X Andy McLellan, P.O. Box 631. Saint John, N.B. Canada
VE1PE9O H. Stackhouse, Rothesay, R.R. 2, N.B. Canada
G-9810 Mike Bland, Darlington Rd., Basingstoke, Hants, England
JA1-2845 Isao Numa, 1-281 Setagaya, Setagaya-Ku, Tokyo, Japan
OH2722 Torsten Soderstrom, Box 306, Helsinki, Finland
OH2PE1L Timo Lehtio, Virkby, Sunis-Hagen, Finland
RA.1061 Les Cufflin, c/o Bobby Morehead, Rt. 2, Box 412, Shelby, N.C.
Richie Krug, 11 Emmett St. New Hyde Park, N.Y.
Jack Allen, 203 Ave. F., Brooklyn, N.Y.
Central Printing, 920 Vandeventer, Fayetteville, Ark.
Ruth Charon, 109 Bowers St., Holyoke, Mass.



THE SWL SHACK

BEST BETS FOR LISTENERS ON THE DX BANDS

by RICK SLATTERY

DX'er Bill Howell, Jr., KDB0371, Aiken, S. C. says to look for *Radio Nederland* on 6035 kc/s and *Radio Denmark* on 9520 kc/s most evenings. He says that good broadcast band bets are WCK in Cincinnati on 1520 kc/s, WGAR in Cleveland on 1220, and WWL in New Orleans.

Regular Reporter Don Huntley, KDD-1522, Asheville, N. C. sends along some off-beat frequencies you can listen on to hear the behind-the-scenes operations of manned space shots. Frequencies are approximate: 11228, 13215, 13826, and 15016 kc/s. After the shots you can listen to the NASA station at Greenbelt, Md. (on SSB on about 7580 and 10615 kc/s.

Don also suggests the following best bets for DX'ers: *Radio Yaounde*, Yaounde, Cameroon, 4970 kc/s at 0000 EST; *Radio Bangui*, Bangui, Centr. African Republic on 5035 kc/s at 0015 EST; *Radio Nacional Espana*, Madrid, Spain, on 9360 kc/s at 0015 EST; *Radio Journal*, Recife, Brazil, on 6085 kc/s 2000 EST; *Switzerland Calling*, Berne, Switzerland, on 9535 kc/s at 2030 EST; *Radio Norway*, Oslo, Norway, on 6130 kc/s at 2300 EST; *Radio Budapest*, Budapest, Hungary, on 7215 kc/s at 2330 EST; *All India Radio*, Delhi, India, on 7225 kc/s at 1930 EST; *Radio Prague*, Prague, Czechoslovakia, on 5930 kc/s at 2000 EST; *N.H.K.*, Tokyo, Japan, on 15235 kc/s at 0430 EST; *Korean Broadcasting Co.*, Seoul, Korea, on 7190 kc/s at 0530 EST; *East Nigeria Broadcasting Co.*, Enugu, Nigeria, on 4885 kc/s at 0045 EST, and finally (whew!) *Radio Village*, Monrovia, Liberia, on 11975 kc/s at 0130 EST.

A report from James H. Burton, III, Staunton, Va., reminds DX'ers that you can get a QSL card from stations WWV (Maryland and WWVH (Hawaii) by sending a detailed report to the National Bureau of Standards, Boulder, Colorado. These stations send out time signals and other technical material 24 hours a day on 2500, 5000, 10000, 15000 and 20000 kc/s. By the way, gang, the Canadian Government also operates a station which sends out time signals. They use the callsign CHU and announce "Dominion Observatory, Ottawa." Listen for them on 3330, 7335, and 14670 kc/s. They send a nice QSL card. Address reports to: Station CHU, Dominion Observatory, Ottawa, Ont., Canada. Their signal sounds like a rhythmic series of CW "dots," one per second.

Other good DX bets this month include: *Kol Yisrael*, Israel, on 9725 kc/s at 1200 EST; *Radio Canada*, Montreal on 9625 kc/s at 1745 EST; *BBC*, London, England, with their special "Shortwave Listener's Corner" every Friday at 1930 EST on 9640 kc/s; *Radio Free Europe*, Germany, on 9595 kc/s at 1630 EST; *XEQM*, Merida, Mexico on 6105 kc/s at 0735 EST; *Voice of the West*, Lisbon, Portugal, on 6025 kc/s at 2100 EST (also on 6185 kc/s at this time; *Deutsche Welle*, Cologne, W. Germany, on 6145, 9605 and 9735 kc/s at 1705 EST and finally, *Radio Baghdad*, Iraq, on 6095 kc/s at 1445 EST.

Send in those reports fellows. How about some more of those SWL shack photos?

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NEW WRL WT-1000 3 TRANSISTOR PLEASURE TIME WALKIE TALKIE!!!

$10.95 NO MONEY DOWN

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- FACTORY WIRED—no soldering—no mess
- No license needed—no age limit
- Handsome, compact—weighs 10 oz.
- Offers up to ¼ mile on-the-move communications
- Includes battery & telescoping antenna

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- FOR HOME—PLEASURE—SPORTS—INDUSTRY
- Operating range—1 to 5 miles under ideal conditions
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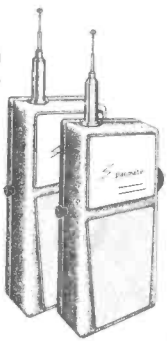
- Includes leather carrying case, battery & antenna.



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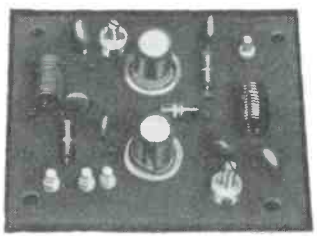

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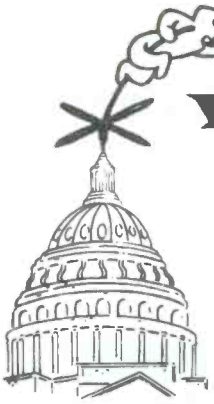

WASHINGTON OUTLOOK

Many revoked CB licenses this round, so let's get right under way.

• The following stations received notices from the FCC to show cause why their licenses should not be revoked for alleged violations of the rules:

18QA1718, Russel John Verona, Ottawa, Ill.

19A7086, Leonard Staten, Flatwoods, Ky.

KDE2942, John D. Brookshire, Mableton, Ga.

1W7777, A. R. LeBlend, d/b as LeBlend's Radio & TV, Biddeford, Me.

KEJ6856, James L. Steese, Compton, Calif.

KKI3578, James Washington, Baltimore, Md.

KRP1438, Thomas E. Johnson, Miami, Fla. (ex-KDI3985).

• These CB'ers actually had their licenses revoked by the FCC:

18Q4830, Robert J. Griese, Milwaukee, Wisc.

6W6559, Thomas Leroy Brock, Fort Payne, Ala.

KEJ3774, Theodore C. Coke, Jr., Pasadena, Calif.

KDD6768, Charles William Claxton, Atlanta, Ga.

KEC0219, E & K Radio Citizens Band Sales & Service, Beaverton, Oreg.

KHG7773, John Hershberger, Jr., Wayne, Ohio.

KKX4033, Garlin R. Napier, Bell Gardens, Calif.

KLS0073, Harold P. Luke, Waiamalo, Hawaii.

KHJ9144, James E. Litteral, Dayton, Ohio.

KCC0706, Francis J. Clark, Gloucester, N. J.

KEJ6754, Raymond Clutter, Redondo Beach, Calif.

KDI0322, Harry J. Salee, d/b as Salee Motors, Homestead, Fla.

KDB7250, Thomas W. Clements, East Point, Ga.

KFA3251, John L. Schultz, Tempe, Ariz.

KDB3522, Ronnie B. Tallman, Riverdale, Ga.

KDB8001, Ernest C. Fortenberry, Cleveland, Tenn.

7W3685, Donald C. Simmons, Tampa, Fla.

KDD8502, Bennie W. Hundley, Jr. Knoxville, Tenn.

KHG3282, Dorcey R. Thomason, Hastings, Mich.

KDE1105, Bobby C. Parrott, Soddy, Tenn.

KKP3241, Gayle Velez, Miami, Fla.

• These stations were given notices of apparent liability in the amount of $100:

KKR5520, William G. Barnes, Saraland, Ala.

KEJ1492, Lenora J. Kindel, Bell Gardens, Calif.

KEJ6195, William R. Burdett, San Pedro, Calif.

KDI4435, Gus Floyd Nichols, Tampa, Fla.

11W7494, Uneeda Joy Window Cleaning Co., LaMirada, Calif.

6W5625, Johnny Zomprelli, Austell, Ga.

• The following CB'ers were in receipt of FCC show cause notices at the time their licenses expired. As a result the FCC proceedings against them were dropped:

6W2871, Jerry L. Wayde, Smyrna, Ga.

11W3782, Robert R. Adams, Los Angeles, Calif.

• On the somewhat happier side of the ledger, the following CB'ers had their $100 forfeitures reduced to $25:

KFA2600, Marion J. Dillard, Crestline, Calif.

KEB2563, Willie L. Westmoreland, Plateau, Ala.

KDH0833, J. C. Smith d/b as Florida Merchant Police, Oakland Park, Fla.

KHG9022, William H. Mathuews, Waverly, Ohio.

20Q0084, William P. Gleichauf, Rochester, N. Y.

• The following CB'er was successful in obtaining a reduction in his $100 forfeiture to $50:

KFA5970, Dewey F. Myers, Long Beach, Calif.

• The $100 forfeiture against the following CB'er was cancelled because the licensee turned his license in to the FCC for cancellation:

KEB3381, Ralph F. Bass, Jackson, Miss.

In other FCC news, the 460 to 461 mc/s segment Class A CB Service, which was scheduled for death this past March 31st, was given an 11th hour stay of execution. The band, which lies in the UHF portion of the radio spectrum, will still belong to the CB service for at least another year.

The Automobile Manufacturers Association, Inc., originators of the H.E.L.P. Program (see March S9, page 9) have sent a formal petition to the FCC asking that the frequencies 27.235 and 27.245 mc/s (commonly known as 22A and 22B) be given over to the H.E.L.P. program for duplex operation (mobiles would all transmit on 22A and receive the base stations on 22B). The two channels are presently used as "junk" frequencies by a small number of miscellaneous radio services and relatively few licenses are outstanding which would be affected should these channels be approved for exclusive H.E.L.P. use. Use of these two frequencies would take the potential message load away from Channel 9, and by utilizing duplex, whereby mobiles could not hear each other's transmissions, the amount of useless chatter in the H.E.L.P. program would be minimized.

S9

KBG4303 RIDES AGAIN

Continued from page 7

stack of *Project Aid* requests, and everything is again back to normal in the Editorial Department.

One potentially dark cloud on the horizon has been rising over the Circulation Department for a number of months now and try as I may, I haven't been able to do much to talk them out of their plans to raise subscription rate and newsstand price. Faced with increasing postage rates and constantly rising production and printing charges, each month I have to storm into Weisner's office to beat him about the head and shoulders, in an effort to delay his sinister plot. He still insists that an increased price for S9 is both necessary and inevitable—no *definite* plans have been made or date set, but present subscribers not only save themselves more than 8¢ per copy from the present newsstand price and receive their issues ahead of others, they also help to keep the Circulation Department pacified, in addition to protecting their presently established purchasing price just in case Weisner isn't bluffing.

The free *S9 services* (wall certificates, free QSL cards, 10 codes, copies of "CB Confidential," "Achtung" certificates, "Flash" envelopes, etc.) have brought us many new friends over the past year and we hope to expand these services as time and personnel limitations permit us to do so.

For all of this—the better CB coverage, the larger circulation, the unparalleled advertising lineage, the color covers, the additional pages we now have regularly, the pretty girls in the office—we have only *you* to thank, subscribers and newsstand buyers alike, a very special breed of people indeed. It would be a piddling injustice to consider you out there as "readers." "Readers" are what newspapers and other magazines have—it's a very impersonal word and a label which I have always tried to avoid. "Friends," "supporters," "the 'in' group," "the fellows and gals" are words which best describe our merry band—a very unique group which has permitted us to go out on limbs (and even to fall off one or two), try off-beat articles, weirdo ads, and a generally unorthodox approach to putting out a publication. I prefer to call you simply *"S9'ers,"* and may your numbers forever increase.

FCC

If you could take your eyes away from last month's cover to read the "Press Time FCC Flash" which we managed to get into the issue a few hours before S9 was to go on the press, you already know that as of April 26th the FCC's "new" CB rules went into effect. These were the rules which were supposed to be with us last November 1, but were delayed becaues of some last minute legal haranguing.

Regular readers of these pages knew *all along* that it was only a matter of time before these same rules would go into effect, so it should come as no shock to anyone who has bothered to keep himself informed. It pained me to see that there was a constant barrage of unfounded rumors (some even in print) as to what revisions *might* be made in these rules between last November 1 and the time the FCC finally put them into effect—from our talks with the FCC, they made no bones about the fact that when the new rules went into effect, they would be pretty much a carbon copy of the way they were first proposed several years ago.

Of course, the major factor in creating the rumors was the plain and simple fact that many of the people on the band don't know the difference between the new rules and the old ones because they don't own a copy of the old ones and haven't taken the trouble to compare them to the new ones. Fact of the matter is, that the new rules, with one or two exceptions, are *nothing more than a more specific restatement of the old rules* intended

to make the whole bit easier to comprehend for the large number of CB'ers who had trouble deciphering the complex linguistics of Part 95 (nee Part 19), if they took the trouble to read them in the first place.

If you are fully aware of the implications and intent of the previous CB rules you should have *no* problems in living with the new rules —so long as you now limit your conversations with *other* licensees to Channels 9 through 14 (plus 23), and abide by the new 5-minutes-on/5-minutes-off rule when talking with *other* licensees. Channels 1 through 8 and 15 through 22 may now be used exclusively for what might be termed "private" communications with your own units, without time limitations, without the constant fear that some character two miles away was going to "break" into an important message and ask you for a weather report. Channel 9 (while not officially noted as such in the new rules) has the FCC's sanction as the "CB Calling and Emergency Channel," to be used by mobiles for summoning help when lost or disabled, and by all stations seeking to establish communications with a second station. It is hoped that Channel 9 will not be used as a regular communications channel so that it can be used to its full advantage as a national standby channel.

While the new rules have their good points, the poor points of the previous rules have, unfortunately, been left in. And poor points abound in almost every section of the rules. In general, the rules reflect a typical symptom of our times—that of a small group deciding what is best for the masses. In this case, the small group is the FCC—who, because of the fact that they conjured up the original idea for the CB service, now feel that they alone are the only ones to decide its direction. The masses, of course, are almost a million citizens who, despite their thousands of requests for FCC revision of poorly conceived points in the rules, have been summarily ignored.

GOOD LUCK, FRIEND

One of CB's (and S9's) good friends, Ivan H. Loucks, Chief of the FCC's Amateur and Citizens Radio Division, made the formal announcement of his retirement from government service a few weeks ago.

Mr. Loucks started his career with Uncle Sam in 1931 as a Radio Inspector with the Radio Division of the Department of Commerce, the original "FCC." He now retires after these many years to take a position within the electronics industry.

Mr. Loucks was one of the men at the Commission who really understood the myriad of complex CB problems. His offices were always open to publications, clubs and even individual CB'ers, for either the venting of anger or for the use of his shoulder upon which to cry. In any event, nobody ever walked away from a conversation with Ivan without having received a direct, candid, accurate and thorough reply.

A nice guy, liked by everyone who had the pleasure of working with him during his many years at the Commission, we are certain that all S9'*ers* join the staff in wishing Mr. Loucks every happiness and success in his new position.

ZIP CODES

A most official looking inter-office memo just went past my desk. This time it's the Post Office insisting that we must include the Zip Code number on the address labels of all subscribers. This number is normally placed on your stencil when it is furnished to us at the time you take out a subscription, however many of you out there didn't bother to let us know your Zip Code when you subscribed.

If you received this issue of S9 through the mail, please look at the bottom of the back cover and see if your Zip Code number is included on the bottom line of your address. If it is, fine and dandy. If it isn't you will be doing yourself a lot of grief if you will either tear off the label and mail it back to us with your correct Zip Code number written on it, or (if you don't want to tear up your issue) just send us your name and address (including Zip) together with the complete serial number copied from the top line of your address label. Doing this will insure that your copies of S9 will be kept coming to you without interruption (you don't want to miss a few issues, do you?) and will probably arrive a few days earlier than usual, to boot.

Please send this information as soon as possible to Hal Weisner, Circulation Director, S9 Magazine, 14 Vanderventer Avenue, Port Washington, N. Y. 11050.

VARI-TUNER

Continued from page 20

tuning slug of the coil on the back of the vari-tuner until you get peak response from the Channel 1 signal.

To check, move to Channel 23 and tune for it with the vari-tuner. You should find the Channel 23 signal somewhere between the 10-per-cent-meshed and 40-per-cent-meshed positions of the capacitor.

If you like, and have access to enough crystals, you can mark the dial directly in channel numbers. Alternatively, you can prepare a chart showing the dial reading for each channel.

The vari-tuner should work with any tube-type transceiver. It's not recommended for transistorized gear.

CB SHOP

Rates for CB SHOP are 10¢ per word for advertising which, in our opinion, is obviously of a non-commercial nature. A charge of 25¢ per word is made to all commercial advertisers or business organizations. A 5% discount is in effect for an advance insertion order for six consecutive months.

We do not bill for advertising in CB SHOP. Full remittance must accompany all orders and orders sent in otherwise will not be run or acknowledged.

Closing date is the 15th of the 2nd month preceding date of publication.

We reserve the right to reject advertising which we feel is not suitable.

Because the advertisers and equipment contained in the CB SHOP have not been investigated, the publishers of S9 cannot vouch for the merchandise or services listed therein.

Crystals mailed prepaid $2.30, QSL Cards, FCC Warning and ID Tags 2 for $1.30, CB Radio Center, Box 12406, San Antonio, Texas 78212.

HEY PUSSY CATS! Want a sneaky way to build up your card swappers collection? We will ship you 25 different cards for only $1. No printers samples or junk, but REAL CB QSL's from all over, some actually signed by the ops. S. Nussbaum, 1440 50th St., Brooklyn, N. Y. 11219.

THIS MONTH'S S9 COVER design now available on your own QSL—in *full* color. Exclusively from F. B. Mathews, 1616 Rural St., Rockford, Ill. 61107. Free samples.

Needed: Operation, calibration and alignment data on Hickok Model 640 oscillograph. Gene Pfeiffer, KBG8157, % e.c.i. electronics communications, 56 Hamilton Ave., White Plains, N. Y.

Creative QSL Cards—25¢ for catalog, samples 50¢ coupon. Personal attention given. Wilkins Printing, Box 787-9, Atascadero, Calif. 93422.

Sell or Swap: Pair of Vocaline JR-425 Class B UHF CB transceivers, one 110VAC/6VDC the other 110VAC/12VDC. Never used, come with mic, instructions, and antennas. Orig. cost $150 for the pair. Will sell the pair for best offer or swap for test gear. Experiment on 465 mc/s CB for a real kick! Gene Pfeiffer, KBG8157, % e.c.i. electronics communications, 56 Hamilton Avenue, White Plains, N. Y.

Johnson-One Watt Walkie-Talkie-Channel 18, leather case. Originally $129.95, now $60.00 plus shipping. Excellent condition. Dave Kulas, 403 East Fifth, Winona, Minnesota.

Log Book for CB'ers. 1965 Call Map printed on inside cover in red and black ink. Latest CB radio 10-code. 1200 entries with 17 inches of space for each call. Plastic ring bound. At your CB dealer or by mail from publisher, $1.00 postpaid. Actual QSL card samples free with each order. Carolina Camera Publishers, P.O. Box 1728-Q, Wilmington, N. C. 28402.

Beautiful Krome-coated QSL's. $9.98 per 1000, $7.98 per 1000 on reorders. Colors, crystallon stock available. Write for Free color brochure. Louden, Flora, Indiana.

QSL Cards—Full Color, Glossy Stock. Free Samples. F. B. Mathews, 1616 Rural Street, Rockford, Illinois 61107.

Almost ½¢ each for QSL's in orders of $1.00 or more (175 for $1.00). Send 25¢ for samples of many different styles. S. Nussbaum, 1440—50th St., Brooklyn, N. Y.

PenVue swapping cards for everyone, especially CB "widows and widowers." Sample 10¢. Pen Vue, Lile Guill, Rustburg, Va. 24588.

You Name The State you want QSL's from. Send your QSL plus other extra QSL's and name a state. We will do our best to serve you. The more QSL's you send the more you receive. Send to Irving, 56 Warren St., Ellenville, N. Y.

Heathkit owners, double reception! SK-3 Preselector fits GW-10, GW-11; SK-4 fits GW-12. $8.99 kit, $11.99 wired. Postpaid. Free kit, antenna list. Holstrom, Box 8640-S, Sacramento, California 95822.

CB QSL cards. From 1¢ each to elaborate, embossed and personalized cards. Decals, card display packets. Catalog, samples 10¢. Sacandaga Press, Broadalbin, New York 12025.

QSL's on beautiful glossy card stock, $2.00 per 100 samples 15¢ refundable. Student Press, Box 42, Bethel, Kansas.

CB transmitters $6.00. Other bargains, catalog 10¢. Vanguard, 190-48 99th Ave., Hollis, N. Y. 11423.

New Magnetic Device—Engineers, inventors, experimenters, hobbyists. Latest theory in basic magnetism. Create new products by experimenting with the Magnetic Ladder Acceleration Solenoid using Direct Current. Plans ($1.00). Jesse Costa, Box 26, Waquoit, Mass. 02570.

CB QSL's samples 5¢ Pearce, 192 Osborne, Danbury, Conn. Calls KKA5858—Northern 2806.

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"Generator Filter" 3-30 bcs. $2.50. Voltage Regulator Filter $2.50. Highest quality. Engineered Products Company, Springboro, Ohio.

Missouri Card Swapper. Send cards to Gary Graham—KLH8576—New London, Missouri.

"Alternator Filters" By original designers and manufacturers. Established 1957. Non-tunable $2.50. Tunable $3.95. Highest quality. Engineered Products Company, Springboro, Ohio.

"Audio-Aid-All" Clipper-Filter kit, $10.99; $14.99 wired. Boosts modulation, aids reception. NJ-7 Noisejector, $4.49. SK-20 Preselector for SWL's, kit, $18.98. Postpaid. Holstrom, Box 8640-S, Sacramento, California 95822.

QSL's. Gorgeous Rainbows! Top Quality! Fast Service! Low Prices! Samples 10¢ (Refundable) Harms, KDI1143, 905 Ferneld, Edgewater, Fla. 32032.

QSL's $1.75/100. New! Different! Samples 5¢. Nu-Print, 322 Page Boulevard, Springfield, Massachusetts.

Free Catalog: Wholesale electronics. Hundreds of items. Why pay more? Royal, Box 2591, El Cajon, California.

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Neat, inexpensive, eyecatching CB QSL cards. Variety of decals. Display Packets. Catalog, samples 10¢. Sacandaga Press, Broadalbin, New York 12025.

"QSL's. Top quality, reasonable price. Samples 20¢. CB Press, Box 281, Oak Park, Illinois 60303."

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QSL'S, CB, WPE Samples 10¢, Nicholas & Son Printery, P.O. Box 11184, Phoenix, Arizona 85017.

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"Looking? Shopping? Trading? Trying to save money? Write Bob Graham for special deals on new and reconditioned used gear. Cash or Budget. Graham Radio, Dept. E, Reading, Mass. 01867, Tel. 944-4000."

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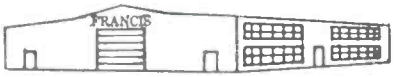

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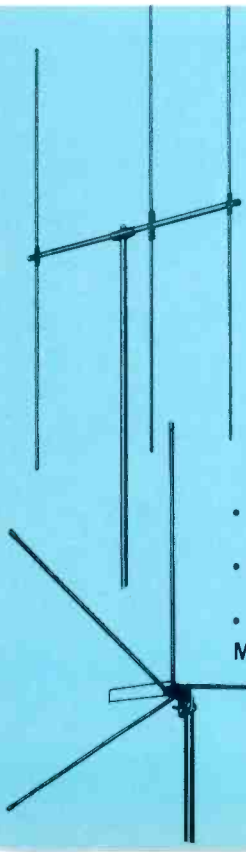

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