

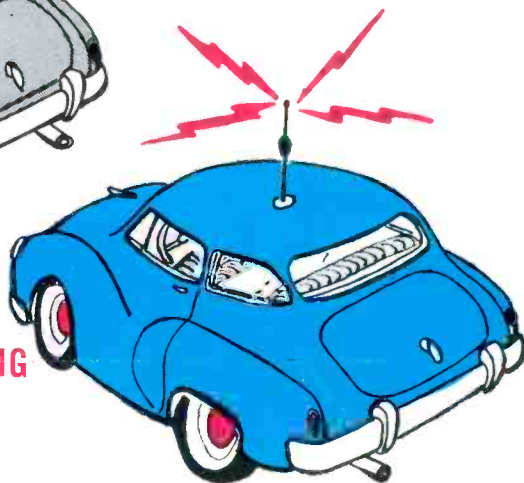
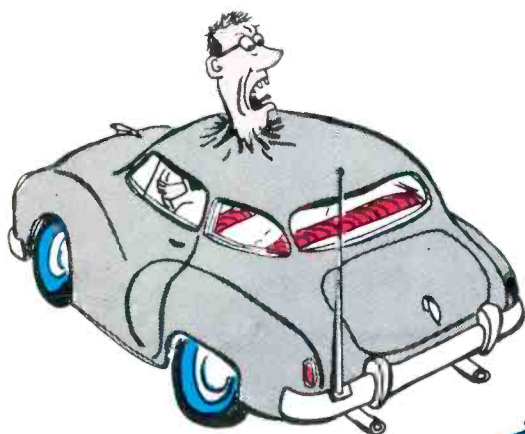
SOUP-UP YOUR RIG-P. 20

OCTOBER 1965

50¢



the citizens band journal



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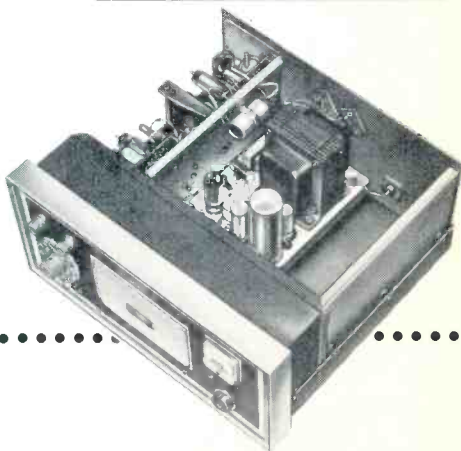
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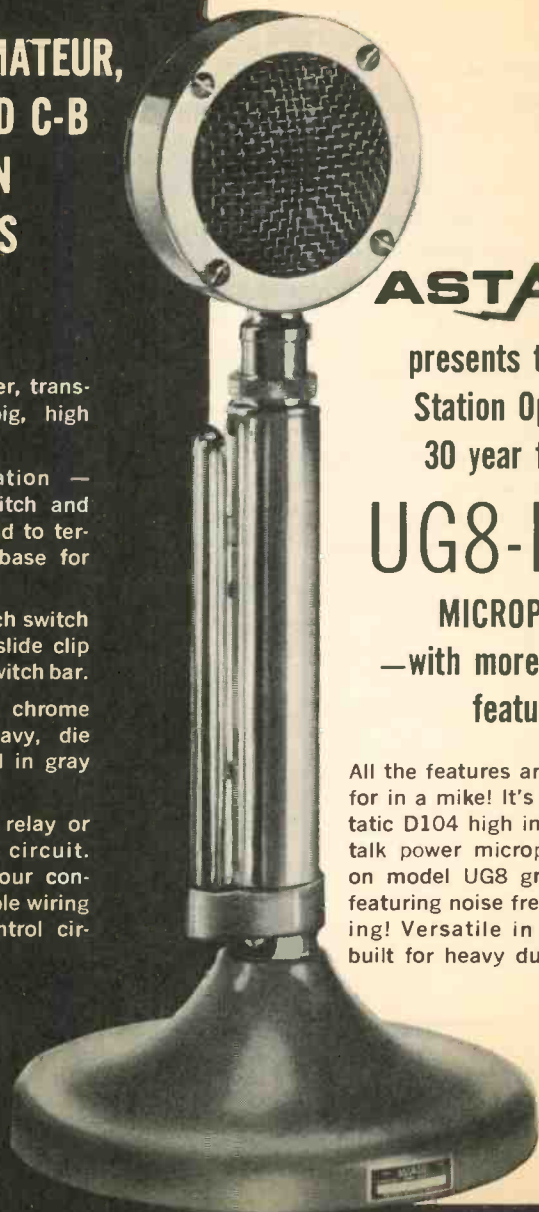


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S9 (title registered U.S. Post Office) is published monthly by Cowan Publishing Corp. Executive, editorial and advertising offices at 14 Vanderventer Avenue Port Washington, L. I., N. Y. 11050 Telephone: (516) PO 7-9080
Subscription Rates: One year \$5.00, two years \$9.00, three years \$13.00 in United States and Possessions, APO, FPO, and Canada.

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READER MAIL

THEY WANT PICTURES

Editor:

When will you have a photo of Susan in the center fold-out, like Playboy?

(unsigned)
Richfield Springs, N. Y.

Tom:

Why not give away photos of yourself? I'm sure all the readers would want one for their QSL cards—they could even be used for money in CB circles.

Barry Schwartz, KMP2718/3
Miami, Fla.

We originally had a center fold-out of Susan planned for this issue, but she complained that the staples tickled. As far as photos of myself, I sold all publishing rights for my photos to MAD—I go under the stage name of Alfred E. Neumann. You may be surprised to learn that my photos do happen to be used for money in most Post Offices, I recall seeing one that said "Wanted—\$50,000." It was signed by the ACBA.

COVER ART

Editor:

That was a pretty good cover on the August issue. I seem to recall seeing it as part of an ad in a European radio directory. Did it take you at least an hour to copy it?

Gary Giannelli, KMA1207
Waterbury, Conn.

As a matter of fact, how would you like a fat lip?

MYSTERY VOICES?

Sirs:

I really and truly have a problem. Radio and TV stations can see me and hear me in the privacy of my room, in fact *any* room I go to where there is a radio or TV set. Specifically, the announcers on radio and the live actors on TV know when I light a cigarette, cross my legs, etc. and they tell me so!

Indeed, several months ago I was actually hav-

ing an argument with David Nelson and Groucho Marx! I don't know how they can see me, but they can.

This may sound like a joke to you, but I'm not kidding. Many electricians have investigated this but can't explain this.

J.D.S.
Albuquerque, N. M.

Groucho and Dave Nelson told me about that argument and I think that you definitely owe them an apology for some of the things you said.

ACDA

Editor:

What do you mean, ACDA #9987 is James B. Kane, Mahanoy City, Pa. (August issue, page 4)? I have an ACDA membership certificate numbered 9987 and my name is on top. I think you had better check your files and see who's who in this so-called club. I don't think that it's right that one number be in two places at the same time.

Bud Wade, 19Q8919
Perry, Ohio

We also think that it's pretty crummy for one number to be in two places at the same time. Oh well, responsible numbers just haven't been easy to come by for the past few years. Bud, please scratch out the #9987 on your certificate and write in #7648—that also holds true for anyone else who has a "thing" against #9987.

ACBA

Dear Tom:

I was shocked by your editorial (July issue, page 7) on the reported ACBA proposal to help the California club to set up a "fink" club to spy on CB'ers. They've pulled some outrageous stunts in their day, but this tops them all. The ACBA, with all their fine and fancy talk about "CB unity," has done more to promote misunderstanding and dissension in CB and any other single thing!

Tommy Kennedy, KEH8092
White Oak, Texas

I think that, by now, most CB'ers have come to agree with you, Tommy. We understand that they are getting very few membership renewals and that new members just "aren't." Their attempt to blackball Lafayette Radio was a fizzle. In an upcoming issue of S9, I feel certain that we'll be able to let you read some more of the angry mail which we periodically receive from one of the ACBA's officers. We are about due for another of his rantings.

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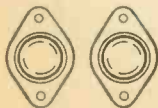


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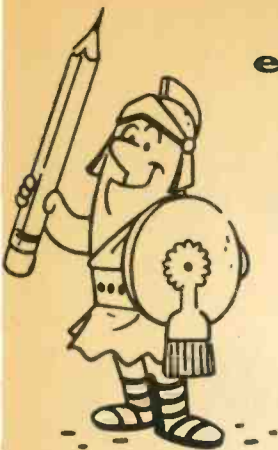
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editorial



KBG4303 rides again!

by TOM KNEITEL
EDITOR, S9

WHOPPING FIASCO

One of the biggest flops to hit CB was called the "First Annual National Jamboree" at El Rey Grotto Park, near Lorain, Ohio.

Dozens of letters poured into our offices to tell us of the wild goings on when 15 sheriff's deputies were rushed in to curb the steaming tempers of about 3,000 CB'ers who were in an ugly mood when jamboree officials didn't come up with an advertised "over \$5,000 in prizes." Prior to the jamboree, the organizers had predicted that 90,000 CB'ers would attend with cash prizes to be given for various achievements.

According to the Cleveland *Plain Dealer* newspaper, the promoter of the jamboree "was reported to have suffered a heart attack and was whisked off the grounds." He was finally traced to his home where his wife said that he was unable to make any statement.

Even though some of the CB'ers had come from as far away as Florida and California, many of the events (including some of the cash prize awards) were abruptly cancelled. Most of the concessions had been closed voluntarily as the irate CB'ers began to drift away from the jamboree grounds.

From the many differing accounts we received of the aftermath of the jamboree, it's difficult to piece together any further details.

Truly an unfortunate situation — the first time we have ever heard of such a thing happening in CB of the many hundreds of jamborees which have provided tens of thousands of CB'ers with entertainment and a chance to win nifty prizes. Let's hope that this one example of unorganized, badly run, greedy CB-manship doesn't blacken the many other wonderful jamborees which have been run in the past and which will be coming up next summer.

I can think of at least 3,000 CB'ers who will think twice before participating in a jamboree, thanks to the folks who ran Lorain Ohio's "First National CB Jamboree" at El Rey Grotto Park. Three thousand fellows who have a reduced faith in their fellow CB'ers.

ADIOS, CLASS C?

Class C CB'ers are radio control enthusiasts who share the 11 meter band in a rather unhappy marriage of convenience with Class D CB'ers. Class C is assigned 6 five watt channels and one 30 watt channel within the confines of the band. The 5 watt channels are located in between Class D Channels 3 and 4, 7 and 8, 11 and 12, 15 and 16, and 19 and 20; the 30 watt channel is our own Channel 23, where we compete with each other—our 5 watts against their 30! How many times have you tried to use Channel 23 only to find it useless because of radio control ("R/C") signals (weird "boop-boop-beep" sounds)?

The radio control people aren't too happy about us either. For years now they have complained that splatter from CB signals has been shooting down their aircraft and sending their model boats to parts unknown. Miniature radio control receivers are (by necessity) very basic in their circuitry—they aren't anything to write home about in the selectivity department and probably hear all CB signals within a channel or two of each side of their R/C channel. They also complained about Part 15 stations using the R/C channels, although nobody has yet taken up S9 on our standing offer to listen sympathetically to any specific proven complaint regarding a particular Part 15 CB'er jamming an R/C device.

Anyway, the Academy of Model Aeronautics has asked the FCC to replace the 27 mc/s channels with five new 1 watt frequencies between 72 and 75 mc/s. This we like.

Should the FCC go along with the AMA's proposal (and we think that they will) it will return Channel 23 to a useful status as an inter-station channel. It will also produce 5 "vacant" channels within the confines of the Class D band, which, it is hoped, would then be turned over to Class D CB'ers to expand our number of channels.

This would be a good time for the FCC to finally come up with some rule making which would be in the best interests of many thousands

Continued on page 70

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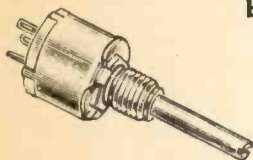
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Let's Meet The Resistor!

by GILBERT OSMOND, 1W3324



FREQUENTLY MISUNDERSTOOD, OFTEN TAKEN FOR GRANTED—THESE BITS OF CARBON AND WIRE ARE AN INTEGRAL PART OF YOUR CB COMMUNICATIONS

A very important phase of communications engineering is the selection of the best resistors and capacitors for the task at hand.

Resistors, as their name implies, are always used in electrical circuitry to resist current flow, and, therefore, in performing this function a certain amount of power is consumed, with a proportionate quantity of heat being liberated. The power generated in a circuit in which a resistor is used may be expressed in watts by the use of any one of the three following familiar expressions derived from Ohm's Law:

- a) $P = EI$
- b) $P = E^2/R$
- c) $P = I^2R$

where:

E = Impressed EMF across the resistor, in volts

I = Current through the resistor, in amperes

R = Resistance, in ohms

In nature, all substances will resist current flow to some degree and, therefore, could be termed resistors. However, since their absolute resistance values often change with increasing time, as a steady current is impressed, most are unsuited for the precise requirements of electronics. In addition, the realization of large magnitudes of resistance cannot be practically achieved in small "packages" for the majority of substances. Hence the ideal resistor for radio work is small in size and free from random resistance changes with time, provided, of course, that the various ratings are not exceeded.

It becomes the responsibility of the designer to select resistors, using the above equations, which are not operated at more than the recommended wattage ratings specified by the manu-

facturers. To exceed the rated wattage is an open invitation to trouble, since excessive heat causes the resistive material to burn up or to suffer a large permanent change in specified resistance.

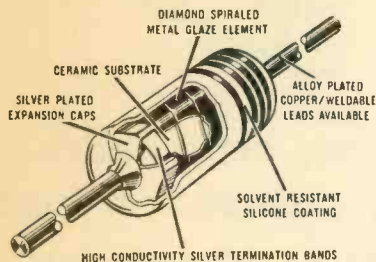
Most equipment designers incorporate a safety factor into their wattage requirements, the margin of safety being governed in large quantity production lots by the conflicting requirements of low cost and reliability. Fortunately, good commercial equipment design usually leaves plenty to spare, and there is little reason why it should do otherwise.

To aid in the selection of resistors, the discussion will be broken into two broad classes, namely composition (including carbon) and wire-wound varieties. Composition resistors are now available having power ratings up to 5 watts while greater wattages dictate the use of wire-wound resistors.

COMPOSITION RESISTORS

Fixed—Fixed composition resistors are among the most familiar items in all electronic equipment. In the past we have seen ingenious engineering and manufacturing techniques evolve new types vastly superior to the bulky troublesome carbon resistors of thirty-five years ago. The changes have been so great that comparisons between old and new are difficult to make. Size has materially decreased, while wattage capabilities and reliability have been tremendously improved. Among the varieties are molded resistors made from composition materials completely surrounded by attractive insulation. These resistors are produced in all standard Radio Manufacturing Association (RMA) values from several ohms to 22 megohms. Three dif-

ferent wattages are readily available, namely $\frac{1}{2}$, 1, and 2, and each is considerably smaller than "older" resistors similarly rated. Many manufacturers of resistors elaborate rather completely on the published ratings by stating that, at the maximum wattage rating, a resistor operating at an ambient temperature of 70° Centigrade for 1,000 hours will not change resistance by more than 5%. The ambient temperature is the free air temperature surrounding the resistor. If it is placed where air circulation is restricted and the ambient exceeds 70° C, the resistor should be underrated for safety, the exact factor being governed by the aforementioned considerations of economy and reliability. For general work, it is well to use resistors rated at about twice the computed wattage, since the added cost is negligible.



Some composition resistors are larger than others, depending upon the manufacturer. Extra size, which may complicate wiring and chassis layout especially in circuits using miniature tubes, is not advantageous, provided that the smaller unit is rated equally in wattage compared to the larger resistor under similar test conditions.

Several additional and important considerations enter the resistor picture other than wattage and size. These may appear unimportant to the occasional user of resistors, but extensive circuit work quickly brings to light the shortcomings of certain varieties. Leads, for example, should be sturdy enough to resist the abuse generally received; a 5 pound pull must be sustained without damage by resistors designed to meet Joint Army-Navy (JAN) Specifications. Further, leads should be hot-solder coated in manufacture so they readily take solder in wiring operations.¹

The actual resistance value itself is a most important factor, to say the least, since any circuit must necessarily use the nearest standard value to that computed in the design process, except in the case of extremely precise circuit applications. However, most circuits are non-critical to the extent that a departure from a computed value of say, 21,500 ohms to the nearest standard value of 22,000 ohms (abbreviated 22K under the present system of conventional symbols and 22M under a generally discarded obsolete and 22M will do little to change performance. Since it is not unusual to find the bargain counter variety of resistors marked 22K (or any value for that matter) to be off from the specified value by as

much as 30% or $\pm 6.6K$ in this case, considerable trouble might conceivably arise, especially with voltage dividers. Thus, resistance tolerance also enters the picture along with all the other ratings. Most good resistors are available on the market with a $\pm 10\%$ tolerance guaranteed, 5% being supplied at extra cost. Plate, cathode bias, and grid resistors, other than bias voltage dividers, normally are ordered in the 10% or 20% tolerance by most equipment designers; the 5% varieties finding greater use in critical circuits. When precision resistors are required, the circuit is generally so labeled.

Resistors are also rated by their manufacturers for maximum safe impressed voltage. Overrating resistors in voltage, even while operating below maximum power ratings, may quickly result in a burnout due to internal arcing with accompanying changes in resistance values. 350 volts is just about the maximum voltage to which a $\frac{1}{2}$ -watt resistor should be subjected, while 500 and 1,000 volts are the limits for 1 and 2 watters respectively. These figures are for certain specific resistors. Other varieties vary from these figures to some degree.

BLACK -0	BLACK -0	BLACK -	TOLERANCE
BROWN -1	BROWN -1	BROWN -0	GOLD $\pm 5\%$
RED -2	RED -2	RED -00	SILVER $\pm 10\%$
ORANGE -3	ORANGE -3	ORANGE-000	NO BAND $\pm 20\%$
YELLOW -4	YELLOW -4	YELLOW-0000	
GREEN -5	GREEN -5	GREEN -00000	
BLUE -6	BLUE -6	BLUE -000000	
VIOLET -7	VIOLET -7	GOLD -MULTIPLY BY 0.1	
GRAY -8	GRAY -8	SILVER -MULTIPLY BY 0.01	
WHITE -9	WHITE -9		



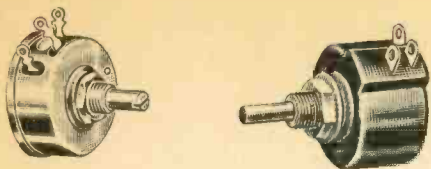
Since resistors, especially $\frac{1}{2}$ -watt varieties, are exceedingly small in size, it becomes difficult to mark the resistance value clearly on the surface in such a manner that permanence is assured. The Radio Manufacturers Association (RMA) has specified a system of color coding of resistors (and capacitors, incidentally) by means of three or four colored bands painted around the units. Reading from the painted band close to the end inwards, it is an easy matter to identify the resistance value. The 22K resistor mentioned earlier will be coded red-red-orange, corresponding to 2 (red) 2 (red) with 3 (orange) zeros as a multiplier. A fourth band designates the tolerance of the particular unit, while the use of tan as a body color indicates that an insulated case is used. A 15-ohm resistor will be coded brown-green-black, the black indicating an absence of any zeros following the 1 (brown) 5 (green). The leading brands of resistors use the RMA color code and also mark the resistance values and the wattage on the body as an added convenience to the user. Color blind persons find this feature of great assistance.

Having discussed fixed composition resistors, we will turn to variable composition resistors, better known as "pots" or potentiometers, to look into some of their salient features.

Variable—Early variable resistors were often wire wound, not because of power considerations but rather because the know-how concerning the manufacture of good small carbon and composi-

¹ To facilitate solder flow and speed up construction, scrape leads lightly before wiring.

WIRE WOUND RESISTORS



tion "pots" was lacking. Fortunately, this deficiency has been corrected with the advent of new fabricating techniques, and pots are now less troublesome than ever before.

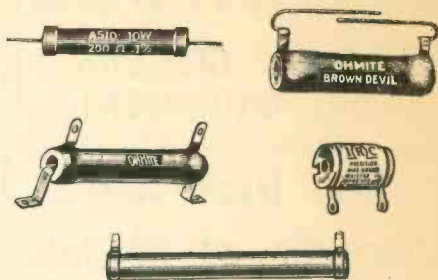
Basically a pot consists of some resistive substance mounted in a circular fashion, having a sliding tap moving over the resistance itself. Newer versions use a single composition material to serve as both base and resistance element itself, while others use a separate insulating base with an applied coating of resistive material (usually carbon in an adhesive binder) deposited on top. The composition pot is usually capable of greater heat dissipation than that realized with the two-element type (of similar dimensions, of course) since heat developed is rapidly carried away in the one-piece pot.

A rather thick resistance element should be used when one considers that a pot may experience many thousand cycles during its life (a cycle being a complete rotation of the shaft in one direction and back again) and that the slider will thus wear down the element somewhat. Relaxing the slider pressure on the element is one cure for wear which can be realized at the expense of the good contact so necessary for noise-free electrical performance. Since most pot manufacturers support the shaft and the attached slider by but one bearing, a good contact is not always present. A step forward is a recently announced pot having the shaft supported at two points, thus helping to keep the slider pressure constant.

A few points of additional interest concerning pots are worthy of mention. Not all pots change resistance in direct proportion to angular shaft rotation. Some experience great resistance changes during the first few degrees of rotation and taper off gradually thereafter and vice versa. This feature is purposely included to accommodate circuits requiring a non-linear voltage change to secure a desired over-all response. The "taper" of any pot is graphically illustrated in data sheets published by the manufacturers, and many versions are available. For general work, it seems advisable to recommend the use of the easily obtained "linear" taper offering resistance change directly proportional to angular shaft movement. For audio work however a control with an "audio taper" must be used to allow smooth volume control.

The usual resistor ratings specifying maximum power and voltage hold for pots as well, and, in addition, one may order a pot in several tolerance values, the most readily available usually being 20%. Color coding is not used for pots, since the actual resistance value is usually marked on the case. Unfortunately, some pots are unmarked in resistance values as some manufacturers use a private code number.

Fixed—When it is necessary to use a single resistor in a circuit where the power will exceed two or more watts, general practice dictates the use of a wire wound resistor. The main reason for this stems from the inability of carbon and composition resistors to radiate satisfactorily large quantities of excess heat. A resistor made using a winding of sufficiently large gauge high resistance wire can be fashioned to spread the coil over a large volume, thus improving cooling considerably.



Fixed

Since wire wound resistors are generally sealed into protective ceramic or other insulation after winding, few are acquainted with their actual "innards." Several points are of interest, the final being that most wire-wound resistors are *inductive* since the winding is in reality a small coil. At higher frequencies the inductance of ordinary wire-wound resistors can become objectionable when they are used in RF circuits. For such applications it is advisable to use one of the several varieties of *non-inductive* wire-wound resistors. "Non-inductive" means that a good part of the inductance has been canceled out by the use of a criss-cross winding process. It should be mentioned that carbon and composition resistors have a negligible amount of inductance, even less than the special non-inductive wire-wound versions.

Small wirewound resistors in the 5 and 10-watt classes, especially those having resistances exceeding 10K, often are extremely close-wound with wire having a diameter of 1 or 2 mils (1 mil = .001 inch). Great pains are taken by the various manufacturers to prevent shorting between these very closely spaced turns. Further pains are taken to prevent moisture from attacking the wire itself, thus opening the door to the not unfamiliar annoyance of an "open" resistor. Long performance life is most important for wire-wound resistors, since they are often used in protective high voltage bleeder applications where an open circuit can mean instant death.

When selecting wire-wound resistors, especially those having large resistances, it pays to play safe by selecting wattages at least twice those computed. Such precaution insures that larger wire than necessary will be present.

Note that some brands may conveniently be mounted with their insulated bodies resting directly upon grounded metal and that others require mounting above the chassis using brackets

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which are generally supplied. A variety of terminal arrangements and body shapes are available on the market so that the experimenter may obtain almost any desired mounting. Remember that regardless of brand, all wire-wound resistors need cooling air. Locate them not in tight corners of a chassis but out in a clear space where adequate air circulation is present.

Variable—Wire-wound resistors may be purchased in two variable forms. The first type is a modified fixed wire-wound resistor having an added sliding contact touching a section of exposed resistance element, thus allowing the selection of any part of the total over-all resistance. Slider versions are rather useful in circuitry requiring infrequent adjustments since the slider itself, when frequently moved over the small diameter wire, tends to wear out the resistance element. This, coupled with the aforementioned disadvantage of having the resistance wire exposed in part to air and moisture, tends to identify slider-type wire-wound resistors as slightly less reliable from a life standpoint. Sometimes the resistor is so wired into a circuit to place the slider itself at some voltage potential with respect to ground, thereby introducing a shock hazard to anyone attempting an adjustment with power on. Taking these factors into consideration, the designer must also use the same precautions concerning wire size and cooling as apply to fixed wire-wound resistors. When adjusting the slider on a variable resistor great care should be exercised to avoid damaging the winding. The slider should be fully loosened before each move.



Adjustable

The wire-wound rheostats and potentiometers constituting the second form of variable wire resistors are used when large wattages, usually more than 2 watts, are being dissipated. Designed for use in circuits frequently needing adjustments, they are ideally suited for all but certain applications where the jump in resistance as the slider passes from turn to turn proves to be a source of electrical noise. Note that the change in over-all resistance of a wire-wound pot is not a steady unbroken variation (as found in carbon and composition pot) but is rather a series of jumps, the number depending on the number of turns used.

Thus we have discussed the most frequently used types of resistors from their most salient features; other facts necessarily enter into the picture, but space limitations prevent a more elaborate discussion. It should be mentioned, too, that resistors of many different characteristics have not been covered in this article mainly because these special versions have limited application in the CB field. In general it is safe to state that the same considerations governing the choice of either composition or wire resistors can be applied to special resistances, since the three wattage equations mentioned previously are the governing laws of resistor design.

S9

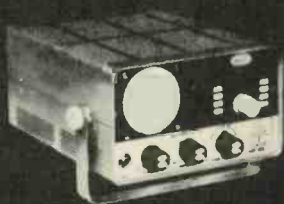
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THE "BUZZ BOMB"

WORLD'S SMALLEST CB TRANSMITTER?

by ROD HUDSON, 11Q5362

This may or may not be the world's smallest CB transmitter, but I defy anyone to turn up with a smaller unit which sends out a signal on 11 meters! This unit is so small that it can be constructed on the side of the battery which supplies its power — it doesn't really serve any practical purpose since it does no more than send out a series of rapid buzzing noises. The range depends upon the receiver used, but we have been successful in hearing it over a 100 foot range — it may do even better. Best of all, you can leave it running continually because it draws so little current from the battery that the battery will power it as long as its own shelf life.

If it has no practical purpose, then why bother to build it? For one thing, it's a good beginner's project; can be whipped together in a jiffy. It is certainly a conversation piece, because in addition to being a CB transmitter, it also flashes an orange-red beacon light of its own.

CONSTRUCTION

A chassis isn't really needed, there are so few parts that you can just wire them to each other. For the sake of miniaturization, I have given a suggested list of relatively small parts, but any components of the same values will work in the circuit.

CERTIFICATE OF COMPLIANCE WITH FEDERAL COMMUNICATIONS COMMISSION REGULATIONS, PART 15, PAR. 205

S9 Magazine certifies that this low power transmitting device can be expected to comply with the requirements of Paragraph 15.205 of the FCC regulations under the following conditions: (A) When this device is assembled according to the diagrams and instructions published by this magazine, using components of the exact specifications described. (B) When in use for the purpose and in the manner indicated in the instructions. (C) When operated on a frequency between 26.97 mc/s and 27.27 mc/s and using an antenna limited to a single element not more than 5 feet long.

Thomas S. Knatel

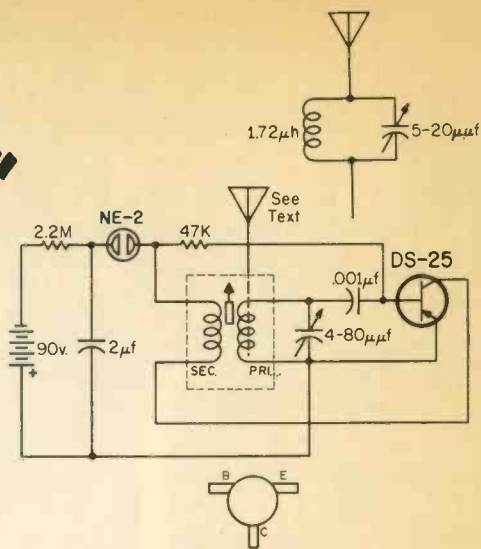
S9 Magazine, Port Washington, N. Y. Dated: Sept. 1, 1965

I hereby certify that I have assembled and adjusted this device in strict accordance with the above.

Owner's signature.

Date:

The finishing touch! To comply with FCC regulations it will be necessary for you to sign this tag, cut it from the magazine, and paste it.



PARTS LIST

- 2 mfd 200V capacitor (Aerovox P-8292-ZN)
- .001 mfd capacitor (Lafayette 33-G-6902)
- 4-80 mmfd trimmer (Lafayette 34-G-6380)
- 5-20 mmfd trimmer (optional)
- 2.2 Megohm resistor, 1/2 watt
- 47K resistor, 1/2 watt
- Delco DS-25 transistor
- NE-2 neon glow bulb
- Miller D-5495-C coil assembly
- 1.72 uh choke (optional)
- 90 volt battery (RCA VS-219)

The antenna is a five foot length of insulated bell wire, connected to the unit by wrapping it several turns around the primary of the coil. You won't have to wind the coils by the way, they are a preassembled unit manufactured by J. W. Miller Co. (Miller parts are standard components and can be purchased through most radio suppliers).

When the construction of the unit is completed and the bulb is blinking for you, tune your CB rig to Channel 10 — or if you have a tunable receiver, to a vacant spot between Channels 9 and 10. Begin adjusting both the slug in the coil and the variable capacitor until the signal shifts into the tuning range of your receiver and you can hear it. A little further adjustment and you should be able to peak it to a higher signal strength than when you first begin to hear it.

If you find that the signal is too wide, it may be narrowed by placing a resonant circuit in the antenna and peaking it for maximum signal strength at the desired frequency. A suggested circuit is shown in the supplementary diagram.

An FCC Part 15 Certification form must be attached to the transmitter. The coupon shown with this article may be used.



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A question of card swapping

by HARRY NECHETSKY

It seems to me that there is a lot of difficulty in getting an appreciable return of QSL cards by the great majority of card swappers. S9 has remedied this to a great deal by charging a 10¢ fee for each month's listing. Of course, this is not an ultimate solution. Anyone with enough arrogance to send in dozens of QSL's will have enough to send in 10¢, too if he wants to. But this has only eliminated the riff-raff. What about those guys that just want to get QSL's without sending any in reply? They are the ones that take the fun out of card swapping. I'll wager that better than half of them work stations on skip. It's a characteristic of the species. So how to eliminate them? After quite some card swapping, I can advocate these methods.

First, and most important, ALWAYS REPLY PROMPTLY TO ALL CARDS! I can't stress this enough. To get a bad reputation is two times as easy as to get a good one. People forget quite a few cards that are sent, but take my word for it, they will remember it for a long while if they do not get a particularly cherished card. I always do. Here, it is best to mark all the peoples' names that cards were sent to. When their card arrives, mark their names so that you will know that they are true swappers. Do likewise with the non-swappers.

Second, if you can get some cards to other buddies and let them send them to some of their friends, you will get a good return because if they weren't swappers, they wouldn't be friends in the first place. Always do so for any people who send you their cards. When you get some PSE QSL's in, send the other cards along. Any person who sends you his card will be very likely to reply to the others for the simple reason that he is a swapper to be sending you his QSL. Simple logic. After a while, you will get fairly well known. To be so is a distinction very few non-swappers have.

Third, try to have a decent card, not some hand made or 1¢ each card. Some hand made cards

are quite good, of course, but they are often the exception rather than the rule. My reputation has helped me a good deal, and to quote from one QSL from Midland, Michigan, "Seen your card at a friend's house. Sure would like to have one." It gladdens one's heart to know that your hard-earned money in QSL's is being appreciated.

Fourth, try to send your cards to as many clubs as you can. They are notoriously good in their response. So far, I have gotten 100% return from them. Some were quite attractive, too.

Fifth, women are very good in their replies. It seems that there aren't as many spoilsports in the females. They show a good degree of seriousness in anything they go into. I get from 88 to 95% return from women as opposed to 70% in men. These figures are relative, and not precise, but very close to the actual figures.

Sixth, if at all possible, send two cards to different persons in the same category. If you are going into prefix awards, send two cards to, say, two different KKK's. You aren't likely to come up with two duds in a row. Sometimes this isn't possible, as in the cases in many of the exotic cards.

Seventh, if you are a tried and true swapper, you doubtless have many addresses of really good swappers. Use them. If you have a pen pal from your swapping, ask him for some sources of good QSL's. Be sure to send him some of the names, etc. of the ones you know. It always pays never to wait to exchange a courtesy. He may get disgusted with the whole thing. Treat him as you would expect him to treat you. Use this axiom and you'll never go wrong.

In these paragraphs, I have attempted to summarize the tricks of the trade in the world of cardswapping. It always pays to be a regular guy and never condone any "square group" because they may be doing a better job than you. Set an example by your ways. Show the majority how to act, and never expect any payment, it will come in time.

S9

***se·lec·tive** (sĭ lĕk'tĭv) *adj.*

having the function or power of selecting; making selection characterized by selection. 1. *Radio.* having good selectivity of being heard. 2. *Electronics.* like, by virtue of being selective.



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USL T 1050 A \$119⁹⁵

23-Ch. tunable receiver with illuminated dial. 6-Ch. crystal-controlled transmit & receive. Illuminated S & RF meter. Crystal spotting. Earphone jack. Nuvisor low noise RF front end. 6V or 12V power supply available (optional extra). Unit comes complete with: microphone, AC cord, 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.



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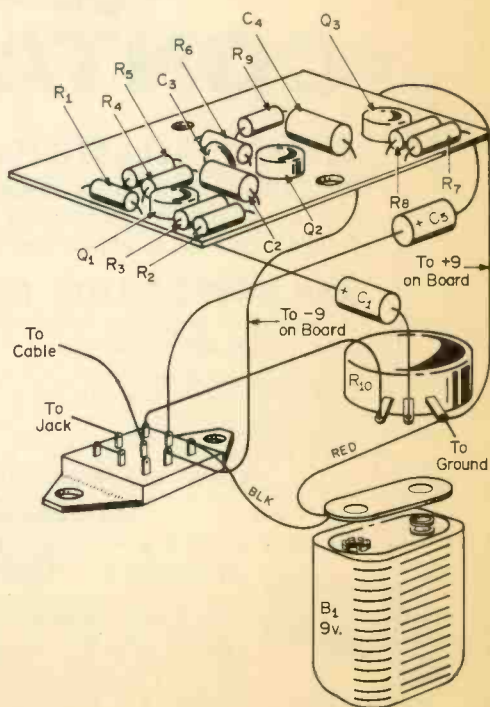
by JIM KYLE, KEG3382

Tired of getting drowned out by somebody else on the channel? About ready to get desperate and risk losing your license by adding a high-power amplifier to your station, regardless of the rules?

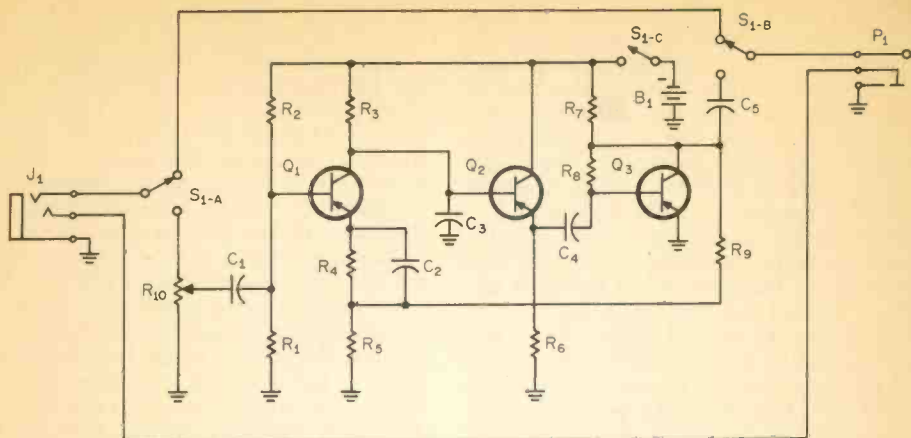
Well, don't. You don't have to. You can make your signal some 100 times bigger—the same as going to a 500-watt transmitter—while staying completely legal, simply by adding TalkPOW'r between the mike and the transceiver. And then the only stations that stand a chance of drowning you out are those which *also* have TalkPOW'r installed.

What is this little gadget? Speaking technically, it's a combined preamp-compressor-clipper that boosts your audio power by as much as 40 db, yet won't let you overmodulate. It's completely self-contained in a standard 2 1/4 x 2 1/4 x 4-inch Minibox, and runs off a standard 9-volt transistor-radio battery (also in the box) so you can use it either mobile or base without change. You should be able to build it in a couple of evenings and have some change left from a \$10 bill.

TalkPOW'r uses three inexpensive transistors, in an ingenious feedback circuit which makes it unnecessary to select the transistors especially for low noise. The feedback circuit, together with the particular parts values, limits output so that overmodulation is normally impossible. However, to comply with the letter of the law it's best to have modulation percentage measured by a licensed technician after installing TalkPOW'r; if your rig happens to be one of the unusual ones which *can* be overmodulated by TalkPOW'r, the technician can adjust the rig so that overmodulation won't be possible, and you can then use TalkPOW'r with no fear of getting a citation.



While you can build this gadget on a 2 x 3 inch piece of perforated phenolic, construction is much faster and simpler if you use the printed-circuit board developed for it by Electronics Consulting Associates, 1236 N.E. 44, Oklahoma City, Okla., zip 73111. Arrangements have been made with ECA to provide the board to readers for \$2 each; the boards are labelled with part numbers which



correspond to the diagram and parts list given here, and are drilled for all mounting holes and component leads. In addition, if you like the idea of having TalkPOW'r on your rig but dislike building things, the entire device can be purchased ready to run (including even the battery) from Bob's Electronics, 1139 N. May Avenue, Oklahoma City, for \$17.95. The board will be sent post-paid; the complete unit is F.O.B. Oklahoma City.

Most of us, though, will probably build our own. Here's how.

The starting point is, of course, to gather all materials. Next, drill an cut the holes for the slide switch, the volume control, the mike jack, and the output cord, as shown in the drawings and photos. The control, jack, and cord require $\frac{3}{16}$ inch diameter holes. The hole for the slide switch will probably be $\frac{1}{4}$ inch wide by $\frac{1}{2}$ inch long, but this may vary depending on the particular make of switch you get. Measure your switch to be sure.

Cutting the square-edged hole for the switch is best done by drilling several small holes inside the area to be taken out, then filing to size with model-maker's miniature files. These tiny files can be found in most hardware stores in sets of 6 for \$1, in the racks of inexpensive imported tools.

With all holes cut and de-burred, mount the switch, control, and jack, and put the rubber grommet in the output-cable hole. Connect a wire from the ground terminal of the jack to the ground terminal of the control. Strip one end of the output cable and connect the shield and the black wire of the cable both to the ground terminal of the control.

Connect the "ring" contact of the jack (or, if you use a different type of mike connector, the contact which comes from the "hot" side

- ### PARTS LIST
- B₁ 9 volt transistor-radio battery
 - C₁, C₅ 50 mf 15-volt miniature electrolytic capacitor
 - C₂, C₄ 6 mf 15-volt miniature electrolytic capacitor
 - C₃ 390 mmf mica or ceramic fixed capacitor
 - J₁ 3-contact phone jack
 - P₁ 3-contact phone plug
 - Q₁, Q₂, Q₃ 2N404 or GE-2 transistors
 - R₁ 47,000-ohm $\frac{1}{2}$ watt resistor
 - R₂, R₉ 100,000-ohm, $\frac{1}{2}$ watt resistors
 - R₃, R₄, R₇ 3300-ohm, $\frac{1}{2}$ watt resistors
 - R₅ 1000-ohm, $\frac{1}{2}$ watt resistor
 - R₆ 33,000-ohm, $\frac{1}{2}$ watt resistor
 - R₈ 220,000-ohm, $\frac{1}{2}$ watt resistor
 - R₁₀ 500,000-ohm, audio-taper volume control
 - S₁ 3PDT slide switch
 - Misc. $2\frac{1}{4}$ " x $2\frac{1}{4}$ " x 4" chassis box (Bud CU-3003-A or equiv.), wire, hardware, etc.

of the mike) to one center terminal on the switch, and the red wire of the cable to the adjoining center terminal. Connect a 4 inch length of black stranded wire to the third center terminal.

Connect the "tip" (or switching) contact of the jack direct to the white wire of the output cable, and short together the outside terminals of the switch as shown in the switch-wiring diagram, so that with the switch in "OUT" position the hot mike lead bypasses everything in TalkPOW'r and is routed directly to the output cable. Wire the other outside terminal of the input section of the switch to the top terminal of the gain control.

Connect the black wire of the battery clip to the third "IN" terminal of the switch, as shown, and the red wire of the battery clip to the ground terminal of the gain control. This completes the preliminary wiring and it's time to move to the board.

If you're using the ECA circuit board, bend the leads on the resistors very close to the resistor bodies and insert the resistors where marked on the board. The resistors and all other components go on the side of the board which does not have the copper foil on it, with the leads passing through the board. Push the resistor bodies down flush on the board, and spread the leads slightly so that they don't fall back through. Then insert C₂, C₃, and C₄ in the same manner, making sure that you have the Plus end at the right end on both C₂ and C₄. Solder all leads where they pass through the foil strips, using a hot, small iron, and soldering rapidly so that the foil won't have time to come loose from the board. Clip off excess lead length.

Now come back with the three transistors, and insert their leads into the board the same way. (We left them out the first time to protect them from heat as much as possible.) Again, solder rapidly, and clip off excess leads.

If you're using perforated board, thread the leads of all components through the perforations as shown in the sketch, and insulate the leads with short lengths of cambric tubing ("Spaghetti") to prevent short circuits. Then solder, and clip off excess leads.

With the perforated board, drill two $\frac{3}{32}$

inch holes as indicated on the sketch, for mounting. The ECA board is pre-drilled.

Attach the two 1 inch mounting posts to the front panel with $\frac{3}{32}$ by $\frac{1}{4}$ inch machine screws, leaving them loose temporarily to help in lining up the board holes. Place the board on the posts, and secure it with two more screws. Tighten down all four screws.

Now fit C₁ and C₅ in place. C₁ runs from the center terminal of the gain control to the marked connecting point on the board, with the Plus end connecting to the control. C₅ runs from the board to the slide switch (see switch wiring diagram) with the Plus end going to the switch. When both are in place, check to see if tubing is needed over either lead of either capacitor. Then solder them into place, working rapidly to minimize heating of the board.

Run a red wire from the "+9" terminal of the board to the ground terminal of the control, and connect the black wire from the switch to the "-9" terminal of the board. The "S" terminals and "C" terminals on the ECA board are not used.

Attach a plug to fit your transceiver to the free end of the output cable, and a plug to fit the input jack to your mike. Put a 9 volt battery into the clip, fit the battery down beside the board and over the output-cable grommet, replace the lid on the Minibox, and you're in business.

In your initial test, set the slide switch to "OUT" and the loudness control about half-way open. With the switch at "OUT," Talk-POW'r is disconnected from the line and is turned off. Transceiver operation should be normal; if it's not, you've made some mistake in wiring the mike or transceiver plugs, and this should be corrected before going on.

If all is well, though, flip the switch to "IN." You should get a report of increased readability, though S-meter readings won't change at all. If you have an output-power indicator, you should be able to see a noticeable upward flicker of outgoing power as you talk.

With the loudness control all the way down, you won't have any audio at all when Talk-POW'r is in; with the control all the way up, the purring of a cat in the next room may go out over the air like the roar of a hungry lion! Proper setting will have to be determined by tests on the air; it won't take you long to find the setting you like best. Then all you need to do is switch it IN and OUT.

And even if you forget and leave it "IN" all the time, the battery should still last for many months. Total drain of the circuit is only a few milliamps.

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- Cathode-ray modulation indicator
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- Second overtone crystals for maximum efficiency
- 5 tubes plus 3 silicon diodes

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- Dual conversion IF
- Automatic Volume Control for fast-acting, positive control
- New! Local-distance switch with exclusive audio-compressor position to prevent overload from nearby stations.
- Series-gated noise limiter
- Squelch opens at 1-microvolt signal
- 5 fixed "receive" channels with band-spread tuning and overall 23-channel continuous tuning

POWER-SWR METER

- Measures RF power output into dummy load (52 ohm)
- Measures SWR
- Meter does not consume power and may be left permanently connected

unmatched beauty . . . brilliant performance

The exclusive 23 channel Satelite Base Station has the distinctive appearance that sets it apart from all others. Demco quality engineering assures you unequalled performance features.

The only true complete base station available to CB'ers today, the Satelite is the result of specialization by the country's leading electronic experts in the CB field. Transmitter has 23 channel crystal controlled switching. Receiver has five fixed "receive" channels with 23 channel variable tuning.

(Its matching Satelite Power Modulator, a compression audio amplifier, doubles effective "talk power" of your signal without increasing wattage output.)

Ask your Demco dealer to show you the Satelite Base Station now! And while you're there, ask about the Travelier Transceiver and other fine CB equipment by Demco. Or, mail in the coupon for further information.

Demco Electronics, Inc. / Bristol, Indiana

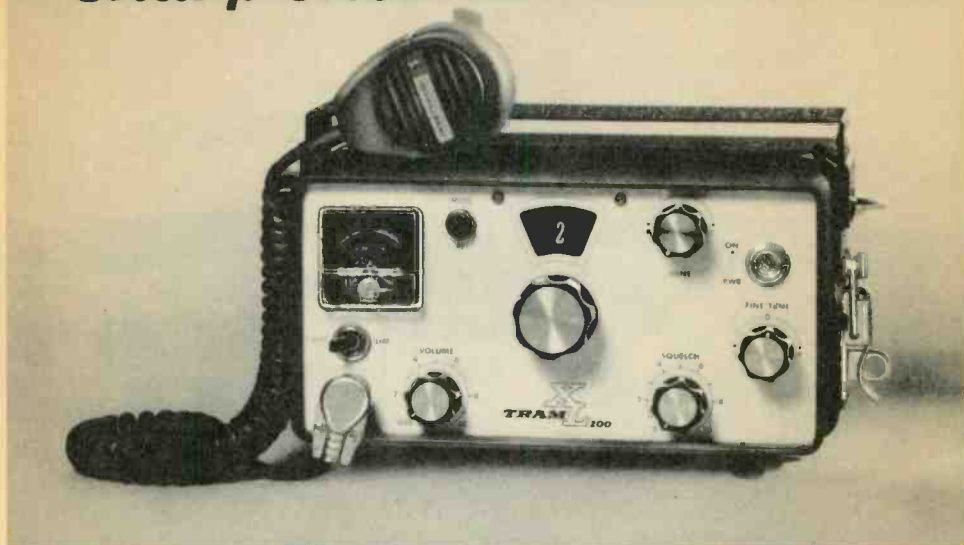
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CB CHILLERAMA

by MARY M. HEROD, KKA (NUTTIN) 529



It was positively the hottest night of the summer, and nothing looked more inviting than the new dairy bar drive-in now deserted because of the late hour. Closing time was near.

I had just about decided what sounded best, when a big black car drove in and parked on the further end of the parking lot. It was a sinister-looking sedan, or maybe it just hit me that way because the Dragnet theme was loudly emanating from a PA speaker set up in the center of the stand.

The young man next to the driver got out dressed in a bluish uniform similar to the type used in local jails. That was a sobering thought in the wee hours of the morning.

The music came to an abrupt halt, as my door closed. I had just opened my pocketbook to get some money out, when a voice, as deep and gruff as I had ever heard, came over the PA system with, "Count your change."

It was quite evident they had either just cashed up and late customers would have to have the exact change, or Candid Camera was in town.

Before I could dig out 15¢ the voice belted, "Break." My knees buckled, my legs wobbled, my heart pounded and a cold sweat broke out all over me. Like a shot, I was back in the car pausing only to lock the doors.

As soon as it was safe to bat an eyelash, I cased the joint. The other fellow was back in the car and all was quiet.

My only thought, now, was getting out of there in one piece and alive. Nervously my hand reached for the key in the ignition and froze, when the voice said, "How's that for a nice clean break? When Two Whip Butinsky wants a break, he breaks. What do you think about that?"

Not wanting to be unfriendly at this point, I answered meekly, "Verrrry good." Two Whip Butinsky! This is it—he's a jail-breaker for sure.

"Don't tell me you don't remember me, Baby? This is XYZ coicle, coicle, coicle, coicle—come back."

"Sure," I said, "It all comes to me now, the time we were jailmates, I mean playmates."

"That's me," he said, "but this is a business deal, get me?" "Of course, sure, anything," I muttered. "Tell you what I'm gonna do, then. My buddy says she's in top shape, that right?"

Blushing, I answered, "No, not really." Maybe this wasn't going to be too bad after all. Being a gunman's moll had never figured in my plans for a career, but—

"If I had a whip with me, it wouldn't take long to demonstrate," he continued sadistically.

Surely he didn't expect me to answer that.

A couple of good belts with a well aimed hammer works sometimes, too," he said with a cold-blooded laugh. "It does?" I shuddered, reaching over quickly to roll up the windows.

"I left another doll hanging somewhere, forgot now just where, but I'll get back to take care of her later." With that I crouched down on the seat trying to get up courage to scream for help.

"Gotta gun I could borrow? I have more experience working with them," the voice said. Is he crazy? If I did have a gun on me, and the windows weren't all steamed up, he would have gotten it long ago.

"Let's not tie this up," he said. "My terms or nothing. Two hundred clams will do it." "It's a deal," I yelled out the side vent near the floor, where my head had come to rest. If \$200 would get me out of this mess, it would be the best break that ever came my way.

Before there was time to straighten out, someone tapped at the window and the door opened. "Need any help, lady?" the young fellow from the black car said. "You don't have to sweat it, we'll install the rig for you at that price. We were trying to make a trade on the band, but an outright sale is better. She's loaded and in top shape," he said, as he helped me untangle my pretzeled body from around the steering wheel.

"Will you take a check," I murmured feebly trying to figure out what the \$200 was for—all I really wanted was a 15¢ vanilla cone.

59



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Other important features include a positive squelch control, illuminated "S" meter, spotting switch, ANL, 3.4 watts, and a quick-change crystal socket. Beautifully designed for home or auto use! Only WRL offers you the finest for less.

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ea. in pairs

- Ready to operate.
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Quantity Prices Available

the mini-monitor

AN ULTRA-COMPACT SENSITIVE CB RECEIVER

by AL BORAK, 6W6328

Here's a nice gadget, a Channel 9 (or whatever channel you want) monitor which will keep your main receiver free for regular communications work while still giving you the opportunity to "stand guard." You can also use the unit when taking a trip, it makes a neat, sensitive, portable receiver which will easily cover the entire 11 meter band (and also the 10 meter ham band).

No claims are made for the selectivity of the set, it's a superregenerative unit and cannot be expected to stack up against the superhet you regularly use. You will find that this set has excellent sensitivity and low noise pickup.

The output from the receiver is fed into an amplifier, such as a hi-fi unit. If you wish, you can even get something like the little 2-watt \$3.50 amplifier module in the Lafayette catalogue (stock #19-G-1511) and make it into a complete miniature receiver. Actually, you could remove both the 5K resistor and the .01 capacitor from the circuit, replacing the resistor with a low cost 2000 ohm magnetic headphone (like C. F. Cannon type AM-15-2), and you've already got a complete receiver.

CONSTRUCTION

The unit is constructed on a small (1½" x 4¼") piece of pre-punched masonite breadboard (Lafayette 19-G-1701). Such construction is quick and very simple with all connections easily done below the chassis.

Care must be exercised when soldering to the transistor leads. Heat getting into the transistors via the leads will ruin them. I suggest that you clip a pair of tweezers to the leads (as a heat sink) temporarily when soldering.

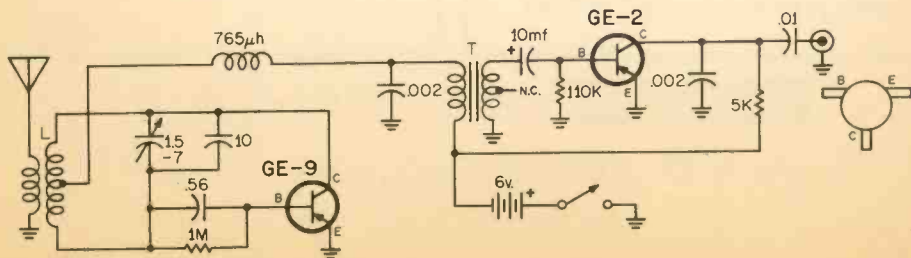
The coil is 13 turns of B&W type 3004 Miniductor, with the tap at loop number 7. The antenna (an 8 foot hank of wire will do fine) is coupled to the Miniductor coil by a small 8 turn coil wound on a short length of wooden pencil or dowel. This 8 turn coil is placed inside the center of the Miniductor and moved around until the point of loudest regeneration is heard through the speaker or phones. After you have determined Channel 9's location by tuning the trimmer, you can glue the 8 turn coil into place to keep the set in regeneration on a permanent basis.

RESULTS

I'm always suspicious when I read claims for any construction project, however I have monitored skip stations in all portions of the country on this set, in addition to hearing some of those juicy Venezuelans.

PARTS LIST

- 1 1.5-7 uufd trimmer (Centralab 825EZ)
- 1 .56 uufd capacitor
- 1 10 ufd, 200 v. electrolytic
- 1 10 uufd capacitor
- 1 .01 ufd capacitor
- 2 .002 ufd capacitors
- 1 5K resistor
- 1 1 Megohm resistor
- 1 110K resistor
- 1 GE-2 transistor
- 1 GE-9 transistor
- 1 765 uh choke (Miller 4651)
- 1 Transformer ("T") (Argonne AR-153)
- 1 Coil ("L") (see text)
- 1 SPST switch
- 6 volt battery, chassis, wire, etc.



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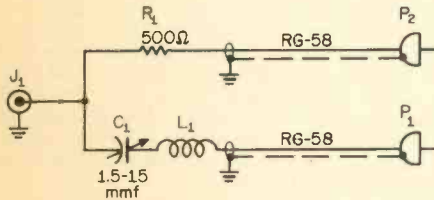
WRITE TO:

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

Well, it was a fine vacation—but now it's over. The questions really stacked up, too, so we'll dispense with the chatter this month and get right down to the business at hand.

CB TO AM COUPLER

I have been searching everywhere for information on building a CB-AM coupler, such as several companies sell. I saw the schematic for this several years ago in one of the electronic books but have since misplaced it. Can you help?
J.P., Pensacola, Fla.



PARTS LIST

- R₁ 500 ohms, 1/2-watt,
- L₁ Ohmite Z-144 choke,
- C₁ 1.5–15 mmf trimmer, Arco 460 or equiv.

Sure can, friend. Probably the one you saw was the one Herb Friedman wrote up in the May, 1963 issue of S9, which is very little different from the one I tore down that was made by Ozco (the original so far as I know). The schematic around here somewhere is a blend of the two, stripped to the bare minimum of parts. Put it all in a metal enclosure; a small minibox is fine, but a sardine can with a new cover plate soldered on works as well and is cheaper! Also easier to solder. Make sure all the coax shields are firmly connected to the enclosure, and that neither side of the tuning capacitor shorts to the frame. To line it up, simply hook it in the line and have your Unit 2 give you a test transmission. Using an insulated screwdriver, tune the capacitor for maximum signal—and you're in business. Good luck.

PREAMP'S TOO GOOD!

I put together the "computer preamp" that was in the November '64 issue. It works excellently—but one thing about it bugs me. It's so good that I have to hold the mike 2 feet or more away from my face, to keep from overmodulating. What can be done to cut down the gain a little bit without hurting the rest of the performance? Have tried everything I can think of, so I'm asking you now.

—P.H., Gary, Indiana

Well, for a start, did you use R6 as the article said? If you did, and hooked it up just the way it was shown, then you might try adding a ground to the terminal shown as having no connection on it! I suspect this was a draftsman's error, since otherwise R6 won't have very much effect on the output level of the preamp. But with the ground connection made, output can be cut all the way back down to nothing at all. As it says on the top of page 14, though, R6 must be adjusted by an FCC-licensed technician to let you use the preamp legally.

BICYCLE MOBILE, ANYONE?

I would like to know if there is any way to put a CB rig on a bicycle, with a 12-volt battery and 102-inch whip. You see, I am the captain of R.E.B.E.L. (Radio Emergency League). We had tried putting a rig, a 12-volt car battery, and a 102-inch whip on a bike, but the battery kept on falling and the whip kept on hitting the boy riding the bicycle over the head. If you can solve this problem please help us. Thank you.

—A.R., Brooklyn, N. Y.

Bicycles must be popular in Brooklyn; first time I've had such a request. Personally, my own tendencies would be toglom onto some kind of full-power all-transistor rig, so that I could get by with eight heavy-duty flashlight batteries instead of several pounds of lead-acid battery to cart around. And I don't think I would attempt to use a 102-inch whip; rather, I would try something like an 18-inch or 48-inch helical. There would be much less weight to haul, and much

of the bicycle's balance. If for had to use a conventional rig, I fix up a sidecar or trailer to haul the s, and antenna, and use a long mike

CUBICAL QUAD ANTENNA

I have been trying to build a Cubical Quad antenna from second-hand information and have had no luck at all. I know they work, because the guy that gave me the specifications really gets out. If you have any data on it, please let me know. I have been using 52-ohm coax cable, but seems to me that 75 ohm would be better. Appreciate your help.

—M.L. Jr., Charleroi, Pa.

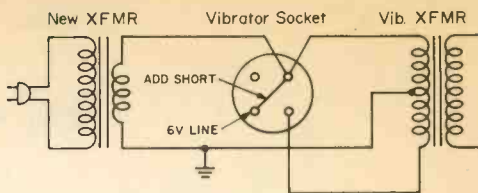
There are about as many recipes for home-brewing a Cubical Quad as there are antenna "experts," and all of them work sometimes and fail at others. My own opinion is that there's more unknown about this antenna than there is known, which doesn't mean that I'm "agin" 'em, for one of the best beams I ever slung above a rooftop was a quad. It might still be up except for a windstorm and my notoriously poor workmanship. Unfortunately, my quad wasn't for 11 meters, so the dimensions I used won't be any help. My books tend to agree that the "right" dimensions for an 11-meter quad are 111 inches total wire length in each of the "loops," and 50 inches spacing between loops. On the reflector, use a shorted stub of No. 14 wire, spaced 2 inches and approximately 16 inches long, to tune it up. The exact length will have to be determined while tuning. And you're right; 72-ohm coax would be better. However, chances are you'll never notice the difference if you keep on using 52-ohm. You can lay out each loop any way you like to make the wire length 111 inches. For all the details on this antenna in one place, you might grab a copy of "Cubical Quad Antennas," by Bill Orr, published by Radio Publications, Inc., Wilton, Conn., and selling for \$2.85 a copy. It really goes into detail!

LOOKING FOR A CONVERTER

Does anyone make a CB converter for use with a 6-volt radio? I have a very strong 6-volt car radio I would like to put a converter on, convert to run off the wall power, and use in my base station. So where can I get a converter, and how do I make the car radio run from the house current? Can you help me out?

—S.E., Fultonham, N. Y.

I'm really glad you asked this one! A couple of weeks ago a good friend of mine asked me to give his product a plug here—and I had to tell him that I don't just give plugs; the product has to be needed to answer a question. Now that you've asked it, I can help you and Uncle George too! Several people make 6-volt converters, but when it comes to value per dollar I've never seen anything that comes up to the Sentry unit that George Beyers is producing across town from me. It's excellent for just about any use, since he's designed it to work with any input signal over an extremely wide range; all you do is get



Looking for a Converter

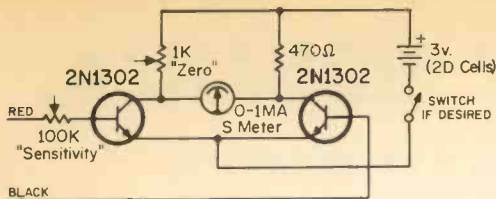
the right crystal to go with it, and you're set (and the cheap way to get the crystal is to buy a channel 1 receiving crystal for any rig that has an intermediate frequency of 1650 kc (such as the HE-20 series) and uses crystals above the input frequency). Now to the business of making the radio run off the wall. Get hold of a good husky 6-volt filament transformer, rated for at least as many amps as the car radio fuse is marked for. Then pull the vibrator out of the car radio, and trace out the leads from the original transformer which went only to the vibrator. Hook your 6-volt AC from the new transformer to these leads, and you're ready to roll. To get power for the converter, tie the filament wiring across any of the radio's tube filaments, and swipe B+ from the screen pin of the audio output tube. This same trick, incidentally, can be used to convert any mobile-only transceiver which uses a vibrator to run off the line for base-station work. Be sure the transformer voltage is rated the same as the battery, and don't try it with any rig that has transistors in it. Remember these two limitations, and subscribe for an extra year to S9 with the money you save. Oh, yes—you'll need Uncle George's address if your local dealer doesn't yet have the Sentry product line (it's got a lot of goodies in it—if your dealer doesn't have it, get him to drop Uncle George a line too and get all the poop). You can find him at P.O. Box 12322, Oklahoma City, Okla., 73112. Tell him you want to know about his Universal Converter, and he'll probably also send you some data on his deluxe all-transistor unit as well.

S-METER FOR TRANSISTORIZED RIGS

Can you please tell me if there is any way one can hook up an S meter to work on a transistor rig such as the Messenger III. If so, can you show us how? Thank you very much.

—J.J.M., Buffalo, N. Y.

Yes, it can be done. However, it's not a task for the inexperienced technician to attempt. You have to dig right down into the heart of the rig, and almost all of the new crop of transistor rigs are pretty tightly packaged, so that getting into where you have to go isn't the easiest thing in the world. If you still want to try, here's what you do. First, locate the detector load resistor. The easy way (!) to find it is to trace signal back from the antenna, through the IF stages (the ones with little transformers) until you get to the last transformer. When you come out of this one, you should find a diode or a transistor. Connected to this diode will be a resistor. If you are dealing with a diode, the other end of the resistor will either connect to ground or be connected back to the transformer. If it's a transistor at this spot,



Transistor S-Meter

the other end of the resistor will go to the power supply line most usually. To make certain you have the resistor you want, hook a VTVM across it and feed some signal into the receiver. The voltage reading should go up as the signal gets stronger (if it tries to go the wrong way, reverse the leads to the meter). Now that you have the resistor spotted, get yourself a length of two-conductor shielded wire, small stuff like used for phono-pickup connections. Hook the red conductor to the end of the resistor to which the positive lead of the VTVM was connected to get the up-scale reading, and the black wire to the other end of the resistor. Now thread the wire out of the rig's case and button up. Next, build the external unit shown in the accompanying schematic, and hook the other end of the wires to it as shown. With the rig off, zero the S-meter needle with the "zero" adjusting pot and then lock the pot shaft with a drop of candle wax or Duco cement (don't use anything more solid; you may want to readjust it sometime later). Tune in the strongest signal you want to hear, and adjust the needle to full scale with the "sensitivity" pot, locking it also. And presto, you have an S-meter. It will be as accurate as any of them, too. P.S.—don't try to eliminate the flashlight cells in the S-meter; the power for this unit must be completely isolated from the car frame or regular power supply. Use mercury cells and they should last for a year or so at a time.

RECEIVER MODIFICATIONS

I need some help in regard to my CB rig, which is a DeWald TR-910. I am looking for two circuits that I want to incorporate into this particular set. First, I would like to have a circuit that spots my transmit frequency on the receiver tuning dial, that could be built right into the set. Second, I understand there is a circuit that can be added to keep the set from drifting. I was told this particular circuit uses a couple of resistors and a Zener diode. Can you help?

—R.F., Charleroi, Pa.

S9 must be popular in Charleroi; hadn't had the pleasure of knowing of the city's existence before, and here I have two questions from that area in one month! Which has nothing at all to do with helping you on your receiver problems, so let's get to work. The spotting circuit can be added easily, but because it involves a modification of the transmit oscillator it has to be checked out by an FCC-licensed technician to be legal. All you do is mount a single-pole double-throw switch of the "spring-return" type (works like a pushbutton in that it springs back when you let go of it) on the front panel, and disconnect the lead from pin 1 of V6, the transmit-oscillator

6AW8A. Connect this lead to the normally-closed contact of the new switch, and run a wire from the arm of the switch back to pin 1. Temporarily connect a potentiometer or rheostat of about 10,000 ohms total resistance from the normally-open contact of the switch to ground. Press the switch and find your signal. Adjust the resistor for the weakest spotter signal you can get, so long as it comes on every time you press the switch (yes, I said "weakest"—it will still be the loudest signal in the band). Then measure the setting of the variable resistor, and solder in a fixed resistor of the nearest standard value. You can just run a lead direct to ground, but if you do you'll get so many "spotting" signals that it will be very hard to tell which is the one you really want. The drift-reducing circuit I think you're asking about is suitable only for multi-grid mixers, and your rig uses triodes. However, you can get a worthwhile increase of stability for just a dime, by purchasing an NE-2H neon bulb and connecting it from I of V2, the 6EA8 receive oscillator-IF amplifier tube, to ground. Be sure to use the NE-2H rather than its more popular cousin, the plain NE-2; the 2H has a higher firing voltage and will keep the plate voltage where it ought to be. If you have a large batch of NE-2's on hand, you can hook them up to a 90-volt battery through a 10K resistor (one at a time) and measure the voltage across them when they fire—if you find one which is as high as 75 volts you can use it instead. This is much cheaper than a Zener and, in this spot, will work as well.

STACKING ELECTRONICALLY-ROTATING ANTENNAS

I would like to know if you can stack or co-phase two Scanner M-119 antennas made by Antenna Specialists. If it can be done would you please let me know how to do it? Thank you for any information you may give me.

D.V.B., Elsie, Michigan

Well, it's possible to stack a pair of them—but it wouldn't be legal to do it because you would have to exceed the 20-foot height limit. The centers of the two stacked arrays would need to be a half wavelength apart, and that in itself is around 19 feet. So the idea, while a good one, isn't exactly practical. Phasing side-by-side would be out; these antennas operate on a phasing principle already, and putting two of them side by side in a phased array would undoubtedly upset most of the design parameters. While I couldn't predict exactly what would happen if you tried it, I'm fairly certain it would be nothing good. Don't let this stop you from trying one of the antennas by itself, though. It might give enough gain that you wouldn't even need the extra you think you need, at this point.

QUICONVERSION QUESTION

I read with interest the article written by Jon Noland in the June '65 issue entitled "A Quiconversion." I have one question: The article

Continued on page 71

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.

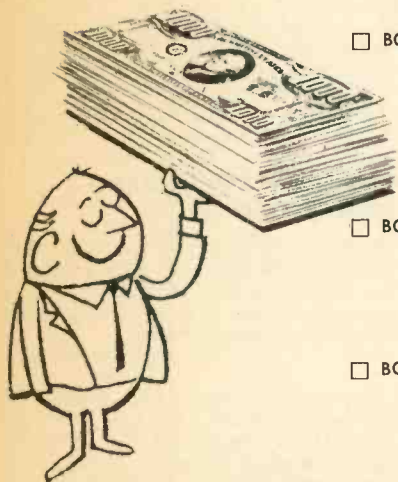
BONUS ITEM #1 — Large 3 inch, 3 color, "Monitor Channel 9" decal. Regularly sells for 50¢.

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ON THE COUNTERS



An announcement from Instrument Devices Corp., P.O. Box 284, Huntington, N. Y. 11744, advises of a new solid-state CB converter for auto and marine radios. Designated the Model 10-4, the unit allows you to tune all 23 CB channels on the broadcast band. A single on/off switch is the only control. Weighing in at 6 ounces, it contains its own battery and sells for \$23.95, postpaid.

The Panadaptor, a device which shows all the signals on the entire band on the front of a cathode ray tube, is now being offered for sale at a new reduced price of \$144.50. It is designed to be used with any CB rig having an IF of 455 kc/s, and may also be used to check modulation percentage and quality. Manufacturer is Singer Metrics, 915 Pembroke St., Bridgeport, Conn.

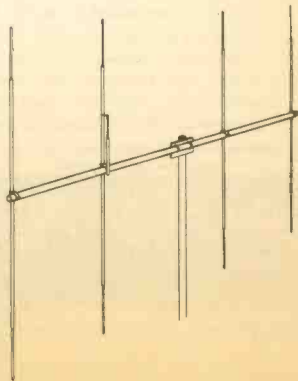
New-Tronics Corp., 3455 Vega Avenue, Cleveland, Ohio 44113, has just issued a new catalogue of its greatly expanded antenna line. Some of the antennas are specifically designed to be used with the HELP program. It's free.

Lafayette Radio, 111 Jericho Turnpike, Syosset, N. Y. has a new low-cost CB walkie talkie known as the HA-130. Selling for \$14.95 (or \$13.95 each for two or more), it's a 5 transistor job with a crystal controlled superhet inductor and a 100 milliwatt input. Antenna is a 34-inch whip. Comes equipped



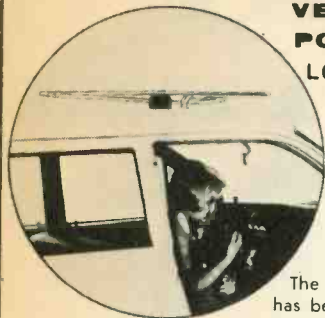
for Channel 10 and they also include the battery.

Mosely Electronics, 4610 N. Lindbergh Blvd., Bridgeton, Mo. 63044, has two new antennas for you, a 4 element beam and an all-new-look base station antenna.



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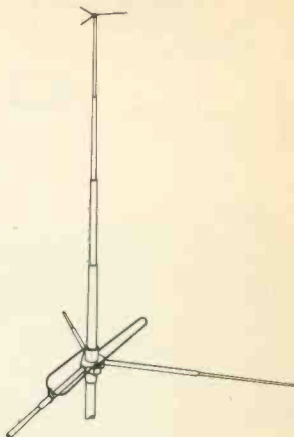
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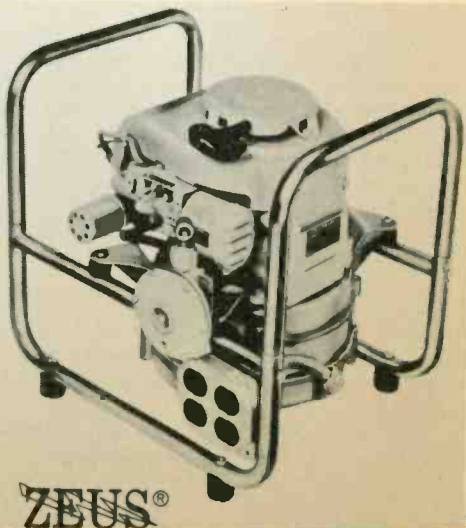
The beam is the A-411-S, a sturdy bi-directional job with VSWR of 1.5:1 or better across the band. Constructed of high-tensile aluminum, it is gamma matched and weighs 15 lbs. Gain is claimed to be 8.7 DB over a 1/4-wave dipole or 1.2 DB compared to isotropic source. Front-to-back ratio is 20 DB. Stacking kits are available.



The other Mosley antenna is the Devant Special, offering 4 DB over a standard ground plane. The all new look comes from a top hat of 10 inch radials which help to produce a low angle of radiation. The many new styling features and rugged construction have led the manufacturer to offer a three year money back guarantee.

Free information on both antennas is available from Mosley.

Two new lightweight, propane-fueled, AC



Continued on page 43

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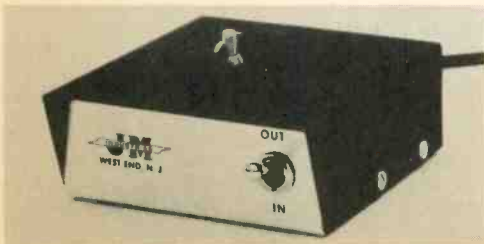
Export: International Div.
Canada: Gould Sales Co., Montreal, P.Q.

Continued from page 34

generators (with permanent magnet alternators) have been introduced into the line of the Zeus Portable Generator Co., 12435 Euclid Ave., Cleveland, Ohio 44106. The 3 kilowatt Model Z-3000RG pumps out 230 volts, 60 CPS at 13.1 amps, or 115 volts, 60 CPS, at 26.2 amps. The Model Z-1250G gives out with 115 volts at 60 CPS, 12 amps. Rating is 1250 watts. A brochure containing information on all 14 Zeus models is available from Zeus.



A new hand-held unit, the Demcophone, is now being marketed by Demco Electronics of Bristol, Ind. Retail price is \$79.50 for two sets. Unusual features of the 100 milliwatt unit include a variable squelch control, a visual battery strength indicator, 11 transistors (plus 1 diode), with advanced circuitry design. Batteries are 6 penlite cells. Delivered with Channel 10 rocks, but these may be easily changed.



Twenty new converters covering all sorts of interesting bands and radio services (including CB, police, marine, satellites, aero, time signals, hams, etc.) are now available from JM Industries, P.O. Box 2, West End,

N. J. Priced from \$21.50 to \$27.95, all operate from 6 to 12 VDC (negative or positive ground) with a provision for use with a 9 volt transistor radio battery.

From the brochure, these look very interesting and should be worth looking into.



Pearce-Simpson Inc., P.O. Box 308, Riverside Station, Miami, Fla. 33135, has a new set—the 23-channel "Director." Fully solid-state in design, it uses a new *HetroSync* frequency synthesis circuit which mixes two frequencies instead of the usual three for exceptional frequency stability. Total weight is only 5 lbs. Price is \$299.95.



The "World Traveler" is a new shortwave receiver from Regency Electronics, Inc., Indianapolis, Ind. Selling for \$69.95, the unit boasts a sensitivity of 3 uv at 20 mc/s for a 6 DB s/n ratio. Five tube performance with a solid state rectifier is offered with a frequency range of 550 kc/s right through to 30 mc/s (this includes CB).

The good word from Astro Antenna Corp. of America, 2 Rock Spring Road, West Orange, N. J. is that they are rolling with their Super Star Burst SB-100 base station antenna. This antenna displays 54 feet of hard aluminum and features a claimed circuit gain of 9.5 DB (produces 9 watts ERP). Height of the antenna is 20 feet and they promise an SWR of *almost* 1:1:



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SUPER-STAR BURST ANTENNA

Inasmuch as class-D CB transmitters, by law, are limited to a low-power input of only 5 watts, any means that can provide the greatest efficiency and the most effective use of the available output power is desirable for better and more reliable communications.

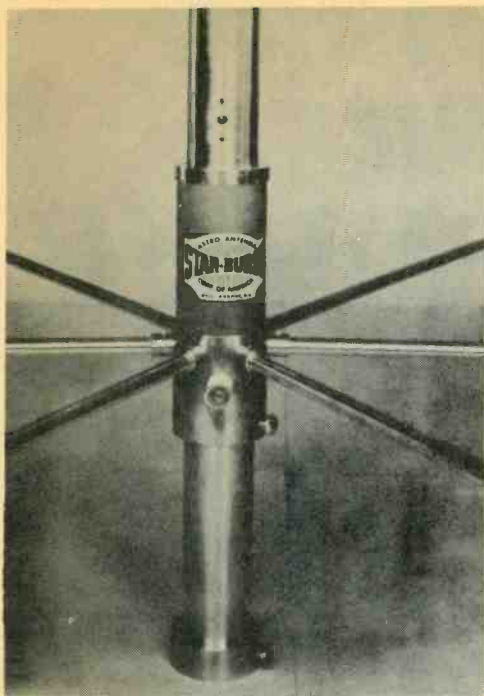
One such device is the Model SB-100 Super-Star Burst Antenna that enables the maximum transfer of power to the antenna to be realized and which at the same time concentrates the power radiated from the antenna to where it will do the most good. This adds up to effective power gain which means a healthier signal.

The Super-Star Burst is designed to present an exact impedance match to the transmission line, resulting in a 1:1 standing-wave-ratio and thereby permitting the maximum possible transfer of power to the antenna. With an SWR other than 1:1, some of the power fed to the transmission line is reflected back from the antenna to the transmitter and thus cancels some of the outgoing power. The end result is poor efficiency, wasted power and less radiated energy from the antenna. A high SWR also can contribute to other difficulties such as causing r.f. feedback, lowering the effectiveness of a TVI filter or otherwise abetting TVI.

Now that we've gotten all the power up to the antenna, let's see what happens next. If the antenna is the usual quarter-wave type, like the ordinary ground plane, most of the power radiated from it will go upwards at a relatively high angle above the ground surface; however, the most desirable radiation for CB communications is that which occurs at a low angle or in a plane parallel to the earth, so much of the energy transmitted by our conventional quarter-wave radiator is wasted.

On the other hand, the radiation from a $\frac{5}{8}$ wavelength antenna is concentrated at a very low angle, so most of the power goes where it is needed. The effective power gain realized thereby can be upwards of a little over 3 db which is equivalent to multiplying your power by slightly more than two. Like the quarter-wave vertical, the radiation in the horizontal plane is omni-directional. The $\frac{5}{8}$ -wave antenna works in a similar manner on receive as for transmitting and thus can improve the signal-to-receiver-noise ratio also.

The Super-Star Burst is a $\frac{5}{8}$ -wave vertical ground plane antenna and therefore it can give you that extra degree of effective radiated power. In addition, it has a matching transformer at the



Base arrangement of the Super Star Burst Antenna.

base to present a 52-ohm load to the transmission line and thus can maintain a 1:1 SWR, regardless of the transmission-line length. The transformer also is supposed to minimize TVI.

The vertical radiator for the Model SB-100 is 20 feet in height and it is made up of five telescoping sections, starting out with a 1½" diameter at the bottom and ending up with a 5/8" diameter at the top where three small wings provide top-hat loading. The telescoped sections are locked in place with self-tapping screws for which the holes are pre-drilled. Six ground-plane radials each tightly fit into separate coupling collars around the base to which they too are secured with self-tapping screws. The radials are each 4½ feet long and have plastic end caps.

The matching transformer is located in the mounting base and is contained in a poly vinyl chloride cylinder that is sealed in polyethylene capped with epoxy for resistance to corrosion. The coax connector protrudes from one side of the base.

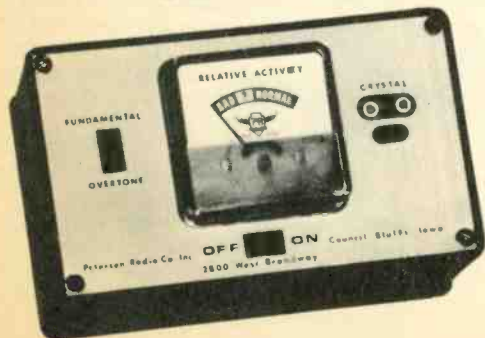
The base itself is machined metal. It is the drop-over type of mounting that slides on top of any mast up to 1¼" diameter to which it is locked with heavy screws.

The antenna is solidly constructed and all the metal parts are 100-per cent rust proofed.

The Model SB-100 Super-Star Burst Antenna is priced at \$32.50 and is a product of Astro Antenna Corporation of America, 2 Rock Spring Road, West Orange, N. J.



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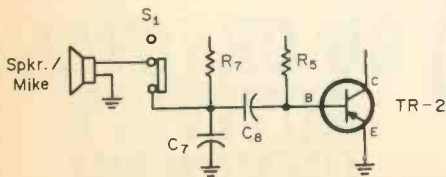
TRIPLE PERFORMANCE BY CHANGING ONE CAPACITOR

by RICHARD C. PETERSON

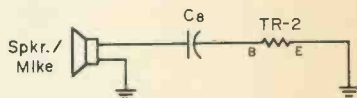
The availability of low-cost citizens band transceiver kits, such as the Allied Radio C-100 has continued to increase the popularity of the part 15 100 milliwatt walkie-talkies.

Any attempt to increase the range of the C-100 must be directed along lines other than increasing radio frequency output, since these units already operate at the legal maximum level of 100 milliwatts. It soon becomes obvious that increasing the modulation is the most practical method of increasing message intelligibility and therefore range. Several approaches have been suggested and used, with varying degrees of difficulty in construction, cost, and success. The following method describes the simplest and most economical method, yielding maximum results.

Although 100 percent modulation is the legal maximum, the C-100 has approximately 30% modulation. It is obvious that the intelligibility of messages over extended ranges is reduced.



The cause of low modulation in the C-100 is a result of insufficient modulating voltage applied between the base and emitter of the audio driver transistor TR-2. Any method that will increase this voltage will increase modulation percentage and message intelligibility. Microphones with greater output, preamplifiers, and/or step-up transformers between the microphone and TR-2 have been suggested. In the first case, speaker/microphones of the proper physical size with higher voltage output are at the best expensive to procure, and at worst impossible. Introducing



a preamplifier or step-up transformer between the speaker/microphone and TR-2 is somewhat difficult and expensive and necessitates adding a pole to the existing press-to-talk switch. Figure 1 shows the input circuit of the C-100. C8 is a 0.1 microfarad capacitor whose impedance at 400 cps is 4000 ohms. (400 cps is the center frequency of the human voice.) The input (emitter-to-base) impedance of TR-2 is approximately 1300 ohms. Figure 2 shows the basic impedance diagram of this circuit. Simple calculations show that approximately 30% of the modulation voltage produced by the speaker/microphone reaches TR-2. The rest is lost across C8's relatively high impedance. If we can increase the modulation of voltage to C8, reduce the impedance of TR-2, or increase the impedance of C8, we can increase the overall modulation percentage of the transceiver. As mentioned above, increasing the modulation voltage to C8 through an improved microphone, preamplifier, or step-up transformer is undesirable from cost and difficulty viewpoints, and, since increasing the impedance of TR-2 is impossible, we are left with the possibility of lowering the impedance of C8. This is very simple. Substitution of a higher capacity capacitor will achieve this purpose, since the impedance of the capacitor is inversely proportional to its capacity.

Therefore, if we substitute a 1 microfarad capacitor for the original 0.1 microfarad C8 we will lower the capacitor impedance to 1/10 of its original value. Without going into the calculations, the voltage appearing at the input (emitter-to-base) of TR-2 with

Continued on page 70

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The Phantom

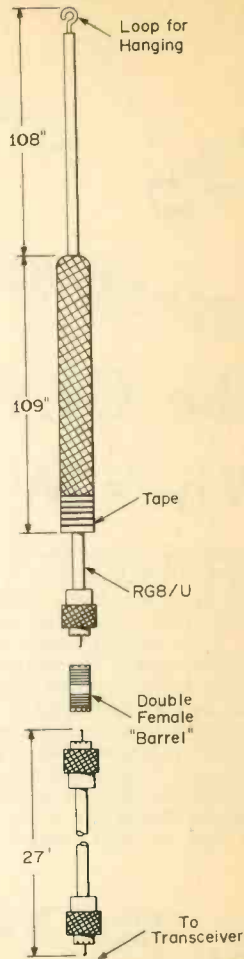
A PORTABLE SKY HOOK

by **BUD MOHR, KIC0922**

This "Phantom" as I call it, can be coiled up and thrown under the seat, or in the trunk, and for hotel or motel, for the traveling man, at picnics, rallies, or anyplace you care to hang it, it does a fairly reliable job.

Materials needed are as follows: 3 PL259 connectors and 2 adaptors, 1 barrel. Solder gun and solder. Sharp knife and some plastic tape. 27 ft. RG58/U and 19 ft. RG8/U.

Procedure: take outer insulation off the RG8/U a distance of 9 feet, being careful not to damage the coaxial braid. Now push the coax back over the inner insulation until quite loose, then reverse it over itself as illustrated. Now cut off the outer braid at 109 inches and wrap lower end with plastic electrical tape. (Caution, do not wrap all the exposed shield as this tends to make antenna too stiff.) Now make a loop and solder it firm at the top of the antenna, leaving on all inner insulation. Solder on all connectors, and check over your work electrically. The "Phantom" talks again. Happy CB'n.



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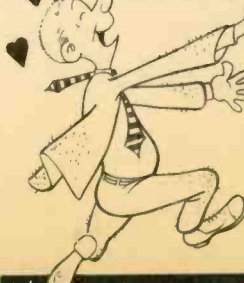
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A.P.R.E. BULLETIN BOARD

New appointments this month to the A.P.R.E. Staff include: Mark J. Planovsky, KKY0299, P.O. Box 1021, Reseda, California; Frank S. Dykeman, KJ12293, 339 Harter St., Herkimer, New York.

All A.P.R.E.'s who want their new Press Cards, Contact: John F. Krejc, 60 Division Ave., Garfield, New Jersey. Please return your old one. Interested parties to the A.P.R.E. Staff should contact the above address as soon as possible.

Also, a few A.P.R.E. decals are left for those A.P.R.E.'s who missed the boat. For details contact: S9, Club Editor.

NORTHERN

The 3rd Annual 8 state jamboree sponsored by the York CB Assistance Club held June 26 and 27 at Musers farm brought several thousand people to south central Pennsylvania. Plans for the 1966 Jamboree are now underway with George J. Chantiles, 3Q3211, general chairman. Preliminary plans show that the next jamboree will prove to be even bigger and better than any previously held. The current officers for CB Assistance include Ralph Kline, KCC3779, President; Leonard Wolf, Vice President; Franklin Hykes, Secretary and James A. King, 3W4475, Treasurer. The club meets the 2nd Saturday of each month at Sprug's restaurant, 2266 S. Queen St., York, at 8:00 P.M.

Gary Thomas, KMG0238, has begun to set in motion the organizing wheels for a club exclusive for the teenagers whose parents hold CB licenses. The first organizing meeting was held recently and officers are expected to be elected at a future meeting. This list and the new club's objectives will be announced as soon as possible.

Recently when his wife went to York's Memorial Osteopathic hospital, Burnell Ruth, KMG0211, set out to borrow a walkie talkie for Jane to use. It proved to be useful, especially when Burnell brought the children when he came to visit her. Hospital regulations prohibit the children in the ward, so with the unit in the car, they could visit with her via the air waves. Jane and little Corey Allen are both doing fine.

The first meeting of the Franklin County CB'ers was held Tuesday evening at the Firemen's Hall. The group was reorganized at the last meeting and elected a new slate of officers. The club is composed of persons who operate the Citizen's Band radio network.

During the meeting it was voted to purchase an electric coffee maker for the club. Also preliminary plans for a family outing was discussed, with definite plans to be formulated at the next meeting.

There were CB'ers present from Jay, East Dixfield, Wilton, Farmington and Chesterville. The next meeting will be held July 13 at the Firemen's Hall. The

program committee will be John Newcomb, Jean Smith and Amos Lane. Lunch committee will be Thorton Osgood, Red Therrien and Steve Bryant.

Recently elected officers of the Chili-Odgen-Riga Klub are: President, Ken Robinson, KIC5786; Vice President, Don Pugh, KLP8114; Secretary, Betty Pugh, KLP8114 U1; Treasurer, Jerry Oakley, KIE0994; Sgt. at Arms, Dave Betteridge, KLQ0982.

The Mt. Greylock Mobil-Ears, No. Adams, Mass. had an outing at Lake Lorraine. (Troy-Bennington road), near Troy, N. Y. on July 18. Everyone had a wonderful time! There were games and prizes for all. The children had the most fun (young and old!)! There was swimming, hot dogs, soda, etc., and free rides on the Mobil-Ears Special car. (Courtesy of Paul Howeroft, 1W8613, and his son, Butchy, who did most of the driving.) The weather was threatening all day but held off until late in the afternoon, then the rains came. John Lampiasi, Bill MacAdoo, and Paul Howeroft did a fine job of cooking and dishing out the food. The Picnic Committee did another fine job of arranging an enjoyable day for all.

Lyle C. Adams has brightened his bedridden life with radio and aiding the Boy Scouts.

In his attic room, Adams is surrounded by citizens band and shortwave radio equipment. Next to his bed is the telephone he puts to work for the Scouts.

Almost 10 years ago, Adams suffered a neck fracture and nerve damage in a fall at Kodak Park. He was totally paralyzed for several months but now can walk a few steps with crutches.

Since the death of his wife a year ago, Adams has shared his home with his son, daughter-in-law and three grandchildren.

Radio and Adams' telephone give Scout camping groups emergency aid whenever it's needed.

In an emergency at a Scout camp, Adams is radioed and calls police or parents.

He also has a list of about 24 scoutmasters, 50 den mothers and 30 commissioners he calls regularly to remind of meetings. "A call is more likely to get someone to a meeting than a card," Rano A. Ventura, a Scout district commissioner, noted.

Yesterday, Ventura presented Adams with a certificate of appreciation for his "outstanding service to boys" from the Otetiana Council, Boy Scouts of America.

Deputy Executive Fire Chief Joseph Shatzel was also there to make Adams an honorary firefighter in appreciation for his work with the Scouts.

And Joseph Heyer, county commander of the American Legion, gave Adams the first two invalid stickers to be handed out. These stickers, which firemen and the Legion will distribute, go on the door of an invalid's home and the window of his room to let firemen know in case of fire that a person who needs special aid is inside.

Two North Adams boys were found unharmed in deep woods in East Cheshire after being sought four hours by 25 members of the Northern Berkshire Emergency Communications Club (NBECC) and numerous police, firemen and other volunteers.

The boys were Mark Belanger, 12, and Arthur Santelli, 14 both identified by Albert M. Abraham, who was

COMING EVENTS COMING EVENTS

The Naugatuck Valley CB Radio Club is holding a State Wide Jamboree, October 3rd, Lake Quasapaug Pavilion, Route 6A, Middlebury, Conn. Contact: Ed Duvel, 57 Lounsbury Street, Waterbury, Conn.

October 10th, the Bell City Radio Club Jamboree, Lake Compounce, just off route 72, Bristol, Conn. Contact: Ted Singleton, P.O. Box 753, Bristol, Conn.

Third Annual State-Wide CB Jamboree, September 25th, Leaksville Armory, Henry Street, Leaksville, North Carolina. Contact: P.O. Box 242, Leaksville, N. C. The event is sponsored by the Virginia-Carolina CB Radio Club, Inc.

The Lower Valley CB Radio Club will hold its 1st CB Jamboree, October 24th, at the Saybrook Grange Hall, Old Saybrook, Conn. RAIN OR SHINE. Contact: Carlton Guptill, 28 Shepard Street, Old Saybrook, Conn.

in charge of the rescue operations yesterday.

Adams police called Mr. Abraham and asked him to alert the NBECC about 3 p.m. after the boys were listed as missing since 11 a.m. Within a short time, 12 mobile units were in East Cheshire and their operators and passengers, equipped with walkie-talkie radio entered woods off the Cheshire-Windsor road a mile or so east of the Polish picnic ground on Sand Mill Road.

Mr. Abraham said that the searchers prowled the woods until 7:30 p.m., when Bruno Buda of Cheshire, reported on his radio that he had come upon the two boys who had built themselves a makeshift hut and had a warm fire going, after realizing they were lost in the woods.

The club's emergency coordinator, Mr. Abraham, said that Mr. Buda is a neighbor of the Santelli family at its Cheshire summer cottage, who knows the woods of the area well. Mr. Buda is not a member of the Emergency Radio Club.

He reported that the boys were about three miles in the woods when found. At the time of the rescue, the NBECC had alerted the State Police at Pittsfield, and the Savoy and Cheshire Fire Departments, to supply search aid.

The Adams Civil Defense rescue unit responded to the search alert at 4:45 p.m. at the request of the Radio Club coordinator. Four men accompanied that unit.

In February of this year the Newington Emergency Alert Radio Team (N.E.A.R.) was formed in Newington, Conn.

The team started with seventeen members and have been active since the start.

Qualifications to be a member include being a resident of Newington, at least 21 years of age and hold a valid Class D license. The team meets the second Sunday of the month at the members' homes.

The elected officers are, Pres., Bob Christensen, KKA-9530, S9 A.P.R.E.; Vice Pres., Nathan Zimmerman, KKB3406; Sec., Jack Haney, KKA0933; Treas., Stan Kaufman, KKB2729 and Comm. Officer, Vincent Morrell, KBE0203. Any correspondence should be mailed to the Secretary at 64 Seventh St., Newington, Conn.

The team monitors Ch. 9 in conjunction with the nationwide H.E.L.P. program.

Officers of the Allegheny Kiski 5 Watters CB Club are President, Edward Barkowski, KID1299; Vice President, Walter Everett, KLQ1138; Recording Secretary, Marian Dick, KLQ1397; Treasurer, Helen Bayne, KLQ-1946. Meetings are held the 1st Wednesday of the month at the Greenwald School, 8:00 p.m. in New Kinsington, Pa. Present membership, at this writing is 94.

The Sara Placid C.D. R.E.A.C.T. Team which consists of Bloomingdale, Lake Placid and Saranac Lake, New York are installing new signs for CB'ers coming into the Adirondack Net vacation area.

The Team provided Safety patrol for the Annual Jaycee Canoe Race on the Ausable River on May 30. Again on July they had a Safety Patrol for the Hamner Boat race on Saranac River.

The Team is very active in Civil Defense and hold their nets every Monday night.

Meetings are held the last Thursday of every month at 8 p.m. in the North Elba Town Hall, River Street, Saranac Lake, N. Y. Officers of the Team are: Harry O. Potter, Jr., KLP9699, Pres.; Vice Pres., Art Fortune, KID0569; Sec. Ida Longtemps, KLP5312; Treas., Harry Starkey, KLQ0374; Directors, Rev. Lewis Taylor, KNP-2374 and Lance Longtemps, KLP5312.

On Tuesday, July 27, the Civil Defense Communications Unit of Pittsfield was called out to assist in the search for a 19-year-old escapee from the Berkshire County House of Correction. He was caught about 6½ hours after he walked off the prison grounds. Approximately 100 men were involved in the search. About 20 to 25 mobiles and some base stations comprised the CD Citizens Band Communications members involved in this assist. Jack Shea, 1Q6682, is the local Pittsfield Civil Defense Director. At the present time, "Jack" is also the President of the Berkshirts 5-Watters CB Radio Club. Many of the CD members belong to this organization.

The Gem of the Valley CB Radio Club of Becket held a picnic on August 15 at Gardner Park in Huntington, Mass. It was well attended by the members who live in the surrounding towns. (More on this club in the near future.) Ray Clark, KBC1833, Chester, Mass., is President.

The Berkshire 5-Watters CB Radio Club combined their July 11th meeting with a picnic and Camporee at Arlington, Vt. on the banks of the Battenkill. (Famous for its fishing!) About 60 to 70 people attended this well planned affair. Arrangements were handled by Bill and Heidi Haskins, KBD2379.

The recent quick action of two CB'ers was directly responsible for the saving of at least two persons. Louie Rogers, KKA5979, was driving through a street when he spotted smoke coming from a house. People walking on the street ignored it, not Lou! Picking up his mike, Louie called Paul Shea, KKB3434, who was on base, and passed the word. Paul called the Fire Department—they appeared on the scene very shortly and extinguished the fire which could have been a very serious one if it had gotten too far. Two or three people were assisted out of an upstairs apartment by the firemen. Yes, CB'ers ARE THINKING VOLUNTEERS, most of them are quick to respond when called upon. Lou Rogers, KKA5979, is Vice-President of the Berkshire 5-Watters CB Radio Club, Pittsfield.

CENTRAL

On the weekend of July 4th, 1965, the Suburban Rescue Squad in Cleveland, Ohio, under the direction of Glen A. Barth, KH15814, and under REACT control in Cuyahoga County with Jon G. Batley, KH11466, REACT Co-ordinator, the group had three mobile units out to cover the Cleveland, Ohio area during the long holiday weekend. Friday night the mobile units covered some of the interstate routes such as "I-90," and "I-71."

On Saturday night our main mobile unit went to West 132nd and Jefferson Park and found 20 "hoodlums" standing out in the street shooting off fireworks. We then parked near the area and called out for a 10-33 to any base station as they did spot the car and were advancing toward us. Thanks to KLN3756 for answering our call and giving the Cleveland Police Department a headline for our mobile unit. Within a few minutes our mobile unit met with the Cleveland Police Department and they helped our unit with the 20 teenagers. The police car then followed behind our mobile unit until we were out of the "rough" neighborhood and thanked us for all of our help.

Around 11:30 p.m. we walked by foot through Edgewater Park and confiscated fireworks from three teenage-boys at the beach and then put out a log fire on

the beach that someone had felt turning earlier that evening.

Sunday night was spent directing traffic at Edgewater Park for the "Fourth of July Fireworks Display." All units went off duty each night around 2:30 a.m.

News of this fine group comes from: Jon G. Batley, KHI1466, S9 A.P.R.E. for Cleveland, Ohio, and vicinity.

The Roundtable CB Radio Club, Inc., meets the first Tuesday of each month, and the meeting is held at the Home Federal Savings and Loan Association at 12222 Madison Avenue in Lakewood, Ohio. Meeting starts at 8:00 p.m. sharp and all CB'ers are welcome to attend.

Officers of the Roundtable are: President, Chuck Morris, KHG4721; Vice President, Bill Mann, KHJ-1064; Secretary, Bud Barnes, KEH4340; Treasurer, Fran Fox, KLM8128; Sgt. at Arms Curt Gregg, KHJ-5932. Other officers include three trustees who are: Pat Boyle, 19Q8661; Tony Cammerata, KHI7148; Don Burnett, KHJ3470, assisting with the paper and Joyce Morris, KHH2230, also assistant editor. The typist of our paper is: Joann Sizemore, KLM8313.

Anyone wishing to exchange papers with the Roundtable CB Club, Inc., please send your club paper to the following address on an exchange basis: The Roundtable CB Club, Inc., P.O. Box No. 8634, Cleveland, Ohio 44134.

News of the group comes from: Jon G. Batley, KHI-1466.

The Coffee Breakers, Inc., of Toledo, Ohio, held a club raffle during the month of July. The lucky winners were as follows: 1st prize winner of the 23 channel Citifone SS was Betty Copelin, KHI1488; 2nd prize was a 40-foot tower and the winner was Harn Weber, KNM0108; 3rd prize was the Antenna Special st Super-Magnum, and, Alan Price, KHH2069, had the lucky ticket.

According to Nancy Early, club secretary, the raffle was a great success thanks to many CB'ers. Their new club emblem just arrived and is a real sharp emblem



with the colors of red, white, and blue. (Guess the coffee pot is always on for this group).

The club's mailing address is: The Coffee Breakers, Inc., P.O. Box No. 5671, Toledo, Ohio 43613.

News of the group comes from: Jon G. Batley, KHI-1466.

Summary of the first bi-annual meeting of Missouri State Citizens Radio Service Association, held June 20th, 1965 Agricultural building, Sedalia, Missouri.

Meeting called to order 10:30 a.m. All club delegates present except one only from Marshall and Cameron. The fine recruiting drive by the Sedalia Club was discussed, 3410 miles driven, \$129.90 spent and 102 hours donated. Next order of business was the election of a President. Many fine delegates were nominated with Paul Stewart of the St. Joseph, club being elected. Lee Roush of Sedalia was elected Vice-President. Lee and Paul will make a good combination. Jim Downey of St. Joseph, was elected Secretary. Jim Fleming became Treasurer, a wise choice with the Association bank account established in Sedalia.

The Sedalia club bylaws were adopted as a guide for the first meeting with any necessary changes to be brought before the Board of Directors at the Sept. 19th meeting by the bylaws committee Terry Purcell, Perry Oliver and Russell Jones.

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ATLANTIC

The Mt. Top CB Radio Emergency Team of Oakland, Md. recently held a very successful CB family-type picnic on July 18th at Herrington Manor State Park, 5 miles North of Oakland. Prizes were awarded during the afternoon with the main prizes being a portable TV and a transistor radio.

The President of the "TEAM" is Carl "Dutch" Wolfe, KKI1526; V. Pres., Harold Boyce, KKI2462; Secretary, Doug Webster, KKI0199 and the Treasurer is Frank Johnston, KCG1524. The team was organized on July 1, 1964. They now have approximately 75 members. They have a small mobile trailer equipped with all the

necessary emergency monitoring communications equipment. They can set up anywhere there is an emergency, because they have their own power supply. They have anticipated in several emergencies to date. These fellows are interested in offering two-way radio communications service when an emergency exists.

S9 Magazine was represented at this event by APRE Dick Long, KCF0986, Director of the Queen City 5 Watters, Cumberland, Md. He was accompanied by Merry Albright. Anyone desiring more information about this emergency team, write: Mt. Top CB Radio Emergency Team, P.O. Box 66, Aurora, W. Va.

At the July 8th meeting of the Norfolk Citizens Band Radio Club Inc. the club welcomed in as a new member Floyd Wilkins, KMK1064.

Robert Walker held a discussion on the talk Robert Ruhle from Hy-Gain antennas gave June 20th at the Ocean View Recreation Center. This turned out to be an excellent review of some of the more technical points that were missed before.

July 9th TERRAC celebrated its first anniversary with a "coffee and cake break," from the regular business meeting. As area coordinator for Red Cross Communications and Survey, Gordon Mitchell, KC14692 asked for individual volunteers who will be used in any disaster. Since the hurricane season is approaching this is a most important step in preparedness.

The club welcomed Cheryl Hunt, KMK2637, Bob Sherwood, KMK1621 and Herb Martin, KMK2335 as new members this month.

July 13th the Virginia Beach CB Club also heard from Gordon Mitchell on behalf of the Red Cross. Anyone remembering the March 17th floods and several hurricanes of past years will know what a vital role in communications this club had.

The club will hold its annual elections at next month's meeting.

Welcome aboard to Les Logan, KBI8872.

The CB Assistance Club of Chesapeake, Virginia will

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be standing by on Channel 9 for anyone needing help on Labor Day weekend. Since this club is on the road to Norfolk and Virginia Beach it should prove helpful to anyone needing aid or directions while driving through the area.

Three new members, Bill Verebely, KMK0821, Clyde Randall, KMK1411 and David Fussell, KCJ6032, bring the clubs membership to nineteen.

News of Tidewater, Virginia clubs is from Bob Smith, KKK6249.

SOUTHERN

Over the Fourth of July weekend, the Citizens Band Safety Patrol played an important part in protecting the drivers of Alexandria from the sudden and complete annihilation that automobile accidents commonly engender.

They were warmly thanked on behalf of the Louisiana State Police by Lt. George G. Givens.

He said, "During the Fourth of July weekend holiday, the emergency communications division of the Citizens Band Safety Patrol had 17 units which greatly assisted the Louisiana State Police in the Alexandria area in observing and reporting traffic irregularities. This group of public spirited citizens will support and work with the Louisiana State Police during future holidays and in emergencies where their special services are requested."

The Citizens Band (C.B.) Safety Patrol cars are equipped with two-way radios and antennas. Some have signs on their automobiles.

The mobile units are manned by: Hugh Vaughn (liaison for the group); B. L. Wilson; James Rainwater; A. L. Woods; Johnny Hero; Walter Dauzat; Monette Benedict; Charles Pospisil, Jr.; Bob Brewer; Ivan Shanks; Adrian Shelton; Norris Guillot; Kirby Bryant and William Hopson.

The base stations are manned by: Mrs. Louise Wilson in Alexandria; Genie Barber in Pineville; Mrs. Fern



Starke in Pineville and Mrs. Johnece Dauzat in Alexandria.

EXTERIOR

Citizen Band activity came early to Hawaii but was not organized until the early part of 1960. At that time a small group of Radiophone pioneers got together to organize the first CB club of Hawaii, of course it was called the Citizen Banders Hawaii. During 1961 the membership in the club got so great it was decided to split up into four chapters, with a chapter at Honolulu, Waianae, Kalihi and one on windward Oahu called the Koolaupoko Chapter. At this time a Council was formed to guide the four chapters in matters of policy and

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formulate rules for the four chapters. Although Citizen Banders of Hawaii is a relatively new organization, its list of accomplishments is long. The club was the first of its kind in the United States to take part in a National Disaster when it played a prominent part in the Tidal-Wave Disaster at Hilo, Hawaii in 1960. Again Citizen Banders Hawaii were first in the nation to hold a State convention (Hoo Huli) which was held at Kailua in January of 1962, such dignitaries as the Lt. Gov. of the State of Hawaii, FCC District Engineer, State Civil Defense Communications Chairman, Red Cross Disaster Communications Chairman and others spoke.

Some of the accomplishments of the club are: the communications for the "second" swim attempt by Greta Anderson, in her bid to conquer the Molokai channel; communications between ground CB crews and the Glider which carried Guy Davis and Gaza Vass on their record breaking (world) sailplane endurance flight; communications throughout the night-long rescue operation on Mt. Olomana, including 100 MW walkie-talkie units with the rescue party on the mountain all night, in order to successfully bring down Scott Mason who had been injured and stranded on the mountain. Halloween night 1962 found the Club active helping the Windward Civic Associations (Kailua, Waimanalo and Kaneohe) and Clubs in the "night of horrors," parade for the little Keiki's in halloween costumes, and when the rains came in the last few months, there always are floods, the club was again called into action, and worked many hours for the State of Hawaii Red Cross Disaster Network and shelters and on the road for rescue work.

The club members are individually and collectively associated with The American National Red Cross Disaster Communication Service and Civil Defense Communications efforts. Drills are held occasionally to keep abreast of problems and to become efficient in case of any type disaster. The club offers its help whenever it can be of assistance.

As of present there are two (2) chapters very active with Citizen Banders Hawaii, they are: Honolulu Chapter and Koolau-poko Chapter. The other two (2) CB chapters Kalihi and Waianae separated from its "mother parent" Citizen Banders Hawaii. Kalihi Chapter became "Hawaii Radio Club." In place of Waianae Chapter which this chapter dissolved and another CB club was organized called: Waianae CB Radio Club, Inc.

PACIFIC

A new CB club has been organized at The Dalles, Ore., which is known as The Columbia Basin Search & Rescue Club. The first official meeting of the club was held on July 15, 1965. The following officers were elected to office.

Paul Dowling, President; Eugene Christensen, Vice-President; Jackie Christensen, Secretary-Treasurer; Donald Davidson, Sergeant of Arms and Emergency Radio; James Lee, Publicity Chairman and Activity; Fred Gearhart, Membership Chairman; Lois Lee and Marge Dowling, Welcoming Chairmen.

The by-laws and procedures were adopted at that time. The functions of the club is to perform radio communications, search and rescue activities on completion of training. Each member will be qualified to give first-aid. First-aid classes are to start in the next few days. The Club will be available to anyone in need of search for lost persons and rescue work. A phone number will be made public at a later date.

Meetings are to be held the 2nd and 4th Thursday of each month, at 7 p.m. Anyone interested in the meetings are invited to attend. Notice of meetings and place will appear in local paper.

WESTERN

The Citizens Radio Service and the Amateur Radio

Continued on page 71

"CREAM OF THE CROP"...

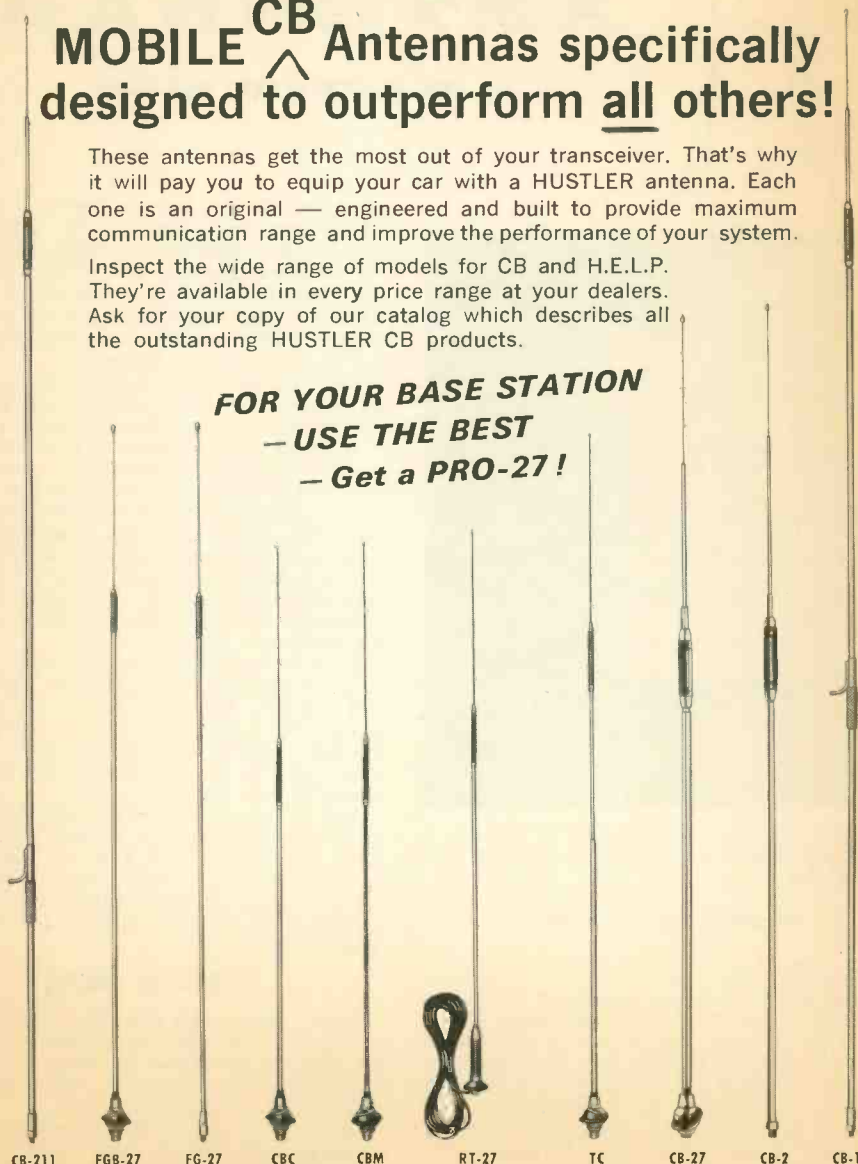
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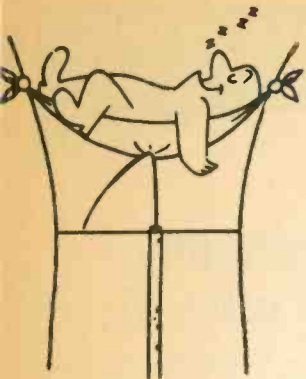
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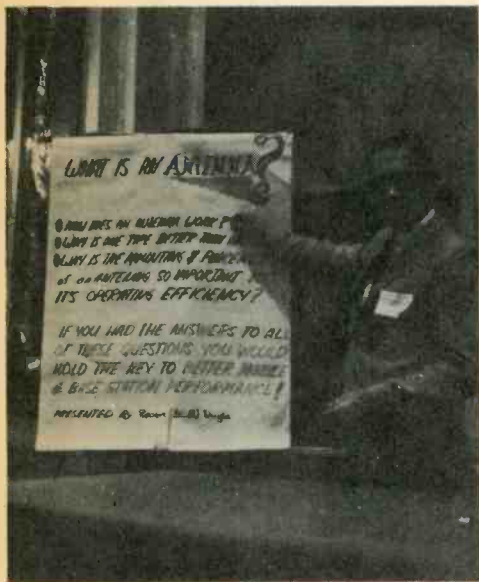
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ANTENNAS

by LEN BUCKWALTER, KBA4480



Bob Ruyle, Hy-Gains roving goodwill ambassador, is shown explaining antenna theory and practice at a CB gathering.

43,000-MILE CONTACT

Who holds the world's record for greatest mileage in a CB antenna operation? We bet on Bob Ruyle. His distance: 43,000 miles. But it wasn't by working skip or raising tall towers. That's the number of miles Bob drove last year as roving goodwill ambassador for the Hy-Gain Company. In speaking to CB clubs around the country, he's visited 31 states, and estimates that some 30,000 CB'ers have listened to his talks. And what a performance he turns in!

Bob is a peppery, pint-size dynamo who knows how to hold his audience—he's sort of a Billy Graham with a degree in electrical engineering. At one point he raises hell-fire because you looked at the instruction booklet *after* raising the antenna. The next moment he's explaining

some fine point in antenna theory so even Aunt Sophie can understand it. In between Bob sprinkles in comments that tickle at least part of his audience—like this one: "Since those new rules went into effect, I've seen a lot of new 100-foot high yard lights being put up around the country. (Of course you can guess what's being put up on top of those lights.)

But a big part of Bob's talk is devoted to solid information on how antenna installations go wrong and what to do about it. Some items:

Nine out of ten complaints about poor antenna performance after six months of operation can be traced to the coax connector. As Bob observes, you can squeeze water from some plugs, much like getting milk from a cow. Connectors aren't meant to be waterproof and need some treatment during installation. A good wrapping with vinyl tape will turn the trick. Or coating with some compound like GE's silicone rubber also keeps the inside dry.

Failure to ground the antenna mast is another frequent bugaboo that steals some performance.

If you use a beam antenna, be sure to keep it at least 12 feet away from any nearby metal. It could possibly upset performance. Such objects could be a TV antenna, rain gutters, or electrical power lines.

And when you write to the manufacturer, for Pete's sake, just don't say "it doesn't work." Give every tiny little detail you can possibly remember; antenna location, distance from other objects, nature of those objects, etc. This is a big help to an engineer trying to puzzle out the right answer.

WAY-OUT NOISE

"Why," one reader asks, "do I hear noise in my rig even when there are no nearby cars causing ignition interference or electrical appliances in operation. The noise reads a different number of S-units at different times."

Once you've ruled out two important sources—man-made interference and noise generated within the receiver itself—there are two other big possibilities to explain a variation in receiver noise level. One is atmospheric; the other, cosmic.

Atmospheric noise is obvious during a thunderstorm. You not only see lightning but hear the static crashes in the receiver. But even unseen

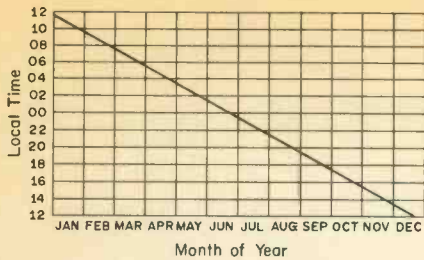


Chart showing cosmic noise at different times of the year. See text.

thunderstorms thousands of miles away are able to produce long-range signals that travel to your antenna to produce an average noise level which shifts hour by hour, day by day.

Even though the origin of atmospheric noise is not completely understood, this much is known. According to estimates, there are about 2,000 thunderstorms in progress throughout the world as you read this sentence. And the greatest number tends to lie in what's known as the equatorial weather front. This region, which girdles the earth's middle, takes in such areas as Central America, East Indies and Equatorial South America and Africa. What's more, the weather front changes in position from day to day and moves to the north or south with the sun according to the season.

But the curious thing about equatorial thunderstorm activity is that it generates long-distance signals to just about every point on earth. And you can talk about these signals in the same way as you would regular radio waves (which they are). They travel in all directions by ground-wave and skip transmission. Since they reach your antenna at the rate of about 10,000 to 20,000 times each second, they're heard as steady noise, like frying eggs.

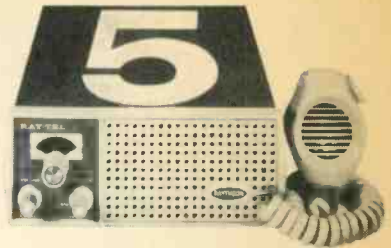
Cosmic noise, on the other hand, arrives from great distances beyond the atmosphere. Its considered an especially important noise source for frequencies greater than 15 mc (and thus CB). Investigators have pinpointed certain hotspots of radio activity which seem to originate in our own galaxy, the milky way. They've plotted its main center at what the astronomers call "right ascension." Nothing more than a term for identifying a position out in space. And each time that patch of sky swings over your antenna, up goes the noise level.

Since the earth is in motion, cosmic noise seems to occur at different times of the day according to season. If you like to do a bit of detective work, and predict when noisy right ascension occurs each day, just use the chart shown here.

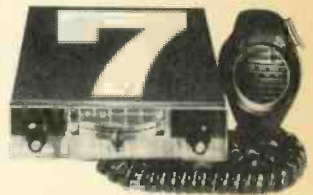
First pick out the month of the year along the bottom of the chart. Then run your finger straight up until you hit the line. Then go over to the left and read off the time of day. This gives the hour of right ascension at your location. For example: if the month is November, cosmic noise should be greatest at 2:00 in the afternoon.



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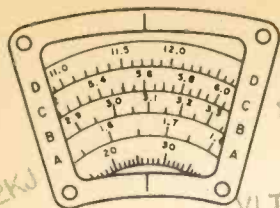
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THE SWL SHACK

BEST BETS FOR LISTENERS ON THE DX BANDS

by RICK SLATTERY



Some nice photos from contributors this month, the first one is of the southernmost SWL in the U.S., Dave Rosso, of Key West, Fla. Don't get shook up by the ham rig atop the CB set—it's for when Dave gets his Ham ticket! Dave, when you get your Ham license, let's see if you can get S9's Editor, Tom, to fire up his station. TK's call is K2AES, and his QSL card is really S-I-C-K!

Our other photo this month is from Rodney H. Johnson, KMK1556, of Hampton, Va. The gear at Rod's shack is a Drake 2-B receiver, and a Hallicrafters S-118. The antenna is a 65 foot longwire—unsophisticated but efficient! Rod promises to be a regular contributor.

With the Hurricane season upon us, you might get a kick out of taking a listen to some of the U.S. Weather Bureau stations which come alive during these weather disturbances. They'll QSL too. Listen on 2776 and 6977 kc/s for a starter. They operate on other frequencies too, but you'll have to dig them out for yourself. Some of the calls heard have been KEB86 and 87 at Cape Hatteras, N. C., KGD72 in Washington, D.C., KAE51/KID75 in Nantucket, Mass., and KEB83 in Boston, Mass.

I think that, as we go along with this department, we will try to furnish you with some lists of the more interesting stations which cannot be sorted out regular radio lists. This might include lists of Coast Guard call signs and frequencies and also other governmental stations, such as all of the known Weather Bureau stations—these lists have



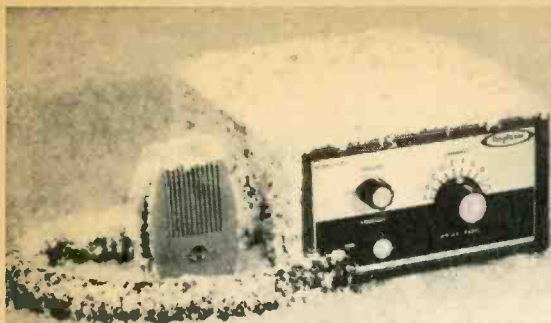
never before appeared in a magazine. An S9 exclusive!

Mike Esposito, of Brooklyn, N. Y. sends along word of RCA test transmissions from Kahuku, Hawaii, on 18870 kc/s. No regular sked, but they do verify reports. Mike says that at Andrews AFB in Washington, D.C., there is a link for all military aircraft flying over the North Atlantic. They can be logged around 3.2 mc/s and will verify.

On the shortwave broadcast scene, we suggest that you look for the following: RAI, Rome, Italy, in English on 9630 and 11905 kc/s at 2000 to 2020 EST; *Radio Pyongyang*, N. Korea, in English at 2300 to 2400 EST on 14520 and 15520 kc/s, also 1400 to 1500 EST on 6540, 7580, 9875, and 11750 kc/s; *Voice of The West, Lisbon*, Portugal, in English, 0815 to 0900 EST on 17895 and 21495 kc/s; *Radio Ghana* in English at 1530 EST and past on 9760 kc/s; *Radio Tirana*, Albania, in English, at 1900 to 1930 EST on 7265 kc/s (even though they announce that they are on 9700 kc/s!); *Radio Algiers*, Algeria, in English at 1700 to 1730 EST on about 6050 to 6065 kc/s; *Radio Village, ELWA*, Monrovia, Liberia, in English at 1730 EST on 3225 kc/s (this isn't an easy one to hear at this hour on this frequency); *Radio Pakistan*, Karachi, Pakistan, in English at 1345 to 1440 EST on 9615 and 11672 kc/s.

Send in those reports and shack photos!

S9



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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 256 D. Moss, KLP7578, Endicott, N. Y.
257 P. Flynn, KKP3015, Orlando, Florida
258 R. Williams, KGI8903, St. Joseph, Missouri
259 Judge Noble Littell, KNJ6056, Martinsville, Ind.
260 Don Theisen, KNM0810, Norwalk, Ohio
261 Dick Stout, KHC4453, Chatham, Ill.
262 Richard Clogston, KKA4210, Starke, Maine
- PX-25 504 R. McMahon, KLV0247, Washington, D. C.
505 R. Saltsman, KLN6383, Salineville, Ohio
506 T. Siddons, KNJ2128, East Moline, Ill.
507 D. Pfisterer, KBG3329, Amityville, N. Y.
508 Bill & Pat Parker, KNV0070, Washington, D. C.
509 D. Conder, KNJ4430, Centralia, Ill.
510 S. Monter, KMD2795, Bronx, N. Y.
511 E. Peschke, KKT0708, Bryan, Texas
512 E. El STG/3, KNA2893, PPO San Francisco
513 R. Lake, KKA5748, Haydenville, Mass.
514 Charles Lee, KJE0047, Washington, D. C.
515 Dick Stout, KHC4453, Chatham, Ill.
516 Larry Huggins, KNH0542, Olathe, Kansas
517 Donald Ebbeson, KNF0919, Paxton, Ill.
518 Jerry Morgan, KMM1484, Mt. Pleasant, Tenn.
519 R. Maier, KLQ2438, Fort Plain, N. Y.
520 A. Jackson, KMP3244, Auburndale, Fla.
521 B. & D. Ross, KMD0217, Oceanside, N. Y.
- PX-50 430 J. Hnasko, KID8954, Hazelton, Pa.
431 R. Snyder, KCD1652, Red Lion, Pa.
432 R. McMahon, KLV0247, Washington, D. C.
433 R. Saltsman, KLN6383, Salineville, Ohio
434 T. Siddons, KNJ2128, East Moline, Ill.
435 D. Pfisterer, KBG3329, Amityville, N. Y.
436 D. Conder, KNJ4430, Centralia, Ill.
437 E. Peschke, KKT0708, Bryan, Texas
438 Charles Lee, KJE0047, Washington, D. C.
439 Donald Ebbeson, KNF0919, Paxton, Ill.
440 Larry Huggins, KNH0542, Olathe, Kansas
441 Dick Stout, KHC4453, Chatham, Ill.
442 Dick Newell, KNP2730, Jamestown, N. Y.
443 John Pfau, KLL0517, Chicago, Ill.
444 J. Moriarty, KKA8101, Florence, Mass.
445 S. Ray, KMI0032, Bridgeport, W. Va.
- PX-75 329 G. Raybin, KBI0854, New York, N. Y.
330 T. Twine, KCI5991, Suffolk, Va.
331 R. McMahon, KLV0247, Washington, D. C.
332 T. Siddons, KNJ2128, East Moline, Ill.
333 D. Conder, KNJ4430, Centralia, Ill.
334 Judge Littell, KNJ6056, Martinsville, Ind.
335 Allen Warshaw, KLJ0280, Chicago, Ill.
336 Ed Linde, KHD7698, Glenwood, Ill.
337 R. Moore, WPE3CGR, Wilmington, Delaware
338 Donald Ebbeson, KNF0919, Paxton, Ill.
339 Larry Huggins, KNH0542, Olathe, Kansas
- 340 Dick Newell, KNP2730, Jamestown, N. Y.
341 Dick Stout, KHC4453, Chatham, Ill.
342 J. Moriarty, KKA8101, Florence, Mass.
343 Terry Henry, WPE1SCC, Keene, N. H.
344 M. Royal, KKP4196, Auburndale, Fla.
345 S. Ray, KMI0032, Bridgeport, W. Va.
- PX-100 302 D. Moss, KLP7578, Endicott, N. Y.
303 T. Siddons, KNJ2128, East Moline, Ill.
304 R. McMahon, KLV0247, Washington, D. C.
305 R. Gevertz, KLA3491, San Francisco, Calif.
306 G. Raybin, KBI0854, Bronx, N. Y.
307 Judge Littell, KNJ6056, Martinsville, Ind.
308 R. Moore, WPE3CGR, Wilmington, Del.
309 J. Moriarty, KKA8101, Florence, Mass.
310 L. Huggins, KNH0542, Olathe, Kansas
311 Dick Stout, KHC4453, Chatham, Ill.
312 G. Marchand, KKK4819, Huntingport, Calif.
313 S. Ray, KMI0032, Bridgeport, W. Va.
- PX-125 231 D. Moss, KLP7578, Endicott, N. Y.
232 R. McMahon, KLV0247, Washington, D. C.
233 Peter Barbera, KHD8077, Chicago, Ill.
234 J. Moriarty, KKA8101, Florence, Mass.
235 Dick Stout, KHC4453, Chatham, Ill.
236 Bob Kretzer, KKI4592, Hagerstown, Md.
237 G. Raybin, KBI0854, Bronx, N. Y.
- PX-150 192 D. Moss, KLP7578, Endicott, N. Y.
193 R. McMahon, KLV0247, Washington, D. C.
194 Pop Utah, KKA8441, Poquonock Bridge, Conn.
195 R. Williams, KGI8903, St. Joseph, Mo.
- PX-175 160 Pop Utah, KKA8441, Poquonock Bridge, Conn.
161 L. Aspinall, KBH8595, N. Haven, Conn.
162 Hootin Annie, KKA3340, Poquonock Br., Conn.
163 J. Mory, KKI2063, Baltimore, Md.
164 George Wiles, KKB4015, Williamstown, Miss.
165 R. Shultz, Shipman, Ill.
166 B. Williams, KGI8903, St. Joseph, Mo.
- PX-200 138 Hootin Annie, KKA3340, Poquonock Br., Conn.
139 J. Mory, KKI2063, Baltimore, Md.
140 R. Shultz, Shipman, Ill.
- PX-225 122 C. Sylvester, KLK5617, Chicago, Ill.
123 H. Fowkes, KLP5005, Duncansville, Pa.
124 W. Shumway, KHA5298, Chicago, Ill.
- PX-250 173 C. Sylvester, KLK5617, Chicago, Ill.
174 R. Thatcher, KBG7687, Hudson, N. Y.
175 W. Shumway, KHA5298, Chicago, Ill.
- PX-275 107 W. Shumway, KHA5298, Chicago, Ill.
108 C. Sylvester, KLK5617, Chicago, Ill.
- PX-300 107 W. Shumway, KHA5298, Chicago, Ill.
108 C. Sylvester, KLK5617, Chicago, Ill.
- PX-325 103 W. Shumway, KHA5298, Chicago, Ill.
104 C. Sylvester, KLK5617, Chicago, Ill.
- PX-350 104 W. Shumway, KHA5298, Chicago, Ill.
- PX-450 102 B. Ross, KCG1087, Washington, D. C.
- PX-600 101 S. Penc, KJI3337, Utica, N. Y.
- MSA 186 L. Aspinall, KBH8595, N. Haven, Conn.
187 R. Williams, KGI8903, St. Joseph, Mo.
188 R. Crigger, KCF2446, Baltimore, Md.

189 Richard Clogston, KKA4210, Starks, Maine
190 R. Shultz, Shipman, Ill.

SSC-1 200 J. DuBois, KKD6389, Middletown, N.Y.
201 R. McMahon, KLV0247, Washington, D.C.
202 Hootin Annie, KKA3340, Poquonnock Br., Conn.
203 Pop Utah, KKA8441, Poquonnock Br., Conn.
204 V. Cavicchi, KKD7623, Morrilstown, N.J.
205 R. Williams, KGI8903, St. Joseph, Mo.

SSC-2 156 Hootin Annie, KKA3340, Poquonnock Br., Conn.
157 Pop Utah, KKA8441, Poquonnock Br., Conn.
158 George Wiles, KKB4015, Williamstown, Miss.
159 Jack Mory, KKI2063, Baltimore, Md.

SSC-3 130 Hootin Annie, KKA3340, Poquonnock Br., Conn.
131 Pop Utah, KKA8441, Poquonnock Br., Conn.
132 Don Theisen, KNM 0810, Norwalk, Ohio

SSC-11 107 H. Fowkes, KLP5005, Duncansville, Pa.
108 W. Shumway, KHA5298, Chicago, Ill.

SSC-12 105 H. Fowkes, KLP5005, Duncansville, Pa.
106 W. Shumway, KHA5298, Chicago, Ill.
107 B. Ross, KCG1087, Washington, D.C.

SSC-13 105 H. Fowkes, KLP5005, Duncansville, Pa.
106 W. Shumway, KHA5298, Chicago, Ill.
107 B. Ross, KCG1087, Washington, D.C.

SSC-14 104 W. Shumway, KHA5298, Chicago, Ill.
105 B. Ross, KCG1087, Washington, D.C.

SSC-15 104 W. Shumway, KHA5298, Chicago, Ill.
105 B. Ross, KCG1087, Washington, D.C.

SSC-16 104 W. Shumway, KHA5298, Chicago, Ill.

SSC-17 104 W. Shumway, KHA5298, Chicago, Ill.

SSC-18 103 W. Shumway, KHA5298, Chicago, Ill.

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 Vanderver Avenue, Port Washington, N. Y. 11050. Deadline for listing in the December issue is October 12th. Any cards received after this date will be listed in the following issue.

Here are this months swappers:

1Q4271 Henry Sowa, P.O. Box 571, Holyoke, 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.
3Q2103 Dorothy Teague, Box 99, Wrightstown, N.J.
5Q2178 Elwyn Beam, Route 2, Vale, N.C.
6W7263 Bill Orton, 905 Altamaha St., Chattanooga, Tenn.
9Q0472 Ben Bailey, 4201 Nagel St., Bryan, Texas
11Q1313 Desert Rat! 1171 W. Miracle Mile, Tucson, Ariz.
11Q2714 Eileen Inns, 530 Catalina Dr., Newport Beach, Calif.
11W9750 G. Strainline, 1171 W. Miracle Mile, Tucson, Ariz.
18B2648 Glenn Davis, 6143 North Rockwell St., Chicago, Ill.
18Q0229 Barney Ross, 4022 Cameron St., Hammond, Ind.
18Q3779 L. A. Morrow, 2210 N. Gayman Ave., Davenport, Iowa
18Q4913 Tom Leadbetter, R. R. 4 - Box 40, Muncie, Ind.
18Q6800 Dick Markle, Box 75 -- 11210 Arcola Rd., Arcola, Ind.
19A8148 Gene Hecht, 26 Sheridan, Pontiac, Mich.
19Q8152 John Kasten, 5916 Westbrook Dr., Brookpark, Ohio
19Q9470 Adrian Fallert, 121 N. "C" St., Hamilton, Ohio

19Q9941 Martin Ripper, 7617 Cavell, Garden City, Mich.
20Q1360 Ivan Smith, 419 Water St., Danville, Pa.
KAG2486 Dave Buda, 717 Centre Street, Nutley, N.J.
KAJ0765 J. L. Kirkland, Route 7, Raleigh, N.C.
KAR0738 The Card Swapper, P.O. Box 411, Westfield, Mass.
KBA2894 Charlie Ambush, 31 Pleasant St., Cambridge, Mass.
KBA5557 Ted Cummings, Bellflower Rd., Billerica, Mass.
KBA7154 Rodney Nelson, Hideaway Lane, Norwalk, Conn.
KBA8595 Lee Aspinall, 20 Forest Ave., North Haven, Conn.
KBC3375 Linwood Lord, 26 Chestnut St., Richmond, Maine
KBC6229 Paul Conant, 139 North Main St., Florence, Mass.
KBC6415 Donald Aspinall, 20 Forest Ave., North Haven, Conn.
KBC6510 Ralph Bryant, 716 Riverside Dr., Fairfield, Conn.
KBC6819 Robert Glustina, 68 Dunmoreland St., Springfield, Mass.
KBC7935 Kathy Connor, 136 Tallman St., New Bedford, Mass.
KBC9193 John Weigel, 119 Shaw St., New London, Conn.
KBC9285 John Christofaro, 7 New Lane Road, New Canaan, Conn.
KBD0747 Herb Girard, 348 Carrington Ave., Woonsocket, R.I.
KBD0784 Jack Suplicki, 2 Willey Pl., Norwich, Conn.
KBD1300 Ray Grele, 9 Argyle Circle, Seymour, Conn.
KBD1849 Paul Sanders, 5 Victor Rd., Framingham, Mass.
KBG6576 Charles Arnwine, 725 South Broad St., Trenton, N.J.
KBG7180 Pat Purcell, 99 Harvard Dr., Hartsdale, N.Y.
KBG7687 Robert Thatcher, R.R. 1 - Box 59-B2, Hudson, N.Y.
KBG8079 Alvin T. Allen, 610 Prospect Ave., Spring Lake Hgts. N.J.
KBH0853 Tom Walton, 324 Kenilworth Rd., Louisville, Ky.
KBH1426 Fred Stearman, R.R. #1 - Box 16, Erie, Ill.
KBH1571 Morrie Goldman, 8046 South Euclid Ave., Chicago, Ill.
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.
KBI2504 Mike Troy, 271 North Ridge St., Port Chester, N.Y.
KBI4141 Danny Seifert, 163 So. Main St., Phillipsburg, N.J.
KBI5592 George Gross, Waring Rd. M.D. 15, Newburgh, N.Y.
KBI6025 Max Latterman, Box 608, RD #1, Princeton, N.J.
KBI6373 Charles Bennett, 89 Valley Rd., Haworth, N.J.
KBI6480 Art Scheid, 2 Essex Place, Hartsdale, N.Y.
KB17301/1 Bob Mhlon, 163 Thomas St., Bloomfield, N.J.
KB18077 John Krejc, 60 Division Ave., Garfield, N.J.
KB19499 Herbert Kuehike, 10 E. Grand Ave., Montvale, N.J.
KB1722 George Hunt, 353 Highland Ave., Middletown, N.Y.
KB20555 Harmon Heller, 610 East 20th St., New York, N.Y.
KCA0102 Frank Askinazy, 1034 Ralph Ave., Brooklyn, N.Y.
KCC1541 Donald Berle, 228 California Rd., Quakertown, Pa.
KCC4461 Warren Greenspan, 1144 Oliver Rd., Huntingdon Valley, Pa.
KCD1896 Howard Taylor, South DuPont Rd., Penns Grove, N.J.
KCD3398 Roger Miller, R. D. 2, Kempton, Pa.
KCD3484 Pat Telstar, 513 East Market St., Pottsville, Pa.
KCD5000 Bill Kochoer, 702 Cambridge Ave., Bethlehem, Pa.
KCD5165 John Shronk, Box M, Mont Clare, Pa.
KCD5491 Bernie & Phyllis, 1509 Bondridge Rd., Wilm, Del.
KCD6109 Lois Lowell, R.D. 2, Sellersville, Pa.
KCD6125 Neil O'Connell, 22 Cassatt Ave., Berwyn, Penna.
KCF2541 James Lofton, 712 N. Loudoun St., Winchester, Va.
KCG0346 Bailey Curtis, 1028 Harrison Ave., Elkins, W. Va.
KCG0706 Eddie Becker, 5606 Franconia Rd., Alexandria, Va.
KCG1087 Barney Ross, 425 Garden St., Washington, D.C.
KCG1835 Edsel Peacemaker, Route 2, Winchester, Va.
KCG2419 Park Bedford, 4903 Asbury Lane, Bethesda, Md.
KCG2891 Edith Becker, 5606 Franconia Rd., Alexandria, Va.
KCG3236 Bob Gallery, 5013 Westport Rd., Chevy Chase, Md.
KCG3068 Ricky Lowman, 1001 W. Addition, Martinsburg, W. Va.
KCG3569 Charles Berry, Nomreh Rd. Rt. 3, Salisbury, Md.
KCG3575 Jim Lott, White Post, Va.
KCG3689 Ed. Ross, 1967th Comm. Sqdn, APO San Francisco, Cal.
KCG4106 Dave Royer, Route 1, Box 133, Finksburg, Md.
KCI2842 Clarence Moore, Route #4 - Box 34, Thomasville, N.C.
KCI5991 Hillery Twine, 2815 Norfolk Rd., Suffolk, Va.
KCJ2292 Hazel Stubbs, P. O. Box 1076, Rockingham, N.C.
KCJ3880 Lee Willick, 3709 Hester Circle, Raleigh, N.C.
KCJ4079 Jack Kirby, 3601 North Ave., Richmond, Va.
KCJ4187 Joel Smyre, 747 S. Brady Ave., Newton, N.C.
KCJ4911 Jearl Bishop, 1801 Chatham Ave., Charlotte, N.C.
KCJ5002 J. L. Kirkland, Route 7, Raleigh, N.C.
KCJ5092 Doug Paynter, 1001 East Jefferson, Charlottesville, Va.
KCJ5244 Joe Tuttle, Route 1, Rural Hall, N.C.
KCJ6987 Tommy Pollok, Gladys, Virginia
KCJ7737 Allison Clarke, 1009 Hamilton Ave., Clifton Forge, Va.
KCJ7851 The Morrisons, 826 Longview Dr., Woodbridge, Va.
KCJ9615 James Surratt, Route 2, Box 86, Denton, N.C.
KDB0371 Bill Howell, 545 Palmetto Lane, S.W., Aiken, S.C.
KDB5453 Isadore Daitch, Box 182, Louisville, Ga.

KDB9372 Claude Hooper, RFD 3, Box 130, Sylva, N.C.
KDC0443 John Blankenship, P.O. Box 363, Grayson, Ky.
KDC0614 Clarence Hnanicek, 10809 Prince Ave., Cleveland, Ohio
KDC0843 Raymond Shoely, Box 95, Petersburg, Ohio
KDC1255 Ben Hefner, 1804 Lennox Ave., Lima, Ohio
KDC2091 Charlie Kreuger, Rt. 2, Marion, Ohio
KDD2134 Michael Ashby, 316 S. Franklin St., Tullahoma, Tenn.
KDE0565 Rodney Wise, P.O. Box 2953, Asheville, N.C.
KDE3230 George Payne, 17 Orton Drive, Maryville, Tenn.
KDI1736 Lew Shacklee, 301 Cortez Road, East, Bradenton, Fla.
KD13211 Bill Wiley, 1601 Cimarron Trail, Wichita Falls, Texas
KD13528 Ray & Ruth, 3073 Ravenswood Rd., Ft. Lauderdale, Fla.
KD13558 Tom Smith, P.O. Box 147, Orlando, Fla.
KDJ0332 Nick Miller, Box 3006, St. Petersburg, Fla.
KEB1659 Ed. Field, P.O. Box 481, Gautier, Miss.
KEB1661 Bob Fancher, Darling, Miss.
KEB4002 Al Mayer, 306 West 8th, North Little Rock, Ark.
KEB4580 Jerry Barnes, 921 Edgemore Dr., Olathe, Kansas
KEB5455 Buddy White, 375 Stevensdale Rd., Baton Rouge, La.
KEE2743 Harry Hoffpowner, 724 Coolidge Rd., Channelview, Tex.
KEE3288 Bill Long, 1110 Rouse, Houston, Texas
KEH5846 Kenneth Bales, Box 295, Guyton, Okla.
KEH7099 Larry Miller, 6907 N.W. 59th St., Bethany, Okla.
KEJ0071 Melvin Nutting, 932 Western Ave., Colton, Calif.
KEJ1341 E.H. Rogers, 2495 E. 6th St., San Bernardino, Calif.
KEJ3938 Bill McCarver, 3712 Mt. Aladin St., San Diego, Calif.
KEJ5828 John Hamner, 12350 So. Fern Ave., Ontario, Calif.
KEJ5869 Johnnie France, Box 4146, Riverside, Calif.
KEJ6681 Bob Osterhout, 3624 Meier St., Los Angeles, Calif.
KFA2338 Frank Whetzel, 916 Larker Ave., Los Angeles, Calif.
KFA4238 Al Froelich, 4128 Casita Way, San Diego, Calif.
KFA6387 George Prock, 4814 W. 131st Street, Hawthorne, Calif.
KFA9923 Helen Morse, P.O. Box 1395, Ontario, Calif.
KFB0396 Ron Federico, 815 No. Palisade Dr., Santa Maria, Cal.
KFB0588 Don Zumwalt, Apt. 51, 5325 Sanger Ave., Alexandria, Va.
KFD1525 Chuck Watrous, 421 W. 12th St., Tracy, Calif.
KFD2055 Chuck Boehnke, P.O. Box 223, Los Gatos, Calif.
KFD2822 Leon Bagdad, 844 W. Dayton, Fresno, Calif.
KFD5345 Cecil Long, P.O. Box 367, Ivanhoe, Calif.
KFD5811 Larry Kluender, P.O. Box 183, Oroville, Calif.
KFD5994 Howard Daub, 3335 Moon Ave., Stockton, Calif.
KFD6256 Sparky Pinola, 3335 Mabel St., Sacramento, Calif.
KFE0284 Julius Greenberg, 1326-32 9th St., Modesto, Calif.
KFI1219 Jack Sudduth, 8103 16th S.W., Seattle, Wash.
KFJ0479 Agnes Sudduth, 8103 16th S.W., Seattle, Wash.
KGC2576 Gene Godsoe, 1406 Oneida St., Denver, Colo.
KGF1675 Earl Wertz, 79 Kincheloe St., Kincheloe AFB, Mich.
KGH2584 Joseph Rose, 1009 Figg, Wichita, Kansas
KGH3372 Wayne Hutchins, P.O. Box 311, Carthage, Mo.
KGI1077 Bob Fellows, Box 38, Goff, Kansas
KGI3589 Clarence Fleagle, R.R.#1, Abilene, Kans.
KGI6100 Robert Schmink, 357 No. Waco, Wichita, Kans.
KGI6979 Don Marshall, 301 Circle Dr., Carrollton, Mo.
KGI7912 Ron Stoneburg, Box 221, Omaha, Nebr.
KGI8903 Ralph Williams, 3420 Nickell Dr., St. Joseph, Mo.
KGI9206 Bud Ward, 968 Lindeman, Des Peres, Mo.
KHA0733 Harold Handley, 13800 W. 145th Pl., Lockport, Ill.
KHA3503 Ove LaPlante, 2978 N. Teutonia Ave., Milwaukee, Wis.
KHA3908 Michael Hencz, 6080 N. Elston Ave., Chicago, Ill.
KHA5150 Virg Mansfield, 600 West 7th, Muncie, Ind.
KHA8376 Gordon Velpel, 801 S. Franklin St., Garrett, Ind.
KHB1210 Larry Rost, R.R. #2, Muscatine, Iowa
KHB2113 Risley Farms, Rural Route 4, Hwy 15 W., Mt. Carmel, Ill.
KHB3556 John Ernstberger, 3516 S. Hermitage Ave., Chicago, Ill.
KHB3971 Larry Parkhurst, 1000 West 11th St., Muncie, Ind.
KHC0280 Dick Dill, 505 W. Cherry, McLeansboro, Ill.
KHC4185 Lou Chappell, 3644 E. Minnie St., Decatur, Ill.
KHC8347 Jim Taylor, Rosine, Kentucky
KHD1288 Charles Couchman, Box 194, North Vernon, Ind.
KHD2732 Nick Schmidt, 1719 W. Catalpa, Chicago, Ill.
KHD3773 Percy Hunt, 1152 Bigger St., Gary, Ind.
KHD4705 George Newberry, 1027 W. Douglas S., Freeport, Ill.
KHD5772 Jim Carey, R.R.#1, Sylvan Lake, Rome City, Ind.
KHD7551 Daryl Dudick, 9931 South Calhoun, Chicago, Ill.
KHE0968 Mick Newton, 634 Madison Ave., Evansville, Ind.
KHC3085 Edwin Chisholm, 1825 Avon St., Saginaw, Mich.
KHG4945 C.M. Cooley, 1006 Hooven Ave., Hamilton, Ohio
KHG5776 Larry Hensley, 15 N. Dewey Rd., Anselst, Ohio
KHG5896 Ron Neufeld, 3090 E. Derbyshire, Cleveland Hts, Ohio
KHG5905 Bill Clouse, 569 Carey St., Zanesville, Ohio
KHG6176 Herman Werfelle, 3121 Jacob St., Wheeling, W. Va.
KHG8600 Watt Gilbert, Comfort, West Virginia
KHG9069 Herb Riggie, Route 5, Zanesville, Ohio
KHG9085 Alfred Hogan, 1108 Walker St., Mansfield, Ohio
KHH1363 Geo. Radenheimer, 3121 Andrew St., Middletown, Ohio
KHH12828 Frank Hall, 711 Water St., Barboursville, W. Va.
KHH13134 Flint McCullough, 800 12th St. S.W., Massillon, Ohio
KHH3585 Leon Breeze, 5660 Hipp, Dearborn Hts, Mich.
KH14973 John Campbell, 216C FTD Box 201, Dow AFB, Bangor, Me.
KH19979 Gene Taylor, 121 N. Adolph Ave., Akron, Ohio
KHJ1206 Marty Snyder, 1516 Lockwood Rd., Barberton, Ohio
KHJ1448 Rickey Atkinson, 525 First Ave., So. Charleston, W. Va.
KHJ1858 Norm Owings, 505 N. Clairmont, Springfield, Ohio
KHJ3477 Donald Belltz, 13474 Enid Blvd., Lake Fenton, Mich.
KHJ3482 Robert Albright, R. 3, Alpena, Mich.
KHJ3914 Ralph Jester, 564 Round Lake Dr., Mich. Center, Mich.
KHJ4747 Don Senger, 2650 Mandale, Orchard Lake, Mich.
KHJ5042 Harold Davis, 9575 Shell Beach Rd., Punckey, Mich.
KHJ6874 Richard Cady, P.O. Box 193, Winchester, Ky.
KHJ7033 Max Green, 100 North Main St., No. Baltimore, Ohio
KHJ7131 Ken Massie, 115 Woodlawn Dr., Ironton, Ohio
KHJ7270 Bob Wilkinson, 500 Magnolia Ave., Cuyahoga Falls, Ohio
KHJ7892 Boots Beaudry, Box 252, Trenton, Mich.
KHJ7895 Bob Best, 12067 Greenlawn, Detroit, Mich.
KHJ7920 Maury Lacker, Route 1, Berea, Ky.
KHJ8472 Doug Thrasher, 1164 Lindsay Ave., Akron, Ohio
KHJ9411 Jim Watts, 28 S. Pembroke Ave., So. Zanesville, Ohio
KHJ9558 Ed Leonhardt, 3518 Smithfield Lane, Cincinnati, Ohio
KIA0468 Clarence Kernstock, 1820 Filmore Pl., Essexville, Mich.
KIA0762 Leroy Butler, 1808 Lennox, Lima, Ohio
KIC1185 Curt Hammond, Rensselaer Falls, N.Y.
KIC1207 Arlene Warner, 2273 Mosser Ave., Williamsport, Pa.
KIC2881 Mike Ripski, 72 Mooney Rd., Plymouth, Pa.
KIC3500 Ruthie Bopp, 350 W. Fifth St., Lewistown, Pa.
KIC5642 Dave Klimeck, 218 Ottawa St., Johnstown, Pa.
KID0007 Fred Martz, Davis-Lane Speedway, Hustontown, Pa.
KID0186 Mike Reshetar, 102 1/2 Walnut St., Binghamton, N.Y.
KID3408 Bruce Sharer, R.D. Box 17, Boalsburg, Pa.
KID4563 Pete Gabrielli, 751 Parsells Ave., Rochester, N.Y.
KID5225 Harry Platt, R.D. 1 - Shaw Road, Conklin, N.Y.
KID5293 George Gould, P.O. Box 42, Hudson Falls, N.Y.
KID5869 Robert Kolock, 844 Taylor Rd., Hamburg, N.Y.
KID6004 Tony Kogut, Frankfort, New York
KID6356 Roscoe Harrington, 5 Schuyler St., Hudson Falls, N.Y.
KID6623 George Kline, 508 Monroe St., Jamestown, N.Y.
KID7260 Stan Breitkopf, 271 Stanton Lane, Rochester, N.Y.
KID8232 Roy McGregor, R.D. 2, Central Square, N.Y.
KIE0628 Al Guley, R.D. 3 - Box 392, Coraopolis, Pa.
KJC0223 J.C. McCalla, 273-G Dyea Ave., Ft. Richardson, Alaska
KJE0047 Charles Lee, 5130 Nebraska Ave. N.W., Washington, D.C.
KJH0032 Jere Caricofe, 2301 Norfolk St., Hopewell, Va.
KJH0080 Robert Grubbs, Route 3, Winston-Salem, N.C.
KJ10614 Joe Hamilton, R.D., New Milpott, Pa.
KJ10777 John White, 311 Owen Ave., Elmira Heights, N.Y.
KJ11072 Len Siedinski, 18 Ames Ave., Tonawanda, N.Y.
KJ12293 The Silver Eagle, 339 Harter St., Herkimer, N.Y.
KJ2342 Fenton's, 125 A-W Lake Road, Penn Yan, N.Y.
KJ2893 Isabel Ripski, 72 Mooney Rd., Plymouth, Pa.
KJ3461 John Garzel, Box 286, Austin, Penna.
KKA0658 Jerry Cote, 105 Old Walpole Rd., Keene, N.H.
KKA0850 Don Benoit, Lams Grove, Spencer, Mass.
KKA1997 Jim McSwain, RFD 2, Windsor, Vt.
KKA3088 John Myott, 16 Washington St., Westfield, Mass.
KKA3340 Hootin Ankle, 11 Fort Hill Rd., Poquonock Bridge, Conn.
KKA4210 Dick Clogston, Starks, Maine
KKA4441 Sherm Irishes, West Peru, Maine
KKA5174 George Brown, 101 Truman St., New London, Conn.
KKA5305 Chase's Engraving, 175 Kitemaug Rd., Uncasville, Conn.
KKA5308 John Mildner, Roberts St. RD. 1, Pascoag, R.I.
KKA6048 Mike Suintava, 198 Mercier Ave., Bristol, Conn.
KKA6885 William Lafond, Eagle Peak Rd., Pascoag, R.I.
KKA7064 Irving Norman, 9 Greenfield St., Pawtucket, R.I.
KKA7269 Phil Newcomb, 59 Center St., Ballardvale, Mass.
KKA7386 Tom Lambert, 295 Parkview Ave., Bangor, Maine
KKA7402 John Flynt Jr., Royal Coach Motel, Weirs Beach, N.H.
KKA8101 John Moriarty, 86 Beacon St., Florence, Mass.
KKA8218 Charlie Judd, 700 Marlboro St., Keene, N.H.
KKA8456 Joe Cambo, 31 Woodbury Ave., Norwalk, Conn.
KKA8964 CB Card Exchange, 3209 Main St., Stratford, Conn.
KKA9690 Peter Flynn, 212 Allen St., Springfield, Mass.
KKB0087 Brian Benkosky, 343 Washington St., Keene, N.H.
KKB0188 James Lacey, 46 Oread St., Worcester, Mass.
KKB0242 Robert Grip, 60 Sexton St., New Britain, Conn.
KKB0399 Paul Ferland, 32 Arland Dr., Pawtucket, R.I.
KKB0748 Tom Holland, South Rumford, Rumford, Maine
John Pluta, 31 Stony Hill Rd., Indian Orchard, Mass.

KKB1170 George Hensel, 37 Fairview Ave., Thompsonville, Conn.
 KKB2355 Brian Mulligan, 16 Winnemere St., Malden, Mass.
 KKB3387 Tom Wilmarth, 466 Main St., Cromwell, Conn.
 KKB3485 Russell Ferland, 32 Arland Dr., Pawtucket, R.I.
 KKB3548 John Monaco, 118 Ledgestreet Ave., New Britain, Conn.
 KKB3586 Ralph Gauthier, 227 Walnut St., Manchester, N.H.
 KKB3702 Ron Corda, 525 Nichols Ave., Stratford, Conn.
 KKB3740 Donald Cone, RFD 1, Box 54, White River Junction, Vt.
 KKB3757 Harrison Cunningham, 71 Water St., Hallowell, Maine
 KKB4058 Phil Gomez, Lebanon, N.H.
 KKD0349 Jack Golden, 5025 Broadway, New York, N.Y.
 KKD0491 Mike Kaplan, 37 Fairview Terr., Maplewood, N.J.
 KKD1177 Christopher Ordeal, 5 Shelley Rd., Short Hills, N.J.
 KKD1640 Al Stanley, 1056 President St., Brooklyn, N.Y.
 KKD1699 Lou Gangemi, 12 Shelley Ave., Hartsdale, N.Y.
 KKD1746 Ivan Samuels, 179 Glenview Rd., So. Orange, N.J.
 KKD1946 Al Neely, 90-26 215 Place, Queens Village, N.Y.
 KKD2292 Henry Meyer, 50 Knickerbocker Rd., Plainview, N.Y.
 KKD2495 Jay Dubner, 1072 Ruth Place, North Bellmore, N.Y.
 KKD2805 Gary Garcia, 164 Lenox Ave., Dumont, N.J.
 KKD4696 Ed. Ruthberg, 26 Jackson Ave., Middletown, N.Y.
 KKD5471 Clifton McGuire, 814 Southard St., Trenton, N.J.
 KKD5555 Stanley Borawski, 616 Cherry St., Trenton, N.J.
 KKD6389 Jean DuBois, RFD 4, Chestnut Hills, Middletown, N.Y.
 KKD6593 Peter Mozzone, 382 Horton Hwy., Mineola, L.I., N.Y.
 KKD7499 Norman Bernstein, 90 Redwood Ln., Massapequa Pk., N.Y.
 KKD7623 Vinny Cavicchi, Lake Valley Rd., Morristown, N.J.
 KKD7750 Joel Fishman, 1810-80 St., Brooklyn, N.Y.
 KKD7950 Joseph Krzanik, Box 171, New Baltimore, N.Y.
 KKD7992 Robert Berntsen, 85 Cypus Dr., Ringwood, N.J.
 KKD8372 Mike Mazzone, 438 Livingston Ave., Albany, N.Y.
 KKD8383 Bob Peterson, 61 Crosshill Ave., Yonkers, N.Y.
 KKD8808 Louis Famine, 355 Eighth Ave., New York, N.Y.
 KKD8859 Charles McNally, 36 Marble Hill Ave., New York, N.Y.
 KKD9510 Ray Dame, 38 Vliet St., Cohoes, N.Y.
 KKE0911 Mitch Zimmer, 1213 E. 83rd St., Brooklyn, N.Y.
 KKE0951 Al Siebold, 110 Jefferson Ave., River Edge, N.J.
 KKE0449 Al Farber, 2554 E. 29th St., Brooklyn, N.Y.
 KKE0663 Brian Zeky, Box 131, Crarville, N.Y.
 KKG0371 Ken Yost, Sunset Lake Rd., Newark, R.D. 1, Del.
 KKG0960 Robert Ream, 608 High St., Lancaster, Pa.
 KKG1280 Clarence Diehl, 800 Mohican St., Bethlehem, Pa.
 KKG3074 Harold Peer, 617 Hallard Ave., Beachwood, N.J.
 KKG3229 Don Schmitt, Box 14, Gettysburg, Pa.
 KKG3987 John LeMay, 28 E. Water St., Gettysburg, Pa.
 KKG4032 Sophia Mitch, 309 South St. Cloud St., Allentown, Pa.
 KKG4281 Charles Lucabaugh, 916 Baltimore St., Hanover, Pa.
 KKG4472 David Bubeck, 109 E. Main St., Schuylkill Haven, Pa.
 KKG4482 Lee Petrucci, 316 W. Van Buren Ave., New Castle, Del.
 KKG4638 Bob Fink, 428 Ash St., Delanco, N.J.
 KK10233 Houston Mullins, 321 Yorkshire Ln., Manassas, Va.
 KK12063 Jack Mory, 2501 Washington Blvd., Balto., Md.
 KK12677 Robert Fox, Rt. 1, Hendricks, W. Va.
 KK12915 George Bowen, 831 W. Matthews Ave., Baltimore, Md.
 KK12997 Don Breitwieser, 947 Maryland Ave., Hagerstown, Md.
 KK13302 David Shor, 2518 Summerson Rd., Baltimore, Md.
 KK13355 Donald Vaughn, 318 Mulhensbury St., Woodstock, Va.
 KK13380 Steven Cockrell, 228 Church St., Clarksburg, W. Va.
 KK1K0471 J.L. Kirkland, Route 7, Raleigh, N.C.
 KK1K0745 Jim Chocklett, 504 Denby St., Wilson, N.C.
 KK1K0927 Tommy Gay, 1146 Rodgers St., Chesapeake, Va.
 KK1K2366 Jack Barbour, 1659 Old Buckroe St., Hampton, Va.
 KK1K2869 Kelly Howard, 415 Broad St., Oxford, N.C.
 KK1K4410 Smylie Grantham, P.O. Box 364, Raeford, N.C.
 KK1K4489 Tommy Spain, 1927 N. Junaluska Dr., Richmond, Va.
 KK1K4512 Jake Sprouse, Rt. 6 Box 279, Charlottesville, Va.
 KK1K6182 Gordon Gallahan, 211 Butler Rd., Fredericksburg, Va.
 KK1K7550 Black Jack, P.O. Box 261, Colonial Heights, Va.
 KK1K8262 Patricia Harris, P.O. Box 6, Bethel, N.C.
 KKM0193 Daniel Parker, Armathwaite, Tenn.
 KKM1253 Buford Richey, 225 Davis Ave., Florence, Ala.
 KKM1288 Irwin Hosea, Route 1, Toccoa, Ga.
 KKM2213 Lee Harvey, 2478 Sharrondale Dr. N.E., Atlanta, Ga.
 KKM4156 Fred Monday, 17 Brownwood Ave., Asheville, N.C.
 KKM4690 Roy Chaffin, 505 First Ave., Mt. Pleasant, Tenn.
 KKM6607 Neal Alexander, 3790 Wieuca Terr., Atlanta, Ga.
 KKM7376 Donald Wilson, 1529 Bush Blvd., Birmingham, Ala.
 KKM7482 Charles Cromer, Route 1, Box 282A, Newberry, S.C.
 KKM8888 Leon Rhodes, Box 11 Piedmont Rd., Rutherfordton, N.C.
 KKM9441 Floyd Pool, 2007 McBrien Rd., Chattanooga, Tenn.
 KKM9702 James Wolfe, 1707 Merrycrest Dr., Memphis, Tenn.
 KKN0224 Jerry Bumbaugh, 316 Crest Dr., Boone, N.C.
 KKN0258 Bill Powers, P.O. Box 104, Bowling Green, S.C.

KKN0300 Steve Masten, P.O. Box 4, Boone, N.C.
 KKN0673 Randall Thomas, Box 108, Boone, N.C.
 KKN0793 G.W. Page, Box 398, Lake View, S.C.
 KKN1566 Joseph Fall, Troy State College, Troy, Ala.
 KKN2631 Warren Stevens, 770 Longleaf Dr. N.E., Atlanta, Ga.
 KKN2632 L.C. Crawford, 407 Chestnut St., Lake City, Tenn.
 KKN2690 Carroll Roger, Box 178, Middletown, Conn.
 KKN2985 Charles Martin, Rt. 6 Harrison Pk., Cleveland, Tenn.
 KKN3229 T.J. Gibson, Box 564, Bennettsville, S.C.
 KKN4052 Harvey Mandle, Route #3, Box 95A, Sylva, N.C.
 KKP1645 Henry McLeod, P.O. Box 126, Perry, Florida
 KKP2232 John Sanders, 3209 Cherokee Ave., Tampa, Fla.
 KKP2242 Frank Wolfgang, 4729 Bay Vista Ave., Tampa, Fla.
 KKP4124 Gene Pairgin, 5111 68th St. North, St. Petersburg, Fla.
 KKP4260 Clark Dickinson, Rt. 2, Box 50, Perry, Fla.
 KKR3700 W.D. Arnolds, Beulah, Mississippi
 KKR5223 Charles Keathley, 3005 Loma Dr., Little Rock, Ark.
 KKR6231 Mike Anderson, P.O. Box 2626, Laurel, Miss.
 KKT3680 Bill Weider, 4204 Oaklawn St., Bryan, Texas
 KKT3774 Le Fremman, 4000 Nagle, Bryan, Texas
 KKT4113 James Bowman, Box 703, Fresno, Texas
 KKV0927 Dinky Hill, Route One, Rising Star, Texas
 KKV0974 John Polhemus, 6855 Arboreal Dr., Dallas, Texas
 KKV3836 Clarence Norton, 512 W. Broadway, Longview, Texas
 KKV4589 Paul Drennon, 2402 Anderson, Irving, Texas
 KKV5575 Alan Haile, 2601 Walnut St., Texarkana, Texas
 KXK2834 Desert Rat's Wife, 1171 W. Miracle Mile, Tucson, Ariz.
 KXK2898 Jerry Pennell, 4845 Lotus St., San Diego, Calif.
 KXK5201 Dale Fletcher, 54728 El Prado Trail, Yucca Valley, Calif.
 KXK7083 James Fuller, 405 Fillmore St., Taft, Calif.
 KXK7642 Walter Koziel, P.O. Box 2212, Bell Gardens, Calif.
 KXK7809 Joe Illions, 12929 Warren Ave., Mar Vista, Calif.
 KXK8239 Ronny Baxter, 2234 Palm Ave., Imperial Beach, Calif.
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 KLA2524 John Brown, P.O. Box 502, San Pablo, Calif.
 KLA3291 Paul Linehan, 2 Estabeno Dr., Orinda, Calif.
 KLA3573 Stephen Ward, 1756 Hallmark Ln., San Jose, Calif.
 KLA3648 Jim Cox, 1865 Michigan, Stockton, Calif.
 KLA4568 Jeff Morgensen, 31 Estabeno, Orinda, Calif.
 KLA5065 Dennis Simonson, 127 Lee Ave., San Francisco, Calif.
 KLA5519 C. & C. Anfinson, 1830-32nd Ave., San Francisco, Cal.
 KLA5629 C. & L. Hatchell, 2222 Sacramento St., Vallejo, Calif.
 KLA5788 T. & E. Saunders, 782 Hutchings Dr., San Leandro, Cal.
 KLA5847 Ray Broten, 40 Buena Vista, Vallejo, Calif.
 KLA6402 Bruce Farley, 3679 Bryant St., Palo Alto, Calif.
 KLA6569 Bob Wright, 1243 Sierra Mar Dr., San Jose, Calif.
 KLA7292 Wayne Metzger, 4068 N. 3rd, Fresno, Calif.
 KLA7428 Jack Evans, P.O. Box 108, Ivanhoe, Calif.
 KLC1071 Ed Lyons, P.O. Box 2, Florence, Oregon
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 KLD1817 Don Fletcher, 3432 So. 180 Pl., Seattle, Wash.
 KLD2362 Richard Spengler, Rt. 1 Box 48, Grangeville, Idaho
 KLE0928 Doc Noyes, 52 S. 1st W., American Fork, Utah
 KLE2219 Art Pautk, 3262 W. 3800 So., Salt Lake City, Utah
 KLF1653 John McGuire, Box 12, Camp Douglas, Wis.
 KLF2842 William White, 1215 Weeks Ave., Superior, Wisc.
 KLF2980 Steve Butler, 822 No. Glendale Ave., Tomah, Wis.
 KLH3541 Jim Walker, 2803 Lewis St., Bloxi, Miss.
 KLH5267 Lloyd Crawford, 900 Troost, Olathe, Kansas
 KLH6583 William Royal, Jr., Syracuse, Nebr.
 KLH6792 Forrest Crawford, 620 So. Cherry, Olathe, Kans.
 KLH6909 Larry Kobberman, Box 233, Remsen, Iowa
 KLH7531 Max Meisel, 1328 Westview, Derby, Kansas
 KLH8133 Norman Royal, Syracuse, Nebraska
 KLH8600 Leon Priest, Box 3260F Star Rt. B, Anchorage, Alaska
 KL10919 Bob McGuire, 927 N. Madison, Topeka, Kansas
 KL13335 Phil Holcomb, 712 Dubuque St., Sloux City, Iowa
 KL13665 Glenn Earney, 928 Olympia Dr., Ferguson, Mo.
 KL11432 Bob Kimbley, 812 Troost Ave., Olathe, Kansas
 KLJ0255 Bob Pierce, 182nd St. Box 382, Lansing, Ill.
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 KLJ2946 Harold Bjorkquist, 8878 So. 84th St., Franklin, Wis.
 KLJ3382 Earl Gordon, 419 W. Grand Ave., Decatur, Ill.
 KLJ3945 William Turner, 1728 Ford Ave., Owensboro, Ky.
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 KLJ5764 Gene Stewart, R.10, N. Berkley, Urbana, Ill.
 KLJ6057 Myrtle Little, 1601 So. 4th St., Richmond, Indiana
 KLJ6167 Ron Kman, 7848 So. Austin, Oaklawn, Ill.
 KLJ6791 Lou Rubenstein, 9901 Calhoun Ave., Chicago, Ill.
 KLJ8259 Jack Jackson, Morocco, Indiana

KLP9464 Fred Sherman, Beech Creek, Pa.
 KLP9534 Steve Delorm, 258 Spencer Rd., Rochester, N.Y.
 KLP9557 George Booth, 971 Sweeney St., No. Tonawanda, N.Y.
 LP9618 Bill Lohnes, Box 176, Round Lake, N.Y.
 LP9656 Irvin Kimmel, Box 14, Tirc Hill, Pa.
 KLP9789 Ed Kindervater, Box 404, Hopwood, Pa.
 KLCQ1114 Roger Hamm, 1447 Union Ctr.-Maine Hwy., Endicott, N.Y.
 KLCQ457 Charles Goughnour, 207 Coldren St., Johnstown, Pa.
 KLCQ660 Jerry Monroe, RD 1, Coy Rd., Greenfield Center, N.Y.
 KLCQ888 Steve Pfaff, 204 S. Fairview St., Lock Haven, Pa.
 KLCQ964 Pete Guy, Box 55, Middle Grove, N.Y.
 KLCQ1059 William Nagurny, 727 Marion St., Scranton, Pa.
 KLCQ1173 Lester Finnegan, 8171 Main St., Williamsville, N.Y.
 KLCQ1294 Koffee Hound, Box 241, Frankfort, N.Y.
 KLCQ1560 Jud Kurlancheck, 242 E. Dorrance St., Kingston, Pa.
 KLCQ217 Don Anderson, 528 Ridge Ave., Cannonsburg, Pa.
 KLCQ2774 Carl Jaegers, RD 2, Sunbury, Pa.
 KMA0173 Joe Witek, 40 Daniel St., Indian Orchard, Mass.
 KMA0295 Dale Rook, Star Rt. 3, Windsor, Vermont
 KMA0500 Sandy DeRoche, 9 Hazel St., Bangor, Maine
 KMA0517 Earl Holbrook, 29 Maynard St., Attleboro, Mass.
 KMA0732 Larry Lavoie, 105 Pine St., Berlin, N.H.
 KMA1396 Ray Martel, 143 Parker St., New Bedford, Mass.
 KMA1835 Steve Caravello, 18 Sedor Dr., Thompsonville, Conn.
 KMA2028 Edwin Keller, 10 South St., Plymouth, Mass.
 KMA2125 Anthony Vicra, 9 Holway Ave., Provincetown, Mass.
 KMA2378 E. Bradshaw, 114 Walter St., Bangor, Maine
 KMA2418 Irving McKirryher, 42 1/2 Freeman Ave., Rutland, Vt.
 KMA2531 Mike Palmieri, 1 Brigham St., Waterville, Maine
 KMA3375 Paul Connors, 31 New Winchendon Rd., Baldwinville, Mass.
 KMA3493 Chris Marinelli, 45 Milton St., New Britain, Conn.
 KMA3939 John McGann, 50 Coombs St., Southbridge, Mass.
 KMA4164 John MacDonald, Warren, N.H.
 KMA4703 David Menoche, 15 Polo St., Pawtucket, R.I.
 KMA5273 James Stuart, 45 S. Main St., Baldwinville, Mass.
 KMA5715 George Goodell, Enfield N.H.
 KMA5726 Eddie Bellar, 15 Rockland St., Fitchburg, Mass.
 KMA6019 Duncan Ainsworth, 14 Bluefield St., New Bedford, Mass.
 KMD0217 Bill Ross, 2788 James St., Oceanide, N.Y.
 KMD0428 David Bellask, 1159 E. 42nd St., Brooklyn, N.Y.
 KMD0490 Fred Decter, 339 Leslie St., Newark, N.J.
 KMD0992 Howard Huneke, 518 Mountain Ave., Springfield, N.J.
 KMD0980 Rick Cary, 565 Edmund Terrace, Paramus, N.J.
 KMD1113 Richard Harvey, 133 Morris Ave., Summit, N.J.
 KMD1314 John Humphries, 102 Lincoln Ave., E. Paterson, N.J.
 KMD1357 Dwight Pagano, 444 E. 20th St., N.Y., N.Y.
 KMD1704 Rick Feinberg, 53 Washington Ave, E. Paterson, N.J.
 KMD2018 Ron Kerber, 25 Broadway, Park Ridge, N.J.
 KMD2130 Chuck Austin, 10 Excelsior Ave., Troy, N.Y.
 KMD2436 John Erwin, 38 Gouverneur St., N.Y., N.Y.
 KMD2453 Lou Gagliano, 18-3rd St., Brooklyn, N.Y.
 KMD2476 Gene Rosenberg, 367 Grant Ave., Oradell, N.J.
 KMD2795 Sheldon Monter, 1495 Popham Ave., Bronx, N.Y.
 KMD3059 Bruce McPherson, 231Wales Ave., River Edge, N.J.
 KMD3327 W. Mitchell, 31 Fowler Ave., Newburgh, N.Y.
 KMD3684 Dom & May, 450 Rhodes Lane, West Hempstead, N.Y.
 KMD3719 Dale Schmalings, 239 Seymour Rd., Port Chester, N.Y.
 KMD4005 Terry Wilmot, P.O. Box 515, Montclair, New Jersey
 KMD4398 Ira Cohen, 1254 East 86th St., Brooklyn, N.Y.
 KMG0063 Jeff Deiser, RD 1, Annville, Pa.
 KMG0285 Charles Bell, 407 Pomeroy St., Ridley Park, Pa.
 KMG0471 Charlie Stauffer, RD #1, Holtwood, Pa.
 KMG0515 Michael DeRossi, So. East Ave., Vineland, N.J.
 KMG0524 Gary Nicholson, 801 North Pitt St., Carlisle, Pa.
 KMG1618 Jim Worrell, Central Ave., Bargaintown, N.J.
 KMG1866 Don Titus, RD 1, Gettysburg, Pa.
 KMI0759 Whit Strunk, 52 Broadway, Hagerstown, Md.
 KMI0763 George Demanelis, 200 Wilson Ave., Morgantown, W. Va.
 KKK4410 Smylie Grantham, P.O. Box 364, Raeford, N.C.
 KMI0928 Jim Shaffer, 109 South Front St., Georgetown, Del.
 KMI0962 William McDowell, 8 Jones St., Piedmont, W. Va.
 KMI1219 Russel Lopez, 216 Elk Ave., Nutter Fort, W. Va.
 KMI1355 Rick High, 103 Locust St., Frederick, Md.
 KMI1934 Joe Myers, 99 Liberty St., Westminster, Md.
 KMI1946 Bob Anderson, 10323 Crestmoor Dr., Silver Spring, Md.
 KMK0600 R. C. Shanks, P.O. Box 252, Montross, Va.
 KMK1360 Lee Estes, 1717 Galloway Dr., Charlottesville, Va.
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 KMK2560 Julian Thomas, 1408 Florence Rd., Charlottesville, Va.
 KMK3175 Bill Lane, 302 Myrtle Lane, Altavista, Va.
 KMM0243 Mike Murphy, 4505 Rogers Rd., Chattanooga, Tenn.
 KMM0474 Albert Phillips, 892 Breedlove St., Memphis, Tenn.
 KMM1177 Ted Booth, 231 Illinois St., Travis A.F.B., Calif.

KLK1408 Leon Adams, 509 May St., Summer, Ill.
 KLK1975 W. H. Willett, Lewisport, Ky.
 KLK2328 John Wigginton, R.R.#1, Lincoln, Ill.
 KLK2458 Lincoln Ide, 7842 So. McVicker, Oak Lawn, Ill.
 KLK2881 Buzz Colburn, 902 Oak Lane, Russellville, Ky.
 KLK3438 Bill Webber, Ludlow, Illinois
 KLK3619 Matt Loeffler, 2169 So. 64th St., West Allis, Wis.
 KLK4537 Clinton Whitney, R.R.2, Warsaw, Indiana
 KLK4588 Charles Copples, 1749 W. Ravina Pk. Rd., Decatur, Ill.
 KLK4830 Francis Wagner, Elizabethtown, Indiana
 KLK4958 Jesse Wade, 224 W. Elm St., Chillicothe, Ill.
 KLK5502 Dick Cridner, 3033 Ute Ln., Lafayette, Indiana
 KLK5617 Chick Sylvester, 1629 E. 86th Pl., Chicago, Ill.
 KLK5810 Irving Felzer, 2131 So. 15th Pl., Milwaukee, Wis.
 KLK5824 Eric Seymour, 408 W. 32nd St., Connersville, Ind.
 KLK6181 Jim Lostlen, c/o Artist Corp., Wis. Hotel, Milwaukee, Wis.
 KLK8300 Marlyn Kempf, Rte. #1 Box 298, Cambridge, Wis.
 KLK8815 Dick Hadley, 470 1/2 Grayton Ave., Huntington, Ind.
 KLK9539 Mike Gelger, Box 83, Cravert, Indiana
 KLK9761 Todd Schumann, 8025 S. Euclid Ave., Chicago, Ill.
 KLL0681 Dick Stichter, 851 E. Pleasant St., Freeport, Ill.
 KLL0800 Gil Davis, 2405 Sunset Blvd., Anderson, Indiana
 KLL0995 Jim Mazurek, 1444 S. Clinton Ave., Berwyn, Ill.
 KLL1090 Reid Kurek, P.O. Box 427, Maywood, Ill.
 KLL1281 Tom Wilson, 1603 Ruth Ann Dr., Centralia, Ill.
 KLM0542 Merle Lane, 1610 Royce Ave., Kalamazoo, Mich.
 KLM1447 Lee Collins, 4814 Sundale, Drayton Plains, Mich.
 KLM3314 Paul Monhart, 2170 W. 63 St., Cleveland, Ohio
 KLM4219 Eddie Welch, 177 Broadway Ave., Masury, Ohio
 KLM4519 N. Schweitzer, P.O. Box 232, Defiance, Ohio
 KLM4842 Bessie Hazen, 231 North Mead St., Zanesville, Ohio
 KLM5051 Jim Swartz, 62 Stadium Dr., Tallmadge, Ohio
 KLM7450 Bill Piper, RFD #5 Box 414, Swanton, Ohio
 KLM7505 Eugene Bradd, P.O. Box 336, Marshall, Missouri
 KLM7763 Jim Warner, 836 Pensacola, Pontiac, Mich.
 KLM7788 Charles Holland, 942 Lingle Ave., Owosso, Mich.
 KLM9955 Thomas Walker, 4025 Rich Dr., Waterford, Mich.
 KLN0934 Leonard Beaudry, 32821 River Rd., E. Rockwood, Mich.
 KLN1014 Tim Taylor, 4908 Sweetland Blvd., Richmond Hts., Ohio
 KLN1209 Ollie Ramey, 2922 Cypress St., Portsmouth, Ohio
 KLN1732 Art Lucas, 1011 W. Cherry Creek Rd., Mio, Mich.
 KLN2610 Joe Tyika, 1410 Maple St., W. Bellaire, Ohio
 KLN3263 Henry Smith, 11944 Algonquin, Pinckney, Mich.
 KLN3497 Ed Newton, 2120 Irving Dr., Benton Harbor, Mich.
 KLN3731 Norm Sieggren, 1532 N. Bond, Saginaw, Mich.
 KLN4091 Clare Wilson, 94 E. Colgate, Pontiac, Mich.
 KLN5264 V. Norling, 25 Indian Trail, Poland, Ohio
 KLN5598 Rawling's Funeral Home, London, Ky.
 KLN8016 Don Gold, 116 Stewart Ave., Sidney, Ohio
 KLN8105 Jan Rodabaugh, 10078 E. Coldwater, Davison, Mich.
 KLN9345 Jim Stephens, 132 Lawnview Ave., Springfield, Ohio
 KLN9710 Ray Keller, 852 N. Rosedale Ave., Lima, Ohio
 KLO0175 Paul Manville, 1736 Lombardy, E. Highland, Mich.
 KLO0253 Marvin Davis, W. Wayne St., Dunkirk, Ohio
 KLO0366 Pete Snyder, 4321-10th Ave., Parkersburg, W. Va.
 KLO0589 Larry Sykora, 4604 Pallister Dr., Cleveland, Ohio
 KLO0598 William Lechner, 4441 Parnell, Pontiac, Mich.
 KLO0638 Dick Seperic, 3324 Karen St., Lansing, Mich.
 KLO1270 Bob McLellan, Box 51, 203 Furnace Ave., Elberta, Mich.
 KLO1619 Bruce Macbeth, 5631 Sandalwood Ave. NE, No. Canton, O.
 KLO2529 James Jones, 533 W. Main St., Zeeland, Mich.
 KLP0319 Pete Hons, 614 Main St., Portage, Pa.
 KLP2238 James Barnes, Rt. 3, Gorton Rd., Corning, N.Y.
 KLP3284 James Phillips, 599 W. 8th St., West Wyoming, Pa.
 KLP5005 Bud Fowkes, 1031 5th Ave., Duncansville, Pa.
 KLP5033 Tom Zawrotny, Rathbone, N.Y.
 KLP5525 Bill Beeke, 11 Maple Dr., Bath, N.Y.
 KLP3765 Ken Clemens, Box 71, Yorkville, N.Y.
 KLP5280 The Bailey's, 1110 Ford St., Ogdensburg, N.Y.
 KLP6039 William McKenna, 1354 Davis St., Elmira, N.Y.
 KLP6639 Don Beraman, 121 W. Ross St., Wilkes Barre, Pa.
 KLP6705 John Fox, Box 92, New York Mills, N.Y.
 KLP7086 William Baum, 5 Second St., Dolgeville, N.Y.
 KLP7290 Stephanie Kogut, Frankfort, N.Y.
 KLP7516 Guy Widmeyer, Box 99-A, Martha St., Hopwood, Pa.
 KLP7578 David Moss, Box 61, Endicott, N.Y.
 KLP7749 Ray Bronder, 416 9th St., Monessen, Pa.
 KLP7848 Bryan May, 147 Old River Rd., Wilkes-Barre, Pa.
 KLP7879 Clarence Peet, Box 73, Port Crane, N.Y.
 KLP8083 Howard Davidson, 26 Knight St., Glen Falls, N.Y.
 KLP8791 Jim Smith, RD 3, Fort Plain, N.Y.
 KLP8809 Don Shumaker, 147 Greenbrier Dr., Carnegie, Pa.
 KLP9351 R. Trull, 25 DeStafano Ave., Amsterdam, N.Y.

KMM1484 Jerry Morgan, 106 Merchant St., Mt. Pleasant, Tenn.
 KMM1595 B. C. Murray, Maysville Rd., Commerce, Ga.
 KMM1812 Linda Chaffin, 505 First Ave., Mt. Pleasant, Tenn.
 KMM2386 Lawrence Fried, 3070 Seaview La., Bellmore, N.Y.
 KMO0404 Jimmy Roberts, 2304 Palmdale St., Jacksonville, Fla.
 KMP0707 Allen Duggar, 709 E. 6th, El Dorado, Arkansas
 KMR0099 Scott Allen, 1090 Meadow Heights, Jackson, Mississippi
 KMR1086 Kenneth Clark, Rt. 1, Box 238, Smackover, Ark.
 KMR1149 Arnold Loftin, Rt. 1, Box 429, Deridder, Louisiana
 KMR1383 John Funk, Rt. 4, Paragoud, Ark.
 KMR1510 James Scroggins, Scroggins Hardware, Belzoni, Miss.
 KMR4011 Michel Fourrier, 3650 Hundred Oaks, Baton Rouge, La.
 KMT1507 Arthur Cates, 1310 North Dakota, Baytown, Texas
 KMX0073 Jim Stewart, 9335 Carmel Rd., Atascadero, Calif.
 KMX0339 Hal Manhelm, 12907 Warren Ave., Los Angeles, Calif.
 KMX0440 Warner Mayden, 385 Venus Ct. Rt. 1, Nipomo, Calif.
 KMX2394 Ed Hoover, 144 Corregidor, Fort Ord, Calif.
 KMX3215 Jim Hughes, P.O. Box 1253, Atascadero, Calif.
 KMX3234 Ron Murphy, 12993 Herrick St., Sylmar, Calif.
 KMX3254 Red Osgood, 3805 Winona Ave., San Diego, Calif.
 KMX4115 Pat Sullivan, 726 Oneonta St., Imperial Beach, Calif.
 KMA1504 Mike Forsyth, 789 Colusa Ave., El Cerrito, Calif.
 KNA2637 Denver Landis, P.O. Box 655, Cupertino, Calif.
 KNA3418 S/SGT G. Bray, 2187 Meadowglen Ave., Sacramento, Cal.
 KND0168 Barry Simpson, 4819 So. Fife, Tacoma, Washington
 KNF0085 Don Hoffmann, Rt. 2 Box 355-C, Onalaska, Wisconsin
 KNF0919 M. E. Ebbeson, 509 West Mission Rd., Minneapolis, Minn.
 KNF1721 M. L. Gibson, Rt. 1 Box 22-H, Mountain Iron, Minn.
 KNH0542 Larry Huggins, 614 N. Chestnut St., Olathe, Kansas
 KNH0786 Bill Howard, 2700 Grandview Ave., Des Moines, Iowa
 KNH2587 Frank Mauler, RFD 1, Olmitz, Kansas
 KNH2593 Os Hartmann, 125 E. Holden, Lemay, Mo.
 KNH3106 Lee Glorie, 101 Fannie, Lema, Mo.
 KNH3738 Red Shaw, 9010 Sycamore, Kansas City, Mo.
 KNH4372 James Stell, 5734 Chestnut St., Kansas City, Mo.
 KNH4295 Dick Canaan, Gardner, Kansas
 KNH4790 Don Drey, 12186 Parkwood Pl., Bridgeton, Mo.
 KNJ0959 Bill Berendts, 818 Third St., Kalona, Iowa
 KNJ1289 Richard Morgan, Box 891 Supply Sq., Duluth, Minn.
 KNJ1478 Jim Heafner, 1503 E. Taylor St., Bloomington, Ill.
 KNJ1768 Lee Coldden, 10 E. St., Wabash, Indiana
 KNJ2128 Tim Siddons, 604 20th Ave. Ct., E. Moline, Ill.
 KNJ3086 Janet Stanley, 334 N. Franklin St., Dunkirk, Indiana
 KNJ3100 Steve Sallac, RR 4, Box 10, Valparaiso, Indiana
 KNJ3143 Emmett Routt, Wyanet, Illinois
 KNJ4063 Charlie Ulshafer, 270 Ross Ave., Wabash, Indiana
 KNJ4360 Andy Croxton, 4241 Main St., Downers Grove, Ill.
 KNJ4430 David Conder, 1319 South Cherry, Centralia, Ill.
 KNJ6056 Judge N. Littell, R. 6, Lake Edgewood, Martinsville, Ind.
 KNJ6149 Stewart Witkov, 9110 N. LaCrosse, Skokie, Ill.
 KNJ7169 Robert Eरिक, RR 2 Box 20-B, Noblesville, Ind.
 KNJ7356 Pete Klufetos, 1024 Pusheck Rd., Bellwood, Ill.
 KNJ7768 Fred Smith, 1639 E. 77th St., Indianapolis, Ind.
 KNJ7802 William Wallace, 35 Gilbert St., Savanna, Ill.
 KNJ8320 Jon Redd, 4306 Somerset, Madison, Wis.
 KNJ8580 Gary Grant, 2701 West Estes, Chicago, Illinois
 KNJ9435 Fred Hammerich, 267 Eleventh St., LaSalle, Illinois
 KNK0240 Don Field, 464 Shabbona Dr., Park Forest, Ill.

KNM0810 Don Theisen, 53 Norwood Avenue, Norwalk, Ohio
 KNM1533 Glen Wright, Rt. 1 Box 122 A-1, Hurricane, W. Va.
 KNM1603 Bob Bofar, 18 Hickory St., So. Zanesville, Ohio
 KNM2078 Bob Deaton, 2814 Evergreen Dr., Springfield, Ohio
 KNM2171 Gary Maturen, 1003 Court, Saginaw, Michigan
 KNM2322 Chuck Sisler, 140 Montgomery La., Mingo Junction, Ohio
 KNM2776 Russ Pettigrew, 619 Seneca St., Fenton, Michigan
 KNM2987 Jeff Chern, 7404 Devon Lane, Chesterland, Ohio
 KNM3839 Skye Wittig, 603 Spruce St., Manistee, Michigan
 KNM4663 Louis Stoughton, 15431 Windemere Ave., Southgate, Mich.
 KNM4813 Jim Waters, 28 S. Pembroke Ave., S. Zanesville, Ohio
 KNM5016 Bill Brooks, 117 W. Stewart Ave., Flint, Michigan
 KNM5687 Sam Meyer, 4955 No. Dixie Hwy., Newport, Mich.
 KNM6195 Larry Reed, Box 2075, Williamson, W. Va.
 KNM6202 Clarence Wrzesinski, 207 St. Mary's Pkwy., Manistee, Mich.
 KNM6687 Joe Kasanic, 635 Derring, Akron, Ohio
 KNM6782 Elwood Duty, Route 1, Central Station, W. Va.
 KNM7922 Raymond Patton, 222 Kontner St., Nelsonville, Ohio
 KNM7532 Wilbur Meadows, 212 Sanderson St., Pontiac, Mich.
 KNM8026 Mel Kropok, 465 Mandlerley, Akron, Ohio
 KNM8981 Halmar Joyce, 1611 10th St., Port Huron, Mich.
 KNM0475 Leonard Szalony, 8118 Portage Rd., Kalamazoo, Mich.
 KNP0126 Earl Sprague, 408 Harvey, New York
 KNP0224 Dave Latina, 458 Harvest Dr., Rochester, N.Y.
 KNP0344 Elmer Hoose, 3053 Butler Ave., Horseheads, N.Y.
 KNP0457 Jeff Ohlsson, 86 Bowen St., Jamestown, N.Y.
 KNP0567 Bob Ivanoff, 726 Ellsworth Ave., Jeannette, Pa.
 KNP1042 Don Lewis, 33 South MorningSide Dr., Binghamton, N.Y.
 KNP1200 Chuck Kratochvil, 111 Cort St., Jeannette, Pa.
 KNP1444 Paul Clark, 863 Monaca Rd., Monaca, Pa.
 KNP1455 Earl Roehl, 861 Monaca Rd., Monaca, Pa.
 KNP1508 William Seward, Lansing Rd., Hagaman, N.Y.
 KNP2225 Robert Madison, 1515 Edgar Ave., Chambersburg, Pa.
 KNP2429 Bob Bialecki, 17 Roser St., Rochester, N.Y.
 KNP2471 Jim Laubs, Route No. 1, St. Thomas, Pa.
 KNP2730 Dick Newell, 395 Fairmount, Jamestown, N.Y.
 KNP4176 Ron Taylor, Chapel Hill Rd., E. Randolph, N.Y.
 KNP4353 Chuck Harrison, 140 Whitehill Ave., Jamestown, N.Y.
 KNP5138 Bob Isole, P.O. Box 214, Gasport, N.Y.
 KNP5155 John Thompson, 436 N. Main St., Wilkes Barre, Pa.
 KNU0024 James Schubaueer, 420 Haines, Fairbanks, Alaska
 KNU0079 Dale Martin, 516 N. Pine St., Anchorage, Alaska
 KNV0070 Pat & Bill Parker, 1023 16th St., N.E., Washington, D.C.
 XM112045 Lloyd Tait, 132 Riverside Dr., Pentlton, B.C.
 XM23597 Byron Orge, P.O. Box 1122, Medicine Hat, Alberta, Can.
 XM33818 Douglas King, Box 1289, Estevan, Sask. Canada
 XM331027 The Ganshorn's, 9 Osler Pl., Regina, Sask., Canada
 XM331056 The Purdie's, 2615 Edgar St., Regina, Sask. Canada
 XM412800 Skippy Massam, 66 Guthrie Ave., Toronto, Canada
 XM43614 Jacob Fehrman, R.R. 1, Pt. Colborne, Ontario, Canada
 XM431259 Denis Dubois, Box 71, Welland, Ontario
 XM441324 Gordon Daugherty, Box 272, St. Thomas, Ontario
 XM422411 Bill Kerwin, 287 Nelson St., Sarnia, Ontario
 XM52895 Bernard Rachlin, 2615 Kent Ave. #204, Montreal, Can.
 XM53463 Francois Goyer, 259 rue Moisan, Drummondville, P.Q.
 XM551755 Sue Dupere, 92 Royal Roussillon, Quebec, Canada
 XM56066 Gilles Petit, 409St Joseph, La Tuque, P.Q., Canada
 ATL1616 Kerry Myers, 409 Brunswick St., Brunswick, Md.
 CENT3250 David Sigo, Rt. 1, Box 153, Goodland, Ind.
 North3020 Robert Ream, 608 High St., Lancaster, Pa.
 North3205 Rob Rodd, Box 824, Utica, New York
 North3300 Tom Bolling, Jr., 233 Temple St., Fredonia, N.Y.
 WPE1GCC Terry Henry, 55 S. Lincoln St., Keene, N.H.
 WPE1GEM Edward Madej, Indian Orchard, Massachusetts
 WPE2NHW Gerry Schecter, 3535 Kings College Pl., Bronx, N.Y.
 WPE2NIO Sheldon Shuff, 105 57 Flatlands 8th St., Brooklyn, N.Y.
 WPE3FSC Robert Ream, 608 High St., Lancaster, Pa.
 WPE3FQQ Donald Schmitt, Box #14, Gettysburg, Pa.
 WPE41HA Tom Spain, 1927 N. Junaluska Dr., Richmond, Va.
 WPE4ENC Jim Bullock, 1628 Long Ave., Nashville, Tenn.
 WPE6GBC Henry Slade, 136 Tamarack St., Vandenberg AFB, Cal.
 WPE8100 Edward Gold, S. Miami Ave., Sidney, Ohio
 WPE00DXH Rick Dehn, RR 1, Onawa, Iowa
 TRQ1000 David Bubeck, 109 E. Main St., Schuylkill Haven, Pa.
 OZDR1261 Palle Nielsen, Humlebaekgade 13", Copenhagen N Denmark
 ONL170 Jacquet Camille, UBA P.O. Box 634, Brussels, Belgium
 Ralph Bryant, 716 Riverside Dr., Fairfield, Conn.
 Ruth Charon, 109 Bowers St., Holyoke, Mass.
 Richle Krug, 11 Emmett St., New Hyde Park, N.Y.
 Jack Allen, 203 Ave. F., Brooklyn, New York
 Central Printing, 920 Vanderverter, Fayetteville, Ark.

CITIZENS BANDITS BEWARE



CB'ers, self-adhesive warning labels, won't wash or wear off your windshield. Bright red on white and 3 1/2 inches wide—easily seen by any would-be tamperers. 3 labels for \$1, postpaid.

Robert King, 735 East 239th St., New York, N. Y. 10466.

WE NEED CB DEALERS!!

AS distributors handling all Major brands of CB equipment, antennas, and accessories we can offer local dealerships to aggressive CB dealers and installers. Write at once for information and your costs on the brands you prefer to handle. Dept. 624

KNOX ELECTRONIC SUPPLY, INC.

67 N. Cherry St., Galesburg, Illinois.





WASHINGTON OUTLOOK

The FCC has been a busy little bee this past month, so let's see what they've been up to.

• The following CB'ers were asked to show cause why their licenses should not be revoked for failing to reply to FCC communications:

KKE0696, John A. Merritt, d/b/a J-W Car Service, Brooklyn, N. Y.

KKG0054, ACP Supply Co., Philadelphia, Pa.

KLN1999, George N. Hanson, Columbus, Ohio.

KLA0085, Raymond J. Medeiros, Sunnyvale, Calif.

KLN0924, Willie Williams, Detroit, Mich.

KMX1006, Broadway Auto Parts, Santa Ana, Calif.

KLA0271, Johnnie R. Littau, Sacramento, Calif.

KKM0084, B&B Construction Co., Stone Mountain, Ga.

KNM0221, Wilburn H. Timmons, Dearborn Heights, Mich.

KLA4482, Louie B. Standberry, Berkeley, Calif.

KHJ3090, Chester W. Hansen II, South Lyon, Mich.

11Q1556, Paul R. Gervasi, Tujunga, Calif.

18B3529, Juan Rofriguez, Chicago, Ill.

KCF1619, Douglas Carson, Chrisfield, Md.

KMP1695, Appliance Headquarters, N. Miami, Fla.

KHJ8026, Gilbert W. Brackett, Troy, Mich.

KDC0429, V. Bauer Trucking, Warren, Mich.

KKB3749, Robert J. Dockham, Pembroke, N. H.

• These stations had their licenses revoked:

KKM7224, Frank Grice, Jr., Montgomery, Ala.

KLK8592, Clarence Leslie, Louisville, Ky.

KKM2576, Amell M. Thurman, College Park, Ga. (repeated violations of following rules: non-permissible communications, failure to properly identify station, and transmission not followed by two minute silent period).

KBA3326, Harold Haines, Presque Isle, Me.

KFC0876, General Electronics Manufacturing

& Maintenance Co., San Pablo, Calif.

KEJ6856, James L. Steese, Compton, Calif.

KKK7791, John R. Derby, Hampton, Va. (for making a false statement of fact concerning a penal conviction in his radio station application).

KLK8061, Discount TV Service Co., Louisville, Ky.

KKR5463, Precision Homes, Inc., Saraland, Ala.

KKM7320, Gainesville Sewing Machine Co., Gainesville, Ga.

KLK0147, Robert J. Deitrich, Sr., Washington, D.C. (for repeated violations of Section 308(b) of the Communications Act).

KLN5911, James Cheshire, Inkster, Mich.

KEJ0312, R. K. Johnson, Los Angeles, Calif.

Unless otherwise noted, all of the foregoing were cited for not replying to FCC communications.

• The following CB'er received a \$400 monetary forfeiture:

KCF1516, William Ray Wilson, Glen Burnie, Md., he not only got hit with a \$400 forfeiture, but was also asked to show cause why his license should not be revoked. Previously, Wilson was fined \$200, which was reduced to \$50 together with a warning against further violations of the rules. He now is charged with violations including running excessive power, illegal antenna height, using the station for hobby purposes, failing to maintain required silent periods, not using his callsign to identify transmissions, using false and deceptive callsigns, use of unauthorized frequencies).

• A \$200 monetary forfeiture was levelled against:

KKX8762, Clarence C. McPherson, Paramount, Calif. (for repeated and willful violations of the rules concerning: failure to identify station, use of unauthorized frequency for inter-station communications, communications with a foreign station, communications over 150 miles).

• These operators had \$100 forfeitures reduced to \$50:

KFD2742, Ben Rolphe, Castro Valley, Calif.
6W5625, Johnny Zomprelli, Austell, Ga.

• These operators had \$100 forfeitures reduced to \$25:

KLP2179, Clyde M. Hauck, Rochester, N. Y.
KIC1896, Dr. Allan A. Fisher, Rochester, N. Y.
KKA6690, Gerara Goodwin, Franklin, Me.
KLG7858, John Leslie, Jr., Louisville, Ky.
KKV4537, Larry Bradshaw, Denison, Texas.
KKI1862, Joseph Cooper, Jr., Springfield, Va.

• The following CB'ers had charges against them dismissed:

KHH0744, James D. Blake, Saint Clair, Mich. (licensee settled his liability with a monetary forfeiture).

KDF2942, John D. Brookshire, Mableton, Ga. (licensee took corrective measures to preclude a reoccurrence of violations).

KLC1739, Daniel M. Danton, Milwaukie, Oreg. (licensee settled his liability for monetary forfeiture).

7Q1601, Earl William Evans, Tampa, Fla. (his revocation order set aside because licensee surrendered his license, which has now been cancelled).

A new bill to cancel the new FCC CB rules went into the House of Representatives under the auspices of Congressman William S. Bromfield (R., Mich.).

The U.S. Tariff Commission has started an investigation which could possibly bring a temporary ban on imported CB gear. The probe stems from a complaint from the Electrosolids Corp. of Los Angeles, Calif., which claims that many of the Japanese hand-held units being sold here infringe on their patents.



KBG4303 RIDES AGAIN

Continued from page 7

of CB'ers. For instance, why not set aside one or two of these channels for CB hobby use—even if only on a limited hours basis? Why not use one or two of these channels for exclusive Part 15 (100 milliwatt) CB hobby use? What about giving these channels to inter-station use and then backing the use of Channel 9 as the National CB Calling and Emergency channel. While the FCC “likes” our using Channel 9 for calling, they still refuse to include this use in the rules. In many parts of the country (especially large metropolitan areas) it is almost impossible to use Channel 9 for this purpose because of the fact that it is one of the 7 inter station channels and is needed too dearly for regular communications use. The FCC has officially established similar “calling” channels in other services, and this would certainly improve communications in our service.

The FCC has asked for comments on the Academy of Model Aeronautics' proposal. If you

would like the R/C stations out of the Class D band we urge that you communicate with the FCC (send an original and 14 copies) and let them know. You might also ask that they allocate the present 27 mc/s Class C R/C channels for inter-station Class D use, along with any other specific uses as suggested above. The deadline for sending this information to the FCC is October 1, so do it as soon as possible. This could be a very important advance in CB communications—or it could be a fizzle.

ANOTHER ADIOS?

Despite a great barrage of denials over the past few months, the relative newcomer called “CB Magazine,” as predicted here in S9, has just been dropped from the roster of publications at Communications Publishing Corp. in Oklahoma City (the heirs apparent to the old *CB Horizons* publishing empire).

This information was confirmed in a recent release from CPC's good news department. The release neglected to say if the magazine will continue a regular monthly schedule of publication, nor did it explain how readers might be able to reclaim any subscription monies, should they not wish to receive issues which might be published at a later date.

It had been long known throughout the electronics field that the publication was in increasingly serious trouble because of lack of both advertising and readers. It was tough and go at best, and the magazine was publishing later and later each month. If it does bite the dust, it will be the eighth so-called “national CB publication” to leave the scene, taking with it the hopes and dreams of the publishers and the cash of the readers.

AWARD FOR S9

We want to offer sincere thanks to the Cape Canaveral CB Club for the beautiful trophy which they presented to S9 at the Florida National CB Jamboree.

The award, which was for “Outstanding Service To The CB'er,” was accepted by your truly who was also enthralled by the fantastic spectacle of the goings-on at Cape Kennedy.

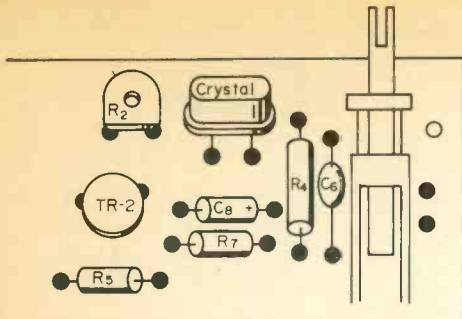
The entire S9 staff was very pleased with this honor and we pledge to continue to contribute, in our small way, to the further growth of CB radio and its benefits to almost one-million licensees.



IMPROVING YOUR WALKIE-TALKIE

Continued from page 46

a 1 μ F C8 will be approximately three times as much as the voltage appearing at the same point with a 0.1 μ F C8. This results in about 90% modulation, 3 times the original 30%,



and close to the legal maximum of 100%.

A suitable 1 μ F 12Vdc Sprague Electric Company #TE-1120 capacitor is available through Lafayette Radio Electronics, 111 Jericho Turnpike, Syosset, Long Island, New York 11791, at 75¢ each. Note that you must observe polarity when replacing this capacitor: the "+" lead must be soldered in the upper board hole that is next to R4, and the other lead in the lower board hole that is next to TR-2, as shown in Figure 3.

For less than \$1.00, negligible effort, and less than 5 minutes of your time, you can greatly increase the range of your flea-power transceiver.



KYLE'S KORNER

Continued from page 31

mentioned the old Johnson Messenger Channel Unit, and I wondered if the same conversion could be made to the new Johnson Viking Messenger Five Channel Unit, which is on the market now. Any information you can give me on this will be appreciated.

—E.L., Oreana, Illinois

To the best of my knowledge, there have been no major changes in the Messenger One since its introduction. Unlike many firms, Johnson has simply maintained production of the original units while introducing newer ones into the line. This isn't a criticism—the Messenger One was so far ahead of its time when it came out that many lines are just now catching up to it, and why change a winner? But, to answer your question, I know of nothing that would keep the modification from being just as applicable to today's Ones as to the first ones off the lines. However, were I to make such a conversion, I would be sure to have it checked out by a licensed technician and have him sign the 452C, noting that he had inspected the conversion and measured all frequencies. Off-frequency operation is still the number one offense clocked by FCC monitors. And if you get tabbed, and your rig has been modified, you have very little room to argue unless you have a certification of frequency on hand.

CLASSIFIED INFORMATION

This isn't exactly a technical question, but it

does deal with CB operation. I'm impressed with the equipment shown on the July '65 cover. Can you tell me more about Suzie?

—S.L.R., Santa Susana, Calif.

Sorry, Sid, old boy—that's classified information you're after. I'll have to buck your question over to T.K. for an answer—if he decides to release any specs or other data!

(Editor's note: Suzie is 21 and single, no further details available.)

And this brings us to the end of the space for this month. There are quite a few questions still in the box to be answered, but I still have room in it for your problem too. Send it to me % S9, 14 Vanderventer Avenue, Port Washington, L. I., N. Y.—and save your stamps, because it's just impossible for me to give direct replies to anyone. While I can understand your need for fast data, there's just not enough hours in the day to give direct replies to all the questions—and if I do it for one, then I feel I ought to do it for everybody. So try to be patient until your question gets to the top of the box—and don't worry, it will one of these months! See you next time . . .



CB CHIT CHAT

Continued from page 54

Service within the areas stricken by recent flooding and tornados in Colorado are to be commended for the line of communications and other volunteer help given so unselfishly by them June 15th thru the 20th.

News reporters, Civil Defense and police many times relied upon the Ham and CB'er to get the message through. The fact that so few lives were lost during the storms and floods was due in part to the efforts of the volunteer communications facilities. Many times the only means of requesting a doctor, an ambulance, equipment, or means of evacuation and the warning of other communications of impending flood and tornados.

Every dry wash became a large stream, every large stream became a raging river, and the rivers turned in to a torrent of flood waters bringing death and destruction.

Colorado is not normally a flood area. The last serious floods were in the early 1930's and a need for volunteer organizations to more closely coordinate for state wide disasters has not been always felt. Now, while the disaster is still fresh in everyone's mind, is the time for the state's volunteer groups to become more closely associated in order to give a better assist.

The cooperation and coordination during the floods here was the very best—Civil Defense, Red Cross, the Hams, CB'ers, the military and all the other countless groups, organizations and individuals. None of them have sought glory or publicity—only to help a fellow man in time of trouble. There was over \$700 million dollars worth of damage in Colorado alone—15 lives lost to the floods which nearly covered the entire eastern half of Colorado from Wyoming to New Mexico. We are all glad that we had the capability and the equipment and training to keep it from being worse.

Re-Organization of SQUAW PEAK CB Radio Chapter, Utah County, Utah.

At a special meeting of the defunct Squaw Peak Chapter of CB Radio, Utah County, Utah, held at the home of Mr. Bill Bird, 1655 North, Orem, KLE2295, on July 7th, 1965 reorganization was accomplished during the course of the evening, changes in the incorporation laws, rules and regulations were made as follows so as to facilitate a larger and better organization.



PSSSST!

HEY BUDDY!



Were you one of the many readers who wrote to us to ask if we could furnish reprints of our wildest of all S9 covers, the "King of The Band" one we had in February? Well, we can't.

BUT we did take this same illustration and enlarge it to a giant 8½" by 11" size, print it in three dazzling colors, and figure out how to personalize it with your call sign on the throne.

If this doesn't shake up visitors to your CB shack, nothing will. It looks dandy in a frame and makes a sneaky gift for someone who has everything. It comes postpaid, and personalized with your call (or any other call or name you specify) for only 50¢ in coins (no stamps or checks please).

Order this winner now from: King of The Band, S9 Magazine, 14 Vanderventer Avenue, Port Washington, N. Y. 11050.

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.

THE BAND BLASTER super Nuvistor microphone amplifier installs between your mic input jack and grid in less than 30 minutes. The poor man's way to be king of the mountain. Only \$9.95, wired and tested from Sentry Mfg. Co., P.O. Box 12322, Oklahoma City, Okla. 73112.

QSL's by Brownie "W3CJL." Since 1939—Quality CB-WPE-QSL cards. Samples 10¢ with catalog 25¢. 3111 Lehigh, Allentown, Pa.

QSL's, 8-12 different beautiful embossed glittering cards 25¢, refundable coupon. Andy's, Bridge St., Amsterdam, N. Y.

"ARE YOU SINCERE?" Are you really looking for the best deal on a new or fully guaranteed used CB unit? Let us convince you with a specific quote that will really save you money. GRAHAM RADIO, Dept. E, Reading, Massachusetts."

CB DEALERS ONLY—One of the nation's largest suppliers of connectors, test equipment and accessory items has a new Catalog out listing direct-to-the-dealer prices on the items most needed by your customers. A card to LOGAN RADIO COMMUNICATION SUPPLY, 2110 Avenue J, LUBBOCK, TEXAS 19405, will bring your firm a copy.

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.

PLUG IN our shortwave converter and receive any single frequency (AM or FM) between 25 and 180 mc/s. Connects in seconds to any auto radio without tools, switches in or out of circuit. Fully wired and tested, transistorized, and with self-contained battery, you can use it to monitor CB, police, fire, telephone, aircraft, hams, taxi, business band, etc. When ordering, specify channel you wish to receive and also a clear frequency on your radio dial below 1000 kc/s. Only \$37.50, complete. From Sentry Mfg. Co., P.O. Box 12322, Oklahoma City, Okla. 73112.

POOR MAN'S INVESTMENT—The U.S. Mint in San Francisco was closed down in 1955—today its products are getting mighty scarce. Some "S" mint marked Lincoln pennies in circulated condition today sell for as much as \$57, \$65, even \$235. Here's your chance to invest a few cents towards the possibility of having a real winner in a few years. We have a limited supply of good condition "S" pennies and can offer them at only 5¢ each, or 25 for \$1. Please enclose self addressed, stamped envelope. Dates of our choice. Pay for your order with "Mercury" dimes and receive 3 "S" Lincolns for the price of 2. Write E. Steinhardt, 5510 13th Ave., Brooklyn 19, N. Y.

FREE CB QSL SAMPLES. From \$2.50 per 100. Radio Press, Box 24S, Pittstown, New Jersey.

Quality QSL's—New designs monthly. Samples 10¢, 25¢ 50¢. Savory, 172 Roosevelt, Weymouth, Mass.

CB DEALERS!—If you haven't got it—you can't sell it. Why send your business somewhere else? Here at Graham Radio, we have thousands of CB and amateur radio units and accessories at *dealer wholesale prices*, and available for immediate shipping. Write for our latest dealer catalog. Graham Radio Inc., Dept. S, Reading, Mass. 01867. Tel. (617) 944-4000.

CB CHRISTMAS CARDS. Imprint and envelopes included 50 for \$2.00 postpaid. Fine quality send for details. Bob Cleary, Box 468, Binghamton, N. Y.

CONVERT your car radio to a super sensitive shortwave receiver with a Sentry Universal Converter. Will receive any band between 40 and 60 mc/s, convert it to the broadcast band. Wired and tested, less crystal only \$9.95. With crystal (specify band desired) only \$14.95. Sentry Mfg. Co., P.O. Box 12322, Oklahoma City, Okla. 73112.

QSL COLLECTORS: Send 40 cards and 50¢ to Dick Schreiber, Box 17, Barrington, Rhode Island 02806. Get 40 different back.

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.

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

CRYSTALS, Mailed anywhere. Any channel, any set, all \$2.95 each. Thousands in stock. Shipped same day. Cash orders shipped postpaid. Worcester Radio, 164 Main Street, Worcester, Mass. 01608.

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

DON'T BUY QSL cards until you see my free samples. Paul, Box 9363, Austin, Texas.

CB IN ACTION

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



"SELECTIVITY AND SENSITIVITY IN A TUNED CIRCUIT"

by Guest Author Tony Seker,
Order Department Manager, Pearce-Simpson, Inc.

Selectivity is the ability of a tuned circuit to select a particular band of frequencies and to discriminate against all other frequencies above and below that band. It rejects transmission other than the one to which it is tuned.

Good selectivity is obtained when a receiver can accept the signals of one station while rejecting those of all other stations on adjacent channels. The manufacturer builds superior selectivity into a unit when he supplies a minimum of two stages and six tuned circuits. The more tuned circuits the better the selectivity.

Sensitivity in a receiver is obtained when minimum input signal is required to produce a specified output signal having a specified signal-to-noise ratio. Good amplification of the radio frequency amplifier stages makes a receiver more sensitive. A tuned RF stage is used to insure good signal-to-noise ratio.

A receiver made sensitive to the desired signal and a high selectivity that accommodates the desired signal bandwidth only, will help to block out interference. This of course is in conjunction with normal suppression methods to reduce interference.

A manufacturer that sells quality two-way radios insists on extra and sophisticated stages to insure good sensitivity and selectivity. It is foolish trying to cut corners to reduce the price of the units. The true CB'er appreciates the need of proper circuit designing to insure him of having a quality unit.

To set the records straight on the meaning of decibel and how it is used, the decibel is not an absolute value; it is a means of stating the ratio of a level to a certain reference level. Usually when no reference level is given, it is 6 millivolts across a 500-ohm impedance. The reference level should be stated wherever a value in db's is given.

The use of a squelch circuit in a radio communications receiver is not always properly understood. Normally the receiver is on all the time to monitor the particular channel used. When no signal is being picked up, there is a high background noise which could prove to be very annoying. To reduce this disturbance, squelch circuits are included to make the audio circuits inoperative until a signal is received. Here again is when the manufacturer puts the quality in by designing the circuit to open the squelch at a very low voltage—generally at one-half microvolt.

WIN A COMPANION II CB

You can win a 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., P.O. Box 800, Biscayne Annex, Miami, Florida 33152.



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SWAP: want early Johnson Messenger 242-128. Have complete home study amateur operator course. Details on request. BEALL, 1001 Country Club Drive, Modesto, Calif.

Cardswappers Attention!! Build up your card collection fast. Send a dollar today and receive 25 different CB QSL cards by return mail. Card Swap Shop, Box 59-B2, Hudson, N. Y. 12534.

STAG & NOVELTY QSL CARDS FOR THE BROADMINDED, Spicy-Clever-Cute, samples and style sheet 25¢ including FREE "EMERGENCY" sticker, BOBO, 642 Woodlawn Pike, Knoxville, Tennessee.

Crystals Guaranteed any channel—most sets \$1.99 ea. \$3.80 pr. cash with order shipped postpaid radios and accessories. Crystal King, Box 439, Big Rapids, Michigan.

CB Catalog—Fantastic Bargains—Write Echo Communications, Box 43, Cedarburg, Wisconsin 53012.

FREE SAMPLES—CB QSL CARDS—\$2.50 per 100 in 3 colors. Garth Printing Company, Box 51S, Jutland, New Jersey.

CB-QSL's, 200 designs, state maps, humorous, regular. Catalog-samples 25¢ (refunded). KCJ1955, Lile Guill, Rustburg, Va. 24588.

No Others Like Them! Sparkling 3-D Cards in space-age designs for QSL — CBL — WPE use. New 3-D Christmas designs, personalized greetings. Samples 25¢ (refundable). 3-D QSL Co., Monson 3, Mass. 01057.

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Fast Service! Low Prices! Samples 10¢ (refundable). Harms, KDI1143, Mystery Hill, No. Salem, N. H.

QSL's—Quality—Immediate Service—Reasonable CB QSL Cards. Samples 10¢. Malgo Press—Box 375—Toledo, Ohio 43601.

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FREE \$9 SUBSCRIPTION with each and every one of our TR-SONIC FISH CALLS. Sold in stores at \$13.95, we'll let you have one (with 12 issues of \$9) for only \$11.95 if you mention that you saw our ad here. In the ocean, in a river or lake, this device attracts fishes by means of electronic trickery. Comes with batteries, ready to pull 'em in. Electronics, P.O. Box 124, Jamaica 13, N. Y.

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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.

FIRST CHECK GETS: Johnson Personal Messenger CB Transceiver (1½ watt) with extras: rechargeable batteries, various antennas, etc. \$75 ea., pair \$140. SIMPSON 260 VOM \$25. EICO 955-k in-circuit Capacitor Tester \$16. KNIGHT VTVM \$18. Add postage, all in excellent condition. D. J. Mladenka, 4819 Willow, Bellaire, Texas 77401.

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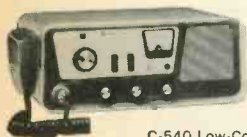
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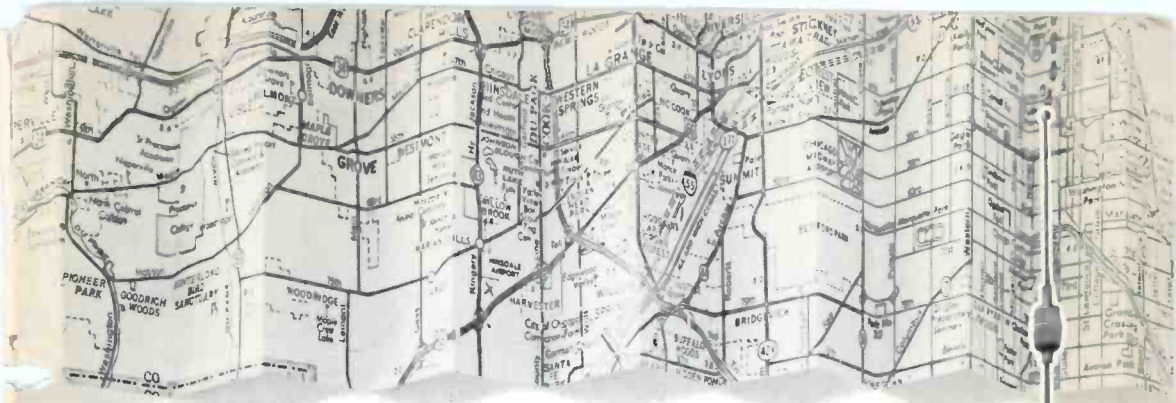
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