

ICD

the citizens band journal

A grid of QSL cards from various amateur radio operators across the United States. Each card typically includes a call sign, location, and contact information. Notable call signs include KHB 1709, KHC 2157, 2Q7376, 12Q3251, 16Q1018, KFC257, 19B0423, 19Q7458, 19QA0872, 19W6220, 5W2109, 4Q1240, 17W, 1Q2032, KEE0379, KCF2574, KCG-1268, 20Q, KIC2309, KBA1182, 2A5251, 9Q0177, KBI4857, KCC3280, KHG4461, XM55560, 7W3209, KHH4313, KBC1036, XMI1-947, 2Q3113, 1W9494, XM1133, 17Q3083, NORTHERN 333, 6Q3425, EG0782, XM23374, 18W6392, 11Q5364, KGH0065, KDD5951, 18Q6396, 3Q2052, XM41964, KDB3762, YY5-PS279, 18A4352, and KB.

Beginner's 1 tube CB receiver
 FCC's Loucks on "CB's Future"
 Guide to 204 QSL Printers

Mobile "Weather-Aid"
 394 QSL Swappers
 Build the "Signal Sucker"

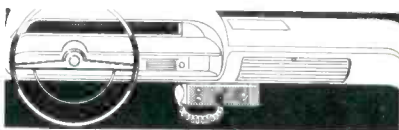
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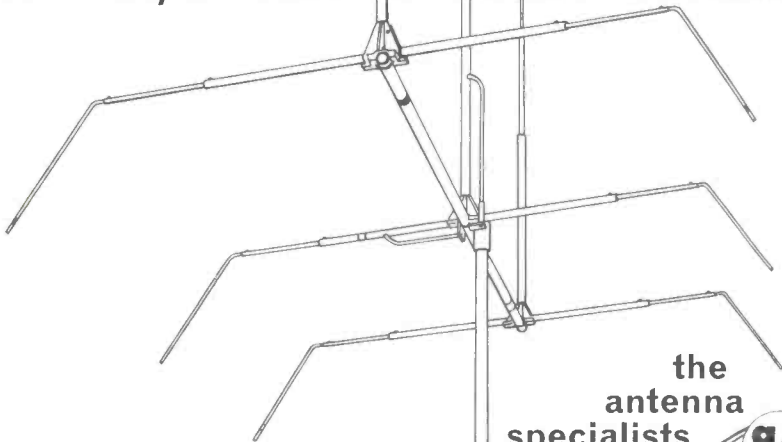
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the citizens band journal

Vol. 3, No. 4

October, 1963

S. R. COWAN, PUBLISHER

300 West 43rd Street New York 36, N. Y.

FEATURES

Readers Of Editorials	Tom Kneitel, KBG4303	7
Plus other assorted ramblings.		
QSL Confidential	David Alroy, 16W0963	9
The "inside story" on how, why, and how much.		
S9 Guide to 204 CB QSL Printers	S9 Reader Service Staff	12
Largest QSL Directory ever published.		
Beginner's 1 Tube CB Receiver	Stephen Dedalus, 12W5415	17
Also a jim-dandy emergency receiver.		
The Future of CB	Ivan H. Loucks	20
The FCC CB-Chief speaks frankly.		
Build The Weather-Aid (Part 2)	Basil Barbee, 9W0831	24
24 hour weather forecasts in your mobile unit.		
Part 15 Callbook		35
This month's installment.		
CB Card Swappers' Korner		38
Do you qualify for an award?		
Some Facts on Phased CB Antennas	Ed Noll, KCC2618	42
You will want to know about this.		
Build The S9 "Signal Sucker"	Don Stoner, 11W1507	50
And get rid of cross modulation.		
The CB Service Station	Lee Aurick, 2W2870	52
Or, 1A2108 keeps 'em rolling.		
Case History of A Lost CB License		54
Plus this month's group of FCC actions.		

DEPARTMENTS

Reader Mail	4
KBG4303 Rides Again/Tom Kneitel, KBG4303	7
Part 15 Korner/Dean Detton, N-17	36
On The Counters	29
Antennas/Ed Noll, KCC2618	42
Card Swappers Unlimited	38
Electronics 'n Stuff/Don Stoner, 11W1507	50
CB Casebook/Lee Aurick, 2W2870	52
CB Chit Chat/John Krejc, 2W4586	46
Washington Outlook	54

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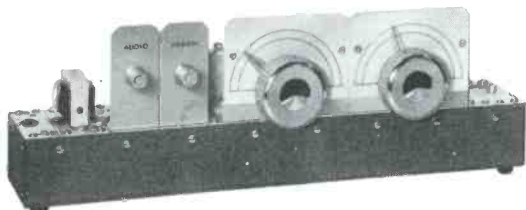
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Receiver kit includes 4" speaker and power supply.

Kit	Frequency	Price
AOR-40	Special	\$68.00
AOR-41	150 kc — 450 kc	62.50
AOR-42	2 mc — 6 mc	62.50
AOR-43	6 mc — 18 mc	62.50
AOR-44	80 meter/40 meter	62.50
AOR-45	15 meter/10 meter	62.50
AOR-46	6 meter	66.50
AOR-47	2 meter	66.50
AOR-48	Citizens 27 mc	62.50

*AOR-41 uses a tuned rf circuit with 6BA6



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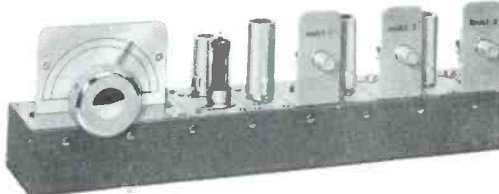
AOT-50 transmitter kit less power supply and key, but with one 40 meter novice band crystal. Shipping weight: 5 lbs. \$35.00



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AOP-100 350 volts, 150 ma intermittent or 100 ma continuous service, 6.3 volts @ 5 amps. Shipping weight: 8 lbs.....\$18.50

AOP-200 650 volts, 250 ma intermittent or 200 ma continuous service, 6.3 volts @ 10 amps. Shipping weight: 10 lbs.....\$32.50



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The International AOF series of variable frequency oscillator kits is available in three versions. For example, the AOF-91 kit is a complete driver unit to be used with 6 meter and 2 meter transmitters. Approximately .5 watt of power is available on both bands. Tube lineup: 6BH6 oscillator, OB-2 voltage regulator, 12BY7 buffer-amplifier/multiplier. Shipping weight: 5 lbs.

Kit	Frequency	Price
AOF-89	VFO 8 mc — 9 mc and buffer	\$22.00
AOF-90	VFO 8 mc — 9 mc plus buffer multiplier and 6 meter output	29.00
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READER MAIL

FCC MONITORING STATIONS

Editor:

Your article on FCC Monitoring Stations (July, cover story) should win the Article of the Year Award.

Tom Cochran, KCC1700
Tri-County Citizens Radio Assn.
Southampton, Pa.

CB LICENSE FEES

Dear Tom:

This CB license fee idea that the FCC has makes me furious.

I feel that my Income Tax each year includes taking care of the administrative costs of the government. If the FCC is now able to levy its own taxes then why don't we get rid of Congress? We can then have a new form of government which each of the agencies collecting their own fees for services rendered.

The fees themselves are ridiculous. Let them charge a dollar per watt for the maximum power used in each service: Broadcast (50 KW) \$50,000; TV (100 KW) \$100,000; Ham (1 KW) \$1,000; and CB (5 W) \$5.

Rowan Haven, KJB0227
Fairbanks, Alaska

Editor:

I do not go along with the FCC on the \$8 fee for CB licenses, but if there are fees, why not the same as Hams, or less? If the \$8 fee remains, then let the FCC give us more freedom in our use of the band. Isn't that what we will be paying for?

Don White, KBC2193
New London, Conn.

Dear Sir:

I agree with you 100% in your stand against the FCC's present proposal for CB license fees. I wouldn't be against paying a reasonable amount, but EIGHT DOLLARS? This is twice as much as a Ham station and it just isn't fair. I will argue this point with anyone, anywhere!

We use our local CB units hand-in-hand with police, CD, Red Cross, and all others devoted to the welfare and protection of the community. Charging \$8 to let us do this is a funny way of saying "thanks."

Jack G. Gatton, KEH0990
Nowata, Okla.

Mr. Kneitel:

I am very much against, and do hereby protest any licensing fee, as I believe that this is just one more example of government intervention in private business. You should solicit the aid of the ARRL and the National Association of Broadcasters in stopping these fees.

I sent a copy of your July editorial on these license fees to my Congressman, together with a letter explaining that the fees are outrageous and discriminatory.

Gilbert W. Stamper, Jr., KCI0352
Charlotte, N. C.

Sirs:

I disagree with you completely. I would think that the average CB user would stop and think of what a valuable asset he or she has in their rigs. They have invested a lot of hard money in them. I don't believe that present CB'ers, had they been required to send a check along to cover their original license application, would have complained.

Don't you agree that the FCC must have quite a chore in just taking care of the new applications they receive each day? What is it going to be when the old license holders have to reapply for a new license upon expiration of their first license?

Tracy W. Griffin, Jr., KBA3409
Lee, Mass.

Since the mail is running about 4 to 1 against the license fees we have presented a proportionate selection of reader mail commenting on the mater. These letters are typical of the views expressed by each side.

SHE'S STAYING WITH US

Gentlemen:

I am renewing my husband's subscription to your magazine. It is an intelligent way for a CB widow to view the situation.

Mrs. 8Q1046
Sturgis, Miss.

AUGUST EDITORIAL: ACBA COMMENT

Dear Tom,

Your August editorial was definitely the best yet. You were very thorough in your story and I feel that you should be proud.

East Tawas, Mich.

Dear Mr. Kneitel:

Congratulations on your August editorial. I could not agree more wholeheartedly with your sentiments on ACBA, and am extremely pleased with the tactful, discrete, and adult manner which you replied to their unpleasant telegram. (name withheld by request)
Johnson City, N. Y.

Editor:

You have tried your best to destroy the ACBA. Why? There doesn't seem to be any-

Continued on page 59



Think smallest.

Planning to buy a mobile CB rig? Think smallest. Buy the smallest 23-channel mobile CB transceiver on the market . . . the Browning Drake M-523. It's so compact it fits perfectly under the dash, and you can still ride three in front comfortably. Perfect for sports cars. The Browning Drake M-523 and M-506 (six-channel version) are 8" x 9" x 3" small. What's more, we use only tubes in the circuits for utmost reliability — and you don't have to be an electronics engineer to make repairs or change a tube. Right now we have over 100 franchised Browning Service Centers across the nation where you can see, try (if you have a license) and buy the Drake or any other Browning CB equipment. We will gladly tell you where the nearest one is in your area. Before you buy just any mobile CB equipment, THINK SMALLEST . . . BUY BROWNING. Then start enjoying CB as it should be.

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ADDRESS _____

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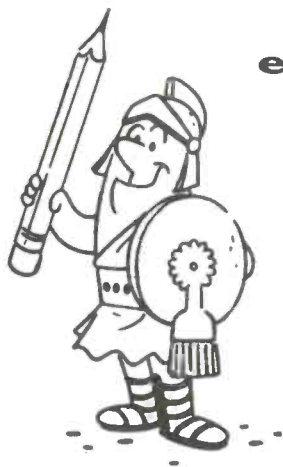
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editorial

KBG4303 rides again!

by TOM KNEITEL
EDITOR, S9

READERS OF EDITORIALS

If there's anything that makes an editor happy it's to discover that somebody reads his editorials. Having kept detailed statistical records down the years, we know that there are seven people who read ours. When, last month we heard from all seven of our readers, and from a new one to boot, we knew that we had rung the bell.

Since the August editorial contained an important message, we were happy to see that many of you "got the word," and a few of you even read between the lines.

It appears, however, that there is a segment of the reading audience that doesn't seem to be able to stomach opinions anymore. They expect that every single thought appearing in an editorial should be bland, foolish twaddle. Maybe it's OK to get involved in having a little sick fun at the personal expense of an FCC official or two, but nothing more serious than that!

I guarantee that you would be absolutely *shocked* if you could take a gander at some of the mail that finds its way to S9. I'm not so naive so as to expect that each and every one of you is going to agree 100% with all the editorials you read here, or anywhere else—you would be human *blanks* if you did. In fact, it is the purpose of all editorials to give you a glimpse of the present state of opinion which prevails under the hat of the author; this may possibly move you to similar thinking, maybe some action, and ultimately, benefit. It is also the hope of the editorialist that some of the readers will be stimulated to the point of forwarding him their thoughts on his opinions, whether they are *for* them or *against* them. Once we are afraid to examine the other

fellow's honest opinion, we are headed for moribundity (look it up in Webster, all eight of you).

August seemed to be one of those extra-stimulating months. Yes, the letters came in and, to our happy surprise, we apparently were tuned to the thoughts of most S9 readers when the editorial was written. Of course, almost everyone had their own slant on the specific points we covered.

Some readers disagreed with us and of these, there were a few very well made points which gave us a clearer insight into the motivational thinking of "militant radical" segment of CB which will probably aid us in our future understanding of their problems and wishes.

But August was *different* in the fact that we must have mentioned several points which antagonized the hitherto latent *twilight zone* residents of CB. In the many years I have been concerned with reader mail, I have never seen so many letters containing hysterical panic, threats of violence, swear words, ranting, raving, wretched epithets, and roughhouse rhetoric.

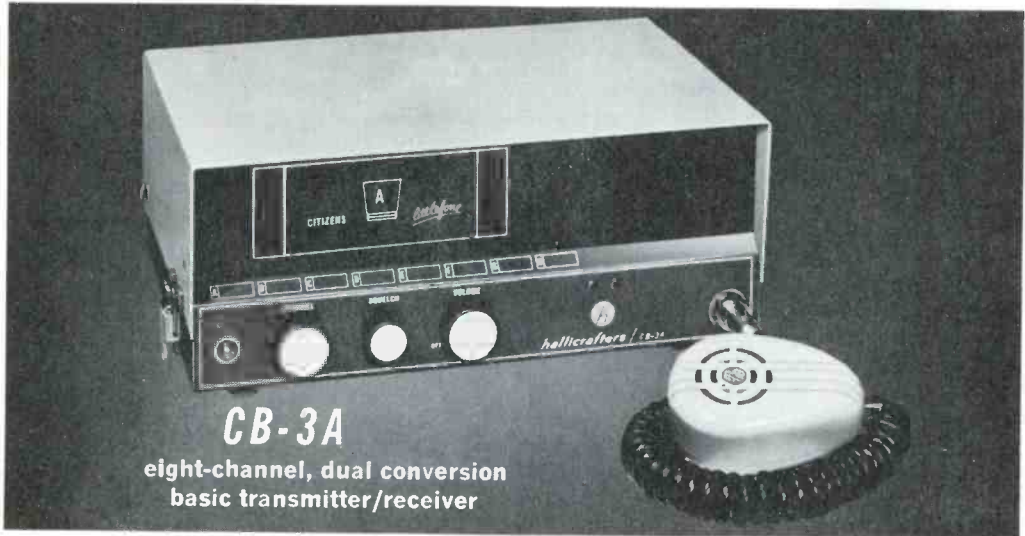
Believe me, its almost frightening to think that my Underwood model 82-H, sitting there so innocuously amidst the reams of paper on my desk, could be the instrument that moved strong men to cry, weak men to bristle.

Think I'm kidding? Here's a letter from Jacksonville, Fla., it says, in part, "My feeling for you is a measure of contempt and disdain. You are more stupid than I had imagined. It will be a pleasure to visit you in your rat hole the next time I am in New

Continued on page 56

hallicrafters gives you the basic superior performance you need for just \$159.95...

All the gadgets ever invented wouldn't improve the tremendous basic performance and reliability of the CB-3A. You get 8-channel, crystal controlled convenience... 100% modulation capability... 40 db. min. adjacent channel rejection... less than 1 μ v. sensitivity... 6 kc. selectivity... removable accessory panels and built-in accessory jack—plus a reliability record unequalled in the field.



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QSL CONFIDENTIAL

WHAT & HOW TO ORDER, HOW MUCH THEY COST, ETC.

by DAVID ALROY, 16W0963



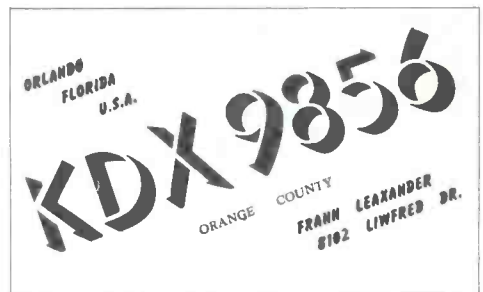
CB'ers have created what amounts to the biggest clamor for QSL cards in the history of 2-way radio communications. This is somewhat strange, since legal CB communications are generally not conducted in a manner which would normally warrant that a QSL card be sent.

But CB'ers, being the inventive folks that we are, have come up with several uses for CB cards which were never before dreamed of. For one thing, CB jamborees swarm with people exchanging QSL's via "eyeball QSO" method. In addition, a large group of CB'ers has embarked on the CB QSL swapping (by mail) hobby (this includes quite a few former skip-workers who found that collecting cards from DX stations can be obtained via mail-swap without violating any of Part 19's tenets). S9 Magazine lists some of these mail-swappers each month, although there are far more of them than are listed.

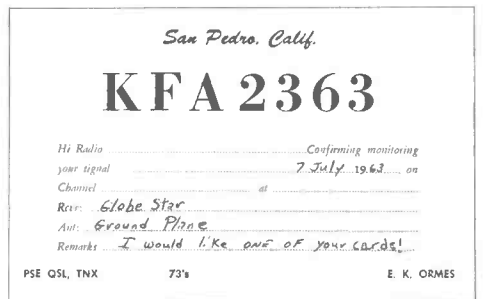
Having been involved in a bit of swapping myself and having also been involved somewhat in printing QSL cards, I thought that I would chat here about some of the things to think about when selecting, ordering, sending and displaying the "pasteboards," or, as CB'ers call them, "wall-paper."

CHOOSING

What type of card elicits the best response? Well, ask yourself, "Which cards do I receive and enjoy best?" These are the types of cards which generally bring the best returns from other stations.

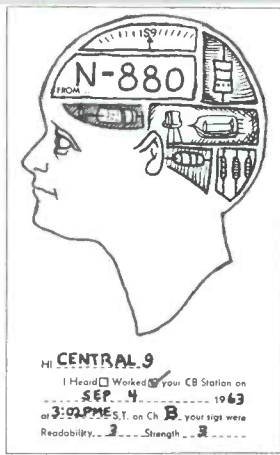


This is the "two sided" type of CB QSL card, with the station information printed on one side and the call-sign on the other.



This card, with all the data on one side, gives the person who receives it full information on you and your station at a glance.

I would say that the *best* received cards contain some form of humor or cartoon. On the other hand, cards which are typewritten or hand-written on filing cards or on the backs of scenic picture postcards do not do particularly well in the returns department. Surprisingly enough, it is *not* always necessary to produce a card which looks like an MGM Technicolor spectacular to get good results, although certainly elaborate QSL's

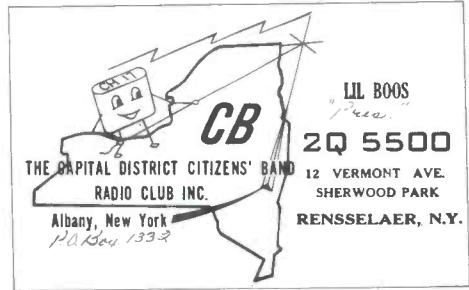


Cards such as this always get good results based on their "shock" value. If you hold it up to a mirror you can read it.

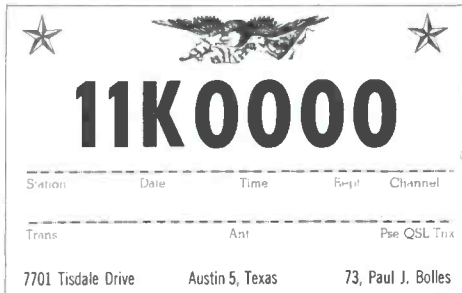
The preprinted "basic design" cards are about the least expensive. You get the cards "blank" and then fill in your own callsign with a pen, typewriter, or rubber stamp. You might even have a local printer complete them.



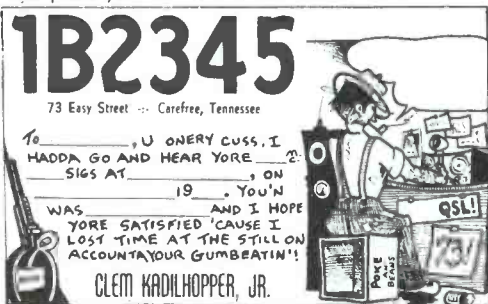
The "individualized" comic QSL is always a popular card, although usually involving more expense than standard cards.



"Club" cards are the same for all members of a particular organization and can sometimes be ordered at special bulk rates.



A "standard form" card; it differs from the N-880 card (shown above) in the fact that the original card printer also prints your name, call, and 10-20 thereon.



A "cartoon" card always brings good results and many clever designs are available from the printers in the S9 Directory of QSL Printers.

are just great (if you can afford them).

There are several basic card styles from which to choose. Let's look at them:

1. The two sided card, with the callsign, operator's name and address on one side and the station equipment information on the other. An example of this is the card from KDX9856.

2. The card with all information on one side in a *standard* format (no cartoons or other individualizing things). See KFA-2363's card here.

3. The Part 15 card shown from N-880 is a preprinted "form" card which has been gaining in popularity. The card is purchased with a basic design and you are free to print, type or handwrite in your own station information.

4. The individualized CB QSL with a cartoon or other information which is specific to the operator of the station or his equipment. This might also contain an actual photograph of the operator or station. See the card from 1W6216.

5. The "standard form" card which is completed by the printer with your call and

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station information on a "stock" card which he has prepared. The call and station information is usually added in a differing color than the preprinted information. See the example of 11K0000.

6. A "cute" card with a cartoon. See card from 1B2345.

7. A zany novelty card with some wild layout designed to "shock" you. Take a look at the card from KGH4255 (it's printed backwards on purpose!).

8. A "club" card which is uniform among all members of an organization. A good example of this is the card from 2Q5500.

CONSIDERATIONS WHEN ORDERING

If you're like me, the price of the card will be the major factor in governing the type of card chosen. One thing should be understood from the first, and that is that each run through the press counts as a separate color. This means that if you have only black printing, but it is on both sides of the card, the cost is going to be for two colors because the cards are printed on one side at a time.

Perhaps you have received a card from another CB'er which appeals to you. Flip it over and look for the name and address of the printer (some thoughtful printers run their full name and address on their cards), or look for his call. If he has included any kind of identifying mark on his cards then chances are that he will be listed in S9's 1964 Directory of CB QSL printers. You can then contact the printer in question and ask for a price list (or you can send him the card you want duplicated).

We have taken some of the samples sent out by the more popular CB QSL printers and averaged their prices so you can have a general idea of what the present picture of the QSL market looks like.

Amount	# Colors		
	1	2	3
100	\$ 4.06	\$ 4.42	\$ 4.97
200	4.90	6.29	7.65
300	5.91	7.75	9.33
500	10.25	11.07	13.90

OTHER CONSIDERATIONS

There are several other refinements to these prices (which are for cards printed on high-gloss stock). Cards on plain non-gloss stock run 50¢ to \$1.00 less per hun-

dred, cards with embossed (raised) lettering average 20% higher, cards with metallic lettering usually run about a penny per card higher. Several printers offer cards with dazzling fluorescent colors, and these usually add a penny to the cost of each card.

Delivery time varies according to the number of inks used (each color must fully dry before another can be printed) and the amount of work for other CB'ers whose orders came in ahead of yours. Most orders make it out of the print shop and into the mails within 10 working days. Payment is *always* expected in advance by QSL printers. You will generally have to pay a small mailing charge in advance for the shipment of the cards from the printer to you, it runs about 50¢ per order.

The "stock" cards mentioned in example #5 (11K0000) average about 2¢ per card, there is usually a minimum order of 100 cards expected (that's on all types of cards, by the way).

Remember that the foregoing is a composite picture made up of information supplied by many printers. Prices and other details vary from printer to printer, sometimes greatly.

SENDING THEM

While postal regulations aren't a secret, it somehow is not normally realized that QSL cards can be mailed in *unsealed envelopes* for the same 4¢ that would be spent for mailing a postal card. This is a bit less than the 5¢ per letter rate for First Class Mail, and constitutes a dollar saved on every 100 cards you send out (oops, forgot about having to buy envelopes).

DISPLAYING

You may wish to sort the cards away in a file, arranged by callsign, however they really do make a nice decoration for the wall of the shack. You can stick them on the wall with Photo-Corners or with Scotch Brand Magic Tape. Better yet, you can display them in the clever transparent packets such as the ones manufactured by TEPABCO, Dept. S, Box 198, Gallatin, Tenn. Each of the packets holds 20 cards, costs only 35¢ and requires only two small nails or tacks for hanging. If you're the sentimental kind, you might want to place your cards in a scrapbook.



THE S9 GUIDE TO QSL PRINTERS

204 QSL PRINTERS IN THIS EXCLUSIVE S9 FEATURE

by THE S9 READER SERVICE STAFF

We frequently receive requests from readers wanting to know where they can order QSL cards, this starts us scanning through our files the classified ads in S9. Sometimes we receive an inquiry which asks about *local* printers, or, "how much are samples from QSL printers?" The following guide should answer all of these questions, and we have also made it convenient for you to keep track of "who" and "when" when you send for samples from these printers. Column "A" boxes should be checked when you send for the samples, column "B" boxes are filled in when the samples are received.

The numbers in parentheses () after a printer's address indicates his normal charges for samples. If no amount is shown it is because this information was not available at press time, however you might send a request without any money enclosed—you have only to lose a post card if they don't reply (chances are they will reply). If there is a charge requested by the printer, please be sure to send it. Many of these printers have special larger assortments of sample cards which they will send to S9 readers, so be certain to indicate that you are a reader of S9 Magazine to take advantage of this bonus offer.

While every effort has been made to insure that this guide is complete and 100% correct, S9 assumes no responsibility for errors and/or omissions. Printers reserve the right to withdraw their offers of samples.



	A	B
ALABAMA		
KDB7114, Print, P.O. Box 3091, Hueytown, Alabama	<input type="checkbox"/>	<input type="checkbox"/>
ARIZONA		
Tyree, 771 Fegan, Globe, Arizona	<input type="checkbox"/>	<input type="checkbox"/>
Nicholas & Son Printery, P.O. Box 11184, Phoenix 17, Arizona (15¢)	<input type="checkbox"/>	<input type="checkbox"/>
C. Fritz, Box 1684, Scottsdale, Arizona (25¢)	<input type="checkbox"/>	<input type="checkbox"/>
CALIFORNIA		
Wilkins Creative Printing, P.O. Box 1064, Atascadero, Calif. (free)	<input type="checkbox"/>	<input type="checkbox"/>
3-D QSL, Box 345-C, Covina, California (free)	<input type="checkbox"/>	<input type="checkbox"/>
W6HTN-Rube, Box 207, Del Mar, California	<input type="checkbox"/>	<input type="checkbox"/>
Bill Pyper, P.O. Box 333, Edwards, California (free)	<input type="checkbox"/>	<input type="checkbox"/>
CB, Box 457, Encino, California	<input type="checkbox"/>	<input type="checkbox"/>
W6EZL Press, 12622 South 8th Street, Garden Grove, Calif. (free)	<input type="checkbox"/>	<input type="checkbox"/>
Hollywood Printing, 1423 1/2 N. Mariposa, Hollywood 27, Calif.	<input type="checkbox"/>	<input type="checkbox"/>
W. A. Kennelley, KEJ2003, 1683 W. 12 Place, Los Angeles, Calif.	<input type="checkbox"/>	<input type="checkbox"/>
Wildcat Press, 6707 Beck, N. Hollywood, California (25¢)	<input type="checkbox"/>	<input type="checkbox"/>
Kraft Print Shop, KFD0740, P.O. Box 21, Requa, California	<input type="checkbox"/>	<input type="checkbox"/>
Golden Gate CB, P.O. Box 1094, San Francisco, Calif.	<input type="checkbox"/>	<input type="checkbox"/>
Town & Country Print, 3650 Balboa, San Francisco, Calif.	<input type="checkbox"/>	<input type="checkbox"/>
DDD Custom Printing Service, Seaside, Calif.	<input type="checkbox"/>	<input type="checkbox"/>
Ron Kratovil, P.O. Box 552, Sierra Madre, Calif.	<input type="checkbox"/>	<input type="checkbox"/>
Certified Printing, P.O. Box 1023, Whittier, Calif. (25¢)	<input type="checkbox"/>	<input type="checkbox"/>
CONNECTICUT		
Pearce, 192 Osborne, Danbury, Connecticut	<input type="checkbox"/>	<input type="checkbox"/>
Sirrah, P.O. Box 1461, Greenwich, Connecticut (10¢)	<input type="checkbox"/>	<input type="checkbox"/>
Roy Gale, 187 Niantic River Rd., Waterford, Connecticut	<input type="checkbox"/>	<input type="checkbox"/>
DELAWARE		
Frederick FriebeI, KCC2505, 13 E. Elmont, Wilmington 4, Del.	<input type="checkbox"/>	<input type="checkbox"/>
FLORIDA		
PAA Latin Amer. Div., P.O. Box 217, Int'l. Airport Sta., Miami 48, Fla.	<input type="checkbox"/>	<input type="checkbox"/>
Paye Press, 824 Avondale Street, Cocoa, Fla.	<input type="checkbox"/>	<input type="checkbox"/>
Joe Harms, 905 Fernald St., Edgewater, Florida (10¢)	<input type="checkbox"/>	<input type="checkbox"/>
Dick McGee, 1444 Home Street, Jacksonville, Fla. (25¢)	<input type="checkbox"/>	<input type="checkbox"/>
E. J. Hellwig, P.O. Box 425, Lake Wales, Florida (10¢)	<input type="checkbox"/>	<input type="checkbox"/>
Pearce-Simpson, 2295 N.W. 14th Street, Miami 35, Fla. (free)	<input type="checkbox"/>	<input type="checkbox"/>
Hobby Print Shop, Umatilla, Florida (free)	<input type="checkbox"/>	<input type="checkbox"/>



MINNESOTA

Rogers, KOAAB, 961 Arcade St., St. Paul 6, Minn. (10g)

A **B**

MISSISSIPPI

Progress Printing, Box 1154, Biloxi, Miss. (10g)
Premier Printing Co., 135 East Pearl St., Jackson, Miss.

MISSOURI

Box 5938, Kansas City 11, Missouri (25g)
Rusprint, Box 7507, Kansas City 16, Mo. (10g)
Ramsbottom Printing, Box 237, Kirksville, Mo. (10g)
L. Keller, 3036 Ridgeview, Normandy, Mo. (free)
Walter Ashe Radio Co., 1123 Pine St., St. Louis 1, Mo.
Woody Advertising Service, 2611 Shenandoah Ave., St. Louis 4, Mo. (free)
Harry Sims, 3227 Missouri Ave., St. Louis 18, Missouri (25g)

NEBRASKA

K0MGX Press, Box 42, St. A.C., Omaha 8, Nebraska (free)

NEW HAMPSHIRE

Bob Cushing, 194 Melrose St., Manchester, N. H.
Kwality Kards, 21 Charleston Ave., Manchester, N. H.

NEW JERSEY

Gary Schober, 440 Timber Drive, Berkeley Heights, N. J.
Jerry, 491 Prospect St., Glen Rock, New Jersey (25g)
Fred J. Kaczor, 525 Locust Ave., Hillside, N. J.
Garth Printing, Jutland, New Jersey (free)
Albert Perkins, 18 Knollwood Ave., Madison, N. J.
K2VOB Press, 62 Midland Blvd., Maplewood, N. J. (10g)
Frank Ruloff, 299 Bates Ave., Phillipsburg, N. J. (10g)
Radio Press, Box 24, Pittstown, New Jersey (10g)
Long Brook Press, Box 393, Quakertown, N. J. (free)
Rutgers Vari-Typing, 7 Fairfield Rd., Somerset, N. J. (free)
Petty, W2HAZ, Box 27, Trenton, New Jersey (10g)
S. Russell Printers, 514 62nd St., W. New York, N. J.

NEW MEXICO

Ham Specialties, Box 73, Hobbs, New Mexico (10g)

NEW YORK

Andy's, 12 Bridge, Amsterdam, New York (10g)
Barry Rimer, 212-03 53 Ave., Bayside, L. I., N. Y. (10g)
Nussbaum, 1440 54th St., Brooklyn 19, New York (10g)
Smart Products, 277 Neptune Ave., Brooklyn 35, N. Y.
Paul Levin, 1460 Carroll St., Brooklyn 13, N. Y. (25g)
Lee Products, 2775 East 12th St., Brooklyn 35, N. Y. (free)
K2ZMH Press, Box 55, Copake Falls, New York (5g)
L. F. Fleming, 411 Balsam St., Elmira, New York
Volpress, Box 133, Farmingdale, L. I., N. Y.
Liberty Printing Service, 65 Broadway, Kingston, N. Y.
The Mad Art Director, 5009 Broadway, New York, N. Y. (15g)
Ed Lynch, Jr., K2UKE, 15 Orchard Park, Poughkeepsie, N. Y.
Frier Specialties, 21 Harvard, Schenectady 4, N. Y. (25g)
General Electric, Components Div., Schenectady, N. Y.
Scotsman Press, 1203 Butternut Street, Syracuse 8, N. Y.
Joseph Koster, 2941 Ewell Pl., Wantagh, L. I., N. Y.
Sandy Press, 38 Ridge Ave., Warrensburg, N. Y. (10g)
W2DJH Press, 19 Elm St., Warrensburg, N. Y. (10g)
K2 Press, Box 52, Westbury, L. I., New York (5g)
Samco, Box 203, Wynantskill, New York (25g)
Ambru Productions, 10 Burbank, Yonkers 2, N. Y. (25g)

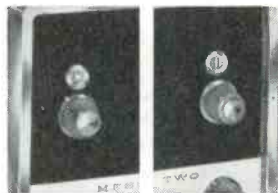
NORTH CAROLINA

Ernest B. Melton, KDB1661, RFD 3, Box 1100, Asheville, N. C.
Homer Hammonds, 5W0706, RFD 2, Box 316, Asheboro, N. C.

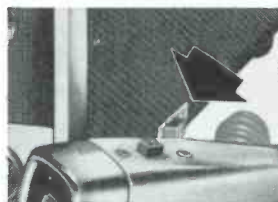
OHIO

Tom Wolfe, 573 N. Firestone Blvd., Akron 1, Ohio
Blanton's Box 7064, Akron 6, Ohio (free)
Globe Print Shop, 4191 Valley Rd., Cleveland 9, Ohio
PDQ Print Shop, 4484 W. 51 St., Cleveland, Ohio
Schuster Brothers Printing Co., Cleveland 9, Ohio
W8CTZ Custom Print, 2118 East 21 St., Cleveland 15, Ohio
Monogram Shop, Box 406, Dover, Ohio
Johnson, 311 Oak, Gallion, Ohio
Home Print, 2416 Elmo, Hamilton, Ohio (10g)
Mills Print, Box 1004, Lima, Ohio
Manchester Signal, Adams County, Manchester, Ohio (10g)
G. Yohn, 518 Topaz Ave., Mansfield, Ohio

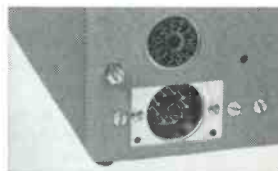
Now! With Tunable Receiver
and 10-Channel Crystal Control!
MESSENGER TWO



AT LEFT—Illuminated indicator and selector knob for crystal control.
AT RIGHT—Illuminated indicator and knob for tunable channel selection.



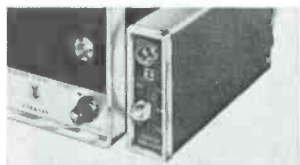
SLIDE SWITCH for selection of either crystal or tunable receiver control.



ACCESSORY SOCKET on rear panel (above power cord receptacle) for instant attachment of "Tone Alert"

High efficiency noise limiter—Excellent sensitivity! High adjacent channel rejection!

Everything you've ever wanted in a CB transceiver!



"TONE ALERT" SELECTIVE CALLING SYSTEM

Mutes speakers until one unit calls another—then automatically your stations receive audio note and indicator light flashes "on", remaining lighted until call is answered. Not a kit, ready to go! Plugs into "Messenger Two", fast hook-up to other transceivers!

Sharp selectivity guards against annoying random triggering. Wide range of tones permits 37 different systems to operate on same channel without overlap. Only 1½" x 4" x 7¾"—wired and tested.

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115 VAC and 6 VDC
Cat. No. 250-811
115 VAC and 12 VDC

\$59⁹⁵
NET

Available now—the new version of the popular "Messenger Two"! Pick any one of 10 channels for crystal controlled "transmit" or "receive"—instantly switch to all-channel tunable "receive" with handy slide switch. Channel indicators illuminate for either "crystal" or "tunable" settings—also serve as "off-on" indicators! Highly efficient circuit design makes full use of maximum legal power . . . delivers a penetrating signal that "outperforms 'em all!" Looking for maximum receiver sensitivity? This unit is hot—pulls in signals you wouldn't know were around with less sensitive equipment! New noise limiter circuit in the "Messenger Two" lets you know what QUIET really means in a CB rig! Positive acting "squelch" and automatic volume control circuits—push-to-talk microphone—crystals for 1 channel. 5½" x 7" x 11½", installs anywhere.

Cat. No. 242-162 . . . 115 VAC and 6 VDC . . .
Cat. No. 242-163 . . . 115 VAC and 12 VDC . . . **\$169⁹⁵**
NET

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MANUFACTURERS OF THE WORLD'S MOST WIDELY USED PERSONAL COMMUNICATIONS TRANSMITTERS

beginner's 1 tube CB receiver

GREAT FOR EMERGENCY USE TOO!

by STEPHEN DEDALUS, 12W5415

I am frequently asked by neighborhood CB'ers to give them some ideas for a simple construction project to get them started along the road to full scale do-it-yourselfing. After having mapped out a number of different projects, the receiver described here was generally found to be the easiest to construct, get operating, and it also served a useful purpose as a stand-by, extra, vacation-time, or emergency CB receiver. The cost of the unit is low and the construction time is short. What more could you want?

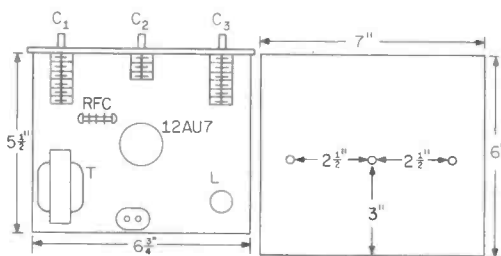
A simple method of construction calls for using a piece of soft pine, plywood, or Vector Board as the chassis, with the front panel constructed from a piece of 1/16" aluminum. The chassis, if wood, can be attached to the front panel by means of angle brackets which are available at hardware stores. Naturally, if you prefer, an aluminum chassis can be used.

BUILDING THE RECEIVER

Drill the three holes in the front panel, as shown in the parts layout. Next, attach the front panel to the chassis and mount capacitors C₁, 2, and 3 in place. The tube socket is next for mounting, and if you are using a piece of wood as the chassis you will have to stand-off mount the socket by means of two 1¼ inch wood screws and two ⅝" lengths of hollow tubing.

Mount the transformer (T₁) in the position indicated on the parts layout, with the secondary side towards the tube socket. The coil socket is now mounted, as shown in the diagram, with the "tap pin" facing the transformer. Use the same "stand off" method as the tube socket.

Ground the rotors of C₁, 2, and 3 to the aluminum front panel, with a ground wire running from the front panel to the "ground" end of the coil socket (facing the



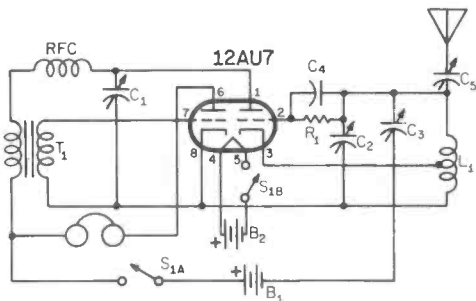
Chassis layout (left) and front panel of the beginner's 1 tube receiver.

rear of the chassis), also to pin 8 of the tube socket, to the ground wire of T₁'s secondary.

The stators of C₂ and C₃ are connected to each other and a short wire is run from C₃'s stator to the grid end of L₁ (the socket connection facing the front of the chassis). R₁ and C₄, with terminal leads connected in parallel are soldered directly to the stator of C₂ at one end, and by a short length of wire to pin 2 of the tube socket on the other end. RFC is then connected at one end to the primary side of the transformer, T₁, on the end of the transformer which faces the front of the chassis and to the stator of C₁. The secondary side of the transformer which faces the front of the chassis is connected to pin 7 of the tube socket. A wire is run from pin 3 on the tube socket to the tap-off pin of the coil socket.

A dual binding post is then mounted on the rear of the chassis, in the center. This will be used for the magnetic headset connection. Run a wire from one of the posts to pin 6 on the tube socket, and from the other post to the primary side of the transformer (T₁) which faces the rear of the chassis.

Capacitor C₅ is then connected, at one end to the grid end pin on the coil socket. The other end of C₅ will go to the antenna,

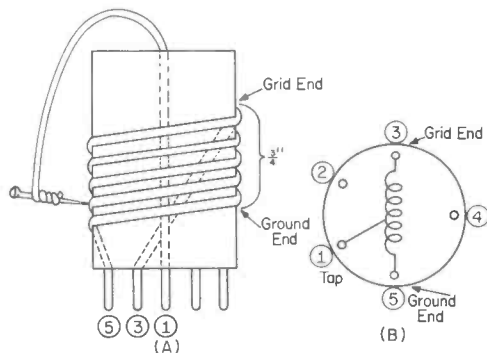


PARTS LIST

- C_{1, 3} 75 mmfd midget variable (Cardwell PL-6016 or equiv.)
- C₂ 10 mmfd midget variable (Cardwell PL-6000 or equiv.)
- C₄ .0001 mica
- C₃ 3 mmfd trimmer (Centralab 829-3 or equiv.) or 2-turn "gimmik"
- R₁ 2 megohm, ½-watt
- RFC 2.5 millihenry choke (Miller 4537 or equiv.)
- T₁ Stancor A53 transformer or equiv.
- S₁ DPDT toggle switch (optional)
- B₁ 45 volt battery
- B₂ 6 volt battery (see text)
- 12AU7 tube
- 1 pair magnetic headphones
- E. F. Johnson type 24-5P coil form assorted hardware, knobs, wire, sockets, chassis, binding posts, front panel, and mounting screws.

until the best spot is found. A schematic of the coil is shown in (B).

When the set is in full operation and the best tap off location is found, it is a simple task to scratch off the insulation at the proper place on the coil, drill a hole in the coil form, and run a wire directly from pin 1 to the permanent tap-off spot.



Design of the coil L₁ is shown in "A." The pin is a temporary means of determining the proper tap.

but we still have the coil to wind and the power connections to overcome before worrying about the sky hook.

THE COIL

The coil is wound with #30 d.s.c. wire on an E. F. Johnson type 24-5P 5-prong coil form. This is a 1¼" diameter polystyrene form which can plug into a standard 5-prong tube socket, such as an Amphenol 77MIP5.

The coil consists of 5 turns of wire, spaced over ¾ of an inch, as in the illustration, part (A). The grid end of the coil goes to pin 3, the ground end to pin 5.

The coil tap will normally be located 2 turns from the ground end, however the best way to find the proper spot will be to wait until the set is in operation and do a bit of experimenting with the tap in different locations. As a temporary measure, run a short length of wire from pin 1 of the coil form, through the hollow center, to a straight pin (as shown in part A of the illustration). The pin can then be inserted through the insulation in different places

POWER

Power for the unit is supplied from two batteries. The B + (high voltage) is supplied by a 45 volt battery (inexpensive ones would be Burgess U30, Eveready 415, Mallory M-213, RCA VS-086, or Ray-O-Vac 213). The filaments will probably *not* need more than 6 volts, even though the 12AU7 normally requires 12 volts (if you run too much voltage on the filaments, the reception will deteriorate). Experiment with 3, 6, and 9 volts, using flashlight batteries (the D size is about 1½ volts) in parallel, adding and subtracting until optimum operation is achieved.

When the best filament voltage is determined, the cumbersome flashlight batteries may be replaced by a smaller battery of the proper voltage. You might even wish to start out with a combination battery which will deliver 3, 6 and 9 volts and may then be left in place (Burgess D6PI, Eveready 2506, Mallory M-1601, RCA VS301).

Leads are run from the filament supply to pins 4 and 5 of the 12AU7. The B battery leads are connected as follows: positive terminal to the primary side of T₁ facing the rear of the chassis (the same spot you connected one lead from the headset binding post). A DPST switch (S_{1a, b}) is op-

tional and will permit simple turning on and off of the rig. It may be mounted on the front panel and should be connected in the circuit as indicated on the schematic. Use lamp cord for leads from the B battery.

OPERATION

With a pair of high impedance magnetic headphones connected to the terminals on the rear of the set, you are now ready for operation. Although the set is not particularly critical in its operation, regen receivers sometimes take a bit of fidgeting to get into operation. Do not be alarmed at this, it is quite normal.

Connect an antenna to the unit, being careful *not* to use one which is resonant on the 11 meter band—in other words, do not use one which you regularly use for CB operation. Try a piece of random length wire, suspended in a vertical position.

The antenna is connected to the set by means of C₅, which may be a two turn "gimmik" (if insulated wire is used for the antenna) or a Centralab 829-3 ceramic trimmer (0.5-3 mmfd). The trimmer can

be adjusted for maximum performance.

The coil tap, when in its optimum position, will provide a light rushing noise, or hiss, in the headset when C₁ is in its middle setting. C₁ is the regeneration control. If no stations are heard, or if stations are being heard without any regenerative squeal, try moving the tap a little further along the coil towards the grid end. In the event you are hearing stations but you cannot tune out the squeal with C₁, then move the tap towards the ground end.

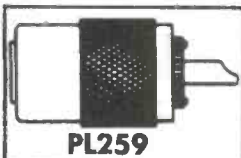
Set C₂ for minimum capacity (plates unmeshed) and rotate C₃ from minimum capacity to maximum. When channel 23 is located, set C₃ to a slightly lower capacity. The different CB channels are easily selected by these two capacitors, and when a station is tuned in, it can be "touched up" with C₁, although once this control is set, it should need little readjustment.

You are now equipped with a handy receiver in the event of power failures, or for taking along on a vacation. And, best of all, you "dood it yourself."



A COMPLETE LINE OF CITIZENS BAND CABLES FEATURING ALL NEW ALUMINUM CABLES

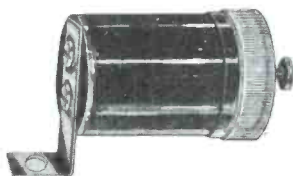
50 OHM — 1/2" ALUMINUM COMMUNICATIONS CABLE
SOLID SEAMLESS — ONE-PIECE ALUMINUM JACKET.



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AN S9 EXCLUSIVE,
THE FCC'S IVAN LOUCKS TALKS ABOUT
**THE FUTURE OF
THE CITIZENS RADIO SERVICE**

by IVAN H. LOUCKS, CHIEF

**AMATEUR & CITIZENS RADIO DIVISION
FEDERAL COMMUNICATIONS COMMISSION**

The following remarks were prepared for presentation in July to the Fairfax-Prince William CB Club, Fairfax, Va. Mr. Loucks, in his usual candid style, presents here some very revealing facts on current Commission thinking which have never before been expressed to the CB world. Mr. Loucks' remarks are an S9 exclusive and are presented in the interests of S9 readers, who are keenly interested in the FCC's thinking on Part 19.

KBG4303



Admittedly, I am not the proud possessor of a reliable crystal ball, so my remarks will merely indicate my present "guesstimate" as to its probable future which is subject to change as the future unfolds. To me, the future of Citizens Radio really depends on two things. First, on the Commission's decision as to what to do with its "problem children" in the Class D category of Citizens Radio, after reviewing the proposals and comments in Docket No. 14843 and, second, on how well you, the Class D licensees, observe the present and any future rules governing this service. The past behavior of these "problem children" has caused considerable concern, both among the Commissioners and in various parts of the Commission's staff, as to whether the Class D category in the Citizens Radio Service has or can be expected to justify its existence, when weighed in the balance of public interest, convenience and necessity. Admittedly, it is the few, rather than the bulk of Class D licensees who cause all of this concern, but you will admit also that they are the ones most in the public eye and most noticeable to the Commission because of their disregard of the present rules.

Speaking of rules, I know that you are all wondering what will be the outcome of the proposed rule making known as Docket No. 14843. That I am not at liberty to discuss. If I were at liberty to discuss it, I would not

be able to give you definite answers. Here is why. Although I may possibly know the recommendations to be made by myself and those closely associated with me, there are many other recommendations to be made to the Commission by other parts of its staff, and final decisions must be made by a majority vote of the seven Commissioners. I can tell you that our staff has completed an analysis and summary of the over 3,000 comments (many of them duplicates) filed in the docket and that the Commission is now reviewing that summary. The various recommendations of the staff will probably follow when the Commissioners feel that they are familiar with the problems involved. Since the Commission will be in recess during the month of August, it is safe to assume that no decision in the docket will be released before September, and it may be much later. When it is released I am sure that it will be given wide publicity in ample time before the effective date of any rules changes which may be ordered, but neither I nor other members of the staff are permitted to "tip you off" before the official release.

Now . . . what way is the Citizens Radio Service headed at the present time, and what is its possible future? I will give you first

some plain unvarnished statistics. We now have over 450,000 licenses outstanding in the Citizens Radio Service and, as nearly as we are able to estimate, over 375,000 of these are Class D. These are being added at the rate of over 10,000 per month. The Citizens Radio Service is already the largest single radio service administered by the Commission, in terms of numbers of licenses or licensees, and outnumbers all of the rest of those services together, if we leave out the 250,000 amateurs.

At the same time, your Class D stations are limited to the use of 23 frequencies; 22 of them exclusive and one which is practically unusable except for test and adjustment purposes because it is a "catch-all" frequency for all kinds of odd operation by stations in nearly all of the radio services in the Commission's book. This makes the Class D frequencies (or channels, if you like) the most heavily populated frequencies anywhere in the spectrum. Some of your "CB" magazines have indicated that there is a possibility of gaining more frequencies for Class D stations. All I can say is . . . Don't hold your breath until that happens. There is no spare frequency space known to me anywhere in the spectrum which could be given you. The only reason you now have what you do is because these frequencies are in a segment which is also occupied by I.S.M. devices, such as diathermy machines and industrial heaters, and as such was considered unusable by the higher priority services which require protection from that kind of interference. Even the amateurs, who were permitted to use this band for a time, seemed to prefer to stay in the internationally allocated "ten meter" band rather than to risk the interference which might be caused by I.S.M. devices. With your ability to move from one channel to another in the so-called "Citizens Band," you have been able to make very good use of those frequencies, since you are able to avoid most of the local diathermy signals, etc., which might cause you trouble. None of those services in which each station is assigned a specific frequency on which it *must* operate, could make that use of this band. The only other stations which can make use of frequencies under those conditions are the low power communication devices operated under Part 15 of the Commission's rules, and they are already in there with you.

With a realization that the number of stations wanting to use your 22 Class D channels is increasing daily, and that there is not a ghost of a possibility of increasing the number of those channels, it may be desirable to

consider whether the Commission *or* you can afford to have the small frequency space available to you taken up by idle chit-chat, long-winded discussions of equipment, DX contacts, exchanges of names and addresses, the solicitation of QSL cards, etc. The present rules of the Commission already prohibit frivolous and hobby use of Citizens Radio facilities by requiring that any conversation between stations be substantive and relate directly to *common* business or personal activities of the station licensees involved. This was made more specific (and perhaps read for the first time) in the rewrite of the rules proposed in Docket No. 14843. You would be surprised at the number of comments which indicate that the writers think the proposed rules will take something away from them—something that they never actually had.

If you are among the serious users of citizens radio, you will be wondering what you can do to help clean up the band, to make it more useful to yourself and the other serious users. Well, my advice is that you set a good example. Stay off the air unless you have something of importance to transmit—when you do transmit make it short, snappy and business-like, and then sign off. You don't need to talk to "Big Daddy" about his special antenna—if you answer him when he calls you, you are just encouraging him to hog the air and you are both violating the rules. Why jeopardize your legitimate use of Citizens Radio where you need radio communications in the conduct of your business or personal affairs, by encouraging the "idle chatter" boys who even now at times make it impossible for you to use it. If you or they are interested in radio as a hobby, the amateur bands are available for all types of radio experimentation and communication contact and contests. Sure, you have to qualify for an amateur license by passing a code test and a written examination. These must not be so hard—over 250,000 amateurs are licensed in the United States alone, and they all passed the examinations. I don't believe that any of you are so dense that you couldn't do the same if you wanted to and were willing and able to devote a little time to studying. How about it?

Now back to Citizens Radio. The number of applications for licenses received each month is still increasing. Every month this year has shown at least 2,000 more applications than the same month last year. As usual, our processing staff is unable to keep up with that increase. We simply do not have enough people to handle that number of applications, and we cannot hire more. So—the backlog keeps building up. Right now it is about



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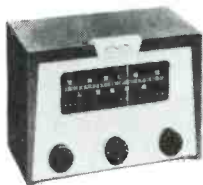
Model MR-10, 152-174 MC
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75 days, and there is little chance of improving the situation until the new automatic data processing equipment is installed and can take over. That is scheduled to happen sometime this fall or early winter. In connection with that automatic data processing, I might mention that a new application form will soon be available which is designed for use with it. Please use that new form as soon as it becomes available—it will save us and you time in getting your application processed, because the machine will be able to do in a few hours after receipt what now takes us weeks to even reach for processing.

This brings me to something else I have been asked to discuss. You have probably heard that beginning January 1st, the Commission is scheduled to start collecting filing fees in connection with applications for radio station licenses. In the case of Classes B, C, and D applications in Citizens Radio, the fee is to be \$8.00. This means, if your application for renewal or modification or for a new station license is received on or after January 1st, it will be returned without action unless it is accompanied by a check, draft or money order for \$8.00. This fee applies to the filing of your application, regardless of whether or not you get the license you apply for. You will not have to pay the fee again if the application is returned to you for completion or for more information, but it will not be returned to you, even though you never reapply. Incidentally, there will probably be a time limit on resubmitting an application which has been returned for some reason, so if you want to save that extra \$8.00 you should be prompt in answering the Commission's questions.

\$9

ALL NEW 3 COLOR 1964 CB MAPS—Yes the famous red-on-white S9 map has been sold out. We've reprinted it in striking red and black on a gold background, big 8½" on 11" size, and on heavier paper too! You won't want to miss this CB value, and they will be gone before you know it. These are only 35¢ each, postpaid. Bulk orders of 10 or more, only 25¢ each. Order now! Send to: Wall Certificate, S9 Magazine, 300 West 43 St., New York, N. Y. (10036)



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THE WEATHER-AID

PART II

CONTINUOUS WEATHER FORECASTS

FOR YOUR MOBILE UNIT—CHEAP!

by BASIL BARBEE, 9W0831

Last month we converted the BC-1206 for 110 volts, making it a "household Weather-Aid." This month we present the second portion of the "Weather-Aid," the complete details on the 12 volt mobile conversion. If you are interested in last month's conversion and missed the issue, the issue is available for 50¢ from the S9 Circulation Department, 300 West 43rd Street, New York, N. Y. (10036).

Did you ever take a motor trip and wonder what type of weather you're heading into? Wonder no more, the WEATHER-AID is an easily converted piece on inexpensive military surplus gear which changes into a convenient receiver capable of monitoring scores of 24-hour (continuous) weather broadcasts prepared by the government.

Besides being handy, the WEATHER-AID gives you an interesting look at radio stations operating in the 200 to 400 kc/s frequency band, which lies below the standard AM broadcasting band. This portion of the radio spectrum teems with thousands of interesting stations in all parts of the world—aviation and marine radio beacons, airport control towers, and the like.

The weather aid is actually nothing more than a sophisticated type BC-1206 receiver, well built but not worth a hoot in its unconverted state; hence its low cost.

By the way, the BC-1206 is available from most of the surplus suppliers.* See if you can buy one without the tubes, it will be cheaper that way and you will be replacing the existing BC-1206 tubes with new ones anyway. The average price for a BC-1206 without tubes is \$6 new and \$3 used.

*Try the following surplus dealers for BC-1206 units:
Columbia Electronics, 4365 W. Pico, Los Angeles, Calif.
Selectronics, 1206 S. Napa, Philadelphia, Pa.
Bill Slep, Brandenton, Fla.
Jeffronics, 4791 Memphis Avenue, Cleveland, Ohio
John Meshna, 21 Allerton, Lynn, Mass.

Originally designed for 24-volt D.C. operation, the BC-1206-C would be handy for use in automobiles and small aircraft if it could be made to run on 12 volts. There is no conversion as simple as plugging in a different set of tubes, since there is no 12-volt equivalent of the 28D7, and in any case the set was intended for headphone use. Without too much trouble it is possible to convert to the "hybrid" circuit as used in the broadcast receivers of most modern cars.

Fig. 2 shows schematically the wiring of the new circuit. (Fig. 1 shows the original schematic for reference.) The first four stages are left unchanged except that the 14A7's V_1 and V_3 are changed to 12BL6's, the 14J7 V_2 is changed to a 12AD6, and the 14R7 V_4 is changed to a 12AE6. This involves only replacement of the tube sockets with 7-pin miniatures having $1\frac{1}{16}$ " mounting centers and reconnecting the leads removed from the old loktal sockets to the corresponding lugs of the new miniature sockets. The output of the 12AE6 is direct-coupled to a 2N107 transistor Q_1 , which drives the output stage Q_2 , a Tung-Sol ET-6 power transistor. Coupling between the two transistor stages is provided by the old output transformer T_1 reversed. The 2N107 works into the old 4000-ohm secondary as a primary, while the old primary becomes the secondary to match the base circuit of the ET-6. Because of lack of space, no output transformer is provided, the ET-6 working directly into the loudspeaker. While a conventional 4-ohm speaker will work, more volume may be had with a 45-ohm intercom speaker. For best match, a 4-ohm speaker with a suitable output transformer mounted on it may be used. I

Continued on page 61

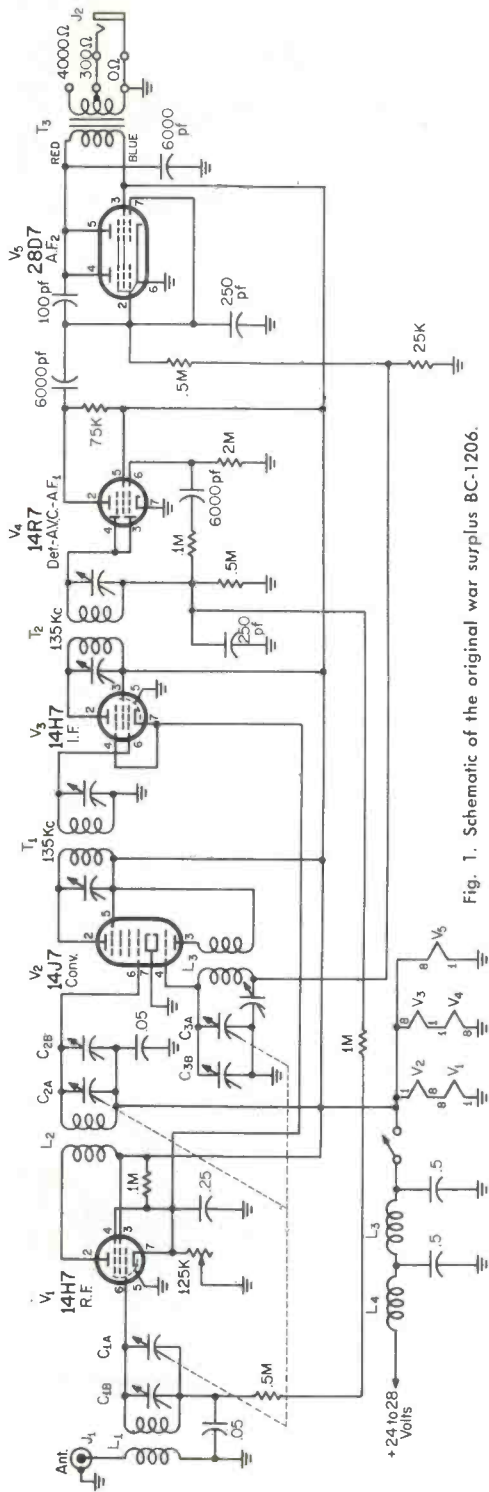


Fig. 1. Schematic of the original war surplus BC-1206.

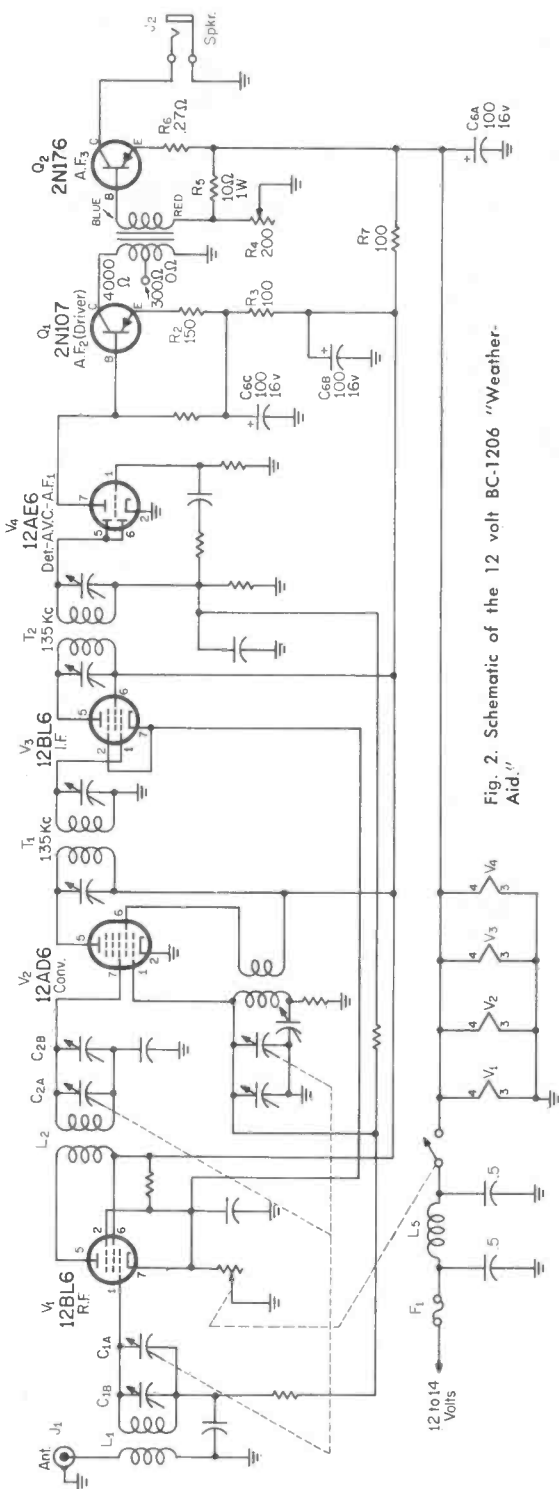


Fig. 2. Schematic of the 12 volt BC-1206 "Weather-Aid."

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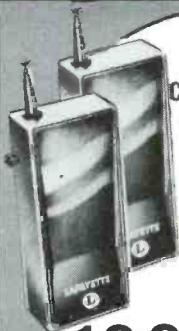
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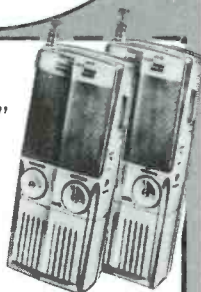
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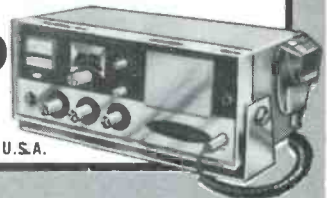
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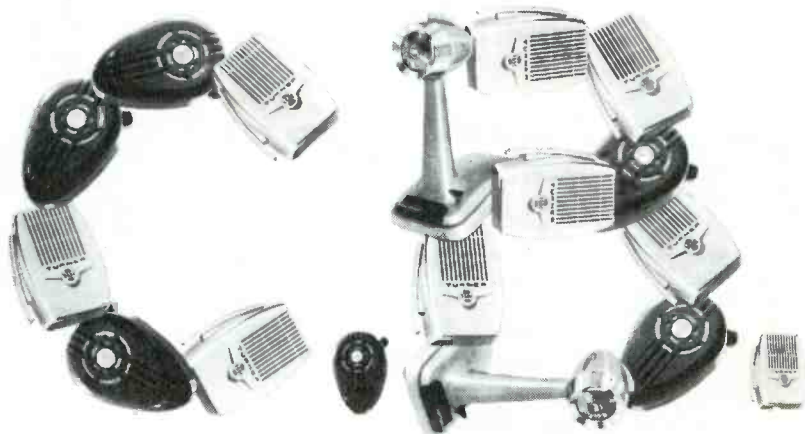
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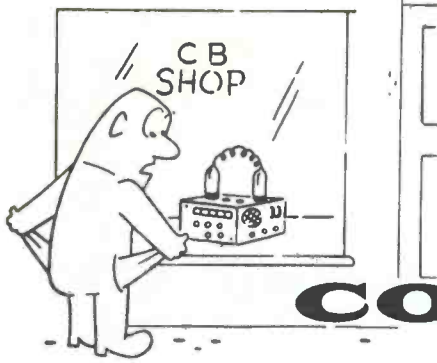


But then, Turner makes most CB mikes anyway

Turner supplies most of the transceiver manufacturers with microphones. And no wonder. CB spells "Microphones by Turner."

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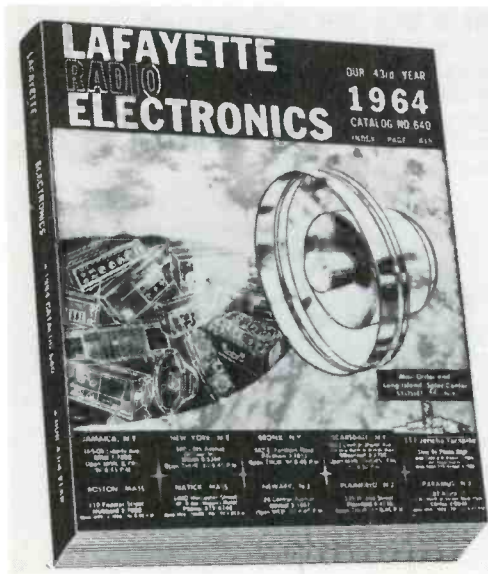
IN CANADA: Tri-Tel Associates, Ltd.
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ON THE COUNTERS

This month marks the appearance of the annual catalogues from the radio supply houses showing the 1964 goodies available to CB'ers. We got a look at the gigantic offering from Lafayette Radio and this is certainly a *must* for each and every CB shack because it gives details on those fantastic new CB units we hinted about several months ago. A copy is free if you write to Department S9J-3, Lafayette Radio, P.O. Box 10, Syosset, L. I., N. Y.

will surely want one for the shelf in the shack. It's free if you write to Allied Radio, Dept. S9, 100 N. Western Ave., Chicago 80, Ill.



New rig this month from Pearce-Simpson, 2295 N.W. 14th Street, Miami 35, Fla. Yes, it looks like they've come up with a winner in their spankin' new *ESCORT* unit. Weighing in at 15 lbs., the rig has a 12/115 volt transistorized power supply, heavy duty aluminum chassis (rust and corrosion proof), 8 channels plus extra crystal socket, 8 illuminated channel markers that are synchronized to move with the channel selector, highly effective "squellch," noise limiter, and a universal mounting bracket. Len Haas, the Sales Manager at P-S, will send you all the poop for only a post card or QSL.

Allied's catalogue is out too, over 400 pages B-I-G with several eye-poppers in the way of new CB gear. This catalogue is an invaluable aid to all radio "bugs" and you

Received a nice letter from General Magnetics Corp., 960 S. Raymond, Pasadena, Calif. They have come out with a nifty crystal controlled broad tuned signal generator which sells for \$39.95 (or \$29.95 in kit form).

**INFORMATION REQUIRED FOR A TIME PAYMENT
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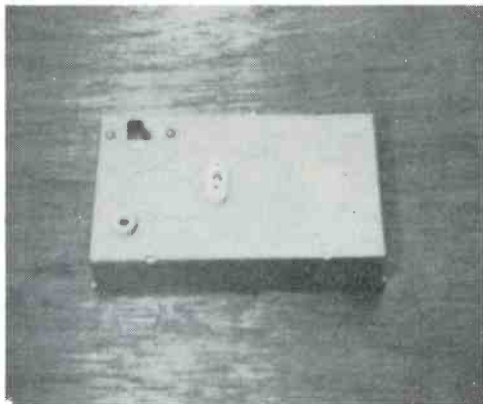
see our ads in this magazine
on pages 22 & 23

Even if you are not ready to make a purchase on credit today, send me the following information on a separate piece of paper. Do not put it in the body of a letter. If you have a message to send us enclose it with the credit application on a separate piece of paper. Once your credit has been ok'ed you will receive an attractive card showing that you are a preferred credit customer. All at no cost to you. List the following information on a separate piece of paper very carefully, accurately, and complete in every detail for quick credit approval:

1. Your full name. Your age. Your Driver's License Number and state in which it is issued.
2. Your wife's name (if any). Her age. Number of children (if any) and their ages.
3. Your complete home address. How long have you lived there? Your telephone number, or nearest phone where you can be reached.
4. List your previous address. How long were you there?
5. If you rent, show the amount of payment. Also name, address, and phone number of landlord.
6. If you own your own home, show the amount of payment (if any). The mortgage holders name, address, and phone number.
7. Show name of employer, his address, and phone number. Your occupation. How long you have been there. Salary by the week.
8. Show previous employer, his address, and how long there.
9. If your wife is employed, show name of employer, address and phone number. Her occupation, and weekly salary.
10. If own a car, show year and model. If it is financed, show by whom and their address.
11. If you own your furniture, state so. If it is being financed, show by whom and their address.
12. List the names and addresses of banks with whom you do business with.
13. List at least five credit references, giving the complete street address, city and state. If you owe anything to these people, show the amount owed, and briefly the items purchased.
14. List at least two relatives and one friend not living with you.
15. Indicate the amount of credit desired and the length of time you desire credit. For instance, \$1,000, for 36 months.

Send the above information to speed
a time payment purchase to:

AMATEUR ELECTRONIC SUPPLY
3832 W. LISBON, MILWAUKEE 8, WISCONSIN



The unit operates using a crystal extracted from the CB rig under test, and it even checks out the crystal to see if it's good. Defective rig components, or those which need alignment or adjustment can't escape the test of this alignment generator. Write the company for details.

Three new company purchases to report this month. Conset was bought by Altec-Lansing, Hazeltine Labs. of Calif. bought by General Radiotelephone, and Master Mobile Mounts was acquired by Whitehall Electronics.

A nice little pocket sized rubber stamp with your name and 10-20 is being offered for sale by one of our brother CB'ers. You get 3 lines (18 characters and spaces, or less, per line) for only \$1. This is a handy thing to have, and the manufacturer, Bob Stubbs, 1318 Colima St., San Antonio 7, Texas, is a shut-in CB'er who supports his family by selling these stamps and QSL cards.

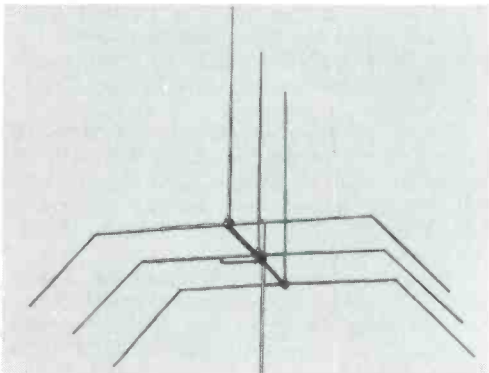


Polytronics Labs, 88 Clinton Rd., West Caldwell, N. J. (new 10-20) has a rig just out and known as the *POLY-COMM N-8*. This is the same basic set as the well-known "N" model with the addition of 4 more



Here's a handy thing for every CB club to furnish as a community service, a CB "Monitor Marker" sign. The weatherproof steel signs are relatively new on the market and are being gobbled up by CB groups as fast as the manufacturer can turn them out. They are available with all channel numbers and are in flashy red, white, and blue, also in light-reflecting Scotch Lite. Cost is as low as \$5.95 each, depending upon number purchased. Manufacturer is Metal Craft Mfg. Co., Inc., Concord, N. C. (These signs are the brain child of 5W3874, head man at Metal Craft.)

channels. It features 3 stages of 455 kc/s IF plus a 6 mc/s stage (16 tuned circuits) which provides 60 DB adjacent channel rejection. It also features an ultra-sensitive noise limiter, supersensitive squelch, and provisions for the POLY-CALL selective calling unit. Sells for \$199.50.



Antenna Specialists has a new unit known as the MR-77, which gives you the choice of vertical or horizontal polarization. The antenna produces a vertical forward gain of 7 DB with a 6 DB horizontal forward gain. Separate coaxial feeders are used for each polarity. The MR-77 is constructed of sturdy, heat treated aluminum which will withstand 100 mph winds. SWR is 1.5:1, or less, in either plane. Company address is 12435 Euclid Ave., Cleveland, Ohio.

A new 1 watt, fully transistorized portable transceiver, the Cipher 1000, has been introduced by Inter-Mark Corp., 29 West 36th St., New York 18, N. Y. The rig has 15 transistors and is operated by 12 "D"

PRINTED IN THE PUBLIC INTEREST

(IN THE INTEREST OF
TOM SWIFTIES, THAT IS.)

"S9 is sure quick with news scoops," said Tom swiftly.

"I always enjoy their articles," she said literally.

"That KBG4303 is sure a card," he said jokingly.

"Yes, the last of the fiery editorial writers," she said warmly.

"I build every one of their projects," he said shockingly.

"And I can't put it down for days," she said off handedly.

"So darn good, I even smoke it," he said harshly.

"And I like their sensible approach to the FCC," she said cozily.

"Did you know a full year's subscription is only \$5?" he said lowly.

"Yes, I subscribe every year," she said annually.

"And I always renew my subscription," he said repeatedly.

"Wish they would print S9 twice a month," said she doubling up with laughter.

"That's a fact, you just can't beat S9," said he strikingly.

"Glad we got that off our chest," said S9 flatly.

"There's a postage-free subscription envelope in the back of this issue," said the S9 Circulation Manager with hindsight.



batteries (120 hours life). Weighing only 7 lbs., the manufacturer claims that the units will receive and transmit up to 10 miles on land or 20 over water. The units are equipped with PTT, earphone and speaker operation, built in antenna and antenna jack, shoulder strap. An AC adaptor is optional. Price is \$129.95.



Utica Communications, 2917 W. Irving Park Rd., Chicago 25, Ill., has a unit called the "Duo Band" on the market this month. This is a 2-band FM receiver which tunes the police, fire, and emergency communications bands. The unit is a dual conversion job and features a squelch, tuned RF stage, crystal controlled second oscillator, and temperature compensation. Operating from 110-120 volts AC, the unit is housed in an attractive chrome steel cabinet. Sells for \$164.95.



And Multi-Elmac has a nice new rig for the coming season. This one is the new Model CD-5A which replaces the CD-5. The front panel has been restyled, the mike hanger has been removed from the front panel, changes were made in the squelch, audio drive, audio output and power supply sections. A selective calling accessory connector is now provided on the rear deck. Their 10-20 is Oak Park 37, Mich.



Here's a fully transistorized CB rig from J. Briskin, 14827 Ventura Blvd., Sherman Oaks, Calif. Known as the *TELE-MATE*, the full 5 watt rig has 5 channels, high level negative audio clipping, 1 microvolt sensitivity, squelch. The unit operates from a 12 volt supply, but is also available for base operation with an external power supply. This is a sweet looking unit, ideal for mounting in a small car where there isn't too much leg room available. Ask them for full details, they'll surprise you.

Turner Microphones has a nice new 16 page, 4 color, catalogue which they will be happy to send to CB'ers. This shows their full line of high quality mikes. Address is 945 17th St., N.E., Cedar Rapids, Iowa. It's worth having.

Last month we told you about the Apollo Type Company and their engraved name badges. Only thing is, we goofed on the address. The correct 10-20 is 2222 65th Street, Brooklyn 4, N. Y. (we had called it 222 in error).

S9 Lab Reports

THE VOCALINE COMMAIRE MODEL ED-276 TRANSCEIVER

The Vocaline Commaire is truly a fine transceiver for the CB'er. Using 22 transistors and 3 vacuum tubes (*hybrid circuit*),



Front view of the Vocaline Commaire Transceiver. Bottom, l. to r., Mike Connector, Filament On-Off Switch, Fine Tune Control, Receiver (Fixed or Tune) Switch, Channel Selector, and External Crystal Socket. Upper left, Squelch and Volume Controls. Upper right, Meter and Receiver Tuning Control. The self-contained speaker is mounted in the center.

the Commaire puts out a well modulated and strong signal. The receiver section is fully transistorized as well as the built-in power supply inverter (for mobile operation). Either 110-120 volts AC or 12 volts DC can power the set. Thus the Commaire can be used as a base station or in the mobile.

SOME CIRCUIT DETAILS

Five fixed channels are available for both receive and transmit; an external crystal socket on the front panel is provided for a sixth channel. Of course the transmit channels are crystal controlled. However, the corresponding receive channels are not, but are fixed tuned by inductor-capacitor tank circuits. Continuous tuning coverage is also available for all 23 channels.

The receiver section uses 2 RF stages and double conversion. A crystal controlled oscillator operating at 30.765 mc/s is used with the first converter; the second converter stage produces the 455 IF signal. The automatic gain control (AGC) is a very effective one. It eliminates the need for having to adjust the audio control for extreme differences in received signal strength and "drowns out" weaker signals when a strong station is being worked. This considerably reduces the annoying howls and squeals produced by interfering stations. The squelch circuit, which is activated by pulling out the *Squelch Control* knob, was found to be effective in reducing background noise.

The transmitter section uses a 12BY7A crystal controlled oscillator and a neutralized 6417 final. Output impedance is 50

CB Owners: IT'S WHAT GOES OUT ON THE AIR THAT COUNTS!

Get maximum amplifier output and outstanding performance from your 5-watter by using famous PR CRYSTALS. These high-active crystals get greater distance than ordinary sluggish crystals. Clearer reception too. Put PR Crystals in your set today, and get the **STRONGEST SIGNALS POSSIBLE WITHIN POWER LIMITS.**

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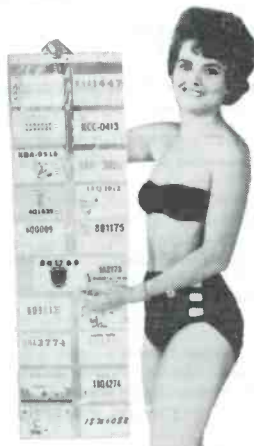
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(noise limiter, bias stabilizer, adj. squelch, channel 7)...Sale ea. \$29.95
(uses 8 penlite cells @85¢ add.) [extra xtls are \$1.99 ea.]

GC TENNA METER (tunes any transceiver) [Reg. \$15.95] Sale \$13.99
(tune for max. power, check antenna performance, etc.)

GC SIGNAL OPTIMIZER (7-in-1 CB tester) [Reg. \$47.50] Sale \$39.95
(checks antenna power, modulation, field strength, SWR, etc.)

HY-GAIN NEW CIR 11 COLINEAR [Bonus offer] Only \$29.97
(Bonus: 50 ft. of RG8U Foam cable & \$2.95 Mobile Handbook)

AUTO BURGLAR ALARM [protect your CB equipment] Sale \$3.49

15-Pc. MOBILE NOISE SUPPRESSOR KIT [Reg. \$10] Sale \$4.99

12-POSITION CHANNEL SELECTOR Sale \$3.99

FAMOUS MAKE BODY MOUNT, Spring, 102" Whip Antenna Sale \$5.88

SINGLE BUMPER MOUNT, Spring, 102" Whip Antenna..... Sale \$8.99

DOUBLE BUMPER MOUNT, Spring, 102" Whip Antenna..... Sale \$9.99

MODEL CBC - CITIZENS BAND COUPLER Sale \$7.95
(use your CB mobile antenna for both auto radio & transceiver)
[See Special Combination Offer Below!!!! BIG SAVINGS!!!!]

HY-GAIN MOBILE CB ANTENNAS: Topper series of top-loaded whips.

Model TLWR, Omni-topper, roof mount \$11.97 ea) -f CBC.. Only \$14.47

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Model TLW whip only, standard adaptor \$6.96 ea) -f CBC..... Only \$9.46

Model TLWT same as TLW but telescoping \$7.20 ea) -f CBC..... Only \$9.70

ANTENNA SPECIALISTS MOBILE CB ANTENNAS:

Model MR-52, 48" Black Beauty Fiberglass \$8.14 ea) -f CBC. Only \$10.64

Model MR-53, 48" Black Beauty Fiberglass \$5.10 ea) -f CBC. Only \$8.10

Model MR-58, 48" Black Beauty Fiberglass \$9.45 ea) -f CBC. Only \$11.95

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MARK MOBILE HELIWHIPS: (HW11-S series std. duty)(HW11 series heavy)

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RG58U..... 50 ft. for \$2.49 100 ft. for \$3.99

RG8U..... 50 ft. for \$4.95 100 ft. for \$8.99

GROUND PLANE ANTENNA SALE!!! [discontinued model]... Sale \$5.99
(solid radials, accepts PL-259, all sales final)

SUPER 111 - 3-ELEMENT HEAVY DUTY BEAM Sale \$11.99
(mounts vertically or horizontally)

BIG \$\$\$\$ SAVINGS ON COAXIAL CONNECTORS!!!!

PL-259-39¢ ea. (10 for \$3.50) PL-258-49¢ ea. (10 for \$4.50)

SO-239-39¢ ea. (10 for \$3.50) UG-175-14¢ ea. (10 for \$1.19)

DM-1-(double male) 95¢ ea. UG-176-14¢ ea. (10 for \$1.19)

M-359-(right angle) 39¢ ea. (10 for \$3.50)

TEE connectors-\$1.95 ea. (10 for \$17.50)

PP-677-[SO-239 one end, auto plug on other] 89¢ ea. (10 for \$7.90)

Check items wanted. Return or order with check or money order. Include postage, excess refunded. 50¢ service on orders under \$5.00. Beams and 102" whip antennas shipped Railway Express. 50% deposit on C.O.D.'s.
 CB DEALERS: Write for Quantity Prices.

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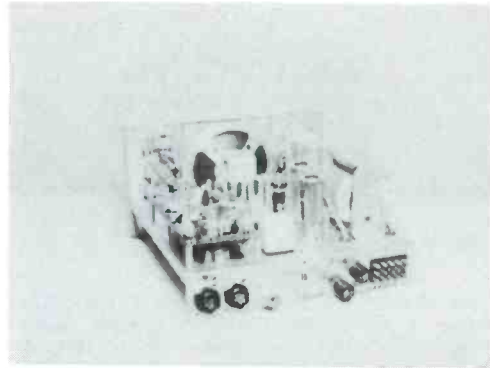
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Chicago, Illinois 60641

Rush items checked
 Send New Giant 1964 Catalog

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Address _____

City _____ Zone _____ State _____



Rear view of the Commaire. Along the chassis apron, l. to r., Two power transistors (used in the inverter), Coax antenna connector, Two transmitter adjustment controls, A.C. and D.C. power supply fuses, and Power socket. The five transmit crystals are mounted in back of the speaker. The light colored cubic object mounted on the rear of the chassis is the relay.

ohms. Relative output power can be monitored on the panel-mounted meter. The input to the final is the maximum legal limit of 5 watts and this stage is plate modulated by a 12AQ5.

CONSTRUCTION AND OPERATION

A mounting bracket is included for mobile installation. High quality components are used throughout and the unit is well constructed, both electrically and mechanically. A Turner ceramic push-to-talk mike is supplied with the transceiver, as well as the AC and DC power cables. Five transmit crystals are also included.

Power drain is low, because of the many transistors used in the Commaire. At 12 volts DC, 1 ampere is drawn during receive and 3.5 amperes while transmitting.

The instruction manual is clearly written and complete with essential information for the CB'er. It gives operating and installation instructions, alignment data, a complete parts list and layout, and a schematic diagram.

The Commaire was tested at the base and in the car. Many checks were made and the results were most gratifying. Reports on the unusually fine audio quality of the set were unanimous. In addition, the signal had "punch." Although the receiver section is not crystal controlled, the drift was slow and at most a couple of kc/s in a half-hour. This is no drawback, however, because this slight drift can be tuned out by the front-panel *Fine Tuning* control.



PART 15 CALLBOOK

We will be keeping this on a constantly revolving basis, calling on each call area every few months to bring it up to date with the latest additions. If you subscribe to S9 you will be assured of having a complete Part 15 callbook as we have no plans at present to issue these calls in one single volume.

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468	G. Rolli, 151 N. La Fonde Rd., Tipton, Cal.	A-H	442	J. Greathouse, 718 E. Pine, Enid, Okla.	7
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476	L. M. Karr, 24 N. E. 62nd St., Portland, Oreg.	A	454	T. Lachhaas, 220 Russell St., Blackwell, Okla.	7
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484-486	M. Nixon, 532 Wilkes Circle, Santa Cruz, Cal.	13, 14	461-463	C. Beck, 5821 Hatcher St., Bell Gardens, Cal.	21
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490-494	J. W. Mosby, 228 Willow Rd., Menlo Park, Cal.	9	466-469	J. Greathouse, 718 E. Pine, Enid, Okla.	10, 17
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			550-553	D. Fair, 1911 Vincent, Brownwood, Tex.	4
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			581-583	J. Hassell, 809 Comm. Sq., F. E. Warren, Wyo.	B
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228-230	M. Powe, 524 Penn. Ave., Slidell, La.	F
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245-249	W. L. Perove, 2465 Wild Valley Dr., Jackson, Miss.	A, H
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PART 15 KORNER

by DEAN DETTON, NORTHERN 17

59 MAGAZINE
300 WEST 43 ST.
NEW YORK 36, N. Y.

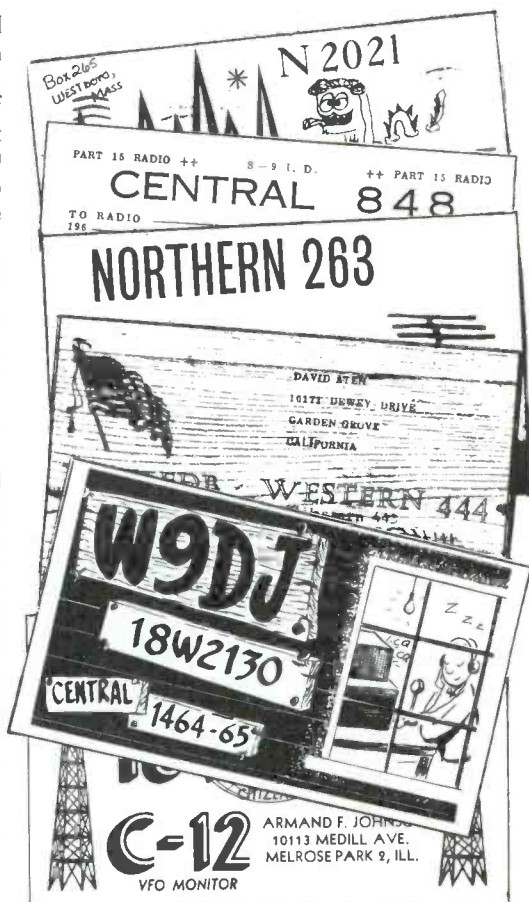
"HELP!" That's the word from Laurel Talbot, 1208 N. Drury Lane, Arlington Heights, Ill. Laurel's station, CENTRAL 593, worked a skip station on the night of July 17th and he's still trying to figure out who it was. It was on Channel 7 from 7:10 to 7:22 P.M. CDT, and it was a Colorado station with a "WESTERN" prefix. There was quite a bit of QRM from other stations and Laurel thinks that the other station had a "7" in its call, or might have been "522." We checked it out for WESTERN 522, and found that this identifier is used by the Mesa Tree Service in New Mexico. Anybody out there belong to this QSO?

Laurel listens for DX calls with a Lincoln 9 transistor rig on Channel 7.



Here's a photo of the nifty station at Steve Budesky's place in Greensburg, Pa. He transmits on Heath GW-31 units and receives on a rebuilt Philco 16-B. He says that there is a lot of Part 15 activity in his neck of the woods. He is on Channel 10 with 'fone and Channel 11 with CW. His call is NORTHERN 1281, give him a call.

We received a note from Richard L. Stainbrook, CENTRAL 1561, General Delivery, Callender, Iowa, saying that he constructed the broadcast band Part 15 rig de-



scribed in S9 for May. Dick has a network of six Part 15 broadcast band stations in his area now using these rigs in their mobile units. Reports excellent results.

Dave Perry, NORTHERN 2021, Box 265, Westboro, Mass., wants to swap Part 15 cards. He says that he's a real "monster," because he read how Part 15 operators are being accused of doing everything from shooting down toy airplanes to destroying villages. He's got one of those deluxe rigs,

an EXEC 1500 from International Crystal –wow, we're all drooling!

A QSL came in from a well known old timer, Larry Wagner, CENTRAL 1464, of 1722 S. Wabash Avenue, Chicago 16, Ill. Larry has been floating around the kilocycles since 1921, when he received his ham ticket. His QSL has his ham call, W9DJ, and both CB calls, 18W2130 (that's an oldie too, I believe that he was one of the first stations on the air back in early 1959) and CENTRAL 1464. Nice to have you with us, Larry. Your QSL will sure be a welcome DX trophy on the wall of any Part 15 shack.

This is the first time the Part 15 KORN has ever received any poetic efforts by its readers, and this one is darn good. It came in from Tom Kennedy, Box 364, White Oak, Texas (still trying to convince his parents to let him get on the air so he doesn't have a callsign). Here's what Tommy tells us:

*There's a small part of the Citizens Band we all know,
And on it, everyone can go-go-go.*

*Not having to fear much of Uncle Sam,
We nearly have the freedom of a Ham.*

*Here we call CQ and work skip, too,
You know, the things Part 19'ers can't do.*

*Although we share our band with the R/C boys,
We manage to keep our operating joys.*

*While we revel in all this bliss,
Others wail, "What's all this?"*

*And to them we proudly hail:
"This is a radio game that's always keen."*

By now they know, IT'S PART 15!!!

Nice work, Tommy.

Speaking of Part 15'ers being "Gung-Ho," we heard from WESTERN 443, David Aten, 10171 Dewey Drive, Garden Grove, Calif. Dave bluntly says, "Either start to publish a magazine just for Part 15'ers or expand your Part 15 coverage. I prefer the former." His ideas for an all-Part 15 magazine include a regular callbook feature (which would include complete details of the equipment in use at each station), new product reports, Part 15 developments, "skip" condition predictions, circuits for Part 15 gear and legal antennas.

Starting a magazine is much easier said than done, Dave, however there has been such an unexpected surge of interest in

Continued on page 58

APPLICATION FOR FREE PART 15 STATION IDENTIFIER CERTIFICATE

To register your Part 15 "unlicensed" CB station with S9 and receive your special station identifier certificate, do the following:

- A. Fill in the application below, or facsimile if you don't want to cut your copy of S9.
- B. Enclose your completed application form together with a self-addressed stamped (5¢) envelope, in another envelope addressed as follows:

**Part 15 Department
S9 Magazine
300 West 43rd Street
New York 36, N. Y.**

- C. Please do not request special identifying words for your station as all identifiers are issued in alphabetical rotation for ease of recording on our records.

APPLICATION FOR PART 15 IDENTIFIER

Name: _____ CB Call: _____

Address: _____

City: _____ Zone: _____ State: _____

Part 15 Channel: _____ Type of unit: _____

No. of units: _____ Date: _____

Signature: _____

CARD SWAPPERS UNLIMITED

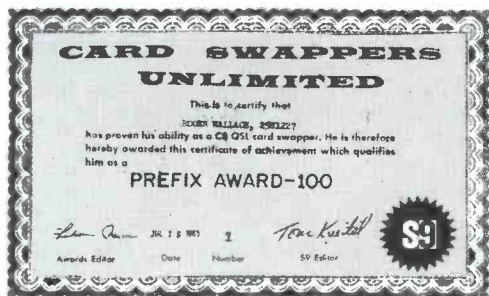
This month's swapper section is the biggest yet, as more and more CB'ers hear about what S9 has going for its readers. Well, after all, that's what we're here for.

The Swappers' Awards are moving along too, here are the S9'ers who we processed this past month, together with the awards which they took away with them:

- SACA # 2. John Moore, KGH0731, Omaha, Nebr.
- PX-25 # 11. H. Thomas Hixon, KHC1496, Chrisman, Ill.
 # 12. Loraine Crocker, KHC8002, Connersville, Ind.
 # 13. Tom Watson, KDD2173, Huntsville, Ala.
 # 14. John Moore, KKG0731, Omaha, Nebr.
 # 15. Don Cash, KHI4958, Bridgeport, Ohio
 # 16. Louis Lamanna, KID1431, Pittsburgh, Pa.
 # 17. William Ferbrache, 18Q2631, La Grange Park, Ill.
 # 18. George Cathey, KDD1064, Jackson, Tenn.
 # 19. Thomas Martin, KFA1028, Pomona, Calif.
 # 20. Ken Buckey, KJC0116, Juneau, Alaska
 # 21. Jack Washington, KID1889, Pittsburgh, Pa.
 # 22. Frank Pakay, KBG5786, Hillside, N. J.
 # 23. Iona Velpel, KHA8376, Garrett, Ind.
- PX-50 # 13. William Jones, KBA8553, Putnam, Conn.
 # 14. William Ferbrache, 18Q2631, La Grange Park, Ill.
 # 15. Lee Aspinall, KBA8595, New Haven, Conn.
 # 16. Jay Ross, KCF0168, Takoma Park, Md.
 # 17. Tom Watson, KDD2173, Huntsville, Ala.
 # 18. Jack Washington, KID1889, Pittsburgh, Pa.
 # 19. Frank Pakay, KBG5786, Hillside, N. J.
- PX-75 # 3. Val Golding, KFC3808, San Francisco, Calif.

That's an impressive looking group. You probably qualify for one or more of these spiffy looking 3 color certificates. They really soup up the wall of any CB shack. If you missed last month's issue when we ran the rules and regulations, we will be happy to send you (at no charge) a whole big involved megillah about how swappers win awards. Please send a self addressed, stamped envelope. Address it to Swapper's Awards, S9 Magazine, 300 West 43 Street, New York, N. Y. (10036).

Leslie Doss, KGH0156, of Wentzville, Mo. is trying for the MSA, PX-100 and SACA awards. Leslie wants to know if we are going to give out an "Eyeball Award"



for cards swapped during eyeball QSO's. If we get any reader interest in it we will be only too happy to work up some type of award along those lines.

Jim Cole, KHC1607, Elwood, Ind., has almost 2000 cards which includes several Canadian stations. He still needs Hawaii. How about it, you guys out there in Aloha-land? Want to help Jim (better known as "The Hoosier Stump Jumper") finish off his 50th state?

Ed Grubgeld, KFA3709, Solvang, Calif., notes that he now has over 350 cards and adcs, "so what." These include at least 4 cards from every state (except Alaska and Hawaii).

Wendy Starr, KGB1500, who was listed in the August issue of Card Swappers Unlimited was shocked to find that he received 51 cards in one single day as a result of S9. Also in New Mexico, we hear that Bob Fleming, KGC0656, has almost 400 cards. He needs 9 states for all 50. She's short on Alaska, and that's the one that has him stumped. Hey, how about one of you guys up there sending Bob a card before it gets too cold to trot out to the mailbox.

Speak about foreign cards, we note that S9'er Stephen Budesky, Greensburg, Pa., has cards from all call areas, Puerto Rico, Alaska, Hawaii, and Guatemala! Not bad, eh? I hope that readers will note that this month we are listing two stations in Venezuela who want to swap with U.S. and Canadian CB'ers.

Want your QSL to be on public display? Send one to R. E. Corbett, 24W0566, at Electronic Wholesalers, Inc., 2345 Sherman

Avenue, N.W., Washington 1, D.C. All cards received will be mounted in the CB section of the store.

Every guy likes to take a gander at a pretty YL and your Swappers' section gives you not only a look at a delight, but also the chance to swap cards with her. Turn your goggles on Miss Janice Anita Strange, KDH0958, 2212 Lakeview St., Lakeland,



Fla. Janice says, "I always shall enjoy S9 because I know all the information contained therein is good, and always enjoyable." Oh, you everlovin' doll! Anybody who doesn't send Janice a card after such nice words is a stick-in-the-mud!

If you want to be listed as an S9 Card Swapper in the December issue, be sure to get your card to us not later than October 12th. You can be listed for as many months as you like, but send in a separate card for each month (it's the only way we can keep track of them). Here is the merry group for this month.

1Q0103 Ron Turcotte, New Lewiston Rd., Topsham, Me.
 1Q2072 Harry Larrabee, Box 252, Berrys Mills Rd., W. Bath, Me.
 1Q3280 Frank Flood, 81 Prentice, Waltham, Mass.
 1Q3477 Joe Perry, P. O. Box 155, New Bedford, Mass.
 1Q6865 Tom Howarth, 52 Lincoln, Esmond, R.I.
 1Q7098 Richard Larkin, Rt. 1, Charlestown, R.I.
 1W1619 Howard Cokey, 315 Riverside Ave., Torrington, Conn.
 2A4157 Jack Harms, Summit St., Philmont, N.Y.
 2A4455 Joel Kampf, 2 Wesleyan, Red Bank, N.J.
 2Q0602 Arthur Hamm, Church St., Philmont, N.Y.
 2Q0920 Pat Race, Ellsworth St., Philmont, N.Y.
 2Q1111 William Plog, 11 Gould Rd., Centereach, L.I., N.Y.
 2Q1928 Roy Anderson, 120-42 132 St., So. Ozone Park, N.Y.
 2Q2301 Al Augustyn Jr., 2029 Caroline Ave., Linden, N.J.
 2Q3057 William Cuthbert, 390 Ave., Bayonne, N.J.
 2Q3092 Dave Buda, 717 Centre St., Nutley 10, N.J.
 2Q3113 Lou Fazekas, 161-30 Jewel Ave., Flushing 65, N.Y.
 2Q4255 Sidney Blutreich, 3126 Coney Island Ave., Brooklyn, N.Y.
 2Q5468 Walt Alexander, 1233 Woodruff, Hillside, N.J.
 2Q5996 Dave Demonet, 322 Taylor Rd. South, Short Hills, N.J.
 2W4586 John Krejc, 60 Division, Garfield, N.J.
 3Q2052 Walter Haines, Sandtown Rd., Medford, N.J.
 3Q2542 Bob Diehl, 240 York, Hanover, Pa.
 3Q2998 Guido Marsala, 1742 So. Bancroft St., Phila. 45, Pa.
 4W2406 Ed Keech, 905 Louisiana Ave., Cumberland, Md.
 4W2520 Robert Brill, 1234 Woodstock Lane, Winchester, Va.
 5Q0577 Fred Harris, Rt. 3, Gate City, Va.
 5W2109 Allan Clarke, 1009 Hamilton Ave., Clifton Forge, Va.
 6Q4672 Emory Gilbert, 307 West 7th St., Louisville, Ga.
 6W1105 Norman Cooley, 3908 N. Main, Anderson, S.C.
 6W2675 Bobby Morehead, Rt. 2, Shelby, N.C.
 6W7155 Terrell Craven, Rt. 1, Box 32, Royston, Ga.
 8Q1418 Charles Sharpe, 2124 Glendale, Texarkana, Ark.
 8W0821 Ralph Tucknies, Rt. 1, Booneville, Ark.
 11Q2237 Roger Ledig, 349 N. Murray, Banning, Calif.
 12Q2742 Rucy, 2689 Gill Dr., Concord, Calif.
 15Q0555 Doug Anthony, Box 206, Douglas, Wyo.
 16Q0517 Garry White, Box 1D 2849, Keesler, Miss.
 16Q0582 Bob Joffer, R. R. No. 1, Box 46, Viborg, S. D.
 17Q0651 Bob Fowler, 4360 Barker Ave., Omaha, Nebr.



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NEW PRODUCTS Dept. C Box 481 Grand Haven, Mich.

17Q1625 Raymond Franks, 1247 Ohio, Augusta, Kans.
 17Q2770 Ora Stewart, Pour & Main, Grainfield, Kans.
 17Q3078 Dee Snyder, Healey, Kans.
 17Q3530 Naomi Sorensen, Box 10603, Gladstone, Mo.
 17Q3732 Jack Schaaf, 1300 E. 65 No., Kansas City, Mo.
 17Q4097 Oren Nogle, 6450 Etzel Ave., St. Louis, Mo.
 17W 5449 Henry Hawkins, 501 W. 10th St., Kansas City, Mo.
 17W7445 Charles Ash, 1214 Dearborn, Augusta, Kans.
 18Q0286 J. Rinehart, Rt. 2, Hagerstown, Ind.
 18Q4913 Thomas Leadbetter, RR 4, Box 40, Muncie, Ind.
 18Q9663 Bruce Paulsen, Rt. 1, Box 316, Mundelem, Ill.
 18QA0830 Jim English, Box 434, Daleville, Ind.
 18QA1814 Craig Bradberry, 1334 S. 48th Ct., Cicero, Ill.
 19A5964 Stan A. Stickler, 2310 Commor, Hamtramck, Mich.
 19A9803 Tom Bratton, 435 Ema St., Russell, Ky.
 19Q9362 Melvin Reed, Lakeside, Ohio
 19Q9441 Martin Ripper, 7617 Cavelli, Garden City, Mich.
 19QA0442 Art DeFraia, 226 So. 3rd, Harbor Beach, Mich.
 20Q2388 Francis Shepard, 359 Crescent Ave., Elmira, N.Y.
 20Q3825 Dean Heiple, Box 252, Jennerstown, Pa.
 20Q4816 Frank Simpson, RD 3 Box 56, Everett, Pa.
 20Q5122 Jack Millar, 110 Prospect St., Endicott, N.Y.
 20W5752 Lester Dewalker, R. F. D. #2, Carthage, N.Y.
 KBA1420 Carlton Labbe, 88 Water St., Clinton, Mass.
 KBA2614 Clifton Smith, Box 486, Block Island, R. I.
 KBA4711 Don Hamel, 521 Main, Amesbury, Mass.
 KBA4862 Earl Bridges, 70 Bromfield, Newburyport, Mass.
 KBA4936 Steve Cornell, Box 121, Shannock, R. I.
 KBA5253 Frank Krol, 10 Newton, Fairhaven, Mass.
 KBA5497 Bill Niford, 13 Ash, Clinton, Mass.
 KBA5557 Ted Cummings, Bellflower Rd., Billerica, Mass.
 KBA6295 Frank Adams, 32 Taylor, New Milford, Conn.
 KBA8091 Polly Huntington, R. F. D. Box 56, Topsham, Me.
 KBA8387 John Hornyak, 1192 Norman, Bridgeport 4, Conn.
 KBA8391 Ernie Richards, 2 Fort Hill CRT., Poquonock Bridge, Conn.
 KBA8472 William Harrington, 44 Orchard View, W. Springfield, Mass.
 KBA8553 William Jones, 127 Grove, Putnam, Conn.
 KBA8556 Lewis Young, 185 Southworth, Brockton, Mass.
 KBA8619 Doug Fleury, 110 High, Lowell, Mass.
 KBA9470 Isabel Howarth, 52 Lincoln, Esmond 17, R. I.
 KBA9997 Leo Campbell, Haverhill, Rowley, Mass.
 KKB0287 Jim Gardner, Box 242, Ballardvale, Mass.
 KKB0451 Frank Murray Jr., 30 Hemlock Dr., Canton, Mass.
 KKB1977 A. Masciarelli, P. O. Box 297, Clinton, Mass.
 KBC2434 Dave Perry, Box 264, Westboro, Mass.
 KBC2451 Eric Ruderman, 21 Drury Lane, Wakefield, Mass.
 KBC2762 George Masciarelli, Box 297, Clinton, Mass.
 KBC2994 Al Correia, 48 Ocean, New Bedford, Mass.
 KBC3048 Bernard Blazys, Sperry Rd., Watertown, Conn.
 KBC3548 Gary McTrottes, 301 Exchange, Fair Haven, Conn.
 KBC3800 Frank Lendzioszek, 54 Mount Tom Ave., Easthampton, Mass.
 KBC3922 Nick Garreff, 25 Wentworth, Springfield 4, Mass.
 KBC4118 Paul Ray, R. F. D. #2, Woonsocket, R. I.
 KBC4209 Joanne Savoy, Box 125, Enfield, N. H.
 KBC4361 Onnie Hutchins, Thorndike, Maine
 KBC4974 Willard Kemp, 25 Prince Pl., Stamford, Conn.
 KBC5095 Leonard Butkiewicz, 1480 Corbin Ave., New Britain, Conn.
 KBC5544 Doug Pierce, 530 East, New Britain, Conn.
 KBC5702 Johnny Farrow, R. F. D. Sterling, Sterling, Mass.
 KBC6617 David Larkin, 218 North Water, Stomington, Conn.
 KKB0998 John Patois, 131 North 2nd, Paterson, N.J.
 KBG1130 John Flynt, 3441 Jackson Ave., Wantagh, L.I., N.Y.
 KBG2108 George Ritter, 41 Ridge Wood, Valley Stream, N.Y.
 KBG2465 Frank Pennucci, 21 Chestnut Ave., Irvington, N.J.
 KBG2644 Charles Cavey, 114 Harbor Rd., Port Washington, N.Y.
 KBG4030 Carl Cox, Rd. 3, Middletown, N.Y.
 KBG4290 Steve Smith, 211 Magnolia Ave., Mt. Vernon, N.Y.
 KBG4303 Tom Kneitel, 300 W. 43 St., New York 36, N.Y.
 KBG4607 John Krueger, 23 Strandpipe Rd., Freehold, N.J.
 KBG5786 Frank Perkyak, 1279 Gurd Ave., Hillside, N.J.
 KBG6468 Stan Erlichman, Philmont, N.Y.
 KBG8102 Bud Gouger, 32 Clinton St., Newton, N.J.
 KBG8537 Bill Wheaton, 270 William St., Hillside 5, N.J.
 KBG8576 Sal Cataldo, 62 Rosehill Place, Irvington, N.J.
 KBG8936 John Lester, 41-01 21st Ave., Astoria 5, L.I., N.Y.
 KBG8963 Bernard Hengber, 1504 38th St., Brooklyn 18, N.Y.
 KBG8984 Richard Belgard, 1383 Luddington Rd., E. Meadow, N.Y.
 KBJ0724 Chip Dresser, 927 Paulding St., Peekskill, N.Y.
 KBJ0866 Helen Alexander, 1233 Woodruff, Hillside, N.J.

KBH1088 Stan Siegel, 88-10 32nd Ave., Jackson Hts 69, N.Y.
 KBH1340 Leonard Katz, 41 Smith Ave., White Plains, N.Y.
 KBH1350 Howard Rosenstein, 142 Huntington Terr., Newark, N.J.
 KBH1456 Earl Kirm, P.O. Box 666, Port Ewen, N.Y.
 KBH1514 John Golderer, 100 Post Ave., Lyndhurst, N.J.
 KBH3455 John James, 149 Knox St., Albany 8, N.Y.
 KBI3925 Tony Pennucci, 13 Berwyn St., E. Orange, N.J.
 KBI3992 Larry Demonet, 322 Taylor Rd., Short Hills, N.J.
 KBH4133 Bob Wanderer, 115-25 Metropolitan Ave., Kew Gardens, N.Y.
 KCC1998 Jim Mansfield, 103 Stamm Blvd., New Castle, Del.
 KCC2653 Ginger Mansfield, 103 Stamm Blvd., New Castle, Del.
 KCC2800 Rose McConnell, Box 649 Convent Rd., Chester, Pa.
 KCC3541 Bob Hayes, 1109 Prospect Bellefonte, Wilmington, Del.
 KCC3753 The Styles, 16 Fairfield Ave., Millville, N.J.
 KCC3960 Josie Murray, RFD 2, Cape May C.H., N.J.
 KCC4162 Rod Phillips, 1444 Colton Rd., Gladwyne, Pa.
 KCD0017 A. Freidrich, 421 E. 24 Ave., N. Wildwood, N.J.
 KCD0352 Roger Miller, Rd. 2, Kempton, Pa.
 KCD0749 W. B. Smith, 1220 N. Broad St., Philadelphia 21, Pa.
 KCD1039 Larry Ampsacher, Box 4, Emigsville, Pa.
 KCD1205 Anthony Mattia, 258 N. Simpson, Philadelphia, Pa.
 KCD1658 Ray Tozer, 129 Mechanic St., Cape May C.H., N.J.
 KCD1795 Larry Mandell, 4763 N. Hutchinson, Philadelphia, Pa.
 KCD2124 The Thomas's, Box 27, Blain, Pa.
 KCD2249 Frank Dowler, 5144 Whitehall Dr., Clifton Hts., Pa.
 KCF0823 Jim Cross, 755 S. Potomac, Hagerstown, Md.
 KCF0990 Peter Loewenstein, Luray, Va.
 KCF1042 Lee Holler, 378 Shenandoah, Winchester, Va.
 KCF1224 Harold Channell, 306 E. Duncan Ave., Alexandria, Va.
 KCF1380 Bill Roney, Lot 31, Pine St., Andrews AFB, D.C.
 KCF1716 Carroll Heishman, 2950 Valley Ave., Winchester, Pa.
 KCF1781 Reggie Martin, 124 Scott Dr., Manassas Park, Va.
 KCF2156 Bob Sowers, 1920 Lexington Ave., Hagerstown, Md.
 KCF2752 James Lofton, 712 N. Loudoun, Winchester, Va.
 KCG0572 Leonard Gettemar, Box 213 Bridge Ave & Main, Edgewater, Md.
 KCG0774 Lew Reinberg, 4118 Kathlan Ave., Baltimore, Md.
 KCI0410 Gene Shelton, Rt. #3, Gettysburg, Pa.
 KCI2563 Bob Crews, 1109 S. Hawthorne Rd., Winston-Salem, N.C.
 KCI2621 Bill Gallihier, Box 494, Saltillo, Va.
 KCI3345 Linwood Jones, 97 Wyoming Ave., Portsmouth, Va.
 KCI4700 Charles Coe, Rt. 2, Box 189, Glade Spring, Va.
 KCI5169 Charles Ford, 3926 Dorset Rd., Richmond, Va.
 KCI6123 Jack Burk, 505 Fort Branch Rd., Pearisburg, Va.
 KCI6631 Harold Williams, P.O. Box 1143, Newport News, Va.
 KCI6636 Cecil Marshall, Box 485, Saltillo, Va.
 KCI6907 Gaylord Worsham, 301 S. Fieldcrest, Draper, N.C.
 KCJ0456 Harry Alvis, Lake Court Ave., Lynchburg, Va.
 KCJ0643 David Harris, RFD #6 Box 137, Charlottesville, Va.
 KCJ2269 Frank Anderson, 73 Bishop Ave., Danville, Va.
 KCJ2292 Hazel Stubbs, P.O. Box 1076, Rockingham, N.C.
 KCJ3489 Tom Marvin, Box 762, Culpeper, Va.
 KDB0371 Bill Howell, Jr., 545 Palmetto Lane, Aiken, S.C.
 KDB0510 Richard Black, 4002 Cypress Ave., Huntsville, Ala.
 KDB0119 Billy Sutton, 312 S. Houston, Athens, Ala.
 KDB1435 Daniel Guthrie, Box 362, Spruce Pine, N.C.
 KDB1821 Bob Trowbridge, 120 East 8th, Waynesboro, Ga.
 KDB3123 John Dillard, 202 E. Commercial, Monterey, Tenn.
 KDB3224 Ray Branson, Box 427, 514 Smith, Shelby, N.C.
 KDB3389 Jean Liles, 713 Jackson Blvd., Birmingham 17, Ala.
 KDB4538 Howard Tripp, 1821 Reynolds Ave., Charleston Heights, S.C.
 KDB4842 Troy Kenemer, Rocky Face, Ga.
 KDB5517 Jimmy Phillips, 2128 Highland Ave., Knoxville, Tenn.
 KDB6227 Eckenrod Camera Shop, 9 E. Court, Marion, N.C.
 KDB7309 Robert Wood, 1625-3rd Ave., Tuscaloosa, Ala.
 KDB7363 Donald Hawkins, Rt. 2, Ellenboro, N.C.
 KDB7747 Bill Frankensfield, Tryon, N.C.
 KDB8688 J. Bragg, Box 243, Crossville, Tenn.
 KDB9044 Bill Smitherman, Rt. 2, East Bend, N.C.
 KDB9144 Gilbert Black, 2224 Bide-A-Wee Dr., Huntsville, Ala.
 KDD0689 Mabry Herndon, 501 Benson, Hartwell, Ga.
 KDD0748 Mike Jones, 711 Rollingwood Rd., Aiken, S.C.
 KDD0847 Harold Shavin, P.O. Box 436, Summerville, Ga.
 KDD1522 Don Huntley, Gen. Del., Bat Cave, N.C.
 KDD1595 M. Copeland, 402 Bellah Ave., Summerville, Ga.
 KDD1878 Frank Doernberg, 1842 Windemere Dr., Atlanta, Ga.
 KDD2166 David Gable, 1086 Goodman Rd., Memphis, Tenn.
 KDD2499 Harry Dayton, Box 399, Caroleen, N.C.
 KDD2601 Howard Ray, Box 284, Caroleen, N.C.
 KDD3270 Johnie Trawick, 708 Hull, Ozark, Ala.
 KDD3337 Fred Jackson, Box 382, Caroleen, N.C.
 KDD3448 Junior Kennedy, Box 252, Caroleen, N.C.
 KDD4060 Mike Fitzgerald, 421 West Outer Dr., Oak Ridge, Tenn.
 KDD4062 Jug Francis, Box 376, Caroleen, N.C.
 KDD4121 Romie Murray, Rt. 2, Ellenboro, N.C.
 KDD4316 Malcolm Burke, 206 Eastview, Camden, Tenn.
 KDD4607 Tani Allen, 1701 Dodds Ave., Chattanooga, Tenn.
 KDD4908 John Clem, 1304 Lyster, Chattanooga 4, Tenn.
 KDD5005 Roy Mason, 458 Burnett, Chattanooga, S.C.
 KDD5298 Robert Denton Jr., 1367 Polaris, Hixon, Tenn.
 KDD5434 Victor Cohen, 3953 Montclair Rd., Birmingham, Ala.
 KDD5848 Jerry Scott, Rt. 1, Toccoa, Ga.
 KDH1201 Wyndham Morton, 802 Madison, New Port Richey, Fla.

KDH0958 Janice Strange, 2212 Lakeview, Lakeland, Fla.
 KDH3104 Lindy Smith, Haines City, Fla.
 KDII145 Jimmy Hopper, 11881 S.W. 188 Terrace, Miami 57, Fla.
 KDII221 William Harvey, 1776 Crois Dr., Clearwater, Fla.
 KDII736 Lew Shacklee, 301 Cortez Rd., Bradenton, Fla.
 KDII754 Paul Nacynych, 1205 Dove Dr., Orlando, Fla.
 KEB0796 Harry Childs, 103rd MF DET, Fort Hood, Tex.
 KED1423 Fred Hutner, 5415 N. New Braunfels, San Antonio, Tex.
 KED2428 Bill Gibson, 628 W. Hollywood, San Antonio, Tex.
 KEE0984 Denny Ellerbee, P.O. Box 6706, San Antonio, Tex.
 KEE1669 Glenn Will, Rd. 3, Box 97-L, Orange, Tex.
 KEG0782 James McWain, 807 N. East, Arlington, Tex.
 KEG2600 The Mayo's, 4001 James Ave., Fort Worth 11, Tex.
 KEH0131 Richard Cline, 915 E. 5th St., Mineral Wells, Tex.
 KEH0221 Joe Aston, P.O. Box 9345, Fort Worth, Tex.
 KEH2042 Ralph Wallis, P.O. Box 378, Bartlesville, Okla.
 KEJ1462 Larry Goldberg, P.O. Box 3571, Van Nuys, Calif.
 KEJ5806 Bob Forster, 6226 Lindsey Ave., Pico Rivera, Calif.
 KEJ6251 Gene Grant, 4908 S. Passons, Pico Rivera, Calif.
 KEJ6930 Bob Forster, 10206 Pradera Ave., Montclair, Calif.
 KFA0553 Gerald Gilbert, Box 142 340 FMS Whitman AFB, Mo.
 KFA1399 May Grant, 4908 S. Passons, Pico Rivera, Calif.
 KFA2330 Larry Merritt, 5303 Penfield, Woodland Hills, Calif.
 KFA2363 E. Ormes, 5262-2 Yeakel, Killeen, Texas
 KFA2537 Dick Stroup, 3210 W. 189th St., Torrance, Calif.
 KFA2888 Ralph Stone, 3017 Future, Los Angeles, Calif.
 KFA3071 Dennis Van Hooked, 391 Freear Dr., Buellton, Calif.
 KFA4102 Jack Pearce, 3000 Lawndale Ave., Las Vegas, Nevada
 KFA4192 V. Ashley, Box 651, E. Las Vegas, Nevada
 KRC1867 Bobby Wood, 1876 Luzera, Seaside, Calif.
 KFC2368 Jack Brown, 6224 Larry Way, North Highlands, Calif.
 KFC2838 Jeff Mosby, 228 Willow Rd., Menlo Park, Calif.
 KFC3057 Jerry Gosnell, PO Box 1094, San Francisco 1, Calif.
 KFC3415 Doug Parker, 3015 Justus Dr., Soquel, Calif.
 KFC3808 Val Golding, PO Box 1094, San Francisco 1, Calif.
 KFC4049 Tom Wetzel, 216 17th St., Pacific Grove, Calif.
 KFD1181 John Brunner, 1641 Chestnut, San Francisco, Calif.
 KFD1371 Mary Weitzel, 216 17th, Pacific Grove, Calif.
 KFD1848 Hank Rhine, 671 8th Ave., San Francisco 18, Calif.
 KGB0032 U. Anthony, 300 E. Center, Douglas, Wyo.
 KGB1886 Gene Ashley, Box 252, Diamondville, Wyo.
 KGC0448 Bill Harper, P.O. Box 473, Silver City, N. Mex.
 KGC0656 Bob Fleming, 3000 Monterey S.E., Albuquerque, N. Mex.
 KGE1112 Dave Kulas, 403 East Fifth, Winona, Minn.
 KGE1811 Gary White, 520 7th S.E., Rochester, Minn.
 KGE2311 Wayne Tysen, 401 Cecil Ave., Fergus Falls, Minn.
 KGE2638 Ralph Sorenson, 673 E. 7th, Red Wing, Minn.
 KGF1106 Bill Lawrie, 912 Grove, La Crosse, Wisc.
 KGF1428 John Feild, 504 Walker, Stevens Point, Wisc.
 KGH0364 Doris Reel, 103 Washington, Buckner, Mo.
 KGH0731 John Moore, 2017 South 107 Ave., Omaha 24, Nebr.
 KGH1315 Roy Moore, 707 May, Marshalltown, Iowa
 KGH2155 Delmar Gault, R. R. 2, Box 224, Augusta, Kans.
 KGH2455 Johnnie Meinholdt, 1100 Daisys Dr., Topeka, Kans.
 KGI0466 Robert Foster, 2936 Baltimore, Kansas City 8, Mo.
 KGI1798 Jerre Brunner, R. R. #2, Robinson, Kans.
 KGI2607 Hal Redfield, 4406 W. Florissant Ave., St. Louis, Mo.
 KHA0395 John Malley, Box 312, Two Rivers, Wisc.
 KHA0470 Martin Hickey, Herman Rd., Mantowoc, Wisc.
 KHA1222 Harold Blesy, 1918 W. Wolfram, Chicago 13, Ill.
 KHA3048 J. Black, R. R. 8, Box 282, Decatur, Ill.
 KHA4829 Marie Black, R. R. 8, Box 282, Decatur, Ill.
 KHA6381 John Raby, Box 503, Dublin, Ind.
 KHA6706 Russell Mahoney, R. R. 1, La Fontaine, Ind.
 KHA7548 John Weston, 1504 Howard Ct., Pekin, Ill.
 KHA8376 Gordon Velpel, 801 South Franklin, Garrett, Ind.
 KHA8512 John Raube, 415 Fullerton, Chicago 14, Ill.
 KHA9422 Bob Hohenadel, 1709 Earl Ave., Muscatine, Iowa
 KHB0209 W. Wallace, R. R. 1, Box 161, Clayton, Ind.
 KHB0512 Orville Simmons, 1155 So. Linwood Ave., Evansville, Ind.
 KHB1053 Duane Macy, Rt. 2, Hagerstown, Ind.
 KHB1075 Jake McClures, 111 South Harrison, Garrett, Ind.
 KHB1077 Jim Phillips, Box 568, Muscatine, Iowa
 KHB1452 Dave Harlan, P.O. Box 335, Mt. Pleasant, Iowa
 KHB1972 Lewis Precourt, 769 Oak, Neenah, Wisc.
 KHB3843 Harlan Murphy, 413 East Belle Ave., Rantoul, Ill.
 KHB3971 Larry Parkhurst, R. R. #1, Columbia City, Ind.
 KHC0858 Art Neff, 227 High, Kokuk, Iowa
 KHC1455 Carl Shoaff, 806 W. Pecan, Carbondale, Ill.
 KHC1571 Mui Phillips, 4 Alleyne Dr., Muscatine, Iowa
 KHC1936 Don Nelson, 265 Oakdale, Kankakee, Ill.
 KHC2157 Wayne Oehler, 10821 West Cameron Ave., Milwaukee 18, Wisc.
 KHC2447 Laverne Burt, 819 Park Place, Clinton, Iowa
 KHC2566 Richard Kyler, Rt. 6, Columbia City, Ind.
 KHC2581 Butch Andre, Box 301, Freeport, Ill.
 KHC2593 Dennis Elliott, 2509 Adams Ave., Evansville, Ind.
 KHC2660 Lee Lhamon, 413 Fairlane, Pekin, Ill.
 KHC3938 Harry Park, R. R. 1, Plainfield, Ind.
 KHC3961 Charles Riley, 188 E. Rees, Fond du Lac, Wisc.
 KHC4157 Bill Fitzpatrick, 416 So. Anderson, Elwood, Ind.
 KHC4178 B. Cox, 204 Breathitt, Russellville, Ky.
 KHC4225 Eddie Blonz, 2826 Jerome, Chicago 45, Ill.

KHC4845 John Tamlin, 1207 Clay, La Porte, Ind.
 KHC4944 Dale Harwick, 727 Montague St., Rockford, Ill.
 KHC5248 Bill Stannard, 75 South McLean Blvd., Elgin, Ill.
 KHC5371 Beth Cole, 830 No. 16th, Elwood, Ind.
 KHC5551 Dodie Barclay, 1300 S. Roosevelt Dr., Evansville, Ind.
 KHC5669 Larry Sheedy, R. R. 4, Box 143, Elwood, Ind.
 KHC5807 Harold Horn, R. R. 1, Pennville, Ind.
 KHC5922 Karl Morris, 507 W. Washington, Paris, Ill.
 KHC6340 Helen Yaden, 210 No. Center, Plainfield, Ind.
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 KHC6672 Ron Lukow, 136 N. Dickson, Michigan City, Ind.
 KHC7022 Jerry Farrell, 2437 Oxford St., Lafayette, Ind.
 KHC8002 Burr Porter, 525 Summit Ave., Connersville, Ind.
 KHC8402 Chuck Herrmann, Steward, Ill.
 KHD0231 Marilyn Parkhurst, R. R. #1, Columbia City, Ind.
 KHC0850 Andrew Arison, Box 386, Spencer, W. Va.
 KHG2085 Jim Gallatos, 8204 Dodge, Warren, Mich.
 KHC4563 Jim Keller, R. 2, Box 62C, Coloma, Mich.
 KHC6668 Norm Payea, 1198 Court Dr., East Tawas, Mich.
 KHG7543 Jim Wolfe, 817 Taylor, S. W., Massillon, Ohio
 KHC9779 Barbara Thorn, Box 507, Clendenin, W. Va.
 KHC9069 Herb Riggie, Rt. #5, Zanesville, Ohio
 KHH0388 James Owen, P.O. Box 4031, Flint 4, Mich.
 KHH1363 Geo. Radenheimer, 3121 Andres, Middletown, Ohio
 KHH3728 Jim Hamilton, Rt. 7, Zanesville, Ohio
 KHH4313 Albert Hizer, Rt. 3, Box 338A, Clendenin, W. Va.
 KHI1664 Helen Ripper, 9954 Auburn, Detroit 28, Mich.
 KHI1753 Lou Feldman, 656 Bagley, Detroit, Mich.
 KHI2703 J. McClure, Rt. 1, Box 217, Yawkey, W. Va.
 KHI3354 John Martin, Rt. 4, Hastings, Mich.
 KHI3697 Stan Koch, 3368 W. Gilford Rd., Caro, Mich.
 KHI5658 Larry Peoples, 340 Bassett Rd., Bay Village 40, Ohio
 KHI7658 Andy Loeffler, 1090 Vincent, Saginaw, Mich.
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 KIC0172 Bob Rogers, 227 Green, Wilkinsburg, Pa.
 KIC0517 Richard Pschirrer, 13 Perine, Dansville, N. Y.
 KIC0655 David Aunkst, 504 Todd, Pittsburgh 21, Pa.
 KIC1651 Tom Perrone, 223 Orchard, Old Forge, Pa.
 KIC2015 Roland Waddell, Box 147, Moores, N. Y.
 KIC2126 Richard Snively, 724 Leshar Ave., Waynesboro, Pa.
 KIC2516 Jim Sankovich, 9 Elcher, Uniontown, Pa.
 KIC2553 Thurston Fleming, 327 Parsells Ave., Rochester, N. Y.
 KIC2600 Jesse Altes Jr., R. D. 2, Franklin, Pa.
 KIC2881 Mike Ripski, 72 Mooney Rd., Plymouth, Pa.

KIC3179 Joyce Spory, Box 853, Butler, Pa.
 KIC3501 Phil Rodon, 16 Garfield Ave., Batavia, N. Y.
 KIC3423 Herbert Ament, 414 N. Sixth, Apollo, Pa.
 KIC3625 John DeBoyace, Stewart Trailer Park, Vestal, N. Y.
 KIC4743 Bill Bentley, Box 571, Saratoga Springs, N. Y.
 KIC5642 Dave Kiltmeck, 218 Ottawa, Johnstown, Pa.
 KIC5694 Owen Chrystey Jr., 19 Saltonstall, Canandaigua, N. Y.
 KIC5907 Dale Hoskin, 851 S. M. S., Beale A. F. B., Calif.
 KIC6895 Paul Rogers Jr., 233 Freeland, Pittsburgh, Pa.
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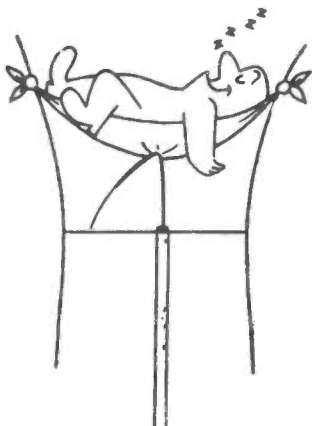


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ANTENNAS

by ED NOLL, KCC2618

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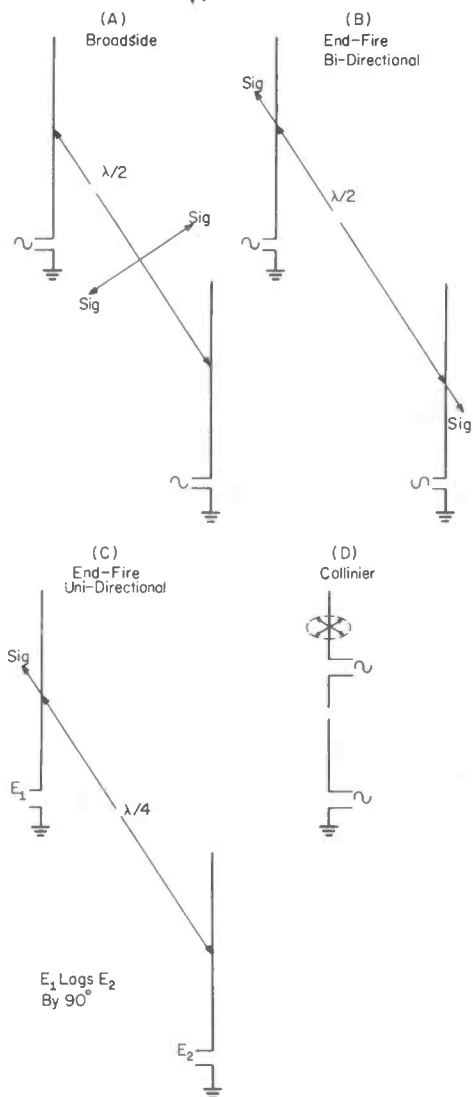


Fig. 1. Typical Phased Antennas.

In the previous column we covered the various basic phased antenna systems broadside, end-fire and collinear as shown in Fig. 1. Patterns and features of each were discussed. Spacing and phasing between antenna elements were important topics. In this column we will go on to the use of transmission lines and matching sections in the feeding of phased antenna elements.

First a review of some of the characteristics of four basic two-element types is in order. As shown in Fig. 1A two broadside elements are fed with in-phase driving signals. In so doing the signal is sent out in a direction that is broadside to the plane of the two elements. With but a few exceptions, antennas have the same transmit and receive patterns. In other words, two broadside elements will display maximum pick-up sensitivity in the two directions broadside to their plane.

When two elements are driven in an end-fire arrangement they are fed out-of-phase. In this case as shown in Fig. 1B, maximum signal is sent out along the line of the antenna elements. A special end-fire combination is shown in Fig. 1C. In the previous two examples the antenna pattern is said to be bi-directional because there is maximum signal sent out in two directions. When the arrangement of Fig. 1C is used a uni-directional pattern can be obtained. To do so it is necessary to separate the antenna elements by a quarter wavelength and to supply them with two signals that are 90-degree related. The one direction of maximum radiation is in a line toward the element that is fed with the 90 degree lagging signal.

For CB operations the collinear antenna, as shown in Fig. 1D, consists of one antenna element positioned above another. This arrangement provides gain and a lower angle of vertical radiation. However, the collinear antenna does have an omni-directional radiation pattern.

SIGNAL PHASING

A radio wave in traveling through space goes through a series of maxima and minima according to its frequency. The separation between two adjacent maxima of opposite polarity is one-half wavelength as shown in Fig. 2. The separation between two peaks of the same polarity (one complete cycle) is one wavelength. Since radio wave, regardless of frequency, travel at the same velocity (300,000,000 meters per second), the formula for wavelength is the simple relation:

$$\lambda = \frac{V}{f}$$

λ -Wavelength
 V -Velocity
 f -Frequency

For practical CB calculations this can be reduced to two very simple and practical formulas:

$$\lambda/2 = \frac{492}{f} \text{ Feet}$$

$$\lambda/4 = \frac{246}{f} \text{ Feet}$$

$\lambda/2$ -Half-Wavelength in Feet
 f -Frequency in Megacycles

A simple substitution permits a quick calculation of half-wavelength and quarter-wavelength dimensions in feet.

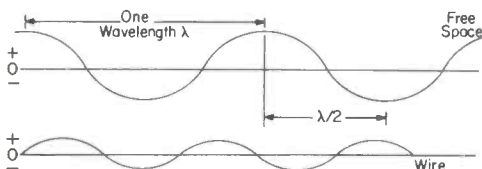


Fig. 2. Spacings Among Maximo of a Wave in Space and Along Wire.

A radio wave in traveling along a piece of wire transmission line goes through the same variations. However, the velocity of the wave travel along the conductor is determined by the characteristics of the particular type of line. In fact the velocity with which the wave travels along the line is slower than in so-called *free space*. A radio wave in traveling along a piece of coaxial cable moves considerably slower than it would in free space. Thus calculations for wavelength dimensions along a transmission line require that the above formulas be modified as follows:

$$\lambda/2 = \frac{492K}{f}$$

$$\lambda/4 = \frac{246K}{f}$$

VELOCITY FACTOR

The constant k is called the velocity factor; it is the decimal equivalent of the velocity of wave travel along a given type of line as compared to the velocity in free space. Velocity factors for the most common types of transmission line are as follows:

Line	K	Z
RG-8/U	0.66	50
RG-58/U	0.66	50
RG-11/U	0.66	72
RG-59/U	0.56	72
Twin 300	0.84	300
Twin 150	0.77	150
Twin 75	0.7	75

Notice that the velocity factors are higher for the twin-lead types of line. Coaxial lines have quite a low velocity factor.

Several examples will demonstrate the practical use of the previous information. In most CB antenna system calculations it is permissible to use channel 9 as a design center. Although this is not exactly the center CB channel the performance of antenna systems in general fall off more rapidly on the low side of center than they do on the high side. Thus by using channel 9 as a design center you can be reasonably certain that good results can be obtained over the entire CB band.

Half-wavelength and quarter-wavelength space dimensions would be as follows:

$$\lambda/2 = \frac{492}{27.065} = 18.18 \text{ Feet}$$

$$\lambda/4 = \frac{246}{27.065} = 9.09 \text{ Feet}$$

Thus if two phased antenna elements were to be separated a half-wavelength for operation on the CB band, the spacing would be 18 feet. If the phased antenna elements require a quarter-wavelength spacing, the separation would have to be 9 feet.

It is possible to use the previous information to calculate the length of a section of transmission line which can be used for an antenna phasing application. The velocity factor for both RG-8/U and RG-58/U cables is 0.66. Consequently, sections of this type of line that could be used as half-wavelength and quarter-wavelength line sections are as follows:

$$\lambda/2 = \frac{492 \times 0.66}{27.065} = 11.998$$

$$\lambda/4 = \frac{492 \times 0.66}{27.065} = 5.999$$

If a signal of zero reference phase is applied to one end of a 12-foot piece of this line, the signal at the far end would be out-of-phase, Fig. 3. In the case of a 6-foot section of line the input and output signals would be 90 degree related.

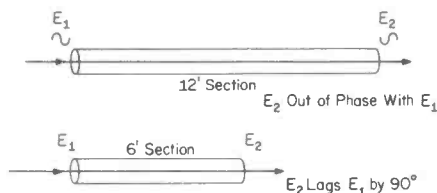


Fig. 3. Half Wave and Quarter-Wave Sections of Coaxial Line As Cut to the CB Band.

If a 24 foot section were used, the signals at input and output would be back in phase.

TRANSFORMERS AND IMPEDANCE MATCHING

Impedance matching is no less important for phased than any other type of antenna system. In supplying signals to more than one antenna element it is important that impedances be matched throughout the antenna system. Poor matching can cause loss and, in addition, can set up standing wave conditions that can prevent proper phasing. In the latter case the pattern may be considerably different from that desired.

In two-element phased antenna systems there is always one point at which three lines or, two lines and one antenna, join together. In many cases some form of a matching network or line is required.

A popular form of matching transformer can be constructed from a quarter-wave section of transmission line. To understand how a section of line can be used to match impedances it is necessary to review several general characteristics of transmission lines. When a transmission line is matched there is no standing wave present on the line. The

CB IN ACTION

By Len Haas,
Sales Manager,
Pearce-Simpson, KBG7527



Congratulations to Reverend J. Leland Hall, KG12201, for his very fine "CB In Action" story. A brand new "Companion" citizens band transceiver is on its way to the Reverend and as he says in his letter, we are sure it will help him to "continue the good work." We think you will enjoy reading about his interesting experience:

"As a long-time user and promoter of the value of CB, I have had many interesting experiences with my ever-present stations. As a minister of the gospel, my wife and I have learned to save money by using our CB set up for 'baby-sitting' while we continue the good work. We have five children from three to sixteen.

"One day, the wife had to be at an afternoon meeting and I was slated to conduct a funeral service. We left the kids at home, with the instructions to call us on the phone if we were needed, or if necessary to call on the CB. I had finished my funeral, and was in all dignity leading a long line of cars down main street toward the cemetery, when my CB rig began to really sound off.

"It seems that one of the younger kids had met with an accident while playing in the yard. The sight of blood put the whole playground into a tizzy, and not being able to get through to 'mom' on the telephone, they turned to 'pop' via the two-way. There I was, led by police escort, followed by a hearse, a load of prominent pall-bearers, a grieving family, and twenty-five cars of mourners in a carefully planned procession; getting the word that something 'awful' had happened at home. What should I do? Dart out of the funeral line, and 'let the dead bury the dead'? It was a frantic moment that called for a cool decision.

"Fortunately, a good friend monitored the adjoining channels and overheard the predicament and volunteered to locate the wife and/or see to the needs of the kids.

"Things were taken care of with dispatch, and I managed to pray a quick prayer for the sorrowing at the cemetery, rush back home in time to find that CB had quickly taken care of the accident that I could not take care of in my frustrating situation."

J. Leland Hall, Bolivar, Mo.

YOU CAN WIN A "COMPANION"

Thanks to all of you wonderful CB'ers who have already submitted so many exciting "CB In Action" stories. They have been read in many influential circles. Everyone was quite impressed with the outstanding record that CB has attained.

Remember, all you have to do to win is tell us of an experience involving CB in which you or your club helped to serve your community.

Write to Len Haas, Sales Manager, Pearce Simpson, Inc., 2295 N.W. 14 Street, Miami 35, Florida.

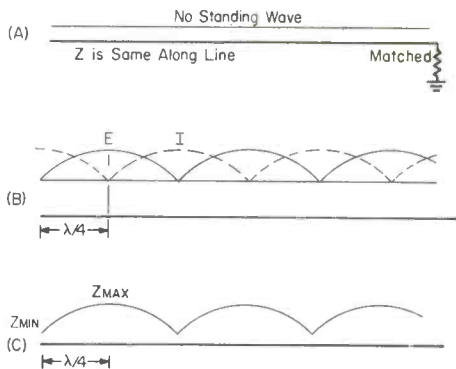


Fig. 4. Impedance Changes Along a Transmission With and Without Standing Wave.

impedance is the same everywhere along the line. The actual ohmic value depends on the construction of and the material in the line.

When there is a standing wave present, Fig. 4, there is a voltage and current distribution along the line. At the voltage maxima the current is minimum and the impedance is high ($Z = E/I$). Oppositely, at current maxima the voltage is low and the current high, displaying a low impedance. The net result is that the impedance along the line changes as in Fig. 4C. Note in particular that the separation between maximum and minimum impedance points is a quarter wavelength.

One very important fact has to do with the relation among maximum impedance, minimum impedance and the characteristic impedance of the line. The maximum impedance is always greater than the characteristic impedance of the line and, the minimum impedance is always less than the characteristic impedance of the line. The exact relationship is given in the following simple formula:

$$Z_0 = \sqrt{Z_1 Z_2}$$

If we are concerned with only a quarter-wave section of line the formula can be rewritten as follows:

$$Z_M = \sqrt{Z_{IN} Z_{OUT}}$$

This equation gives you a clue as to how a quarter-wave section of line can be used as an impedance transformer. A proper match can be obtained if the characteristic impedance of the line is of a correct value in relation to the impedances to be matched at the input and output ends of the quarter-wave transformer.

Several practical examples will show the usefulness of the matching arrangement. In Fig. 5A a source impedance of 20 ohms is to be matched to a 125 ohm value using a quarter-wave section. The characteristic impedance of the line should be as follows:

$$Z_M = \sqrt{20 \times 125} = 50 \Omega$$

Thus a quarter-wave piece of 50-ohm line would provide a match between 20 and 125 ohms.

Example B shows how a three-point junction of lines can be matched. In this case three 50-ohm

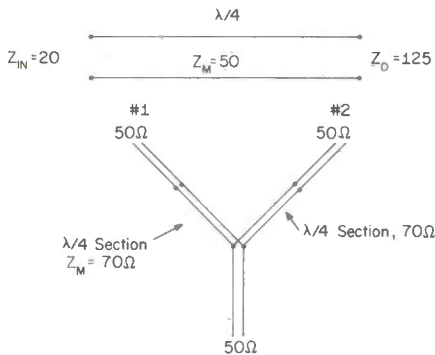


Fig. 5. Using the Quarter-Wave Matching Transformer.

points are to be joined together by inserting quarter-wave matching sections in two of the lines. Let us assume the matching sections are to be placed between source one and the junction and between source two and the junction. At the junction the two segments are connected in parallel reducing the net impedance to a value one half of that of a single segment. This net impedance must be 50 ohms to match the common line impedance. This being so the output side of each quarter-wave matching section must have an impedance of 100 ohms.

Since the source side is 50 ohms, each matching section must match 50 ohms to 100 ohms. The characteristic impedance of the line must be:

$$Z_M = \sqrt{50 \times 100} = 70.7\Omega$$

In this example two quarter-wave sections of line provide proper matching at the three-point junction. The two methods just described are used widely in matching phased antenna elements and lines.

PHASING ARRANGEMENTS

In addition to proper matching in a phased antenna system, the various elements must be provided with signal of proper relative phase. Phasing too can be accomplished with the use of line sections of appropriate length.

A very simple arrangement for driving two antenna elements in phase is shown in Fig. 6A. The T-junction is positioned midway between the two antenna elements. Consequently, the signal travels exactly the same distance to each antenna element and both elements are driven with signal of the same phase.

In B there is a full-wave section of line between antenna 1 and antenna 2. Since the phase of a signal goes through one complete cycle in traveling along a wavelength of line the signals present at antenna 1 and antenna 2 will again be in phase.

Example C shows how it is possible to drive two antenna elements out-of-phase. A signal traveling along a half-wave section of line will have its polarity reversed. Thus the two elements will be driven out-of-phase. Example D shows how a T-junction plan can be used to obtain the same results. One antenna element is driven through a

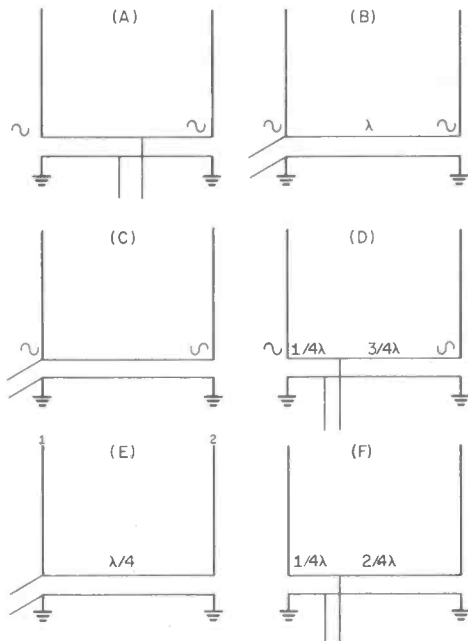


Fig. 6. Same Basic Phasing Arrangements.

quarter-wave section of line; the second element, through a three-quarter-wave section of line. Thus the signal at antenna 2 will be 180 degrees later than the signal delivered to antenna 1. This means, of course, that the two signals are 180-degree related or out-of-phase.

Examples E and F show how two antenna elements can be fed ninety-degree related. In example E antenna 2 is fed 90 degrees late because of the quarter wave section of line that runs between antenna 1 and antenna 2. In fact, any combination that makes the length of line between the junction and antenna 2 90 degrees longer than between the junction and antenna 1 will produce the same result. Refer to example F.

Next month's column will cover practical construction information for several types of phased antennas. Feed systems and matching sections will be constructed.

S9

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CB CHIT-CHAT

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TO JOHN KREJC, 2W4586

**ATTENTION ALL A.P.R.E.-CB CLUBS-
CLUB PAPERS-CB'ERS AND READERS
OF S9.**

Effective October 1st the new mailing address of the S9 Club Editor will be 60 Division Ave., Garfield, New Jersey. Please have all mailing lists changed to this address. Mail before that date should be sent to the old address.

Bruce Thomas, KEJ3856, Secretary of the 11-27 CB Club of Ventura, Calif., announces that they now have a permanent meeting place. The meetings are held the 1st and 3rd Thursdays of each month at 30 Rincon, Ventura. The club has 68 members and another 31 new CB'ers that will join as soon as they receive their calls.

Snapper, KEJ3867, well known figure in Southern California CB circles is President of the 11-27 Club of Ventura and Chairman of the California Citizens Band Coordinating Council. John "The Snapper" Konecny, is one of the pioneers of the new Channel Island Marine Watch. The Ventura Marine Watch has 38 active volunteers, with an additional 23 to be installed in the near future. The Marine Watch Patrol operates Saturday, Sunday and all holidays, from sunrise to sunset. They patrol the Santa Barbara Channel from Carpinteria to Point Magu, and out as far as Anacapa Island, several miles off the coast. The Marine Watch of Ventura, California, recently received a very fine letter of appreciation and thanks from Mr. Walter Allen, of Santa Barbara, which lauded them on their fine work. The groups weekend work includes about 20 assist.

FLASH! Readers will want to wish the best to a new harmonic, Sharon, born to S9 Chit-Chat Editor John Krejc and his XYL, Eleanor. The future CB'er was born August 13th and weighed in at 7 lbs. 2½ oz.

"Old CB, with new services." The Klamath Five-Watters of Klamath Falls, Oregon started down a new road for CB'ers to travel. Last June the club re-organized its membership under a new constitution and by-laws, with new officers to lead the new services. President of the group is Dave Moran, KFF1046. Under the clubs new organization there was a communications dept. which is known as the Emergency Communications Service. The club is Inc. in the State of Oregon. Just completed, a CB call roster, listing of all local CB'ers by call-sign, name, phone number, occupation, channels and channel monitored. The club is planning a local Services List, for travelers information.

From the Mason-Dixon CB Radio Club of Penna., comes the news that the club is setting up an Emergency Network. Let's hear more news on this Vick, 20W4216, when it's set-up. Lots of luck with your picnic.

Now that the summer is here and gone, the Bear Valley CB'ers of Bear Lake California, were busy directing traveling CB'ers around the mountain areas. Channel 11 is monitored at all times. In an emergency, the Sheriff's Dept. may be contacted on channel 1.

Meetings of the Five Watt Wizards of San Bernardino, California, are held the 3rd Monday of each month



at 340 W. 4th St. Additional information may be had at the office of Pacific National Life Assurance Co., 248 W. Highland Ave., Suite 3. KEJ0922 Monitor, the Club monitoring station, is on the air, ready to aid anyone requesting help or information. Channel 9 is to be used in contacting "Monitor." The club has planned an all-out effort to increase their membership. Use that "whip" on your car to help your friends and neighbors through the efforts of the 5 Watt Wizards. You'll be glad you did. All clubs should record the change of address of Jack Kinsey, 11Q5345, P.O. Box 664, San Bernardino, California, in their future mailings.

Members of the Packerland Radio Club in Green Bay, Wis., recently donated their services at a local telethon for cerebral palsey. The main jobs at the telethon consisted of communications, talent and volunteer check-in, transportation, crowd control and safety. This was the second telethon worked by club members so far this year. In Feb. several more base rigs were employed in bringing information from outlying areas by means of relays. Thanks again to JoAnn Neklzewitz, Publicity Chairman.

The South Western Ohio Citizens Band Radio Association holds their monthly meetings the 2nd Sunday of each month, 2:00 p.m. at the Municipal Building in Mason, Ohio. The organization has approximately 70 official members, both men and women operators from 16 greater areas in Southern Ohio. The primary purpose for SWOCBA is to aid the county authorities in time of emergency or disaster. The association provides additional communications for other organizations and the general public when necessary. SWOCBA members are equipped with mobile and base station units, which can function at any time, under many kinds of circumstances.



Dr. E. K. Clardy, KEA1238, Medical Director of the Levi Memorial Hospital of Hot Springs, Arkansas, is shown at the hospital using a SONAR Model E, Citizens Band Transceiver. Dr. Clardy participated in the recent CD drill, where the use of CB equipment was most successful. The Levi Memorial Hospital also uses a pair of SONAR CBP WALKIE TALKIES, which they use for hospital emergency communication, as well as for CD. The Levi Memorial Hospital specializes in the treatment and research of arthritis. The hospital is non-sectarian and is sponsored by B'nai B'rith.

JAMBOREE REPORT—The CB Jamboree held at Maryville, Tenn., on July 11th, 12th, 13th and 14th was the most successful Jamboree. More than 20 states were represented at the huge affair and the Fair Grounds at the edge of town was an excellent place for the huge gathering. Campers were allowed to pick any place they wished to set up their gear, and water and electricity were available. Two large barns were used for displays and entertainment. It was quite evident that the local merchants, city officials, chamber of commerce, and local people were really behind the whole affair one hundred percent. Weather for the gala event was mostly fair with a few scattered showers, but the barns were large enough to hold the crowds that were there. Thanks to Frank Karcher, KDD1150, for the fine and most complete report.

The Tri-sonic Boomers of the Bunker Hill Air Force Base held their meeting recently which was presided over by BIG BILL PERCY, 18Q5367. The club meets the 4th Friday of the month.

The Midwestern CB Club, Ind., with activities chairman, Roger Kring, KHA5885, who made arrangements for the club membership and their families to tour Delco Radio Corp. of Kokomo, Ind. The members meet in the auditorium of Delco and were divided into groups to tour the plant. They were shown the construction of car radios from the raw sheet metal to the finished product ready for installation in the 1964 models. The group also saw a movie entitled, General Electronics in our living World of Tomorrow.

The Logansport CB Club have erected signs outside the city limits to help traveling CB'ers and are engaged in making and erecting more. The club is under the leadership of Keith Kohr, KHA5886. Members of the club are going to act as guides and help park cars during the week of the 4-H County Fair.

At a recent meeting the Broward Citizens Radio Club put its best foot forward and accepted the sponsorship of a C.A.P. Squadron, dedicated for rescue and disaster for Broward County. Through the efforts and guidance of the C.A.P. the club can now offer to its membership the active participation of a trained team of communicators plus the adventures of education in all phases of electronics.

Recently four members of the Cee Banders Radio Phone Club provided transportation for the V.F.W. at their annual Wheelchair convention.

The Tri-County 5 Watters of Santa Barbara area, in appreciation for time given to CB Radio, and in keeping with the true spirit of CB, voted Ed Grubgeld, KFA-3701, an honorary membership. Ed lives in Solvang, Calif. and is a paraplegic.

EMERGENCY CHANNELS TO REMEMBER WHEN TRAVELING IN THE WEST—Reno, Nevada monitors channel 11—Stockton, Calif. monitors channel 8—Tracy, Calif. monitors channel 11.

Walt Harrow, KFF1113, of Boise, Idaho, advises that the former Treasure Valley CB Club, is being activated. All CB'ers in the Boise area are invited to attend the meetings.

Editor of the Denver, Colorado, METRO-QRM NEWS is Betsy McKinley. Associate editors are Helen Wasylow and Faye Phillips. The Metro Radio Club will be happy to swap news publications with other CB Clubs. Address—4710 Thompson Court, Denver 16, Colorado.

The area in and around Bend, Oregon has a very active club of about 40 members known as the Central Oregon CB'ers Club. President of the club is John Schulke, KFF1125. The club provides emergency communications for CD, has a search and rescue team and works with the Sheriff's Dept. on emergencies. Meetings are held once a month, on the 3rd Wednesday. All CB'ers in the vicinity of Bend, Oregon, are invited to attend their meetings.



PICTURED LEFT TO RIGHT—J. Pat Pike, KDB0815, S9, A.P.R.E.; Marcus Jones, KDB6464; Wesley Liles, KDB3389.

The CB Radio Inc., club of Roseburg, Oregon, meets the last Sunday of each month. Present membership is 25. This is a real live group. Last year the club purchased a 32 passenger bus and have remodeled the interior to use as a communications center. Clifford Johnson, KFF0049, a member of the club and now a paraplegic as the result of a motorcycle accident, was supplied with a new CB rig by the Roseburg club. Cliff does a great deal of monitoring for the club. By the way, cliff's address is Route 1, Box 22, Sutherlin, Oregon, for those who wish to send him a QSL. Presi-



dent of the club is Loren Costello.

The El Camino Real CB Club of Calif., had as guest speaker at their last meeting, a member of the California Highway Patrol. The members learned how they can better help the H.P. in emergencies. Those members that stayed home and missed the big dinner dance, lost out on a good turkey dinner and a lot of fun listening and dancing to Teddy Buckneer and his Dixieland Band. Through the generosity and interest in the club, a Johnson Viking was offered as a main door prize, by Grandpa Ed, 11Q0227. The Bulletin editor, Louise, KEJ1102, reports a very enjoyable vacation trip back east. She did a lot of talking with a lot of nice people while enroute. At the invitation of Ron and Earline Cleaver, 17Q3508, she attended the MOK club meeting in Joplin, Missouri. Had a very pleasant time. Thanks to Joplin, for making a stranger feel at home.

Newly elected president of the Citizens' Assistance Relay League, Long Beach, California is Gene Petersen, KEJ4667-U2. The organization is in its second year of operation. Recently C.A.R.L. provided communications for the South Gate American Legion gala event.

Yes, history was made on the weekend of June 1st and 2nd, when approximately 300 CB'ers from all over turned out for the first CB Jamboree ever held in San Diego County. This big event was sponsored by the Southern California Citizens Band Association of San Diego, and was another "first" for the club. The Jamboree was held atop the Laguna Mountain range about 50 miles east of San Diego, and the headquarters was set-up at the Blue Jay Lodge, in the Laguna Recreation Area. Club Motto—"God grant me the serenity to accept things I cannot change, courage to change things I can, and wisdom to know the difference.

Recently, the Central Oregon CB'ers Club meet with the Tri-County Tranceivers, for an overnight outing at Seattle Lake, Oregon. A.P.R.E. Ann Dickens, KFF-0901.

The name of the Southern California Coordinating Council has changed to the California Citizens Band Coordinating Council. The four original officers which had been elected as temporary when the council was first formed, have been accepted as the first year officers. Three more delegates were elected at large to complete the 7 member board.

Just a rumor at this writing—The Citizen Band Association of San Francisco, which is the Coordinating Council for CB Clubs in the Bay area, some time ago expressed a desire to merge with the Southern California group, as one council for the entire state. The Bay area council is formed of 24 clubs and 1200 members.

Haven't heard from the CB Monitors of La Puente, for some time. Wha happen fellows?

REACTSHUN, club news publication of REACT of Organge County, reports much activity in the recent months. Surprisingly well attended meeting and such, during the summer months. Two active CB'ers in the unit are Bob Dunham, KG10613 and Tex Hodnett, KFD0202, both are in the Marine Corps, stationed at El Torro Air Wing Base. Bob handles Public Relations for the club and Tex is the editor of the club publication. You almost have to be a native Texan to converse with Tex, but quite a guy, this editor. Ed Maust, Communications Officer, Vice president Harry Sprague and his wife Betty, put in much time and effort for the REACT Unit, in fact everyone in the club seems to do their part and the results show it.

Bill Evans of Confluence, R.D. 1, was presented a plaque naming him a lifetime member of the Somerset County Area CB Club at a meeting of the organization in CAP Headquarters, Somerset. Known as "The Old Man of the Mountains," he has been helpful to all CB'ers in relaying messages and providing directions or information over his radio set, which is tuned for calls 14 hours a day.

The 80 year old retired railroader is known to every CB'er in Somerset County as well as surrounding counties within reach of his set.

New President of the Tri-State Flea Watters Inc. is Charles Ruhlemann. Recently 337 persons registered at their Sioux Empire Jamboree. Nine states were represented.

Recently the Lycoming CB Radio Club was called upon for three emergency blood donations. The three donors were Richard Davanport, Bert Schweikart, and Tom Davidson. Prior to July the following four members were called upon for emergency blood donations, John Taylor, Mel Harpster, Bill Schweikart, and Leon Steppe.

At the present time, out of ninety members, only fourteen members blood types are on record. This record is being kept for you and your family. The idea behind this file of blood types is, that you or your family should need blood, it can be readily made available from your own organization twenty-four hours a day.

Volunteer Emergency Communications is still looking for members. What is V.E.C.? It is an organization set up by the Santa Clara County Citizens Radio League in cooperation with Civil Defense and San Jose City Communication with the purpose of being a ready force of stand-by emergency communications in the time of need in a disaster or whenever emergency communications is needed. V.E.C. has been used a few times already.

The Manasota CB Club has within its organization a committee which is named the Manasota Search and Rescue Unit. This committee was formed to furnish communications either in an emergency or wherever needed upon the request of responsible organizations. Many of the committee members are now taking a course in first aid so as to better be able to serve in emergencies.

The "CB-AIRES" meet on the 3rd Thursday of each month, at the Hamiltonian Federal Savings & Loan Ass., St. Louis, Mo.

The Five-Eleven Radio Club, Inc. held a family picnic and fishing contest (for Kids) on Sunday, July 7, 1963 at Raccoon Creek State Park. The park is located in the rolling hills of Beaver County, Pa., between U.S. Rts. 22 and 30 and on Penna., Rt. 18 about 25 miles southeast of Pgh., Penna. We were lucky to have good weather and a fine time was had by all. A big THANKS to our Activities Director Ron Toth, who did a fine job organizing and arranging the picnic, and to his assistants, John Groot and Bill Kietz.

COMING EVENTS—Annual Steak Roast, sponsored by the Troy Area CB Radio Club, on Sept. 22 at Half-moon Beach, Crescent, New York, between 1 P.M. and

9 P.M. There will be manufacturers and dealers present, displaying various CB equipment. It is expected to cover 7 states. Pres. of the group is Jack Coultry, KGB1812.

The Western Cee Banders Section of The Cee Banders Radio Phone Club of Birmingham has been sponsoring a drive to raise funds for the benefit of Dale Welch, 6W7906, who has been in the hospital for some time. The method chosen to raise these funds was to raffle off different items of Citizen Band material. Henry Ross, has been heading the drive and a successful drive is expected by the sponsors.

Dale Doolittle was elected president of a new Citizens Band Radio Group, to be known as the Good Timers, Bay City, Michigan. Other officers are James Lamkin, vice president; Helen Draper, secretary; and Oliver Draper, treasurer. The group will be composed of no more than 25 couples.

There is a new React Team in Portland, Ore., known as Portland React Radio-Communications. Lots of luck to Pres. Wayne Kudrna, KFG0932.

The Hi-Desert CB Radio Club of Joshua Tree, California, reports wonderful weather this past summer. A great many visitors, and many new friends made by means of the helping hand of the React unit. If you are ever visiting or passing thru this part of the California Desert don't fail to make this contact. Remember they monitor channel 11.

George Osborn of Yucca Valley, California, Radio announcer for Station KDHI, Twenty Nine Palms, was guest speaker at a recent PotLuck dinner and meeting held by the Hi-Desert Radio Club at the Community Park in Joshua Tree. Balmy evenings make these outside affairs, delightful moments.

REACT of Whittier-Pico Rivera-Montebello are seeking additional members. Anyone interested contact Gene Grant, KEJ6251, Communications Officer or call OX 9-3321.

Santa Barbara CB Radio Club climaxed a fund raising project by getting together Sunday evening, July 28th, at one of the local restaurants for dinner. Some 350 tickets had been sold for a drawing on a ITT all transistor transceiver. Their efforts were well rewarded, and a nice sum was added to the clubs treasury. 35 CB'ers turned out for the dinner and enjoyed a most wonderful evening. Kay and Bob Forster KEJ5806, S9 A.P.R.E. were guests of the club. Bob gave a short after dinner speech, "Snapper" Koneche, KEJ3867 of Ventura, Chairman of the California Citizens Band Coordinating Council, member of the Ventura Marine Watch, member of the 11-27 Club and the Santa Barbara club, was there for dinner. "Snapper" says he is tired trying to hunt for a stand that has S9 so that he can get a copy, so he signed up there on the spot. His worries are now over for at least next year. Jim Hartley, President, handled the MC job very nicely.

A public service was done by the Merced County CB Club for the Yosemite kennel Club on July 20, 1963. The CB club provided Walkie Talkies for communications between the rigs and the announcer.

The Midwestern CB Club enjoyed a fine picnic recently at Stelite Carbadoa Park. Approximately 52 members were present and the club raised their membership by 20 new members. The club wishes to thank the Stelite people for letting them use the picnic grounds. A fine time was enjoyed by all. President is William Weichlein and Communications Officer and also S9 A.P.R.E. is Ralph Harter, KHB2574.

The Sociable 5 Watts Radio Club is one of the largest CB Clubs in Western Pa. The club serves the Tri-State area and also rates high for activity in their community. They monitor channel 9, and meet the 2nd and 4th Wednesday of each month. This writer has noticed a great improvement in their club paper in the recent months. Good luck to the club and publisher, Roy Shetler, 20W7473.

New president of the Carnation City CB Club of Alliance, Ohio is Ed Speaker, 216 W. Vine, Alliance. Good luck to Ed from the gang at S9.

Add a new CB club in Ohio! From the Coshocton County area comes the Tri-Valley Citizens Band Radio Club. While in its first six months of organization, it already has over 45 members. A "get-acquainted" picnic and outing held recently for members and their families had a very good attendance. Our president is Charles Powell, KHH2577, sect'y, Marie Carpenter XYL of KHI1048. Meetings are the third Saturday night of each month, at 7:30 p.m., at the West Lafayette High School. Channels 9 and 15 are stand-by in this area.

The Albuquerque Citizen's Radio Association (ACRA) elected their new officers recently. Formal seating was accomplished on June 4, 1963, Pres., John Goff, KGB1029; Vice Pres., R. W. Russell, KGC0102; Sect'y, Mrs. Lent Williamson, 15W2800; and Treasurer, Charlie Kelly. The name, address, phone number and call of each member is compiled into a roster for the convenience of local CB'ers. A Club paper may be obtained by writing the editor of the "Five Minute Times"—Bob Mark, KGB1940, Box 354, Albuquerque, New Mexico. Please send one in return. The Albuquerque Citizen's Radio Association has its meetings the first Tuesday of each month. All travelers coming through Albuquerque are cordially invited. Just contact a CB'er on Channel 11, they will be more than happy to assist you.

COMING EVENTS—Galveston County Citizens Band Ass'n Radio Club Jamboree—Benefit of Shrine New Local Children's Burn Hospital—Runge Park—Arcadia, Texas—September 28th-29th. Bar-B-Q, Prizes Galore. Bring the kids and make this a family affair.

The Galveston County CB Assn. meets the first Tuesday of every month, alternating between Texas City and Galveston. H. H. Stiers Jr. recently appointed A.P.R.E. would like all clubs in the 9 area to send him their monitoring channels, addresses, meeting nights, etc.—Mail to P.O. Box 443 Kemah, Texas 77565, Zip.

Word comes from Boise, Idaho that the Treasurer Valley CB Club has been reorganized. Their policy is to promote the use of CB Radio for the public welfare. The club officers for 1963-64 are, Jerry Halt, Chairman, Paul Kimball, Vice-Chairman, Dallas Pedersen, Sect-Treas. Walter Harrow and Denny Moren complete the Board of Directors. Meetings are held the third Wed. of each month, at Vista Realty, 515 Vista Avenue, Boise. All CB'ers in the area are invited to visit these meetings and are welcome to become members of this group.

Numbered among the many efficient and well organized search and rescue teams in the county is the Idaho Mountain Search and Rescue Unit. Like many of these groups, this is entirely a volunteer team. Idaho is proud of this Search & Rescue Unit. During the three years of its existence, the IMSARU has participated in 30 missions. During a massive four day search this last spring, members of the Treasure Valley CB Club provided five mobile communication units in the field and a monitor in Boise. Request for man power, supplies and progress reports were relayed to Waid Harrow in Boise for the entire four days.

S9

BACK ISSUES OF **S9**

Kicking yourself because you missed out on the previous issues of S9? Well kick no more! We've got 'em for you. Which do you need— They are 50¢ each. Write:

S9 Magazine
300 West 43rd Street
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ELECTRONICS 'N STUFF

by **DON STONER, 11W1507**
BOX 7388
ALTA LOMA, CALIF.

KILLING "CROSS MODULATION"

George came charging into the shop with fire in his eyes. On closer inspection, the red cast was obviously caused by the bloodshot appearance rather than any inflammable material.

Sam glanced up from his work bench just as the charging hulk descended on him. "To what do we owe the pleasure of your presence," Sam inquired in the general direction of George. "Skip the cheerie words, Sam, I've got a crisis on my hands and you're the only guy I know who can save my collapsing world." The grave look on George's face resembled that of a doctor who was about to tell his patient to get his affairs in order.

"Obviously someone has swiped your Channel 11 rock," Sam said, trying to make light of the situation. "Whadda friend—I'm dying and you're cracking jokes," George shot back. Sam realized immediately that big George was in no mood for jesting and took on a serious look.

"Okeh, George, what cooks? I didn't realize you were really having problems," Sam said, almost apologetic.

"You know that new guy who's been coming to the last few club meetings?" Sam nodded, "Yes, I know who you mean." "Well, I just found out he lives on the street behind me and down about four houses," George continued. "I turned on the rig this morning and there he was on every channel. Every time he comes on, my reception goes blotto." Sam was glad he hadn't told George that the "new guy" had just bought a Johnson "Messenger" from him a few days ago. By this time George was almost out of breath. "Can you fix my set so I can cream him, Sam?" George asked hopefully. "Now, now, that's not the ole CB spirit, George. He's probably having just as much trouble receiving as you are. The only way you'll solve this one is by cooperation," Sam cautioned. "You won't settle a thing by starting your own private war."

Here's what happens to cause this situation. When your "friend" transmits, his radio frequency energy creates many hundred volts up near the tip of the antenna. By being so close, a relatively large voltage is induced on your antenna due to the

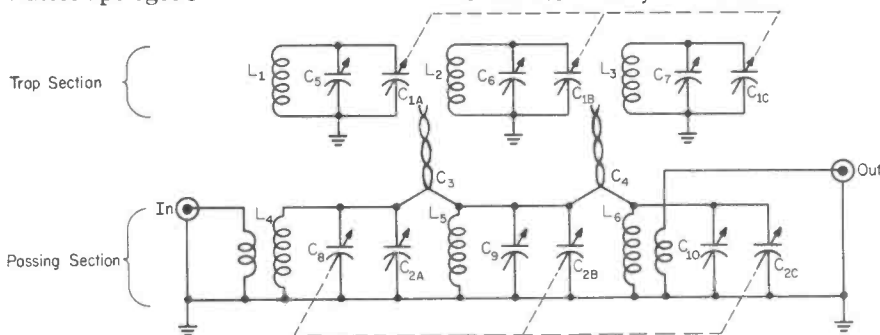


Fig. 1. Schematic of the "Signal Sucker."

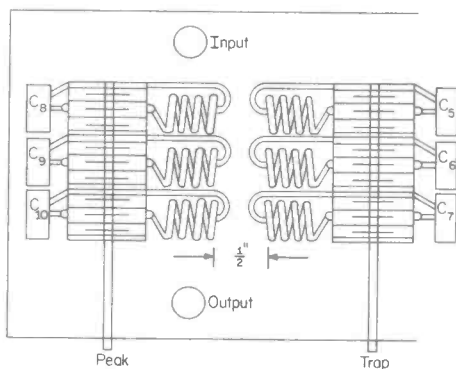


Fig. 2. Pictorial diagram of the "Signal Sucker."

strong radiated lines of force cutting through it. This voltage is coupled down the transmission line and into your rig. The antenna coil in the receiver section steps this voltage up again.

The voltage is again increased by the RF amplifier in the set. By the time this signal reaches the mixer grid it may have a potential of 30 volts or more. About the most signal the mixer can handle is a volt or two. The excessive signal on the mixer grid causes the positive peaks to rectify and overload the set. When this occurs the station causing the overload will be audible clear across the dial. Even if he is on 22 and you're on 1, enough signal will get through to cause rectification in the mixer. The front end tuned circuits are broader than the proverbial barn door. The technical name for this condition is called *cross modulation* and can be identified by the fact that the interfering station is all over the dial or is on whatever channel you happen to switch to. There are several cures, such as chopping down the antenna at the interfering station or giving up CB yourself.

However, there are only two ways to get rid of cross modulation electronically and without ripping up your set. You can build more selectivity into the antenna circuit ahead of the amplification stages. Another way is to trap out the signal before it can do any damage.

"Let's see if we can combine both these electronics methods into a gadget to end your woes, George," Sam said with a gleam in his eye. Sam pattered with parts for an hour or so and examined the results of his labors both electronically and visually. "This

"SIGNAL SUCKER" PARTS

- C_{1, 2} 1.5-8 mmfd, 3 section (Miller 1460)
 C_{3, 4} gimmik capacitors (see text)
 C_{5, 6, 7, 8, 9, 10} 8-50 rotary trimmer (Centralab)
 L_{1, 2, 3, 4, 5, 6} 12 t. #22 plastic hookup wire,
 closewound on 3/8" form.
 Links are 1 turn wound over ground end of L₄
 and L₆.

ought to do the trick," Sam said while drawing a sketch on the based (figure 1). "This is my little Jiffy Signal Sucker," he announced to the world.

The Signal Sucker works in this manner. It consists of a passing section and a sucking section. Each section consists of these tuned circuits (a coil and tuning capacitor) which exhibit a high degree of selectivity. Each tuned circuit in the passing section is coupled together through small capacitors made by twisting two 1 inch pieces of small plastic hookup wire together. Each tuned circuit narrows down the band of signals that can pass through. Coupled to each of the coils in the passing circuit is another set of coils which make up the sucking or trap circuits. These circuits absorb signal from the passing section. What channel is absorbed depends on the tuning of the trap coils.

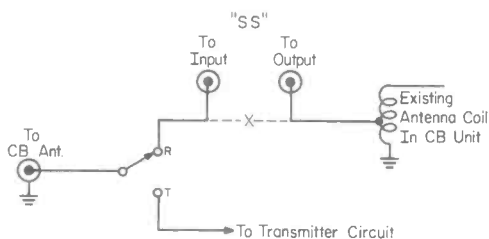


Fig. 3. Connecting the "Signal Sucker" to the transceiver.

The construction of the Signal Sucker is shown in figure 2. The position of the coils is rather critical if best performance is to be obtained. The coils should be at least their own diameter away from the metal chassis. The coupling between the coils in the two sections will determine how much signal is sucked out. If they are too close together, they will suck out the wanted along with the unwanted signal!

Figure 3 shows how to connect the Signal Sucker into your transceiver. If you don't

Continued on page 58

CB CASEBOOK

by LEE AURICK, 2W2870

MT. PLEASANT RD. RFD 1
COLUMBIA, PA.

WOULD YOU LIKE TO READ ABOUT YOUR COMMERCIAL USE OF CB IN S9? IF SO, WRITE TO US.



Reports of unusual automotive service, and some equally unusual CB-equipped vehicles, led your S9 reporter to the West Side Chevron Station in Brockton, Massachusetts. Owned and operated by Frank Lange, 1A2108, this immaculate station has a reputation for service that must be the envy of others for miles around.

Unfortunately, Frank was not able to be present on the day we visited, but all of our questions were ably answered by his two lieutenants, John Cormier, and Bob Bourassa.

Frank, John and Bob each have a unit at home that ties in with the base station at the service center. All units operate on channel one. In addition, a fifth unit mounted in a Dodge pick-up truck provides the mobility that has earned this organization the support of so many South Shore motorists.

"I couldn't begin to count the number of miles CB radio has saved us," John told your reporter. "And as for *time*—there would be days and nights when we would never get home, if our radios didn't almost make each of us two people."

"When one of us is away from the station, we never return unless we call in first

to learn if there are other errands or service calls to be made in the area."

"Without a doubt, winter is a particularly important time for CB, with us. I usually leave the station at 7 A.M., and if my booster batteries hold out, I'm not back until noon. Each call to the base brings at least ten new calls from customers unable to cope with frozen engines on a typical frosty New England winter morning."

"On occasion, we have called for doctors and nurses and brought them directly to



the hospital when taxicabs and other means of transportation were hopelessly stalled in deep snow or unable to start. One really hair-raising trip involved getting a nurse to the hospital for an emergency operation."

"Our customers really appreciate the *extra* service we are able to give as a result of our radios, and they take every opportunity to tell us so."

"I believe we are getting out of CB radio everything we can—and we operate our units completely within the letter of the law. We've been able to discourage the few 'space-cadets' who once gave us a great deal



of interference, and no longer have any real problem in this area."

"Our reliable range is about 15 miles, and this is well within the distance we normally require. Our experiences in this respect have served to show us the importance of a good antenna installation. Any kind of a compromise here seems to cut the range in half."

"Besides providing our customers with services we could never have dreamed of before, we sometimes have an opportunity to do a small turn for community service. We have even provided communications for local Boy Scout rallies and outings."

John went on to say that he belongs to the Cape Cod CB Radio Club. This organization is the proud owner of its own CB-equipped ambulance, and ties in its communications with the Sheriff of Plymouth County, State Police, and the Mass. Registry of Motor Vehicles.

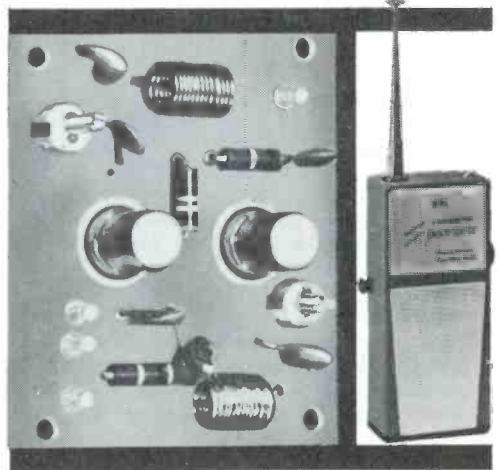
At this point our attention was directed to a panel truck, and a jeep with a camper-type body. I was told that the MBBA initials stood for Massachusetts Beach Buggy Association. A quick look on, in, and around these vehicles told your reporter they were equipped for anything. Literally designed for living on the beach, they sported all kinds of gear to make life more interesting and enjoyable while roaming the dunes of Cape Cod. The CB radios were proudly shown, and we were told that radio is most likely to be voted the one thing the members would not want to give up. Often, an emergency arises on the beach, and though miles from help, aid is quickly summoned. The jeep, of course, has sufficient traction, by virtue of its four-wheel drive, to go "most anywhere." John solved this problem with his panel truck by a little "Yankee ingenuity." Through the use of modified wheel rims, John was able to double the rim area, spread the tire, and achieve a broad tread that gives him the necessary traction and steering control on sand and loose gravel.

"I guess you've heard this before, but each of us feel that our units paid themselves off in the first two weeks we had them," John said.

(Ah, yes!—Editor.)



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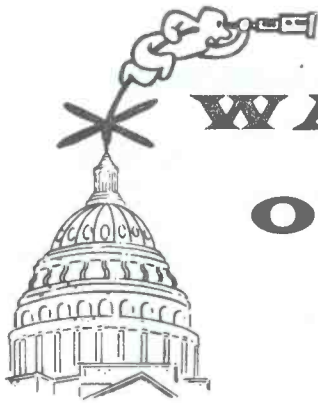
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WASHINGTON OUTLOOK

Between January 1, 1962, and the end of July, 1963, the Commission handed out 12,000 Class D citations. Here are the FCC actions during the past 30 days:

6W1350, Joseph M. Worsham, Forest Park, Ga., sent a notice of apparent liability for the forfeiture of \$100 for alleged violation of 19.61(a) which is a "non-substantive" message violation.

8W2022, Billy R. Sherrill, Conway, Ark., the hearings were terminated on the possible loss of his license.

9Q1515, James C. S. Dacus, Hot Springs, Ark., sent a notice to show cause why his license should not be revoked, reason not available at press time.

19A5837, Leonard W. Mountford, Grosse Pointe, Mich., license revoked for repeated failure to respond to official notices concerning alleged violation of Section 308(b) of the act concerning the operation of his station relative to non-substantive communications between units of different stations, and as well as to his mailing address, effective September 3.

19W9828, Dr. Elmer Diltz, Columbus, Ohio, directed to show cause why his license should not be revoked for repeated failure to respond to official notices concerning alleged violation of 19.25(c) concerning antenna height at a fixed location for a Class D station.

20W1705, Ralph Yago, Pittsburgh, Pa., license revoked for failure to permit inspection of his station by FCC engineers.

KBA5393, Robert G. Maskell, Stoneham, Mass., license revoked for repeated failure to respond to official notices concerning alleged violation of 19.61(a), unsubstantive messages. This was effective August 27th.

KBC1555, Diann N. Roosa, Somerville, Mass., sent a notice of apparent liability in the amount of \$200 for repeated and/or willful violation of 19.61(a) and 19.62 (non-substantive messages and station identification).

KDB3263, Perry Carl Long, Powder Springs, Ga., sent a notice of apparent liability in the amount of \$200, same reasons as KBC1555.

KDB6339, Robert Lee New, Mableton, Ga., sent a notice of apparent liability in the amount of \$100 for violation of 19.61(a), non-substantive messages.

KDB7499, Jerry Lee Green, Atlanta, Ga., sent a notice of apparent liability in the amount of \$100, same reason as KDB6339.

KDB7792, Julian E. Williams, Mableton, Ga., sent a notice of apparent liability in the amount of \$100, same reason as KDB6339.

KDD2521, Jerry D. Ewing, Atlanta, Ga., sent a notice of apparent liability in the amount of \$100 for failure to respond to written official communications from the FCC.

KED2105, Charles E. Slaughter, Austin, Texas, license revoked for repeated violations of Sect. 308(b) of the communications Act and Sect. 1.76 of the rules, concerning failure to respond to official notices with respect to operation of the station by other persons using the callsign of his station, effective September 3.

KEJ1194, Donald K. Fisher, Sherman Oaks, Calif., license revoked for repeated failure to respond to official notices concerning alleged violation of 19.61(e), concerning overlength transmissions.

KEJ2825, Edwin J. Squire, Jr., Long Branch, Calif., license revoked for repeated failure to respond to official notices concerning alleged violation of rule 19.61(a) and (c), concerning unsubstantive messages and the transmission of signals to attract attention.

KEJ5029, David R. Coughlin, Whittier, Calif., license revoked for repeated failure to respond to official notices concerning alleged violation of rules 19.61(a) and (c), (same reasons as KEJ2825).

KEJ7142, Raymond Taylor Hendershot, San Pedro, Calif., license revoked for repeated failure to respond to official notices concerning alleged violation of 19.33 (off frequency operation).

KIC2710, Donald J. Jones, doing business as D. J. Radio & T.V., Buffalo, N. Y., directed to show cause why his license should not be revoked for repeated failure to respond to official notices concerning alleged violation of 19.62 of the rules (station identification).

KIC3299, James Hayes, Hudson Falls, N. Y., directed to show cause why his license should not be revoked for failure to respond to an official notice concerning alleged violation of Section 310(b) of the Communications Act and rule 19.92

concerning transfer of operating authority to the City of Glens Falls, N. Y.

Richard P. Greenside, Somerville, Mass., call-sign not available at press time, was sent a notice of apparent liability in the amount of \$100 for repeated and/or willful violation of 19.62 (station identification).

Concerning the FCC action against 20W1705, the Commission recently released the Docket (#14753) which outlined the circumstances of the loss of Mr. Yago's license. While the Docket runs 17 pages, we thought that you would be interested in some of the events which lead 20W-1705's license being revoked.

On July 27th and 28th, 1962, two FCC engineers were monitoring CB in Pittsburgh (in a mobile unit). In the vicinity of 20W1705's 10-20 they heard transmissions identified only by the callsign "1705." By means of DF and other gear, they determined that the signals were coming from Mr. Yago's home. Wanting to discuss his apparent improper station identification, plus questioning him as to how much power he was running, the FCC men rang the bell at slightly after 9:50 P.M. (noting that the CB'ing was still in progress and that the lights to the house were still on).

An unidentified woman opened the door and one of the FCC men showed her his credentials and said that he wanted to inspect Mr. Yago's station. She stated "that she didn't know anything about it," and closed the door.

They again checked to make certain that 20W-1705 was still in operation, it was, so they again rang the bell. This time, Mr. Yago's father-in-law, Mr. Lee A. Spencer, answered the door. Again they showed their credentials and said that they wanted to inspect the station. Spencer challenged their authority to inspect the station, asking if they had a search warrant, and refused to let them into the house, stating that Yago was not at home. The FCC men explained that they had the legal right to inspect radio stations without a warrant and that they knew that Yago, was, in fact, home and wanted to conduct their inspection of the station immediately.

Spencer then said that he would "see if his son-in-law was home," went inside and called Yago, who occupies the third floor of the house. The FCC men followed Spencer inside the house. Spencer called to Yago, "two men from the Federal Communications Commission" were there and they wanted to inspect the station. Yago allegedly replied, "Tell them to go to Hell." The FCC men decided that they should then leave Yago's home but Spencer went upstairs and told Yago, "These men are from Washington, you better come down and talk to them." Yago then descended the stairs.

At the FCC hearing, Spencer stated that he didn't want to let the FCC men in the house because they were not accompanied by a uniformed officer, because he believed that they needed a warrant, that he "had no way to identify the in-

spectors' credentials due to his weak eyesight," that he felt he was alone in the house, that he didn't want anyone in Yago's radio room while Yago was not at home, and that he was suspicious of the inspectors because of difficulties he and Yago were having with possible neighborhood TVI.

Yago claimed that when Spencer first called up to him, he was "half asleep," hence his reaction. He said that when Spencer explained further as to the identity of the men, he then came downstairs.

Upon coming downstairs, the FCC men told Yago that they wanted to inspect his station, to which he replied, "on what authority?" The FCC men then showed Yago their credentials, and Yago carefully scrutinized them under a desk light. Yago said that he didn't see the words "FCC" or "Federal Communications Commission" on the credentials, so the FCC men removed them from their case and indicated the location of these words. Yago replied that Spencer owned the premises, and that if he (Spencer) did not permit them to go upstairs, he could not do anything about it. The FCC men then asked, "Are you refusing to permit inspection of your radio station?", to which Yago replied, "Yes."

Yago later stated that he believed that he questioned the identity of the FCC men because he believed that this could have been "faked-up" or "trumped up." The Docket states here that, "his testimony . . . indicates that he entertains considerable contempt for the law in general and law enforcement officials."

One of the FCC men told Yago that if he wanted to double check their identities, he could call the FCC office in Washington, to which Yago replied, "if you tried to call the FCC in Washington you are going to wear yourself out of dimes."

During the hearing, Yago and Spencer testified that they had been the target of various unpleasant and unwelcome "attentions" from some of their townsmen, arising from the belief that Yago may have been the source of TVI. Additionally, it was brought out that Yago appears to be at odds with a local CB club. These events include someone taking a random shot at Yago's car in 1961, the filing of a complaint in June, 1962, which alleged Spencer to be creating TVI; the placing of threatening and harassing phone calls to Yago's residence, the shadowing of Mr. and Mrs. Yago prior to July, 1962, and a physical assault on Yago in May, 1962.

Yago's testimony on the operation is somewhat confused. He testified that the FCC men did not attempt to inspect his station until about eight or ten minutes past 10 P.M., and that he had been operating his CB rig mobile in front of his house for about 30 to 45 minutes before the inspectors arrived. Shortly thereafter he testified, "I never mentioned that I transmitted in front of my house." He also testified that after the transmission was completed, the mobile unit with the CB rig was removed from in front of the house. But it remained

in the near vicinity and that the transmitter was not used any more that night. Yago also testified that for the entire day of the FCC visit he had been away from his home painting. He came home that evening, showered and went to bed. He also stated that he had no equipment in the house which was capable of transmission on CB, however he did not advise the FCC men of this when they tried to make their inspection. He said that he sub-buys and sells equipment (radar, aircraft transmitters, etc.) and "had more transmitting equipment in the house than you could look at from now until the end of the week . . ."

The FCC men countered the testimony with the facts that they did not see any CB equipped car near Yago's residence, and that they departed Yago's residence at two minutes before 10 P.M.

Digesting all of this information, plus numerous other facts which were brought out in the hearing, the Commission decided that Yago was in the wrong and revoked his license, effective September 9th. Board Member Joseph N. Nelson dissented.



KBG4303 RIDES AGAIN

Continued from page 7

York. I think you are liars."

A letter from Silsbee, Texas, "Why not get off your (censored) and help get a legal channel for skip. . . ." A letter from Ft. Worth, Texas, "I'll thank you to direct your criticism [of ACBA] somewhere else. I wonder what the Cowan Publishing Co. would think of an editor who would write such drivel as you so inadequately publish."

These are examples of some of the tamer letters, after all we still have to think about sending S9 through the mails. The only reason I bother to quote from them at all is to satisfy the respective authors (each of these writers ended his epistle with a "dare" that I publish their literary efforts, a common symptom of the species) and hope that, now satisfied, they will retire back to limbo.

Let me say that *all* letters received here are read carefully, *some* are even answered, many are read aloud at our staff meetings and discussed at length. We *do* want to hear from you, but you cannot expect us to give any serious consideration to out-and-out hate letters, or poison pen letters. It's true that these letters usually scare the hell out of my secretary when she opens them, but that's about the only positive accomplishment they achieve.

If you have an outlook on CB which is different than ours, by all means let us hear

from you, but *please* try to present your ideas so that they will be of use to us in formulating our future ideas and plans.

WORTHWHILE READING

On the other side of the typewriter, the great majority of the mail received here is both *constructive* and *instructive*. I point this out because we have been carrying on some correspondence with readers Hank Gavit, 20Q5491, Stony Creek, N. Y. and Charlie Riecke III, 6W0652, of Johns Island, S. C. These fellows have brought out some very valid points in their letters which deserve being kicked around over the cracker barrel.

Speaking of the habitual rule-breakers who infest CB, making themselves one big gigantic pain in the antenna, the two gentlemen comment: "The proposed revision of Part 19 . . . with the exception of 2 small items, is nothing but a re-wording of those same regulations as they presently exist. Absolutely no basic change is made therein in Paragraphs 19.61 and 19.62, in that working skip, calling "CQ" and general yak-yakking has always been contrary to the regulations. Anyone who attempts to claim that these regulations are obscure, and possible of more than one interpretation is just confessing his ignorance of the English language."

They go on to say, that since all applicants for CB licenses are pledged to obey the regulations (the little print at the bottom of the application), anyone who receives a CB license and then goes on to ignore the regulations is possibly guilty of fraud.

The correspondence indicates that they share our distaste for the cheap rabble-rousing methods now being tried by some segments of the CB population to "keep their rights" (rights which they never had in the first place). This includes the barbs at FCC officials, the sly innuendos to break the rules and the "marches on Washington." Say, what ever happened to the "CB March on Washington?"

THE PASSING PARADE

It probably has gone by without notice for most of you, although perhaps a QRM-wrinkled old-timer or two has recalled it. It *almost* slipped by unnoticed here at S9. Talking about Class D CB radio's fifth birthday, natch.

Really doesn't seem like five years ago that we started loading up the whips and ground planes, back in the days of the In-

ternational Crystal "Icebox" rig (bet not too many of you remember that one), the Globe CB-100, the Heath CB-1 "Lunchbox," the Conset "Gooney Box," and the homebrew "Stoner" rigs.

Have any of you old timers thought about the fact that the first batch of Class D licenses began expiring a few weeks ago? Lest you forget, you just can't continue operating on an expired CB license, even though it will tug at your heartstrings to think that you are going to swap your "W" call sign for one of the raunchier "K" types. Like it or not, you're still going to have to make the new CB license scene. If you operate without a license you will probably be snagged by an FCC monitor as these people have been told to start checking "W" calls heard on the air for possible expired licenses.

Take a few minutes and check your "W" license expiration date. Is it time to renew? Don't forget that Uncle Sammy will be hanging out the \$8 price tag for CB licenses come January 1, 1964.

"BREAK CHANNEL 11"

One of the most amusing things we hear on CB is the now overworked expression, "break break," or its younger brother, "break channel (number)."

For instance, the channel is dead for 10 or 15 minutes. Suddenly a voice appears, saying, "Break channel 11." Receiving no reply, the station keeps repeating this idiotic message ad nauseum. Finally a great and mysterious voice from out of the ether grants permission, "Go ahead breaker." A quiver of happiness in his voice, our "breaker" then merrily calls another station.

Now, I'm the first one to plug for courtesy on CB, because, heaven knows, we sure need a little. I draw the line at this common practice because it is a waste of time and serves only to clutter up the air with unsubstantive and unnecessary transmissions. Wouldn't a few seconds of monitoring let the "breaker" know whether or not the channel is in use. If it is, he then can stick around for a few minutes and wait for it to clear. If it's not in use, then he can go ahead and use it without seeking permission from the mysterious voice who grants such things.

The only proper time to "break channel 11" (or whatever) is when you have an

emergency message or when you want to use the channel after waiting for a hobbyist to finish with his five minutes and he doesn't appear to be running out of gas.

Nobody owns any of the CB channels that they must be implored to grant divine permission before you may transmit on an unused channel. Don't make a laughing stock of yourself by continuing this useless waste of the airwaves.

Say, just who *is* the voice that always comes in and says, "Go ahead breaker"?

WAY BACK WHEN

As a student of the history of CB, I am always seeking data on the earliest beginnings of our little band. I had it traced back to the mid-1940's but I'm now indebted to an unknown S9 reader who seems to have brought it back to the late-1930's.

An anonymous friend in Wabash, Ind., sent us a page from the November, 1938, issue of QST (a magazine for Hams). This was the reader mail page and it contained a letter from a Herbert Brooks, W9SDG, of Port Wing, Wisc.

Under the heading "Citizen Radio" (first time this expression was used, I think), Mr. Brooks suggests that the "Federal government should . . . permit non-licensed operators to use sealed, fixed tuned transmitters."

He goes on to say that there is a need for low-power portable rigs which "is not filled by commercial, experimental or amateur licenses, especially in . . . intercommunication between salesmen and truck drivers and the home office, and between small-town fire and police departments that cannot afford an operator, plus many other uses."

This is possibly the most fantastic piece of crystal balling we've ever come across, not only does this 1938 article give a fairly complete picture of the Citizens Radio Service, it even calls it by name!

We immediately tried to contact Mr. Brooks, but to no avail. He is no longer listed as holding the call W9SDG and the telephone company doesn't have any record of him in Port Wing, Wisc. Too bad, this could have made an interesting interview. Can anybody get any information on Mr. Brooks? How about it, you loyal Wisconsin S9'ers?



ELECTRONICS 'N STUFF

Continued from page 51

want to make internal connection to the set you can connect it in series your your transmission line. Connected in this manner, however, it will be necessary to switch it out of the circuit on transmit. Otherwise the Signal Sucker will absorb too much of your transmitter power. This modification is shown in figure 4.

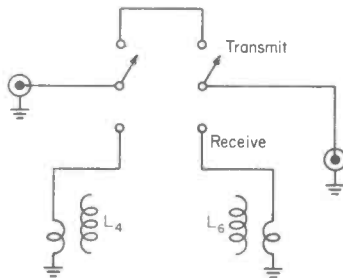


Fig. 4. Simplified "Signal Sucker" hookup.

After the unit is connected either way, follow this alignment procedure. Have a strong station transmit to you. Rotate the peak dial for the strongest signal. Rotate the trap dial until it is at maximum capacitance. Then adjust the tuning capacitors on the side of the peak tuning capacitor, again for maximum signal. Make this adjustment very carefully for they will determine how well your unit works. If the adjustment of one trimmer seems to affect the tuning of the adjacent trimmer, loosen the twists on the hookup wire capacitor coupling the two tuned circuits. These should be twisted as tight as possible consistent with the above requirement. If they are too loose, you will lose too much wanted signal along with the unwanted signal. If they are too tight, too much unwanted signal will get through and you'll be right back where you started from!

Once you are satisfied with the adjustment of the peaking section, rotate the dial on the trap tuning capacitor until you hear the strong signal drop way off in strength. Very carefully adjust the trimmer capacitor on the side of the trap tuning capacitor for maximum signal strength. Repeat these adjustments carefully, while retuning the trap capacitor dial. It should be possible to virtually eliminate the strong signal.

Once these adjustments have been completed, the Signal Sucker is ready for use.

Operation is simplicity itself. Tune the peak dial for maximum strength of the wanted signal and tune the trap dial for minimum strength of the unwanted station. If the trap dial seems to take out too much of the wanted signal, increase the distance between the peak and trap coils and realign the 6 circuits. If the peak dial seems to pass too much unwanted signal, decrease the number of twists on the capacitors coupling the tuning coils and realign.

Sam learned a few days later how successful his new invention was when Jerry Gordon, the "new" CB'er walked into his shop. "Sam, you gotta do something with this rig. That joker on the next street is wiping me out and he doesn't seem to know I exist," Jerry confided. "Seems to me I've heard that story before," Sam chuckled.

S9

PART 15

Continued from page 37

Part 15 in recent months that we will be running more and more Part 15 articles. This is in line with S9's general expansion plans.

David Webb, 47478 Hoyt St., Fremont, Calif. (he didn't pass along his Part 15 call) says that he has been working into Texas, Iowa, Wyoming and southern California. He uses two Lafayette HE-86's.

From the Pacific northwest we heard from Frank Schwartz, PACIFIC 288, 1125 N.E. Craft St., Newport, Oregon, who tells us that he has been working a whale amount of Part 15 skip using homebrew equipment. The transmitter at P-288 is mounted atop a 65 foot mast and is modulated by a Lafayette PK522 subminiature audio amplifier. He wants to know where to obtain back issues. Well, Frank, I am told by S9's Circulation Department that they still have all back issues of S9 available at 50¢ each, but the older ones are getting a little short in supply. There is a possibility that the 1962 issues will have to be withdrawn from sale, or reprinted for sale at \$1 per copy. They really went like hot cakes. By the way, the first issue of S9 was July, 1962.

New Part 15 club going in Rocky Mount, N. C. They want to swap cards with other Part 15 clubs or with individual operators. Contact the club Secretary, Bobby Griffin, 1029 Lafayette Avenue, Rocky Mount, N. C., for further details.

S9

READER MAIL

Continued from page 4

thing wrong with having a national organization to discuss the future of CB with the FCC. The Hams have an organization, the unions have representation, the farmers have it, then why can't we CB'ers have it.

Sure, the ACBA has voiced its opinions pro and con on proposed changes in Part 19. Why not? Are you going to sit back and let the FCC do as it pleases with CB? If so, then you might as well send in your ticket right now.

Brown Thornton, KDB5075
Oak Ridge, Tenn.

Hi O.M.,

Why is it that when two powers rise in any field there must be one who takes it as their duty to be the "champion" of the "suppressed," when in truth there are no "suppressed," except of their own doing? To be specific, why must one magazine that could be working for the good of all insist that they are the voice of the majority and then assume that the majority must favor their aims, their goals, and back their selected club.

I expect and demand the right to know the clear, unclouded facts both pro and con, and I expect to find them presented side-by-side in any publication devoted to the good of its readers. Naturally, if only one side is presented I must, and do, look elsewhere for the missing information. I also know that any publication that has pledged its support to a national organization usually does not present any facts that do not show this organization in the best of light. This isn't really fair to the readers. Let the light shine where it may; the reader should be free to know both sides and make up his own mind. An editor should be allowed to express his opinion.

So far I have mentioned only the rules of honest reporting. I have not mentioned the name of any publication or magazine, national group or club, or even a specific field of publication. I could be talking about magazines devoted to stamp collecting, for the rules are the same for all phases of reporting.

One CB publication stands out as a prime example of what can be done when reader interest is placed first. They refuse to start or take part in any program against any federal agency. They present all the facts. They will now bow to suggestions that the editor "step out behind the barn." This magazine has faith in the readers' ability to take facts and reach an intelligent conclusion. The editor wants no feuds with other editors or government agencies. He knows this is not the way to reach an equitable understanding. Each month this editor rides the trail of a Free Press in all matters. May his trips be pleasant as he guides his steed over the mysterious and storm tossed horizons.

Jack W. Kinsey, 11Q5345
San Bernardino, Calif.

Mr. Kneitel:

You are probably aware that the ACBA is currently "acknowledging" non-existent membership applications. Their image would indeed

be ludicrous if it were not so potent.

James C. Acheson, 19W9706
Short Hills, N. J.

Dear Mr. Kneitel,

I do not subscribe to S9 Magazine, but if I did, I would cancel immediately.

Thomas E. Mellons, KDB0235
Chairman, ACBA
Kingsport, Tenn.

Hi Tommy,

Sure wish you would start a good national CB club. We're behind you 100%!

Ralph Sorensen, 16Q1960
Bay City, Wisc.

Sirs:

I think you are liars.

E. R. Jackson, 7Q2029
Jacksonville, Fla.

Dear Tom:

It occurs to me that, in view of the editorial slant of your good magazine, you might be interested in noting the following quotation from a letter I recently received from Bob Cooper of CB Horizons, parent publication of ACBA.

"In closing, Hank," he says, "I'd like to note that at this point we are just as dismayed with Ernie Walker as you are."

Henry Gavit, 20Q5491
Stony Creek, N. Y.

Sirs:

It's pretty obvious that S9 is having a pretty hard time and as a result you are filled with hate and invictiveness. It's really too bad that you haven't found time to do something for Part 19 users other than call attention to the monitoring station in Massachusetts to the off frequency stations. This I will admit has helped in some instances but you sure haven't done much else.

Irvin Hemmler
Ft. Worth, Texas

Dear Tom,

Thank you very much for the interest you have shown in CB'ers all over the country. I admire a man who says what he thinks and your articles were to the point. I enjoyed each one of them and do think you have a very fine magazine.

This is to advise you that I am no longer connected with the workings or operations of the ACBA, effective August 12th. After the general offices of the ACBA moved to Oklahoma City many things changed very fast, some of them I just could not stomach and told them flatly my feelings. So the new administrator or manager (how he got that job I do not know) asked that I resign—so I did.

Please let your readers know about this. I will have a full and complete statement at a later date. Find enclosed a check for a subscription to S9 Magazine.

Ernest L. Walker, ex-15W1670
Española, N. M.

Dear Editor,

About 3 years ago I joined Horizons' World Wide DX League, for which the membership fees were \$2. After *much* correspondence I finally received a shoddy membership certificate and that was the maximum that any member



HEY ZB'ers!



Kum on and subscrib too S9. S9 is the onli way yew kan know what is going on in the world of Sitzins Raddio—and iff yew doan't know *what is goin' on then how kan yew get full use from yur equipment?*

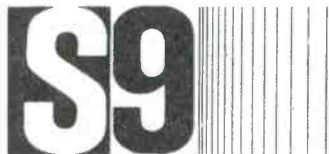
Each month S9 bringz yew all of the latist nuz of Sitzins Bandirs and their klubs, FCC happenings, zimple construction artikels, theery, antinnas, humeor, and like that.

So for onli 5 buks a year for 12 gigantic issues how kan yew go rong? Remimber, you kant get thiss infornation anywhere else!

Use the postage-free envilupe bitwin pagis 48 an 49 to sind us yur zubskriptin. Do it now, so yewl not miss our nixt issue!



(Editor's note: If you don't subscribe, how do you expect my staff to take any pride in their work? Better do it now so I won't have to put up with any more of this kind of workmanship.)



300 West 43rd Street New York 36, N. Y.

got out of this club. Many prominent members of the SWL'ing (DX listening) fraternity got "suckered into" this deal, and efforts to get our money back failed, in all of the many cases which I know of.

I feel that I should warn CB and GRS users of this because I have a strong suspicion that they may have the same trouble as their cousins, the SWL's, from the Horizons organization. I would appreciate it if you would pass this information along to S9'ers.

Sam A. McLauchlan, ex-WVE2AA (WWDXL)
Gatineau, Que., Canada

Like the letters on the license fees in this month's issue, this is but a random sampling from the mailbag. Because of space limitations, we couldn't run each letter here in its full length, but we did want to give you an over all picture on the reaction to the S9 editorial.

As noted above, Mr. Walker is now out of the ACBA and we have received information to the effect that the organization had originally planned on purchasing 15,000 decals for members. The order was abruptly slashed to 5,000. A birdie tells us that the ACBA actually has only about 1,500 members—a far cry from the claimed 6,000. Why have you been lied to? What happened to the so-called ACBA "March on Washington"? Why have certain key ACBA people been told to try to stir up a non-existent feud between S9 and another publication? Is it true that the ACBA's secret motive is to try and peddle "ACBA" ties, belts, jewelry, pens and other trinkets? What happened to the proposed (but never publicly announced) ACBA 2-way CB skip award for working all states? What will a famous CB manufacturer have to say in the next issue of S9 about ACBA? Who is the "ghost writer" who composes each and every ACBA article that has ever been published, using the name of the figurehead president as a by-line? Who is actually personally (and secretly) running the ACBA? What happened to the \$1 membership fees sent in by 1,500 CB'ers? Keep tuned boys, it's all coming out in the wash, just as predicted in S9. We could tell you lots more but it will be better to let you discover some things for yourselves!

We would like to take this opportunity to clear up a misconception which has received some reader mail. Some people seem to have gotten the impression that we at S9 are against the hobby use of CB and that we are "out to get" hobby users. Here's our position.

As the present rules stand, hobby use of CB is illegal. We do not think that you, the readers, would want us to therefore promote an illegal activity, so we take every opportunity to remind you of the status of hobby-CB and to keep the bee in your bonnets that, under present regulations, hobby-CB is strictly verboten.

If you will look back in the March, 1963, issue of S9 you will see that we submitted a formal comment to the FCC asking for the establishment of 4 channels which can be used by CB'ers. If, and when, hobby channels are established and legal, we will then (and only then) promote this activity.



WEATHER AID

Continued from page 24

found that a 250-ohm line-to-voice-coil transformer gave the greatest audio output.

ADJUSTMENT OF BIAS

Before the completed hybrid set is turned on, the bias rheostat R_4 should be set for maximum resistance, corresponding to minimum collector current through Q_2 . Then with the set turned on and an ammeter plugged into J_2 , R_4 should be adjusted for a collector current of 0.5 amp. The speaker may now be plugged in and the set operated.

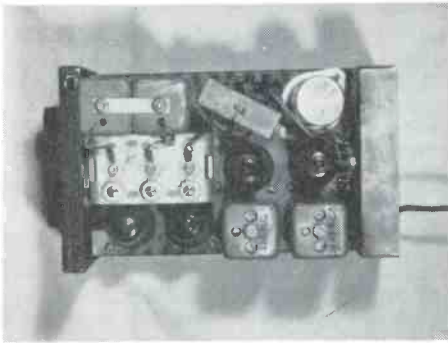


Fig. 3. Top view of the 12 volt "Weather-Aid."

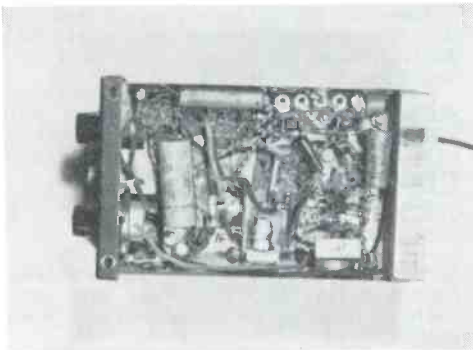


Fig. 4. Underside workings of the "Weather-Aid."

Placement of the new parts may be seen in Fig. 3, top view, and Fig. 4, bottom view. The triple electrolytic condenser $C_{6A, B, C}$ is mounted in the hole formerly used for the 28D7 socket. The output transistor Q_2 is mounted in a 9-pin miniature tube socket on the vertical wall of the shallow rear com-

PARTS LIST

- $C_{6A, B, C}$ Triple 100-100-100 uf., 15 v., electrolytic condenser
- F_1 5-amp., 3AG fuse in in-line holder
- Q_1 2N107 transistor
- Q_2 ET-6 or 2N176 transistor
- R_2 150 ohms, $\frac{1}{2}$ -watt resistor
- R_3 100 ohms, $\frac{1}{2}$ -watt resistor
- R_4 200 ohm rheostat
- R_5 10 ohm, 1-watt resistor
- R_6 0.27 ohm, 4-watt resistor
- R_7 100 ohm, $\frac{1}{2}$ -watt resistor
- V_1, V_3 12BL6 tubes
- V_2 12AD6 tube
- V_4 12AE6 tube
- 4 7-pin miniature tube sockets, 1- $\frac{5}{16}$ " mounting centers, Cinch Type 7WL4
- 1 9-pin miniature tube socket, Cinch Type 9W1
- 1 BC-1206-C receiver (War Surplus)

partment housing the hash-filter, one section of which must be removed to make room for the transistor. Q_2 's socket is mounted with 2-56 flat-head screws countersunk into the wall to provide a flat surface for good thermal contact to the transistor. A mica shim coated on both sides with Silicone grease provides electrical insulation but heat conduction between the transistor and the wall, which acts as the heat sink. Mounting holes for the transistor are so located that Pin 9 of the socket accepts the emitter pin of Q_2 and Pin 5 the base pin, while the collector connection is made through one of the 6-32 mounting screws, which are insulated from the wall by fiber shoulder-washers.

Referring to the bottom view, Fig. 4, the 2N107 may be seen to the side of the 12AE6 socket, supported by its own leads from the socket and a 3-lug terminal strip. The bias rheostat R_4 is mounted on the side wall of the chassis, with R_5 and R_6 nearby.

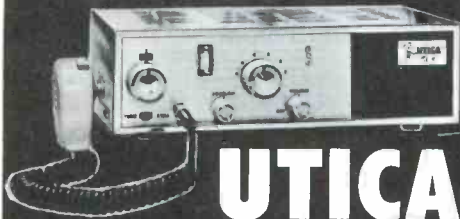
Due to differences between the old tubes and the new, the receiver should be aligned for best results after conversion. Alignment is conventional, and is done exactly as for the miniature A.C. model described in Part II. The antenna trimmer, C_{1A} , should be touched up after installation in the vehicle. The antenna required is not critical; anything from an ordinary car-radio antenna on up will perform satisfactorily.



FLASH—Just received word from Chuck Baer Enterprises, 6429-S North Glenwood, Chicago 26, Ill., that they have gone into production of the "EMERGENCY" sign which appeared in the September issue of S9 (page 22). These are in decal form and sell for 2 for \$1.00 with discounts to clubs and dealers.

ORDER NOW

IMMEDIATE DELIVERY FROM STOCK



UTICA T & C II TRANSCEIVER

With all the deluxe features and performance you could possibly want. A new dual conversion 6 channel crystal controlled transceiver with tunable receiver. S meter and signal strength output indicator, external crystal socket, auxiliary speaker terminal and universal power supply are only a few of the many plus features that make the T & C II outstanding. Deluxe chrome cabinet 199.95

10% down **\$20⁰⁰** (\$199.95)

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Attn: Joe Hotch Federal 9-6351

- Place my order for immediate delivery.
Enclosed find \$ _____
- Send complete specifications on Utica
T & C II Transceiver

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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.

New "Audio-Aid-All" Clipper-Filter kit, fits any transceiver, boosts modulation, aids reception, \$10.99. Hy-Gain Mark II Colinear, \$29.95. Omni-Topper, \$10.97. Best buy: DP = 2 BC/CB antenna coupler, \$4.99. Noisejector, NJ-7, \$4.49. Postpaid! For Heathkits, our preamps double reception! SK-3 Preselector kit fits GW-10, GW-11, \$8.99. SK-4 Preselector kit fits GW-12, \$8.99. Wired, \$11.99. Postpaid! HOLSTROM ASSO-CIATES, Box 8640-S, Sacramento, California, 95822.

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CB'ers—The sincerest form of flattery. Often copied but never duplicated. Our easy-do Dual Conversion adapter kit improves selectivity, increases sensitivity, for HE-15, A, B; 800; 910, A, B; HE-20, A, B, C; 770, 1, 2; Mark VII; Messenger; GW-10 etc. \$15.50, with tubes \$17.50. Also, Speech clipper-kit complete \$17.85 or \$5.00 plus C.O.C. Results! Not promises. Free literature Dpt. #10S Bainbridge Radio Electronics, 2839 Briggs Ave., New York 58, N. Y.

CALL CARDS—BADGES—DECALS—"GOOD-IES." ILLUSTRATED LITERATURE WITH SAMPLES 25¢. 1W6216 % Errol Engraving, Westfield, Mass.

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Let mobile CB'ers know you're monitoring with these heavy duty 24 gauge steel CB monitoring signs. Big 18 by 24 inch size, available with any channel number. Bright red, white and blue can be seen for several hundred feet, also available in Scotch Lite for easy nighttime visibility. Hundreds in use, ready for immediate delivery. Minimum order of 2, \$7.95 each, price drops to \$6.50 each for 6, \$5.95 for 12 or more. Scotch-Lite, \$12.95 each for 2, 6 at \$11.50 each, 12 or more \$10.95 each. Specify channel. Terms: 50% deposit and balance COD, or sent prepaid if full payment accompanies order.

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Paulin Sales Co.
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Amateur Electronic Supply	22, 23, 30
Antenna Specialists Co.	1
Briskin, Co., Inc.	28
Browning Labs	5
e.c.i. electronics communications, inc.	6
General Radiotelephone Corp.	Cover 4
Grove Electronics	34
Hallicrafters	8
Hy-Gain Antenna Products	Cover 3
International Crystal Mfg. Co.	Cover 2, 3
E. F. Johnson Co.	16
Knights, James, Co.	45
Lafayette Radio	26, 27
Lew Bonn	62
Metal Craft	63
Multi Elmac Co.	41
New Products	39
Part 15 Identifier	36
Paulin Sales	63
Pearce-Simpson	43
Petersen Radio	33
Rego Wire	19
S9 Subscriptions	31
Tepabco	33
Turner Microphones	28
World Radio Labs	53

Quality QSL's—New Designs Monthly—Samples 10¢, Giant 25¢. Savory, 172 Roosevelt, Weymouth, Massachusetts.

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CB QSL's—CALL LETTER D-CALS. SUPER FAST SERVICE ON ORDERS AND REORDERS. 15 Samples—25¢. Dick, 19QA0625, Route S9-4, Gladwin, Mich.

CB QSL SAMPLES 20¢ (refunded). America's finest!!! Sackers, S9, W8DED, Holland, Michigan.

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CB transmitters \$6.00. Other bargains, send 10¢ for list. Vanguard, 190-48—99th Ave., Hollis 23, N. Y.

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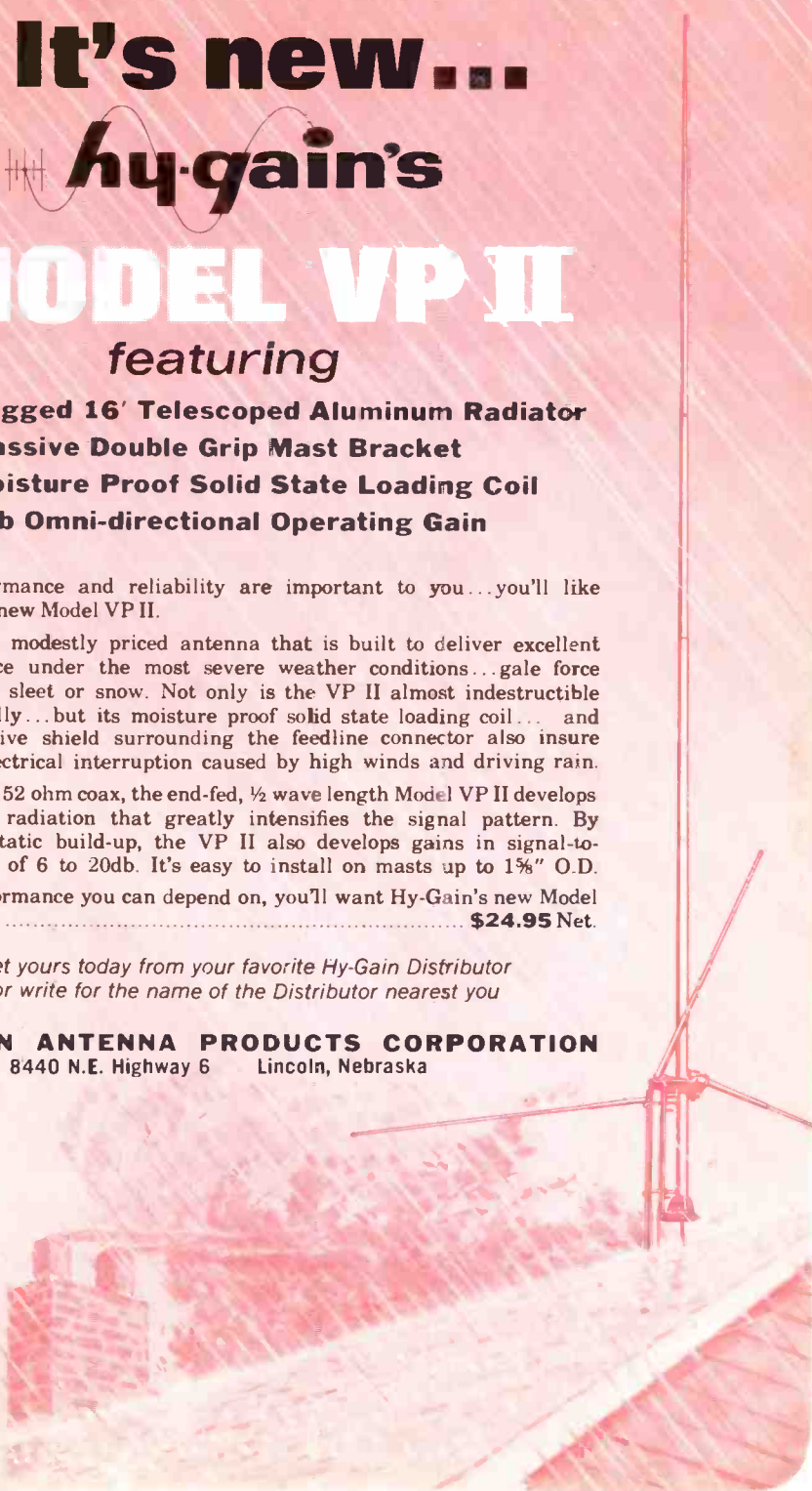
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