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S9

JUNE 1963

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the citizens band journal

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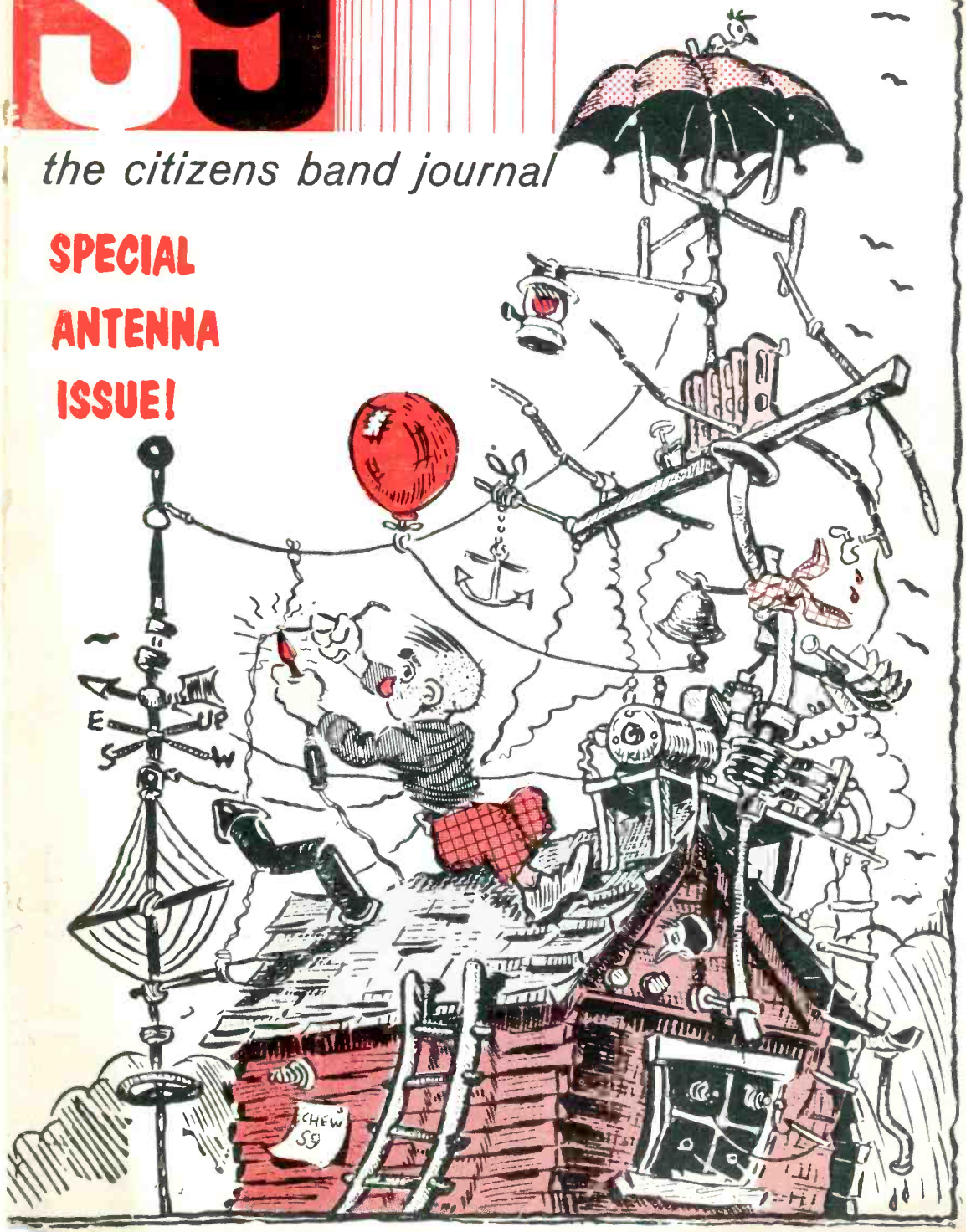

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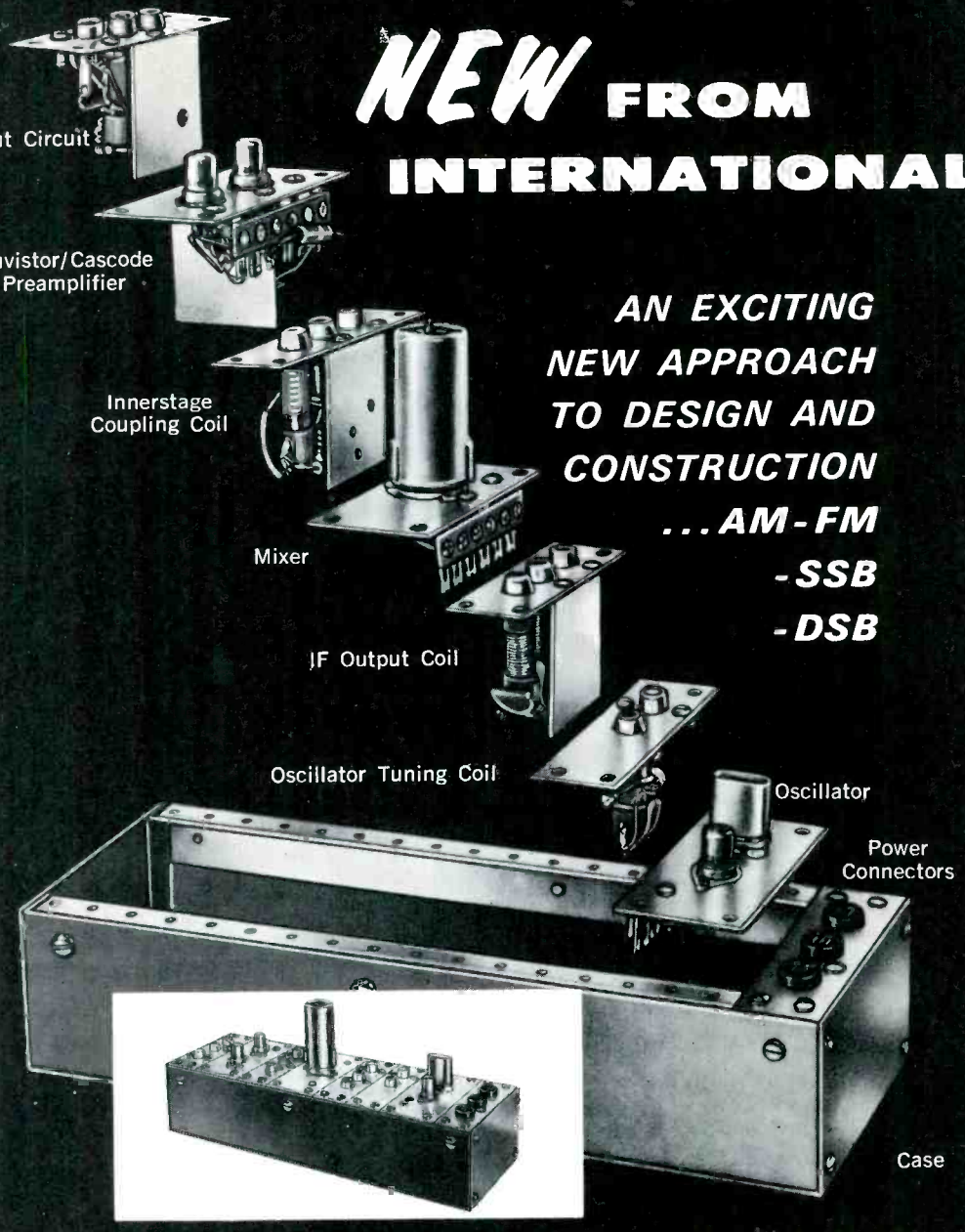

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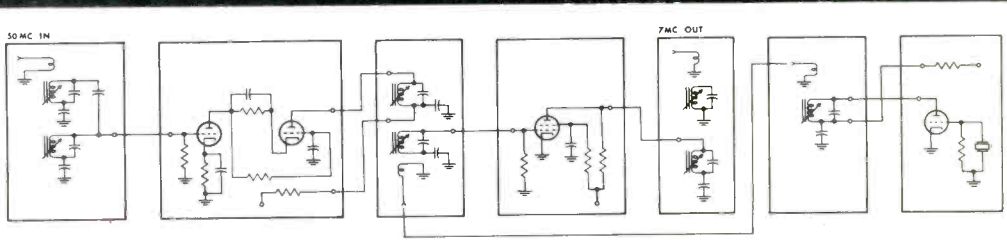

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S9
the citizens band journal

Vol. 2, No. 6

June, 1963

S. R. COWAN, PUBLISHER

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

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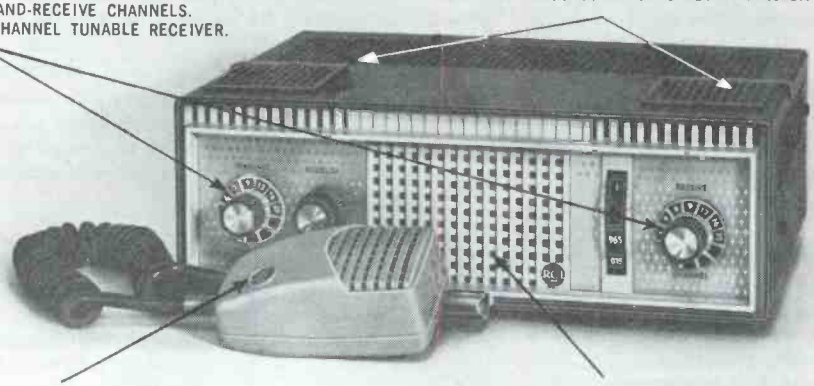

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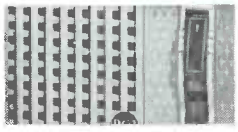

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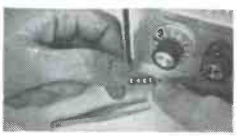

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Subscription form between pages 48 and 49!

READER MAIL

GREETINGS FROM ALASKA

Gentlemen:

We have just established our club here in Juneau and two of our members are active on Part 15 channel A. Due to the poor telephone system here with its 10-party lines, walkie talkies used in conjunction with base stations seem to be the most popular form of communication.

In San Francisco (from where I just migrated, I was KFC0693), S9 is considered to be the *best*. Here in Juneau, you've got to be the best because you're the ONLY publication on sale on the newsstands. We're glad to see that we receive nothing but the BEST!

Ralph D. Wedertz, Secretary
Southeast Alaska Citizens Communic. Club
Juneau, Alaska

NOTHING BUT "THE TRUTH"

Editor:

I enjoyed reading your article, "The Truth about CB-TV," and was surprised to learn, the facts being what they are, that CB'ers could be so gullible that they could actually be led into believing such a hoax.

I notice that S9 consistently is on the ball in giving CB'ers the actual facts, and is usually the first to come up with novel and clever ideas for CB'ers. Keep it up!

R. P. Lewis, KBG4392
Bronx, N. Y.

You were no more surprised than we were to see that CB'ers could be deceived with such a fantastic story. Perhaps it was an "April Fool" gremlin at work a few months early.

As for our coming up with ideas first, *we know just what you mean. We got together with Pearce-Simpson several months ago on an idea called "CB In Action." It must have been a good thing because it has been freely "borrowed" in the current issue of another publication. Perhaps some of the ideas in this issue of S9 will also appear there soon. Perhaps they'll even call themselves S9—or S4½.*

HELLO FROM TOKYO!

Dear Mr. Kneitel:

Thank you for the references made to our company in your December issue on hand held units. As a result of same, we have received a basketfull of mail and considerable orders. We are most indebted to you for the service which you are providing to 11 meter enthusiasts.

J. R. Pidcock, Managing Director
The Rotoken Corp.
Tokyo, Japan

YOU'RE KIDDING!

Tom:

Everyone has been calling my attention to the cartoon in your magazine at the top of the page featuring the "CB Casebook." It seems that my base station is situated exactly the same as that in your cartoon, and people have also commented on the resemblance between your cartoon character and myself. I know that the cartoon is copyrighted and I am most anxious to find out if it is possible for me to use it on my QSL cards.

James Simpson
Lansing, Mich.

Be anxious no longer, Jim. Permission granted. Send us one of your cards when you get them printed, and also a photo of yourself at the rig—we'll see if our readers notice a similarity.

CAN YOU DO IT?

Editor:

Are you allowed to talk to another CB licensee within your own call area, or are you allowed to communicate only with other units of your own license. I've been told many opinions on this.

Albert Harney, KDH0665
DeBary, Fla.

It's not the contact in itself that makes the difference, it's the content of the transmission. The transmission must be relative to your personal or business activities and must be of a substantive nature. Check your copy of Part 19, it's pretty explicit on this. It's possible to find yourself in hot water even when communicating with your own "unit 2" if the message is "unsubstantive."

CALLING ALL CARD SWAPPERS!

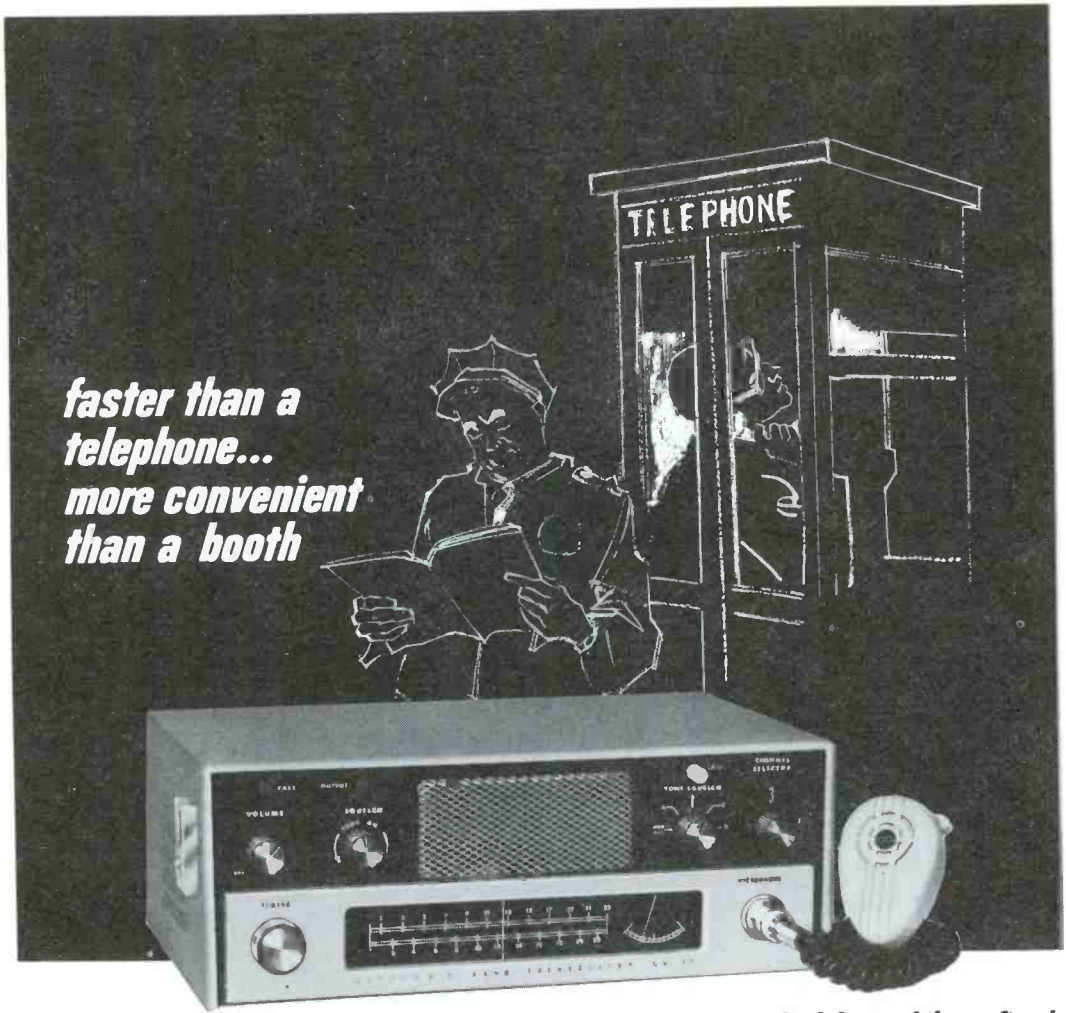
Dear Sir:

I have been swamped with hundreds upon hundreds of cards from people who saw my QSL card reproduced in your September, 1962, issue. What pulling power.

I want to thank you for your article on the Civil Air Patrol, a very commendable group. I myself have used a Heath GW-10 and a Utica Town and Country in a Ryan Navion with excellent results.

Steve Ruthven, 11Q5364
Los Angeles, Calif.

We're not surprised that you were swamped Steve. Despite irresponsible and inflated circulation claims being shouted throughout the CB publishing industry, S9 has always had, by far, the largest circulation. More people see more things in S9!



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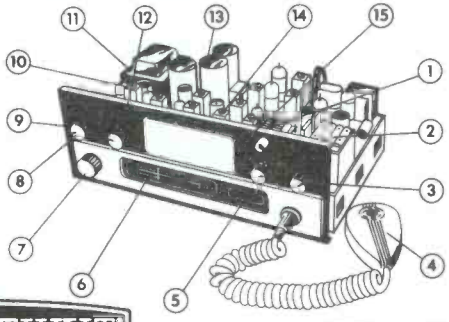

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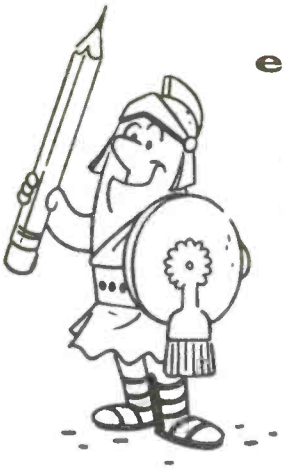

editorial

KBG4303 rides again!

by TOM KNEITEL
EDITOR, S9

UNTIMELY HOTFOOT

There are two ways to approach any problem, the *right* way and (of course) the *wrong* way.

There is only one way to approach the Federal Communications Commission; the *right* way.

Now, the so-called *right* way is written down in FCC regulations. Among other things, it calls for comments to be filed on Dockets and proposed rule changes, along with certain other specified procedures. The only way that the Commission can judge the users of its services and their needs is from these comments and the things picked up by their monitoring stations.

Let's face it, a few minutes of monitoring in most areas will not give anyone a rosy picture of CB'ers and their band—especially the FCC, which has been shaking its head and issuing generalized warnings to the 11 meter crowd for lo these many months.

So the only other possibility of *getting through* to the FCC is by the submission of comments. When the proposed rulemaking came up (Docket 14843) for CB'ers, the Commission asked for comments. They received comments.

They also got something else for which they didn't bargain. They got a hotfoot. If things weren't already dismal enough for the CB'ers, certain groups had to try to "improve" the situation by means of personal attacks on the integrity of FCC officials in general (and several specific officials in particular). Also included in this "hate the FCC program" were (and *are*) all manner of marches on Washington, wild insinuations about members of the U.S. Senate, and sly innuendos that CB'ers should operate their equipment in a *devil may care* manner to show the FCC who is the boss. Groping at straws, they have even accused the American Telephone and Telegraph Company of being in dark league with the FCC in a 1 million dollar plot against CB'ers.

This whole *anti*-public relations program seems to be working its way towards the attempted formation of a national "anti-FCC club." This "club," which thankfully has received only slight interest from CB'ers (despite the exorbitant claims of its organizers), propose to "make it hotter for the Commission."

The stated purpose of the "club" is to form an (in their words) "offensive group in Washington." Our dictionary gives one definition which describes the word "offensive" as "displeasing and disagreeable." Obviously this isn't the meaning intended by the "club," however it is a horrible unintended pun, because such antics on the part of Citizens Radio Service licensees must, indeed, be *most* offensive to the FCC.

A figurehead of this "club" is an ex-CB'er who had his license revoked by the Commission for rule violations. This fellow sent two letters to the S9 offices. One letter, dated January 4th and mailed anonymously, said, ". . . all FCC Commissioners may resign before it's over." A second letter, sent January 14th and signed, accused the Acting Secretary of The Commission of giving out false information for the purpose if impeding the legal rights of the CB'er in question, it accused one of the Commissioners of "passing the buck," it claimed that an official of the FCC's CB Division gave out false information regarding the number of

Continued on page 58

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GAINING ON "GAIN"

A CB'ERS DISCUSSION ON THIS LITTLE UNDERSTOOD SUBJECT

by CHARLES LEEDHAM, 2A3788

Every CB'er who ever operated would like to have more "*gain*"—whatever that is—and some with time, money, and a screwdriver, spend long hours tinkering and adjusting to get it. But what exactly is "gain," and how much can you expect to get by improving your rig, cable and antenna? *Some*, fortunately, but not all *that* much. Before you dive into the rig with tools at the ready, or invest in that high-priced new cable, take a look at what it is likely to get you.

Take Joe as a hypothetical example, a technically-minded CB'er with a set feeding 4.5 watts into the final. Under the limits? Yes, so Joe tears into things and fiddles and adjusts and sweats and swears and finally manages to inch the input up to 4.8 watts. Pretty good, but what has Joe got himself? A 7% increase in power that none of his friends can hear, nor yet see in the faintest upward tick of their S-meters. About all he'll get for his trouble is a sneaking suspicion that all his former friends—who were friends until they got good and sick of giving Joe repeated S-readings and being sworn at because they couldn't see any change—are banded together in a jealous conspiracy to deny Joe the precious knowledge that his rig is now putting out the *king* signal on the band.

What's beating Joe is not his friends, but the facts of power ratios, S-meters and the human, conspire to make a 7% signal increase quite small potatoes. The decibel—the "DB"—is a ratio of power. Without going into the technicalities of how it came to be that way, a 3DB gain means that the power has doubled. One DB means a power increase of about 25% (*not* 33%, because DB's aren't linear), and Joe's 7% increase comes to just about 0.3DB. Further, one DB is by definition the amount of signal change which "can *just* be detected under ideal conditions." And there you have the reason for Joe's friends' seeming reluctance to admit their astonishment at his grand new boomer of a signal—they literally can't hear any change with an increase of only one-third of the lowest detectable change. And as to their S-meters, a needle movement of 0.3DB on the scale would likely be invisible even if Joe were able to switch back and forth from 4.5 to 4.8 watts on the spot, much less get one reading one day and another a week later. Further—and this is the crusher for Joe—if Joe's original reading was listed on the S-units scale, his 0.3DB gain would mean exactly *one-twentieth* of a S-unit (one S-unit equals 6DB), which even a microbe on the needle wouldn't notice in terms of movement. Poor Joe.

From Joe let us turn to a hypothetical Herman, a sly and evil character who is going to have the big signal *at any cost*, including illegal above-limits power—a fictional character, to be sure. With his rig operating on the limit of 5 watts, Herman pores through the manuals and finds out how to squeeze it up to six. *Surely* the FCC won't be able to tell about one measly little watt. Result? A 20% power increase, or still less than the "just detectable" one DB. Barely visible on the S-meter, but still unhearable. Even his contacts, much less the FCC, can't tell that Herman has done it dirty and crept beyond the limits of the law.

It is a hard, cruel fact of decibel life that one DB is *just* detectable, and although 3DB means a doubled power it does *not* mean that the signal will sound twice as loud. Because of the peculiarities of the human ear, it takes a 6DB gain (quadrupling the power) for the signal to sound twice as loud. Suppose Herman throws caution and conscience to the winds and somehow boosts his input to 10 watts? You

guessed it—doubled power means a 3DB gain, which *is* detectable, but Herman still doesn't have the loudest signal around. He would have to jack his rig up to 20 watts to come in twice as loud and move the needle by one whole S-unit—and even then very likely wouldn't have as big a signal as some legal operator who happened to have a good location. For the Hermans, the game is hardly worth the reward or the risk.

But back now to Joe, the determined but strictly legal CB'er, who decides that the way to beat his friends' meters and ears to a pulp is to get some low-loss cable. The old RG58/U, according to the tables, slaps him with a 2.2DB less per 100 feet, and Joe is running 50 feet to the antenna. A loss of 1.1DB, but switching to RG8/U would cut that down to 0.49, or a net gain to Joe of approximately 0.6DB. Joe lowers the antenna, puts on the expensive new cable, raises her up again and gets himself set to blast the front ends right out of his friends' receivers. Again you guessed it. The 0.3DB he got from his power increase and the 0.6 from his new cable *still* add up to less than the detectable 1DB, and Joe kicks and screams when the reports come back, "Still don't hear any change, Joe old man."

The real answer to Joe's nagging problem is a more efficient antenna, which may give gain figures in the more respectable range of 3 to 9DB. But even then Joe might possibly be disappointed with the shiny new hardware on the roof.

Not long ago I wrote to a friend suggesting that he build himself a particular type of beam antenna which would give him, with luck, 9DB gain. He built it, but wrote back, "It works better than the old antenna, but not what I expected. It ought to be giving me more punch."

The problem was two-fold: my friend was suffering a little from the "Joe mentality"—expecting a respectable but not shattering DB gain to give him a blasting signal which would cause the chickens to lay square eggs for miles around—and he had failed to recognize the fact that antenna gain is measured, not over the old antenna, but over a mythical creature called a "reference dipole."

Decibels by themselves mean nothing, but must be used in reference to something else as a base. In the case of antennas, DB's gain are compared to the performance of a reference dipole—a half-wave dipole antenna mounted at the same height, in the same location, and fed by the same transmitter and cable. My friend's old antenna was already delivering him a probable 3DB gain (over the dipole), and the chances are that by minor factors in installation and tuning—it isn't a snap and requires equipment to tune a beam to *absolute* maximum performance—he could have been getting as little as 6DB gain (again over the mythical dipole) from the beam. Thus his total net gain was 3DB. Nothing to sneeze at—a clearly detectable signal increase—but still not enough to make his signal twice as loud or to move a properly calibrated S-meter more than half an S-unit.

There are two morals to all this. First, don't let this frank discussion of gain restrain you from putting up that new antenna. If you can get a reasonable gain like 3DB as compared to your old antenna, it *will* make your signal louder, it *will* kick the S-meters up, and it *will* make operating easier and better—especially with a beam, which not only boosts the signals to and from the front, but cuts down interference in all other directions. But don't expect the new signal to melt down the RF tubes in friends' receivers, you will never achieve this with a 5 watt signal.

The second moral is: think before you fiddle with the rig or the transmission cable, taking the lesson of Joe to heart. If you simply enjoy tinkering and fiddling and hanging new cable and all that, all well and good. You'll enjoy yourself and get some healthy fresh air and some small increments of gain if you tinker correctly. But it will definitely *not* give you the socko signal of all time, and your friends may never know the difference, except from your anguished cries over the air.

The only foolproof road to a commanding personality and a signal which will frighten the warts off a frog is to pack up and move to a house high on a hill, with no trees around and a high strong chimney to clamp your antenna mast to. Then the other guys on the band very likely *will* sit up and say, "Wow, that Joe must be a whizzbang the way he pours a signal out!", and you don't have to tell the only brains involved were in moving. And, oh yes, be sure to let the S9 Subscription Department know at least 60 days in advance so you won't miss any copies at the new 10-20.

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It's not that we won't tell you.

We can't. We don't know.

Experience has a lot to do with it though.

Each word placed in S9 is processed through a barrage of experienced and qualified CB'ers, technicians, creative geniuses and assorted authorities—each of whom add their own touch of distinction to the end product.

When an article or story begins its journey through this lineup, we don't even know what the final result will be until it actually appears in print.

But we do know that our staff produces a publication which has taken the CB world by storm.

There are many things which make it so.

Such as the light touch and easy readability of the articles.

And the fact that our staff maintains many exclusive personal contacts within the CB industry and with other "insiders."

Then (hushed voices, please!) there's the skill of our editors.

By experience alone, they judge if editorial material is fit to be called "S9."

If there is the slightest doubt, the material does not appear in print. This policy is infallible in our striving to give you only the best.

Now, many people ask us, Is S9 understandable if you have no in-depth knowledge of electronics.

Yes, it is.

But don't imagine that this "readability" has anything to do with the fact that the articles might not cover a subject adequately.

A readable magazine is a worthwhile magazine.

And "worthwhile" S9 most certainly is.

As we started to tell you, don't bother to read this advertisement. . . .

Oh, well. Too late.

postage-free subscription envelope between pages 48 and 49

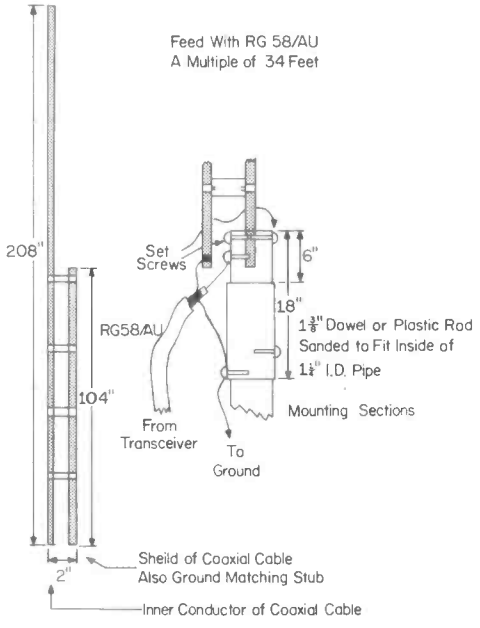
CB ADAPTATION OF A HAM-BAND FAVORITE

THE "VERTICAL J" ON 11 METERS

by JERRY GINSBERG, WA6NFI

One of the main problems of the user of the 11 meter band is getting greater coverage with the base to mobile installations. Antenna gain is about the only way this can be achieved, without going over the legal power input of 5 watts permitted by the FCC.

This type antenna is more frequently used on the 6 and 2 meter Ham bands, because of its simplicity and greater gain over a ground plane or quarter wave vertical radiator. I found that the "J" works well on most any band, but particularly well on 10 meters, which, of course, is adjacent to 11 meters. The low angle of radiation provides better groundwave coverage and better all around communications between mobiles using standard mobile whips and base stations using the "J."



CONSTRUCTION DATA

The Vertical J is built using a half wave type radiator and a quarter wave matching section which runs parallel to the radiator. The J was constructed with ½" o.d. aluminum tubing with a spacing of 2 inches between the radiator and matching stub. I used 4 supports of plastic between the 2 sections for rigid support of both elements with large cable clamps around the elements themselves. These supports should be equally spaced from top to base (see diagram).

This antenna provides better than 3 DB. gain, or in effect, doubles the effective radiated power.

Once you have the antenna up in the air, just connect the transceiver to it and, using a standing wave bridge, peak the transmitter for maximum output. The SWR should read between 1.3 to 1.8 to one.

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BUILD THESE INVISIBLE CB ANTENNAS

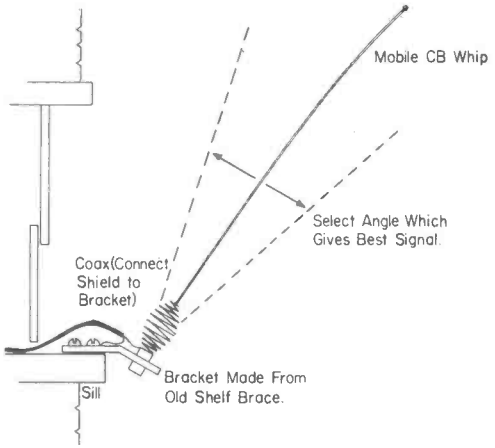
SNEAKY ANTENNAS FOR ALL AND SUNDRY

by JULIAN M. SIENKIEWICZ, 2W5115

A CB license and an apartment lease just do not mix. Take my landlord, Robert Ubermyier, as a horrible example. All I said to him was, "Mr. Ubermyier, I would like to put a CB antenna on the roof," and he began to make sounds like a National cash register. My wife's dog cost us an extra ten spot each month, the washing machine hit us for another ten, and not knowing how he would react to our first child due in June, I clammed up. So, my future was decided. I was to become the CB king of outlaw antennas for southwest Brooklyn. Realizing that the Feds were better equipped to ferret me out than Mr. Ubermyier, I decided to stick well inside the Part 19 fetters, but not the lease.

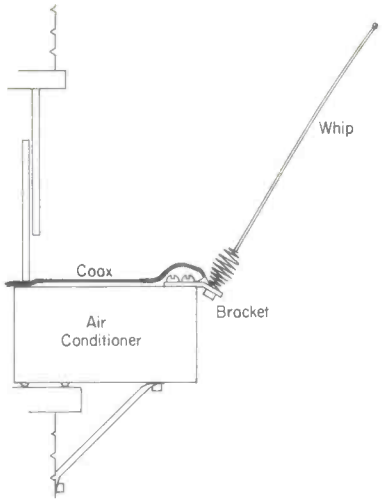
First off, I pulled the mobile whip off the VW and hung it from the light fixture in the kitchen. Result, nothing coming in or going out. However, on transmit I was able to get the fluorescent lamp to blink on and off. Conclusion: only place for a CB antenna is out-or-doors.

That night, just after the stroke of 12, I shoved the whip outside my kitchen window mounted on the end of a broom. A quick call to my brother Charlie's gas station told me that two-way contact was possible but "20 over S-9" reception reports were out of the question. While checking with Charlie, my antenna took a turn for the worse. That is, the twine holding the whip to the broom end loosened and the whip was pointing straight down. But that did not stop Charlie from picking me up. It seems that CB rigs can't tell an upside down ground wave from one that's right side up.



Before I called it a night, I tried several positions and found that the whip gave best results when mounted on the window sill jutting out at an upward angle of 45 degrees from the side of the building. Reception was fair but I could not pull in those stations immediately behind the building.

The next evening as I was parking the car and thinking about removing the whip, I looked up at my apartment windows on the 15th floor. It was then that I noticed that the guy above me has an air conditioning unit jutting out of his bedroom window just above my window. (Ol' Scrooge Ubermyier gets 15 bucks for coolers.) Great! The cooler was one of those old units that juts way out and is broad on the beam. With my whip hooked to the bottom of that steel box, I could operate an upside down quarter-wave antenna with some sort of ground plane. Not much of a ground



plane but every little bit helps.

That night, again at the enchanted hour of midnight, I reached out of my bedroom window into the black void to hook my whip onto a cross brace on the bottom of that Philco cooler. I had fashioned a hook out of a wire coat hanger and use a Coke bottle with the whip taped to it as a base insulator. Another call to Charlie and after telling him what I did, all he could say was that I had a cool signal. My signal strength was just a hair better than the previous night.

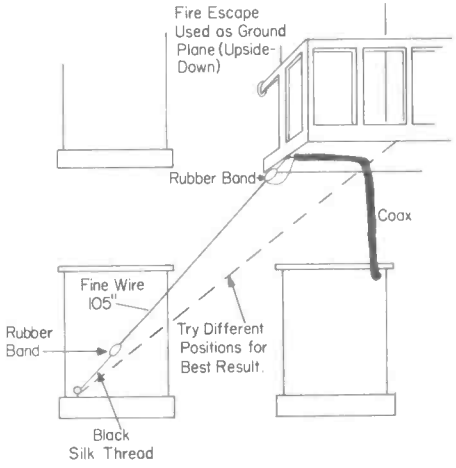
Just then I told Charlie to standby because I had another idea. I took down the whip and set up on the living room fire escape. Now that's a ground plane 130 feet above the street level worth talking about. This time Charlie forgot his humor when he reported I was putting out at S-9. Not as much as the mobile set-up, but at least most of the soup was getting out.

The next day was Saturday and I was fit to be tied. I didn't dare leave the whip out in the day time for fear of Ubermyier spotting it. What I needed was an *invisible* antenna.

Then a bolt from my school days past struck me. I recalled that the radiation impedance of a very fine wire quarter-wave antenna is 32 ohms. And the finer the wire, the sharper the resonant curve for the antenna. Simply, this means that a quarter-wave antenna of fine wire could not be seen from the street, and its *high Q* will help reject those unwanted noise bursts on the side bands which tend to ride on through the rigs RF stage.

Well, I got started at once. The fine antenna wire was hijacked from the primary winding of an old AC-DC radio audio output transformer. It was enamel-coated which made it blend beautifully with the building's tan-red brick. It must have been about a size #22 wire but not having a wire gauge handy, let's call it a "mighty thin wire." I cut a length exactly 105" long to hit smack in the middle of the CB band.

Insulators were a problem for a while. I was going to use polystyrene rods, but they yielded to thin rubber bands which have a good electrical resisting characteristic and serve double duty in keeping the thin-wire antenna taut.



That night, right after the ghost-chasing hour of 12, the deed was done. The thin wire quarter-waver was hung upside-down from the fire escape with the coax lead-in tucked away neatly out of sight. The job would have brought tears to the eyes of a CIA agent. Now for the test.

I read once that the current in a CB quarter-wave stub gets as high as ½ amp. I turned on the rig and let it warm up. Then I pressed the mike button and found myself whispering into the mike. As I spoke, I kept a keen eye on the fine wire. Nothing happened. It stayed cool and did not go up in a puff of smoke.

Just as I let go of the button, good ol' Charlie shot right back with his congrats. I was putting out a nice clean signal. Charlie then said, "Lemme introduce ya to a customer of mine whose interested in what ya did. Say hello to Bob Ubermyier."

S9

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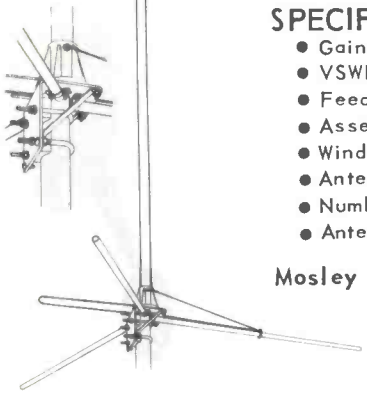

SPECIFICATIONS AND PERFORMANCE DATA:

- Gain over standard ground plane – up to 4Db.
- VSWR – 1.5 : 1 over entire band.
- Feed Point Impedance – 52 ohm coax unbalanced line.
- Assembled Weight – 8 pounds.
- Wind Load (EIA STD.) – 50 pounds.
- Antenna Height – Less than 20 ft.
- Number of Radials – Three.
- Antenna mounting fits masts up to 1½".

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For The CITIZENS BAND!

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- No. of Elements - 3
- Antenna Weight - 12.5 lbs.
- Boom Length - 12'
- Maximum Element - 18' 8¾"
- Front-To-Back - 20 db.
- Vert. Wind Load - 65 lbs.
- Hor. Wind Load - 35 lbs.
- Forward Gain - 8 db.
- Type Matching - Gamma
- Impedance Point - 52 ohms.
- Radiation - Uni-Directional

Here are two new beams for the CB'er who wants the best point-to-point communications at lower costs. Mosley SCOTCH-MASTER A-311-S, three element & A-511-S, five element beams are designed for the economy minded CB'er who wants the world famous Mosley quality.

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Mosley A-511-S
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- No. of Elements - 5
- Antenna Weight - 16.5 lbs.
- Boom Length - 24 ft.
- Maximum Element - 18' 8¾"
- Front-To-Back - 20 db.
- Vert. Wind Load - 112 lbs.
- Hor. Wind Load - 62 lbs.
- Forward Gain - 9.5 db.
- Type Matching - Gamma
- Impedance Point - 52 ohms.
- Radiation - Uni-Directional

The Modified "Lazy H" Beam

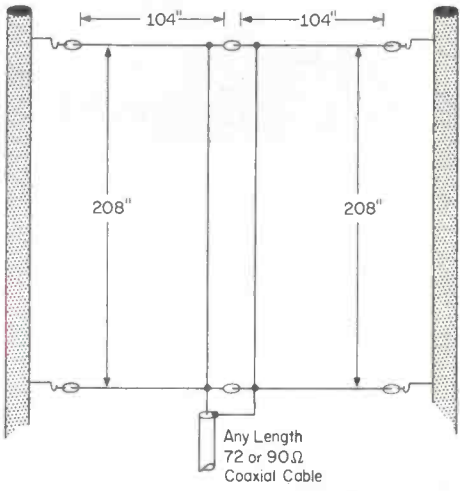
AN OLD FAVORITE CONVERTED TO CB USE FOR THE FIRST TIME

by H. C. EARWICKER, 18QA1888

A popular non-CB antenna for many years has been the "Lazy H" beam—a haywire assortment of wires, insulators, supporting rods, and phase matching sections. Even so, it's still fairly simple to construct and will deliver about 6 DB gain over a dipole.

We simplified it even further from its regular "textbook" version. The S9 modified "Lazy H" requires the following: 70 feet of #16 copper wire (available in 100 foot spools for about $1.35), 6 egg insulators (about 30¢ each), 4 universal TV standoff insulators (15¢ for all). This comes to a grand total of less than $3.50, a fair price for such a worthy sky-hook.

As shown in the diagram, the beam is suspended between two poles—these, naturally, can be replaced by any two supporting objects such as the side of a building, a flagpole, a laundry pole, a tree, and so on. For best results the antenna should be mounted as high above the ground as possible, however remember that we all live with a set of restrictive FCC regulations on antenna heigths. Unlike some of the antennas which have been described elsewhere, you do *not* have to mount this antenna in an illegal manner to "get out." Check your proposed installation against Part 19 to make certain that you're not going to violate any of "ye olde reg-yew-lashions" established by the FCC.



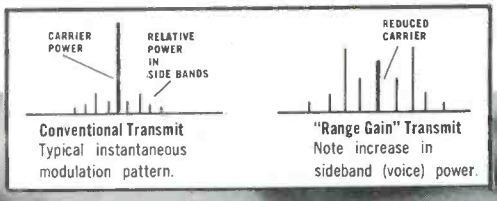
The beam is *best* fed with RG-62/U cable, which is 93 ohm type rope (you will probably not be sitting around with any on hand). Alright, you can substitute RG-11/U or RG-59/U cables (75 ohms) without any appreciable amount of signal suffering.

The "Lazy H" will show broadside directivity, with both vertical *and horizontal* polarization eminating therefrom.

For the price and amount of effort involved in getting the "Lazy H" airborne, it's probably one of the best things going for the budget minded homebrewer.

DOUBLE SIDE-BAND POWER

gives you up to 4 times more coverage!



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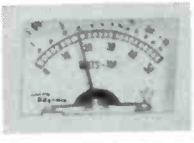
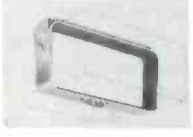


4-WAY METER, illuminated; 2 scales.



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Subscription form between pages 48 and 49!

EXPERIMENTING WITH LONG WIRE ANTENNAS

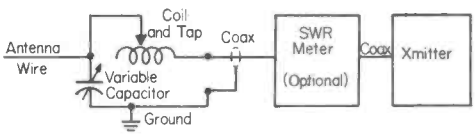
YOU CAN DUPLICATE THIS CB'ERS NOVEL ANTENNA

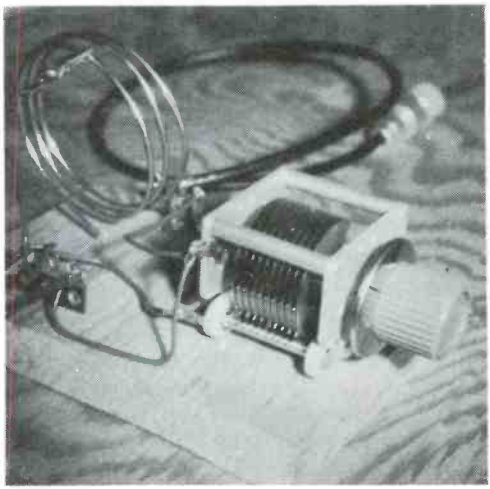
by CHARLES LEEDHAM, 2A3788

Out of all the hundreds of thousands of CB operators, 98.7% get their signals out into the air via ground-planes, beams, coaxials or whips, and few indeed know that you can broadcast a respectable signal from a piece of ordinary wire. You can't check the statistics, because I just made it up, but it will serve well enough for the moment. Experimenting with antennas is a pleasure too few CB'ers know, and a wire is one of the best simple ways to start.

It is also a handy antenna to be able to rig. You're not going to get the performance from it you can get with a high-mounted ground-plane, but by tinkering about a bit you can make it work remarkably well. It can be useful, too, as a utility antenna for trips or vacations. Take along your transceiver, antenna tuner and a coil of wire, and any hotel room that doesn't look out onto an airshaft becomes a temporary base station.

The wire I'm talking about, mind you, is not anything fancy—no dipoles or carefully mounted, Zepp-fed devices with balanced and tuned feeders. It is just any old sort of insulated wire (even bare would do, but you're likely to run into troubles) that you feel like hanging out the window. Fancier wires come later, when you get interested in antennas and what makes them tick. For even the simplest wire, though, you need some sort of device to tune and load. The most basic and easiest to build is an "L" network which looks in schematic like this:





The materials are: a short length of RG58/U (about a foot will do), a coax plug (or phono plug if your set takes that instead of coax for the antenna), two 3-lug terminals (I like to use 3-lug rather than 2-lug because it eliminates any possibility of shorts), a few inches of hook-up wire, a small alligator clip, a 2-foot length of #12 busbar (5¢ in any radio-supply store), and a variable capacitor with a maximum rating of 100 to 140 uuf. You'll also need a small piece of board to mount the whole affair on —and if you want to make a box for it, some bits of plywood for the sides and top. Total expense, two or three dollars if everything is new; total construction time, possibly half an hour, excluding cabinetry.

First, from the #12 bus, make a three-turn coil about 2½ inches in diameter. An easy way is to wrap the bus around any flashlight so that the turns touch as you wrap. When you've wrapped it and release the pressure, the bus will spring out to a larger diameter than the flashlight, and you'll end up with just about three turns

and 2½-inch diameter—the 2½ inches isn't critical. Spread the turns to about ¼-inch spacing (if they haven't already sprung out to that dimension) and you have your coil. An inch from one end, bend the bus to make a right-angle bit sticking out for mounting.

Now, mount the capacitor at either short edge of the board with the tuning shaft and knob sticking out over the edge. At the other end mount the two terminals on opposite sides (the long sides). Poke the right-angle bit of the coil through one of the lugs of the terminal which now will be called the "input" terminal—preferably the lug farthest from the capacitor. Solder the lug and coil so that the coil stands vertical. Prepare the coax by installing the coax (or phono) plug on one end and stripping the other end and pigtailing the shield. Solder the center conductor of the coax to the same input terminal lug you mounted the coil on (the coil may slip during this, but hold it in place with pliers). Solder the shield braid to the other outside lug of the terminal. Now run a wire from the ground lug of the input terminal to the ground lug of the variable capacitor (this will be the lug connected to the moving plates). This completes the input side of the tuner/loader.

For the output side, run a wire from the capacitor ground lug to one of the outside lugs of the other terminal, now the "output" terminal. Run another wire from the "hot" lug of the capacitor (connected to the stator plates) to the other outside lug of the output terminal. To this same terminal, solder a short wire (4 to 5 inches) and on the other end of the wire solder the alligator clip. Finally, connect your antenna wire to the output terminal lug which has the alligator-clip wire on it, and your ground wire to the ground lug of the same terminal. The construction is completed, but check it against the schematic and the photo for mistakes.

Now comes the experimenting. Your antenna wire should be at least a half wavelength long at 11 Meters, which means 19 feet or more, and the longer the better. Route the wire from the tuner to the nearest window and flip it out. Tune your receiver to a channel with lots of local activity, set the capacitor to about half-mesh, and clamp the alligator clip anywhere on the coil. Rotate the capacitor to see which position gets the best reception, by S-Meter or ear. You may get little or nothing on your first try at positioning the clip, so it is now up to you to keep trying various positions of the clip and settings of the capacitor for maximum received signal. There will be a specific point on the coil and related setting of the capacitor which will give you the best results with your own piece of wire.

With that best-receive setting, you will be at or somewhere near the best setting for transmitting, and your transmitter should show at least fair loading right away. With an SWR meter in the line, you can work at the coil and capacitor settings until you get minimum SWR, but even without a meter you can get good results by simply watching your RF light or meter.

Once you've become familiar with the tuning circuit, you can begin experimenting with various lengths of wire and ways of placing it. If you have no choice but to hang the wire out a window, you might try using a short piece of lath (with a staple at the outside end to run the wire through) stuck under the screen or window to support your wire at least a foot or two away from the side of the building as it hangs down. If there's any way you can run the wire up from the window, you'll undoubt-

edly get better results—but even with a 30-foot length of wire hanging down I've made 5-mile contacts from a miserable location in midtown New York City, surrounded by much taller buildings. If there's a convenient tree, you can run the wire up to an insulator which is in turn hung just below a branch. One way in an apartment building is to run the wire up to the edge of the roof and there fasten it inconspicuously—if you have a roof you can work safely on. If there's absolutely nothing to which you can fasten it, as its often the case in apartment buildings, try driving a thin nail between the bricks on the inside of the roof parapet and fastening the wire to that. If you're on a low floor with an unsuitable roof, get friendly with the people who live in a high-floor apartment above yours and ask them to let you put just one teeny nail in their window frame and run your wire to it—but be very sure you don't start splashing TVI into their set if you value your antenna.

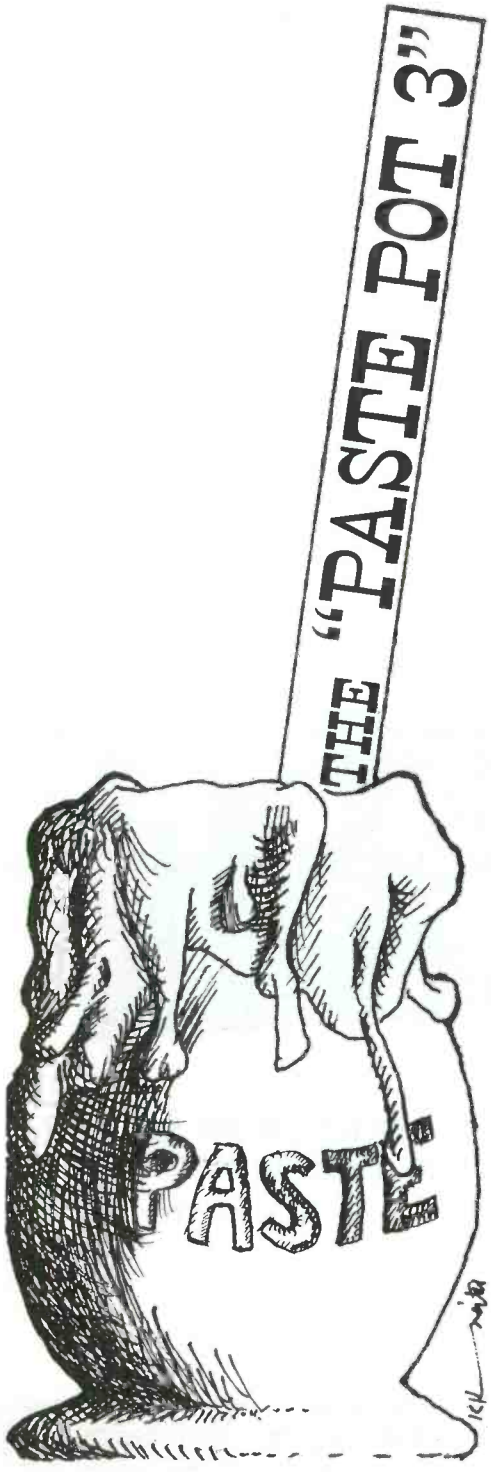
About the ground wire mentioned earlier —a wire antenna just *will not work well unless it has a good ground to work against.* You may not have bothered with ground wires before, but if you have any sort of cold-water pipe anywhere near your operating position, run the ground wire to that and clamp it on securely. Or you can arrange quite a good ground by simply using a quarter-wave length of wire. Cut a piece of wire to 18½ feet, solder one end of it to the ground-wire terminal, and then just run the wire along the floor, behind furniture or wherever. Don't connect the other end to anything, just let it lie and it will provide a reasonably good ground.

If you want to make your tuner look neat and professional, you can build sides and top of plywood. Use two screw-type terminals (of the sort used in a metal chassis) for the connections to transmitter and antenna and ground, or mount a coax socket for the transmitter cable. Don't forget to leave yourself some sort of access hatch if you plan to continue fiddling with the coil settings. Then paint the whole thing black —or even blinding red if that strikes your fancy—and you will have quite a profes-

Continued on page 59

AN INEXPENSIVE INDOOR 3 ELEMENT CB BEAM

by STEPHEN DEDALUS, 12W5415

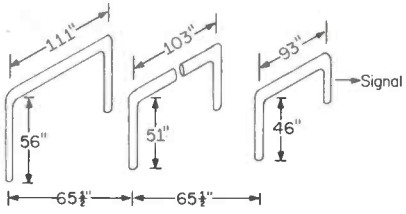


The many articles on 11 meter beams have been read with interest and envy. Each article lauded the construction and particularly the proven performance. But for many months I have waited in vain for an article on a beam for the city dweller. I had been operating on an "inside" folded dipole. My particular problems had many aspects, most of which are familiar to CB'-ers not living in private homes. First: no outside antenna could be used. Second: I was hemmed in by a four story apartment block to the south and a metal roof to the north. Third: I was already on several Mafia lists for allegedly causing all neighborhood TVI problems. These obstacles meant that I had to install the beam in the unfinished attic or go without it.

It quickly became apparent that I would have to overcome the problems myself. The cost of the beam had to be kept as low as possible, as I had visions that it would not work and I would find myself back on the folded dipole. The only materials on hand were a few pieces of plywood and several lengths of wooden dowling ¾ of an inch in diameter. These dowels would make swell elements if they were aluminum—so the next step was to cover the dowels with aluminum foil. Remember, this was to be an *indoor* beam.

A roll of Reynolds-Wrap was chosen from the corner victuals emporium. Three elements were constructed. "Rubber" cement was used to stick the foil to the dowels and was of the 5 & 10 species.

CONSTRUCTING THE ELEMENTS



To construct each element, a strip of foil slightly larger than the dowel is cut from

the roll. The aluminum strip should be about 4 inches wide. The foil is laid on the floor and cement applied to one side of the dowel. Next, place the cemented side on the foil and cement the foil around the dowel, full length (not spirally). A thin film of paste is all that is needed. Smooth out the wrinkles and the element is complete.

With the space available, I certainly could not mount this thing in a vertical position. It was then decided that the elements would have to be bent into the shape of a squared-off inverted "U."

The performance of the beam while fixed in one position seemed to warrant the installation of a rotating device. An eleven foot boom was constructed from plywood and cross-braced dowels. The boom support consisted of a wooden tripod. The boom was set on the tripod and a shaft was extended to the floor.

A circular wooden disc was attached to the end of the shaft. A disc of similar size was suspended over the stair-well of the attic stairs and another shaft extended downward (so it could be reached by opening the attic door). A compass card was mounted and an arrow attached to the end of this shaft to act as a handle for turning and also as a direction indicator. A length of closeline was used to connect the two discs of the rotating drive unit. This did not prove satisfactory as there was slippage. Rubber tape was tacked to the rim of the discs, but the slippage was not entirely eliminated. The clothesline was replaced with old rubber-covered mike cord and the drive became slip-free.

The elements were fastened to the boom with stand-off insulators and the driven element was fed at the center with 52 ohm coaxial cable.

Everything seemed to be in order. Locals who had been noted on the folded dipole were again checked and these subsequent checks proved that the beam was a definite asset. My carrier level on transmissions also went up. While forward gain was good, radiation from the ends was high as compared to standard straight element beams.

Adding up the cost, I had spent about $2, including the elements, cement, and hardware.

I got a beam on 11—hurray! S9

Subscription form between pages 48 and 49!

THE "MOBEAM"

MAKE YOUR CAR A 4 ELEMENT BEAM!

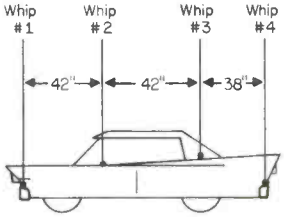
by HARVEY HURWITZ, 2W2921

The desire for greater efficiency in a mobile installation has led to many improvements in the field. Not the least of these is the use of loaded or tuned antennas. The *ultimate* in mobile operation can be achieved by the use of a beam antenna.

The first impulse of a typical CB'er is one of disbelief. How can you possibly mount a vertical beam on a car without it ending up looking like something from outer space. The solution is quite simple, and relatively inexpensive.

Mount a standard bumper type spring-assembly on the rear bumper. Carefully ground the center conductor terminal to the spring mounting screws. Obtain and install a plastic or similar short loaded whip (four to six feet) in length at a point on the rear deck or quarter panel exactly 38 inches in front of the center of the bumper base previously installed. Connect this whip to the transceiver in the normal manner. Install a 108" steel whip on the rear bumper mount. At this point you now have a two element vertical beam antenna mounted on your car.

The point of maximum gain will be in line with the double whips and towards the front of the car. This type of arrangement should produce approximately 3-4 DB gain (an effective doubling of your output power). Should you desire to go one step further you can add a director element to the array and increase the gain to approximately 6DB or more.



To add the director element, obtain a plastic-coated antenna designed for 10 meter operation. Mount this antenna on the front panel adjacent to the windshield. This antenna must be mounted exactly 42 inches from the center of the radiator that you installed on the rear quarter panel. Carefully ground the center contact on the 10 meter whip to the whip mounting screws.

Should it be your desire to be the absolute king of the hill, a second director mounted on the front bumper 42 inches from the one mounted on the front panel near the dashboard will produce a shattering 9 DB-plus gain figure or an effective increase in power on the order of eight times. You must remember however that by doing this you have also created a new problem. In order to receive your base station you will now find it necessary to point your MOBEAM in the direction desired. As a bonus, you will now find that interference from stations located to the side or behind you has been reduced or completely eliminated. Careful orientation of your six or eight cylinder MOBEAM will produce ranges and power for in excess of the customary 5 to 10 miles.

YOUR RUPTURED RECEIVER!

CANDID CURES CONCERNING COMMON CB COMPLAINTS!

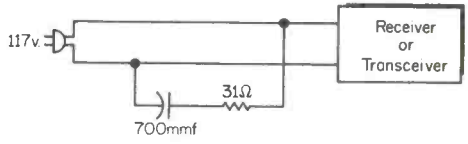
by BOB BROWN, KBG8417

Snap, crackle, pop! No, we're not talking about *Rice Krispies* gasping for breath after being nearly drowned in a milk flood, but rather of that *sometimes* not so quiet receiver of yours.

A friend of mine uses his CB transceiver almost 24 hours a day. During working hours he is constantly monitoring a particular channel for his on-the-road truck men; and if he has to put in a little overtime, he calls his wife. His transceiver has truly become an important communications link for him, but lately he complains that it sounds more like the rattling of rusty chains. Trouble-shooting was in store, for these hissing, crackling, banging, whoosing, humming, and at times roaring sounds were driving poor John to drink. So, with all due respect to the AA and the youth of America, we'd like to present our findings and suggestions here for any future squawk-box problems you might encounter.

Intermittent Humming Sound: This one can be particularly annoying, in that it usually seems to develop during crucial moments, almost completely overriding the station you're trying to hear. Try replacing the electrolytic capacitors in the power supply section of the receiver (these are usually of the tubular variety with markings such as 8 mf/450 VDC) one by one. These capacitors have a tendency to age and dry out (like some people we know). Temperature has a great deal of effect on the life expectancy of these components. If the hum still persists, however, then and *only* then start checking resistors and smaller capicitors with a meter. Make sure they still maintain the values marked. If they don't, replace them. In some cases, a tube has found to have been at fault (due to an internal short between its cathode and filament). Those poor dried out electrolytics, though, are usually the culprits. And they don't cost much to replace.

TV "Birdies" on the Receiver: No, these aren't the kind your wife feeds with bread crumbs that should have been condemned months ago—they are little blip-like noises that sound like some poor fellow CB'er whose



talking without his mike plugged in. These eminate from the oscillators in TV sets. One sure-fire solution is to turn off all the televisions in your neighborhood, thereby completely eliminating the real source of the annoyance (and eliminating future bridge parties). But if you're a Dale Carnegie fiend,

try this gimmick: simply solder a 700 uufd. capacitor in series with a 31 ohm resistor and connect the whole mess across your receiver (or transceiver) AC line cord. It may not kill *all* your birdies, but *Ben Casey* addicts won't be coming at you with their scalpels.

"Dead" Signals on Channel: This situation is quite similar to the one just described, but on occasion proves even more disturbing. Sometimes these "dead carriers" can reach an unbearable 20 db over S9 meter reading and *nothing* can get through. The cause? A nearby broadcast band receiver. Just like in the TV, the BC set's oscillator can generate its own signal (due to the superheterodyne nature of the circuit). This can be easily checked by just changing the station the set is tuned to. If the mysterious "dead carrier" disappears on the CB receiver, you've solved your problem. Now SHUT THE BC SET OFF!

Loud Roaring Noise Blankets Reception: As you settle down for a nice contact and fire up the receiver, a loud noise, varying in intensity, obliterates the channel. What now? Nothing. Only time will solve this one, which occurs only on rainy or snowy days. Small charges of static electricity are built up in each raindrop or snowflake which are discharged only when they contact your antenna. The resulting sound (especially if you're wearing earphones with the volume way up) can be deafening. Only suggestion here is to use an inside antenna or just sit it out. Mother Nature has won again.

Rhythmic Snapping Noises: Rainy weather adversely affects this one too, but it is not always the direct one-and-only cause. Faulty antenna connections outside have been known to "arc" in damp weather, resulting in a snapping sound which builds to a climax and then starts all over again. Be sure to make periodic checks on those antenna contacts—they may just require resoldering.

If this doesn't help, it may be the line transformer on the telephone out front or down the street. These utility units are infamous for throwing lines across TV screens and rendering radio reception almost impossible. One short phone call to the power company is almost guaranteed to get results. They're experts in handling these problems, and are only too happy to lend a helping hand. Besides, you'd look rather silly dangling on top of that pole with a soldering gun in your hand.

Any NE2's Anyone?

VERSATILE LITTLE GADGET FOR THE CB SHACK

by ROBERT B. KUEHN

So for 10¢ apiece, how can you go wrong? Yup, that's the total price of a NE2 neon glow bulb; a very versatile gadget to keep around a shack. Here are 9 uses which we found for the little glowing devil—how many more can you discover?

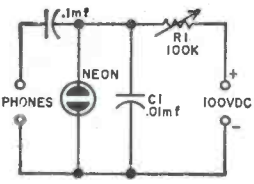
Figure 1. A great code practice oscillator for boning up on your Part 15 CW operation. You can run it from 110 VAC or DC, or even from a battery which will deliver at least 67 volts. Let's face it, the thing isn't going to make with a pure 1000 cycle tone, but it will groan enough to give you a good crack at CW.

Figure 2. Here's a sneaky way to avoid investing in a tuning meter for the CB transmitter. The 1 Meg resistor allows the plate voltage to ignite the NE2 with an orange glow, while at the same time blocking the flow of RF to ground. When the stage is tuned and RF appears in the circuit, the NE2's glow changes to a deep purple. The brighter the glow, the more RF you're generating.

Figure 3. Think up your own application for this one. The NE2 will indicate AC or DC on voltages above 67 volts. Since no power is consumed, the NE2 will ignite with only one lead touched to the circuit. There's no danger of shock by holding the other lead unless the voltage is high enough to jump between the electrodes.

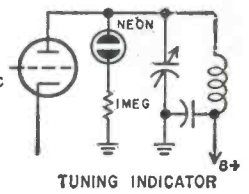
Figure 4. Once the ignition point of the NE2 is reached (67 volts), the voltage across it tends to remain constant. Thus it can be used to limit the high intensity noise usually encountered in mobile CB installations. For base station installations, the same application protects the output transformer from possible breakdown if a speaker lead should come loose when audio is being applied.

Figure 5. This "RF Sniffer" makes use of



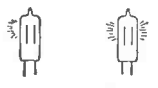
.AUDIO OSCILLATOR

Fig. 1



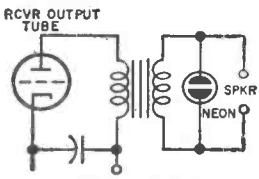
TUNING INDICATOR

Fig. 2



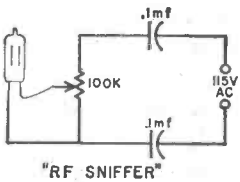
A.C. OR D.C. INDICATOR

Fig. 3



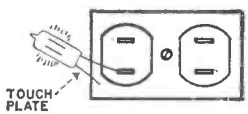
NOISE LIMITER

Fig. 4



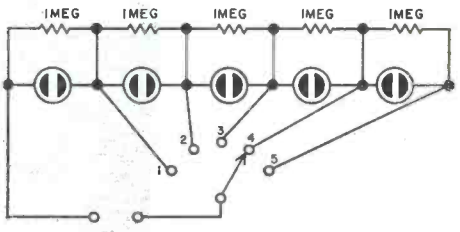
"RF SNIFFER"

Fig. 5



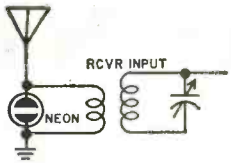
POLARITY INDICATOR

Fig. 6



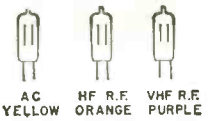
VOLTMETER

Fig. 7



ANTENNA STATIC DRAIN

Fig. 8



FREQUENCY INDICATOR

Fig. 9

the fact that the NE2 doesn't care if the 67 volts is AC, DC, or RF. If the variable resistor is adjusted to apply, say 55 volts of AC or DC, then only 10 additional volts of RF will serve to ignite the lamp, thus making it a fairly sensitive indicator of CB-type amounts of RF. The NE2 need not be actually connected to an RF circuit but merely held close to a coil, tube, tuning capacitor, etc.

Figure 6. The testing and operating of certain AC-DC gear still requires that it be plugged into the AC line one way or the other with respect to the *hot* or with the *grounded* side of the line. The little NE2's ruddy glow will ease your mind in this respect when one of its leads is touched to the *hot* side. You can also touch one side of the NE2 to the set's chassis, holding the other end of the NE2 between your fingers to accomplish this. In this case, if the bulb glows, reverse the set's power plug in the wall outlet.

Figure 7. Alright, so it doesn't compare with the accuracy of a $50 voltmeter, but it is a whale of a lot better than no voltmeter at all. It will measure AC, DC or audio with an accuracy of 35 volts and the range can be extended almost indefinitely by more NE2's, 1 Meg resistors and switch contacts.

Figure 8. Ever notice on a windy or stormy day that static electricity in your antenna causes arcing (accompanied by *snapping* or *popping* noises) at the CB rig's antenna terminal? An NE2 mounted inside your set across the pins on the coax receptacle will offer some measure of protection by shorting such charges to ground, rather than allowing them to crackle around the coils and wiring.

Figure 9. The color of a neon lamp's glow changes from orange at very low AC frequencies to purple or violet at VHF and UHF. This characteristic is interesting and is useful in checking out harmonic and/or parasitic radiation causing TVI.

Can anybody think up any more uses?

S9

Subscription form between pages 48 and 49!

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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387-388	D. Miller, 17371 Woodingham, Detroit 21, Mich.	10
389-392	J. C. Moore, 2017 So. 107 Ave., Omaha, Nebr.	7
393-397	R. A. Opdyke, Rt. 2, Box 88, Bryan Ohio	12
398-399	C. F. Carpenter, 7025 No. Damen Ave., Chicago 45, Illinois	7
400-403	F. M. Evans, 633 Park Ave., S.W., Canton 6, Ohio	
404-405	W. H. Gotchall, 304 Reno Ct., N.W., Canton 8, Ohio	4
406-408	S. Machek, 2338 W. 19th St., Chicago 8, Illinois	
409-410	M. Smith, Box 1, Topeka, Indiana	7
411	C. Plotkin, 6434 Glenwood Rd., Omaha 32, Nebr.	4-11-16
412	R. McFadden, R. R. 1, Box 48, Montezuma, Kan.	7
413	M. McFadden, R. R. 1, Box 48, Montezuma, Kan.	7
414-417	J. W. Koss, R.R.1, Box 359, Chippewa Falls, Wis.	A & B
418-421	B. Calandra, 1944 So. 105, Omaha 24, Nebr.	7
422-423	H. Bruce, 1119 13th, Wyandotte, Mich.	B
424-427	H.J. Malkowski, 35207 Palmer Rd., Wayne, Mich.	A & B
428-430	W. T. Wilholt, R. R. 4, Columbia City, Ind.	ALL
431-432	T. Irving, 2247 Benjamin St. N.E., Minneapolis 18, Minnesota	10
433-434	S. Recobs, 420 So. Conde St., Tipton, Ind.	7
435-437	H.E. Tice, Dome St., Box 685, East Liverpool, Ohio	
438-440	D.E. Amacher, 7471 Mudbrook St., N.W., Massillon, Ohio	15
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443-446	D. Crail, Box 296, 392 Knox Rd., Kingsford Heights, Indiana	7
447-449	F. Perkins, Box 122, Quinwood, W. Va.	A & B
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451	G. Anderson, 3612 E. 51st St., Indianapolis, Ind.	
452	J. Spence, 750 Broadway, Niles, Mich.	7
453-457	Warner Communications, 7216 St. Charles Rock Rd., St. Louis 33, Mo.	ALL 8
458-459	J. Busateri, 1419 N. Cass St., Milwaukee 2, Wis.	C
460-463	J. Mitton, 3116 Smeltzer Rd., Marion, Ohio	7
464-465	A. A. Loeffler, 1090 Vincent St., Saginaw, Mich.	10
466-467	T. Herold, Craigsville, W. Va.	B
468-469	R. D. Suddeth, 667 LaLone Ct., Pontiac, Mich.	ALL
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474-475	R.L. Fischer, 2127 Harvey Rd., Huntington 1, W.Va.	13
476-479	W. Vernier, 1326 Eastview Dr., Fairborn, Ohio	A-H
480-489	R. Dudley, 833 Wall St., Akron 10, Ohio	1-23
490	R. Casey, 8939 Parkside Ave., Morton Grove, Ill.	7
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495-497	C. Huff, R.R. 8, Box 196, Chillicothe, Ohio	7
498-500	C. F. Zeffries, Route 1, Petersburg, Ky.	A
501-503	A.A. Coffman, 525 Hamilton St., Bellefontaine, Ohio	
504-505	12353 Indiana, Detroit 4, Mich.	A
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512-513	D. D. Burgett, R.R.1, Villa Grove, Illinois	A
514-515	R. C. Smith, 2248 E. 96th St., Chicago 17, Ill.	7
516-518	V. Skeen, 1220 Cardinal Dr., New Martinsville, W.Va.	B
519-520	H. H. Peck, 1344 Huestis Ave., Fort Wayne, Ind.	1,11
521	B. Peck, R. R. 4, Bronson, Mich.	11
522-523	D. Hansing, 1316 Stratford Ave., Rockford, Ill.	1

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30-33	R. Yee, 1215 So. King St., Honolulu, Hawaii	
34-39	M. Vitousek, 1651 Ala Moana Blvd., Honolulu, Hawaii	ALL
40-41	D. D. Auna, 3414-B Hardesty St., Honolulu, Hawaii	22
42	A. J. Lum, 1746 Kewalo St., Honolulu, Hawaii	
43-47	J. Lau, 171 N. Beretania St., Honolulu, Hawaii	
48-50	K. N. Bukey, 917 W. 11th St., Juneau, Alaska	A
51-55	A. R. Tanaka, 91-270 Fort Weaver Rd., Ewa Beach, Hawaii	A

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648-651	D. Wightman, Box 102, W. Clarksville, N.Y.	A, B, C
652-653	P.T. Primrose, 759 Bayview Ave. N. Bellport, N.Y.	20
654-655	W.D. Moore, 102 E. Green St., Middletown, Dela.	A, B
656-657	R. Davis, Box 131, RFD 1, Perkingsville, Vermont	13
658-661	R. Francis, 56 Eastern Ave., Gloucester, Mass.	A
662-663	G. Judkins, Jr., Brentwood Rd., Exeter, N.H.	10
664-666	R.C. Weber, 59 Penn St., Penns Grove, N.J.	A, B
667-668	A. Matteliano, 226 Vermont St. Buffalo 13, N.Y.	C
669-670	C.V. Williams, Main St., Piseco, N.Y.	B
671	C.E. Yering, 197 Boston Post Rd., Waterford, Conn.	4, 11
672-674	T. Cook, Cazenovia Rd., Manlius, N.Y.	
675	P.L. Cornell, 52 Willowbrook Ave., Dunkirk, N.Y.	C
676	P.M. Sheedy, 222 Lakeshore Dr. E, Dunkirk, N.Y.	B, C
677-681	R. Kurcoba, 508 Gaines St., Elmira, N.Y.	A
682-683	C.H. Clemons, Upper Floyd Ave., Rome, N.Y.	
684-685	B. Muckelmann, 18 O'Hara St., Ford, N.J.	A, B
686-687	S.E. Judkins, Kingston Rd., Exeter, N.H.	10
688-690	C.C. Bogert, 202-17 36 Ave. Bayside 61, N.Y.	10
691-692	R.M. Palmatier, 451 Liberty St., Beacon, N.Y.	10
693-694	W. Olson, 46 Willow Ave., Jamestown, N.Y.	7
695-696	R.C. Bartel, 97 Charon Terrace, S. Hadley, Mass.	B
697-700	G.W. Goodwin, 705 Jay St., Elmira, N.Y.	A, H
701-702	S. Ippolito, 97 Main St., West Orange, N.J.	A
703	G.C. Carr, 25 Lewis Ave., Poughkeepsie, N.Y.	
704-705	H.R. Brown, 85 Delaware Ave., Penns Grove, N.J.	
706-707	R. Pratt, 40 Blanchard St., Jamestown, N.Y.	B, 7
708	A. Carlson, 336 Price St., Jamestown, N.Y.	7
709-711	R. Dugas, 1 Hill Ave., W. Springfield, Mass.	A, B, D
712-715	R. Zawislinski, RFD 1, Uncasville, Conn.	A
716	A. Amendola, 502 Steuben St., Staten Island, N.Y.	A
717	A. Demartini, 320 Grant Ave., Cresskill, N.J.	
718-721	A.A. Kneller, 705 1/2 Ocean Ave. Bradley Beach, N.J.	C
722	C. Kreuter, 179 Hathaway Ave., Elmont, N.Y.	A, B, C
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725-726	N.H. Walker, RD 1, Box 254, Hummelstown, Pa.	7
727-728	R.L. Sweeney, 62 Englewood Ave., Teaneck, N.J.	G, H
729-730	J. Molino, 2 Blvd. Court, Bklyn 23, N.Y.	A
731-732	J. Reynolds, 47 Bowne Ave., Freehold, N.J.	10
733-735	J.F. Martinik, 3022 Boyd Ave., McKeesport, Pa.	7
736	J. Eaton, 1109 Brandon La., Wilmington 6, Dela.	7
737-738	P. Gorman, 1471 Wyoming Ave., Niagara Falls, N.Y.	7
739	J. Rhoads, 10 Granite Rd., Wilmington 6, Dela.	7
740-745	Hainsworth Radio Sales & Sv., 4331 N. Franklin St. Philadelphia 40, Pa.	All
746-747	V.P. Tancrati, Lakeside Dr., Monson, Mass.	10
748-751	R.L. Gross, RFD 1, Franklinville, N.Y.	6, 9
752-757	A.K. Trask, RFD 2, Laconia, Gilford, N.H.	A
758-761	F. Lake, 1101 Laurel Rd., Beverly, N.J.	10
762-766	H.R. Bowen, 85 Delaware Ave., Penns Grove, N.J.	A
767	C.R. Cole, 936 E. 169 St., Bronx 59, N.Y.	10, 11
768	F. Daigle, 882 Oregon, Schennectady 9, N.Y.	F
769	W.L. Knowlton, RFD 5, Gouverneur, N.Y.	A, D
770-774	J. Katz, 190 W. 170 St., Bronx, N.Y.	A, F
775-777	H.E. Pretlow, 389 E. 154 St., Bronx 55, N.Y.	A, B, C
778-779	G. Pretlow, 389 E. 154 St., Bronx 55, N.Y.	A, B, C
780-781	B. Faber, 345 Pine, Millersburg, Pa.	7
782	G.D. Carr, 25 Lewis Ave., Poughkeepsie, N.Y.	All
783-784	W.E. Olson, 46 Willow Ave., Jamestown, N.Y.	7

NAKED CITY "GOES CB"

POPULAR ABC-TV SERIES MAKES USE OF HE-20

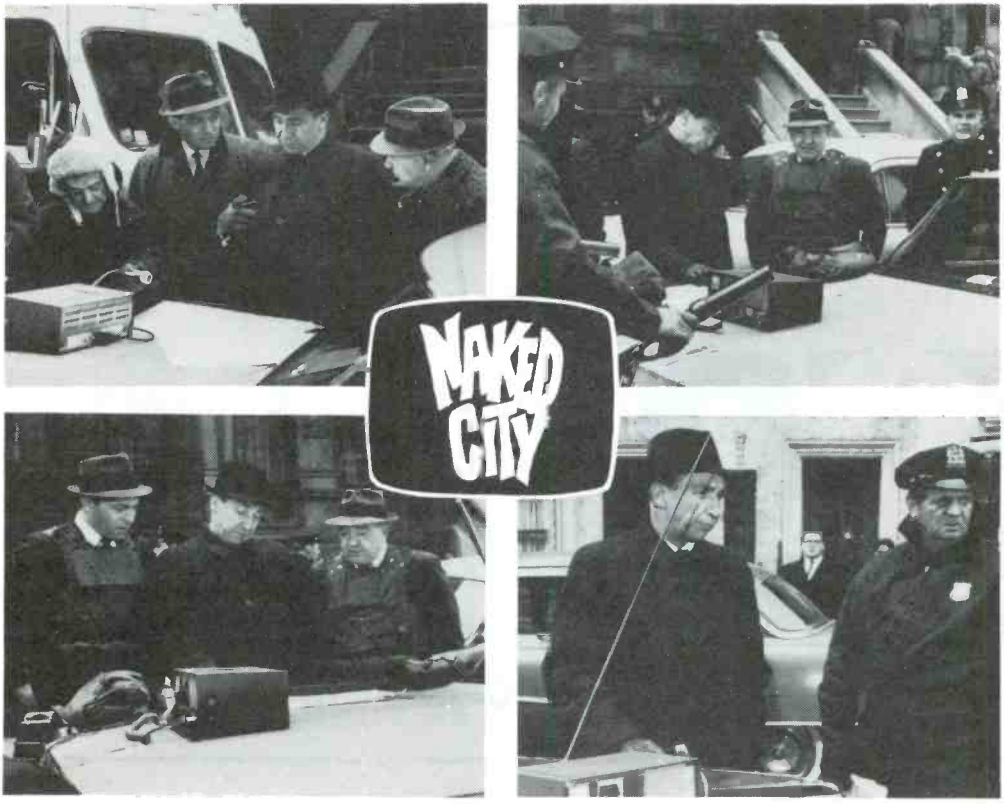
Perhaps many CB'ers were surprised to see that a Lafayette HE-20 CB rig was an integral part of the story on a recent telecast of "Naked City" (ABC-TV, Wednesday, 10:00 P.M. EST).

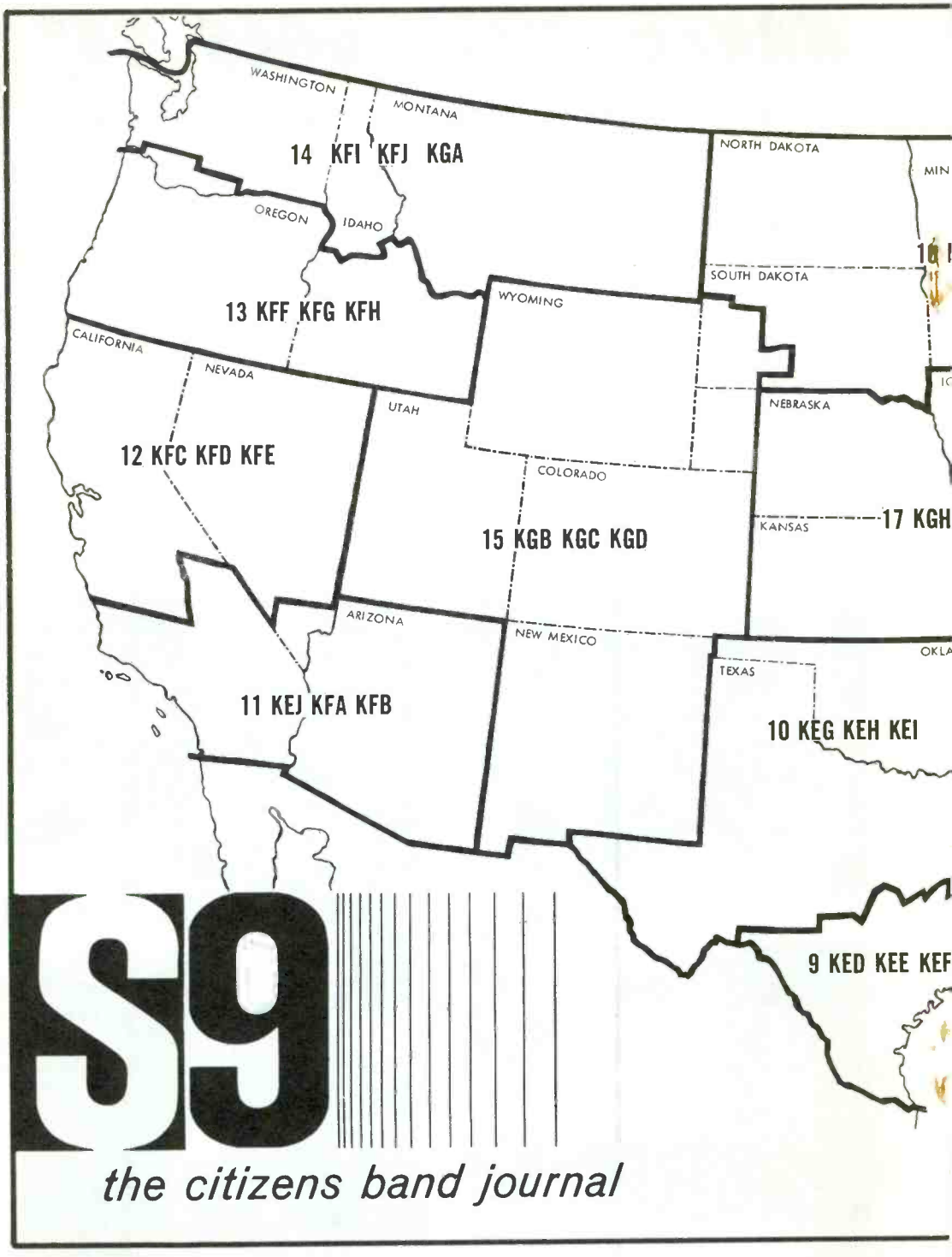
The program, entitled "Man Without A Skin," had the villain holed-up in his apartment; armed to the teeth; door barricaded. Down in the street, the New York Police Department (TV version, at least) readied a frontal assault with all manner of riot guns, tear-gas bombs, etc. Coordinating the operation was Lt. Mike Parker (Horace McMahon) aided by a map of the building and a Lafayette HE-20 CB rig. The riot-cops were wearing bullet-proof vests and all carried Lafayette Walkie-Talkies.

Constant communication was maintained between the sidewalk base station and the roving policemen. Needless to say, the bad guy was caught—after all, you might be able to fake-out a riot gun, but how can you escape CB?

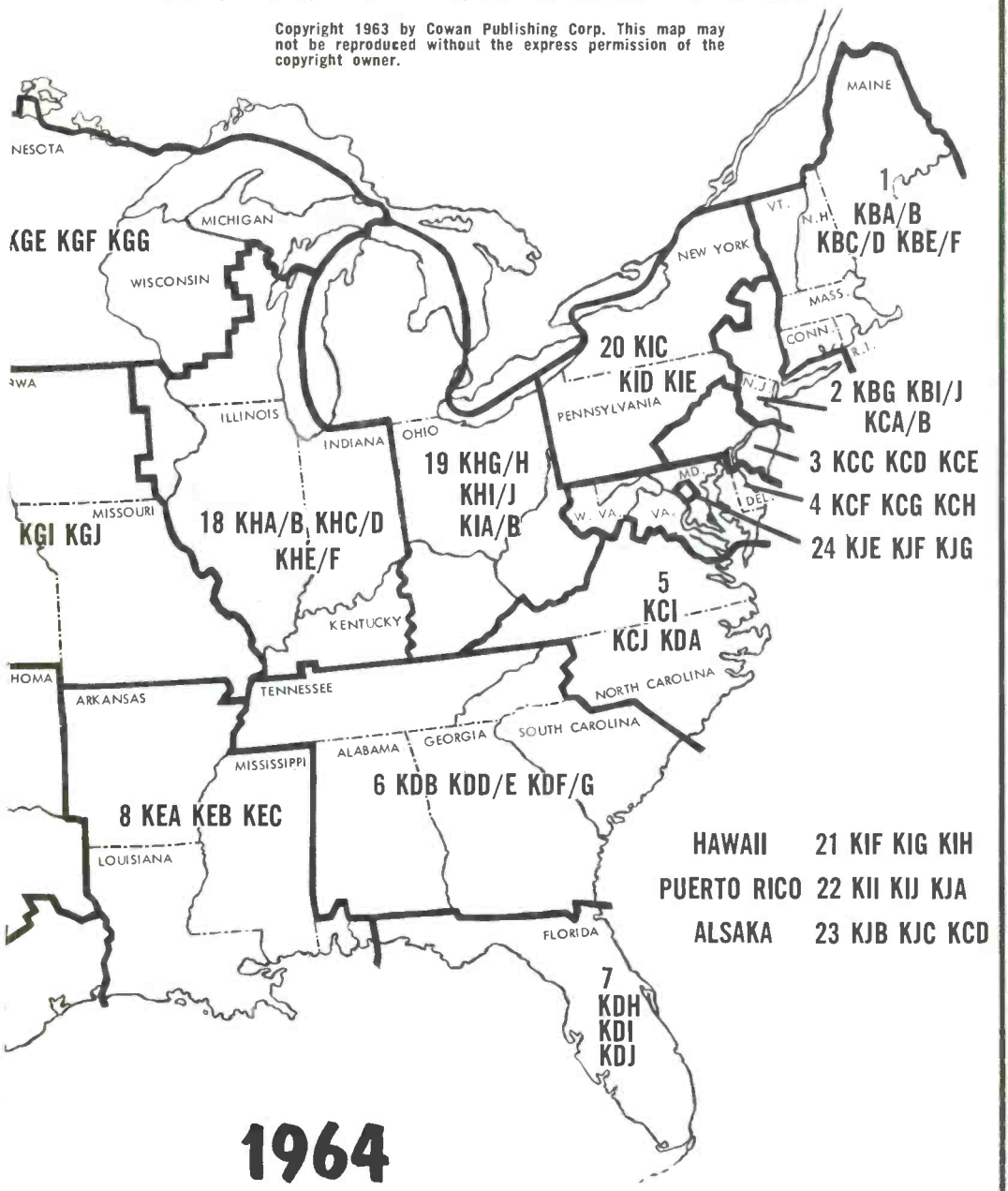
Coincidentally, on the following week's program, the bad guy got caught while hiding out on a rooftop—directly beneath a giant CB ground plane. As we said, you just can't escape from CB (or the *Naked City* police).

These photos show the stars of the program, Horace McMahon, Paul Burke, and Harry Bellaver, coordinating the raid in "Man Without A Skin." The fellow in the fur cap holding the mike isn't a nosey CB passer-by, he's the Director, George Sherman.





Quality color reprints of this map are available from S9 at 25¢ each.



1964
CB CALL AREA MAP

map design courtesy International Crystal Mfg. Co., Oklahoma City, Okla.

Subscription form between pages 48 and 49!

ON THE COUNTERS

"Instant 2-way radio" is the battle cry heralding the release of Radio Shack's new TRC-8 rig. The unit, a 5 watter, provides 8

transmit channels, double conversion tunable and crystal controlled receiver with better than 1 microvolt sensitivity. Additional features include automatic noise limiter, tuned RF stage, combination S-meter and power input meter, "pi" output network. It comes equipped with a rock for Channel 11. The rig comes as a kit for $109.95 or wired for $139.95. Details are available from Radio Shack, 730 Commonwealth Avenue, Boston 17, Mass.

Also new from Radio Shack, the *Realistifone* Model TRC-2 9 transistor hand held transceiver. The unit operates from batteries or a 110 volt AC power supply converter. Features of the unit are push-to-talk, long/short range receiver control and light weight (2 lbs.). The unit sells for $39.95 (each) and the power converter for 11 volts AC is $6.95.

Turner Microphones (945 17th Street N.E., Cedar Rapids, Iowa) is now in production on a new cardiod microphone, the Model 500. Listing at $84, the 500 boasts a great

response (40 cps to 15,000 cps), output minus 55 DB at high impedance. Turner's Sales Manager told us that the unit had been tested at fixed station communications installations and had "performed at or beyond our expectations." He said that one of the

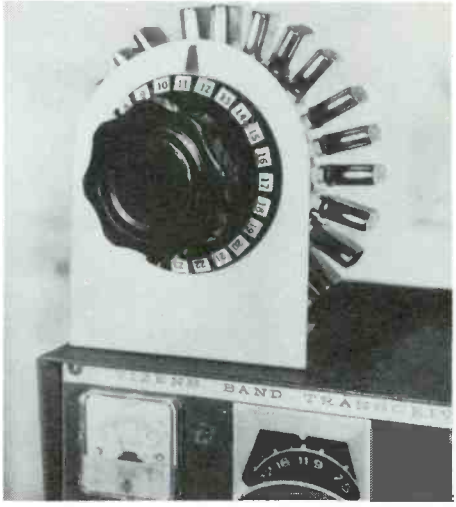
principal features of the new mike is its smooth and uniform response. Turner will supply you with further spec sheets upon request.

Here's a novel unit, a dual power CB rig which runs 5 watts for Part 19 Class D *and* 100 milliwatts for Part 15 hobby CB'ing. The unit, the Davis 5W4, is produced by The Davis Manufacturing Co., 2072 LaJolla Drive, Stockton 4, Calif. It's a 3 channel job with fixed tuning and a half-of-a-microvolt sensitivity. The unit also features an adjustable squelch. Lists for about $200. Ray Davis at the company will be able to fill you in on further details.

Watch for Lafayette Radio's new Part 15 unit, the HE-82 Walkie-Talkie. Basic features of this unit are similar to the HE-66 unit pre-

viously described here, however the HE-82 has a provision for operation with a 110 volt AC adaptor so that it may be used as a base station transceiver. Price is only $19.95, or $38.95 for a pair. The optional 110 volt AC power supply is $6.95. Here's that budget priced Part 15 base station you've all been asking for! For further information on this (and other Lafayette units), drop a card to Lafayette Radio, Dept. S9-F3, P.O. Box 10 Syosset, L. I., N. Y. If you get on Lafayette's mailing list (and your inquiry for the HE-82 will get you there) you will receive news of some *sharp* new products Lafayette in bringing out for you—we know what they are but promised we wouldn't tell yet.

Also in the "under wraps" category are some new products from *e.c.i. electronics communications, inc.* (325 N. MacQuesten Parkway, Mt. Vernon, N. Y.). It's the same old bit, we were nosing around their design lab and came across these new products and we had to swear the oath of Yona Schimmel that we wouldn't blab it all over the place. One product is of interest to mobile CB'ers, the other is a non-CB consumer product which should easily slash to ribbons the current market for this product (which now is coming in from Japan). If you have an electronics store, I suggest that you get ahold of Irwin Sussman at *e.c.i.* and get some information on this consumer product—shake him by the lapels until he tells you what it is and gives you a dealership! CB'ers will dig it the most.



The Kavin Engineering Co. (89 W. Main St., Penacook, N. H.) announces that they are offering the first electrically symmetrical 23-channel selector switch. It is easily mounted

on any tunable-receive CB rig and is guaranteed to work. Minimum circuit upset is achieved by double-pole switching, use of quality materials, completely symmetrical construction and low design capacitance. The best feature of this switch is that it will take any crystals which you now have on hand, and dial markers can be added as the sockets are filled. Price, complete with dial, mounting hardware and instructions (but without crystals) is less than $35. Contact the company for full particulars.

S9 Lab Reports

METROSTAR CB TRANSCEIVER

The appearance of the *Metrostar CB Transceiver* is matched by its fine performance qualities. Using 8 tubes, the unit operates from either 117 volts AC or 12 volts DC. A built-in vibrator supply provides the

Front view of the Metrostar CB Transceiver. The controls are, top row, l. to r.: Crystal Position, Tuning, Squelch, and Volume. For the bottom row, the controls are l. to r.: Xtal-Tune Switch and PA-Sig Switch for the S-meter. Two lamps located in the lower right hand corner indicate proper operation of the rig.

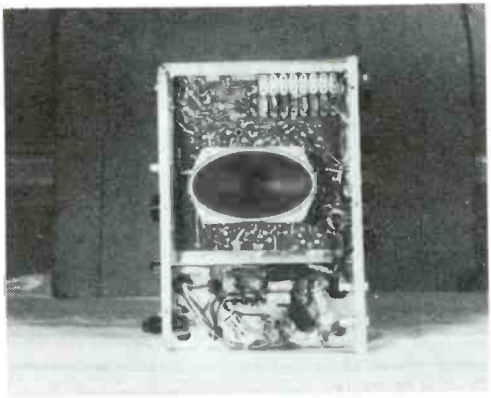
power for mobile operation. Silicon diodes are used for the power rectifier, squelch, and noise limiter circuits.

The receiver section of the *Metrostar* is a dual conversion superhet, which is sensitive and does a fine job in reducing images. Up to 8 different channels can be selected by a front panel switch. With the switch set in the "Tune" position, the receiver may be tuned to any of the CB channels for listening. An effective squelch circuit cuts out background noise and interference. The *Metrostar* comes complete with an Electro-Voice ceramic mike and a pair of crystals for channel 11 operation.

The output stage of the transmitter section can be loaded up to the maximum legal power of 5 watts. A "pi" network permits adjustment for maximum delivery of power into an antenna. Protective circuits prevent damage to any tubes or components if the

Rear view of the Metrostar. Top row, l. to r.: S-meter Adjust, Power Socket, Accessory Socket, Coax Antenna Connector, and Ant. Load Adjust. Bottom row, l. to r.: Fuse and Ground Terminal.

Subscription form between pages 48 and 49!



Underside view of chassis. A sturdy printed wire card serves as a major building block for the rig. Eight pairs of crystal sockets are located in the upper right hand corner of the chassis. An oval-shaped speaker is mounted in the center.

transceiver is improperly adjusted or crystals not installed. The rig also features built-in provision for the addition of selective call and other accessories, such as a telephone handset and a remote speaker. The S-meter may be used to indicate signal strength when receiving and final plate current when transmitting.

The rig, featuring excellent workmanship, weighs 14 pounds and measures 8¼ x 12 x 15 inches, plus mounting screws. The 8-page instruction manual is clearly written and complete with installation, operation, and troubleshooting instructions.

Test Results

The *Metrostar* was checked on the air from the cell block and in the mobile. Numerous checks were made and the reports were unanimous on the rig's sock and fine audio quality. A scope was used to monitor the output signal and maximum modulation was found to be 80%. This is exactly what the manufacturer designed it for. The *Metrostar* will provide its owner with excellent performance—either in fixed or mobile operation.

BIGGS ASSOCIATES STANDING WAVE-POWER-METER

Did you ever experience the following? The meter on the rig indicates grid and plate currents recommended by the manufacturer, but you cannot get out of your backyard. "What's wrong?", you ask your-

Continued on page 59

CARD SWAPPERS UNLIMITED

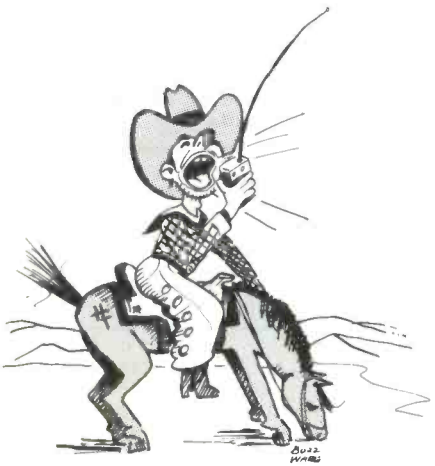
The response to "CARDSWAPPERS UNLIMITED" has been most enthusiastic and we look forward to its continuing growth.

Here's a new use suggested by one of the S9'ers—he hopes too swap with all 50 states and possessions and submit all of the cards to some outfit that's giving out "skip" awards for CB stations "heard and/or worked." We must admit it's a sneaky way to win an award, but at least it's the only *legal* way to do it!

If you would like to be listed as a CARDSWAPPER UNLIMITED, just send us a post card or CB QSL card to reach us by the 15th of June and we'll have you listed in the August issue. You must send us a separate card for each single month you wish to be listed. Address them to "Cardswap," % S9 Magazine, 300 West 43rd Street, New York 36, N. Y. Enter your name each month if you like. We don't guarantee results, however, and if you don't get a reply from some of the stations listed below we don't want to be on the receiving end of a wild letter from you.

1Q6763 Bob Lawton, 26 Seventh St., Medford, Mass.
1W6651 Ed Swanson, 7 Broadway, Malden, Mass.
2Q3057 William Cuthbert, 390 Ave. C, Bayonne, N. J.
2Q3644 Joe Valeo, 170 Garfield, Kearny, N. J.
6Q4624 Charles C. Gregorie, Jr., 1217 Johnson, Macon, Ga.
15Q0555 Doug Anthony, Douglas, Wyoming
18W8741 Larry Engle, 418 W. Ft. Wayne St., Warsaw, Ind.
KBA1328 Edward Kupchunas, 28 Wood St., Nashua, N. H.
KBA3874 Fred Nowak, 2 Azaela La., W. Peabody, Mass.
KBA4754 Gordon Stover, 24 Park, Houlton, Me.
KBA5312 Norm Bureau, 314 Belmont, Manchester, N. H.
KBA6204 Ernie Morgera, 33 W. Eagle, E. Boston 28, Mass.
KBA6639 Dottie Burdette, 285 Brookline, Cambridge 39, Mass.
KBA7339 Alex R. Jones, 102 Court, Houlton, Me.
KBA7367 Frank Franzosa, 23 Vista, Roslindale 31, Mass.
KBA7960 Chicky Whiteside, 80 Hadley St., Malden, Mass.
KBA8124 Paul Lubofsky, 54 Jones, Dorchester 24, Mass.
KBA9343 Ruth Graham, 78 Washington Elms, Cambridge 39, Mass.
KBA9619 Joe Souza, 16 Copeland, Roxbury 19, Mass.
KBC0209 Vincent Melendy, Spring St., Bedford, Mass.
KBC0802 Thomas Quigley, 28 W. Eagle, E. Boston, Mass.
KBC1607 Peggy Jones, 102 Court, Houlton, Me.

KBG0548 George Hindle, Jr., 2113 E. 35th St., Brooklyn 34, N. Y.
KBG6417 Hal Fossum, Jr., 1398 Bushwick Ave., Brooklyn 7, N. Y.
KCF0431 Bobby Foster, 1634 N. Abington, Arlington 7, Va.
KCI6223 Herb White, King William, Va.
KDB4842 Troy Kenemer, General Delivery, Rocky Face, Ga.
KDB5061 "Jackrabbit" Park, Box 593, 4137th Strategic Wing, Robins AFB, Ga.
KDD0301 Bill Wilks, 345 W. Outer Dr., Oak Ridge, Tenn.
KDD0748 Mike Jones, 711 Rollingwood, Aiken, S. C.
KDD1522 Don Huntley, Bat Cave 4, N. C.
KEG4356 Bob Zart, 13419 Red Fern, Dallas 30, Tex.
KEJ0733 "Beep Beep" Grubgeld, Box 65, Solvang, Calif.
KFC2826 Will Harris, 1424 Lincoln, San Rafael, Calif.
KFD0221 Bud Pierson, 1776 California, Mtn. View, Calif.
KGB0117 King Hitz, 3212 Majestic, Salt Lake City 17, Utah
KGB0299 Bobert Minton, 14701 Colfax, Aurora, Colo.
KGH3933 Thomas Atkinson, 795 Central Pkwy., Florissant, Mo.
KGH4255 Pat Hagerty, 432 S. Sappington, Kirkwood 22, Mo.
KHC1496 Tom Hixon, Box 306, Chrisman, Ill.
KHC1607 Jim Cole, 830 N. 16th, Ebwood, Ind.
KHG9638 Dave Scherer, Box 41, Waynesville, Ohio
KHH0396 "Junior" Kleman, Kleman's Motel, RR 4, Wapakoneta, Ohio
KHH1363 Geo. Radenheimer, 3121 Andrews St., Middletown, Ohio
KHI1953 Howard Quick, 573 Capital Ave. SW, Battle Creek, Mich.
KHI2226 Bob Williams, 745 Wellington, Battle Creek, Mich.
KIC2480 Wm. Bolle, 814 Fonclair, Johnstown, N. Y.
KIC4127 Edward Gruber, 168 Arthur St., Horseheads, N. Y.
KIC4675 Warren Bartlett, 6 E. State, Johnstown, N. Y.
KIC7042 Warren Becker, 401 Walnut, Montoursville, Pa.



"Y'say my plugs is noisy?"

CB IN ACTION

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

Congratulations to our first winner for the best "CB in Action" letter! Arnold Asterino, 19Q8348, has a brand new "Companion" CB transceiver on its way and "ready for *action*." Here is the text of his letter—a fine "CB In Action" community service experience:

"Dear Mr. Haas:

Re: CB in action.

The first week-end in March this year, was potentially a dangerous one in west central Ohio. Eight inches of snow had fallen several days before in and around the Urbana area. A thaw and rain by Monday morning was rapidly building to near flood proportions. By noon many basements in Urbana were flooded. Streets in low sections of town and the railroad tracks bisecting the town were completely inundated.

At approximately 3:30 p.m. Civil Defense Director, Ernst Asman alerted Champaign County CB Club president Ray Wilkens, 19B0241 and myself, 19Q8348 mobile unit, to notify club members of "stand by alert" for possible assistance. At 6 p.m. the call for assistance went out. CB mobile units in Urbana went into action, with 19B0241 setting up as Base Station. With help from the local National Guard unit and box 13, emergency rescue of the Urbana Fire Department, evacuation of approximately forty families was begun. Rowboats, waders and hip boots were located by CB use and put into service. At 8 p.m. CB units in the outlying areas of the county were called and mobile units were dispatched throughout the county to report on flooding of main routes and county roads. This information was relayed to the sheriff's department and Urbana Police department for their information.

By 10 p.m. the crest had passed and shortly thereafter reports of water levels receding began to come in. By use of our CB equipment, base and mobile units were able to effectively give aid where needed and relay valuable information to authorities, quickly and accurately.

Sincerely,
Arnold B. Asterino, 19Q8348
Champaign County, CB'ers
115 North Drive, Urbana, Ohio"

WIN A "Companion" CB.

We want to thank all of our CB friends who submitted so many wonderful "CB In Action" letters. Don't be discouraged—remember, this is only the first award. A new Companion will be sent out again in October with many more to follow. Your letters are still under consideration for the next award. Be sure to keep those new "CB In Action" stories coming! We are keeping them on file and they will be used along with other information to help prevent the restrictive revisions for Part 19 that are now under consideration.

Write—LEN HAAS, Pearce Simpson, Inc., 2295 N.W. 14th Street, Miami 35, Florida. Remember—CB in Action is *YOUR* Story!

PART 15 KORNER

by DEAN DETTON, NORTHERN 17

% S9 MAGAZINE
300 WEST 43 ST.
NEW YORK 36, N. Y.

One of the most often requested aids to Part 15'ing, at least from the several hundred letters we receive on the subject each month, is a Part 15 call area map. Save the postage gang, here it is!

Dave Reed, CENTRAL 84, of Reed Advertising (546 Pond Run Road, Raceland, Ky.) passes along word that his company has begun printing Part 15 QSL cards—they're in numerous color and card stock combinations and sell for only about $1.75 per hundred (the club rate is $1.50 for 5 or more orders shipped to the same address). Drop Dave a note if you're interested. He's got some dandy Part 19 cards too.

PART 15 CHANNELS	
Channel A	26.995 mc/s
Channel B	27.045 mc/s
Channel C	27.095 mc/s
Channel D	27.145 mc/s
Channel E	27.195 mc/s
Channel F	27.235 mc/s
Channel G	27.245 mc/s
Channel H	27.265 mc/s

Speaking of Part 15 Clubs, we were notified by Part 15 S9'er Tim O'Dell, CENTRAL 237, of Saginaw, Mich. that the local gang has formed a club known as The Saginaw Valley Hobby Radio Club—devoted strictly to Part 15'ing. Tim was asking about a squelch circuit to be added to Part 15 rigs. Tim, the gang would probably find value in

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:_____

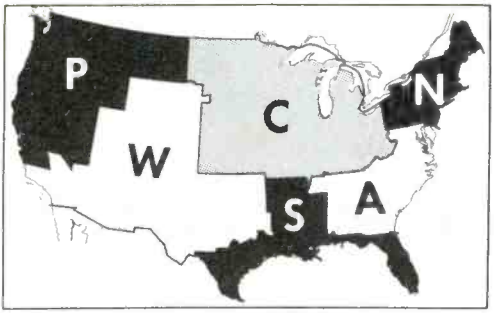
Address:_____

City:_____ Zone:_____ State:_____

Part 15 Channel:_____ Type of unit:_____

No. of units:_____ Date:_____

Signature:_____



These are the Part 15 "Call Areas." The abbreviations used are as follows: A- ATLANTIC; C- CENTRAL; N- NORTHERN; P- PACIFIC; S- SOUTHERN; and W- WESTERN. In addition, Canadian stations are assigned "ROYAL" callsigns. Stations located in United States possessions and territories, as well as the states of Alaska and Hawaii are assigned "EXTERIOR" callsigns. Stations issued calls in one area would normally utilize their original call when traveling in other areas.

the TNS squelch circuit which was run in the August, 1962, issue of S9. If they are using transistorized gear, they will be interested in the transistorized version of the TNS in the May, 1963, issue of S9. Keep us posted, and we hope that some of the other Part 15 clubs will let us know how they are getting along. With the summertime "skip" season upon us there should be quite a bit of club activity.

E. W. Haskell, PACIFIC 396, of Alameda, Calif., has the right idea! He tells us that the CB group in Alameda has become very interested and enthused about Part 15 and have already established several nets. "396" tells us that they were "really amazed at the results."

The other day we received a request for Part 15 identifiers from The 11 Meter Boy Scouts of America Emergency Net in Indianapolis, Ind. Mr. Art Hopkins, the Adult Advisor told us that the identifiers will be used for walkie talkies in the search activities performed by the unit. He said that the group follows S9 each month, finding our Part 15 coverage most helpful.

Bob Fischer, CENTRAL 474, of Huntington, W. Va., wants to know about the availability of a Part 15 Callbook. Bob, the Callbook is a monthly feature of S9—we run a little at a time in installments. The only way to get a complete Callbook is to buy S9 each month. Back issues are 50¢ each from our Circulation Department, and the Callbook started in the February, 1963, issue.

Before we sign, we would like to remind you of something which is *very* important,

Continued on page 59

EXCERPTS FROM FEDERAL COMMUNICATIONS COMMISSION PART 15 INCIDENTAL AND RESTRICTED RADIATION DEVICES

15.3 General Condition of Operation

Persons operating restricted or incidental radiation devices shall not be deemed to have any vested or recognizable right to the continued use of any given frequency, by virtue of prior registration or certification of equipment. Operation of these devices is subject to the conditions that no harmful interference is caused and that interference must be accepted that may be caused by other incidental or restricted radiation devices, industrial scientific, or medical equipment, or from any authorized radio service.

15.4 General Definitions

(b) *Harmful Interference.* Any emission, radiation or induction which endangers the functioning of a radionavigation service or of other safety services or seriously degrades, obstructs or repeatedly interrupts a radio-communication service operating in accordance with this chapter.

(f) *Low power communication device.* A low power communication device is a restricted radiation device, exclusive of those employing conducted or guided radio frequency techniques, used for the transmission of signs, signals (including control signals), writing, images and sounds or intelligence of any nature by radiation of electromagnetic energy.

15.5 Equipment Available for Inspection

Any equipment or device subject to the provisions of this part together with any license, certificate, notice of registration or any technical data required to be kept on file by the operator of the device shall be made available for inspection by Commission representatives upon reasonable request.

SUBPART E—LOW POWER COMMUNICATION DEVICES

15.205 Operation Within the Frequency Band 26.97-27.27 Mc/s

A low power communication device may operate within the band 26.97-27.27 Mc/s (27.12 Mc/s ± 150 kc/s) provided it complies with all of the following requirements:

(a) The carrier of the device shall be maintained within the band 26.97-27.27 Mc/s.

(b) All emissions, including modulation products, below 26.97 Mc/s or above 27.27 Mc/s shall be suppressed 20 db or more below the unmodulated carrier.

(c) The power input to the final radio stage (exclusive of filament or heater power) shall not exceed 100 milliwatts.

(d) The antenna shall consist of a single element that does not exceed 5 feet in length.

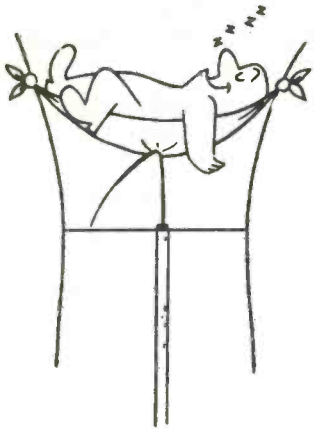
15.207 Class B Emission Prohibited

Operation of low power communication devices that produce Class B emissions (damped waves) is prohibited.

15.210 Interference From Low Power Communication Devices

Notwithstanding the other requirements of this part, the operator of a low power communication device, regardless of date of manufacture, which causes harmful interference to an authorized radio service, shall promptly stop operating the device until the harmful interference has been eliminated.

Subscription form between pages 48 and 49!



ANTENNAS

by ED NOLL, KCC2618
BOX 23
CHALFONT, PA.

There are many styles of mobile antennas. Transceiver output systems are not uniform in their operating characteristics. Antennas are not mounted at the same position on each vehicle. The electrical wiring, bonding and ground-plane charactertistics vary from car to car. All of these variables make their contribution to the performance of a CB mobile antenna installation.

Regardless of antenna style and mounting position certain fundamental considerations and basic steps permit you to make an effective installation. In fact, there is sufficient uniformity in performance that the CB radio shop that makes a considerable number of mobile installations can come up with a rather routine procedure.

Many mobile antennas are tunable; some are not. Many tunable types telescope. Others include a set-screw that can be used to change the length of a short segment of the antenna with respect to a loading coil. It is possible to remove turns from the helical wire arrangement of a fiber glass type, if tuning is advisable. Refer to Fig. 1.

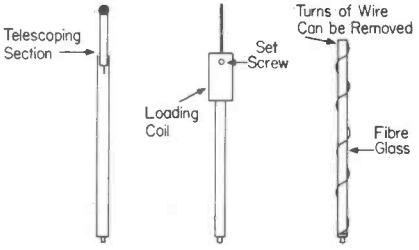


Fig. 1. Antenna tuning methods.

Transmitter output systems vary in their ability to match an antenna system that does not display an exact 50-ohm resistive load. Some output matching arrangements are so versatile that it is not really necessary to tune the antenna proper for the usual mobile installation. In terms of antenna tuning, the newer and shorter mobile antennas are more critical. They have a narrow bandwidth and tuning of the antenna proper is usually advisable.

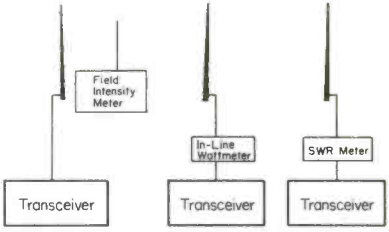


Fig. 2. Mobile tuning indicators.

Some type of output indicator is needed in making mobile antenna adjustments. The three most common meters are shown in Fig. 2. The

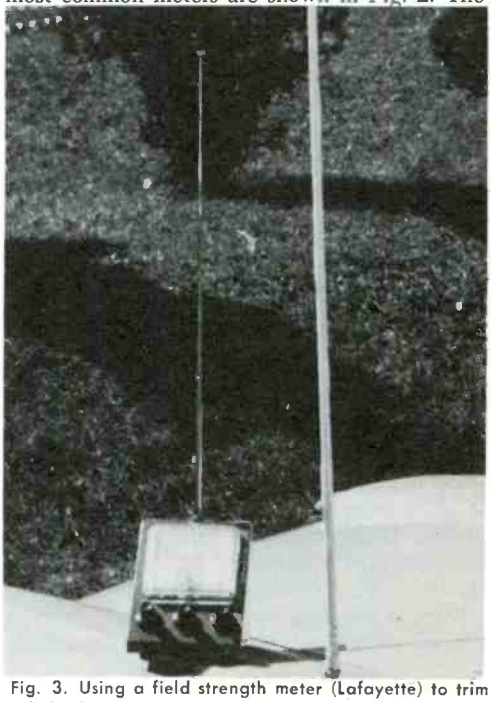


Fig. 3. Using a field strength meter (Lafayette) to trim a helical-winding antenna.

Fig. 4. Checking output and SWR with an in-line wattmeter (SECO).

field intensity meter, Fig. 3, is an excellent indicator. The more sensitive the instrument, the further it can be separated from the antenna. The presence of the indicator near to the antenna and near to the metal parts of the vehicle can have an influence on the meter reading. It is helpful if you can place the field intensity meter on a step-ladder or some other position actually removed from the car body.

The in-line wattmeter, Fig. 4, is also a good indicator of antenna system performance. It shows both the amount of power sent between the transmitter and antenna as well as any power that is reflected back from the antenna because of mismatch. Usually the in-line wattmeter can also be used to measure standing-wave ratio.

Standing-wave ratio (SWR) meters are also available. Such a meter is also inserted in the transmission line and measures the standing wave on the line. In an ideal situation the standing wave is at a very minimum when the system is matched. Standing-wave ratios of 2-to-1 or less are usually recommended. Remember that a 2-to-1 standing-wave ratio is good and indicates only a minimum loss of power.

One must at times be careful about the use of in-line wattmeters and SWR meters. They are designed for 50-ohm systems. When there is a serious mismatch their readings are not completely accurate. In this case the reading depends to a great extent on the position along the line at which the meter is inserted. This can either give you an indication of good match or indicate a mismatch condition far worse than really exists.

TUNING METHODS

There are several techniques for tuning a mobile antenna. The brute-force method involves tuning both transmitter and antenna after the installation has been made. In this technique you adjust the transmitter for best operation with the antenna installed. You then try to improve upon the operation by tuning the antenna. After each change in the effective length of the antenna you retune the transmitter. Thus by jockeying back and forth between antenna adjustment and transmitter tuning you find the spot that gives optimum performance.

If done carefully the above procedure, although a rather haphazard one, will permit you to obtain optimum performance from a given installation. Procedure and results vary a bit according to type of equipment, type of antenna, and mounting position.

FIGHTING THE VARIABLES

The CB radio shop that makes a quantity of installations should avoid haphazard techniques and should as far as is reasonably possible, establish some sort of fixed installation and tuning routine. Some variables can be reduced if the installer decides upon the use of some *definite and good antenna* with uniform performance characteristics.

CB radio test sets are available that supply an exact 50-ohm resistive termination for the output of a CB transmitter. Initially each transmitter should be tuned to deliver maximum output to such a termination. This initial transmitter adjustment can be made in the shop, or better still, it can be made with the transmitter set up temporarily in the car and using the car battery as a source of power.

It is now possible to connect the car antenna system. Antenna adjustments are now made for maximum power output as shown by a field strength indicator or an in-line wattmeter. If a true 50-ohm resistive antenna is being used, an SWR meter will also indicate maximum power output when it shows a minimum standing-wave ratio.

Note that in this method of installation and adjustment it was not necessary to jockey back and forth between transmitter and antenna adjustments. However, the selected antenna must have good 50-ohm resistive characteristic.

ANTENNAS TUNABLE BUT CHARACTERISTICS INDEFINITE

If you install a variety of antenna types and

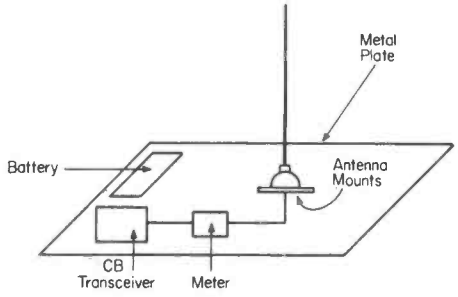


Fig. 5. Shop antenna test and tuning set-up.

various models of CB equipment the former method is not always appropriate. However, the quantity installer will save himself some backbreaking "in-the-car" adjustments if he will have a test set-up in his shop. This should be arranged so that a variety of antenna styles can be set up rather quickly. The length of line between the antenna and the CB transmitter should be the same as that employed on the usual car installation or should be the actual length of line supplied with specific mobile antenna models. Refer to Fig. 5.

The transmitter can be tuned initially to supply maximum power to a 50-ohm resistive termination. The antenna should then be set up and adjusted for maximum radiation. Now the transmitter can be touched-up carefully to determine if a significant amount of additional power can be radiated. In this latter adjustment you have compensated for the fact that the antenna system may not be displaying an exact 50-ohm resistive load to the transmitter. Jockey back and forth several times to obtain the strongest radiation.

These initial adjustments will bring you rather close to optimum setting of transmitter and antenna. After installation in the car only slight readjustments are usually required. These adjustments will compensate for the rather indefinite ground-plane characteristics of the particular mounting position on the vehicle.

This technique is rather successful because it eliminates several important variables in mobile system performance before the installation is made in the car. In general you then only have to cope with the mounting position variables of the vehicles. The secret is to make your shop test set-up come as near as possible to the usual vehicular characteristics. Several square feet of metal can be placed below the antenna test mounting position. This metal should not be grounded to your shop ground. If you want to go all out use a storage battery to power the transmitter while it is being tested so as to keep the system away from the *good ground characteristics of your shop*, a condition which does not exist for a vehicular installation. A vehicle has a floating and very indefinite ground.

THE INDEFINITE UNTUNABLE ANTENNA

The untunable mobile antenna that displays a reasonably close 50-ohm resistive load over the CB band presents no great problem to the installer. Transmitter tuning adjustments are made for maximum output.

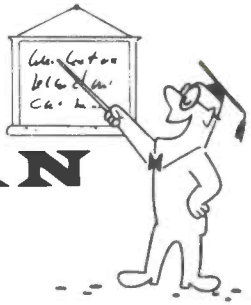
Fig. 6. Neat, trim, appearance of a CB-AM installation on a compact car.

If the antenna is untunable and displays varying characteristics that are influenced by the mounting position on the vehicle, tuning problems can result if you use an improper approach. For an antenna of indefinite characteristics of this type it is usually wise if you rule out the use of a 50-ohm in-line wattmeter or SWR meter. In this type of installation, use a field intensity meter placed free of the car body at approximately the same height as the antenna.

Antenna and lines should be installed and transmitter positioned as near as possible to its final location. The transmitter should not be tuned up with other than the actual transmission line that will be used between antenna and transmitter. Transmitter controls are then adjusted for maximum output. This usually requires a considerable amount of jockeying between the antenna loading and tuning controls.

Continued on page 60

CB ANSWERMAN



by LEN BUCKWALTER, KBA4480

Editor's Note: Readers are invited to ask the CB ANSWERMAN any questions which they have regarding the CB service. Address your questions to Len Buckwalter, KBA4480, Wilridge Road, Georgetown, Conn.

ANTENNA HEIGHT

I am located between two mountains and find it impossible to get out with the 20-foot antenna height restriction. I have $700 tied up in CB units and need them for my drive-in business. Any suggestions?

J.M., Bassett, Va.

Sounds like a case for the "Black Box." If you can climb that mountain, turn its liability into an asset. Mountains make excellent towers that fit nicely into the category of "natural formation" and thus are legal for antenna mounting. From the sketch you enclosed, I'd judge that the mountain behind your drive-in is about 500 to 800 feet high. One solution is running low-loss coax to the top, but the price would nearly equal that of the whole CB system. A better approach is an antenna amplifier. Located on the antenna mast atop the mountain, it will take a much-weakened signal from the long transmission line and boost it to proper level. (It also works on receive.) The only unit of its type now on the market is Antenna Specialists M-82 "Black Box." Such a booster would permit the use of low-cost coax up the mountain to the antenna site.

CBI

Several boys in our club pick up audio from an FM station when they are within a block or two of it. They also receive tone signals. This happens only on Channel 23. How come?

J.F., Waukesha, Wis.

Tone signals on Channel 23 are to be expected in many areas. The channel is shared with other services that use the frequency for radio-control purposes (model airplanes, traffic-light control, etc.). This cannot be classed as interference since all CB license holders agree to accept interference from other sources, as stated on the back of the ticket.

The reason for the FM station pickup might be traced to oscillator harmonics. In most CB sets, there is a local oscillator operating on approximately 27 mc. It serves to mix with an incoming CB signal and convert it down to an intermediate frequency (IF). Depending on the particular set, the IF may be on 455 kc, 1650 kc or some other similar frequency. The set's local oscillator, however, not only generates 27 mc, but higher-order harmonics as well. Let's say the local oscillator is on 26.5 mc. This places the fourth harmonic on 106 mc, a frequency that falls within the 88-108 mc FM broadcast band. If the FM station is on 106.5, for example, this signal may enter the CB set, mix with the oscillator harmonic and generate a difference of 500 kc (106.5 minus 106 mc). The CB set's IF amplifier boosts it and passes the signal to the detector where it becomes audio. Although the signal is FM, the AM detector in the CB set can convert it to audio if the IF frequency is close enough to 455 kc.

Of course, this only happens when the rig is close to a powerful FM transmitter, as you state in your case. The reason we go into detail is that the same process—oscillator harmonics—may also underly cases of TVI where the TV set picks up CB signals in similar fashion.

Another possibility relates to the construction of the FM transmitter itself. The crystal in a commercial FM transmitter op-

erates at a low fundamental frequency (for good stability) and is multiplied by succeeding doubler and tripler stages. One of these stages may fall on or near a CB channel. Since the power of a multiplier stage may be several dozen, or even many hundred watts, it could put a readable signal into a CB rig located within a block or two.

CABLE LENGTH

I would like to use a long coaxial cable to my antenna. What is the formula for figuring the correct wavelength? I intend to use RG-8/U.
B.C., Barnardsville, N. C.

There is no formula since coaxial cable may be any length. A common misconception is that trimming, pruning or otherwise cutting coax to a certain number of wavelengths will improve performance. The cable is so constructed that it displays 52 ohms (characteristic impedance) at any length. Thus, the 52-ohm output of the CB set will properly transfer power into the cable whether it is 20 inches or 20 feet. Unlike an antenna, the line is not a tuned or resonant element.

To preserve the match, the coaxial cable must work into an antenna that presents a 52-ohm load, true for the various commercial CB antennas. Problems such as reflected power from antenna back to transmitter (SWR) occur when the line and antenna are not of the same impedance.

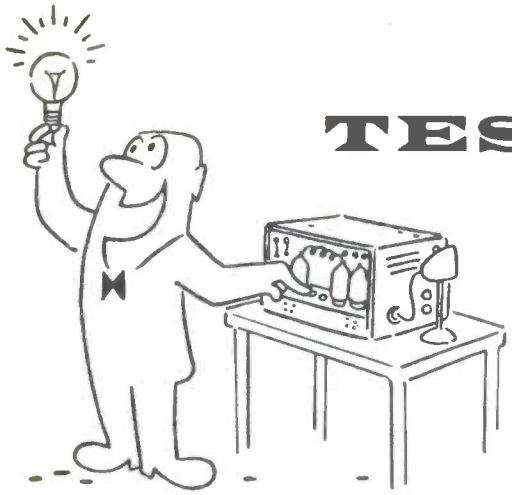
There is an important consideration that affects the cable run, but one that has nothing to do with exact number of wavelengths. It is the amount of power loss suffered by the coax over an extended length. You've already reduced this loss by your choice of RG-8/U, a cable with less loss per hundred feet than the more common RG-58/U.

VFO

Could I use a VFO if it had an accuracy of .005%?
P.S., New Windsor, Md.

If you wish to use a variable-frequency oscillator, to sweep your transmitter frequency across the CB band, I may refuse to answer on the grounds that it may tend to incriminate you. Crystals, as specified by the FCC, make Very Fine Oscillators. Except for Part 15 use, a VFO is strictly verboten!

Subscription form between pages 48 and 49!



TEST GEAR

by HERB FRIEDMAN, 2W6045
2271 KNAPP STREET
BROOKLYN 29, N. Y.

"One picture is worth a thousand words" may be a tired old phrase—to everyone, that is, except the electronics technician. The "screwdriver mechanic" and "VTVM specialist" may smugly claim, "Who needs the fancy instrument?", but down deep he knows that many is the time one quick picture on an oscilloscope would have saved weeks of effort for the scope can display in an instant what page after page of measurements can only begin to imply.

Let's take a practical example. A few weeks back a down-at-the-mouth Joe CB'er finally lugged his transceiver down to the shop. For weeks we had been hearing about his distorted modulation and how the local experts were going to find the trouble, but here was the rig with the same miserable modulation. We connected a signal generator to the mike input and traced the signal through the modulator with a scope. Up to the grid of the modulator tube we observed the trace shown in Fig. 1A—a beautiful distortion free pattern. At the B+ input to the RF final we got the trace shown in Fig. 1B—in less than five minutes we had the trouble isolated to the modulator. A few quick voltage measurements, a modulation transformer replacement, and the rig was as good as new: total time about 15 minutes. (In case you don't think Fig. 1B is too bad—the pattern represents more than 25% distortion.) Without the scope we could have spent days looking for the trouble.

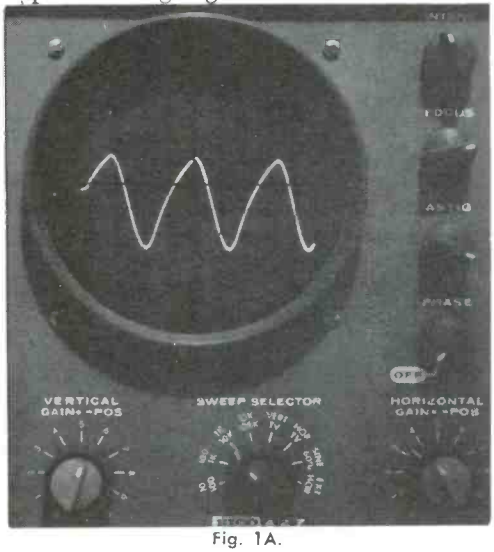


Fig. 1A.

There are many scope models avialable, but for the general experimenter (which includes CB'ers) a good general purpose scope is the best bet from the viewpoint of simplicity of operation and low cost. An example of a good GP scope is the EICO 427 (kit).

Fig. 2 shows an important feature of the 427. Notice that a wide-layout is utilized, this is reflected under the chassis in ease of assembly since there are no places where the components are jammed together in layers. Also notice that there are no printed circuit boards, the entire scope is point-to-point wired. Mark the extensive framing which results in a very rigid chassis; the 427 can take a lot of punishment without fear of damage.

The vertical amplifier is direct coupled

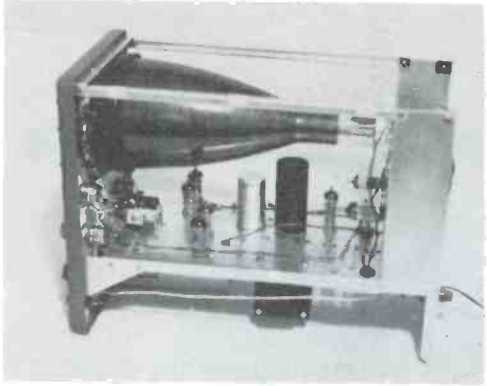


Fig. 1B.

throughout. A switchable input capacitor enables you to read either DC voltage, AC with DC, or AC voltage alone (in the presence of DC). The input signal is controlled by a frequency compensated stepped attenuator calibrated from .01 to 10 volts. To insure accurate measurements a built-in switch selected calibration voltage is provided. Once the vertical gain control sets-up the calibration level you can read-off the input voltages directly.

The vertical frequency response is flat to 500 kc. with usable sensitivity extending past 1 mc. This range will permit you to connect your transceiver's last IF amplifier to the scope so you can monitor the modulation of the *received* signal.

The sweep selector covers the range from 10 cycles to 100 kc. In addition, two fixed frequencies of 7875 kc. and 30 cycles are provided for rapid TV servicing.

To keep operating as simple as possible sync adjustments *are not* provided; rather a sync clipper which insures a steady pattern

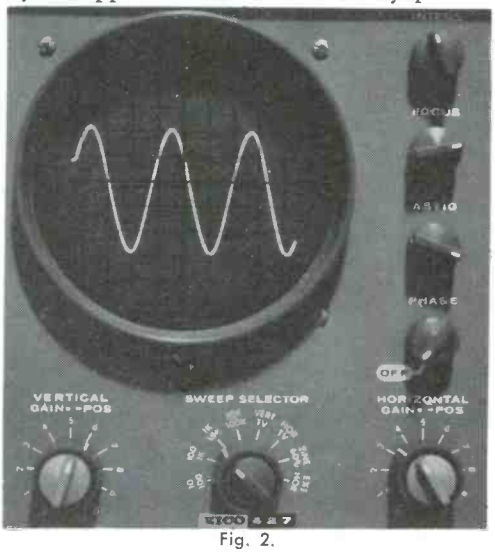


Fig. 2.

at all times is employed. The usual scope features of external horizontal and sync inputs are also provided.

A unique feature (for low priced scopes) is a *front panel* astigmatism control which enables you to adjust the trace for maximum sharpness across the *entire* face of the five inch CRT.

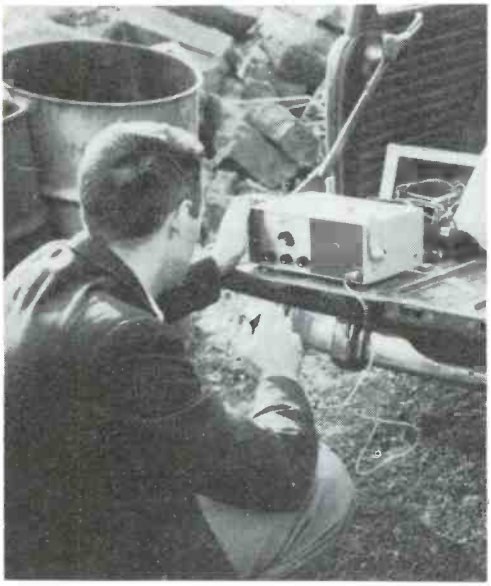
On the rear apron are switch selected vertical and horizontal input jacks. When the switch is in the "direct" position the two accessory jacks make connection directly to the vertical and horizontal CRT plates. These are the connections needed for trapezoid modulation tests on your own rig. (It is not necessary to make any modifications to the 427 for trapezoid or modulation envelope measurements.)

While a scope's price tag is not astronomical, it's not cheap either; but if you expect to do anything more than putter-around in electronics the scope can be a major asset to your shop.

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.



The unusual company name of this month's subject aroused a rather unusual curiosity, and finally prompted your S9 reporter to write to the Alpine Geophysical Associates, Inc., Norwood, New Jersey to inquire as to their use of CB. The first exchange of correspondence with their very cordial President, Walter Beckmann, 2Q-0161, only served to convince us that here was perhaps the most far-ranging application of CB radio that we have had a chance to look at yet.

"Our company is involved in various types of geophysical exploration. Sometimes this work is done for the purpose of finding mineral deposits. On other occasions a matter of civil engineering is the purpose. In either case, our job is to determine the physical nature and structure of a site for the purpose of mining or some type of construction."

"We have found that we do not need the walkie-talkie type unit, and that frequently we need the extra distance that only the larger units can give us. To have both kinds of units would only handicap us when we needed the greater range. We have seven units. Several are permanently mounted in our trucks, while others are arranged to fit temporarily on tailgates, fenders, or at theodolite sites. A theodolite is a surveying instrument used for measuring horizontal and vertical angles. In work involving these devices, we'd be all but lost if we didn't have the instantaneous communications that our CB radios provide. The units mounted aboard our boats are self-contained in plywood cases, and the antennas mount on top of the cases."

"We usually need to communicate from a few hundred yards up to 10 to 12 miles. Our radios come in for their greatest use when we are running a survey from one of our boats in which our objective is to map the bottom of the ocean or channel, as well as the sediment and rock structure that may lie beneath the bottom. The soundings we measure will prove of little value to us unless we are able to determine the precise position of the survey vessel every minute. In actual practice, each theodolite operator might radio the angle from his position to the boat as often as every 15 seconds. On the boat, these angles are layed out and the position of the vessel is known every foot of the way. When we are not using the radios to help in precision plotting, we

usually find any number of operational messages to send over them."

"Some of the surveys in which CB radio has been most helpful to us have involved investigations for ground water in Long Island, an iron ore dock in the St. Lawrence, channel widening and deepening in the East River, bedrock studies for fixed towers at Buzzards Bay, and a variety of foundation-site surveys in the New York area."

"Interference is rarely a problem to us. We usually determine those frequencies that are most popular in the area in which we intend to operate, then purchase crystals for some other channel. We also use crystal-controlled receivers in our units exclusively, to avoid the problem of getting everyone's attention, and having everyone listening at the same time. CB radio is a vital part of our business, and we can't afford to waste a minute waiting for someone to get tuned-up on frequency. With so much equipment involved in our work, and the great number of highly-trained people required, a delay of minutes could cost us hundreds of dollars. Too, we are frequently battling to finish a survey before the weather closes in."

The roster of clients who have made use of the services of Alpine reads like a list of Who's Who in the World of Industry. With successful operations completed on every continent, and for both private and government clients, there seems to be little for this "deep" scientific company to long for in the way of terrestrial exploration. The chances are perhaps more than even that when the Lunar dust is first subjected to earthly analysis, a team from Alpine will make the survey.

Two of the highly interesting methods of determining what lies beneath the surface of the water, and what is perhaps of even more interest to the civil engineer, what lies beneath the surface of the bottom, have now been disclosed to your reporter, and we prevailed upon 2Q0161 to share them with you.

"Two techniques that we use are the Sparker and Gas Exploder. They are continuous marine sonic reflection techniques similar to echo sounders. The Sparker is a device that produces an electrical discharge in the water to provide a high level relatively broad-band pulse of energy. The Gas Exploder uses a combustion chamber towed in the water in which a mixture of propane and oxygen is detonated by a small ignition spark. The sound reflected from the water bottom and sub-bottom are detected by a towed hydrophone, amplified and recorded on a chart which represents a vertical cross-section of the geologic structure beneath the track of the survey vessel."

"The Sparker is used to study shallow sub-bottoms to depths of as much as 1000 feet below the ocean or channel floor. The Gas Exploder is used where it is desired to go even deeper to study formations, perhaps to 6000 feet."

"Either device, and the detecting hydrophone, are towed from a survey vessel which may range in size from a 26-foot motor boat to an ocean-going ship. Weather usually determines the size of the vessel since the equipment is compact and requires little space."

"Our next step is to set up a grid of the area to be surveyed. In the ideal situation, optical sighting posts are then established and radio communication established between these locations and the survey ship. By this means we are able to correlate the readings being taken aboard the vessel as to the contour of the bottom, with the exact bearings provided by the optical sighting posts manned by the theodolite operators."

In addition to investigating likely sites for bridges in Scotland, proposed highway crossings of the Chesapeake Bay, and hunting for off-shore coal deposits, there is one little item that Alpine has investigated that could be the terrestrial engineering feat of the century—a proposed Channel Tunnel from England to France. Test borings were made to verify the echo data, and one novel aspect of this phase of the work was that after the holes had been sunk to the required depths, and the cores extracted, the holes had to be filled in with concrete in the event that the Tunnel might pass near the hole and permit water to pour into the workings.

"The usefulness of radio communication in our business is obvious. The use of CB has made it possible to have good equipment available at reasonable cost, as opposed to the gear previously used for such work. Some of our present techniques would have to greatly modified if it were not for the use of CB radio."

CB CHIT-CHAT

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

TO JOHN KREJC, 2W4586

40 LANZA AVE.
GARFIELD, N. J.

WANT TO MAKE MONEY? S9 has a nationwide staff of AREA PUBLIC RELATIONS EDITORS who act as our representatives in the field. We are always looking to expand this force with good workers. Our A.P.R.E.'s can earn some nice money too, and many are already supplementing their regular incomes substantially by representing us. We're especially interested in persons to act in this capacity in the following call areas: 2, 6, 9, 14, 16, 17, 18, 19, 22, and 23, although ambitious S9'ers in all other areas will also be most welcome. Drop us a note and tell us about yourself.

From the Central W. Va. Citizens Band Radio Club, of Spencer, West Virginia. The group monitors channel 9 in the vicinity of Doddridge, Tyler, and portions of Ritchie Counties. They are located on the busy US Route 50 E-W.

The Lehigh Valley Chapter of CBRRL, recently received their charter and have a membership of 39. The club was complimented by Sergeant Sam of the Marine Corp for helping collect 75,000 pieces of toys for the Corp, campaign for needy tots at Christmas. The club meets the last Sunday, 2 p.m. at the Marine Corp Reserve Bldg., Bethlehem, Pa. President, Bill Logan, KCC 1149.

Recently a trench digger struck and ruptured a large gas main in the San Pedro area. Bill Carpenter, secretary of the South Western Los Angeles REACT Unit, was on his way home from work and stopped and offered the services of the Unit. Residents of the area were evacuated by Police and Fire Dept. 9 CB Units of the REACT Unit reported, took over the job of suppling the Police and work crews with hot coffee. Letters of appreciation and thanks were received by the Unit, from W. L. Miller, Chief Engineer of the Mayors office of Los Angeles and from the San Pedro Division of the Los Angeles Police Dept.

The Hi-Desert CB Radio Club of Joshua Tree, California reports that while F. V. Williams, 11W9374 is not a member of their club, he works with them in many of their Search and Rescue functions. He has achieved national recognition for several life saving contacts that he has provided by the use of his CB base. If you are anywhere in the hi-desert—give 11W9374 a call. He'll hear you. Thanks RMF. . . .

Members of the Bronx-Westchester (N.Y.) CB Assn. toasted by e.c.i. with a guided tour of their manufacturing plant in Mount Vernon, N. Y. The program started at 8 P.M. and lasted till 11 P.M. Thanks to the Sussmans, the club enjoyed themselves. The club meets on the first Tuesday, 8 P.M., at Foriccios, 4638 White Plains Rd., each month. Why not attend their next meeting?

CB NEWS and VIEWS, official voice of CITIZENS RADIO LEAGUE, a division of Metropolitan CB Radio Association, Inc., tells that it's election time again. The club will nominate a complete slate of officers, people who will agree to serve if elected and carry on the program of their club.

Reader W. S. Jones, CB'er YY1-80, of Maracaibo, Venezuela sends us his picture and greetings to all the U.S. and Canadian S9'ers. Jonsie uses International Crystal units and has received S9-plus reports from listeners in Nevada, Virginia, Missouri, etc. He's mostly on Channel 12.

The A-K 5 Watters from the 20th area is 2 years old this past February. CB profile of their club paper, The Monitor, honors Cecil Loach, 20Q1276; Joe Woodfield, 20Q1380; and Ed Yost, 20Q1428. Editor, Red Montgomery, KIC7626, is looking for help with the club publication.

The Macomb CB'ers will present to the members their ideas of the club emblem. The decal was drawn up by Chuck Baer Enterprises, which was drawn by their president Vince Cuker, 19W9224.

COMING EVENT—The Northeastern Michigan CB Club will hold their CB Jamboree, June 2, 1963 at Caro Gun Club, Caro, Michigan. A display of CB equipment and prizes is on the docket. Jamboree Chairman is Lester Evens, KHG5854, Cass City, Michigan.

COMING EVENT—The Cereal City Citizens Band Radio Club, Battle Creek, Michigan will also hold a Jamboree. The event will take place July 21, 1963 and to be held at Kellogg Airport Hanger #4. Committee Chairman is Don Waters, 19Q0342. The club meets the first Wednesday of the month at Post Cereals Club House at 7:30 P.M. Club paper, CB CHATTER BOX, is edited by Don Cortright, 19B0553.

COMING EVENT—The Sioux Empire Jamboree will be held at Lewis and Clark Lake, Yankton, South Dakota, June 22nd and 23rd. Chairman of the event, Clara Graham, Box 1652, Sioux City 2, Iowa.

Congratulations are in order to the North Country C-Bees, under the leadership of 1Q0407, G. Lemireand, and members of the club, who recently provided time and equipment for the International Ski Jumping Championships, held at Berlin, N. H.

Western New York Frontiermen Citizen Band Association, Inc., was formed Jan. 19, 1963 in Lockport, N. Y. President of the new club, Peter Russell, KIC-1734. First Aid, Civil Defense, aiding police, and Sheriff's Dept. plays a large part in the club.

COMING EVENT—The Wabash Valley Citizens Radio League will hold their annual Jamboree, July 14, 1963, at Turkey Run State Park, Terre Haute, Indiana. Anyone interested write: Ronald S. Divine, 501 4th Ave., Terre Haute, Indiana.

COMING EVENT—The Tri-State CB Jamboree will be held at Pleasure Isle Lodge, located in South Fort Mitchell, Kentucky, approximately 12 miles south of Cincinnati, on Highway 17, June 15th-16th.

The Delaware Citizens Band Club, Inc., Muncie, Indiana, was formed about 2 years ago. Channel Chatter

Subscription form between pages 48 and 49!

OFFICERS OF THE SEMINOLE CB CLUB, FORT MYERS, FLORIDA. Left to right: Vice president, Richard Dillon, Sr., President, Myles Collier, Jr., Past president, Bert Marvel, Sec'y-Treas. Barbara Shanaway, Past president Louis Shanaway.

is their club paper, president of the group, Leo Wood, 18Q4692.

The Steel Valley Citizens Radio Association, Youngstown, Ohio, were originated in November, 1960. The club recently helped in the rescue of a young child, whom was found. The club is planning to hold a CB Round-Up, July 20th, but this is only a tentative date. More info is forthcoming. Thanks, Ed, for the nice words about S9, we know it's the greatest. President, Bob Shephard, KHG6002.

COMING EVENT—Come one, come all and have a ball at the 1st annual WEST COAST CB JAMBOREE, sponsored by the Citizens Emergency Mobile Patrol, Inc., Brookside Park, Pasadena, Calif., June 16th.

Plans are being readied by the Hagerstown, Maryland, unit of REACT for the annual Telethon collection of contributions for the community rescue service. Last year over $300.00 was collected through the efforts of the CB operators and their mobile and base rigs for this most worthwhile organization, whose members are all volunteers and receive nothing for the wonderful service they perform for the community.

It has not been reported as yet, but in the Chambersburg, Pa., area there exists a very good CB club called the Cumberland Valley CB Club. This club handled communication and directions during their Civil War Centennial and had full cooperation from the city police. Club officers are Frank Allen, KIC0381, president and R. Wayne Kanarr, KIC0894, who fills the post of secretary.

At U.S. Army "Site B" located in Maryland, members of a local REACT team have permisison to install a CB rig on the base, but they came upon a problem. This problem turned out to be a need for 650 feet of RG-8A/U coax cable. Where are you guys putting all that cable? All CB clubs or organizations in the area of Hagerstown, Maryland, be it 5 or 50 miles, submit your CB news items to "Jim" Cross A.P.R.E. 755 S. Potomac St., Hagerstown, Maryland so we can let the rest of the nation know that CB is big around there.

President of the Trunbell County CB club, Carl Bungard, 19A5717, boast a membership of 30, and in good standing. The club meets the 4th Tuesday of each month at the C.D. Hall in Warren, Ohio.

The Carrier, club paper of The Capital District Citizens Band Radio Club, Inc. personality of the month was Elsie Leonard, 2Q4813. Elsie commonly known as "The Ridge Runner" due to her 10-20 being way up on a mountain ridge in Hannacroix.

Norwalk Citizens Band Radio Assn. club paper The Shak, reports that the Emergency Communications Net conducted its first surprise drill recently. The purpose of this drill was to determine the length of time to assemble the net in a go condition. Members of the net were instructed to assemble in the Stop and Shop parking lot on West Ave., Norwalk. The length of time it took to assemble was a surprisingly short eighteen minutes with a turn out of twenty members.

The Silver State CB Assn. will start the First Aid course very shortly. Fred Keiper, KGD0480 will be their instructor and mentor. This is something that can be of invaluable use to each and every one of the members. Editor of their club paper, who monitors channel 9 is John W. Riggs, 12Q3211.

Coffee breaks for the 10-99 Club, Orange County, California, are held at the Copper-Penny, Metcalf Plaza in Orange every Monday night at 8:00 P.M. See you all there.

The Tri-County Emergency Communications Net, Inc. of Dover, N. H., is rapidly becoming C.D. minded, and at the same time they are pleased to report that communications can be established from Portland to West Epping, using Dover as a pivet point. Branching out to Barringten and into the Berwicks it seems that it won't be long before Tri-County can present themselves to any local or state official and have it be known that they have complete coverage of three counties by rapid Citizens Band radio.

COMING EVENT—Their Annual Get Together—"Break Break Jamboree," June 2, 1963 at the Exposition Gardens, Peoria, Ill. The event is sponsored by the Illinois Valley Citizens Band Club, Peoria, Ill., starting time 7:30 A.M.

From the South-Eastern Pennsylvania Citizens Radio Club comes the news that a pavilion in Hershey Park, Hershey, Pa. was going to be reserved for them in the month of June. What, another Jamboree or ??? Let's hear more on this Chet.

COMING EVENT—1st Annual Massachusetts State Jamboree, to be held Sunday, July 21, 1963 at the Conny Outing Grounds—Monnoth Rd., Dracut, Mass. The Jamboree is being sponsored by The Five Watt Whips of Lowell, Mass. For mobile directions monitor Ch. 5-9 or 11.

The Kickapoo 5 Watter News is edited by C. Leon Swinford, KHA9496, of Danville, Ill. The first meeting of the clubs auxiliary was held recently, with 23 members attending. Elections of officers was held in March. "Ladies," please come to order!

Sixteen Bingen and White Salmon CB'ers who are members of the Skyliners Mobile Radio Club, Bingen, Washington have made plans to serve Goldendale, with their equipment when emergencies arise. The Group met at the Sheriff's office, with Deputy Sheriff Harvey Martin, presiding. George Roberts, Jr., president of the newly formed group was spokesman for the club. He stated that the group could have 23 two-way radio sets in operation within an hour's time, many of them in vehicles which could be stationed wherever communications were needed.

President of the Tri-County Citizen Band club of St. Louis, Leonard Morris, was presented a Philmore rig and a Colinear Highgain antenna. The club covers a large area in Michigan and has a very large, active membership. One hundred was present at their recent meeting.

The efforts of a blind CB'er, Leonard Morris, President of the Tri-County CB club, was sent out over the air and was picked up by Jerry Dayman, of North Star, in which to obtain a dog for a four year old child, who is stricken with leukemia. The dog was delivered to the boy as a Christmas present.

President of the Citizens Radio League of Northlake, Ill., Ralph Nelson, 18W3943. On May 25th the club participated in a Boy Scout Canoe Marathon on the Des Plaines River. A group from the Racine (Wis.) CB Club was headed by Roger Tischendorf, 18A8858 who spoke and answered questions on CB'ing in Racine.

Correction: President of the Mountaineer CB club of the Cumberland, Md., area is Art Asenfelter, KCF0549.

A new club organized on March 18, at the Somerset County CB club, is headquartered in Somerset, Pa. The club has a membership of 30, and meets at the home of Val Narad, KIC7276, who is president.

The Orange County 10-99 Club of 301 Mesa Dr., Costa Mesa, Calif., would like to exchange club papers with clubs throughout the nation and form a chain of "hands across the country," encircling CB'ers everywhere. Any club interested contact: Joy Lefever, at the above address. QRM is their club paper.

COMING EVENT—The Tri-Valley Radio Club, who has one successful event under their belt is planning

one for July 20th. The Golden State CB Council has asked for an overnite CB Jamboree to Sequoia National Park. Should be a real blast.

Marine Watch has officially started as of March 16th, on Ch. 13 and with your help they can make it a success. All interested should contact Snapper, KEJ3867. Channel 13 is being used all along the California coast for MARINE WATCH STATIONS. The article should credit the 11-27 Club of California.

The Citizens Radio Club of Johnson County, Ind. is growing by leaps and bounds, membership at 31, the club is starting a code training course. The club was highly praised and commended by the area C.D. during the recent flooding of a four county area during the heavy spring rains. The club continues to police its members in proper radio use.

The Greater Chattanooga Citizens Radio Club has been in existence for only a few months and its aspects are looking good. Club members are in the process of organizing a Rescue Team and starting their First Aid Course. The community has recognized the GCCRC as a great aid to civic affairs in its two-way radio assistance units. The club has set Ch. 7 as the standby for all units in time of need. Hats off to Dennis Corbley, KDD0577 and Dale Selvidge, KDD5751.

El Camino Real Citizens Band Radio Club held their usual Saturday night "Coffee Break" at the Colonial Pancake House (free plug), in Duarte. Despite very bad and rainy weather they had a wonderful turnout. The Orange County REACT club had a delegation of 8 cars that traveled 40 odd miles to surprise them. Members of the 11 Meter League from Bell Gardens and groups from Whittier, Pico Rivera (Hi Bob) also braved the inclement weather to enjoy the "Coffee Break."

If anyone wants to know how to start a successful CB outing and picnic, let them contact Snapper, KEJ-3867 in Ventura. He is Chairman of the California Citizens Band Coordinating Council, and with the aid of his gang, man did they put one on.

One of the major events of the Santa Barbara CB Radio Club was a caravan trip to Nojoqui Falls near Solvang, Calif. Good report on this trip in their club paper, CB FLASHES.

The San Pedro unit of REACT—S.W. Los Angeles County does not have a club paper as yet, but never the less they have made great progress, in the short time they have been reorganized, in becoming an organization which will be an asset to their community. The REACT club held a disaster drill recently to prove their ability to monitor and stay on the air, completely portable, for a minimum of 24 hours. They had a good turn-out and the drill was a complete success. R.M.F.

The 3rd Anniversary Banquet of the Lycoming CB Radio Club will be held June 8, 1963, at the Republican Club. Fred Hardt is head of the dinner committee. The club recently held a successful Area CB Turkey Banquet at the Sunbury Social Club. Editors of their club paper, LYCO CB NEWS, Les Gruver, 3W-1027, and Bob Ott, 20W5796.

COMING EVENT—Week-End For CB'ers, to be held at the Huron County Fairgrounds in Norwalk, O., August 24th and 25th. They are planning two afternoons of entertainment in the grandstand with equipment demonstrations in the exhibition hall, also a dance to be held on the grounds Saturday night. The group is better known as the Firelands Citizens Band Emergency Net which is under the direction of Huron County Sheriff's Dept. The net in the past 6 months has grown from their original 35 members to 108, who very adequately cover Huron County.

The 19-20 CB Club, the areas first CB Club is under new management. Elected President of the club was Ed Coulter, KIC0187. Several of the members recently installed a Magnum on the roof of St. Francis Hospital, Pittsburgh, Pa. One of the members, Lou Ecker, KIC3227, will be confined there for the next several months and his CB rig is helping to pass the time of day. Any CB'er from the Sharon, Pa., Warren, O., area is welcome to attend their meeting, held the first Thursday evening of each month.

One more CB Club paper to add to the ever growing list is the South-Lynd, club paper of the South-Lynd Radio Club. Should be a good one! How about the Radio Theory Notes on the back page—good idea.

A recently formed CB club, The Pikes Peak Area Citizens Band Club, Colorado Springs, Col. had its first meeting on March 24th. President, John P. Schaefer, KCG0481 and Secy., Bill Godsey, KFD0821, states that any CB'ers coming through the Pikes Peak Area —Channel 11 is monitored 24 hours a day.

Newly elected president of the Seminole CB Club of Fort Myers, Fla. is Norman Jobes, KDH2066. And a special meeting yet!!!!!

Radio Station WALE devoted ½ hour to the Fall River Channel Wizards—CB Club for a question and answer period, which was by phone. President and VP are Jim Mello and Dick Cutting.

The Bristol County CB Radio club of R.I. continues to help Bristol Police by reporting accidents and fires. One local patrolman said that CB'ers are thicker than flees—they sure help with assistance and direct traffic when necessary.

The regular meeting of the Tri-State Joint Conference of Citizens Radio Service Club was held on Sunday, March 17, 1963, at the YMCA Building in Bulter, Pa. with the CB Rangers serving as the host club. CB Rangers President Frank Gibson, extended a warm welcome to the representatives of the various clubs attending on behalf of the CB Rangers. Host club for the June meeting will be the Alleghany Valley Citizens Radio Club, Pittsburgh, Pa. Chairman of the Tri-State Joint Conference is John King, 20W4008.

The CB Social Club of Buffalo, N. Y., handled the communications for the St. Patrick's Day parade. Their main job was to help control the flow of parade traffic and relay messages from the reviewing stands spread along the route. Doctors and other emergency units were kept in contact and could be dispatched to all points at the time they were needed, thanks to the help of CB radio. Communications were arranged by President, Wess MacDonald, 20W5301 and club members.

Sam Pedone, KIC4175 and Ray Roeder, KIC3590, of Buffalo, N. Y., wishes to thank Steve Klena, KIC0383, of Johnstown, N. Y. and Ward Marriott, KIC1011 of Rome, N. Y. for their great and unbelievable relay. An important message was relayed 150 miles.

COMING EVENT—The Wayne County Citizens Radio Assn., of Wooster, O., is sponsoring a Jamboree and Picnic, Sunday, June 16th, from 10:00 A.M. till ???. There will be door prizes every hour, swap shop, and QSL card exchange. Interested parties should contact: Willard Dye, Wayne County Citizens Radio Assn., R.D. #3, Dooster, Ohio.

Another new club—Susque CB Radio Club, Pa., is a social club. The unit has provided communications for parades, fairs, regattas, etc. The club stresses social rather than business end of CB. Chairman is Robert C. Ott.

COMING EVENT—The Springfield CB Radio clubs will sponsor their first annual dance and Jamboree on June 29th and 30th. The place: New Berlin Fair Grounds, Ill. Monitor Ch. 9 and 11.

COMING EVENT—The Sedalia Citizens Band Radio Club Jubilee will be held all day Sunday, June 30, 1963, in the Agricultural Building on the Missouri State Fair Grounds, Sedalia, Mo.

COMING EVENT—The Otter Valley Citizens Radio

Club will hold the Vermont CB Jamboree, June 9, 1963.

COMING EVENT—The Fairfax-Prince William CB club has a tentative date of Sunday, July 21, 1963 for their Jamboree. The site has not been found yet, but more info will be in the July issue. Look for a real blast here.

Telstar Radio Club, Clarion, Pa. The club presently has a membership of thirty and have been meeting twice a month to keep the interest alive. Their meetings generally are held the first Friday of each month, and all are invited. President of the newly formed club is Gail B. Hall, KIC1403. Good luck, boys.

COMING EVENT—The Southern California Citizens Band Assn. (11W Club) is sponsoring a CB Jamboree, June 1st and 2nd. The event will be held at the Blue Jay Lodge, Mt. Laguna. The lodge is in the Mt. Laguna Recreation Center.

COMING EVENT—The Annual Convention of The Virginia State Citizens Band Radio Association will be held at the Jefferson Hotel in Richmond, August 24th and 25th. The committee was formed by the Richmond CB Club, Old Dominion Radio Club and the Five Watt Club to formulate plans for the convention and the first Annual Communications Trade Show sponsored by the VSCBA.

The Sociable 5 Watts Club which is active in C.D., is from Enon Valley, Pa. This is one of the largest in Western Pennsylvania with a membership of 101 at this writing. The club will hold their picnic on August 25th, Brady's Run Park near Beaver, Pa. President, Roy Shetler, 20W7473. Glad to see the old calls still around.

COMING EVENT—The Southern Tier Citizen Band Radio Club will hold a CB Jamboree on Saturday, August 3, 1963 at Ross Park, Binghamton, N. Y. Monitoring channel 11—Jamboree Chairman is Bob Reagan.

COMING EVENT—Sioux Empire Jamboree, June 22nd and 23rd, Sat. and Sun. Lewis and Clark Lake, Yankton, S. D. Rain or shine.

The Delaware Valley Citizens Radio League has announced the winner of their club newspaper contest which was President Sid Stokes, 3Q1079. Sid came up with the OVERTONE. The DVCRL OVERTONE.

CITIZENS RADIO ASSOCIATION, of Hastings, Neb. is a well organized, well attended, extremely active and harmonious association. Their membership numbers about 40 and is still growing. They maintain a 24 hour monitoring station which is presided by an invalid woman who is a well known and popular citizen of their city. Through this monitoring station they have frequently aided in emergencies in a 30 mile area. The association monitors channel 15 exclusively as is the practice in the area and are pleased to assist travelers who drive through that part of the country.

The El Camino Real CB Radio Club of the San Gabriel Valley, Calif. reports that Dan Pollock has been elected president. The club has been reorganized since Oct., 1962, and report a constant growth since. They meet the 4th Thursday of each month at 250 East 1st Street, Azusa, Calif., 8:00 P.M. Folder getting bigger, Bob. So is you know who.

Roger Eder, 18Q6179 was elected to the office of chairman for the second time of the Citizens Radio League of Chicago. Jake Wolf, KHA8836 will be officiating as vice-chairman for 1963. Looks like every issue of the 7 page newspaper we see the name of Sue Peterson, 18Q8375. Fine job, Sue.

The CENTRAL PENNSYLVANIA CITIZENS RADIO ASSOCIATION of Harrisburg, Pa., received Certificate of Appreciation and letter commending them for the very fine assistance which they provided the Marine Corps Reservists of Harrisburg in conducting their annual 1962 Christmas collection of "Toys for Tots."

Members of the Broward Citizens Radio Club, Fla., have been invited by Lt. Col. Mel Weiser, Civil Air Patrol Commander of the Carol City Cadet Squadron to attend an open meeting in the near future of the organization.

"The Carrier," club paper of the CENTRAL SOUTH CAROLINA CITIZENS RADIO CLUB, was founded the 1st of August, 1962, for the entertainment and information of the members and other interested persons. The newspaper is published by and for the members of CSCCRC to be distributed during the meeting which is held the second Friday of each month. Editor of the fine paper is Eddie Crisp, KDB2168. President is Howard Doble, KDB6084.

An idea, hard work, cooperation, and worthwhile goals, dissatisfaction of social and click operated organizations, eight CB'ers formed the nucleus of Atlanta's first and largest CB club. Atlanta CONTAC Radio Assn. Its name reflecting its goals and objectives, Communications Of Necessity To Aid Citizens. CONTAC became the first and is the only CB club in the Atlanta Metropolitan Civil Defense. Under the direction of Major Herbert Connor, CONTAC participates in regular C.D. drills. When the local Red Cross Chapter sponsors a blood drive the members of CONTAC provide transportation for the donors. Atlanta CONTAC News, is their publication and is a pet project with all members. President of the group is John Cowart, KDB5986.

COMING EVENT—CB Rally, sponsored by the KYOVA Citizens Radio Club, of Huntington, W. Va. will be held June 20th, Camden Park, Route 60, West end of Huntington. Monitor channel 11, for directions.

The Grand Canyon Radio club president for 1963 is Jim Bailey, 11W1543. The club monitors channel 9, and assist travelers, accommodations or read information 24 hours a day. Direct connections with the Park Rangers are available for all law enforcement matters and group travelers are requested to use other channels for their intercommunications after 9:00 P.M. and before 8:00 A.M. so that channel 9 could be available for emergencies.

COMING EVENT—Greater Youngstown CB Roundup will be held at the Mobile Rod and Gun Clubhouse, Route 224, July 21st. Seven CB clubs in Eastern Ohio and Western Pennsylvania are participating. All CB'ers are welcome.

The REACT of South Western Los Angeles County, held a portable unit disaster drill in March, and despite stormy weather, the turn out of members proved that the membership was more then ready to aid in any emergency. The monitoring operation was highly successful and under the guidance of Tony Cardenas, Communications officer, the drill was unbroken for a full 24 hour test. The officers of the unit thank all the many members that turned out to do their share of the monitoring. The club meets the first Saturday of each month at the international House of Pancakes in the Del Amo shopping center, Torrance, Calif. A club book is now ready for distribution to members at the time that April dues are collected. The book contains constitution and By-Laws, 10 Code, Emergency phone numbers, etc. The Preface in the book is a masterpiece and reads like the work of Bill Carpenter, KEJ0668—Sec.-Treas. of the REACT unit. The committee of Tony Cardenas, Dave MacTaggart and Grif Chase is working hard on the details for the units participation in the Armed Forces Day Parade. Sounds like a winner too.

Members of the Santa Cruz CB Cruzers held a pot luck picnic at Mt. Madonna State Park, March 24th. The affair attended by approximately 150 people was an overwhelming success. CB'ers from San Jose, Salinas, Monterey, Watsonville and other nearby cities were well represented. The event provided a pleasant get-together and helped to further comradeship of CB. Congratulations are in order to the committee for the effort put forth in promoting a successful affair.

From the Garden State Communicators, Inc. Metuchen-Edison, N. J. area comes the news of 31 active members led by President Bill Inkrote, KBG2064. The club recently held a mobile run to the Shartlesville Inn, Pa. The group is planning a family picnic and mobile run to Surprise Lake in the Watchungs in early June.

The Mascoma Valley Emergency Communications Team held its first practice on April 7th. The exercise, involving 10 mobile units and a net control, proved how fast REACT could respond to most any situation. Richard Blain, KBA9421, coordinator, working with President Dick Peck, 1Q2290, operated the net control and dispatched mobile units to various points, sealing off the town of Enfield. The exercise was followed by their regular monthly meeting.

Recently the CEMP of California, attended as guests the monthly meeting of the Tri-Valley Radio Club at Thousand Oaks. The Tri-Valley is also an emergency group and operates as a unit REACT.

The Lawrence County members of the Tri-County Citizens Radio Club were on hand at the National Guard Armory to offer their assistance to the Red Cross Blood Bank. Each member of the club was used to help speed up the transportation of donors to the Armory. Units were stationed in downtown Bedford, the shopping center and at the North End Fire Sta-

Continued on page 59

WASHINGTON OUTLOOK

by EDWIN FREDERICK, 2W4580

A 21 year old man in Racine, Wisc., who last March 18th voiced a false "MAYDAY" distress call on 11 meters was sentenced to 21 days at hard labor in the Racine County Jail by County Court Judge Thomas Corbett.

The jail term was ordered for John R. Jacobs after he pleaded guilty to a charge of disorderly conduct after having been arrested by the Racine Police.

According to the District Attorney, Jacobs made a call from the mobile CB rig in the car of his 17 year old companion. The rig was licensed to the 17 year old's father and the auto likewise. Jacobs radioed that a plane was in distress at 300 feet and was coming down fast over lake Michigan shortly after Noon. The call was heard by a CB'er who relayed it to the authorities, said the D.A.

As a result, Racine police and Racine County sheriff's deputies, as well as private individuals were called upon to patrol the lakefront while airport officials in Racine and Milwaukee were notified of the call.

Jacobs said that his younger companion told him that the "emergency frequency" of the CB rig wasn't in working order before they made the calls.

After someone answered, Jacobs said his companion turned off the rig and said "we could get in trouble for this." Jacobs said that he then wanted to notify the authorities that there was no plane in distress, but that his companion told him not to.

The Judge, reminding Jacobs of the boy who "cried wolf," said that there was no way of estimating how many future distress calls will go untended because of what Jacobs did. He said that he could understand the two making the call while thinking the equipment was not operating, but said the serious thing was that they turned the rig off when they knew that the message had been received.

Police Chief LeRoy Jenkins said that the FCC had been given the identity of the 17 year old who accompanied Jacobs.

We are indebted to S9 reader C. H. Jackson, KHA0414, of Jackson's Drug Store in Burlington, Wisc. for this interesting item. Thanks Mr. Jackson! With the vacation season just starting we hope that our readers will see the moral in this story.

We understand that the new FCC CB license application forms will be slightly delayed and that their new estimated time of arrival will be in the Autumn, not early in July as previously announced.

This month's FCC actions totals a whopping 30, a sharp rise. Here are the CB'ers who ran into FCC snags:

2A5949, James E. Feyko, Middle Village, L. I., N. Y., hearings terminated and certified to Commission on whether license should be revoked.

2Q3700, Main Auto Wreckers, Avanel, N. J., hearings terminated.

4Q0384, Peter A. Lindquist, Morgantown, W. Va., given Show Cause notice.

6Q1466, Stanley Hash, Bristol, Tenn., hearings terminated.

9Q0034, C. H. Crubb, Houston, Texas, given a Show Cause notice for repeated failure to respond to official notices concerning alleged violation of rules 19.24(a)(1) and 19.62.

10W3377, James Helton, Hooks, Texas, license revoked for alleged violations of rules 19.33.

10W3878, Rosemary E. Thompson, El Paso, Texas, given a Show Cause notice for alleged violation of 19.61(f)—overtime talking.

11Q0250, Albert P. Maurer, Santa Ana, Calif., given a Show Cause notice.

11Q1170, Gary D. Aston, Hollywood, Calif., hearings terminated.

11W2207, Addison B. Haraldson, La-Habra, Calif., hearings terminated.

11W3782, Robert R. Adams, Los Angeles, Calif., a Show Cause notice for repeated failure to respond to official notices concerning alleged violation of rules 19.61(a).

11W8013, Thomas J. Gadd, Lancaster, Calif., given a Show Cause notice for repeated failure to respond to official notices concerning alleged violation of rules 19.61(a) —non-substansive messages.

11W8521, John Stewart, Los Angeles, Calif., license revoked for failing to reply to official correspondence concerning alleged violation of 19.61(a).

13W1064, Walter T. Mabe, Toledo, Oregon, license revoked for repeated failure to respond to official notices concerning alleged violation of rule 19.61(a).

18A6870, Glen L. Davis, Chillicothe, Ill., licensed revoked for repeated failure to respond to official notices concerning alleged violations of rules 19.61(a), 19.62, 19.72(a) and (b) plus 19.92.

18A6916, Maywood Garage, Hammond, Ind., terminated its hearings on license revocation and turned over results of the hearings to the Commission.

18W5046, Robert C. Berry, Jeffersontown, Ky., terminated its hearings on license revocation and turned over its results to the Commission.

19A4476, Ray Walter, Delta, Ohio, hearings terminated.

19Q6185, Woodwards Party Store, Lake Orion, Mich., hearings terminated.

19W2051, Garner D. Barker, Charleston, W. Va., license revoked for repeated failure to respond to official notices concerning violation of rules 19.61(g) and 19.62.

KBG3066, Marc L. Feld, Brooklyn, N. Y., given a Show Cause notice for repeated violations of Section 308(b) of the Communications Act and rule 1.76.

KDB3880, Israel Snyder (doing business as Coastal Cab Co.), Savannah, Ga., was given a Show Cause notice for violations of Sect. 308(b) of the Communications Act and rule 1.76.

KDB5712, Morris J. Green, Mableton, Ga., sent a notice of "apparent liability" and imposed a forfeiture of $100.00 for repeated violation of 19.61(a)—unauthorized communications. He was given 30 days to respond.

KDH0307, William J. Sirmans, Ft. Lauderdale, Fla., license revoked for repeated failure to respond to official notices concerning alleged violations of rule 19.33.

KDH0455, Gordon Thomas Riggs, Miami, Fla., license revoked for repated failure to respond to official notices concerning alleged violations of rule 19.92.

KDH1467, Sod & Landscape Co., Miami, Fla., hearings terminated.

KED1181, Charles Lozano, Houston, Texas, the hearings on this case were terminated and the results turned over to the Commission for disposition.

KEJ0426, Sharon K. Flippen, Norwalk, Calif., given a Show Cause notice for alleged violations of rule 19.33—frequency tolerance.

KEJ4428, Dale E. Zacharias, Huntington Beach, Calif., hearings terminated.

KHG8618, Harold Polmateer, Cleveland, Ohio, hearings terminated.

Now that you've been put in such a good mood by reading these FCC actions, we'll give you something else to think about. For instance, it looks as though the Commission hasn't forgotten about their license-fee plan which they have been talking about for the past several years. We have good reason to believe that such a plan will be in action within the next 6 months to a year. Our prediction is that CB'ers will be relieved of 5 to 10 dollars when filing for CB licenses. Happy filing!

KBG4303 RIDES AGAIN

Continued from page 7

CB petitions received and asked why he "got into the act," and finally the letter ended with admonition that "in another week they [the Commissioners] will be fighting each other."

Here's how this ex-CB'er fits into the "club." He is supposed to make in-person appearances at the FCC's Washington offices to "soften up" the Commission. I've got a big picture in my mind of this hair-brained scheme actually taking place and doing all sorts of "wonderful" things for the cause of the Citizens Radio Service. This person is the ideal spokesman to represent you in such discussions.

Oh, by the way, you may have guessed that somewhere along the line money is expected to change hands. You're right. A "fund" is being established to propel the goodwill ambassador on his Washington junket.

Now, I ask you, as reasonable and ra-

Subscription form between pages 48 and 49!

tional CB enthusiasts, what impression do you think this nonsense is making on the FCC? Don't think for one minute that the men in Washington don't know what's going on —they know *everything* that's going on.

Unless you are one of these people who thinks that you can make a friend by giving a hotfoot, I'm sure that you will agree that these childish and irresponsible pranks are doing the Citizens Radio Service immeasurable harm.

This "club" proposes to expand by direct mailings to CB'ers, advertising in publications, and by agitation at local CB club meetings. This is a warning to our readers to be careful regarding the things they sign, the "clubs" they join, the causes which they support, and the purposes for which their money will be spent for them.

LONG WIRE ANTENNAS

Continued from page 21

sional looking bit of equipment.

One last word on the wire antenna itself. In general you will find that the longer the wire gets, the better your results will be, so try to dangle as long a piece as possible out the window. What with trees and the metal or your building and the buildings around it, varying lengths of wire, your own varying position in relation to the window (the closer your transceiver to the window, the better, incidentally) and any number of other factors, it is impossible to quote you any figures on performance or much of anything. But this is where you as an experimenter come in. Have fun.

PART 15 KORNER

Continued from page 43

something which we mentioned to you several times earlier. That is, be very careful that you do not use a Part 15 rig on a frequency which is in use by a Class D or Class C (radio control) station. We've had all sorts of wild and frantic letters from radio control hobbyists who feel that the 100 mw. Part 15 rigs will be shooting down their airplanes and sending their boats on the way to parts unknown. The FCC has also been brought into the act via the radio controllers' letters and asked us to re-impress upon you that Part 15 units operate strictly on a non-interference basis to all licensed transmitters.

CB CHIT-CHAT

Continued from page 56

tion. The central communications setup was located at the Armory.

The Mississinewa CB Radio Club of Kokomo, Ind. sports about 80 members and meets the second Sunday of each month. They also publish a fine club newspaper. Oh yes! President of the club is Ray Phips, 18Q1501.

Just a rumor, we hear that the Jackson CB Radio Club Inc. and the Jackson Amateur Radio Club may be joining hands in building a local headquarters for both clubs. Not just renting or leasing, but buying the land and building the headquarters to suit their needs. As you remember in the winter of 1961 Jackson had quite a flood. Local news medias accredited the Jackson CB Club for the work and effort they rendered during the crises, keeping communications around the clock. Not for personal gain, these CB'ers were doing it just for the welfare of their community. The club has just received permission to erect signs inside the city limits in which to welcome you to the city on behalf of the club. Also shown on the signs is their monitoring channels—9, 11, and their major channel 15.

New appointments this month to the APRE's—Melvin J. Baer, 18Q6133, 6429 North Glenwood Ave., Chicago 26, Ill.; Benny Bangs, 6Q4537, 506 Johnson St., Piedmont, Ala.; Thomas Arnold, KEA1660, 404 Watt St., Prichard, Ala.; Frank Karcher, Box 362, Spruce Pine, N. C.; Fred R. Wuensche, 307 East 11th, Austin 1, Tex.; Cleveland Wheeler, KDB7185, 5511 Miller Dr., Chattanooga, Tenn.; Carolyn Sturm, 19Q-1332, Columbia St., West Union, W. Va.; Theodore A. Margwarth, KHA3346, 2025 E. Spruce, Springfield, Ill.; Horace E. Lutz, Box 52, Waco, N. C.; Bill Wilks, KDD0301, 345 W. Outer Dr., Oak Ridge, Tenn.; E. R. Bailey, KID0987, 745 Dutch Lane, Sharpsville, Pa.; and who can top this

S9 LAB REPORTS

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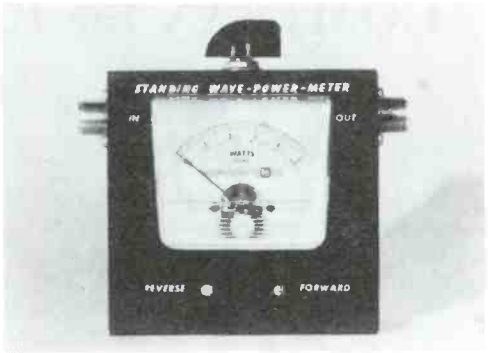
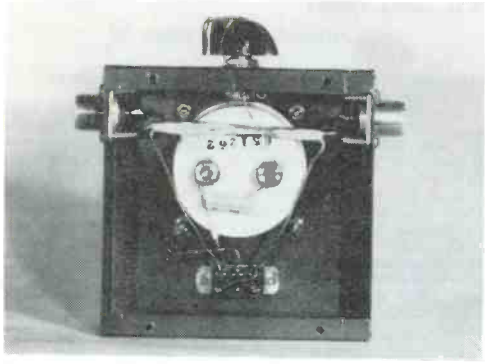


Front view of the Biggs Standing Wave-Power-Meter. The left coax connector (IN) goes to the transmitter; the right connector (OUT) is connected to the transmission line. The top control is used to calibrate the meter. Slide switch marked REVERSE-FORWARD is used when making SWR measurements.

self. Chances are there is a *mismatch* between your antenna and transmission line. This causes some of the energy sent to the antenna to be returned to your transmitter. Standing waves result in the line and insufficient power is radiated.

One can measure the amount of power sent to the antenna (forward power) and



Rear view (with plate removed) shows the construction of the device.

the amount returned to the transmitter (reflected power) by an SWR meter. When all the power gets to your antenna (which is the objective) the standing wave ratio (SWR) is said to be 1:1. If the SWR is much greater than 1:1, the radiated power drops off.

The Biggs Associates, Inc. Standing Wave-Power-Meter is designed to measure directly the SWR as well as the approximate power output. The meter may be permanently connected between the output of the transmitter and transmission lines. This device absorbs practically no power in its operation. The Biggs unit is made for a 52 ohm antenna system.

Serious minded CB'ers will find this meter to be an excellent investment. They will always be made aware of what is taking place in the antenna system and be confident that all the power is getting out. The meter may be used in both fixed and mobile operation. A 1-page sheet provides clear instructions on the use of the device.

Biggs hangs out their shingle at 1328 Pulaski St., Peru, Ill.

ANTENNAS

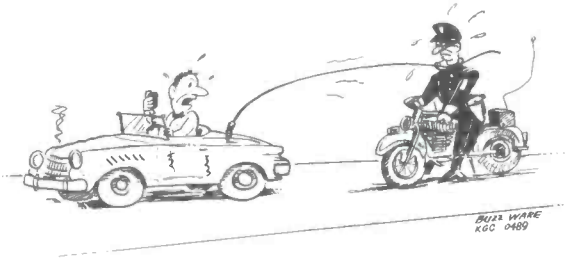
Continued from page 46

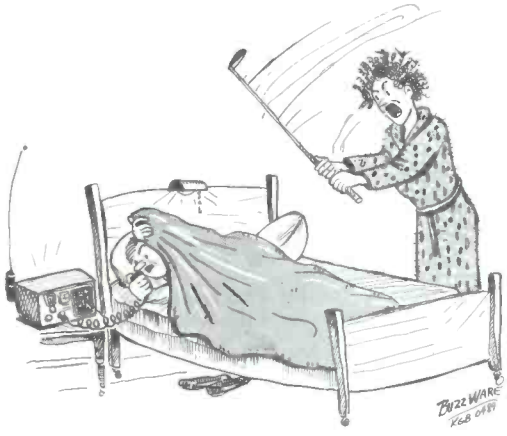
If the transmitter output circuits are rather versatile in their output range an antenna with indefinite impedance characteristics can be loaded rather well. Its performance will be comparable to other types.

However, if the antenna characteristics deviate considerably from the 50-ohm resistive value and/or the output characteristics of the transmitter cannot be changed significantly from the 50-ohm resistive value, optimum performance cannot be obtained. If performance is very poor, it is sometimes advisable to choose another mounting position on the car.

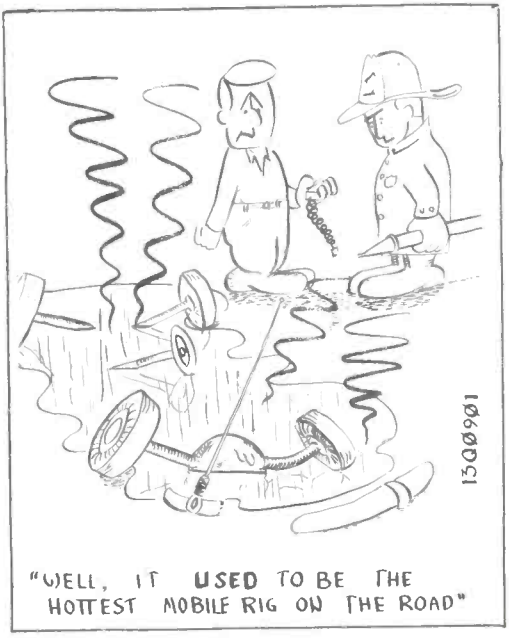
CB CHUCKLES

"How's it look from your end, Ed?"





"Yes, I've got a little local QRM here."



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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.

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

WALKIE-TALKIE RADIOS: CITIZEN BAND EQUIP.; INTERCOMS; RADIO-TV PARTS—FREE CATALOGUE—ALLEN ELECTRONICS, 4142A Main, Flushing 55, N. Y.

SELLING Antique Wireless Radio Collection; getting too old to continue collecting. Terrific Hobby for Citizen Bander. Details, lists, for large stamped addressed envelope and 5¢ Stamp. Hurry! W6LM, Wrightwood 308, California.

QSL CARDS, 100 for $3.00. Samples 25¢. Redbird Printers, Freedom, Indiana.

T-N-S MOBILE NOISE ELIMINATION—No coils, uses 6AL5-15AX7! Schematics, parts list, step-by-step instructions $1.00. FRANKEL, Box A-142, Wantagh, New York.

CB QSL Cards. New, Kute, Klever, Komical designs. Some low as $1.80 per 100. Brilliant colors including beautiful silver and gold. Samples 10¢. M. Hellwig, Box 425, Lake Wales, Florida.

CB QSL CARDS—100 two color $3.00 postpaid, samples 10¢. Rusprint, Box 7507, Kansas City 16, Missouri.

$10 DOWN DELIVERS your CB equipment with 12 to 24 months to pay balance. This month's specials . . . RG8/U coaxial cable only 7¢ per foot (FOB New York) . . . also, any CB transmit or receive crystal, for any type of CB transceiver . . . $2 each. Include 25¢ additional with order for postage and handling of crystal. House of Sound, 2119 Starling Avenue, New York 62, N. Y.

Free Samples CB QSL Cards $2.50 per 100 in 3 colors. Garth, Jutland, New Jersey.

CB - HAM - QSL - EYEBALL CARDS. Samples and Price List 20¢. Dave, KHG9638, Box 41, Waynesville, Ohio.

QSL CARDS. Many sharp, cartoon designs . . . send for FREE brochure. F. B. Mathews Printing & Advertising, 1616 Rural Street, Rockford, Illinois.

MODULATION BOOSTER—It's new! It's terrific! As much as doubles your transmit and receive range with no violation of FCC power requirements. Compact, easy to install, with instructions. Net $14.95. Dealers write too. ROKO Products, Inc., Box 3766, Baltimore 17, Maryland.

ANTENNA SWITCH—Operate one CB on two Antennas or two CB on one antenna. Attractive stainless steel, Takes PL-259 plugs. Net $7.95. ROKO Products, Inc., Box 3766, Baltimore 17, Maryland.

TWO L2000A Lincoln Transceivers, A-1 Condition 3-watts output. $50.00 each. FOB, Ira Lee, Henagar, Alabama.

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

WANTED: CB TRANSCEIVERS. CASH WAITING. STAN KRZAK, PAWTUCKET, R. I.

CB REPAIRS—CALIBRATION, reasonable prices, FCC licensed technicians. ELECTRONIC SPECIALTIES, Box 13, East Patchogue, N. Y. ATlantic 6-9467.

CREATIVE CBL CARDS—Free, new catalog and samples. Personal attention given. Wilkins Creative Printing, P.O. Box 1064-9, Atascadero, California.

CB-QSL's over 100 designs, samples 10¢. Roger K0AAB, 961 Arcade, St. Paul 6, Minn.

FOR SALE—General MC-5 CB Unit, Complete —22 Transmit & 3 Receive Xtals. 2 power cords —Mobile Mounting. $225.00—Postage Pre-paid in USA. Mr. Stanley Schneider, KBG6254, 754 Bronx River Road, Yonkers, New York.

CB-QSL Cards — Brownie — W3CJI/3W1974 — 3110—D Lehigh, Allentown, Pa. Catalogue with samples 25¢.

New "Audio-Aid-All" Clipper-Filter kit, fits any transceiver, boosts modulation aids reception, $10.99 complete. 29" Hy-Gain Omni-Topper, $10.97. DP-2 BC/CB Antenna Coupler-Duplexer kit, $4.99 New. Revolutionary Noisejector, NJ-7, $4.49. Postpaid! Free kit list. HOLSTROM ASSOCIATES, Box 8640-S, Sacramento 22, California.

Heathkit owners, our preamps double reception! SK-3 Preselector kit fits GW-10, GW-11 $8.99. SK-4 Preselector kit fits inside GW-12, $8.99. Wired, $11.99. Postpaid! HOLSTROM ASSOCIATES, Box 8640-S, Sacramento 22, California.

QSL'S, SWL'S, CB. SAMPLES 10¢, Nicholas & Son Printery, P.O. Box 1184, Phoenix 17, Arizona.

WANT A NEW CB UNIT? We will allow you up to $80 on a trade for a new CB unit of your choice. Tell us what you have, and what you want, we will rush you complete information. Dealerships available. Knox Electronic Supply, Inc., Galesburg, Illinois.

TONE SIGNALS. Legal. New "High-Level" pulse. Adaptable all units. $4.95 each, complete. Ideal Enterprises, Box E, Wessington, S. D.

IMPROVE GW-10 PERFORMANCE! — Better transmission, reception! Reduce mobile noise! Instructions $1.00, postpaid. FRANKEL, Box A-143, Wantagh, New York.

CB QSL card. Samples 10¢—MALGO PRESS, Box 375—Toledo 1, Ohio.

CB, QSL, SWL Cards that are different. Quality Card Stock. Samples 10¢ Home Print, 2416 Elmo, Hamilton, Ohio.

GLOSSY 3-color QSL cards 100 — $4.50. Free samples. Rutgers Vari-Typing Service, 7 Fairfield Road, Somerset, New Jersey.

HEAR THE WORLD! The Hammarlund HQ-170, 17 tube triple conversion receiver, with clock is for sale. It is in A-1 condition just 3 months new. This superhet. receiver lists for $369; I will accept $250. Write: Dan Parnes, 184 Huntington Terrace, Newark 12, New Jersey.

LOOKING? SHOPPING? TRADING? TRYING TO SAVE MONEY? Write Bob Graham for Special Deals on New and Reconditioned used gear. Cash or Budget. Graham Radio, Dept. E, Reading, Mass. Tel: 944-4000.

WALKIE-TALKIES, Telecon Line, Direct from Japan 100 mw and 1 Watt Units. Catalog and Order Form Airmailed. Write Rotoken Corporation, 18 Mikawadai-Cho, Minato-ku, Tokyo.

CB QSL CARD samples 25¢. Sakkers, W8DED S9 Samples, Box 218, Holland, Michigan.

S9's JUNE FRONT COVER CARTOON available on QSL cards from C. Fritz, Box 1684, Scottsdale, Ariz. Also Rainbo calls, states maps—you name it we have it! Samples 25¢ (deductible from order). Get yours now!

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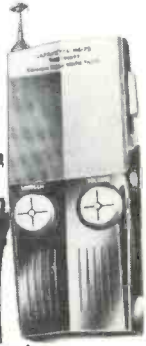

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