REACT ADOPTS CHANNEL 9 OFFICIALLY! P. 26

S9

DECEMBER 1964

50c

the citizens band journal

FCC FUNNIES

CB MOBILE — WHAT?

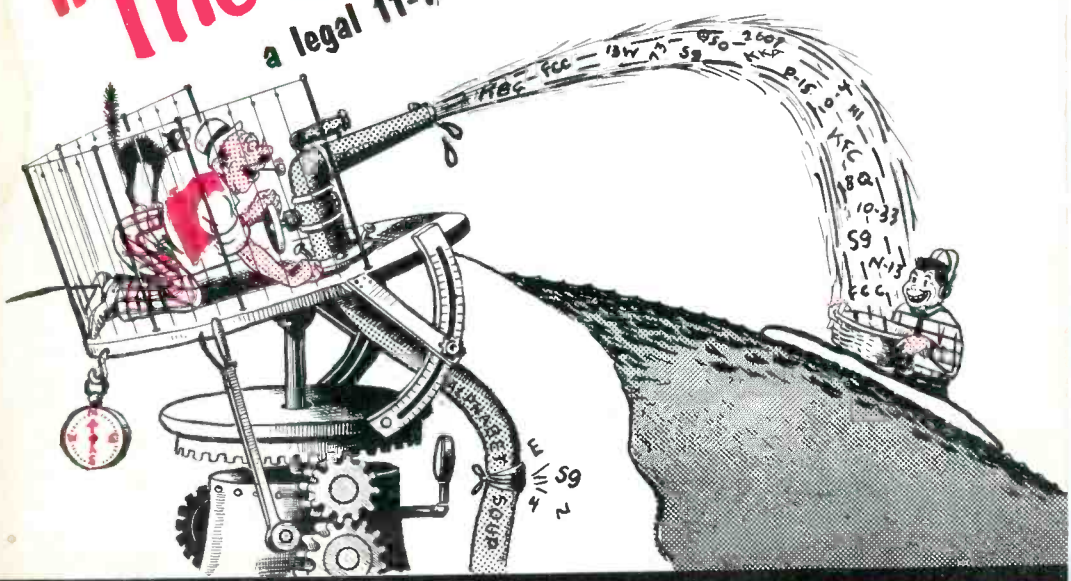
1 TUBE CONVERTER

THE "CHIRPER"

A CB CHRISTMAS

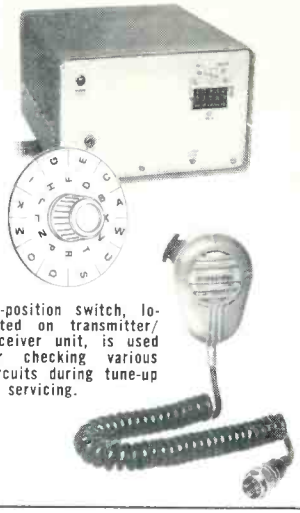
"The Signal Squirter"

a legal 11-1/2 watt signal for $6.35!



The OFFICIAL CB RADIO MAGAZINE

Remote Console



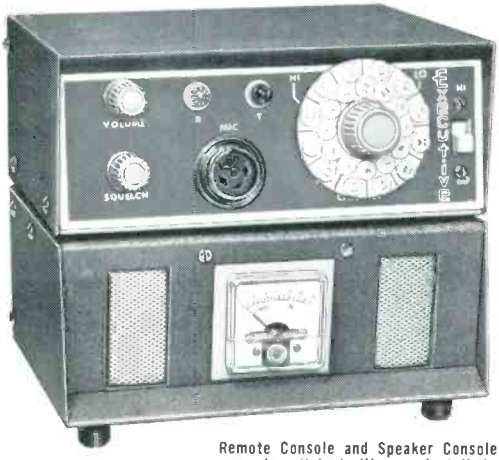
24-position switch, located on transmitter/receiver unit, is used for checking various circuits during tune-up or servicing.

International Executive 750-HB2

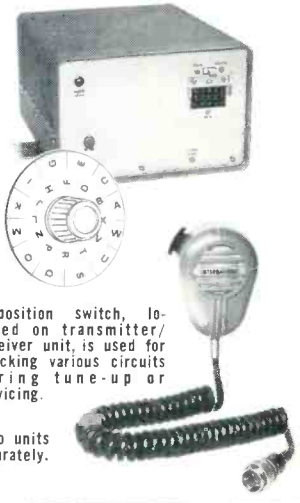
introducing

(with Built-in Test Circuits)

International Executive 750-HM2



Remote Console and Speaker Console. Two units may be "stacked" or installed separately.



24-position switch, located on transmitter/receiver unit, is used for checking various circuits during tune-up or servicing.

It's totally new . . . a Citizens Band transceiver with built-in test circuits. Now at the "turn" of a switch, located on the transmitter/receiver unit, you can instantly check the operating performance of various circuits within the set. Makes tune-up and servicing easy. Checks filament, plate and input voltages, transmitter forward and reflected power, modulation, etc.

This "years ahead" built-in test feature has been incorporated into International's two new transceivers. The 750-HB2 with its functionally designed remote console* for desk-top installation, and the 750-HM2 for mobile communication. Both transceivers have 23 crystal controlled channels, and operate on 115 vac, 12 vdc, and 6 vdc.

Write for the name of your nearest International dealer. See the 750-HB2 and 750-HM2. Ask him about his trade-in / trade-up plan.

*Base station remote console available separately. Ask for RMO-24 HB2

NEW Built-in test circuits. **NEW** Delayed/Expanded AVC. **NEW** Simplified cabling. **NEW** Built-in S/Meter and Transmit/Meter as standard equipment. **NEW** Microphone with improved characteristics for better "close talk" quality. **NEW** Speech Clipper/Filter Amplifier.

TEST CIRCUITS WILL CHECK . . .

- Receiver Signal Strength And Transmit Audio Monitor
- Receiver RF Amplifier
- Receiver 1st Mixer
- Receiver 2nd Mixer
- Receiver 1st Oscillator
- Receiver 2nd Oscillator
- Receiver 1st IF Amplifier
- Receiver 2nd IF Amplifier
- Receiver Detector
- Receiver Squelch
- Receiver Audio
- Microphone Audio
- Power Audio
- Transmitter Buffer
- Transmitter Power Amplifier
- Transmitter Oscillator
- Transmitter Frequency Adder
- Plate Voltage
- AC Filament
- DC Hot +
- DC Hot −
- Transmitter Forward Power
- Transmitter Reflected Power
- Transmitter Modulation

S9

the citizens band journal

Vol. 4, No. 12

December, 1964

S. R. COWAN, KBI7182, PUBLISHER

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

FEATURES

DEPARTMENTS

STAFF

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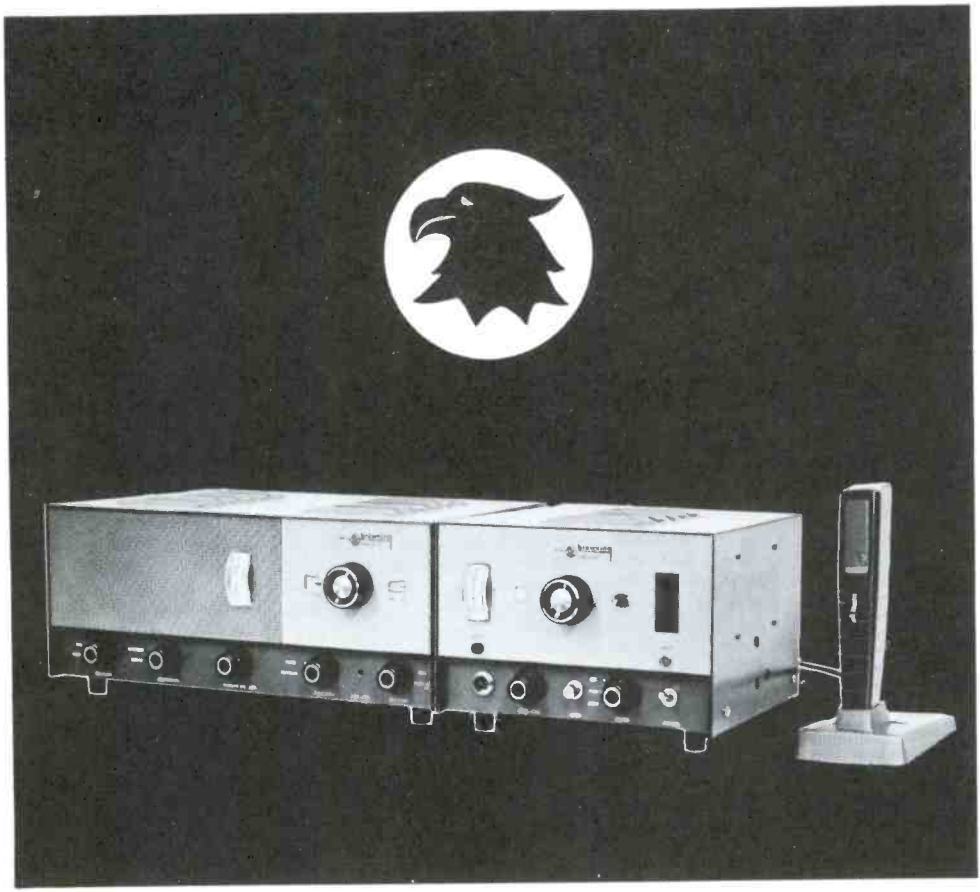

My name is Browning Eagle and I've got a secret.

Shhh! If you would like to belong to the world's most exclusive CB radio club, just write to us and we'll send complete details and a free copy of our latest catalog. Recently someone wrote and asked, "Is the Browning Eagle base station expensive?". Heck, no! Not when you consider that you're buying the best there is. Everything's built in, no extras to buy. The Eagle gives you more features than any other make. You can send and receive over greater distances on the same amount of power. It's a dependable base that will outperform the others for many years to come. Best CB investment you can make at any price. Don't take our word for it. Ask the man who owns one. Or, better still, buy a Browning Eagle and find out for yourself. And don't forget to write.

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READER MAIL

NEW RULES FOR CB'ERS?

Dear Tom:

The Editorial in the October *S9* is, generally speaking, a fine job. I won't say that I agree 100% with all of the ideas reflected therein, but I do feel that it represents some constructive thinking, and presents quite a bit of food for thought.

It goes a long way, for instance, to point up to a question that has been bothering me for some time; and I wonder if it isn't bothering a lot of other people. That is the question of the real definition of "hobby use" of the CRS. We've all been talking about it, pro and con, for some time now, but I wonder if we are all talking the same language.

It is more or less obvious, from the contents of the new provisions of 95.83 that, according to the FCC's definition, "hobby use" is any use which is not strictly necessary and substantive, to use the original terminology. This would place in the "hobby" class, as I understand it, all communications which do not specifically relate to some really necessary facet of the licensee's business, or personal activities. It would place in that classification all communications with any contact with whom the licensee had never had previous contact, and which are made for the basic purpose of exchanging QSL cards, or just for the purpose of making a new contact, on any basis. Obviously, it places in that classification all such communications as are mentioned in your Editorial like the skip-workers, Bingo players, and such, or "aimless chit-chat" as the FCC calls it.

In your Editorial, however, you speak of "the beneficial users who perform public services" as being in a class opposed to the "hobby use" class. And, again, you refer to the "commercial" users, who, in your estimation, have no time or interest for the type of emergency communications, life saving operations and road assistance work being presently carried on by the so-called hobbyists.

So doesn't it begin to look as though we actually have, in the CRS, Class D, not two, but *three* classifications of users? Don't we have, in one classification, those licensees who use their equipment strictly for business (or "commercial") purposes, with perhaps a bit of necessary personal thrown in, but, on the whole, strictly INTRA-station operation. In a second classification, those licensees who don't really have a demonstrable NEED for CB radio, but who use it, for the most part, for sensible, beneficial purposes, and, when the occasion arises, for emergency, life saving, and such. And, lastly, the "Space Cadets" as some call them, who, apparently, have no other purpose but to clutter up the frequencies with card exchanging, working skip, aimless chit-chat, and all the other things that we lump into the general category of "continuing annoyance?"

The lines of demarcation can not, as I see it, be clearly and concisely drawn to separate these three classifications. There is no question, of course, but that the last category is the one we all want to get rid of—including the FCC. But even there, it is undoubtedly true that there are many licensees who belong, for the most part, in the second category who are also, many times, guilty of belonging in the last group. I know, for instance, of several licensees in my own area who have a need for the CRS based on the fact that they do not have land telephone service. However, scarcely a day goes by but that they can be copied in a communication of aimless chit-chat, or in one for card-swapping, or some other such unnecessary and illegal type of communication.

By the same token, probably a goodly number of licensees who would belong primarily in the first category have to be classed with the second group if for no other reason than that much of their communication is inter-station rather than intra-station.

Now, whether or not I have here made an accurate, or reasonably accurate distinction among the users of CRS, I think it begins to become fairly evident that, before we go all-out on one side or the other of the "hobby use" question, we'd do well to kick this around a bit and get down to some more or less universally accepted definitions as to just what we mean when we use the term.

Perhaps it might not be a bad idea to print this letter, and either answer it yourself, editorially, or call for ideas (you'll probably get lots of them anyway) from the readers.

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

Dear *S9*,

I certainly hope that *S9* pushes an unrelenting, though dignified and legal, drive for relaxation of the new rules which the FCC wants to give to CB. I am writing to all the Congressmen from this state and I encourage your many readers to do likewise for their own states' Congressmen.

Bud Karzin, KGI4080
University City, Mo.

Tom,

I have admired *S9* since 1962 and I have read every editorial you have ever written. It thrills me through and through after reading your October editorial regarding the proposed new CB rules. I have been wondering when you would take pen in hand and really talk turkey about CB and its needs to the FCC. There must be thousands of CB'ers who have no desire to know the workings of electronic gear of any type or to know the code. They just want to be able to have reasonable and unrestricted free speech over the quipment which they purchased to operate on publicly owned radio frequencies in the "citizens" service. I wish every CB'er could read your October editorial and know that we aren't alone in our fight for fair legislation.

Jim Harris, KEE3372
Bay City, Tex.

Hi *S9!*

It would appear that the proposed new CB

Continued on page 72

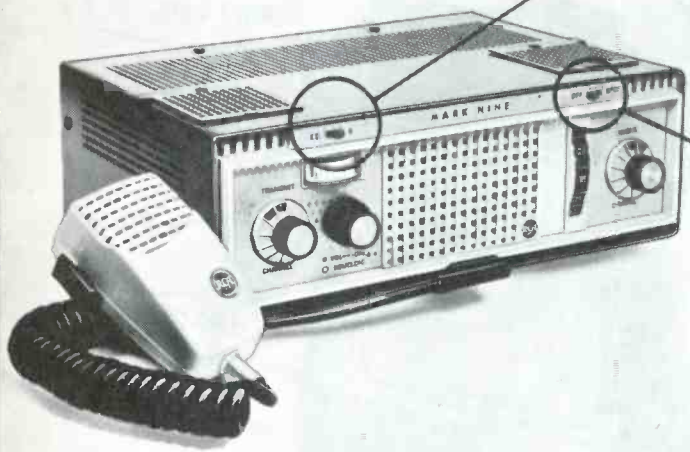
1958...the RCA Radio-Phone Series
1959...the RCA Mark VII
1963...the RCA Mark VIII

and now 1964...

THE NEW RCA MARK NINE

the latest and greatest RCA CB radio of them all

Look at some of the new features...



NEW! Combination "S" Meter and Relative RF Output Meter

"S" Meter indicates the relative strength of incoming signal in "S" units. RF Output Meter (EO) indicates relative strength of the signal being transmitted.

NEW! Spotting Switch

Permits precise manual tuning of receiver without use of receiver crystals. Receiver can be tuned (or "spotted") quickly to any incoming channel. This means, when you buy crystals for extra channels, you can (if you wish) omit the RECEIVE crystals and buy only TRANSMIT crystals.

NEW! External Speaker Jack

Lets you connect an external speaker to the set, so incoming calls can be heard in remote locations.

RCA, a pioneer in the development of citizens' band radio, has been providing quality equipment since the inception of the Class D Citizens' Radio Service in 1958. Now, these years of experience culminate in the great new RCA Mark Nine.

- 9 fixed crystal-controlled TRANSMIT/RECEIVE channels, separately controlled
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Please send more information on the RCA Mark Nine CB Radiophone

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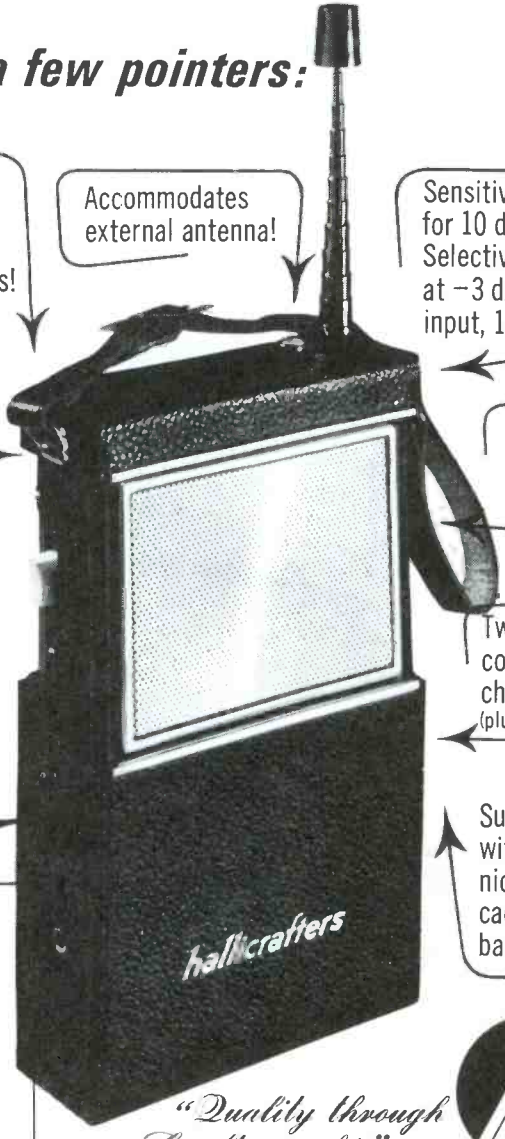
Looking for superior performance in a two-channel, hand-held transceiver?

Here are a few pointers:



Designed for rugged industrial use yet weighs only 2½ lbs!

Accommodates external antenna!

Sensitivity, 1 μv for 10 db. S/N . . . Selectivity, 6 kc. at −3 db. Power input, 1 watt.

Adjustable squelch control

Jack for external speaker!

Complete with battery charger, leather case!

Two crystal-controlled channels! (plug-in crystals)

$99.95/each

Supplied with 500-hr. nickel cadmium battery!

CB-6 100 mw. $59.95 each

CB-11 100 mw. $79.95 pr.

Write for full specifications.

"Quality through Craftsmanship"

CB's hallicrafters

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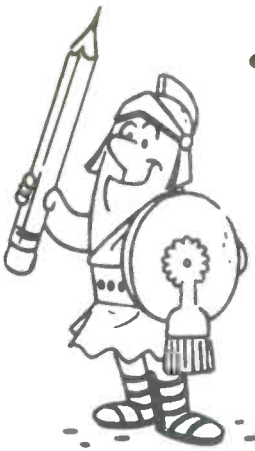


editorial

KBG4303 rides again!

by TOM KNEITEL
EDITOR, S9

WEAK LITTLE MINDS

It would certainly seem time enough for the small (but noisy) fringe group in the ham radio fraternity to recover from the shock of losing the 11 meter band to the Citizens Radio Service. After all, last September made 6 years that the FCC established Class D CB on 11 meters, taking (in turn) the band away from the hams. The CB'ers didn't ask for 11 meters, the FCC decided (on their own) that CB should be located on 11 meters for reasons known only to themselves. Of course, the fact that the hams didn't bother to fire up their rigs on the 11 meter band when it was theirs probably was a deciding factor somewhere along the line. Personally, I think that 11 meters was a rotten band to be selected for CB if the FCC really expected it to be used for *short* distance communications. It should have been located somewhere above 200 megacycles.

Nevertheless there are those hams who now take violent personal offense to anything which has to do with CB. Awfully unsporting, I think, for these fellows to condemn all CB'ers for something over which the CB'ers had no control.

As a result of this hostility, many CB'ers have had no opportunity to see the potentialities of ham radio for their own interests.

While it's wonderful for hams to arrange for drugs to be flown halfway around the world, for them to freely give their time and equipment to public service ventures, and for them to experiment with new communications frontiers, perhaps the small, warped, and violent contingent might care to *join the living* in accepting CB as another radio communications service—if not one of equal interests, at least one of equal stature. At any rate, not as something to be ridiculed without cause or reason. Not as a depository solely for sub-normal beings.

While many of the most violent oddballs and creeps in this small segment if ham radio have elected themselves both goodwill ambassadors to the world and seers to the ham fraternity, they have certainly bombed out with several hundred thousand CB'ers and with mature and responsible ham operators. They don't realize that the FCC was going to take away 11 meters even if the CB service was never created. Come on fellows, why not throw in the towel—get off our backs. The CB'ers have never had anything against hams, regardless of the things said against them. Are these weak little minds in ham radio's outer limits just looking for something (anything) to bellyache about?

THE ENEMY WITHIN

As reported last month in S9, the FCC delayed implementation of the new CB rules because of several petitions for reconsideration. Any new rules which might bear upon CB'ers will not be brought into being until at least 30 days after the FCC takes action on these petitions. The Commission is also faced with several Congressional inquiries on the CB rules, but these seemed to be destined for whiskers and an agonizing death while they cool their heels in one of those dead-end "Congressional committees."

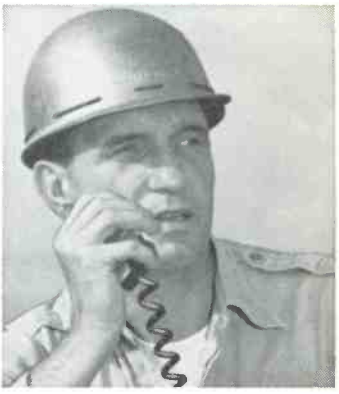
The ever-alert ACBA (American Citizens Band Association) sent in a petition too, too late to have any bearing on the delaying action, but still in time to get themselves on record with the Commission. They asked that the FCC establish a CB "advisory committee" to have the "responsibility of providing licensees with a continuous appraisal of compliance results with Part 95 (the Citizens rules) as amended, as experienced by the Commission, in the areas of most frequent non-compliance and, in turn, to apprise the Commission of the factors impeding such compliance, with recommendations toward amending the regulations to obtain more effective compliance while retaining the basic regulatory purposes of the rules."

Continued on page 70

any*

Yes, in any CB application...you'll outperform 'em all with a

MESSENGER®



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"MESSENGER" AND "MESSENGER TWO"—For mobile or base stations. High efficiency design makes full use of maximum allowable legal power. Excellent receiver sensitivity and selectivity. Automatic "squelch" control. 5 crystal controlled channels on the "Messenger" and 10 crystal controlled channels plus tunable receiver on the "Messenger Two".

"MESSENGER"		"MESSENGER TWO"	
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115 VAC/6 VDC.....	**$114.95 Net**	115 VAC/6 VDC.....	**$169.95 Net**
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"MESSENGER III"—Offers everything you ever wanted in a CB transceiver . . . compact size, a husky signal, extreme sensitivity, razor-sharp selectivity—and complete flexibility for base station, mobile, public address, or battery powered portable use! Double conversion receiver—set-and-forget "Volume" and "Squelch" controls—11 channel coverage—"Tone Alert" Selective Calling System available as accessory.

Cat. No. 242-150.....12 Volts DC Messenger III.....**$189.95 Net**
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Watch for next month's big issue

THE SIGNAL SQUIRTER

AN 11½ WATT LEGAL SIGNAL FOR ONLY $6.35

by RICHARD SAUNDERS, KHB4307

How would you like to push 11½ watts worth of CB signal into a particularly difficult to reach area? How would you like to do it legally and for about $6? You say that it's going to take a beam antenna with gain, and these can't be had for as little as $6? Your assumption is partly true, it *is* going to take a beam, but we are going to tell you how to put up a wild beam made from *only one piece of long wire*. Yes it *is* a beam. Yes it *does* have directivity (and plenty of it). Yes it *can* be put up in jiffy time for about $6. It's as simple as any antenna you have ever seen—and if you like the idea of using a beam you can go right on using it for as long as you like.

To give you the most use from this SIGNAL SQUIRTER beam, we are going to tell you how to whip together three different versions of the beam. Each as a different amount of gain and a slightly varying directivity pattern.

There is at least *one* major electrical difference between the SIGNAL SQUIRTER and the regular CB beam which you immediately picture in your mind when you think of a beam. Usually CB beams (in fact most CB antennas) are vertically polarized. The SIGNAL SQUIRTER is horizontally polarized. Horizontally polarized? Yes, and that doesn't seem to present many of the difficulties that everyone had warned me about. For working other horizontally polarized base stations, the interference from vertically polarized CB stations is almost nil. I imagine that if you equipped your mobile units with horizontal antennas (such as Cush-Craft's new *Squalo*), you could establish base/mobile communications over record distances (providing the mobile unit is inside one of the 4 signal lobes of the SIGNAL SQUIRTER. We will have a go at each of the three versions of the SIGNAL SQUIRTER, discussing the smallest one (the one with the least gain) first.

THE SIGNAL SQUIRTER — MARK I

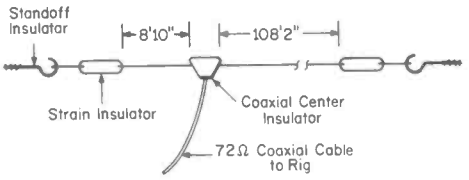
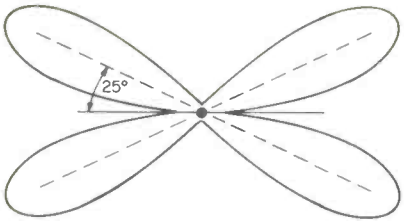


Diagram of the SIGNAL SQUIRTER — MARK I. Cut the wire of each section 2 inches longer than necessary to permit tieing on the insulators.

The "basic" SIGNAL SQUIRTER is three wavelengths long and is fed by 72-ohm coaxial cable at a point a quarter wavelength in from one end. The measurements for the SS-Mk I are given in the diagram of the antenna, but when you cut the wire for the antenna, cut it with an extra 4 inches to allow for waste when hooking on the insulators.

To construct the antenna you must first determine where you want most of the signal to land. The antenna has a sort of cloverleaf



The signal pattern for the SIGNAL SQUIRTER — MARK I looks something like this, with the best signals at 25 degrees off the sides. Take this into account when you decide which direction the antenna is to be hung for maximum signal into your desired coverage area.

radiation pattern, with the cloverleaves (4 of them) at 25 degree angles from the antenna. If you want to send your signal into an area which is, say 52 magnetic degrees from your station, you will then want to orient your antenna either 47 or 77 degrees to position the signal where you want it. Obviously this antenna can't be rotated, so once you pick your coverage area(s) your stuck with them.

Once you have decided the physical direction of the antenna, plant a 20 foot mast in the ground at least 109 feet away from your radio shack. This is the spot where the "far" end of the antenna will be located. A discarded rung ladder, by the way, makes a dandy mast. Just bury the bottom three feet solidly in the ground to hold it erect, you can even guy it. You can save yourself the bother of putting up any kind of a mast if you should (luckily) happen to have a building or other possible antenna support structure somewhere between 109 and 120 feet away from your shack in the general direction of the end of the antenna. The antenna should not be mounted higher than 20 feet above the ground at the far end.

The "near" end of the antenna is attached to the side of the building which houses your radio shack. This end of the antenna should be the same height above ground as the far end so as to keep the antenna horizontal.

At each of the two end support locations, place a screw eye standoff insulator. These are sold at all TV shops or may be ordered by mail (Lafayette has a package of 5 for 13¢, stock #18-G-6702).

The antenna proper can now be constructed, following the diagram for the general idea. Use something like #12 solid copper antenna wire, which sells for about 2¢ per foot and usually comes in 100 foot rolls (Lafayette 34-G-4624, 100 feet for $2.40). If you should have to splice two rolls together to attain the proper length, you must solder the splice.

When the 108 feet 6 inches (the extra 4 inches are for tieing to the insulators, as previously mentioned) have been measured out, measure in exactly 9 feet from one end and cut the wire. This is the feed point, and you will insert a center insulator here. We used a Hy-Gain Model CI which sells for less than $4. Coaxial center insulators are also available from Ludwig Mfg. Co., P.O. Box 97, Ramona, Calif. 92065 ($2.95), and from Yatter Laboratories, Bradley Beach, N. J. ($3.00). The Ludwig unit is fed by means of a PL-259 coaxial plug, the others provide for you to wire the coaxial cable directly to the antenna wires inside the insulator. The center conductor of the coax goes to the long side of the antenna, the shield goes to the short side.

Now you can solder the center insulator into place; and also the 72-ohm coax at the feedpoint. Standard strain insulators are now added to the two outside ends of the antenna —we used 5¢ Lafayette 32-G-3008 types. Strain insulators are plentiful at any ham radio shop or military surplus store.

You can now "hang" the antenna on the screw eye standoff insulators. Use fiberglass fishing line to accomplish this for best results.

Your SIGNAL SQUIRTER – MARK I is now ready for blasting them all off the band. The MARK I will give you the equivalent of a 6 watt signal from a 3½ watt carrier.

THE SIGNAL SQUIRTER — MARK II

The MARK II version of the antenna gives you a signal which equals almost 9 watts output. This is easily accomplished by extending the long side of the antenna from 108 feet 2 inches to 181 feet 5 inches. The radiation pattern will change, however, with the signal lobes being at closer angles to the end points of the antenna.

THE SIGNAL SQUIRTER — MARK III

For the wide open spaces and a real smashing signal, the MARK III will give you about 11½ watts of effective radiated power. The long side of the antenna is now extended to 254 feet 1 inch, and the signals will be shooting straight off the ends of the antenna, so orient it accordingly.

If you want to push up your power output *legally* we suggest you get a beam. If you want to try one out before picking up a commercial model beam, why not give a whirl to the SIGNAL SQUIRTER?

BETTER BUILT BY HAMMARLUND

the Sensational

CB-212

No other CB rig now on the market combines the Hammarlund-unique features of low, low cost with outstanding performance. The new CB-212 is rugged, reliable, and loaded with "talk power."

In the car or fixed, the Hammarlund CB-212 offers optimum selectivity and sensitivity for maximum "get thru" effectiveness. Here is a unit that provides a positive means of CB communications for people on the go—doctors, taxi fleets, business men, delivery trucks, and all others who must communicate with base operations.

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$129.95
(includes 2 crystals and P.T.T. microphone)

FEATURES

- 6 crystal controlled transmit/receive channels
- Outstanding sensitivity of 0.5 μ volts
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- AGC Range of 5 μ volts to 100,000 μ volts
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- 8 IF tuned circuits for excellent adjacent channel selectivity
- Electronic Switching (no relays) for the utmost in reliability

Look for this outstanding new unit at your nearest Hammarlund CB Dealer, or send for complete technical data today!

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FCC FUNNIES

by JOHN G. BORKMAN, 12W1919

Being deeply involved with the FCC and their regulations, we frequently fail to hear about some of the lighter things which happen when the Commission runs across the American public.

For instance, shortly after a railroad reported the theft of a VHF communications transmitter from a caboose in the Kansas City yards, radio units of the railroad began receiving transmissions over railroad frequencies of music and voices of children singing Spanish Flamenco songs to the accompaniment of guitars, handclaps, castanets and stomping boots. FCC engineers were quickly dispatched by railroad police. They eventually wound up in the basement of a modest home where they found seven children ranging in age from 11 to 14 years. They were operating the missing transmitter to "broadcast" improvised programs. They were warned and letters were sent to their parents.

Or how about the time sounds of hail and barking dogs on a CB channel in Denver aroused the curiosity of a local operator. The FCC was called in to investigate and they discovered that the transmissions were from a low powered transmitter which was hidden in a home by a "private eye." A check of the equipment found that it radiated far more power than permitted under the regulations.

California authorities hastily reported to the San Francisco FCC office that a woman was hearing calls of "Help — can you help me?" on her TV receiver. Search led to a neighboring 13 year old radio enthusiast. However, he claimed that in testing a new transceiver with a dummy load he had transmitted the phrase "Hello — can you help me?" to his grandfather in an adjoining room. The woman who made the report, when again contacted, said she *might* have misunderstood the transmission.

A letter from a Pennsylvania college student reported hearing mysterious "code signals" from a radiator in his quarters. He added that he was a former radio operator in the military service and thought that the signals might be coming from a secret radio station. The case was taken in hand by the FCC's Buffalo office which determined that the "code signals" were actually the result of signals transmitted over the college's power lines to regulate the flow of water into radiators. The clickings of the valve could be mistaken for Morse code characters by someone "rusty" in his code ability.

One time an irate TV viewer complained to the New Orleans FCC office that her entire neighborhood was being affected by severe interference. She threatened to originate a petition for action and was still ranting when the FCC man arrived on the scene with his test equipment. The engineer quickly traced the trouble to the complainant's own refrigerator. Embarrassed, the woman expressed her gratitude.

Lastly we have the classic case of an international radiotelephone station in White Plains, N. Y. They angrily reported to the FCC that an interfering signal was intruding on their reception from Panama. The FCC direction finding network quickly swung into action, but told the complainant that the *interfering* signal was also coming from Panama. This was proven when the Panamanian radio-telephone station checked it's own operation, interrupted its transmission, made an adjustment, and corrected the situation which caused the station to send out a signal which *made it appear* as if there was a third station interfering in the two-way contact.

Watch for next month's big issue

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The Chirper

A PART 15 BROADCAST BAND CW STATION

by MARK TAPLEY, 10W3140

One of the fastest and easiest ways to get some code speed up is to have a go at practicing sending code back and forth with someone else. This gets quite boring after a short while. But now you can combine Part 15 transmitting/receiving with CW to come up with a fabulous aspect of radio experimenting, Part 15 Broadcast Band CW. All it takes is any household radio for a receiver, and something which will transmit a CW signal somewhere between 540 and 1600 kc/s for a transmitter (the P-15 band actually begins on 510 kc/s but household receivers don't tune lower than 540 kc/s). Some of the problems to consider for this type of operation are: the transmitter cannot run more than 100 milliwatts input, the antenna cannot exceed 10 feet (including lead in wire), and a receiver will have to contain some sort of beat frequency oscillator (BFO) so that the CW signal will be heard with a modulated tone (without a BFO the CW station will just make a series of unintelligible hisses).

The 100 milliwatts *really* is a problem, but by careful planning it can be made insignificant. To stretch the transmitting range of a P-15 broadcast band station we can: use a loaded antenna, use a good receiver with a very long antenna (there is no limitation on the length of the receiver antenna), operate on a quiet (clear) frequency, and the fact that CW is being used instead of fone should also do a considerable amount of good adding to the range.

The problem of adding tone to the CW signal so that it can be understood on a broadcast receiver was solved by creating a P-15 broadcast band CW transmitter which sends out the CW with the modulated tone already built-in.

THE CHIRPER

The CHIRPER is what we call just such a P-15 transmitter. It can be built very easily by even the most inexperienced constructor. It offers more range than you might imagine for such a little pipsqueak, and it also offers quite a passle of fun as you set up your own neighborhood P-15 CW net—and for very little investment.

The CHIRPER is made from a handful of components, most of which you probably have in your junk box—all of which can be purchased without much strain on the old wallet.

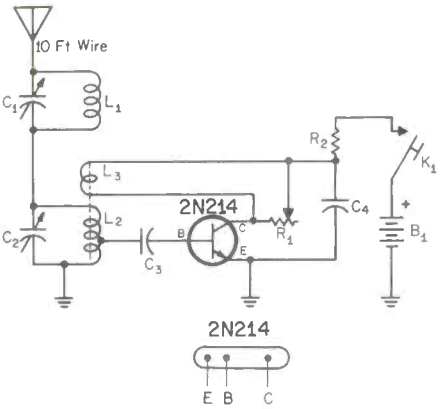
Using a cigar box as a chassis and cabinet, you should be able to assemble the CHIRPER in jiffy time. Parts layout is not critical and there aren't enough parts to create any cramped-space problem. I mounted the major parts on top of the cigar box, the battery inside the box, and the telepraph key was placed at the end of a short length of lamp cord. The variable resistor was mounted on the underside of the cigar box top, with the shaft sticking through the top to permit adjustment. A schematic of the CHIRPER is given, and we have also provided you with a wiring diagram of the CHIRPER to make it easier for you to get it perking.

Resistor R_1 is a pot, such as an inexpensive Lafayette 32-G-7361 (49¢). Its function in the circuit is to vary the tone of the signal which the CHIRPER transmits. More about its use later. You will note that it has been located towards the rear of the cigar box chassis. This is because once it is set there should be little need to fool with it (unless you change frequency).

Coil L_3 consists of 13 turns of plastic coated hookup wire around the center of L_2.

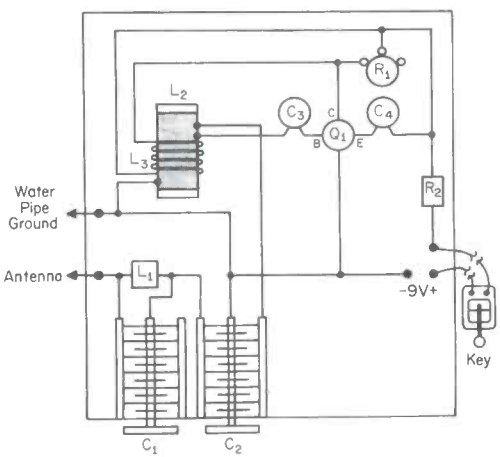
CONSTRUCTION HINTS

There are five terminals on the top of the chassis (as indicated by solid black circles on the wiring diagram). These are for the antenna, ground, voltages and telegraph key. I used H. H. Smith type 202 insulated tip jacks for these, but you can use tacks, nails, or even make do without any type of terminals. The battery is connected to it's terminals by means of a regular 9 volt battery clip (Lafayette 34-G-1003). If needed, you can add some wire between the clip and the terminals to give you some more length in dropping the battery into the cigar box. Be *very* careful to connect the battery with polarity *only* as shown. The telegraph key selected was the cheapest one we could find, the Lafayette 99-G-2554, which sells for 69¢.



PARTS LIST

$C_{1,2}$ 365 uufd variables (Lafayette 99-G-6217)
C_3 .005 ufd (Lafayette 32-G-0943C)
C_4 .01 ufd (Lafayette 32-G-0943C)
R_1 1 Meg. linear pot (Lafayette 32-G-7361)
R_2 4.7K ½ watt resistor (Lafayette 32-G-0937C)
L_1 240 uh coil (J. W. Miller 9210-94)
L_2 230 uh tapped ant. coil (Lafayette 32-G-4105)
L_3 see text
Q_1 Sylvania 2N214 transistor
B_1 9 volt battery (Lafayette 99-G-6021)
K_1 telegraph key (Lafayette 99-G-2554)
Misc.: terminals, battery clip, cigar box, hookup and antenna wire.



S9 Magazine certifies that this low power transmitting device can be expected to comply with the requirements of Paragraph 15.205 of the FCC regulations under the following conditions: (A) When this device is assembled and/or adjusted in accordance with the diagrams and instructions published by this magazine, using components of the exact specifications described. (B) When in use for the purpose and in the manner indicated in the instructions. (C) When operated on a frequency between 510 kc/s and 1600 kc/s and using an antenna limited to a length of not more than 10 feet. (D) When using not more than 100 milliwatts input to the final radio stage.

Tom Harrel

S9 Magazine, Port Washington, N. Y. Dated November 15, 1964
I hereby certify that I have assembled and adjusted this device in strict accordance with the above.

Owner's signature. Date:

You may find it helpful to screw the key to the top of your operating table to stop it from wandering all over while you're sending code.

The antenna is nothing more than a long wire—but *not* more than 10 feet in length (to keep you operating within FCC regulations—they don't want your CHIRPER heard all over the county!). A good ground will also improve operation of the set. I suggest grounding it to a cold water pipe.

International Morse Code

A	·−	N	−·	1	·−−−−
B	−···	O	−−−	2	··−−−
C	−·−·	P	·−−·	3	···−−
D	−··	Q	−−·−	4	····−
E	·	R	·−·	5	·····
F	··−·	S	···	6	−····
G	−−·	T	−	7	−−···
H	····	U	··−	8	−−−··
I	··	V	···−	9	−−−−·
J	·−−−	W	·−−	Ø	−−−−−
K	−·−	X	−··−		
L	·−··	Y	−·−−		
M	−−	Z	−−··		

Period	·−·−·−	Error	·····
Comma	−−··−−	End of Transmission(SK)	···−·−
Question	··−−··	End of Message(AR)	·−·−·
Wait (AS)	·−···	Fraction Bar (DN)	−··−·
Break(BT)	−···−		

The International Morse code alphabet, together with numbers and most needed punctuation marks. Keep this at your operating position for convenience.

FIRING IT UP

When you have the CHIRPER completed, place it near a standard broadcast receiver. Find yourself a clear spot near the lower portion of the band. Next, press down on the key and tune C_2 around until you find your own signal on the receiver—it may be necessary for you to concurrently adjust R_1 to get the unit to transmit. Start out with R_1 set at maximum resistance (counter clockwise),

Continued on page 74

A CB CHRISTMAS

by FRED CULLUM, KCF1721

T'was the night before Christmas and all over the dial,
Not a sound could be heard for many a mile.
The skip cards were hung on the wall with care,
In hopes that Fred's Cousin Charlie would *not* be there.

The XYL's were nestled in their beds,
While hopes of long-distant contacts ran through their heads.
With more cards on the desk, a log book on my lap,
I had just sat down with hopes of a long distance chat.

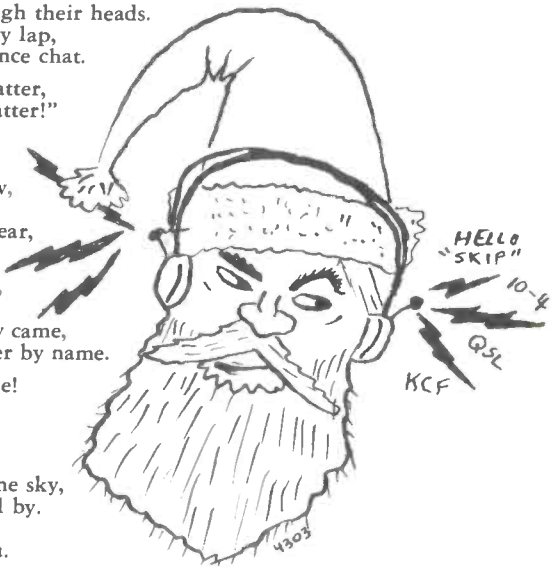
When up by the *Hy-Gain* there arose such a clatter,
I sprang from my chair crying "What is the matter!"
Away to the window I flew like a flash,
Threw back the curtains, threw up the sash.

The lights on the breast of the new fallen snow,
Gave off the appearance of dawns early glow.
When, what to my wondering eyes should appear,
But a *Globe 200* and eight tiny colinear's.

With a little old operator so quick with mocks,
I knew in a moment it must be, "Bob E. Socks."
More rapid than rockets the ground waves they came,
And he whistled and shouted, called each carrier by name.

Now, Vernon! Now Lou! Now Ben and Ripple!
On Bob! ! On Al! ! On Bill and Mitchel! !
To the top of the band to make all your calls;
Now blast away, blast away, cover them all!

When a signal from one set meets another in the sky,
They are received by other sets but both squeal by.
So up on the antenna, the clan they flew,
With a pouch of citations from the FCC to you.



And then in a second on the CB band,
I heard the blasting and shouting from each of the clan.
As I closed down the window and was turning around,
Down the RG-8/U came the FCC with a bound.

He was dressed in a white suit from head to foot,
His clothes were all spotted with dust and soot!
A bag of citations he had flung on his back,
He looked like a boy scout just opening his pack.

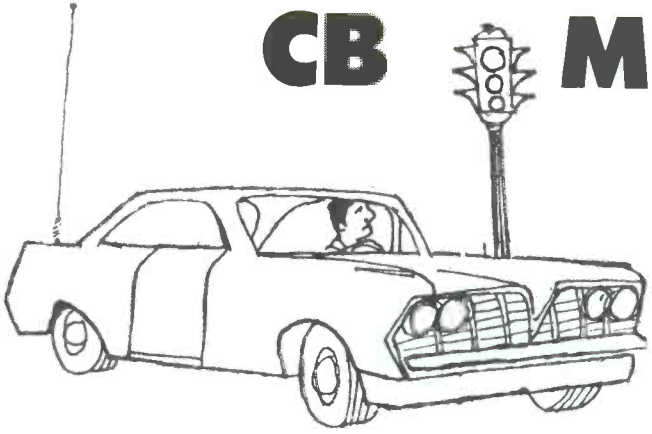
His eyes, how they twinkled! His dimples, how merry!
His cheeks like roses, His nose like a cherry!
His droll little mouth was spouting out mocks,
So surely CB'ers must hate Bob E. Socks.

He was a plump little vigilante, a right jolly ole' elf;
And I laughed when I saw him, in spite of myself.
A blink of his eyes and a shake of his head,
Soon gave me to know I had troubles ahead.

He spoke not a word but went straight to his work,
And filled in the blanks; on his face was a smirk.
With his finger a-side of his nose,
On giving a snicker, up the coax he rose.

He sprang to his Globe and gave it a blast,
And away he went, in a noisy cast.
But I heard him exclaim as he soared out of sight,
"Bad skipping to all and to all a good-night!"

CB MOBILE — WHAT?

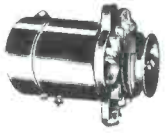


RANDOM THOUGHTS ON YOUR MOBILE ELECTRICAL SYSTEM

by JOSEPH KARO, KCA4822

Having pushed a CB mike button in everything on wheels from a Ferrari to a Ford, I have picked up quite a bit on random information and interesting tidbits on the electrical systems of CB equipped mobile units. You say that all electrical systems are alike? You're mistaken, friend. When a CB rig is placed in a vehicle there are a number of things which take place which might not normally face a motorist. I'm not a *real* writer, in fact my hands are much more used to the feel of an engine block than they are to the keys of a typewriter—so don't expect what I have to say to be any literary gem. I'll just ramble on with some disconnected thoughts on the various parts of your mobile equipped CB unit, and hope that you may find the information useful now or at some future date.

THE GENERATOR



Generators do what their name implies, they generate. They are caused to generate by the action of the motor. Their function is to replace the battery's electricity which is expended in the operation of your vehicle. Generators cause a whining interference in CB receivers, and sometimes the CB rig draws so much current from your vehicle's electrical system that the poor old generator never seems to replace a sufficient amount of juice in the battery. Result? Dead battery.

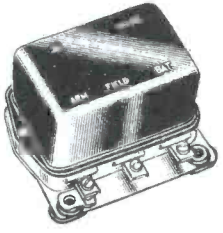
The whining noise can usually be cured by installing a 500 ufd 12 volt electrolytic capacitor from the generator output terminal to ground. Observe correct polarity (this depends on whether the mobile unit chassis is negative or positive). *Don't* try hooking this capacitor to the "field" terminal of the geneator or you will damage the vehicle's regulator.

There are a number of commercially available coil/capacitor generator noise killers available, and these are frequently all that is needed to silence the generator.

Defective generator bearings have also been known to kick up a racket in CB receivers. Replacement of the worn bearing considerably reduced the interference.

If your generator isn't keeping up with the output of current from the battery your best bet is to replace the generator with a heavy duty model. It is *not* suggested that you attempt to extract more voltage from your existing generator—voltage isn't what you are deficient in, your vehicle is current starved and only a larger generator will solve the problem. Pushing more voltage out of your generator will only damage your voltage regulator. The local auto parts shop can advise you on the recommended heavy duty generator replacement for your particular car.

VOLTAGE REGULATOR



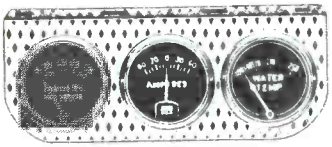
The voltage regulator comes between the generator and the battery. When the battery begins getting hungry for current the voltage regulator taps the generator on the shoulder and they serve a meal. The voltage regulator prevents the battery from getting overcharged or from dying of starvation. The voltage regulator can contribute its own fair share of noise to your CB receiver and

it can also be inadequate for the needs of your CB equipped car.

The noise can be squashed by attaching a 10 ohm 1 watt resistor from the "field" terminal to ground. Install it right at the regulator and not at the regulator connection on the generator.

Do not fall into the old CB trap of adjusting your voltage regulator upward to give you more output from your CB rig—all you will accomplish is burning out the tubes in your rig. If you replace the generator with a heavy duty unit, you will probably also have to replace the voltage regulator, check with your mechanic.

AUTO GAUGES



Auto gauges are another frequent cause of interference in CB receivers. This generally can be cured by means of 0.01 ufd disc ceramic capacitors between the gauge terminals and ground. Keep the lead lengths of the capacitors as short as possible and try to solder them at the ground end.

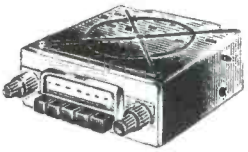
This can also be done to the ignition switch.

SPARK PLUGS

To use or not to use Resistor Plugs seems to be a long debated question. If you use them, have them checked and cleaned every 3 months.

My own opinion is that the little clip-on resistor attachments which go on the top of the plug (these are sold in most auto acceessory shops) *may* help in cutting down radio noise, but they seem to make the car engine a bit sluggish and slow to start.

TRANSISTORIZED EQUIPMENT



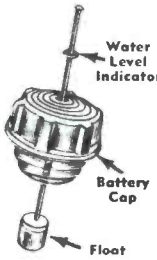
If your CB rig or car radio is transistorized you may feel that you are picking up more noise than you had with tube equipment. This is solved by connecting a special 1000 ufd capacitor to the ignition coil. Ask your auto supplier to get you a

Motorola part with the serial number AK-300 (about $1.90).

BATTERY

The terminals tend to get a bit corroded, and this impedes the battery's functioning. Use something like "Battery Tru-Rinse" (about 16 oz. for $1). This will clean off all acid and corrosion with a minimum of work. Check your local auto supply shop for this product.

Use a hydrometer once a month to see if your battery needs a charge. Most service stations will have one of these, or you can buy one for as little as 50¢ if you shop around.



Frequently check your battery to see if it is filled to the proper level. Never fill it with ordinary water, it requires distilled water (you can buy it at any drug store if you'd rather do it yourself). Many auto supply shops sell so-called "battery check caps" which replace your regular battery caps. These special caps give you a constant reading of your battery's water level without your having to mess up your hands by pulling them off the battery. Price is usually somewhere around $1.30 for a set of 6.

I have found that adding a chemical known commercially as "VX-6" has always been a great help to the batteries of CB equipped mobiles (in fact it is beneficial to *all* mobiles). VX-6 is an additive which prevents internal sulfation. To translate: sulfation (lead sulfate) is a regular chemical reaction that starts as a soft, spongy, greenish-white substance, then hardens and chokes your battery to death. This is the same material you see around the external battery connections. This sulphation is the number cause of battery failure and is the reason that 7 out of 10 batteries are reported at being "dead" (they are actually still full of life but choked for a free flow outlet of energy).

VX-6 dissolves sulphation in old batteries and will prevent it from forming in both old *and new* batteries. Now for the CB'er, who depends even more on his battery than most motorists, this additional dependability has a special meaning. Batteries treated with VX-6 will insure starting under all weather conditions (40 degrees below zero to 160 degrees above), you get 25% stronger lights, generally better battery output, and the guarantee that your battery will last for the life of your car. (One typical test of VX-6 is to put the chemical in your battery with the ignition switched off and the brights on. You step on your starter until the battery is so shot that it won't start the engine or run the lights. You turn off the lights for 3 minutes and then step on the starter. Your car should start up as good as new using the power that the battery has regained in the 3 minute interval.)

So, as a CB'er (that is, someone who tortures a battery even more than a regular motorist), you will find that there is some preventive maintenance you can perform to prevent the horrible moment when you wind up stuck in the middle of nowhere unable to start your car, and also unable to call for help via the radio.

VX-6 is available from many auto shops, or can be ordered by mail for $2.98 (postpaid) from J. C. Whitney & Co., 1917-A Archer Avenue, Chicago, Ill. 60616. Ask for stock number 17-1205.

One final battery consideration. Check the battery cable from time to time. If it looks like the cable is soon to become separated from the terminal, it's time to install a new one.

COMMERCIAL "NOISE KITS"

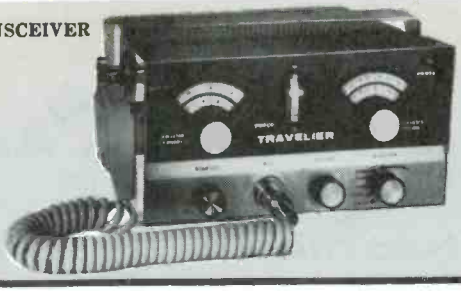
These are good, fast, ways to get a complete engine noise elimination job for your CB rig. They are professionally designed and priced right. I recommend the kits made by Hallett, Webster, and E. F. Johnson.

THAT'S IT

Hope some of my rambling thoughts will help you to achieve quieter, more efficient, mobile CB operation. Come to think of it, if all of you take my advice I might be out of a job. Better forget the whole thing!

AC POWER SUPPLY

TRAVELIER TRANSCEIVER



TRAVELIER
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Transmitter:
- 23 channel crystal controlled
- Power Output: 3.25 watts minimum

Receiver
- 9 tube superhet circuit with RF stage
- Sensitivity: .1 microvolt for a 6 db down signal-to-noise ratio
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SATELITE
base station

Transmitter:
- 23 channel switching — Channel 9 crystal supplied
- Cathode-ray modulation indicator
- 5 tubes plus 3 silicon diodes
- 5 watt input—100% Heizing modulation

Receiver
- .1 microvolt sensitivity cascode amplifier
- Dual conversion IF — 10 mc. and 455 kc
- Highly readable 2½" square "S" meter with front panel zeroing control
- Local-distance switch with audio compressor position to prevent overload from nearby stations
- 5 fixed receive channels with band-spread tuning and overall 23 channel continuous tuning
- 14 tube performance with 8 tubes and 5 diodes

Power SWR Meter:
- Measures RF power output into dummy load (52 Ohm)
- Measures maximum forward antenna current for antenna tuning — used in conjunction with reverse position — measures relative standing wave ratio (SWR)

DEMCO *Presents....*

the all new 23 channel TRAVELIER *transceiver*

the exclusive 23 channel SATELITE *base station*

Only Demco offers you a complete true Base Station and a new Mobile rig that has everything. Outstanding Demco quality is the result of specialization by the country's leading electronic experts in the CB field!

Both the Satelite and Traveler have 23 channel crystal controlled transmitters, and the Traveler also has four crystal controlled receive positions. No other manufacturer can give you all these features.

The Satelite Power Modulator, a compression audio amplifier, greatly increases your talk power when used with the Satelite Base Station or most other CB radios.

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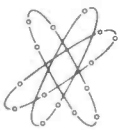
Exciting New Ideas  . . . from

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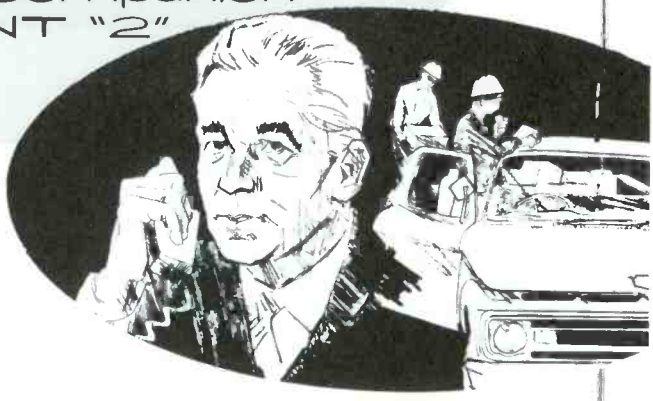
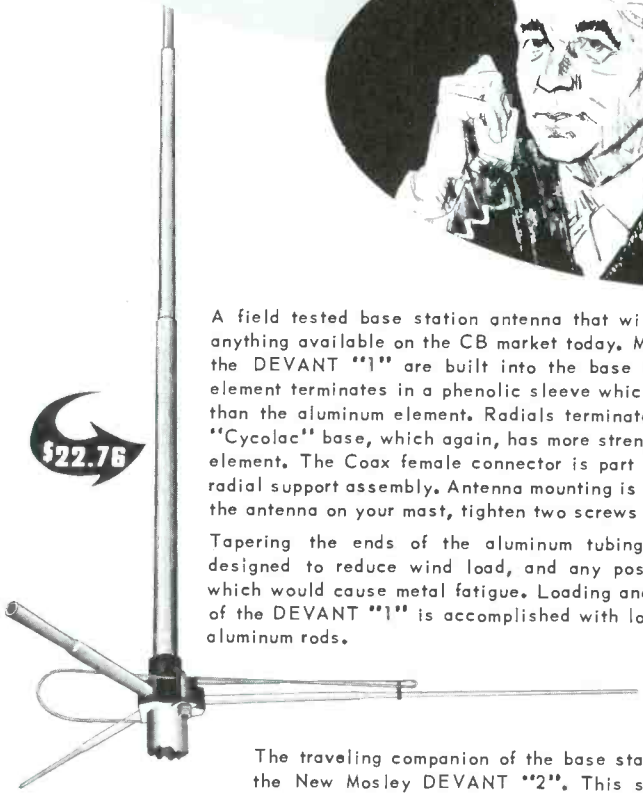
Bristol, Indiana

SATELITE
POWER MODULATOR

SATELITE
BASE STATION

The All NEW Base Station Antenna DEVANT "1" & Mobile Companion DEVANT "2"





$22.76

A field tested base station antenna that will equal or outperform anything available on the CB market today. Many of the features of the DEVANT "1" are built into the base section. The vertical element terminates in a phenolic sleeve which has greater strength than the aluminum element. Radials terminate into a high strength "Cycolac" base, which again, has more strength than the aluminum element. The Coax female connector is part of the (weather-proof) radial support assembly. Antenna mounting is simplified, just mount the antenna on your mast, tighten two screws and lock nuts.

Tapering the ends of the aluminum tubing (called swaging) is designed to reduce wind load, and any possibility of vibrations which would cause metal fatigue. Loading and impedance matching of the DEVANT "1" is accomplished with loops of one-eighth inch aluminum rods.

$14.50

The traveling companion of the base station DEVANT "1" is the New Mosley DEVANT "2". This stainless steel mobile antenna has the world famous Mosley performance. A slim line beauty with built-in durability. The DEVANT "2" will operate on any length of coax line.

Please send me (FREE of charge & obligation) literature on the following antennas. DEVANT "1" ☐ DEVANT "2" ☐

Name . . . . . .

Address . . . . . .

City/State . . . . . .

Mosley Electronics Inc. 4610 N. Lindbergh Blvd., Bridgeton, Mo. 63044

BUZZING CB

VIBRATORS FROM V TO W

by YUSSELL GEBURTSTUG

Everything in CB seems to go in fads. First there was the tunable rig fad, then it was the crystal receiver fad, then it was for extra audio power. Now we are in the *vibrator* fad where the big, BIG, problem is whether to use a vibrator or transistorized power supply. And all this work and discussion is due to the vibrator or transistor being "better"—the "better" being whichever one *you* like best. When we come right down to the guts of the issue few CB'ers know what in heck the vibrator or transistor does (or doesn't do).

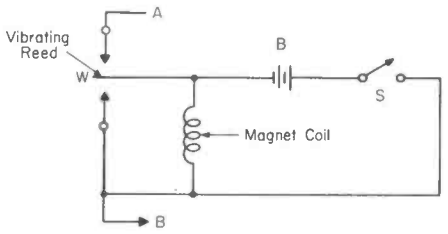


Fig. 1. Basic vibrator circuit.

Figure 1 shows a basic vibrator. *A* and *B* are the contacts and *W* is a vibrating reed normally positioned between—not touching—the contacts. When Switch *S* is closed battery current flows through the magnet coil and back into the battery. When current flows through the coil the resultant magnetic field pulls the reed against contact *B*. Note that when the reed touches *B* the coil is short circuited; since current no longer flows through the coil the magnetic field collapses, there is no force to hold the reed down against contact *B* and the reed tries to spring back to its normal position. However, the reed cannot shift to the exact center position and it literally bounces up, touching contact *A* before coming to rest. Of course, once the reed is released from contact *B* current flows through the coil and the magnetic field again pulls the reed against contact *B*—repeating the cycle. As long as switch *S* remains closed the reed vibrates between contacts *A* and *B*.

Figure 2 shows how this vibrator is used to power a CB transceiver. In figure 2A we have a power transformer. If 12.6 VAC is applied to the primary of T1,200 VAC will be developed across the secondary. When we rectify the 200 VAC and filter the resultant DC we get about *300 VDC,* this is the so-called B+ voltage (the power supply is simplified, it is not representative of any transceiver).

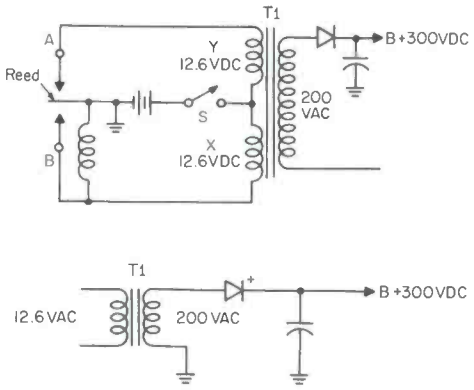


Fig. 2A. Basic power supply and Fig. 2B, simplified vibrator power supply.

"Aha," you say, "All very nice but my car has about 12 volts DC. How do you convert DC to AC in order to get the transformer to work, since a transformer cannot step up DC?". This is where the vibrator comes in.

In Fig. 2B we have a mobile power transformer. The supply voltage is 12.6 VDC and we have placed the vibrator between the supply voltage and T1.

First note that T1 has two primaries. Actually only one is used at a time. We could use a vibrator to control a single primary but the overall efficiency would be low. At the instant switch S is closed current flows through primary *X* and through the coil, pulling the reed to contact B. The current surge through primary *X* causes a voltage to be induced across T1's secondary. When the wiper bounces to contact *A* a current surge flows through primary *Y* and again voltage is induced across T1's secondary. As far as T1 is concerned it is receiving an AC input current—actually it is pulsed DC, but pulses—actually square waves—formed by the action of interrupting the DC simulate an AC input. As far as the transformer is concerned it is powered by AC.

Well, this all seems simple enough, what's the problem with vibrators? Well, the big problem is "hash." When the contacts are opened, breaking the DC, a spark is generated at the contact each time the current is interrupted. This sparking generates "hash," which is interference at virtually all radio frequencies, particularly severe at CB frequencies. The "hash" is evidenced by a sharp

Watch for next month's big issue

grating noise usually added to the received signal, rarely does it get into the transmit signal. True, vibrator hash can be so severe as to almost obliterate even a strong signal. But we're living in the age of modern design. Any engineer worth his salary should be able to design a hash-free power supply, and in fact most do. Rare is the CB transceiver that has a bad hash problem. In fact, most modern transceivers have *no* hash problam—it simply doesn't exist other than in the CB'ers mind. Well then, what's the problem with vibrators? Actually, we have to look hard to find a problem; possibly it's "life expectancy."

Naturally, anything that vibrates is bound to eventually break down. Conceivably, the vibrating reed *could* snap or fail, but this is stretching credulance. Modern vibrators often last the life of the equipment. This author knows no CB'er, amateur or car radio user who has ever had a vibrator fail from causes other than side effect when other components fail.

What's a side effect failure? Suppose you developed a short in the B+ rectifier circuit. Suddenly, a very high, excessive current surge is pulled through the primary of the power transformer. Since this current surge also flows through the vibrator contacts it can fuse the contacts together. While the vibrator failed it really wasn't the fault of the vibrator. Also, contacts do wear.

Now, make no mistake, we're not trying to push vibrators; it's just that normal vibrator failure such as an open coil or burned out contacts is *not* as common as burned out tubes. (The contact pitting is caused by the arc when the contacts break the current.)

You may feel our confidence in vibrators is excessive, as evidenced by the long list of replacement vibrators in the radio catalogs. Well mull this point over: most electronic hobbyists—that is, anyone other than a serviceman—assumes almost automatically that inoperative mobile equipment is caused by a defective vibrator—and possibly more *good* vibrators are replaced than defective ones. This obsession probably stems from the unreliability of vibrators used *thirty years ago;* the modern vibrator is a precision device.

The modern vibrator is so precise that articles on "how to repair vibrators" should be ignored completely. You know the one we mean, they tell you how to cut open the can and file down the contacts. Great, just great. First, the can is a shield, a very important part of the "hash elimination." Just try running a vibrator with the top of the can held in place with friction tape; if the hash doesn't pin the S-meter at 20 over 9 somebody up there likes you. Secondly, filling the contacts changes the entire timing of the vibrations; sure, it's a small change but it can be enough to change a powerhouse RF output to something so weak it has to hold onto the coax cable in order to make it up to the antenna (that's a joke, son).

TRANSISTORS

"If vibrators are so good why the big fuss over transistor substitutions for the vibrator? What do they do?" Well, without bogging down in a lot of theory about transistor switching, let's take a look at a transistor "switch."

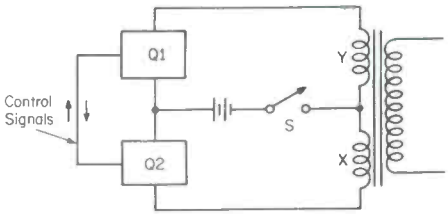


Fig. 3. Simplified transistorized power supply.

Figure 3 shows a functional transistor circuit; that is, the actual circuit isn't shown, we only show what the transistor does. The instant switch *S* is closed battery current flows through transistor Q1 and through primary *Y*. When current flows through Q1 a control signal from Q1 prevents conduction through Q2. After current flows through Q1 for about 1/100 of a second Q1 cuts off, the control signal is removed and Q2 conducts, passing the battery current through primary *X*. Simultaneously, a control signal from Q2 prevents conduction through Q1. Again, after 1/100 of a second the cycle is repeated. Essentially, the transistors duplicate the vibrator switching without moving parts or contacts to wear out. (This is simplified, sugar coated theory but it explains the transistor switch.)

The advantages? Well, for one thing there are no contacts breaking current so there's no hash. If you've got one of the older CB rigs which do generate some vibrator hash one of the plug-in transistor vibrator substitutes will clean up the hash problem. Secondly, conceivable, transistors don't wear out so they should never need replacement. And finally, transistor supplies are more efficient, they require somewhat less (but not substantially less) battery current for operation.

But just remember this, a kiss is still a kiss; also, if something breaks down in the power supply of a vibrator power supply, causing excessive primary (battery) current drain, the vibrator can usually handle the overload without self-damage. But should an overload occur in a transistor supply about ten bucks worth of transistors heads for the great beyond. However, transistors can be protected against damage caused by excess current drain for just a few pennies.

To sum up, as a famous Englishman said (who's name no one remembers), "vibrators or transistors; you pays your money and you takes your choice" (CBwise, that is).

TAKES 9

NATIONAL EMERGENCY ORGANIZATION MAKES 9 "OFFICIAL"

by TOM KNEITEL, KBG4303
EDITOR

If you read S9 last month you noticed our big story on CB Channel 9 as the National Calling and Emergency Channel—the one channel which will be monitored by all stations which are 10-8 and 10-10 on the band, it will be used by all stations trying to raise another station (to save the trouble of calling the other station on several channels), and to summon help in securing road directions and/or assistance. We had requested that both individual CB'ers and clubs refrain from using Channel 9 for anything but calling and emergency aid communications, and that they

publicize the proper use of the channel.

Following up the Channel 9 bandwagon, the national emergency organization REACT (Radio Emergency Associated Citizens Teams) has just established Channel 9 as their own National Calling Channel. "This decision was made," said REACT's National Director, Henry B. Kreer, 18Q5495, "following a six month study that included not only research among the more than 18,000 REACT members, but extensive consultation with official and unofficial groups outside REACT, including leading publishers in the CB field."

This is quite a boost for the Channel 9 program, inasmuch as REACT is now by far the world's largest organization of CB operators. The three year old group now comprises more than 600 "REACT Teams" throughout the U.S. and Canada. REACT is a non-profit organization without membership fees or assessments of any kind, it is sponsored as a public service by the Hallicrafters Company. Kreer told us that realizing the need for an organization such as REACT, "Hallicrafters pays the entire cost of not only national administration, but all membership materials, which include a REACT news publication called 'The National REACTER.'"

The purpose of REACT is to provide an organizational framework whereby groups of CB'ers in a community may join together effectively and intelligently to provide local emergency communications via CB. The organization has, in its three year life, distinguished itself many times in daring Johnny-on-the-spot communications feats during emergencies such as floods, storms and other natural disasters. Members frequently participate in search and rescue operations and also offer assistance and directions to motorists.

Channel 9 will now be *the* channel to contact REACT when you need their services. This provides a standard, known channel on which an emergency contact can be made anywhere at any hour. Kreer told S9 that Channel 9 will be the *primary* emergency channel (REACT teams will be *required* to monitor it after January 1st), but a *secondary*, local emergency channel may also be monitored at the option of the individual REACT Teams involved.

S9 endorses REACT fully. If you would like further information on how you can put your individual or club CB communications capability to good use we suggest that you contact REACT at: REACT National Headquarters, 5th and Kostner Avenues, Chicago, Ill. 60624. Tell them S9 sent you!

CB CONVERTER

THIS ONE USES BUT 12 VOLTS FOR ALL POWER

by AL BORAK, 6W6328

Are you the type of CB'er who is lazy? Or, like me, are you the hopeless combination of lazy and short of finances? Well now that you see my position, you can see the need behind my invention of the Lazy Man's CB Converter. No high B+ voltages are included in the design, no crystals, no variable tuning; but I have nevertheless been able to attain a high degree of stability and performance.

OPERATION

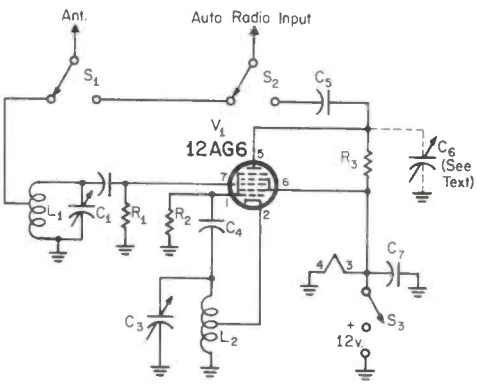
The circuit consists of a heavily coupled tuned antenna input circuit to the converter, with a fixed local oscillator frequency. The plate circuit is untuned allowing the use of any standard broadcast receiver (especially a car radio) to be used as a variable IF amplifier/receiver, and thus a means of tuning over the band. By using this form of conversion, the stability problem is kept simple (fixed local oscillator), construction effort down (no front panel dial to worry about), and costs are reduced (no variables or IF output transformer). Furthermore, the use of a 12AG6 twelve volt space charge tube eliminated the B+ supply without the necessity of resorting to transistors, with their higher costs and design problems.

Construction is simple and straightforward. Use of fairly high C tuned circuits, sturdy coil construction and short leads augment stable operation. If possible, have the coils ventilated to prevent heat expansion. Isolate the output and input circuits to prevent undesirable direct coupling of broadcast stations. Coaxial cable inputs and outputs are mandatory from this standpoint. Since some auto radios use the input cable to tune the car radio antenna input circuit, it will sometimes be necessary to use a short low capacity output cable and the insertion of C_6 for adjustment of maximum signal strength during converter operation.

ALIGNMENT

Alignment of the converter is simple. With the converter off, readjust the auto radio input trimmer (if there is one) for maximum output, using any broadcast station near the low of the band as a signal. With the converter on and warmed up, adjust C_1 for resonance at 26 mc/s in the input circuit. Adjust C_3 to resonate the local oscillator at CB Channel 1. The Citizens Band will now appear across your broadcast dial, from the low end of the band up towards the center. The signal may be peaked up using C_6 (if used) for maximum signal strength. If the radio has an input trimmer, C_6 may not be necessary.

Easy calibration may be accomplished by means of a signal generator. First tune your auto radio to 965 kc/s, then locate CB Channel 1 there by means of C_3. Then (with the exception of Channels 1 through 3) it will only be necessary for you to add a 27 and a decimal point to the last three digits to determine the CB channel to which you are tuned. If your car radio reads 1085 kc/s, you will be on 27.085 mc/s, or Channel 11. By this method you will also have your CB channel pop out between broadcasting station channel, and this should cut down on the possibility of them feeding through the converter to interfere with CB reception.



PARTS LIST

$C_{1, 3}$ 10-100 uufd capacitors
$C_{2, 4, 5}$ 100 uufd capacitors
C_6 10-100 uufd capacitor (see text)
C_7 .02 uufd capacitor
R_1 2.2 Meg. resistor, ½ watt
R_2 33K resistor, ½ watt
R_3 10K resistor, ½ watt
V_1 12AG6
$L_{1, 2}$ 5 t. #16, ⅝" diam., space wound ¾" long. Tapped two turns up from ground.
$S_{1, 2}$ SPDT toggles
S_3 SPST toggle
Misc.: chassis box, tube socket.

ELENCO CB Accessories

FEATURING
POWER AND POWER CONTROL

ELENCO MODEL LR-1 LONG RANGER
BI-LATERAL LINEAR RF POWER AMPLIFIER

$129.95

*Connects in coax line between transceiver and antenna
*Automatic electronic switching
*10 times (10 db) power gain on transmit signal; up to 60 watts carrier output, depending on RF drive power and mode.
*Three S units gain on received signal.
*Factory tuned, ready to go into 50 ohm coax.
*Can be operated remote control.
*Will operate mobile with inexpensive 12V DC to 115V AC inverter.

ELENCO L200 SERIES LINEAR RF
POWER AMPLIFIER

$150.00

*Up to 135 watts carrier output, depending on available RF drive power and mode.
*Connects in coax line between transceiver and antenna.
*Automatic electronic switching, transmit to receive.
*Set-and-forget tuning.
*Can be operated up to 100' away from transceiver.
*Remote control in-out circuitory built-in.

THE LONG RANGER IS THE ONLY LINEAR WHICH WILL BOOST POWER BOTH TRANSMIT AND RECEIVE

ELENCO POWER GAINER AUDIO
COMPESSION AMPLIFIER

$45.00

*Provides a very high level of talk power; makes 5 watts as effective as 20 watts (without compression).
*Has control to avoid overmodulation of signal to prevent spreading.
*Has front panel switch for local-distance operation.
*Four variable controls permit precise adjustment for top performance on all sets.
*Three wires to connect to set, complete instructions furnished for connecting to any set. Wired quick disconnect plug furnished.

ELENCO MODEL SW-1 SIDEWINDER

$29.50

*Converts sets putting out standard AM signal to a double sideband modulation controlled carrier signal (DSMCC)
*Function switch provides a low power position for local contacts; helps reduce interference.
*DSMCC signal provides a more efficient duty cycle signal for driving linear RF power amplifiers. Permits operation of a linear at two times power rating of straight AM operation.
*Goes with the set on any voltage.

Fingertip control of power and range! Be first in your area with the newest equipment. See your local CB dealer for a demonstration. If no local dealer, order direct from factory.

ELECTRONIC ENGINEERING COMPANY PHONE 563-2294, AREA CODE 219
WABASH, INDIANA

DX LISTENERS WANTED

SWL'S & DX'ERS ATTENTION

by VAY S. MEER

The following DX radio clubs have informed S9 that they have open memberships for Broadcast Band DX'ers and Shortwave Listeners. They have also furnished some details of their operation:

Kentucky DX'ers Association, formed in July, 1963. Now has 60 members and publishes a 10 to 12 page monthly DX bulletin. Covers shortwave DX, broadcast band DX, Ham, TV, FM, card swappers. Membership is $2 per year, includes contests for members. Contact: KYDXA, 546 Pond Run Rd., Raceland, Ky.

International Radio Club of America, formed in March, 1964. Now has 185 members and publishes a broadcast band (only) DX bulletin. Sample copy of bulletin is 15¢ from: IRCA, Box 5181, Terminal Annex, Denver, Colo. 80217.

North American Shortwave Association, publishes a giant 40 page DX bulletin every month covering all possible phases of DX reception. They also have an extensive awards program for members. Membership is $3 per year which also entitles you to a membership card / certificate and voting rights. Contact: NASA, 1503 Fifth Avenue, Altoona, Pa. 16602.

National Radio Club, has been going strong for broadcast band DX'ers for almost 32 years now, publishing an excellent monthly bulletin and holding yearly conventions for members. Membership fee is $4 per year, sample copy of the bulletin is 25¢. Contact: Ray B. Edge, Box 63, Kensington Sta., Buffalo, N. Y. 14215.

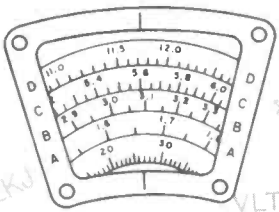
American SWL Club, current membership about 170, publishes a monthly 30 page DX bulletin covering SWBC, QSL Collecting, BCB DX, Ham/TV/Space/Utilities DX. Also a large number of awards are available. The club produces a weekly DX program which is broadcast over an international shortwave broadcast station. Dues are $3 per year, sample bulletin is 20¢. Contact: Gerry Klinck, ASWLC, 223 Potters Rd., Buffalo, N. Y. 14220.

America Central Radio Club, publishes a 10 page monthly DX bulletin mainly devoted to a monthly log with special emphasis on Latin America. Membership fee is $2 per year. Contact: Duncan B. Gardiner, ACRC, 207 E. 16th, Bloomington, Ind. 47403.

DX Inter-Nationale, publishes monthly DX bulletins which (some months) run as big as 50 pages (in color) and cover SW, BCB, FM-TV DX, card and tape swaps, friendship, hi-fi, stereo, music, Ham band DX, etc. Members may purchase printed report forms to send to stations heard and may take advantage of the DXI tape library service. Sample bulletin is 25¢, membership fee is $2.25 per year. Contact: David Wilson, DX Inter-Nationale, % The Inter Nation Program, 91 Court, Newton, Mass.

Newark News Radio Club, about the oldest and largest radio club in the world with many hundreds of members. Publishes a monthly bulletin of about 60 pages full of BCB, swappers, SW, Ham, FM-TV, QSL info, Utilities, etc. This club is practically a *must* for any serious listener. Sample bulletin 25¢. Dues $5 per year. Write: Newark News Radio Club, 215 Market St., Newark, N. J.

When contacting any of the above clubs, please mention that you heard about them through S9, as some have indicated that S9 readers will receive extra fast service and additional material not normally furnished to non-members.

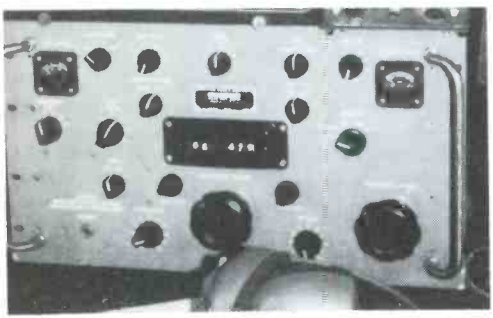


THE SWL SHACK

BEST BETS FOR LISTENERS ON THE DX BANDS

by RICK SLATTERY

Here we go with another DX'ers column, and the topic which seems to have created the most interest from last month's article is the receiver which was shown in the photo of *S9* Editor Tom Kneitel's listening post. We mentioned that it was a Collins R-390A digital readout job with mechanical filters. A number of readers were quick to point out that their electronic equipment catalogues do not show this receiver and that possibly we had made a mistake by calling it a Collins rig, or by giving it the handle "R-390A." Well *we* were right, but you won't find it in very many catalogues.



Actually it's probably the fanciest receiver in the world—the rig has 33 tubes and will allow a bandpass as small as 100 cps wide. It covers 500 kc/s right through 30 mc/s in 30 one megacycle bands. It offers direct frequency readout in digital form, that means when you are looking for say 6097 kc/s, you just dial it via the frequency counter on the front panel (it reads like an automobile mileage odometer), and there you are! It offers this direct frequency readout with an accuracy of about 300 cps. Sounds nice and rather unique, doesn't it? Oh yes, the receiver sells for about *$3,000!*

Now that you've recovered from that shock, here are some DX tidbits for you to seek out:

SHORTWAVE BROADCAST STATIONS

All times are shown in 24-hour Eastern Standard Time.

Radio Japan heard well at 0605 in English on 9505 and 15195 kc/s . . . *Radio Australia* at 0605 on 9570, 9580, and 9660 kc/s . . . *Radio Peking* holds forth at 0614 on 9735, 9880, 11290, 11505, and 15060 kc/s . . . *BBC* with good sigs at 0643 on 15070 kc/s, at 0734 on 17705 kc/s, 0739 on 17790, 1330 on 17695 . . . *HCJB* in Quito, Ecuador, very good sigs at 0615 on 9745 and 11915 kc/s . . . *Radio Loreto*, OAX8F, Peru, heard through QRM with music at 1625 on 9470 kc/s, also from Peru we hear OAX4R, *Radio Nacional*, at 1630 on 9562 kc/s . . . *Voice of The West* in Lisbon, Portugal, with English at 1510 on 9645 kc/s . . . *United Arab BC* from Cairo with all sorts of chanting at 1417 on 9780 kc/s . . . *Deutsche Welle*, DMQ11, in Cologne, W. Germany, with excellent sigs at 1405 on 11925 kc/s . . . *Radio Prague*, in Czechoslovakia,

Editor's Note: Take a listen to station WRUL's program "DX'ing Worldwide" broadcast each Saturday at 1400 EST on 11875, 11940, 15440, 17760 kc/s. S9 Magazine is preparing some material for this program and there is a possibility that at least once a month WRUL ("Radio New York Worldwide") may present a special program for S9'ers, featuring members of the S9 Magazine staff. We will let you know if and when this develops. In the mean time, you can pick up some good DX tips each week on this interesting program which is heard throughout the world.

KBG4303

(Advertisement)

CB IN ACTION

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

The Holiday Season is here—and it brings with it many things. First the nostalgia we all feel when another year comes to an end—the memories, the goals accomplished and those that we didn't get around to completing, and the resolutions to make the coming year an even better one for ourselves, our family and our friends.

But more than that, it is a time when the spirit of the season takes over—the feeling of friendship and a willingness to help and share with our friends, neighbors and those less fortunate than ourselves. We CB'ers are also a family and we also have a means at our disposal which can be used to help others—not only in the Christmas Season but throughout the year . . . helping motorists in trouble, people that are stranded, cooperating with police and civilian defense and a list too long to begin to touch on the good that we have done and will continue to do. Let us then resolve to keep up the good work that we have done—observe the courtesies of the air and do unto others a little more than we would do unto ourselves (it always pays back with interest).

Meanwhile—thanks to you all for a wonderful happy year—for the fun and camaraderie we've had meeting with you on our trips across the country and to all of you who have taken the trouble to write to us (we love to get mail). We will continue to try to give you the kind of information you want—What would you especially like for us to accomplish in our column during this coming year? We are anxious to give you what you want—Let us know and help us make *our* resolution for the year!

WIN A COMPANION II CB

And don't forget—a new COMPANION II will be awarded to the best CB in Action story next month. Write us your experience. Write Len Haas, National Sales Manager, Pearce-Simpson, Inc., 2295 N.W. 14th Street, Miami, Florida 33125.

Happy Holidays and 73's to All!

at 0745 on 9470 kc/s . . . Fantastic signals from Fidel via *Radio Havana* at 0713 on 15135 kc/s . . . *Swiss BC Co.*, HER4, Berne, Switzerland, at 1625 on 9535 kc/s . . . From Mexico we hear XERR, *Radiodifussion Comerciales*, with music at 1330 on 15110 kc/s . . . The mysterious station which does nothing but play one song ("Kiss Me Honey") over and over with no announcements is heard jamming the bootleg political station *"Peyk-e Iran"* on 11694 kc/s at 1245 until 1400 s/off. We think that the jammer is located in Iran . . . LRX2, *Radio El Mundo*, Buenos Aires, Argentina at 2205 on 9710 kc/s . . . New schedule from *Austrian Shortwave Service:* to eastern North America on Sunday, Monday and Saturday at 1700 on 6155 kc/s. Send reception reports to Testbroadcasts, Osterreichischer Kurzwellendienst, Postfach 700, Vienna 50, Austria . . . *Vatican Radio* heard at 0630 on 15150 kc/s . . . Radio Canada puts a wallop of a signal on the following sked: 0715 on 5970, 15320, and 17820 kc/s, at 1016 on 11720, 15320, 17820 . . . *Radio Addis Ababa*, Ethiopia, in English 1100 on 7295 kc/s and at 1310 on 15300 kc/s.

BROADCAST BAND TIPS

Nice signals heard well throughout the States and Canada from *Radio Americas* on Swan Island. Station varies in frequency from 1162 to 1165 kc/s and is heard every evening . . . Hope this issue reaches you in time to let you know about the special Newark News Radio Club DX test broadcast from *CFJR*, Brockfield, Ont., 1450 kc/s on November 23 at 0230 to 0600. Send your reception reports to John A. Radford, Managing Director for your verie . . . South Americans being heard nightly in North America include *HJKL* in Colombia on 605 kc/s; *Radio Managua*, Nicaragua, on 965 kc/s; and *Radio Barbados* on 795 kc/s . . . Good strong one most evenings at *WOAI* in San Antonio, Texas, on 1200 kc/s, it's amazing that this one just about blankets the continent . . . Another winner is *WGN* in Chicago on 720 kc/s . . . You should have no trouble copying any of the following stations regardless of where you live: *WSM* in Nashville on 650 kc/s, *WNBC* in New York City on 660 kc/s, *WMAQ* in Chicago on 670 kc/s, *WLW* in Cincinnati on 700 kc/s *WJR*, Detroit, on 760 kc/s, *XELO* in Juarez (Mexico) on 800 kc/s, *WCCO* Minneapolis, Minn. on 830 kc/s, *WHAS* in Louisville on 840 kc/s, *WCBS* in New York City on 880 kc/s, *XEW* in Mexico City on 900 kc/s, you beginners can probably hook these on even a small table radio.

HAM BAND TIPS

You'll be interested in trying for the following DX ham stations: HK7AKJ in Columbia on AM, 14200 kc/s; DJ2EZ in Germany on SSB, 14129 kc/s; CM6AAL in Cuba on SSB, 14149 kc/s;

Continued on page 75

ANOTHER CB GREAT

Courier 12

INCLUDES TRANSISTOR POWER SUPPLY; MOUNTING BRACKETS; 2 POWER CORDS & MICROPHONE

FEATURING:

- Part 15 Switch
- 12 Crystal-Controlled Transmit and Receive Channels
- Tunable Receive — 23 Channels
- Transistorized Power Supply
- P. A. Facility
- Illuminated "S" & "RF" Meter
- Illuminated Dial
- Single Knob Tuning
- Chrome Cabinet
- Noise-cancelling Mike
- Made in U.S.A.

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white plains, n. y.

Please send me full details about the e.c.i. Courier 12, Part 15 operation, and all other e.c.i. citizens band products.

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World famous manufacturers of quality CB & BB equipment including Courier 23, Courier 1M, Courier 30B, Fleet Courier, Port-A-Lab, Transistorized Power Supply, Linear Amplifier.

eci. electronics communications, inc. 56 hamilton ave., white plains, n. y.

NOW!

GET CB AND PART 15 OPERATION

WITH THE REMARKABLE COURIER 12

JUST FLIP THE PART 15 SWITCH . . .

- **No license required**
- **Talk skip — around the world**
- **Use voice or CW**
- **Unlimited antenna tower height**
  (subject to FAA Regulations)
- **Talk as long as you want on any subject**

The great new Courier 12 comes fully equipped with a "Part 15" switch which limits output to FCC Part 15 power requirements. When coupled to the e.c.i. "Fifteener" antenna, Courier 12 will open up entire new areas of "hobby-type" communication. Use the coupon, on reverse side, for complete details.

Courier 12 complete with "Part 15" Switch

$109.50

slightly higher west of Rockies

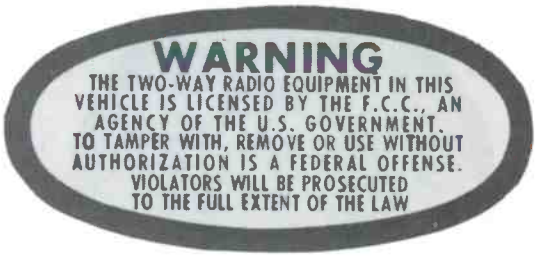
eci. **electronics communications, inc.** 56 hamilton ave., white plains, n. y.

ON THE COUNTERS

A new transistorized auto ignition system has been announced by Slep Electronics, P.O. Box 178, 301 Highway Ellenton, Fla. The new unit, called the TS-30 Banshee delivers peak performance and economy into any automobile. The unit installs in less than an hour on any 6 or 12 volt engine, regardless of the number of cylinders. Prices range from $39.95 to $59.95 depending on the model. Loads of literature are available from the manufacturer.

The EXECUTIVE 59 is one of the latest CB units from International Crystal Mfg., 18 North Lee, Oklahoma City, Okla. The unit operates on 6/12VDC and 115 VAC and features 9 crystal sockets for receive and transmit, .5 uv sensitivity, selectivity is 15 db down at 10 kc/s, automatic series-gate NL. The suggested user net is $172.50. The unit is similar to the EXECUTIVE 50 except that the unit is completely crystal controlled.

Raytheon Company, 213 E. Grand Ave., South San Francisco, Calif. has a new *2 watt* hand held transceiver using 13 transistors, 2 diodes and a thermistor. Called the RAY-TEL TWR-6, the set weighs in at 2¾ lbs. A meter on the side of the set shows the amount of charge of the self contained nickel-cadmium batteries. The batteries are recharged from any household wall outlet. Suggested price is $119.50, plus optional accessories. Contact Dave Thompson for more details of this miniature powerhouse.



A nifty FCC warning decal in red, white and black is being offered by ARTCO, P.O. Box 8202,

FREE CHANNEL 9 MONITORING DECAL!

BIG!!!
3 inches

Yes, you can boost Channel 9 as the National CB Calling & Monitoring Channel with a large red, white, and black decal on your windshield! Can be seen by all mobile units to let them know where you are listening. These large decals sell for 50¢ each but are FREE with all new S9 subscriptions and renewals received —— mark your subscription order "Decal" to get these *while they last!*

Besides the decal, you will be signing up for 12 months of the "Official Publication" of all CB'ers throughout the U.S. and Canada, the largest circulating CB magazine—the one with twice as many pages for the same price! So double your pleasure, double your fun, get twice as much magazine, for the price of just one! And don't forget to take advantage of the Channel 9 Monitoring Decal—tell the gang where you got it too!

A postpaid subscription form is located in the rear of this issue. By the way, an *S9* subscription makes a swell holiday gift for someone (XYL's please note!). *S9* gift subscriptions are furnished with a distinctive gift card to tell the CB'er who has been kind enough to send him the best in CB reading.

Atlanta, Ga. They sell at 2 for $1 with a rapid delivery. Quantity prices are available to CB clubs. The company is experimenting with a new product: a sleek new telephone-type remote unit for all CB rigs.

Lafayette Radio, Dept. S9L-4, P.O. Box 50, Syosset, N. Y. offers two new communications of similar physical appearance, but with different frequency coverage. The first set, the model HA-225, sells for $139.50 and features 14 tube dual conversion coverage from 150 kc/s to 30 mc/s, plus 6 meters—of course the Citizens Band is included in the coverage. Sensitivity is .5 uv, the unit features SSB detector, BFO, built-in crystal calibrator (crystal optional), S-meter, Q-multiplier, VR power supply, and calibrated electrical bandspread. The other unit, the model HA-230, is a low cost (wired at $89.50 and semi-kit at $74.50) 8 tube ham and SWL receiver. It covers 550 kc/s to 30 mc/s with 1 RF and 2 IF stages, Q-multiplier, 1 uv sensitivity, BFO, noise limiter, and calibrated bandspread.

Lafayette also has for emergency-help minded CB-ers three GIANT "WARN-O-SIGNS" which offer a vivid warning to oncoming motorists. The signs say "CAUTION" (#11-G-8051, $2.95), "DANGER" (#11-G-8052, $2.20), and "SEND HELP" (#11-G-8053, $2.50). These signs are printed in luminous painted on a beaded reflective screen which can be seen for hundreds of feet in day or night. No batteries and they attach by means of magnetized rubber strips. When not in use they are rolled up and stored in the trunk. Sizes range from 2 feet by 1 foot to 1 foot by 3

Watch for next month's big issue

feet. If you ever stop to help a stranded motorist one of these signs could stop your car from being clipped from behind.

Want to send a Christmas greeting to a CB friend? Here's just the thing—a Christmas QSL card from Chuck Baer Enterprises, 6429-S North Glenwood Ave., Chicago, Ill. 60626. Orders must be at Chuck's not later than December 10th and should include special delivery postage. Cards are red, green, and black on the front, with blue on the flip side. Prices include regular parcel post and are: 100 for $5.20, 200 for $7.30, 500 for $14.50, and 1000 for $21. Special delivery, add 55¢ for less than 200 cards, 65¢ for more than 200.

Pearce Simpson, P.O. Box 308, Riverside Station, Miami, Fla. 33135, offers their new GUARDIAN CB rig. The GUARDIAN features 23 channel operation by means of a new, patented, frequency synthesizing circuit; also a highly efficient noise limiting circuit, an illuminated S-meter, an illuminated channel selector and modulation indicator, universal power supply, external speaker provision, 2 stage TVI filter. Price is $299.50. Details and specs are available from Lenny Haas at the company.

Heath Company has their new 1965 106 page color catalogue available at no cost for S9'ers. Drop a card to The Heath Company, Benton Harbor, Mich., for this listing of all types of easy-to-build electronics kits.

If you're interested in the betterment of CB communications you will be using Channel 9 as

Continued on page 42

NEW! LAFAYETTE DUAL-CONVERSION DELUXE 9-TUBE C. B. TRANSCEIVER Model HB-200

Successor to the Famous Lafayette HE-20C

Made in U. S. A.

109.50

42-0118WX

Imitated but never duplicated . . . Lafayette scoops the industry again with the finest in Citizens Band Communications at a price you can afford.

• 9 Tubes plus 3 Silicon Diodes plus 2 Crystal Diodes for 17-Tube Performance • Super Sensitivity—1 Microvolt or Less • 8 Crystal Receive Positions plus 8 Crystal Transmit Positions plus 23-Channel Tunable Receive • Push-to-Talk Microphone • Dependable Relay Switching • Illuminated Meter with 3-Position Switch • Adjustable Squelch • Spotting Switch • Built-in 117 Volt AC Power Supply with 12 Volt DC Mobile Transistorized Power Supply • With Bracket Handle, Push-to-Talk Ceramic Mike, Pair of Transmit and Receive Crystals for Channel 15 plus Crystal for Dual Conversion

NEW! LAFAYETTE MODEL HA-115 AUDIO COMPRESSOR AMPLIFIER FOR CITIZENS BAND-TRANSCEIVERS

3 ACCESSORIES IN ONE COMPACT UNIT

• 6, 12 or 117 Volt For Mobile or Base Transceivers • Illuminated Meter Directly Reads Modulation Percentage • Completely Pre-Set and Pre-Tested • Printed Circuitry — Advanced Design • Works With All Popular CB Units • Simple Installation • Increased Intelligibility Over Static, Noise, Adjacent Stations • Better Modulation for Older Units • Increased Talk Power For CB Operation

25.95

42-0117WX

Made In U.S.A.

NEW! LAFAYETTE 2-WATT 2-CHANNEL C. B. "WALKIE-TALKIE" Model HA-300 WITH VARIABLE SQUELCH

99.95

2-for-194.95

- Range up to 10 Miles
- Plug-in Battery Changer with Self-Contained Rechargeable Batteries
- 13 Transistors, 2 Diodes
- Fully Crystal Controlled
- Full-Time Automatic Noise Limiting Circuit
- 10-Section Telescopic Antenna
- Complete with Nickel Cadmium Batteries, Battery Charger, Earphone, Crystals for Channels 10 and 15, Leather Carrying Case • Imported

LAFAYETTE HB-115A PUSH-TO-TALK CITIZENS BAND TRANSCEIVER

42-0101WX

FULL 5-WATT INPUT!
FULL VALUE

Made In U.S.A.

- 12 Tube Functions, Plus 1-Diode, Plus 2 Silicon Rectifiers
- 8 Crystal-Controlled Transmitting Positions
- Tunable Superheterodyne Receiver Over All 23 Channels
- Electronic Push-to-Talk Switching
- Push to Talk Ceramic Microphone
- Pi-Network for Maximum Power Output
- External Speaker Earphone Jack on Front Panel
- Full-Wave Variable Noise Limiter
- Separate On-Off Power Switch
- Supplied with Channel 14 Transmitting Crystal
- Attractively Styled, Ruggedly Built

59.95

OTHER LOCATIONS	New! New York City Store 71 West 45th St.
New York, N. Y. 100 Sixth Ave.	Newark, N. J. 24 Central Ave.
Jamaica, N. Y. 165-08 Liberty Ave.	Paramus, N. J. 182 Route 17
Brooklyn, N. Y. 2265 Bedford Ave.	Plainfield, N. J. 139 W. 2 St.
Bronx, N. Y. 542 E. Fordham Rd.	Boston, Mass. 584 Commonwealth Ave.
Scarsdale, N. Y. 691 Central (Park) Ave.	Natick, Mass. 1400 Worcester St.

FREE! Mail Coupon For
1965 Catalog No. 650
Over 500 Pages!
Featuring Everything In C.B.

Lafayette Radio Electronics
Dept. S9L-4, P. O. Box 10
Syosset, L. I., N. Y. 11791

☐ Send me the FREE 1965 Lafayette Catalog 650
☐ $.....enclosed; send me #..... (Prices do not include shipping charges).

Name .....
Address .....
City ..... State ..... Zip .....

LAFAYETTE

NEW! LAFAYETTE 23-CHANNEL CRYSTAL-CONTROLLED DUAL CONVERSION 5-WATT CB TRANSCEIVER

WITH ADVANCED "RANGE-BOOST" CIRCUIT

Double Side Band Full Carrier

- **17-Tube Performance with 13 Tubes**
- **Low Noise Nuvistor "Front End"**
- **5 Double-Tuned If Transformers**
- **Meets All FCC Requirements**

Model HB-400
99-3001WX

169.50

- *Frequency Synthesized Circuit Provides 23 Crystal-Controlled Transmit & Receive Channels—No Extra Crystals to Buy!*
- *Continuous One-Control Channel Tuning*
- *Full 5-Watt Input*
- *Push-To-Talk Microphone & Electronic Switching*
- *Dual Conversion Receiver With 3/10 μv Sensitivity*
- *Delta Tuning Offers "Fine Tuning" of ±2.5Kc on Receive*
- *Illuminated "S" and RF Output Meter*
- *Variable Squelch, Variable Noise Limiter, AGC*
- *Built-in 117V AC & 12V DC Power Supply*
- *"Vari-Tilt" Mounting Bracket for Easy Mobile Installation*
- *Plug-in Facilities For Lafayette Selective Call Unit*

Efficient, dependable 2-way communications in any fixed or mobile application is assured with this rugged, new 5-watt CB transceiver. A military-type frequency synthesizing circuit makes it possible to transmit and receive over the full range of 23 channels with crystal-controlled accuracy—no extra crystals to buy and install!

Efficient circuit with 13 tubes and 8 diodes offers maximum transmitter power output . . . high receiver sensitivity—plus every feature CB users want!

Operates in a fixed or mobile location with equal ease . . . has built-in power supply for either 117V AC or 12V DC. Specially designed "Vari-Tilt" mounting bracket simplifies mobile installation—permits fast removal of the transceiver too! And, there's nothing else to buy—you get all crystals, push-to-talk ceramic mike, and a built-in vibrator for 12V DC, plus 2 power cables. Measures a compact 12Wx5Hx10"D.

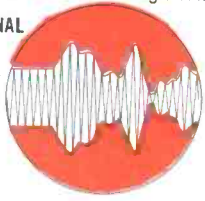
ADVANCED "RANGE-BOOST" CIRCUIT

Increases Your Effective Range—Lets You Get Through When Others Fail!

Want to effectively increase your range? You can—with Range-Boost! A simple turn of a switch on the HB-400 increases the average percentage of modulation and lets your voice cut through QRM and noise to reach further . . . gives you more "talk-power" when you need it—without overmodulating!

CONVENTIONAL

Average Percentage of Modulation Is Lower



WITH RANGE-BOOST

Average Percentage of Modulation is Higher—Sideband Power is Increased

Headquarters For Citizens Band Equipment

NEW! LAFAYETTE ALL-TRANSISTOR DUAL CONVERSION 5 WATT CB TRANSCEIVER

FEATURING AUTHENTIC MECHANICAL FILTER

139.50

- 100% Solid-State . . . Full 5-Watt Performance!
- Small, Compact—Only 11-7/16Wx6-11/16Dx3"H
- Low Battery Drain—Less Than 350 ma on Receive, 850 ma on Transmit!

- *12 Crystal Transmit plus 12 Crystal Receive Positions*
- *23 Channel Tunable Receiver with Vernier Tuning*
- *Dual Conversion Receiver with 5/10 μV Sensitivity*
- *15 Transistors, 3 Diodes, 2 Zener Diode plus 1 Thermistor*
- *Zener Diode Voltage Regulated Receive Oscillator for Superior Frequency Stability*
- *Dependable Sealed Relay Switching*
- *Automatic Noise Limiter*
- *Variable Squelch*
- *For 12 Volt DC Mobile Operation (Negative or Positive Ground) or for 117V AC Operation when used with Matching Solid State AC Power Supply (Optional)*
- *Meets All FCC Regulations*

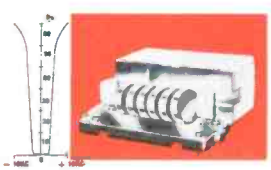
RUGGED, HEAT RESISTANT TRANSISTORS USED IN ALL CRITICAL AREAS

EPITAXIAL SILICON, MESA TRANSISTORS used in Transmitter Oscillator, Driver and Final Stages.

SILICON MESA TRANSISTORS used in Receiver Oscillator, RF and IF Stages.

If you're looking for a high-performance CB transceiver in a small, compact size, you'll want the HB-500! Using advanced solid-state circuitry, this transceiver is small enough to fit conveniently into the most compact car. And, battery drain is really low! The transceiver draws no more than .35 amps on receive, .85 amps on transmit—an important advantage in mobile applications! This rugged transceiver offers instantaneous, cool-running operation and features printed circuit, all-transistor design. Equipped with mobile mounting bracket, push-to-talk dynamic microphone, crystals for operation on channel 12.

HIGHLY SELECTIVE MECHANICAL FILTER



With CB channels only 10 Kc apart, selectivity is important! In the HB-500, ultra-sharp selectivity is achieved by means of a true mechanical bandpass filter in the 455 Kc IF section. At 10 Kc on either side of the center frequency, the filter provides 60 db of attenuation—an extremely high rejection ratio that assures complete adjacent channel rejection!

Model HB-501 Solid State AC Power Supply

Matching solid state AC power supply for HB-500 for fixed station operation (at home, business, office). Transceiver rests on power supply to form attractive integrated unit. Size 11 7/16 x 6 11/16 x 3 11/32".

99-3028 ..... Net 16.95

Continued from page 37

your monitoring channel; you will also want to let others know about CB's National Calling Channel and the fact that that's where you're monitoring. Especially true for mobile units which pass in the night. You can let them all know that you monitor 9 with a BIG 3½ inch 3 color Channel 9 Monitor decal. Dazzling red, white, and black for mounting on any surface. With mounting instructions for long lasting sticking. Available at 50¢ each from: Channel 9, % S9 Magazine, 14 Vanderventer Ave., Pt. Washington, N. Y. 11050. REACT members should be especially interested in these decals inasmuch as Channel 9 is now the compulsory monitoring channel for *all* REACT Teams. Decals are available in bulk at 10 for $3, postpaid. Single decals may be had free with new or renewal subscriptions to S9 if the subscription orders are marked "Decal."

S9 Lab Reports

USL CONTACT-8

The USL *Contact-8* is a moderately priced CB transceiver which offers, among other things, frequency-control flexibility without necessitating a large expense. This is accomplished through the use of a 23-channel tunable receiver, eight instantaneously selected crystal-controlled transmit and receive channels and separate external crystal sockets for transmitting and receiving on a single channel. In the event receiving crystals are not used, a spotting position is provided so that the receiver dial may be exactly set to the transmitting channel.

Other features include: Illuminated meter which can be switched to read signal strength or relative transmitter-power output, electronic switching, headphone jack, squelch, automatic noise limiter, TVI trap, Nuvistor RF stage in receiver for high sensitivity with low noise, high transmitter-output power with full plate modulation, self contained transistorized power supply, operation on 117 VAC or 12 VDC (negative or positive ground). Separate cables are used for AC and DC operation, with the 12 VDC cable equipped with a cigar-lighter type plug for quick installation. The receiver tuning

dial is illuminated as are the panel designations for the various controls, thus making quick identification of controls possible under adverse lighting conditions such as may be encountered during mobile work.

The USL Contact-8 CB Transceiver. At the bottom from left to right are: mic connector, CB-PA switch, volume control with power switch, spotting switch, receiver-tuning or crystal-control switch, channel-crystal selector, headphone jack. The squelch control is at the right of the speaker grille with the tuning dial just at the right of center. Below the meter is the meter function switch along with the two external-crystal sockets below it.

An extra dividend is that the *Contact-8* can be used as a P.A. system simply by switching to the P.A. position and plugging an external loudspeaker into a jack on the rear of the unit.

The model checked in the *S9* lab was one of the production line and was furnished with an instruction manual or schematic diagram, so detailed technical data is not known; however, examination of the unit revealed that the RF output amplifier employs a 6BQ5 which is plate modulated by another 6BQ5. A conventional crystal oscillator/driver combination is used. The receiver has a 6DS4 Nuvistor tube for the RF stage which is followed by a converter tube the oscillator section of which may be either crystal controlled or manually tuned as selected by a panel switch. Two IF stages are used at a frequency of 1650 kc/s, thereby minimizing the possibility of interference from IF image signals. A 6T8 triple-diode/triode is used for squelch, automatic noise limiter and a.v.c. and a.f. amplifier. The modulator tube doubles as an a.f. power output amplifier.

PERFORMANCE

Measurements indicated a receiver sensitivity of .5 microvolts for a 9 DF signal-to-noise ratio. Selectivity, although not as good as that obtained from a 455 kc/s IF system, was entirely adequate, but image rejection for a single conversion receiver was superior. The transmitter power output measured 3.25 watts at normal AC line voltage, a little higher with 12-volt operation. Complete modula-

Continued on page 46

REVOLUTION IN CB BASE ANTENNAS

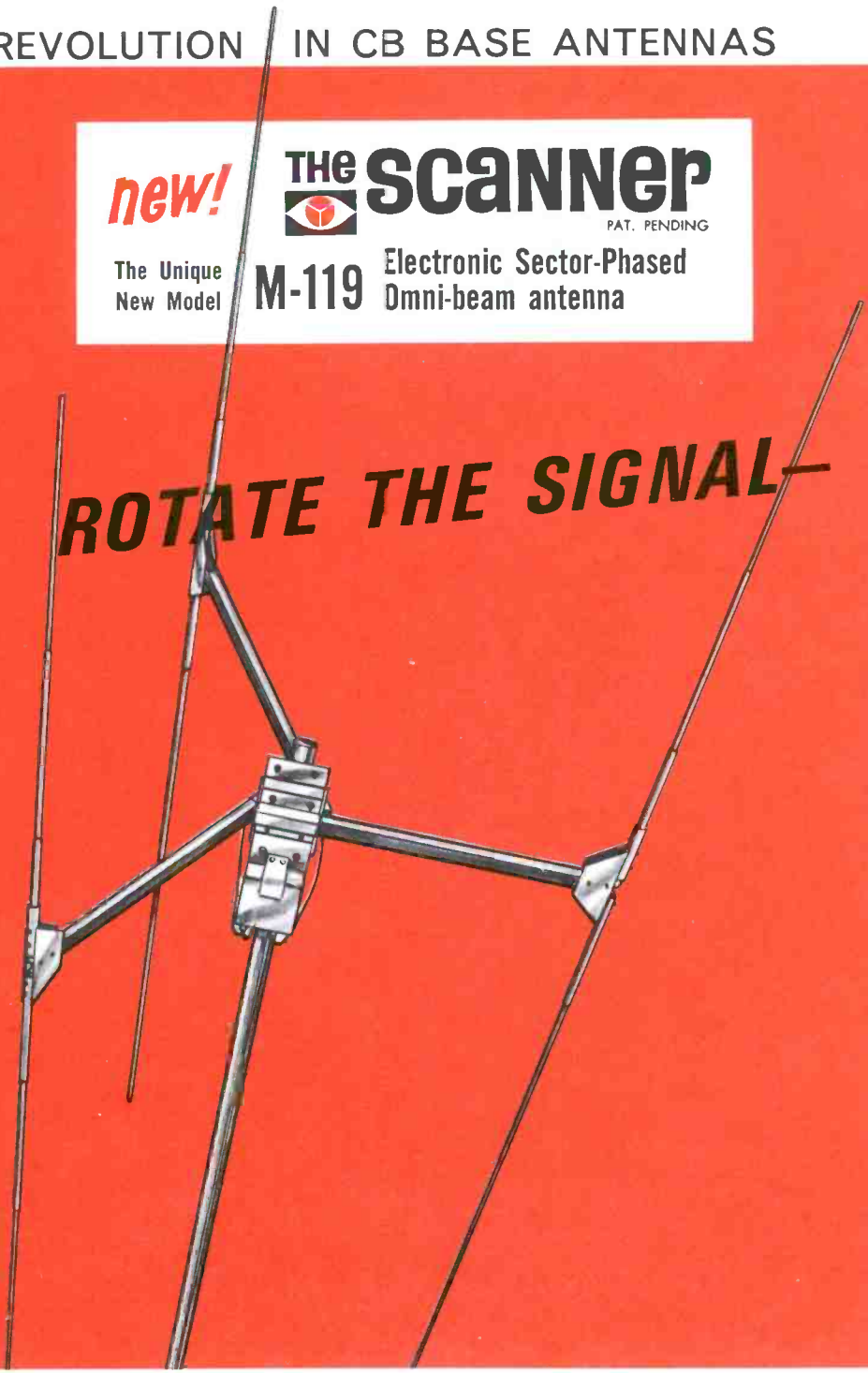
new!

THE SCANNER

PAT. PENDING

The Unique New Model **M-119** Electronic Sector-Phased Omni-beam antenna

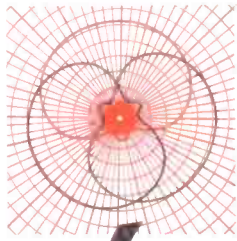
ROTATE THE SIGNAL—



Ask your dealer about the SCANNER today!

Easy, Instant, Trouble-free Scan Control

The Scan Control Unit is a simple switch-box with three direction positions, with lifetime neon lights in white, red, and amber to show where the SCANNER is aimed. It controls electronic circuits that sector-phase the antenna feed to focus and direct the signal . . . instantly. The radiation patterns for the three beam positions, shown at the right, illustrate the strong directional gain and the full-circle scan coverage.



NOT THE ANTENNA!

Electronic Focus and Signal Rotation—No Rotator

The SCANNER electronically focuses your CB power for maximum distance, and electronically rotates the focused beam at a touch of the control switch. No old-fashioned mechanical rotator is needed.

Instantaneous Scan

Beam direction responds instantly to the control switch. You get immediate action in any direction you select.

Most Compact, Sturdiest

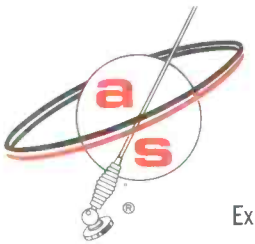
Elements extend less than three feet from the mounting structure. Compare this with the 24 ft. by 18 ft. wingspread of an ordinary five element Yagi! One man can easily install the SCANNER. It weighs only 17½ lbs., yet it will withstand over 100 mph winds—25% more wind than an ordinary beam array can safely take.

Directional Gain of 7.75 db—23 db Front to Back

The SCANNER has an excellent front to back ratio of 23 db, with directional gain of 7.75 db over a standard flat ground plane. Instant scanning gives you omni-directional coverage in a split second, plus a focused beam six times more powerful!

Priced 30% Below Old-Fashioned Beam Arrays

With no rotator or other accessories to buy, you'll pay at least 30% less for the SCANNER than for an ordinary middle-class beam array set-up.



the antenna specialists co.

12435 Euclid Ave., Cleveland, Ohio 44106
Export Div.: 64-14 Woodside Ave., Woodside 77, N.Y.

Stripes of Quality

Continued from page 43

tion was obtainable; in fact, the *Contact-8* is one of the few units we've tested that produces significant upward modulation, thereby assuring maximum modulated power. A contribution in this respect is that the modulations peaks are clipped just below the 100-percent mark. This clipping action increases the average speech power, yet prevents overmodulation and interference due to carrier breakup on the negative peaks; however, if carried too far, this could cause undesired distortion. The *Contact-8* has more than enough speech amplification (the transmitter can be fully modulated while you're talking over a foot away from the microphone), so to avoid excess clipping it will be best to talk easily and at a slight distance from the mic (the output meter should just start to flicker)—by all means, don't shout!

There is no on-off switch for the noise limiter, so its effectiveness could not be closely determined. The squelch functions smoothly and even without the squelch, the receiver is relatively quiet during standby periods without the customary terrific background roar. The audio quality for both the receiver and transmitter is excellent.

The P.A. system arrangement works nicely and although it is not overpowering, it is a convenient and useful feature for portable or mobile use, if used indoors, however, a volume control would be desirable to have available for reducing the mic level as needed to avoid feedback.

The USL *Contact-8* is nicely packaged with a sloping panel finished in a two-tone combination of black and gray with red slide-switch arms and aluminum-finish knobs. It is furnished with a gimbal bracket with which it may be suspended from below the dashboard of a vehicle or be supported in a tilted-up position on an operating desk. Size is 12½" W. x 5" H. x 7¾" D. Weight is 14 lbs.

No matter whether you are a commercial or personal CB'er, you find the USL *Contact-8* to adequately fill most of your needs at a reasonably moderate cost. It is priced at $149.50 complete with microphone (push-to-talk), power cords, one pair of crystals and snap-lock mounting bracket. The manufacturer is United Scientific Laboratories, 35-15 37th Avenue, Long Island City 1, N. Y.

THE "POWER PAKS"

In any given set of tubes the rectifier is usually among those that need frequent replacement; and it is usually the tube that produces the most component destroying heat. Eliminate the rectifier tube and you reduce two problems—tube replacement and heat.

While most modern CB transceivers utilize silicon rectifiers—which generate virtually no heat—many older units literally burn up the cabinet

Continued on page 48

Regency EXPANDS YOUR HORIZON WITH THE RANGE-GAIN TRANSCEIVER

Now the best transceiver is even better. The NEW Regency "Range Gain" with its exclusive Double Side Band Reduced Carrier Transmitter gives you all the power you need for horizon-line operating range PLUS metered control so you do not exceed the FCC limit. PLUS you get new clarity in reception . . . pulls in even more distant signals than ever. 23 crystal-controlled channels—transmit and receive included. The word is out. Ask your friends about the "Big R". There is nothing on the market to match it, and the price is right. See your Regency dealer now. **Full one year warranty.**

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The Regency ROMPER is a Citizen's Band Transceiver with 17-tube performance. Now you can enjoy the benefits of 2-way communications at a realistic price. For example, with the Regency Romper, one crystal does the job of two—it both transmits and receives—reducing your crystal cost by one-half. No coil tuning is required—just plug in the crystals.

Tunable to all 23 channels, the new Regency Romper transmits and receives with crystal controlled reliability on any eight of the 23 broadcast channels specified by the FCC. To increase the overall performance and versatility of this transceiver, Regency design engineers have placed one of the Romper's eight crystals on the outside face of the set for easy access. The external crystal mounting allows you crystal controlled transmit and receive on any one of the 23 channels without effort. The Romper's receiver is highly sensitive and selective so that clear and consistent reception is always achieved. The Regency Romper is ideal for both mobile and base installations. Full one year warranty.

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Continued from page 46

with tube rectifiers. But just because your transceiver came with a rectifier tube is no reason you can't modernize the power supply with silicon rectifiers. And you don't have to be an electronics technician to do the job. With one of Marine & Mobile Communication's "Power Paks" you can change from tube to silicon rectifier with a flick of the wrist.

The "Power Pak" is a nifty device consisting of silicon diodes assembled in a plastic case which matches the tube it's to replace. For example, the silicon diode replacement for a 6BW4 is the size of a 6BW4 and has the same pin connections. You just lift out the tube, plug in the diode replacement and *voila*, a "modern transceiver."

The silicon replacements come in a wide assortment, there's a model for all rectifier tubes used in CB gear. To simplify matters the silicon replacement model numbers correspond to the tube numbers. In the case of the 6BW4 the diode replacement is the S-BW4—what could be easier.

Of course, the silicon replacements do cause one problem: that of excess power input to the RF final. Normally, 30 to 50 volts is dropped across the rectifier tube. But a silicon diode has a drop of only a volt or so; this means that the B+ will be nominally 40 volts higher than normal and the final plate power input will be more than 5 watts. To stay within the rules either the transmitter loading must be reduced so the power input doesn't exceed 5 watts or a series dropping resistor must be connected in series with the B+ to drop the B+ back to the original (tube) voltage.

For further information write to Marine & Mobile Communications, Costa Mesa, California.

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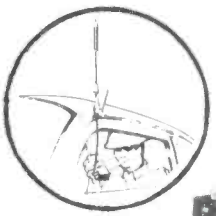

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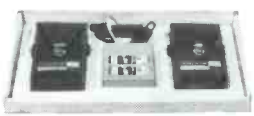
1 Model 900 Battery charger
4 Model 880 Rechargeable batteries
Attache kit carrying case



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Packaged in compact reusable box

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1 Model 900 Battery charger
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1 580 18" Clip-On Antenna for mobile use (with 6' of cable)
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CANADIAN CB CAPERS

We are looking for Canadian readers to become S9 AREA PUBLIC RELATIONS EDITORS (APRE's), similar to the system used so successfully by John Krejc in his "CB CHIT CHAT" column. Canadian readers who would like to become local S9 reporters (and earn some ready cash) please drop me a note and let me know that you're interested.

XM49-405

by JOHN BURNUP, XM49-405
9268 CUMMINGS AVE.
OTTAWA, ONT., CANADA

Well the proposed new regulations governing CB in the United States have made some Canadians wonder if "it could happen here." Certainly it can, if we GRS users abuse the privileges given us. I have written it before and I repeat it, we must police our own operations and if necessary report offenders to the authorities. CB clubs should make this a club project. Contact all new operators and help them to learn the proper operating procedures. Also contact the old users and bring them up to date with any new regulations that they may not be aware of. This is the type of assistance where clubs can be of service both to the operators and the D.O.T.

Many areas in Canada have clubs formed as Emergency or Rescue squads. This is wonderful, however wouldn't it be a great idea to have a national group formed to standardize their operations. We have all heard of REACT, why not a true Canadian counterpart. Maybe some public spirited manufacturer might sponsor such a group?

American CB'ers don't forget the Canadian Tourist Radio Regulations when you want to visit Canada. We love to meet you all on the band.

Ed Litwack, Stella Young, Fred Van Hunt, Susan Young, Peter Young, Jack Hermanson, John Burnup.

XM46-352 Danny Armstrong, RR #3 East Korah, Sault Ste. Marie, Ontario wrote to tell of an accident along U.S. Highway 2 about 5½ miles south of the Michigan Sault on September 6. XM46-380 Cliff Gutcher witnessed a head on collision. He sent out a call for help and within one minute confirmation was made that the Police, an ambulance and a wrecker were on the way. Although two men were killed, Mr. Gutcher's action saved the lives of two others. It proves that Canadians and Americans can mutually assist each other.

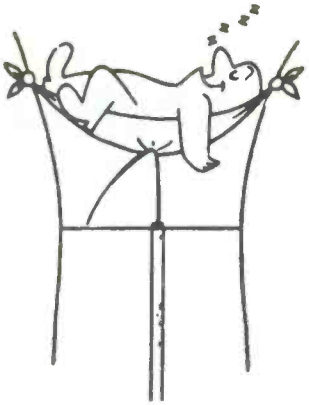
The month of September gave us the first national CB convention. Even though the turnout at London, Ontario was not as great as was expected it proved a huge success. Much praise should go to the Southwestern General Radio Association for the excellent way in which it was handled, including the speech given to all the delegates by Mr. A. G. E. Argue, Licensing Policy & Domestic Regulations.

It is through people like Mr. Argue that all GRS users can be made to appreciate what the DOT has done for us and the co-operation they will give when we abide by the regulations.

On September 24th, 1964 the first outlet for Lafayette CB Equipment was presented to the GRS users and public. Capital Importers of Canada introduced *Young's Radio* as the exclusive Dealer for Ottawa and the Valley. "Pete" Young was more than pleased with the results. Even the food was good.

On October 17th I went to the Three Rivers Inn for the CB'ers get-together. Next month I will give you a full report on it from the Canadian point of view.

Any club that wishes may list their club activities in S9 in this column and for the benefit of the French speaking CB'ers the Editor of S9 will allow a French text, you asked for it, now let's use it . . .



ANTENNAS

by LEN BUCKWALTER, KBA4480

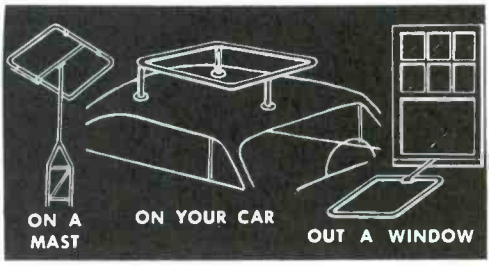
PRONOUNCE IT "SQUAY-LO"

Horizontal antennas for CB are about as rare as the topless bathing suit. And for nearly the same reason. Mounting problems. Try to stretch 18 feet of steel rod flat on your car roof and the nearest pedestrian gets the point. Electrically, too, it's fickle. So antenna makers latched onto the convenient, free-standing whip which teams up with the car body to fill out the needed 18-foot halfwave.

But like the player piano and long hair on boys, the horizontal antenna is making a comeback. It appears in a new antenna by Cush Craft. As you can see by the illustration, it looks remarkably like something worn by an angel who hadn't heard of Ringo Starr. That's right, a square halo. Squeeze those words together and you get "Squalo"—name of one of the first truly horizontal antennas for CB.

Halos aren't new. For years hams used these looplike antennas for 6-meter mobile. Cush Craft craftily goes one better. By squaring off the circle they improve performance, get rid of critical tuning, and now build Squalos for most ham bands and CB. Sales of the new models have put a round halo atop Bob Cushman of the company. He reports whopping sales in Cleveland where the truncated tubercles were first introduced Hams gobbled them up and CB'ers, too, want to go square. Is Squalo the answer to the CB'ers innermost dream? S9 signals while driving under a steel bridge during a thunderstorm as you're tail-gating an unsuppressed Volkswagen.) No, it's not the cure-all. Like many standard CB models, a Squalo should be selected with a careful eye to the end use. It's a poor choice for certain jobs, but could be excellent for others.

The real value of a horizontal mobile antenna is not how much gain it offers. In fact it radiates just about the same signal as its vertical cousin. It's in the noise area that the horizontal shines. Man makes the kind of electrical interference that mostly rides on vertical radio waves, e.g. ignition noise. The regular whip, standing erect, responds best to vertically polarized waves, and thus favors



noise pickup. Not so with the horizontal antenna. Lying flat, it creates cross-polarization; noise is vertical, antenna horizontal. Electrical hash is knocked down many db.

What about the *desired* CB signal coming in vertically? It, too, is clobbered by the horizontal antenna. Thus, the first big decision is whether you want to convert your entire system—base and mobiles—to horizontal. To gain noise reduction and still preserve good communications, all antennas would have to lie down on the job.

Thus a move to the horizontal depends on how you use CB. If communications are strictly between units of the same station, as in many business applications, there's a double advantage: less man-made noise and much rejection of other CB stations which point their whips skyward.

Squalo's operating principle is close to that of a dipole, though modified. A half-wave length on 27 mc is angled into the square shape. Each side of the square is about 50 inches long, small enough to fit atop even a small foreign car. The proper match for 52-ohm coax cable is obtained by a small tuning section along one leg. (It is a gamma element called "Reddi Match" by Cush Craft.) At the factory, a slider on this section is set up for the 52-ohm match, but the manufacturer recommends final adjustment when the antenna is installed. This requires the use of a meter for determining lowest SWR. For mobile installation, the antenna fastens to the car top with three rubber suction cups and stand-offs that hold the elements some 9 inches over the roof.

Watch for next month's big issue

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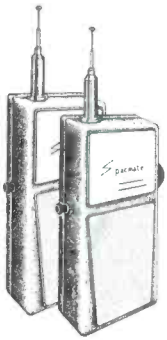

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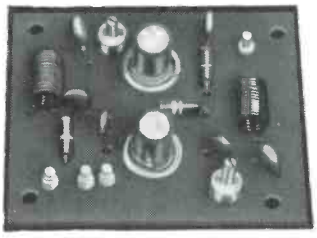

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Address correspondence to:

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GARFIELD, N. J.

COMING EVENTS

The **Lake City CB Club** and the **McDowell County Rescue Squad** both of Marion, N. C., will jointly sponsor the **2nd Annual National Grandfather Mountain CB Jamboree,** June 11th, 12th and 13th, 1965 at MacRea Meadows, on the slopes of Grandfather Mountain. Write: Jamboree Secretary, Blanche Wilkerson, 308 Vale Street, Marion, North Carolina.

Lancaster County CB Club will sponsor their **Annual Jamboree,** July 5th. More info forthcoming.

3rd Annual State of Vermont Jamboree, sponsored by the **Otter Valley CB Radio Club,** June 27th, 1965, State Fairgrounds, Rutland, Vermont. Contact: Bill Pinkham, Bob Hughes, P.O. Box 669, Rutland, Vermont.

National CBRRL is having their 4th **Annual Dinner-Dance** at the Friar Tuck Inn, Route 23, Cedar Grove, New Jersey, January 16, 1965, 7:30 p.m. Everyone invited. $10 a head, reservations only. Contact: Angelo Pollicino, KKD4039, 10 Avenue O, Brooklyn, New York 11204.

CENTRAL

Officers of the **Gateway Circle 11 Meter Ass'n** are: President, Carl Davies, **KHH3557**; Vice President, James Roberts, **KLN1697**; Secretary, Jane Roberts, **KLN1697**; Treasurer, Joe Hinton, **19Q3725**. Membership is approximately 45-50. The club meets the last Sunday of each month making it a family affair with a supper at each meeting. Guests are invited at all times. There is no definite meeting place, but information can be had by contacting the prez, at 1306 Central Ave., Newport, Kentucky. The club also is affiliated with **REACT** and is very strong in Civil Defense.

Recently, three year old Mary Jean disappeared from her home. After two hours of search, her father inquired of CB'er Howard H. Halperin if he had seen her. Three minutes later, 6 CB mobiles were proceeding to the search area. Ten minutes after the first alarm, one-half of the **Four Points CB Club** mobile units were alerted and the little girl was located shortly thereafter.

A brand new club has started in the area of Abilene, Wakefield, Chapman, Hope, Longford, Manchester, Elmo, and New Cambria, Kansas. They have divided their area by crews and here are the captains that represent their city: Crew 1, **KGH4463,** Irvin Koerner, Captain of Wakefield and his Co-Captain, **KGI7077,** Harry Marshall. Crew 2, Captain, **KGH2401,** Stanley Scripter and Co-Captain, **KGH2016,** Ivan Schwab of Abilene. Crew 3, Captain, **KGH1390,** Lavern Frohardt, Co-Captain, **KGH5463,** Austin Lay of Chapman. Crew 4, Captain, **KGI0175,** Virgil Schlesener of Hope. Crew 5, Captain, **KGH3549,** Leo Crawford and Co-Captain, **KGH0600,** Clarence Bermeier of Langford. Crew 6, Captain, **KGI1802,** Dale Botz and Co-Captain, **KGI-5962,** Orville Bender of Manchester. Crew 7, Captain, **KGI5839,** Pat Campbell and Co-Captain, **KGI8933** of Abilene. Crew 8, Captain, **17Q0710,** Rex Russell and Co-Captain, **KGI3171,** Ed Reiff of Elmo. Crew 9, Captain, **KGH2855,** Jim Sherman of New Cambria and the Co-Captain, **KGI2564,** T. M. Amos of Salina. Their Civil Defense Channel is 18. Good Luck folks to the new club.

Nine months ago, in a city called Dixon, Illinois, a CB Club was born called the **O.W.L. Club.** The club serves the counties of Ogle, Whiteside and Lee. As of this writing, membership is nearly 100. Also this past summer, the club sponsored a Jamboree at Lowdens State Park in Oregon, Ill. The club participates in CD and civic activities as well as social events. Club motto, as well as the city motto is, City of Progress. News of the club comes from Mrs. Ethel Buccola, Secretary.

President, Marvin Ryan, **18Q6728** of the **Maumee Valley CB Club** announced that the September 20th Annual **CB** Jamboree held at Fort Wayne Coliseum produced a gathering of over 5000 CB'ers from 17 states and helped the club celebrate their 3rd and largest annual gathering to date. During the day a total of 236 door prizes worth over $1000 was given away. Needless to say—QSL card swappers had a field day and many happy CB'ers are awaiting next year's event. (Editors note). It just goes to show, what advance publicity will do. This event was planned long in advance and had the proper guidance and coordination.

Newly elected officers of the **Wabash County CB Club** are: President, Gerold Benson, **KHB0945**; Vice President, John Crumrine, **KHD1779**; Secretary-Treasurer, Peggy Helfin, **KLK6287**; Directors, Tom Helvey, **KLK1709** and Dick Workman, **KHD2022.** Meetings are held the 24th of each month at the American Legion, Urbana, Indiana. The club monitors channel 9 with guests always invited.

The **Twin Cities CB Radio Club** of Benton Harbor and St. Joseph, Michigan. Officers are: President, Marlin Swanson, **KHI0001**; Vice President, John W. Hardin, **KHG4644**; Secretary, Mrs. Richard Kling, **KHJ2346**; Treasurer. James Hatchkiss, KHJ7544. The club is participating in the United Fund Parade sponsored by the Twin Cities Jaycess. Mobiles are being used for emergencies and to help control the parade in route. They also helped in the Blossom Parade and many other activities when called upon. The newly reporting group is well organized and enjoy helping people who are in distress or need road information when traveling through the area. The club monitors channel 9 and welcomes all CB'ers to visit their meetings and get acquainted.

The **Central Iowa CB Club** of Des Moines, Iowa recently won $10.00 cash prize for 100% attendance at a CB Jamboree at Marshalltown, Iowa. The Jamboree was sponsored by the **Corn Belt CB Club of Marshalltown,** and was held at the Isaac Walton League club house and grounds. Quite a few CB'ers camped overnight and had a ball. Some came early and camped out for two nights.

Al Polley, 17Q3947, President of the **Corn Belt CB'ers** said attendance was over 600 and the Jamboree was a huge success. Congratulations Al, on your first Jamboree!

Club meetings of the **Friendly Citizen Band Club** are held the third Wednesday of each month, Manistee, Michigan. Officers of the club, which membership numbers 32 are: President, Carl Ward, **KDC0899**; Vice President, Bob Johnson, **KHH0163**; Secretary-Treasuser, Cecil Gielczyk, **KDC1768**; Emergency Committee, Don Frestick, **KLN5357**; Harold Fortier, **KHH2263**; Carrol S. Hodges, **KHH1667.**

Members of the **Central Iowa CB Club** provided radio communications for the Iowa State Fair in Des Moines, August 21-30, 1964. Participating were Angelo Cipale, **KLH5796**, Jack Doggett, **KLH4994**, Ted Hesselltine, **KLH0863**, Bill Iiams, **KGI7580**, Don Jackson, **KLH-5136**, Larry Mihalovich, **KLH1880**, John Nay, **KLH-2813**, Bill Pennington, **KLH6044**, Andy Reed, **KLH5721**, Ralph Sheets, **KGI7662**, Dick Thompson, **KLH6915**, and Gary "Wimp" Winterberg, **KGJ0538.**

The club put up a temporary base in the Iowa State Fair Police Station and had mobile units cruising the entire fair grounds, parking lots, camping area, etc. Using 4 to 5 mobile units per night, each CB'er had at least one or more State Fair Policeman except one car which carried two Des Moines City Policemen. On two Saturdays and two Sundays, the club worked in two shifts, 11 A.M. to 6 P.M. and 6 P.M. to 1 A.M. with 8 and 10 mobiles working the grounds. The mobile units carried signs on both sides of the cars with words "Official State Fair Radio Car." They also carried "Police Car" signs in the front windshield.

Many lost children were reported to the police station and descriptions were immediately dispatched to the CB radio equipped cars and the search was underway. In fact, some lost children were found before the parents had even missed them. Fights were broken up practically as soon as one started. Quite a few fair visitors forgot where they had parked their cars and shortly after receiving the cars' description, it was located.

The club members received praise and thanks from the State Fair Police Chief. He said everything ran smoother this year than ever before due to CB communications. The **Central Iowa CB Club** received a nice letter of appreciation from Kenneth Faulk, Secretary of the Iowa State Fair. He complimented the club on the fine team work and said he had received compliments on the State Fair radio cars. The Fair is looking forward to another successful year with communication cars in 1965.

Club officers for the **Central Iowa CB Club** are: President, Don Jackson, **KLH5136**; Vice President, Jack Doggett, **KLH4994**; Secretary-Treasurer, Larry Mihalovich, **KLH1880**; Sergeant at Arms, Angelo Cipale, **KLH5796.** The club has 24 members and was officially organized in July, 1964.

NORTHERN

Recently organized in the Greater Boston area is the **Eastern Mass. Citizens Radio Club.** Present membership consist of 43. Newly elected officers include: President, Bill Campbell, **KBA7377**; Vice President, Don Ciccolini, **KBC4222**; Treasurer, Elmer Carpenter, **KBA-1852**; Secretary, Vera Jameson, **KBC1705.** Public Relations Chairman is Frank Franzosa, Jr.

Also newly reporting is the **Capital City Stand-by CB Club** of Concord, N. H. Recently elected officers are: President, John French, **KBC5711**; Vice President, James Hall, **KKA0010**; Treasurer, Maurice Cleveland, **KBC7153**; Secretary, Marylin Teal, **KBC6699.** Club reporter is Herbert Morrill, **1Q0600.**

Recently, **The Lycoming CB Radio Club, Inc.,** of Montoursville, Penn. provided radio communications for the South Williamsport Mummers Parade. News of the club comes from Richard S. Allen, Public Relations Chairman.

Newly elected officers of the **Two Rivers CB Club** are: President, Raymond C. Myers, **KJI2853**; Vice President, Herbert Flint, **KID8419**; Secretary, Mary Eddy, **KJI1218**; Ass't Secretary, Alice Davis, **KLP2726**; Treasurer, Willie Heesh, **KIC0820**; Ass't Treasurer, Roxie Sager, **KJI3014.** The club meets on the second Saturday of each month at 7:00 p.m. Any CB'er interested in joining should contact the above officers.

From J. F. Heinke, Jr., **KKD6806, S9, A.P.R.E.** Some fire departments in the Suffolk area are thinking of going into "Part 15" to keep in contact with their men while fighting large wooded fires. Most of this is due to the fact that the regular Fire Band is always jammed. So we think we have problems!

Martha's Vineyard—A Coast Guard helicopter crew plucked three men off a 22-foot cabin cruiser minutes before the craft sunk 10 miles south of No Man's Land.

One by one, Gary Merrill, 37, and John Loring, 37, both of South Darthmouth, and James Avilla, 26, of North Darthmouth were hoisted to safety aboard the helicopter. Lt. Thomas Finnigan of Marblehead was the pilot and Allan Backe of Salem the crew member of the chopper, which was out of the Salem Coast Guard Air Base.

Merrill said the cruiser struck a heavy metal object, "like a box," and immediately started to ship water from a hole in its hull. He said a distress call was sent over the boat's citizens radio band, and the signal, in turn, was flashed by an unidentified operator ashore to the Coast Guard.

Newly elected officers of the **Kings County Chapter of CBRRL** are: President, Andrew Luisi, Sr., **2Q7073**; 1st Vice President, Bernie Hengber, **KBG8963**; 2nd Vice President, Thomas DeCarlo, **KCA0442**; 3rd Vice President, Nick Fragapane, **KBG4156**; Treasurer, Andrew Luisi, Jr., **KBG0869**; Recording Secretary, Jerry Alfred, **KBG8706**; Corresponding Secretary, Irwin Karasik, **KKD0464**; Sgt. at Arms, Walter R. Castellano, **KKD0499.** The club meets every 1st Thursday of the month at 2225—65th St., Brooklyn. The Chapter monitors channel 11 and 21. All they need is another officer and they could hold their own meeting. (It takes 9).

The **Resistors Club of Boston,** thanked S9 and all CB members for the contributions and moral support to two of their members, John and Lita Long, **KBC-6033,** in their hour of bereavement. As you may know, they were burned out, recently, and lost everything including four of their five lovely children. Through a 10-5, CB'ers and hams alike were reached across the country and came to their aid proving CB is a wonderful thing and should be here to stay.

Now that summer activities are over, the **Bethel CB Monitors** are again active. Plans are under way for Pony Rides on Oct. 17th for the local children. Also available will be soft drinks, brownies and fudge to tempt their sweet tooth. Arrangements for a Biggest Buck Contest are being made. For the citizens and members not interested in getting a big buck, there will be a raffle with a Winchester 30-30, Model 94 as 1st prize. A $20 merchandise certificate from Gilbert's Trading Post will be 2nd prize. Drawing will be held Nov. 2, 1964. Donations $1.00. If interested contact any **Bethel CB Monitor** members.

The **New England CB Council,** an organization of, by, and for the Class D, Citizens Band Radio Clubs throughout the New England area, recently held its elections for '64-'66, with the following results: President, Bill Antoine, 1W4100, Hingham, Mass., MCRA; Vice President, John Morgan, **KBA2346,** Norway, Maine, Hurricane Mt. CB Rangers; Secretary, Charlotte Taylor, **KKA0177,** Walpole, Mass., 11/27 Radio Club; Treasurer, Donald Wallace, **KBA6491,** Southington, Ct., Triple CB'er. State Representatives: Conn., Steve Karpinski, **KBC1547,** Farmington Valley CB'ers; Maine, Errol Donahue, **KBC6733,** Bethel CB Monitors; Mass., Herbert Mitchell, **1W8674,** 23 CB'ers of No. Central, Mass.; N. H., Patricia Soule, **KBD4550,** North Country C. Bees; R. I., Antonio Calore, **KBC1409,**

Here's the giant A.P.R.E. (AREA PUBLIC RELATIONS EDITOR) list CB'ers and Clubs have been waiting for. The following is copyright by S9 Magazine.

FIRST CALL AREA:
Terrance P. Hughes, 704 Third Ave., Berlin, N. H.
R. E. Myra, Jr., RFD #1, 101 Spring St., Hanover, Mass.
Barbara Godwin, Bethel, Maine
Seth Paull, 701 Hope St., Bristol, R. I.
William M. Welch, 34 Sunset Rd., West Haven 16, Conn.
Wm. A. Gendron, Jr., 344 No. Winooski Ave., Burlington, Vt.
Edward Millett, Jr., 52 Fern St., Bangor, Maine
Thomas E. Peterson, 55 South St., Claremont, N. H.

SECOND CALL AREA
Lance Wheeler, 9 Riverledge Rd., Hudson, New York
R. Scheeren, RD 3, Box 25, Hopewell Jct., N. Y.
Bert Endress, 161 East 4th St., Clifton, N. J.
Edward LaFortune, 126 Second Ave., Troy, New York
Julius F. Heinke, Jr., 866 Church St., Bohemia, N. Y.

THIRD CALL AREA
Frank Peterson, 1022 Old Farm Rd., Point Pleasant, N. J.
Chet Zubrzycki, 241 Hayes St., Chester, Penna.
Robert L. Vincent, 1603 Edgewood Ave., Westville, N. J.

FOURTH CALL AREA
James M. Cross, 755 S. Potomac St., Hagerstown, Maryland
John S. March, 1143 John Marshall Dr., Falls Church, Va.
Richard W. Long, 711 N. Mechanic St., Cumberland, Maryland
G. Herold Berthy, Jr., Box 1093, Morgantown, W. Va.

FIFTH CALL AREA
R. F. Dougherty, Office of Civil Defense, Gate City, Va.
W. C. Hatcher, 713 Parrott Ave., Kinston, N. C.
Fred Blackwell, P.O. Box 117, Denver, N. C.
Charles E. Eichorn, 843 Hinton St., Petersburg, Va.

SIXTH CALL AREA
Cecil Pryor, P.O. Box 33, Gallatin, Tenn.
Frank Karcher, Box 362, Spruce Pine, N. C.
Cleveland Wheeler, 5511 Miller Dr., Chattanooga 11, Tenn.
Horace E. Lutz, Box 52, Waco, N. C.
Bill Wilks, 345 W. Outer Dr., Oak Ridge, Tenn.
Roy L. Greene, Chesnee, S. C.
James P. Setliff, 608 S. Best St., Goldsboro, N. C.
Donald Huntley, P.O. Box 2642, Asheville 10, N. C.
C. B. Womac, 3900 Hawthorne Ave., Huntsville, Ala.
John Pearson, 1204 Ashwood Ave., Nashville, Tenn.
Thomas Arnold, 404 Watt St., Prichard, Ala.

SEVENTH CALL AREA
Frank Allen, Route 3, Box 304, Lake Wales, Florida
Norman Jabes, 120 Lucille Ave., Fort Myers, Florida

EIGHTH CALL AREA
James Buffington, 115 Highland Ave., Aberdeen, Miss.
James E. McCoy, 248 Briarwood Dr., Jackson 6, Miss.
Murray L. Cain, P.O. Box 53, Jackson, Miss.
Harold E. Laughlin, 1924 Friedrica, Gretna, Louisiana

NINTH CALL AREA
Fred R. Wuensche, 307 East 11th, Austin 1, Texas
H. H. Stiers, Jr., P.O. Box 443, Kemah, Texas
A. J. Richardson, 3802 Merrick Dr., Houston, Texas
Reed L. McClellan, Jr., P.O. Box 3345, Pasadena, Texas

TENTH CALL AREA
Jack Doggett, 8060 Dema Drive, Des Moines, Iowa
Robert Johnson, 4300 Rector Ave., Forth Worth 15, Texas
James K. Abney, Jr., 406 E. Merritt, Marshall, Texas
Radio Red, 1623 West 7th, Texarkana, Texas
John Frazier, 329 South Fleishel, Tyler, Texas

ELEVENTH CALL AREA
Jack W. Kinsey, P.O. Box 3364, San Bernardino, Calif.
Gene, May Grant, 4908 So. Passons, Pico Rivera, Calif.
Marion R. Fenily, 11204 Mansel Ave., Inglewood, Calif.
Gordon Foulger, P.O. Box 697, 528 Second, Encinitas, Calif.
Michel J. Finley, P.O. Box 1689, Lancaster, Calif.
Robert Blakeley, 1918 Harbor Blvd., Costa Mesa, Calif.
Robert Forster, P.O. Box 233, Landers, Calif.

TWELFTH CALL AREA
Earl E. Hintz, P.O. Box 4, Atwater, Calif.
Donald Tillery, 5184 American Beauty Ct., Concord, Calif.
C. R. Comfort, 38397 Nebo Dr., Fremont, Calif.
Daniel Watrous, 211 Portola Way, Tracy, Calif.

THIRTEENTH CALL AREA
D. H. Fuson, Rt. 1, Box 80, Aumsville, Oregon
Ann Dickens, P.O. Box 1228, Bend, Oregon

FOURTEENTH CALL AREA
Lloyd E. Apitz, East 2709 Columbia, Spokane 28, Washington
Donald Speers, P.O. Box 321, Sumner, Washington
Walter Harrow, 2315 N. Curtis Rd., Boise, Idaho
James Roberts, Box 2772, Boise, Idaho

FIFTEENTH CALL AREA
Spencer Van Nov, 632 E. 3900 So., Salt Lake City 7, Utah
Donna Cosby, 319 W. Highland Dr., Grand Junction, Colorado

SIXTEENTH CALL AREA
Philip R. Nelson, P.O. Box 472, St. Croix Falls, Wisconsin
Glen Gorergen, 1843 Kerney Pl., Milwaukee 15, Wisconsin
H. Dean Schultz, 909 So. Jessica, Sioux Falls, S. D.

SEVENTEENTH CALL AREA
D. C. Wolcott, RFD #1, Cedar Rapids, Iowa
James T. Leversee, Box 53, Janesville, Iowa
Shirley Schaaf, 716 E. 72nd Terr., Kansas City 31, Mo.

EIGHTEENTH CALL AREA
Chuck Baer, 6429 North Glenwood Ave., Chicago 26, Ill.
Thomas Vastine, 341 Frederick Ave., Bellwood, Ill.
Clyde A. Davis, 858½ W. Green St., Decatur, Ill.
Theodore A. Margwarth, 2025 E. Spruce, Springfield, Ill.
W. R. Wootan, 331 Granada Place, New Whiteland, Indiana
Ralph Harter, Rt. #1, Box 37-A, Amboy, Indiana
Shirley Burns, 921 East Curtis Ave., Decatur, Ill.
Kurt Heinrich, 3102 Sunset Lane, Franklin Park, Ill.
Pat Hutcheson, Rt. #2, P.O. Box 18, Reelsville, Indiana
H. Thomas Hixon, Box 362, Chrisman, Ill.
Warren Wallace, 306 North Main St., Winchester, Ill.
Seth Lang Atwood, 2121 Harlem Blvd., Rockford, Ill.

NINETEENTH CALL AREA
William R. Nichols, 338 Patterson Lane, Weirton, West Va.
Daisy Zitka, RD #3, Box 306, Newton Falls, Ohio
David E. Morrison, 63 E. College St., Alliance, Ohio
Andrew Andrus, 1023 Columbia Road, Mason, Michigan
Ione Peterson, 202 Fairview Dr., Greenville, Michigan
Charles E. Nigg, Box 214, College Corner, Ohio
Jon G. Batley, 29803 Lake Rd., Bay Village, Ohio
Mark Templin, 408 Washington St., Steubenville, Ohio
Edward E. Saver, 525 Second St., Ann Arbor, Michigan

TWENTIETH CALL AREA
Lyle C. Adams, 64 Earl St., Rochester 11, New York
Charles Di Rosa, 165 East Ave., West Seneca 24, New York
Gary Goss, Box 164, Hiller, Penna.
William F. Harms, 928 E. Delavan, Buffalo 15, New York
E. R. Bailey, 745 Dutch Lane, Sharpsville, Penna.
J. E. Sankovich, 9 Eicher St., Uniontown, Penna.
Gary A. Baker, 50 E. Fourth St., Waynesboro, Penna.
Robert Bovd, 102 Williams Ave., Wellsville, New York

TWENTY-FIRST CALL AREA
C. R. Alsip, 827-B Herian Place, APO 958, San Francisco, Calif.

TWENTY-THIRD CALL AREA
Robert De Loach, 406 29th Ave., Anchorage, Alaska
Raymond Williams, Box 5959, Anchorage, Alaska

SERVICEMEN
Greenland—
Earl Hintz, 4683 Transron (ADC), P.O. Box 76, APO 23, N.Y., N.Y.
Montana—
Dick Lohr, 13th F.I.S., Box 1073, Glasgow AFB, Montana
Hawaii—
J. McGraw, QTRS. 46-D Naval Sta., Ford I., FPO, San Fran., Cal.
Georgia—
Pvt. E2 Benny Bangs, Co. B., Inf. Schl. Batt., Ft. Benning, Ga.

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Little Rhody CB'ers; Vt., Joseph Hotte, 1A2068, Otter Valley Citizens Radio Club.

EXTERIOR

Special report from Charles R. Alsip, S9, A.P.R.E., Hawaii.

NEED CLUB MEMBERS? HERE IS A SURE FIRE "RECRUITING METHOD."

Sergeant Samuel Williams, KKV3913, former member of the Comanche Lasill CB Club, Lawton, Oklahoma, arrived in Hawaii in September 1964 and first things first, began to install his groundplane antenna on the roof of his quarters at Schofield Barracks. Not familiar with the surroundings and gusty winds of Oahu, Sam was soon on his way to the ground via Air Mail and upon landing found that he had broken his heel. Unable to walk, Sam crawled to his CB rig, threw the switch and called for help. Sergeant Lewis Payne, KDD8393, former President of the 50th State CB Club, picked up the message, picked up Sam and transported him to Tripler Army Hospital, twenty miles away.

Sam was hospitalized with his broken heel and was informed that his confinement would be at least six weeks. "Gee, and I haven't even been on the air yet," muttered Sam. Sergeant Payne returned to Schofield Barracks and quickly dismanteled Sam's gear and transported it back to Tripler where he hung a homemade diapole antenna from the fourth floor balcony where he had temporarily set up Sam's base station. Sam, in his "mobile" wheel chair, rolled out on the balcony and flipped the switch on his rig once again. "KKV3913, local Hawaii, from Oklahoma, presently confined at Tripler Army Hospital, is 10-8 on Channel 11." The visitors streamed in by the dozens bringing cigarettes, cakes and flowers and those funny get well (QSL) cards.

Sam soon learned that CB'ers stick together. A CB'er employed by Finance and Accounting tracked down Sam's lost pay records and insured that Sam would receive his pay next month. The problem of shipping a car to Hawaii and then reclaiming it is being handled for him by two CB'ers who are employed at the pier in Honolulu. Any other problems Sam has or anticipates having are quickly disposed of by his multitude of CB visitors from all the clubs of the island.

A recent visit by this S9, A.P.R.E. accompanied by a "Membership Application" was all that it took. Sam is now our newest member and by far our best publicity man, for he has told the story no less than a hundred times. Sam says "It's better than life insurance." "Bill Martin, KGI5580, President of my former club at Lawton, wouldn't believe CB'ers are this close unless he read this. He was sure getting those CB'ers organized there when I left, but this takes the prize. Where do I sign?"

Pictured above from left to right. S9, A.P.R.E., Richard W. Long, KCF0986, and S9, Club Editor, John F. Krejc, KBI8077. Picture was taken while S9 was attending the most successful Lancaster County CB Radio Club Jamboree in Lancaster, Penna. Missing from the picture was Frank Peterson, KCD1135 and Robert L. Vincent, KCC3308, both S9, A.P.R.E.'s. One can notice the glum faces after a most successful afternoon. By popular demand, this will probably be the last picture of this writer.

Newly elected officers of the Utah Citizens Band Association, Salt Lake City, Utah. Left to Right: Secretary, JoAnn Steele, KLE0399; Treasurer, Norman Steele, KLE-0399; James Velotis, KGC0885, President; Roger Frost, Vice President, KHA4980.

PACIFIC

The Emergency Auxiliary Radio Service Inc. of Napa County have Sgt. Woodrow Riley, USAF, an instructor in search and rescue and survival at Travis Air Force Base as their instructor at their next meeting. The CB'ers of this area had a float in their Napa Town and Country Fair Parade. The officers of this club are: President, Jim Conner, 12W1890; Vice President, KFD0188; Secretary, Roberta Guanan, KLA3994; Treasurer, Bill Frank, KFD3739.

Recently, CB'ers from all over the Bay Area and beyond gathered for a picnic, complete with many valuable prizes donated from many firms, clubs, and individuals for the benefit of Anita Silva. Sponsoring the picnic was the REACT of the Golden Gate Area for the six year old daughter of Norman Silva, KLA-4203. Anita was injured recently, and requires a series of skin grafts and plastic surgery. As of this writing, 20 area clubs will be represented. News of the Benefit comes from A.P.R.E. C. R. Comfort, KFD2121.

In the Northwest there is a CB Corporation (WCBC) called the Westerners. Their headquarters is in Everett, Washington. They publish a Call Directory each year listing their members by city, state, name, license, address and channel monitored, or as some prefer, and channel most commonly used by said member. In cases of emergency, highway assistance, travel information, or just plain help needed this Directory is of value as has been proven by several of the members throughout the five Northwestern states.

A newsletter is published quarterly keeping members abreast of the news and latest projects of the Corporation along with informative articles and comments of the membership.

Each member has a membership card and decal, which is common for most organizations. A spirit of Fellowship is obtained through the area representatives and by the membership themselves. This spirit of Fellowship or "Pioneerism" as commonly called by several of the members is developed in the individuals and radiated through the group.

Next summer's Jamboree is expected to be one of fun and interest to all members. When all of the Westerners get together for their Pacific Northwest Jamboree it should be one of the greatest for the individuals of those five states.

The total cost to each member is $1.00 per year and that's it. There are no other costs, charges, or expenses.

It has been noted that many organizations have a membership fee and then charge for decals, directories, newsletters, and what have you. In the Westerners the

dues are $1.00 per year and you receive all materials free. With the group effort and volunteer work the program is being conducted effectively. There are no paid officers, directors, representatives, or any members and no expense accounts are allowed. It is all volunteer with the Motto of "Help Your CB Neighbor."

Those living in the Northwest who wish to get hold of a Westerner can probably reach him on channel 11. Over 87% of the Corporation is using channel 11. Those of you living outside the Northwest and who have been copying the mail here, who run into difficulties or need help while traveling through the Northwest, but are not certain which channel to call on, make channel 11 one of your initial attempts.

There are at present over 400 members in the Westerners and it is interesting to note that over 80 members are from the general public and do not even own a CB radio. They are merely interested in this public assistance program.

Any interested parties should contact: WCBC, P.O. Box 2004, Everett, Washington.

SOUTHERN

From the 8th area comes news of two CB Clubs. The Greater New Orleans area boast two leading clubs which includes the **5 Watt Wonders CB Radio Club,** led by President, Bill Bergeron, **KEB0169.** The club publishes a paper called the **CARRIER,** which Lovie Campbell, **KEB0267** is editor. The newly reporting unit monitors channel 12.

The Metropolitan CB Radio Club of New Orleans was incorporated about 8 months ago. The Metropolitan monthly newspaper is the Modulator and Editor, Rodney Blackburn, **KKR0265.** President, William H. McCarter, Sr., **KEB0925.** The club monitors channel 11.

Words of high praise to the **Cenla CB Radio Club** from the local paper the Alexandria Daily Town Talk. The club has a sort of welcome wagon service to greet newcomers to their city. The contact was made by B. L. Wilson whom is a member of the club. The Wilsons' contacted over 100 visitors to the city last month, and received permission to place their call letters on the city's population signs at city limits. Mayor W. George Bowdon, Jr., gave the club permission to attach the notice. Seems the caption of the article was wrongly worded.

ATLANTIC

The **Mason-Dixon CB Club** representing the Eastern shores of Delaware: Lewes, Rehoboth, Fenwick Island, Georgetown, Seaford, Milford, Milton, Millsboro, Frankford, Dagsboro, Roxana, Williamsville, Selbyville, Ocean View, Berlin, Ocean City and Slaughter Beach are the cities enjoying this club. The new officers are President, Chris Christiansen, **KCG1981;** Vice President, Charles Headdley, **KCG3961;** Secretary, Cindy Christiansen, **KKI0361;** Treasurer, Phyllis McCabe, **KCG3985.** They meet the second Thursday of each month.

Pictured above is the emergency equipment of the Emergency Communication Organization, Texarkana, Texas. The group is very active in CD activities. Director of the unit is Cub Dycus, KEH5123.

Present Board of Directors, at this writing, from the Maumee Valley CB Radio Club. Left to Right: Front Row, Dorothy Stephens, KHA0634; Junie Manier, 18Q-8610; Blanche Bowman, KHA0089; Jack Dold, KHA-9478. Rear Row: Marvin Ryan, 18Q6728; Roland Lents, KLJ8040; Bob Cherrington, KHD4104. Missing from the above photo is Pop Cornewell, 18B0551.

The Putnam County REACT Club along with the Civil Defense maintained a radio net for emergency traffic from Palatka to Hastings to St. Augustine during Hurricanes Cleo and Dora.

On Wednesday night, September 9, an emergency call from one of the Hastings shelters to a base station in Palatka for a doctor as a woman in Hastings had a heart attack and they ran out of medical supplies for her.

Robert Lee, **KDH1087** in Hastings sent the call and Charlie Hunter, **KKP0205,** Palatka answered the call. Within minutes an ambulance sped to the scene and took her to Putnam Memorial Hospital.

Putnam County was fortunate enough to not have been hit as hard as its neighboring counties as wind and water damage was not as severe.

The Coastal Empire CB Radio Club of Hinesville—Fort Stewart, Georgia, has been giving a building on the Fort Stewart Military reservation for their clubhouse. The club hopes to have a base station set-up shortly. Officers are: President, Chuck Cunningham, **KCJ4109;** Vice President, Dick Ellens, 19W8773; Secretary-Treasurer, Larry Swain, **KCJ6564.** The club has been involved in CD activities over the last several months, due to the many hurricanes in the area. They also hope to become affiliated with **REACT.**

WESTERN

Well, after 4 years this writer finally goofed, but good. In the September issue we included the **REACT of Ridgecrest** under the **PACIFIC AREA,** instead of the **WESTERN AREA.** Mr. Garland Whiteside did not bring it to our attention, but thanked this writer for the nice article. So I looked high-an-low for the write-up under Western but to find same under Pacific. **REACT of Ridgecrest** is a small group numbering only 7 members, but in spite of this, they have been on the air for more than 3000 hours of continuous monitoring. Their location is considerately isolated, being in the middle of a dry lake bed, and far from well-traveled highways and because of this they operate their sets at peak performance so as to cover an area of more than 100 square miles. They have been fortunate in being able to give assistance to many mobile units traveling along California State Hwy. 14 and 395.

Newly organized in the **Cottle County Radio Club** of Paducah, Texas. The club meets the first Monday of each month at the City Hall. Officers of the group are: President, Dr. Louis J. Cole, **KKV6652;** Vice President, Joe F. Cock, **KEH7207;** Secretary, Bob Powell, **KEH5478;** Treasurer, Howard Powell, **KKV-2932.**

KYLE'S KORNER

WRITE TO:

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

Like hello dere!

Since this department is just getting started, I sort of felt like you all might like to know a bit about me, my purpose in being here, and what I hope to do to help you in the months ahead.

KBG4303 might not think I need much introduction, since I've been around CB writing almost as long as he himself has—but I've been looking at the new-license figures and listening to all the new calls on the air, and I figure a little bit of an introduction wouldn't hurt.

I've been on the 11-meter band off and on since the middle of 1957, even if CB itself didn't get started on the band until 1958. No, I wasn't a bootlegger. In the days before Class D CB, the band belonged to the hams, and it was as a ham that I operated on 27 Mc.

But when the band was moved over to CB, so did I. My original ticket, 10W0901, was one of the first 50 issued in the 10th call district. The current one resulted from a change of address, and I expect there will be still a third set for me to learn before long.

Back about the time CB was getting started, I began writing about electronics. We're both still going strong, in spite of a few temporary setbacks for both the service and myself.

I first worked with Tommy back in the *CB Horizons* days, and quickly learned to both respect his know-how and to value his friendship. Though in the days that have passed since then we have more often than not found ourselves competing professionally, the personal friendship has continued. And you never learn to respect a man so much when you work *with* him as when you are competing *against* him.

So you might gather that I'm glad to come to these pages. You might also like to know why I'm here.

I've been a reader of S9 since its first issue. For that matter, I read *all* the other electronics magazines too—for my profession is writing. Not long ago, I came to two conclusions almost simultaneously: The first was that S9's major lack was a question-and-answer department. The second was that editing a complete magazine took up far too much of my own time to leave me any over for writing (which I enjoy), operating, experimenting, and getting to know my family.

So, I'm here. Hope you put up with me for a long time to come.

Now, what is this department going to do? To put it briefly, we're going to try to answer any CB questions you may have. Because of time and space limits, we're going to have to limit the questions to those which are of use and interest to many readers, with a slight edge given to the technical questions. We can answer only in these columns, but unless you really set out to snow me under with questions I expect most of the questions will get answered as the months go by.

I won't undertake to design complete pieces of equipment for you, since to do this I would have to not only design the gadget, but build it and prove it out before publishing it. However, don't let that stop you from suggesting such designs. If enough of you ask for approximately the same thing, I'll see what can be done—and the project will appear as a feature article rather than in the column.

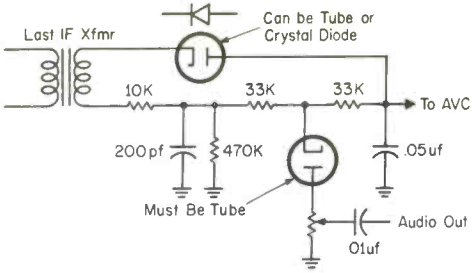
That's enough of this type of stuff for now. From here on in, and in the months to come, it will be strictly questions and answers. Just keep the questions coming!

ADD-ON NOISE LIMITER

I read recently in some other magazines about a noise limiter called "the Makino circuit" which is supposed to be a fantastic improvement over other noise limiters. If it's so good, why don't the set makers put it in at the factories?

—R. B., Bronx, N. Y.

As the polticos say, I'm glad you asked that one, since lo these many years ago I dragged the Makino out of an engineering-level magazine and loosed it on the CB world. Here's why it isn't more widely used: With some sets, the physical arrangement of the various tubes and other parts is such that the noise can go right around the limiter, and the Makino makes no improvement. In others, the AVC voltage is knocked so far down that S-meter readings are way off (but with these, I never found any other effect on operation). And with one type of selective calling system, sold under many names, the Makino circuit takes out the calling-code pulses as well as the noise—and naturally the makers of these sets can't use the Makino.



Basic Makino Circuit.

One transceiver comes from the factory with a Makino in it. Many others can be adapted easily. Some can't. If you have any doubts about how it works, why don't you try it in your own rig and see? It's easy to put in, and just as easy to switch back to the original circuit if you don't like the results. There's a schemtic around here somewhere.

REPLACING RECTIFIERS

A buddy told me he almost doubled the power out of his rig by buying a "silicon-diode" plug-in gadget and replacing the original rectifier tube with it. Is this possible?

—T. H., Simi, Calif.

Yep, it's possible—but if The Man ever comes calling, that extra power might cost him $100. Even if he doesn't get caught for over-power operating, it can cost him nearly as much in parts maintenance. The vacuum-tube rectifier in older sets has a "drop" across it of about 50 volts, while the more modern silicon power diode's drop is only about a volt and frequently even less. When the tube is replaced by the silicon diode unit, the B + voltage rises by that 50 volts or so. If, like many rigs, that of your buddy's was designed to operate with a B + voltage of 325 volts, the new voltage will be 375. For a legal 5 watts in at 325 volts, the plate current would have been just over 15 MA. However, because of the way the RF final works, raising the voltage to 375 will raise the current to a little over 17 MA and the new power will be nearly 6½ watts. At the lower voltage, efficiency usually runs about 65% which means that power out would be about 3¼ watts; at the higher voltage, efficiency rises to about 70% so power out will become a little over 4½ watts. This is almost 50% increase in power. If the rig used less than 325 volts of B + to start with, the gain in efficiency could easily account for the higher increase in output power—but the odds are that with his plug-in, he's on the illegal side of 5 watts. And his increase in range will be so small that the risk isn't justified. The higher voltage will cause his tubes to burn out faster, his resistors to change value more easily, and his capacitors to fail earlier. It's no fault of the diode. The fault is in making a circuit change without enough knowledge of everything that's involved!

TRANSMITTER EFFICIENCY

Those new rules set a limit of output power as 4 watts, and input power is 5. Also, I have seen ads promising 4 watts out with legal input. Tell me, how can it be done?

—D. M., Socorro, N. M.

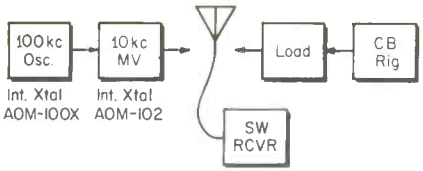
It's not easy. Most radio engineers agree that about 70 percent efficiency in the final output stage is as much as it's *practical* to get. Sure, the Class C amplifier is capable—on paper—of reaching 100% efficiency. But to get there, it has to be driven by a pulse of power which exists for literally no time at all and is infinitely large. Such things can exist on paper, in the mathematical examination of a transmitter circuit, but they can't be obtained when it comes to making the circuit actually work! And even if they could, the calculations *don't* show how much of the resulting RF output power is fundamental-frequency, and how much is at various harmonics. With conventional design, only about 70% of it will be at the fundamental. The rest is harmonic, so it does no good (and much harm) to generate it. This is why most 5-watt rigs have, at the most, 3½ watts output. In England, a circuit has been developed for which the designers claim better than 90% efficiency at *fundamental* frequency; details of it aren't available on this side of the pond. If it should prove to be practical, then 4½ watts out for 5 in would be within our reach, and the new rule would stand in need of some revision! At present, though, the allowable 4 watts is just a little bit more than you have any right to expect.

FREQUENCY MEASUREMENT

I don't want to get a citation for being off the assigned channel frequencies. Can I measure the frequency of my rig myself? If I can, how?

—K. J., Denver, Colo.

Measure your frequency, you can. *Adjust* it, you cannot—unless you hold a 2nd class commercial ticket. You can use any of several methods to check your crystal frequencies. The simplest, by far, is to go out and buy a frequency meter such as International Crystal's unit or the Lampkin MFM. These will set you back the price of a new transceiver, though, which may make this route a bit unattractive. Another way is to use a general-coverage shortwave receiver, and a "frequency standard." The frequency standard is a 100-kc crystal oscillator (you can buy one for about $10 to $15 from any of several firms) which can be adjusted to "zero beat" with station WWV, the official frequency standard of the United States. You can find WWV at 2.5, 5, 10, or 15 Mc on the dial of the SW receiver. When the frequency standard oscillator is adjusted to be in exact zero-beat (no whistle at all) with WWV, it will be operating at exactly 100 kc. This 100-kc signal is then applied to a 10-k- multivibrator to get signals spaced out over the entire spectrum, 10 kc apart. To measure your frequency, turn on the transceiver



Measuring Frequency.

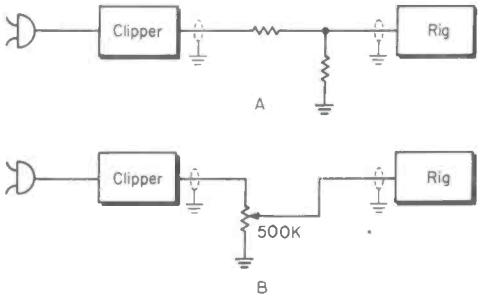
(coupled into a dummy load) and tune in its signal with the SW receiver. Then turn on the frequency standard. You should hear not one but two whistles, since the assigned CB channels fall halfway between the 10-kc spacing of the frequency-standard output signals. If both whistles have the exact same tone, you are right on channel. If one is higher pitched than the other, you are off. If you can determine by ear the amount by which the two whistles differ (many musically trained people can do so) you will know how far off you are; the error in your frequency will be *half* the difference between the whistles. So long as you're less than 1200 cycles off frequency (1200 cycles is about 2⅓ octaves above middle C; the difference between the whistles would be 2400 cycles for this) you're within tolerance. To make a more precise measurement, turn off the standard and tune in your signal exactly. Note the dial reading on the 0-100 logging scale of the bandspread dial. Next turn off the transceiver and turn on the standard. Using the bandspread dial, tune lower to find the next lower standard spot and note the reading, then tune up to the next higher spot and note its reading. The difference between these two readings equals 10 kc; dividing it by 10 will give you the amount by which the dial reading changes each kilocycle. Now subtract the lower dial reading from the reading you got with your transceiver, and divide the result by the dial-reading-change-per-kilocycle figure you just determined. The result will be the number of kc your frequency is higher than the next lower 10-kc spot; it will be approximately 5 (exactly 5.000 if you are right on channel) and the amount by which it departs from exactly 5 will be the amount by which you're off true frequency. Let's go through an example to make the mess a bit more clear: Your transceiver tunes at 89 on the dial, when you're on Channel 9. The next lowest signal from the standard falls at 82, while the next higher is at 91½. Subtracting 82 from 91½ gives 9.5 dial divisions for 10 kc, or 0.95 dial division per kilocycle. Subtracting 82 from 89 gives you 7, and 7 divided by 0.95 equals 7.368 +. This is 2.368 + greater than 5, so your Channel 9 rock is transmitting 2.368 kc above the assigned frequency. You are approximately a kilocycle out of allowable tolerance, and can expect a citation if you use this crystal, in this rig.

OVERMODULATION

Not long ago I bought one of the popular audio preamp-clipper units and installed on my rig. Now the rest of the gang tells me my signal covers three or four channels either side of the one I'm on. I'm afraid I may be overmodulating because of the preamp. What can I do about it?

—V. J., Long Beach, Calif.

I too am afraid you may be overmodulating. The splatter over several adjacent channels sure sounds like it, anyway. A quick way to cure the problem would be to take off the clipper-preamp, but that would leave you back where you started. There's a better way to handle it, but explaining how is going to take some space. The modulation level, as you probably know, is set by the amount of audio which goes to the modulator stage in the rig. In most rigs, things are set up so that *if* you use the mike furnished, and *if* your voice is "average"



Preventing Overmodulation.

in intensity, and *if* you hold the mike the same distance from your face that the engineer did when designing the rig, then your modulation level will be high but not too high. When the preamp-clipper is added, things change. If it puts the same amount of audio out as the original mike, nothing is hurt. If it puts out more, there's a chance of overmodulation. (You get gain even if it puts out only the same amount, because of the clipping action which keeps the *effective* level higher without exceeding the *peak* level.) Since they're made to be used with most any set, these preamp units usually have an ample margin of output—which means it may be easy to overmodulate when using them. The cure is a pair of resistors hooked up as shown in the schematic; the resistors act as voltage dividers to cut the peak level back down to where overmodulation is impossible. Total resistance of the pair, in series, should be around 500K ohms or so; individual values will depend entirely on the characteristics of your own mike, your own rig, and your own voice. A quick way to find out is to use a 500K volume control as in part B of the schematic, and set it for maximum output without exceeding 100% modulation. Then disconnect it without changing the setting, and measure each side. Use the closest standard values of resistors. Since this is an adjustment which can affect the modulation, the FCC requires that it be performed only by licensed

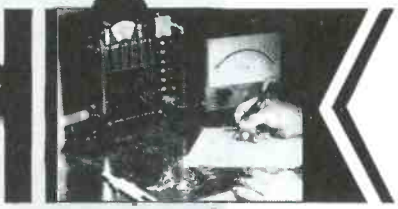
Continued on page 74

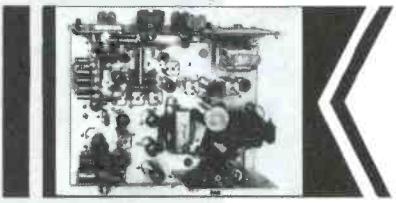
MORE AND MORE CB'ERS ARE MOVING UP TO...

TRAM

TR-70C MOBILE

Now available with PS-101 A.C. Power Supply





PERFORMANCE ENGINEERED

Designed from the start with one important thing in mind – *top performance*. The receiver sensitivity is 1 uv. for 300 milliwatts of audio. Adjacent channels are 60 db. down. A minimum of 3.5 watts of output and keyed compression mean you will get out like you never have before.

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Every set is carefully assembled, using the finest materials available, and is carefully inspected at each step along the way. Tram Electronics, Inc. believes you buy a CB Transceiver to use, not repair.

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The Tram Electronics people make every effort to make each set perfect . . . for continued top performance in hard use. If your new Tram does not perform to your expectations – use your unconditional 10 day return privilege for an exchange or full refund.

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Please send by return mail at no obligation, detailed information and specifications on TRAM Citizens Band equipment.

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"And when did you first notice this fear that CB was taking you over?"

"Cut down on your CB contacts to 24 a day and in between get plenty of sleep."

"I understand he was a CB'er."

CARD SWAPPERS UNLIMITED

SWAPPERS: Here's a manufacturer who has joined the ranks of card swappers. You're invited to send your card to Jack Mosley, Mosley Electronics (KLH7507), 4610 N. Lindbergh Blvd., Bridgeton, Mo. 63044. The KLH-7507 card is a snazzy gold, maroon and black design which will dress up any wall or collection.

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

SACA
188 The Milton Seibert's, KHB2112, Mt. Carmel, Ill.
189 Bill Giles, KKI0688, College Park, Md.
190 William Kocher, KCD5000, Bethlehem, Pa.

PX-25
334 Conrad Lauzon, XM522168, Verdun, Que., Canada
335 Duke Banks, KKA4451, Westfield, Mass.
336 Ted Templeton, KJI1094, Erie, Pa.
337 Robert Pyle, KKI2669, Bethesda, Md.
338 Bud Fowkes, KLP5005, Duncansville, Pa.
339 The Milton Seibert's, KHB2112, Mt. Carmel, Ill.
340 Steve Yankee, 19A5551, Manistee, Mich.
341 Big Bill Britton, KLN7118, Dayton, Ohio
342 Edward Bassett, KLJ6061, Toledo, Ill.
343 Ronald Edmonds, KLV0117, Washington, D.C.
344 Arthur Cates, KED0572, Baytown, Texas
345 Eugene Cagle, Coral Gables, Fla.
346 Walt Wise, KFA4659, Anaheim, Calif.
347 Richard Clogston, KKA4210, Starks, Maine
348 Alice Gourley, KLK7667, Jacksonville, Ill.
349 Dave Vizard, GI10691, Newtownabbey, N. Ireland
350 Frank Brown, KFA8471, Long Beach, Calif.

PX-50
287 Conrad Lauzon, XM522168, Verdun, Que., Canada
288 Duke Banks, KKA4451, Westfield, Mass.
289 Ted Templeton, KJI1094, Erie, Pa.
290 Bud Fowkes, KLP5005, Duncansville, Pa.
291 The Milton Seibert's, KHB2112, Mt. Carmel, Ill.
292 Steve Yankee, 19A5551, Manistee, Mich.
293 Gerry Schechter, KBG7387, Bronx, N.Y.
294 Albert Gourley, KLJ7870, Jacksonville, Ill.
295 Ronald Edmonds, KLV0117, Washington, D.C.
296 Arthur Cates, KED0572, Baytown, Texas
297 Walt Wise, KFA4659, Anaheim, Calif.
298 Harry Nechetsky, KKP2504, Niceville, Fla.
299 Richard Clogston, KKA4210, Starks, Maine
300 Eugene Cagle, Coral Gables, Fla.
301 Dave Vizard, GI10691, Newtownabbey, N. Ireland

PX-75
222 Conrad Lauzon, XM522168, Verdun, Que., Canada
223 Duke Banks, KKA4451, Westfield, Mass.
224 Ted Templeton, KJI1094, Erie, Pa.
225 Bud Fowkes, KLP5005, Duncansville, Pa.
226 Vincent Goodnuff, KLM7764, Belleville, Mich.
227 Raymond Randall, KLP2986, Hudson Falls, N.Y.
228 Arthur Cates, KED0572, Baytown, Texas
229 Walt Wise, KFA4659, Anaheim, Calif.
230 Richard Clogston, KKA4210, Starks, Maine
231 Dave Vizard, GI10691, Newtownabbey, N. Ireland

PX-100
207 Duke Banks, KKA4451, Westfield, Mass.
208 Ted Templeton, KJI1094, Erie, Pa.
209 Bud Fowkers, KLP5005, Duncansville, Pa.
210 Gus Feltner, KEE2893, New Braunfels, Texas
211 Vincent Goodnuff, KLM7764, Belleville, Mich.
212 James McClure, KHI2703, Yawkey, W. Va.
213 Walt Wise, KFA4659, Anaheim, Calif.
214 Richard Clogston, KKA4210, Starks, Maine
215 William Kocher, KCD5000, Bethlehem, Pa.

PX-125
145 William Calvert, KIC5720, Duncansville, Pa.
146 Ben Biro, XM15065, Penticton, B.C., Canada
147 Duke Banks, KKA4451, Westfield, Mass.
148 Ted Templeton, KJI1094, Erie, Pa.
149 Bud Fowkes, KLP5005, Duncansville, Pa.
150 Lee Willick, KCJ0880, Raleigh, N.C.
151 Walt Wise, KFA4659, Anaheim, Calif.
152 Richard Clogston, KKA4210, Starks, Maine
153 Bill Scamell, KFC2921, Vallejo, Calif.
154 William Kocher, KCD5000, Bethlehem, Pa.
155 Richard Kuzma, KBC7900, Rutland, Vt.

PX-150
125 Walt Wise, KFA4659, Anaheim, Calif.
126 Bill Scamell, KFC2921, Vallejo, Calif.

PX-175
115 George Radenheimer, KHH1363, Middletown, Ohio
116 Tim Hamilton, KHJ9961, Wooster, Ohio
117 Bill Scamell, KFC2921, Vallejo, Calif.

PX-200
104 Jim Cross, KCF0823, Hagerstown, Md.
105 Tim Hamilton, KHJ9961, Wooster, Ohio
106 Bill Scamell, KFC2921, Vallejo, Calif.

PX-225
103 George Thayer, KID2617, Salamanca, N.Y.
104 Tim Hamilton, KHJ9961, Wooster, Ohio
105 Bill Scamell, KFC2921, Vallejo, Calif.

PX-250
101 Stanley Penc, KJI3337, Utica, N.Y.
102 George Thayer, KID2617, Salamanca, N.Y.
103 Tim Hamilton, KHJ9961, Wooster, Ohio
104 Bill Scamell, KFC2921, Vallejo, Calif.

MSA
141 Bud Fowkes, KLP5005, Duncansville, Pa.

SSC-1
150 Duke Banks, KKA4451, Westfield, Mass.
151 Bud Fowkes, KLP5005, Duncansville, Pa.
152 Ben Biro, XM15065, Penticton, B.C., Canada
153 Raymond Randall, KLP2986, Hudson Falls, N.Y.
154 Bill Giles, KKI0688, College Park, Md.
155 Walt Wise, KFA4659, Anaheim, Calif.
156 Richard Clogston, KKA4210, Starks, Maine
157 Bill Scamell, KFC2921, Vallejo, Calif.

SSC-2
125 Ted Templeton, KJI1094, Erie, Pa.
126 Bill Stroud, KJI1090, Corning, N.Y.
127 Bud Fowkes, KLP5005, Duncansville, Pa.
128 Walt Wise, KFA4659, Anaheim, Calif.
129 Bill McShea, KCG0200, Arlington, Va.
130 Bill Scamell, KFC2921, Vallejo, Calif.

SSC-3
111 Walt Wise, KFA4659, Anaheim, Calif.

SSC-4
106 Bud Fowkes, KLP5005, Duncansville, Pa.
107 Elwyn Beam, 5Q2178, Vale, N.C.

SSC-5
105 Bud Fowkes, KLP5005, Duncansville, Pa.

SSC-7
104 Jim Cross, KCF0823, Hagerstown, Md.

SSC-9 104 Frank Martz, KID0006, Hustontown, Pa.

SSC-10 104 Frank Martz, KID0006, Hustontown, Pa.

SSC-14 101 Dan Guthrie, KDB1435, Spruce Pine, N.C.

SSC-15 101 Dan Guthrie, KDB1435, Spruce Pine, N.C.

SSC-16 101 Dan Guthrie, KDB1435, Spruce Pine, N.C.

SSC-17 101 Dan Guthrie, KDB1435, Spruce Pine, N.C.

SSC-18 101 George Thayer, KID2617, Salamanca, N.Y.

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

Our Swappers' listing is a bit shorter this month than usual. Our 10¢ charge seemed to have the desired effect of weeding out many of the deadbeats who send in huge batches of cards without any intention whatsoever of actually swapping.

Here are this month's swappers:

1W6216 Errol Engraving, 36 Hampden St., Westfield, Mass.
2Q1147 George Delaney, 308-47th St., Union City, N.J.
2Q1911 William Plog, 11 Gould Rd., Centereach, L.I., N.Y.
3Q1618 Everett Lindsey, RD. 1, Mount Holly, N.J.
5Q0577 Fred Harris, Route 3, Gate City, Va.
5Q2178 Elwyn Beam, Route 2, Vale, N.C.
6Q0914 Paul Skidmore, Box 243, Rockwood Rt.1, Tenn.
6Q4378 Ernest Watson, P.O. Box 104, Alpharetta, Ga.
6W4390 Claude Witt, 206 Dunbar Lane, Crossville, Tenn.
8Q1009 Sid Coryell, 4502 W. 29th St., Little Rock, Ark.
11Q1313 George Strainline, 1171 W. Miracle Mile, Tucson, Ariz.
11Q2714 Eileen Inns, 530 Catalina Dr., Newport Beach, Calif.
11Q2838 Dale Reed, P.O. Box 296, Joshua Tree, Calif.
17W3325 Pete Nosler, 1144 Pineridge, Wichita Kansas
18A8492 George Ready, R.R. 1, Carlisle, Ind.
18B2648 Glenn Davis, 6143 N. Rockwell St., Chicago, Ill.
18Q4913 Tom Leadbetter, R.R. 4-Box 40, Muncie, Ind.
18Q8866 Richard Cary, Rt. 4-Box 176, Russell Springs, Ky.
18QA1528 Fred Schuemelfeder, 316 West Park Rd., Round Lake, Ill.
19A5551 Steve Yankee, 357 First St., Manistee, Mich.
19A5964 Stan Sickler, 2310 Commor, Hamtramck, Mich.
19Q0707 Jim White, Box 108, Syracuse, Ohio
19Q4842 James Humburg, 460 Pipestone St., Benton Harbor, Mich.
19Q8152 John Kasten, 5916 Westbrook Dr., Brookpark, Ohio
19Q9941 Martin Ripper, 7617 Cavell, Garden City, Mich.
19W8131 Robert Tatum, 23748 Haig Rd., Taylor, Mich.
20Q0255 Philip Lundy, 48 Sodus St., Clyde, N.Y.
20Q1360 Ivan Smith, 419 Water St., Danville, Pa.
KAG2486 Dave Buda, 717 Centre St., Nutley, N.J.
KAP2563 Burl Davis, Rt. 1, Davisville, W. Va.
KBA5557 Ted Cummings, Bellflower Rd., Billerica, Mass.
KBA8730 Howard Wolf, 4903 216 Pl., S.W., Mountlake Terrace, Wash.
KBA9538 Jessie Redman, R.R. 1-Box 13, Harborside, Maine
KBB0740 Russell Redman, R.R. 1-Box 13, Harborside, Maine
KBC0209 Vince Melendy, Spring St., Bedford, Mass.
KBC0533 Ruth Charon, 109 Bowers St., Holyoke, Mass.
KBC5455 Sandy Fitzgerald, 30 Stevens St., Chicopee, Mass.
KBC8093 Dennis Cidale, 17 Water St., Stonington, Conn.
KBC9307 Jim Dooley, 115 Bartlett St., Charlestown, Mass.
KBD0454 Ed Harhausen, 20 School St., No. Woburn, Mass.
KBD0747 Herb Girard, 348 Carrington Ave., Woonsocket, R.I.
KBD1474 Dorothy Sullivan, Port Clyde, Maine
KBD4096 Buck Lambert, RFD 1, Lebanon, N.H.
KBG0381 Frank Ellis, Germantown, N.Y.
KBG1845 Phil Grabel, 1 Catalina Dr., Somerville, N.J.
KBG6576 Charles Arnwine, 725 South Broad St., Trenton, N.J.
KBG7387 Gerry Schechter, 3535 Kings College Place, New York, N.Y.
KBG7687 Robert Thatcher, R.R. 1-Box 59-B2, Hudson, N.Y.
KBG8153 Betty Krueger, 23 Standpipe Rd., Freehold, N.J.
KBG8159 Hazel Drewes, Lighthouse Dr., Saugerties, N.Y.
KBH0301 Jack Whittier, 2400 Johnson St., Janesville, Wis.
KBH0797 Stan Shafer, 2205 North E. St., Richmond, Ind.
KBH1426 Fred Stearman, R.R. 1-Box 16, Erie, Ill.
KBH1663 Tom Aiellos, 4804 North Pine, Davenport, Iowa
KBH1789 Dick Fuhrman, 1631 Alta Place, Dubuque, Iowa
KBI0275 Hank Mancura, 64 Meadow Lane, Levittown, L.I., N.Y.
KBI0454 Ron Dubois, 7901 Hampton Blvd., Norfolk, Va.
KBI2123 Richard Rios, 2897 Ardsley Rd., Wantagh, L.I., N.Y.
KBI2251 Mona French, 35 Southwood Dr., Old Bridge, N.J.
KBI2517 Dan Michaels, 12059, East Berne, N.Y.
KBI3455 John James, 299 1/2 Lark St., Albany, N.Y.
KBI3853 Joel Kaplan, 635 Arnow Ave., Bronx, N.Y.
KBI6480 Art Scheid, 2 Essex Place, Hartsdale, N.Y.
KBI6983 George Brandt, 1297 Myrtle St., Hillside, N.J.
KBI7938 Joe DiGiaimo, 287 E. 29 St., Paterson, N.J.
KBI7974 Mark Levy, 8640 Bay Parkway, Brooklyn, N.Y.
KBI8077 John Krejc, 60 Division Ave., Garfield, N.J.
KBI9330 Al Harris, Box 252 Overlook Dr., Neptune, N.J.
KBJ0206 Jean Holt, 314 Mountainview Terrace, Dunellen, N.J.
KBJ1722 George Hunt, 353 Highland Ave., Middletown, N.Y.
KBJ1921 Paul Price, 117 N. Montgomery St., Valley Stream, N.Y.
KCC1860 Hank Thompson, 915 High St., Bethlehem, Penna.
KCC2443 Bill Keefer, 31 N. Queen St., Littlestown, Pa.
KCC2976 Alta Dicks, 320 N. High St., Millville, N.J.
KCD3398 Roger Miller, R.D.2, Kempton, Pa.
KCD5154 Earl Rogers, 224 Tuscany Rd., Maple Gardens, Chester, Pa.
KCD5410 Bill Rogers, 224 Tuscany Rd., Maple Gardens, Chester, Pa.
KCD6109 Lois Lowell, R.D.2, Sellersville, Pa.
KCF0329 Willie Lindsey, 10 E. 21st St., Baltimore, Md.
KCF0823 Jim Cross, 755 S. Potomac St., Hagerstown, Md.
KCF1224 Harold Channell, Box 126, Alexandria, Va.
KCG0008 Joseph Blanton, 112 Prince St., Alexandria, Va.
KCG0706 Eddie Becker, 4305 Franconia Rd., Alexandria, Va.
KCG1087 Barney Ross, 425 Garden St., Washington, D.C.
KCG3068 Ricky Lowman, 1001 W. Addition St., Martinsburg, W.Va.
KCG3371 Clifton Carey, 911 South Division St., Salisbury, Md.
KCG3689 Jane Ross, Box 188, Eastville, Va.
KCI1656 Allen Clair, 2847 Cannady Rd., Roanoke, Va.
KCI2842 Clarence Moore, Rt. 4-Box 34, Thomasville, N.C.
KCI2904 Jim Rawles, 7008 Belvedere Dr., Newport News, Va.
KCI6935 Joe Temple, P.O. Box 312, Kinston, N.C.
KCJ1066 Kermit Minter, 314 W. Maryland Ave., Draper, N.C.
KCJ2292 Hazel Stubbs, P.O. Box 1076, Rockingham, N.C.
KCJ2780 R. Harris, 513 McDonald Ave., Charlotte, N.C.
KCJ3095 Donald Kelley, Glen Allen, Va.
KCJ4187 Joel Smyre, 747 S. Brady Ave., Newton, N.C.
KCJ4314 Denis Jackson, 1316 Grove St, Greensboro, N.C.
KCJ5002 J. Kirkland, Rt. 5, Raleigh, N.C.
KCJ6180 Buddy Williamson, 604 Gillespie St., Greensboro, N.C.
KCJ6413 Wendell Proco, Rt. 1, Cambria, Va.
KCJ6641 Eddie Griffin, Rt. 1, Box 199, New London, N.C.
KCJ7698 Joel Dawson, 1125 Tabor St., High Point, N.C.
KCJ7737 A. Clarke, 1009 Hamilton Ave., Clifton Forge, Va.
KCJ8028 Buck Buchanan, 2923 West Marshall St., Richmond, Va.
KCJ8282 Bruce Kanoy, P.O. Box 2306, Sunset Beach, N.C.
KCJ8516 The Morrison's, 826 Longview Dr., Woodbridge, Va.
KCJ8765 T. Matlock, RFD 5, Box 558, Greensboro, N.C.
KCJ9372 Gene Andrews, Rt. 5-Box 204, Glen Allen, Va.
KCJ9742 J. Gupton, 3242 Selwyn Ave., Charlotte, N.C.
KDB0371 Bill Howell, 545 Palmetto Lane, SW, Aiken, S.C.
KDC0215 Dan Gooding, 1230 Westmoorland, Ypsilanti, Mich.
KDC0390 Jerry Pater, 1195 Dale Rd., Hamilton, Ohio
KDC1358 W. McKeever, Box 573, Lakeside, Ohio
KDC2257 Larry Rochelle, 3281 Warringham, Drayton Plains, Mich.
KDC2313 Chuck Spain, 3113 Bessie St., Auburn Heights, Mich.
KDD2134 Mutt Ashby, 316 Franklin St., Tullahoma, Tenn.
KDD3990 Jean Ashby, 316 Franklin St., Tullahoma, Tenn.
KDD6368 Dennis Laxton, Rt. 3-Box 387, Lenoir, N.C.
KDD8403 Lloyd Coop, 506 E. General St., Tullahoma, Tenn.
KDD9162 Irene Beem, P.O. Box 52, Russellville, Ala.
KDE0017 Bill Causey, 737 Augusta Pl., S.E., Atlanta, Ga.
KDE0198 Albyne Watson, P.O. Box 104, Alpharetta, Ga.
KDE0565 Rodney Wise, P.O. Box 2953, Asheville, N.C.
KDE2266 Richard Bolding, 805 W. Crawford St., Dalton, Ga.
KDH1318 Robert Dwyer, 105 McKinley Ave., Cocoa Beach, Fla.
KDI1754 Steve Yacynych, 1205 Dove Dr., Orlando, Fla.
KDJ2207 Gene Portwood, 1020 Sunshine Dr., Lakeland, Fla.
KDJ0332 Nick Miller, Box 3006, St. Petersburg, Fla.
KEB1661 Bob Fancher, Darling, Miss.
KEB2231 J. Adams, 920 Vandeventer, Fayetteville, Ark.
KEB4662 Erman Hunt, 3055 Conway Dr., Baton Rouge, La.
KED0572 Arthur Cates, 2708 Virginia, Baytown, Texas
KEE1986 Jim Hawkins, 2502 Spokane Rd., San Antonio, Texas
KEE2031 John Wasson, 334 Cypress, Lake Jackson, Texas

KEE2463 Virginia Bergeron, 1121 Myers, Clute, Texas
KEE2743 Harry Hoffpowier, 724 Coolidge Rd., Channelview, Tex.
KEE3761 H. Broaddus, 1300 Kyle Rd., Clute, Texas
KEH0445 Wally Williams, 1428 Purdue, Oklahoma City, Okla.
KEH0947 Edna Williams, 1428 Purdue, Oklahoma City, Okla.
KEH1105 Fred Kimbro, 213 N. Edmond, Muskogee, Okla.
KEH2115 Ray Harper, Box 1083, Lubbock, Texas
KEH5846 Kenneth Bales, Box 295, Guymon, Okla.
KEH7235 John Glover, 2428 Hugo St., Dallas, Texas
KEJ5828 John Hamner, 12350 S. Fern Ave., Ontario, Calif.
KEJ5869 Johnnie France, Box 4146, Riverside, Calif.
KFA4077 Lowell Smith, 11142 Penn St., Lynwood, Calif.
KFA4167 Mike Daugherty, 2736 E. Fairmount, Phoenix, Ariz.
KFA4659 Walt Wise, 613 No. Glenwood Place, Anaheim, Calif.
KFA6460 Jim Bowcutt, 1521 So. Larchwood, Hacienda Heights, Calif.
KFA9923 Helen Morse, P.O. Box 1395, Ontario, Calif.
KFC3866 Rex Mathews, 407 Potomac Ave., Sacramento, Calif.
KFD4362 Ron Lesher, 2585 Painted Rock Dr., Santa Clara, Calif.
KFD4870 Bud Fischer, 1525 Blackstone, Fresno, Calif.
KFD5811 Larry Kluender, P.O. Box 183, Oroville, Calif.
KFD6381 Steve Erickson, 1206 Post St., Alameda, Calif.
KFI1219 Jack Sudduth, 8103 16th S.W., Seattle, Washington
KFJ0479 Agnes Sudduth, 8103 16th S.W., Seattle, Washington
KGC2253 James Schubauer(Did not send the address)
KGC2289 Rosalie Danielson, 3188 9th St., Boulder, Colo.
KGE0071 Jackie Wera, 216 Olmstead St. Winona, Minn.
KGF0592 Rod Basham, 810 E. 36th St., Minneapolis, Minn.
KGF1755 Mal Pickens, 4032 12th Ave. So., Minneapolis, Minn.
KGF1773 Dave Kryzer, 553 East 7th St., Winona, Minn.
KGF2118 John Neihart, 1590 So. Mississippi Blvd., St. Paul, Minn.
KGF2217 Gary Luzar, 3119 23rd Ave. South, Minneapolis, Minn.
KGI4148 Bernie Bottenberg, 511 Wyoming, Holton, Kans.
KGI6082 Bill Wilson, 900 South Madison, Plainville, Kansas
KGI6100 Robert Schmink, 357 No. Waco, Wichita, Kansas
KGI7379 Marilyn Sheet, 1628 Cherry St., Dallas Center, Iowa
KGI7662 Ralph Sheet, 1628 Cherry St., Dallas Center, Iowa
KHA5591 Shirl Wilson, R.1, Box 117, Round Lake, Ill.
KHA8032 William Davis, R.R.7, Huntington, Ind.
KHA8376 Gordon Velpel, 801 S. Franklin St., Garrett, Ind.
KHB2112 Milton Seibert, 218 East 6th St., Mt. Carmel, Ill.
KHB2113 Risley Farms, RFD 4 - Highway 15 West, Mt. Carmel, Ill.
KHB2233 Harold Conley, 1516 Hedge Rd., Champaign, Ill.
KHB4303 Irv Weinstein, 1746 N. Sawyer Ave., Chicago, Ill.
KHB4794 John Sadorf, 1409 Clinton St, Round Lake, Ill.
KHC0280 Dick Dill, 5 West Cherry, McLeansboro, Ill.
KHC3163 Jerry Hannum, 2107 Marshfield Rd., Lake Villa, Ill.
KHC8813 Dick Burdge, Box 197, Liberty Center, Ind.
KHC9024 Joe Flood, 912 E. Oak St., Louisville, Ky.
KHD2772 Al's Windy Hill, Box 421-A-1, Spring Grove, Ill.
KHD4705 George Newberry, 1027 W. Douglas St., Freeport, Ill.
KHD5225 John Ulman, 4303 Dearborn Ave., Hammond, Ind.
KHD5667 Richard Wajtalik, 2127 N. Sayre Ave., Chicago, Ill.
KHD6704 Geo. Corter, 1512 W. School St., Chicago, Ill.
KHD7113 Bob Honzik, 407 N. Morgan Blvd., Valparaiso, Ind.
KHD7375 Joe Winfield, 1671 S. Boeke Rd., Evansville, Ind.
KHD8505 Lucile Webber, Box 421-A-1, Spring Grove, Ill.
KHG1923 Bob Gillespie, 31805 Desmore Rd., Willowick, Ohio
KHG4493 Chuck Cooley, 2243 Ham Cleves Rd., Hamilton, Ohio
KHG4945 C. Cooley, 1006 Hooven Ave., Hamilton, Ohio
KHG5522 Vi Holt, Clare, Mich.
KHG9554 Kenny Roberts, 1584 Stewart Rd., Lima, Ohio
KHH0299 Cliff Weaver, 408 8th St., Belpre, Ohio
KHH1363 Geo. Radenheimer, 3121 Andrew St., Middletown, Ohio
KHH1667 Stephen Hodges, 104 E. Court St., Ludington, Mich.
KHH3134 Bill McCullough, 800 12th St. S.W, Massillon, Ohio
KHI1036 John Lathrop, Rt. 2-Box 101, Richland, Mich.
KHI2703 Jim McClure, Rt. 1, Box 217, Yawkey, W. Va.
KHI2916 Larry Bauder, 120 Bradley Rd., Midland, Mich.
KHI2952 Bill Culver, 119 East Brooks, Howell, Mich.
KHI5457 George Barker, 343 N. 27th St., Battle Creek, Mich.
KHI7117 Melvin Anderson, Rt. 1, Box 155-A, Hinton, W. Va.
KHI9425 Bill Nagel, Newaygo, Mich.
KHI9979 Gene Taylor, 121 N. Adolph Ave., Akron, Ohio
KHJ1206 Herb Snyder, 1516 Lockwood Rd., Barberton, Ohio
KHJ1415 John Bryant, Rt. 1 - Box 254-G, Bellefonte, Penna.
KHJ1478 Bill Brandell, 309 Denver Ave., Lansing, Mich.
KHJ2246 Gus Cottis, Rd. 2, Bantam Ridge, Wintersville, Ohio
KHJ2653 Jeff Cunningham, 3317 Orchard Dr., Portsmouth, Ohio
KHJ3180 Chuck Nestor, 24 Townsend Ave., Norwalk, Ohio
KHJ3477 Donald Belitz, 13474 Enid Blvd., Lake Fenton, Mich.
KHJ4747 Don Senger, 2650 Mandale, Orchard Lake, Mich.
KHJ6091 Sally Pattica, Cor. Gruntt & Strayn Sts., Scio, Ohio
KHJ6874 Richard Cady, P.O. Box 193, Winchester, Ky.
KHJ7131 Ken Massie, 115 Woodlawn Dr., Ironton, Ohio
KHJ7217 Ray Smejkal, 2652-A Wiskory, Glasgow AFB, Montana
KHJ7270 Bob Wilkinson, 500 Magnolia Ave., Cuyahoga Falls, Ohio
KHJ7892 Boots Beaudry, Box 252, Trenton, Mich.
KHJ7916 Jan Kasten, 5916 Westbrook Dr., Brookpark, Ohio
KHJ8472 Doug Thrasher, 1164 Lindsay Ave., Akron, Ohio
KHJ8624 Bill Crosley, 409 National Court, Van Wert, Ohio
KHJ8843 Bob McCarty, Rt. 4, Mt. Sterling, Ky.
KHJ9164 Ernie Hurt, 3035 Circle Ct., Cleveland, Ohio
KHJ9317 James Denman, 809 E. Bellefontaine St., Wapakoneta, Ohio
KHJ9508 Jim Fosnough, P.O. Box 674, Killeen, Texas
KHJ9558 Ed Leonhardt, 3518 Smithfield Lane, Cincinnati, Ohio
KHJ9698 Charles Spears, Box 304, Caledonia, Ohio
KHJ9961 Tim Hamilton, P.O. Box 572, Wooster, Ohio
KIA1234 Don Lebo, 5221 Revere Ave. N.W., Massillon, Ohio
KIA1323 Nancy Harris, P.O. Box 263, Steubenville, Ohio
KIA1514 Bev. Bashore, 916 N. Miami, Sidney, Ohio
KIC0172 Bob Rogers, 227 Green St., Wilkinsburg, Pa.
KIC1207 Arlene Warner, 2273 Mosser Ave., Williamsport, Pa.
KIC2881 Mike Ripski, Mooney Rd., Plymouth, Pa.
KIC3500 Ruthie Bopp, 350 W. 5th St. Lewistown, Pa.
KIC5720 Bill Calvert, 1134 6th Ave., Duncansville, Pa.
KIC5753 Art Kretschmer, Leicester Rd., Caledonia, N.Y.
KIC7028 Barney Bishop, Box 117, Portville, N.Y.
KID0007 Fred Martz, Hustontown, Penna.
KID0186 Kathy Reshetar, 102 1/2 Walnut St., Binghamton, N.Y.
KID2541 Bill Shagi, 6950 Shannon Rd., Verona, Penna.
KID3476 Bud Bixby, 56 Dodge Ave., Corning, N.Y.
KID4563 Pete Gabrielli, 751 Parsells Ave., Rochester, N.Y.
KID4964 Amos Hennigan, 53 Riverside Dr., Canton, N.Y.
KID5144 John Fudge, 54 Dexter St., Wilkes-Barre, Pa.
KID5293 George Gould, Box 42, Hudson Falls, N.Y.
KID5798 John Palmer, R.D.2, Fort Plain, N.Y.
KID5968 John Norman, Box 249, Watkins Glen, N.Y.
KID6356 Roscoe Harrington, 5 Schuyler St., Hudson Falls, N.Y.
KID6623 George Kline, 508 Monroe St., Jamestown, N.Y.
KID7260 Stan Breitkopf, 271 Stanton Lane, Rochester, N.Y.
KID8516 Bill Saunders, R.D.1, Box 267, Chenango Forks, N.Y.
KID8628 Dean Buffington, P.O. Box 213, Gabriels, N.Y.
KID8884 Eddie Culver, 12 Whitman Place, Tonawanda, N.Y.
KID9344 Lorraine Yetter, McClure, Pa.
KJI1164 Lew Bixby, R.D.1, Corning, N.Y.
KJI1746 Fred Spencer, R.D.1, Binghamton, N.Y.
KJI1893 Andy Denko, 66 Monroe St., Saratoga Springs, N.Y.
KJI2293 Frank Dykeman, 339 Harter St., Herkimer, N.Y.
KJI3114 Walter Bourne, 184 Ogden Ctr' Rd., Spencerport, N.Y.
KJI3118 Evelyn Bishop, Box 117, Portville, N.Y.
KJI3337 Stanley Penc, 1524 Mt. View Ave., Utica, N.Y.
KKA0367 Bob McGinn, 8 Forestdale Rd., Worcester, Mass.
KKA0658 Jerry Cote, 105 Old Walpole Rd., Keene, N.H.
KKA1485 Wendell Dashno, 14 S. Elm St., St. Albans, Vt.
KKA2019 Ed Karvosky, 45 Lincoln Ave., Stratford, Conn.
KKA2191 Alvin Arthur, P.O. Box 27, South Weymouth, Mass.
KKA3377 Albert Abraham, 94-96 Summer St., Adams, Mass.
KKA4210 Dick Clogston, Starks, Maine
KKA4451 Duke Banks, 131 Springdale Rd., Westfield, Mass.
KKA4552 Eddie Gagnes, 629 Central Ave., Pawt., R.I.
KKA5072 Bob Knowlton, 166 Pleasant St., Otter River, Mass.
KKA5305 George Chase, Black's Trailer Pk. RFD 4, Uncasville, Conn.
KKA6781 Norwood Fowler, 448 Lowell St., Lawrence, Mass.
KKA7324 Dick Gorman, 318 Litchfield, Storrs, Conn.
KKA7345 Terry Sidelinker, 37 Pine St., Orono, Maine
KKA7401 Ralph Westerberg, 103 Dauntless Lane, Hartford, Conn.
KKA8005 Dan Spendolini, 6 Adams St., Smithfield, R.I.
KKA8456 Joe Cambo, 31 Woodbury Ave., Norwalk, Conn.
KKA8813 Jay Knowlton, 166 Pleasant St., Otter River, Mass.
KKA9530 Bob Christensen, 8 Eighth St., Newington, Conn.
KKA9907 Alfred Rawley, P.O. Box 426, Camden, Maine
KKD0491 Mike Kaplan, 37 Fairview Terr., Maplewood, N.J.
KKD1311 Don Brandt, 1 Farmstead Rd., Short Hills, N.J.
KKD2429 Dave Ellis, Germantown, N.Y.
KKD2872 Richard Korn, Glenwood Dr., Ellenville, N.Y.
KKD2992 E. Litke, 18 E. Main St., Beacon, N.Y.
KKD3296 George Masny, 299 E. 8th St., New York, N.Y.
KKD3253 Richard Reiss, 105 West 176 St., New York, N.Y.
KKD3429 Cliff Share, 132 Greenway, Albertson, L.I., N.Y.
KKD3784 Leonard Waller, 330 West 28th St., New York, N.Y.
KKD5880 Howard Lipson, 9 Westwood Ave., Ellenville, N.Y.
KKD6253 Ronnie Bloom, 1212 North Pierce Ave., North Bellmore, N.Y.
KKD6558 Joe Kernaghan, 821 Lincoln Ave., Schenectady, N.Y.
KKD7642 Frisbee, 233 Jay Ave., Lyndhurst, N.J.
KKD8046 Ellen Sonkin, 246-15 57 Drive, Douglaston, N.Y.
KKG0046 Ira Pitel, 17 North State St., Vineland, N.J.

KKG0667 Ed Haupt, 18 South Penn St., Shippensburg, Penna.
KKG0930 Lew Keen, South Chestnut St., Elverson, Penna.
KKG0960 Robert Ream, 608 High St., Lancaster, Pa.
KKG1280 Mary Diehl, 800 Mohican St., Bethlehem, Pa.
KKG2291 George Mummart, 1006 Briarsdale Rd., Harrisburg, Pa.
KKG2712 Claude Dye, R.D.3, Pottstown, Pa.
KKG3924 C. Koehler, 1015 Pennsylvania Ave., Prospect Park, Pa.
KKI0233 Houston Mullins, 321 Yorkshire Lane, Manassas, Va.
KKI1251 Stella Mullins, 321 Yorkshire Lane, Manassas, Va.
KKI2000 Thomas Termini, 4611 Langdrum Lane, Chevy Chase, Md.
KKI2063 Joe Mory, 2501 Washington Blvd., Balto, Md.
KKI2379 Marlin Barnhart, 1133 Beechwood Dr., Hagerstown, Md.
KKI3172 Duane Guy, Westernport, Md.
KKK0308 George Cipra, 650 Chester St., Norfolk, Va.
KKK0471 J. Kirkland, Rt. 5, Raleigh, N.C.
KKK2541 Dale Shaffer, 906 Bridges St., Morehead City, N.C.
KKK2938 Jerry Smith, B-4-Z College View, College Station, Texas
KKK4396 Lynn Bailes, 3033 Maywood Road S.W., Roanoke, Va.
KKK4410 Smylie Grantham, P.O. Box 364, Raeford, N.C.
KKK5114 Joe Hughes, 205 S. 10th St., Mebane, N.C.
KKK6266 Reginald Durham, Box 83, Wytheville, Va.
KKK6606 Rob Dalton, Bland, Va.
KKM0562 Bill Gibson, P.O. Box 2004, Macon, Ga.
KKM0735 Ebbie Odom, 140 Dupree St., Chester, S.C.
KKM0911 Grady Hill, 205 Walnut St., Union S.C.
KKM2052 Linton Slappey, P.O. Box 52, Plains, Ga.
KKM4156 Fred Monday, 77 Brownwood Ave., Asheville, N.C.
KKM4178 Bernie Broster, 150 Thornton Ave., Cedartown, Ga.
KKM7129 Carl Stapleton, Rt.1, Box 179-N, Helena, Ala.
KKM7376 Donald Wilson, 1529 Bush Blvd., Birmingham, Ala.
KKM7447 Bob Carlton, 506 E. General St., Tullahoma, Tenn.
KKM8114 Eugene Canipe, Rt. 1, Box 269, Lancaster, S.C.
KKM9072 Charles Blackburn, 803 S. Anderson St., Tullahoma, Tenn.
KKM9656 Carroll Rogers, 315 Rogers St., Spruce Pine, N.C.
KKP1393 Jeep Rhoads, Rt.6, Box 203, Lakeland, Fla.
KKP2504 Harry Nechetsky, 133 N. Partin Dr., Niceville, Fla.
KKP2521 C. Bismark, 116 Allen St., Norfolk, Va.
KKP3468 Gene Cagle, 3859 Kumquat Ave., Coral Gables, Fla.
KKR2939 E. Sanford, 111 King St., Columbus, Miss.
KKR3158 Robert Choate, P.O. Box 314, Simsboro, La.
KKR4361 John Cole, 102 Alabama St., Columbus, Miss.
KKR4805 Don Curtis, Rt.2, Box 280, Denham Springs, La.
KKT1134 Marj Allen, Box 1259, Clute, Texas
KKT1300 Carl Allen, Box 1259, Clute, Texas
KKV2029 David Fair, 1911 Vincent, Brownwood, Texas
KKV3836 Clarence Norton, 512 W. Broadway, Longview, Texas
KKV5444 Dick Jackson, 119 East 11th, Mt. Pleasant, Texas
KKX1777 Barney Franke, Rt.1, Box 611 F, Tucson, Ariz.
KKX2834 Bessie Strainline, 1171 Miracle Mile, Tucson, Ariz.
KKX4958 Phil Hirt, 3608 E. Sylvane, Tucson, Ariz.
KKX5201 Dale Fletcher, 54728 El Prado Trail, Yucca Valley, Calif.
KLA0149 Al Louis, 1692 East Ave., Hayward, Calif.
KLA0472 Charley Lively, 1708 Midfield Ave., San Jose, Calif.
KLA1026 Bill Whited, 1514 Budd Court, San Mateo, Calif.
KLA1537 Frank Borjon, 1634 East Tyler Ave., Porterville, Calif.
KLA1875 Ruth Hanes, 2585 Painted Rock Dr., Santa Clara, Calif.
KLA5173 Chuck Hopper, 834 Florida St., Vallejo, Calif.
KLA5704 Glenn Moore, P.O. Box 8051, University Stn, Reno, Nevada
KLD0462 Hubert Ingersoll, 548 Edith, Walla Walla, Washington
KLD0488 Ben Michel, 4616 So. Lucile, Seattle, Wash.
KLD0953 Keith Howe, 9001 16th Ave. S.W., Seattle, Wash.
KLF1305 George Johnson, 312 Pine St., Sparta, Wisconsin
KLF2124 Ed Pierce, 4020 McCulloch, Duluth, Minn.
KLF2564 Joe Holeton, 119 Watson St., Antigo, Wisconsin
KLH2653 Ron Auck, 524 Dover Place, St. Louis, Mo.

KLH2654	Becky Irvin, 1530 East 19th St., Des Moines, Iowa
KLH2665	Earl Holding, 807 Irving, Wichita, Kansas
KLH3140	Joe McMahon, 131 Pierre St., Salina, Kansas
KLH4368	Hank Miller, 1913 Euclid Ave., Lincoln, Nebr.
KLH4558	Jim Nelson, Box 253, Jefferson, Iowa
KLH4994	Jack Doggett, 8060 Dema Dr., Des Moines, Iowa
KLH6866	Herb Breeden, 1320 E. 8th, Denver, Colo.
KLH7398	Bob Carr, 1507 Jefferson, Great Bend, Kansas
KLH7458	Chuck Stagner, 3833 East 68th St., Kansas City, Mo.
KLH7545	Walt Johnson, 3235 So. 39th St., Lincoln, Nebr.
KLH7747	Jesse Estes, 2117 Sloan, Manhattan, Kansas
KLJ0532	Jack Rabey, 2237 N. Lawndale, Chicago, Ill.
KLJ1323	Gloria Wright, 1336 Blaine Ave., Janesville, Wis.
KLJ1650	Dan Wright, 1336 Blaine Ave., Janesville, Wis.
KLJ3893	Eva Lustro, 1440 W. Fullerton Ave., Chicago, Ill.
KLJ3918	Cloyd Cooper, 10 Schultz St., Danville, Ill.
KLJ4006	Al Waldsmith, 2710 W. State St., Rockford, Ill.
KLJ4024	Diane Snyder, 542 9th Ave. South, Clinton, Iowa
KLJ9747	Leonard Fairley, R. R. 2, Chatsworth, Ill.
KLK0083	Floyd Ginger, 715 So. Monroe St., Lewistown, Ill.
KLK0610	Irene Thomas, 615 Prospect St., Crawfordsville, Ind.
KLK1217	Dick Eairheart, P. O. Box 66, Marion, Ill.
KLK1313	Joel Zarnke, 6th & Wearon, Box T3108, Tinker AFB, Okla.
KLK1548	Don Taylor, 13H Gomper Home, E. St. Louis, Ill.
KLK2079	Russell Smith, 107 So. State St., Louisville, Ky.
KLK2149	Rexford Niccum, RFD 1, North Manchester, Ind.
KLK2326	Roy Clark, P. O. Box 553, Louisville, Ky.
KLK5976	Marje Engel, P. O. Box 130, Berwyn, Ill.
KLM2786	Bob Starkey, 2834 Berrell Ave., Columbus, Ohio
KLM3240	Mary Ann Salzwimmer, 1211 California Ave., Akron, Ohio
KLM3953	Buck Rucker, Fultonham, Ohio
KLM3966	Dale Welfley, 3778 Englewood Dr., Stow, Ohio
KLM4842	Bessie Hazen, 231 North Mead St., Zanesville, Ohio
KLM5051	Jim Swart, 62 Stadium Dr., Tallmadge, Ohio
KLM5233	Cecil Campbell, 5687 Eldridge, Pontiac, Mich.
KLM5949	K. Matheny, Long Bottom, Ohio
KLM6123	Till Leonhardt, 3518 Smithfield Lane, Cincinnati, Ohio
KLM6883	Ernest Roberts, Box 275, East Fultonham, Ohio
KLM7311	Richard Heysek, 2430 West Sprague Rd., Parma, Ohio
KLM8313	Bob Sizemore 7807 Hope Ave., Cleveland, Ohio
KLM9178	Tom Snedeker, 999 Michigan Ave., Adrian, Mich.
KLN3897	Jerry Harris, 651 Cove Rd., Weirton, W. Va.
KLN4977	John Barta, 3975 Crum Rd., Austintown, Ohio
KLP0290	Chuck Dill, 1025 Powell Ave., Erie, Pa.
KLP0319	Pete Hons, 614 Main St., Portage, Pa.
KLP2986	Ray Randall, 36 Pine St., Hudson Falls, N. Y.
KLP3083	Rich Hatalski, 145 Sambourne, Wilkes-Barre, Pa.
KLP3111	Paul Miller, 8 Clark St., Canton, N. Y.
KLP3147	Tony Clavelli, 14 Denesha Place, Fulton, N. Y.
KLP3496	Jerry Babcock, Abbotts Corners, RFD 1, Cuba, N. Y.
KLP4360	Earl Bonenblust, 515 Whiting Rd., Webster, N. Y.
KLP4665	Ray Limpert, 27 Briarhill Dr., West Seneca, N. Y.
KLP4695	Dan Cunningham, 185 Ogden Ctr'Road Spencerport, N. Y.
KLP4910	Chuck McKee, Box 9, Fenelton, Pa.
KLP6039	William McKenna, 1354 Davis St., Elmira, N. Y.
KLP6232	Jim Pachter, 75 Ludlow St., Saratoga Springs, N. Y.
KLP7909	Alan Gutfrucht, 248 Spencer Rd., Rochester, N. Y.
KLP8050	Richard Hudak, Hdq. Co. 4th Bn. 69th Armor, Ft. Benning, Ga.
KLP8083	William Davidson, 26 Knight St., Glens Falls, N. Y.
KLP8509	Leonard Dotys, Monessen, Pa.
KLP8924	Charlie Jones, 48 Waller St., Wilkes-Barre, Pa.
KLP9113	Joe Jones, 21 West Elm St., Wilkes-Barre, Pa.
KLP9151	Robert Lance, 10 Fredella St., Glens Falls, N. Y.
KLP9557	George Booth, 971 Sweeney St., North Tonawanda, N. Y.
KLP9731	Thomas Byrd, 2288 Seneca St., Buffalo, N. Y.
KLP9773	Ron Crown, 764 Merchants Rd., Rochester, N. Y.
KLP9838	Phil Tannenbaum, 35 Sharpe St., Kingston, Pa.
KLS0054	Tom Grimke, Box 485, Wahiawa, Hawaii
XM22030	Dick Craddock, 9528 144 St., Edmonton, Alberta, Canada
XM49405	John Burnup, 9268 Cummings Ave., Ottawa, Ont., Canada
XM52477	David Pinsky, 4895 Bourrot, Montreal, Que., Canada
XM53463	Francois Goyer, 259 Rue Moisan, Drummondville, P. Q.
RA1061	L. Cufflin, c/o Huia P. O. Huia, Auckland, N. Z.
Atl. 974	Hal Hardaway, 605 Powell St., Crewe, Va.
Cent. 2860	Angelo Bione, P. O. Box 8, Christopher, Ill.
North2727	Don Dresser, 927 Paulding St., Peekskill, N. Y.
North3300	Tom Bolling, 233 Temple St., Fredonia, N. Y.
North3544	Rich Abrams, Bayne St., Norwalk, Conn.
WPE2JPN	George Masny, 299 E. 8th St., New York, N. Y.
WPE3FQS	Tony Cinquini, 6917 Chester Ave., Philadelphia, Pa.
WPE3FSC	Robert Ream, 608 High St., Lancaster, Pa.
WPE3FUL	Tom Archer, 6837 Chester Ave., Philadelphia, Pa.
WPE6ETT	Harry Okey, P. O. Box 1526, La Jolla, Calif.
	Central Printing, 920 Vandeventer, Fayetteville, Ark.

WASHINGTON OUTLOOK

Here's what happened at the FCC of late:

2A5739, Ralph De Seno, Neptune, N. J., hearings terminated and proceedings dismissed.

2Q2459, Raymond P. Laubenstein, West Belmar, N. J., hearings terminated and proceedings dismissed.

3Q1112, Eugene A. Schmidt, Philadelphia, Pa., directed to show cause why his license should not be revoked for alleged violation of the rules.

6W4430, Harold G. Gordon, Rome, Ga., his $100 monetary forfeiture was reduced to $25 in view of mitigating circumstances.

7W0734, Harry E. Mahoney, Key Largo, Fla., hearings terminated and proceedings dismissed.

11Q0752, Costa Mesa Welding Supply, Costa Mesa, Calif., hearings terminated and certified to the Commission who will now decide the fate of the station license.

11Q4913, William D. Roberson, Jr., Los Angeles, Calif., directed to show cause why his license should not be revoked for repeated failure to respond to official notices concerning alleged violations of the CB rules.

11W4069, Paul Sigur, Compton, Calif., license revoked for repeated failure to respond to official notices concerning alleged violations of the CB rules.

11W6140, Donal B. Morse, Anaheim, Calif., hearings terminated and proceedings dismissed.

13W0980, Dynamic TV Service, Portland, Ore., hearings terminated and certified to the Commission.

20Q1947, Darrell W. Patton, Rochester, N. Y., directed to show cause why his license should not be revoked for repeated failure to respond to official notices concerning alleged violations.

KBC1096, Laurence Robert Snyderman, Randolph, Mass., hearings terminated and proceedings dismissed.

KCF2482, Paul L. Goddard, Gairfax, Va., his $100 monetary forfeiture was reduced to $25 in view of mitigating circumstances.

KCG0478, Earl L. Johnson, Baltimore, Md., licensee asked the FCC to reconsider their order to revoke his license on June 15. The petition was denied but the Commission moved the revocation date to October 15.

KCG1159, William R. Becker, Burtonsville, Md., directed to show cause why his license should not be revoked for repeated failure to respond to official notices concerning alleged violation of the rules.

KDB1271, Lois McCallum, Atlanta, Ga., imposed with a small forfeiture in the amount of $100 for repeated violations of the rules.

KDB2107, Manning G. Ryals, Columbus, Ga., the order which was to revoke his license on October 12th was stayed pending licensees petition for reconsideration.

KDB6085, George Crayton McMichen, College Park, Ga., his $100 monetary forfeiture was reduced to $50 in view of mitigating circumstances.

KDD0481, Curtis A. Schwartz, N. Miami Beach, Fla., directed to show cause why his license should not be revoked for repeated failure to respond to official notices concerning alleged violation of the rules.

KDD2179, Larry E. Herring, East Point, Ga., license revoked for repeated violations of the rules.

KDD7813, William F. Algood, Decatur, Ga., directed to show cause why his license should not be revoked for repeated failure to respond to official notices concerning alleged violations of the rules.

KDD8741, Cecil D. Hamrick, Atlanta, Ga., license revoked for repeated failure to respond to official notices concerning alleged violations of the rules.

KDE1009, James R. Gibson, Soddy, Tenn., license revoked for repeated failure to respond to official notices concerning alleged violation of the rules.

KDI1685, Kenneth J. Hunter, Ft. Lauderdale, Fla., his $200 monetary forfeiture was reduced to $50 in view of mitigating circumstances.

KDI3158, Michael S. Ross, Miami Beach,

Fla., hearings terminated and certified to the Commission.

KDJ0319, Robert C. Massey, Miami Springs, Fla., directed to show cause why his license should not be revoked for repeated failure to respond to official notices concerning alleged violation of the rules.

KEH7141, Conrad F. Stokes, Ackerly, Tex., directed to show cause why his license should not be revoked for repeated failure to respond to official notices concerning alleged violation of the rules.

KEJ6807, William Shannon, Bell Gardens, Calif., license revoked for repeated violations of the rules.

KFA1203, Wesley P. Miller, Anaheim, Calif., hearings terminated and certified to the Commission.

KFA3127, Alpha Baker, Jr., South Gate, Calif., directed to show cause why his license should not be revoked for repeated failure to respond to official notices concerning alleged violation of the rules.

KFA5917, Neal Allen Weeks, San Pedro, Calif., imposed with a monetary forfeiture of $100 for repeated violations of the rules.

KFA7737, Melvin Godfrey, Las Vegas, Nev., license revoked for repeated failure to respond to official notices concerning alleged violations of the rules.

KFA9245, Robert H. Noyes, Ontario, Calif., hearings terminated and certified to the Commission.

KHD5217, Linda Carol Thomas, Farmington, N. Mex., directed to show cause why her license should not be revoked for repeated failure to respond to official notices concerning alleged violations of the rules.

KHG8618, Harold Polmateer, Cleveland, O., hearings terminated and proceedings dismissed.

KHG9401, Richard A. Haynes, Columbus, O., hearings terminated and proceedings dismissed.

KHH0744, James D. Blake, Saint Clair, Mich., hearings terminated and certified to the Commission.

KHH1930, Wesley L. Nevelle, Columbus, O., hearings terminated and certified to the Commission.

KHJ5455, Orrin S. Horton, Franklin Furnace, O., imposed with a monetary forfetiure of $100 for repeated violations of the rules.

KHJ7769, Ronald C. Smith, Firebrick, Ky., imposed with a forfeiture of $100 for repeated violations of the rules.

KIC1650, James L. Mancuso, Rochester, N. Y., license revoked for repeated failure to respond to official notices concerning alleged violations of the rules.

KKP1664, William T. Pitts, West Palm Beach, Fla., license revoked for repeated failure to respond to official notices concerning alleged violations of the rules.

KKX2509, Robert M. Hogan, Anaheim, Calif., directed to show cause why his license should not be revoked for repeated failure to respond to official notices concerning alleged violations of the rules.

KKX3795, Eagle Eye Armed Guard Service, Anaheim, Calif., hearings terminated and certified to the Commission.

KLM6290, Lowell E. Page, Wilmington, O., directed to show cause why his license should not be revoked for repeated failure to respond to official notices concerning alleged rule violations.

For those of you who keep track of statistics, we understand from the Department of Transport (the Canadian agency which issues CB licenses, we learn that as of July 31, 1964, there were 28,883 Canadian CB licenses outstanding, with new licenses being issued at a rate of about 1,000 per month. S9

KBG4303 RIDES AGAIN

Continued from page 7

What this, translated, says is that they (the ACBA) aren't aware that for $5 per year or 50¢ an issue you can read in S9 the current month's FCC actions against CB'ers who have violated the rules. They want the FCC to set up a special committee to duplicate S9. In addition, the committee would tell the FCC what new rules are required to keep everyone happy—something else done when necessary right here in S9 editorials! And, of course, every individual CB'er has the right to sit down and dash off a suggested rule change to the FCC.

Another proposed ACBA plan would have the FCC take away a portion of the 10 meter ham band to be given over to a new specialized CB-hobby service. If the ACBA had taken the time to research this idea, they would have seen that almost two years ago this same idea was formally presented to the FCC by International Crystal Mfg. Co. ("A CB'ers Ham License," S9, April '63, p. 29) to no avail. The 10 meter ham-to-CB conversion plan is also being pushed by the National Association for Citizens Band Radio, Inc., in their petition before the FCC. In the meantime, ham operators (recalling how the dormant 11 meter ham band was given to the CB'ers) have come to the realization that the FCC might possibly look with favor on this proposal and have instituted several "get back on 10 meter" plans for their operators who have found greener pastures on the other ham bands.

In years gone by, when the sunspots were more cooperative than they are now, the 10 meter ham band was one of the best ways you could work around the world on low power and without much interference. It was great for mobiling and handy for Civil Defense. True,

a lack of DX openings on 10 have caused it to fall into temporary disuse, but I can't see any advantage in penalizing hams for this just for the sake of our gaining additional frequency space for CB. *If* there is a need for separate hobby CB channels, there should be an alternative plan.

The ACBA has therefore provided such an alternative, possibly themselves realizing the improbability of their 10 meter band suggestion being taken seriously. The alternative plan is for the FCC to reallocate the 26 megacycle "remote broadcast pickup" band to the CB-hobby service. This band, which runs from 26.110 mc/s to 26.470 mc/s was once in relatively heavy use by radio broadcasters who used 26 mc/s equipment for their "man in the street" broadcasts. The stations were assigned to channels which were placed 20 kc/s apart, making this a 19 channel band. With CB channels spaced only 10 kc/s apart, it would provide for 37 channels. This band is little used today what with the availability and convenience of recently developed VHF FM remote pickup equipment. So why not give it to CB?

One reason is that there is currently a worldwide scramble going on for frequency assignments below 30 mc/s. Everyone wants these prime communications channels—the aeronautical services, the petroleum companies, police and fire departments, international telephone and telegraph stations. These are vital public service interests with considerable influence. Does it sound logical that the FCC is going to let these prime channels be given to CB-hobbying, especially since they have made it quite clear that they don't want CB hobbying on *any* frequencies? We think not. Besides, if it was a matter getting more available CB channels, we could extend the present 27 mc/s Citizens Band to 46 channels if everyone would use single sideband.

Perhaps a little thought and knowledge of the situation on the part of the ACBA would have told them about the possibility of the FCC shaking loose some new CB channels in the VHF or UHF portion of the radio spectrum—if the FCC would consider establishing a CB-hobby service *on any frequencies at all!* According to S9's contacts, to even consider asking for more CB frequencies below 140 megacycles is (under present FCC thinking) a fool's errand.

Then why not obtain VHF or UHF channels for the CB service and turn them over to the *commercial* users of CB? The VHF and UHF channels aren't subject to skip which seems to annoy the commercials so much. The channels are perfectly suited for local dispatching and base-to-base communications. The "hobbyists" could then be given 11 meters for themselves where they could hobby away to their hearts' content. After all, *if* there are more CB hobby users than commercials (as the ACBA contends), then why should the hobbyists have to be the ones to shuffle along to a new band (scrapping their 11 meter gear along the way) while the commercial minority makes use of frequency space which it cannot use to maximum advantage?

The ACBA also asked the FCC to reduce the $8 CB license fee, obviously in support of S9's earlier proposal, as discussed on page 7 of our July, 1963, issue.

You know, I seem to recall when the ACBA was at one time passing around certain literature to solicit new members. This literature claimed that the ACBA had "inside FCC information" that, because of their noble efforts with the FCC, the CB'ers of America were going to have "several hobby channels" when the new rules were announced. Our sources in Washington said at that time that this was not the case (see September '63 issue of S9, p. 7), and that, if anything, the pressure CB groups were only making it rougher on the CB'ers. The ACBA called us "liars." I wonder if that ACBA literature brought them any new members, and how the ACBA is now going to explain away their claims to these members and the others.

So it has come to pass that the ACBA has *again* run off at the mouth; too soon; too loud; without proper research and preparation. Now they have gone to the Commission with poorly researched, previously presented (and previously FCC rejected) ideas, and plans for the FCC to duplicate S9. Maybe the answer is for us to furnish the ACBA with a subscription to S9 so that it can know what's going on in CB and keep from putting its foot in the mouths of 700,000 CB'ers. When will it end?

ON THE STAFF

You've been seeing Jim Kyle's name on these pages and on the pages of numerous other publications for lo these many months now. Jim is a gifted author, a technical expert, one of the "in" people in CB, a CB pioneer, and a nice guy. For a considerable time now I've been browbeating Jimmy to join our staff on a regular basis, and for the same length of time Jim has been keeping the discussions at a Mexican standoff. For one thing, Jim was working as the editor of a local Oklahoma City CB publication, *CB Magazine*, and for another, he was sort of hoping *CB Magazine* would hold big things in their future, with perhaps a comfortable spot in the heirarchy for himself.

Whether or not Jim saw the handwriting on the wall with *CB Magazine*, or whether it was my great job of pushing S9 to Jim, I'll never know—but Jim has vacated his position with *CB Magazine* and joined S9 as a Con-

tributing Editor, effective with this issue.

Jim will be conducting "Kyle's Korner," a folksy monthly visit between the readers and himself. Readers are invited to query Jim regarding any aspects of CB, be they technical, non-technical, or whatever. Jim will draw on his own personal experience, upon his numerous industry contacts, and upon the wealth of information he has in his own vast library of CB data for the answers. There are no holds or questions barred—and perhaps Jim's answers might deflate some pet balloons. But that's what he's here for—frank answers to the problems faced by the readers.

The only things which we can't expect him to comply with are requests for information which will lead to illegal operation, or requests for highly detailed equipment designs (so don't ask him to design you a 15 tube quadruple conversion receiver, or a 25 watt transmitter).

What about that question you've been unable to get answered by all of your local CB experts? Why not ask S9's expert?

As a bonus, we've arranged for Jim to give us one of his now famous "Special Sections" for our January issue. Remember the "Special Mobile Sections" in the April and May issues? Jim did those, and that's the same caliber of useful material you'll be getting in the January S9—so watch for it!

USED GEAR

Every time I attend a CB Jamboree at least several people ask me if I know about anyone who wants to buy some unused and unwanted piece of CB equipment which they have sitting around the shack or closet. Whenever I wander into a CB dealer's shop I see a bulletin board containing about 50 scraps of paper containing offerings of used CB gear—some are there for months without results.

This is a message to those of you who ask the questions at Jamborees and who pin scraps of paper to walls: did you know that an S9 classified ad will cost you only 10¢ a word with *no* minimum? Did you know that your classified ad in S9 will be read not only by just about every active CB'er in the U.S. and Canada, it will also be read by a number of used equipment dealers who comb through our classified ads looking for equipment they seek—making offers and sending checks? Did you know that most people who offer used gear in S9 classified ads sell it within the first week the magazine comes out? Did you know that they receive top dollar for their gear? Did you know you could compose an ad for that used rig right now for *less* than $1? What are you waiting for?

READER MAIL

Continued from page 4

rules have let us know that some governmental agencies want to set themselves up as Lord and Master of the public. To me, CB is exactly what it states; the *citizen's* band. Does it hurt the FCC's ego because there are new uses to which the public found to put radio which the FCC didn't think of when they created CB? If business interests find CB so inadequate for their communications needs, why don't they get business band licenses?

This whole situation is ridiculous. Let private citizens have this band in peace for a change. Of course some of us break a rule or two now and then; who doesn't? Do you mean to say that nobody at the FCC ever runs that little 5 MPH over the speed limit or "just makes it" across the intersection when the light turns orange? I guess the main difference is that *we* aren't members of the FCC.

I wonder if the FCC is going to help me finance all the new crystals I'm going to need if their new rules go into effect.

Tom French, Jr., KFA5768
Palmdale, Calif.

S9 *predicts: The FCC may reconsider the new rules, possibly even hold a hearing with the few people who filed petitions for rehearings. The end result will be no changes in the proposed rules or possibly a change in the rules for 5 minutes on and 2 minutes off instead of 5 on/5 off. Maybe one or two additional channels will be given for cross-talk. It seems as if the only thing which will really get the rules the way most of the users want them is considerable Congressional, or Executive pressure from within the government itself. This is up to you. Have you written to your Congressman or Senator about these rules yet?*

Dear Mr. Kneitel,

When I received my October 1964 issue of S9 and eagerly went through the contents. I must say that I was shocked and disgusted by what I read. You have defamed the FCC, encouraged lawlessness and abused one of mankind's most useful of tools, radio. A citizens band radio can be more useful to you and I then a telephone. CB permits us to communicate without the needs of wires. It permits us to receive messages while walking, riding, flying or sailing over water. Messages can be transmitted instantaneously. There are no telephone bills to limit our calls.

But CB radio has one limitation. If some one is using a channel no one else can use it. Two people can not work with the same tool at one time. The FCC, serving the interest of all concerned, has decided that the radio spectrum is too small and too useful to be wasted. The FCC wants all CB messages to contain matters of importance. Any hobby type of transmission should not be tolerated because it interferes with valuable radio communications. Radio is a *tool* not a *toy*. Though I subscribe to and read S9 Magazine, let it be known that I back the FCC 100% in their recent actions taken to make CB radio useful.

I do not agree with your suggestion that CB'ers

write to their Congressmen concerning this matter. With Communists infiltrating our government, with Viet Nam, South America, Africa and European crisis on hand, with integration problems, with the race for the moon, with the national economy to consider, with labor troubles, social security, road building, housing and taxes to worry about, if any Congressman wastes his time with CB nonsense he should be impeached.

I sincerely feel that your last issue of S9 was not written with "good taste."

Alan Aaronson
Yonkers, N. Y.

Mr. Aronson, a nice chunk of my earnings goes towards paying the salary of my Congressman, who was also placed behind his desk by my going to the polls. I, for one, have not the slightest twinge of pain in requesting that this man devote some of his attention to the problems of 700,000 Americans. Anyone who feels ashamed to ask his elected public representatives to consider problems facing enough people to repopulate Milwaukee or Pittsburgh, maybe should try living someplace where the "elected" officials elect themselves and the people are happy to receive even small scraps of their attention.

If you lick the red on our cover this month, I think that you will find it to be in much "better taste" than the October issue. For the holiday season we are using cranberry instead of the usual strawberry.

ACBA

Editor:

I would like to resign from my post as *S9* APRE for Kansas because I am tired of Tom griping all of the time about the ACBA. Why doesn't he do something to better the situation or become president of the ACBA. I am a charter member of the ACBA and I am also a skipworker known as "Kansas Tornado" from Kansas. I have "skipped" around the nation and into Canada.

Let me know if you still want me on your APRE staff, otherwise I will leave on December 30, 1964.

Mel Hammer, Jr., KGI8017
Wichita, Kansas

Mel, it would appear that your skip working abilities would best be put to use in the organization which you apparently helped to form. S9 does not condone illegal skip working and it would not seem to be in our best interests to have you represent us. You being a skip worker, it is understandable why you are unable to read editorials which knock clubs which welcome and promote skip working among their members.

Tom,

They say a bad penny keeps returning, but what about a bad dollar? Like a few other naïve CB lambs we gave the ACBA a dollar over a year ago and I have received mail ever since from them, all of which has been tossed in the trash can. None of it has been answered because each letter from them reminded me of how I wasted my money. Now they sent me a notice telling me to send $3 for another year of membership. Haw!

Charles D. Baird, KLN4954
St. John, Mich.

Dear Tom,

Why hasn't anyone considered bringing a law suit against ACBA for an accounting of funds? Why doesn't the Post Office, Better Business Bureau or ICC go after them. God only knows of their membership claims, not to mention lack of mailing out subscriptions, etc. Somewhere in *S9's* multitude of readers there must be an attorney who could check into this for the betterment of CB.

I think that *S9* should stop calling itself the "Official CB Radio Magazine" until it can come up with a good organization to counter the bad effects of ACBA. Then watch them howl!

Phil Pendleton, KCG1990
Baltimore, Md.

Sirs:

Tar and feather the ACBA for condemning Part 15!

Jay Breakstone
Brooklyn, N. Y.

ASSN. TO CONDEMN DETRIMENTAL ASSN'S.

Tommy,

Your ACDA club sounds almost as crazy as I am. I'd like to join.

George Hulse, KBI0561
Centereach, N. Y.

OPINION: CB PUBLICATIONS, ETC.

Sir:

Once I wrote to *CB Horizons* to ask about their subscription rates because I thought it was a pretty good magazine. I never heard from them, but about two months later I received a dinky, little, poorly written thing called CB Magazine (there was no apparent explanation for this, either) I then read in *S9* that *CB Horizons* had gone out of business and that this other "magazine" was supposed to have replaced it.

Well I certainly had rejected considering wasting $4 on this substitute *CB Horizons*, but then guess what happened? They sent me a bill for $4, this was strange since I had never contacted them in the first place. Well, they weren't kidding, they keep sending me all sorts of cheaply printed reminders that I "owe" them $4. I sincerely hope that you can use this information in some way to warn other CB'ers who might be unaware of these basic facts of CB life.

Arthur Tress
Union City, N. J.

Editor:

I saw it in *S9*, but don't believe it. The cartoonist from page 42 of the October is crazy. Us *S9* readers *would* rather FIGHT than switch! My subscription is enclosed.

J. H. Pittman, Jr.
Macon, Ga.

Sirs:

I have received three issues of *S9* and another "CB publication" and there *is* a difference. I sure was a sucker to subscribe to the other one and wish I could get my money back.

Richard Kingery, KKX2784
Las Vegas, Nev.

Gentlemen:

What a mistake! I sent off a subscription to

CB Horizons (or whatever they call it these days) and then discovered my first copy of *S9*. Oh well, I guess we all learn by mistakes.

Guy L. Roese
Mineola, N. Y.

Dear Tom:

Today, October 2, I received my August issue of that informative gem from Oklahoma City, *CB Magazine*. There was an ad from U.S.L. which said that if I sent them my QSL card I would have a chance at a drawing for a free CB rig. The deadline to send in was September 10th, this was 23 days before I even received my issue of the magazine. Although I sent a QSL to U.S.L. when their ad ran in *S9*, I'm not wasting 5¢ to enter a drawing which ended several months ago. Is there an ink shortage in Oklahoma City?

I remember when you were the Editor of *CB Magazine's* predecessor, *CB Horizons*, things were different then. Thank you for switching to *S9*, it's a live wire. I, myself, am finally becoming an *S9* converted CB'er.

E. F. Orth, 3W2725
Allentown, Pa.

THE CHIRPER

Continued from page 15

then keep inching it open at about a quarter of a turn each time you sweep C_2 across the band looking for the CHIRPER's signal on the receiver. Once the signal has been found, you can adjust R_2 to give you the signal which sounds best to you.

After this has been done, adjust C_1 to get the highest output for the rig—this will probably be best accomplished by means of a receiver with an S meter or by a receiver which isn't sitting so close to the CHIRPER that all signals sound the same.

If you find it difficult locating the CHIRPER's signal on a receiver, reverse the connections on L_3.

OPERATING

Make certain that the *receiver* you will be using has a *long* wire antenna—at least 50, or more, feet. An indoor antenna just won't permit you much range (this goes double for the transmitting antenna).

You will find that your sending ability will be improved by monitoring your own signals on your receiver while you are transmitting.

A word of caution: do not willingly interfere with any broadcasting station or you may find yourself on the receiving end of an FCC blast. If someone tells you that you are causing interference to their reception you will have to pick up and find yourself another frequency.

Before placing your CHIRPER in operation, be sure that you have affixed the FCC required Part 15 equipment certification seal. We have included one here which may be removed from this issue.

We have also included a CW chart for ease of operation. Naturally, you will use your S9 Part 15 station identifier as your "call letters." Do *not* attempt to use your CB call over this rig.

OK fellows, here you have a way to bone up on CW, get in some on-the-air CW operation, build some electronic gear—what you might call an all-in-one course in electronics—plus FUN—for a total cost of about $7.

KYLE'S KORNER

Continued from page 61

personnel. However, you can make the checks yourself using a dummy load, if you have modulation percentage measured and certified by a 2d class licensee before putting the rig on the air. Whenever an audio accessory is added, such a checkout and certification is a good idea; you can *keep* out of FCC trouble a lot easier than you can *get* out of it, once in!

CHANGING THE SWR

How can I cut down the SWR on my antenna?

—G. W., Miami, Florida

I think what you really want to know is how to reduce the SWR on your *feedline;* if you didn't have a standing wave on the antenna itself, your signal wouldn't get anywhere! The standing wave is what does the actual radiating of the signal, and this is one reason why low SWR on feedlines is usually considered a major goal in antenna system engineering. If the feedline is radiating too, the system radiation pattern will be fouled up. But if the feedline SWR (more accurately, VSWR) is 1 to 1, no radiation will occur from the feedline. This reason isn't very important to CB, since antenna patterns aren't of such consequence to us, but it's where the original emphasis came from. More important to us is the fact that high VSWR can cause damage to the rig, and prevent maximum performance. The only way to reduce SWR on a feedline is to make a more perfect match between the feedline and the antenna. Most commercial antennas have this taken care of at the factory; if you get a drastically high VSWR with one of these, something is wrong either with it or with the way you have installed it. Check first for bad connections; they can look perfectly all right and still be open for RF. Similarly, it's easy to melt out the insulation on coax and put a short circuit where you don't want it. For other ways of reducing VSWR, go back to the August, 1964 issue, and read my article on page 31. The techniques are just too detailed to repeat here—sorry.

Which brings us to the end of the allotted space this time around, but not to the end of the question stack. If *you* have something puzzling you, drop a line.

THE SWL SHACK

Continued from page 32

KG1FQ in Greenland on SSB, 14149 kc/s; ZK1BW in the Cook Islands on SSB, 14169 kc/s; OH1AD in Republic of Somali on SSB, 14124 kc/s, EL2Y in Liberia on SSB, 14158 kc/s, and I1SCA in Italy on SSB, 14110 kc/s.

ULTILITY STATIONS

Swingingest aeronautical net you ever heard holds forth every night on 6567 kc/s. A few minutes on the channel bring you such choice items as "Boyeros" in Havana; "Balboa" in the Canal Zone; "San Juan" in Puerto Rico; in addition to airliners of all nations . . . On 4418 kc/s there are some good ship stations to be heard . . . A station of the RCAF in Trenton, Ont., with the callsign CHT has been heard on 9945 kc/s with SSB at 2255 . . . Big U.S. Navy aeronautical net quite busy on 6723 kc/s in evenings . . . A similar Coast Guard areo net (complete with helicopters) can be heard on 5696 kc/s. Look for NMG, New Orleans; NOM, Miami; NOP, Brooklyn; NOW, Port Angeles (Wash.); and Corpus Christi . . . We noted station XLN68, a forestry unit in Swastika, Ont., calling Toronto on 5410 kc/s at 1600 . . . Tel Aviv, Israel, heard with a repeating tape SSB transmission on 17667 kc/s at 0729 . . . Mysterious Russian language transmissions and conversations heard around 0645 on 2202 and 2299 kc/s. Possibly "fishing trawlers" off east coast of U.S. . . . You CW operators can look for ZLP of the New Zealand Royal Navy in Irirangi, N. Z. at 2230 on 12944 kc/s . . . A Hellenic Telecommunications station, SZU43, is reported with a repeating SSB tape at 1030 on 14583 kc/s.

SEE YOU NEXT MONTH

Let us know some of the stations you fellows and gals are hearing out there. Remember, *any* receiver can be used for DX monitoring—all it takes is a little patience to start pulling in those stations and racking up those QSL cards!

CB SHOP

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

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

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

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

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

Sonar Citizens Band Radios, 23 Channel Set $225. 8 Channel Set $165—used 1 month. Tom Sears, 1312 N. George St., Rome, N. Y. FF 7-1232.

Picture of yourself, home, equipment etc. on QSL cards made from your photograph. 250-$7.50 or 1000-$14.00 postpaid. Samples free. Write picture cards, 129 Copeland, La Crosse, Wis.

"Audio-Aid-All" Clipper-Filter kit, $10.99; $14.99 wired. Boosts modulation, aids reception. Postpaid. Holstrom, Box 8640-S, Sacramento, California 95822.

CB QSLs 3 & 4 colors, 100 $2.00, samples dime. W3UQL, Lehighton, Penna.

"Generator Filters" Low-Loss 3-30 mcs. CB type $2.50. 30-60 mcs. 6 meter type $2.50. Voltage Regulator Filter $2.50. Highest quality. Engineered Products Company, Springboro, Ohio.

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

"Alternator Filters."The original designers and manufacturers. Non-Tunable type $2.50. Tunable type $3.95. Highest quality. Engineered Products Company, Springboro, Ohio.

"Increase talk power with a transistor amplifier-clipper-filter. Two models: External model, self powered—no connections inside unit. Internal model, no external box. From $13.95. Send for free literature, Dept. S10, j-a Electronics, Box 645, Teaneck, N. J."

Most efficient CB/BC mobile antenna coupler, DP-2 Kit, $5.49. Free kit, antenna list. Holstrom Associates, Box 8640-S, Sacramento, California 95822.

8 Watt Paging Horn ideal for mobile CB use. 5" rd. x 5¼" long mounts inside or outside car. $12.95 postpaid. Free catalog. Sylvester Sales, P.O. Box 1151, Pawtucket, R. I.

DANDY HAM STATION! Thinking about going Ham? Buy my transceiver—cheap! Am selling my beloved Clegg 99'er 50 mc (six meter) transceiver after two years of faithful service. Runs 8 watts input on phone; double-conversion superheterodyne receiver. Everything in one unit: all you need is a mike and antenna. Worked (and QSL'ed) 31 states with this unit from the mobile! Price: $97.00 postpaid. Make it $110.00 and we'll throw in a completely transistorized speech clipper-compressor device, used successfully in conjunction with the 99'er (designed by Don Stoner). Will ship immediately on a first-come basis: Bob Brown, KBG-8417/K2ZSQ, % S9, 14 Vanderventer Avenue, Port Washington, L. I., New York 11050.

QSL Cards—$2.95 per 100, samples—10¢. Bill Orton, 905 Altamaha St., Chattanooga 12, Tenn.

CB QSL cards, personalized art work—minimum charge $1.50 extra on your first order. Catalog and samples 10 cents. Sacandaga Press, Broadalbin, New York 12025.

CB QSL's 3 & 4 colors 100 $2.00 samples dime. Bob Garra, Lehighton, Penna.

"Audio-Aid-All" Clipper kit, $10.99; $14.99 wired. Boosts modulation, aids reception. Postpaid. Holstrom, Box 8640-S, Sacramento, California 95822.

Hundred QSL's: $1.00. Samples, dime. Meininger, Jesup, Iowa.

HEY PUSSY CATS! Want a sneaky way to build up your card swappers collection? We will ship you 25 different cards for only $1. No printers samples or junk, but REAL CB QSL's from all over, some actually signed by the ops. S. Nussbaum, 1440 54th St., Brooklyn, N. Y. 11219.

Handle top selling lines of CB equipment and accessories in your area. Liberal dealer discounts. Send for complete details. Special prices on equipment for demonstration purposes. Top equipment —lowest dealer prices. Edwards Electronics, 4124—34th St., Lubbock, Texas, Phone 806—SW 5-2595.

QSL's "Frier" 21 Harvard, Schenectady Large "Clip and Design" Catalog with samples .25¢.

Complete CB servicing on all types of equipment. Authorized warranty station for all leading brands. Reasonable prices and top quality work. Edwards Communications Service, 4124—34th, Lubbock, Texas.

QSL cards printed to suit you—Any Design At No Extra Cost—$8.00 per 1000—Free Samples—Murray Gintis, 171 Gramercy Rd., Bala, Pa.

FOR SALE! One General MC-5 CB Unit—22 Channel Transmit (all Crystal-Transmit) 3 receive —2 Power Cords, 12 Volts. DC & one 117 Volt. AC—Mounting Rail Bracket. Will ship Paid-Postage anywhere in U.S.A. . . . Price asked $200 Cash. No Time payments or Trades wanted . . . Illness in Family—must sell—need Money Badly. Please do not Telephone me—Write only. All replies will be answered promptly. Stanley Schneider, KB19512, 1224 Walton Ave., Bronx, N.Y.C.

NUSSBAUM'S FOLLY! The printer goofed on our last order and ran off 3 times the amount of our famous wild CB QSL cards than we wanted. We refused to pay for the extras and can now pass these savings on to you. You never saw cards of this quality at175 for only $1. All you do is add your name and callsigns and they look better than cards costing many times this price. Order; enjoy, enjoy. S. Nussbaum, 1440 54th St., Brooklyn, N. Y. 11219.

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

QSL's, Gorgeous rainbows, etc. Top quality! Fast service! Low Prices! Samples 10¢. (refundable) Harms, KDI1143, Edgewater, Fla. 32032.

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

Protect your mobile rig with FCC warning stickers for your windshield. Large size. Special 3 for $1.00, Bob King, 735 E. 239 St., Bx., N. Y. 10466.

Selling: "New" 1963 Ray-tel (TWR-3) CB transceiver. Includes eight new Xtals. Bought for $210 . . . Cheap—Will negociate Price. A-1 performance; Bob Schnitzer, 52-24 65 Place, Maspeth, N. Y. 11378.

Reduce Mobile Static With Skyway Static Straps. These are the bonding straps that the books on mobile units advise using to minimize road noise. Ten braided straps with heavy duty connectors. Install in minutes. Complete directions. $2.50 postpaid. The Skyway Company, Box 51A, Hillsboro, Tenn. 37342.

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

Connect Your Mobile Rig To Your Battery using the most efficient connector available—a permanent professional connection to the center of your battery terminal without interfering with battery cables. Immediate disconnect and reconnect for battery servicing. Two Skyway Battery Connectors (one for your present battery and one for your next battery), Only $1.00 postpaid. As with all Skyway products, money back if not satisfied. The Skyway Company, Box 51A, Hillsboro, Tenn. 37342.

F.C.C. Labels, Plastic Packets, Eyeball Cards, Call Sign Decals, QSL Cards—Free samples, Fluorescent and glossy card stock, Latest designs and ink colors, April Sign, 56290 Van Dyke, Washington, Mich.

CB Call Map—18" x 24" United States and Canadian Districts, $1.00 Postpaid. Bulldog Supply, P.O. Box 404A, Dunbar, W. Va. 25064.

CB Clubs—any CB organization, emergency squad, CD net, coffee break, horizontal beam club, REACT, annual jamboree, list your group free in CB Calls—"Club Directory." Send officials' names and other pertinent information to: CB Calls, 46 Washington, Rutland, Vermont 05702.

Now a 23 channel switch to fit model 50 or 100 International Executive (and many other brands). Get complete enjoyment with this new 23 channel switch. Can be installed in 5 minutes in all model Executives. $17.50 postage paid from the factory. See your dealer or order direct. LOGAN RADIO SUPPLY, 2110 Ave. "J", Lubbock, Texas, Phone SH 4-1433. Dealer inquiries invited. Money back if not satisfied.

ABSOLUTELY BEST PROTECTION YET! Large federal warning decals displayed on your windshield warn against the serious crime of tampering with or stealing your CB equipment. A necessity in alerting the public and preventing your losses. Rush $1.00 for each pair of three color decals to: ARTCO, Box 8202, Atlanta 6, Georgia 30306. Return mail delivery!

CB QSL cards. Free samples. Little Print Shop, Box 9401, Austin, Texas.

QSL's Different Blue Eagle Background confirming data Glittering Gold Embossed Trial 25—$2.00. Samples 10¢. Andy's, 12 Bridge, Amsterdam, N. Y.

Hundred QSL's: $1.00. Samples, dime. Meininger, Jesup, Iowa.

CB QSLs "The Best of Letterpress" Samples 10¢. Hutchins Brothers, Thorndike, Maine.

CB QSL cards, personalized art work—minimum charge $1.50 extra on your first order. Catalog and samples 10 cents. Sacandaga Press, Broadalbin, New York 12025.

GLOSSY 3-COLOR QSL CARDS. 100-$4.50. Free Samples. Rutgers Vari-Typing Service, Thomas Street, Riegel Ridge, Milford, N. J.

QSL's 100 only $3.00, samples 25¢ refundable. Redbird Hill, Freedom, Indiana 47431.

CB RUBBER STAMP—Calls, name and address on a full size—4 line stamp, only $2.00 postpaid. Sent to: S & H Rubber Stamp Service, 54 Cathedral Avenue, Florham Park, New Jersey.

LOG BOOK for CB'ers. 1965 S9 call map printed on inside cover in red and black. Plastic ring binder opens flat with 1200 lines 17 inches long for calls. $1.00 postpaid. CAROLINA CAMERA PUBLISHERS, Post Office Box 1728-S, Wilmington, N. C. 28402.

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

CB QSL's $2.00 per 100 postpaid. Glossy 2-colors. Free sample. Hobby Print Shop, Umatilla, Fla.

QSL Cards. Classy originals at lowest price: 1,000 $7.25 pp. Happy customers everywhere. 50 beautiful CB Christmas cards, your imprint $2 pp. Eyeball cards, 2 color, 1,000 $3.25 pp. Send 10¢ stamps (refundable) for samples packet. Bob Clearly, Box 468, Binghamton, N. Y.

1965 Desk Calendars, your name, call, address. 3-$1.00, Henry Morgan Printery, 443 Euclid, Akron, Ohio.

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