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NOVEMBER 1963

50c

S9

the citizens band journal

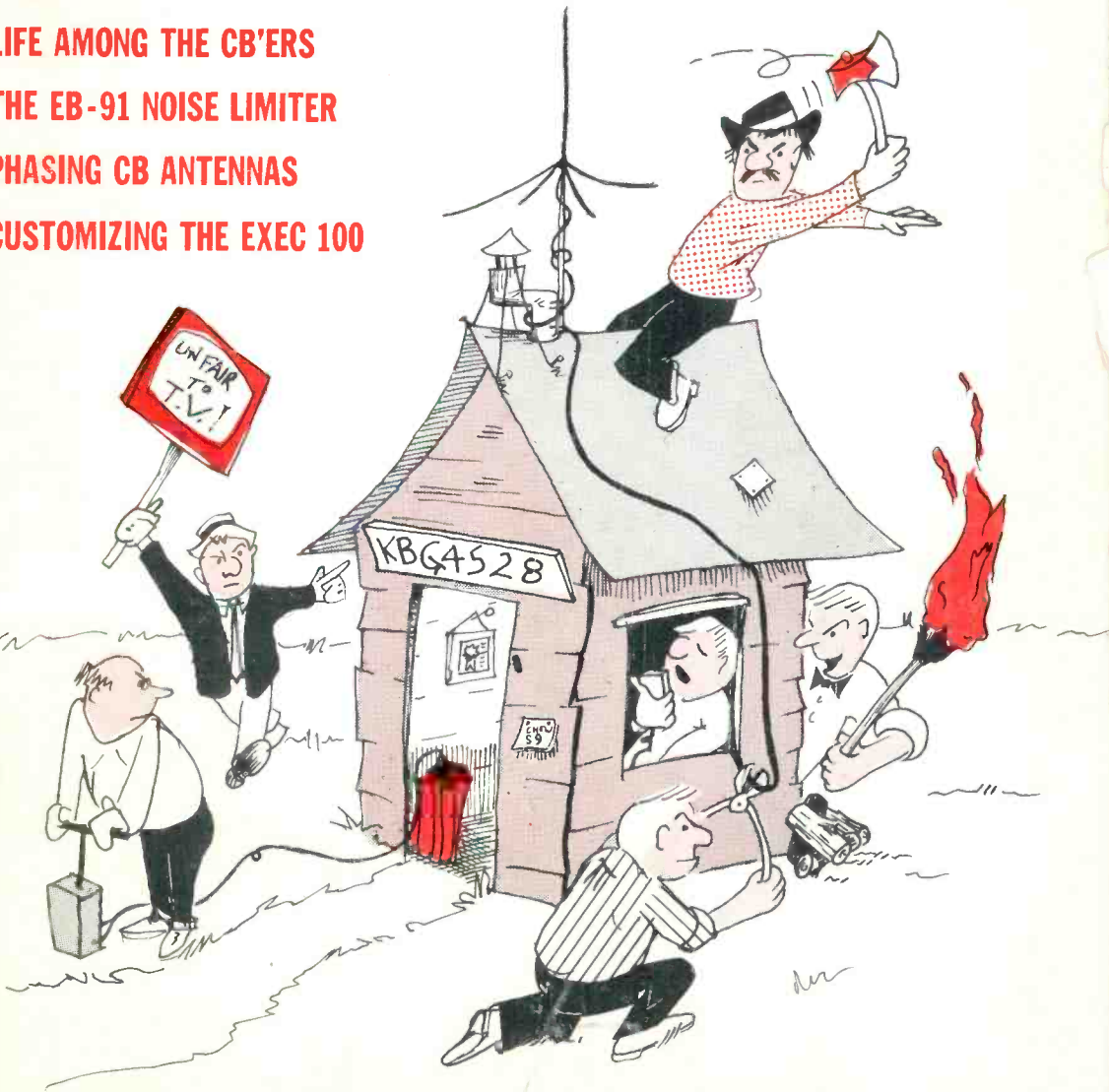
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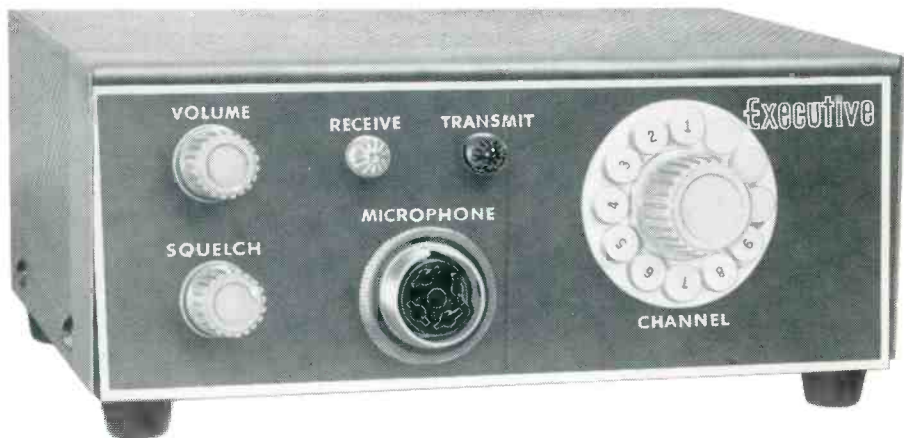
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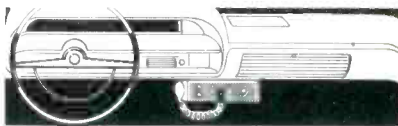
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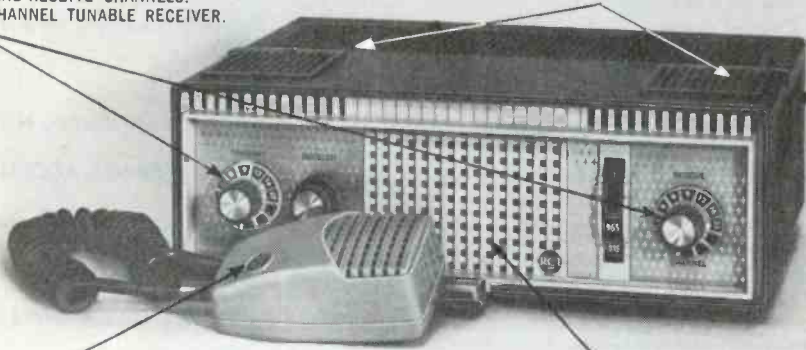
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the citizens band journal

Vol. 3, No. 5

November, 1963

S. R. COWAN, PUBLISHER

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Gentlemen:

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Toronto, Ont., Canada

RE ACBA

Dear Tom,

Many of your readers write to me regarding ACBA under the assumption that I am an officer or director. Please note that my only association with ACBA was the acceptance of an invitation to speak on Citizens Band and related subjects in Kingsport last summer.

Charles Messenger
General Radiotelephone Company
Burbank, Calif.

Glad you cleared this up for us Charlie, we were somewhat confused on the point ourselves. Your exact relationship with ACBA was never clearly explained, and in fact, the general impression given in literature we have seen was that you were, in fact, an executive of ACBA. By the way, our readers will also be interested in knowing that a second officer of the ACBA (Walker was first) quit at soon as the operations of the club were "switched" to Oklahoma City. He is Vernon Jackson of Jonesboro, Ky. Vern will be missed as we understand that he was one of the few people who might have gotten the ACBA onto the right track and off the ground.

Tom Kneitel,

As a member of the ACBA you can help to guide it—offer your suggestions on what should be done, and I'm sure that there are enough who will recognize the truth and insist on it.

James S. Green, 13Q0596
McMinnville, Oregon

Sorry Jim, the ACBA has too many ideas and tactics which stick in my craw. They have told too many lies to their members, they have "needed" too many FCC officials, and have already done irreparable harm to the Citizens Radio Service as far as the FCC is concerned. They have no regard for Federal regulations and suggest skirting them in all sorts of "cute" and "clever" ways. I am very careful of the organizations which I join. I don't belong just for the sake of "belonging," I would join an organization only if I felt that there could be mutual benefit. What with their officers pulling out of the club so fast, it might turn out that I would be the only officer left after a while anyway—and that wouldn't be much fun.

Gentlemen:

The thought of belonging to a national organization for CB'ers such as the ACBA, at its inception, was very appealing to me. The attraction of the ACBA has now been completely dissipated since it has become anti-FCC. I am thoroughly disillusioned about any benefits to be achieved by membership.

H. Van Hobbs, KHB0619
Gary, Ind.

Dear Tom,

Many of the fellows in this area feel that S9 might consider starting a worthwhile national CB organization if it received enough requests. I have a feeling that I am probably speaking for CB'ers throughout the nation. What say?

Paul Ramsden, KID0245
N. Kensington, Pa.

Tommy:

Down with the Armenian Corn Bread Addicts.
Robin Mages, KFA4601
Phoenix, Arizona

LICENSE FEES

Dear Tom:

I see where the FCC has a proposal to place fees on all filings for CB licenses. Doesn't this seem rather silly? How many CB'ers would charge for their services in times of emergency? Not many, if any! Next thing you know the FCC will come up with a toll charge for every time you press your mike button. Maybe after that they can bottle the airwaves and sell them too.

I'm not trying to be a one man crusade on the subject, but that's almost the way I feel about the whole license fee situation. Same thing goes for a fee on ham tickets.

I read S9 every month and especially go for your great editorials and the strong stands you always take (sometimes alone) for a better Citizens Radio Service. Keep it up, we're all with you.

Tommy Kennedy
White Oak, Texas

CB STINKS?

Dear Mr. Kneitel,

I think that hobby channels for CB'ers, if they are approved, just plain STINK! If some IDIOT thinks that he can talk to his friends or anyone else he is nuts. If the idiot really wants to accomplish something he should get a HAM license. Most CB'ers are all bark and no bite. In other words, they really don't know much in the way of electronics and can't get their ham license. Therefore they chicken out and get a CB ticket. These people put up a big front to cover their stupidity or lack of interest. Print this.

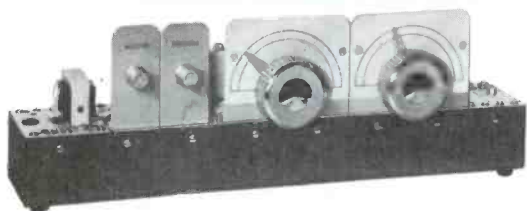
Mark W. Persons
Hartl Manor
Marshfield, Wisc.

There doesn't seem to be a Ham call sign in back of your name, Mr. Persons. Hope that you accomplish it someday.

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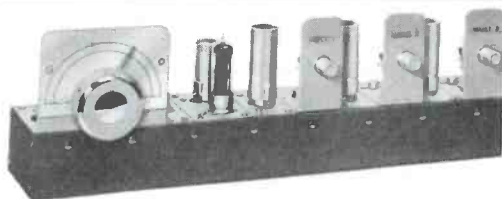
Kit	Frequency	Price
AOR-40	Special	\$69.00
AOR-41	150 kc — 450 kc	62.50
AOR-42	2 mc — 6 mc	62.50
AOR-43	5 mc — 18 mc	62.50
AOR-44	80 meter/40 meter	62.50
AOR-45	15 meter/10 meter	62.50
AOR-46	6 meter	66.50
AOR-47	2 meter	66.50
AOR-48	Citizens 27 mc	62.50

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



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Kit	Frequency	Price
AOF-89	VFO 8 mc — 9 mc and buffer	\$22.00
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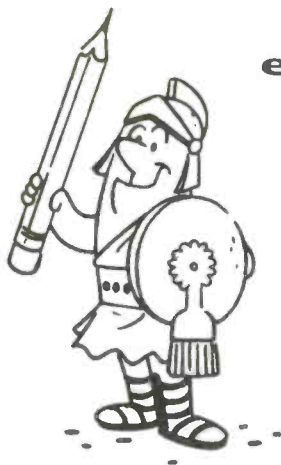
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editorial

KBG4303 rides again!

by TOM KNEITEL
EDITOR, S9

GOING, GOING...

Several readers have told us that CB NEWS, of Kansas City, has announced their discontinuance of publication. This saddened us because we always felt that CB NEWS was a publication of consistent quality, one of those publications in which the enthusiasm of its editors and staff "showed through" in its pages.

Thinking back over the years it occurs to us that a number of publications which apparently have called it quits in the rather rough CB field. I don't exactly recall the order in which they went, but there was CB PRESS, CB NATIONWIDE NEWS, CB DIGEST and CB HORIZONS MONTHLY CALLBOOK.

CB PRESS and CB NATIONWIDE NEWS were actually newspapers. NATIONWIDE was taken over by the officers of the short lived National Citizens Radio League, and when the NCRL "went west," nobody ever again saw CB NATIONWIDE NEWS. CB PRESS was published in Erie, Pa., and was known for its outspoken editorial policies (sometimes they were good, other times they were just plain "outspoken"). Although publication of CB PRESS was interrupted several times for brief periods, it looked as though they were going to make it. We saw the publisher during the summer of 1962 and he told us that they were making a big comeback—although we haven't seen or heard of a copy since.

CB DIGEST was a magazine which tried to make a go of it in the manner of READERS' DIGEST, that is, by reprinting articles from electronics publications. They hit a snag early in life when they found that

many electronics publications plain and simple just didn't want to be reprinted.

The CB HORIZONS MONTHLY CALLBOOK was doomed from the start. There just isn't a market today for a yearly CB callbook, much less one which comes out every month. Many were printed, few were sold (same as the recent yearly callbooks). The publication was abruptly scrapped by its publisher after only a few issues.

We bring all these gory details to you to emphasize the point that it takes far more than just enthusiasm to publish a magazine. It takes several things, but mostly it takes a valid perspective of the readership coupled with the support of that readership.

There are currently two other publications in what might be called the "exclusively" CB field. One of them is now dearly paying the price for a childish and irresponsible editorial policy and has lost readers and advertisers galore over the past several months. The other publication, which doesn't seem to come out with any regularity, is now hopelessly lost in the shuffle of the rapidly changing and dynamic CB field and has panicked into changing their coverage to include "all two way communications services" rather than CB exclusively. It's interesting to note that two wide differences and two close similarities exist between both publications. One has a militant/extremist editorial policy, the other has no editorial viewpoint whatsoever (but it sure does look purdy). Both publications started "national CB clubs," neither of which has accomplished anything of a positive nature, except the collection of dues.

Regarding the other ingredient necessary

Continued on page 58



The best mobile CB rig on wheels.

Planning to buy a Citizens Band mobile transceiver? Don't make a move until you've seen the Browning Drake M-523. It's the smallest 23-channel mobile rig you can buy, only 8" x 9" x 3". The Browning Drake will fit perfectly under the dash of your car, no matter what make, and still leave plenty of knee room. Or you may choose the M-506, the six channel version of the Drake. Either way, you get the communication reliability and range you want because the Drake has the same tubes, components and circuitry

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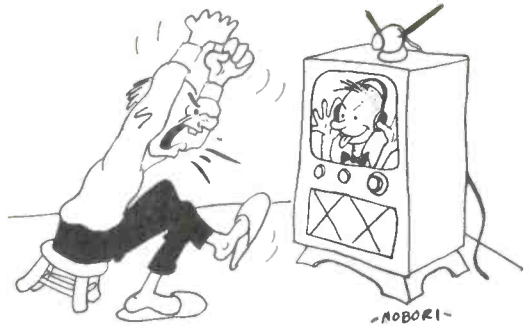


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SOLVING THOSE "TV JEEBIES"



TVI, A COMMON CB PROBLEM, SOLVED AT LAST!

by MIKE CARAVAGGIO, 8W1015

Perhaps you are one of the fortunate few CB'ers who has never had to face the problem of your CB activities appearing on a TV set. More than likely you have, in one way or another, learned to live with CB's most common problem, that of television interference (also known as "TVI," "Tennessee Valley Indians").

Yes, all manner of stripes, black bars, flashes, and unwanted modulation can make your neighbors squirm, squeal, shudder, and (what's worse) *squawk!* And let's not forget what's more horrifying than *everything* else, TVI on *your own set*. It's one thing to deal with aggravated neighbors, another to fast talk your way out of TVI complaints from the XYL and the kiddies.

But why bother trying to talk your way out of it and be reduced to living like a hermit with concealed antennas, unlisted telephone numbers, and the like? It's really not too difficult to eliminate the whole TVI problem once you understand it and know of a few inexpensive tricks of the trade.

IT'S CAUSES

TVI, it may surprise you to learn, is not always the fault of the CB operator. In many instances the TV set itself is solely at fault, or is at least *equally* at fault with the CB rig.

Here's how the most common CB-rig caused TVJ comes about. Say you are using a third overtone oscillator circuit in your transmitter. Your crystal actually oscillates at 9 mc/s and this output is multiplied up

to 27 mc/s by the circuits in your rig. The same circuits which produce these multiples (let's call them "harmonics") produce many more harmonics than the desired 27 mc/s product. You might be producing little bits of RF energy at 36, 45, 54 and other 9 mc/s multiples. In addition, your fundamental frequency of 27 mc/s may be splitting into multiples and producing signals at 54, 81, 108, 135 mc/s (and so on right up the radio spectrum). This is especially true if the CB rig has been "modified" to produce "higher output."

Now, while your CB rig is designed to radiate only the 27 mc/s signal products with efficiency, it may also *inefficiently* radiate some of these unwanted harmonic signals. In case you didn't know it, the power used up in generating these harmonics is power which is deducted from your 27 mc/s signal.

Supposing that you are operating on CB channel 11 (27.085 mc/s) and generating harmonics. Your second harmonic would be on 54.170 mc/s and the third would be on 71.255 mc/s. These harmonics just happen to drop into TV channels 2 (54-60 mc/s) and 4 (66-72 mc/s). Remember, besides the fact that you are jamming TV reception with these harmonics, and forgetting the fact that you are wasting the potential power output of your rig, you are operating on a frequency (or frequencies) which is not authorized for your station. This is clearly a violation of FCC regulations.

Harmonics are the only form of TVI

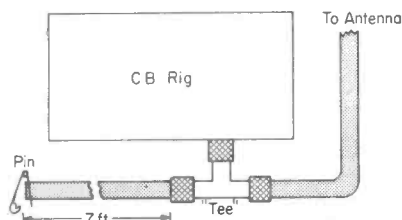


Diagram 1. A wavetrap such as this one will attenuate even numbered harmonics from your rig.

which can be cured at the transmitter end of the interference problem. Their riddance will be discussed shortly.

A common form of TVI is due to so-called "front end overload" caused by your CB signal overpowering the circuits in nearby TV receivers. Your little CB signal is more powerful than those from a distant TV transmitter, even though you may be radiating a 27 mc/s signal (without harmonics).

Some older TV sets have IF frequencies near the 27 mc/s Citizens Band and it is possible that your signal is leaking into the TV receiver via this route.

These are the basic causes of TVI from CB rigs. A long technical dissertation on each of these conditions could be presented at this point, but the information given here will give you a sufficient understanding to be able to cope with a TVI complaint. And don't forget, TVI isn't caused *only* by CB rigs, it can also come from radio transmitters in other services, from faulty household appliances, diathermy machines, auto ignition systems, old or worn TV antennas and cable, or faulty components within the TV set itself.

THE COMPLAINT

As can be expected, the first time you will hear about TVI will be from an irate neighbor. The general feeling from neighbors is that they could watch the TV set before you went on the air, and regardless of whose fault the TVI is, they didn't need you to prove it to them. You will frequently hear things said such as, "You are broadcasting on a TV channel," "I'm going to complain to the police," or "I'm going to sock you in the schnozola." The first two of these remarks can be taken with a grain of salt however the last remark should *always* be met with rapid action on your part to investigate the cause of the complaint and take any action within your power to eliminate it.

You must understand that the police would not normally have any jurisdiction

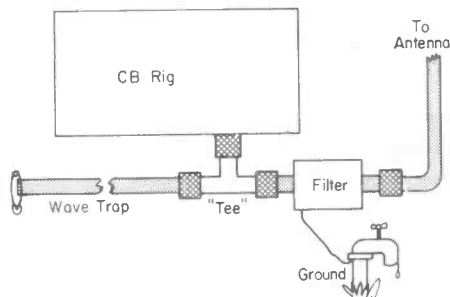


Diagram 2. Method of using a low pass filter in conjunction with a wave trap for maximum harmonic reduction.

over a federally licensed radio transmitter, such as your CB rig. They can not *legally* force you off the air. Only the FCC can yank you off the air legally (and make no mistake, they *will* do it if you are giving out with harmonics).

Also keep in mind that the TV viewer is not particularly technically inclined and doesn't care a hoot about harmonics, front-end overload, IF frequencies, and the like. All he wants to know is, "Why can't I watch Johnny Carson?" So don't bother to go into a whole Rube Goldberg rigamarole because most viewers will feel that you are giving them a snow job and trying to get off the hook. Heck, if it is you causing the TVI then you should own up to it and clear it up!

You can explain that you have an FCC license to operate a CB station and that it is *possible* that the interference is caused by a source other than your rig. You can only say this if the viewer hasn't heard your modulation, complete with call sign and handle, through his TV set.

You've got to start someplace in your investigation and the best place is in front of the "invaded" TV receiver. Go over to the guy's house and let him show it to you. If the TVI taking place while you are at his house and nobody is using your CB rig, then you can get a clean slate by telling friend neighbor to look in somebody else's closet for the culprit. Of course, with your luck, the TVI will be present *only* when your CB rig is in operation, so let's take it from there.

If the TVI appears only on certain channels then you can be pretty certain that your harmonics are causing the problem. If the TVI is on all channels then either the signal is overloading the set or getting into the IF's (of course, there is still the possibility that you are radiating harmonics too).

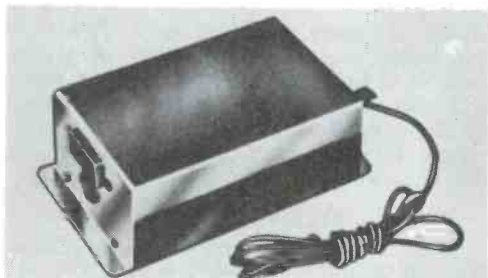
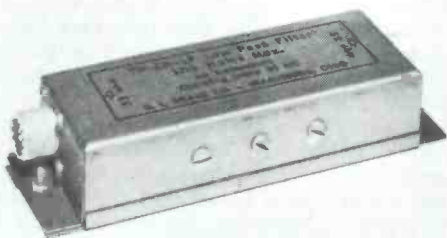
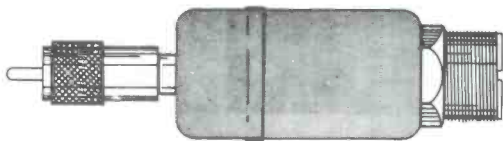
Let's get one thing straight right now. If you are coming through the neighbor's TV set and it isn't from harmonics, then it is the fault of the TV set. Naturally, the set owner is expected to maintain his TV receiver in proper operating condition and you are not required to spend any money for it to be put into condition so as to eliminate the TVI. You, likewise, are responsible for the proper operation of your own equipment.

CURES

There are several methods of eliminating the harmonics from your CB rig, and they all call for one form or another of wave traps or "low pass filters." A low pass filter, as its name implies, is a filter which will pass only low frequencies (remember, your 27 mc/s CB frequency is lower than the 54 mc/s TV frequency).

A wave trap is easily built by means of a 7 foot length of RG-58/U coaxial cable and two connectors. As shown in Diagram 1, place a "Tee" connector at the antenna socket on the rear of the CB rig. To one side of the connector, attach the coaxial cable from the antenna. To the other end of the "Tee," attach the 7 foot length of coax with a safety pin stuck through the outer coating, the copper shield, the polyethylene inner jacket, and into the copper center conductor, in other words, this pin is used to short the center conductor to the outer braid. With the pin inserted, flip on your carrier (on your most used channel) and get a report on your TVI. Turn off the rig and move the pin an inch or so along the cable towards the connector and hit the mike button again. Keep repeating this until you find the exact spot where the TVI diminishes most or drops out completely. This should be somewhere about a foot in from the end of the 7 foot length, and it may take a number of ¼-inch moves with the pin to find the precise spot. When this point is reached snap the pin closed, or snip off the end of the coaxial cable in back of the pin and make a solder connection to short circuit the cable.

Remember that a wave trap does not replace a low pass filter, it is merely a means of lessening even numbered harmonics (2nd, 4th, etc). Its best use is to supplement a commercially built low pass filter. A low pass filter attenuates *all* harmonics, and will do an even better than usual job when used in conjunction with the wave trap. The low pass filter is placed in your transmission line at the transceiver end, and if a wave trap is used in conjunction with the low pass filter, the "Tee" connector



TVI Filters, top to bottom: Antenna Specialists, Drake Model TV-CB-LP, Lafayette, Johnson, B&W Model 424, and high pass filters from Bud and Drake (side by side).

and wave trap are placed as shown in Diagram 2.

Low pass filters pass only those signals below a certain frequency, with some having a cutoff frequency as low as 35 mc/s. Anything which chops off frequencies above 52 mc/s is suitable, and all commercially made units accomplish this. Low pass filters suitable for CB are manufactured by Barker & Williamson (\$8.65, \$17.10), Bud Radio (\$16.90), E. F. Johnson (\$14.95), R. L. Drake Co. (\$16.95, \$6.95, \$5.95), Antenna Specialists (\$4.70), and Ameco (\$3.75). Here's a hint, after some experimentation, many CB'ers have found that the low pass filters give considerably improved service if the chassis of the filter is connected to a good ground (cold water pipe) by a short length of heavy insulated wire. Prices of the filters vary due to amount of power capable of being handled by the filter, some will take as much as a kilowatt (the manufacturers don't think that you're not running a kilowatt from your CB station, it's that they also sell these filters to Hams).

RECEIVER CURES

Front end overloading and IF leak-through should be easily conquered, however if the TVI is caused by transmitted harmonics there isn't much that can be done at the receiver end other than *trying* to tune out the TVI with the receiver's fine tuning control.

A wave trap can be made for the receiver as shown in Diagram 3. A nine foot length of 300-ohm twin lead is connected in parallel with the TV set's antenna, and there is *no* need to short out the far end as in the transmitter's wave trap. With the receiver and CB transmitter both in operation, start trimming off the loose end of the 9 foot length, an inch at a time. Keep going until the TVI reaches its lowest point, in fact, when you see the TVI gradually lessening you might trim in 1/2-inch segments.

A wave trap is commercially made by J. W. Miller Co., it sells for \$5.00 (Model 6166).

It might be pointed out here that front end overloading can cause the TV receiver to generate a type of self-interference within its own circuits which amounts to an effect which closely resembles harmonic TVI from a transmitter. A wave trap should eliminate this condition.

Another method used to reduce the possibility of your CB rig's fundamental frequency from jamming a TV set is to install a high pass filter. The commercially made high pass filters generally attenuate signals below 40 or 50 mc/s. These units are made

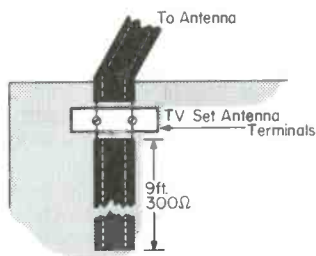


Diagram 3. A wavetrap for a TV receiver. It's simple and inexpensive and often eliminates the TVI.

by R. L. Drake Co. (\$3.97), Regency (99¢), JFD Electronics (\$2.65), J. W. Miller (\$3.23, \$6.25), Ameco (95¢, \$2.25), Bud Radio (\$4.95), and Lafayette (\$2.39). Prices differ because of materials used in construction, amount of signal attenuation offered, and other factors. The best place to install a high pass filter is directly on the input to the tuner on the inside of the set. The filter may also be placed on the external antenna terminals, however this generally is not nearly as effective as when placed on the tuner. The filters should be grounded to the chassis of the TV receiver, and in extremely stubborn cases, two filters in series may be used.

Sometimes overloading can be reduced considerably by elevating the CB antenna to a point where it is higher than the TV antenna which is having the interference problem, but since the height of a CB antenna is regulated by the FCC this is not always a practical solution.

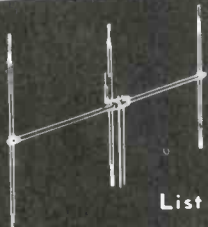
REMEMBER

It's good to understand that *you have no legal obligation to buy high pass filters for your neighbor's TV set*—in fact if several neighbors hear that you bought one for another neighbor, you will find that there is going to be a long line of people standing outside your front door waiting for free filters. Actually though, you can advise your neighbor to write to the manufacturer of his TV set and ask for a filter. Most manufacturers will provide a high pass filter providing the serial number of the receiver is supplied with the request.

And think about this: if you install a filter on a neighbor's TV set, you will be blamed for all eventual problems that the neighbor may have with the set. This means that if the picture tube blows in three years it will be blamed on you. Our suggestion is that you refer the neighbor to a local TV service shop and leave the do-it-yourself TVI elimination tasks to your own home set.



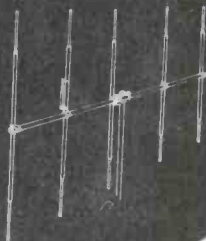
CB Antennas by MOSLEY



List Price \$46.68

A-311-S

- No. of Elements - 3
- Antenna Weight - 12.5 lbs.
- Boom Length - 12 ft.
- Impedance Point - 52 ohms
- Max. Element Length - 18' 8 1/4"
- Vertical Wind Load - 65 lbs.
- Horizontal Wind Load - 35 lbs.
- Radiation - Uni-directional
- Type Matching - Gamma
- Front-to-back - 20 db.
- Forward Gain - 8 db.



List Price
\$73.35

A-511-S

- No. Elements - 5
- Antenna Weight - 16.5 lbs.
- Boom Length - 24 ft.
- Max Element Length - 18' 8 1/4"
- Front-to-back - 20 db.
- Vertical Wind Load - 112 lbs.
- Horizontal Wind Load - 62 lbs.
- Forward Gain - 9.5 db.
- Type Matching - Gamma
- Impedance Point - 52 ohms
- Radiation - Uni-directional

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Mosley Electronics, Inc.

4610 N. LINDBERGH BLVD., BRIDGETON, MO. 63044

To the one man in four who should own transistorized CB equipment

It's time someone cleared the air over transistorized CB units. Do they really make sense? What can they do—and what are their limitations? Who should buy them, and why?

A magic word—*transistors*. Even to the most sophisticated engineer, it has a ring of the exciting, mysterious future about it. To most of us, it almost irresistibly implies a vast superiority in performance.

Unfortunately, this compelling but vague idea is costing a lot of CB'ers—unnecessarily—a great deal in money, exasperation and disappointment.

Who stands to gain with transistorized equipment?

Make no mistake about it—solid-state transceivers offer many unique advantages. But they are *important* advantages only in certain kinds of applications.

The majority of CB'ers today use it primarily for personal communication. Their mobile operations are irregular and infrequent compared to base station activity. Most of their vehicles are pleasure cars where space is no particular problem. To these, transistors may have no genuine advantage.

But if you are among the one in four to whom CB has a predominantly serious purpose . . . if you use it frequently in mobile situations . . . if you use it regularly in business, commercial or industrial enterprise . . . if you actively participate in REACT or other local emergency groups . . . then you have good reason to consider a transistorized set.

What are the limitations of solid state transceivers?

First, let's explode a myth. Transistor units *do not outperform tube sets*. Period. Most units on the market are measurably inferior to conventional sets in sensitivity, power input, and/or selectivity.

Here at Hallicrafters, hundreds of thousands of dollars and a decade of the most advanced military transistor design experience have resulted in a new transistorized unit, the CB-5

MARK II, whose basic performance equals the better tube devices. *Equals—but does not exceed.*

So if it's simply "maximum range" you're after—don't waste your money on transistors. You'll get comparable distance with a tube transceiver for *at least 25% less*.

Then there are the minor annoyances of conducted noise and transistor "hiss." The first creates very tricky installation problems (or *did* until we finally licked it with an equally tricky toroid filter in the MARK II).

Nothing yet known entirely eliminates the slight but ever-present residual hiss in the A.F. amplifier in *all* transistorized equipment.

Finally, you *do* have to pause a breath's worth before talking. Reason: The reliable transistorized units actually are hybrids; the several miniature tubes in the amplifier final take a split second to warm up. (Even the most expensive industrial equipment is hybrid.)

The real benefits of transistors

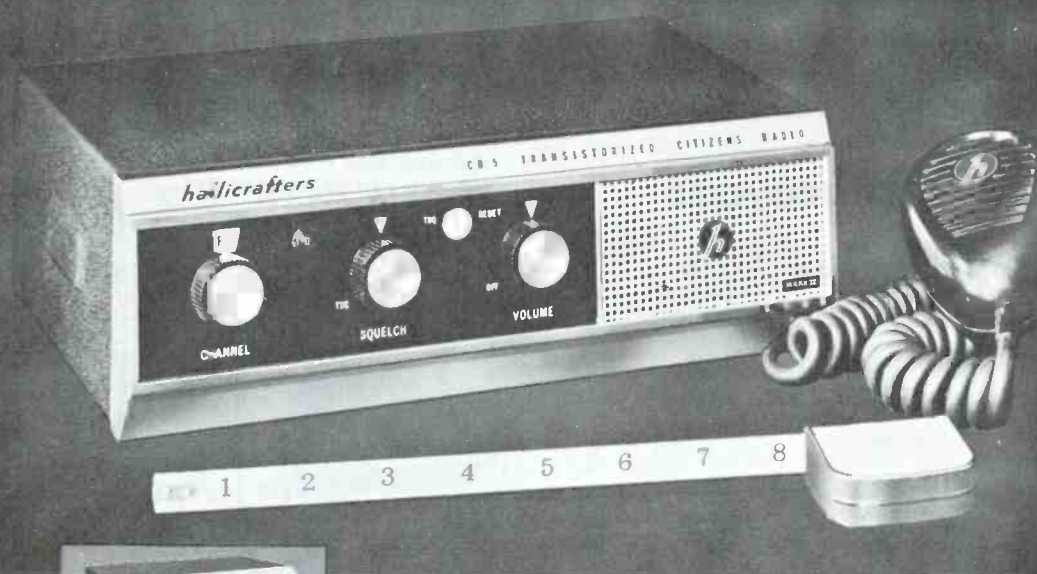
Oddly enough, the major benefits are mechanical rather than electronic, although the extra reliability is worth considering. The size advantage is obvious (our CB-5 MARK II, for instance, will fit in a Volkswagen glove compartment and leave room for gloves)—and critically important in most commercial or compact vehicles.

Battery drain is so low as to be negligible. A well-designed unit will draw less than .225 amps in standby; leave it on all night and you'll have used *less battery power than is required to start your car once*. You need neither heavy-duty battery nor generator—a big advantage to the regular operator.

Equally important, transistors make practical the marvelous flexibility of *full-power* portable operation with a battery pack—indispensable for industrial field use, agriculture, traffic control, sporting events, field trips and the like. All in all, if you can use these advantages, good transistor equipment is a *very* good investment. If you are among the one in four, you'll find worthwhile the reading on the next page.

the new ideas in electronics

Meet the magnificent new transistorized CB-5 Mark II



PS-120 AC Power Supply. Slim matching pedestal for CB-5 MARK II. Size: 10 1/4" x 2 1/4" x 6 1/4". Optional at just \$44.95.



HA-14 Portable Pak. Either 1.5 or 5-watt capability, depending on batteries. Two alkaline or single nickel-cadmium—both types rechargeable. Fiber glass whip included.



Precision engineering throughout—and a genuine engineering breakthrough in noise immunity.

A high-performance citizens band transceiver, reflecting the most advanced and practical concept of transistor design.

An entirely new principle of noise suppression—the result of many months of experimental work—employing a new nickel alloy high-permeability toroid filter has virtually eliminated conducted noise pick-up.

Automatic series noise limiter improvements have cut radiated noise so dramatically that no external noise-stopping device is necessary.

Six crystal-controlled channels • Provision for HA-15 built-in selective call (optional at \$54.95, available now) • 100% modulation capability. \$219.95.

SPECIFICATIONS

5 watts input; 100% modulation capability; 6 crystal-controlled channels; 1 μ v sensitivity for 10 db. S/N ratio; 45 db. adj. channel rej.; PTT ceramic mike; 6 kc. selectivity at 6 db.; 18 transistors, 9 diodes, 3 instant-heat transmit tubes.

If you're sold on tube equipment, the field-proven excellence of our eight-channel, dual-conversion CB-3A will be verified in detail by your CB dealer. \$159.95.



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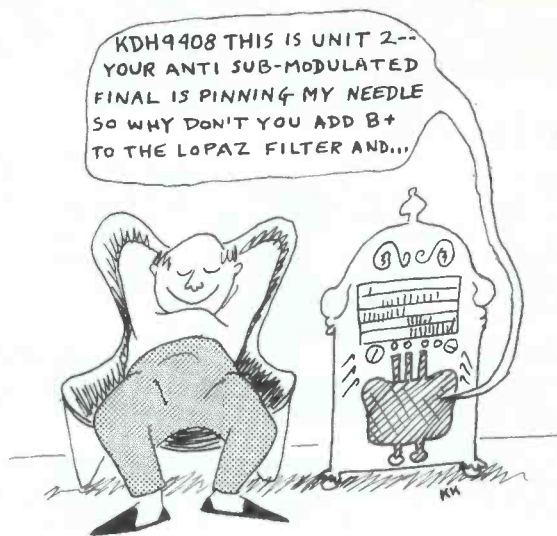
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Life Among The CB'ers

CANDID IMPRESSIONS OF NEWLY DISCOVERED PHENOMENA

by THE OL' TIMER



There is a gadget on my radio set—a switch, I think, is the technical term—which I turned quite by accident one day. The lower half of the dial lit up, disclosing some mysterious numerals I had never before noticed. These were numbers with decimals, 25.5, 26.9, 27.1, right on up to 30.1. A scientist of my acquaintance explained that I had discovered the short-wave band on my radio.

The short-wave band, I have learned, consists of vast expanses of silence, considerable areas of static, and an occasional spot where one can overhear the conversations of CB'ers and Hams.

From this fortunate accident of discovery, I have truly gained the peace that passes all understanding. I say this advisedly, for having listened to the CB'ers for quite some time now, I must say they certainly pass my understanding. But I have found peace.

I have not been urged a single time to order a *crispy* or even a *crunchy* ground plane from my favorite dealer, or to breakfast on a coaxial connector with milk or cream and sugar. Not once has a CB'er troubled to disclose what "crystal" spells backwards. I have not even once heard the words "laundry detergent." No one has tried to sell me a thing. I have, indeed, found

peace. I have found a refuge which I commend to anyone who has had all he can endure of dancing, singing, shouting, or rhyming commercials.

To the uninitiated I hope to give some idea of what may be heard in this fascinating sphere.

Tuning the Citizens Band one day, I heard a party whom we shall call KDH-8802, although that really isn't his name. It's a kind of nickname, short for Sam. Sam was speaking to a station known as "base" and he was discussing his radio equipment, as often is the case. Sam, or KDH8802, was quite enthused over his antenna, which, as nearly as I can remember it, was a base loaded beam of the dipole, rotating type, underfed with collapsible cable, with modulated resistors in the pine output to offset the distortion from the impedance coil below the water tank. I may not have this strictly accurate. At any rate, KDH8802, or Sam, had had considerable antenna trouble, he was telling "base," and one day his grandmother mistook the collapsible cable for the wash line, and loaded the thing with several pounds of diapers and other dainties. From that day on, Sam has been able to have solid communications over a 50 mile range.

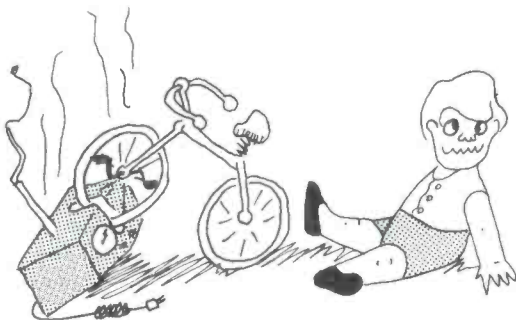


There was a charming girl I tuned in on one time. Betty, I think her name was. Betty of KDH4887. She had a lovely voice, The kind one would expect to give cooking recipes on that other band, what do they call it? Oh yes, TV. Did she bore me with how to mix a batter for a date nut loaf? Not a bit of it. Betty was explaining to Dotty, KDH9783, how she coupled her regenerative SWR bridge to an overmodulated filament circuit without even using a #47 bulb. "I never use a #47 bulb, Dotty," Betty said emphatically. "It's too hot this time of year." I couldn't hear what Dotty said, but Betty later replied: "Thanks, Dotty," for the suggestion about the bobby pin. I'd never have thought of that." And she turned off.



Now the average person would never have thought of coupling an SWR bridge to a filament circuit with a bobby pin, which is why I say that listening to CB'ers is not only good fun, but very helpful.

Among CB'ers, too, it is a common thing for perfect strangers to come to know one another through the medium of radio and to develop close and lasting friendships. I recall tuning a contact between two CB'ers, Bill, KDH7171, and Richie, KDH9422, who were strangers to one another, although both lived over on the same side of town. This was their first contact, and as usual, they got to comparing notes on their respective equipment. Bill explained to Richie that after waiting 6 months, he had finally gotten delivery on the latest model, a newly designed rig for which he had paid over \$250, and which he had temporarily stored



in his garage. How temporarily it actually was he learned only when he discovered that the next door neighbor's kids had driven a bicycle into it, and hacked it to pieces in an orgy of good natured child's play. Richie was extremely sympathetic and invited Bill to come over and see his rig. Bill thanked him and reciprocated with a like invitation. The two exchanged addresses. It developed that Bill and Richie lived next door to each other, and for some reason, I have never heard either one of them again.

Operating a CB station requires considerable patience and stamina, and overlong hours at the mike their toll. I tuned in on Morris at KDH3503 one night when he wasn't feeling well. He had considerable trouble reading, and was unable to hear his mobile unit because somebody was skipping due to spots. Also he had been

Continued on page 57

USE THE "EB91-NL"

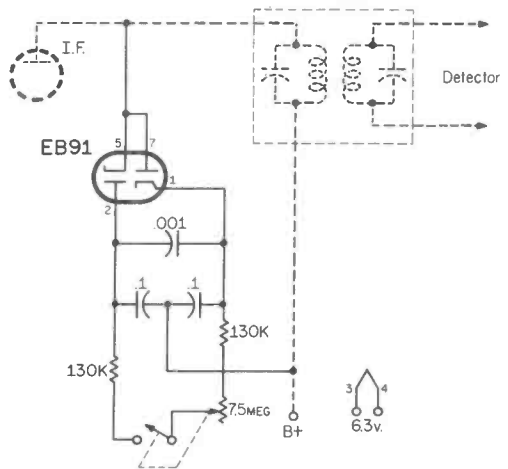
SIMPLE BUT EFFECTIVE ADJUSTABLE CB NOISE LIMITER

by PETER DENDIN, 17W6366

The problem that I have always had has been with noise limiting circuits in CB rigs. Either they are mysteriously tucked away in the circuitry and are, seemingly, always in the "on" position (which contributes to audio distortion and loss of receiver sensitivity at all times, even at times when the functions of a noise limiter are not required), or the limiter can be bluntly switch "on" and "off," a feature which ignores the finer nuances of the noise elimination technique. After all, if there is only a little noise why should there be a lot of limiting? Why not an adjustable limiter, one which can be removed from the circuit when there is no need for it?

Having experimented with several types of diode limiters and found them unsuitable for my needs, I decided to utilize a Mullard type EB91 tube because of its long life (10,000 hours), low internal noise, distortion, and microphonics, and high stability. This was one of the tubes from the Mullard "Master 10M" series and can be purchased from most any radio supply houses for about \$1.75. Budget minded CB'ers can get Mullard's standard (non-Master 10M) version of the EB91 for slightly less than \$1, it's good but hasn't gone through the rigid "10M" tests at the Mullard factory before being shipped. Of course, if you're a playboy CB'er driving around in a red Jaguar Model XKE, you can use a gold plated, hand made "Gold Lion" type D717 which will run you about \$3.80.

Anyway, the circuit is quite small and all the components can be mounted beneath the chassis near the base of the EB91. Locate the EB91 on the chassis so that the



PARTS LIST

- 2 .1 ufd paper tubular capacitors
- 1 .001 ufd capacitor
- 2 130K resistors, 1/2 watt
- 1 7.5 megohm linear taper pot
- 1 Mullard EB-91 "Master 10M" tube
- 1 7-pin miniature type tube socket
- short length of coaxial cable

leads from the IF transformer are short (the shorter the better). You will probably want to mount the limiting control (the 7.5 megohm pot) on the front panel for ease of operation. Connect the control on the panel to the limiting circuit with a length of coaxial cable (RG-58 or 59 will do). Keep this length of cable as short as possible. As shown in the schematic, the circuit functions when hooked to the line which runs between the last IF transformer and the plate of the IF amplifier tube (existing circuitry is shown in dotted lines in

Continued on page 57

HAMMARLUND'S

SOLID CB-SIX



The Last Word In Dependable CB Communications

Whatever the intended use; casual, commercial or industrial, the SOLID CB-Six offers the inherent dependability of Hammarlund design and super-rugged construction. Built to withstand the jarring, day-after-day jolts of trucks and heavy duty construction equipment, this ruggedly constructed unit offers the sophisticated CB'er outstanding sensitivity and remarkably efficient circuit design for full use of maximum legal power.

Hammarlund's SOLID CB-Six is a dual conversion superheterodyne transceiver featuring six crystal controlled channels for receive and transmit. Suitable for both mobile and base station use, it incorporates a built-in power supply for use with 12 volt DC and 117 volt AC operation. Optimum sensitivity with razor-sharp selectivity is combined with an effective dual diode series-type noise limiter for reliable reception under all operating conditions.

A microfine $\pm 3\text{KC}$ vernier tuning control on the front panel assures peak signal reception on all receive channels—a Hammarlund extra to compensate for minor frequency variations in other CB transmitters.

Send for complete technical literature today—or see the SOLID 'Six at your nearest Hammarlund CB Dealer.

\$179⁵⁰

Includes Crystals For One Channel.

HQ-105 TRS



With one unit you get both Ham and CB coverage—and can listen to short wave stations all over the world. This is a quality communications receiver with a built-in 5 watt transmitter—which can easily be retuned for 10 meter use when you get your Ham ticket.

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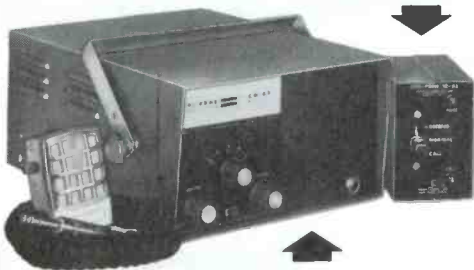
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FCC SCORE- CARD

BOX SCORES OF THE RECENT FCC CB CRACKDOWN

As mentioned in our exclusive September "scoop," the FCC conducted a "survey" of CB conditions during June. During the 5 day period from June 3 to 7 they detected a total of 7,298 rule violations on 11 meters and sent out 1,275 violation notices.

Of the almost 7,300 violations recorded during this period, the large majority (2,678) were for non-substantive messages. We herewith list each of the violations noted that week, together with a capsule description of the violation. We suggest that you consult your copy of Part 19 for a detailed description of these offenses so that you will not find yourself on the business end of an FCC monitor's receiver. What, you don't have a copy of Part 19 in your station? Oh well, maybe you'll be just another statistic the next time they shake up some of the skeletons in our family closet.

Rule	Capsule Description	Violations
19.61(a)	Non-substantive transmissions	2678
19.62	Improper identification	1605
19.61(g)	Working skip	976
19.33	Off-frequency	944
19.61(f)	Talking more than 5 minutes	508
19.61(e)	Too long for a message	193
19.83	Sending false signals	102
19.61(c)	Sending signals to attract attention	58
19.25(c)	Antenna too high	54
19.61(h)	Dead carrier	42
19.34(d)	Unauthorized type of emission	30
19.61(b)	Broadcasting	14
19.36(a)	Overmodulation	13
19.61(j)	Unnecessary testing	12
19.72(a)	Failure to post station license	12
19.32	Excessive power	11

Continued on page 58

Let's Clear The Air About

CO-AX

"HOW LONG SHOULD I CUT MY TRANSMISSION LINE?"

by HERB FRIEDMAN, 2W6045

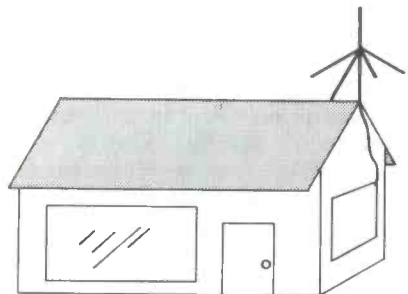
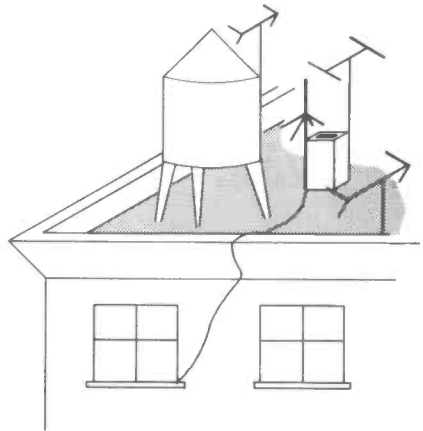
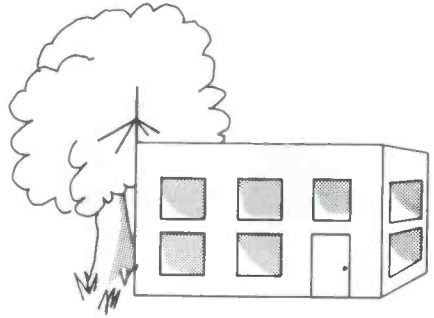
Instead of clearing up the subject it seems that recent articles on transmission lines have created even more confusion. Hundreds of you have written with more or less the same question, namely, "I read that the transmission line should be a multiple of a $\frac{1}{2}$ wavelength because of antenna impedance variations, yet the antenna manufacturers say *their* antennae gives such a good match a random length line can be used. Why don't you folks agree?"

The answer is simple—both are correct; it's the explanation which is difficult—but let's have a go at it.

With the exception of the $\frac{1}{4}$ wave, full length whip, most modern CB antennae are designed for an impedance looking in of 50 ohms. If the antenna's radiation resistance isn't 50 ohms a matching device is provided to make the antenna *appear* as 50 ohms. If the 50 ohm impedance was retained when the antenna was mounted in its *operating location* there would be no problem, the 50 ohms would be a perfect match for 50 ohm coax. However, notice the hooker, we said "operating location."

The antenna manufacturer may have designed for 50 ohms with the antenna mounted at its optimum height, or he may have assumed, say in the case of a base antenna that the antenna would normally be mounted above a flat roof of assumed type and dimension and at maximum legal height, and the antenna would be designed for 50 ohms under these conditions. If the mounted impedance is 50 ohms it won't make one bit of difference whether the coax is twelve feet, thirty or fifty feet. (There are normal losses but they are negligible below 100 feet so we'll ignore them.)

But now you come along and mount the antenna as best you can. Maybe you wind up with a large metal surface near the an-



WE REGRET TO ANNOUNCE

that this is your last chance in November, 1963, to subscribe to S9 for only \$5 per year.



Yes, next month it will be December and you will have missed your chance to get your subscription in before November 30th—and after that date it will be December. It's much better to subscribe in November. December usually means parties and festivities here in the office and our lecherous old Circulation Manager (KBG4528) spends most of his time telling obscene "knock-knock" jokes to the secretaries. Yes, your best bet is to get that subscription to S9 in the mail today before it's too late. Use the convenient postage-free envelope hidden towards the back of this issue. Hurry, 4528 has been walking around all week with a sinister leer and chuckling—it may already be too late!

tenna, or you can't get it high enough over the roof, or your mast isn't grounded, or you bend one of the ground plane elements—you can bet your antenna is no longer 50 ohms. Now the coax doesn't match the antenna, you have an SWR and it is possible that the input impedance of the transmission line can appear higher or lower than 50 ohms if the line is a random length. If the new line impedance is not within the matching range of the transmitter's output circuit the transmitter will not deliver its total potential power to the transmission line.

See what has happened? The manufacturer has sold an antenna which under proper mounting conditions appears as 50 ohms, but because of installation limitations at your location the antenna impedance has been changed and "compensation" must be applied through the use of a transmission line a multiple of a $\frac{1}{2}$ wavelength to get everything back to 50 ohms.

It is due to the fact that there are impedance variations that are caused primarily by installation, that most articles recommend the $\frac{1}{2}$ wave transmission line as a safety feature. If you have done the installation carefully and maintained the 50 ohm antenna impedance the $\frac{1}{2}$ wave line won't do any harm, and if there are unknown variations the $\frac{1}{2}$ wave line will compensate for the changed input impedance of the line. Since the average CB'er doesn't have equipment telling him if the variations exist it is best at all times to employ the $\frac{1}{2}$ wave line.

Mobile antennae are a different story, and let's start with the $\frac{1}{4}$ wave whip. It's impedance depends where on the car (or truck) it's mounted, the size and shape of the car and a host of other variables such as how far it bends when you're driving—and unless somebody up there likes you very much the impedance is going to be nominally 30 ohms. So, you must use the $\frac{1}{2}$ wave line with the full length $\frac{1}{4}$ wave whip.

The loaded mobile antenna is something different. Here the manufacturer can design for a particular mounting. If he specifies a recommended mounting, such as the center of the roof, and/or provides an adjustable loading or matching coil (or it can be fixed) the antenna can be 50 ohms. However, if you cannot mount the antenna as recom-

Continued on page 58

5 WATTS INPUT
TONE ALERT
MODULATION PL 259
HI GAIN
SUPERHET
CIRCUIT
52 OHM COAX
ADJUSTABLE
SQUELCH
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QSL
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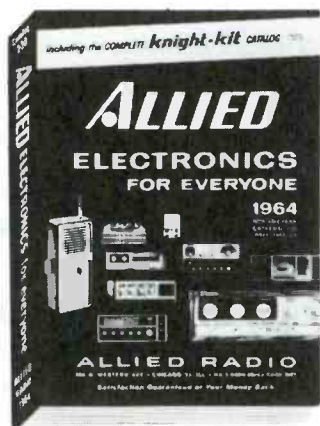


ON THE COUNTERS



Lafayette Radio leads the list of new products this month with a new CB rig called the HB-115. The HB-115 is a low cost (\$59.95) superhet type unit which features an 8 channel transmitter and tunable receiver. The unit has AVC, planetary vernier tuning, an external speaker/headphone jack, variable noise limiter, power indicator light, 110 volt power supply and a receptacle for a 6 or 12 VDC power supply. There is an RF stage in the receiver to boost sensitivity.

From the looks of the HB-115 it will be another triumph for the folks at Lafayette. Their HE-20 has already gone down in the history books as one of the all time great CB bargains.



Last month we mentioned the new 444 page Allied Catalogue. This month we have a photo of the front cover. As previously mentioned, it's free from Allied Radio, Dept. S9, 100 N. Western Avenue, Chicago 80, Ill.



Funniest bit we've seen in years, and a wild idea for a nutty Christmas gift for a CB'er, is one of the "Dil Awards" currently becoming popular in CB circles. The "awards" you can buy are the "WBL" (World's Biggest Lid), "WAN" (Worked All Neighbors), "NEW" (Nothing Ever Works), and "RBE" (Radio's Biggest Egotist). Each of these whacky certificates is worded differently (and cleverly) and is lettered in black over a metallic gold background with a colored engraved border (green, orange, brown, red) and looks quite official. The whole set of 4 awards sells for \$2 from Don Davies, 31 Cambridge Ave., Saddle Brook, N. J. Tell Don that you're an S9'er for *extra* fast service.

Hammarlund Mfg. Co., 53 West 23rd St., New York 10, N. Y., has brought out their Model *CB-Six* transceiver. This rugged unit has 6 transmit and receive channels,



a dual conversion receiver with a 262 kc/s IF for high selectivity (8 kc/s at 60 DB). The fixed-tuned receiver may be tuned 3 kc/s to each side of its fixed channels to bring in those off channel stations. Unit operates on both 117 VAC and 12 VDC.

New-Tronics Corp., 3455 Vega Avenue, Cleveland 13, Ohio, has two new mobile antennas for CB'ers. They are copper sheathed fiberglass encapsulated rods in waterproofed plastic sheaths, 48 inches high and center loaded. One model has standard screw threads on the base and the other has a cowl mount. Complete information is available from the company.



Lafayette Radio, Dept. S9-K3, P.O. Box 10, Syosset, L. I., N. Y. has out (in addition to their HB-115 mentioned earlier) a unit called the "Priva-Com" Selective Caller Model HA-100. This is a tone calling unit which is priced at \$32.50 each, \$26.50 for a pair.

The "Priva-Com" is designed to keep your CB rig on "squelch" until another similarly equipped station wants to contact you. The operator at the other station presses a button on his "Priva-Com" and a tone sounds in your set and a light goes on. For maximum privacy, there are 6 different tone combinations which may be utilized. It will work with any push-to-talk CB rig. Oh, be-

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- GC TENNA METER (tunes any transceiver) (Reg. \$15.95) Sale \$13.99
(tune for max. power, check antenna performance, etc.)
- GC SIGNAL OPTIMIZER (7-in-1 CB tester) (Reg. \$47.50) Sale \$39.95
(checks antenna power, modulation, field strength, SWR, etc.)
- HY-GAIN NEW CLR 11 COLINEAR (Bonus offer) Only \$29.97
(Bonus: 50 ft. of RG8U Foam cable & \$2.95 Mobile Handbook)
- AUTO BURGLAR ALARM (protect your CB equipment) Sale \$3.49
- 15-Pc. MOBILE NOISE SUPPRESSOR KIT (Reg. \$10) Sale \$4.99
- 12-POSITION CHANNEL SELECTOR Sale \$3.99
- FAMOUS MAKE BODY MOUNT, Spring, 102" Whip Antenna Sale \$5.88
- SINGLE BUMPER MOUNT, Spring, 102" Whip Antenna Sale \$8.99
- DOUBLE BUMPER MOUNT, Spring, 102" Whip Antenna Sale \$9.99
- MODEL CBC - CITIZENS BAND COUPLER Sale \$7.95
(use your CB mobile antenna for both auto radio & transceiver)
(See Special Combination Offer Below!!!! BIG SAVINGS!!!!)

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 - Model TLW whip only, standard adaptor (\$6.96 ea) -f CBC..... Only \$9.46
 - Model TLWT same as TLW but telescoping (\$7.20 ea) -f CBC... Only \$9.70

- ANTENNA SPECIALISTS MOBILE CB ANTENNAS:
- Model MR-52, 48" Black Beauty Fiberglass (\$8.14ea) -f CBC. Only \$10.64
 - Model MR-53, 48" Black Beauty Fiberglass (\$5.10 ea) -f CBC. Only \$8.10
 - Model MR-58, 48" Black Beauty Fiberglass (\$9.45ea) -f CBC. Only \$11.95
 - Model M-90, 96" Whip only " Fiberglass (\$6.95 ea) -f CBC. Only \$9.45

- MARK MOBILE HELIWHIPS: (HW11-S series std. duty)(HW11 series heavy)
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 - HW11 Series (4 ft or 5 ft) (\$9.95 ea) -f CBC Only \$12.45
 - HW11, 6 ft. heavy duty (\$10.95 ea) -f CBC Only \$13.45
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(solid radials, accepts PL-259, all sales final)

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

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- PL-259-394 ea. (10 for \$3.50) PL-258-49¢ ea. (10 for \$4.50)
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- DM-1-(double mole) 95¢ ea. UG-176-14¢ ea. (10 for \$1.19)
- M-359-(right angle) 39¢ ea. (10 for \$3.50)
- TEE connectors-\$1.95 ea. (10 for \$17.50)
- PP-677-(SO-239 one end, auto plug on other) 89¢ ea. (10 for \$7.90)

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

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fore we go, did you send for the 1964 Lafayette Catalogue yet? C'mon, man, it's one of the most useful things you'll ever have around your shack, and the price is right (it's free). Chop the coupon out of their ad or send a postcard (or QSL) to the 10-20 above and tell them to lay one on you.



Here's an S9 exclusive scoop, a new transceiver from EICO, 131-09 39th Avenue, Flushing, N. Y. (note the new address). This is the Model 777, a six channel job with both a tunable receiver and six fixed channels. The receiver is a double conversion job with a 1750 kc/s first IF and a 262 kc/s second IF.



Polytronics Labs (88 Clinton Rd., West Caldwell, N. J.) has a potential winner in their new model the "POLY-COMM PRO," a 23 channel delight with a Nuvistor front end including a cascode RF amplifier, Nuvistor 1st mixer, separate Nuvistor crystal oscillator and tunable oscillator. The unit provides 20 tube performance using 9 tubes, 5 Nuvistors and 7 diodes.

Other features are a tunable receiver with

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FLASH!

NEW CB RULES NOTICE

The grapevine says that there is a very good possibility that the "new" CB regulations (Part 19) will be released by the FCC sometime around the end of October. We know that you, as a CB'er, are most anxious to know the outcome of this Commission proposal.

We will be pleased to keep you on top of the situation with a capsule synopsis of the new rules, mailed to you on the day that they are received by the S9 staff. We anticipate that there will be an overwhelming interest in this service and we must therefore limit this service to S9 SUBSCRIBERS ONLY! If you are a subscriber and desire this service, please rush us a stamped, self-addressed envelope and we will place your envelope on "Flash" status in our Reader Service Department—ready to go as soon as the official "word" is out. You might want to use an 8¢ Air-mail stamp for prompter service. Remember, because of the fact that we expect to be swamped to our maximum capabilities, we can offer this service ONLY TO SUBSCRIBERS! If you do not yet subscribe to S9, you may enclose your subscription with your request. Use the postage-free envelope between pages 48 and 49 of this issue for your subscription.

Current subscribers can apply for this service by sending their stamped, self-addressed envelope to: "FLASH!", S9 Magazine, 300 West 43rd St., New York, N. Y. 10036

a 6-to-1 vernier dial, 6 mc/s 1st IF, 455 kc/s 2nd IF and separate "peak" and "null" controls. "Primary" AGC for improved cross-modulation and de-sensitization characteristics, high sensitivity (0.1 mv for 6 DB signal-to-noise). The rig has a tunable PI-network and will deliver 3.5 watts on all channels (minimum), according to the manufacturer. It also has transmit and receive neon indicator lights, a silicon diode power supply and an illuminated meter with selectable function switch to read signal strength, modulation RF power output, and audio level when used as a public address unit. Set sells for \$269.50, which includes a mike and a mounting bracket.

There's a new catalogue available from the Heath Company (Benton Harbor, Mich. 49023). It covers over 250 devices in all fields of electronics, is more than 100 pages big this year, and is many times worth the post card (or QSL) it takes to receive it. Tell them you heard about it in S9!

S9 Lab

Reports

THE INTERNATIONAL CRYSTAL EXECUTIVE 1500 PART 15 STATION

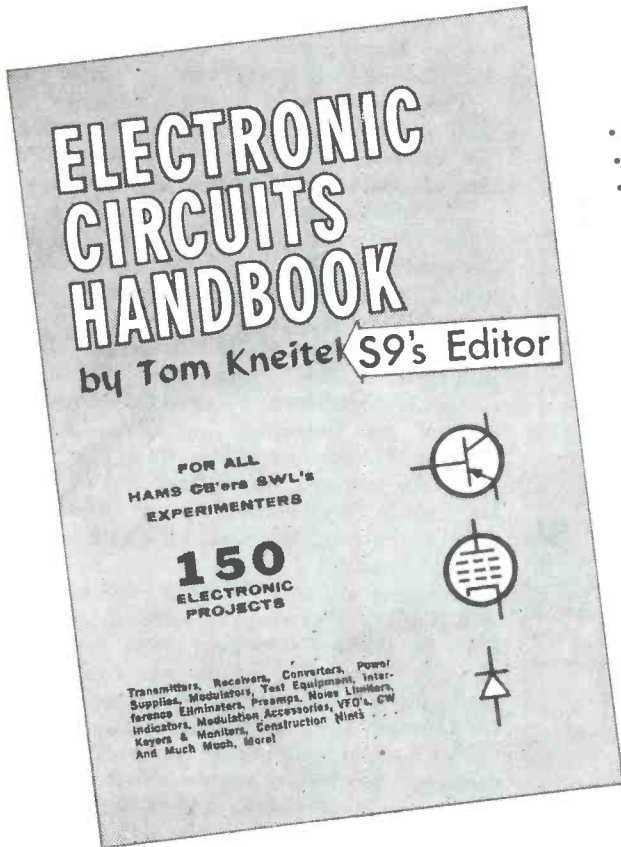


Possibly the most talked about unit of the past several months is the EXEC 1500 by International Crystal, not so much because of the fact that it is a new unit, but because of the fact that it is the first, and so far

PERFECT Holiday Gift

Here's just a sample of what you'll find in its chapters:

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- Novice Ham Transmitters
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- Code Practice Oscillators
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- All-Band Receivers
- Broadcast Tuner for CB Rigs
- Receiver Preselectors
- CB Preamplifiers
- Noise Limiters
- Q-Multipliers
- Heterodyne Eliminator
- Weak Signal Detector
- Modulation Indicators
- Dummy Loads
- Field Strength Meter
- S-Meters
- Line-Noise Filters
- TVI Filters
- Mobile Unit Burglar Alarm
- Schematic Symbols Chart



Here is the book we've all been waiting for! By "Mr. CB" himself, S9's Editor, Tom Kneitel, KBG4303. Tom has compiled a book which presents and discusses in detail 150 of the most often needed circuits around the shack. Beginners, old timers, Hams, and experimenters will find many valuable circuits for construction projects. There's even a chapter which tells how to make all construction projects "a snap." Here's a book which is a MUST for each and every CB'er, written by the leading authority on the subject! Get yours NOW!

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Hammarlund HQ-105TRC	229.45	214.53	9.65
*Hallicrafters CB-3A	159.95	135.95	6.11
*RCA Mark VIII	149.95	127.45	5.73
RCA 6v DC or 12v DC supply for above	19.95	16.95	.76
Regency Range Gain	269.50	242.55	12.13

*These units shipped with Channel 11 installed. Extra crystals, \$5.90 per channel. On these sets, specify (6+ 110v.), or (12+110v.).

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AMATEUR ELECTRONIC SUPPLY

only, transceiver manufactured especially for Part 15 (100 milliwatt input) legal hobby use. Actually, it really isn't fair to call the 1500 a "rig," "unit," or "transceiver" because it is a full-fledged "entire" Part 15 station in every sense of the word.

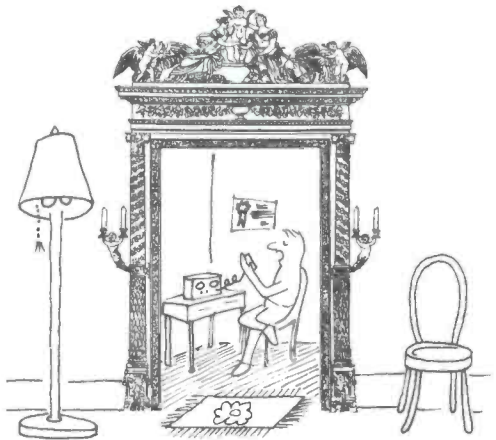
The station comes complete with a two section transceiver, a tower for mounting the antenna, a 5 foot antenna mast, 100 feet of cable, a mike and a telegraph key.

The transceiver's two sections consist of a receiver/exciter unit which is installed at the operating position and the transmitter/antenna unit which mounts on the mast and tower (up on the roof).

The receiver/exciter unit is crystal controlled on 8 Part 15 channels (the unit comes equipped with 16 crystals for transmitting and receiving on Channels A through H) and, in addition, there is a provision for external transmitting and receiving crystals for operation on any other frequency of your choice within the authorized Part 15 band.

The receiver features the now well known "EXECUTIVE" circuitry, with a crystal filter to sharpen selectivity. The receiver also has a squelch, which was found to really put a lid on background noise when the channel being monitored is "dead."

The transmitter/antenna unit on the roof contains a receiver preamp which gives the megacycle inhaler some added sensitivity. This principle of mounting a receiver preamp at the antenna is relatively new to CB,



"Frankly, the XYL thinks I've gone a little overboard in fixing up the shack here."

Always say you saw it in 59



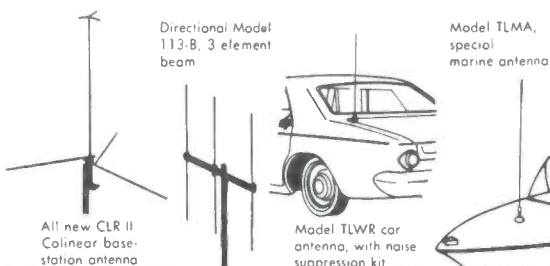
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- I enclose \$ _____ for _____ extra sets of crystals (\$5.95 each) for channels _____, I will need set for 6+ 110v., 12+ 110v.

NAME _____ CALL _____

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Send for free list of used CB and Ham Gear.

CB IN ACTION

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



So—you are going to tune your own CB transmitter! One of the most useful tune up tools is the meter—you will undoubtedly be using a milliammeter, reflected power meter and a field strength meter. Here's what actually happens when you obtain your reading:

When you use a milliammeter to measure the plate or cathode current to the final amplifier tube, you are adjusting the load on the tube itself to the most efficient operating conditions for the tube. When you tune for dip you are adjusting so that the power is being passed on as radio frequency energy rather than being dissipated within the tube as heat. As you adjust the antenna coupling control, this R.F. is being passed on to the antenna and as the antenna accepts this energy, it demands more from the tube and the plate current increases—this procedure continues until the limits imposed by the power supply, final tube and other conditions are reached. If you continue beyond this point, the tube can no longer deliver this power as output and will begin to dispose of some of it as heat. Remember, of course, not to carry this loading procedure beyond the 5 watt limit.

The reflected power meter that you will use indicates the power that is being passed from the transmitter to the antenna and feed line. It is the surest way of indicating the actual output of the transmitter and is convenient to use. It will not, however, indicate when you have exceeded the safe power level of the tube or FCC limits. It will also give you a check on your antenna and feed line since when it is set to read reflected power, rather than forward power, it will indicate how well the antenna is accepting the power. The power shown here is power that is not radiated but is returned to the transmitter instead, to be used up as heat in the final tank coil circuit.

The surest way to indicate that your entire station is working at maximum efficiency is by using the field strength meter. This meter will indicate the RF energy that has actually been coupled into the air. This means that it will show when your transmitter is tuned to maximum output and that the power is being passed on to the feed line and the antenna. It will also show that your antenna is properly adjusted to couple the most energy into the air.

By getting the proper reading with the milliammeter, the reflected power meter and the field strength meter, you can be sure you are putting out maximum power from the final stage, that the power is being received by the antenna and that all of the energy is being radiated by the antenna.

WIN A COMPANION II CB

As you know, our second COMPANION was awarded last month. An interesting one page letter from Rev. J. Leland Hall, KG12201, took the honors as he told of how CB helped him out of a tough spot. You and your club can win just as easily. Simply tell us how CB helped to serve your community. We will run the best story in this column and use it as an example of the good work accomplished by CB. There is a mounting mass of evidence now before groups proposing legislation change, that CB'ers and their clubs are contributing greatly to the country's welfare. We are constantly pressed to select a winner from among the wonderful letters about the outstanding experiences which we have already received. Keep up the good work—and let us hear from you! Send your "CB in Action" story to: Len Haas, Pearce-Simpson, Inc., 2295 N.W. 14th Street, Miami 35, Florida.

having been tried and proven in the weak-signal TV reception industry (there's an industry for everything these days). It seems that mounting the preamp at the antenna gives the incoming signal a chance to be boosted before it gets involved with any noise which might be picked up by the lead-in cable and connectors.

The transmitter of the EXEC is located on the roof but is excited by the operating console portion. The reasoning behind this is that there would be harmful signal loss when trying to run the low power output of the transmitter (about 65 milliwatts) along a 100 foot length of coaxial cable to an antenna. Also, problems of SWR are eliminated because the antenna is factory connected directly to the roof-top "final." The roof-top unit is *not* transistorized, as might be expected, but uses conventional tubes (they receive their power from the console unit via the control cable).

You have your choice of both 'phone or CW (code) operation with the EXEC 1500, and there is a clever feature in the unit which permits you to monitor your own CW. This may not sound like too much of a big-deal, but try to send CW without monitoring yourself sometime (you can't even hear which words you're spelling wrong). By the way, this monitoring feature is *not* normally provided in even the most expensive Ham transmitters, you have to "roll your own" or buy one (average cost, \$20). An adjustment is provided which varies the tone of the CW monitoring and a switch on the front panel allows you to switch instantly from 'phone to CW. A BFO in the receiver permits monitoring the other fellow's CW.

One feature of the unit bothered us upon first notice, and this was the fact that the roof-top transmitter/antenna unit was of metal exterior construction which might be adversely affected by rain. The unit has been installed for several months, however, and seems to be taking on all manner of nasty weather "like a trooper."

The antenna is, as mentioned before, mounted on the transmitter. It consists of a loaded dipole which meets the FCC requirements of a single element antenna not more than 5 feet in length. It is horizontally polarized to minimize interference to and from Class C and Class D CB stations.

Putting the EXEC 1500 through its paces

we found that it was no difficult chore to work horizontally polarized Part 15 stations over a 10 to 12 mile path. Communication with vertically polarized stations was a bit on the "hairy" side, although it would seem that the transmitter/antenna might be mounted in a vertical position on a wooden mast to achieve vertical polarization (although this has not yet been tried at our installation).

During several band openings we worked "skip" into St. Louis, Mo., and into the southern states without any particular difficulty. It seems that when the band is "hot," the fact that the power of the rig is low doesn't eliminate you from the possibility of "getting out."

As you probably know, there is no license required for operation of a Part 15 station, although "uniform" identifying letters are being assigned to Part 15 operators by S9 Magazine at no cost (see application form in this issue). A callbook is also available.

The EXEC 1500 operates from an internal 115 VAC power supply.

While, at first, the \$299.50 sounds earth shattering, it is quite realistic when you consider that the EXEC 1500 comes as a *complete* station, ready to unpack from the crate and put on the air in about 15 minutes. We understand that other models will soon be available with prices of some models being less than \$100. All in all, the EXEC 1500 provides a truly different type of CB'ing than Class D operators have ever known—legal hobby CB with an effective range approaching that of many Class D "5 watt" installations, and the 1500 does a good job of Part 15'ing. Further details are available from Uncle George, International Crystal Manufacturing Co., 18 North Lee, Oklahoma City, Okla.



LAST CHANCE FOR BACK ISSUES AT 50¢!

Yes, beginning in January, all 1962 and 1963 back issues of S9 will be \$1.00. Until then they are still 50¢, so get 'em while we're almost giving them away—this is your last chance at this price. All issues from July, 1962, still available. Order now from S9 Magazine, 300 West 43rd St., New York, N. Y. (10036).

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see our ads in this magazine
on pages 30,31.

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2. Your wife's name (if any). Her age. Number of children (if any) and their ages.
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6. If you own your own home, show the amount of payment (if any). The mortgage holders name, address, and phone number.
7. Show name of employer, his address, and phone number. Your occupation. How long you have been there. Salary by the week.
8. Show previous employer, his address, and how long there.
9. If your wife is employed, show name of employer, address and phone number. Her occupation, and weekly salary.
10. If own a car, show year and model. If it is financed, show by whom and their address.
11. If you own your furniture, state so. If it is being financed, show by whom and their address.
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PART 15 KORNER

NEW PART 15 BOOK

& AN ANGRY EDITORIAL

by DEAN DETTON, NORTHERN 17

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

You don't normally see editorials in the Part 15 column, but Kneitel has been locked in his office for 2 weeks working on the December Annual issue of S9 and he probably won't see this.

The bit this month stems from the seemingly growing denseness of the model aircraft radio control people. As you know, we have stressed the "non-interference" point very heavily here, and you fellows have been doing a splendid job of minding your Part 15 P's 'n Q's (*politeness 'n QSO's*). We have *never* received one *specific* charge of a Part 15'er causing any aggravation to a radio controlled device.

Nevertheless, the radio control people, with poor flying weather ahead during the

winter months, are still looking for something (*anything*) to gripe about. Their latest ranting is in a letter to *10-4 Magazine*. The letter spouts the same old "party line" about how "that other Magazine" (that's us) is telling Part 15'ers to operate on certain channels used by radio controllers. They allegedly have "more than 50,000 active" radio control people using planes valued between \$100 and \$1000 each, according to their spokesman. He also said that *you* Part 15'ers had no business on these particular frequencies within the 11 meter band.

The clever soul who answers the letters in *10-4* then did the whole bowing, scraping and heel-clicking routine to the author of the letter and said, "Now that we have

AT LAST: A PART 15 HANDBOOK & CALLBOOK

You bugged us for months for it, so we whipped together an unbelievable book of Part 15 goodies. Yes a complete callbook of the thousands of Part 15 stations registered with S9 (complete to date of callbook publication), plus a Part 15 call area map and features on how to obtain maximum use and enjoyment from your

UNBELIEVABLE

Part 15 "legal hobby" CB station. Off the press in December, so reserve your copy now before they're all gone. If you have a registered S9 Part 15 identifier the book is only 50¢ per copy (be sure to let us know your identifier number or send in an application for one when ordering). Price is \$1.00 if you aren't registered.

Order now from:
Book Division
Cowan Publishing
300 W. 43 St.
New York, N. Y. 10036

the facts clearly and concisely stated, let's all stay in our own back yard and leave the other services to their own frequencies. If you can't join 'em, leave 'em alone!" It's obvious that this poor fellow has never read Part 15, especially the part where it says that the Part 15 "backyard" encompasses the entire radio spectrum (except for the edges) of the 11 meter band, and this *includes* the channels that the radio control people now claim as their exclusive property. You must understand one thing, however, that *10-4* recently announced that they are no longer an exclusive CB magazine, and that they are trying to cover radio control, police radio, industrial radio, etc., etc. I guess they have to pay the devil his dues now and again by "yessing" users of other services, regardless of how idiotic or anti-CB may be their cause. CB is a funny type of thing, it is so specific a radio service that you simply can't do it justice by trying to serve several other "masters" in one publication.

My thought after reading this particular letter to the editor was that the author would probably make a better investment in life if he cashed in his \$1000 toy air-

plane, bought a \$1 Yo-Yo (Duncan makes a nice "sleeping" model for a buck) and spent the other \$999 on a skull-specialist to find out why grown men spent \$1000 on toy airplanes. (Jeeves, when you finish reading that book on Benedict Arnold, throw out all those copies of *10-4* you keep under the short leg of the kitchen table!)

Leaving the toy airplane people to play *footsies* with the *10-4* intellectuals, we now take a look through the Part 15 mailbag to see what looks especially interesting this month.

Here's a new Part 15 club, known as the "Nashville Hundred Milliwatters." They can be reached in care of Bill Harrison, 2020 Olga Avenue, Nashville 6, Tenn.

Several months ago we ran a photo of the shack at CENTRAL 390, operated by John Moore, 2017 South 107 St., Omaha, Neb. John is also WNOGBR on the Ham bands. He recently revised his station and here is how it looks now. He wants to know if it is legal to use a variable frequency oscillator (VFO) for a Part 15 transmitter. Nothing against it, John, but you should have some way of making sure that the VFO is stable enough so as not to drift out

APPLICATION FOR FREE PART 15 STATION IDENTIFIER CERTIFICATE

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

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

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

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

APPLICATION FOR PART 15 IDENTIFIER

Name: _____ CB Call: _____

Address: _____

City: _____ Zone: _____ State: _____

Part 15 Channel: _____ Type of unit: _____

No. of units: _____ Date: _____

Signature: _____



of the band if you're operating near the edge.

Now, here's the news of the century for Part 15 users! You have sent us literally hundreds of letters and cards asking for an all encompassing Part 15 callbook. Frankly, it meant a lot of work to get a volume such as this together and into production, but you've bugged us so much about it that we are going to pull out all the stops and give you twice as much as you asked for, for about one third the price! So here goes, the 1964 Part 15 CB HANDBOOK/CALL-BOOK! Yes, we sure "dood it" and here is what this Part 15 book-to-end-all-Part 15-books will have: A complete listing (to publication time) of *all* Part 15 station identifier assignments, *plus*, the official S9 "Part 15 Operating Guide," *plus* the answers to most of your Part 15 questions in a special section by Don Stoner, *plus* a complete reprint of all FCC regulations which will affect your Part 15 operation, *plus* information on the S9 Part 15 station

identifier system, *plus* useful gadgets and equipment which you can build to add to your Part 15 enjoyment—and, if you think that's all you're going to get, *you're wrong!* There is a section on CW codes *and* an official S9 Part 15 CB call area map.

Yes, this is the last word "it" book for Part 15, written by the leading authorities on the subjects covered, and published by the official Part 15 communications publication, S9! You're going to fall right off your transistor when you here what we are foolish enough to offer this book for, yes it's only 50¢ to persons who are registered with S9 and have a Part 15 station identifier. The book will be \$1.00 for those persons who *do not* have an S9 Part 15 identifier. Publication will be in mid-December (as soon as all of the November call applications are processed on our records). So if you haven't got a Part 15 identifier yet, be sure to fill out the application in this issue

Continued on page 59

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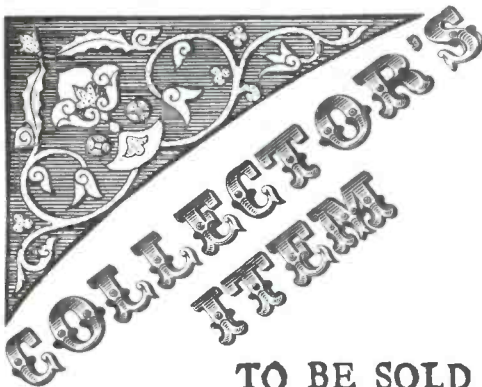
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PART 15 CALLBOOK

We will be keeping this on a constantly revolving basis, calling on each call area every few months to bring it up to date with the latest additions. If you subscribe to S9 you will be assured of having a complete Part 15 callbook.

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439-440	J. Belcher, 6970 S.G., Ft. Meade, Md.
441-444	M. Bell, 22 Oakland Ave., Inman, S.C.
445	M. Serlo, 302 Sherwood Dr., Huntsville, Ala.
446-447	D. Dean, Box 307, Brevard, N.C.
448-449	G. Cline, 1530 Grove Dr., Pulaski, Va.
450	T. Blankenship, P.O. Box 12, Rural Retreat, Va.
451-452	W. Posey, R. 1, Box 302, Clarksville, W. Va.
453-454	J. Ward, 101 Beechwood Rd., Bristol, Tenn.
455-456	J. Bratton, 1432-22nd St., Roanoke, Va.
457	R. Shepperson Jr., 541 Madison Ave., Roanoke, Va.
458-459	C. Strickling, 810 Second St., Sta. Marys, W. Va.
460-461	S. Strickland, Box 160, Elkview, W. Va.
462-465	T. Palmer, 8 South Va. Ave., Brunswick, Md.
466-468	B. Lunsford, Box 534, Shawmut, Ala.
469	A. Marsh, R.F.D. 1, Box 56, Mt. Airy, N.C.
470-471	R. Babington, 202 W. D. St., Elkton, Va.
472-473	D. Lutterly, Bat Cave, Bat Cave, N.C.
474-475	L. Russo, 1405 Cresthill Rd., Birmingham, Ala.
476-477	R. Williams, Box 66, Pembroke, Va.
478-479	C. Di Rico, Box 67, Pembroke, Va.
480-481	J. Rosen, 4903 Wofford Ave., Columbia, S.C.
482-487	R. Brackette, Box 212, Lancaster, S.C.
488-489	C. Richman, Rt. 1, Box 8, Moatsville, W. Va.
490-492	M. Allen, 201 S. Harrison Ave., Cary, N.C.
493-495	B. Marler, 7111 Kendall Cr., Raleigh, N.C.
496-499	J. Allen, 201 S. Harrison Ave., Cary, N.C.
500-501	T. Hawks, 519 N. Russell Rd., Jackson, Tenn.
502	B. Willhelm, 4361 Ruth Rd., Birmingham, Ala.
503-504	G. Kyke, 2816 Milford Ave., Maryville, Tenn.
505-506	L. Tramm, 33 Washington St., Frostburg, Md.
507	M. Williams, 4365 Ruth Rd., Birmingham, Ala.
508-509	D. Wheeler, Box 467, E. Stone Gap, Va.
510	C. Mills, 2606 Barton Ave., Richmond, Va.
511-515	J. Soule, 2134 E. 5th St., Charlotte 4, N.C.
516-517	J. Hinson, 224 Belmar St., Morgantown, W. Va.
518-522	J. Smith, 8116 Eastern Ave., Washington, D.C.
523-527	K. Reeder, 87 Carlisle Dr., Jackson, Tenn.
528-529	C. Noah, 313 Galloway St., Mt. Airy, N.C.
530-531	W. Ashley, Box 614, Clendenin, W. Va.
532-533	N. Jones Jr., 2030 W. Grace St., Richmond, Va.
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537-538	G. Fullerton Jr., 1304 W. Gulf Field Dr., Mobile, Ala.
539	J. Young, 3915 Woodlawn St., Hopewell, Va.
540-542	W. Milway, RFD #3, Box 350, Bel Air, Md.
543-544	J. Medley, 207 1/2 4th Ave., S. Charleston, W. Va.
545-547	W. Treadway, Rt. 1, Box 8, Moravian Falls, N.C.
548	D. Taylor, 1910 Citico Ave., Chattanooga, Tenn.
549-553	R. Hudson, 623 Homer St., Salisbury, Md.
554-556	C. Jones, Hughwer Rd., Darlington, Md.
557	S. Laise, 700 Linnard St., Baltimore, Md.
558-561	W. Andrews, 808 Williams St., Jacksonville, N.C.
562-564	J. Smith, Rt. 1 Box 229, Hubert, N.C.
565-568	A. Carr, Box 88 RFD 1, Darlington, Md.
569	J. Pappas, 206 S. High St., Morgantown, W. Va.
570	K. Pappas, 206 S. High St., Morgantown, W. Va.
571-572	F. King, 819 Virginia Ave., Fairmont, W. Va.
573	J. Nigh, 602 Walnut Ave., Fairmont, W. Va.
574-575	B. Hart, 1521 Pichard St., Greensboro, N.C.
576-577	M. Culbreth, 2116 Queen St., Winston-Salem, N.C.
578	T. Curtis, 119 Cornell Ave., Morgantown, W. Va.
579-582	W. C. Wynne Jr., 2619 S. Alston Ave., Durham, N.C.
583-587	R. McFarland, 202 Oriffin Ave., Bessemer, Ala.

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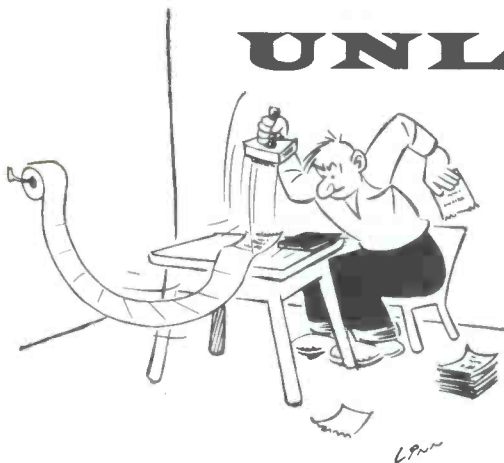
588-592	L. Phillips, 110 Kenwood Place, Smyrna, Ga.
593-594	R. Cole, 317 So. Monroe St., Baltimore, Md.
595-596	J. Gallagher, 1830 Wilhelm St., Baltimore, Md.
597-599	N. Smith, Box 725, Saltville, Va.
600-601	L. Lansting, Jr., P.O. Box 236, Triangle, Va.
602-603	L. Lansing III, 312 Lunceford Lane, Falls Church, Va.
604-605	M. Druin, 3227 James Place, Greensboro, N.C.
606-607	J. Gallagher, 1830 Wilhelm St., Baltimore, Md.
608-611	W. Roberts, 538 W. College St., Florence, Ala.
612-613	D. Coleman, 108 Red Oak St., Jacksonville, N.C.

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CENTRAL

683-684	D. Christiansen, 1520 N. Logan, Danville, Ill.
685-687	J. Williams, 413 W. Pine, Platteville, Wisc.
688-692	J. Whalen, RFD., Bonfield, Ill.
693-696	D. Case, 1210 Tulip Tree Rd., Ft. Wayne, Ind.
697	L. Thibaudeau, Luxemburg, Wisconsin
698-699	W. McKeever, Box 573, Lakeside, Ohio
700-701	W. Cowan, 433 Hunts Dr., Henderson, Ky.
702-703	W. Crouch, 315 North Main St., Henderson, Ky.
704-705	D. Burnett, 211 Liberty St., Jonesville, Mich.
706	D. Hollingsworth, 806 W. Oak, Carmi, Ill.
707-709	C. Jones, 214 S. Pierce St., Galion, Ohio
710-711	W. Swallow, 4025 Meridec Dr., Indianapolis, Ind.
712-713	J. McCorkel, 605 S. Lee St., Garrett, Ind.
714-715	R. Britton, 627 W. Oak St., Carmi, Ill.
716-720	V. Havermale, 517 Adams St., Quincy, Ill.
721-726	R. Olmstead, 309 Ryan Ave., St. Paul, Minn.
A 727	L. Egbert, 203 N. Walnut, Carmi, Ill.
728-729	P. Earnst, 1400 Bluff St., Fulton, Mo.
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732-736	B. Garritano, 5302 W. Drummond, Chicago, Ill.
737-739	J. Hardman, 1720 Washington, Parsons, Kansas
A 740-744	T. Garritano, 5302 W. Drummond, Chicago, Ill.
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764-772	S. Stanley, 1745 N. 53 St., Milwaukee, Wisc.
773-776	W. Wilhoit Jr., 403 Smith, Yorktown, Ind.
All 777-778	T. Reum, Plaza, N. Dakota
A 779-781	N. Schultz, 1613 S. State St., St. Joseph, Mich.
A-H 782-783	J. Fedora, 2716 Idaho Ave., Granite City, Ill.
784-786	K. Latwinski, 2822 Bay Dr., Union Lake, Mich.
B 787-789	E. Richmond, 121 Sherman Ave., Aurora, Ill.
A 790-791	R. Owen, 5322 Hammond Dr., Toledo, Ohio
A 792-795	R. Cooley, R. 3, Box 72, Michigan City, Ind.
A-B 796-798	L. Carter, 2346 N. Graceland Ave., Decatur, Ill.
11 799-800	B. Fiast, Churubusco, Ind.
11 801-806	L. Teper, 12524 Waltham, Detroit, Mich.
A-B 807	J. Marty, Box 25 213 S. Oak St., Kendallville, Ind.
B 808	S. Vajda, 3579 Hildana Rd., Shaker Hills, Ohio
A-H 809	C. Mistakovich, 650 Chase Ave., Joliet, Ill.
10 810-815	R. Apking, Onaway, Michigan
B 816	H. Nelson Jr., 213 Bridge St., Sweet Springs, Mo.
A-E 817-820	A. Davis, 6143 N. Rockwell St., Chicago, Ill.
7-14 821-824	R. Knight, 946 Iowa Ave., Iowa City, Iowa

CARD SWAPPERS UNLIMITED



Several readers have requested that we make some notation next to the names of persons who are appearing here for the first time. Great idea! One catch, that being that we would have to go back over each and every previous issue of S9's swappers to check out each card sent in. If anyone out there in radio-land has a suggestion as to how we could conveniently furnish this service, we're all ears. Please don't suggest that all new swappers make a notation on their cards—it won't work. It also won't work in reverse, where all old swappers make a notation on their cards.

Plea for help this month from KBI1949, Layton Payne, 387 South Orange Avenue, Newark 3, N. J. Layton is looking for QSL's bearing the numbers between 1900 to 1970 after the three letters. He is also looking for Canadians, Hawaiians, and Puerto Ricans. All cards sent to Layton will be promptly answered.

Faye Smith, 601 7th Avenue, Athens, Ala. (KDD4500) reports that as a result of being listed in S9 as a card swapper, she was deluged with as many as 65 cards a day and promptly knocked off swaps with all 50 states and 6 countries. Although she was listed several months ago, she still gets 10 to 25 a day. Her comment on the situation (and we quote): "Thanks a million and keep up the G-R-E-A-T work on S9."

Here are the people who qualified for Swappers Awards this month:

SACA #3. Blanche Wilkerson, KDB2210, Marion, N. C.
#4. Bobby Moorehead, KDB5118, Shelby, N. C.

#5. Bob Jaffer, 16Q0582, Viborg, S. D.
#6. Bernard Bastura, KBA2979, Middletown, Conn.

#7. Herb Riggle, KHG9069, Zanesville, Ohio
PX-25 #24. Blanche Wilkerson, KDB2210, Marion, N. C.

#25. Sheldon Marvin, KCJ3489, Culpepper, Va.
#26. Bobby Moorehead, KDB5118, Shelby, N. C.
#27. Harry Alvis, KCJ0456, Lynchburg, Va.
#28. John Bigelow, KHC4217, Dubuque, Iowa
#29. Wm. McShea, KCG0200, Arlington, Va.
#30. John Tamlin, KHC4815, LaPorte, Ind.
#31. John Chomyk, 2A5034, Westbury, N. Y.
#32. Ed Barkowski, KID1299, Arnold, Pa.
#33. Warren McClure, KHB1075, Garrett, Ind.
#34. Louis Andre, KHC2581, Freeport, Ill.
#35. Richard Rogers, KID3387, Allegany, N. Y.
#36. Terry Whittle, KEE1423, Bryan, Texas
#37. Bob Pacheo, KFD2078, Santa Clara, Calif.

PX-50 #20. Tom Elan, KDB0581, Jackson, Tenn.
#21. Bobby Moorehead, KDB5118, Shelby, N. C.
#22. Harry Alvis, KCJ0456, Lynchburg, Va.
#23. Iona Velpel, KHA8376, Garrett, Ind.
#24. John Moore, KGH0731, Omaha, Nebr.
#25. Louis Lamanna, KID1431, Pittsburgh, Pa.
#26. Terry Whittle, KEE1423, Bryan, Tex.

PX-75 #4. Bobby Moorehead, KDB5118, Shelby, N. C.
#5. W. H. Mays, KDD0237, Augusta, Ga.
#6. William Ferbrache, 18Q2631, LaGrange Park, Ill.

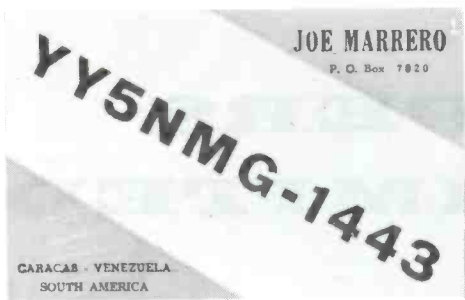
#7. Jack Washington, KID1889, Pittsburgh, Pa.
#8. R. E. Myra, KBA1081, Plymouth, Mass.
PX-100 #2. Bobby Moorehead, KDB5118, Shelby, N. C.
#3. R. E. Myra, KBA1081, Plymouth, Mass.

MSA #2. Blanche Wilkerson, KDB2210, Marion, N. C.
#3. Edward Gruber, KIC4127, Horseheads, N. Y.
SSC-1 #2. Blanche Wilkerson, KDB2210, Marion, N. C.
#3. Bobby Moorehead, KDB5118, Shelby, N. C.
#4. Iona Velpel, KHA8376, Garrett, Ind.

SSC-5 #1. Dan Guthrie, KDB1435, Spruce Pine, N. C.

That's quite an impressive group, and I see that Dan Guthrie finally made it to the top of the ladder with the overwhelming SSC-5 (swapped 5,000 cards) award. Which of the 11 awards can you qualify for? Want a free copy of the rules and information as to how to apply? All you do is write to us and ask (don't forget to enclose a stamped, self-addressed envelope).

Want to be sick with envy? Take a look at some of the stations who swapped with some of the award winners: YY4-KK-294



(Carabobo, Venez.), YY5-HER-2019 (Miranda, Venez.), YV1-WKC-156 (Coro, Venez.), YY1-GET-263 (Caracas, Venez.), YY5-NMG-1433 (Caracas, Venez.) VGH-3967 (Eleuthera, Bahamas), and XB3 (Guadalajara, Mexico). If any of you swappers have these foreign cards you want to show off in S9, send them in to us and we will be glad to run them here. Oh, just in case you're wondering, we will mention your name with them and also send the card(s) back to you in the next day's mail (via air) after we receive it.

Want to be listed as a card swapper? Send your card (no letters please) to reach us not later than November 12th (note that the day of the month has been advanced) to be included in the January issue. You can be listed every month, but you will have to send in a separate card for each time you want to be listed. Send them in all at once if you wish.

Here are the swappers for November.

- | | | | |
|---------|---|---------|---|
| 1Q0103 | Ron Turcotte, New Lewiston Rd., Topsham, Maine | 20Q3527 | Frank Gibson, 254 Shearer Rd., Butler, Pa. |
| 1Q3215 | Celia White, Wright St., North Reading, Mass. | 20Q4816 | Frank Simpson, R.D. 3, Box 56, Everett, Pa. |
| 1Q5773 | Costas Broutzas, 96 W. Rosemont Ave., Manchester, N.H. | 20Q5576 | Ray Stackhouse, 107 E. Vanderbilt, Athens, Pa. |
| 1W1619 | Howard Gokey, 315 Riverside Ave., Torrington, Conn. | 20W1572 | Alvin Arthur, P.O. Box 27, S. Weymouth, Mass. |
| 1W2963 | Arthur Van Wart, 11 Perkins St., Arlington, Mass. | 20Q4011 | Morris Kemmerer, Mountain Top, Pa. |
| 1W4417 | Ed Sternfelt, 32 High St., Cambridge, Mass. | 20W4113 | Harry Prosser Jr., 228 Jackson Ave., Cresson, Pa. |
| 2A4918 | Dick Aiken, Box 282, R. D. 4, Troy, N.Y. | 20W4590 | Jud McNamara, R. D. #3, Bridge St. Hill, Towanda, Pa. |
| 2Q0602 | Arthur Hamm, Church St., Philmont, N.Y. | 20W5494 | Don Kaibflesh, R. 6, U.S. 11, S., Chambersburg, Pa. |
| 2Q3439 | Tom Grimke, 1482 East 95th St., Brooklyn, N.Y. | 24W0566 | Dick Corbett, 1720 Merrimack Dr., Adelphi, Md. |
| 2Q3057 | William Cuthbert, 390 Ave. C., Bayonne, N.J. | KBA4862 | Earl Bridges, 70 Bromfield St., Newburyport, Mass. |
| 2W4586 | John Krejc, 60 Division, Garfield, N.J. | KBA5093 | Vernon Mitchell, Lancaster Rd., Clinton, Mass. |
| 3Q2052 | Gladsy Haines, Sandtown Rd., Medford, N.J. | KBA4948 | Lenny Ouellette, Manchester, N.H. |
| 3Q2542 | Bob Diehl, 240 York St., Hanover, Pa. | KBA5557 | Ted Cummings, Bellflower Rd., Billerica, Mass. |
| 3W2725 | Fred Orth, 806 Flexer Ct., Allentown, Pa. | KBA6392 | Barbara Bridges, 70 Bromfield St., Newburyport, Mass. |
| 3W4048 | Loisann Orth, 806 Flexer Ct., Allentown, Pa. | KBA8472 | William Harrington, Box 1391, Springfield, Mass. |
| 4W2406 | Ed Keech, 905 Louisiana Ave., Cumberland, Md. | KBA8681 | George Jollys, Talcottville Rd., Vernon, Conn. |
| 5Q1139 | Claude Coggin, Box 634, Badin, N.C. | KBA8788 | Butch Walb, 61 Lee, East Longmeadow, Mass. |
| 6Q0914 | Paul Skidmore, Jr., Rt. 1, Box 243, Rockwood, Tenn. | KBC1245 | Bob Stearns, Box 146, Starksboro, Vt. |
| 6Q5399 | Carmack Elder, Jr., 112 Scenic Hills, Winchester, Tenn. | KBC1659 | Leo Beane, 18 Highland, Wakefield, Mass. |
| 6W4121 | John Thompson, Crossville, Tenn. | KBC1977 | Arlene Masciarelli, P.O. Box 297, Clinton, Mass. |
| 8Q1418 | Charles Sharpe, 2124 Glendale, Texarkana, Ark. | KBC2224 | Paul Margolis, 8 Gilman St., Worcester, Mass. |
| 10W2616 | Albert Dale, P.O. Box 146, Ketchum, Okla. | KBC2451 | Eric Ruderman, 21 Drury Lane, Wakefield, Mass. |
| 11Q1153 | L. Perry, 6371 San Marino Circle, Buena Park, Calif. | KBC2588 | Charles Burns, 15 Owen Dr., Cumberland, R. I. |
| 11Q1313 | G. Strainline, 1171 W. Miracle Mile, Tucson, Ariz. | KBC2969 | Mark Ernst, 182 Charles St., So. Meriden, Conn. |
| 12Q2962 | Casey Durso, 786 Malarin Ave., Santa Clara, Calif. | KBC2994 | Al Correia, 48 Ocean St., New Bedford, Mass. |
| 17Q1625 | Raymond Franks, 1247 Ohio St., Augusta, Kans. | KBC3922 | Nick Garreffo, 25 Wentworth, Springfield, Mass. |
| 18B2648 | Glenn Davis, 6143 N. Rockwell St., Chicago, Ill. | KBC4361 | Onnie Hutchins, Thorndike, Maine |
| 18Q2631 | William Ferbrache, 702 Hulman Center, Terre Haute, Ind. | KBC5674 | Arthur Caterino, 4 Marion Rd., Burlington, Mass. |
| 18QA162 | Harold Meador, R.R. 8, Box 111, Decatur, Ill. | KBC6097 | Gary Shamel, 61 Alcott St., Acton, Mass. |
| 19A5964 | Stan Sickler, 2310 Commor, Hamtramck, Mich. | KBC6164 | Jerry Kenney, 64 Westminster Ave., Watertown, Mass. |
| 19A8789 | Rick Schwartz, 333 E. Dixon Ave., Dayton, Ohio | KBC0998 | John Patois, 131 North 2nd St., Paterson, N.J. |
| 19B0682 | Marshall Matlock, R.R. 3, Box 498, Coloma, Mich. | KBG1130 | John Flynt, 3441 Jackson Ave., Wantagh, L.I., N.Y. |
| 19Q1312 | Charles Helberg, 1404 7th St., Parkersburg, W. Va. | KBG4303 | Tom Knettel, 300 West 43rd St., New York, N.Y. |
| 19Q7698 | Chuck Cerny Jr., 2393 Green Rd., Cleveland, Ohio | KBG4334 | Thomas Summa, 310 Schepis Ave., Saddle Brook, N.J. |
| 19Q8447 | Frank Cairni, 3754 Princeton Blvd., Cleveland, Ohio | KBG4657 | Fred Wuthrich, 64 Camp, Sidney, N.Y. |
| 19Q9379 | Earl Lewis, Williamstown, W. Va. | KBG4952 | Al Aronowitz, 91 Haussler Terr., Clifton, N.J. |
| | | KBG7059 | Ken Brown, 196 Main St., Poughkeepsie, N.Y. |
| | | KBG7159 | R. Stroehlin, New Lebanon, N.Y. |
| | | KBG8599 | Barry Schaffer, 35 Hillside Ave., New York, N.Y. |
| | | KB11163 | Ruth Wuthrich, 64 Camp, Sidney, N.Y. |
| | | KB11456 | Earl Klm, P.O. Box 666, Port Ewen, N.Y. |
| | | KB11788 | Skip Zoller, 349 Richard Way, North Plainfield, N.J. |
| | | KB11949 | Layton Payne, 387 So. Orange Ave., Newark, N.J. |
| | | KB13023 | Jeff Weiss, 285 Walton Ave., South Orange, N.J. |
| | | KB13556 | Rich Ciccotta, 183 Larch Ave., Teaneck, N.J. |
| | | KB13795 | Julian Schwalb, 904 Park Ave., Albany, N.Y. |
| | | KCC3960 | Josie Murray, R.F.D. 2, Cape May Court House, N.J. |
| | | KCD0541 | Jim Woods, Rd. 2, Box 219, Absecon, N.J. |
| | | KCD0851 | Virginia Lake, 1101 Laurel Rd., Beverly, N.J. |
| | | KCD1205 | Anthony Mattia, 258 N. Simpson, Phila., Pa. |
| | | KCD1795 | Larry Mandell, 4763 N. Whitehorn, Phila., Pa. |
| | | KCD2249 | Frank Dowler Jr., 5144 Hittcham Dr., Clifton Heights, Pa. |
| | | KCD2620 | Saul Tarlow, 1437 McKinley, Phila., Pa. |
| | | KCD2949 | Henry McGann, 1601 Market, Harrisburg, Pa. |
| | | KCF0168 | Jay Ross, 7112 Carroll Ave., Takoma Park, Md. |
| | | KCF1224 | Harold Channell, 306 E. Duncan Ave., Alexandria, Va. |
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| | | KCG0774 | Lew Reinberg, 4118 Kathland Ave., Baltimore, Md. |
| | | KCG0959 | Paul Tucker, 5520 Wesley Ave., Baltimore, Md. |
| | | KCG1048 | Bob Loudans, Rt. 1, Knoxville, Md. |
| | | KCG1661 | Bob Dibbie, 5802 Essex Ave., Springfield, Va. |
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| | | KCG2291 | Mark Ewing, Box 136, Staunton, Va. |
| | | KCI2563 | George Crews, 1109 S. Hawthorne Rd., Winston Salem, N.C. |
| | | KCI2621 | Bill Galliher, Box 494, Saltville, Va. |
| | | KCI2679 | Harold Whittington, P.O. Box 902, Gastonia, N.C. |
| | | KCI2948 | Earl Paynter, 1001 E. Jefferson, Charlottesville, Va. |
| | | KCI3345 | Linwood Jones, 97 Wyming Ave., Portsmouth, Va. |
| | | KCI3527 | Bill Heath, 4615 Circle Dr., Winston Salem, N.C. |
| | | KCI5169 | Charles Ford, 3926 Dorset Rd., Richmond, Va. |
| | | KCI5308 | Jerry Fox, 853 Park Dr., Statesville, N.C. |
| | | KCI6293 | Howard Conselyea, 418 Virginia Ave., Norfolk, Va. |
| | | KCI6631 | Harold Williams, P.O. Box 1143, Newport News, Va. |
| | | KCI6907 | Gaylor Worsham, 301 S. Fieldcrest, Draper, N.C. |
| | | KCJ0456 | Harry Alvis, Lake Court Ave., Lynchburg, Va. |
| | | KCJ1632 | Spencer O'Neal, 2001 Wayne Dr., Durham, N.C. |
| | | KCJ2269 | Frank Anderson, 73 Bishop Ave., Danville, Va. |
| | | KCJ2292 | Hazel Stubbs, P.O. Box 1076, Rockingham, N.C. |
| | | KCJ3489 | Tom Marvin, 3207 Garland Ave., Richmond, Va. |
| | | KCJ3695 | Jack Shortt, 1511 Cottage Lane, Lake Charles, La. |
| | | KCJ4425 | Charles Lane, P.O. Box 2433, Winston Salem, N.C. |
| | | KD80371 | Bill Howell, Jr., 545 Palmetto Lane, Aiken, S.C. |

KDB1435 Daniel Guthrie, Box 362, Spruce Pine, N.C.
 KDB2967 Jim Wofford, P.O. Box 17, Atco, Ga.
 KDB3123 John Dillard, 202 E. Commercial Ave., Monterey, Tenn.
 KDB3844 Robert Watson Jr., P.O. Box 384, Laurens, S.C.
 KDB4538 Howard Tripp, 1821 Reynolds Ave., Charleston Hts., S.C.
 KDB7309 Robert Wood, 1625 3rd Ave., Tuscaloosa, Ala.
 KDB7503 L.B. Trentham, Parrottsville, Tenn.
 KDB8688 J.T. Bragg, Box 243, Crossville, Tenn.
 KDB8247 Joe Buntyn, Rt. 7, Crossville, Tenn.
 KDB8900 Danny Goodman, 4909 Governors Dr., Huntsville, Ala.
 KDB9144 Gilbert Black, 456 Comb. Def., Beale AFB, Calif.
 KDB9218 Bobby Robbins, Box 535, Chesnee, S.C.
 KDD0464 Tom Smith, 601 7th Ave., Athens, Ala.
 KDD0634 Pat Lane, Lone Mountain, Tenn.
 KDD0689 Mabry Herndon, 501 Benson, Hartwell, Ga.
 KDD0748 Mike Jones, 711 Rollingwood Rd., Aiken, S.C.
 KDD0847 Harold Shavin, P.O. Box 436, Summerville, Ga.
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 KDD3270 Johnie Trawick, 708 Hull, Ozark, Ala.
 KDD3380 Jo Shavin, P.O. Box 436, Summerville, Ga.
 KDD3505 Marvin Goff, 849 Reddco, Memphis, Tenn.
 KDD4060 Mike Fitzgerald, 421 West Outer Dr., Oak Ridge, Tenn.
 KDD4320 W. Campbelle, P.O. Box 604, Aiken, S.C.
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 KDD7095 Lee Ingram, 110 Walker Dr., Anderson, S.C.
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 KDH2978 Marti Asche, 2325 Seminole Blvd., W. Palm Beach, Fla.
 KDI1644 Bob Breitenbecker, 207 Nellie, Palatka, Fla.
 KDI2568 Dan Henry, Rt. 2, Box 28-I, Ocala, Fla.
 KEB1525 Ernie Cawby, 6007 Old Palafox, Pensacola, Fla.
 KED0775 Arno Feltner, 430 Landa, New Braunfels, Tex.
 KED2428 Bill Gibson, 628 W. Hollywood, San Antonio, Tex.
 KEE0298 Allen Moers, Rt. 2, Box 127A, Wharton, Tex.
 KEE0379 Sarah Gaine, 1513 E. 25th, Bryan, Tex.
 KEE0984 Denny Ellerbee, Jr., P.O. Box 6706, San Antonio, Tex.
 KEG0314 Jerry Marshall, 310 East Cecil, Waynoka, Okla.
 KEG1418 Georgia Dale, P.O. Box 146, Ketchum, Okla.
 KEG1678 George Paul, Box 303, Killeen, Tex.
 KEG5026 J.C. Strahan, 7800 Porche, El Paso, Tex.
 KEH0131 Richard Cline, 915 S.E. 1st St., Mineral Wells, Tex.
 KEH0221 Joe Aston, P.O. Box 9345, Ft. Worth, Tex.
 KEH4168 Jim Warren, Box 4304, Wichita Falls, Tex.
 KEJ1462 Larry Goldberg, P.O. Box 3571, Van Nuys, Calif.
 KEJ3652 Beany Kinsman, 16809 Benbow, Covina, Calif.
 KEJ6955 Ray Griffin, 15338 Garfield, Paramount, Calif.
 KFA0705 Fred Hart, 5800 Gladly, South Gate, Calif.
 KFA0763 Greg Smith, 1232 Graynold Ave., Glendale, Cal.
 KFA1223 Chuck Mallory, 1301 Norton Ave., Glendale, Cal.
 KFA4192 V.D. Ashley, Box 651, E. Las Vegas, Nevada
 KFC2239 Loutse Jacobson, P.O. Box 46, Tracy, Calif.
 KFC3527 Steve Herberth, 36 Raymond Dr., Reno, Nev.
 KFC4344 Jack Green, 36973 Creole Place, Hayward, Cal.
 KFD2078 Ken Jetson, 1498 Palmview Way, San Jose, Cal.
 KFD2078-2 Bob Pacheco, 562 Madison, Santa Clara, Cal.
 KFD2121 Clyde Comfort, 38397 Nebo Dr., Fremont, Cal.
 KFD2406 Jim Neel, 1330 W. L. St., Benicia, Calif.
 KFP1398 Oliver Olson, 3534 S.E. 63, Portland, Oreg.
 KGC0203 R.L. McMullen, Box 53, Laramie, Wyo.
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 KGE1811 Garry White, 516 7th St., Rochester, Minn.
 KGF0111 William Benton, 1010 North 1st Ave., Grand Rapids, Minn.
 KGF0277 Kenny Dil, 312 Elmwood Rd., Hoyt Lakes, Minn.
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 KGH0731 John Moore, 2017 So. 107 St., Omaha, Nebr.
 KGH4099 Jeff Church, 2044 S. 8th Ave., Omaha, Nebr.
 KGH4527 Robert Wootten, 316 Northcrest Dr., K.C., Mo.
 KGI3013 Karl Paulsion, Rt. 1, Ft. Crook, Nebr.
 KGI5004 Bob Bone, 3020 Parkview Dr., Springfield, Mo.
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 KHA2937 Evelyn Meador, R.R. 8, Box 111, Decatur, Ill.
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 KHB0243 Frank Sus, Sr., 1238 Michigan Blvd., Racine, Wisc.
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 KHB2113 Bing Risley, RFD. 4, Mt. Carmel, Ill.
 KHB3803 Roger Tesch, 445 N. Lake, Aurora, Ill.
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 KIC6334 R. Gaboriski, 110 Blair St., Rochester, N. Y.
 KIC6590 George Funk, 108 Mott, Milford, Pa.
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 KIC7333 Larry Wolfe, 111 S. Woodlawn Rd., Butler, Pa.
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 KIC7485 Ron Baughman, RD 3, Everett, Pa.
 KIC7651 Roy Saunders, Saunders Rd., Clinton, N. Y.
 KID0003 Emory Wilt, 2015 Eight Ave., Altoona, Pa.
 KID0006 Frank Martz, Star Route, Hustontown, Pa.
 KID0007 Fred Martz, Hustontown, Pa.
 KID0186 Michael Reshetor Jr., 102 1/2 Walnut, Binghamton, N. Y.
 KID0739 William Bryan, 1203 Walnut, Hollidaysburg, Pa.
 KID1328 Ron Conley, 45 Murrain, Rochester, N. Y.
 KID1668 James DeRenzo, 163 W. Genesee, Clyde, N. Y.
 KID2158 Dennis Gould, 40 William, Dansville, N. Y.
 KID2196 Fritz Nowak, 80 Fairfield Ave., Lancaster, N. Y.
 KID2519 George Newcomb, 10 Seneca Mobile Manor, Clinton, N. Y.
 KID2541 Bill Shagi, 6950 Shannon Rd., Verona, Pa.
 KID2595 Charles Hunter, 1416 Rose Hill Dr., Altoona, Pa.
 KID2617 George Thayer, P.O. Box 23, Burnt Cabins, Pa.
 KID2633 Ray Zulawinski, 515 Oates Blvd., New Kensington, Pa.
 KID2832 Frank Wingerter, 817 McConnell, Erie, Pa.
 KID2897 Stel Barkowski, 1911 Freeport Rd., Arnold, Pa.
 KID3134 Anthony Febbo, 1635 Twentieth Ave., Altoona, Pa.
 KID3167 Gordon Wood, 168 Main St., Wellsburg, N. Y.
 KID3219 Jay Wassel, Sandy Route, Kingman, Ariz.
 KID3233 Charles Andreen, 404 Beltzhoover Ave., Pittsburgh, Pa.
 KID3327 Jim Kent, R.D. 1, Granville Summit, Pa.
 KID3514 Tom DiGiacomo, Glade Mill Rd., RD 2, Valencia, Pa.
 KID4047 Dale Reeder, 306 Arch St., Williamsport, Pa.
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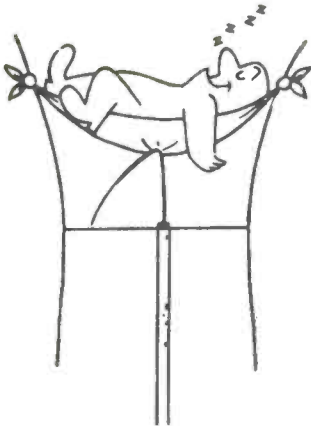
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In the previous two columns the fundamentals of phased antennas were covered. Antenna patterns were discussed as well as basic feed methods. It was made evident that by proper selection of the mounting positions of two vertical antenna elements a phased system can be made directional at desired compass angles. Another attribute of a phased antenna is that the directive pattern can be shifted with changes in antenna phasing. This can be accomplished without rotation or physical change in their mounting positions.

SWITCHED BI-DIRECTIONAL

A 90-degree pattern shift can be accomplished simply by switching between in-phase (broad-side) and out-of-phase (end-fire) feeding of two vertical antennas. The simple switching arrangements of Figs. 1, 2, and 3 demonstrate the technique. Broadside feed is accomplished by making certain that the total length of line between the junction point and each antenna is exactly the same. Out-of-phase feed results when the line length between the junction and one of the vertical elements is a half wavelength longer than between the junction and the second element. Hy-Gain uses the simple switching arrangement of Fig. 2 with their $\frac{1}{4}$ th wavelength colinear antennas. The antenna is a 50-ohm type. Two of them are separated by a half wavelength (18 feet).

The lines from the two antenna elements must be paralleled and matched to the 52 ohm line that connects to the CB transceiver. Since a match must be made to 52 ohms, each antenna line must display an im-

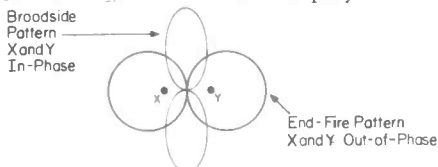


Fig. 1. End-fire and broadside response patterns.

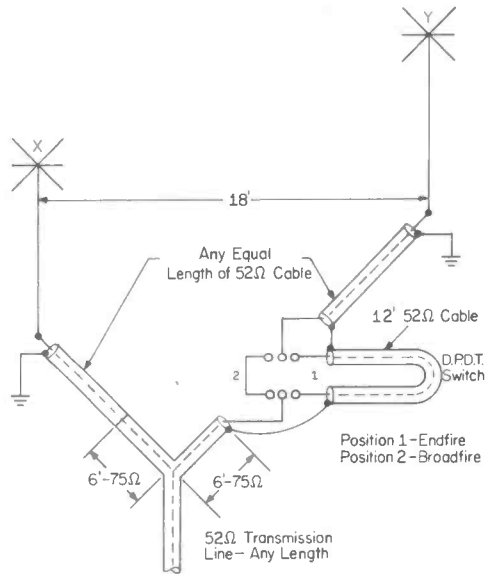


Fig. 2. Hy-Gain end-fire and broadside feed arrangement.

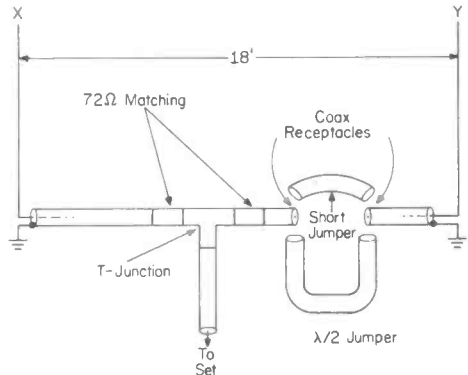


Fig. 3. Simple method of shifting pattern.

pedance of 100 ohms at the junction. This can be accomplished by using two quarter-wave line transformers (6 feet). The impedance of the matching sections must be:

$$Z_M = \sqrt{Z_{IN} Z_0}$$

$$Z_M = \sqrt{100 \times 52}$$

$$Z_M = 72$$

If the overall length from junction to each vertical is the same, the two antennas will be fed broad-side. This corresponds to position two of the double-pole double-throw switching arrangement.

If the antennas are to be fed end-fire, a half wavelength section of line must be added in one leg 25 per position 1. This is the purpose of the 12-foot section of 52 ohm line. In this case the two antennas are fed out-of-phase and the figure-eight pattern is switched through 90 degrees 25 in Fig. 1.

The above switching can be accomplished with a double-pole double-throw coaxial switch or two single-pole double-throw switches.

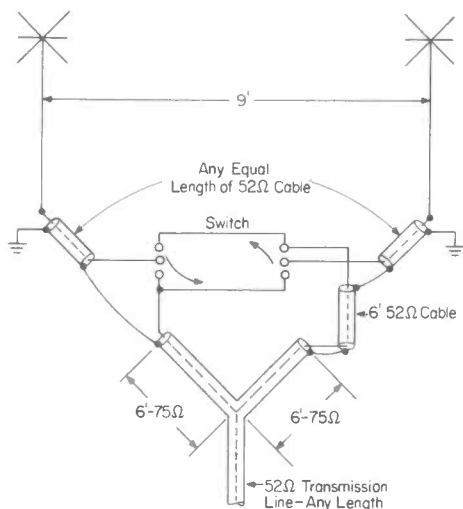


Fig. 4. Hy-Gain end-fire uni-directional feed system.

A very simple arrangement can be made using two coaxial receptacles as shown in Fig. 3. For broad-side operation it is only necessary to use a short jumper between the two receptacles. In this case the total leg length, including the jumper, must be the same as the length of line feeding antenna X. If end-fire operation is desired, a half wavelength jumper can be connected between the two receptacles. In this case, the total length of line, including the jumper, feeding antenna Y should be exactly 12 feet longer than the length of line between the junction and antenna X.

Switching can also be accomplished with a coaxial relay controlled from the operating position. The relay can be mounted near to the antenna in a weather-proofed housing.

SWITCHED UNI-DIRECTIONAL

As covered in a previous column two antenna elements spaced 90 degrees and fed 90 degree-related produces a uni-directional cardioid pattern. Such an antenna has its maximum in the direction of the antenna element being fed the 90 degree lagging voltage.

Such a uni-directional pattern can be switched through 180 degrees by switching a quarter wavelength of line (6 feet) between one leg and the other. A Hy-Gain arrangement is shown in Fig. 4. Note that the two antennas are separated by 9 feet (free-space quarter-wavelength on the CB band).

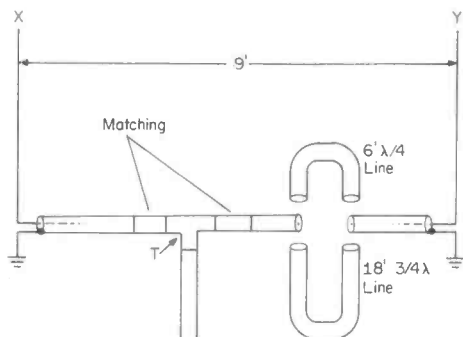


Fig. 5. Simple method of switching uni-directional pattern.

The switching can be handled by two single-pole double-throw coaxial switches. A two receptacle plan can also be used as shown in Fig. 5. When a quarter wavelength piece of line (6 feet) is inserted between the two connections antenna Y is fed a 90 degree lagging signal. Thus there is maximum radiation in the line X to Y. If the length of line connected between the two receptacles is three-quarter wavelengths long (18 feet), antenna Y will be fed a 270 degree lagging signal (same as a 90 degree leading signal). This is exactly the same as applying a 90 degree lagging signal to antenna X. In this case the pattern maximum is in the line Y to X.

DIRECTIONAL WHIP ANTENNAS

Simple quarter-wave 102-inch antennas can be connected in phased arrangements. Two such whips can be mounted on the apex of the roof, as shown in Fig. 6, and along with a very simple switching arrange-

ment at the operating position can provide a selection of either bi-directional end-fire or bi-directional broadside operation. If the two whips are mounted in approximately a north-south line, end-fire excitation sets the figure-eight pattern maximums north and south. The maximum directions are east and west with broadside excitation. A good ground is important in terms of impedance matching.

The indoor control position need only be a T junction and two coaxial receptacles. The line from antenna #1 goes directly to the T junction. The line from antenna #2 is linked to the T junction via the two receptacles.

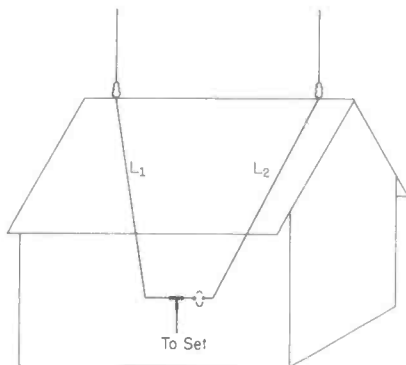


Fig. 7. Three-element broadside and end-fire phasing.

For broadside operation a 6" jumper with coaxial plugs at its ends is inserted into the receptacles as per Fig. 5. For end-fire operation, a 12'6" length of cable is connected between the two receptacles. For omnidirectional operation use no jumper; signal is fed only to antenna #1.

In summary, this simple arrangement permits the choice of three separate radiation patterns, omnidirectional, broadside or end-fire. More details will come next month.

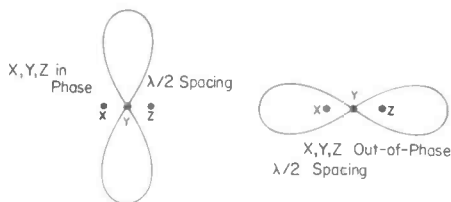


Fig. 6. Whip antennas in a phased arrangement.

THREE-ELEMENT GROUPINGS

Additional gain and pattern sharpness can be obtained by using three instead of two driven antenna elements. When fed in

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Break the strangle-holds on two-way com. improve AM, FM broadcast performance! NOT A SUPPLEMENT, but a complete ignition shielding kit... control both radiated and conducted interference. Easy to install—utilizes shielding techniques and materials used in "customized" systems by police, taxi and other operators of two-way radio equipped fleets.

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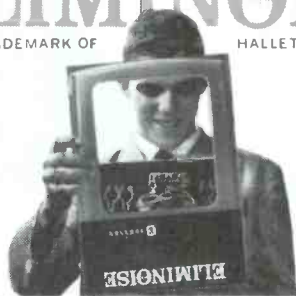


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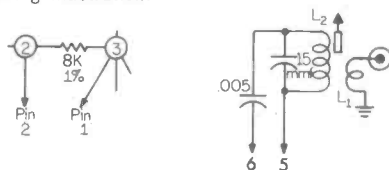
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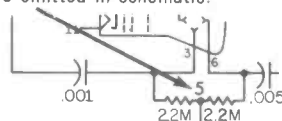
GOOD GRIEF!

Two articles which appeared in the September issue of S9 required corrections.

The Thinking Man's 'Scope. In the chassis layout of the Miller terminal board, socket pins #1 and #2 are transposed. Pin numbers 5 and 6 on the following illustration:



Pin #5 omitted in schematic:



The Weather Aid (Part 1). In the schematic, a 0.5 meg grid resistor was omitted from the 7B5 output stage. Also, a 6000 pf plate bypass capacitor is connected to the screen instead of the plate. There should be a "plus" symbol after the "B" at pin 4 of the power plug.

**FOR
ADULTS
ONLY!**



NEW CADRE C-75 CB TRANSCEIVER

The new Cadre C-75 1.5-watt, 2-channel transceiver is 15 times too powerful for youngsters (under 18 years of age) to operate, according to FCC regulations. Clearly, it's not a toy. It's designed for serious CBers who need 'big set' performance that can be used anywhere.

The new C-75, weighing less than 2 lbs; provides clear, reliable 2-way communications up to 5 miles and more. All solid state design creates an extremely rugged transceiver to absorb rough handling, stays on frequency. Two crystal-controlled channels spell perfect communications contact everytime. Sensitive superhet receiver ($1\mu\text{V}$ for 10 db S/N ratio) brings in signals in poor reception areas. Powerful transmitter has one watt output to the antenna. Adjustable squelch silences receiver during standby. AGC assures proper listening level. In a word, the C-75 has all the features you'd look for in a quality full size CB unit.

The C-75 has all the portable conveniences you'd want, too: operates on alkaline or mercury penlite cells (8-hour rechargeable nickel-cadmium battery available); ear-phone and antenna jacks; built-in retractable antenna; jack for base operation while recharging.

Use the Cadre C-75 anywhere in the field, for vehicle, office, boat or plane. Use it constantly too, because its all-transistor modular circuit (11 transistors and 2 diodes) is virtually maintenance free. \$109.95. Recharger and 2 nickel-cadmium batteries \$31.85.

Cadre also offers a complete line of 5-watt all transistor transceivers and accessories.

See your Cadre distributor or write
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 COMMERCIAL PRODUCT DIVISION □ ENDICOTT, NEW YORK
 □ AREA CODE 607, 748-3373. Canada: Tri-Tel Assoc., Ltd.,
 81 Sheppard Ave. W., Willowdale, Ont. Export: Morhan Ex-
 porting, 458 B'way, N. Y. 13, N. Y.

phase, Fig. 7, the gain rises a couple DB and there is an elongated figure-eight pattern broadside to the line of the antenna elements.

Three elements can be fed end-fire if one desires a sharpened pattern along the line of the elements. Various other patterns can be set up using a trio of elements but this is material for still another column.

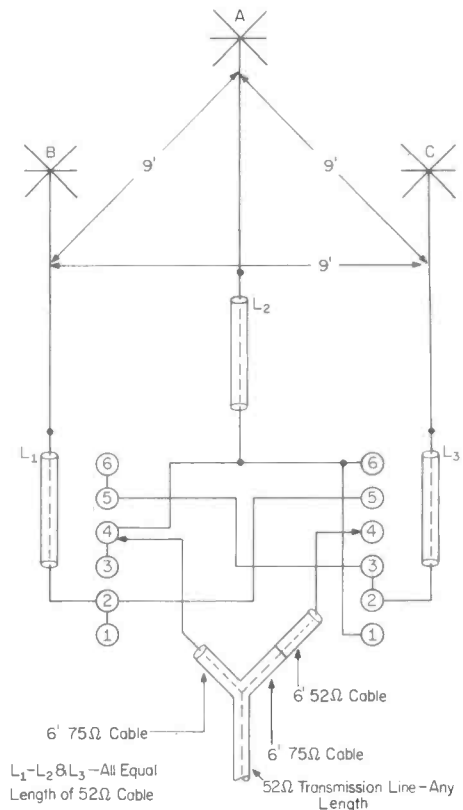


Fig. 8. Hy-Gain three-element end-fire uni-directional feed system.

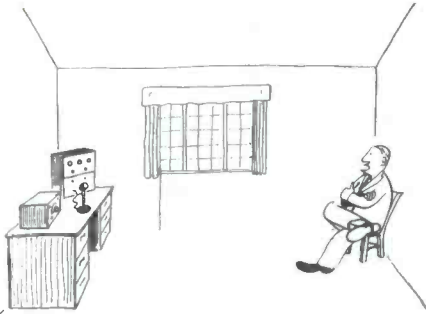
A Hy-Gain arrangement comprising three elements in a triangle is shown in Fig. 8. The antenna elements are fed in pairs. Spacing between any selected pair is 90-degrees and phasing between any pair is 90-degrees. Hence a uni-directional pattern is obtained. However, the pattern can be switched to any one of six possible directions.

In the switch position shown antennas A and B are in circuit. Since the lagging current is exciting antenna B, maximum signal would be sent out along a line from antenna A to antenna B.

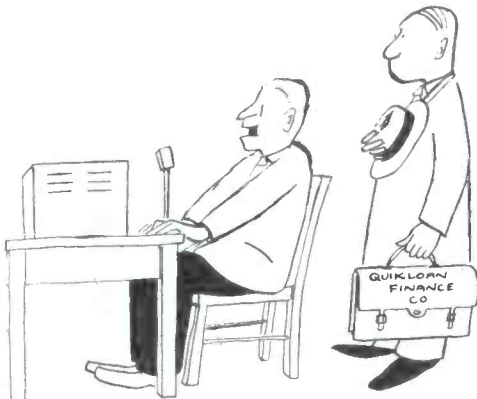


WAY OUT

by WORTHINGTON



"As a matter of fact, at the present time I've got more audio than I can use. . . ."



". . . so if I don't come back on the next transmission, you'll know what happened . . ."



"Should I put out the carbon or crystal mike M'lord?"

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IT'S HERE! The Rolls Royce of all CB mobile antennas.

The most efficient quality antenna ever designed for max. performance from your CB rig.

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- 4 IT HAS HAD OVER 2,000,000 MILES OF FIELD TESTING FOR EVALUATION AND COMPARISON. It has been field tested and compared to other antennas for over 2 years by independent laboratories under all weather and terrain using all popular transceivers and antennas.
- 5 IT CANNOT AND WILL NOT CORRODE. BECAUSE: it is all brass and stainless steel construction, and chrome plated to strict military specifications.
- 6 IT OPERATES IN ALL KINDS OF WEATHER. BECAUSE: Teflon wire is used on all transformer windings with Mylar for insulation.
- 7 IT DOES NOT REQUIRE DETACHING OR TIE DOWN WHEN GARAGING. BECAUSE: taper ground 42" flexible stainless steel whip bends to small radius.
- 8 IT DOES NOT REQUIRE CUTTING OR CLIPPING FOR TUNING. A small recessed screwdriver slot adjusts for perfect match in seconds.
- 9 IT MOUNTS AT ANY CONVENIENT LOCATION. BECAUSE: Standard PL-259 fitting connects to many existing mounts or may be mounted anywhere with Standard UG363U fitting.

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Enclosed is my check (money order) for \$21.95 for a Toroid-Tenna. (In California, add 4% sales tax.)

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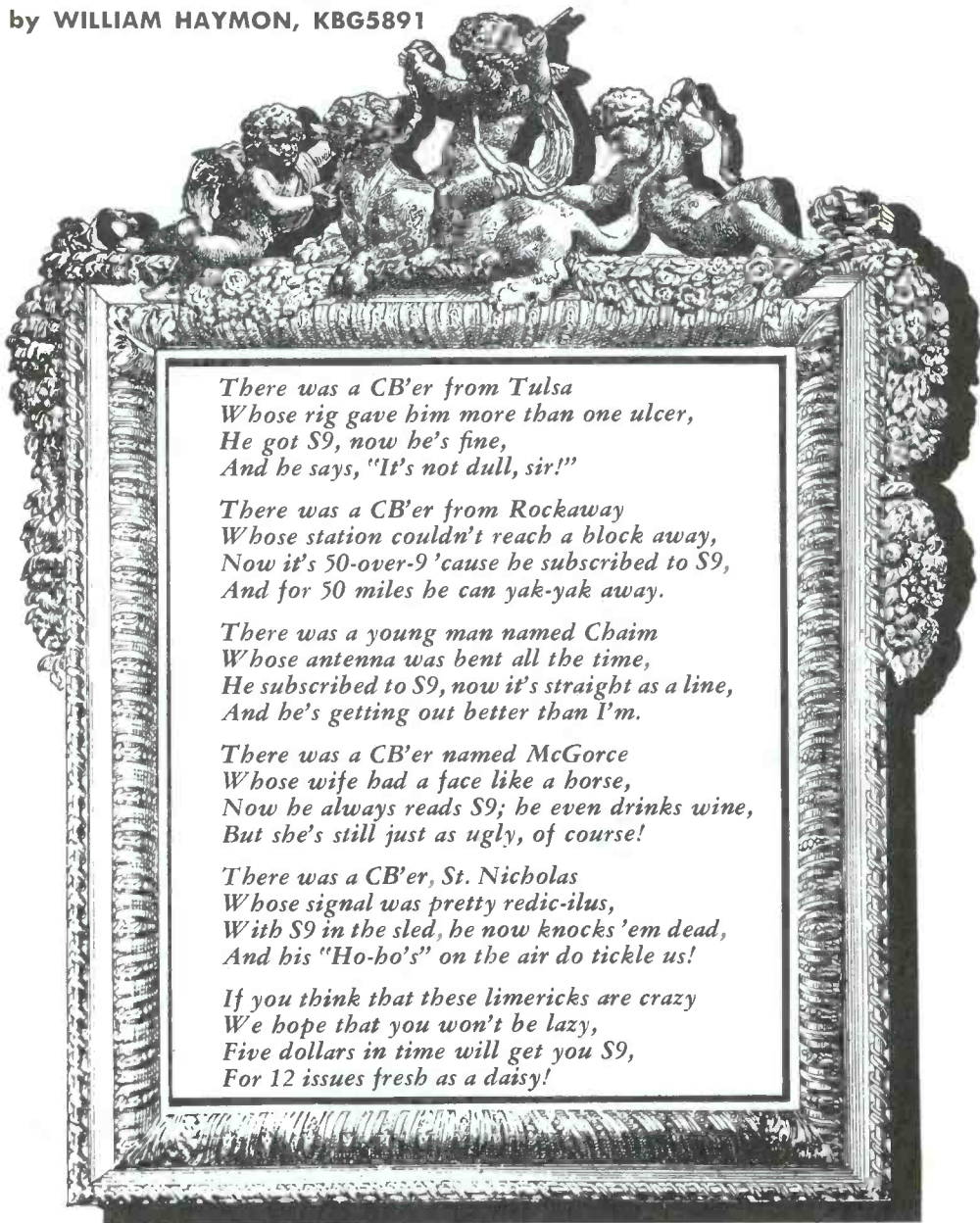
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City & State

SOME DISTRIBUTOR TERRITORIES OPEN.

"THERE WAS A CB'ER..."

by WILLIAM HAYMON, KBG5891



*There was a CB'er from Tulsa
Whose rig gave him more than one ulcer,
He got S9, now he's fine,
And he says, "It's not dull, sir!"*

*There was a CB'er from Rockaway
Whose station couldn't reach a block away,
Now it's 50-over-9 'cause he subscribed to S9,
And for 50 miles he can yak-yak away.*

*There was a young man named Chaim
Whose antenna was bent all the time,
He subscribed to S9, now it's straight as a line,
And he's getting out better than I'm.*

*There was a CB'er named McGorce
Whose wife had a face like a horse,
Now he always reads S9; he even drinks wine,
But she's still just as ugly, of course!*

*There was a CB'er, St. Nicholas
Whose signal was pretty redic-ilus,
With S9 in the sled, he now knocks 'em dead,
And his "Ho-ho's" on the air do tickle us!*

*If you think that these limericks are crazy
We hope that you won't be lazy,
Five dollars in time will get you S9,
For 12 issues fresh as a daisy!*

HAPPY HOLIDAYS

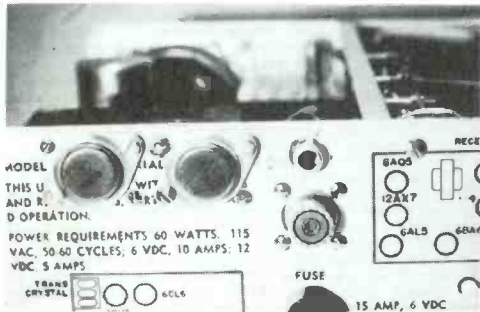
CUSTOMIZING THE EXEC 100

THE "NEW LOOK" FOR AN OLD FAVORITE RIG!

by JIM GIBSON, 2W7610

In this age when it is not uncommon for equipment to be obsolete as soon as you buy it, it is always surprising to find a manufacturer who not only doesn't change models weekly, but who makes accessories available which permit modernizing older equipment.

This has practically always pertained to International's line of CB transceivers. Their latest addition for the do-it-yourselfers is a transistor power supply and an illuminated transmit channel selector for the EXEC. 100.



The transistors are mounted on the rear apron of the Exec. 100.

Transistor power supplies add an extra measure of reliability to your rig since they are not as prone to failure or deteriorated performance, as is vibrators. The illuminated selector comes in very handy when you're trying to change channels at night.

The transistor power supply conversion is relatively easy. Actually, most of the work is in changing some of the power plug connections. As shown in the photographs, the vibrator and its socket is completely removed. The transistor oscillator transformer is then mounted under the chassis directly under the



Removing the vibrator and its socket leaves more than enough room for the transistor oscillator transformer.

socket hole. There's lots of space so mounting the transformer presents no problem, other than taking care that the drill doesn't slip and mash the plates of the plate tuning capacitor. Because the transformer is mounted directly under the socket hole then connecting wires are easily routed through the hole; it is not necessary to start chopping the chassis.

The transistors are mounted in the upper left hand corner of the rear apron. A template is supplied which indicates the centers for the necessary holes. A word of caution is in order. The holes must be drilled exactly as indicated. If the drill slips and even one hole is off-line, it is possible to destroy a transistor with a short circuit. *Carefully* centerpunch each template "crosshair" before drilling.

Two colored (red, yellow) hook-up leads are provided from which you cut the proper length. Don't be confused by the fact that the instructions do not specify which color

Continued on page 58

CB CHIT-CHAT

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

**TO JOHN KREJC, 2W4586
60 DIVISION
GARFIELD, N. J.**

The Goldsboro Whips CB Radio Club of Goldsboro, N. C. was formed recently. They have a membership of 51. This does not include the wives, who are active also. Meetings are held once a month with roll call each Tuesday at 7:00 P.M. on channel 7.

The Metropolitan Denver Citizens Radio Club meets the first Tuesday of each month, Security Life Bldg., 14th and Stout Streets, Denver, Colo. All CB'ers in the area are always welcome. The big annual picnic held by the club was August 25th at Morse Park.

From Herb Brown, 15W1898, Metro Denver Club comes word that they have a Women's Auxiliary that is the finest in the country. Herb is Secretary on the Denver club.

Cal McGraw, Sitka, Alaska, reports much activity on the CB channels during the present fishing season. He has a new RCA Mark VIII, and expects to make many new contacts as A.P.R.E. for S9.

Northwest Emergency Network, Portland, Oregon, monitoring channel 11, provided emergency communications for the Molalla Buckaroo Rodeo recently. While at Molalla, they received a call to search for an eight year old boy lost near Mt. Hood. Mobilizing all members that they could reach, they left Molalla and proceeded to the search area and helped with the search till the next morning. They didn't find him, but he wandered down to a farmers house the next day, well and hearty, and just a bit hungry.

The Chatthaohocsee Valley CB Radio Club was founded in 1959. Starting with 10 members, the club has now grown to a membership of 50. The club has two scheduled meetings each month, the first and third Tuesdays of the month. The club house is located at 2060 Comer Ave., and is at present undergoing a face lifting and a complete inside remodeling job. A monitor room, lounge, conference room and a workshop is planned. This past year has found the club active in many community activities. The club is from Columbus, Georgia.

The Five Watters of Lake County will undertake the job of a jamboree next year. It was decided not to rush ahead and try to do one this summer. Mike Shalala, 19Q8738, will be in charge of Jamboree. Anyone having ideas for this upcoming 1964 event, please submit them to Mike.

Recently the Klamath Five-Watters Emergency Communications Service, Inc., conducted its first meeting with its newly elected officer. President Dave Moran, KFF1046 is talking with Klamath Falls officials for the use of a larger meeting room in the county courthouse, for next month's meeting. During the month of August the club's Family Picnic was held at Fish Lake, Oregon with a large number of CB'ers having fun. The club says "A hats-off" thanks to Loran Dunn, 13W1369 for his station and camping unit. Their communications officer Gary Anderson, KFG0528 advises that the newly adopted name "EMCOS" (Emergency Communications Service) will be used in communication operations and club decals as the title of the club's paper. Also their REACT stations Fred Metz, KFG0812 Base, and Gary KFG0582 mobile are operating for REACT traffic.

The North Area Emergency Radio Team (N.A.E.R.T.) assisted in the tracking and landing of a hot-air balloon loosened by a K.C. Radio Station Aug. 11, 1963. The two-man craft had to make an unexpected landing



when the wind carried them into the T.W.A. flight pattern. Ten members of the team were mobile and tracking the balloon five minutes after the call for help was put out. They assisted in landing the craft and aiding local police in blocking off the area and directing traffic. The team monitors Ch 21 twenty-four hours to aid those traveling in the greater K.C. Area.

The Sedalia CB Club recently held their Annual CB Jamboree at the Missouri State Fair Ground, Sedalia, Mo. The two day event was a smashing success thanks to Jim Flemming Chairman of the Jamboree Committee. The Sedalia Club monitors Ch 9 and 11.

The Pikes Peak Area Radio Club performed their usual fine communications work along the route of the Pikes Peak Sports Car Race July 4th. Thanks to John Morgan (Pres.) KGC0306 and his fellow club members are points along the dangerous road were covered and another fine job was done by these efficient CB'ers.

The Logan Utah Sheriffs Jeep Patrol (15W1814, Ellis Hancey, Pres.) Monitor Ch 1 and 11 to aid anyone in the Logan Area. They have made several mountain rescues this summer and are on 24 hour call.

From Bob Dunham, KGI0613, Public Relations officer of REACT of Orange County, California, comes the report of the club enjoyed a mobile run to San Diego, climaxed by a deep sea fishing trip. Ten members make the trip. Jim Finicum, KEJ5159 won the \$18 pack pot, by landing a 25 lb. 1 oz. Albacore. 43 hookups were made and 23 Albacore were brought aboard. VeePee Harry Sprague, KEJ0815 says he enjoyed everything about the trip, except the boat ride, vows that he will do his fishing from solid ground in the future. Ernie Payne was another member that stated barbering was much easier on the stomach then try to ride a bouncing boat on the ocean swells.

"The Five Watter" is the new shape, name, and format for the paper published by the 5WW's. The staff is doing a good job of reporting all CB news in the area. They ask that anyone with an item of interest please mail it to the club at P.O. Box 3364, San Bernardino, California. The San Bernardino City Civil Defense and Disaster Radio Communications team has been reactivated as of July, and responsibility for the initial co-ordination and recruitment of personnel has been assigned to the 5 WW's. Primary mission of this organization is to provide supplemental radiotelephone

communications and to furnish additional vehicles for transportation of injured persons, supplies, and equipment during periods of national emergency or major disaster. Just another example of how CB and a good club can and do help everyone living in the area. The local "Hams" are also cooperating in the program, and it should be noted that when and where it really counts, the "Ham" and CB'er can work side-by-side for the good of all.

A newly reporting club is the 18-50 Middle Island CB Club, named in part for Middle Island Creek, the longest in the world. At their first meeting in March, seventeen interested CB'ers attended. They now have 54 members and are growing very rapidly. They are probably one of the very few clubs with an XYL as Pres. She is Jean Heffin (KHI2482). Vice-Pres. is Bill Sole (KHG9548) and Sec.-Treas. is Carolyn Sturm (19Q1332). At the present time the majority of their members are from West Union, Middlebourne, and immediate vicinity. Meeting dates are the first Saturday night in each month, with the 10-20 alternating between West Union and Middlebourne. As this is West Virginia's Centennial year, they are having a float in the local Centennial parade and a window display at one of the local merchant's. The club monitors Channel 9 and would welcome visitors at any time. Anyone desiring more information can contact the Sec'y at Columbia Street, West Union, West Virginia.

Citizens Assistance Relay League of Long Beach, Calif., look about you, don't you know some one who is qualified and would like to join and participate in activities? Ask Greg Artz 11Q2545-2 for a application.

Looks like the V-P of the Kern County Citizens Radio Association (KCCRA) will have to finish out Pres. Aubreys term. Aubrey, who is Barry to all his friends, has been transferred from the main Sheriff's office in Bakersfield to the Boron Sub-Station. Good luck on the new job, Barry.

Louise Welch, KEJ1102, Editor of the El Camino Real Club's news Bulletin, advises that over 100 mobile units of CB'ers showed up at the "Coffee Break" held at Teds & Nitas, KFA2600 at Crestline in the San Bernardino Mountains, on August 17th.

Barry Aubrey Pres. of Kern County Radio Assn., advises that the club has a new monthly bulletin, the "Static Chaser." The monthly meeting will be held at the Park Stockdale Community Club House, Stockdale Highway across from Kern City, Bakersfield, California. All CB'ers in the area, whether members or not are invited to attend. The Kern County Citizens Radio Assn., of Bakersfield, Calif., reports the posting of Ch 9 Monitor signs at all entrances to the city. The Bakersfield Club, KCCRA, announces that upon the completion of Pres. Aubreys new house in the Lake Isabella area they will hold an open house. This should be late October or early November. Watch for the date. This could be a regular jamboree.

Bill Edwards, manager of the Cardinal Motel on Las Vegas Blvd., South has been elected vice president of the Tri-City Citizens Band Radio Club at its July meeting. Two Projects were approved by the membership for club activity, one to provide communications for the Las Vegas Yacht Club at the Sept. Boat Races on Lake Mead, Sept. 7th & 8th, Ken Hathaway was named coordinator for this event which will require about six water borne and one beach control points. The second project will provide communications for the Las Vegas Sky Diver's National Parachute Jumping Contest over Lake Mead area on Oct. 5th & 6th. Cecil Miller will coordinate this activity which involves setting up communications at the Boulder City Airport, Boulder Beach and several pickup boats.

The Waukesha County CB Club Inc. held their picnic at the 10-20 of 18W6313, at which 18Q0904 cooked up a pot of hobo stew. Mrs. KHB2345 celebrated her birthday that day and three cakes were enjoyed. A large hill at the site was used as a slide for the youngsters and oldsters. This was a wonderful day and the stew was just right. I was wondering where Bud learned to make the hobo stew?

The Hi-Desert CB Radio Club of Joshua Tree, California, has set up a disaster committee, headed by Les LeSaunier, 11W5622 as Director. "Pinky" Hyde, KEJ-1251 will be Ass't Director. Hi-Desert county always has such a peaceful look that one can hardly connect the word disaster with anything that could happen there, but don't let it fool you, that is Mother Natures way of lulling you into complacency. There is always the need for a well tarined group such as they have formed. The club is a REACT unit and monitors Ch 11 around the clock.



The South-Lynd Radio Club had a tent set-up with a display of several pieces of CB equipment. Their display attracted a great deal of attention and was considered one of the finest displays at the Lyndhurst Home Day affair.

January 25, 1964 the National CBRRL Inc. will hold its Third Annual Dinner-Dance and Installation of Officers at the Bossert Hotel in Brooklyn, N. Y. at 8:30 P.M. Reservations are \$10 per person and limited to 400 guests. The new chapters will receive their charters at this dinner.

Newly reporting club is the Triangle CB Radio League, P.O. Box 543, Cary N. Carolina. Officers are: J. W. Allen, 5W1742, Pres., Cecil Young, KCJ1691, Vice Pres, Bobby Marler, KCJ2669, Sec'y, Sammy Nichols, KCJ6932, Treas. Editor of their fine paper are J. W. Allen, 5W1742. Co-editor and Publisher is Bobby Marler, KCJ2669. Roving reporters are the entire club membership. How about that. The club meets the 1st and 3rd Monday nights at 7:30 P.M. at the Cary Baptist Church basement.

The REACT Team of Orange County, Calif., conducted a training mobile test in August looking for a "missing" woman. The woman was known to be in a heavily populated area approximately two miles square. Took the mobile team just less than 15 minutes to locate the woman's car and find the woman. The team is well organized and covered the area very efficiently.

From Canada, The Ontario General Radio Service Assn., comes the news of their most successful picnic. The club begins a membership drive very shortly. They boast Canada's fastest growing, most aggressive CB club. Contact Jim de Zorzi, 61 Dalrymple Dr., Toronto 9, Canada. Editor of their news bulletin is Bob Watson, XM41-240, Box 111, Agincourt, Ontario, Canada.

The El Camino Real CB Club located in San Gabriel Valley, Calif., has an Emergency Road Patrol, that has been kept quite busy during these past hot summer days. The grade up over Kellogg Hills, on the San Bernardino Freeway especially has kept them jumping, supplying water to those cars that overheat, helping some that run out of gas and notifying the Automobile Club for others that need assistance. The California Highway Patrol has been very appreciative of the work this Patrol is doing.

Congratulations are in order for those CB'ers in the Lynwood, Calif. area that sponsored the two day Jamboree. The affair was a huge success and well put on.

We hear from a new club called the Cascade County CB Radio Club. Pres. Ed. Steffens, Vice Pres. Leo Sloan, Sec'y Sandi Steffens, and Henry Reihl, Treas. Any CB'er coming through the Great Falls area, give us a call. We monitor channel 9.

Several weeks ago the Net Control of the 10-99 Club in Santa Ana, Calif, received a call for assistance from the Sheriff's Dept. A 16 year old girl was struck by a hit-and-run driver. Witnesses had not been able to get the license number but were able to give a very good description of the car. In a matter of minutes control had 65 volunteer mobile units on the streets. In less than an hour the car was located and the driver held for the Sheriff's Dept. Once again CB'ers were able to be a service to their community.

The Cenla CB Radio Club, 1156 Rapides Avenue, Alexandria, La. The general club meeting is the second Wednesday of every month, and club calling and monitoring channels are 11 and 16. The club constitution was drawn up and signed June 12, 1963, and also reg-

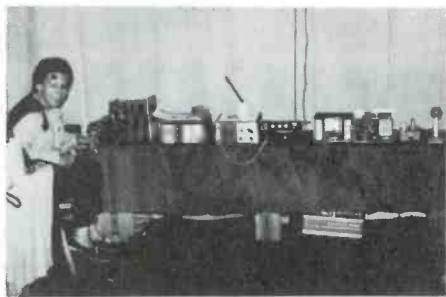


Photo shows one of two booths at the Jamboree, which displayed new CB gear by Mr. & Mrs. James Martin—Martin Electronics, Sutherlin, Oregon. Photo by James S. Green, McMinnville, Oregon.

istered at the Chamber of Commerce of Alexandria. Officers are Pres. Robert Brewer, KEA0115, Vice Pres. Jim Smith, KEA2291, Sec'y Chas. Pospisil, KEA2231, Treas. Jack Taylor, 8W1725. In charge of publicity are Mrs. Ruth Brewer, Salmone Smith and Mrs. Mary Bills.

The 11 meter League of Bell Gardens, Calif., have scheduled a CB Jamboree for Sept. 8th, at the John Anson Ford Park. The news came late to be included in the Sept. issue. Will have more on this later. The League has future plans for a "Court of Honor" and a pot luck dinner for the Boy Scout Troop that they sponsor. No date set as yet. CB'ers in the Bell Gardens area watch for this date.

The Hi-Desert CB Radio Club and the Big Bear CB Club in California will jointly handle the relay communications for the Pioneer Pass Annual Golf Tournament to be held Oct. 11th, 12th and 13th. This is the first year that the CB'ers have been asked to handle the communications and both Clubs are going all out to prove that the Citizens Band operators have know-how to handle the job properly. This is a unique tournament, all participants play the 18 hole course in Yucca Valley on the 11th, then the play continues up the mountain road, over the many miles to Big Bear and finishes up by playing the course at B.B. on the 13th of Oct. Relay units of both Clubs will be stationed about every two miles for these communications. They will keep in touch with all contestants, reporting the progress of the golfers to the control throughout the entire tournament.

At the request of the Maryland State Police, the REACT Radio Patrol of Hagerstown, Maryland under the direction of Troy Cosner, KCF1944, assisted with 4 mobile units and two walkie talkies when word was received that a local citizen had jumped into the Potomac River with suicide intended on the evening of 8/22/63. After two hours of effort on the part of the combined services of the members of the REACT team, the Williamsport, Maryland Ambulance Rescue Boat Team, Deputy Charles Scuffins of the Washington County Sheriff's Office and Trooper Fuller of the Maryland State Police, the body was located under water within jumping space of a fishing pier, where the man's clothes were located earlier. Word has it that the REACT team in Hagerstown soon will be incorporated. That will be the big day for these hard working members, who have given so much of their time to better conditions for the public via CB radio.

A very successful meeting was held by the California Citizens Band Coordinating Council (CBCC) at the S. Calif. Boy's Club in Compton, Aug. 25th. At the present time the council represents 39 CB clubs. Every club is represented by two delegates in the council. The host club was the Southern California Citizens Broadcasters, headed by President Bob Aeary, 11Q-2519. Bob made the welcoming address and turned the meeting over to Chairman "Snapper" of Ventura. Secretary Bill Garrett of San Pedro, presented the first draft of the "Articles of Incorporation" for the council. Every CB Club that affiliates themselves with the Council becomes an incorporated member at a great saving to their club. Most of the council meetings are open to all CB'ers regardless of whether or not they are club members and are invited to attend.

Received word from Wayne Kanarr, KIC0894, Vice President of The Cumberland Valley CB Club of Chambersburg, Pa., that on July 16th the club became a year old and a family picnic was held for the members with over 150 persons attending. This club has been mentioned in the CB Club News before and has a welcome part of the print. The club by this printing should be incorporated and going full swing. Activities of the club consist of a used toy collection for the Chambersburg Lay, record hops, and numerous other civic activities throughout the city. With an initial member roster of 5, this club now in over a year's time has grown to over 75 members. Officers for the club are: Pres. Harold Benchoff, 20Q3126, Vice Pres. R. Wayne Kanarr, KIC0894 and Sec'y-Treas. Donald Smith, KIC0718. Good luck fellows and keep up the good work.

From Bob Hall, KEJ3461, Whittier, California, comes news that the long awaited unit two well known CB'ers in that area, Don and Jean Pearce, KEJ4211 and KEJ-6062, arrived August 24th at 12:15 A.M. She weighed 7 lb. 8½ oz. and is named Dynette Marie. Congratulations to Don and Jean.

Steve Basco, KFA0355 of East Whittier, is well on his way to complete recovery after going through a serious back operation. All your CB friends send you their best wishes.

The REACT of the CB "5" Watters of Virginia met recently at the Red Cross Building on West Avenue in Newport News. Radio communications are ready for use at the Red Cross Building for any emergency. Members recently installed an antenna atop the building. First Aid classes for club members will start in September. Regular monthly meetings of the CB "5" Watters are held the 1st Wednesday of each month.

Betsy McKinley, editor of the Denver Radio Club's publication, "Metro-QRM-News" and her staff of Faye Phillips, Chuck Booth, Bill Ross, Don Parrott and Dick Duncan deserve a big pat on the back for the wonderful club paper. Looks like a winner. Any CB club wishing to exchange papers write: Betsy at 1130 Madison St., Denver, Colo.—ZIP-80806.

Sorry to learn that Norma Bechtold, KEJ4179, has found it necessary to resign as secretary of the splendid Hi-Desert CB Radio Club. Norma was a good worker and always kept us informed of the clubs activities. Am sure that she will be greatly missed—RMF. No successor named as yet, but if we may presume, expect that Norma's assistant, Betty McCormick, KFA0581 will finish out the term. RMF.

Club Personality of the Month of the Band-Spread, club publication of the Tri-County Citizens Radio Association is Mike Hrynia, 3W2660, Mike is the clubs first permanent secretary and is one of the original charter members. Mike's main hobby, which has kept him busy these last 5 years has resulted in a home that is beautiful beyond description. Mike works for the Philco Corp., as an Electronic Engineer in quality control.

We have just learned that Wayne Hanselman, KFA-0471, Chairman of the Hi-Desert CB Radio Club is to move from Joshua Tree to Orange County, in order to follow his electronic profession. Sorry to see you leave the Hi-Desert country Wayne, and sure wish you the best of luck in Orange County.

The Metro Denver CB Radio Club closed the summer season with a large gala picnic. The large turn-out enjoyed the entire day. Lots of food, prizes and games for every member of the family. Social events are put on and handled by the Women's Auxiliary, whose motto is, "Never a Failure." Sounds like a great group of ladies. Wish to remind all CB'ers in the Denver, Colo., area that the club meets the 1st Tuesday of each month. All CB'ers are welcome at the meetings, and are invited to visit with us and perhaps join this active radio club. Dues are low—\$3 per year. The clubs fiscal year is from June to June, and dues are prorated on a quarterly basis for any time less than the full 12 months.

Under the direction of Captain Arnold, of the Salvation Army, the newly formed S.A.C. CB Radio Team answered the call to give aid and comfort to fire- and policemen fighting a 12 alarm fire at 9th and Hardesty St., K.C., Mo. Twenty-one CB units spent the night of Aug. 20th and part of Aug. 21st operating the Army Canteen, directing traffic, blocking off a 20 block area and running communications between fire fighting groups via Walkie-Talkie and Mobile units. The fire proceeded uncontrolled through the night and CB'ers were on the job until the clean up was completed the following evening. Working in shifts members of S.A.C. made up principally of the North Area



Above picture is the Ladies Auxiliary of the Jackson CB Radio Club at their recent CB Jamboree in Jackson, Miss. The purpose of the Jamboree in Jackson was to raise money to build a club house that will serve the club and the Ladies Auxiliary. The club has gained 23 new members from the Jamboree. Thanks again to "Pop" Chaney.

Radio Emergency Team (N.A.E.R.T.) and the Kansas City Emergency Radio Team, so that the all night operation did not work unnecessary hardship on any one man. Fourteen members of N.A.E.R.T. answered the initial call, set up the operation, and remained on duty until 2:30 when they were relieved by K.C.E.R.T. men, some staying until 9:00 P.M. the following night. The S.A.C. group was heartily endorsed by the K.C. Police and Fire Depts. as an essential and necessary part of their operation. The S.A.C. units under the control of Jack Schaaf, 17Q3732, Harvey Bates, 17W-0654, Gil Perry, 17Q1619, and Capt. Arnold of the Salvation Army, 17Q1379. They were in constant contact with police and firemen as well as with base stations operated by Bob Davison, KGH3585 and S. Schaaf,

KHG1666, who made land line contacts as they were needed. The base stations kept individual units located throughout the disaster area. Walkie-talkie units Sonny James, KH13419, Jerry Miller, KGH0296, Gil Perry, 17Q1619, and Lowell Dockery, KGH3379, were set up for communication from the front line firemen to the outer limits under police control.

A Citizens Band Jamboree was held for all CB'ers and interested parties at the Ocean Court Motel, 6 miles south of Waldport, Oregon. It was sponsored by the McKenzie Citizens Band Radio Association of Eugene and Springfield, Oregon, which was organized in May of 1962 with 6 members and has since grown to 38 members. The Jamboree was organized with two things in mind—entertainment and to acquaint the newer members with the workings and proper use of CB.

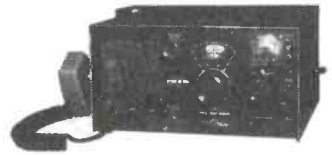


"... I don't know what you did at your end Lou, but your signal came up quite a bit on that transmission."

TR-27E

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TR-70C



The TRAM 23 base station, renowned for its superior performance and dependability under the most exacting conditions, is the result of the extraordinary consideration and effort given to the design and construction of all TRAM citizen's band equipment.

- The "s" meter is now a D'Arsonval moving coil type with an illuminated panoramic scale, accurately calibrated to 60 db over S9.
- The cabinet now has an extra durable wrinkle finish.
- The 23 channel selector switch carries the channel number illuminated in the panel.
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The TRAM TR-70C is a quality communications instrument, constructed to give you the ultimate performance in the mobile situation. An audio spotting system assures you of "on-the-button" tuning of the entire citizen's band. Regardless of location, noise level or range, you can depend on your TRAM mobile to get through.

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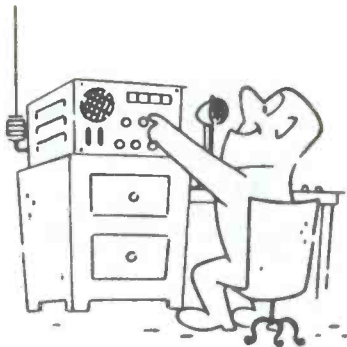
November 1963 • S9 • 53

CB CASEBOOK

by **LEE AURICK, 2W2870**

MT. PLEASANT RD. RFD 1
COLUMBIA, PA.

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



Citizen Band Radio has seldom been put to the exacting service it saw during the night of July 10, in Marina, California. At 7:35 P.M., a call came into the Marina Volunteer Fire Station reporting that the old Park's residence off Reservation Road was on fire. Jack Meeks, the paid fireman on duty at the time immediately responded with the Fire Engine and Volunteer Fire Captain Ken Klinger followed with the Service Unit. The incoming call was monitored by Assistant Chief John T. Fleming at his home, on the emergency telephone extension, and he responded in his car equipped with a Safety Services two-way radio and a CB unit. Fire Chief Lester Waddel was in a restaurant across from the Fire Station and followed the two trucks in his private car. The four vehicles arrived simultaneously at a common point from which the drivers saw that it would be difficult to drive the apparatus to the scene as the main road had been bulldozed closed. From their position on the paved road they could see that the entire building was enveloped in flames. Capt. Klinger locked the Service Unit into compound low and drove across the field while Chief Waddel, with the Fire Engine, attempted to approach the scene from another direction. Assistant Chief Fleming, observing the size of the fire, radioed to his wife at home, via CB, and requested that she telephone all members of the department, both paid and volunteer, and have them respond.

A large siren is always sounded to summon assistance, but it is not always effective. Ass't. Chief Fleming then parked his car on the paving and walked to the fire scene, arriving with the Fire Engine and the Service Unit. The main house, an abandoned frame and stucco building, was completely in flame. The main attack on the fire was designed to protect the surrounding buildings and to prevent fire from starting in the surrounding knee-high, tinder-dry grass. The Chief and the Assistant Chief each carried Part 15 walkie-talkies and were able to communicate with each other from opposite sides of the fire line, and to and from the trucks. Using these hand-held units, they were able to keep each other advised of the current situation and to request more men or water without resorting to the use of a firefighter as a runner. This was the first time the walkie-talkies were used at a fire or other emergency, and Ass't. Chief Fleming and Chief Waddel agreed that they were invaluable in that they doubled the efficiency of the fire-fighting operations. Communications were established between the walkie-talkies and the base station in Ass't. Chief Fleming's home. While not perfect, the quality of the communications were adequate. It was through this system that a call for Mutual Aid Assistance was relayed to the nearby Fort Ord Fire Department who stood by in the Marina Fire Station to be of assistance, either at the fire scene or to respond in the event of a separate fire or emergency. It was noted at this time that other CB'ers on an adjacent channel were interfering with the walkie-talkies. Ass't Chief Fleming walked to his car and called, again via CB radio, to the director of the Monterey Bay CB Radio club and asked his assistance in clearing the working channel and adjacent channels. The club director, Chuck Woolridge, KFD0102, issued a call to units on the working channel and explained that the Marina Fire Department was using 100 mw units and that stations in a twenty-mile radius were causing interference. As if

by magic, all transmissions ceased and good communications between the walkie-talkies resumed. Ass't Chief Fleming asked that a special "Thank you" go to KFD0102 and all CB'ers in the area for their cooperation. By this time, it was noted that the walls on the main house had collapsed and all that remained was the fire in the center. The Fire Engine was released to return to the station to relieve Fort Ord, and the Service Unit remained on the scene. With the removal of the Fire Engine, all radio communications between the Fire Station and the scene were severed as the Service Unit was not equipped with either Safety Service or CB radios. To maintain a vital communication link between the Fire Station and the fire scene, a fireman was dispatched to bring the Chief's official car as close to the scene as he could and monitor the safety services radio, relaying messages from the Fire Station to the scene via the walkie-talkies. If it were not for these small units, the Fire Station and the fire scene would have been isolated from each other. The entire Department thanks CB for the coffee and refreshments that were so welcome during the long, hot, and dirty job of mopping up and patrolling the fire. The Service Unit and fireman remained on the scene until 2:00 A.M., a total of 6½ hours. Damage was confined to the house, which was a total loss, but the Marina Volunteer Fire Department feels that the loss would have been much greater and their job would have been much hotter and much more dangerous had it not been for the use of Citizen Band Radio.

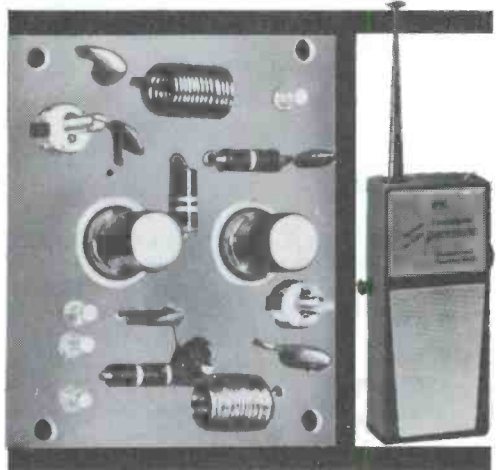
Here's what Assistant Chief Fleming had to say about Citizen Band Radio in a recent letter.

"I originally installed these CB units to serve as an auxiliary communications system to supplement the Safety Services Radio in the Fire Station and in the Fire Engine. Our main worry was that we would receive two alarms at close intervals, and at separate locations. When only one paid fireman is on duty, he responds with the Fire Engine to any alarms he may receive. This leaves the Fire Station unmanned until the arrival of another person, either paid or volunteer, who is summoned by the siren. We have had occasions when the station was empty for as long as ten minutes or more, especially if the alarm was during a week day, or in the early hours of the morning. We all lived with the fear that another alarm would be received when the Fire Engine was out and the Fire Station was unmanned. With a CB radio in my home, close to the extension of the 'hot line,' and one in my car, my wife can let me

Continued on page 59

THIS MONTH'S BRAINWASHING: Subscribe!

2 CB Specials From WRL



1 2-STAGE "CB" NUVISTOR PREAMPLIFIER

Guaranteed to improve reception on CB Receivers or Transceivers

Finest Printed Circuit Board

Double Sensitivity Over 20 db Gain

2 RCA 6CW4 Nuvistors complete and wired

Use with Superhet or Regenerative Units

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No license required

46" telescope antenna

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NAME _____

ADDRESS _____

CITY _____ ZONE _____ STATE _____



WASHINGTON OUTLOOK

by EDWIN FREDERICK, 2W4580

The following CB operators did business with FCC during the past month:

7W0464, William Humbert, Jr., Tampa, Fla., license revoked for repeated violations of Sections 19.33 (off frequency operation), 19.102 (Conelrad violation), and 19.61(g) (working skip).

7W2827, William Humbert, Sr., Tampa, Fla., the Commission dismissed charges against the station.

8W2022, Billy R. Sherrill, Conway, Ark., license revoked for repeated failure to respond to official notices concerning alleged violations of Sections 19.17 and 19.72 of the regulations and Section 310(b) of the Communications Act, concerning unauthorized transfer of operating rights under the station license and failure to properly post the station's license.

11Q3297, Denny C. Leipert, Torrance, Calif., directed to show cause why his license should not be revoked for repeated failure to respond to official notices concerning alleged violation of Section 19.33 (off frequency operation).

11W2882, Charles A. Schlicht, Encinitas, Calif., directed to show cause why his license should not be revoked for repeated failure to respond to official notices concerning alleged violation of Section 19.33 (off frequency).

11W3134, Paul W. Behne, North Hollywood, Calif., hearings terminated on his Show Cause notice. The Commission will now decide on whether or not to revoke his license.

11W3782, Robert R. Adams, Los Angeles, Calif., hearings terminated on his Show Cause notice.

11W4157, Robert D. Coughtry, Manhattan Beach, Calif., directed to Show Cause why his license should not be revoked for repeated failure to respond to official notices concerning alleged violations of rules Sections 19.61(a) (non-substantive messages) 19.61(e) (failure to restrict com-

munications to minimum practical time), 19.61(f) (talking over 5 minutes), and 19.62 (improper identification).

KBG1339, Virgil E. James, West New York, N. J., the Commission dismissed the hearing on the possible loss of this station's license.

KCI1496, Gino Turchiaro, Bronx, N. Y., license revoked for failure to respond to official notices concerning alleged violation of rules Section 19.61(a) (non-substantive transmissions), 19.61(f) (overtime talking), and 19.61(g) (working skip).

KDB0264, Melvin S. Welch, Stone Mountain, Ga., sent a notice of apparent liability in the amount of \$100 for transmitting non-substantive messages.

KDB5712, Morris J. Green, Mableton, Ga., sent a notice of apparent liability in the amount of \$100 for transmitting non-substantive messages.

KDB7504, J. A. Wallace, College Park, Ga., sent a notice of apparent liability in the amount of \$100 for transmitting non-substantive messages.

KDD0606, James Puckett, Atlanta, Ga., sent a notice of apparent liability in the amount of \$100 for transmitting non-substantive messages.

KEG4411, Robert L. Bonnell, Lawton, Ga., directed to show cause why his license should not be revoked for repeated failure to respond to official notices concerning alleged violation of rules Sections 19.61(a) (non-substantive messages), 19.61(f) (overtime talking), 19.61(g) (skip working) and 19.62 (improper identification).

KEJ1382, Electro-Mech. Engr. Spec. Co., Huntington Beach, Calif., license revoked for repeated failure to respond to official notices concerning alleged violation of Section 19.33 (off frequency operation).

KEJ1859, Charles D. Pettis, Las Vegas, Nev., directed to show cause why his license should not be revoked for repeated failure to respond to official notices concern-

ing alleged violation of Section 19.33 (off frequency).

KEJ2646, Ralph E. Fullenwider, Riverside, Calif., sent a notice of apparent liability in the amount of \$100 for transmitting non-substantive messages.

KEJ2825, Edwin J. Squire, Long Beach, Calif., sent a notice of apparent liability in the amount of \$100 for failing to respond to official notices.

KEJ4109, Bob J. Billington, Long Beach, Calif., sent a notice of apparent liability in the amount of \$100 for transmitting non-substantive messages.

KEJ4555, Betty J. Booth, Anaheim, Calif., directed to show cause why her license should not be revoked for alleged violation of Section 303(n) of the Communications Act and Section 19.73 of the rules (not permitting station inspection), and operating, or permitting operation, in violation of various other sections of the rules.

KEJ5669, Kurt Kroeger, Arcadia, Calif., sent a notice of apparent liability in the amount of \$100 for transmitting non-substantive messages.

KEJ6589, Bob Meyers (doing business as Bob's Auto Service), Long Beach, Calif., to show cause why his license should not be revoked for repeated failure to respond to official notices concerning alleged violation of Section 19.61(a) concerning non-substantive messages.

KFA0557, Fred E. Kruse, Long Beach, Calif., directed to show cause why his license should not be revoked for repeated failure to respond to official notices concerning alleged off frequency operation.

KFF1097, Charles H. Andrews, Newburg, Ore., sent a notice of apparent liability in the amount of \$100 for failure to respond to written official communications.

KIC3299, James Hayes, Hudson Falls, N. Y., directed to show cause why his license should not be revoked (reason not available at press time).

In addition to the above actions, Warren J. Currence, ex-4W0152, of Elkins, W. Va., was arrested on August 24th by U.S. Marshals, accompanied by FCC officials, for alleged operation of an unlicensed CB station in Elkins. Three CB transmitters were seized. The U.S. Commissioner at Fairmont held him under \$1,000 bond for appearance before the District Federal Grand Jury.

This was Currence's second appearance before the U.S. Commission in four months. He earlier ran afoul of the communications laws, which resulted in his being charged with using obscenity on the air. This caused revocation of his CB license by the FCC on July 22nd. His illegal operations brought

complaints by hundreds of CB'ers in the central West Virginia area.

Two criminal actions are now pending against Currence. On transmitting obscenity over CB, he is subject to a maximum penalty of \$10,000 fine or not more than two years imprisonment, or both; while as to the more recent charge of transmitting after his license had been revoked, he faces a like fine or imprisonment not exceeding one year or both.



LIFE AMONG THE CB'ers

Continued from page 17

having parasitic oscillations all day. He tried preamps, lopaz filters, even a fielded strength meter. Nothing helped. I felt sure at the time that sunshine and plenty of rest would have done the trick. It worked wonders for my father when he was suffering from the same thing . . . or was that paralytic ossification?

I could never get his name, but the operator at station "QRM" is one of the most popular CB'ers on the band. He is spoken of in almost every broadcast, and he must have a wonderful sense of humor, because I frequently heard one CB'er say to another QRM was terrific tonight. I like a good laugh myself, so I have tuned my set very carefully the whole range of the megacycles, but I've never heard QRM. Probably too much static, or too many stations.

That may give you some idea of my life among the CB'ers. Tuning the band has afforded me a new interest and pleasure in radio listening, far surpassing even TV. And, as I think must be apparent, has taught me a little something of the mechanics of radio. Recently I have had so little occasion to listen to other broadcasts, that I have sold my TV set. I often wonder what Jack Paar is doing these days.



EB91-NL

Continued from page 18

the schematic.

The circuit connected, use switch on the pot to cut the circuit in and out of the transceiver circuit, also to adjust the amount of limiting desired. The action of the EB91 circuit should prove superior to conventional noise limiting circuits in CB rigs, especially if they are placed in the audio output of the detector stage. No loss of receiver sensitivity or annoying audio distur-

tion should be encountered when the EB91 circuit is constructed exactly as indicated in the schematic.

This circuit should perform with equal vigor in all tube type transceivers regardless of IF frequency, number of IF stages, whether base or mobile.



FCC SCORE CARD

Continued from page 20

19.1	Operation not within CB's basis and purpose	10
19.24(a)	Unauthorized change in station	10
19.72(b)	No Form 452-C on mobile transmitter	7
19.25	Antenna violation	4
19.92	Transfer of operating authority	3

In addition to these multiple violations, single violations were noted for: 19.17—Transfer of license; 19.61(i)—Improper radio control; 19.64—Non-suspension of improper operation subsequent to FCC notice of technical violation; 19.73—Failure to permit station of station; 19.81(b)—Failure to answer FCC notice; 19.93—Civil Defense violation, plus 15 others in miscellaneous categories.



COAX

Continued from page 22

mended or you change the recommended position drastically it is quite possible the range of adjustment will not be enough to "force" a match to 50 ohms. Again you see where the use of the 1/2 wave line as a safety feature will insure maximum power transfer from the transmitter.

But do not be misled. The 1/2 wave line has no effect on SWR, or antenna performance—it does not improve radiation pattern or angle, or change the antenna impedance. All it does is insure maximum power transfer from the transmitter.



KBG4303 RIDES AGAIN

Continued from page 7

for a publication to possess, reader support, it would seem that you like S9's "middle of the road" and "no obligations to anyone but the readers" policy. It's a matter of simple business arithmetic that the more support we receive from readers, the bigger and better we will be able to make S9 for you. Support from readers means (chuckle, chuc-

kle) subscriptions (bet you thought that we'd never get around to mentioning that, did you?) and if you don't already subscribe, why not do it this month? There's a specific reason for you to subscribe now, and it's tied in with next month's issue of S9.

NEXT MONTH

All of the foregoing brings us to the fact that next month we are flexing our editorial muscles to bring you a *very* special and different type of issue of S9. The December S9 will be our 1963 *Annual* issue and will contain *several times more articles and features* than have ever appeared in any publication of any kind (including previous issues of S9)!

We have all been burning the midnight oil with this issue to make sure that it's not just "something to remember" throughout 1964. This 1963 *Annual* will be a volume which you will be able to use throughout the entire year to come. AND despite the many bonus features in this issue, I've been able to cudgel the Circulation Department into holding the regular 50¢ price for it ("Annuals" usually bring at least a buck). The December 1963 *Annual* will be gobbled off the newsstands pronto (that's what happened with the May "Mobile" and June "Antenna" issues) so you might give some extra thought to that subscription you have been thinking of getting, but have been putting off. And here's a little inside info for you: if you goof and miss the December issue while it is on the newsstands (for 50¢) it can be purchased directly from our office, *however the price will be \$1.00!* You figure it out.



EXEC 100

Continued from page 49

For which leads. Both leads are the same gauge, just cut-off the right length of either color.

Take care when making the power plug changes that a small drop of solder doesn't get between contacts and cause a short. When the plug wiring is completed run a knife blade between all the contacts to remove any solder drops.

The illuminated selector should be mounted at the time of the transistor installation since you have to drill a hole in the panel.

The lead for the indicator lamp passes through the hole in the panel and connects to the indicated power source. Then the se-

lector assembly is slipped on the existing switch shaft; that's all there is to it. With the assembly in place the hole in the panel is completely covered.

About an evening's work is all it takes to modernize the EXEC.



PART 15

Continued from page 36

and get it into us PRONTO! You'll have a tough time getting a better deal than this 1964 PART 15 HANDBOOK/CALLBOOK! Get your order in now and reserve a copy—we promise to get it in the mail to you hot off the presses! Send 50¢ (don't forget to let us know your S9 Part 15 identifier call) in coin, money order or check (no stamps, please) or \$1.00 (if you aren't registered) to: Book Division, Cowan Publishing Corp., 300 West 43rd St., New York, N. Y. 10036. I think that these will sell out fast.



SWAPPERS

Continued from page 42

XM11509 Lew Morton, 5966 Kirkwood Rd., Beach Grove, Ladner, B. C.
XM13500 Leo Bernard, P. O. Box 696, Duncan, B. C., Canada
XM43371 Bernie Murphy, 1384 Duncan Rd., Oakville, Ont. Canada
XM44042 Venetta Merton, 234 Southcrest Dr., London, Ont., Canada
XM44506 Joan Tibbs, 492 Hill, London, Ont., Canada
XM441000 Gerald Inch, 35 White St., St. Thomas, Ont.
XM49466 Margaret Burnup, 926 B. Cummings Ave., Ottawa, Canada
YY5-179 Eduardo Insam, P. O. Box 2251, Caracas, Venezuela
WPE6EWU Allan Hart, 5800 Gladly, South Gate, Calif.
North. 2139 Alvin Arthur, P. O. Box 27, So. Weymouth, Mass.
Harriet Sanderson, Box 117, Scottsburg, N. Y.
John Starcher, Bolair, W. Va.



CB CASEBOOK

Continued from page 55

know if anything comes up and I can then respond from the scene of the first alarm. This has proved so effective that we are planning to expand our use of CB as soon as funds permit. These walkie-talkies were purchased just prior to the Park's fire and they paid for themselves, ten-fold, there.

"We are now investigating the possibility of using CB radio as a call-up system for our volunteers. The siren we now sound is not effective during heavy fog, high winds, or if the volunteers are watching TV or asleep. We have telephone dispatchers who phone each member, but this is slow and inefficient. If we could install a CB receiver in each home, to be monitored continuously, the dispatcher would simply notify all units of the type and location of the alarm and inform the men of their specific assignments. This could be done in less time than it takes to dial just one number, and would be much more certain of response. If a workable system such as this can be developed, it would eliminate

Tell your friends about S9

nearly all of our response problems.

"We have discovered, to our disappointment, that CB is a 'party line' and anyone has the right to monitor our transmissions. We have had some foolish CB'ers drive to a fire scene just to gawk. They invariably are in the way and make a nuisance of themselves, as well as being a genuine hazard to us, and themselves. The law-enforcement officers now are requested to cite all unauthorized persons inside our fire lines. Cooperation of most CB'ers in relinquishing the channel during emergencies has been excellent, as they know that we do not transmit unless there is an urgent need to do so.

"The terrain of Marina is such that we have not had any problems communicating with our units wherever they may be, even with the low-powered walkie-talkies.

"I know it has often been said before, but I don't really know how we got along without CB radio.

"The units of the Marina Volunteer Fire Department are all individually owned and licensed, but a Departmental license is pending. More and more members are acquiring CB transceivers and the Department now can depend on 10 mobile units responding when needed. In addition to numerous fires, the Department has used CB for First Aid calls, rescues, resuscitator calls, lost child hunts, and has come to depend on CB for communications during practice fires and drills. One memorable instance occurred about 10:30 in the evening when a grass fire was reported near a certain corner. The Fire Engine responded, accompanied by my car, at that time only equipped with the CB radio. The fire was not located where reported, and after searching vainly for 20 minutes, the Fire Engine was ordered to return to the Station House. I continued to search and finally located the fire more than a half-mile from where it had been reported. I radioed to my wife, who telephoned the station house. A message was sent to the Fire Engine via the Safety Services radio. The Engine then proceeded immediately to the scene and extinguished the fire. The speed with which the Engine was able to respond was credited with preventing untold damage to the property. Had it not been for CB Radio, I would have had to drive to a telephone to report the fire and lost as much as ten minutes by doing so."

While application of Citizen Band Radio to emergency services is becoming more common, few organizations rely on it to the extent, or use it as effectively and efficiently as does the Marina, California Volunteer Fire Department.



HE DIDN'T SUBSCRIBE TO

S9



This is Gridley Snarfwort — he didn't subscribe to S9. He didn't know the latest goings on in the CB field, the new products, the construction projects, the club news, the humor, the technical information, the FCC rules. Gridley Snarfwort broke several FCC rules — he just didn't know about them.

Gridley Snarfwort is now paying his debt to society. As soon as he is released he will subscribe. By the way, he is serving 20 years for a bank heist in Kansas City.

Seek out the postage-free envelope jammed-in between pages 48 and 49 of this issue. Send it to us. Pay your debt to society . . . and also for a subscription to S9. YES THE BIG SWITCH IS TO S9! Largest circulation in CB—GUARANTEED!

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36 issues—	\$13

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

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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.

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CB QSL CARDS—100 two-color \$3.00 postpaid, samples—10¢. Rusprint, Box 7575, Kansas City, Missouri 64116.

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

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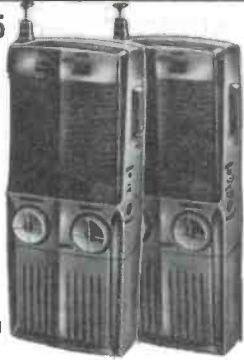
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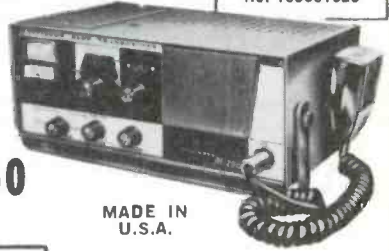


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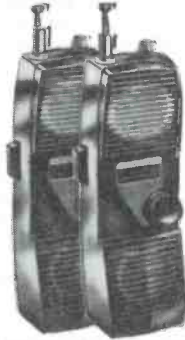
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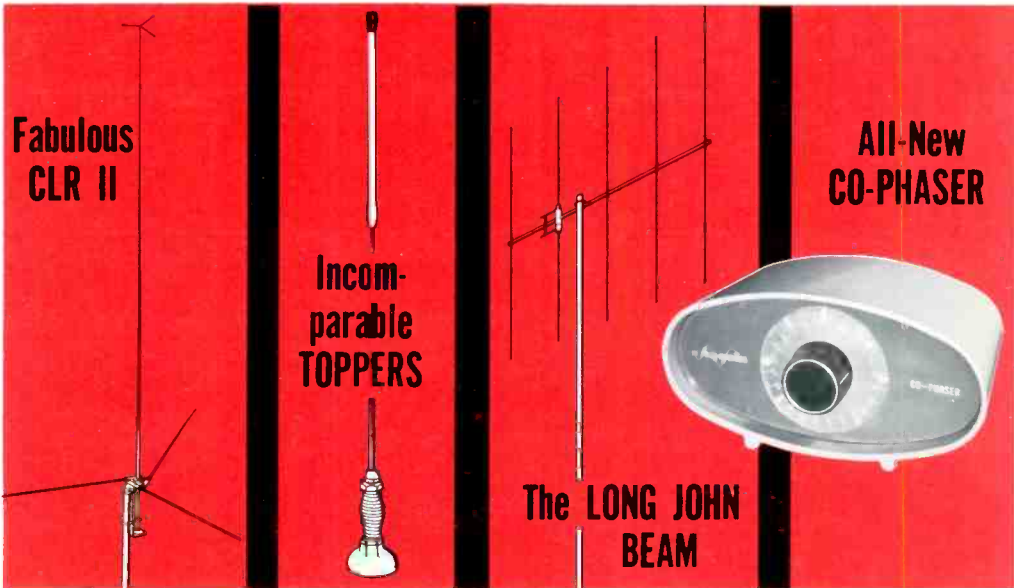


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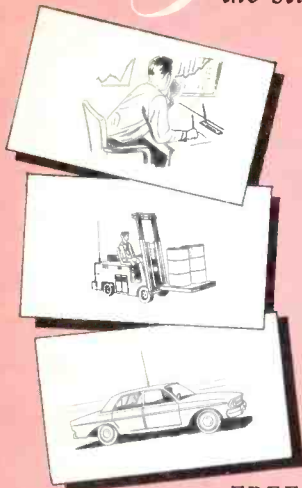
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