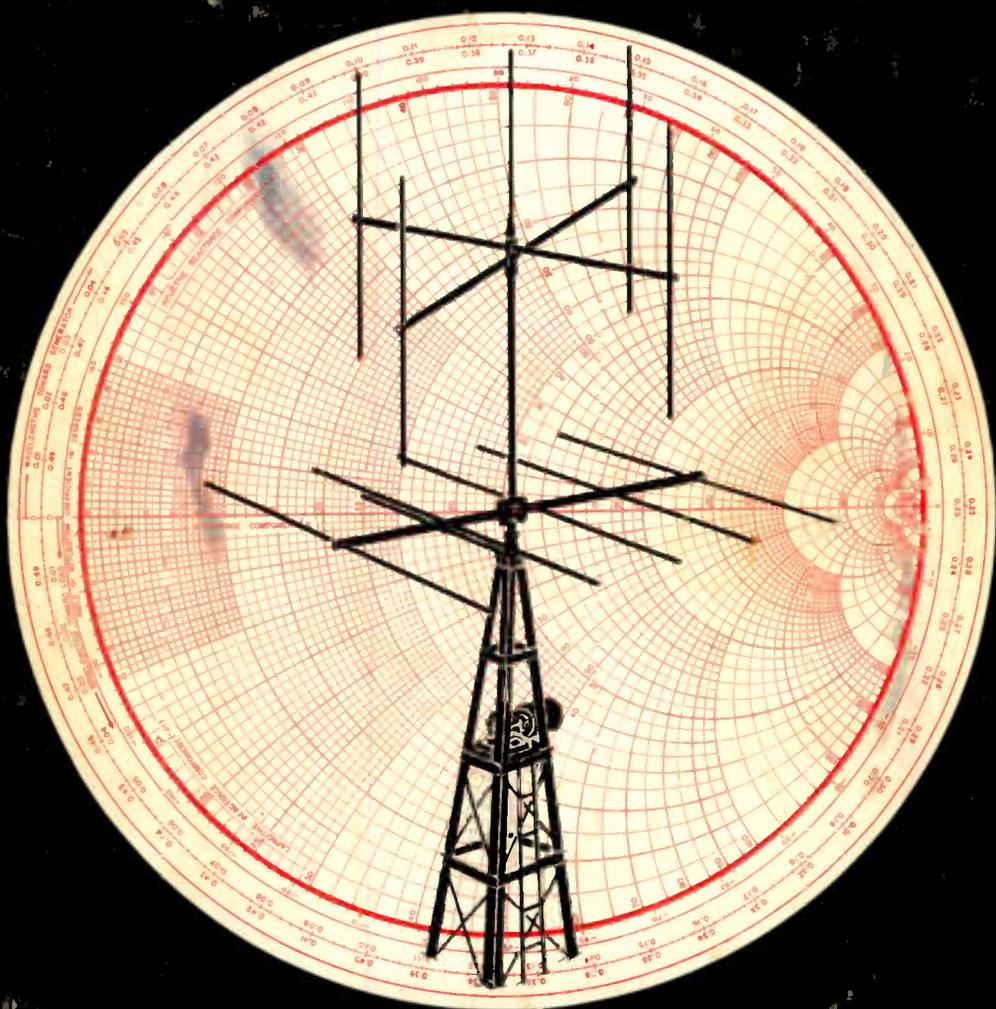


CB

HORIZONS

MARCH 1962
40 CENTS
(50 CENTS IN CANADA)



THE CITIZENS BAND RADIO MAGAZINE

CB ANTENNAS!

ALSO BIG CONVENTION NEWS!

INTERNATIONAL'S

Executive

FOR SUPERIOR CITIZENS

The ultimate in Executive Citizens transceivers. New crystal filter which minimizes adjacent channel interference in the receiver. New built-in receiver calibration circuit. New International NR squelch. New 12 position crystal control transmit channel selector. New front panel microphone jack. New provision for connecting external speaker and S/meter. Tunable dual conversion superheterodyne receiver covering all 23 channels. Two crystal control receive positions. Push-to-talk operation. Three way power supply for 6/12 vdc and 115 vac. Full five watts plate input. Certified tolerance $\pm .005\%$. **Complete with 1 transmit crystal, 1 receive crystal, new style ceramic microphone and coil cord.**

\$199.50*

International's exciting New compact transceiver. Field tested full five watt transmitter contained in the higher price Executive transceivers. Certified tolerance $\pm .005\%$. Tunable superheterodyne receiver covering all 23 channels. Three position crystal control transmit channel selector. Manual transmit-receive control. Noise limiter. Available accessories include four separate power supplies — 6 vdc, 12 vdc, 24 vdc, or 115 vac, push-to-talk relay kit, and 12 position transmit channel selector. **Complete with 1 transmit crystal, matching microphone and external speaker, but less power supply.**

\$69.50*

MODEL 100



MODEL 10



See The Executive Series at Your Authorized International Dealer



INTERNATIONAL CRYSTAL MFG. CO., INC.

transceivers

BAND COMMUNICATION

MODEL 50



A precision engineered transceiver featuring push-to-talk operation. Three position crystal control transmit channel selector. Dual conversion superheterodyne receiver tuning all 23 channels. Full five watts plate input. Crisp and clear modulation. Certified tolerance $\pm .005\%$. Two crystal control receive positions. Series Gated automatic noise limiter. New International NR squelch. Three way power supply for 6/12 vdc and 115 vac. Additional features of the Executive Model 100 may be added at any time. The Model 50 is a rugged yet handsome piece of communication gear equally at home in the office, service truck or field. **Complete with 1 transmit crystal and matching microphone.** **\$149.50***

*Suggested Price

FREE 1962 CATALOG

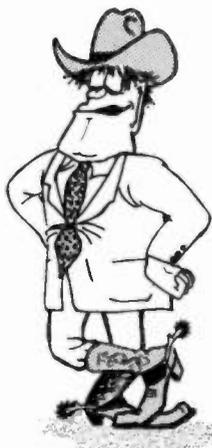
Your buying guide for precision radio crystals, electronic equipment, and Citizens Band accessories . . . contains suggested oscillator circuits, plus technical information on selecting the proper crystal. Write today for International's 1962 catalog. It's FREE.



18 NORTH LEE
OKLAHOMA CITY, OKLAHOMA

International Crystal Mfg. Co., Inc.
18 North Lee, Oklahoma City, Okla.
Please rush FREE 1962 International Catalog.

NAME..... Please print
ADDRESS.....
CITY.....ZONE.....STATE.....



OZZIE'S MAIL-BOX

Gentlemen:

I am not impressed by CBH in fact I am nauseated by it. The vast majority of CB'ers are frustrated would-be Amateurs who like to make believe that they are hams.

I have been a ham for 25 years and hold the highest form of available Extra Class and Commercial licenses. I have a CB call that is strictly a business assignment and will never be used in idle talk to other CB'ers, I never have answered one yet nor will I.

Generally CB stinks worse than a skunk. Print this.

(unsigned)

Dear whoever-you-are. Too bad you have so much to say but are ashamed to sign your name, usually people who write us these "hate" letters don't sign them because they realize the things they say are somewhat unbalanced. We ran your letter to show our readers what hard-working editors must contend with when looking through the morning mail.

Letters which are signed and contain genuine specific criticisms of the magazine or the CB service are appreciated. Letters such as the one above are promptly used in our paper crumpling survey (we test different brands) and eventually end up as basketballs in the inter-office lunchtime tournament with the wastebasket. (Production Dept. leads the league by 12 games.)

Ozzie

Dear Ozzie-

Keep up the good work, it sure is nice to know that we CB'ers can get some real help from someone. I use CB in my business and have to keep the rigs going—and I already give you credit for doubling my performance.

Bob Carraway, 7Q0860
Quincy, Fla.

This guy we like! Obviously a gentleman of superior taste and intellect.

Ozzie

Dear Ozzie-

The article on page 14 of the January CBH (OVERLENGTH 11 METER WHIPS) has given me excellent results.

I have been using a 127-inch bumper mounted whip on my mobile unit and might recommend to other CBH'ers to try a 360 uuf capacitor for maximum results. My Eico 762 loads into this beautifully with a 1.2:1 SWR.

I am located around water and get out 16 miles to the north with ease, 23 miles to the north readable, and 40 miles south (over 16 miles of land).

I am also rid of much of the annoying skip so I have apparently managed to keep my signal at a fairly low angle of radiation.

I am more than pleased.

Seth Paull, 1W1717
Bristol, R. I.

Thanks, Seth, for the good report and helpful advice on the capacitor which you use. Many have reported trying our overlength whip suggestion with results equal to yours.
Ozzie

Ozzie-

I'm pleased to report that I have received the Lafayette HE-20A which I won in your November "Gigantic Giveaway." Words cannot express how much I thank you for it.

I enjoy CB Horizons very much, it's far superior to any publication available to CB'ers.

G. B. Hunt, 10Q1683
Van, Texas

Dear Ozzie-

The other day someone told us of a CB publication which is starting a "national club" to come to everyone's rescue with insurance policies, swap shops, and all sorts of other benefits.

Please inform your readers that they needn't panic nor subscribe to this publication just to get a national club. CB Horizons and our club, MCEU, were both here doing the job long before they were thought of and we'll still be here when they are forgotten.

Our club is a National organization. We have been in existence since 1959 and now boast 1700 members in 20 states. MCEU (Mobile Civil Emergency Unit) is comprised of local chapters running their groups locally, banded together nationally for strength and purpose.

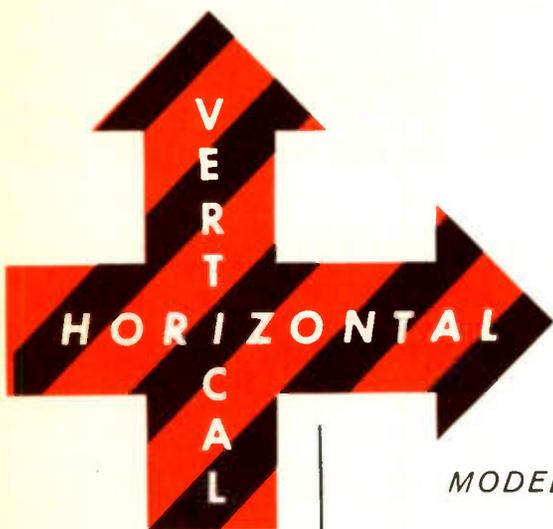
Local chapters have a voice through their own appointed and elected representative at our annual National Convention, as well as through the elected Board of Directors.

We endorse CB Horizons and would like to congratulate you on producing a fine, well-rounded publication.

Thomas S. Wallace, 20W3939
Executive Secretary,
MCEU, Inc.
P.O. Box 246
Syracuse, N. Y.

Thanks for your letter, Tom. From what we've heard from numerous CB'ers, MCEU is just about the only real national CB club, that is, one which is well established throughout the country that has been providing beneficial member-service for a long period of time. We recommend it to our readers.

Ozzie



These two points
tell the whole story of
antenna specialists' brand

New

MODEL

M-77

VERTICAL / HORIZONTAL
BEAM
ANTENNA

8 db. gain!
(8-15 db. where
conditions are
very hairy)

Only 9' tall!
¼-wave,
full length
vertical element

Loaded horizontal
3-element beam
functions also
as vertical
ground plane!

Rugged aluminum
castings and heavy wall
1 3/8" boom tubing
for maximum rigidity!

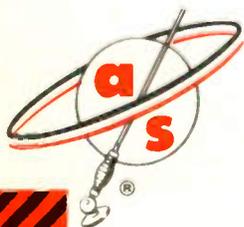
It may sound corny, but the "hybrid" concept of our new M-77 actually does give you *two antennas for the price of one*. More important: it combines the characteristics of vertical and horizontal beams to capture the maximum possible useable signal in mobile-to-base communication—especially in obstructed areas, where signal polarization becomes "confused".

The secret: M-77 is polarized both *vertically and horizontally*. It operates as an efficient beam horizontally in one direction and vertically in the other. Or, each element may be fed separately—whichever is best for your terrain. The improvement in your performance will be noticeable. *Very noticeable.*

For complete information, see your Citizens
Band supplier . . . or write for specifications to:

the antenna specialists co.

12435 Euclid Avenue, Cleveland 6, Ohio



Reg. T.M. "Stripes of Quality"



MARCH 1962
VOLUME 2 - NUMBER 3

HORIZONS

PUBLISHED MONTHLY BY HORIZONS PUBLICATIONS, INC.
POST OFFICE BOX 1557 OKLAHOMA CITY 1, OKLA.

STAFF

BOB COOPER, 12Q2339
Publisher
TOM KNEITEL
10Q3161/W5KDR
Managing Editor
JIM KYLE, 10W0901/K5JKX
Technical Editor
H. FRIEDMAN,
2W6045/W2ZLF
Associate Editor
REX HOLMES, 24W2424
JIM GIBSON, 2W7610
Contributing Editors
GAR GREENE, JR., 1W4844
Editor at Large

DEE CALVI, 10Q2952
Editorial Assistant
JACKIE JOHNSON, 12Q2015
Promotion Manager

STAN SEARLE
Art Director

OFFICES

Business and Western
Advertising Offices
1518 9th St.
Modesto, Calif.
Tel. 209 LA 4-7395
(call collect for ad info)

Editorial Offices
4 N.W. 7th St.
Oklahoma City, Okla.
Tel. 405 CE 2-6290
(call collect for ad info)

Eastern
Advertising Office
COWAN PUBLISHING CO.
300 West 43rd Street
New York 36, New York
Judson 2-4460
Dick Cowan
Jack Schneider, 2W5669

ADVERTISING

CB HORIZONS magazine accepts commercial display advertising from bona fide manufacturers, distributors of electronic equipment and associated apparatus. Advertising rate card and coverage data available upon request.

CIRCULATION

CB HORIZONS magazine is circulated through the mails and over the counter to approximately 63,000 readers each month. Readers are operators and licensees of Class D Citizens Band radio equipment in the United States, its territories and possessions. Detailed and sworn circulation statement available upon request from the Publisher.

SUBSCRIPTION

Subscription rates in the United States — \$4.00 per year. Single copies 40c each (50c in Canada). Subscriptions outside the U.S.A. — \$5.00 per year. Subscription remittances should be made by bank draft or postal money order. Airmail subscription available at \$7.00 per year, U.S.

TABLE OF CONTENTS

FEATURES

THE WHAT, WHY, AND HOW OF CB ANTENNAS Meet Aunt Enna and her family.....	8
CB KEEPS UP WITH THE TIMES Build o Nuvistor preamp.....	14
WANT A 250 WATT SIGNAL? The CB'ers Dream Antenna, Part I.....	17
NORTH OF THE BORDER, UP CANADA WAY Conodo Heeds for 11 Meters—Exclusive report.....	18
HERE'S ANOTHER ONE YOU ASKED FOR Build the CBH Field Strength Meter.....	20
WE TEST:	
The Allied C-27 Transceiver.....	24
An 18 inch Heliwhip.....	25
The "Web Whips".....	25
The Antenna Specialists M-73.....	26
The CESCO 4 Element Beam.....	28
CBH 1962 Complete Antenna Directory	29
WE'LL BE IN CHICAGO AT THE CONVENTION, WILL YOU?	
The NCRL Notional CB Convention.....	36
Publisher's Comment on the Convention.....	37
BET YOU NEED THIS ONE!	
Build o simple Microphone "Booster".....	44

DEPARTMENTS

OZZIE'S MAILBOX	4
ANTENNA TOPIX	17
CB SHOWCASE	22
LAB REPORTS	24
CCM REPORTS	38
TECH TALK	44
GAR'S GABBING	49
CLASSIFIEDS	50
TK ON CB	52
WASHINGTON REPORT (Late-Late FCC news)	53
GIGANTIC GIVEAWAY (Bock in April)	

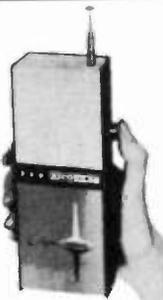
CB HORIZONS (title registered U. S. Post Office) entered as Third Class postage in Oklahoma City, Oklahoma. All copyright and editorial rights reserved by Horizons Publications, 1962.

The entire contents of this magazine are copyrighted by Horizons Publications. No article in this magazine may be reproduced in whole or in part without the written permission of the publishers.

COVER: Telrex Laboratories' Model 11M-OD4 cloverleaf pattern antenno stocked on one of their 5 element beams.

FOR POWER OR PORTABILITY . . . UNCOMPROMISING ENGINEERING WITH

EICO® CITIZENS BAND TRANSCEIVERS



Operates 2500 hours on 1 rechargeable leakproof battery

EICO WALKIE-TALKIE MODEL 740: Kit \$54.95. Wired \$79.95.

Carrying Case \$3.95.

Complete with rechargeable battery & charger. No license or permit needed . . . no age limit

U. S.-made
an original
product of EICO
research

- Finest U.S.-made nickel-cadmium rechargeable battery provides about 8 hours "on" time with 50% duty-cycle operation on a single charge • Battery can be recharged 300 times, replacing over 1,000 penlight cells (over \$200.00 worth) • Leakproof nickel-cadmium battery is hermetically sealed in plastic — can never cause corrosion damage • Full 100mW Input to Final, as permitted by FCC for Unlicensed Citizens Band Operation • Crystal-controlled transmit & receive • Full modern superhet receiver • 9 transistors and 1 diode • Range 1½ miles under average conditions • High quality circuit board, beginner-tested instructions for complete kitbuilding ease and assurance • Make a "network" with 2 or more EICO #740's or with EICO 770 series or with EICO 760 series

Size: 7¼" x 2¾" x 1½", weighs only 19 oz. . . . fits comfortably in hand, slips easily in jacket pocket.

NEW VERSATILITY WITH NEW DELUXE 770 SERIES

	Kit	Wired
Model 770†: 117 VAC only	\$79.95	\$109.95
Model 771†: 117 VAC and 6 VDC*	89.95	119.95
Model 772†: 117 VAC and 12 VDC*	89.95	119.95

†U. S. Patent #D-190,970 *Including Posi-Lock Mounting Bracket

"A steal . . . Better than manufacturing specs . . . Publisher Cooper reports base-to-mobile contact out to 22 miles consistently, often to 40 miles . . . Thorough manual is almost a handbook for CB radio."—CB HORIZONS

Front panel selection of one of 3 transmit crystals with continuous receiver tuning over all 23 CB channels, or a fourth transmit crystal with appropriate receiving crystal. Press-to-talk button on microphone; transmit-receive switching accomplished by high-quality relay with minimum capacity between contacts to prevent current leakage at RF frequencies. Superhet receiver with RF stage for high sensitivity & proper signal-to-noise ratio. 1750 KC IF strip for unequalled image rejection & freedom from oscillator "pulling" on strong signals. IF strip realigned so that only "touchup" alignment without instruments is needed. Current metering jack in series in cathode circuit allows checking of input power to transmitter final and adjusting it to FCC limit. 13-tube performance (4 dual function tubes, 4 single function tubes, plus germanium diode). Adjustable squelch control (in addition to automatic noise limiter). Optimum adjustment to any popular CB antenna assured through use of variable pi network in output. AVC. 3" x 5" oval PM speaker. Supplied complete with 8 tubes & 1 transmit crystal (extra crystals \$3.95 each).



The entire transmitter oscillator circuit and RF final in every EICO transceiver, kit and wired, is pre-mounted, prewired, pretuned, and sealed at the factory (about 3 hours of skilled labor, precision adjustments and testing), complying with FCC regulations (section 19.71, part D). This permits you to build the kit and put it on the air without the supervision of a commercial radio-telephone licensee.

STANDARD 760 SERIES



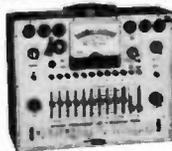
	Kit	Wired	*Including Posi-Lock Mounting Bracket
Model 760: 117 VAC only	\$59.95	\$89.95	
Model 761: 117 VAC and 6 VDC*	69.95	99.95	
Model 762: 117 VAC and 12 VDC*	69.95	99.95	

Same uncompromising engineering, same care and precision, and largely the same circuitry as in 770 series (above), lacking only multiple-channel transmitting, crystal receiving, and push-to-talk microphone.

BEST BUYS IN SERVICE INSTRUMENTS: everything from Scopes to Probes



DC-5 MC 5" Scope #460.
Kit \$79.95
Wired \$129.50.
Also available—
5" Push-Pull Scope #425.
Kit \$44.95
Wired \$79.95



Dynamic Conductance Tube & Transistor Tester #666
Kit \$69.95
Wired \$109.95
Complete with steel cover & handle

EICO, 3300 N. Blvd., L.I.C. 1, N.Y. CB-3

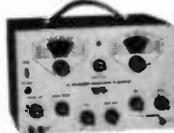
- Send Free 32-page catalog & Distributor's name.
- Send Free Schematic of Model No. _____
- Send new 36-page GUIDEBOOK TO HI-FI for which I enclose 25¢ for postage & handling.

Peak-To-Peak VTVM #232 & †Uni-Probe®. Kit \$29.95
Wired \$49.95
VTVM #221 Kit \$25.95
Wired \$39.95



†Pat. #2,790,051

TV-FM Sweep Generator & Marker #368
Kit \$69.95
Wired \$119.95



Name _____
Address _____
City _____ Zone _____ State _____

Export Dept., Roburn Agencies Inc.,
431 Greenwich St., New York 13, N.Y.

Add 5% In West

Meet Aunt Enna And Her Family

a look at CB's most important relative

By JIM KYLE, 10W0901
CBH Technical Editor

Aunt Enna is a mighty popular gal in the radio business; in fact, she's to be found in every station. Furthermore, we'd be in a heckuva shape without her.

But our old friend Aunt Enna has a multitude of disguises and aliases, which on occasion tend to confuse even the most experienced engineers. One example is her latest nom de guerre: "Log Periodic Antenna." Reams of paper have been spent in attempts (not very successful ones) to pierce the mysteries of that particular disguise.

We're not going to add to such confusion here; what we're setting out to do in these paragraphs is to introduce Aunt Enna and her family, in virtually every disguise she may assume in your CB station (base type only—mobiles were covered in January). The purpose is to remove confusion, not to add more.

For simplicity, let's start out with a version so basic that you hardly ever see one up any more—in fact, you may never have heard of it, but it's the basis of almost all others. This is the vertical half-wave dipole antenna.

The vertical half-wave dipole consists of a length of wire exactly one-half wave in length (this is $5\frac{1}{2}$ meters for CB, or about 16 feet). It's insulated at each end, and is also broken in the middle by an insulator. The feedline connects at the center, the center conductor of the coax going to one of the halves of the wire and the outside shield going to the other. The name is derived as follows: vertical, because the wire is stretched vertical; half-wave, because of the half-wave length; dipole, because it contains two (di means two) pieces of wire, or "poles."

When RF comes up the feedline to this antenna, it causes a "standing wave" of current to appear on the wire. This standing wave is not to be confused with the feedline standing wave referred to in the term "standing wave ratio"; a standing wave on the antenna is necessary for antenna operation. This standing wave produces the radiation, by coupling to free space (the mechan-

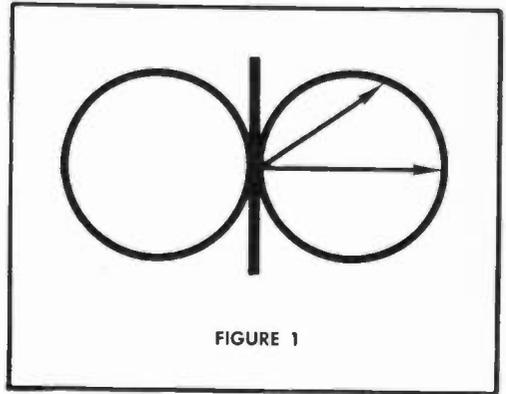


FIGURE 1

Free space radiation pattern of a half-wave antenna. The antenna shown here is mounted vertically, with the signal radiating away from the dipole at a plane perpendicular to the earth.

ics of this operation are quite involved; take our word for it that this is what happens).

Like most CB antennas, the vertical half-wave dipole is omnidirectional. That is, it radiates equally well in all directions. Most of the radiation is produced by the center portion of the antenna, near the feedline connection—and since FCC regulations limit the tip of the antenna to a 20-foot elevation,

this means that the effective part of this antenna is located only about 12 feet above the rooftop.

Since this antenna is so little used, we won't devote much more space to it. The main reason for mentioning it at all is that this is the antenna which ties all other types together; different though they may appear to the eye, all current CB antennas are variations of the vertical half-wave dipole. You might say that this is Aunt Enna, without a disguise—in fact, without even any makeup!

A big problem in practice with the vertical half-wave dipole is the matter of keeping the feedline from fouling up the antenna performance. Since the feedline shield is metal, it tends to nullify the action of the lower leg of the antenna.

This has been overcome by making the lower leg out of hollow tubing instead of wire, and running the feedline up inside this tubing (the upper leg, for that matter, is frequently made of tubing or spring steel also). This version is known as the coaxial antenna, since the feedline is coaxial (on the same axis with, or inside) to the lower antenna leg. The coaxial antenna is widely used on Class B CB and on ham VHF frequencies, but has seen relatively little service on Class D frequencies. It has the same characteristics as the vertical half-wave dipole.

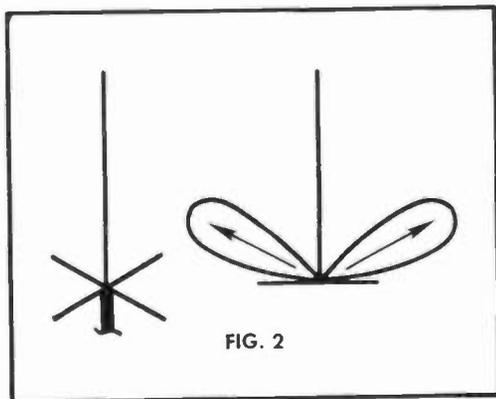
The next variant, though, is possibly the most popular of all CB antennas for base-station use. Take an imaginary coaxial antenna and cut the lower tubing up the side in four places. In other words, give Aunt Enna a set of slit skirts. Now bend these four segments of the skirt up to a horizontal or near-horizontal position. Presto—a ground plane!

The ground plane antenna has a number of advantages which contribute to its widespread popularity. In addition to being omnidirectional, it has a lower "angle of radiation" than many other types of antenna. This means that it squirts the signal out more parallel to the ground than the other types do, and as a result provides greater working

range than does the vertical half-wave dipole or the coaxial.

In addition, the ground plane's active part is only half as high as that of the dipole or the coaxial, making the physical installation of the antenna less of a problem.

At least one manufacturer puts out a "monopole" antenna, similar in appearance to a ground plane but having a doubled-over vertical element instead of a single straight piece of tubing. By doubling the element over, one of the two vertical tubes may be grounded while the feedline connects to the other. Electrically, the antenna is identical to the ground plane so far as RF is concerned—but it now also acts as an A-number-one lightning rod to boot, if you ground the radials directly to a water pipe or other good ground system!



Ground plane antenna exhibits radiation pattern above the horizon. This normally means a stronger sky-wave signal, shorter ground-wave range. Special loading coils and configurations present in many ground planes for CB lower the angle of the signal close to the horizon for improved ground wave coverage.

All the antennas described so far suffer from two limitations in common—their most effective portions are limited to a 12-foot altitude, and they're effective over only a narrow band of frequencies.

A wild-looking device, recently introduced to the CB market by the Stinger people, overcomes both these drawbacks. This gadget is called the discone.

Despite its looks, the discone is a rather close relative of the ground plane. To see how this comes about,

let's go back to their common ancestor, the coaxial antenna.

You'll remember that we split Aunt Enna's skirts in four places to develop the ground plane. Let's do it again, but split them in several hundred places. Say, every hundredth of an inch, like a hula skirt.

Now, lift all these strips out until they form an angle of 60 degrees with their original position. You now have a sort of skeleton cone, and Aunt Enna is feeling a bit exposed. Since the skeleton cone acts to the RF just as if it were a solid sheet of metal, let's give Aunt Enna some sheet-metal covering over that skeleton.

We still don't have the disc, though. To get that, we have to go to the theory book where it says that the physical length of an antenna is somewhat dependent on its diameter. For instance, an antenna built out of 3-inch tubing will be shorter, for the same frequency, than one build from No. 20 wire.

Now, let's take the upper element of the coaxial antenna and start thickening its diameter. As we spread it out, we must also shorten it. As we continue, we spread it out and shorten it so much that it becomes a thin disk of sheet metal—and in combination with Aunt Enna's covered-over hula skirt, we have a disccone antenna.

However, in the process we have done several other things too. The most effective part of the antenna is still that part near the feed point—but now the feed point is less than an inch below the top of the structure, giving us 8 feet more legal altitude.

In addition, the bandwidth goes up as the structure changes. In the case of the disccone, it becomes almost infinite. The explanation involves much mathematics, as well as some knowledge of microwave waveguide action, but in effect a CB disccone will operate just as well on the 6, 2, or 1½ meter ham bands as it will on 27 megacycles. In fact, it will also give fine results on a number of TV channels, police, fire, taxicab, and other commercial frequencies. One disccone designed for ham use covers the frequency range from 13.9 megacycles

to more than 500 megacycles with equal performance at all points in this range!

Another popular antenna for CB use is the colinear design. The antenna dubbed a "colinear" by advertising men for CB use is not a true colinear, since it has no phase shift between sections; basically, it is a vertical half-wave dipole which is fed at the bottom end through a special "launcher" matching network rather than at the middle. Its performance is about the same as that of the coaxial or a good ground plane.

So far, we've talked only about omnidirectional antennas. Despite some advertising claims, no omnidirectional antenna of any legal size can give you any useful gain; gain is obtained only by

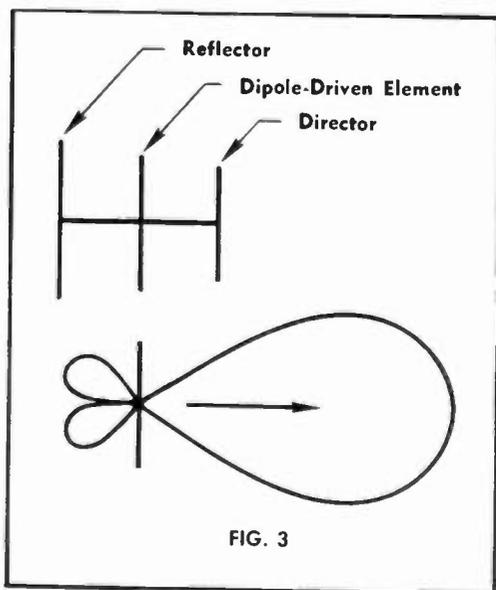
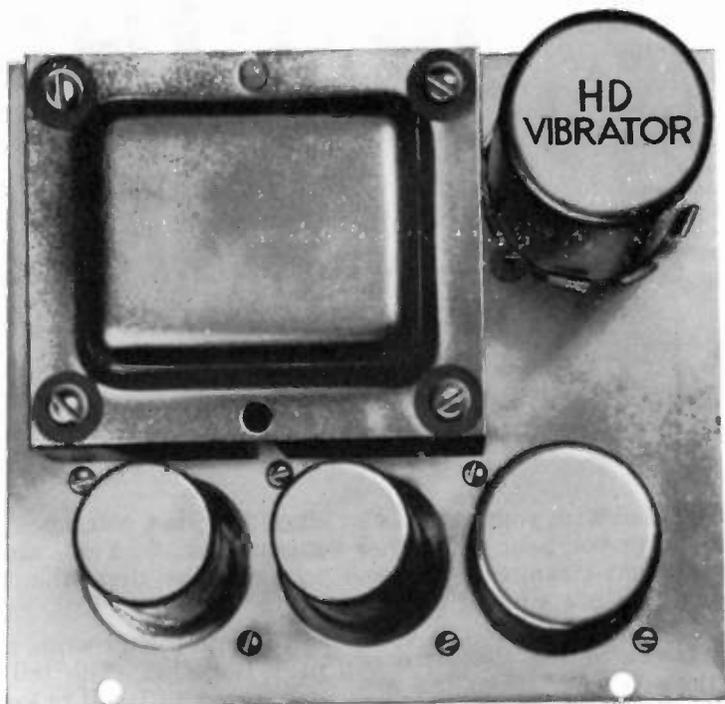


FIG. 3
Three element beam mounted in the vertical position and its radiation pattern. Pattern exhibits maximum power in a forward direction (arrow), compressing the signal of the free-space dipole into a single direction. The long element in the rear is the reflector which serves to reinforce the dipole radiating signal. The front element is the director.

squeezing the antenna's radiation pattern, since you have only so much power to work with (usually about 3 watts of RF). Squeezing the vertical radiation pattern requires structures too large to fit into our 20-foot limit; you might try stacking a pair of disccones for 3 db gain, but this is hardly a useful amount.

However, you can get gain, and in

(Continued on Page 34)



CB MOBILITY?

This rugged power supply with heavy duty vibrator is the heart of e.c.i. Courier 1's versatility for mobile or base use. It is one of five key components in the Courier 1 unitized chassis . . . and offers built-in 110 volt power for base station use and built-in 12 volt power for mobile use. Add to this an extremely effective noise limiter plus cadmium plated metal parts for marine use. Want more good reasons why CB experts say Courier 1 is great? See for yourself. Check these features:



write for free brochure

\$189.50

Slightly higher west of Rockies

- 12 CHANNEL TRANSMITTING
- 23 CHANNEL TUNABLE RECEIVE
- 4 POSITION FIXED RECEIVE
- BUILT-IN SQUELCH
- LOWEST NOISE FRONT END (NUVISTOR)
- ELECTRONIC SWITCHING (NO RELAYS)
- MORE THAN 3 WATT OUTPUT
- BETTER THAN 15 WATT CAPABILITY
- FRONT PANEL RF GAIN CONTROL
- BUILT-IN "S" & "RF" METER
- FULLY MODULATED (100%)
- ENTIRE UNIT SLIDES OUT ON TRACKS

(Limited to 5 watts input by present FCC regulations)

e.c.i.

electronics communications, inc. 325 no. macquesten pkwy. ml. vernon, n.y.

NEW-VISTA

*of receiver
performance*

← *CB TURNS TOWARDS
MISSILE-AGE ELECTRONICS!*

By **JIM KYLE, 10W0901**
CBH Technical Editor



Are you satisfied with your receiver's performance? Can you hear your other units from as great a range as you desire? Or could you use a bit of a boost in the gain department?

If your answer to the first two of these questions is "no," then the answer to the third must be "yes". One of the simplest methods of boosting the sensitivity of your receiver is to add an "outboard" preamplifier; such a gadget connects between the antenna and the receiver, and can improve receiver performance by, literally, a hundredfold.

But to get this great increase in performance, many factors have to be considered in preamp design; just any tube in any circuit won't do. Special tubes having high gain and low noise are necessary, and careful selection of circuits is also a must.

One of the best tubes available for this purpose, at any price, is the new RCA "Nuvistor" type 6CW4. This thimble-sized and -shaped bottle, selling for less than \$2.50, outperforms those fabulous 416Bs with the gold-plated grids you may have heard of.

The preamp described here, built around the 6CW4, gives you a gain boost of at least 100 times (20 db.), with a "noise figure" of approximately 4 db. This "noise figure" means simply that this preamp has only 4 db. more noise than a theoretical perfect amplifier with no noise at all; such a zero-noise amplifier is a physical impossibility but it

does provide a reference point for noise measurement. Few amplifiers have lower noise than the one described here.

To build this preamp, first get all the parts together. The only item which may prove difficult to locate is the special socket required for the tube; this is available from any of the large mail-order houses if you can't get it locally.

Next, cut the chassis and shield plates to size as shown in Fig. 1, and drill all necessary holes. After the holes are deburred, mount the socket and terminal strip in place. You'll have

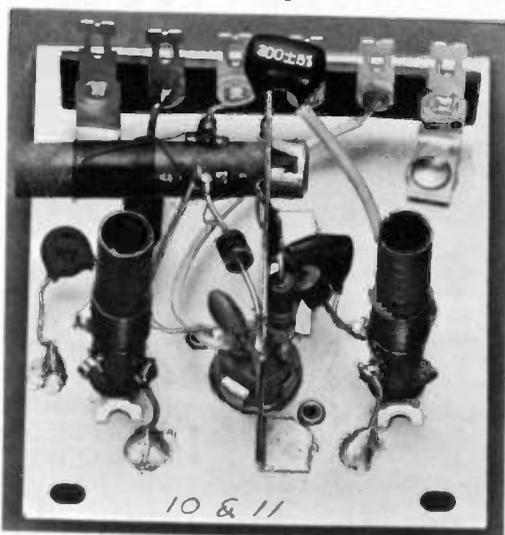


Photo of the underside of the CBH Nuvistor preamp. As you can see, it is not a difficult project.

requires about 18 inches of wire.

Strip the insulation from one end of the wire for about an inch, and solder this end of the wire to the outer terminal of the form. Clamp the other end of the wire in a vise, stretch the wire taut, and then wind the coil by keeping the wire taut while rotating the form. It's actually not as hard as it sounds; with a little practice, you'll have no difficulty winding a professional-looking coil.

After the 17- $\frac{3}{4}$ turns of wire are on the form, use a piece of cellophane tape to hold the wire in place temporarily. Strip the insulation from the wire at the point where it meets the inner terminal of the form, and solder it. Then paint the coil with "coil dope" or Duco cement to hold the wire more securely.

Now, at the inside end of each of the coils, wind a 1-turn link. Twist the leads of the link together for now; later, you'll connect them to the input and output terminals.

Coil L3 is wound in similar fashion, but it consists of 60- $\frac{1}{4}$ turns of No. 35

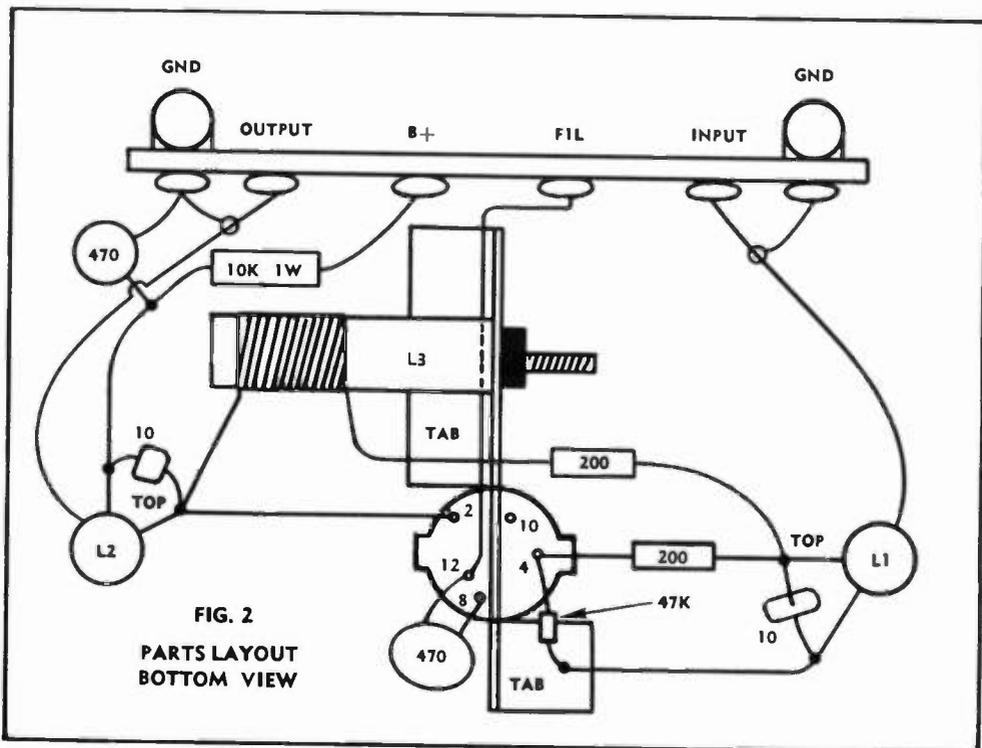
wire and has no link winding. The No. 35 wire is only slightly heavier than a filament of spider web; you'll have to be careful when pulling it taut. For this coil, a 52-inch length of wire is required.

After the coils are completed, mount L1 and L2 on the chassis plate and L3 on the shield plate as shown in the parts layout, Fig. 2. Now, you're ready to connect things up.

Wire the filament lead first, keeping it close to the chassis. Next, connect the link leads from L1 and L2 to the input and output terminals, respectively. Connect L2 into the plate circuit as shown, and wire L1 into the grid circuit. Finally, connect L3. Check all connections carefully for possible errors, and you're ready to try it out. Before use, though, the preamp must be aligned.

This preamp requires 6.3 volts AC for the filament, and 150 volts DC for the plate; check the schematic diagram for your transceiver to determine

(Continued on Page 42)



THE RHOMBIC

CB's "DREAM ANTENNA"

PART I

By GORDON J. KING, 17W2432

Have you ever dreamed of an antenna system that would amplify your CB transmitter signal to a level comparable with say a 250 watt transmitter?

You have? Well read on, for here is just such an antenna, with all the physical problems and erection headaches that must go along with anything so powerful and effective.

The Rhombic antenna is wire in construction, with a sprinkling of ceramic insulators thrown in to keep it taut and away from nearby foreign objects. The Rhombic antenna is large . . . very large . . . and only those CB'ers with a fair piece of property to play on will want to tackle its construction.

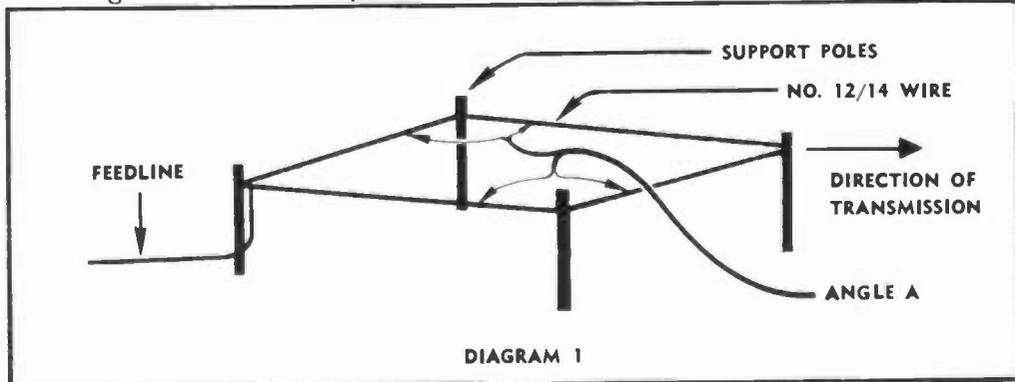
As diagram one shows (a horizon-

and then a reading of only '10' 150 yards either side of the center 100 yard strong signal area point. Running around to the sides of the antenna, and keeping about 5 miles "out", the signal level registered from 0 to 15 all of the way around. In other words the signal off the front of the Rhombic is nearly 16 times as strong, in relative field strength, as off the nearest competing side lobe point.

Truly, this is a directional antenna!

So what good is it? You can't rotate it, it makes a poor clothesline 30-50 feet above ground, and it may cost you as much as \$50.00 to install.

In my installation, I need to cover 37 miles over flat mid-western grassland



tally mounted Rhombic), the beast is diamond shaped and fires in one direction . . . away from the end to which the feed line is attached. You really can't imagine how directive a horizontal rhombic is until you run out in front of one with a horizontal dipole (at a distance of five miles or so) and a field strength meter. On my test installation in Kansas, I found a meter reading of '200' (just relative field strength—forget how strong this may or may not be) in a path 100 yards across at five miles,

with consistent signals S5 over better. I don't want to be bothered by skip, and if a mobile unit happens across my channel someplace between here and my 37 mile communications point, I don't want him clobbering my communications. On top of this, I don't want my signals heard in any of the neighboring towns, if I can help it!

The Rhombic fills this bill because it allows me to pinpoint my 5 watt signal within a fraction of a mile at 37

(Continued on Page 35)

CANADA HEADS FOR 11-METERS

By MITCH MACKENZIE, XN2????

CBH Canadian Correspondent

As has been mentioned briefly several times in CBH, "Canada is rapidly approaching on the air" for our own CB-type service. The service, in Canada called the "General Radio Service," should be in full swing within the next few months.

The whole concept of the GRS is to make it possible for individuals, small business and light industry to operate private radio systems for local communications between GRS stations within the groundwave coverage of the stations involved. It's anticipated that the regulations covering the GRS will not provide for communications with citizens in other parts of Canada outside the groundwave coverage area of the stations involved nor with citizens in other countries.

While the terms of the convention between Canada and the U.S. provide for Amateur stations of one country to operate in the other country, there is no provision to permit similar operation in so far as the United States' CB'ers and the Canadian GRS'ers (pronounced "Gressers") are concerned.

Channel allocations have been established for the GRS which correspond directly with US-CB Channels 4 through 22.

The following are some of the technical requirements which the Canadian 11-meter operators will be living with:

1. The gain of all antennas used shall not exceed 3 db with reference to a half-wave dipole.
2. Special forms must be completed if the "base" station is within 3 miles of an aircraft landing area and is to be located on a new structure.

3. When between 3 to 6 miles of an airport, a special form will have to be completed if the antenna is to be mounted upon an existing structure over 20 feet in height.
4. Beyond 6 miles from an airport, GRS'ers will be allowed a 30 foot high antenna without special forms.
5. Super-regenerative receivers will not be permitted.
6. All equipment must be type approved.
7. The plate power input shall not exceed 5 watts.
8. Transmitter frequency stability must be 0.005% or better.
9. Spurious radiation must be at least 50 db below the carrier level.
10. The power measured across the receiver antenna terminals shall not exceed 1000 pico watts.

We have interviewed a number of Canadian manufacturers about their plans to bring forth GRS transceivers. It seems that all American made sets brought into the country (Canada) will be subjected to 22 percent import tax. Obviously this gives the Canadian home boys a head start in producing a competitive unit for less money. A number of small Canadian firms have purchased or are negotiating to purchase manufacturing rights on American CB sets. Others are bringing out their own units from scratch. One of the most interesting units we found was the model now under development at Delta Electronics in Toronto. Delta is

(Continued on Page 51)

INCREASE COVERAGE

WITH MARK STATIC SHEATH* CITIZENS BAND ANTENNAS

Eliminates Noisy Precipitation Static . . . Improves Signal-to-Noise Ratio . . . Affords up to 20 db Operating Gain . . . Increases Receiver Sensitivity . . . Extends Intelligible Coverage. Easiest to install.*

MARK II SUPER BEACON FIXED STATION ANTENNA with exclusive Static Sheath*

Design advantages of the new MARK II now make it possible to step up the efficiency of your CB operation, and maintain clearer communication over greater distances. 19 feet overall, the omnidirectional MARK II makes fullest use of the 20-foot legal length limit. Requires no radials or skirts. Provides 1 db gain over ground plane antennas. Employs a full half-wave radiator voltage fed through a special launcher-matcher cable section for excellent impedance match over the entire citizens band. Low angle radiation insures utmost efficiency and maximum contact with mobile units.

Patented Static Sheath* eliminates precipitation static*, greatly improves signal-to-noise ratio, increases receiver sensitivity, affords up to 20 db operating gain, increases coverage and readability. Improved mechanical features and extra-rugged base support pipe add to its reliability. Simplified clamp mounting makes installation easy.

Precipitation Static is caused by charged particles in the air impinging in a continuous stream on metal antenna radiator surfaces. It is revealed by a continuous hissing background noise. The patented Mark Static Sheath is a tough, durable, dielectric plastic covering that acts as an electrical insulator and eliminates static interference caused by the precipitation effect.

MARK HW HELIWHIP®* MOBILE ANTENNAS Top-Loaded, Step-Tapered . . . with Static Sheath*

This basic Mark development brings new efficiency, new compactness, new convenience to CB mobile communication, through its shortened mechanical structure. The Heliwhip* is molded Fiberglass designed to replace lengthy stainless steel whips and is far superior to whip and loading coil combinations.

The Heliwhip is top-loaded to provide the fullest operating efficiency. It can be located on the upper portion of the vehicle such as trunk lid, cowl, fender or hood to obtain proper ground plane. Step-tapered helical conductor provides uniform current distribution and important 50-ohm match.

Patented Static Sheath* eliminates precipitation static*, greatly improves signal-to-noise ratio, increases receiver sensitivity, affords up to 20 db operating gain, increases coverage and intelligibility. Single-hole mounting simplifies installation and easily permits blending with auto body style. Available in 18", 3', 4', and 6' models.

MARK HW HELIWHIP®* MARINE ANTENNA

Eliminates the need for metal ground plane. May be mounted on Fiberglass or wood surface, or on mast. Mark Static Sheath* increases efficiency. 6' long. Complete with mount and launcher-matcher cable.

See Your B & K Distributor or
Write for Catalog HW19-CB

*U.S. Pat. 2,966,679
U.S. Process Pat. 2,938,210



MARK HELIWHIP®*

Another Fine Product Line by

B&K MANUFACTURING CO.
Dept. CB-3, 1801 W. Belle Plaine
Chicago 13, Illinois



THE CBH-FSM

A ONE TRANSISTOR FIELD STRENGTH METER

HANDY AND EASY TO BUILD!

By **HERB FRIEDMAN, 2W6045**

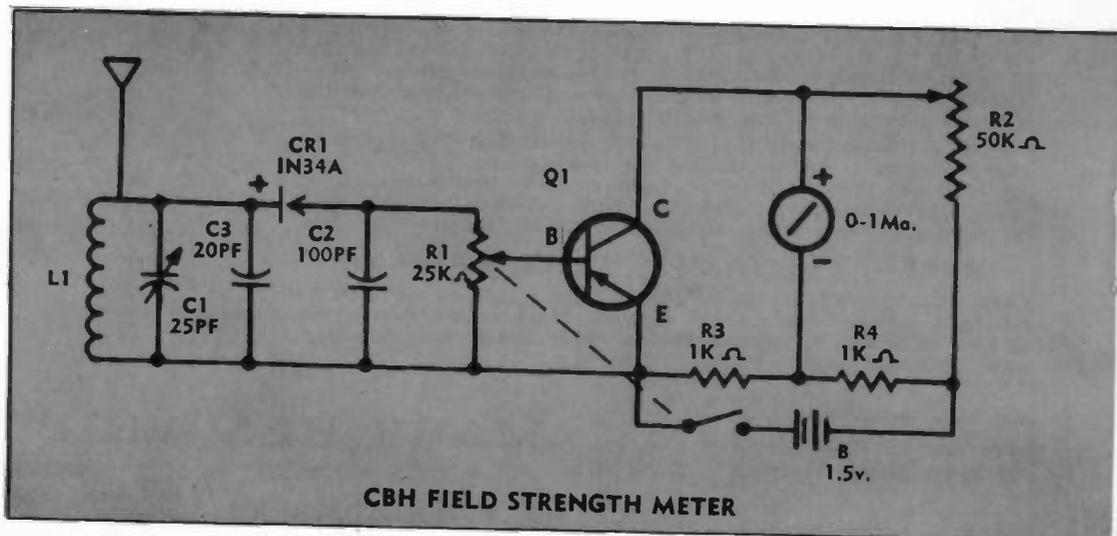
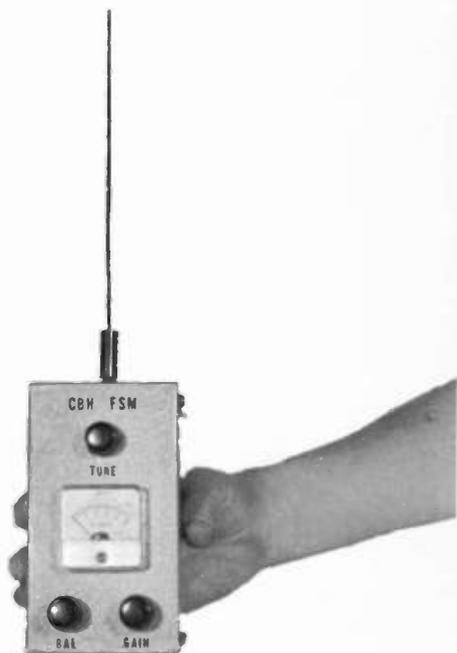
CBH Associate Editor

As you can guess, we get many letters asking for information about and construction articles on many different gadgets. By far the most consistent request is for a rugged, sensitive CB Field Strength Meter. Accordingly, we have wumped up what many of you indicated you want—an FSM, rugged because of a 0-1 ma. meter, sensitive because of the transistor amplifier, and self-limiting (you cannot "pin" it). And all for less than \$10.

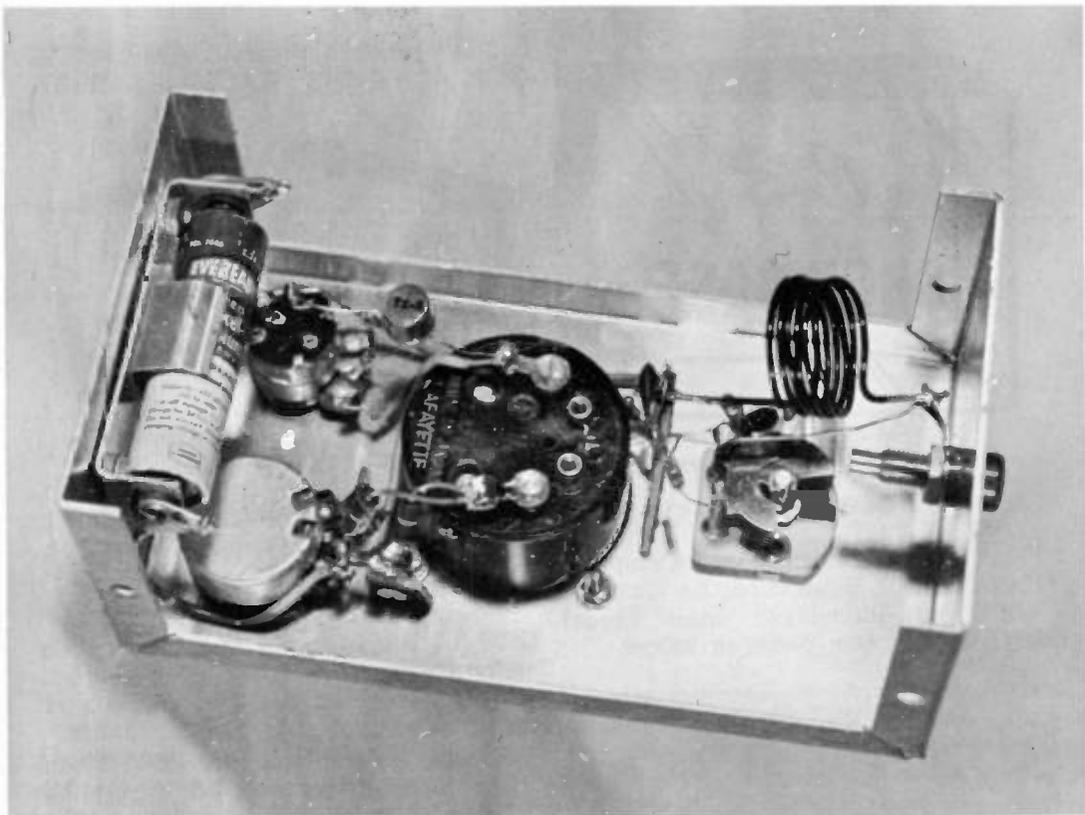
Construction

CBH's FSM is built on the front panel of a $5\frac{1}{4} \times 3 \times 2\frac{1}{8}$ inch Minibox. The antenna jack is mounted in the center of one end panel. The battery clamp is mounted on the other end panel.

L1 consists of 6 turns of #18 enamelled wire close wound on a $\frac{3}{4}$ " form; a short piece of dowel makes a fine form.



CBH FIELD STRENGTH METER



(No, Charlie, you remove the dowel after you wind the coil.)

The hole for the specified meter is cut with a 1½" knockout or chassis punch.

When soldering CR1 and Q1, make certain you protect the components from heat damage by using an alligator clip on each lead as a heat sink.

The antenna consists of ten inches of stiff wire attached to a banana plug. To insure good contact, use a solderless plug. (This type uses a set-screw for a pressure fit.)

Adjustment and Use

Set the gain control (R1) and the balancing control (R2) to full counter-clockwise. Ease R1 clockwise until the switch "clicks." If the meter reads off zero, rotate R2 until a zero reading is obtained.

Holding the FSM near a transmitter or antenna advance R1 ¼ clockwise; then tune C1 for peak meter reading. The FSM is ready for use.

At about 75% of full scale the meter "limits," preventing overload of the meter movement. When using the FSM, set R1 so the meter reads approximately ⅓ scale. Any change in transmitter or antenna adjustment will be indicated. The meter can be adjusted to any reference you desire by adjusting R1.

PARTS LIST

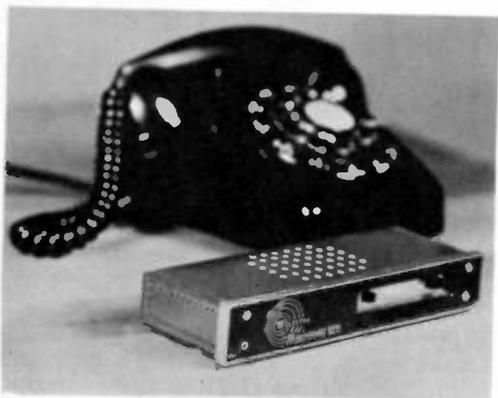
Resistors

- R1— 25,000 ohms miniature potentiometer with switch, Lafayette Radio VC-25
- R2— 50,000 ohm potentiometer
- R3, R4— 1000 ohms, ½ watt.
- C1— Hammarlund MAPC-25B
- C2— 100 pf. ceramic disc
- C3 20 pf. molded mica
- CR1— 1N34A
- Q1— Lafayette Radio SP-239
- M— 0-1 ma. Lafayette Radio "S" meter TM-11
- B— 1.5 volt penlight battery
- Misc.— banana plug, jack, battery clamp, terminal strips, etc.



**NEW CB PRODUCTS
OF THE MONTH**

The Electra International Company (1346 Foothill Boulevard, La Canada, Calif.) has introduced their Model MINIPHONE 600, pictured below.



The MINIPHONE 600 is a fully transistorized transceiver featuring miniaturized construction, plug-in antenna provision to permit connection to any type of CB antenna, provision for operation on either battery or 115 VAC. Has built-in automatic noise limiter.

Radio Publications (Box 149, Wilton, Conn.) has two publications of interest to CB'ers. The first, called HOW TO OBTAIN YOUR CITIZENS RADIO LICENSE, is a 36 page deal which you will find helpful in the fact that it pretty well explains the why's and how's of CB. Just the thing to keep around the CB rig to let others read when they start asking about your set up and how they can get one. Sells for a buck.

The second publication, ANTENNAS FOR CITIZENS RADIO SERVICE,



also a buck, runs 40 pages and gives some interesting theory on CB antennas. Also included is information on how to construct 8 types of antennas.

Creative Products, Inc. (6944 Plainfield Road, Cincinnati 36, Ohio) has brought out what they call "a highly efficient base loading coil which is an economical way of increasing the effectiveness of your present CB system by

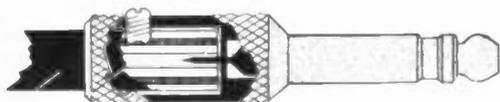


4 to 8 db." It weighs but 2 ounces and is encapsulated in weather-proof epoxy. Fitting standard $\frac{3}{8}$ -24 threads at the base of whips and spring mounts, the unit may be used with 102", 96" and 92" whips. Costs \$5.00. They also claim it will reduce receiver fading while your car is in motion, and allow proper matching of antenna to transmitter.

Turner Microphone Co. (901 17th St. N.E., Cedar Rapids, Iowa) has brought

out a new mike called the 254C. Designed for a CB base station installation, it is a desk type ceramic job with 80-7000 cps response and -54 db output. Has a touch bar on-off switch and lever lock on-off switch. The unit has the same insides as the Turner 350C mobile mike. Sells for \$14.10.

Here's an item we've tried ourselves and can attest to its usefulness. It's a coax connector which hooks up in 10



seconds with no soldering, no splicing, no stripping. All you do is chop the cable where you want it to end, jam the stub into the connector, tighten one set-screw and you're in business. If you've ever wrestled with a soldering gun and a coax connector you'll appreciate this gadget, which sells for only \$1.20 and comes in 4 models. Made by L&K Manufacturing Co., 1008 15th St., Denver, Colo. Dealers carry them too.

Communication Products Co., Inc. (Marlboro, N.J.), an old friend to many commercial radio users has come out with a new CB antenna designed for use in private and executive planes. Called Model 313-509, the antenna is a base loaded whip about 18 inches long with a streamlined fiberglass base housing the loading coil. Write them for info, say that Horizons sent you.

Ward Products Corp. (Amsterdam, N.Y.) informs us that they have come out with a unit called the L-COIL ANTENNA which permits reception of standard AM broadcasting stations while still functioning as a nifty CB antenna. Mounts in the spot where your present car radio antenna is and doesn't give your mobile unit that "communications van" look that some XYL's complain about. Write to Mr. E. L. Shaw, Director of Sales, at Ward for further data on this one.

OOPS Department

Page 18, February CBH, carried an article on a "Surplus CB Converter", referring the reader to General Surplus Sales, Bldg. 735, Oakland Airport, Oakland, California for the surplus 522 front end. The price given should have read \$4.00 each, NOT \$1.00 to \$1.50 each.

Our old friends at Hallicrafters in Chicago (4401 West 5th Ave.) have recently brought out a hand-held CB unit called the LITTLEPHONE CB-4. Having benefit of that famous (and slick)



"Hallicrafters look," the CB-4 weighs in at 1½ pounds and is fully transistorized. Has plug-in crystals, 1 uv. receiver sensitivity. Goes for \$89.95. Mr. L. P. Hench at the company will be happy to flood you with info on the unit if you drop him a card.

International Crystal (18 N. Lee, Oklahoma City, Okla.) reminds CB'ers



that they can supply their famous CB-CERAMIC mike as a separate component from their EXECUTIVE transceivers. A number of CB'ers have apparently written to them asking them if the mikes could be purchased separately. Costs \$13.95, plus \$2.20 for the metal desk-stand.

10-7

The CBH Lab Reports . . .

WE TEST

- ☆ Allied C-27
- ☆ 18-inch Heliwhip
- ☆ The "Web-Whips"
- ☆ Antenna Specialists M-73
- ☆ Cesco 4 Element Beam

Allied C-27

When we first opened the Allied Radio CB transceiver kit we were sort of overwhelmed by the number of components. However, after reading the instruction manual we were oriented, and construction proceeded rather quickly. It took an experienced kit builder 10 hours from start to fin-



ish. Because of the thorough manual and excellent pictorials, we estimate that it would take someone with virtually no kit experience only about 15 hours.

Allied not only supplies the resistors on a keyed card-mount, the wires are pre-cut to size and color coded; and to make things really easy, a generous quantity of free flowing solder is provided. Both the transmitter and receiver sections use a printed circuit board, you push in the parts and solder them—it's difficult to make mistakes.

The completed transceiver has some very nice features. The receiver is two

channels crystal control or variable tuned. Both the crystal and VFO oscillators are voltage regulated. The Crystal control double conversion utilizes two stages of 455 kc. I. F. A noise limiter and squelch is also provided. The transmitter uses third overtone crystals in a well laid out, easy to service circuit.

Both the receiver and transmit coils are pre-aligned, and by following the "received signal" alignment instructions you can align the receiver close to perfect without instruments. When we aligned with instruments there wasn't any improvement worth mentioning.

The C-27 gave very pleasing results. The selectivity is extremely good being virtually free of adjacent channel interference. An S-9 signal causes no adjacent channel interference; it took a mobile located 50 feet away before there was any interference.

The front end handles high level signals well, without any tendency to go into "shock." The receive audio quality is very good as is the squelch action. However, the noise limiter is only fair, high intensity noise produces a definite "pop."

The two channel transmitter delivered 2.2 watts into our Seco 510. The built-in limiter was very effective, limiting both the negative and positive peaks to exactly 100% on all three microphone options. The reserve microphone gain is good, and even a low level voice tripped the limiter.

Both the normally supplied crystal and the extras we ordered were within frequency tolerance.

The basic C-27 utilizes the speaker as a microphone for transmission. As might be presumed, when the speaker is used as a mike the audio quality is "squawk box," though it is completely intelligible at strong and medium signal strength. The convenience of the speaker-mike is good. Around the office we simply reach over and slap-down the transmit bar; at a 6 foot distance from the mike the readability is still good.

For better quality audio, either a

PTT mike or a handset can be used. We tried both getting good results; incidentally, you can use any of the three options at will by plugging in either a mike, handset or jumper plug—a very nice convenience.

Dollar for dollar the C-27 is a good buy, particularly from the standpoint of selectivity and microphone convenience.

The 18-inch Heliwhip

There probably isn't a CB'er around who hasn't used a Mark Mobile Heliwhip, or hasn't seen one of these interesting white antennas with the red tip, and wondered what it was.

Heliwhips are **continuously** loaded fiberglass whips, not just **loaded whips**. They are made under a U.S. Patent Office process patent.

Made in a variety of sizes ranging from 6 feet long to a mere 18 inches, we were tempted to "try 'em all" when given the opportunity to do a product check on the Heliwhip. Being that we were in Chicago at the time, and en-route to New York, we decided to take the 18-incher because it was the easiest to pack into a suitcase.

So there we sat in our room at the Palmer House Hotel testing what is probably the world's smallest CB antenna, only a foot and a half long.

Let's face it, it's not as good as a **full length** whip, it's not as good as either the 6 foot Heliwhip, or even the 4 foot (standard) Heliwhip—but it is **good!**

Without going into gain figures (which we certainly were not in a position to calculate at the time) we worked base to mobile (4 ft. Heliwhip on the mobile unit) with reliable communications over a 5 mile radius, with spotty communications out to 8 miles. A base station 15 miles away was received with good signals but we did not attempt a 2-way contact. Remember, this was inside the hotel on the 9th floor, facing into nowhere.

Comparing the results to other "little whips" we have tried in a similar manner, we would say that the HW-11-S18 Heliwhip did a bang-up job. Similar re-

sults were obtained with the same test in New York City, from within a steel-frame building.

Mark Mobile (5441 W. Fargo Ave., Skokie, Ill.) should market this little devil under the name "DYNA-MITE STICK," which it truly is.

The "Web Whips"

This is some type of first for CB Horizons. In one complete swoop, we are reviewing the Webster "Q-Top" mobile antenna, the Webster "49'er" mobile antenna, and the Webster models B Ball Mount and S Spring.

The entire Webster package was run through it's paces at one time, and as we found it such a joy to work with, we thought a "package review" would be in order.

Both the "49'er" and "Q-Top" antennas mount in standard ball mounts, with or without springs. So we commandeered passing 12Q2817 of Madera, California and before you could say "10-4" cut a nice round hole in the rear



"49'er" whip mounted on Model "5" spring, Model "B" ball mount. This installation on 2817's mobile.

of his Studebaker Lark and dropped the model B Ball Mount into place. The Ball Mount was quick to install, rugged and enhanced the appearance.

of the car, which after we have drilled our hole would have been a bit drafty without something to fill the hole! The Model S Spring screwed down on the Ball Mount as if it were made for it (it *was*) and we were in business, ready to test antennas. First the "Q-Top." One thing we noticed right away about both Webster antennas; Neither rain, nor sleet, nor hail . . . etc. would ever penetrate their exceedingly tough coating. Webster has a process of coating their antennas that leaves them very-much weatherproof. Not only that, they look good too.

The "Q-Top" screws down on the ball mount, and you are in business (assuming you have run coax to your rig). This is a 52 ohm antenna, and we found it matched up right on the nose with an SWR meter in the line. Overall height is 89 inches, plus the spring. The "Q-Top" consists of a 51½ inch specially coated whip section, and a 37½ inch loading section. The top whip portion gives with the wind, but being fiberglass in construction, it snaps back to attention when you slow down.

Next we hooked up the "49'er" by merely unscrewing the "Q-Top" and replacing it on the spring with the shorter version. In case you haven't noticed, it is 49 inches in height, fiberglass in construction and easily adjusted for minimum SWR by pruning the top loading coil (antenna is top-loaded). The top loading does a nice job of raising the radiation level on the antenna to the top of the whip . . . giving a few extra feet of effective antenna height.

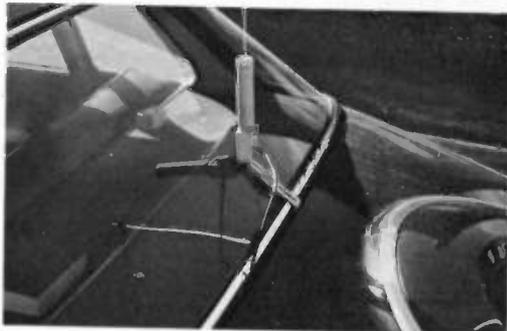
The SWR was low, and you can peak up on any channel if you feel like fooling with the factory pre-set adjustment which broad-bands the array.

Model "49'er" antenna sells for \$14.50 and model "Q-Top" lists for \$24.75. Webster hangs its antenna shingle at 317 Roebling Road, South San Francisco, California.

ANTENNA SPECIALISTS M-73

Looking for a mobile CB antenna that mounts in a few minutes, doesn't require ugly holes in the car's body, and works like a bomb?

Antenna Specialists Company (12435 Euclid Avenue, Cleveland 6, Ohio) recently shipped one of their new M-73 series antennas out to the CBH lab for a quick going over and check out. At the time the antenna arrived in California, CBH was moving to Oklahoma. So we mounted the M-73 (see photo)



on the back of Horizons' Valiant (12Q2339 unit four, Stan Searle, *Horizons' Art Director*), patted Stan and the Valiant tenderly and pointed them towards the Sooner state. Five days later we had the report.

"Needed CB 84 times," announced Stan (a good artist, yes; a navigator, no) as he pulled into ice bound Oklahoma City. Sure enough he had, extracting road directions, motel information, and weather reports all along Route 66 from the west coast.

As you can see, the M-73 antenna is one of those clever designs that mounts in the trunk groove. You simply drill two 7/32 inch holes in the trunk groove, drop in the metal screws AS/P provides, and cinch the whole thing down. The coax mounts through a sleeve which is just about the cleverest thing we've seen in a long time. You strip the braid back a couple inches, insert the poly into the connector, drop the sleeve over and tighten it down. This takes all of the strain off the connection point where the RG-58/U (provided by AS/P) and the base of the antenna combine.

With this clever arrangement you can use your trunk as before. The mount is adjustable vertically, so you don't have great problems getting the proper clearance from the trunk lid.

(Continued on Page 28)

DIRECTIONAL
VERTICAL MOUNT

CLOVER LEAF
PATTERN

EXPAND

YOUR COMMUNICATIONS RANGE

WITH *Cesco*

QUALITY-PROVEN* CB ANTENNAS

*PROVEN PERFORMANCE, DAY-IN DAY-OUT RELIABILITY, AS REPORTED BY THOUSANDS OF CRITICAL USERS

BEAM ANTENNAS 3-4-5 ELEMENT



CESCO has gone all out to bring CB operators the very finest light-weight high performance quality 11 meter beam line, featuring the exclusive CESCO Acromatch. Each antenna is constructed from 100% extruded aluminum tubing, heavy duty 1 1/4 inch boom, high tensile strength aircraft aluminum. No measurements or adjustments required. Special aluminum alloy clamps slide to marked position on boom and elements are inserted to pre-marked rings. All antennas factory tuned for exceedingly low VSWR over entire band, with center frequency on channel 11 (27.085). Each antenna is complete with instructions, hardware, everything you will need to put an outstanding signal into the air!

3 EL.

4 EL.

5 EL.

\$29.95

\$39.95

\$49.95

Power Gain-7 db

Power Gain-8 db

Power Gain-9 db

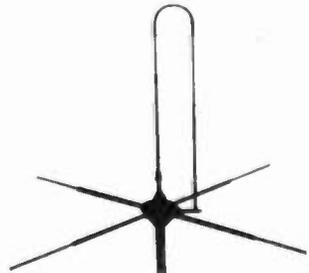
FOR GREATER GAIN, VERTICAL PARALLELING OF 3 OR 4 EL. WITH CESCO PARALLEL KIT RECOMMENDED.

Here is the antenna you can really rely on to get through when the "going is rough". Complete circular coverage pattern all the way around features exceedingly low VSWR with CESCO's exclusive Duo-Pole design. Special Duo-Pole acts to keep your signal down close to the horizon for extended base-to-mobile range. Super-fast assembly with CESCO's famous element ring locks (Pat. Pending). Pre-tuned for channel 11 operation (27.085), and complete with simple instructions for absolute resonance on any CB channel where you concentrate your operation. Mounts on standard 1 1/4 inch aluminum or steel mast. Weatherproof gaskets for long-life corrosion proof operation, minimizes precipitation static. Solid weather-proofed die cast aluminum base mount.

Net Price

\$29.97

DUO-POLE GROUND PLANE



CONTINENTAL ELECTRONICS & SOUND CO.

6151 Doyton Liberty Road, Doyton 18, Ohio

"CESCO PERFORMANCE IS PROOF-ASK THE MAN WHO OWNS ONE!"

CESCO 4 ELEMENT BEAM

By JIM GOULD,

CBH Mid-western Reporter

Bill Wyrick, 18Q6476, in Forrest, Indiana, is located ten miles west of my 10-20 in Kokomo. Bill's installation consists of an International Exec 50 and a popular brand $\frac{1}{4}$ wave ground plane, mounted on top of his two-story house. His signal here in Kokomo used to run S8 until he installed a Cescos 4 element beam. Now his signal runs well over S9! But that's not all the story.

At the time Bill bought the beam no one in this area was too much aware of the Cescos beam products. Bill's beam went together from the packing

ABOUT LAB REPORTS

CB Horizons has a policy concerning the type of material which appears in this section of the magazine. This policy has been spelled out a number of times to manufacturers, but never in print to CB'ers in general. In response to a large number of requests, here is that policy.

The CB Horizons Lab Reports section is for the primary purpose of acquainting CB'ers with new products in the field. It is the Horizons' policy to perform rudimentary check-outs and tests on the equipment submitted by manufacturers, and report on these tests to our readers, only if the tests are favorable. Lab Reports is not utilized for the purpose of 'knocking equipment', or pointing up bad points in equipment which may not yet be perfected. Our own reaction to the piece of equipment under scrutiny can best be judged by the reader by observing the interest which we place in the item. Antennas, rigs, accessories which do not meet specifications are not reviewed here. You simply won't read a bad report because we would rather print no report, than a bad one. In other words, we don't believe in knocking equipment in print. If we don't like it, we simply say nothing about it.

If the rig has been reviewed in Lab Reports, the reader can rest assured the equipment is everything the manufacturer says it is, and perhaps a little more.

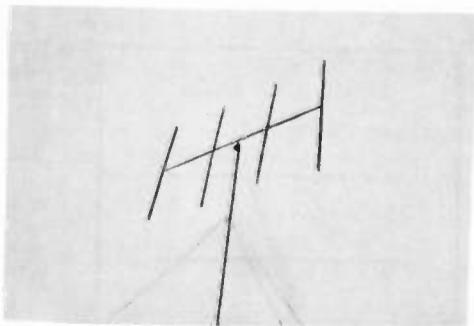
Ozzie

crate to the last bolt and nut in 45 minutes. Bill himself climbed up the tower carrying the beam, dropped it down on the TV rotar, and pushed the antenna up to the 'legal limit' (He has a TV antenna above the 11 meter beam). With the RG-8/u connected,

the SWR bridge went into the line. The antenna arrives from CESCO pre-set for the middle of the band. A slight bit of re-tuning was required, probably because the beam got jostled on the way up the side of the tower.

You can imagine our surprise when we went into the radio room and heard ground wave signals from other CB stations 90-110 miles north into Michigan! A station in Three Rivers, Michigan, was running S5 $\frac{1}{2}$ on the meter, and shortly after a station in Kalamazoo (145 groundwave miles) was copied!

Of course these conditions didn't last long, and when things quieted down Bill's consistent ground wave range was improved by 20 miles, or out to



55 miles in most directions.

Since Bill put up his beam, Paul Wrightsman—18Q2196, has erected a CESCO beam. Paul's net signal improvement over his previous ground plane is 2 S units, as verified by a number of CB'ers including 18B2321 in Marion, Indiana (24 miles).

CB'ers in the central Indiana area are very enthusiastic over the CESCO beam antennas, as evidenced by the fact that I have had one on order for nearly two weeks, and am still waiting for delivery.

As band conditions continue to get more crowded, and channel space becomes more of a premium commodity, a directive antenna with gain is a definite asset. 1962, I forecast, will be "beam antenna year" in many areas of the country with a large number of CB'ers.

10-7

1962 CB Antenna Directory

THE ANTENNA SPECIALISTS CO. 12435 Euclid Ave., Cleveland 6, Ohio

MODEL MAGNUM 27 ANTENNA

Half wave length, end fed, vertical antenna. Shunt fed and grounded radiator.

MAGNUM 27 \$28.43

MODEL M-1D ANTENNA

Complete mobile assembly includes chromed swivel base, chromed spring and 102" stainless steel whip.

M-1D \$11.97

M1 (Same as M-1D except has aluminum base and cadmium plated spring) \$8.97

MODEL MB24 ANTENNA

Bumper mounting assembly consists of double chain bumper mount with cable terminals, cadmium plated spring, stainless steel 102" whip, 20' RG-58/U cable and connector on one end, solder lugs on the other and whip hold-down clip.

MB-24 \$20.33

M-24 (same as MB-24 except single chain bumper mounting) \$17.60

MODEL M-33 ANTENNA

Complete kit for rear deck or side mounting. Coaxial base, spring, 102" whip, cable, gutter clip, 20' of RG-58/U cable and connectors.

M-33 PNA

MODEL M-52 ANTENNA

Cowl mounted antenna with continuously loaded 48" fiberglass whip. 5' RG-58/U and connectors.

M-52 \$9.95

M-53 (similar to M-52 but without mounting base) \$7.20

MODEL M-58 ANTENNA

48" continuously loaded fiberglass whip. Cadmium plated adjustable brackets permits mounting on vehicle trunks.

M-58 \$11.16

MODEL M-49 ANTENNA

Center loaded cowl mount antenna. Sealed loading coil, low VSWR. Extends to 60", retracts to 43". With 5' of RG-58/U with connectors.

M-49 \$9.96

M-59 (similar to M-49 but with assembly for mounting on trunk lid) \$9.96

MODEL ASP-189 ANTENNA

Front cowl mounting antenna fits same hole as auto antenna. Vinyl covered loading coil. Whip is 40". Has 6' of RG-58/U and plugs.

ASP-189 \$12.48

ASP-185 (similar but with clamp for mounting on rain gutter) \$12.48

ASP-63 (similar but with coax plug on base) \$7.77

MODEL ASP-239 ANTENNA

Portable antenna with tunable base coil and coax connector. 43" stainless steel whip.

ASP-239 \$16.40

MODEL M-67 ANTENNA

Base loaded mobile roof-top antenna. 44" high tapered steel whip. Solderless connection for lead. With 12' RG-58/U and connector.

M-67 \$15.68

M-73 (Trunk groove mounting) \$17.06

M-74 (Cowl or deck mounting) \$19.32

MODEL M-77 ANTENNA

Hybrid type with both vertical and horizontal polarization. Horizontal beam has 3 elements, vertical is a ground plane.

M-77 \$59.50

MODEL M-20 ANTENNA

Window mounting antenna for apartment buildings. 9' jointed aluminum radiator.

M-20 \$7.50

MODEL M-36 ANTENNA

One-half wave coaxial sleeve base station antenna. Aluminum radiator.

M-36 \$19.95

MA-36 (similar except with jointed skirt) \$21.00

MODEL M-37 ANTENNA

Three element vertical beam for base station. 18" high on 11' boom. Seven db. gain.

M-37 \$45.00

MODEL MC-27 ANTENNA

Base station ground plane. Aluminum 108" heat treated radials (jointed).

MC-27 \$15.95

MD-27 (MC-27 w. 50' RG-58/U) \$19.50

M-38 (Isolating skirt for ground planes) \$11.37

M-27 (ground plane with stainless steel radials) \$29.85

MODEL M-71 ANTENNA

Marine model including support tube, mounting and transmission line. Flex. steel 42" whip. Overall height 107" can be reduced to 71".

M-71 \$34.05

BROWNING LABORATORIES, INC.

100 Union Avenue, Loconio, New Hampshire

BASE STATION BEAM

Six element wide spaced vertical beam with 2-3 element sections on a one-half wave horizontal boom. 11 db. forward gain.

BEAM \$97.50

THE CITIZENS BANDERS

P. O. Box 698, Conoon, Connecticut

MOBILE ANTENNA

40" long for use on present mount or spring.

MOBILE NIICP

CLEAR BEAM ANTENNA CORP.

21341 Roscoe Blvd., Conogo Park, Calif.

MODEL GP-1 GROUND PLANE

Consists driven vertical element and three drooping ground plane elements.

GP-1 \$9.95

MODEL CBY3 3-ELEMENT BEAM

May be mounted either vertically or horizontally.

CBY-3 \$14.95

C.M.E. MANUFACTURING CO.

3754 Midway Drive, San Diego, Calif.

COAXIAL ANTENNA

Designed for marine installation. 16½" overall with fiberglass covered top section.

COAXIAL PNA

COLUMBIA PRODUCTS CO.R.F.D. 3, Columbio, S.C.
MODEL 72-0 ANTENNA

A two-section shortened coaxial antenna for base station and marine use. White fiberglass with chrome plated brass fittings. Length is 10'6".

72-0 _____ \$39.95

MODEL 10-3 ANTENNA

White fiberglass whip. Resonant length is 96".

10-3 _____ \$6.95

MODEL 74-0 ANTENNA

4' loaded fiberglass whip for attaching to rain gutter of car. Cadmium plated steel mounting hardware, 9-ft. RG-58/U and plug.

74-0 _____ \$14.40

MODEL 73-0

Gray fiberglass distributed loaded antenna with space wound coil inbedded in fiberglass laminate. 48" long.

73-0 _____ \$11.25

62-0 (similar to 73-0 but white) _____ \$15.90

MODEL 61-0 ANTENNA

Fiberglass ground plane with cadmium plated steel hardware.

62-0 _____ \$39.95

MODEL 146 ANTENNA "SLIM GEM"

Loaded whip. Air core space wound base coil molded with fiberglass laminate. Tapered 48" high. Brass, chrome plated base ferrule.

146 _____ \$8.95

CONTINENTAL ELECTRONICS & SOUND CO. (CESCO)

6151 Dayton Liberty Road, Dayton 18, Ohio

DUO-POLE MODEL

Constructed of aluminum with grounded one-quarter wave fold back radiator; lightning safety factor. Vertical radiator with 4 horizontal radials.

DUO-POLE _____ \$29.97

BEAM ANTENNA MODELS

Extruded aluminum tubing.

3 Element (7 db. gain) _____ \$29.95

4 Element (8 db. gain) _____ \$39.95

5 Element (9 db. gain) _____ \$49.95

CRATER LAKE ANTENNAS

P. O. Box 333, Old Chelsea Station, New York 11, N.Y.

MYTIE MOBILE ANTENNA

28" stainless steel radiator with 3 3/8" matching transformer at the base encased in resin. Base screws into antenna mount. 12 coax incl.

MYTIE MOBILE _____ \$17.95

DELUXE MYTIE MOBILE (similar to MYTIE MOBILE except different styling with base matched to color of your car) _____ \$19.95

MARINE MODEL ANTENNA

Ground plane effect with MYTIE MOBILE cart-ridge and radials. 12 ft. coax incl.

MARINE MODEL _____ \$26.96

CUBEX COMPANY

3322 Tonia Avenue, Altadena, California

MODEL CBQ CUBICAL QUAD ANTENNA

Quad for directional base station use. Up to 10 db. gain, low angle of radiation. 110" high. Fed with 52 or 72 ohm coax.

CBQ (Bamboo radial arms) _____ \$39.50

CBQ-FG (Fiberglass radial arms) _____ \$64.50

CUSH CRAFT

621 Hoyward Street, Manchester, New Hampshire

MODEL CG-11 ANTENNA

Economy ground plane with wire radials.

CG-11 _____ \$12.50

CG-11C (CG-11 with special adapter plate to which radials are attached) _____ \$15.00

MODEL CSG-11 ANTENNA

Self-supporting ground plane of all aluminum construction. Heat treated solid aluminum rod.

CSG-11 _____ \$16.05

MODEL CGP-11D ANTENNA

"Commercial quality" ground plane of all machined aluminum construction.

CGP-11D _____ \$25.00

MODEL CB-11

Three element beam with Gamma match loading. 8 db. gain. Aluminum tubing.

CB-11 _____ \$28.50

CB-11 DUAL (2 CB-11 beams for 11.5 db. gain) _____ \$97.50

G-C ELECTRONICS

Rockford, Illinois

MODEL 29-740 ANTENNA

Ground plane kit complete with mast and coax. Aluminum.

29-740 _____ \$25.50

29-742 (w/o mast and coax) _____ PNA

29-730 (wire radials w. mast and coax) \$23.85

29-732 (wire radials w/o mast and coax) .. PNA

MODEL 29-700 ANTENNA

102" stainless steel whip.

29-700 _____ \$6.90

29-702 (100' whip) _____ \$6.90

MODEL 29-710 TEL-COIL WHIP

48" tapered fiberglass "loaded" whip.

29-710 _____ \$7.20

MODEL 29-706 ANTENNA

101" fiberglass tapered whip.

29-706 _____ \$8.40

MODEL 29-712 TEL-E-SCOPE WHIP

Chrome plated, 101" extended, 32" collapsed.

29-712 _____ \$4.80

MODEL 29-734 ANTENNA

End fed dipole for base stations. 17' in height.

Coaxial launcher assembly with coax connector.

29-734 _____ \$21.95

GENERAL ELECTROMAGNETICS CORP.

11719 E. Washington Blvd., Whittier, Calif.

OMNI-SLOT ANTENNA

Two inches high with efficiency equal to 108" whip—same gain. Omni directional horizontal pattern for car top.

OMNI-SLOT _____ under development

GOTHAM

1805 Purdy Avenue, Miami Beach, Florida

V40 MODEL ANTENNA

Vertical 23 foot antenna. No guying. Base loaded. For base station.

V40 _____ \$14.95

GROVE ELECTRONIC MANUFACTURING CO.

4103 West Belmont Ave.

Chicago 41, Ill.

MODEL GP-27

Special ground plane antenna, all aluminum.

GP-27 _____ \$8.99

COMMAND HOT-ROD MODEL

4 ft. continuously loaded fiberglass whip, with trunk lid mount.

COMMAND HOT-ROD _____ \$8.69

COMMAND CORSAIR MODELS

102" steel whip with bumper mount and heavy spring.

CCB-1 _____ \$8.99

CCB-2 (double bumper mount) _____ \$9.99

CS-2 (heavy duty body mount) _____ \$6.89

MODEL CGP-1 COMMAND

Heavy duty ground plane with solid aluminum radials.

CGP-1 _____ \$11.99

MODEL CCA-1 COMMAND COURIER

Center loaded whip. Fits standard mount.

CCA-1 _____ \$3.99

GYRO ELECTRONICS CO.

36 Walker Street, New York 13, N.Y.

MODEL DGP-27 ANTENNA

Ground plane with isolating skirt to lower radiation angle. Consists of a vertical radiator, 4 drooping ground planes at the base of the radiator and an additional set of 90° ground planes one-half wave below the upper set.

DGP-27 _____ \$16.95

SGP-27 (w/o isolating skirt) _____ \$11.95

H & L ELECTRONICS

P. O. Box 125, Medford, Oregon

MODEL LW-1 ANTENNA

48" mobile whip (base loaded) with 18 feet of coax and all mounting hardware. Tapped coil matching.

LW-1 _____ \$10.95

HI-PAR PRODUCTS CO.

347 Lunenburg St., Fitchburg, Mass.

MODEL CO-27

Sleeve-type coaxial antenna; all-aluminum construction.

CO-27 _____ \$14.95

MODEL UB-27

Ground plane antenna with adjustable gamma match feed system. Seamless aluminum with stainless steel fasteners.

GP-27 _____ \$16.95

HY-GAIN ANTENNA PRODUCTS

1135 N. 22nd, Lincoln, Nebraska

MODEL CW ANTENNA

44" telescoping whip w. loading coil.

CW _____ \$5.97

MODEL CD ANTENNA

Telescoping rabbit ear dipole.

CD _____ \$13.17

MODEL TLW ANTENNA

Top loaded mobile whip.

TLW _____ \$5.37

TLW-T (Telescoping) _____ \$5.97

TLW-M (w. body mount and coax fitting) _____ \$7.17

MODEL CMR ANTENNA

Base loaded rooftop whip w. mount.

CMR _____ \$8.97

MODEL W-102 ANTENNA

102" stainless steel whip.

W-102 _____ \$4.35

FW-102 (Fiberglass) _____ \$8.37

MODEL SGP ANTENNA

Aluminum ground plane.

SGP _____ \$16.17

GP-1 (Heavy Duty) _____ \$26.25

CLR (Colinear GP with 3.4 db. gain, 3/4 wavelength) _____ \$29.97

MODEL 113-B ANTENNA

Nine db. gain with aluminum 3 element beam. 16 1/2 ft. elements. Vert. or Horiz. mounting.

113-B _____ \$31.50

MODEL CLR ANTENNA

Colinear ground plane. Three-quarter wavelength high.

CLR _____ \$49.95

MARINA COMMUNICATIONS

11527 Washington Blvd., Los Angeles, Calif.

MODEL GB-11 GIZMOTCHY ANTENNA

Beam antenna with both vertical and horizontal polarization. 8 db. gain. Gamma match loaded. Made of aluminum. 9 elements.

GB-11 _____ \$55.95

SWB-4 (GB-11 selector box) _____ \$ 7.50

GBV-11 (Vert. only Gizmotchy) _____ \$44.95

MODEL GP-11 BUDDY ANTENNA

Drooping groundplane made from aluminum.

GP-11 _____ \$19.95

MODEL BW-11 BUDDY WHIP ANTENNA

"Ten db. gain over bumper mounted antennas" claimed. Lowers from driver's seat. Fiberglass construction. 96" long. Mounts on rain gutter.

BW-11 (Black) _____ \$19.95

BW-11 (Colored) _____ \$24.95

HERB KRECKMAN CO.

Cresco, Pennsylvania

KRECO MODEL CO-CBA ANTENNA

All aluminum coaxial sleeve antenna. Exceedingly heavy duty.

CO-CBA _____ \$41.25

MODEL CP-CBA

Co-plane with 3 db. gain, coaxial type with skirt. Very heavy duty, must be guyed.

CB-CBA _____ \$93.75

MARK MOBILE, INC.

5441 W. Fargo Ave., Skokie, Illinois

MODEL CBB-1 "BEACON" ANTENNA

One-half wave radiator. No radials or skirts. Special one-quarter wave matcher for low SWR.

CBB-1 _____ \$19.95

MODEL HW HELIWHIP ANTENNAS

Continuously loaded fiberglass whips.

HW-11-4 (500 kc. bandwidth, 2:1 SWR) _____ \$9.95

HW-11-5 (750 kc. bandwidth, 2:1 SWR) _____ \$9.95

HW-11-6 (1 mc. bandwidth, 2:1 SWR) _____ \$10.95

HW-11-259 (HW-11-4 with UHF plug on bottom) _____ \$9.95

HW-11-S4 (4' Light duty model HW-11) _____ \$7.20

HW-11-S3 (3' Light duty model 400 kc. bandwidth, 2:1 SWR) _____ \$7.20

HW-11-S18 (Light duty model 350 kc. bandwidth, 2:1 SWR) _____ \$7.20

HW-11-6M (Marine model, no ground plate required) _____ \$22.95

HW-11-S6 (6' Light duty model) _____ \$7.20

MODEL CSM-11-1

Single element antenna for side mounting on tower.

CSM-11-1 \$ 44.50
CSM-11-2 (2 element) \$108.00**MODEL MK II SUPER BEACON**Half wave radiator with noise eliminating "Static Sheath", ruggedized heavy duty antenna.
MK II \$34.95**MASTER MOBILE MOUNTS, INC.**

1306 Bond Street, Los Angeles, California

MODEL 100 ANTENNAStainless steel whips. Threaded tip.
100-96S (96") \$5.20
100-103S (103") \$6.95**MODEL 106 ANTENNA**Stainless steel whips. Plain tip.
106-96S (96") \$4.50
106-103S (103") \$6.45**MODEL FG ANTENNA**Fiberglass whip.
FG-96 (96") \$5.25
FG-103 (103") \$6.95**MODEL CG-110**Clamp-on for car's rain gutter. Base loaded.
CG-110 \$10.30**MODEL SM-700-11 SKYMASTER ANTENNA**Coaxial sleeve type made of aluminum.
SM-700-11 \$17.95**MODEL MM-811 MAGIC WAND ANTENNA**Tapered fiberglass whip top loaded.
MM-811 (60") \$8.95
MM-811-35 (35") \$8.95
MM-811-45 (45") \$8.95**MODEL SR-600-11 ANTENNA**Monopole ground plane with folded radiating element.
SR-600-11 \$24.50**MODEL SR-500-11 ANTENNA**Three element beam for 8 db. gain.
SR-500-11 \$36.00**MODEL GP-27-11 ANTENNA**Aluminum radial ground plane with heavy copper wire radials.
SR-500-11 \$34.50**MODELS SB-27 AND 8B-27 ANTENNAS**For cowl mounting. Base loaded 40" whip.
SB-27 and 8B27 \$12.95**MOSLEY ELECTRONICS, INC.**

4610 N. Lindberg Blvd., Bridgeton, Missouri

MODEL A-311 ANTENNAThree element beam, 9.3 db. gain.
A-311 \$37.50**MODEL V-27-GP ANTENNA**Ground plane.
V-27-GP \$34.95**MODEL LC-100 TELESCOPIC ANTENNA**Chrome plated 100' whip telescopes down to 39".
LC-100 \$8.50**NEW-TRONICS**

3455 Vega Ave., Cleveland 13, Ohio

MODEL CB-27Collapsible loaded mobile whip antenna—60" extended and 27" collapsed; supplied with 5' length of AG-58/U cable.
CB-27 \$10.44**MODEL CB-111**

Rear deck or fender mounting 54" aluminum construction antenna. Folds over to permit garage door, car-port clearance, fits all standard mobile mounts.

CB-111 \$13.90

MODEL CB-211

Bumper mount version of CB-111, folds over 27" from base for garage clearance.

CB-211 \$13.90

SPACE RAIDER ANTENNAS

1076 E. Walnut Street, Pasadena, Calif.

MODEL GP-27-1 ANTENNAGround plane antenna.
GP-27-1 \$24.95**STINGER CORPORATION**

3160 E. Imperial Highway, Lynwood, Calif.

STINGER ANTENNAMobile whip is 32" long for mounting on roof, fender or trunk. Transformer coupled. Polished stainless steel. With all plugs and connectors necessary.
STINGER \$17.95**FUTURA I DISCONE ANTENNA**

Disc and cone design antenna lowers background noise by 12 db. Controlled radiation pattern.

FUTURA I (Tentative price) \$59.95

TECHNICAL INDUSTRIES, INC.

C/O Electrophone & Ports Corp., 530 Conol St., New York 13, N.Y.

TII MOBILESpecial bracket fits car window and places 40" base-loaded whip antenna in center of car roof; sold with antenna and 10' of RG-58/U cable.
\$19.95 (suggested net)

TII \$19.95

TELREX LABORATORIES

Asbury Park, New Jersey

MODEL 11M-309 ANTENNAThree element beam with 9 db. gain.
11M-309 \$31.50**MODEL 11M-206B ANTENNA**Two element beam with 5 db. gain.
11M-206B \$19.95**MODEL 11M-05 "MINI-BOWTIE" ANTENNA**

Looks like TV antenna for apartment house installations.

11M-05 \$7.50

MODEL 11M-254 "MINI BEAM" ANTENNA

Coil loaded beam looks like TV antenna for apartment houses. 4.0 db. gain.

11M-254 \$16.00

MODEL CO-11M "BEAMED POWER" ANTENNACoaxial sleeve aluminum antenna.
CO-11M \$19.95**MODEL CGP-1011S ANTENNA**Conical ground plane, aluminum.
CGP-1011S \$19.95

CGP-1011M (Customized) \$29.95

MODEL 11M-DP ANTENNABalun-fed dipole.
11M-DP \$19.95

MODEL 11M-0D4 ANTENNA

Vertically polarized omni-directional 4 element antenna. 4 db. gain.
11M-0D4 _____ \$95.00

MODEL 11M-518 ANTENNA

Deluxe 5 element beam. Horizontally polarized. 11 db. gain.
11M-518 _____ \$160.00

TWO-TONE ELECTRONICS

250 North Coronado, Los Angeles 26, Calif.
GETMORE ANTENNA

Three element vertical and horizontal beam. Capacity load gamma match.
GETMORE _____ \$47.95

UNITED STATES FIBERGLASS CO.

4001 N.W. 24th Street, Miami 42, Florida
ANTENNA

Fiberglass construction for mobile or ground plane mounting. Colors available.
ANTENNA _____ PNA

VANTENNA PRODUCTS

Box 172, Dover, New Jersey

MODEL VT-11 ANTENNA

Ruggedized ground plane. Aluminum. Drooping elements.
VT-11 _____ \$21.95

VERSA-TRONICS

Box 223, Wheeling, Ill.

VERSA-TENNA

Mobile antenna which mounts on vehicle roof with magnets to eliminate drilling. Secure at high speeds. 36" high.

VERSA-TENNA _____ \$5.95

WEBSTER MANUFACTURING CO.

317 Roebling Road, S. San Francisco, California

MODEL CBF "49'er" ANTENNA

49" top loaded fiberglass whip. Can be adjusted to peak on 1 channel.

CBF _____ \$14.50

MODEL CBS-103 ANTENNA

103" stainless steel whip will not work-harden or take permanent bends. Corono ball at top.

CBS-103 _____ \$8.35

MODEL CBF-96 ANTENNA

Marine or mobile one-quarter wave whip with maximum corrosion resistance. Covered with fiberglass. 96" long.

CBF _____ \$7.85

"MARINE CITIZENS" MODEL

"Semi-sleeve" type vertical dipole. Fiberglass. 18' long overall.

"MARINE-CITIZENS" _____ \$64.50

MODEL "D" INSULATED BASE MOUNT

For mounting antennas on auto's bumper pan or rear deck. Accepts coax plugs directly.

"MODEL D" _____ \$7.40

MODEL VC-2 ANTENNA

Coaxial sleeve base station antenna.

VC-2 _____ \$56.50

MODEL "Q-TOP" ANTENNA

87" center loaded fiberglass mobile whip.

"Q-TOP" _____ \$24.75

WHOLESALE SUPPLY CO.

Lunenburg, Mass.

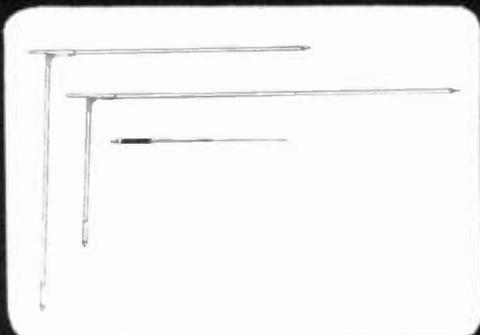
MODEL 3L-27

3 Element beam. 9.5 db forward gain. Seamless aluminum tubing.

3L-27 _____ \$29.95

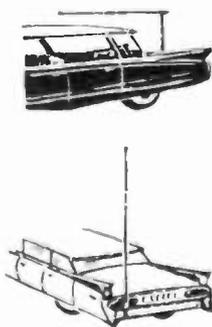
10-7

More Power to you and Convenience too!



NEW-TRONICS FOLD-OVER CB ANTENNA

This unique new combination of a sturdy mast and 11 meter tunable center loaded resonator provides exceptional transceiving results. Less signal fading, more consistent contacts. Total extended height approximately 83". Mast folds over to clear overhead obstructions and to permit tuning. Mast is 1/2" heat treated aluminum alloy with 3/8" 24 base stud to fit standard mobile mounts. Standing wave ratio is less than 2 to 1.



Model CB-111 for Rear Deck or Fender. 54" mast with 11 meter resonator. Mast folds over at 15" from base **\$13.90**

Model CB-211 for Bumper Mount. Same as CB-111 except mast folds over at 27" from base **\$13.90**

FITS MORE CARS THAN ANY OTHER BUMPER MOUNT!

Model BM-1 Fits foreign and domestic cars. Only 1/4" clearance between bumper and car required for installation. Anti-rattle patented design. Standard swivel ball, not available in any other make, holds whip vertically. **\$6.95**



See these NEW-TRONICS products at your electronics distributors or write us for descriptive literature.

NEW-TRONICS

DIVISION

3455 Vega Avenue • Cleveland 13, Ohio

CB IS BUSTING OUT...



ALL OVER! AT WESTERN COMMUNICATIONS CO.

THE FAR WEST'S

LARGEST CB CENTER

Positively the largest selection of CB equipment on the West Coast. Our large sales volume permits us to give you real deals on new and used equipment from the following lines . . . International Crystal, Viking, General Radiotelephone, Gonset, Sonar, Globe, Browning, Kaar, Hallicrafters, Osborne, CIT and many others!

A Huge, Huge selection of hand-held transistorized units, priced from \$42.95. Complete selection of meters, mikes, crystals, VOX, etc. Check our "largest-in-the-West" assortment of used CB equipment.

You Can Rely On Western As Your One Stop Headquarters For All Of Your CB Needs.

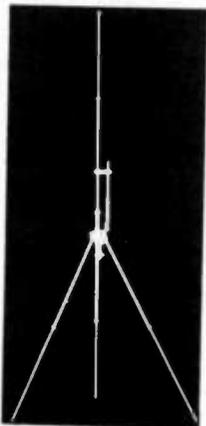
Western COMMUNICATIONS CO.

3285 Mission St., San Francisco, Calif.
Telephone MI 8-8480 or MI 8-8077

Get High Efficiency Performance

With The

UB-27 Ground Plane



The Model UB-27 is a vertical ground plane antenna designed for high efficiency operation in the 27 MC Citizens Band. A precision engineered matching section is incorporated to provide exact impedance matching. This "gamma" device is adjustable to match any of the standard co-axial cables in the 50 or 70 ohm series.

Elements are made of seamless aluminum tubing. Telescoping vertical and radial elements are secured with stainless steel fasteners. May be mounted on any pole or mast up to 1½" O.D.

CB'er Net Price — just \$16.95

Hi-Par Products Company

347 Lunenburg St. - Fitchburg, Mass - Ph. DI 2-2970

Aunt-Enna

(Continued from Page 10)

quite respectable amounts, by sacrificing all-direction coverage. This is frequently an advantage; for instance, most of your communication might be to a direction due east of your base station, and at the same time another operator might be located only a couple of blocks to your west. Putting up a directional antenna will give you gain to the east, where you want it, and at the same time will reduce your reception to the west, where the interfering station is located.

The Yagi beam usually consists of three elements, called the reflector, the driven element, and the director. However, additional directors may be needed. The only limiting factor is size; more than three elements get unwieldy in a hurry at 11 meters! A 3-element Yagi will give you about 6 db signal increase, which doubles your effective radiated power in the most favored direction. This power is taken from that available for other directions, cutting down response in these areas.

To bring your effective radiated power up to 10 times that obtained from an omnidirectional antenna, a 5-element beam is necessary if you use the Yagi design. This beam is about 20 feet long, making its installation a problem.

A Yagi has other disadvantages besides length. When mounted vertically, the Yagi is a clumsy affair.

To give you an idea of what happens, we've included some typical "polar pattern" sketches showing the patterns of various antennas.

And there you have it: an introduction to Aunt Enna and her family. Most of the antennas described are available from a number of manufacturers; virtually all are available from at least one company. And if you should run across a member of the family which we haven't discussed here, follow the same procedure. Start with the half-wave vertical dipole, and trace the family tree. You'll be surprised how simple antennas can be!

10-7

Now more than ever—The Greatest Pair On The Air

BROWNING CB RADIO EQUIPMENT

Latest improvements now make the Browning R-2700-A base station receiver better than ever. New antenna tuning control; Improved planetary ball drive, non-slip, all channel tuning control; New silicon rectified power supply same as in the 23/S-NINE. ■ New Browning 23/S-NINE CB transmitter lets you operate on any channel at the flick of a switch. Also has standing wave indicator; TVI trap; PI network; Spotting switch and many other outstanding features.



23/S-NINE
TRANSMITTER
\$144.00
(with 1 crystal)
\$189.00
(with 23 matched
crystals installed)

R-2700-A RECEIVER \$149.00

Complete literature and specifications free on request. Ask about our 4 convenient purchase plans — send today.

As low as

\$15.00

PER MONTH
after a nominal
down payment



browning
BROWNING LABORATORIES, INC.

105

UNION AVENUE

LACONIA, NEW HAMPSHIRE

(Continued from Page 17)

miles, it is horizontal and does not react to vertical mobile or other CB base station antennas (also vertical), and its signal is held so close to the ground that skywave (skip) DX is virtually non-existent except on the very worst days.

You probably don't have these requirements for an antenna, so I will give you a few ideas I have on how this antenna might serve your needs. Vertically mounted, the Rhombic could be orientated on a near-by town or center of CB activity (say 25-50 miles away) and you would be assured of rock solid contacts into the area all of the time. If you operate a delivery type business, you may have one direction out of town which you travel a little further than the rest. A Rhombic orientated in that direction would give you rock solid mobile coverage (if the rhombic is vertical, like mobile antennas, and majority of base station antennas) out to 25-35 miles under even the most ad-

verse conditions.

The Rhombic, you see, is a high gain antenna. Depending on its size "per leg", gains up to 20 db over a reference dipole are not uncommon. In terms of "effective radiated power", this means your average 2.5 watt output CB transceiver will sound like 250 watts when pushed through a 20 db gain Rhombic. This is a healthy improvement, and that same 20 db of antenna gain will help just as much on receive. Although this hasn't yet been borne out in experimentation, two 5 watt CB stations operating over essentially flat terrain, and driving a Rhombic antenna at each end (assuming 20 db gain for each antenna) should be able to communicate over a distance of not less than 80 miles day in and day out with very consistent signals.

**Next Month—Instructions
for building your own Rhombic.**

10-7

SEE YOU AT THE NATIONAL CB CONVENTION!

CHICAGO - MARCH 9-10-11

"It's been a long time in coming" one CB'er told us. "Something we have needed for a long time" another CB'er noted. "I'll be there because I know I should" quipped another "but oh . . . Chicago in March!"

These are a few of the many typical comments CB Horizons has heard about the forthcoming NCRL March meeting in Chicago.

But a few words about the NCRL, its purposes in life and how it *may* be a boon to the CB field.

The National Citizens Radio League is apparently a forthright attempt to unite all of the nation's CB'ers under one banner, for our mutual protection. It might be well worth noting that this is the first of several national conventions which CB Horizons has been enthusiastic about. The NCRL proposes to bring representatives of the nation's CB clubs and statewide organizations (regardless of what states you represent) together at one time to sit down and discuss why a national organization is needed, and how it might be activated. The NCRL is an organizational group, rather than an "already in existence outright organization." The NCRL convention can best be described as an inter-club organizational meeting where all comers (clubs and individuals) will have an equal opportunity to express their views, feelings and comments on a really united CB service.

CB Horizons sanctions *the idea* behind the meeting, and we will be there in full gala force to lend whatever support we can to the activities.

Heading up the NCRL organizational group is Chuck Greene, 18A6256, and a born leader. Chuck has put untold hours of toil into the convention to

make it as educational, fun filled and informative as anything conceived to date.

Here is what the convention will consist of: Some 75 manufacturers of CB equipment and accessories are expected to turn out to man booths and show off their goodies. Many of the same manufacturers will be on hand to provide a continuing series of semi-technical sessions and lectures in the main auditorium. Organizational meetings for the NCRL will be sprinkled throughout the three day meet. You, as a CB'er, will be admitted to the premises for a buck (\$1.00). The dollar helps defray the costs of putting on the affair, renting the Morrison Hotel in Chicago, etc. Incidentally, clubs are asked to contact the NCRL for tickets. To all clubs selling the \$1.00 tickets, the NCRL will refund 50 cents apiece to the club treasury. This means the NCRL is anxious to help clubs get on a better financial footing, and will share in the convention proceeds with the clubs on a local level.

The entire third floor of the Hotel Morrison will be exclusive for the convention. We've seen a floor plan, and from the looks of the layout, Chuck Greene and the boys at NCRL have done a good job. If you can tear yourself away for the March 9-11 period, we'll see you in Chicago. A handy registration card for the convention can be found between pages 40 and 41. You'll get this special pre-registration card back when you show up in person at the convention. Bring it over to the Horizons booth and collect a passel of goodies courtesy of CBH.

10-7

PUBLISHER'S NOTE ON THE NCRL CONVENTION

It's not too often that CB Horizons gets excited about traveling to Chicago in cold-windy March! However, Editor Tom Kneitel, Publisher Bob Cooper, and staff are looking forward to attending the NCRL meet with considerable enthusiasm.

The reason's for the uniqueness of this meet are spelled out in the page to the left. We are enthused to learn that manufacturers such as Vocaline, Browning, Hallicrafters, Raytheon, Texas Crystals, Polytronics, Heathkit, Mark Products, Globe, E. F. Johnson, Hammarlund, Utica, James Knights, General Radio Telephone, and a host of others will be on hand with display booths, and to provide a session of well planned technical displays and talks.

The meeting will consist of a series of highly informative talks by manufacturers in the main auditorium, the booth displays around the corridors, and the NCRL organizational meetings in special meeting rooms. You as a CB'er can wander from booth to booth, attend technical sessions at your leisure, button hole manufacturers during their lectures and after the sessions with questions only they can best answer about their equipment, pick up reams of printed literature and information about CB in general, and rub elbows and exchange shop talk with CB'ers in attendance from coast-to-coast. What a wonderful opportunity!

See you there?

Bob Cooper, Jr.—12Q2339
Publisher
CB Horizons

IF YOU OWN, INTEND TO BUY, OR WANT TO SERVICE CB EQUIPMENT... READ CITIZENS BAND RADIO

by Allen Lytel

"... A 152 page barrel of information ..."
CB HORIZONS MAGAZINE. . . . If you are now operating CB equipment—this book will help you get top flight performance. Design features of different types of transmitting and receiving equipment are described and specific models are analyzed in detail. Particular emphasis is placed on single-channel and multichannel transceivers and receivers.

Practical problems faced in mobile and base station installations are discussed—selection of a proper antenna; tips on installing CB equipment in boats, cars, trucks and base stations for better performance, ease of operation, elimination of interference.

The actual operation of the equipment is covered along with a discussion of the FCC rules. Power supplies and specific requirements of base station and mobile installations are covered. You also get license information; FCC regulations and historical development of CB.

The portion of the book devoted to repair includes an outline of potential trouble spots to check when trouble does occur. For technicians this book contains information of great value: types of test equipment to be used for alignment and repair of transmitters and receivers; step-by-step alignment procedures; and troubleshooting data.

For the person about to buy CB equipment, this book serves as an excellent guide of what to buy, and how to install it. #273, \$3.90.

Other Rider Books of Interest To Every CB'er:

HOW TO LOCATE AND ELIMINATE RADIO & TV INTERFERENCE (2nd ed.) by Fred B. Rows. Covers the latest techniques applicable to the location and elimination of radio and TV interference. Tells the reader what to look for, what to do and how to do it. Discusses the newest FCC rules and regulations. #158, \$2.90.

BASIC RADIO by M. Tepper. "... A good and carefully written basic course in radio fundamentals."—ELECTRONICS WORLD. This 6-volume "pictured-text" course is the best that exists on radio communications. No previous knowledge of electricity is required—the course teaches it. It covers everything from fundamentals of electricity to transmitters at the technical institute level. #197, 6 vols., soft covers, \$13.85; #197-H, 6 vols., in 1 cloth binding, \$14.85.

BASIC TELEVISION by Alexander Schure, Ph. D. "... the most understandable presentation of the basic theory, operation and circuitry of black and white television ever published..."—ELECTRONICS & COMMUNICATIONS. #198, 5 vols., soft covers, \$11.25; #198-H, 5 vols. in 1 cloth binding, \$12.75.

BASIC AUDIO by Norman H. Crowhurst "... effectively a complete course in basic audio theory."—POPULAR ELECTRONICS, #201, 3 vols., soft covers, \$9.70; #201-H, all 3 vols. in 1 cloth binding, \$9.95.

HOW TO READ SCHEMATIC DIAGRAMS by David Mark "... a worthwhile acquisition for anyone who is beginning to feel his way in electronics."—ELECTRONICS ILLUSTRATED. #208, \$3.50.

GETTING STARTED IN AMATEUR RADIO Julius Berens, W2PIK "... A style that can be understood by the layman, regardless of his technical background... leads the reader through every step necessary to obtain a ham license..."—SCHOOL SHOP, #199, \$2.40.

Use this convenient coupon to order

10-DAY GUARANTEE

John F. Rider Publisher, Inc. A Div. of Hayden Publishing Co., Inc.
116 West 14th Street, New York 11, N. Y.

ENCLOSED IS \$ _____ PLEASE SEND ME:

CITIZENS BAND RADIO, \$3.90

BASIC RADIO (6 vol.), soft covers, \$13.85 ; cloth, \$14.85

HOW TO LOCATE AND ELIMINATE RADIO & TV INTERFERENCE
(2nd ed.), \$2.90

HOW TO READ SCHEMATIC DIAGRAMS, \$3.50

BASIC AUDIO (3 vol.), soft covers, \$8.70 ; cloth, \$9.95

BASIC TELEVISION (5 vol.), soft cover, \$11.25 ; cloth, \$12.75

Name _____

Address _____

City _____ Zone _____ State _____

If not fully satisfied, I may return within 10 days for full refund.

CITIZENS COMMUNICATIONS



FIRST CALL AREA: CCM Donold O. MacLeod, 1W8438, 26 Elmview Circle, Dover, N. H., ACCM Muriel Brumage, 1Q2576, 48 Winter Street, Portsmouth, N. H.

Registration of N.E.C.B. Clubs with Horizons Publications has been rather meager to date with a total of 9 clubs listed as against 24 known CB organizations and a grape-vine reported 35. This correspondent would like to encourage all club listings to be registered with him for transmittal to this magazine.

Among the latest reported are the newly formed Greater Boston 11-Meter Association with Gordon Wilk, 1W8814 of Newton Center, Massachusetts, as Pres, and William Kichton, 1W5805 of Brighton, Massachusetts, as V.P. Over in Windsor, Vermont, the Twin-State 5-Watters are well organized according to a letter recently received from club secretary George E. Cummings, Jr., 1Q2314. We do not have the name of their prey but feel sure that George will send it along to us soon.

Still in the talking stage in this area, is the proposed formation of a N.E. Wide CB Council composed of representatives of all clubs in N.E. It is expected that a meeting will be held in the Boston area soon to set the ball in motion.

SECOND CALL AREA: CCM Don Lehr, 2W3911, 39 West Blvd., East Rockaway, N. Y. ACCM John Krejc, Jr., 2W4586, 40 Lonzo Blvd., Gorfield, New Jersey.

Nassau CB Club members irked over nuisances caused by a local group supposedly operating as a monitoring association for the benefit of the CB band.



Motoring CB'ers would probably be startled, although envious, if they come across this road sign outside of Enfield, N.C. It's only a spoof thought up by Sam Monning, 5Q3514.

The members of this group operate in complete secrecy as to who they are and the location of the monitoring stations. Club Pres. Len Pottruck, 2W3048, finally went to FCC in New York and found that they, too, were tired of being bothered by the foolhardiness of this group's operations. The FCC's advice: "Ignore them and they'll fade away."

Nassau Club's April 8th Jamboree plans are growing all the time. On the schedule of events planned are frequent drawings all day long for a whole pile of CB prizes.

Recent communications with Jerome D. Silberstein, chairman CBBRL, executive committee, informed us that 5 new chapters are being formed. This will bring the list to 11. One thing that was quite interesting to us, was that the CBBRL is the only organization that they know of that has been accepted and approved by the associated Hospital Service of New York to offer their members a group plan for Blue Cross and Blue Shield coverage.

A real swinging club in the north western part of New Jersey called the Lake Land "5 Watters" is located and has its headquarters in Dover, New Jersey. Presently with a membership of 45, they run a well controlled, efficient and balanced organization. The membership is open to all Citizen Band operators hold-



A serious version of 5Q3154's sign (of left) is the one established in Hompton, Va., shown here. Bob Mollison, 5W2423, does the honors for the club.

ing a license in the area. Various types of lectures and entertainment are carried on in which to create interest to all members. Pres. Russ Dupree, Vice Pres. John Leisner, Tres. Dove Ensel, Sec. Ken Jacobsen, Sgt.-At-Arms Harry Hulit, monitoring channel-11.

North Jersey chapter of M.C.E.U., wishes to thank the Clifton Red Cross for the private lessons given the members on Red Cross training. Dinner committee working on installation of officers all MCEU members can be seen very easily by the flashy scotchlite reflector with his call on the rear bumper. National boasts a membership of 1700. Weekly net control is a practice of N. J. MCEU to improve and foster better communications during storm periods.

2W4586 plans on visiting each and every club in his scope of travelling, if clubs will contact us.

FIFTH CALL AREA: CCM J. M. Robinson, 8Q0484, 9547 Granby St., Norfolk, Va. Asst. CCM J. P. Setliff, 5Q2388, RFD #1, Dudley, N. C.

From the CB "5 WATTERS" in Hampton, Virginia, comes the report of their Christmas project for the needy. At the December meeting Bill Purdie, 5W1310, asked the Club about playing Santa Claus for a needy family. The Hampton CB'ers asked the Norfolk CB'ers for their help and the big project got underway. Bob Mallison, 5W2423, President of the Hampton CB "5 Watters," Sonny Owens, 5W2925, and Bill located a family with 5 small children. On Christmas Eve Santa went to the home with toys, candy, food and clothes . . . the look in the children's eyes was all the Christmas the Club could ask for.

Late report received by your CCM comes from J. P. Setliff, 5Q2388, 1st VP of the Wayne County CB Assn. of North Carolina. J. P. is also an ACCM for the 5th Call District. The Wayne County CB'ers held their first meeting way back in November at Goldsboro, North Carolina. Quentin Overman, 5Q1620, was elected as the 2nd VP; William Powell, 5Q3184 (U-2), was elected to Secretary and Leland C. Beaman, 5W0424, was



CB'ers to the rescue again. This time it's the Jackson (Miss.) CB club which provided 24 hour communications for 7 days during the recent flood threat in Flowood. Control unit was at City Hall. C. J. Easley, club proxy, is at the mike here.

elected Treasurer. At the Club's second meeting the Club volunteered its services to the CD, Fire Department and all Law Enforcement Agencies of Wayne County.

The Eastern Carolina Citizens Banders headed by President Claude Plyler, 5Q1230, held its November meeting in Snow Hill, N. C. The Eastern Carolina CB'ers are very active and interested in becoming a part of their community besides furthering the cause of CB.

Their December meeting was scheduled for Greenville, N. C.

The Norfolk Citizens Radio Club of Norfolk, Va., met on 14th of December and accepted 7 new members to the Club. Installation of Officers Ceremonies were held and the Club presented the new officers with frosted-mirror name-plates signifying their respective offices. Mr. C. H. Dalby, Director of Public Safety for the City of Norfolk, Va., was the guest speaker. John Hamby, 5W1786, won the "ham" that was given away. John immediately donated the ham to the Hampton, Va., CB'ers Christmas drive for the needy. The Norfolk CB Club membership has moved up to 50 members in only 5 meetings.

EIGHTH CALL AREA: CCM Ralph F. Lord, 8W1494, 4834 Crown Ave., Baton Rouge, La.

Once again the activity has been slow in the 8W area. This reporter would welcome any and all news of activity in this area. Come on, you "guys & gals", take your pen in hand and let me hear from you. In the Baton Rouge area we were pleased to have CB'er Len Morgan (Valdosta, Ga.) as a visitor during the holidays.

The CB'ers in Baton Rouge are co-operating with local law enforcement agencies in the following man-

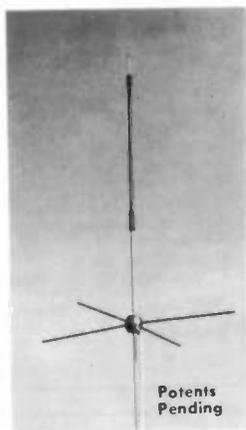
85% INCREASE IN RELATIVE FIELD STRENGTH

(See official Lob Report on page 30, Feb. CBH)

"Mobil-Plane" MP-1

Here is a remarkable new attachment for CB mobile antennas, guaranteed by the manufacturer to increase relative field strength by 50-100 percent (model MP-1) or "in excess of 100 percent (model MP-6)." On receive, the Mobil-Plane cuts down noise interference, improving the signal to noise ratio on weak borderline signals, making them more readable.

Easy to install, no cutting or tuning. Use field strength meter to position, and then lock down the holding screws. Slips over existing whip, complete instructions provided. Available to fit all 102 inch whips, top and center loaded whips, or with adapter sleeves for fiberglass and small diameter non-standard whips. Available with blue or black anodized aluminum hub (model MP-1) or nickel plated hub (model MP-6).



THE ORIGINAL AND ONLY MOBIL-PLANE
"A Better Product for Improved Mobile Communications"

DEALER INQUIRIES INVITED

**MCCULLOUGH
AERO
CORP.**
ELECTRONICS DIVISION

Phone EX 8-6293

MCCULLOUGH-AERO CORP.
5615 CENTINELLA BLVD.
CULVER CITY, CALIFORNIA

Please Rush "Mobil-Plane" MP-1 (\$5.95) MP-6 (\$7.95). My antenna is (specify if not 102 inch standard diameter stainless steel whip).....
 Check or Money Order Enclosed, Ship Post Paid
 \$2.00 enclosed, balance C.O.D.
(Colif. residents include 4% sales tax.)

NAME.....
ADDRESS.....
CITY.....STATE.....

Grove's CB Sale!!

- Hi-Gain Colinear Antenna, Only .. \$29.95**
Special: with each colinear, 100 ft. RG58 cable only 19c
- Magnum 27 by Antenna Specialists, Model M-81 Only .. \$28.43**
Special: with each M-81, 100 ft. RG58 cable only 19c
- Mark Mobile Beacon Base Station Antenna CBB-1 Only .. \$19.95**
Special: with each beacon, 100 ft. RG58 cable only 19c
- Super Beacon by Mark Mobile, Only .. \$34.95**
—for base stations
Special: with each super-beacon, 50 ft. RG8u cable only 19c
- Heliwhips by Mark Mobile— Only .. \$7.20**
Light duty
5 models: 18-inch, 3 ft., 4 ft. or 6 ft. lengths
Special: with Heliwhips, 50 ft. RG58 cable only 19c
- Generator Noise Suppressor— Only .. \$1.99**
Model GNS
Reg. \$3.98. Tuneable for CB band.
(3 or more, \$1.49 ea. — 6 or more, \$1.19 ea.)
- 14-Pc. CB Silencer Kit— Only .. \$3.99**
Model SN-2
(Complete Noise Suppressor Kit)

Check items wanted. Return ad or order w/ check or money order (include postage, excess returned). 50% deposit on all C.O.D. orders. Large antennas shipped express collect.

GROVE ELECTRONIC SUPPLY CO.

4111 W. Belmont Avenue
Chicago 41, Ill.

- Rush items checked
- Send latest CB Sale Catalog

Name _____
Address _____
City _____ Zone _____ State _____

ner: There are about 100 CB "rigs" on the road each day and they are requested to report any accidents, road hazards, faulty traffic lights, etc., to this station 8W1494 or to Carl Wells (8W1952), who in turn will relay the information to the proper authorities (City Police, Sheriff, State Police, Highway Dept., etc.). In most cases the CB'ers are the first to report these situations. We feel that this is a worthwhile public service! What are CB'ers in your town doing? Let me know!

Co-operation in the "NATCH" program, in and around Baton Rouge, has been excellent. I have received no reports from any other cities in the 8W area regarding this program. The cities of De Ridder and Leesville, La., have been recently introduced to the wonders of CB. Welcome to CB'er Cecil Rogers, of Rogers Auto Parts in these cities!

NINTH CALL AREA: CCM John Hudson, 9Q0026, 235 Englewood Dr., San Antonio, Texas.

I am proud to have been made the CCM for this area. I will do my best to bring latest club and Civil Defense news to the CB'ers in our area. The San Antonio CB club headed by Pres. Joel Holyoak, 9W0920, will have its annual officer nominations Jan. 14, 1962. Congrats to Keith Cruise, 9Q0266, Club secretary on his engagement. The S.A. Club monitors Channel 8 and will be glad to assist anyone and everyone passing through or visiting San Antonio. The Bexar County Civil Defense, 9W2546, uses CB radio in their Radio Amateur Civil Emergency Service program (races). Mr. Louis Manz, 9Q0240, is the director of our C.D. organization. Our C.D. Net now uses Channel 8 for all Net



Mrs. Clifford Smith, 19Q3719, of Wayne, W. Va., is smiling because she knows what kind of rig this is and you don't. Actually it's a Regency in a customized cabinet.

operations. These CB units were used extensively during Hurricane Carla and did a marvelous job assisting the unfortunate victims from stricken coastal areas.

TENTH CALL AREA: CCM Bob Johnson, 10W4389, 4300 Rector Ave., Fort Worth, Texas, ACCM James Kabney, Jr., 10Q2516, Marshall, Texas.

CB Radio Club Ft. Worth, Texas, January 1962, first meeting was the best meeting of the year. Speaker Glenn Scott, Science Demonstrator with Southwestern Bell, Scott used a small transmitter and receiver, a small replica of the Echo 1 balloon, and demonstrated how signals can be bounced off a satellite. Bell is negotiating Government Officials to make rocket at no cost to U.S. for this project.

CB'ers that really want to be of service to their community have formed a new rescue unit, RESCUE 7, 35 members strong all types of emergency equipment including mobile base station with power plant. 10Q0253, is the daddy of this rig.

Cleburne, Texas, CB'ers gave a Bar-B-Que this past month. Sheriff Earl King of Johnson County, and Tarrant County CD's Noel Shepherd gave a plch on the good CB'er's could do for their counties. Units from Lake Whitney, Alvaredo, Burleson, Keane, and Ft. Worth attended.

"RESCUE 7" gave a first get together January 14, 1962, all the fish anyone can eat and goodies too, held at the Cowtown Posity meeting hall, a real get together. 10Q1990 Pres. and his four district chiefs should be congratulated.



CITIZEN BAND CLASS "D" CRYSTALS

3rd Overtone; Hermetically Sealed .005% tolerance—Meet FCC requirements, 1/2" pin spacing—.050 pin diameters. (Obs pins available, add 15c.)
ALL 22 FREQUENCIES \$2.95 EACH
IN STOCK!

(add 3c per crystal for postage and handling)

The following Class "D" Citizen Band frequencies in stock (frequencies listed in megacycles): 26.945, 26.975, 26.985, 27.005, 27.015, 27.025, 27.035, 27.055, 27.065, 27.075, 27.085, 27.105, 27.115, 27.125, 27.135, 27.155, 27.165, 27.175, 27.185, 27.205, 27.215, 27.225.

Matched crystal sets for Globe, Gonset, Citi-Fone and Hallicrafters Units . . . \$3.90 per set. Specify equipment make.

RADIO CONTROL CRYSTALS

In HCG/U HOLDERS—SIX FREQUENCIES
In stock for immediate delivery (frequencies listed in megacycles); tolerance .005%. 1/2" pin spacing—.050 pin diameter. (.093 pins available, add 15c per crystal.) Specify frequency.
26.995, 27.045, 27.095, 27.145, 27.195, 27.255 **\$2.95 EACH**
(add 3c per crystal for postage and handling)

ASK YOUR PARTS DEALER FOR TEXAS CRYSTALS

See big red display . . . if he doesn't stock them, send us his name and order direct from factory.

Send for FREE CRYSTAL CATALOG #860 WITH OSCILLATOR CIRCUITS

Now! Engineering samples and small quantities for prototypes now made either at Chicago or at Ft. Myers plant. 24 hour service!
CHICAGO PHONE GLadstone 3-3555

All orders Shipped 1st Class Mail. Rush order to:

TEXAS CRYSTALS

DEPT. H-32, 1000 CRYSTAL DR., FORT MYERS, FLA.
For fastest possible service, Phone WE 6-2100

Caddo District CB Club, Marshall, Texas, was asked to help in the CB units when CD workers were dispatched to pick up donations call to radio station KMHT, this worked out good and shows how much CBer's can do if they work in a unit.

Another top club in Texas trying to work with local CD office Pres. 10W2592 and his officers doing a good job in Sulphur Springs, Texas. Denton County Amateur club and CB Club had a chili supper also a hot time was had by everyone. Mrs. 10W4276 net controlled this area did not have to keep the peace at this hot time. CBer's and Amateurs worked hand in hand in this area. This we would like to see more of.

FIFTEENTH CALL AREA: CCM Spence Van Noy, 15W1894, 632 E. 3900 So., Salt Lake City, Utah.

On January 2, 1962 this writer travelled to Los Angeles into the 11 call area and took along his Eico 760 with a new 18" whip. I was really surprised at the results. We made several nice contacts, particularly 11W2292 #1. Paul works for the Gizmotchy people in L.A. and gave me a good demonstration of the ant. as he was a distance of 12 miles from our motel. The reception was as clear as a bell. We also want to thank Kriss & Knoll for the fine ride to Hollywood from our motel.

In Salt Lake January 14th we had a March of Dimes Telerama on a local TV station. Over \$35,000 was raised on this day and to help out in collecting this terrific amount were the CB'ers of this area. The people would call a number at the studio and a group of about 20 nice looking girls would take their pledges and the CB'ers would go mobile and pick it up and wait for another call from a Base Station at the studio. There are too many names to mention, but our many thanks to all who took part in this wonderful project for a worthwhile cause.

The network is getting more and more crowded around here on Ch. 9. Again we ask, use if possible this channel for calling and switch to another as there are a lot of CB'ers who use this chan. for calling only. It would be appreciated greatly, to respect the three minute code. 15W1189, "Tats", who had a heart attack, is up and moving around now and we're surely happy to hear him back on the air with a nice word for everyone.

EIGHTEENTH CALL AREA: ACCM D. C. Wolcott, 18A4803, RFD 1, Cedar Rapids, Iowa.

The CB Club of Cedar Rapids held their election of officers. Re-elected was D. C. Wolcott, Pres. and Dick Eymann, Treas. Ron Berrier was elected Vice President and Frank Hall was elected Secretary.

The December meeting was a Family Pot Luck Christmas party held at the Cedar Rapids Boat Club.

Will We Meet You in Chicago

On March 9-10-11?

See Page 36
This Issue of CBH!

Entertainment was provided by Arch Blackford (18W3809) and his guitar and three variety dances by Terry Cumberlin, daughter of Cliff Cumberlin (18A5767) and her friend Vickie Classen. The climax of the party was the arrival of Santa Claus. A hearty thanks to Robert Coover, 18A5987, for the success of the party.

December 21 the local radio station KPIG sponsored a drive to help 180 needy families. Mobile units of the Club assisted in pickup and delivery of local donations.

10-7



**MOBILPHONE
FREQUENCY SELECTOR**

Model M-23 is designed for use with all makes and models of CB equipment. Converts your crystal control transmitter and/or receiver to cover all 23 channels. Complete, ready to go, less crystals. Only 3 1/4 by 3 by 2 1/4 inches.

KIT-M-23-K \$ 9.99
WIRED-M-23 \$15.95

**MOBILPHONE
RF POWER METER**

Absorption type watt meter and field strength



BEST CB BUY in all purpose field strength and watt meter. Checks modulation, power to 10 watts. Requires no maintenance, batteries 50 ohm impedance, 20 inch telescoping antenna. Weighs only 10 ounces, very small.

KIT F-10-K \$15.95
WIRED-F-10 \$19.95

MOBILPHONE CB ACCESSORIES
1111 State Road 67E, P.O. Box 1132, Anderson, Indiana

NEW!



NOISTOP

Only 1 1/2" x 2 1/2" x 4"

"NOISTOP" ELIMINATES IGNITION INTERFERENCE CAUSED BY NEARBY CARS AND TRUCKS... boosts range and performance by letting you hear signals normally lost due to ignition interference!

Thousands in use by CB'ers throughout the country! Prevents receiver jamming from trucks, cars, out-board motors, or other nearby source of pulse-type electrical noise! No need to suppress your car—ideal for base station use. **\$16.95 NET**

Completely wired, tested and guaranteed. Installs in 20 minutes.

DETAILED INSTRUCTIONS FOR:

EICO 761, 762	KAAR TR-32
ELMAC CD-5	KNIGHT C-27
GENERAL MC-4	LAFAYETTE HE-15A, 20-A
GLOBE CB-100, 200	POLYCOMM PC-2
GONSET G-12, 14	RAYTHEON TWR-1
HALLICRAFTERS CB-2, 3	R. C. A. MARK VII
HEATHKIT GW-10	UTICA MC-27
INTL. CRYSTAL 50, 100	VOCALINE ED-27M
JOHNSON "Messenger"	WEBSTER 4-11

See your distributor, or write to:
BUSINESS RADIO CO. INC.
P. O. Box 5652 • Mpls. 17, Minn.

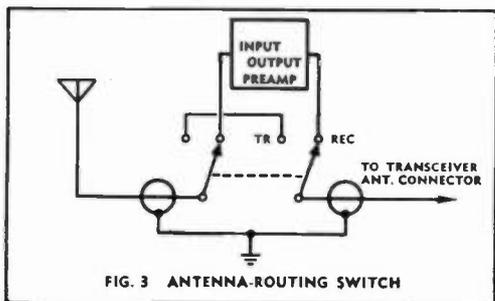


New-Vista

(Continued from Page 16)

where you can obtain these voltages, then connect the preamp to the set.

If your set (like most CB rigs) uses internal "transmit-receive" switching, or push-to-talk, you'll also have to install an antenna-routing switch for the preamp as shown in Fig. 3, to remove



the preamp from the antenna feedline while you're transmitting. This switch removes the preamp from the line when in the "tr" position, and connects it when in "rec" position.

To align the preamp, you must adjust the three coils. Using a weak received signal on channel 9 or 10 as a source, adjust L2 for greatest signal strength. Then adjust L1 for an even greater boost in signal strength. If the signal is suddenly replaced by a loud rushing noise, the preamp is oscillating. Adjust L3 until oscillation ceases, then continue adjusting L1. You may have to readjust L3 several times before finding the proper adjustments.

For a final touchup, switch to channel 1 or 2 and re-peak L1, then go to channel 21 or 22 and re-peak L2. Touch up the adjustment of L3 at channel 9,

FREE GIVE-A-WAY FROM CB HORIZONS

We need your subscription this month.

(see pages 10-11, this issue)

We will do almost anything to get your CBH subscription, Call-Book order or Monthly Call-Book subscription **this month!**

(see pages 10-11, this issue)

We will even send you a free two color 17 by 26 inch CB Call-Area map showing the brand new KBA-KJE call signs. This will make your station the most up-to-date in town! A 50c value!

(see pages 10-11, this issue)

We want you to subscribe this month so you won't miss next month's magazine.

WHY?

Because next month's issue promises to be the most fantastic high interest issue of any CB publication to date, even topping any of our previous high-interest issues!

In The April Issue . . .

- *Five CB one-evening Construction Projects, plus
- + Add Crystal Spotting to Your Rig
- *Plus
- + How To Buy A Used CB Set
- + Meet the CBH Staff
- + Where Does My Signal Go?
- + Cash in on Electronics
- + Complete Guide to NCRL Chicago Convention
- + much, much, more!

**SO . . . what are you waiting for . . .
subscribe during February using
the handy forms on page 11
of this issue-CBH!**

and check all channels to see that the preamp is not oscillating anywhere within the band. Now, you're ready to go.

Total parts cost for the preamp is approximately \$10, and it will require from 10 to 40 hours to build (depending on your skill). If this seems a bit too much trouble, you can purchase an almost-identical unit, wired, tested, and guaranteed, from International Crystal Mfg. Co., 18 N. Lee, Oklahoma City, Okla., for \$9.95 plus postage.

10-7



with 1 pair of crystals,
microphone and power cables

\$17950

NOW... Tomorrow and for years to come!

Sonar CITIZENS BAND RADIO

- 8 Channels, crystal controlled transmitter and receiver • Tunable receiver for 22 channels • Transmitter 100% Class B modulated
- Adjustable squelch • Automatic noise limiter • R. F. Power indicator
- 1 Year guarantee • Easy to install. Ideal for home, boat, car or business. Weighs only 9 lbs. . . 4 3/4 x 9 1/2 x 11 1/4 • FCC Type accepted* (*in preference to only certification).

SONAR RADIO CORPORATION, 3050 W. 21 St. • B'klyn 24, N.Y.
Please send me complete information on Model "E" CB Radio.

NAME _____
ADDRESS _____
CITY _____ STATE _____



JANUARY GIVEAWAY WINNERS

We have carefully shuffled through the stack this month and picked a real cute CBL card from "down east" in the 1W/KBA call area.

The winner is 1Q6955, Tom and Lucette Keene, of Laconia, N.H. The card

Here are the lucky CB'ers who our Dee (10Q2952) drew to come out atop the heap of the January Gigantic Giveaway:

First Prize—A Lafayette HE-20A transceiver: R. Roth, 2W7750, New York, N.Y.

Second Prize—Electro-Voice Model 729SR Mike: H. W. Parker, 6W0372, Atlanta, Ga.

Third Prize—Cush Craft Model CG-11 Ground Plane: Joe Dischner, 11Q-4782, Riverside, Calif.

Fourth Prize #1—Vanguard RF Amplifier: L. T. Brownsey, 2Q6692, Niskayuna, N.Y.

#2—Set of JK Crystals: Gene Hinesley, 18W2774, New Castle, Ind.

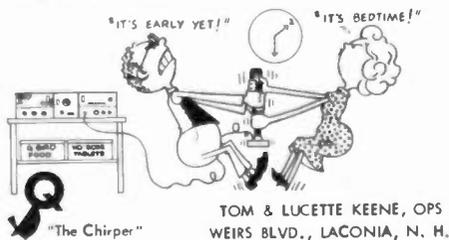
#3—An OZCO Snoozer squelch: Richard Hawkins, 17Q0688, Florissant, Mo.

#4—2 year subscription extension to CB HORIZONS: Bill Roberts, 18A9972, Oak Creek, Wisc.

#5—Cesco generator noise filter: Ted Willis, 19Q1430, Huntington, W. Va.

10.7

1Q6955



is a 4-color job with a cute (and well drawn) cartoon picturing the familiar goings-on at a CB home, come 2:30 a.m.

Tom drags a six month's extension to his CBH subscription back to his quarry for sending in the card and taking first prize.

Send 50c (No Stamps) For Your 1962 Call Area Map In 2 Colors, Know Where The "K" Stations Are! CB Horizons, P.O. Box 1557, Oklahoma City 1, Okla.

CB'ers—Increase Your CB Talk Power 4-Times!

- Simple Connections To Any CB Transceiver or Transmitter
- Meets All FCC Requirements —Perfectly Legal!
- Use With Mobile Or Base!
- Many CB'ers Report 50-100 Percent Increased Range!



HOW IT WORKS

"The ELENCO Audio Compression Amplifier gives a four times increase in talk power." Like going to 20 watts input! Yet the rig input remains at 5 watts, and modulation at or below 100 percent.

Small, compact—only 5" x 6" x 4"; weighs 3 pounds.

The ELENCO Power Gainer
Only \$45.00

Order Direct From Factory or See Your Local CB Equipment Dealer
ELECTRONIC ENGINEERING COMPANY, WABASH, INDIANA

CB TECH TALK

Transistorized Mike—Booster, Etc.

Editor's Note:

This column is by and for CB'ers who have a yen to "tear into the rig" with soldering gun in hand and clippers clenched between the teeth. You are invited to send along your modifications, improvements and gadgets to "Mike's Modifications, P.O. Box 1557, Oklahomo City 1, Oklo-homo." CBH pays from \$5. to \$25. for material used in this column. Keep in mind that any modifications to the transmitter oscillator circuit, multiplier circuits or final amplifier stage, which will in any way tamper with frequency tolerance or final plate power, are strictly illegal.

by
JIM GOULD

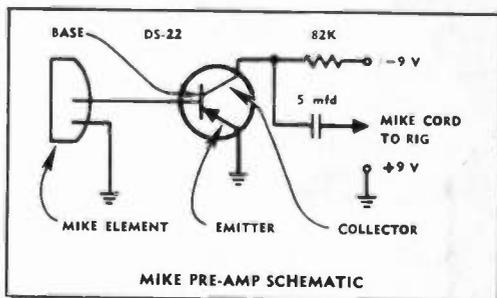
My super-compact transistor mike pre-amp came into being out of necessity, some nine months ago. I was up late (about 2:30 a.m.) talking to a fellow CB'er in Anderson, Indiana, about 38 miles. Ground wave conditions were poor and copy was rough at best. I was trying to keep my voice down so I wouldn't wake up the rest of the household. When the Anderson CB'er lost me in the noise, I forgot myself and raised my voice. He came right back with "I copy you 100 percent now." Unfortunately, he wasn't the only one to copy me 100 percent!

Chances are he could have raised his window and copied me 100 percent too. The family was up in a flash, banging at my door and threatening all sorts of retaliation.

Right then and there I decided to solve the problem. What I needed was a simple microphone amplifier which would allow me to 100 percent modulate the rig while speaking in a more or less soft voice.

Rumbling around in my scrap box, I came up with a Delco Radio DS 22 transistor, designed for i.f. frequency service. My only other components were a 82,000 ohm $\frac{1}{2}$ watt resistor, a 5 mfd 10 volt capacitor and a compact-small 9 volt mercury cell battery.

As you can see in the drawing, the transistor was soldered directly to the terminals of the mike; the emitter to



the ground side, and the base connection to the mike output side (see schematic). The 82 K resistor was soldered to the collector connector on the transistor. The mfd condenser also connected into the collector connection on the transistor.

By this time you can see that my entire mike pre-amp fits *inside* the microphone, including the battery! This makes the pre-amp ideal for mobile as well as base operation. Some CB'ers in the area have called it "my secret weapon." The pre-amp does help you cut through the noise, and it adds to the audio capability of your transmitter.

A word of explanation here about the 5 mfd condenser. Experimentally, I found that values down to .05 mfd

(Continued on Page 47)

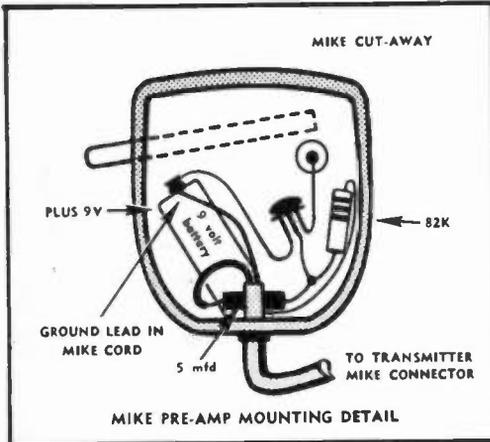
Tech-Talk

(Continued from Page 44)

work equally well. However, the 5 mfd adds base-boost to your audio.

In my Regency base station set, the mike output wire is red. However, this will vary from set to set, so care should be taken to locate the proper wire (i.e. mike output) before connecting in the 5 mfd condenser.

The wire that had connected to the mike output (red in the Regency) is



soldered to the 5 mfd condenser. A short piece of hook-up wire is soldered to the plus side of the 9-volt battery, and the other end connected to the ground connection on the mike. The end of the 82 K resistor not connected to the transistor collector is soldered directly on the minus (—) side of the 9 volt battery.

Should oscillations occur after the pre-amp has been added, try inserting a filter condenser at the mike plug on the set (about .01 mfd in value). Do not put a filter condenser on the audio output lead. If this does not cure the oscillation, use a 100 K resistor at the mike plug where the audio from the transistorized mike pre-amp (lead from mike) enters the set. If all else fails, reduce the size of the 82 K resistor until oscillations cease. On an International Executive, a 150 K resistor was used with no oscillations. (The larger the resistor, the higher the gain up to about 200 K.)

Other transistors have been used, including the CK 722 and 2N105. These

transistors do work, but their gain is lower than the Delco DS 22.

J. G.

READERS WRITE

A note from Don W. Patrick, two-way service engineer from Fort Smith, Arkansas, comments on the January CBH story on overlength whips.

CB'er Patrick notes "I have been installing 5/16ths wave whips on many of my customer's cars for the past 2½ years (See page 14, January CB Horizons-Ed.). In fact, there are approximately 30-40 in this area using this whip design and they work out very well.

In my case I differ with you slightly as to the coax to use. It seems that RG-59 (73 ohm) will tune sharper and give me a lower SWR. I also suggest that this antenna be fender mounted, as it works better that way.

Also, many that may attempt to install this antenna might have difficulty finding the proper components to use. An example might be the variable capacitor that must have both stator and rotor above dc ground. One that fits the bill perfectly is the Hammarlund APC-140. This unit has a maximum capacity of 140 mmf and has two threaded females and a locking nut.

As for the whip, I use a 108 inch and the Antenna Specialists M5-18 extension, or the 102 inch whip and the M5-24 extension."

Numerous reader letters have poured in commending writer Jim Gibson for his article on the overlength whip, and it would appear that contrary to the trend, the CB'ers with the most on the ball these days are not using shorter and shorter whips, but are in fact switching to the "over-length" whips described by Gibson in the January CBH.

Seth B. Paull, 1W1717 of Paull's Radio and Television, Bristol, Connecticut, writes about the Turkey Call-Q Bird article appearing in the December issue of CBH.

"I built the Turkey Call, as described, and had only one trouble. When connecting to the grid of the

ROCKET NOISE FILTER



\$17.95
POSTPAID

THE ROCKET

NOISE FILTER eliminates ignition and other pulse noises in your car and other nearby cars by differentially gating techniques developed by the missile industry.

- Transistorized (no tubes).
- Draws less than 1 milliamper.
- No holes cutting or soldering.
- No technical knowledge required.
- Completely molded in plastic.
- Installed in minutes.
- 1½ x 1 — Mounts on set or dash with magnets.
- Fits all C.B. units — specify make, model and series.

Money back guarantee and 2 year warranty.

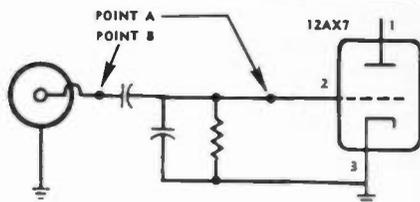
ROCKET NOISE FILTER

JOHN C. MABBETT DISTRIBUTING COMPANY

1465 So. Sheridan Blvd. • Denver 26, Colorado

Dealer Inquiries Invited.

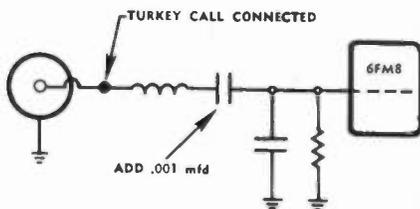
microphone amplifier, I got a terrible buzz (see point A, diagram below). I cured it by merely backtracking and



USL - TR800 SET

connecting in my signaler at point B, the mike unput jack. This was on a USL-TR800 transceiver.

On my Eico 762 the Turkey Call-Q Bird will not work properly unless a .001 condenser is installed as shown ahead of the grid on the 6FM8 mike amplifier. The boys around here found



EICO 762

this same connection necessary on the Gonset G-12, HE-20A, etc. rigs. I hope this solves the problem others may have had. I have the Turkey Call working on both of my sets now, thanks to CBH. Keep up the good work." **10-7**

Know Where the New 1962 CB'ers Are!

Send 50c (No Stamps) For Your New 2-Color Wall-Sized "K" Call Area Map.

CB Horizons, Dept. CAM

P. O. Box 1557

Oklahoma City 1, Okla.

17Q4129

IGN. DECK

17Q4129

17Q4129

CHANNELS 2-7-11-18-22

YOUR CALL LETTERS CUSTOM-ENGRAVED IN ATTRACTIVE FORMICA

For your Desk, Door or Car. Permanently engraved with clean-cut figures. Attractive and durable. Won't fade or chip. Easily cleaned.

Call letters only **\$3.95**

Call letters with your name or channels **\$4.95**

Your Choice: White letters on Black, Red, Wood-Grained Mahogany or Walnut with Anodized Aluminum Easel. Size 9½" x 2½".

ENGRAVED METAL NAMEPLATES (Gold Color). Adhesive-backed for permanent mounting on units. 1¾" x 7/16", 1 line, \$1.00; 2¾" x 9/16", 2 lines, \$1.25.

Send check or money order. Postage paid. Prompt delivery.

METALcraft INC.

1619 SO. FEDERAL AVE.

MASON CITY, IOWA

GAR'S GABBINGS

**Gar Greene, 1W4844
CBH Roving Reporter**

The *CB Socialites Club* of Hemstead, N. H. invited me to attend one of their meetings as a guest speaker. The meeting was called to order by the President, Frank Marshall (1W6455). The old and new business was brought up including a discussion of their very successful recent party, a mention of the CBH Club Subscription Plan, and the letters of praise from various near-by police departments. The club's membership at that point was about 90 CBers and there were about 75 in attendance that night. Incidentally, in many clubs I've found that the women are greatly neglected or not included, but the *CB Socialites* had a large percentage of *XYL's* in attendance. After the meeting broke up with coffee and donuts, I was able to meet and talk with many of the CBers and I feel that here is one progressive club which will grow with leaps and bounds.

In Chicopee Falls, Mass. I met Joe Desforges, 1Q2779, who is Publicity Agent for the *Pioneer Valley Five Waters*. Joe claims proudly that they have 125 active members and that they are still growing.

In near-by Westfield a young new club has formed. They call themselves the *5x5 Watters of Westfield*. The meeting I attended was held in the home of Ray Snow, 1Q4500, who was acting Chairman. My cordial greeting was emphasized by all the other members present. The club has about 35-40 members and they expect rapid growth. Gloria Lees, 1W7370, has been very helpful in the formation of the club through her position as secretary, as has Bob LaBonte, 1W5970, as publicity agent. Their biggest problem is the overcrowded condition of Channel 11. Many suggestions were offered to help

remedy this very common problem.

John Robinson, 1W9937, President of the *Northeastern Communications Association*, of Andover, Mass., extended an invitation to me to speak at one of their meetings. They have 61 members and have been in existence about six months. Gary Holt, 1Q2666, is V.P. and Harold Tynning, 1Q2699, is Treasurer. The club's mobile facilities are tied in with Civil Defense as an auxiliary system. I noticed a lot of teen-age interest in the club, and this young enthusiasm is a definite attribute to any club.

The *Monadnock C.B. Club* struck me as being a very unusual type. The "gypsy-type" club travels from town to town in Southern N. H. and Northern Mass. for their meetings. The reason being that the members represent about a dozen different towns.

While I'm discussing New England, I feel it is only fitting that I mention my "home town gang"—the *Lakes Region Citizens Band Radio Club*. The *L.R.C.B.R.C.* is based in Laconia, N. H. with members in all the outlying towns. The club is in its *third* active year and has accomplished many things. The club held classes in code and theory for CBers wanting to get their "Ham tickets." Central New Hampshire, being a year 'round vacation area, is the home of the New England Boat-a-rama, the National Motorcycle Races, and the World Championship Sled Dog Races—all of which are held annually in Laconia. The *L.R.C.B.R.C.* has helped all of these events over the past few years. Since the club is also affiliated with the N. H. Civil Defense, Laconia's mobile units are always on hand for emergencies.

Communications, Inc. of Wilton, Conn. held their gala open house with speeches, manufacturers, CBers, and refreshments. This progressive outlet, headed by Chuck Warren, 1W4044, and Al Chapple, is set up to give a complete and diverse selection of communication equipment of all types. Cliff Sloat, 1W5818, a 1st Class licensee, is on hand for maintenance, technical advice, and answering installation problems. **10-7**

CLASSIFIED

Rates for classifieds are 10c per word for advertising which, in our opinion, is obviously of a non-commercial nature. A charge of 25c per word is made to all commercial advertisers or business organizations. We do not bill for advertising in CLASSIFIEDS, nor can we acknowledge receipt of copy sent in. Full remittance MUST accompany all orders. NOTE: The products and services advertised in this section are not guaranteed by the publisher of CB HORIZONS. Closing date for the April issue is February 23rd, in Oklahoma City.

SK-3 RF PRESELECTOR kit increases sensitivity of GW-10 at least 3 "S" units. Wire and install in one evening without cutting GW-10 wiring. Inconspicuously mounts on transceiver; extends 1 1/2" rearward. High-GM tube, all parts, complete instructions included for \$8.99 (postpaid). **HOLSTROM ASSOCIATES**, P.O. Box 8640, Sacramento 22, Calif. (GW-11 owners and others, inquire.)

We had to take back six Hallicrafters CB-3's. The person who purchased the units made the down payment, then had to return them. They are new and in factory sealed cartons. Anyone sending check for \$130.00 each or \$13.00 down and \$4.23 per month takes one. Act now—Wirth's, Box 106, Cedarburg, Wisconsin.

SALES AND SERVICE, new/used, all popular brands. Same day shipment on your order. Antennas, Transceivers, Accessories. Citizen Band Two-Radio Co., 4007 N. Penn, Oklahoma City, Okla. JA 4-7442.

NOISE LIMITER for all CB'ers. Stops noise from trucks, etc. Complete instructions, installed in minutes. \$9.95 Postpaid. Larson, 19Q1062, 10132 E. Warren, Detroit, Mich.

LAFAYETTE HE-15, HE-15A Plug-in crystal receive converter. No wiring. No more station hunting. Always tuned to your channel. Switches from tune to crystal receive, 3 positions. \$10.95 with one crystal, specify channel. F. Abate, P.O. Box 206, Pompton Lakes, N. J.

CB — Now use just one mobile antenna for both CB and Broadcast radio — even at the same time! OZCO "1-10'er" signal divider only \$5.95 postpaid. Guaranteed unsurpassed! Free literature. OZCO, Canaan 3, Conn.

2X3 MOBILE TRANSMITTER DECAL against unauthorized use. Cars, boats, base. 35c each. 4/\$1.00. CB Products, Box 457, Encino, Calif.

REMOTE YOUR CITIZENS BAND set. Will fit any major brand set on the market. Easy to install. Kit form \$39.95. Completely wired and ready to install \$59.95. Western Communications Co., 3285 Mission St., San Francisco, Calif.

BRAND NEW Government surplus 30-40 mc dual conversion FM superhet receivers include 13 tubes and 10 audio filters. Fine for conversion to CB, ham or radio control. Built in 28 volt DC dynamotor can be converted to 115 VAC to 6/12 VDC. \$29.95 plus freight. Weighs approx. 50 lbs. Spera Electronics, 37-1- 33 St., L.I.C., N.Y.

EXECUTIVE 100 Clean, perfect \$130; PACO Signal generator \$25; TN59 "S" Meter \$5; Heathkit AV3 audio VTVM \$15; Triplett Model 600 Watt Meter \$20; Transistor desk clock—runs 1 year \$15. Small deposit, balance C.O.D. Locascio, 8420 51 Avenue, Elmhurst, N. Y.

WANTED! YOUR CB CARD — I would like the largest call card collection in the country. Would appreciate your help. Leslie T. Ellis, 49 Pochassic St., Westfield, Mass.

CALL LETTERS ENGRAVED. Onyx & white plastic or Gravaflex 2"x8" — \$1.00 each, plus 10c postage. Mac, 10W0798, 4911 Camp Bowie, Ft. Worth 7, Tex.

QRM KILLERS — Sprague "Filterol #2" power line filters — crush incoming power line noise, outgoing CB-TV1. Also attenuates ignition noise when used in mobile rig. Check any catalogue, they're \$8.70 — our price only \$1.00 each, or 2 for \$1.50, while they last. McCart Electronics, 2204 Downing, Oklahoma City, Okla.

BARTLETT AUTO GENERATOR NOISE FILTER eliminates the noises at the source, on the generator. It is PRE-TUNED with instruments to CB frequencies and sealed against moisture, oil and dust. Small in size, efficient in operation, instruction sheet enclosed. \$3.00 postpaid, or see your dealer. Distributors: Radio Products Sales, Inc., Los Angeles/Audioelectronics Corp., Philadelphia, Pa. Mfg: Ben N. Bartlett, 1815 W. 85th St., L.A. 47, Cal. 11W5592

CB WALKIE-TALKIES — 9 Transistor Superhet units with or without B/C band receiver. AC adapters and rechargeable cells available. Buy direct and save. Details on request. The Rotoken Corp., 18 Mikawadi Minato-ku, Tokyo, Japan.

NEW CB GROUND PLANE Only \$12. Three element beam \$20. 3 Utica MC-27. Box 211, Olive, Calif.

FREE SAMPLES — CB QSL cards. \$2.50 per 100 in 3 colors, postpaid. Garth Printing Co., Box 51, Jutland, N. J.

CB'ers DUAL CONVERSION ADAPTER kit, all parts, schematic, pictorial; hear only the channel you tune. For HE-15, 15A, TR-800, 910, etc. \$14.95, with tubes \$16.95. For HE-20, 20A; Mark VII \$15.50, with tubes \$17.50. Or \$5.00 deposit plus C.O.D. Bainbridge Radio, 2649 Bainbridge Ave., New York 58, N.Y.

TRADE — 1 Model 111 Precise tube checker, 1 Model 2432 Triplett signal generator for HE-20 or equal — \$100 cash. Bob Williamson, 19Q6086, Box 257, Tecumseh, Mich.

CREATIVE CBL CARDS — New catalog and designs being completed. Free samples and catalog. Personal attention given. Wilkens Creative Printing, P.O. Box 1064-4, Atascadero, Calif.

CALL SIGNS 3" X 9" for Automobile \$1.00, "HUSHPUFFY" Squelch for Heath CB-1 \$3.98. Western Mass. Electronics, P.O. Box 225, Great Barrington, Mass.

CB'ers—SPECIAL 5-minute sand type timer +15 sec accuracy. Full 3 1/2" high, red and white trim. 89c including postage. No COD or stamps please. FGS Electronics Service, 200 Maple Avenue, Graterford, Pa.

FIX YOUR OWN TV, Save 80%! Send for FREE ILLUSTRATED CHART showing how! We'll include GIANT electronics catalog. Zalytron, 220-C West 42nd St., N.Y., N.Y.

WANTED: I have a need for CB regenerative type converter, with squelch control, for 12V auto radio. Send specifications (including sensitivity) and price. G. W. Long, Andover, N.H.

MOTOROLA Transmitter Model WET30V, and receiver Model FMR13V, 30-50 mc, less crystals, for 6-volt operation. \$75.00 complete with tubes. C. Bernard Smith, 30 So. Greenwood Ave., Posodeno, Calif.

PERSONAL CALL TAGS AT HALF PRICE — Your call numbers in brilliant blue lettering on a reflecting Scotchlite background. CB Tag easily attached on bumper or window of your car. Special offer expires March 31, 1962. Rush your call and only \$1.00 for each tag ppd. to C. C. Soles Company, R.D. #3, New Solem, Pa.

CITIZEN BAND: Get maximum quieting of lowest cost with OZCO "Snoozer" odd-on squelch. Easily installed by anyone! Only \$2.00 each, \$3.95 pair postpaid. Fully guaranteed! OZCO Soles, Connon 3, Conn.

20W CB'ers — Stinger Mobil Whips. Increases receiving and transmitting distances. 32" of Dynamic CB Antenna. \$17.95 Postpaid. Bussard Motor Co., Drower 10, Reynoldsville, Pa.

CB QSL CARDS — \$2.50 per 100 postpaid. Send for free brochure. F. B. Mothews-Artists, 1616 Rural Street., Rockford, Ill. SPECIAL CARDS DESIGNED FOR CB CLUBS.

YOUR CALL, NAME AND ADDRESS on rubber stamp. \$1.00. W6LXW, P.O. Box 278, Copitolo, Calif.

PLASTIC NAME/CALL LABELS — Adhesive back. Personalize your rig. White raised letters on black or brown background. Five call signs or one and call sign \$1.00. M&W Soles, Dept 1, Box 905, N. Elizabeth, N. J.

CB WPE QSL CARDS. Finest quality, multicolor, 10c for samples. Rodio Press, Box 24A, Pittstown, N. J.

CB GOODIES. Illustrated list 10c. 1Q5226, LEE-DECK, Box 105-H, Westfield, Mass.

SUPER SQUELCH will eliminate most ignition noise from mobile unit and other cars in traffic—Johnson, Heath, Lofoyette and others. Price \$12.50. Electronic Enterprises, Box 86, Brookline, Missouri.

CB QSL CARDS — CALL LETTER DECALS. Fast Service, Low Prices! Samples 10c, or send 25c and receive large selection. Fast service special—100 3-color glossy cards, \$3.20 postpaid. Dick Stouffer, 19QA0625, 1996 N. M-18, Gladwin, Mich.

WALKIE-TALKIE radiophones, converters, signal boosters at factory prices. Write for free literature. Vanguard Electronic Labs, 190-48 99th Ave., Hollis 23, N. Y.

STOP WASTING THOSE WATTS! Let the SWR-1 help you improve that inefficient antenna system! Reod your rf power and SWR directly in watts—no more guessing! Only \$19.95! Write for details today! Dealer inquiries appreciated. H&L Electronics, P.O. Box 125, Medford, Ore.

CB-WPE-QSL CARDS — Samples ten cents, with catalogue twenty-five cents. BROWNIE, 3W-1974/W3CJI, 3110C Lehigh St., Allentown, Pa. Order yours from Homdom's leading QSL printer since 1939.

Canadian CB (Continued from Page 18)

planning six crystal controlled channels in the GRS band, full five watts input, with the entire assembly transistorized. Delta has a broad background of television reception aids and aircraft electronics, and is a most able example of Canadian ingenuity.

All Canadian manufacturers interviewed told us they are pushing the panic button over the April 1 deadline. It seems few will have equipment ready for submission to the Department of Transport by April 1, and if no equipment has been submitted for government approval, there won't be any equipment to go on sale!

It might be worth noting that most Canadian manufacturers expect the DOT to push back the opening date for the GRS to June 1, 1962.

Call signs will be from the block XN1001 through XN6999, with the first number after the "N" representing one of the 6 call districts, Vancouver, Edmonton, Winnipeg, Ontario, Quebec, Moncton.

Everyone expects there to be a great temptation for QSO'ing between the U.S. and Canadian 27-meggers, and there is no doubt that the temptation will be too much for many to resist. We hope that the channels will not become too jammed-up with the additional work-load of the Canadian stations.

We look forward to a close cooperation on matters of skip-QRM between the stations on both sides of the border.

10-7



announcing the
Cubex "11 METER"
CUBICAL
QUAD

- FIRST Cubical QUAD Antenna offered for CB Service
- 10 db gain, high front-to-back ratio (24 db)
- Extremely lightweight—only 16 lbs., easily rotated with TV rotor

MODEL C80—Only \$39.50
MODEL C80-FG (Fiberglas radials)
—Only \$64.50

If your dealer can't supply you, order direct. Include 30% deposit with C.O.D. orders. Write for Brochure "C"

CUBEX CO.
3322 TONIA AVENUE • ALTADENA, CALIFORNIA

7.K. on C.B.

by TOM KNEITEL, 12Q1747

Firing in all directions . . .

Seems that when the first FCC shot was fired to open the 11 meter band all the prospective CB manufacturers threw whatever components were available on their shelves into their units. Mentioning this is by no way to chop into the quality of their products—rather it is intended to bring to your attention a situation with which we are all faced. The problem is called “**equipment incompatibility.**”

Pick any five CB rigs at random. Pick out any 5 CB mikes. Take your 10 pieces of equipment to the base station installations of any 5 CB'ers. Now—try to get a signal on the air!

Yes, we're given several types of antenna plugs with which to work (PL-259, “Motorola plugs,” RCA phono plugs, etc) and a bushel-basket full of mike plugs.

Inasmuch as the rest of the electronics industry has relative standardization of components, it would seem that now is the time for CB manufacturers to get together and decide just which plugs will be used as standard equipment on future equipment. It would certainly be in the best interests of the CB'ers to do so.

CB Horizons would be more than happy to act as the intermediary for any manufacturers who go along with standardizing CB plugs and connectors. We are completely impartial on which plugs are used, we would just like to settle the problem.

Any interested manufacturers are invited to contact yours truly regarding this.

What Our Survey Showed

We recently ran a nation-wide survey

to find out which equipment was in use at mobile and base stations throughout the CB world. This information is now being compiled into a marketing report which will shortly go out to all of the CB manufacturers, but we thought that we would give our readers an inside look at a few of the unusual things we found.

For one thing, 17 CB'ers told us that they used “Motorola” CB rigs—that's interesting because Motorola never made a Class D CB unit. Were these converted industrial 2-way radios?

One “big time” CB rig, which we had thought was a very popular base station, really laid an egg—hardly any in use at base stations, although it showed rather well as a mobile station.

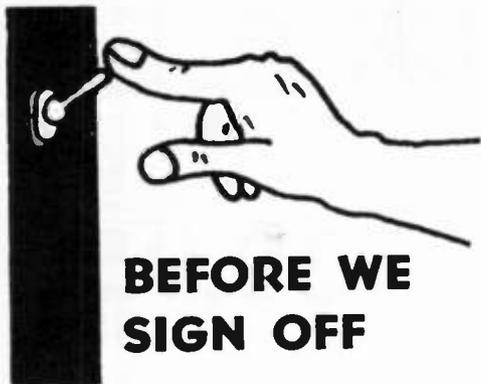
On the other hand, a unit which we thought was a “fair-to-middlin” unit came in very well in both mobile and base station categories.

Up on the roof, ground planes clobbered all other types of base station antennas by 3-to-1. There were 16 guys who used Winegard antennas, although as far as we know, Winegard never actually produced the CB antenna they had designed. Were these converted Winegard TV antennas?

There were 2663 home-brew base station antennas (we hope many were from CBH construction projects), 1981 beams, 1399 base station whips.

The 102” Mobile whip was a 4-to-1 winner over its nearest rival. There were 74 homemade whips, 203 whips were 123” (as in our January issue), and 1 U.S. Army whip (there's one in every crowd).

10-7



**BEFORE WE
SIGN OFF**

D. C. FLASHES!!

By **REX HOLMES, 24W2424**
"Our Man in Washington"

Recent FCC Blastings

First CB'er on the launching-pad this round is Ray C. Brown, 4Q0996, of Baltimore, Md. Brown got the old "show cause" routine for failing to respond to "certain interrogatories" concerning FCC rule violations.

Meanwhile, David Colella, 1A2170, of New Haven, Conn. was charged with having moved his station without authority from the Commission, and with apparently have "authorized others to operate radio transmitting apparatus using the callsign of his station."

Unlicensed Operation

Raymond P. Laubenstein, 2Q2459, of West Belmar, N.J. was charged by the FCC with apparently operating a CB station without a license prior to the issuance of the license for the station involved; and that subsequently "on several occasions failed to transmit the official callsign of his station at the beginning and termination of all communication;" and, still later, purported to transfer the operating authority conferred under the license "to another person."

In correspondence with the Commission concerning these violations, the agency said, Mr. Laubenstein "falsely" declared that he had permitted "no per-

son other than himself" to use his callsign, and that he had not operated the station prior to the issuance of his license.

Two More Hits

Ralph M. Boyd, Springfield, Mass., licensee of station 1W1324, was cited for apparently transmitting communications "beyond the normal ground wave range of the radio station" which were not "purposeful or substansive to the licensee's personal need", and with the "length of the communications exceeding practical transmission time."

Down in Florida, Russel D. Mawson, 7W0437, of Hallandale, was charged with apparently transferring his "license privileges without first obtaining authorization from the Commission;" with failing "to post the station license or a photocopy thereof at the location of the fixed transmitter;" failing to "maintain control of transmitters being operated under the callsign 7W0437;" and failing "to make provision for receipt of Conelrad radio alerts."

S.C.—"Show Cause"

Mr. Clifford C. Hayes, 6Q1601, of Charleston, S.C. was given a "show cause" because, the Commission said, he had been asked to respond to "certain interrogatories" regarding "certain alleged violations" of the Communications Act, but had not done so.

The FCC has also terminated the proceeding regarding William Humbert, Jr., Tampa, Fla. to show cause why the licenses for CB stations 7W0464 and 7W2827 should not be revoked.

New Ruling Affects CB'ers

The FCC has amended Section 1.76 (c) of its rules concerning notices of violations to require a licensee notified of any violation to report the steps taken to correct the condition complained of.

Previously, the Commission had required such answers only from licensees notified of violation due to the physical or electrical characteristics of the transmitter. Under existing rules, such statements are required within 10 days of notification.

10.7

LAFAYETTE is America's Citizens Band Headquarters



Ship to Shore



On the Farm



Construction Work

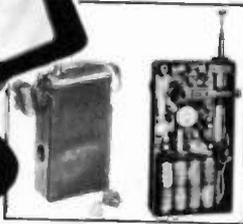


**NO LICENSES,
TESTS OR
AGE LIMITS**

**9 LAFAYETTE
TRANSISTOR
CITIZENS BAND
"WALKIE TALKIE"**

**39.95
2 for 78.88
NO MONEY DOWN**

**PORTABLE—
POCKET SIZE
Only
6 3/4 x 3 1/4 x 1 3/4"**



- Completely Wired—Ready to Operate • Fully Transistorized—9 Transistors plus 1 Diode • Uses Inexpensive Penlight Batteries
- No License, Tests or Age Limits • Comes with Leather Carrying Case, Earphone, Antenna, Batteries and Crystals

As simple and easy to use as the telephone—and twice as handy. Receives and transmits up to 1.5 miles under average conditions. Weighs only 18-oz. and slips into your pocket. Push-to-talk button operates built-in speaker as sensitive microphone.

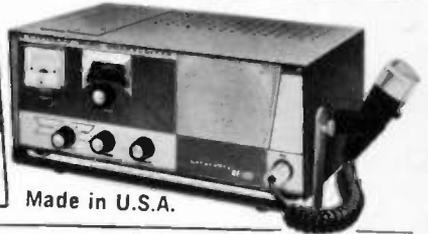
HE-29A

LAFAYETTE HE-20A

Citizens Band TRANSCEIVER

- Pi-Network for Greater Power Output • Calibrated "S" Meter • Series Gate Noise Limiter • Tuneable Superhet Receiver over all 23 Channels • 4 Crystal-Controlled Transmit Positions • 4 Crystal-Controlled Receive Positions • Dependable Push-To-Talk Ceramic Microphone & Relay • Illuminated Dial • Built-in 12-Volt Power Supply • Complete with Matched Crystals for Channel 9

**109⁵⁰
NO MONEY
DOWN**



Made in U.S.A.

LAFAYETTE HE-15A Citizens Band TRANSCEIVER

SUPERHET



Made in U.S.A.

**ONLY
59⁵⁰
NO MONEY
DOWN**

- Completely Wired—Not A Kit • 5 Crystal-Controlled Transmitting Positions • Tuneable Receiver Over Full 23 Channels • High Output Ceramic Microphone • Complete with Transmitting Crystal for Channel 9

A compact, precision transmitter and receiver covering up to a 20 mile or more radius, depending upon conditions. The HE-15A features an effective full-wave variable noise limiter, planetary vernier tuning. RF and microphone jack on front panel, 12 tube performance from 4 dual-function tubes, 2 single-function tubes, 2 rectifiers.

- HE-19 Telescoping Whip Antenna Net 3.95
- HE-16 Power Supply for 12 Volts Net 10.95
- HE-18 Power Supply for 6 Volts Net 10.95

LAFAYETTE ALL-IN-ONE CITIZENS BAND MOBILE ANTENNA

The Scoop Buy for
Citizens Band Mobiles

6.95

HE-800WX

- Chrome Swivel Base • Stainless Steel Spring • 102 1/2" Stainless Steel Whip for Optimum 11-Meter Performance

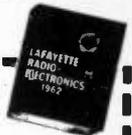
Chrome swivel ball mount base designed for mounting on any surface. Stainless steel spring holds rod in properly adjusted position and prevents rod damage from shocks and blows. Stainless steel whip for maximum resiliency and strength.



LAFAYETTE RADIO FREE!

**SEND FOR LAFAYETTE'S
NEW 1962 CATALOG**

Catalog 620
340 Giant
Size Pages



OTHER LOCATIONS:
JAMAICA, N. Y.
165-08 Liberty Ave.
NEW YORK, N. Y.
100 - 6th Ave.
BRONX, N. Y.
542 E. Fordham Rd.
BOSTON, MASS.
110 Federal St.
NEWARK, N. J.
24 Central Ave.
PLAINFIELD, N. J.
139 W. 2nd St.
PARAMUS, N. J.
182 Route 17

LAFAYETTE RADIO, DEPT. CBB-2
P.O. BOX 10,
SYOSSET, L. I., N. Y.

Send FREE 1962 Catalog 620 featuring the full line of Lafayette C.B. Equipment

\$ _____ Enclosed for Stock No. _____

Name _____

Address _____

City _____ Zone _____ State _____

HERE'S THE NEW, 2-WAY
HAND-HELD TRANSCEIVER THAT
OUTPERFORMS 'EM ALL!

PERSONAL *Messenger*

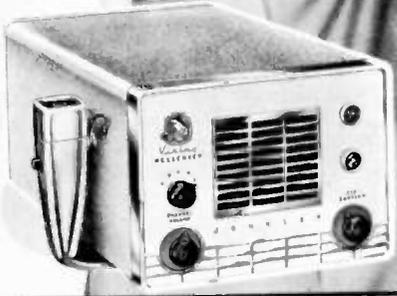
- No license required—may be used at once!
- Meets FCC requirements for use with licensed Citizens' Band stations, too!

This is the new "Personal Messenger"—a superbly engineered 2-way crystal-controlled transceiver so compact it fits in your hand—so flexible it can be used in thousands of applications! 11 transistors and 4 diodes—superheterodyne receiver with exclusive tuned R.F. amplifier gives you twice the sensitivity and more than 40% more range than units with conventional circuitry! Powerful two-stage transmitter delivers more power output than similar units with the same rated input! Unmatched audio intelligibility and razor-sharp voice reproduction—automatic noise limiter—automatic volume control—positive squelch control—elastic hand strap—operates on penlight or rechargeable nickel-cadmium batteries.

\$109⁵⁰

ILLUSTRATED AT LEFT—The Viking "Messenger"—maximum legal power Citizens' Band crystal-controlled transceiver. Excellent receiver sensitivity and selectivity—highly efficient transmitter punches your signal home! Built-in squelch—AVC—ANL. With tubes, push-to-talk microphone and crystals for 1 channel.

FROM \$134⁹⁵



<p>Delivery or fleet operation</p>	<p>Your own personal use</p>	<p>Construction or Business</p>
------------------------------------	------------------------------	---------------------------------

FREE
Color Brochure

WRITE TODAY

E. F. JOHNSON COMPANY
2410 Tenth Avenue S. W. • Waseca, Minnesota

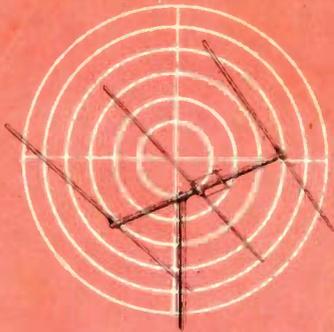
• Please rush me your full color brochure.

NAME _____

ADDRESS _____

CITY _____ STATE _____

Manufacturers of the world's most widely used personal communications transmitters



I OWN THE ULTIMATE IN CITIZENS BAND ANTENNAS

THE HY-GAIN 3-ELEMENT CITIZENS BAND BEAM

NOW AVAILABLE!

Two Model 113-B's may be stacked for vertical polarization developing 3 db additional gain with new stacking kit. Model 113-S includes preassembled RG8U coaxial harness, boom/mast hardware and T-fitting for phasing lines. Model 113-S, \$99.75 list.

Developing the tremendous gain of 9 db, the Model 113-B is designed specifically for Citizens Band transmitting and receiving; may be mounted either vertically or horizontally for excellent F/B and F/S ratios. Boom 2" OD aluminum, 8 ft. long. Elements 3/4"-5/8" aluminum, 16 1/2 ft. long. Hardware iridite treated. Easy to install; easily rotated. Exclusive Hy-Gain Beta match. Complete engineering report available. \$52.50 list.

EFFECTIVELY MULTIPLIES CB POWER 8 TIMES . . .

See your local hy-gain distributor or write direct to

HY-GAIN ANTENNA PRODUCTS • DEPT. 263 • LINCOLN, NEBR.

HY-GAIN HY-LITE



ONLY
\$895

Handsome grey plastic, "on the air" indicator, 4x8", for mounting atop your CB equipment or on wall brackets. Attaches simply to antenna changeover or transmitter control relay. Internally illuminated.

BULK RATE
U. S. POSTAGE
PAID
Permit No. 7
OKla. City, Okla.

OKLAHOMA CITY, OKLAHOMA
P. O. BOX 1557

CB HORIZONS