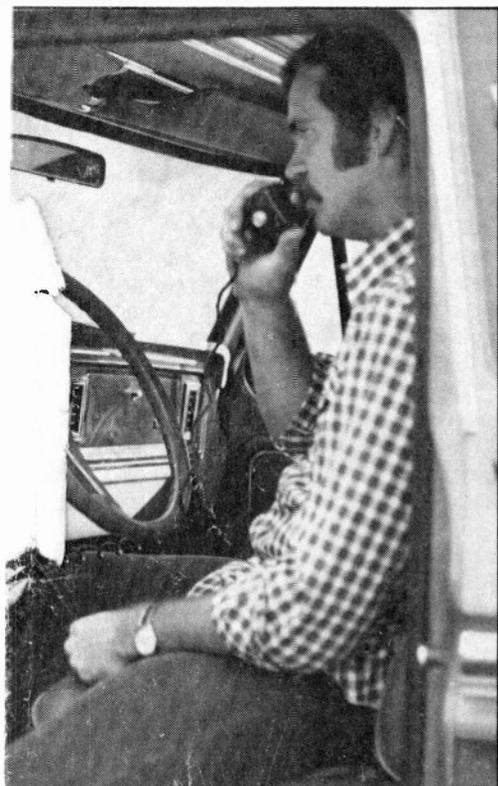


World Of CB RADIOS

AN ARGUS
PUBLICATION

APRIL/MAY 1976



4 WHY CB RADIO?

They're pretty expensive at times—is the investment really worth it?

6 WHY A CB LICENSE?

Do you really have to cooperate with Uncle Charlie (FCC) to talk to your buddies?

7 TRUCKER'S CB CHANNEL LOCATER

Where and how to find your favorite 18-wheeler while you're out trying to avoid bear.

8 MAKING SENSE OUT OF THE AIR WAVES

"Keep your rubber side down, shiny side up, the bugs off your glass and the bears off your—tail. We'll catch you on the flip-flop or the next eat-em up. We're 10-8, 10-10 and 10-27 back to the home freq." "Huh? Whad ya say?"

12 THE TRUTH ABOUT COAXES

For a base or mobile unit, which is best: RG-58/U, coat hanger, bailing wire, RG-8/U, copper wire, shoestring or wet spaghetti? Read on and get enlightened!

14 THE REACT TEAMS

Someone you should know about who is there on channel nine, available to help you out when an emergency arises.

18 PRODUCT EVALUATION: THE PACE 1000M

Got some cash? Want a CB radio? Check out the list and find out if you've got to get a bank loan, or have enough bread already.

20 YOUR PRICE GUIDE TO CB RADIOS

The AM/SSB goes under the scrutiny of the World of CB staff, in an effort to find the ultimate in mobile CB radio quality.

24 STEP-BY-STEP GUIDE TO INSTALLING A CB RADIO IN YOUR CAR

It's easy, but time consuming, so follow the guide and instructions to get your car in a talkative mood.

28 SQUEEZING A CB UNIT BEHIND THE DASH

The most sanitary method is the type that looks as though it came from the factory. With some drilling and patience you too can have the same appearance in your dashboard.

32 MAKING YOUR VAN TALK

We didn't leave you box folks out. Vans have CBs too. Follow our roof mounting guide that clears up a few myths and rumors.

36 HOW TO SELECT AND INSTALL CB MOBILE ANTENNAS

Bugs Bunny and you have something in common. Without the right ears, nobody wants to talk to you.

40 MATCHING YOUR MOBILE ANTENNA

Now that you've got it mounted you've got to check the SWR rating. If it isn't matched, it doesn't work well.

44 HOW TO SHOP FOR CB EQUIPMENT

Everything you need to know to get that one important jump ahead of a high-pressure salesman who wants to sell you a unit that will also make the bed for you in the morning.

56 YOUR BASE ANTENNA

The type your base unit needs and the area you live in makes a lot of difference in your transmit and receive power. Pick the right one the first time.

60 MOUNTING A BASE ANTENNA

Put it up the right way and you'll never have to crawl up on that slippery roof in the rain again.

66 PRODUCT EVALUATION: JOHNSON VIKING 352

Another biggie in the CB world for mobile use. We tested this model everywhere but underwater!

68 PA SPEAKER INSTALLATION

Getting the attention of your friends and neighbors can be easier than you think. You don't even have to buy that big fancy car!

70 A GUIDE TO PREAMP MIKES AND WIRING INSTALLATION

What they are, how they work, where to get one, how to install it. Basically, how to *everything!*

74 YOU AND THE CLASS D LICENSE

Where, how much, and how to apply for a CB license before Uncle Charlie puts the bite on you and shuts your rig down with a \$500 fine.

WHY CB RADIO?

Whether a CB Radio
Is Used on a
Day-to-Day Basis,
or for Emergencies
Only, You Shouldn't
Be Without One!

Indeed, why CB radio? On the lighter side, it's fun; on the more serious side, it can be a lifesaver. So if you don't already know about CB radio, it's high time you began to learn. There have been rumors that the Federal Department of Transportation would like to see all vehicles in recreational use equipped with two-way radio. The name of the game is safety.

Let's face it. A lot of us, in our desire to get away from it all, overdo the scene and sometimes get so far away from it all that we get into places we shouldn't and get stuck. Far out in the boonies in splendid isolation with a transmission "gone away," there's no way to call your friendly auto club tow service by telephone, and a hike out to civilization and the hard road might take days.

While most are hip to the difference between location masts and CB antennas, there are still thousands who are a little vague about the tall protrusions sprouting from various locations and swaying high in the air as vehicles cruise down the highway. Often the assumption is that these are "hams," that elite body of radio amateurs who converse around the world. No way. The majority are CB (Citizens Band) licensees who have discovered a world of togetherness, enjoyment and peace of mind through a simple little five watts of potential lifesaver.

In 1958 the Federal Communications Commission (FCC) created what we now know as the Citizens Radio Service. The motivation was primarily safety rather than any spur to the economy. The FCC felt that there should be a means for those of us who do a lot of traveling and who sometimes get out in the wilderness areas on a camping trip, to communicate with the outside world in case of

accident, illness or other emergency. The commission also recognized that there was a real need for the troubled motorist, no matter what his vehicle, to obtain help without having to leave his machine and start hiking.

Since the 11-meter radio band, which had been allocated for amateur use, was unpopular with the hams, it was removed from that service and Class D or Citizens

Band was established. Twenty-three frequencies (channels) in the range between 26.965 and 27.255 Mc/s (now known as MHz in honor of physicist and radio pioneer Heinrich Hertz) were designated for CB.

At the outset, all these channels were legally limited to transceivers (transmitter/receiver) held under the same license. A dispatcher could talk back and forth with his cab drivers, but to no one else. A motorist could talk to his home base but not to another motorist. This worked fine for awhile, but as more and more people became aware of the simplicity of CB radio, there was public pressure on the FCC to set aside certain channels where one licensee could legally talk to another.

Under the FCC rules, conversation is limited to stations not more than 150 miles apart and each chat may be no longer than five minutes. We'll get to some of the other regulations a little later, but right now let's assume that you have your license and your two-way is installed in your car. Let's look at some of the advantages and pleasures.

The situations where you'll find the radio helpful are countless, so let's pick an example out of a hat. Let's suppose you are on a winding two-lane road. You're packed for a weekend and you're heading for a favorite vacation spot. Ahead of you there's an underpowered sedan towing an oversized travel trailer. You've been trying to find a safe place to pass, but there just hasn't been room. If he displays on the rear of his rig (and many do) his call sign, say KCW 5193, and the notation "Ch. 13," you just turn on your CB radio, switch to channel 13 and politely identify yourself as, perhaps, KQX 5915. If he's monitoring his usual channel, you can now (again politely) ask him to try to find a place to let you by. Most CB'ers are clubby folks, and you'll probably not only be given the opportunity to pass but have the pleasure of a friendly conversation as well until distance or mountains separate your signals.

Consider another for-instance. You are near a town, heading for an unfamiliar destination, but you're in strange surroundings and don't know which road to take. This is the time to avail yourself of channel nine, the official

emergency channel as designated by the FCC. Your procedure is to "go to" (switch to) channel nine and identify yourself. Again we'll use KCW 5193 because that's our own call sign. It goes like this: "KCW 5193 mobile calling REACT monitor." Repeat if you don't get an answer immediately. In a city of any size, however, you should raise a member of the nationwide organization whose sole purpose in life is public service. Give the REACT monitor your location and he'll get you headed in the right direction.

REACT stands for Radio Emergency Associated Citizens Teams, and groups of teams throughout the country are sponsored nationally by the Research Division of General Motors. In most circumstances REACT gives the traveler advice on traffic conditions; however, there have been many instances of performance far and above the routine. During the last big Los Angeles earthquake a REACT monitor was the primary link between the San Fernando Valley and many emergency headquarters. Reports of burglaries in progress have brought officers to the scene to nab thieves red-handed.

When we get away from the freeways and expressways and venture into camping country, there are more potentials for CB use than we can count. Let's get back to that blown transmission we mentioned in the beginning. Here you can make a "10-33" call (serious emergency) on any channel if you are unable to make contact on channel nine. If you have full 23-channel capability, you can surely contact another licensee.

Speaking of licensing, it's the simplest thing in the world. When you go shopping for your transceiver(s), the proprietor of your friendly electronic supply house will almost certainly have an application form for you. If not, you can readily obtain one from your nearest office of the Federal Communications Commission (FCC). Your dealer will also in all likelihood be able to supply you with a digest of the FCC rules governing CB radio operation that you should read and understand. Fill out the application form, mail it with the appropriate fee and you'll have your license back in three weeks or so. Incidentally, when you fill out your license application, you'll notice a space where you are to indicate the number of sets you expect to be operating. *Never* put down "one" in that space for that would mean that you only intend to use it to converse with others and never from home to mobile or vice versa.

When your license arrives it's a good idea to read the booklet that comes with it. It's a refresher on the rules and regulations of Class D (that's you). There are no technical requirements, you don't have to learn Morse code and you don't have to pass a tough examination on

electronic theory. You are presumed to be a good citizen and thus entitled to a Citizens Band license to operate a radio station.

This might be a good place to bring out some of the other do's and don'ts according to the FCC's regulations for Class D. By law you are restricted to five watts of input power. You are not supposed to use CB radio for personal chit-chat. The whole idea is that the radio will fill a real need where no other means of communication is available. The use of profanity or obscene language is expressly forbidden as is the broadcast of music or other entertainment material. Communications with other stations are supposed to be limited to five minutes.

Of course, it is possible to go out and buy the equipment and go on the air without a license. Unfortunately, some do. But by so doing they have violated federal law and stand a very good chance of getting caught. It is not only very dumb but it can also be extremely expensive to go around breaking Uncle Sam's laws.

These illegal operators are called "bootleggers" by the law-abiding and licensed CB users, and the bootleggers can be more than just an annoyance and troublemakers. Not having licenses, they call themselves by "handles," such as Moonshiner, the Deacon, Dirty Bird and on and on, limited only by their imagination. The real source of difficulty with the bootleggers is their hogging of channels, including those not designated for conversation between units of difference licensees. Since they are already illegal, they could care less. Another grave problem is the bootlegger's frequent use of linear amplifiers which boost the legal five watts up to 50 or more watts and will also cause "bleed over" onto adjacent channels, making their use impossible. But enough of the crazy bootleggers; the advantages of CB still make it worthwhile to put up with a few nuisances.

One of the questions we are frequently asked concerns the power drain on a vehicle's battery when the CB set is in use. Your transceiver not only draws a tiny amount of current (a 12-volt battery in good condition will supply power for at least eight hours of continuous transmission without the engine running) but mobile units are remarkably durable. We have rescued rigs from the wreckage of head-on crashes and found them still in perfect operating condition.

Another question we are frequently asked involves the initials SSB. They stand for Single Side Band. Every transceiver emits secondary signals both above and below the assigned frequency. Certain sets are built to take advantage of this characteristic and amplify the side bands. There are benefits in side band operation in that there is less interference

and signals are stronger. There are distinct disadvantages also. The cost is greater, often as much as \$100 more than a conventional, comparable AM transceiver. Even more important, the person to whom you wish to talk must also have SSB capability. On straight AM, SSB bleed-over sounds a lot like Donald Duck with a speech impediment.

In spite of these few drawbacks, more and more people, especially those who are in groups, are going the SSB route. The most popular channel for SSB use is channel 16; there is more room and less interference there. You should be able to get a card from your electronics store which will show the band separation between channels.

Other than the aforementioned problems with bootleggers, it is only fair to warn you that there can be other frustrations in CB operation. One of the troublesome conditions that plagues the short airwaves is noise or "hash," the result of a combination of mysterious electronic influences (some say sunspots) and the thousands of sets in use across the country. Occasionally, due to these same mysterious causes, you'll pick up a licensee thousands of miles away. While on duty as a REACT Monitor one early

morning we came back to a motorist seeking directions. There was difficulty in our communication, however—he was lost in Phoenix, Arizona, and we were in Los Angeles, California!

CB'ers have a language all their own known as the "10 Code." It's remarkably easy to learn and it does save much time on the air. The entire list accompanies this article with a notation on the numbers most frequently used.

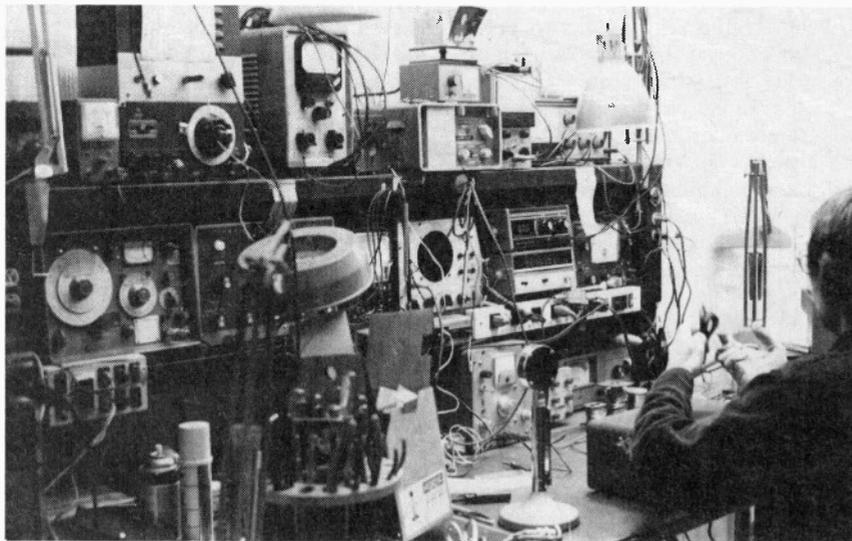
Perhaps the most vital thing to remember about CB radio is that you never think you'll need it until you need it desperately. Our most critical moment came when on the outskirts of Los Angeles we had a flat tire. In the hassle of changing the wheel, we locked the car keys in the trunk. Fortunately there was access to the car's interior and we were able to radio for help in getting a spare set of keys from home. In a way, CB radio could be compared to the life jacket on an ocean liner. You may never need it, but it's very comforting to know it's there.

For protection, for fun, for companionship, convenience and safety, the inexpensive little five-watt box can be one of the best accessory investments you'll ever make. ●

10 CODE *(most frequently used)

*10-1 Receiving you poorly	10-39 Your message delivered
*10-2 Receiving you well	10-41 Please tune to channel _____
10-3 Stop transmitting	
*10-4 OK, message received	10-42 Traffic accident at _____
*10-5 Relay message	
*10-6 Busy, please wait	10-43 Traffic tie-up at _____
*10-7 Leaving the air	
*10-8 In service, subject to call	10-44 I have a message for _____
*10-9 Please repeat	
*10-10 Standing by	10-45 All units within range please report
10-11 You're talking too rapidly	10-50 Break channel
10-12 Visitors present	10-60 What is the next message number?
*10-13 Advise please on road/weather condition	10-62 Unable to copy, use land line
	10-63 Net directed to _____
10-16 Make pickup at _____	10-64 Net clear
	10-65 Awaiting next assignment
*10-17 Urgent message	10-70 Fire at _____
10-18 Anything for us?	
10-19 Nothing for you, return to base	10-73 Speed trap at _____
*10-20 My (your) location	
10-21 Call by telephone	10-75 You are causing interference
10-22 Report in person to _____	*10-77 Negative contact
	10-82 Reserve room for _____
10-23 Stand by	
10-24 Completed last assignment	10-84 My telephone number is _____
10-25 Can you contact _____	
10-26 Disregard last information	10-85 My address is _____
*10-27 Moving to channel _____	10-89 Radio repairman needed at _____
10-28 Identify your station	10-90 I have TVI (television interference)
10-29 Time is up for contact	10-91 Talk closer to mike
*10-30 Does not conform to FCC rules	10-92 Your transmitter is out of adjustment
10-32 I will give you a radio check	10-93 Check my frequency on this channel
*10-33 EMERGENCY (equivalent to Mayday)	10-94 Please give me a long count
10-34 Trouble at this station, help needed	10-95 Transmit dead carrier for five seconds
10-35 Confidential information	10-99 Mission completed, all units secure
*10-36 Correct time is (wanted)	10-100 Stand by, bathroom urgency
10-37 Wrecker needed at _____	10-200 Police needed at _____
10-38 Ambulance needed at _____	

Why Have a Citizens Band Radio License?



The Small Investment That Really Pays Off!

By Tari May

According to the latest facts, there are over 17 million CB radios in operational use today. Each month that figure grows by 50 to 100 thousand. In order to help control and guide the CB radio's use, the FCC (Federal Communications Commission) requires that every CB'er have his or her own license.

Although the Class D or Citizens Band radio license application is probably one of the easiest to fill out, many people still feel that it is perfectly alright to continue to operate their radio without one. *Wrong!* There is no valid excuse why anyone who operates a CB radio should not have a valid, current license. Until 1975, the fee for applying for a license was \$20. Now that fee has been reduced to \$4 so that many more people who enjoy the use of CB radio can afford a license.

Another reason why the FCC wants all CB'ers to have a license is because of some people's great misuses of the radio. By applying for a license, you sign the application, and say that you have read Part 95 of the FCC rules and regulations regarding the use of CB. You also must state that you have, or will have, a current copy of Part 95 with you before you turn your set on. This way, you have no legal excuse for the radio's misuse!

Although Part 95 is rather lengthy, here are a few of the major violations that the FCC is really tough on, should you get caught:

1) Under any and all circumstances, the use of profanity is strictly prohibited!

2) The use of a linear power amplifier is also a direct violation. By running any more than five watts input, and four watts output, you're asking the FCC to come down . . . hard!

3) Failure to identify your station by the use of your call sign at the beginning and end of all your transmissions also constitutes improper use. You are also not permitted to talk to any station that does not identify themselves. If you converse with a friend who does not properly identify himself, you can both be fined, or have all your radio equipment confiscated by the FCC.

4) You are not permitted to alter any frequencies in your radio. The standard CB comes equipped with all the legal channels needed for radio communications. If you are caught operating on other than an authorized channel, you could very easily lose your license, or go to jail.

If you think the FCC or Uncle Charlie, as he is commonly referred to, is playing around . . . think again! Each month hundreds of unlicensed CB'ers are caught illegally operating their sets. The fines and punishments imposed by the FCC are also none too light. First off and foremost, it is a federal crime to operate a CB radio without a proper license. Punishment for this violation can range from a \$10,000 fine, to confiscation of equipment, or even a prison sentence.

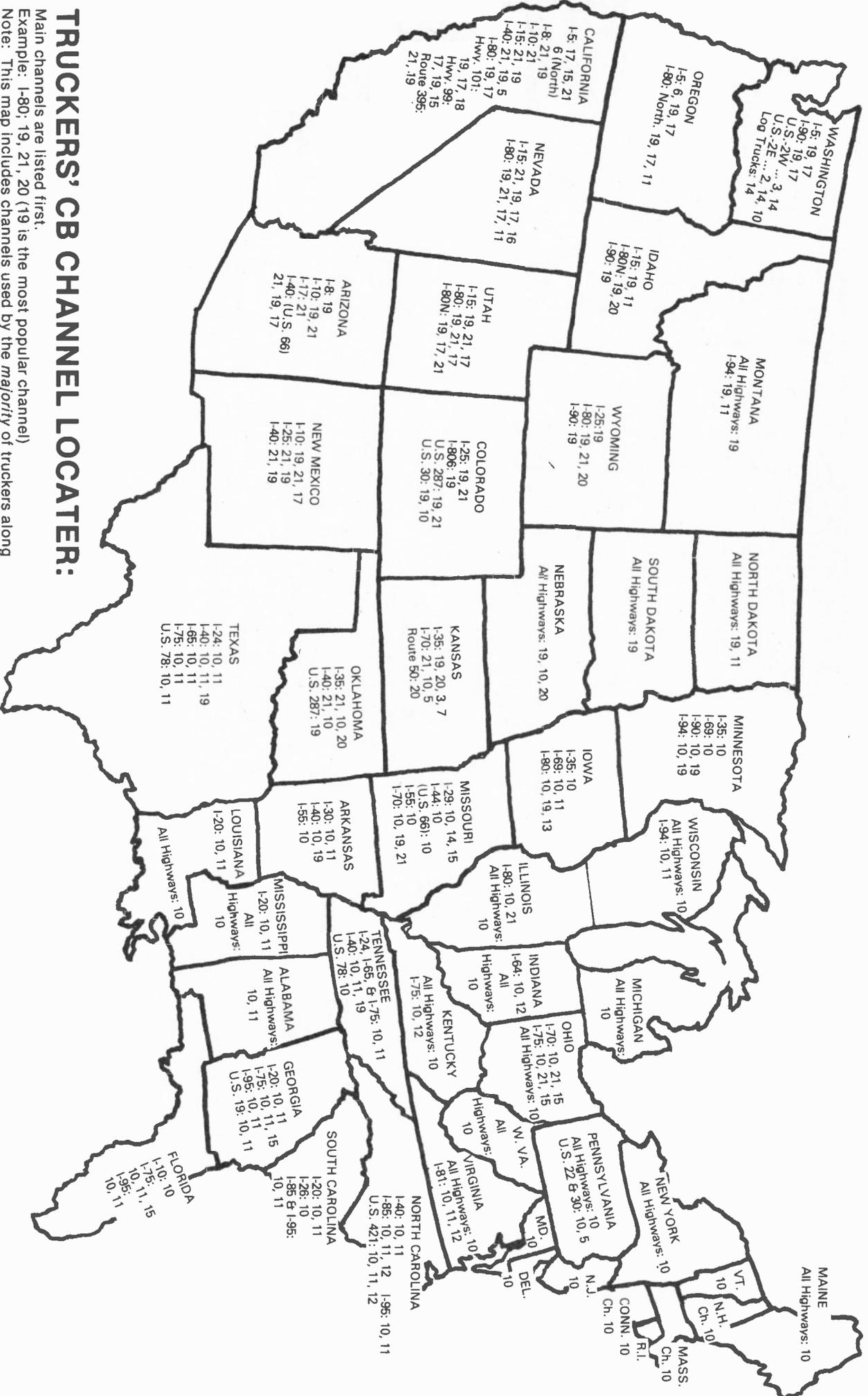
So before you key that microphone down, give some serious thought to some of the consequences to being caught operating that CB without a license. If you do, it's a pretty sure bet that a \$4 license fee is a lot cheaper than losing your rig or going to jail! ●

TRUCKERS' CB CHANNEL LOCATER:

Main channels are listed first.

Example: I-80: 19, 21, 20 (19 is the most popular channel)

Note: This map includes channels used by the majority of truckers along major highways. Channel usage, of course, is subject to change.



MAKING SENSE OUT OF THOSE RADIO WAVES

By Tari May

If you are new to the airwaves of CB radio, you're in for a real treat. The only problem is that you may not be able to understand the meaning of everything that's said. For the *World of CB Radios*, there is now a whole second language that has developed. To help you get a better understanding of this somewhat strange-sounding slang, here's a current list of the most popular sayings, and their translations.

Fully Understanding Bears in the Air, Raking the Leaves & Shaking the Trees

A

ace—a big brother
advertising—a marked police car that has its lights turned on
apple—a CB nut

B

back—over
back door—last vehicle (truck) in a string of three or more—all in contact with each other
back down—drive slower

back out—stop transmitting
bad scene—a weenie channel, crowded channel
ballet dancer—an antenna that is not tied down properly
barefoot—using no power, type accepted unaltered CB radio
base station—CB radio at a fixed location
beam—directional CB antenna
bear—state highway patrol
bear cave—police station or post on highway
bear in the air—police helicopter; spy in the sky



BEAR IN THE AIR—

bear report—where are the police?
bear taking pictures—radar speed trap
bear's den—any police station
bears wall to wall—many police out on patrol
beast—a powerful CB station
beat the bushes—"front door" (lead vehicle) looks for Smokey by going fast enough to draw him out of hiding. See also "shake the leaves"
beertone—a CB signal fading in and out
big daddy—a long-time CB'er
big switch—turn off CB set
bleeding—CB interference from another channel
blessed event—a new CB set
blow the doors off—okay to pass my vehicle
bodacious—good signal; clear transmission
bootlegger—an unlicensed CB'er
boulevard—interstate highway
bounce-around—the return trip
boy scouts—the state police
break—let me on the channel
breaker—a CB'er wanting to use the channel
break one-oh—also "break 10"—I want to talk (on channel 10)
bubble gum machine—police emergency light
bucket mouth—person or persons hogging a channel
bushels—one-half ton; a 20-ton load would be 40 bushels

C

camera—police radar unit
catch—talk to
catch you on the flip/flop—catch you on the radio on a return trip
cellblock—location of a base station
chain gang—members of a CB club
check the seatcovers—watch out for a female driver with her skirt pulled up
chicken choker—poultry truck
chicken coop—highway truck weigh station
chopped top—a short antenna
chrome dome—mobile with a roof antenna
clean—no bears or police ahead
clean cut—a CB station without power
clear—out, final transmission
cloudy—the FCC is monitoring for violations
coffee break—a get-together for CB'ers
come again—repeat that, I didn't hear it all
comeback—return call
come on—over
comic books—truck drivers' log sheets or log books
container—outside covering of a CB set
convoy—organized bear hunt
cotton picker—cotton picker (instead of four-letter words on the air)
covered up—interfered with transmission
county mounty—county sheriff or highway patrol
cut the coax—turn off CB set

D

daddy-o—FCC
darktime—night
dead pedal—slow moving vehicle
do it to it—go ahead and talk
double nickels—55 miles per hour speed limit
draggin' wagon—a tow truck or wrecker

E

ears—antennas or radios
ears-up—radio on
eat-um-up—truck stop cafe
eighteen wheeler—any semi-tractor truck with any number of wheels
eights—kisses
eyeball—a face-to-face meeting

F

fat load—overload, more weight than local state law allows
feds—inspectors, DOT or FCC
feed the bears—to get a ticket
final—last transmission
fingers—a channel-hopping CB'er
five-five—speed limit
flagwaver—road construction worker
flappers—ears
flip flop—trucker's return trip
four—abbreviation of "10-4," meaning "OK"
four ten—10-4, emphatically
four wheeler—automobile
friendly candy company—the FCC
front door—first vehicle (truck) in string of three or more trucks in radio contact
fugitive—a CB'er operating on a channel different from home channel

G

geological survey—a CB'er who looks under his set
getting out—being heard
glory card—FCC license
go-go girls—load of pigs headed for market
gone—final transmission
good buddy—a good friend who is also a CB'er
goodies—extra accessories for a CB set
G.P.—a ground plane antenna
grab-bag—an illegal ham on CB band
grass—side of the road or median strip
green stamps—dollars
green stamp road—tollway

H

hammer—accelerator
hammer down—to floor the accelerator
handle—a nickname picked to identify a CB'er and his station

happy number—an S meter reading
high gear—to turn on extra power amplifiers
holler—to call
home twenty—home or house
how about—calling
hung-up—CB'er whose mike cord has wrapped around the steering wheel

I

idiot box—a television set
indian—neighbor with TVI
in the grass—parked or pulled over on the median strip

J

jamboree—a gathering of CB'ers, usually a weekend outing

K

keep your nose between the ditches and Smokey out of your britches—drive safely and look out for speed traps and speeding fines
keep the greasy side down and the shiny side up—drive safely
kenosha Cadillac—any car made by AMC
keyboard—the control knobs of a CB set

L

landline or LL—telephone call
lay an eye on—to see someone in person
let the channel roll—let others break in and use the channel
linear—a power amplifier used to increase wattage output
local yokel—city police officer

M

man in blue—policeman
man in slicker—fireman
man in white—doctor or ambulance attendant
mail—an overheard conversation
mercy—oh, wow!
mercy sakes—mercy sakes
mile markers—signs along interstate highways
mobile—CB radio mounted in a vehicle
modulate—to talk with
mothball—annual CB convention
move—get in motion

N

negative contact—no reply on called station
negative copy—did not hear response
negatory—no; negative reply
nickel's worth—the five-minute time limit for conversation

O

one time—for a short contact
on the move—driving, moving
on the pay—driving the legal speed limit
on the side—parked or pulled over on the shoulder
other half—wife (usually) or husband
over shoulder—behind

P

peanut butter in ears—not listening
panic in the streets—the FCC is monitoring the area
penman—a CB'er who has filed for his license
peak a set—to beef up a radio to get the most out of it
picture box—police radar car
picture taker—radar speed trap
pick-um up—light ruck; pickup truck
plain wrapper—police car with no markings; unmarked car
portable chicken coops—a portable truck weigh station
post—milepost markers along an interstate highway
pounds—number on S-meter (S-3 is three pounds, etc.)
pregnant roller skate—a Volkswagen
put the good numbers on you—threes and eights—best regards, etc.
putting the hammer down—moving at high speed
putting out—strength of signal



NEGATIVE COPY —

Q

queso—conversation

R

radio check—how is my radio getting out
 rake the leaves—back door or last vehicle in string, bringing up the rear
 ratchet jaw—a CB'er who never stops talking
 react—emergency frequency channel, usually 9
 read—do you hear?
 reefer—refrigerated truck
 renegade—an unlicensed, outlaw CB'er
 rest-um up—a truck stop or rest station
 rig—CB radio or large truck
 rocking chair—vehicle that's between the front door and back door in a string of vehicles
 roger—I acknowledge
 roger rollerskate—passenger car going more than 20 mph over the limit
 roller skate—small car

S

scatterstick—vertical antenna with a ground plane
 seat covers—girls in a car
 seventy-three—best of luck, good wishes
 seventy-seven—negative contact
 shake the leaves—act as lead vehicle to decoy any Smokies out of hiding
 shakey town—Los Angeles
 shiney side up, dirty side down—keep your car upright, drive safely
 shout—to call for another CB'er
 short skip—atmospheric conditions for longer range
 six wheeler—passenger car pulling a trailer
 skip—talking to stations outside the 150-mile limit
 slider—an illegal variable frequency oscillator
 smokey—state police, same as bear
 smokey lickin' his chops—waiting for business
 smokey on four legs—mounted police (used in New York city and Chicago only)
 smokey the bear—state police patrol (with or without a smokey the bear hat)
 smokey with ears—a police car with a CB radio
 stack them eights—best regards
 stepped on—your signal was interfered with
 struggle—trying to break a channel
 suicide jockey—a driver hauling a dangerous load
 sweeping leaves—bring up the rear
 swindle sheet—trucker's log book

T

taking pictures—radar speed indicator
 tear jerker—a CB'er who cries the blues
 ten one hundred—nature calls
 thermos bottle—tank truck
 thirty three—10-33; this is an emergency
 thread—wires in a CB radio
 threes on you—best regards, good luck
 threes and eights—lots of best regards
 throwing—transmitting



STEPPED ON —

tijuana taxi—a marked police car
 train station—traffic court that fines everybody
 two wheeler—bike or motorcycle
 two-way radar—radar used from moving police car

U

uncle charlie—the FCC

W

walk all over—overpowered by a stronger signal
 wallpaper—postcard acknowledgement
 wall-to-wall—coming in loud and clear; pegging the needle!
 wall-to-wall bears—high concentration of police with strict enforcement, traps, etc.
 we gone—stopping our sending; will listen
 wheels—the mobile unit
 weenie—small no-power CB station
 wiendy—homemade CB set
 wrapped loaf—a CB set in its original box
 wrapper—paint job on a car
 w.t.—walkie talkie

X

X-ray machine—radar speed gun
 XYL—wife (stands for ex-young lady)
 XYM—the husband of a CB'er

Y

YL—young lady, miss, not married, daughter
 YM—young man, not married, son

Z

zoo—police headquarters

The TRUTH ABOUT COAXES

Using the Right One Can Make the Difference in Your Radio's Transmission!

By Ray Andrews

After you've got your radio installed, and your antenna bolted down, there is still one key piece of equipment that is missing—the coax. In case you're new to the world of CB, the coaxial cable, or coax, is that thick black wire that connects the radio to the antenna. Unless you use the right coax for your particular setup, you may be losing a great amount of power.

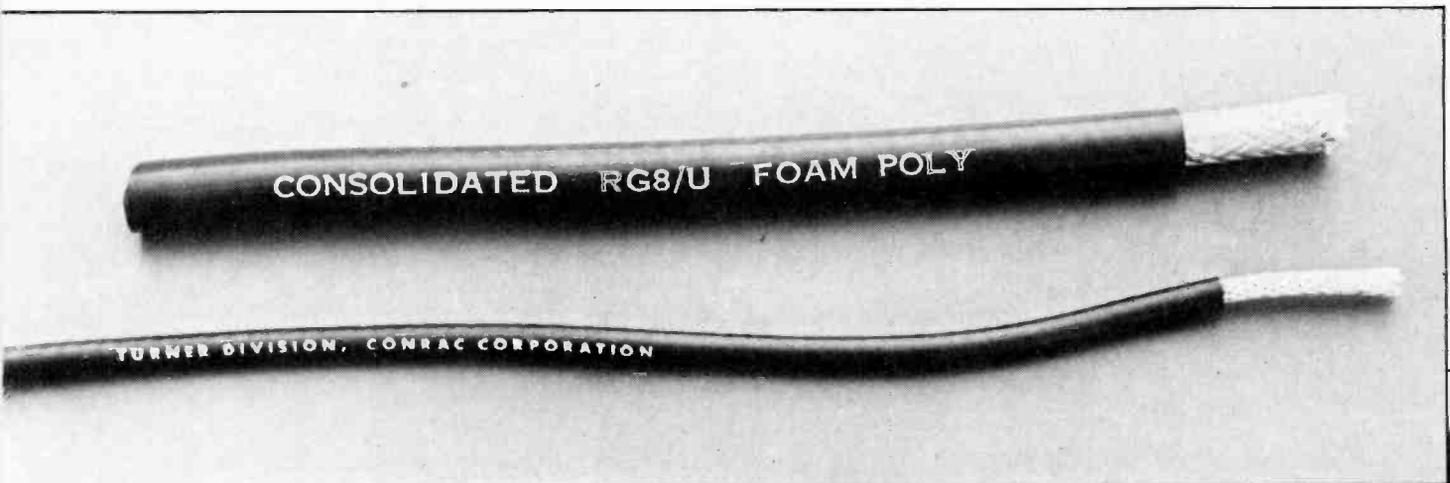
Most base and mobile CB radios generate just under four watts of radio frequency power output. The main thing that's unfortunate for most CB'ers is that few stations can claim that the same four watt output ever reaches their antenna. What happens is that a significant amount of power is often lost somewhere in the coax that connects the antenna and the transceiver.

Currently, the two most popular types of coax are RG-8/U and RG-58/U. The differences between these two types and their performance can definitely affect the working output of your radio. For all practical purposes, RG-58/U coax is the ideal type for mobile installations and use. This coax is about one-half the diameter of its thicker counterpart, RG-8/U.

The center of the RG-58/U is made up of copper braiding, a plastic insulator, and a thin copper wire that runs the entire length of the coax. Its smaller diameter is best for mobile use because for the short distance between radio and antenna, the radiated power loss is not as significant.

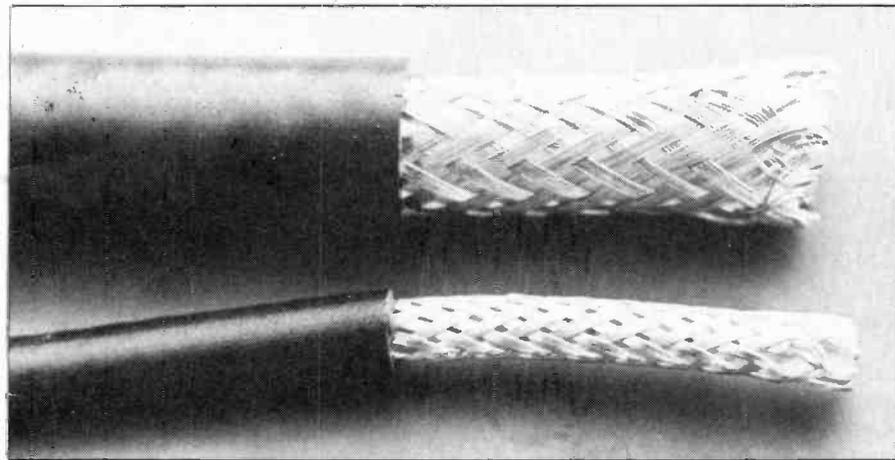
For base installations, the best choice is RG-8/U. This heavier and more expensive coax is much better insulated than RG-58/U. If you run RG-58/U coax for your base usage, you can lose nearly one watt of power for every 100 feet! This compares to about a 1/10 watt of power lost for the same length of RG-8/U.

Whichever coaxial cable you use, it is always best to purchase the highest grade available. Try to steer clear of the so-called "bargain," or surplus coaxes. It may look the same on the outside, but you will notice the difference, once it's too late and already installed. You should also periodically inspect your base or mobile coax for breaks, cuts or crimps in the line. If the cable is old and has started to deteriorate with age or exposure to the elements, you may end up losing up to two-thirds of the power that your radio puts out! ●



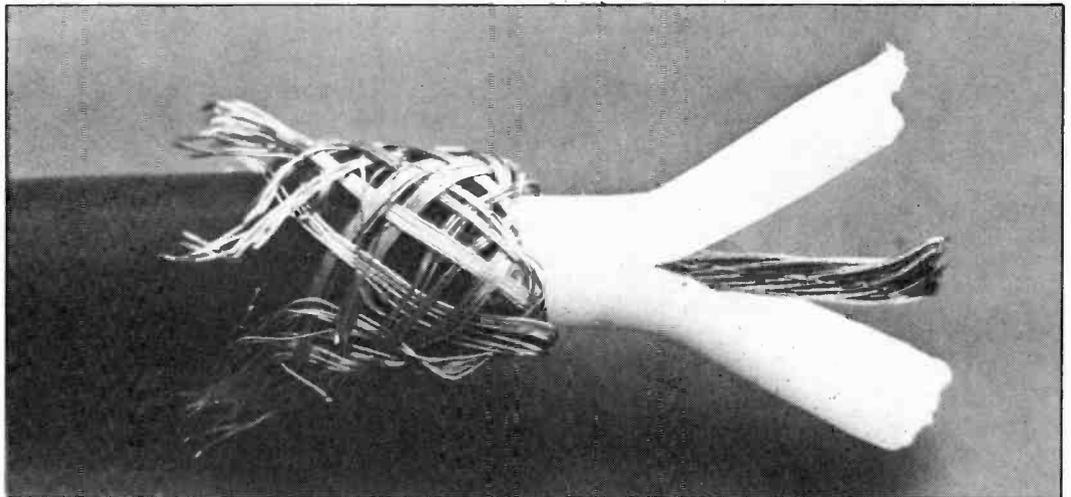
The two most popular types of coax are RG-8/U and RG-58/U. The differences between these two have a great effect on your radio's performance.

Always choose a coax that has a thick braid shielding. The higher grades of coax will always use copper shielding.

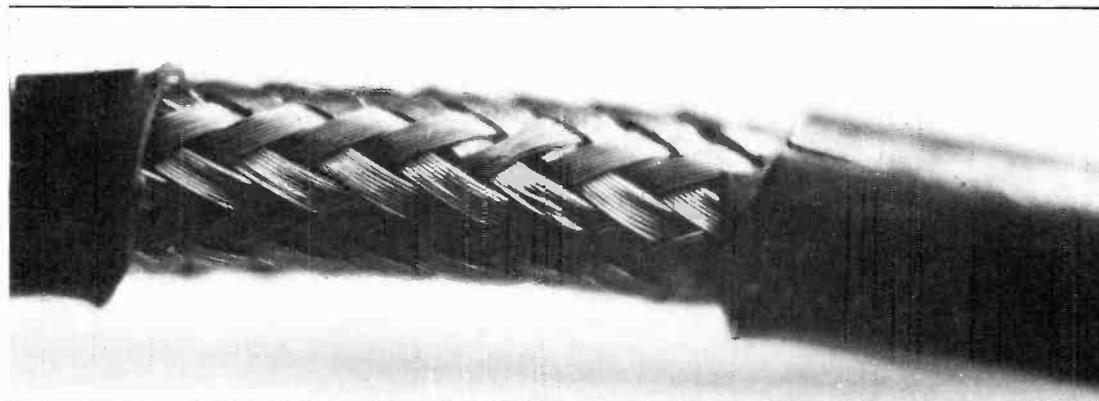
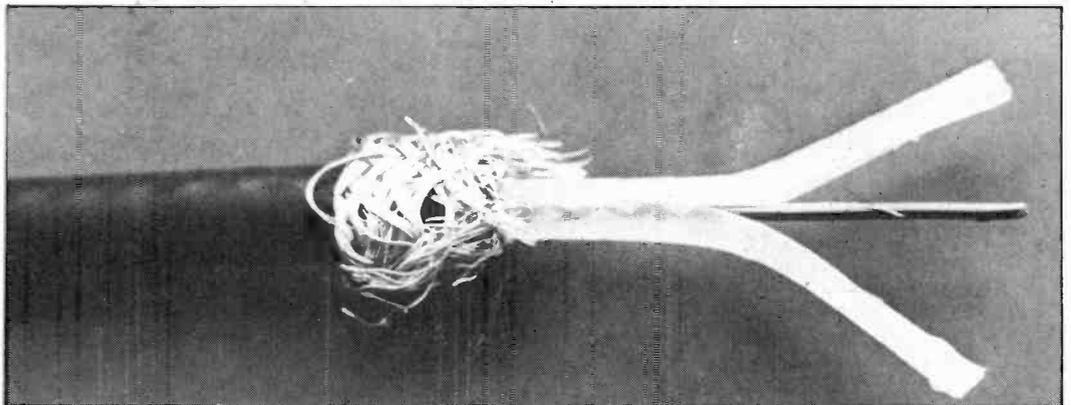


Note the difference in the coax's diameter. The thicker coax is RG-8/U and is used for base stations. The thinner coax is RG-58/U and is best for mobile use.

The RG-8/U coax has a thick poly-foam insulation, and several copper wires for a center core. For a base installation, this is the best to use.



RG-58/U has one strand of copper wire for a core and less insulation. This coax is best suited for mobile use.



Everyone who owns a CB unit, whether it's a base or mobile unit, and even if he or she only uses it rarely, should be informed of the all-volunteer radio communication crew that could possibly save their life. REACT, which stands for Radio Emergency Associated Citizen's Teams, is the largest CB community-oriented group in the country. Their size and effectiveness has changed the CB world and has made the two-way radio immeasurably valuable to the public.

In just about every section of the country you can find a REACT volunteer, monitoring emergency channel nine, ready to help out. Whether it's a flat tire, accident, or a report of bad road conditions, the volunteers who comprise REACT can aid you and other motorists.

For instance, let's imagine that you're out in the middle of the desert with a vapor-locked engine. It won't start, and you can vaguely remember the last gas station about 40 miles over your shoulder. According to your road map, the next station is approximately another 40 miles in front of your radiator. What do you do? You could sit there on a deserted highway for hours before another car comes by. And even at that, getting someone to stop and assist you on the highway these days is like pulling hen's teeth.

If you're one of the fortunate who's got a CB radio installed in his vehicle, you're in luck. Switch to channel nine, and using your FCC appointed call numbers, you can contact the nearest REACT team member. From there, the REACT volunteer will get the information from you concerning the problem, including your approximate location, make and color of vehicle, and license number. If you've got an automobile club card, they can dispatch a tow truck to your car to help out. If that isn't available, most REACT members will alert an 18-wheeler or other mechanically oriented motorist to your location and problem, requesting that they give you a helping hand.

Utilizing channel nine, and the REACT team, you can get information on upcoming road conditions, possible traffic accidents, where to go if you're helplessly lost, and even find out if the town you're heading towards has any decent motels or restaurants. The REACT team is there to help out the CB user, and they do a fantastic job.

The track record of REACT is impressive. Since its inception in 1962, REACT teams have handled an estimated 55 million emergency calls including approximately 12 million highway accidents. Over 200,000 volunteers have provided a total of 100 million man-hours in public services to

their communities through local REACT team programs. A large percentage of REACT teams have now taken Red Cross first aid training and provide emergency communications coordinated through their Red Cross chapters.

According to recent statistics, over 5,000,000 emergency calls are made annually by CB'ers across the country. Over a quarter of these emergency calls are about accident-related problems, most of which REACT handled. The majority of REACT teams work in conjunction with their local police, fire and rescue departments, allowing them to call in by telephone and give the location and seriousness of accidents long before these public facilities even get wind of the problem. REACT teams have saved many a motorist's life, especially in incidents where a few minutes made the difference between a hospital bed and a coffin.

REACT team members are very keen on the proper usage of the CB radio, and will be quick to point out that if the rules laid down by the FCC aren't followed, the CB radio will become so restricted that its effective use in emergency situations will be hampered. The REACT objectives are to assist in all forms of local emergencies by furnishing instant radio-telephone communications in cooperation with proper authorities and official agencies. They maintain and encourage operating efficiency through proper communication techniques, and are very keen on the proper and effective use of the

Organization, Public Service, and Volunteers Make Channel 9 a Lifesaver for the CB World and the General Public

official CB emergency channel, designated at nine.

If you are interested in helping out your fellow CB'er, and especially others who are not as lucky to own a two-way radio, a REACT team in your area would be glad to accept your assistance. In order to join some of the REACT teams, you must want to help people, have at least two hours a week to devote to monitoring channel nine, own and operate a base station, and have a telephone to alert local police and emergency groups.

Even if you do not become an official member of the REACT team, your help would be greatly appreciated. For instance, if you come across a car stalled on the freeway, an accident, or a car out of gas or with a flat, you can contact the REACT teams, who will then take it from there and organize the proper aid to get the motorist on



The REACT Teams





Utilizing channel nine, a CB'er contacts REACT and relays information about an auto accident.

Various REACT clubs appear at community functions to explain their work to citizens and to get more CB users into the all-volunteer program.

In many desert areas, the REACT teams are utilized in search and rescue operations.

Immediately, the REACT volunteer gets on the telephone with the information, and contacts local police and ambulance crews, directing them to the scene.





Some REACT teams overflow into other branches. These two men work the desert areas and are members of the Desert Rescue Squad, which sometimes employs the assistance of REACT.



Many large corporations, such as General Motors, see the importance of the REACT teams, and donate grants, allowing the groups to buy some of the necessary equipment vital to proper operation.

his way.

The REACT teams rely heavily on non-member assistance to keep them up to date on accidents, weather and road conditions, and various community-related problems, so they can keep in touch with authorities. If you come across an accident, jump on channel nine, and contact REACT. The same holds true for weather and road conditions; if you clue in REACT, they can pass the information on to other concerned citizens. REACT is there for the

benefit of CB owners, as well as other motorists, who cannot get to a telephone to report their problems.

REACT is one of the more effective programs that the public citizen can become involved in. If you're interested, and are willing to donate some time, we would strongly suggest that you get in contact with your local REACT team. If you don't own a base station, but still would like to help, we're sure that they're not going to turn down your assistance.



In instances where someone is lost, the members work specific areas, keeping in contact with each other to report progress.

In order for the CB radio to be used properly and effectively, there must be organization by citizens in order to utilize all of its qualities. The fine people of REACT, through their efforts, have added so much value to the CB radio that national political figures have praised the groups for their continuing efforts. The REACT team is there to help, and whether you're interested in volunteer work, or just would like to relay information that would be helpful to other motorists, channel nine most likely has someone at the other end, operating a base station, doing volunteer work.

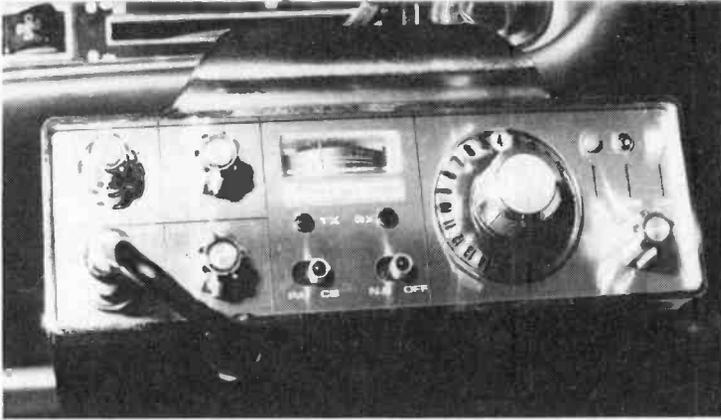
If you'd like more info on REACT, or are thinking of setting up a program in your area, you can get in touch with the proper people by writing REACT Headquarters, 111 East Wacker, Chicago, IL 60601. Utilize the REACT team—they're there to serve you. ●



REACT has saved a great number of lives thanks to their alacrity and efficient use of the CB radio as an aid in communications and organization of search and rescue parties.

Product Evaluation—

THE PACE 1000M CB RADIO



AN IDEAL RADIO FOR THE AVID CB'ER!

Over the years Pace/Pathcom Communications has held a pretty impressive record of building durable, rugged CB radios. Using the best in both American technology and materials, Pace has continued to remain one of the leaders in the field of CB communications.

One of their more recent models to be developed is the Pace Sidetalk 1000M mobile CB radio. The Sidetalk is not only durable and built to last, but also incorporates the latest in high-frequency design techniques. The Pace Sidetalk is designed to operate on either AM (Amplitude Modulation), Upper Single Sideband (UCB) or Lower Single Sideband (LSB). Its 23-channel operation on any of these three frequencies is made possible by ten crystals in a highly stable synthesizing circuit.

The 1000M has a full-range RF Gain, and a full netting Clarifier to provide maximum performance. The RF Gain is almost like a second volume control to help pull in those far away stations, or to help turn down the extra strong signal of somebody very close by. The Clarifier will help in tuning in those stations that may be slightly off frequency.

Offering the legal five-watt input, the unit we tested had a strong output power of close to 3.5 watts. The Sidetalk also provides one of the best noise blanketing features. The exclusive limiting circuitry on AM and the noise blanketing provision on SSB means quieter and more sensitive performance. The centrally located meter on the unit accurately measures incoming radio signal strengths in "S" units. The meter will also show

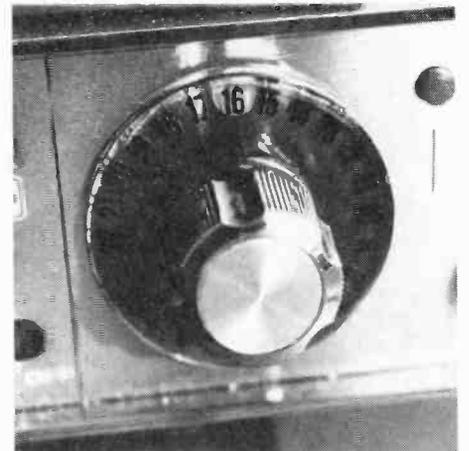
The large ribbed frequency selector makes for easy switching for AM, USB, or LSB. The illuminated lights tell you exactly what frequency you're on at all times.



The unit, minus this bracket, weighs about ten pounds. It's lightweight enough to mount anywhere, and durable enough to last.



The large channel selector is located in the center of the radio for easy selection. The Sidetalk has positive click stops to keep you on the right channel.





The strength meter registers signal input in "S" units. You can have either CB or PA control by a flick of the switch. The noise blanketer also can be easily turned on or off.



outgoing power in a relative reading and center scale.

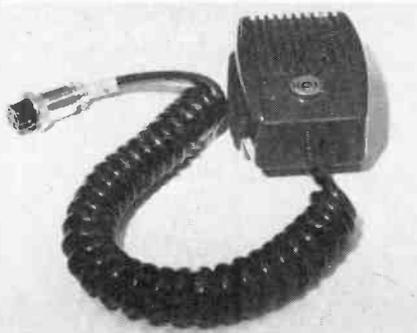
With this unit, you will always be able to tell at a glance which channel and frequency you're corresponding on. The entire front panel is bold enough to be easily seen. By night, the internal lights help illuminate everything, without being harsh or annoying, or interfering with driving. Even in normal sunlight, there is enough electrical illumination available to allow the user to see the different settings.

The Pace 1000M also has full transmit and receive power on all 69 channels—23 AM and 46 SSB. The TX and RX lights are indicators to tell you whether you're transmitting (TX) or receiving (RX). The radio also has a PA feature so that it may be used as a public address system. By simply plugging a PA speaker into the radio's back and switching the front control from CB to PA, the unit may be used to make announcements or to talk to people outside your vehicle. The PA volume is controlled by the radio's volume dial. There is also a plug-in jack on the back of the radio so that an auxiliary or external speaker may be used.

Another feature incorporated into the Sidetalk 1000M is that it will operate in either a positive or negative ground vehicle. If you have two vehicles with different grounding systems, this radio will work in both.

The CB comes equipped with a high-quality microphone which offers very good modulation and high sensitivity, and the unit comes ready to be installed in any vehicle. The package contains the radio with all power cables, mounting bracket, microphone and hanger bracket with mounting screws, and a very easy to understand owner's manual with tech tips and installation instructions.

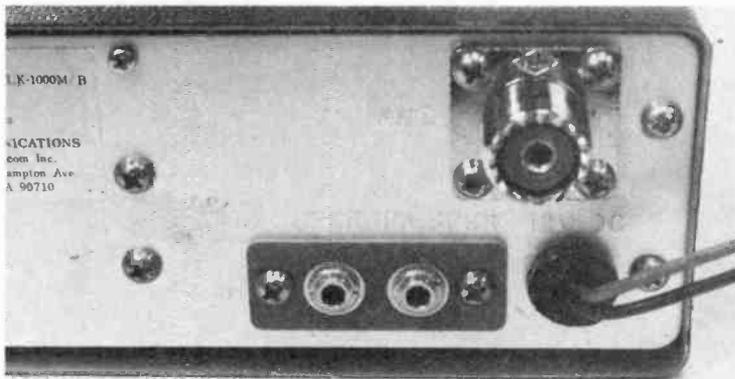
The unit sells for \$360 and can be purchased at most CB stores. For further information write to Pace Communications, 24049 South Frampton Ave., Dept. CBW, Harbor City, CA 90710. ●



Volume control, squelch, RF Gain and Clarifier are all located together for making those fine tuning adjustments when needed.

The Pace 1000M comes equipped with this high-quality microphone. It offers high sensitivity and excellent modulation.

The easily identifiable jacks for the PA and external speakers are also handy features incorporated into the Pace Sidetalk 1000M.



POINT EVALUATION

(10)	Simplicity of Installation	7
	(Relative to size and weight)	
(10)	Face Layout	10
(10)	Dial and Switch Access	9
(10)	Noise Limiting Capabilities	9
(10)	Microphone Quality	10
(10)	23 Channel Capabilities	10
(5)	Strength Meter Accuracy	5
(5)	Panel Illumination Qualities	5
(5)	PA Speaker Accessibility	5
(5)	External Speaker Capability	5
(5)	Internal Speaker Quality	3
(5)	Completeness of Instructions and Manual	4
(10)	Overall Unit Performance	9

POSSIBLE TOTAL POINTS — 100 TOTAL 91

SPECIFICATIONS

Unit Brand	Pace
Model	Sidetalk 1000M
Size	7 1/2" x 2 1/4" x 10"
Weight	10 lbs.
Approximate Price	\$360.00
RF Output	3.4 watts AM
Input Sensitivity	0.8 μV am
Adjacent Channel Rejection	5D dB
Image Rejection	58 dB
AGC Action	11 dB
Input Level for S9	320 μV
Modulation to 85%	Yes
Relative Sensitivity for 85% Modulation	-31dB
Modulation Limited to 100%	No

YOUR PRICE GUIDE TO CB RADIOS

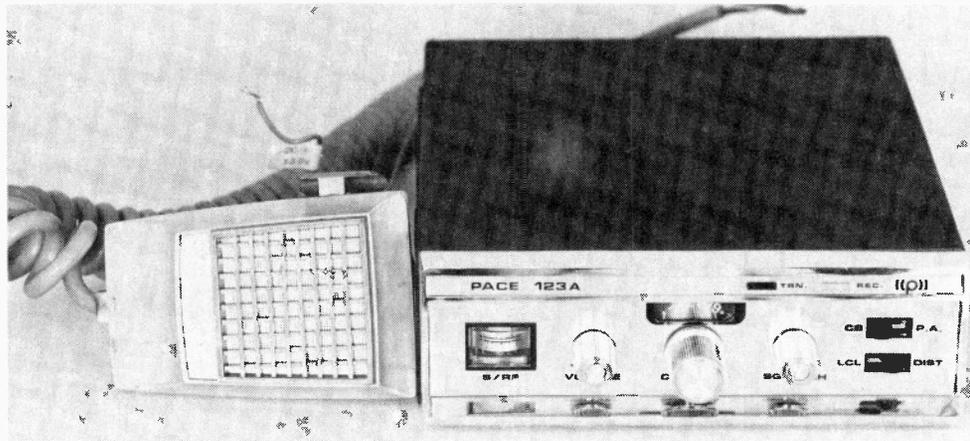
A Common Sense Listing of Price Breakdowns!

By Ray Andrews

Whether you're a rank beginner into the world of CB radio, or a seasoned veteran of the radio waves, you know all CB'ers share the same problem. That universal problem raises its head each and every time a CB'er goes out to purchase a new radio. With so many radios at so many different and varied prices, we thought we could help take some of the leg work away. The following list is a graduated price scale to help you determine what brands and particular models are available to you and your budget. Regardless of how much or how little you are planning to spend for your radio, it might be worthwhile to note which manufacturer's radios fall into your price range. The following chart makes no reference to the quality of these units, but is merely intended to show you what is available. There are many other brands and models to choose from, but at press time only these manufacturers had responded.

MOBILE RADIOS

Under \$100	
Midland 13-801	\$78
Pace 100 ASA	\$95
Realistic TRC-9A	\$60
Realistic TRC-11	\$80
Royce 1-590	\$75
SBE Capri II	\$90
Teaberry Mighty "T"	\$99



\$100 - \$125

Pace CB 123A	\$120	Realistic Mini 23B TRC-50	\$110
Pearce-Simpson Alley Cat 23	\$120	Teaberry "T" Scout	\$120



\$125 - \$150

Browning Brownie	\$140	Lafayette HB-23A	\$140
Cobra 19	\$130	Lafayette Micro 923	\$150
Courier Rebel 23	\$145	Pace CB 143	\$140
Craig 4101	\$130	Pearce-Simpson Tomcat 23B	\$140
Craig 4102	\$150	Regency CR-202	\$130
E.F. Johnson Messenger 120A	\$150	Royce 1-601	\$135
Hy-Gain Hy-Range I	\$135	Surveyor 2300	\$150
		Surveyor 2400	\$140

\$150 - \$175

E.F. Johnson Messenger 123A	\$160
E.F. Johnson Messenger 123SJ	\$170
Kris XL-23	\$170
Midland 13-861	\$165
Pearce-Simpson Puma 23B	\$170
Realistic TRC-24C	\$160
Royce 1-602A	\$170
Teaberry "T" Charlie One	\$165
Tram XL	\$170



\$175 - \$200

Browning SST Mobile	\$190
Cobra 21	\$190
Cobra 29	\$200
E.F. Johnson Messenger 130A	\$200
Lafayette Com-Phone 23	\$190
Lafayette HB-525F	\$180
Lafayette HB-625A	\$200
Pace 2376B	\$180
Pace CB144	\$190
Pace CB145	\$200
Pearce-Simpson Pussycat 23	\$180
Pearce-Simpson Bobcat 23D	\$190
Realistic CB-Phone 23	\$180
Royce 1-605	\$200
Royce 1-612	\$190
SBE Cortez 21CB	\$180
Teaberry Five By Five	\$190
Teaberry Tele "T"	\$200



\$200 - \$225

Cobra 28	\$220
Kris Victor II	\$220
Midland 13-883	\$205
Pace 2300	\$220
Pearce-Simpson Tiger 23C	\$210
Regency CR230	\$209
Royce 1-603	\$210
Royce 1-620	\$220
SBE Coronado II	\$215
Teaberry Big "T"	\$215
Teaberry "T" Control	\$225
Tram Diamond 40	\$220



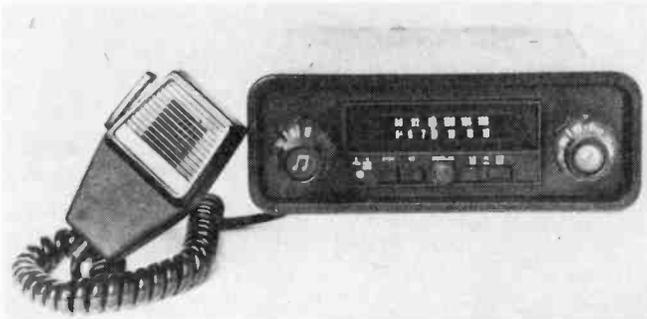
\$225 - \$250

Courier Caravelle	\$230
Craig 4201	\$240
E. F. Johnson Messenger 323A	\$250
Midland 13-863	\$245
Pearce-Simpson Cougar 23B	\$240
Realistic TRC-47	\$250
Royce 1-580 Mod-U-Lar	\$230
Royce 1-606	\$250



\$250 - \$275

Cobra Cam 89	\$260
Courier Conqueror II	\$260
E. F. Johnson Messenger 132	\$260



\$275 - \$300

J.I.L. 852 CB	\$300
Panasonic CR-B1717	\$300



\$325 - \$350

Cobra 138	\$340	Pace Sidetalk 1000M	\$350
Courier Spartan SSB	\$330	Pearce-Simpson Bearcat 23C	\$340
Lafayette Telstat SSB-50	\$330	Royce 1-630	\$350



\$350 - \$375

Browning LTD.	\$360
Cobra 132	\$360
E. F. Johnson Viking 352	\$360
Midland 13-893	\$355
Pearce-Simpson Panther SSB	\$370
Siltronix SSB-23 Albatross	\$360

\$375 - \$400

Pearce-Simpson Guardian 23	\$380
SBE Sidebander II	\$395
Tram Diamond 60	\$380

\$400 - \$425

Cobra 139	\$420
Pearce-Simpson Cheeta SB	\$420

\$425 - \$450

Courier Gladiator	\$430
Pace Sidetalk 1000B	\$450
Pearce-Simpson Bengal SSB	\$430
Royce 1-635	\$440

\$450 - \$475

SBE Console II	\$455
----------------	-------

\$475 - \$500

Cobra 135	\$480
Midland 13-898B	\$490
Royce 1-640	\$480

\$525 - \$550

Courier Centurian	\$550
-------------------	-------

\$550 - \$575

Pearce-Simpson Simba SSB	\$560
--------------------------	-------

\$575 and Up

Hy-Gain 623	\$595
-------------	-------

**CB BASE RADIOS****\$175 - \$200**

Pearce-Simpson Pussycat 23	\$180
----------------------------	-------

\$200 - \$225

Royce 1-620	\$220
Teaberry Big "T"	\$215

\$225 - \$250

Craig 4201	\$240
E.F. Johnson Messenger 250	\$230
Courier Caravelle II	\$230
Pace DX 2300B	\$250
Realistic TRC-47	\$250
Teaberry "T" Control	\$225

\$250 - \$275

Cobra Cam-89	\$260
Courier Conqueror II	\$260
E.F. Johnson Messenger 132	\$260
Gemtronics GTX-2300	\$270
Lafayette Telstat 925	\$270

\$350 - \$375

Midland 13-893	\$355
Pearce-Simpson Bearcat 32C	\$350

\$400 - \$425

Cobra 139	\$420
-----------	-------

\$425 - \$450

Pace Sidetalk 1000B	\$450
Pearce-Simpson Bengal SSB	\$430

\$450 - \$475

SBE Console II	\$455
----------------	-------

\$475 - \$500

Cobra 135	\$480
Midland 13-898B	\$490
Royce 1-640	\$480

\$525 - \$550

Courier Centurian	\$550
-------------------	-------

\$575 - \$600

Hy-Gain 623	\$600
-------------	-------

\$600 and Up

Browning Golden Eagle Mark III	\$750
Tram Diamond D201	\$850



STEP-BY-STEP Guide to Installing a CB in Your Car!



Before mounting your radio, try positioning it in several different locations. It should be out of your way, yet still within reach.

Remove the radio's top cover before drilling holes for the sliding mounting bracket.

MAKING A DIFFICULT TASK EASY

By Tari May

As in any vehicle, mounting a CB radio in a car can be a major task or a simple operation. The choice is usually one of the installer's and no one else's. Mounting a CB radio in your dashboard can be a relatively simple operation if you are careful to follow each step to insure proper installation.

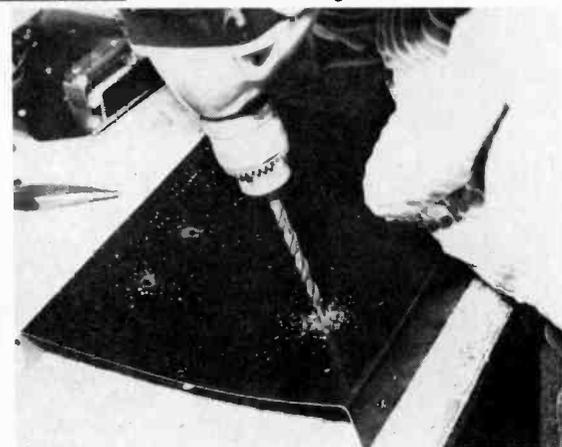
To do the job correctly, you will need the following household tools: a small electric drill and number 29 tap drill bit, a roll of black tape, a Phillips head screwdriver, a small adjustable Cres-

cent wrench, a soft lead pencil, and a soldering iron and solder.

CHOOSING YOUR SPOT

Before the actual installation takes place, it might be a good idea to try holding the radio in a number of different locations, checking to see if it is still within easy reach for making operation adjustments and also insuring that it is out of the way of your feet.

Try to envision a number of different locations. Avoid an area where the radio is in the way of heater ducts, air con-



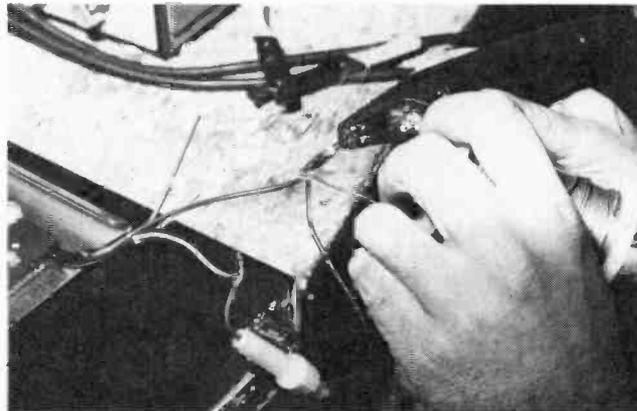
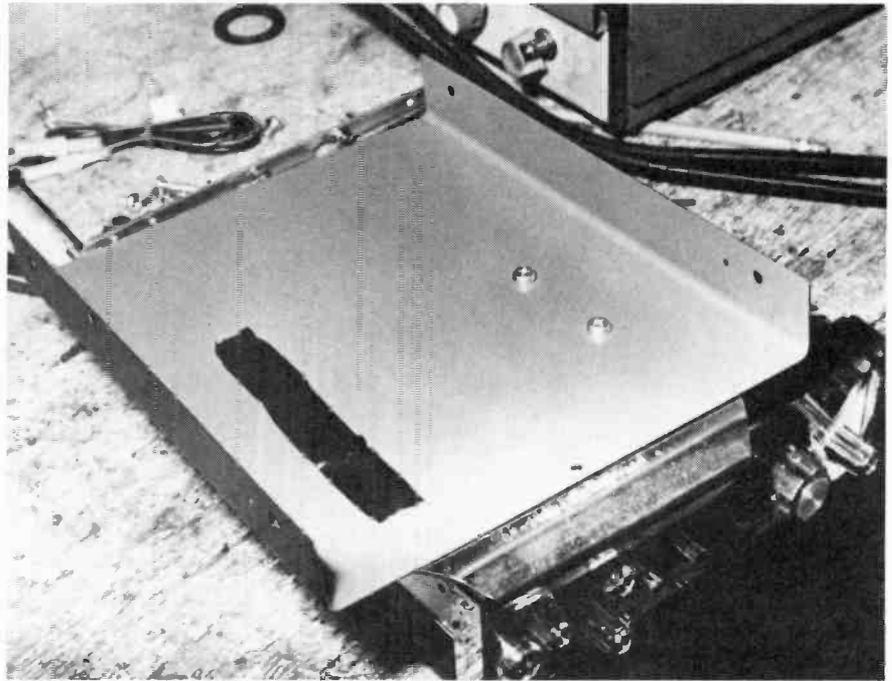
Special thanks to Pace Pathcom Communications for the use of a Pace 1000M and CBer's Haven for assistance in the installation.

Once the bracket is bolted on, cover the screw heads with black tape. This will keep the screw heads from coming in contact with the radio's circuits and causing a short.

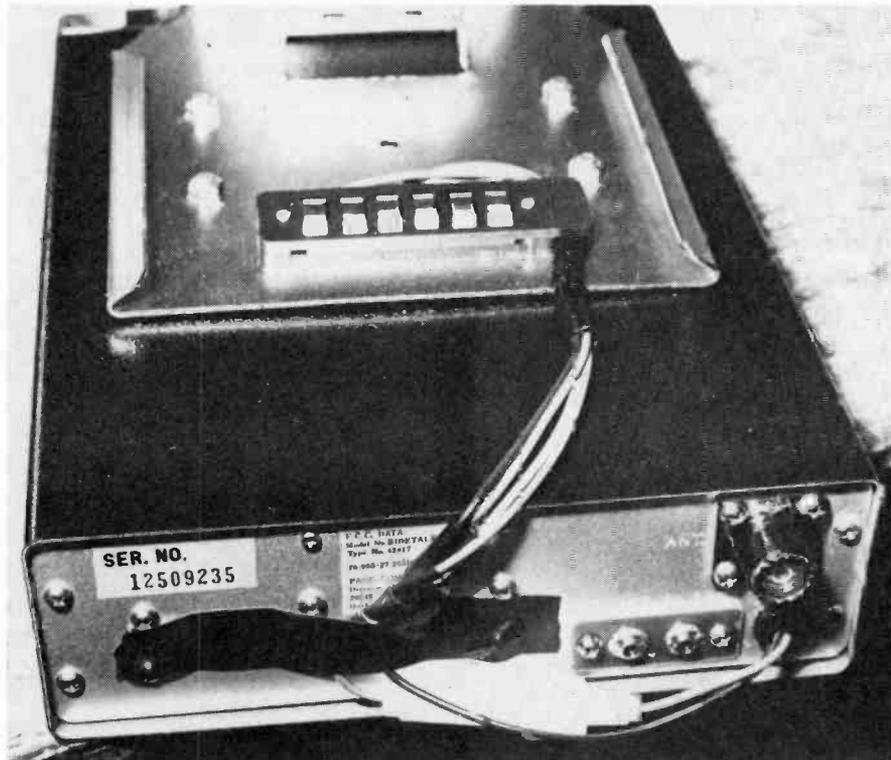
ditioning outlets or direct blasts of air. Remember that your CB radio is a somewhat delicate piece of equipment. Although a mobile unit is built to withstand a lot of bouncing around and punishment, you still should try to locate it in an area where damp cold air or hot moist air do not come in direct contact with the set.

MOUNTING BRACKET

After choosing the radio's permanent location, you are ready to install your mounting bracket. Although each radio comes with its own mounting bracket, it is suggested that you invest a few extra dollars into a universal slide mount. A slide mount is, simply speaking, two sheets of metal with numerous electrical connections. The male and female portions slide together and complete the circuit. The reason for suggesting that this be used over the one that comes with your radio is two-fold. First, the slide mount provides a much easier access for removing your radio from the car. With CB radios more popular than stereos when it comes to car break-ins, it's a good idea to get in the habit of removing your radio when you leave your car for almost any length



Make sure that you securely solder the electrical connections from the bracket to the radio.



of time. With a sliding mounting bracket, you need only disconnect the coax and don't have to bother disconnecting the power and grounding wire.

The second reason is that a sliding bracket can be easily locked if you choose not to remove the radio. The lock on the top of the bracket provides as secure a lock as possible. Although nothing will stop a would-be CB thief if he really wants the radio, at least a lock may help in discouraging the less avid burglar.

Attach the female part of the bracket to the radio itself, and the male part to the dashboard. Be sure to mark and drill the holes in the dashboard before trying to screw on the bracket. Always use self-taping screws for this mounting, as these have a much better bite. If you consider the bouncing and shaking

Properly installed, the radio and bracket should look like this. Use black tape to hold the loose wires on the radio's back.



Mount the male part of the bracket to the dashboard using self-taping screws. A number 29 tap drill bit can be used for drilling the necessary holes.

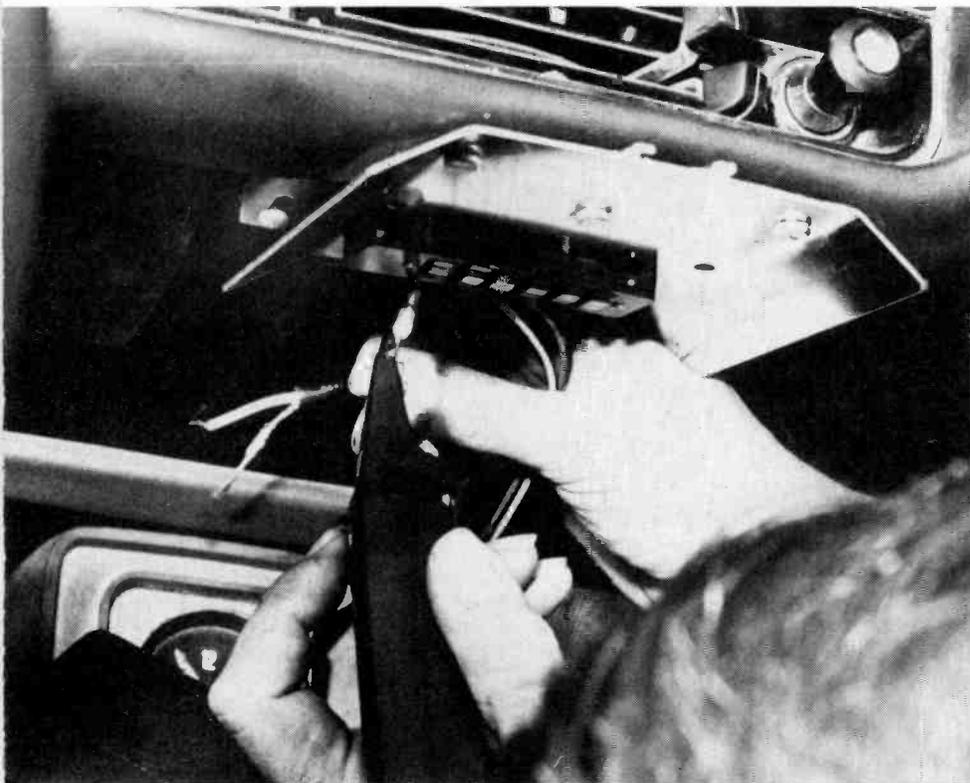
around that a CB goes through, you will appreciate the extra support they provide.

CONNECTING POWER

Make sure that you have a good power source when you hook up your radio. The battery is the best place from which to draw the needed power. Using a small Crescent wrench, connect the power cables directly to the battery and secure them. By hooking up to the battery you cut out a lot of static engine noise and also don't have to keep your engine running to operate your radio. If possible, try to ground the radio directly to the car's frame. A good solid ground will also help cut down on needless static.

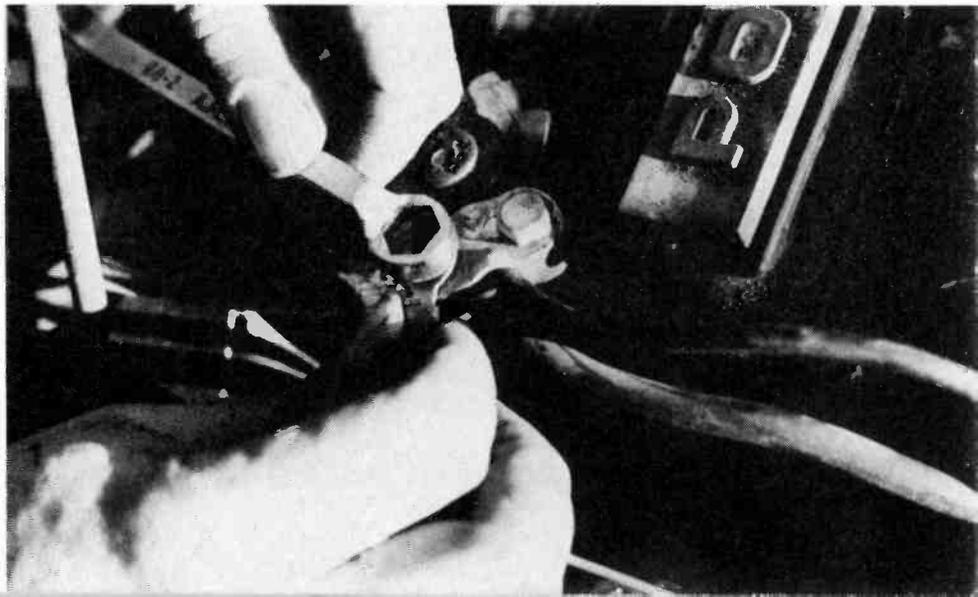
MOUNTING THE ANTENNA

Most car owners would prefer to avoid drilling holes in the middle of their roofs for the sake of mounting a CB antenna. For those who feel that way, aftermarket equipment manufacturers have developed a trunk lid antenna that will easily bolt onto any car trunk. One of the best features about this type of mounting is that it can be easily removed by unscrewing two bolts. Once removed, there are no unsightly holes to be capped or filled. Although trunk lid-mounted antenna reception is not quite up to the quality of roof-mounted antenna reception, the convenience of it being removable instead of permanent should more than help compensate for the slight loss. To insure the best reception, make sure the antenna is centered as close to the middle of your car's trunk as is possible. Whether you have a large trunk or a small one, the entire area will help serve as a reflective ground plane, and thus enhance your reception.



Solder and black tape all electrical connections from the mounting bracket.

Using a small wrench, fasten the power cable directly to the battery. Using the battery for power will help eliminate a lot of engine static.

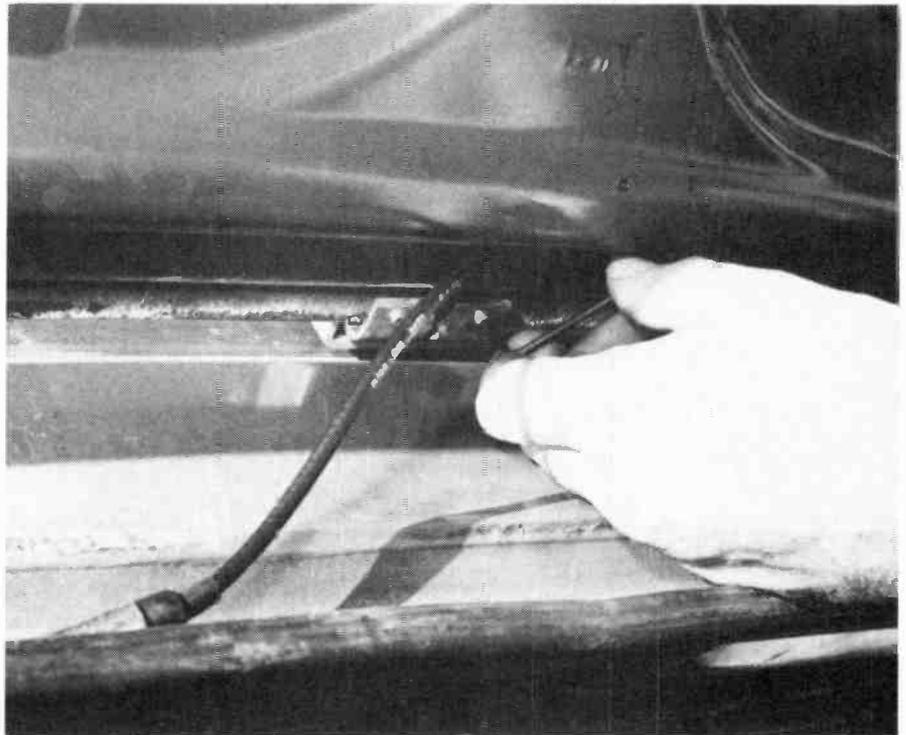


RUNNING THE COAX

Another distinct advantage of a trunk mount versus a roof mount is in the running of the coax cable. With a trunk mount you simply have to run the antenna coax through the car and under the carpet to the radio. This saves a lot of hard work trying to run the coax from the roof, through the headliner, and down one of the roof struts. The coax itself is the thick black cable that connects the antenna to the radio. For all mobile installations, the best suited coax to use is RG-58/U. This well-insulated coaxial cable will help keep the radiated power loss at a minimum throughout the line.

Start by sliding the unconnected end of the coax through the trunk and then through one of the small air vent openings behind the rear seats. By removing the back seat cushion, you should have little difficulty in locating the coax and pulling up the slack. Next, remove the carpet running boards alongside one of the car doors. Again, gently work the coax under the carpet towards the front seat. If the coax gets stuck, don't force it! Pull it back out and start again. The thin copper wire that runs through it can be easily broken if crimped. If problems still persist, try straightening a metal coat hanger and pulling the coax through from the radio's end.

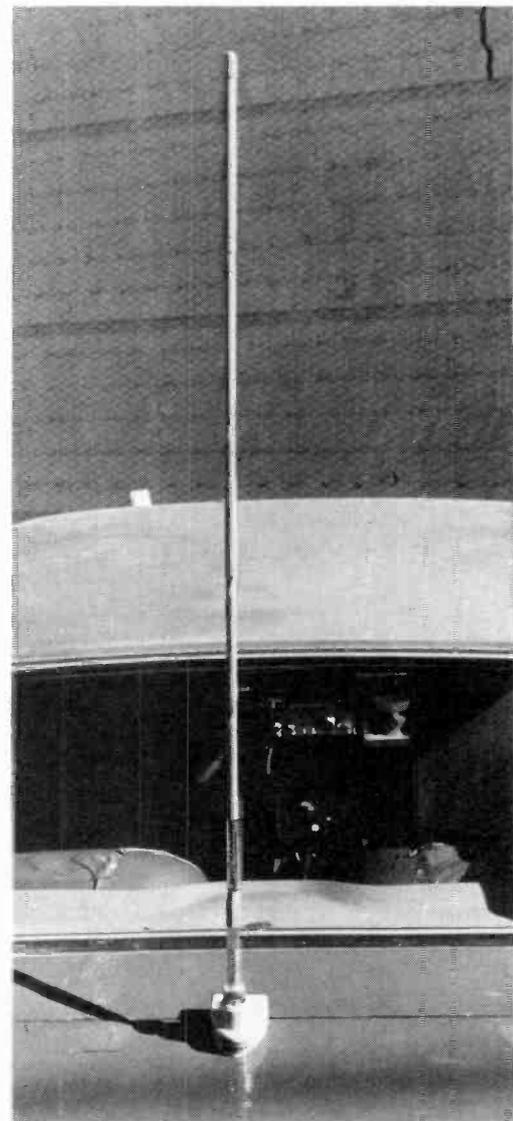
Once the coax is pulled through, keep pulling the excess up until only a small amount of slack remains. Leave enough cable to reach the radio and solder on your antenna connector plug. With the system ready for testing, connect the SWR meter and try to match the set as close to a 1.0-to-1 match as possible. You don't have to be exact, for anything under a 1.5-to-1 match will be more than satisfactory. Following these simple steps and hints, anyone can, with a little time and patience, install their own CB radio and make it look like it was done by a professional.●



The bracket for the trunk lid mount is easily installed using an Allen wrench.

If properly installed, a trunk lid mount will hold as well as an antenna mounted permanently to the roof.

Once the antenna base is secured, connect the antenna to the coax that runs through the car.



This is how the finished installation will look. Notice that in addition to being compact and nice looking, the unit is hard to remove, adding a margin of safety.



The first step is finding out where the unit goes. If you have a radio now, just remove it and leave all wires hanging. If there is no radio in your vehicle, find a blank panel like this one and reach around underneath and find the bolts that secure it. Take these out and you'll find that all of the cutting has been done for you.

Photos by Steve Reyes

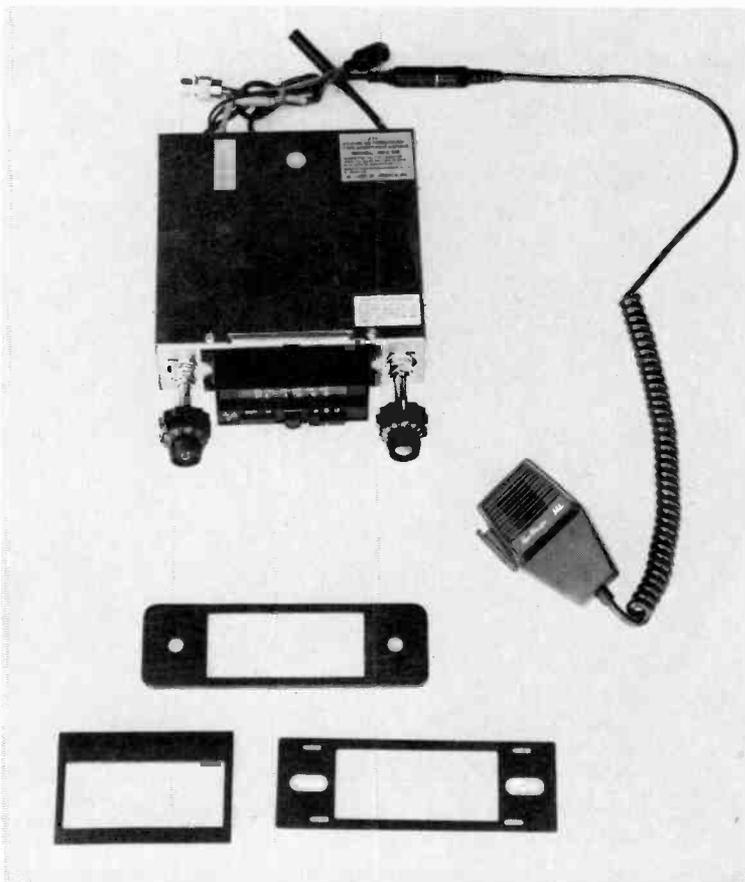
Squeezing a CB Unit

If You're Looking for a Neat Way to Install a Basic CB Unit, This Is It!

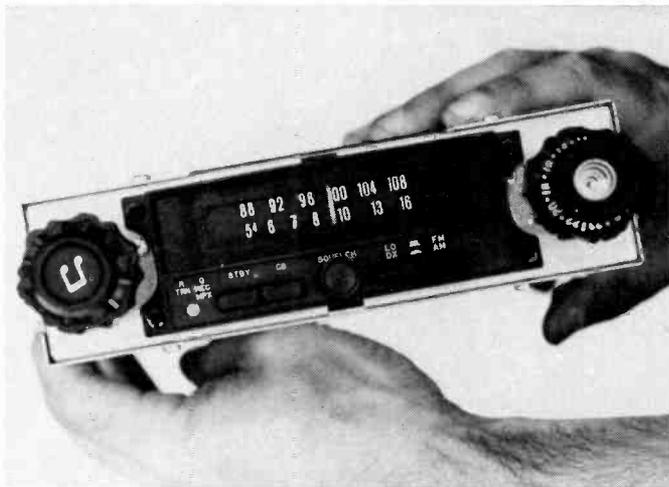
By Rick Valasek

Okay, we'll all be impressed with the super units that do everything but change your socks, but a lot of us are casual CB'ers and all we want or need is a basic unit. If you fall into this category, stick around and we'll show you how

to combine your CB with an AM/FM/MPX radio and even a little eight-track thrown in for good measure. The kicker is that the whole ball of wax can be contained in one unit that is mounted in the dash of your car, van or truck!



With most units you'll get a variety of faceplates. Consult the instructions with the unit to find out which plates are used with your vehicle.



Before you go through the trouble of installing the unit in your car, hook up the wires and speakers to make sure everything works.

Bolting the unit into place is not quite as easy as it sounds. You have to make sure that the CB is secured both in the front and in the rear. A metal strap is usually supplied that will help secure the rear.



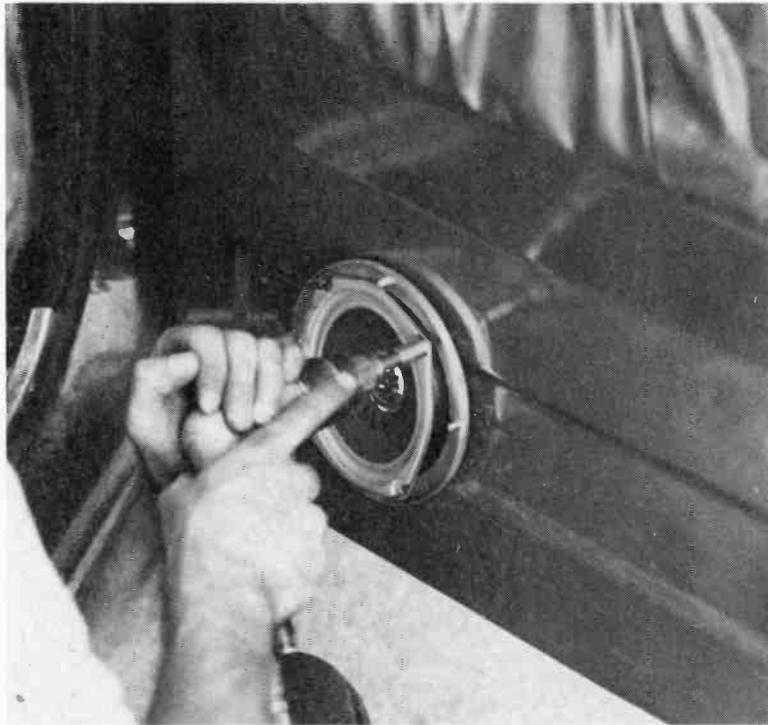
Behind the Dash

Although there are a number of units that combine functions, the J.I.L. unit that we tested from T&H Works Unlimited, 7119 Laurel Canyon Blvd. #3 in North Hollywood, California, seems to combine the best of all possible worlds.

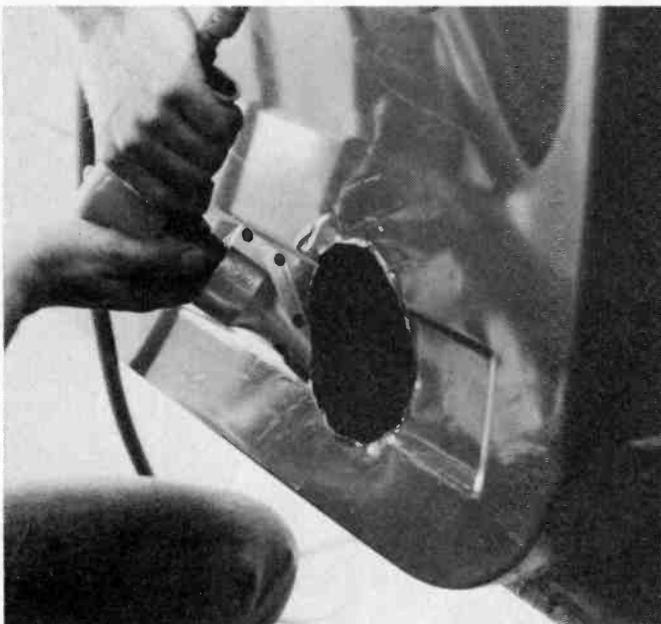
Whichever brand of in-dash CB radio you select, make sure that the knob spacing is the same as the standard radio for your vehicle. While you're at the store, pick up the appropriate antenna and a set of good quality speakers.



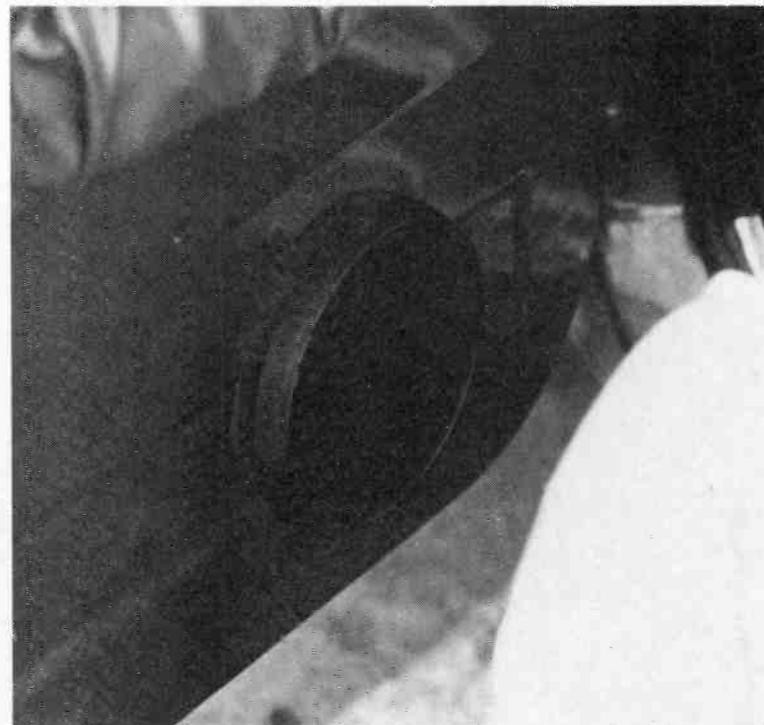
The best location for the speakers is in the doors. This helps the speakers produce the best possible sound. Just make sure that you locate the speaker in a space that isn't used for anything else, like an air duct or the window cranking mechanism.



Hook up the wires before you bolt the speakers into place. A small hole drilled in the jamb will suffice.



Once you've carefully measured the speaker area, cut it out with a saber saw or other cutting tool. Cut the hole a little small the first time around—remember, you can always make the hole bigger.

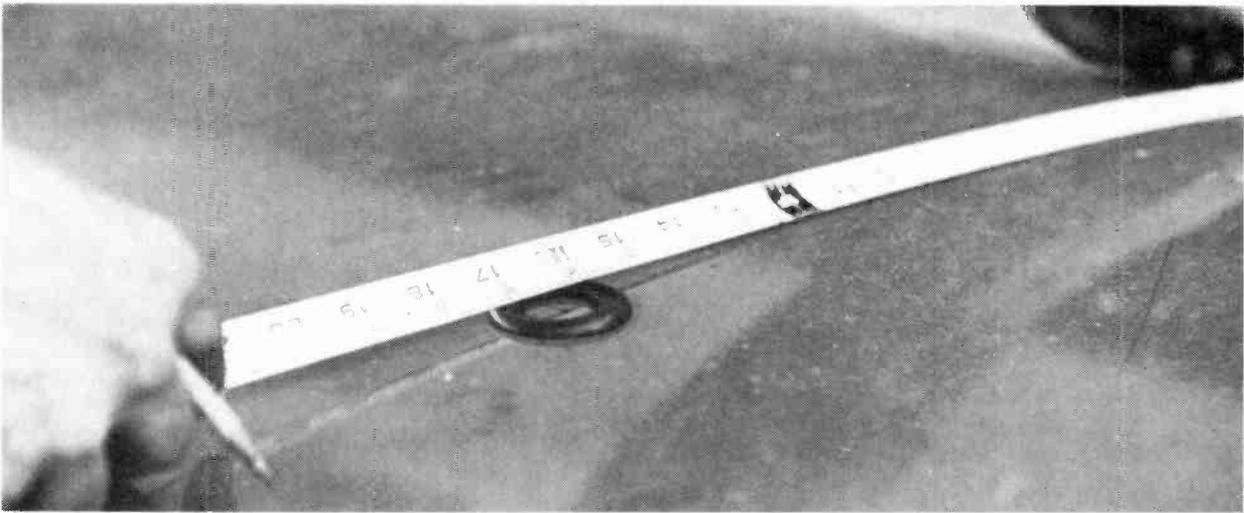


All you have to do is snap the grille into place and the job is almost finished.

The photos for this story were shot at Custom Touch, 21444 Ingomar St., Canoga Park, California, and while you probably don't have all of the special tools that they have, here's all that you need to do the job: a hammer, screwdriver (both slot and Phillips),

wire cutters, a saber saw, a drill with a half-inch bit, electrical tape, and a measuring tape.

Once you've gathered the tools and the radio parts together, sit back, look at the photos and read over the instructions once or twice, and then go to it. ●



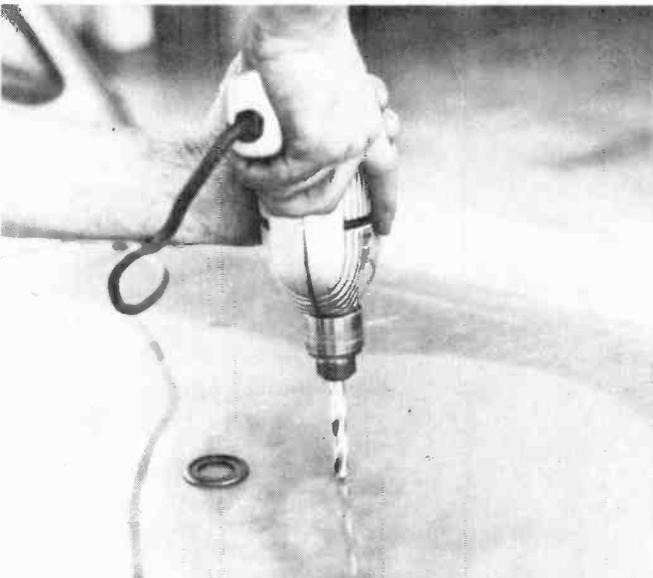
For most antennas, the ideal installation spot is the center of the roof. Measure this out before you drill 17 holes.



Make sure you know how the antenna parts fit together beforehand. Learning by doing is not the way to go.



Once you've routed the cable and hooked up the antenna, all you have to do is "match" it to the CB unit and you're off and running.



When you drill the hole, don't press hard or you'll drill right through both metal sheets and the headliner.

Simple Do-It-Yourself Installation

MAKING YOUR VAN TALK

By Andy Lightbody

At first glance, everyone wonders how to get that new CB radio from the box to the van. Following a few simple steps can make the do-it-yourself installation simple and easy.

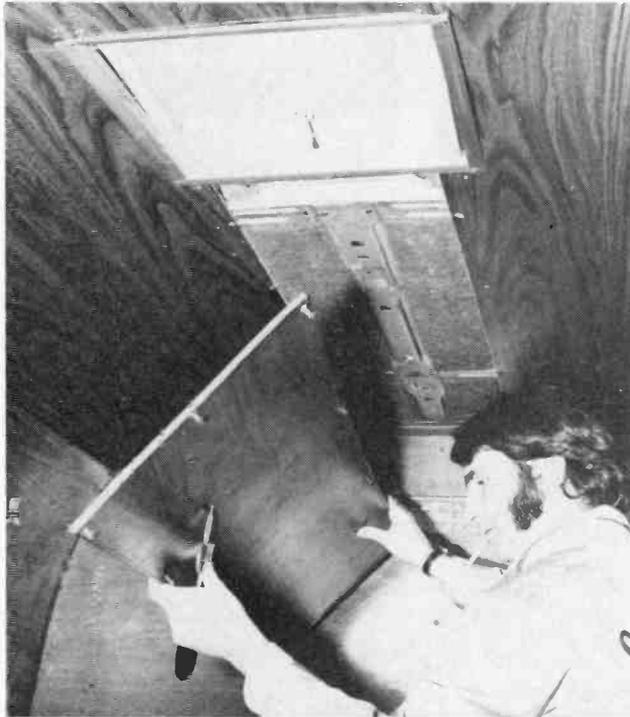
To do the job right, you will need the following tools and equipment: a small hand-held drill and bit (a #29 tap drill bit is the most commonly used), a Phillips head screwdriver, a standard or flathead screwdriver, a soldering iron and solder, caulking sealant, a roll of black or electricians tape, a coat hanger, and six extra feet of RG-58/U coaxial wire.

After you've located all your tools, don't get over-anxious. Give some thought to the radio's location. Some simple hints to keep in mind are, that you should install the radio in a convenient location, yet one that does not interfere with driving. If you install your radio out of reach, then it won't do you much good. By the same token, if it hampers your driving ability, it may very well cause you to have an accident. The radio should be installed so that the channel selector, volume, microphone, etc. are within reach and easily accessible.

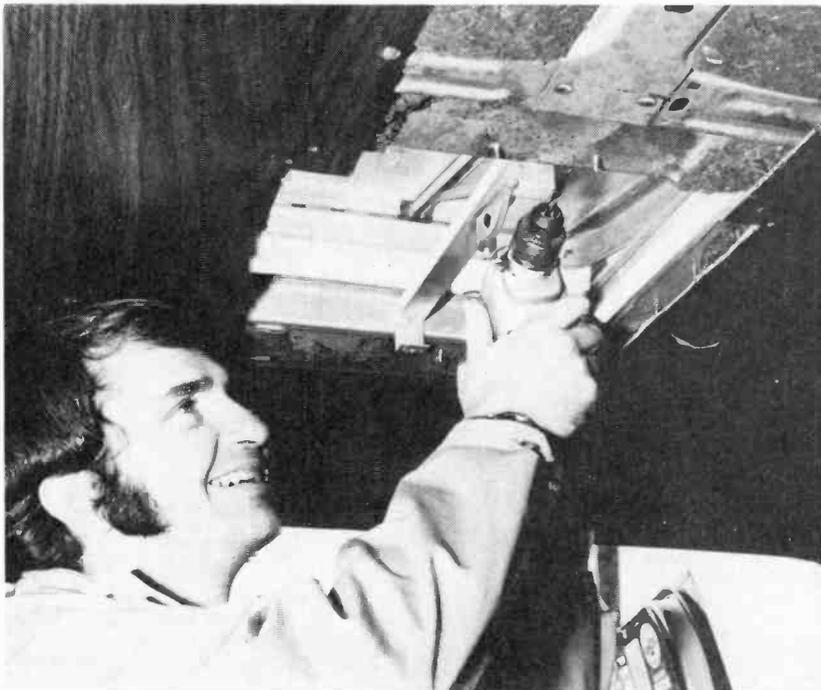
Choosing the right antenna is also a key factor to bear in mind. There are many different types of CB antennas, such as 72-inch whips, base-loaded

Remove the overhead paneling. This is where the coax will run from the antenna to your radio.

Most paneling is easily removed with just a screwdriver.



Using a #29 tap drill bit, drill the holes for the antenna mount.



Make sure all screws on the antenna bracket are tight. Reseal the sunroof or air vent with sealer. This is necessary to prevent leakage of water onto the coax, as well as into the van.

coils, top-loaded coils, fiberglass vs. metal, etc. Choose the antenna that best suits your needs and your radio. Also keep in mind the old saying that you get what you pay for! Antennas are no exception to the rule. It would be a shame to sink a good sum of money into a radio and then skimp on the antenna. No matter how much money you spend on a radio, if you buy a poor antenna, your radio will not work at its best.

When placing your antenna on the van, remember that the most ideal location is directly in the center of the van's roof. It is the highest, most unobstructed location, and the roof itself acts as a reflective ground plane. This in turn helps boost your reception.

PUTTING THE PIECES TOGETHER

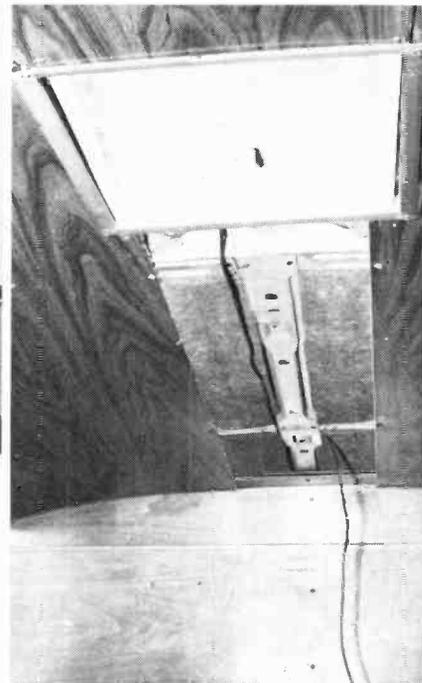
If you already have an air vent or sun-roof on the van, then you pretty much have the best location from which to mount your antenna. You can install a bracket into the air vent that requires no additional drilling of holes. If you are not so fortunate as to have this setup, then it is but a simple operation to drill a hole large enough to accommodate the antenna's base.

Once the antenna mounting bracket is installed, you should connect your coax; RG-58/U is best for all mobile installations. Make sure that all coax cable is run through the inside of the van and not along any part of the exterior. The coax is a delicate wire that should be protected from excessive bending and the outside elements. Most van paneling can be easily removed to tuck all coax cable out of sight.

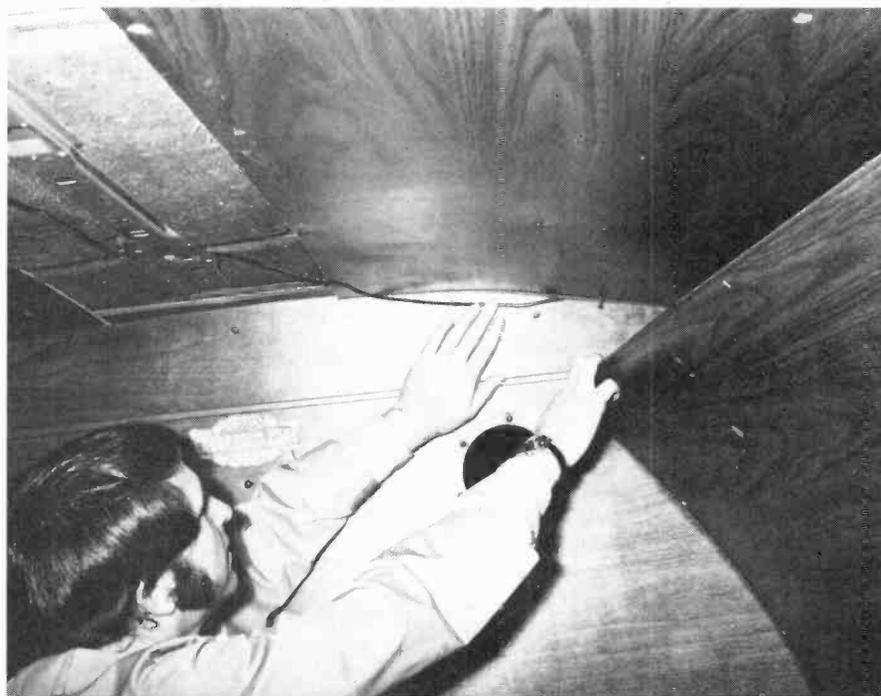
Run the coax along the roof, under the headliner. Once the coax has been run through, you are ready to install the



Connect the base-loaded coil and antenna to the mounting bracket. Using the Allen wrench that comes with antenna kits, securely fasten the antenna to the coil.



Connect the coax to the antenna mount and run it along the open area where the paneling has been removed.



Work the coax wire out of sight by sliding it underneath the paneling. Special care should be taken to not excessively bend or crimp the coax.

Remove the screws that hold the headliner in place.



Pull the headliner down slightly to locate the coax cable. Sometimes a straightened coat hanger is useful in pulling the coax through.



transceiver or radio. Mark the area you are going to drill with a pencil then check to see what is behind it before you start punching holes. Take note to also not drill too deep. If you are planning to mount the radio from the van's ceiling, be extremely careful not to bore through the van's roof! Many a would-be CB installer has made this slip, and unfortunately this mistake is permanent. After the mounting bracket for the radio is in place, you're ready to hook up the electrical system. Again, make sure all the wires are run out of sight, and not out in the open where someone can catch their foot and literally tear the wires out!

Most CB radios come with simple to follow electrical hookup instructions. Follow these carefully and your set will work at its peak of performance. One key factor to keep in mind is that your power or hot wire should be connected directly to the battery if at all possible. By hooking into the battery, you have two distinct advantages. First, you will have a constant source of power and need not worry about having the engine running. Second, you will eliminate a lot of static engine noise that can be caused by wiring your radio to the ignition system.

Once the coax is located, gently pull the slack through and again work it into an area hidden from view.



If you are planning on using the battery as your power source, it is recommended that you use a heavier gauge wire to connect to the battery terminal. The thin single-strand hot wire that comes with your CB radio will soon burn out or be eaten away by the battery. Instead you should use RG58/U coax to connect the set. The coax wire is of a heavier gauge and is better insulated to conduct the power.

Using the electric drill, make a small hole under the carpet through the fire-wall. Run the hot wire through the hole to your battery. If you are worried about water splashing through the opening, you can easily dab on a little waterproof sealing compound and alleviate the problem before it starts. Using the soldering iron, make sure that the wire from your radio is securely soldered together to the RG-58/U. After they are soldered together, use a generous amount of black tape to further reinforce the bond.

The other wire that runs out of the back of your radio is the ground wire. When grounding the radio, again care should be taken. Make sure that it is connected to an area of the van that will provide a good grounding. Usually the negative pole of the battery, the van's frame or the floor boards are the best location.

Now that the set is installed, the only things left to do are plug in the antenna wire, screw the antenna on the roof, and match your set. Matching your set refers to the process of making the



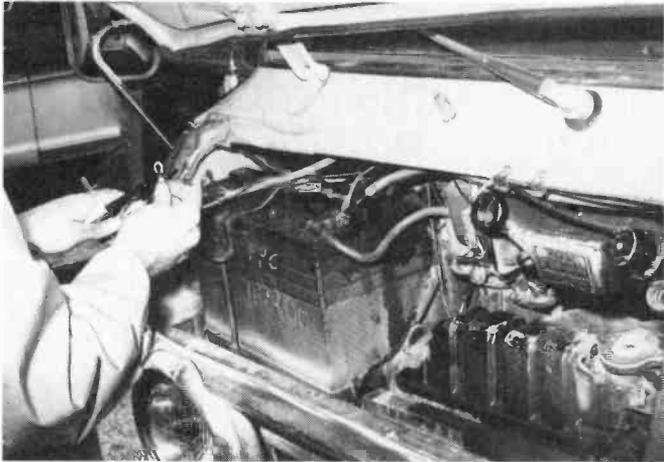
Make sure you know what you're drilling into. A high-speed drill can easily tear up other electrical wiring or even worse, bore through the van's roof!

Mount the bracket using self-taping screws. Make sure that the radio is mounted in a convenient location for use.

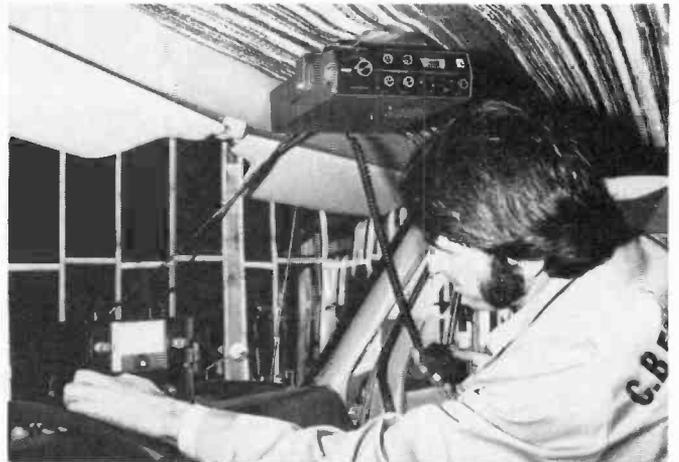
antenna and radio work together without great losses of output power. For this, a standing wave ratio meter, or SWR, is needed. Ideally speaking, it is best to have what is known as a 1.0-to-1 match. This means that the component parts, radio, coax and antenna, are working in perfect harmony with each other. The only problem with that is that it's almost impossible! Anything under 1.5-to-1 match is excellent. If you can't get the match any closer than 2.0-to-1, then it might be best to let your local CB shop take a look at the system. ●



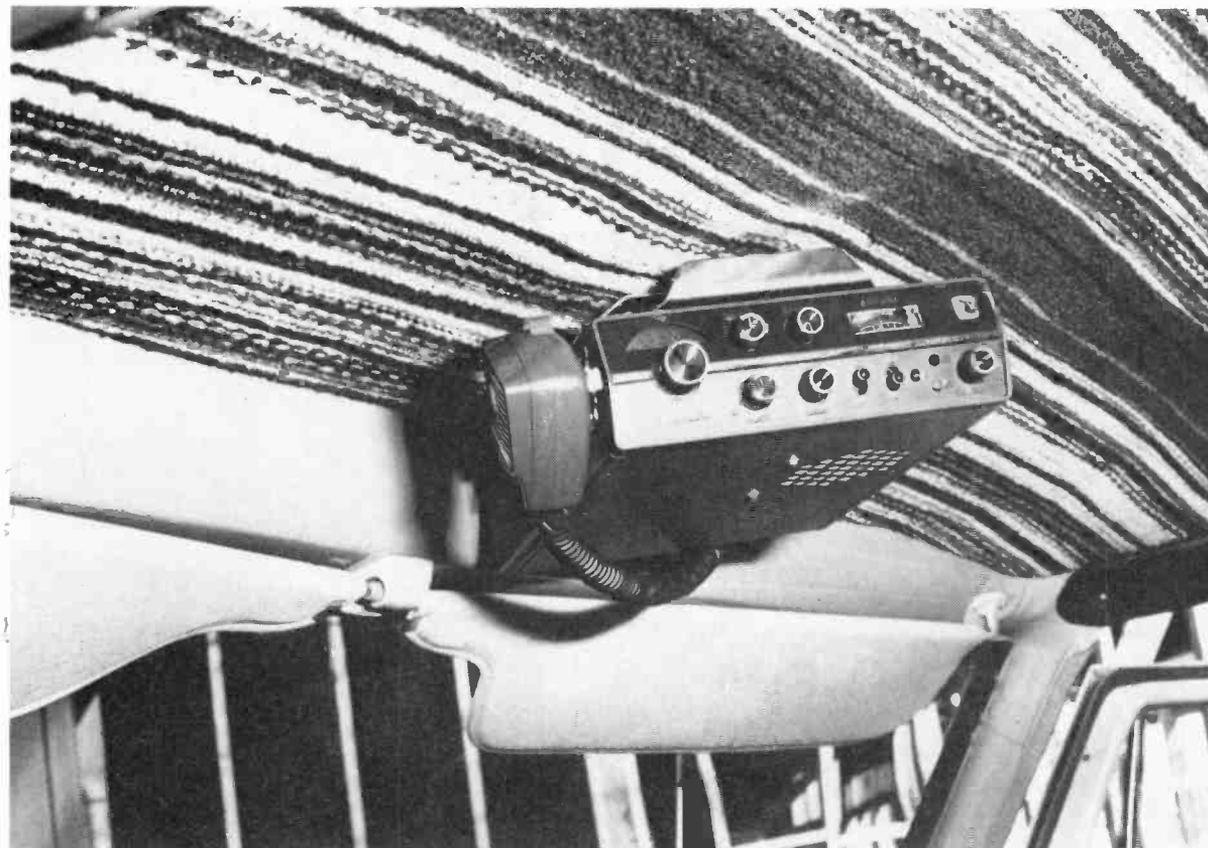
Using a #29 tap drill bit, drill a small hole under the carpet and through the firewall. Through here you will run the power and grounding wires.



The best place for the power hook-up is directly to the battery. RG-58/U coax wire serves well here. A short spray of WD-40 on the positive terminal will help eliminate acid buildup that can eat at the power connection.



The Johnson Viking 352 is now ready to be matched to the antenna. For this an SWR meter is used.



The installation complete, the Viking 352 is now ready for use. Mounted overhead, the radio is out of the way of driving operation and still easily accessible. Special thanks to E. F. Johnson Company for the use of a Viking 352, and CBer's Haven for assistance in the installation.

HOW TO: SELECT and INSTALL CB MOBILE ANTENNAS

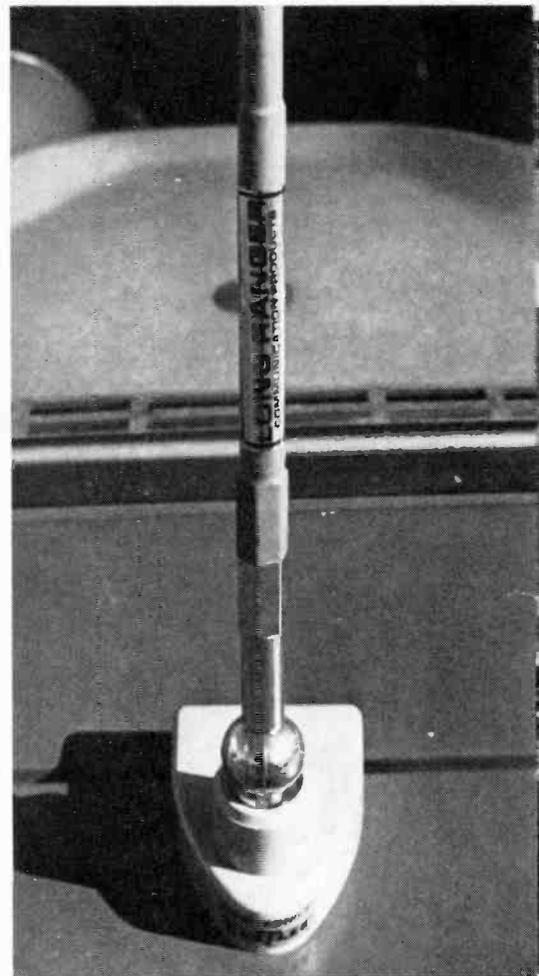
If Your Signal,
Both on Receive
and Transmit,
Leaves a Lot to be
Desired,
the Problem Is
Probably Not Your
Transceiver

It's becoming difficult nowadays to find a recreational vehicle owner who hasn't at least given some thought to CB radio. More and more, owners are finding CB both a necessity and a pleasure. Inevitably there are some who become discouraged over their failure to

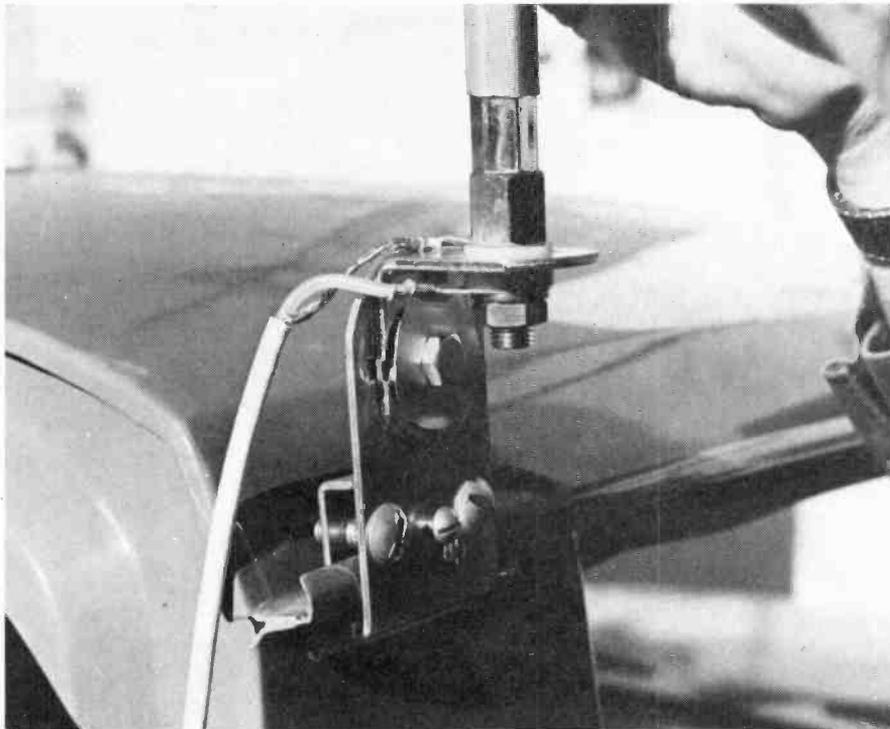


With so many different brands and types of antennas to choose from, selecting the right one for your radio's needs is of key importance.

For most car owners, a popular type of antenna is the trunk lid mount. It is easily installed and requires no hole drilling, yet is as permanent as a roof mount.



This center-loaded coil antenna can attach easily to the side mirrors. It provides good reception and is also short enough to eliminate getting hung up in low clearance areas.

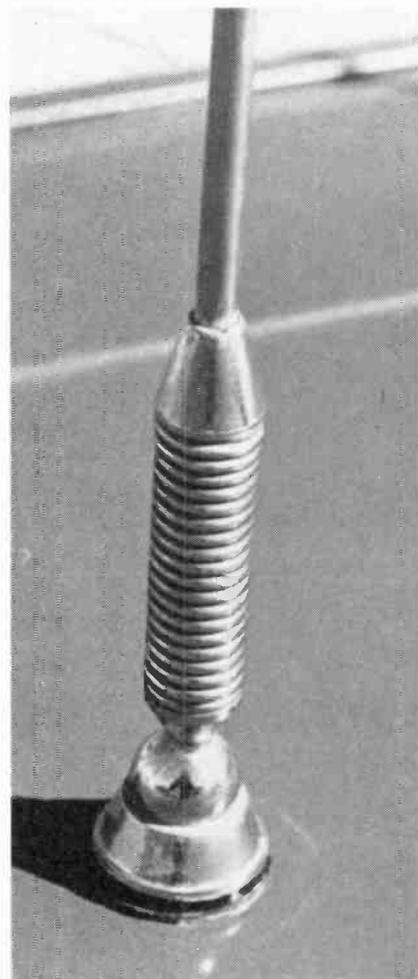


A gutter-mount antenna also requires that no additional holes be drilled into your vehicle. The base attaches securely with a pressure clamp.

For maximum reception, you should mount your antenna in the center of your vehicle's roof. The roof will in turn act as a reflective ground plane.

line into the transceiver. That reflected power is called the "standing wave." If the return power is high, the efficiency of the system is sharply reduced. If it is extremely high, permanent damage to the transceiver can result. In the ideal situation, the standing wave is reduced as low as possible in relation to the power that goes out through the antenna.

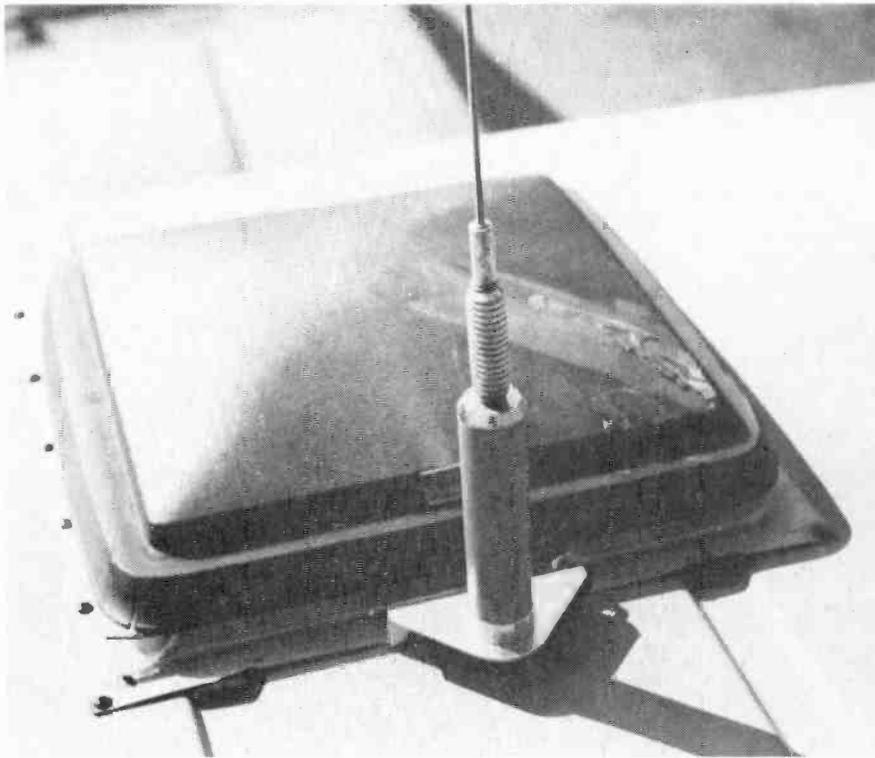
The standing wave ratio (SWR) is measurable and it's easy to check. There are meters specifically designed for that purpose, and often you can borrow one from your friendly CB dealer. He'll also show you how to connect and operate the device. Although most CB transceivers are rated at five watts, actual output is more on the order of four watts. The set may deliver five watts to the antenna system, but by the time the signal gets on the air, losses have occurred. Let's assume that yours is capable of four watts and your SWR reads 1.9. Under these circumstances your loss due to mismatch would be about 10 percent. By



get the kind of reception and transmission they have been led to expect.

Before all the blame is heaped on the transceiver and the company that made it, there's another more likely direction in which to look. In good reception and transmission, of equal importance to the transceiver is the antenna system. Composed of the antenna itself and the coaxial cable connecting it to the radio, it is the electrical pathway that delivers the signals both incoming and outgoing.

When you bought your set, the man at the electronics store probably told you about the importance of matching the radio and the antenna to reduce range loss due to poor standing wave ratio (SWR). What this means is that some of the electrical power you put into that antenna is reflected back all along the



For van owners, using a vent mount is also very popular. No holes are needed for mounting, and you still have the benefit of using the roof as a ground plane.

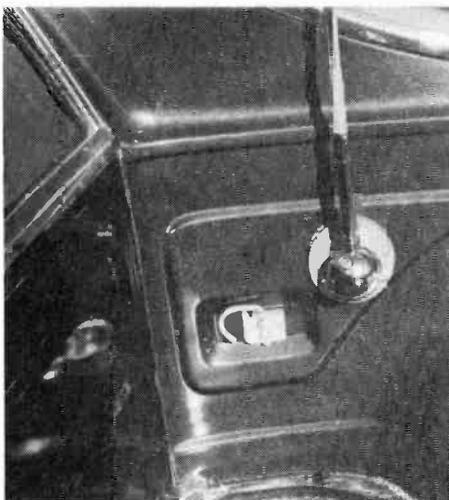
bringing the loss down to 1.5, the system will operate efficiently. Few antenna systems exceed this percentage.

Many of the mobile antennas now available, both in stainless steel and fiberglass, have adjustable tips which enable them to be shortened or lengthened for the best SWR match. Some of the fiberglass antennas are built with the provision that small amounts of material may be trimmed off the tip in order to achieve a good SWR match. It is very important to be sure that your particular antenna is so designed before getting out the diagonals. If it isn't, you can ruin it beyond recall.

Probably the most frequently asked question and one that is highly important is "Where should I mount my CB antenna?" It is unfortunate that many either don't ask or don't listen. There seems to be a fad for placing CB antennas low on the rear street-side

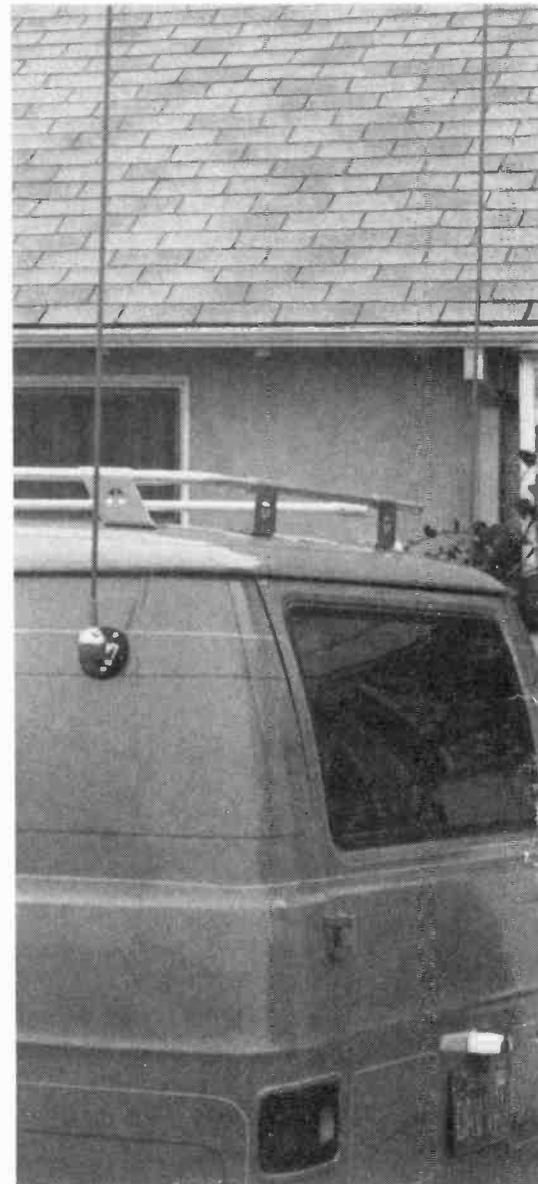


Bumper-mounted antennas really cut down on the reception. This is one of the worst places to mount a CB antenna, unless your sole purpose is for decoration only!



Many pickup truck, El Camino and Rancho owners like to mount the antenna system inside the rear deck or bed of the vehicle.

Always remember to try to place your antenna system as high as possible on your vehicle. For vans, this is one of the better locations.



flank. It's just about as poor a location as possible.

For best reception and transmission your antenna should be mounted at the highest point possible to the center of the roof. The reason is that a mobile antenna is omni-directional. It receives and transmits in all directions and does its job most efficiently when center-mounted. When it is mounted at a corner, it becomes more directional. Short-wave radio transmissions tend to travel in a line of sight; therefore, the higher you can locate the antenna, the better your messages are going to be received. This, of course, calls for some common sense. Antenna height, while important for good reception and transmission, can get out of proportion. Designed for automobiles with bumper mounts, whips about nine feet long can be purchased. Mounted on a van roof, this would be ridiculous. Besides, many states have laws restricting such matters to a maximum height of 13.5 feet.

Regardless of your choice in antennas, it will almost surely be tall enough that you'll want a spring at the base which will absorb wind pressure at highway speeds and permit passage under bridges and branches without damage.

Coaxial cable has to be routed from the antenna to the transceiver, and it's a lot easier in the beginning rather than having to cut holes through or remove

elaborate paneling or upholstery. In this connection another factor to remember is wiring. It's a lot safer having things out in the open than chancing a dead short by cutting blind because you can't remember for sure just where the wires ran.

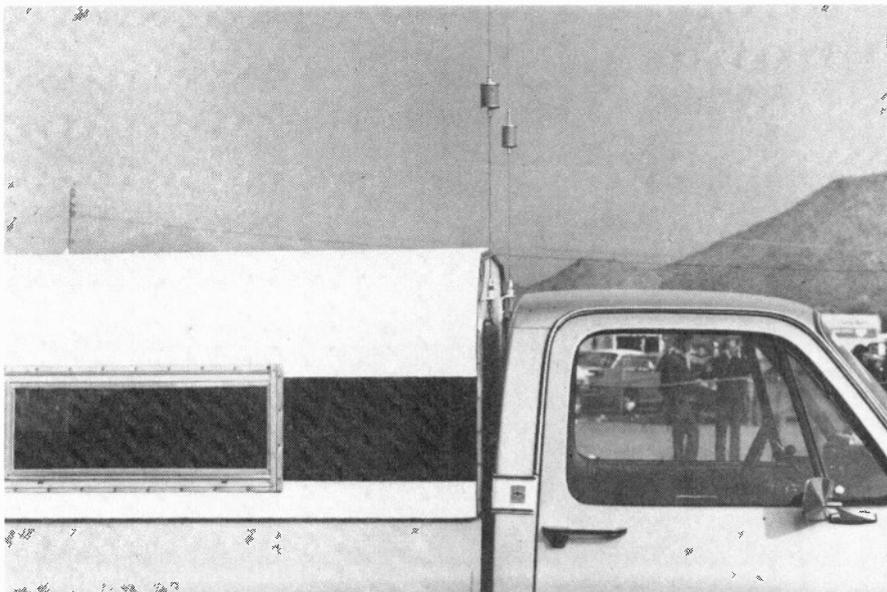
Not to be overlooked in planning your antenna system is the coaxial cable from the antenna to the transceiver. The most often used in mobile applications is the RG-58/U (small diameter); however, the super-small RG-174 is becoming very popular especially with CB'ers who want to hide as much of the coax as possible.

The combination of roof and CB can make for some pretty inventive approaches. One way to go is to have two CB antennas, one for on the road and another for back-country destinations. While traveling, a short antenna is used; when stopped for the weekend, a tall antenna that is flat on the roof is erected by means of an electric motor controlled from the dash. To use both the mobile and the super antenna, two coaxial cables are required, but a handy switch box can be located near the transceiver for antenna selection.

Leave the technical stuff alone until you set up your base station at home. As a parting thought, don't overlook that all-important SWR match. Get it down to 1.5 and you won't be unhappy with your transceiver. ●

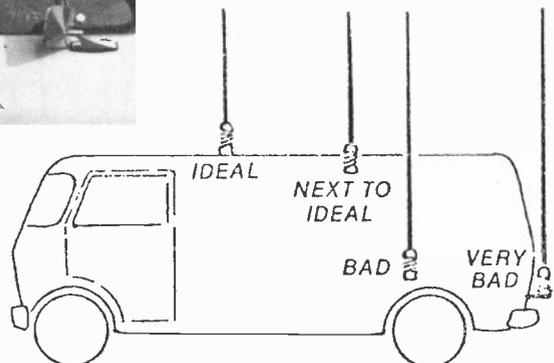


Mounting the antenna on the cab is also acceptable. Again, incorporate height and the vehicle's roof as much as possible.



If you use a camper shell, strive to keep those antennas up high. This system provides good reception because of the center-loaded coils.

This illustration shows the correct and incorrect mounting positions for a CB antenna.



A fancy SWR bridge such as this is nice if you want it, but it's not all that necessary to help you get a good match on your antenna.



MATCHING YOUR MOBILE ANTENNA!

Making Easy Use of a Standing Wave-Ratio Bridge

By Ray Andrews

If you're not already familiar with terms like SWR, match, impedance, and 1-to-1, then you certainly should be! All of these strange-sounding terms play a direct role in your mobile CB radio working at its best.

SWR, which means standing wave ratio, is basically the ratio of your antenna to the transmission line. If your antenna is rated at 50 ohms, and the transmission cable or coax is also 50 ohms, then the SWR should be 50/50. Or saying it another way, 1-to-1. This 1-to-1 ratio is what is known as a matched or perfect SWR. This means that the maximum power of the transceiver is being transferred from the coaxial cable to the antenna. This process can only work at its maximum level when the coax and antenna are matched. If the antenna impedance is different from that of the coax, some of the energy power does not flow from the transceiver to the antenna. This energy has no place to go, so it turns back from the antenna and is burned up as heat in the radio and coax. In turn then, the higher the SWR from 1-to-1, the greater the loss in power.

SWR BRIDGES

A standing wave ratio bridge is that piece of equipment that compares the power going to the antenna to the amount of power that is reflected back



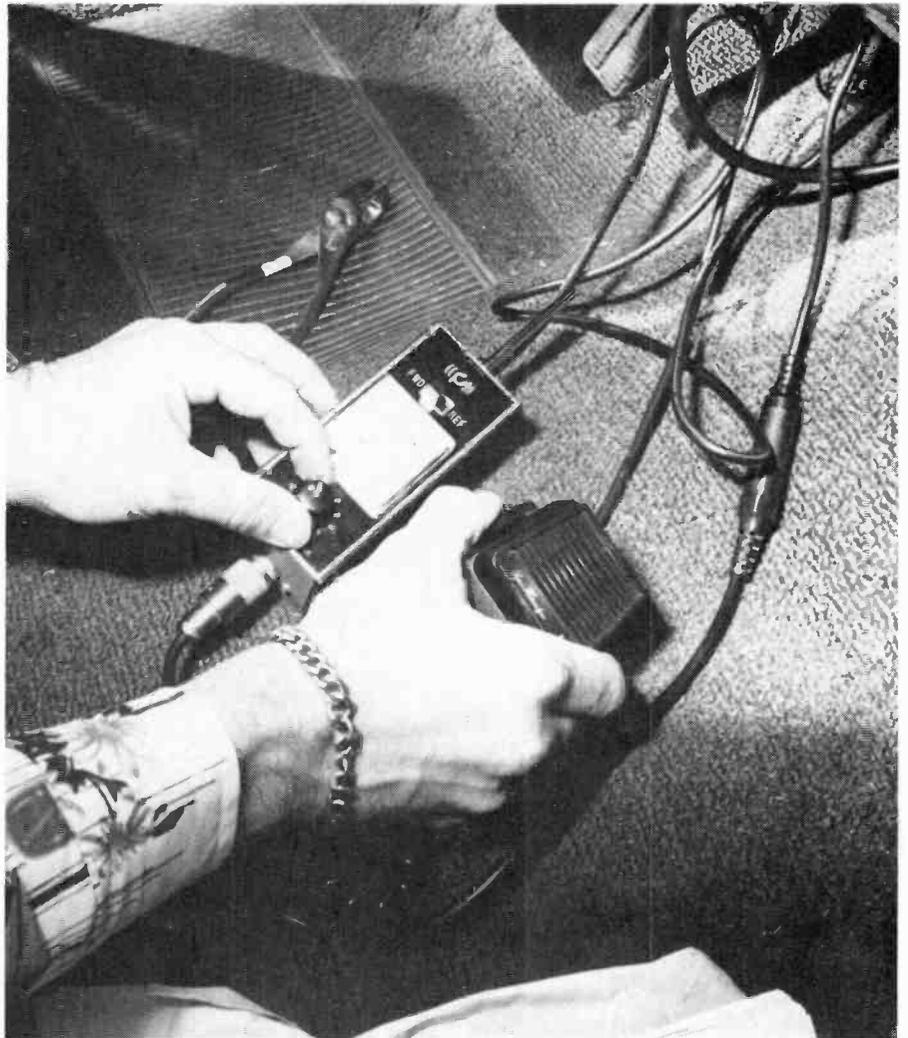
down the feed line or coax of the antenna due to improper impedance matching. The SWR bridge is an excellent accessory piece of equipment that should be owned by any CB'er who wants the maximum performance from the mobile radio system. You can usually find a good, easily workable SWR bridge at your local CB shop. The average unit will run anywhere from \$10 to \$18. There are also much fancier SWR meters that incorporate such technical features as modulation, calibration, radio frequency or RF power, etc. These units can cost anywhere from \$30 to \$150 and up.

CHECKING YOUR MATCH

At first glance an SWR bridge may look a bit confusing, but it's not. Follow the simple enclosed instructions and you'll have no problems in determining the match of your radio, or that of a friend's radio.

Connecting the SWR bridge is very simple. The unit is inserted between the radio and the antenna, usually where the coax plugs into the radio. To properly connect it, you will need two short pieces of coax cable with the appropriate connections. Usually lengths of two

Knowing how to use one of these strange-looking black boxes can make a big difference in the signal you're putting out!



After hooking the SWR bridge up, place the switch to FWD and adjust the dial to the SET position.

to three feet is plenty to do the job.

One end of the SWR bridge is marked ANT or ANTENNA. This is where the antenna will plug in. The other end is marked XMTR or TRANSMITTER, and of course this is the end that will connect into your set.

Once the SWR bridge is properly connected, you're ready to check the match. With the radio turned on, begin by placing the switch on the meter to the FWD position, and then key the microphone. The needle on the dial should swing across the face of the gauge to the SET position. If it overshoots or undershoots the SET position, use the small fine-tuning knob to properly place it. Once the needle is in the SET position, unkey the microphone and flip the switch to the REF slot. Again, key your microphone and take note as to the needle's location. Ideally speaking, the needle should move only as far as the number one. However, only very rarely is it possible to achieve a perfect 1-to-1 match. If your match is 1.5 or below, you have about as close a match as is possible. If the needle

reads 1.7, 1.9, 2.0, 2.3 or above, then your antenna is not working at its peak of performance and you will need to make some adjustments in the system.

TRIMMING THE ANTENNA

To help you get your SWR reading down to an acceptable level, you will have to trim or adjust the antenna. Although there is another way, that of adding or subtracting coax cable, this method is very difficult and the results are often disappointing. A much more efficient method is that of making adjustments at the antenna and leaving the coax alone! For this method, there are different ways to trim an antenna, depending on the type you own.

If you have a solid steel or fiberglass whip antenna, you will remember using an Allen wrench to secure it to the base. Try loosening this screw and sliding the antenna down 1/8-inch at a time. Most of the time, you will find that by sliding the whip down deeper into the socket, you will in turn lower the SWR match.

If the whip is slid in as far as it will go, and your match is still not 1.5 or lower, you will have to cut a small portion of the whip. Use a pair of sharp wire cutters and remove *no more* than 1/8-inch from the base of the whip at a





Unkey the microphone, flip the switch to REF and re-key the microphone. Where the needle stops indicates the impedance match you have.

time. Replace the whip in the base and again check the reading. Keep repeating this process until you bring the match down. Usually, you will not have to cut more than 1/4 to 1/2 inch of the whip. If much more is needed to be cut, you may have a bad antenna or coax and should have your local CB shop take a look.

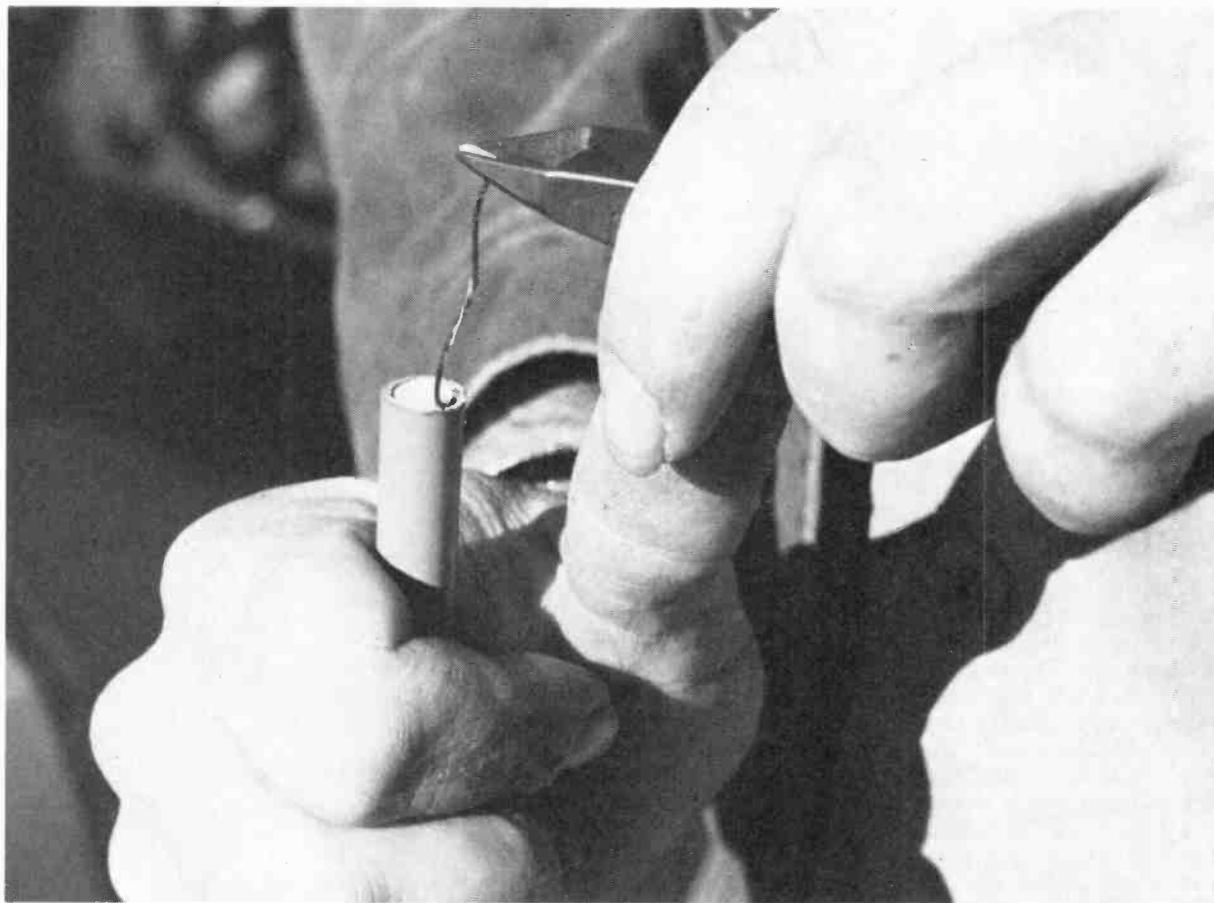
The other way of trimming your antenna concerns those who own the solid antennas that are wire wrapped, like the Long Ranger style. Here, you simply remove the plastic cap, pull out 3/4 to one inch of wire and snip it off. Replace the antenna, check the meter and repeat as necessary.

Percent of Power Loss	VSWR	Percent of Effective Radiated Power
.0	1.0:1	100.0
.3	1.1:1	99.7
.8	1.2:1	99.2
1.7	1.3:1	98.3
2.7	1.4:1	97.3
5.0	1.6:1	95.0
8.0	1.8:1	92.0
11.0	2.0:1	89.0
14.0	2.2:1	86.0
17.0	2.4:1	83.0
20.0	2.6:1	80.0

This chart shows the amount of power you lose if your antenna is not properly matched. Under 1.5, it is not that bad, but after that, you really have large drops in power output.

If the match is above 1.5, you need to make adjustments. Try sliding the whip down 1/8-inch at a time into the socket. If still not close, you may need to trim a little from the base of the whip.





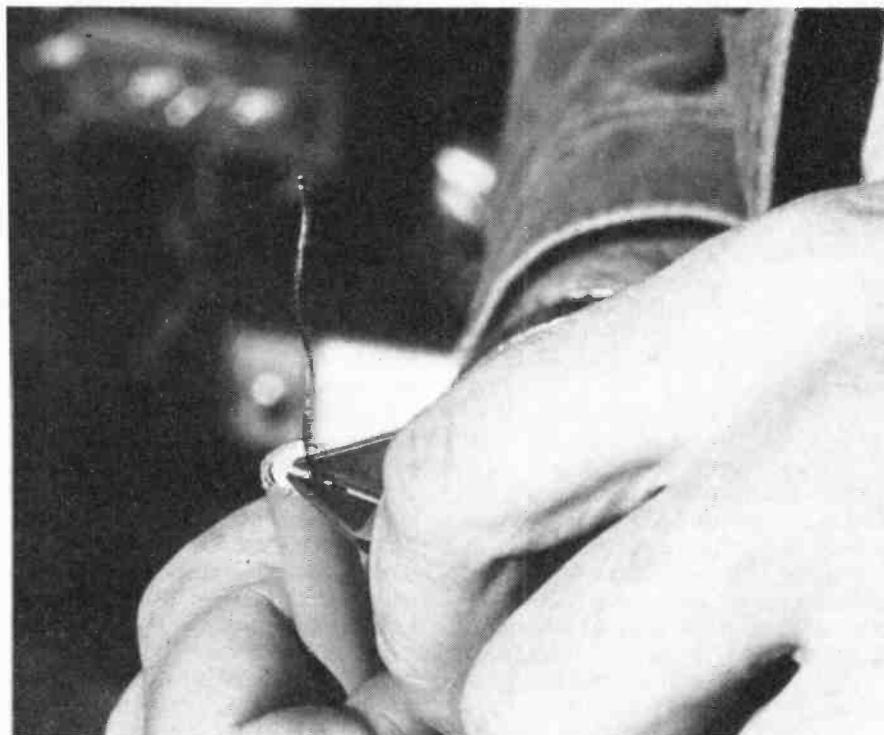
For the wire wound antennas, such as the Long Ranger style, remove the plastic cap and trim 3/4 to one inch.

MATCHING TO YOUR CHANNELS

Remember to always try to get as low a reading as possible. Also you should strive to achieve the best match on the channels you usually use. If you spend most of your time on channels 10 to 14, it would be of little value to try to have the best match on channels 20 to 23.

Once the antenna is properly adjusted to the radio, meaning maximum power to the antenna and minimum reflected power back to the radio, you can easily remove the SWR bridge and pack it away. Or you may leave it connected; if left connected, it will serve as a double check on your antenna's performance. Usually, the SWR bridge draws no power from the radio's output capabilities, and will only serve to verify that nothing is wrong with your coax or antenna.

With the matching and trimming completed, spend a few minutes and see what the meter reading is on all of the other channels. Strive to get a 1.5 match on all 23 channels! If you do, you will have many more useful channels and more clear frequencies to choose from. ●



Usually only a few clippings are necessary to match any antenna. If excessive cutting is required, you may have a defective antenna. Let your local CB shop take a look before you cut too much!

How to Shop for CB Equipment



There's More To It Than "You Pays Your Money and You Takes Your Chances!"

Just about the worst thing you can do when you start shopping for a transceiver for your vehicle or base station for your home is to be impulsive. The shopper who heads for the closest electronics store listed in the yellow pages and lays out his cash for the first suggestion the clerk offers may be making a costly mistake. There are electronic supply houses that stock a wide variety of CB radios, antennas and accessories, and only offer other merchandise as a sideline.

The advantages of seeking out a store that specializes in CB are many . . . first and most important is knowledge. The man behind the counter, whether he's the boss or an employee, is guaranteed to have a wide range of know-how on the subject of CB radio, generally, and particularly on the merchandise he has in stock. It's no sin and it's certainly no sign of lack of intelligence on your part to be uninformed on a new subject. If you're completely green about CB, tell the man you're a beginner but anxious to learn. He'll be helpful, will get you started on the right foot and have consideration for your budget as well.

The CB specialist will very likely have a number of different makes of sets, both mobile and base in stock. Some of these will not have full 23-channel capability, and as a result will be offered at a lower price. For safety considerations and maximum effectiveness, our recommendation is the full complement. Get a set with all 23 channels. Another advantage to shopping the CB specialist is his selection of antennas and accessories. Elsewhere in this issue, you'll find a story devoted to CB antennas, their installation and their critical importance to good reception and transmission. Tell the friendly man at your CB shop what kind of vehicle or base station you wish to work the radio into. He'll help you select the right antenna, the right coaxial

cable, and if need be, any auxiliary switches and connectors you'll need to make the installation complete.

Unlike the store that carries CB transceivers only as a sideline, your CB specialists will almost surely be able to give you a blank for your Class D radio station operator's license, and a condensation of the rules and regulations of the infamous Part 95. Part 95 is that section of the rules that pertains to us CB'ers. Also please feel free to use the enclosed license application, inside the back cover.

There are some large electronics stores that carry a good selection of CB radios, antennas, and accessories, but again, only as a sideline to their main business of equipment for radio amateurs or "hams." In places like this it's hard to get anyone to pay attention to you, and since most of the employees are hams, they have a rather superior attitude to us, the "chicken banders, or unclean ones."

To ferret out the CB specialist, don't be afraid to ask questions. Consult your friends who already have a CB, or look in the yellow pages of the phone book under the heading of Radio Communications Equipment and Systems. Some of the listings will tend to confuse you, but those are the ones for business radio and mobile telephones. Keep an eye out for listings that state CB radio or Citizens Band Radio. Keep such brand names in mind, like Johnson, Pace, Midland, Courier, Browning, Cobra, just to name a few of the many manufacturers.

Prices will range between \$125 all the way up into the \$400 bracket. The average full 23-channel AM radio will run in the \$175 area. A good quality mike is normally included in the transceiver price. So what are you waiting for? Finish reading our guide, hustle yourself to the yellow pages, and get on down to your CB shop. We'll meet you on the air! ●

The best way to get started into the World of CB radio is to go to a shop that specializes in CB equipment. Our local specialists, CBers Haven in West Los Angeles.

HY-GAIN



HY-RANGE 1 (\$138.95)

A 23-channel AM transceiver for mobile operation. Power supply is 12 VDC. Overall dimensions are 6x8x2 inches. Front panel controls include power, volume, squelch, channel selector and strength meter. Standard accessories include microphone, mounting brackets, all crystals and DC power cable.



HY-RANGE 2 (\$179.95)

A 23-channel AM transceiver for mobile operation. This unit features delta tuning on all channels. Power supply is 12 VDC. Overall dimensions are 6x8x2 inches. Front panel controls include power, volume, squelch, delta tune, ANL on/off switch, channel selector and strength meter. Standard accessories include microphone, mounting bracket, all crystals and DC power cable.



HY-RANGE 3 (\$229.95)
 A 23-channel AM transceiver for mobile operation. This unit features fine tune in all channels. Power supply is 12 VDC. Overall dimensions are 7x10x2 inches. Front controls include volume, squelch, power, RF gain, fine tuning, ANL on/off switch, channel selector and strength meter. Standard accessories include microphone, mounting brackets, all crystals and DC power cable.

J.I.L. ELECTRONICS



J.I.L. IN-DASH (\$259.95)
 A 23-channel AM transceiver that includes AM/FM Multiplex, eight-track or cassette stereo. Power supply 12 VDC. Overall dimensions are 2x7x7¼ inches. Front panel controls include channel selector, volume, squelch, power, AM/FM/CB/Stand-by switch, full AM/FM radio tuning bar and eight-track or cassette slot. Standard accessories are microphone, all crystals, easy to install instructions and DC power cable hook-ups.

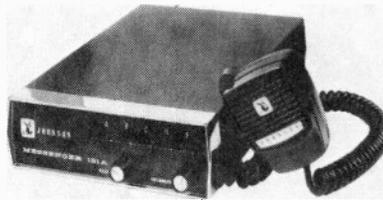


E.F. JOHNSON MESSENGER 123A (\$159.95)
 A 23-channel solid-state transceiver for mobile operation. Power supply is 12 VDC with a negative ground. Overall dimensions are 2-5/8x6¼x8¾ inches. Front panel controls include volume, squelch, strength meter, and channel selector. The standard accessories are microphone, mobile mounting bracket, all crystals, and DC power cable.



HY-RANGE 4 (\$239.95)
 A 23-channel AM transceiver designed for base operation. Power supply is 117 VAC only. Overall dimensions are 13x11x5 inches. Front panel controls include volume, power, squelch, RF gain, fine tuning, ANL on/off switch, phone plug-in jack, channel selector and strength meter. Standard accessories are mike, AC power cable and all crystals.

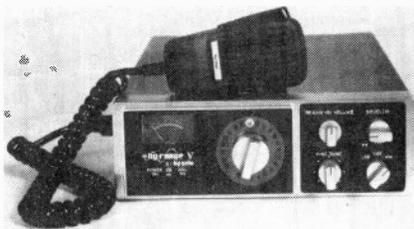
JOHNSON RADIOS



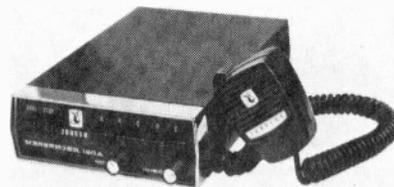
E.F. JOHNSON MESSENGER 121A (\$99.95)
 A five-channel solid-state transceiver for mobile operation. Power supply is 12 VDC with negative ground. The overall dimensions are 2x6¼x9-3/8 inches. Front panel controls include volume, squelch, power, and channel select buttons. The standard accessories are microphone, DC power cable, mobile mounting bracket, and one crystal set.



E.F. JOHNSON MESSENGER 123SJ (\$169.95)
 A 23-channel solid-state transceiver for mobile operation. Power supply is 12 VDC with either a positive or negative ground. Overall dimensions are 2½x6-3/16x9-5/8 inches. Front panel controls include volume, squelch, channel selector, and lite-indicator strength meter. The standard accessories are microphone, mobile mounting bracket, all crystals and DC power cable.



HY-RANGE 5 (\$349.95)
 A 23-channel AM/SSB transceiver for mobile operation. Power supply is 12 VDC. Overall dimensions are 8½x11½x3 inches. Front controls include volume, power, squelch, AM/LSB/USB selector, fine tuning control, RF gain, PA/CB, ANL on/off switch, channel selector and strength meter. Standard accessories include microphone, all crystals, mobile mounting bracket and DC power cable.



E.F. JOHNSON MESSENGER 120A (\$149.95)
 A five-channel solid-state transceiver for mobile operation. The built-in Tone-Alert silences the receiver until the proper tone is received. Power supply 12 VDC with negative ground. Front panel controls include volume, squelch, power, channel select buttons, call and standby buttons, and Tone-Alert signal light. The standard accessories are microphone, DC power cable, mobile mounting bracket, and one crystal set.



E.F. JOHNSON MESSENGER 130A (\$199.95)
 A 23-channel AM transceiver for mobile, PA operation. Power supply is VDC with a negative ground. This unit incorporates the mobile telephone style. Front panel controls include volume, squelch, channel selector, PA speaker or handset, and illuminated transmit light. Standard accessories are handset, mobile mounting bracket, all crystals and DC power cable.

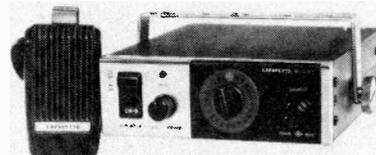


E.F. JOHNSON MESSENGER 250
(\$229.95)

A 23-channel AM transceiver for base operation. Power supply 117 VDC with a negative ground. Overall dimensions are 5-7/16x11x9-13/16 inches. Front panel controls include volume, squelch, power, channel selector, and strength meter. Standard accessories are power cable and owner's manual and all crystals. The microphone is not included with this unit.



E.F. JOHNSON VIKING 352 (\$359.95)
A 23-channel AM/SSB for mobile, PA operation. Power supply 12 VDC with positive or negative ground. Overall dimensions are 2½x7½x10¾ inches. Front panel controls include channel selector, volume, squelch, power, AM/USB/LSB, fine tune, PA/CB, RF gain and noise blanker on/off control. Standard accessories are microphone, all crystals, DC power cable, mobile mounting bracket, remote speaker and PA plug-in jack.



LAFAYETTE MICRO 923 (\$149.95)
A 23-channel AM transceiver for mobile, PA operation. Unit has built-in channel nine monitor. Power supply is 12 VDC with positive or negative ground. Overall dimensions are 2x6x7 inches. Front panel controls include volume, channel/PA selector, main receiver squelch, monitor receiver squelch, power, and monitor on/off switch. Standard accessories include microphone, all crystals, mobile mounting bracket, DC power cable.



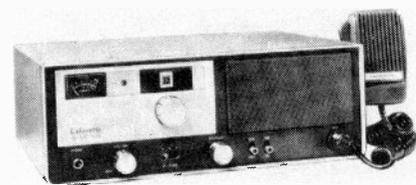
E.F. JOHNSON MESSENGER 323A
(\$249.95)

A 23-channel AM transceiver for mobile, PA operation. Power supply 12 VDC with either positive or negative ground. Overall dimensions are 2-5/8x8x10 inches. Front panel controls include volume, squelch, power, channel selector, PA/CB, and noise blanker. Standard accessories are microphone, all crystals, strength meter, mobile mounting bracket, and DC power cable.

LAFAYETTE



LAFAYETTE MICRO 66 (\$79.95)
A six-channel AM transceiver for mobile operation. Power supply is 12 VDC with negative or positive ground. Overall dimensions are 2x5½x7 inches. Front panel controls include volume, power, squelch, and channel selector. Standard accessories are microphone, mobile mounting bracket, DC cable and channel 10 crystals.

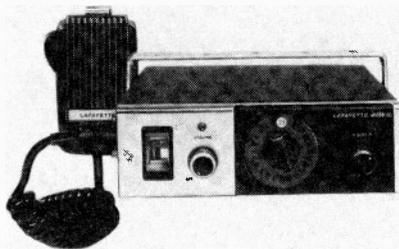


LAFAYETTE TELSAT 1023 (\$179.95)
A 23-channel AM transceiver for mobile, base, PA operation. Power supply 12 VDC negative ground or 117 VAC. Overall dimensions are 13x8½x4¼ inches. Front panel controls include volume, power, squelch, plug-in phone jack, delta tune, ANL on/off switch, CB/PA, channel selector and strength meter. Standard accessories are microphone, DC and AC cables and all crystals.

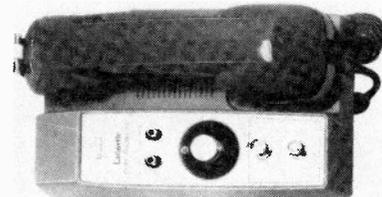


E.F. JOHNSON MESSENGER 132
(\$259.95)

A 23-channel AM transceiver for mobile, fixed PA operation. Features a hand set with controlled console styling. Power supply 12 VDC with negative ground and 117 VAC. Overall dimensions are 5x13-5/8x8¾ inches. Front panel controls include channel selector, squelch power, volume, PA/CB, handset/strength meter speaker, monitor selector. Standard accessories are AC power cord, all crystals and hand set.



LAFAYETTE MICRO 723 (\$119.75)
A 23-channel AM transceiver for mobile operation. Power supply is 12 VDC with negative or positive ground. Overall dimensions are 2x6x7 inches. Front panel controls include volume, power, squelch, channel selector, and strength meter. Standard accessories are microphone, mobile mounting bracket, DC cable, and all crystals.



LAFAYETTE COM/PHONE 23 (\$189.95)
A 23-channel AM transceiver for mobile, PA operation. Features telephone hand set operation. Power supply is 12 VDC with positive or negative ground. Overall dimensions are 3½x5½x10 inches. Front panel controls include volume, power, channel selector, squelch, PA/CB, speaker/hand set selector, and illuminated transmitting light. Standard accessories are hand set, all crystals, DC power cable and mobile mounting bracket.



LAFAYETTE COMSTAT 35 (\$199.95)
 A 23-channel AM transceiver for mobile, base, PA operation. Power supply is 12 VDC with negative ground or 117 VAC. Overall dimensions are 12x5x8½ inches. Front panel controls include volume, squelch, fine tuning, standby switch, range booster switch, PA/CB, strength meter and channel selector. Standard accessories include microphone, AC & DC power cable, all crystals, and inobile mounting bracket.



LAFAYETTE TELSTAT 925 (\$269.95)
 A 23-channel AM transceiver for base, PA operation. Delta tuning available on each channel. Features channel nine monitor and a digital clock with automatic alarm. Also has tape recorder output. Power supply is 117 VAC only. Overall dimensions are 5x15x9 inches. Front panel controls include volume, channel/PA selector, delta tune, main squelch, channel nine squelch, ANL on/off switch, CB/monitor selector, power control, strength meter, headphone and microphone jacks. Standard accessories include microphone, AC power cord and all crystals.



COBRA 29 (\$199.95)
 A 23-channel AM transceiver for mobile operation. This unit features delta tune on all channels. Power supply is 12 VDC on positive or negative ground. Overall dimensions are 2x7x8½ inches. Front panel controls include volume, power, squelch, RF gain, delta tune, dyna mike control, channel selector, CB/PA switch, noise blanketer switch, ANL on/off switch, illuminated indicator lights and strength meter.



LAFAYETTE COMPHONE MARK 2 (\$229.95)
 A 23-channel solid-state AM transceiver for base, PA operation. Power supply is 117 VAC only. Overall dimensions are 5½x12 inches. Front panel controls include volume, squelch, hand set/PA speaker switch, channel selector, and strength meter.

**COBRA
 DYNASCAN CORPORATION**



COBRA 21 (\$159.95)
 A 23-channel solid-state AM transceiver for mobile operation. Power supply is 12 VDC with negative ground. Front panel controls include volume, power, squelch, microphone gain, channel selector, ANL on/off switch, CB/PA and strength meter. Standard accessories are microphone, all crystals, mobile mounting brackets and DC power cable.



COBRA CAM 89 (\$259.95)
 A 23-channel AM transceiver for mobile, base, and PA operation. Power supply is 12 VDC with positive or negative ground, or 117 VAC. Overall dimensions are 6x10x8 inches. Front panel controls include volume, power, squelch, tone, RF gain, dyna mike control, delta tune, CB/PA, ANL on/off switch, modulation meter, channel selector and strength meter. Standard accessories are microphone, all crystals, and AC and DC power cables.



LAFAYETTE TELSAT SSB/75 (\$249.95)
 A 23-channel AM/SSB transceiver for mobile operation. Power supply is 12 VDC with positive or negative ground. Overall dimensions are 8x3x10 inches. Front panel controls include volume, squelch, power, fine tune, LSB/USB/AM selector, strength meter and channel selector. Standard accessories includes microphone, all crystals, mobile mounting brackets and DC power cable.



COBRA 85 (\$189.95)
 A 23-channel AM transceiver for base operation. Power supply is 117 VAC only. Dimensions are 6x10x8 inches. Front panel controls include volume, power, squelch, channel selector and strength meter. Standard accessories are microphone, all crystals, and AC and DC power cables.



COBRA 138 (\$339.95)
 A 23-channel AM/SSB transceiver designed for mobile operation. Power supply is 12 VDC with positive or negative ground. Overall dimensions are 2½x7½x10 inches. Front panel controls include volume, power, squelch, dyna mike control, AM/USB/LSB selector, RF gain control, voice lock control, channel selector, CB/PA, noise blanketer on/off switch, ANL on/off switch and strength meter. Standard accessories are microphone, all crystals, mobile mounting brackets and DC power cable.



COBRA 132 (\$339.95)

A 23-channel AM/SSB transceiver for mobile operation. Power supply is 12 VDC with positive or negative ground. Overall dimensions are 2x7½x11 inches. Front panel controls include volume, power, squelch, voice lock control, RF gain, AM/USB/LSB selector, channel selector, noise blanketer, CB/PA, and strength meter. Standard accessories are microphone, all crystals, mobile mounting brackets and DC power cable.

CRAIG



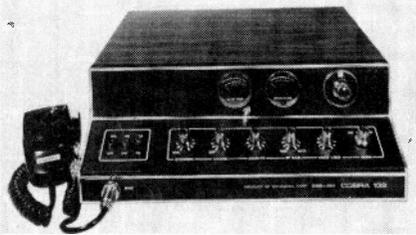
CRAIG 4101 (\$129.95)

A 23-channel AM transceiver for mobile, PA operation. Power supply is 12 VDC with positive or negative ground. Overall dimensions are 2¼x6½x9 inches. Front panel controls include volume, power, squelch, and channel selector. Standard accessories are microphone, all crystals, mobile mounting bracket and DC power cable.



CRAIG 4103 (\$199.95)

A 23-channel AM transceiver for mobile operation. Power supply is 12 VDC with positive or negative ground. Overall dimensions are 2¼x6½x9 inches. Front panel controls include volume, power, squelch, channel selector, RF gain, delta tune, ANL/NB/PA switch, and a SWR meter and calibration switch. Standard accessories are microphone, mounting bracket, all crystals and DC cable.



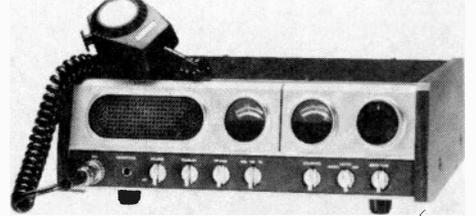
COBRA 139 (\$419.95)

A 23-channel AM/SSB transceiver for base operation. Power supply is 12 VDC negative ground or 117 VAC. Overall dimensions are 6x14x13 inches. Front panel controls include volume, squelch, power, dyna mike, CB/PA, noise blanketer, ANL on/off switch, RF gain control, voice lock control, AM/USB/LSB channel selector, modulation meter and strength meter. Standard accessories include microphone, all crystals and AC power cable.



CRAIG 4102 (\$149.95)

A 23-channel AM transceiver for mobile, PA operation. Power supply is 12 VDC with positive or negative ground. Overall dimensions are 2¼x6½x9 inches. Front panel controls include volume, power, squelch, channel selector and PA selector. Standard accessories are microphone, DC power cable, all crystals and a quick-release mobile mounting bracket.



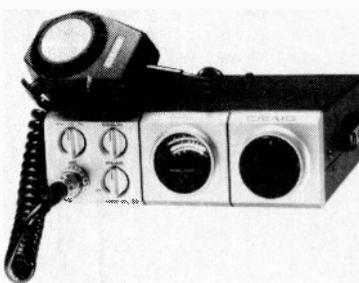
CRAIG 4201 (price not available)

A 23-channel AM transceiver for mobile, base, PA operation. Power supply 12 VDC with negative ground or 117 VAC. Front panel controls include volume, squelch, power, RF gain, ANL/NB/PA switch, calibration switch, strength meter switch, delta tune, plug-in headphone jack, strength meter, SWR meter, and channel selector. Standard accessories include microphone, all crystals, mobile mounting brackets and AC and DC power cables.



COBRA 135 (\$479.95)

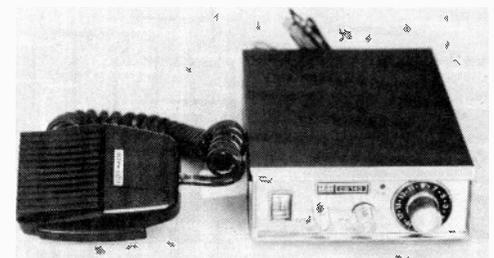
A 23-channel AM/SSB transceiver for base, PA operation. Power supply is 12 VDC positive or negative ground, or 117 VAC. Unit is equipped with digital alarm clock. Overall dimensions are 5½x13½x12 inches. Front panel controls include volume, power, squelch, automatic meter switching control, SWR control, digital clock with alarm, RF gain, voice lock, AM/USB/LSB selector, SWR and strength meter, plug-in jack and channel selector. Standard accessories are microphone, all crystals and DC power cable.



CRAIG 4104 (\$169.95)

A 23-channel AM transceiver for mobile operation. Power supply is 12 VDC with positive or negative ground. Overall dimensions are 2¼x6½x9 inches. Front panel controls include volume, power, squelch, channel selector, ANL/NB/PA switch, strength meter and modulation light. Standard accessories are microphone, all crystals, mobile mounting bracket and DC power cable.

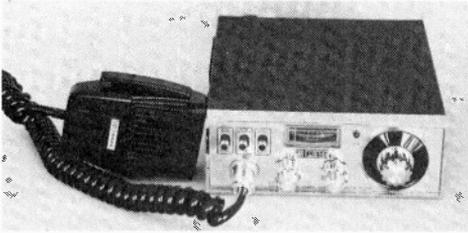
PACE PATHCOM RADIOS



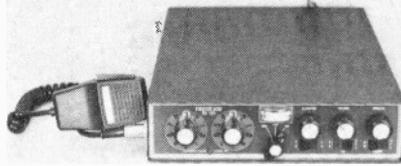
PACE CB 143 (\$129.95)

A 23-channel AM transceiver for mobile, PA operation. Power supply 12 VDC with positive or negative ground. Overall dimensions are 1-5/8x5x7¼ inches. Front panel controls include channel selector, volume, squelch, power strength meter and transmitting light. Standard accessories are microphone, all crystals, mobile mounting bracket and DC power cable.

PALOMAR ELECTRONICS



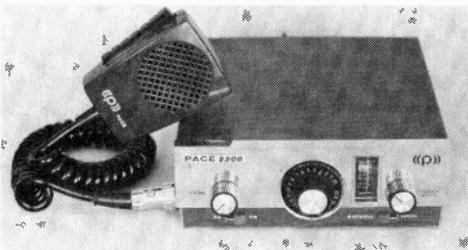
PACE CB 144 (\$179.95)
 A 23-channel AM transceiver for mobile, PA operation. Unit also features a delta tune. Power supply 12 VDC with positive or negative ground. Overall dimensions are 1-5/8x5x7 1/4 inches. Front panel controls include volume, squelch, power, channel selector, delta tune and strength meter, RF gain, CB/PA, noise blanker, transmitting light and ANL on/off control. Standard accessories are microphone, all crystals, DC power cable mobile mounting brackets and a remote speaker cable.



DIGICOM 100 (\$495.00)
 Radio is designed to operate on any future expansion of frequencies approved by the FCC. This unit offers 100 AM/SSB frequencies and is designed for mobile use. Power supply 12 VDC. Front panel controls include clarifier, volume, squelch, PA/CB switch, noise blanker on/off switch, power on/off switch, USB/LSB/AM switch, strength meter and programmable dual channel selectors, offering a 100-channel range. Standard accessories are microphone, all crystals, mobile mounting bracket and DC power cable.



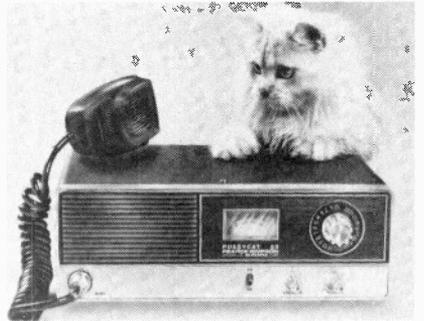
PEARCE SIMPSON TOMCAT 23 (\$139.95)
 A 23-channel AM transceiver for mobile operation. Power supply is 12 VDC with negative ground. Overall dimensions are 2 1/4 x 6 x 8 1/2 inches. Front panel controls include volume squelch, channel selector and strength meter. Standard accessories are microphone, DC power cable, mobile mounting bracket and all crystals.



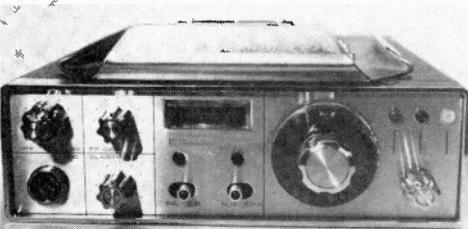
PACE 2300 (\$219.95)
 A 23-channel solid state AM transceiver for mobile, PA operation. Power supply 12 VDC with negative ground. Overall dimensions are 2 1/2 x 7 x 8 1/2 inches. Front panel controls include channel selector, volume, power, squelch, PA/CB, strength meter and local/distant switch. Standard accessories are microphone, all crystals, DC power cable, and mobile mounting bracket. Unit can be re-wired for positive ground.



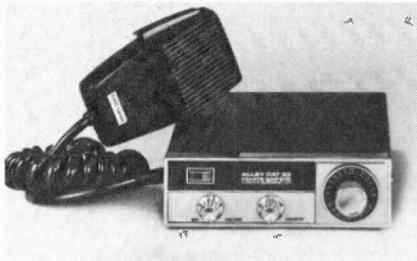
PANASONIC CRB 1717 (price not available)
 A 23-channel AM transceiver designed for mobile operation. This unit is for in-dash installation and features AM/FM stereo pushbutton control. Power supply is 12 VDC. Unit is five inches deep. Front panel controls include volume, squelch, power, CB/monitor switch, power indicator, delta tune, AM/FM dials, and channel selector. Standard accessories include microphone, DC power cable, and all crystals.



PEARCE SIMPSON PUSSYCAT 23 (\$179.95)
 A 23-channel AM transceiver for mobile, base and PA operation. Power supply is 12 VDC with negative ground or 117 VAC. Overall dimensions are 4x11x9 inches. Front panel controls include volume, power, squelch, PA/CB, channel selector and strength meter. Standard accessories are microphone, AC power cable, and all crystals.



PACE SIDETALK 1000M (\$349.95)
 A 23-channel solid state AM/SSB transceiver for mobile, PA operation. Variable tuning + 500Hz for each channel. Power supply 12 VDC with positive or negative ground. Overall dimensions are 2 1/4 x 7 1/2 x 10 inches. Front panel controls include volume, squelch, power, channel selector, RF gain, clarifier, strength meter, PA/CB switch, noise blanker, illuminated transmit and receive, AM/USB/LSB selectors. Standard accessories are microphone, all crystals, mobile mounting bracket and DC power cable.



PEARCE SIMPSON ALLEY CAT 23 (\$119.95)
 A 23-channel AM transceiver for mobile operation. Power supply is 12 VDC with positive or negative ground. Overall dimensions are 2 1/4 x 6 x 7 1/2 inches. Front panel controls include volume, squelch, channel selector and strength meter. Standard accessories are microphone, all crystals, DC power cable and mobile mounting bracket.



PEARCE SIMPSON TIGER 23 C (\$209.95)
 A 23-channel solid-state transceiver for mobile, PA operation. This unit offers delta tuning on each channel. Power supply is 12 VDC with negative ground. Front panel controls include volume, power, squelch, channel selector/PA, delta tuning, ANL on/off switch, and strength meter. Dimensions are 2x7x8 inches. Standard accessories are mike, DC power cable, all crystals and mobile mounting bracket.



PEARCE SIMPSON COUGAR 23 B
(\$239.95)

A 23-channel transceiver for mobile, PA operation. This unit features delta tuning on each channel. Power supply is 12 VDC with positive or negative ground. Overall dimensions are 2½x7x8 inches. Front panel controls include volume, power, squelch, meter selector, noise blanker, SWR calibrate, channel selector/PA and strength meter. Standard accessories are microphone, DC power cable, mobile mounting bracket and all crystals.



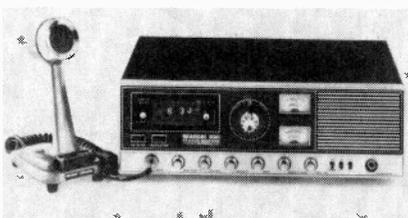
PEARCE SIMPSON GUARDIAN 23
(\$379.95)

A 23-channel tube transceiver for mobile or base operation. Power supply is 12 VDC positive or negative ground or 117 VAC. Overall dimensions are 4½x11x9 inches. Front panel controls include volume, squelch, RF gain, tone, channel selector, and strength meter. Standard accessories include AC and DC cables, all crystals and mobile mounting bracket. Microphone does not come with this unit.



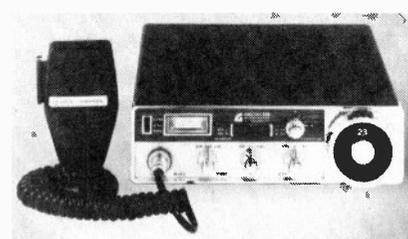
PEARCE SIMPSON SIMBA SSB
(\$559.95)

A 23-channel AM/SSB transceiver for mobile, base, PA operation. Clarifier tuning available on all channels. Unit comes equipped with a built-in digital alarm clock. Power supply is 12 VDC with negative ground, or 117 VAC. Overall dimensions are 6x15x11 inches. Front panel controls include volume, power, squelch, calibration switch, mike gain, headphone jack, AM/USB/LSB selector, RF gain, clarifier, SWR meter, strength meter, CB/PA, noise blanker, and channel selector. Standard accessories are desk-top microphone, AC and DC power cables, and all crystals.



PEARCE SIMPSON BEARCAT 23 C
(\$339.95)

A 23-channel solid-state AM transceiver for mobile, base, and PA operation. This radio features delta tuning. Power supply 12 VDC with positive or negative ground, or 117 VAC. The radio has a built-in digital alarm clock. Overall dimensions are 5x14x9 inches. Front panel controls include volume, power, noise blanker switches, channel selector, PA/CB, delta tuning, squelch, SWR calibrate, clock, headphone jack and strength meter. Standard accessories are desk-top microphone, all crystals, AC and DC power cables and mobile mounting bracket.



PEARCE SIMPSON CHEETAH SSB
(\$419.95)

A 23-channel solid-state AM/SSB transceiver for mobile, PA operation. Fine tuning is featured on all channels. Power supply is 12 VDC with negative ground. Overall dimensions are 2½x8½x10 inches. Front panel controls include volume, squelch, power, RF gain, channel selector, clarifier, PA/CB, noise blanker, meter selector, meter calibrator, AM/USB/LSB selector, and strength meter. Standard accessories include microphone, mobile mounting bracket, all crystals and DC power cable.



REALISTIC TRC-9A (\$59.95)

A three-channel AM transceiver for mobile operation. Power supply is 12 VDC with negative ground. Overall dimensions are 1-5/8x4-1/8x6-5/8 inches. Front panel controls include volume, squelch and channel selector. Standard accessories are microphone, mobile mounting bracket, DC power cable and set of crystals for channel nine. Additional crystals for other frequencies are available.



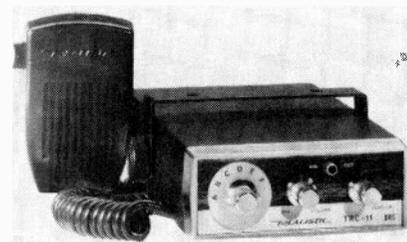
PEARCE SIMPSON PANTHER SSB
(\$369.95)

A 23-channel AM/SSB transceiver for mobile, PA operation. Variable tune on each channel. Power supply is 12 VDC with negative ground. Overall dimensions are 2x7x10 inches. Front panel controls include volume, squelch, power, variable tune, channel selector, AM/USB/LSB selector, noise blanker, PA/CB, strength meter and local/distance switch. Standard accessories are microphone, DC power cable, mobile mounting bracket and all crystals.



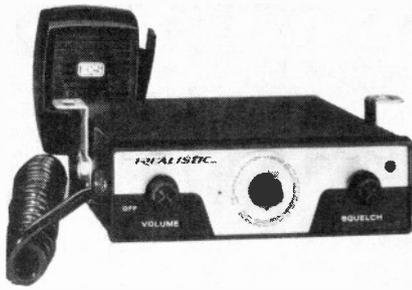
PEARCE SIMPSON BENGAL SSB
(\$429.95)

A 23-channel AM/SSB transceiver for mobile, fixed, PA operation. Variable tuning is available on each channel. Power supply is 12 VDC with negative ground, or 117 VAC. Overall dimensions are 5x13x10 inches. Front panel controls include volume, squelch, RF gain, mike gain, variable tuning, channel selector, PA/CB, noise blanker, strength meter, AM/USB/LSB selector, headphone jack, and modulation meter. Standard accessories are microphone, mobile mounting bracket, all crystals and AC and DC power cables.

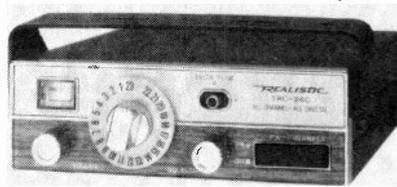


REALISTIC TRC-11 (\$79.95)

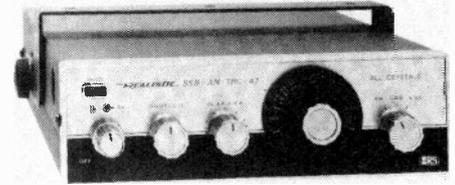
A six-channel AM transceiver for mobile operation. Power supply is 12 VDC with negative ground. Overall dimensions are 1½x4-1/8x6¾ inches. Front panel controls include volume, squelch, channel selector and ANL on/off switch. Standard accessories are microphone, mobile mounting brackets, DC power cable, and channel 11 crystals. Additional crystals for other frequencies are available.



REALISTIC MINI 23 B (\$109.95)
 A 23-channel AM transceiver for mobile operation. Power supply is 12 VDC with positive or negative ground. Overall dimensions are 1-5/8x5-5/8x7-7/8 inches. Front panel controls include volume, power, squelch and channel selector. Standard accessories are microphone, mobile mounting bracket, DC power cable, and all crystals.



REALISTIC TRC-24 (\$159.95)
 A 23-channel AM transceiver for mobile, PA operation. This unit offers delta tuning on each channel. Power supply is 12 VDC with positive or negative ground. Overall dimensions are 2x6x8 1/4 inches. Front panel controls include volume, power, squelch, channel selector, delta tune, PA/CB, noise blanker, and strength meter. Standard accessories are microphone, mobile mounting bracket, all crystals and DC power cable.



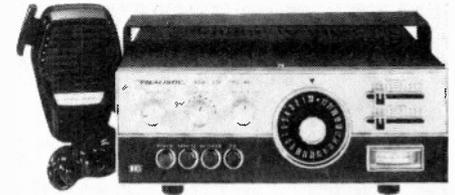
REALISTIC TRC-47 (\$249.95)
 A 23-channel AM/SSB transceiver for mobile use. Power supply is 12 VDC with negative ground. Overall dimensions are 2-1/8x7-1/8x8-1/8 inches. Front panel controls include volume, RF gain, squelch, clarifier, channel selector, AM/USB/LSB selector, power, and illuminated transmitting light. Standard accessories are microphone, mobile mounting bracket, DC power cable and all crystals.



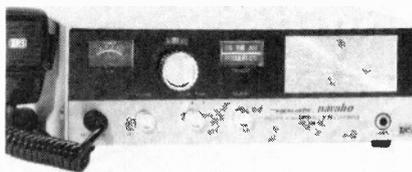
REALISTIC TRC-52 (\$129.95)
 A 23-channel AM transceiver for mobile operation. Power supply is 12 VDC with positive or negative ground. Overall dimensions are 2x5-7/8x7 1/2 inches. Front panel controls include volume, power, squelch, RF gain, PA/CB, ANL on/off switch, channel selector and strength meter. Standard accessories include microphone mobile mounting brackets, all crystals, DC power cable.



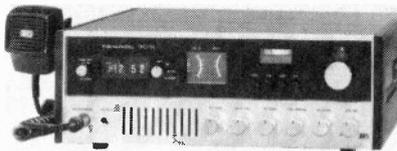
REALISTIC TRC-56 CB PHONE 23
 A 23-channel AM transceiver for mobile operation. This radio features mobile phone-like appearance and has delta tune. Power supply 12 VDC positive or negative ground. Overall dimensions are 5x8 3/4 x 7 inches. Front panel controls include volume, power, squelch, delta tune, speaker control, noise blanker, PA/CB, channel selector, and strength meter.



REALISTIC TRC-48 (\$329.95)
 A 23-channel AM/SSB transceiver for mobile, base, and PA operation. Power supply is 12 VDC with negative ground or 117 VAC. Overall dimensions are 2 3/4 x 8-7/8 x 10 1/2 inches. Front panel controls include volume, power, SSB silencer, clarifier, AM/LSB/USB selector, squelch, RF gain, channel selector, and strength meter. Standard accessories are microphone, mobile mounting bracket, DC power cable, AC power cable and all crystals.



REALISTIC TRC-30A NAVAHO (\$159.95)
 A 23-channel AM transceiver for mobile or base operation. Power supply is 12 VDC with positive or negative ground, or 117 VAC. Overall dimensions are 4x11 1/2 x 9 inches. Front panel controls include volume, power, squelch, delta tune, transmit light, channel selector, earphone jack, and strength meter. Standard accessories are microphone, mobile mounting bracket, all crystals, AC and DC power cables.



REALISTIC TRC-55 (\$229.95)
 A 23-channel AM transceiver for mobile, base, PA operations. Power supply is 12 VDC with negative ground or 117 VAC. Overall dimensions are 5x14 3/4 x 9 inches. Front panel controls include volume, squelch, power, fine tuning, RF gain, SWR calibration, PA gain, phone jack, digital clock with alarm, ANL switch, noise blanker switch, SWR meter, strength meter and channel selector. Standard accessories are microphone, mobile mounting bracket, all crystals, AC and DC power cables.

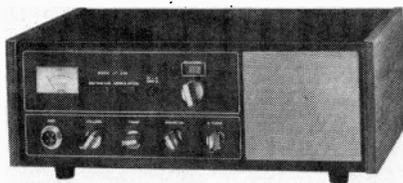


REALISTIC TRC-57 (\$399.95)
 A 23-channel AM/SSB transceiver for mobile, base operation. Power supply is 12 VDC with positive or negative or 117 VAC. Overall dimensions are 3-7/8x15x10 1/2 inches. Front panel controls include volume, power, squelch, clarifier, PA, noise blanker, ANL, calibration switch, SWR calibration switch, RF gain, plug-in phone jack, AM/USB/LSB selector, SWR meter, strength meter, digital clock and channel selector. Standard accessories include microphone, mobile mounting bracket, AC and DC power cable, and all crystals.



WV-23 (\$129.95)

A 23-channel AM transceiver, PA for mobile operation. Power supply 12 VDC. Dimensions are 5½x2x7-1/8 inches. Front panel controls include channel selector, volume, power, squelch, ANL switch, PA/CB, external speaker selector, and strength meter. Standard accessories are microphone, all crystals, mounting bracket, and DC power cables.



ROYCE 1-620 (\$219.95)

A 23-channel AM transceiver for mobile, base and PA operation. This radio offers delta tuning on each channel. Power supply 12 VDC with positive or negative ground and 117 VAC. Overall dimensions are 4½x12½x8½ inches. Front panel controls include volume, squelch, channel selector, power, tone, fine tuning, strength meter, tone switch and noise limiter on/off switch. Standard accessories are microphone, AC and DC power cables and all crystals.



ROYCE 1-605 (\$199.95)

A 23-channel AM transceiver for mobile, PA operation. This unit features delta tuning on each channel. Power supply 12 VDC with positive or negative ground. Overall dimensions are 2-3/8x7½x7¼ inches. Front panel controls include volume, squelch, power, channel selector, tone, delta tune, PA/CB, ANL on/off switch and strength meter. Standard accessories are microphone, mobile mounting brackets, all crystals and DC power cable.



ROYCE 1-610 (price not available)

A 23-channel AM mobile transceiver. Unit features digital readout and Chan-L-Matic remote channel switching from a button on the mike as well as front panel. Power supply 12 VDC. Front panel controls include volume, squelch, power, fine tuning, PA/CB, ANL off/on switch, strength meter, channel selector and bright-dim illuminator light switch. Accessories include Chan-L-Matic microphone, all crystals, mounting bracket and DC power cable.



ROYCE 1-612 (\$189.95)

A 23-channel AM transceiver for mobile, PA operation. Power supply 12 VDC with positive and negative ground. Overall dimensions are 2¼x7x7-1/8 inches. Front panel controls include channel selector, volume, squelch, tone, local/distant switch, PA/CB, ANL on/off switch, strength meter and illuminated transit and receive lights. Standard accessories are microphone, all crystals, DC power cable and mobile mounting bracket.



ROYCE 1-606 (\$249.95)

A 23-channel AM transceiver for mobile, PA operation. This unit features delta tuning on each channel. Power supply 12 VDC with positive or negative ground. Overall dimensions are 2¼x8¼x8¾ inches. Front panel controls include volume, squelch, tone, delta tune, microphone gain, PA/CB, channel selector, noise blanker, local/distant switch power and strength meter. Standard accessories are microphone, mobile mounting bracket, DC power cable and all crystals.



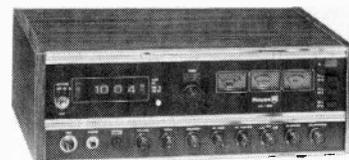
ROYCE 1-624 (price not available)

A 23-channel AM transceiver for base operation. Unit features digital channel readout. Front panel controls include volume, squelch, power, AC/DC switch, RF gain, fine tuner, calibration, ANL on/off switch, PA/CB, high and low tone switch, strength meter, SWR bridge, calibration meter, channel selector. Standard accessories are microphone, all crystals, AC and DC power cables.



ROYCE 1-602 (\$169.95)

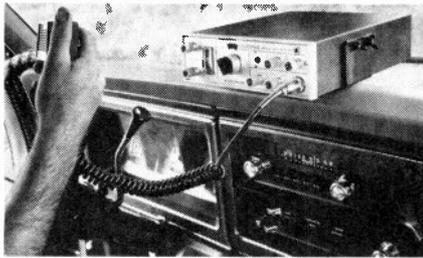
A 23-channel AM transceiver for mobile, PA operation. This unit features delta tuning for each channel. Power supply 12 VDC with positive or negative ground. Overall dimensions are 2½x7x7¾ inches. Front panel controls include volume, squelch, power, channel selector, PA/CB, ANL on/off switch, strength meter, and delta tune. Standard accessories are microphone, all crystals, mobile mounting bracket, and DC power cable.



ROYCE 1-640

A 23-channel AM/SSB transceiver for mobile, base, PA operation. This unit features delta tuning on each channel. Radio also has a built-in digital clock. Power supply 12 VDC with positive or negative ground and 117 VAC. Overall dimensions are 4¾x15x10½ inches. Front panel controls include power, volume, squelch, tone, RF gain, PA volume, AM/USB/LSB selector, clarifier, calibration dial, wake-up alarm, digital clock, channel selector, strength meter, calibration meter, SWR bridge, PA/CB, noise blanker, AGC off, headphone and microphone jacks. Standard accessories are microphone, all crystals, AC and DC power cables.

SILTRONIX



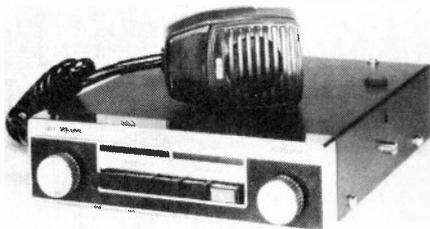
SILTRONIX ALBATROSS (\$359.95)
A 23-channel AM/SSB transceiver for mobile, PA operation. Power supply is 12 VDC. Overall dimensions are 2½x8x11 inches. Front panel controls include volume, squelch, power, noise blanker, fine tune, PA/volume control, RF gain, AM/LSB/USB, channel selector and strength meter. Standard accessories are microphone, mobile mounting brackets, all crystals and DC power cables.



SEB CORTEZ (price not available)
A 23-channel AM transceiver for mobile operation. Power supply 12 VDC with negative ground. Front panel control includes volume, power, squelch, channel selector, CB/PA, noise limiter on/off switch, and strength meter. Standard accessories include microphone, mobile mounting bracket, all crystals and DC power cable.



SBE SIDEBANDER 3 (price not available)
A 23-channel LSB/USB transceiver for mobile operation. Power supply is 12 VDC with negative ground. Front panel controls include volume, squelch, RF gain, clarifier, USB/LSB selector, CB/PA, channel selector, noise blanker, on/off switch and strength meter. Standard accessories include microphone, all crystals, mobile mounting brackets and DC power cable.



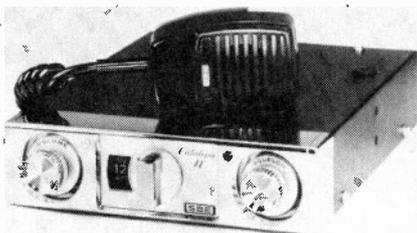
CAPRI 2 (\$89.95)
A five-channel AM transceiver for mobile operation. Power supply 12 VDC with negative ground. Overall dimensions are 1½x6½x7½ inches. Front panel controls include volume, squelch, power, and channel selector. Standard accessories are microphone, channel nine crystals, mobile mounting bracket and DC power cables.



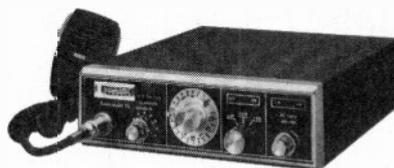
SBE FORMULA D (price not available)
A 23-channel AM transceiver for mobile operation. Each channel features a delta tune. Power supply 12 VDC with negative ground. Overall dimensions 6½x9x2¼ inches. Front panel controls include volume, power, squelch, RF gain, tone, delta, tune, channel selector, distant/local switch, CB/PA, noise limiter on/off switch and strength meter. Standard accessories include microphone, all crystals, mounting bracket and DC power cable.



SBE SIDEBANDER 4 (price not available)
A 23-channel AM/SSB transceiver for mobile operation. Power supply is 12 VDC with negative ground. Front panel control includes volume, power, squelch, RF gain, clarifier, AM/USB/LSB selector, noise limiter on/off switch, PA/CB, channel selector, noise blanker, and strength meter. Standard accessories include microphone, mounting bracket, all crystals, and DC power cable.



SBE CATALINA 2 (\$139.95)
A 23-channel solid-state AM transceiver for mobile operation. Power supply 12 VDC with negative ground. Overall dimensions are 1-5/8x6¼x7¾ inches. Front panel controls include volume, squelch, power, and channel selector. Standard accessories are microphone, mobile mounting bracket, all crystals and DC power cable.



SBE SIDEBANDER 2 (price not available)
A 23-channel AM/SSB transceiver for mobile operation. Power supply 12 VDC with negative ground. Front panel controls include volume, power, squelch, clarifier, AM/USB/LSB switch, RF gain, CB/PA, channel selector, noise blanker and strength meter. Standard accessories include microphone, all crystals, mobile mounting brackets and DC power cable.



SBE TRINIDAD (price not available)
A 23-channel AM transceiver for mobile, base, PA operation. Power supply 12 VDC with positive or negative ground, or 117 VAC. Front panel controls include volume, squelch, power, SWR sensitivity, delta tune, S meter or SWR switch, CB/PA, phone jack, ANL on/off switch, strength, SWR meter and channel selector. Standard accessories include microphone, all crystals, mobile mounting bracket, AC and DC power cables.



SBE TRINIDAD 2 (price not available)
A 23-channel AM transceiver for base, mobile, PA operation. Power supply 12 VDC, with positive or negative ground, or 117 VAC. Front panel controls include volume, squelch, PA/CB, strength meter and channel selector. Standard accessories include microphone, all crystals, AC and DC power cable.



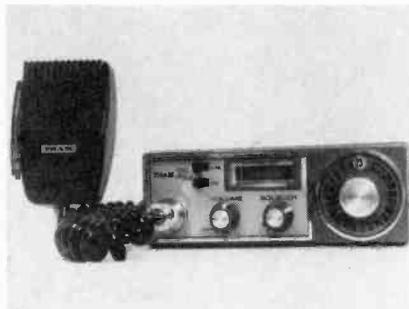
STANDARD COMMUNICATIONS RADIO HORIZON 29 (price not available)
A 23-channel solid-state AM transceiver for mobile operation. Front panel controls include volume, power, squelch, delta tune, RF gain, channel selector, strength meter, noise blanker and ANL limiter. Standard accessories are microphone, all crystals, mobile mounting bracket and DC power cable.



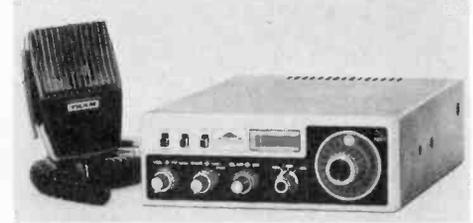
TRAM XL5 (price not available)
A 23-channel AM/SSB for mobile operation. Power supply is 12 VDC with positive and negative ground. Overall dimensions are 7½x2x10 inches. Front panel controls include volume, power, squelch, clarifier, AM/USB/LSB selector, noise blanker PA/CB, channel selector and strength meter. Standard accessories include microphone, mobile mounting brackets, all crystals and DC power cable.



SBE CONSOLE 2 (\$454.95)
A 23-channel AM/SSB transceiver for mobile, base, PA operation. Power supply 12 VDC with negative or 117 VAC. Overall dimensions are 5x12x10¼ inches. Front panel controls include volume, power, squelch, clarifier, RF gain, AM/USB/LSB selector, channel selector PA/CB, noise blanker and S/RF/SWR meter. Standard accessories are microphone, all crystals, AC power cable.



TRAM XL (price not available)
A 23-channel AM transceiver for mobile operation. Power supply is 12 VDC with positive or negative ground. Overall dimensions are 2x5½x6 inches. Front panel controls include volume, power, squelch, PA/CB, ANL on/off switch, channel selector and strength meter. Standard accessories include microphone, mobile mounting brackets, all crystals and DC power cable.



TRAM 60 (price not available)
A 23-channel AM/SSB transceiver for mobile and PA operation. Power supply is by VDC with positive or negative ground. Overall dimensions are 2½x7x10 inches. Front panel controls include volume, squelch, power, RF gain, SWR/mike gain, clarifier, AM/USB/LSB selector, noise blanketer, PA/CB, SWR calibration switch, channel selector and SWR/strength meter. Standard accessories include microphone, all crystals, mobile mounting bracket and DC power cable.



SBE CONSOLE 4 (price not available)
A 23-channel AM/SSB transceiver for mobile, fixed, PA operation. Power supply 12 VDC with positive or negative ground, or 117 VAC. Front panel controls include volume, power, squelch, RF gain, AM/USB/LSB selector, clarifier, internal/external speaker selector, VOX on/off switch, CB/PA, noise limiter on/off switch, RF/S/SWR switch, SWR meter, strength meter, channel selector, and CAL/REV switch. Standard accessories are microphone, all crystals and AC power cable.



TRAM 40 (price not available)
A 23-channel AM transceiver for mobile operation. Power supply is 12 VDC positive or negative ground. Overall dimensions are 2½x7x8 inches. Front panel controls include volume, power, squelch, PA/CB, noise blanketer switch, SWR/CAL, SWR and mike gain, delta tune, channel selector and SWA strength meter. Standard accessories include microphone, mobile mounting brackets, all crystals and DC power cable.



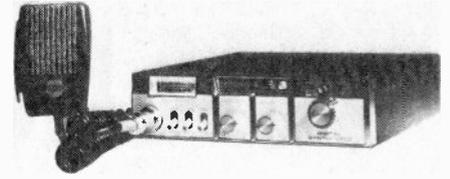
TRAM D 201 (price not available)
A 23-channel AM/SSB transceiver for base and PA operation. Power supply is by 177 VAC only. Overall dimensions are 21½x7½x13 inches. Front panel controls include volume, power, squelch, AM/LSB/USB selector, RF gain, VOX Sens/VOX delay adjustment, SWR calibration switch, manual tuning knob, noise limiter switch, microphone gain, SWR/ CAL/SWR/SPWR, crystal selector, clarifier, crystal/manual switch, strength meter, modulation meter and SWR meter.



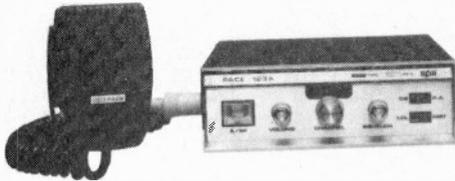
VEXILAR INC. 336 (\$129.00)
 A 23-channel AM transceiver for mobile operation. Power supply is 12 VDC negative ground. Overall dimensions are 1-3/8x4 1/2x5 3/4 inches. Front panel controls include volume, squelch, automatic noise blanker and channel selector. Standard accessories are microphone, all crystals, two mobile mounting brackets and DC power cable.



PACE CB 162 (\$179.95)
 A 23-channel AM transceiver for base, mobile operation. Power supply is 117 VAC or 12 VDC with positive or negative ground. Front panel controls include power, volume, squelch, PA/CB, ANL on/off switch, channel selector, transmit and receive indicator lights, channel selector and strength meter. Standard accessories include microphone, all crystals, AC and DC power cables.



PACE CB 166 (\$209.95)
 A 23-channel AM transceiver for mobile, PA operation. Power supply is 12 VDC with positive or negative ground. Overall dimensions are 7x2x9 inches. Front panel controls include power, volume, squelch, ANL on/off switch, PA/CB, noise blanker on/off control, channel selector, and strength meter. Standard accessories include, microphone, one crystal (which provides 23 channel capabilities), mobile mounting bracket, and DC power cables.



PACE 123A (\$164.95)
 A 23-channel AM transceiver for mobile operation. Power supply 12 VDC positive or negative ground. Overall dimensions are 2x6x7 inches. Front panel controls include volume, power, squelch, local/distant switch, PA/CB channel selector, and strength meter. Standard accessories include microphone, all crystals, mobile mounting brackets and DC power cables.



PACE CB 145 (\$199.95)
 A 23-channel AM transceiver for mobile, PA operation. This unit also features two channels for checking on latest weather conditions. Power supply is 12 VDC with positive or negative ground. Front panel controls include power, volume, squelch, delta tune, RF gain control, noise blanker on/off switch, CB/weather one weather two mode selector, strength meter, and channel selector. Standard accessories include microphone, all crystals, mobile mounting bracket, and DC power cables.



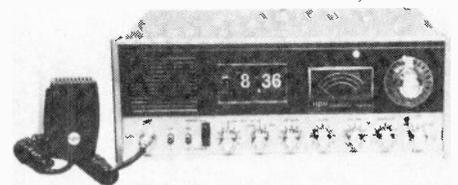
PACE 2700B (\$379.95)
 A 23-channel AM/SSB transceiver for base operation. Power supply is 117 VAC. Front panel controls include power, volume, squelch, tone, RF gain, fine tune control, mode selector, ANL on/off control, noise blanker switch, channel selector, and strength meter. Standard accessories include microphone, all crystals and DC power cables.



PACE 2376B (\$179.95)
 A 23-channel AM transceiver for mobile, PA operation. Power supply is 12 VDC with positive or negative ground. Overall dimensions are 2 1/2x6 1/2x8 inches. Front panel controls include power, volume, squelch, local/distant switch, channel selector, and strength meter. Standard accessories include microphone, all crystals, mobile mounting brackets and DC power cables.

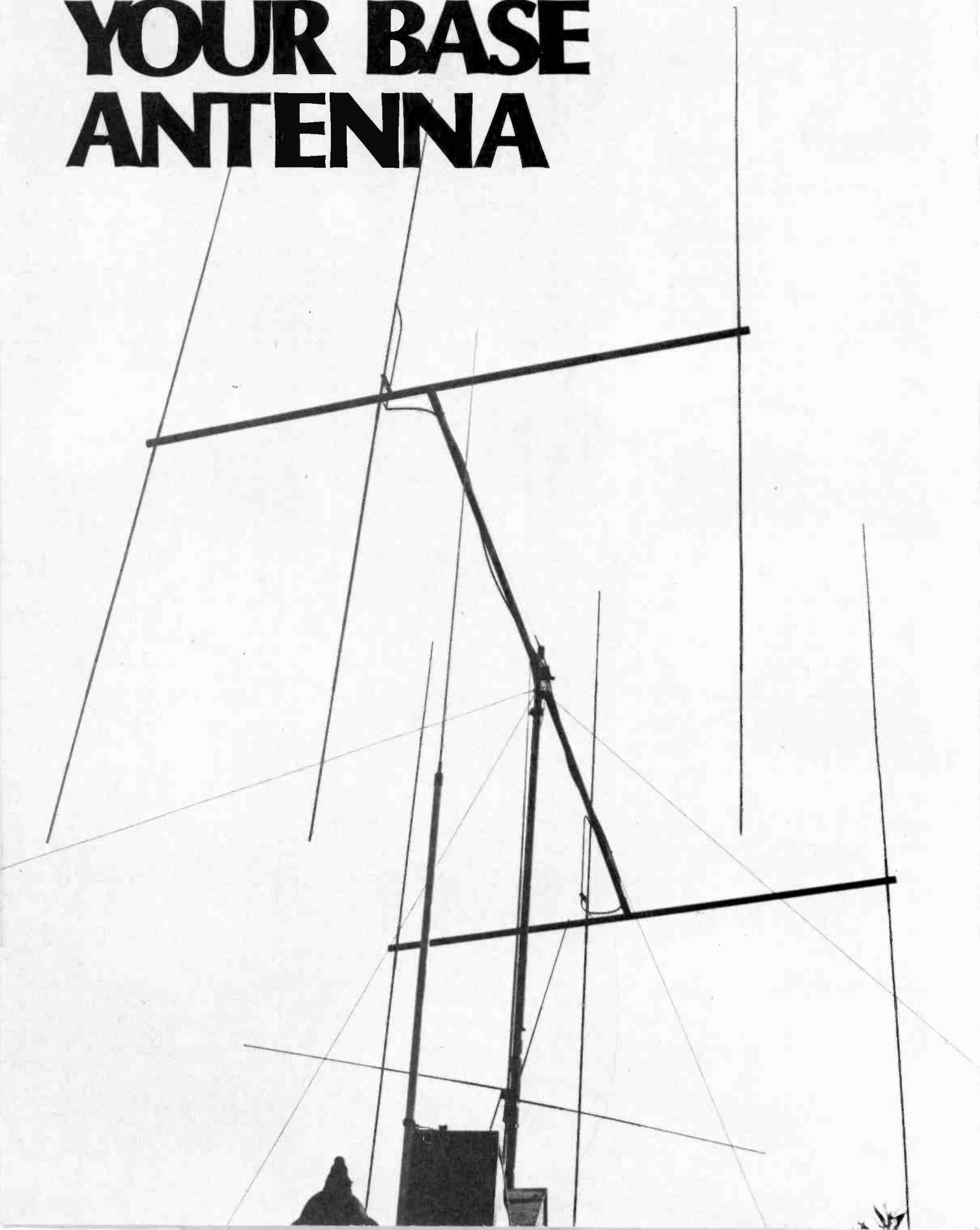


PACE CB 113 (\$209.95)
 A 23-channel AM transceiver for base, PA operation. Power supply is 117 VAC. Overall dimensions are 3x9 1/2x8 1/2 inches. Front panel controls include power, volume, squelch, CB/PA, local/distant switch, channel selector, switch, channel selector, and strength meter. Standard accessories include microphone, all crystals, AC power cables.



PACE 1000B (\$469.95)
 A 23-channel AM/SSB transceiver for base, PA operation. Power supply is 117 VAC. Overall dimensions are 11x5x14 inches. Front panel controls include power, volume, squelch, CB/PA, RF gain, clarifier, AM/USB/LSB mode selector, SWR calibration switch, digital clock with alarm, strength meter, and channel selector. Standard accessories include microphone, all crystals, and AC power cables.

YOUR BASE ANTENNA



Knowing the Facts About Them Can Be the Key to Getting Your Messages Out!

Antennas are a vital part of any CB radio setup. Some form of antenna, no matter how simple or complex, is required to effectively transmit and receive the radio's signals. How efficiently your radio does this depends greatly on the performance of the antenna system you choose.

In the early days of CB radio, antennas were generally crude and inefficient. Back then, it was not too uncommon to find someone using an old metal clothesline, chain link fence, or even a screen door to transmit and receive. While these crude antennas did permit some form of communication, even the peak of their performance left much to be desired.

Because these backyard wonders didn't use the transmitted power to its fullest capacity, great amounts of extra power had to be added in order to achieve any satisfactory communication range.

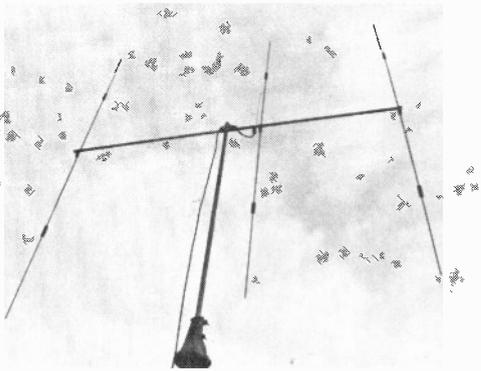
So the world of CB radio developed over the years, and it was discovered that by using a better design for the antenna system, the communicating range could be greatly increased without having to

boost the transmitting power. These overall design improvements have resulted in even greater efficiency whereby they now permit CB radio communications over a surprisingly long distance, using only a fraction of the power previously required.

THINK BEFORE YOU BUY

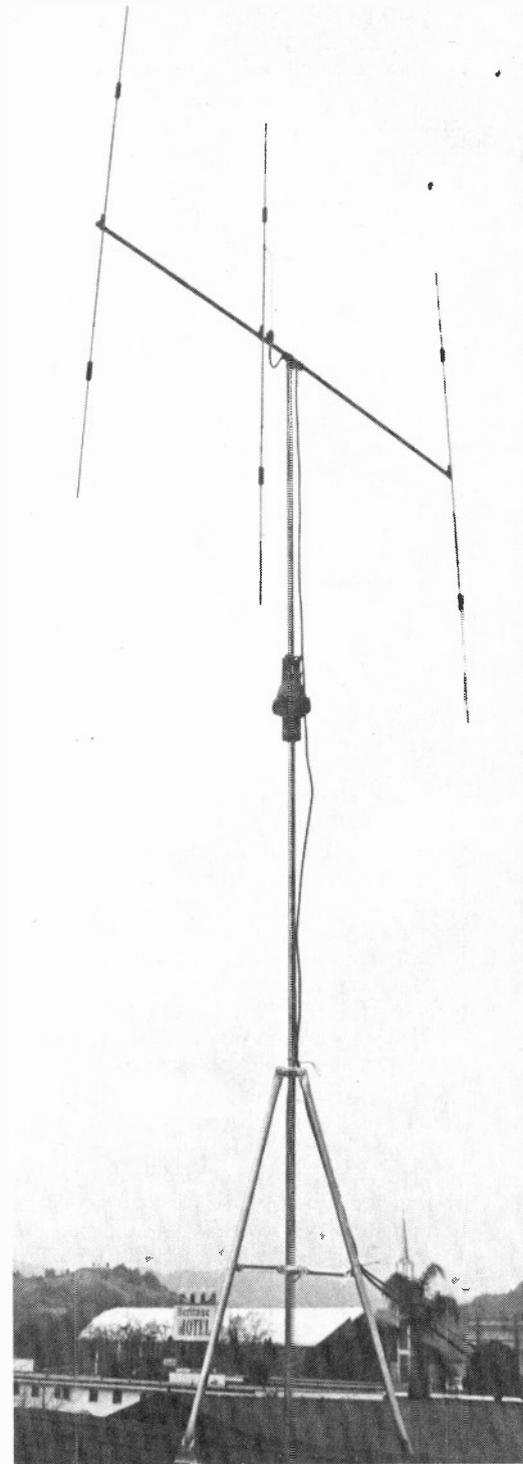
For the most efficient use of your antenna, all parts that make up the system must be considered. This includes the coaxial cable, loading, matching and coupling devices. The inability of any one of these factors can have great adverse effects on your antenna's performance. In selecting a base antenna, be sure to keep in mind that it will be continually at the mercy of rain, ice, wind, and snow. Odds are that your antenna, once installed, will probably be in a difficult position to service. Crawling up on the roof a couple of times a day to

Choosing the right antenna can have a lot to do with your transmission and reception. These three stacked-element beams make a fine base station system.



This three-element beam antenna can be directionally controlled by the use of a rotor. This way the CB'er has a 360-degree capability.

A rotor is a small electric motor mounted halfway up the antenna's mast, allowing it to revolve the unidirectional type of antenna to home in on radio signals.



The beams, rotor, mast and mounting base all help contribute to a good base setup.

fix and fiddle will wear anyone out.

For this reason, you will probably find it more economical (and less tiring) to spend a few extra dollars for a ruggedly constructed antenna. These "super sale" antennas may not be built to the same specifications as a slightly more expensive model and may require replacement either in whole or part, soon after purchase.

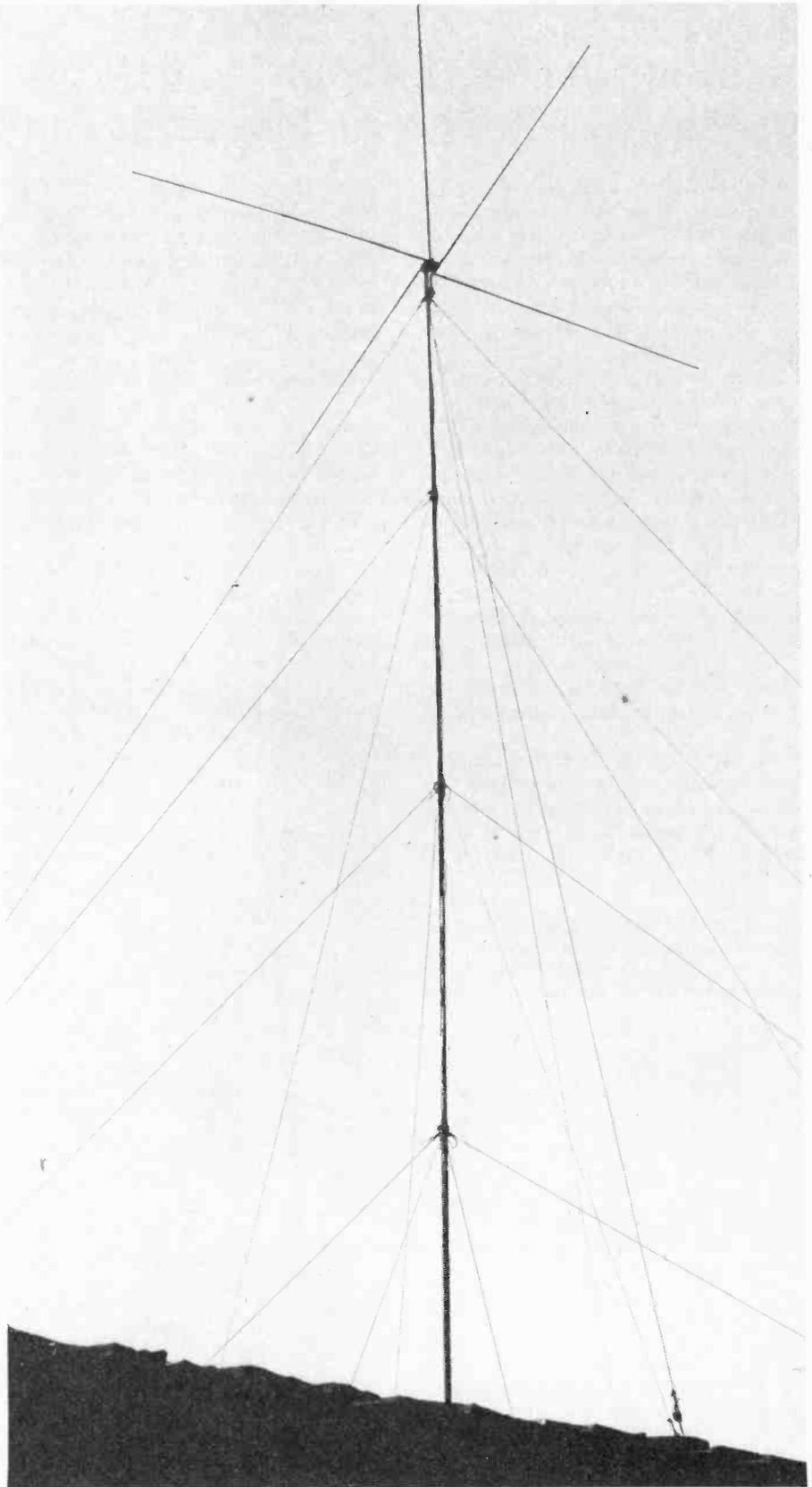
Some of the cheaper antennas can be used in certain sections of the country. For instance, a base antenna mounted to a rooftop would probably last twice as long in warmer climates such as Southern California, than the identical unit that had to withstand the punishing weather of the East. Even still, it's better to spring the few extra bucks to get a unit that really lasts.

Most base station antennas consist of several elements mounted at great heights. The weight of your antenna system must also be kept at a minimum . . . but not at the expense of strength. Most antenna elements are usually made from hollow aluminum tubing. This tubing is light in weight, yet durable and sturdy enough to withstand high winds, a plus factor if you're living on the Great Plains or other areas where Mother Nature is trying to take the roof off your house by blowing at it.

It might also pay to look around your neighborhood at the various CB antennas in use. Most CB antennas are easily recognizable by their shape or number of elements. Make mental notes as to which antennas are withstanding the weather conditions in your community. If a friend down the road has an antenna that is falling apart, you might want to find out why or avoid that brand completely.

If just observations don't tell you anything, don't be afraid to do some doorbell ringing. If a fellow CB'er has the type of antenna mounted on his house that you feel might be of value to you, by all means talk to the fellow and find out his views on the unit. Most CB'ers, by nature, like to talk to other human beings, and whether it be through a microphone or a screen door, most can be very helpful when you're seeking advice.

Regardless of what brand or type of antenna you decide upon, correctly mounting your system is of big importance. By correctly installing your antenna, you will increase your range. CB radio waves travel the line-of-sight method, and do not follow the curvature of the earth. A CB radio wave can work around some obstructions, such as tall buildings and trees, but remember that these obstructions tend to cut down on the available distance that the signals travels. For this reason you should attempt to mount your antenna system as high as is legally permissible. You don't



A typical four-radial-element ground plane antenna. This type radiates power in all directions.

want to put it in the basement, and on the other hand, Boeing 747s shouldn't be altering your antenna's shape either. When mounted as high as the local laws allow, your radio signal will travel a further distance before being soaked up or blocked by obstructions.

OMNI-DIRECTIONAL ANTENNAS

Non directional, omni-directional, and ground plane antennas are all one and the same. This is the most popular type used by CB'ers. It is easily installed and relatively inexpensive as compared to beam antennas.

A ground plane antenna is the type most frequently used by base and mobile stations when communications are desired in all directions at the same time. This type of antenna works basically on a vertical principal. The radio signal travels from the radio, through the coax and exits or radiates out the long vertical part of the antenna, in all directions at the same time. Since these signals travel basically straight up, they in turn need something to help catch the waves when they start back down the antenna, and cast them out horizontally.

The part of the antenna that fulfills that need is called the radial element. These elements are usually the lower protruding rods that appear on the antenna. Most commonly you will see three or four such radial arms on a good quality ground plane antenna.



Keeping such factors as maximum legal height in mind will also help your radio's use and performance.

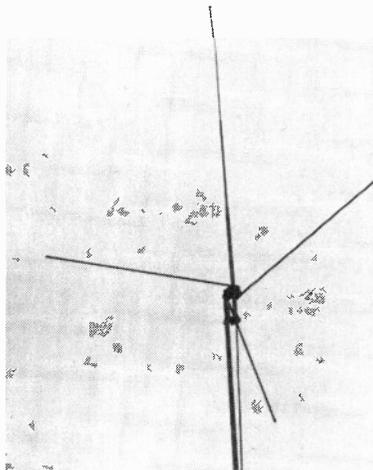
With your radio waves radiating in all directions at once, you cannot control or channel this power in any one direction. If your ground plane is properly mounted, you can expect the reasonable communication distance to be somewhere between 12 and 15 miles. In plainer words, a well-designed omni-directional antenna has the effect of increasing your power output by 50 percent.

BEAM ANTENNAS

The beam gain or uni-directional antennas are also very popular for the more avid CB'er. They require a little more complicated installation and in turn the cost is higher. But if distance is what you want, then you really won't mind spending the few extra dollars for what you get.

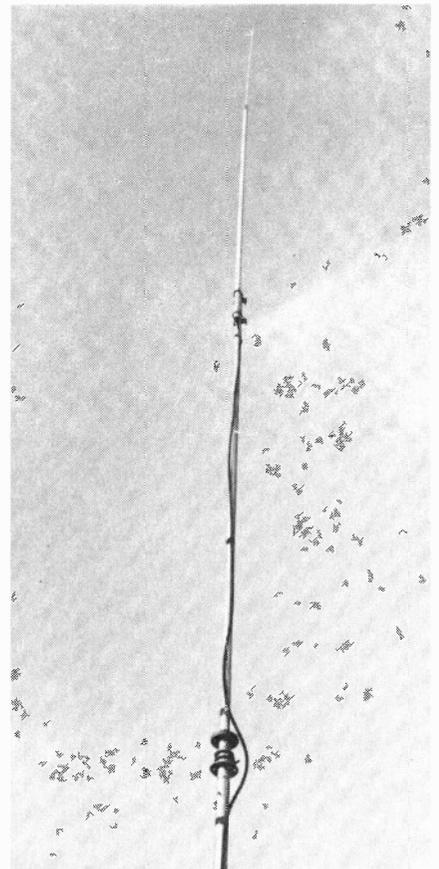
The beam antenna is capable of concentrating the radio energy in one direction, in such a way that it will appear as a much stronger signal than the actual signal producing it. By using a beam it is possible to make three watts from the transceiver look like 30 watts when it leaves the antenna. The reason is that the beam is basically just that, a beam of radio signals. It concentrates all the radio energy in one direction. This compares to a ground plane antenna, which in order to be effective, releases its radio energy in all directions.

Keep in mind that a beam does not actually increase or put out any more than legal power. What it does is merely make the most efficient use of the power that is produced. The best parallel that can be drawn is comparing it to an ordinary lawn sprinkler versus a high-pressure nozzle. The lawn sprinkler distributes water equally in all directions, but using a high-pressure nozzle enables you to reach out to a much greater distance, while at the same time, you're using the identical pressure that the sprinkler required.



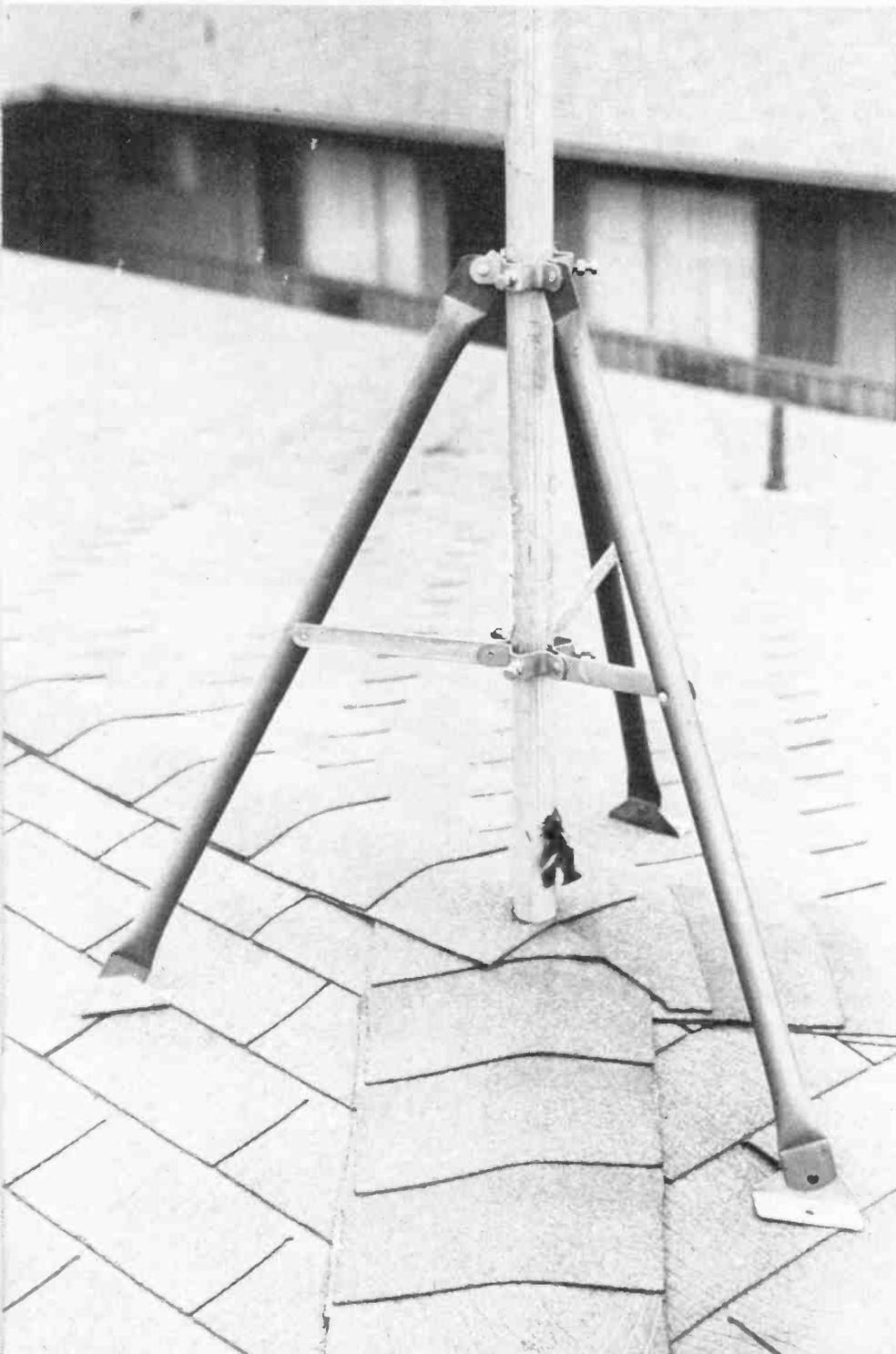
This uni-directional antenna system is the best used from base operations requiring point-to-point communications. The only way to make a beam antenna operate in a direction other than the way it's facing is to rotate it. This is accomplished by the use of a rotor. A rotor is basically a small electric motor mounted halfway up the mast of the beam antenna. By turning the control switch, the CB'er can position his beams in just about any direction of his choice.

The second advantage beam antennas have over ground planes is in the field of reception. Not only is reception greatly increased, but it can also be controlled. Remember that beams only transmit and receive in one direction or distance of approximately 90 degrees out of 360 degrees. Therefore, if an interfering conversation is taking place, the CB'er merely turns the beams around and can then no longer receive the conversation that is taking place behind him. Also, he is not interfering with that conversation. By turning the antenna system he is now transmitting in a different direction. ●



The "Big-Stick" is also a popular omni-directional antenna. Mounting it on a push-up rod will help increase its efficiency.

This omni-directional antenna is equipped with three radial elements. Properly mounted, it will increase performance by 50 percent.



Choose the highest, most unobstructed location for mounting a base antenna. A tripod mount provides a strong support for a tall antenna.



Make sure you securely mount that antenna base to the roof. Black tar over the screws will prevent water leakage into your home.

Tips and Helpful Info for Doing the Job Right

The antenna you are planning to mount is one of the crucial links in your radio's performance. For most novice CB'ers, the antenna at first glance looks like a box of rods, screws, bolts, and clamps. You will invest a considerable amount of time for your antenna installation if you are to do it right. Much of your base station's performance depends on how accurately it's put together, located, and installed.

Like any semi-complicated task, your best bet on a place to start is by reading the instructions. Be sure that all the instructions have been read completely before you haphazardly start bolting and screwing pieces together. Be sure to identify all parts that you don't recognize. The diagrams that are included with the instructions generally show each part and a number. If you need to, write down identification numbers on the rods and clamps. This will be of help in guaranteeing that all the parts needed for assembly are there, and that every piece fits properly.

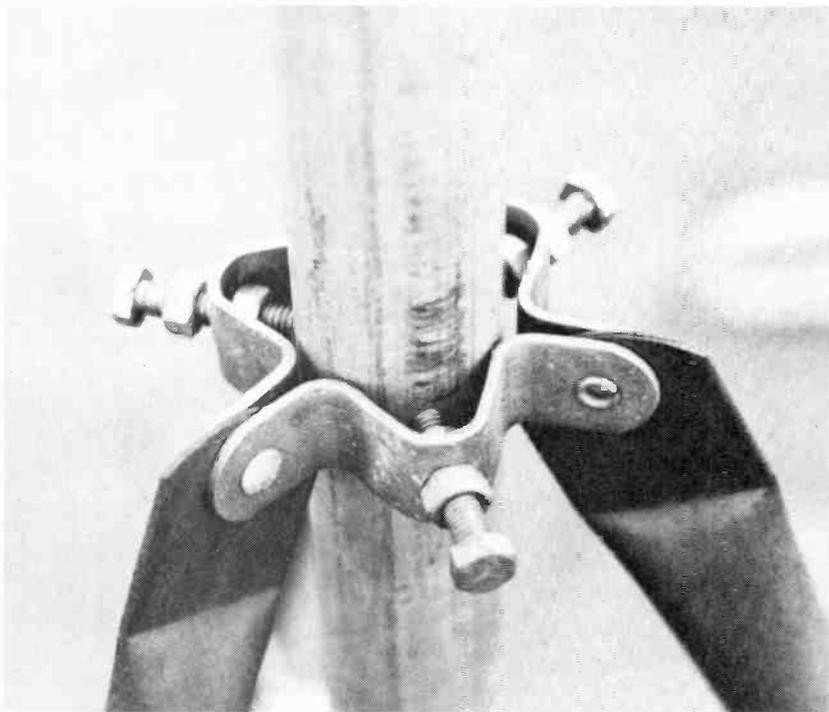
CHOOSING THE LOCATION

Since most beginner CB'ers are going to mount the antenna from the roof, as compared to a homemade tower, it is best to point out that choosing a rooftop location is of key importance.

After your antenna is fully assembled, leave it laying on the ground and avoid the temptation to mount it on the first spot that looks good to you. To get the most out of your antenna, you should give careful thought to its location. To

MOUNTING a BASE ANTENNA

By Andy Lightbody



This tri-bolted base offers much greater support and strength than a base with one or two bolts.

The antenna can even be mounted to a roof pipe. If done correctly, there is no need to further ground your antenna system.

change your mind about the antenna's position after it's up is usually too late.

A few factors to keep in mind are that you should mount your antenna from the highest point of your rooftop. If you have an A-frame structure, then the antenna should be mounted from the pinnacle. If you have a flat-roofed structure, the best location is directly in the center of the roof. This is a better location than one nearer the edge because your flat-roof area will better help serve as a reflective plane for your antenna system.

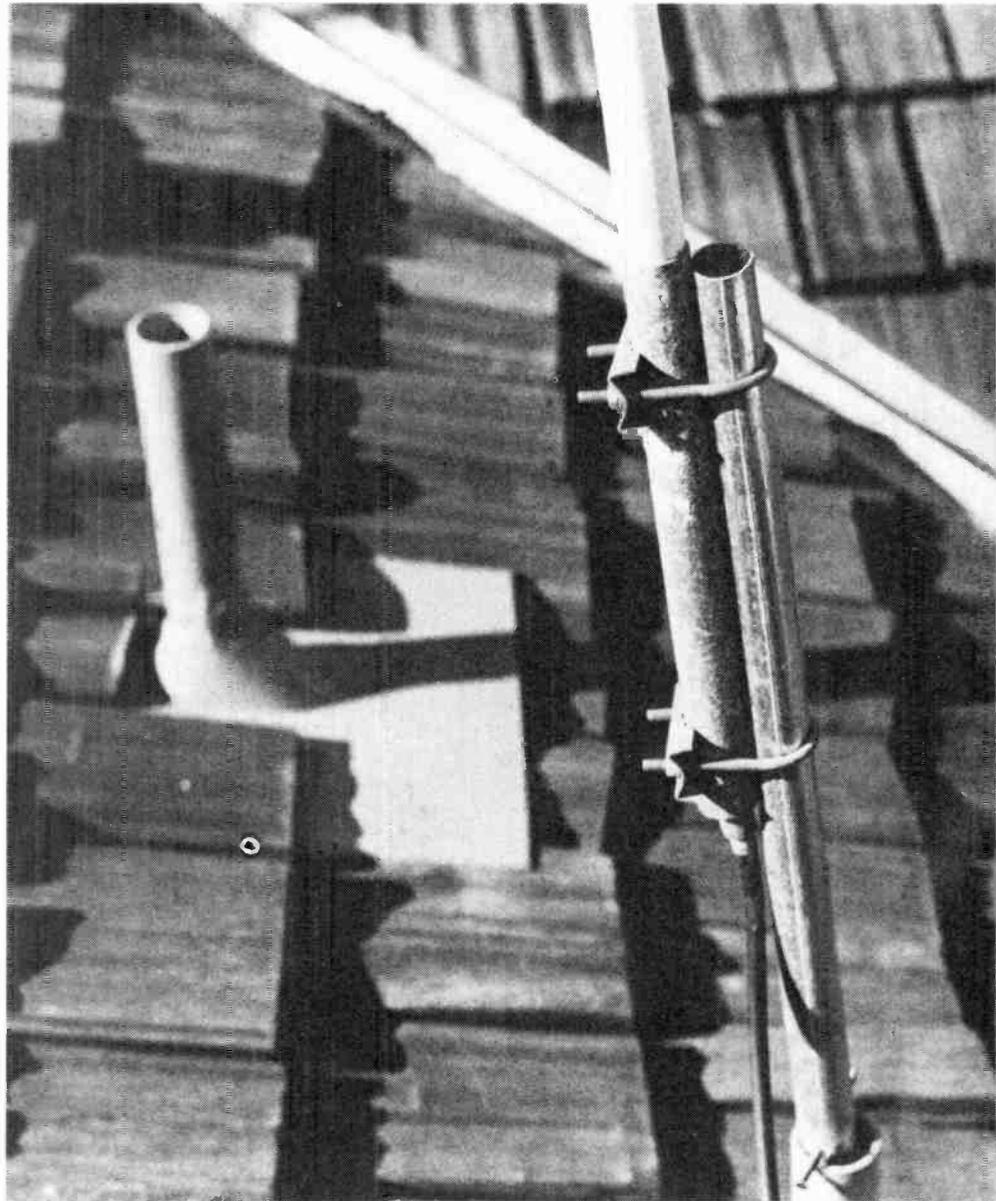
The antenna should be mounted in a location away from existing TV antennas, overhanging trees and high wires if at all possible. All three of these obstructions will cause your CB antenna some type of interference.

PICKING THE ROOF MOUNTS

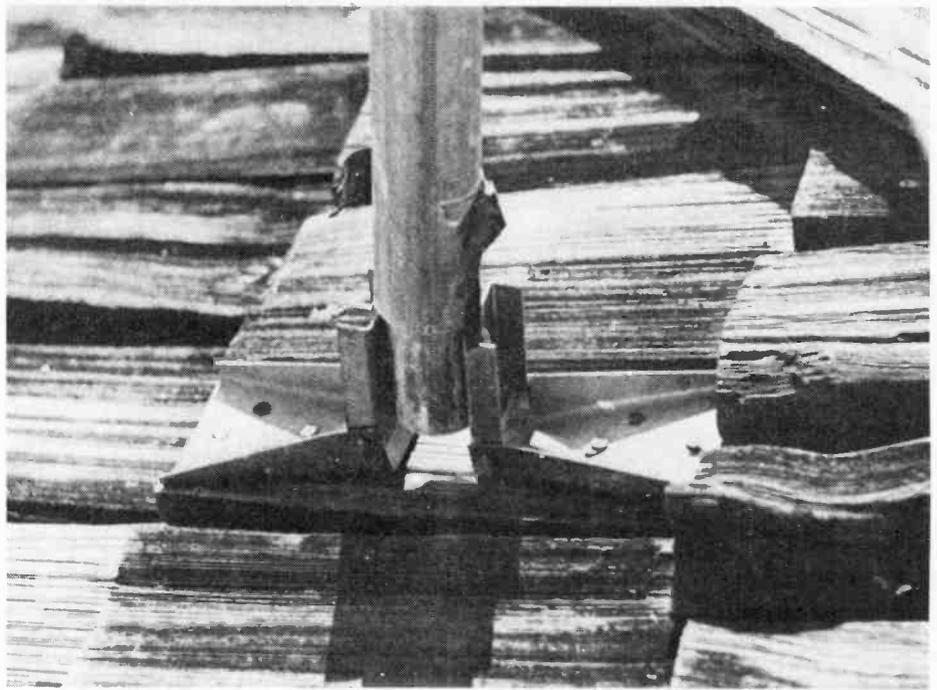
One of the nice things about mounting a base antenna is that there is a mounting apparatus made for almost any conceivable way of attaching your antenna to your home. There are pinnacle braces, chimney mounts, pipe attachments, self-supporting mounts, rain gutter brackets, tripods, etc. The list is almost endless. You should decide how you want to install your antenna; there is probably a clamp, bracket, or mount that is designed with you in mind. For most rooftop installations, the mount that offers the most support is the tripod. This three-legged contraption bolts securely to the roof and offers one of the strongest supports for high wind areas.

HEIGHT LIMITATIONS

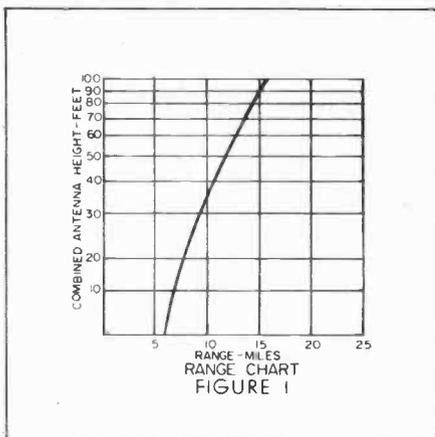
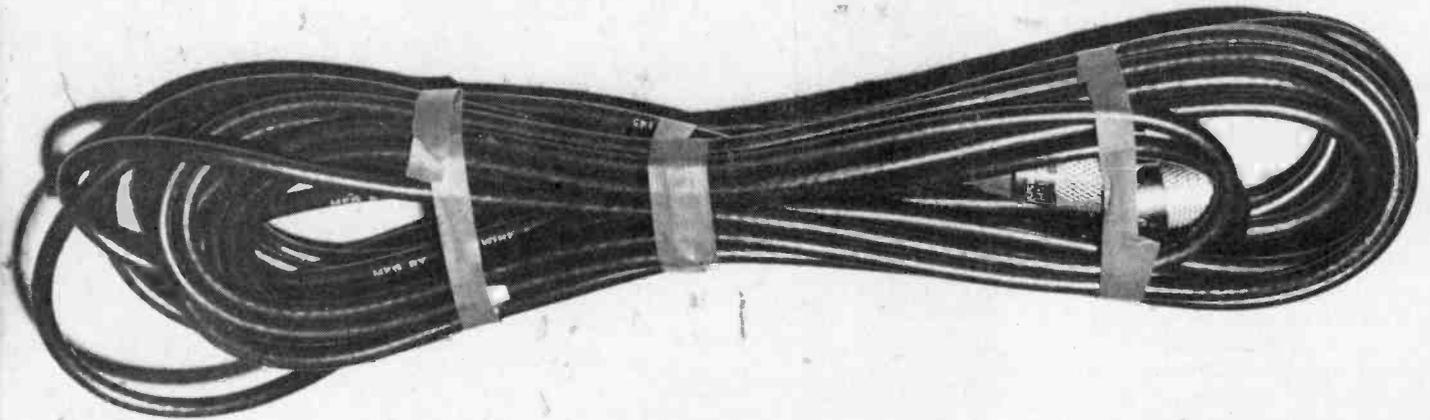
It wasn't until September of 1973 that the FCC finally made some modifications to the rules and regulations regarding antenna height. Originally, the top of the antenna could not exceed 20 feet above the supporting structure. If you happened to live in a 150- or 200-foot



This type of mounting bracket can be used for either flat or A-frame structures. The flaps are mounted and movable to a number of different positions.



Despite what many say, you will have less radiated power loss if you use RG-8/U for all base antenna installations.



To use this chart, simply add the length of your antenna to the length of the person's antenna you are conversing with. The combined total can then be used to tell the average distance you might expect to talk.

building, then this ruling was to your advantage. But for the majority of CB'ers who don't live in these super structures, the 20-foot limitation presented serious problems, especially if you lived in a one-story dwelling surrounded by tall trees.

To help out the average CB'er, the FCC changed the rules; now an operator has a little more choice in the way he wishes to mount his antenna. If you are planning on using an omni-directional or ground plane antenna, you can mount it from your roof, but it cannot exceed 20 feet above the highest permanent fixture. Or you can mount it on a self-supporting tower as high as 60 feet. What this does is triple the previous limitations for ground plane type antennas.

For the CB'er who chooses the beam type antenna, the picture is not quite as optimistic. Since a beam antenna produces more power performance, the FCC has limited them to the 20-foot mark whether mounted from the rooftop or a self-supporting tower. CB radios are

designed for short-distance communications, and a beam antenna mounted to a 60-foot level would be inviting long-distance contacts. As the rules are now, communication over a distance of 150 miles is strictly forbidden.

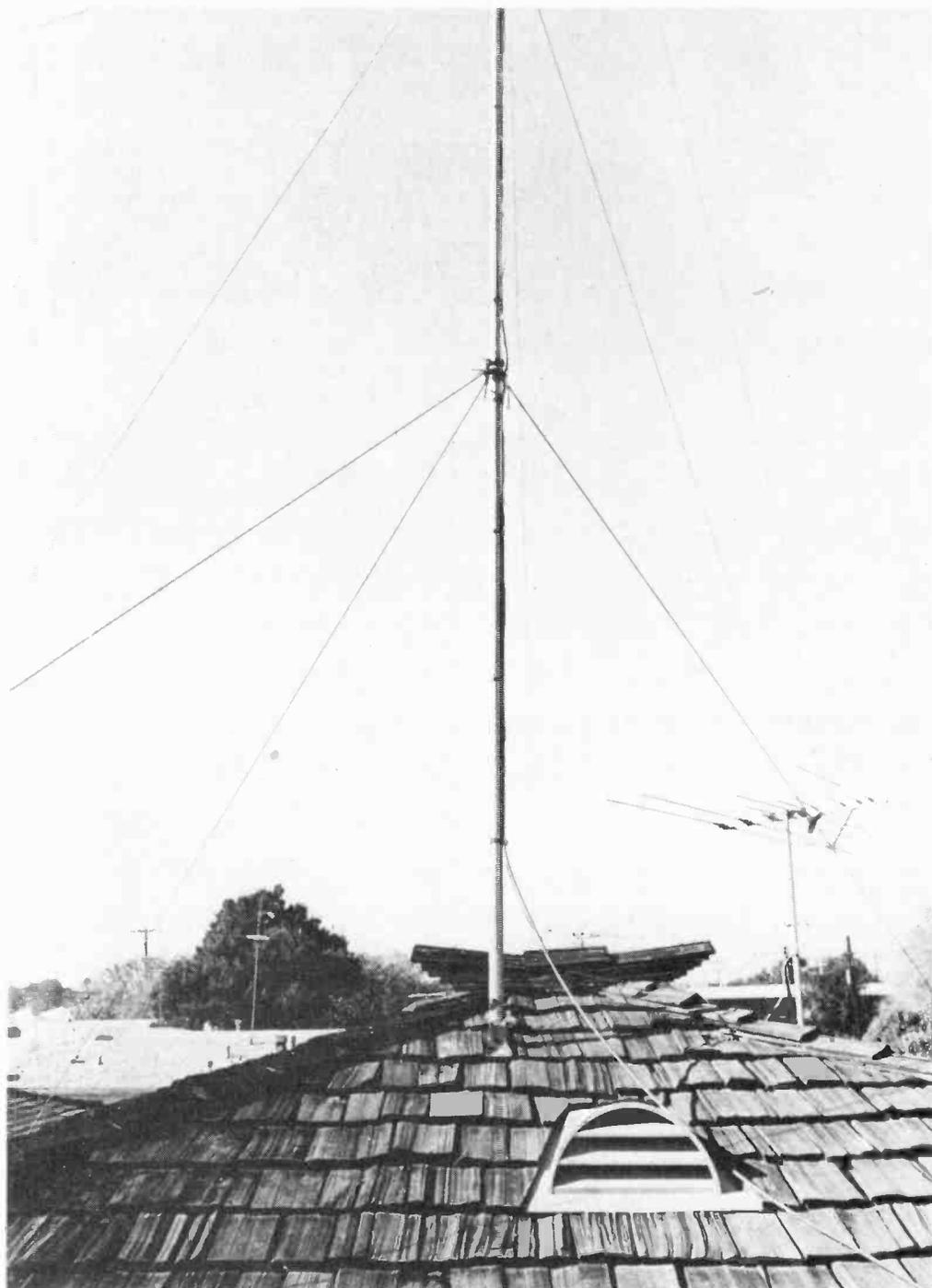
WHAT TO EXPECT

With power and antenna limitations being what they are, it is conceivable to communicate at times over distances much greater than 150 miles. However, for all practical purposes, you should consider about a 12-mile effective range from base to mobile. In open country you can at least double that and possibly triple it with ideal situations.

CONNECTING MAST, GUY LINE, AND COAX

Now that your antenna is assembled, you've chosen your location, and are aware of the height restrictions, you are ready to attach the mast and guy wires.

First, be sure to securely mount whatever bracket or brace you have decided



Be sure to properly guy line your antenna. Four guy lines should be run at 90-degree angles every three feet up the mast.

upon. When you consider how hard a wind can blow, it may be a little comforting to know that you mounted the bracket securely, especially when you see your antenna swaying to and fro. If you use a mount that requires you to drill holes or place screws in the rooftop, be sure and smear black tar over the screw heads. If you don't, you're liable to end up with an attic full of water when the rains come.

Next, bolt your antenna to the mast or push-up rod you have selected. Once the antenna and mast are secured, attach

your guy wires. It is best to run three or four guy wires every three feet up the mast. Again, when those winds blow, you need not worry quite so much if a few of them snap. There are currently several brands and tested strengths of guy wire suitable for a CB antenna installation. However, more and more CB'ers are switching to polypropylene rope instead of wire. The reasons are many and varied.

The polypropylene rope has a longer life than wire, deteriorates less than wire and doesn't rust; it's stronger than wire and also stretches more under extreme pull and tension. The polypropylene rope is also helpful in eliminating TVI (television interference) that can be caused by a CB radio. The guy wires radiate some

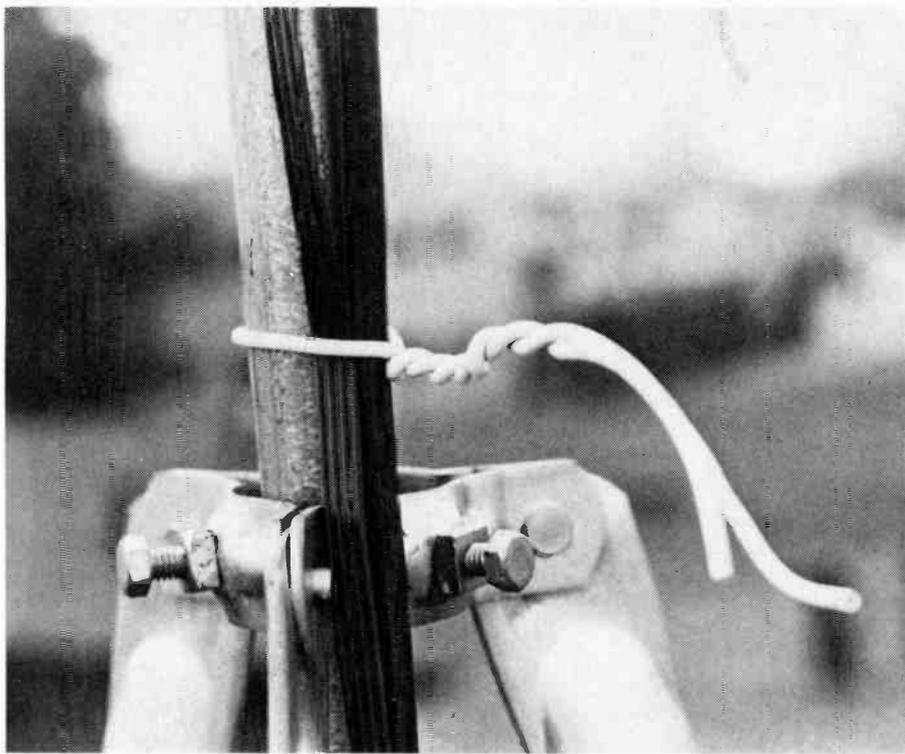
Be sure and black-tape your coax to the mast every three feet up the entire length of the mast. This will keep the wind from tearing your coax loose.

of the CB radio's signal and this in turn causes television interference. The rope will not radiate this "second harmonic," as it's called, and should help cut down on this problem.

COAX

Securely attach your coax cable to the base of the antenna. Use rust-resistant coating or a good grade of vinyl, black tape or sealant on this connection. This will prevent any moisture from leaking in and down your coaxial line. If moisture leaks in under the vinyl outer shell of the coax, you will have to replace it. Water



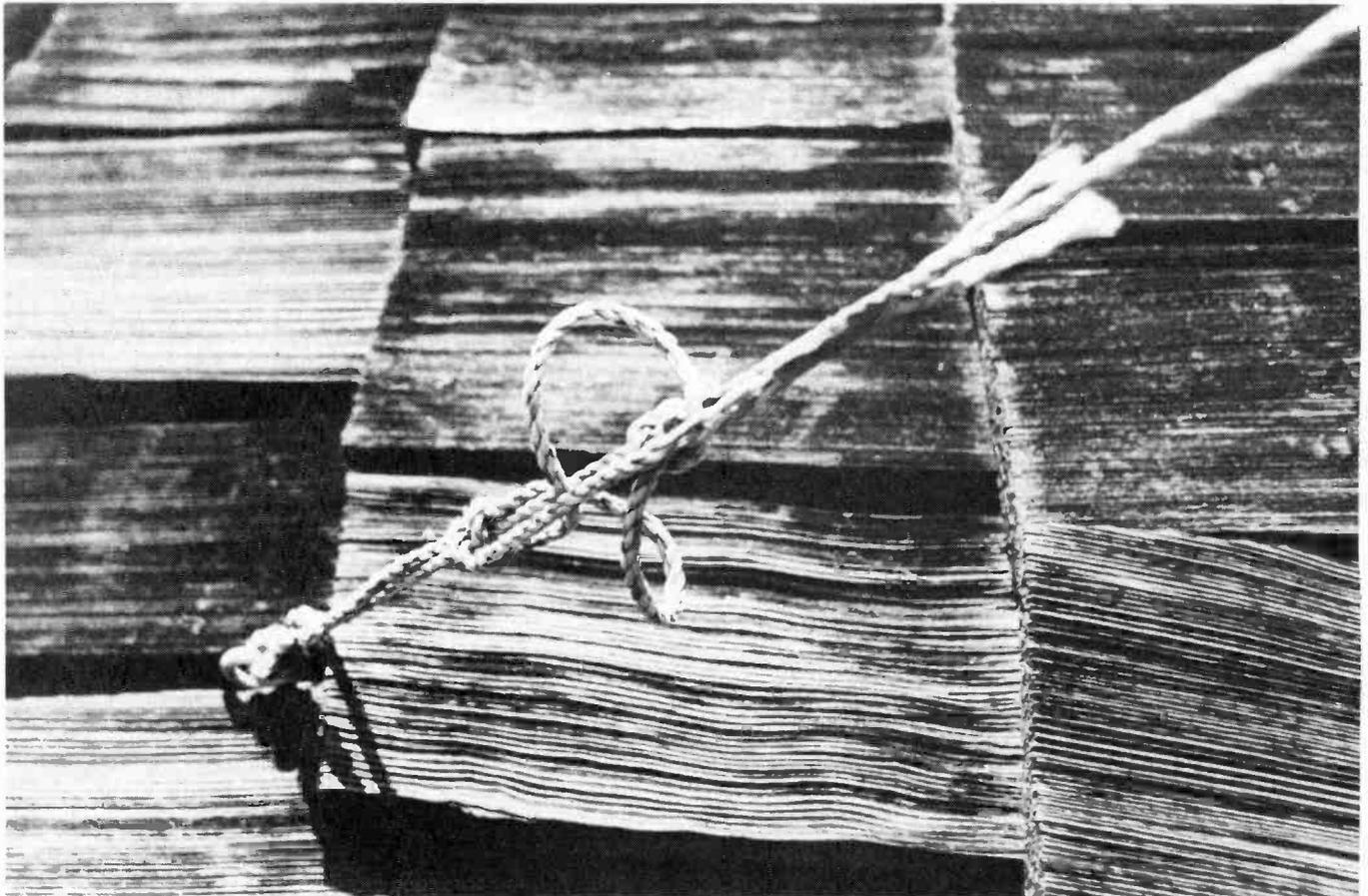


Once the coax is connected to the antenna, it is suggested that you wire it close to the base or supporting structure.

too much for a one-man job. Two people or more should be included. Many a CB'er has discovered too late how awkward it is to try hoisting an antenna alone.

SECURING, TYING, FASTENING OF GUY LINES AND GROUNDING

Now that your antenna is up, don't let go of it until you have securely bolted it into the roof bracket. If you do, it may fall and not only damage the antenna, but tear out the roof bracket and a portion of your roof! Make sure the mounting mast is slid down inside the bracket as far as it will go, preferably until it is touching the roof. Secure the bolts from the bracket to the mast. It is suggested that you still hold the antenna until at least 50 percent of the guy lines are connected. The guy lines should be pulled taut and have very little slack. Don't tie guy lines off the pipes. Tie them off using the fasteners that screw into the



Try using polypropylene rope instead of wire for guying. It will be stronger, have more give, and help eliminate TVI.

will corrode the braided shield and destroy the effectiveness of the coax within a few months. Moisture in the line will also greatly increase the loss of radiate power throughout the cable.

HOISTING YOUR ANTENNA

Before you hoist your antenna, it is suggested that you solicit some assistance. Most antennas and masts are really

roof. Again, black tar the areas to avoid leakage.

All antennas should be grounded somehow. Proper grounding of your antenna can be accomplished in several ways. First, if you use a roof pipe or rain gutter as your mounting base, chances are your antenna is already grounded. However, if you use a tripod, self-



Make sure your antenna is properly grounded to a roof pipe or a buried rod alongside of your home. In case of lightning, you'll be glad you did!

supporting bracket or a chimney mount, you need a better ground than that supplied by the bracket. The best way to ground your antenna is by connecting a 14-gauge copper wire to the mounting bracket or mast. Run this wire to a cold water pipe or to a grounding rod driven at least six feet deep into moist dirt. Put the ground rod as near to your base transceiver as possible, to keep the ground wire short and direct.

There are several good reasons behind

properly grounding your antenna; some are for safety and others are for performance. In terms of safety, the antenna should be grounded in case of lightning. As everyone knows, lightning has a tendency to strike the tallest object. Because of this, a CB antenna is a prime candidate for getting zapped. Let's face it, it would be better to have your antenna blown apart than it would for the current to travel through it and end up coming out your radio, especially if you happen to be working the set at

If your antenna is properly installed, you'll have all the talking power you need without adding a linear amplifier.

the time!

Proper grounding can also help your radio and antenna's performance. A good ground will help eliminate some of the radiated TVI and also help cut annoying reception static.

RUNNING THE COAX AND MATCHING THE SET

One of the cardinal rules for a base antenna installation lies in running your coax. Although the lighter coax RG-58/U may be used for distances under 50 feet, it is suggested that you use the heavier RG-8/U coax for all base operations. The RG-8/U is a more weather-durable and better-insulated coaxial cable.

Whatever type of coax you use, avoid excessive bending or crimping. Avoid smashing the coax in any way, such as clamping it under a window jamb. Another helpful tip relates to any holes you may drill through the house when you run the coax. For any hole drilled in the house's framework, be sure you aim the drill hole downward towards the outside. This way you won't have to worry about water leaking in.

For most base antennas you need not match the coax as you would a mobile antenna. If properly assembled, your match should be done close enough that you don't need to add or subtract coax cable to make it work at its peak output. A few models still provide fine tuning devices on the antenna and if these adjustments are necessary for operation, be sure to follow the step-by-step instructions. ●





PRODUCT EVALUATION of The E.F. Johnson Viking 352

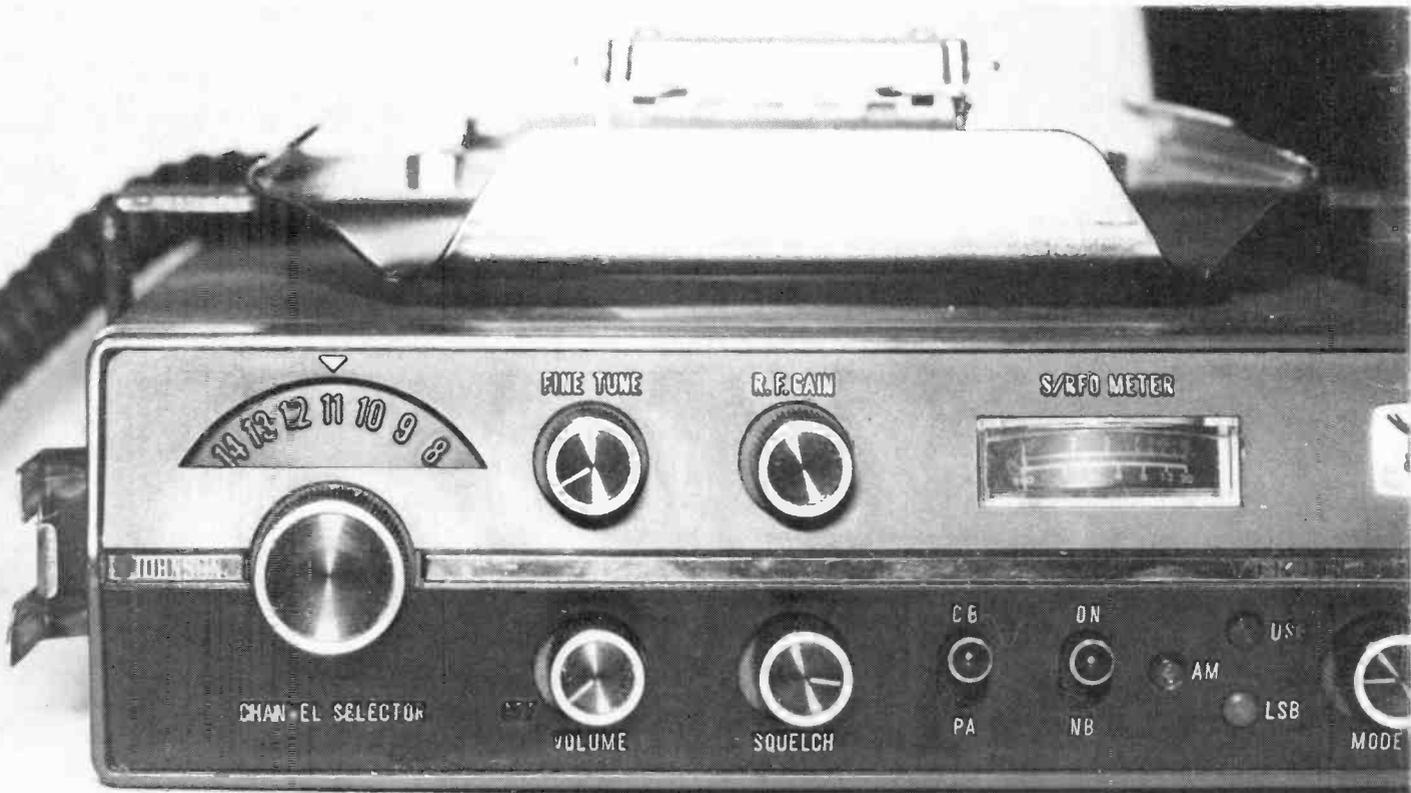
The AM / SSB Mobile CB Transceiver
With All the Extras!

The E.F. Johnson Company and its subsidiaries manufacture communications equipment to serve more markets than any other firm in America. For years they have been one of the true leaders in two-way radio communications. Since the advent of CB radio back in the late 1950s, E.F. Johnson has continued to strive for building better CB radios, with the CB'ers' interests in mind. The Viking 352 AM/SSB CB mobile transceiver is proof of that!

The Viking 352 is a solid-state 23-channel AM/SSB transceiver. It offers 23 AM channels and 46 SSB frequencies. The unit works off any 12-volt DC system, and can make use of either a positive or negative ground.

Everything on the Viking 352 is fingertip close. The dials and switches are easily adjustable for making all minor adjustments necessary. The black face provides a handsome background for its numerous dials and controls. The Viking 352 has a fine-tuning switch that will readily help you tune in other stations that may be slightly off frequency.

The unit that we tested had a power input of five watts, and a radio frequency



The radio offers a positive click-stop channel selector for easy tuning. The fine-tune and RF Gain controls will help you tune in those hard-to-get stations.



output of over three watts. The radio has a good noise blanker that can be turned on and off with a flick of the switch. The strength meter is very accurate in telling the S units someone else's signal is producing. Upon transmission, the strength meter is again very accurate in showing you how strong your carrier is.

All of the dials are back-lighted and this in turn provides easy reading during both day and night. The standard RF Gain control lets you decide how well you want to pull in those weaker signals.

The microphone is very sensitive and provides good modulation. At times, the signal tends to over-modulate if you are extremely close. To compensate for its high sensitivity, simply hold the microphone a few inches from your mouth and the problem should readily clear up. The radio also features an interesting and useful transmitting light. When you depress the microphone button, the Viking logo will glow red and let you know that your signal is getting out.

The unit comes ready to install in any vehicle equipped with a 12-volt system. With the addition of an external power converter, the Viking 352 can be used in the home as a base unit. The radio package includes the following equipment: transceiver, microphone and holder, mobile mounting bracket and screws, all crystals (permanently installed), ground wire, DC power cable

The Viking 352 is equipped with an accurate strength meter, and will tell you at a glance how well you are receiving. The AM/LSB/USB switch is brightly illuminated to tell you which frequency you are operating on.

A good quality Johnson microphone is included in the standard accessories with this unit. The mike is durable and will really last.

and a very complete instruction, operation, and schematic manual. The unit sells for around \$359.95. For further information contact: E.F. Johnson Company, Dept. WCBR, Waseca, MN 56093. ●



POINT EVALUATION

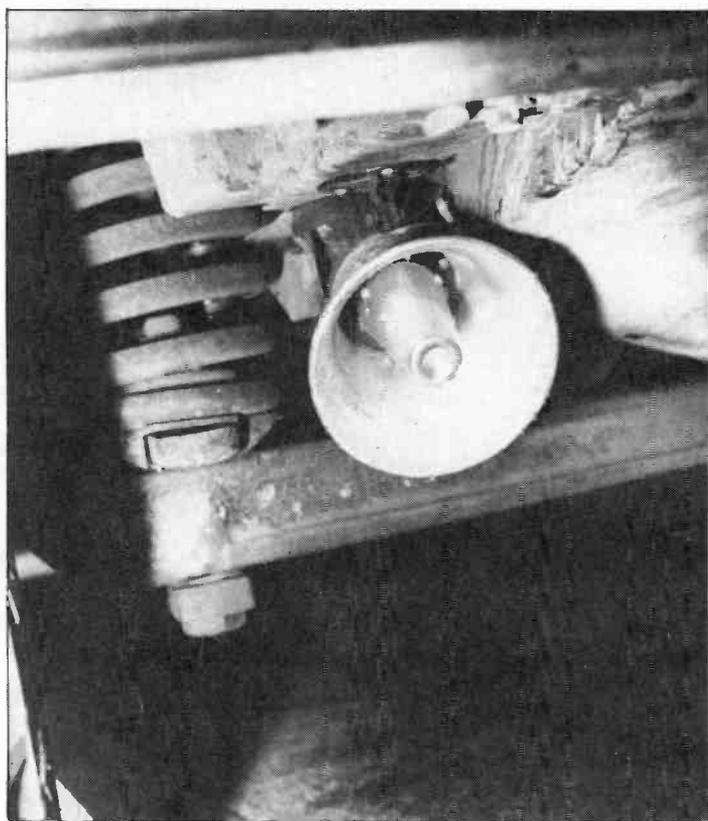
(10)	Simplicity of Installation	9
	(Relative to size and weight)	
(10)	Face Layout	10
(10)	Dial and Switch Access	8
(10)	Noise Limiting Capabilities	7
(10)	Microphone Quality	8
(10)	23 Channel Capabilities	10
(5)	Strength Meter Accuracy	5
(5)	Panel Illumination Qualities	5
(5)	PA Speaker Accessibility	5
(5)	External Speaker Capability	5
(5)	Internal Speaker Quality	4
(5)	Completeness of Instructions & Manual	5+
(10)	Overall Unit Performance	9
Possible Total Points — 100		Total Points 90

SPECIFICATIONS

Unit Brand	Johnson
Model	Viking 352
Size	2 1/2" x 7 1/2" x 11"
Weight	6 lbs.
Approximate Price	\$359.95
RF Output	3.0 watts AM
Input Sensitivity	0.5 μV
Adjacent Channel Rejection	45 dB
Image Rejection	50 dB
AGC Action	24 dB
Input Level for S9	130 μV
Modulation to 85%	Yes
Relative Sensitivity for 85% Modulation	-24 dB
Modulation Limited to 100%	No

PA Speaker Installation

Cheap, Simple and Beneficial
to the CB Radio Owner



For many CB owners, the little notch on that black box labeled "PA" is simply another useless gadget. Granted, the presence of a PA hook-up usually isn't a deciding factor when buying a unit, but many CB'ers overlook the abilities that a public-address system is capable of.

Just look at some of the uses that the PA system can be put to. Construction companies use them to give directions out in the field. Many an organized company picnic or outdoor party is run smoothly with the aid of a PA system attached to a CB radio. Search and rescue teams rely on the CB's PA for a variety of uses. Lately, with the popularity of the van and CB combination on the rise, the PA system has been put to use in organizing group rallies, sports, and announcements. Even at the motorcycle races you'll find a CB radio switched to the PA, used by the promoter to explain course rules and regulations during the riders' meeting. At the smaller races, the PA is used for actual announcing of the event's highlights.

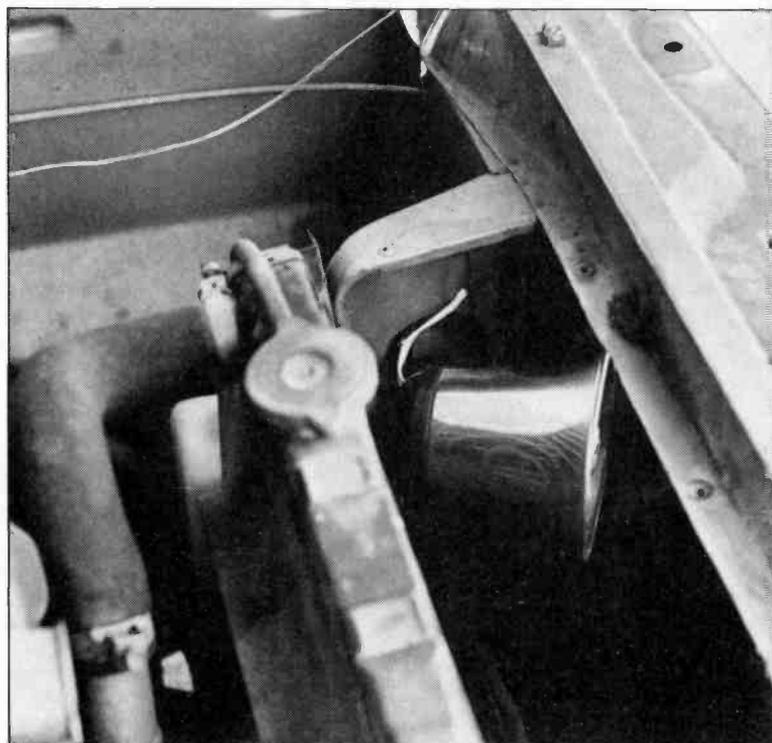
Installation and cost of a PA system is surprisingly inexpensive. Our speaker, which we purchased at CBer's Haven in Venice, California, cost only \$11. Add on a couple of dollars for the wire and solder, and you're looking at a total investment of only \$15 for a PA system.

There are a few things that you've got to be careful of when installing your speaker unit. Be sure that it doesn't constrict any engine airflow, particularly around the bottom of the engine block or the front of the radiator. Also be sure that the speaker bell is pointed outward, and preferably upward, so that the sound will carry far. Clearness also depends on where and how the speaker is mounted.

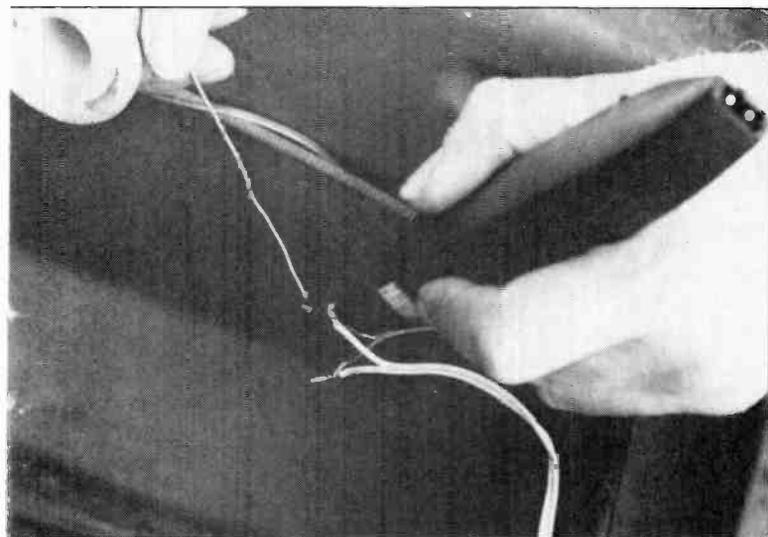
We attached our PA speaker to the radiator bracket, which gave us a clear broadcast area towards the front of our car, and didn't interfere with the radiator's performance. The first step was to drill out the bracket holes and mount the speaker bracket by way of sheet metal screws. All the wiring was then laid out and fed from the back of the CB unit, through the firewall, and into the engine compartment.



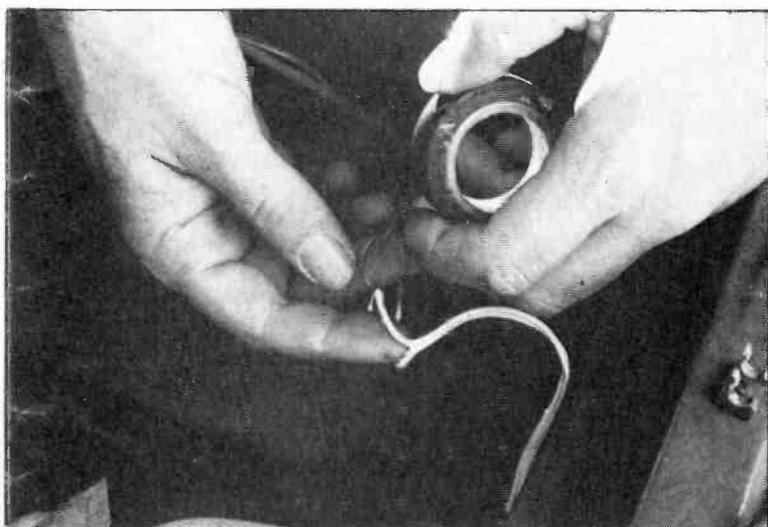
The speaker itself was surprisingly inexpensive. We purchased ours from CBer's Haven in Venice, California, for just \$11.



An ideal mounting position is on the radiator bracket. In this spot the speaker has good broadcasting capabilities and doesn't conflict with the engine's airflow.



All wires are intertwined and then soldered for strength and long life. Be sure to use the correct solder, and try not to drop large lumps onto the wire connections.



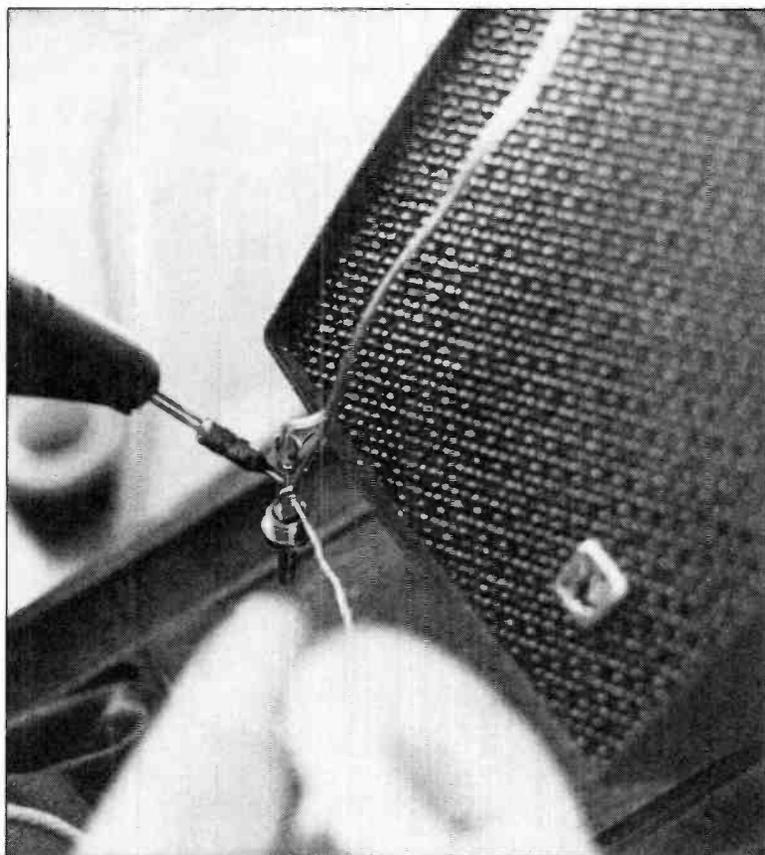
After the solder cools, black electrical tape is wrapped around the connections to eliminate wire shorts or fuse blowing.

Each wire connection was soldered for strength. If you just twist your wires together, they're going to short out eventually on the car body or frame, and blow a fuse. Once the soldering was completed, black electrical tape was wound around the connections, insuring that no grounding out or shorts would arise.

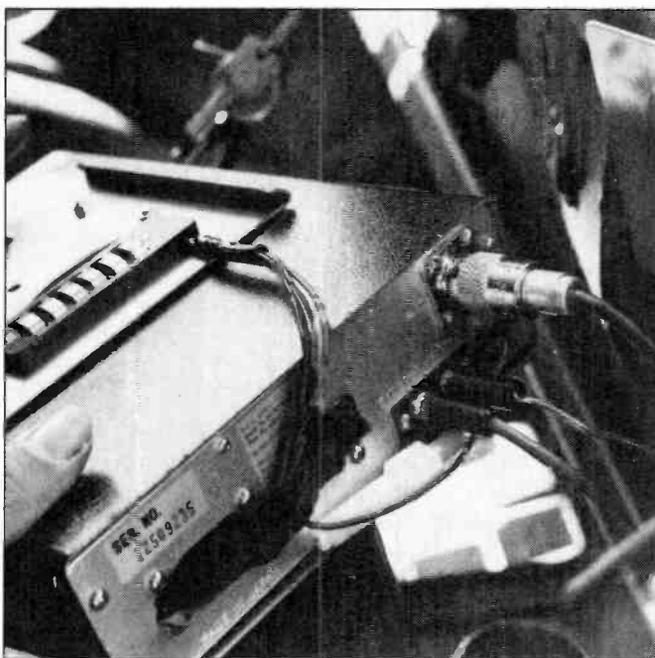
The same held true for the speaker plug that inserts into the back of the CB unit. The wires were wrapped around the plug, following the directions with the PA speaker. They were then soldered and taped.

With the entire unit plugged in and secured, it's just a matter of flipping a switch and you've got outside broadcasting power! However, we would like to point out that the local law enforcement frowns upon your utilizing the PA system on public streets and highways. In other words, you can't jump on the speaker and tell someone to get their rear in gear or change lanes. It's illegal, and carries a stiff fine.

You might experience a bit of over-modulation when your PA speaker is first put to use. When you're hooked in, you should hold the microphone slightly farther away from your mouth than normal when broadcasting. Other than that, there are no drawbacks to installing a speaker to go along with your PA switch. It's worth the time, money and effort spent, and rewards you with yet another utilitarian feature of your CB radio. ●



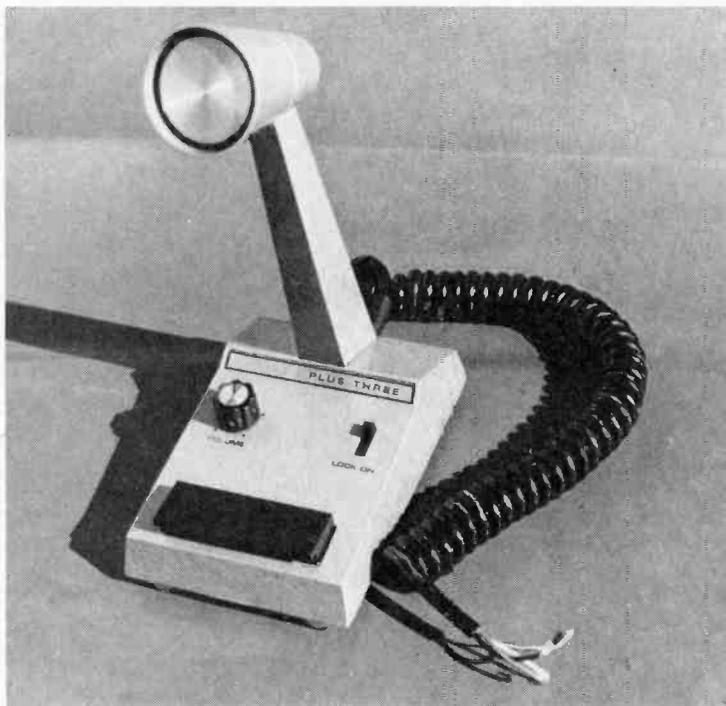
Also solder the wire and PA plug junction. All wiring should be done permanently, or you'll get bad connections on your PA system.



The final step is to insert the PA wire into the proper plug hole. With this Pace 1000M unit, it was also possible to insert the PA plug into the external speaker outlet, giving you regular CB channel broadcast, allowing you to monitor the radio while you're outside of your car.

The Secret Behind

What Do They Do and Why Are They So Popular?



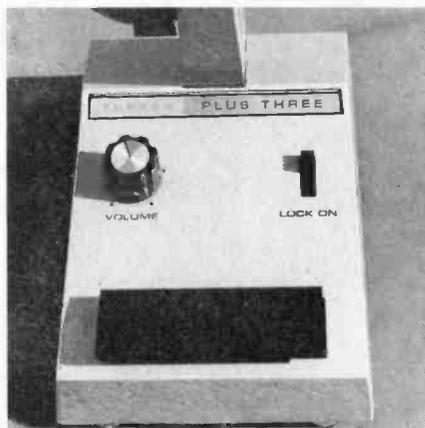
"Could you say again, there good buddy? I couldn't copy on that!"

If that is a familiar phrase to you, then you're definitely not alone. Many CB'ers face the same problem every day. For some, the answer to getting out and being heard lies in adding illegal power amplifiers or linears. For others, it's just a matter of trying to get used to not being heard clear or strong enough. If you think that the answer to this problem lies in one of those two choices, then think again. The real solution may be in adding a preamp microphone!

WHAT IS A PREAMP?

Without getting too technical, a pre-amp microphone boosts the audio signal. Most CB radios come standard with a microphone of some type. When keyed, all of these microphones activate a carrier, or block for radio transmissions. It is here that different mikes do different things. Once the carrier is activated, you fill this space by talking or modulating, into the microphone.

Using a preamp microphone may be the answer to your signal being heard cleaner and stronger. It won't add more power, but will better utilize the audio portion of the carrier.



The Turner Plus 3 desk top mike is one of the many fine preamps. The lock-on button provides continuous modulation.

The Turner Plus 2 desk top preamp uses a small radio battery to provide the needed power to boost the audio signal.



The desk top or "lollipop" mike is also a very popular model preamp.



PREAMP MIKES

Even the desk top preamp mikes are fully adjustable to help prevent overmodulation.

How effective your mike picks up and transmits that modulation has a lot to do with whether or not you carry on your conversation. Recent studies show that the average mike that comes with your radio, regardless of brand, utilizes the carrier for modulation to a maximum of 65 to 85 percent. In plainer words, the mike is not using the carrier to its peak of performance.

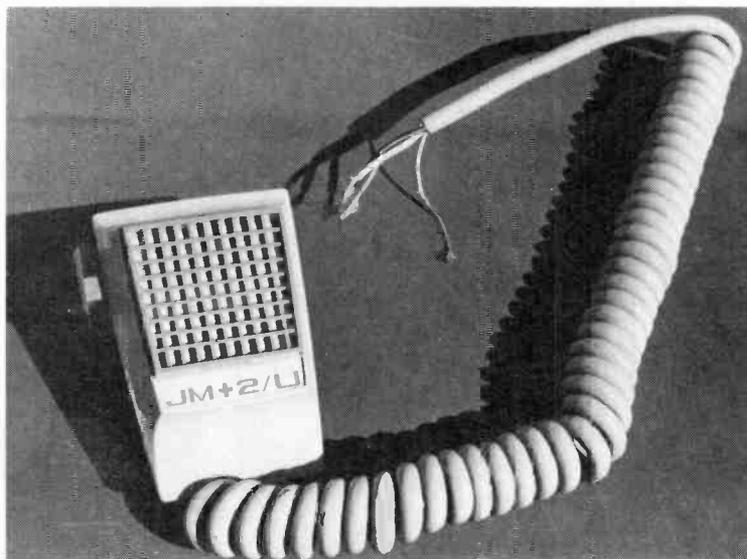
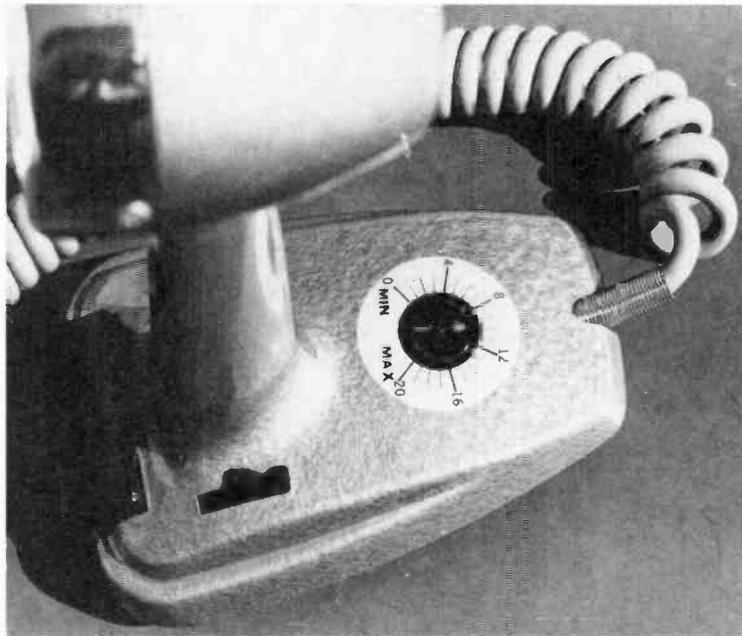
Now imagine how much your distance and transmitting capabilities would be increased if you could add something to utilize that carrier to 100 percent—all the time! That is, in plainer words, exactly what a preamp microphone does. It doesn't add more power, but merely better utilizes the audio portion of the carrier.

If you've ever wondered why one station was hard to hear, even though he registered an eight or nine on the S meter, it's probably because he was using a stock mike that came with the set. On other occasions, a weaker carrier has been received, yet his actual modulation was not only strong, but clear, crisp, and audible. Again, chances are they were using a preamp mike.

THE DIFFERENT TYPES

Since a preamp is designed to better use the existing carrier, very little power is required to operate it. Usually most preamp microphones run off a small seven or nine volt radio battery.

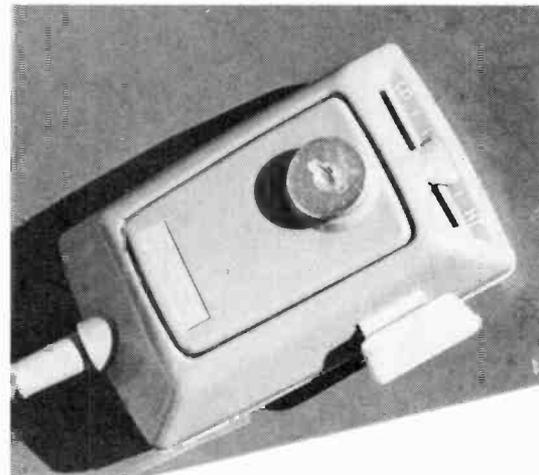
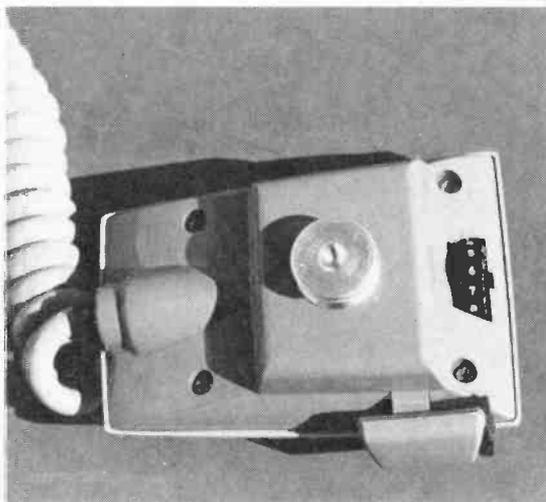
Whether you decide to put a preamp on your base or mobile radio makes little difference. There are specific models designed for both. By far, the



If you'd prefer a hand-held preamp microphone, there are several manufacturers that make these small mikes that really pack a punch.

The hand-held mikes use a small seven-volt battery and are fully adjustable, usually on a scale of one to ten.

Make sure to properly adjust your preamp to avoid over-modulation.





The Turner Road King 70 is one of the fine preamp microphones available. It not only boosts the audio signal, but is a noise suppression type to help cut down on high-level background noise.

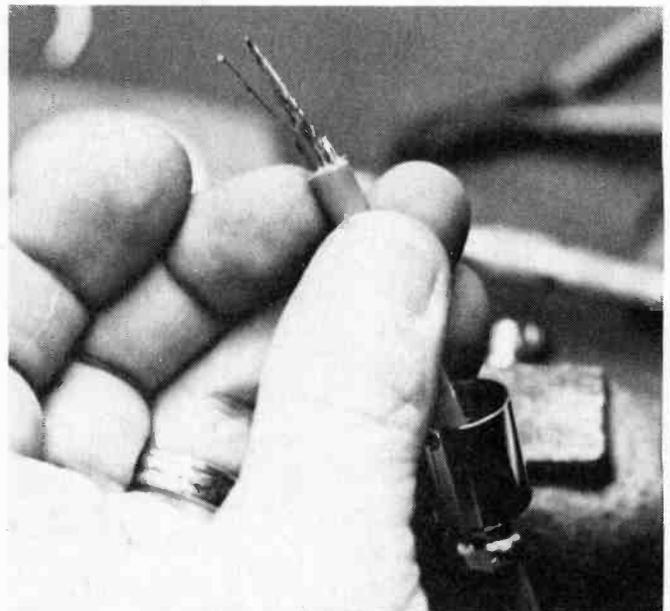
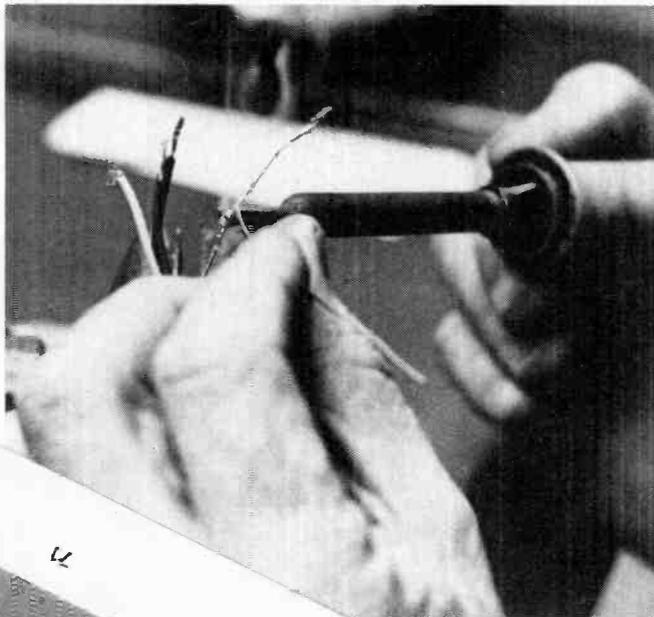
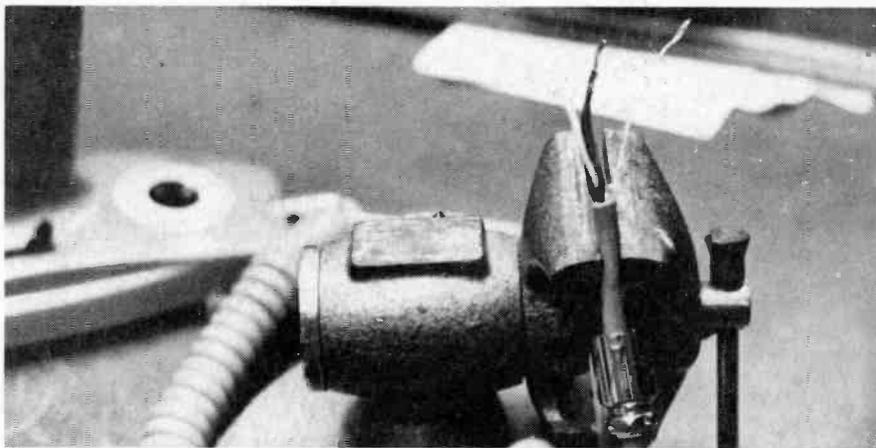
most popular preamps are for the mobiles, such as those manufactured by Turner Electronics. These rugged hand-held preamps will give you all the modulation you can handle at a price to fit anyone's budget. All the Turner microphones are completely adjustable from low to high modulation, and many incorporate built-in features to prevent you from over-modulating and sounding garbled when you talk.

WIRING A PREAMP

Another nice feature about preamps is that for the great majority of radios, there is no special or additional wiring required to the radio to accommodate the preamp microphone. About all that is required is that you wire the mike's cord with the appropriate connector that plugs into your particular set. Whether you have a four or six-pronged mike plug makes little difference.

Simply follow the instructions that accompany the preamp and you'll be wired in no time. Each instruction booklet lists almost every wiring procedure for the many different varieties and brands of radios. You should have little difficulty in finding your particular set in the pamphlet.

Before soldering the wires of your mike, read and follow the enclosed instructions. For the actual wiring, using a small bench vise will keep your hands free.



After soldering, trim all the wires to approximately the same length with a pair of wire cutters.

Carefully insert the mike plug over the corresponding wires. The wires are somewhat delicate and care should be taken when handling them.

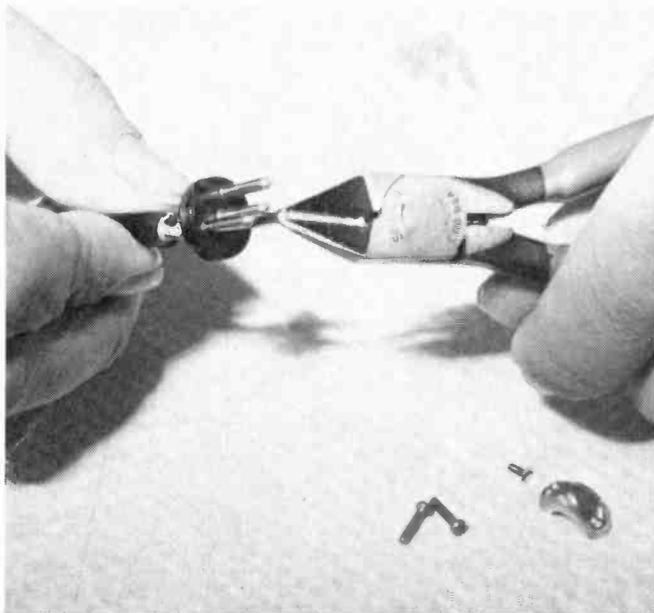
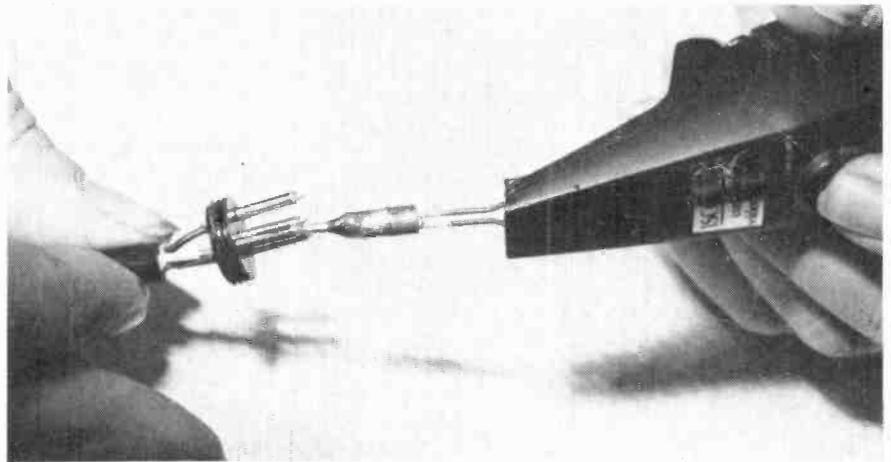
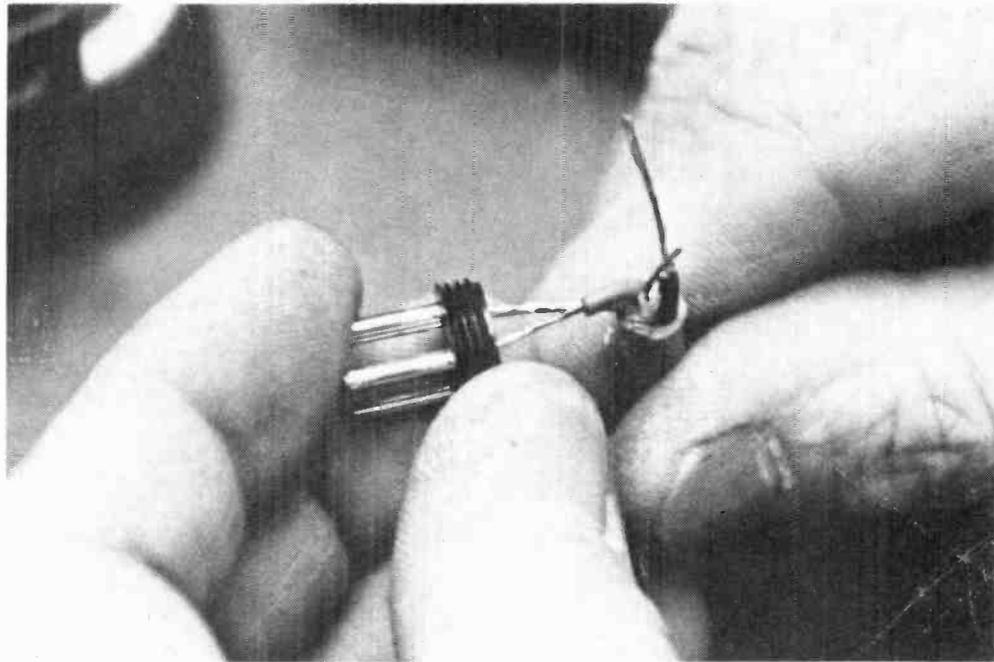
WIRING YOUR MIKE

Wiring a connector to your mike cord is a very simple operation. For the job you'll need only a soldering iron and solder, small screwdriver, and a pair of wire cutters. If possible start by placing your mike cord in a small bench vise. This will keep the cord steady and both your hands will be free to complete the job.

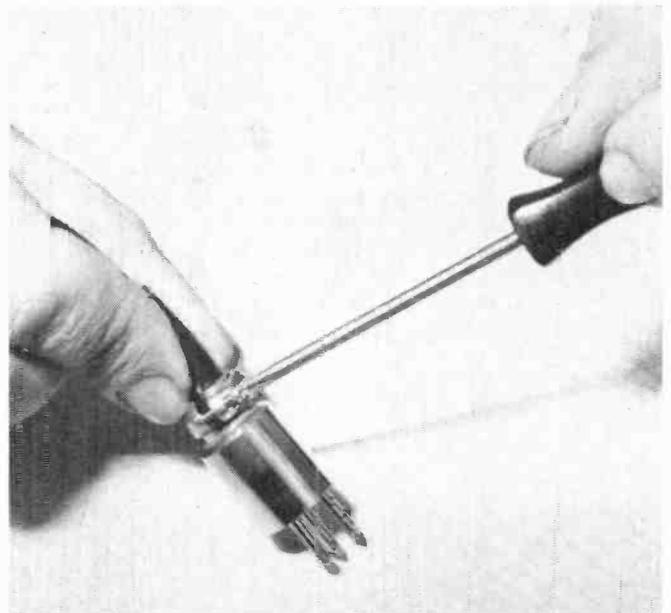
Individually twist about 1 1/2 inches of each of the stripped wires so that there are no loose strands. Next solder the wires individually from top to bottom. Trim all the wires so that they are all about even lengths and insert the connector. Place the cord back in the vise and allow the solder to drop down inside each of the prongs, until it fills. Allow a few minutes to cool and cut off any excess that protrudes beyond the plug. Reassemble the connector and your wiring installation is complete.

Be sure to keep fresh batteries on hand for your mike. If the batteries get low, the efficiency of the preamp may be greatly reduced. Other than that, you're ready to start making use of your new mike and begin avoiding the old phrases of "Come back, I missed that." With a preamp mike, odds are that there will be a lot fewer of those comments directed at you! ●

Once the plug is on, place solder down each one of the plug's prongs. Make sure you have a good solder connection.



Trim any excess wire that protrudes through with wire cutters.



You're now ready to put that plug bracket together, plug it in and begin getting out!

YOU and the CLASS D LICENSE

How to
Apply
For
Your CB
License!

Of all the forms and application blanks you will probably be filling out in your lifetime, The FCC Form 505 will have to rate as one of the simplest. This is the form that must be filled out when you apply for your CB license. If you are at least 18 years old, and a citizen of the United States, a Citizens Radio Service or CB license is virtually yours for the asking. There is no examination given, and no technical electronics background is required to operate a CB.

Some manufacturers include a copy of the license application form with every new CB transceiver. If there's none with your unit, or you are buying a used one, drop a postcard to your nearest FCC field office. Ask for a copy of Bulletins 1001 and 1001h, and for FCC Form 505, Application for Class C or D License in the Citizens Radio Service. In most cases, you'll have everything you need within a week.

To obtain your CB license, you simply fill out and sign FCC Form 505 (opposite page) and mail \$4 to the FCC. The \$4 application fee covers a five-year license which can be renewed. Several weeks after filing with the FCC, you'll receive your new license and call letters. Remember that it is illegal for you to operate a CB radio without a license, and the penalty if you get caught is a fine, jail sentence, or both! ●

By Tari May

439 U.S. Courthouse and Customhouse
113 St. Joseph Street
Mobile AL 36602
205-433-3581, Ext. 209

U.S. Post Office Building
Room G63
4th and G Street
P.O. Box 644
Anchorage AK 99510
907-272-1822

U.S. Courthouse
Room 1754
312 North Spring Street
Los Angeles CA 90012
213-688-3276

Fox Theatre Building
1245 Seventh Avenue
San Diego CA 92101

300 South Ferry Street
Terminal Island
San Pedro CA 90731
213-831-9281

323A Customhouse
555 Battery Street
San Francisco CA 94111
415-556-7700

504 New Customhouse
19th St. between California
& Stout Sts.
Denver CO 80202
303-837-4054

Room 216
1919 M Street, N.W.
Washington DC 20554
202-632-7000

919 Federal Building
51 S.W. First Avenue
Miami FL 33130
305-350-5541

738 Federal Building
500 Zack Street
Tampa FL 33606
813-228-7711, Ext. 233

1602 Gas Light Tower
235 Peachtree Street, N.E.
Atlanta GA 30303
404-526-6381

238 Federal Office Bldg.
& Courthouse
Bull and State Streets
P.O. Box 8004
Savannah GA 31402
912-232-4321, Ext. 320

502 Federal Building
P.O. Box 1021
Honolulu HI 96808
546-5640

37th Floor - Federal Bldg.
219 South Dearborn Street
Chicago IL 60604
312-353-5386

829 Federal Building South
600 South Street
New Orleans LA 70130
504-527-2094

George M. Fallon Federal Bldg.
Room 819
31 Hopkins Plaza
Baltimore MD 21201
301-962-2727

1600 Customhouse
India & State Streets
Boston MA 02109
617-223-6608

1054 Federal Building
Washington Blvd. & LaFayette Street
Detroit MI 48226
313-226-6077

691 Federal Building
4th & Robert Streets
St. Paul MN 55101
612-725-7819

1703 Federal Building
601 East 12th Street
Kansas City MO 64106
816-374-5526

905 Federal Building
111 W. Huron St. at Delaware Ave.
Buffalo NY 14202
716-842-3216

748 Federal Building
641 Washington Street
New York NY 10014
212-620-5745

314 Multnomah Building
319 S.W. Pine Street
Portland OR 97204
503-221-3097

1005 U.S. Customhouse
2nd & Chestnut Streets
Philadelphia PA 19106
215-597-4410

U.S. Post Office & Courthouse
Room 322 - 323
P.O. Box 2987
San Juan PR 00903
809-722-4562

323 Federal Building
300 Willow Street
Beaumont TX 77701
713-838-0271, Ext. 317

Federal Building-U.S. Courthouse
Room 13E7
1100 Commerce Street
Dallas TX 75202
214-749-3243

5636 Federal Building
515 Rusk Avenue
Houston TX 77002
713-226-4306

Military Circle
870 North Military Highway
Norfolk VA 23502
703-420-5100

8012 Federal Office Building
909 First Avenue
Seattle WA 98104
206-442-7653