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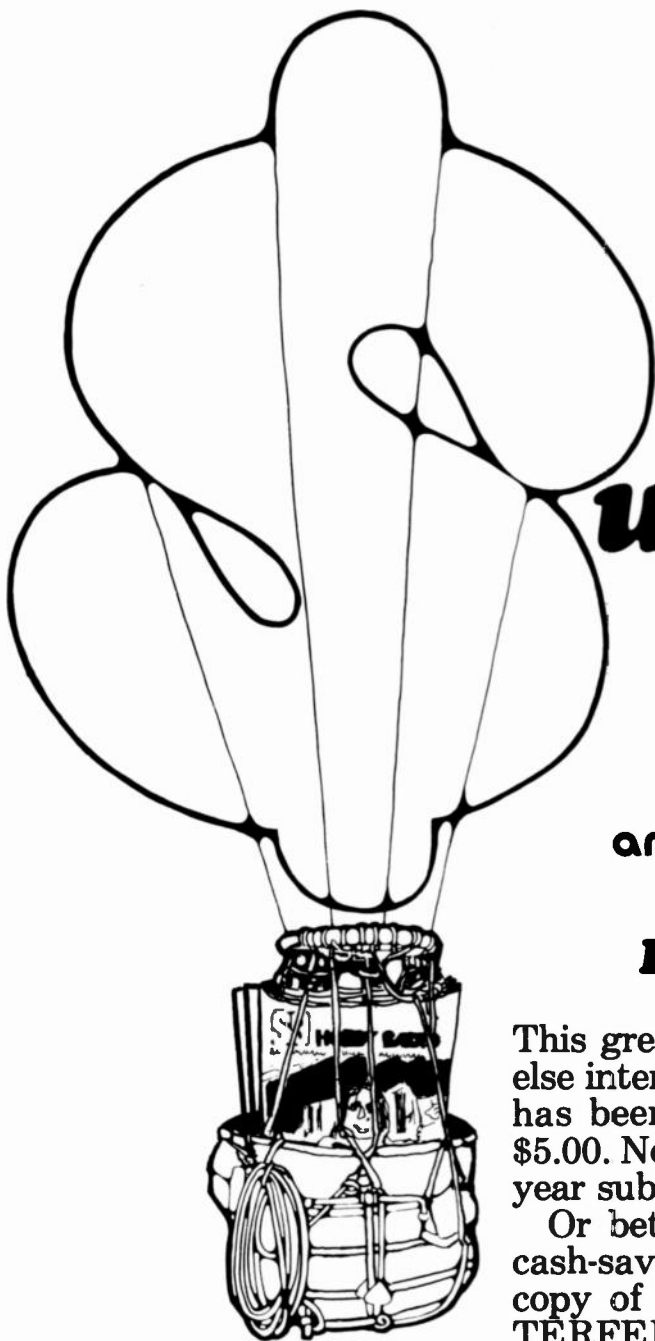
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CB NEWSWIRE

YOUR CB NEWSPAPER

OCTOBER 1981

San Diego Has Its Own Hitler!

The familiar ranting was barely intelligible, but to Frans terHorst there was no mistaking the strident voice of Nazi leader Adolf Hitler.

He had heard the speeches in his native Holland just before he fled to England as the German army rolled into Rotterdam.

Those Hitler speeches have come back to haunt him and other World War II survivors, who are demanding that the Federal Communications Commission investigate a San Diego man who has been playing Hitler recordings on his citizens band radio.

The unidentified man usually follows the Hitler orations with profane comments or interpretations in English of the speeches.

TerHorst said the biggest insult came when the man played lengthy recordings of the Hitler speeches last Memorial Day.

At terHorst's request, Rep. Bill Lowery (R-San Diego) mailed a letter this week to FCC officials asking that reports of the Hitler broadcast be investigated.

"Those tapes that are being played," terHorst said, "are very old so they are not very intelligible. But I recognize, of course, the Hitler speeches because I escaped from the Nazis in Holland."

TerHorst, who lives in Mission Valley (Calif.) and is a member of the Laguna CB Club, said many veterans in the group were "extremely upset" when the Hitler rangings were aired on Memorial Day and have been trying to zero in on the man playing the tapes.

According to another Laguna Club member, who asked not to be identified, the man was reported to FCC officials last January. The member said

the license number of a pickup truck from which some of the speeches were aired also was given to FCC officials in Washington, D.C.

In his letter to the FCC, Lowery said the man's "transmissions occur frequently following the news at 6:30 p.m. on CB channels 38 and 18."

The letter said, "Frequently, the tapes are followed by live remarks of a similar philosophical orientation. Nazism is repugnant to any free society, but the First Amendment must be observed even in this case."

"However, if any transmission violates existing laws, I urge you to rapidly locate this individual and enforce those laws," the letter stated.

June Alonso, an FCC public service field specialist, said the man would be in violation of FCC rules if he were playing tape recordings of the speeches because "you cannot transmit one-way communications on a CB radio."

The man could also be violating other FCC rules, Alonso said, if he deliberately were interfering with other CB frequencies. Deliberate interference is defined as blocking of a CB channel continuously for more than five minutes without giving a call for

Alonso said her office had no record that a complaint was filed last January with the FCC about the Hitler recordings.

"You can put yourself in the same situation," terHorst said of his flight from the Nazis. "You get away from the Nazi regime and then you have to hear it all over again. The thing that bothers me is that, although these CB radios supposedly have only a very short range, because of the skipping effect against the ionosphere they reach practically all over the world. They can be

heard in Australia, in Japan or by some of our boys in the Pacific.

"Even though I am only a naturalized citizen, I feel the name of the United States is being debased in these foreign countries with these speeches coming from this area."

Another member of the Laguna Club called the tape playings "very, very disturbing. This character has been going on for a long, long time."

The man said club members have tried to get the FCC to locate the operator with a directional apparatus, but were told by FCC officials that they had more important things to do.

"We have a lot of people in this club who lost their friends and buddies in World War II," he said. "And Memorial Day is no time to be playing Adolf Hitler tapes."

The source said the same man has been broadcasting records using language of the lowest type, getting away below the gutter."

He also interferes with CB by playing sirens, horns or other gadgets on the air, the source said. The Laguna Club member said the man deliberately switches to any channel where two parties are talking and airs Nazi propaganda.

The man said, "He comes on with the Hitler speeches and ends up with that stuff at the end, 'Sieg heil.' The guy comes on three or four times a week.

"It's just a damn agitation. The tapes run for about five minutes. It just bothers me that this guy is feeding all kinds of Nazi propaganda all over the U.S.," he said.

Local CBers who have been attempting to track the man, believe he is operating somewhere between California 395 and Interstate 15 and between University Avenue and Mission Valley.

A/S Presents First Formula-1 Antenna To React Executive

Gerald Reese, Executive Director of REACT International, Inc. (left), receives a briefing on the features of The Antenna Specialists Co.'s new *Formula-1* mobile CB antenna from A/S President, Bob Paul. Occasion was a ceremony commemorating the antenna maker's massive, industry-wide support program for REACT, the CB volunteer organization whose 30,000 members monitor CB Emergency Channel 9, and provide organized communications for local civic organizations throughout the U.S., Canada and many foreign nations. The first production model of *Formula-1* was presented to Reese as a symbol of Antenna Specialists' commitment to donate one dollar to REACT for every



Formula-1 antenna purchased throughout 1981. A/S dealers throughout the country are participating on a voluntary basis to work with and support REACT teams at the local levels.

Street Patrol Gives Residents 'Peace of Mind'

It was a chance encounter that may solve the Ida Mendelsohn murder case. But if Gerry Segal and his fellow CBers hadn't been patrolling the streets of Cote des Neiges, in Montreal, the informant would not have come forward.

"It was a fluke," Segal admitted, "And we don't know if the information is accurate at this point, but at least people are talking to us."

It was shortly after the tragic death of 86-year-old Ida Mendelsohn on April 18 that the Montreal Brotherhood of CBers gathered to form a security patrol. It will cover the Cote Des Neiges district from Queen Mary to Van Horne, and from Decarie to Cote des Neiges Streets.

Segal, 36, as president of the organization, heads a 27-man team who alternate shifts, travelling two in a car.

"We are constantly on the move, looking for suspicious signs," said the garment manufacturer. "The men are not permitted to get personally involved in any form of violence."

Two men control base headquarters

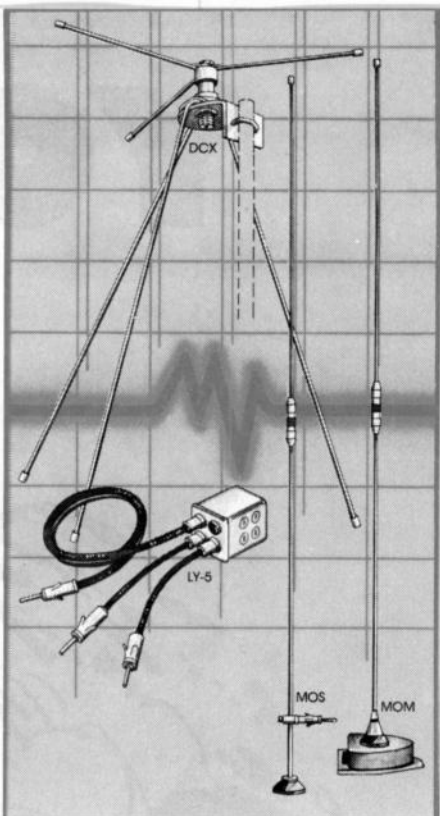
every night, five nights a week. Murray Tratenberg and Issie Milstein stand by for calls and transmit messages to Station 31, where the appropriate police procedures are instituted. Both Tratenberg and Milstein, who is blind, volunteer their time to help restore what Segal calls "peace of mind" to the troubled area.

None of the 27 men live in the Cote des Neiges district and none are reimbursed for their expenditures while on patrol.

"We are eyes and ears for the police," Segal explained. "They can't do it alone."

"We handed out pamphlets advising them how to protect themselves," he explained. "The crime rate is increasing in every major city, but thank God we're still not New York."

"There are many districts which are organizing similar citizen movements in order to help the police do their job," Constable Bouchard said. "In the States, they're called 'crime watch' organizations and have been highly successful as crime deterrents."



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by Lou Franklin, KZB4389/K6NH

“TALK POWER”



YOU GOT IT!

HERE'S HOW IT WORKS AND HOW TO GET IT!

Have you ever been watching your favorite TV program, when suddenly the commercials appeared and seemed to knock you right off your seat? Or maybe you've noticed how most AM or FM broadcast stations playing rock music always seem louder than other stations? Well, they

haven't turned up the power or program volume! Instead, they've applied a form of audio or speech processing. You too can take advantage of such techniques to make your CB or HAM signal appear louder and more powerful, and this discussion will demonstrate the basic methods, as well as pros and cons of each.

SIMPLIFIED BACKGROUND THEORY

It's well known that the human voice is actually very weak when compared to other types of audio signals. For example, a solid tone, which is a sine wave, has about twice the power to modulate a radio transmitter than does the average voice. Unlike the familiar sine wave with its regular

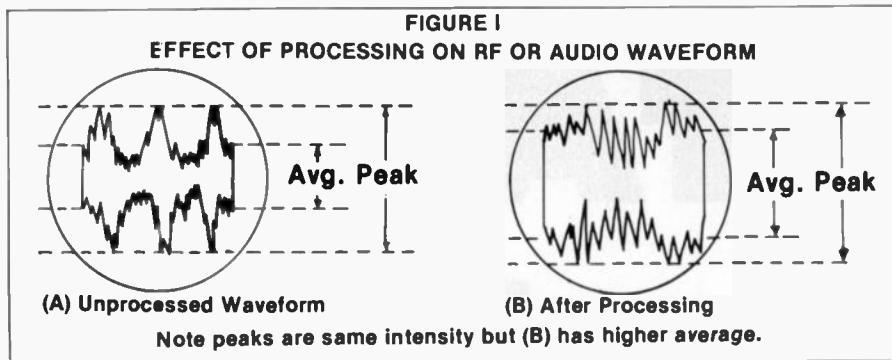
repeating pattern, a human voice is a very complex waveform having many "peaks" and "valleys." The peaks represent the points of maximum transmitter modulation, and the valleys the minimum.

The problem is that those sounds producing maximum modulation are not the same sounds that give maximum "intelligibility" of the transmitted signal. ("Intelligibility" simply means how easily the voice can be understood, especially during weak-signal or heavy interference conditions.) These high-intensity, low-intelligibility sounds are the familiar "vowel" sounds we were taught in grade school: A, E, I, O, U. It is the *consonant* sounds, such as B, K, L, S, T, which actually give the voice its greatest intelligibility. If we can therefore increase these consonant sounds *relative* to the vowel sounds, the overall *average* voice power will be significantly increased. This is illustrated in FIGURE 1.

We also know that the greatest amount of voice power of benefit to radio communications is concentrated in a rather narrow band of frequencies, from about 500-2500 Hz, with the most power centered around 1000 Hz. Women's Lib notwithstanding, the male voice is more powerful than the female voice because it contains more of the frequencies near the 1000 Hz median while the ladies' voices contain more of the higher frequency elements. If you've ever watched a TV show or movie being filmed, you'd have seen that in a shot containing both men and women, the soundman always hangs the mike boom closer to the woman to keep the overall volume of the performers' voices equal. Thus an important part of speech processing in addition to reducing the peak-to-average power difference is to filter out all the low-power voice frequencies and concentrate only in the 500-2500 Hz range. This is also very important because it limits the "occupied bandwidth" of your signal. In other words, you don't want to be heard on three channels at once!

MEASURING SPEECH PROCESSING AND ITS EFFECTS

Since this discussion deals with power levels, it's not surprising that speech processing and its effects on intelligibility are measured by the familiar "decibel" or "Db." In its simplest terms, a change of "so many



Db" means that the signal power has been multiplied (or reduced, for that matter) by a specific factor. Let's list a few of these typical power multiplication factors to aid our discussion:

- + 3 Db - Power multiplied by 2
- + 6 Db - Power multiplied by 4
- + 10 Db - Power multiplied by 10
- + 20 Db - Power multiplied by 100

As an example, if your transmitted signal increased by +3 Db, this would be the same as doubling your power (X 2). The difference to the person receiving your signal is just as though your transmitter power increased from 5 watts to 10 watts, when in reality this +3 Db increase was the result of speech processing.

There are two distinct Speech Processing measurements typically used.

- 1) Actual amount of processing applied to the signal, expressed in Db;
- 2) Effective increase in intelligibility of a processed signal over an unprocessed one, expressed in Db.

In the first case, if the power of the consonant sounds were increased ten times *relative* to the vowel sounds, this would be the same as saying that "10 Db of processing" was applied to the signal. Usually, the amount of processing can be ad-

justed by the operator with a potentiometer control in most speech processors; the amount of adjustment effects intelligibility and the degree to which the voice is altered from its unprocessed natural sound.

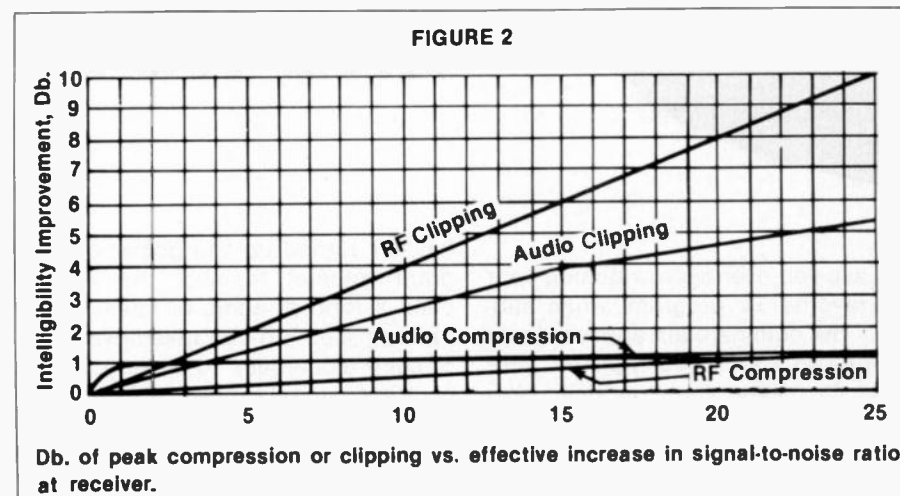
The true test is the actual increase in readability over an unprocessed signal, all other factors being equal. Thus to say that the processing adds "3 Db of intelligibility" is just like the power doubling of transmitted RF described above. The person listening to your signal can't tell the difference between a doubling of RF power or a doubling of *effective power* due to the speech processing. It's important to remember this point when considering the different processing systems that you may apply to your CB/Ham rig.

SPEECH PROCESSING METHODS

There are four basic systems that have been used to increase the "talk power" of an AM or SSB signal. These are:

- 1) RF CLIPPING
- 2) RF COMPRESSION
- 3) AUDIO COMPRESSION
- 4) AUDIO CLIPPING

Let's briefly examine the pros and cons of each method as it might be used in the typical CB or Ham



transceiver. The effectiveness of each has been summarized in the graph of FIGURE 2 which we'll refer to often.

1) RF CLIPPING:

As the graph clearly shows, this is by far the most effective speech processing technique. However, it is restricted to SSB transmitters only. That's because the processing occurs in the actual IF stage of the transmitter, after the SSB signal has been generated, rather than in the audio stages. A typical system is shown in FIGURE 3; diodes are used to clip or "chop off" the high-intensity peaks of the RF waveform itself, resulting in a higher average power relative to peak power.

The previous graph of FIGURE 2 indicates that with about 20 Db of RF envelope clipping, an incredible 8 Db improvement in signal intelligibility can result. This is equivalent to a power multiplication factor of over 6 times, which is about the same power advantage of SSB over AM in the first place!

We never get something for nothing, including electronics. Clipping of any type, RF or audio, produces lots of "harmonics" or undesirable signals. No doubt you've already experienced this as "splatter" or channel "bleedover" interference. Just like overmodulation. Thus any clipper circuit must be followed by some kind of filter to prevent the clipped signal from being heard all over the band.

The disadvantages: Cost and installation complexity. While RF Clipping is the most effective, it's also the most expensive, in the \$140-\$175 range for typical Ham-type RF Processors. And since the circuit must be installed internally in the IF stage of the transmitter, it takes a skilled technician to do it. Not your simple add-on Black Box!

2) RF COMPRESSION:

This type of processing is commonly found in virtually all CB and Ham SSB rigs. You may have heard it called by its more common name, "ALC" or "Automatic Level Control." Basically, this is a simple feedback system identical in principle to the Automatic Gain Control or AGC circuits used in receivers: A small RF signal sample is picked off after the final amplifier stage and fed back to an earlier RF stage to control gain. Thus the stronger the incoming signal from the mike, the more the RF

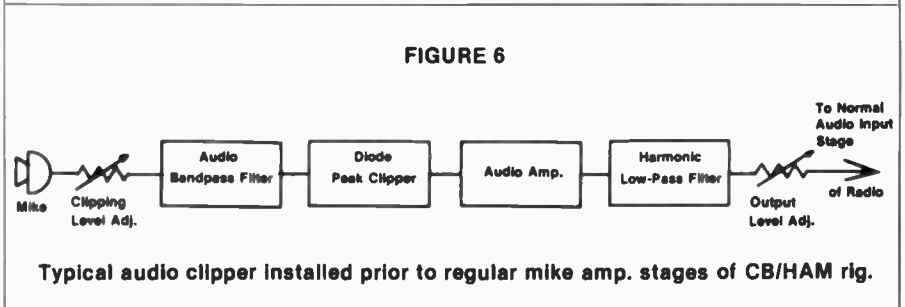
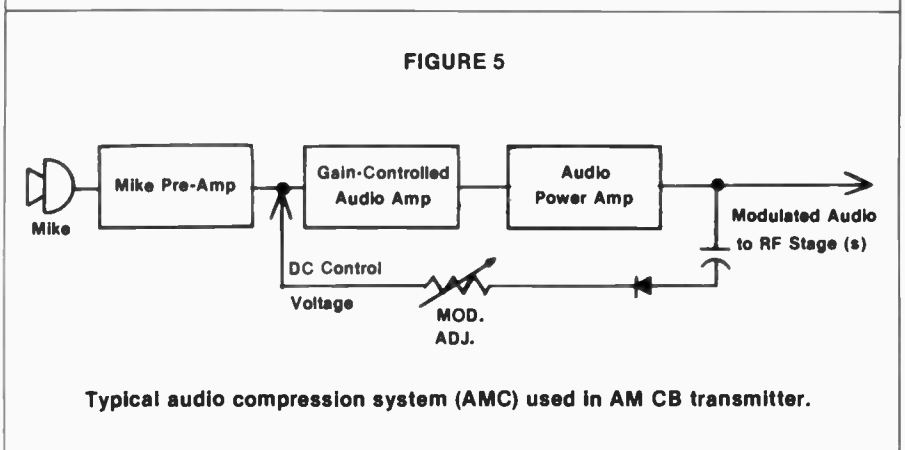
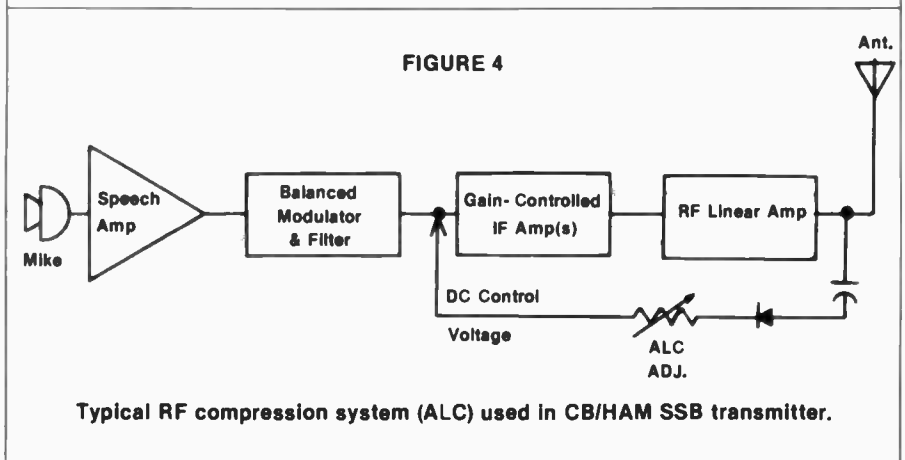
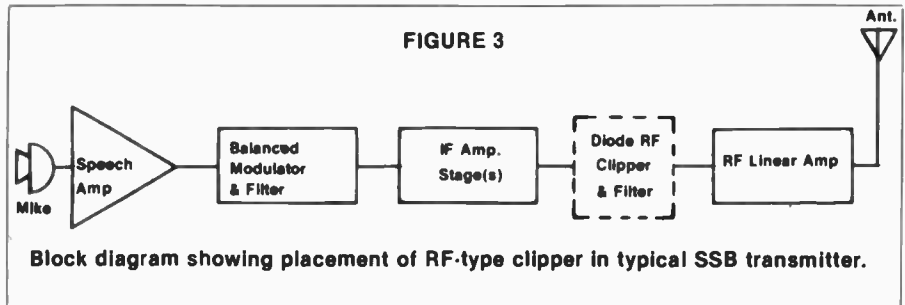
signal going to the antenna is reduced. The result is to keep the output signal level constant even though the input power of the operator's voice may vary greatly. This method is shown in FIGURE 4.

The true purpose of ALC is not really to increase talk power, but to prevent bleedover interferences. When the RF SSB signal entering the final RF amplifier stage is too strong, the final is "overdriven," and results in

adjacent-channel splatter. (This is the familiar "flat-topping" of signal peaks seen on an oscilloscope in a misadjusted SSB rig.) And as shown in our earlier graph, this method only adds about 1 Db of intelligibility to the SSB signal.

3) AUDIO COMPRESSION:

This is no doubt the most commonly-used system. It's found in many popular power mikes, and one form is used in all 40-channel and



most newer 23-channel CB rigs. (Called "AMC" or "Automatic Modulation Control.") This is exactly the same idea as in the ALC/RF COMPRESSION method, except that the sample signal is fed back from the last *audio* stage rather than RF final stage. The real purpose once again is not to increase talk power, but to prevent over-modulation on voice peaks and its resultant bleedover interference. The basic system is shown in FIGURE 5.

In the case of the Compression-type power mikes, the voice signal has been made constant in level before it even enters the radio. This is done by amplifying the weaker voice elements in relation to the stronger peaks, and one disadvantage here is that such circuits are always very sensitive to any background noise or AC powerline hum in base-operated rigs. A listener may hear the kids yelling in the next room, or the operator's voice may sound very hollow if he's not speaking closely into the mike. In any event, the graph reveals that audio or "volume" compression adds almost nothing to the signal in readability, only about 1 Db.

An interesting variation of audio compression is the so-called "logarithmic" speech processor. In very simple terms, this is a "smart" processor which knows which voice elements to amplify and which to ignore. The stronger the incoming voice signal, the less amplification is applied, and vice-versa. You'll pay a big price for such a gadget too, around \$75. As with regular compression circuits or power mikes, the net increase in actual intelligibility is not that impressive. And they're very sensitive to the slightest background or AC powerline noises; thus, sophisticated noise-blanking and filtering circuits are required which partly account for the high price tag.

It's worthwhile to note at this point that many so-called "power mikes" have no processing circuitry at all, not even compression. Instead they simply amplify *all* voice elements equally. As you realize by now, any system which does not actually change the audio or RF peak-to-average relationship does not do anything to increase your talk power.

4) AUDIO CLIPPING:

This is probably the simplest and dollar-for-dollar most effective technique. FIGURE 6 shows a basic system. The mike control is first amplified to a

level high enough to clip off the high-intensity, low-power peaks when applied to a diode circuit. At the same time the desired range of voice frequencies can be filtered to fit the required 500-2500 Hz band limits. The processed signal is then reamplified and adjusted to a level which will produce 100% modulation of the AM/SSB transmitter and at the same time the undesirable harmonics are removed.

Referring again to the graph of FIGURE 2, this method is the next best thing to RF envelope clipping but a lot cheaper, easier to install, and will work with any AM, SSB, or even FM transmitter. (Remember the TV commercials?) Using 15 Db of audio clipping, you'll get about 4 Db of real increased intelligibility. This represents a 2½-times power multiplication factor; a 4-watt CB sounds more like 10 watts! With the clipping increased to about 25 Db, another 1.5 Db of added readability results. At such high clipping levels the voice sounds unnatural but quite readable during weak-signal or heavy interference conditions.

Since clipping of any type produces harmonic bleedover, filtering is an absolute must! However, this is easily accomplished by the addition of a few circuit parts which form a "low-pass" filter, just like the type used on your base antenna to help reduce TVI.

Another advantage here is that background noise and hum aren't nearly as noticeable as in audio compression circuits. That's because this method doesn't amplify the weak sounds in relation to the strong ones, but rather *reduces* the strong sounds relative to the weak ones. The difference is very subtle but the results are often a real increase in talk power!

Perhaps the greatest advantage of audio clipping is its price and simplicity. The circuit is connected in series with the mike audio and can be added externally in a separate box, or permanently wired inside the radio if desired. The \$15-\$30 price tag makes it cheaper than most power mikes and as we've seen, more effective in producing a genuine power advantage. CB CITY INTERNATIONAL, P.O. Box 31500, Phoenix, AZ 85046 is now offering such an accessory in kit or assembled form to those wishing to get the maximum performance from their rigs.

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KEY

Your Antenna

TO BETTER

[YOURS CAN PROBABLY BE IMPROVED!]

By Marc Stern, KBFS-8072/SSB-0A71

Lead In:

R SIGNALS!

I recently met an operator who was complaining of lousy performance for his rig. He told me when he inspected it that everything looked okay, but that he just wasn't getting any output, and he asked me to take a look and see if I could find out what the problem was.

When I peeked inside his mobile, everything looked shipshape to me, at least from the front. But, when I keyed the mic to see if there was any output, there wasn't. To top it off, there was no incoming signal, either.

I immediately suspected there was something wrong with the coax, or at least, the connector in the rear. With a little further checking, I found out that this was exactly what was wrong. The coax connector was all messed up.

Fortunately, I was able to save the connector and make up a new piece of coax for his antenna. But this started me wondering. I thought to myself: "How many times do we blame our rigs for something, when the fault may be somewhere else?" The only answer I could come up with was, many times. It seems we always blame the rig first and not any other part of the system.

Improperly working coax or connectors are probably two of the biggest causes of headaches known to the modern radio operator. It doesn't matter what kind of radio, CB, amateur or business, the answer always seems to work out the same.

So, when your rig is performing badly, how can you tell whether it's

the rig or the coax? The only answer I can give is take a *look*. DON'T assume it's the rig that's performing poorly, it may be the cable.

What do you do when this happens? The answer is to fix it. It's a job that's both fun and educating. After you're done, you'll know what coax is and what it does. You'll also know how to fix it. At first, it will probably take you a long time to do this process, but with practice, you'll soon find that you'll be able to repair coax in under half-an-hour.

Let's say you've looked at the coax in your rig and have found the connector is loose. This is probably the reason for the poor rig performance.

The first thing to do is look at the connector and see if it can be saved.

If it can, then cut it off at the end of the cable and put it aside for a few minutes.

For this operation, you're going to need a sharp knife or razor blade, a heavy-duty soldering iron, a scribe or an ice pick or something with a sharp point. You're also going to need a good pair of wire strippers and a wire cutter.

The reason for the wire cutter is easy. You're going to need this to cut off the connector. Once you've done this, unless you have to trim the cable, this tool is all you are going to need.

The next step is simply slitting the outer covering of the coax with the knife or razor blade. This should be done about an inch from the end. Then, remove the covering. Make sure not to cut too deeply because you risk cutting some of the inner braid, which is a no-no.

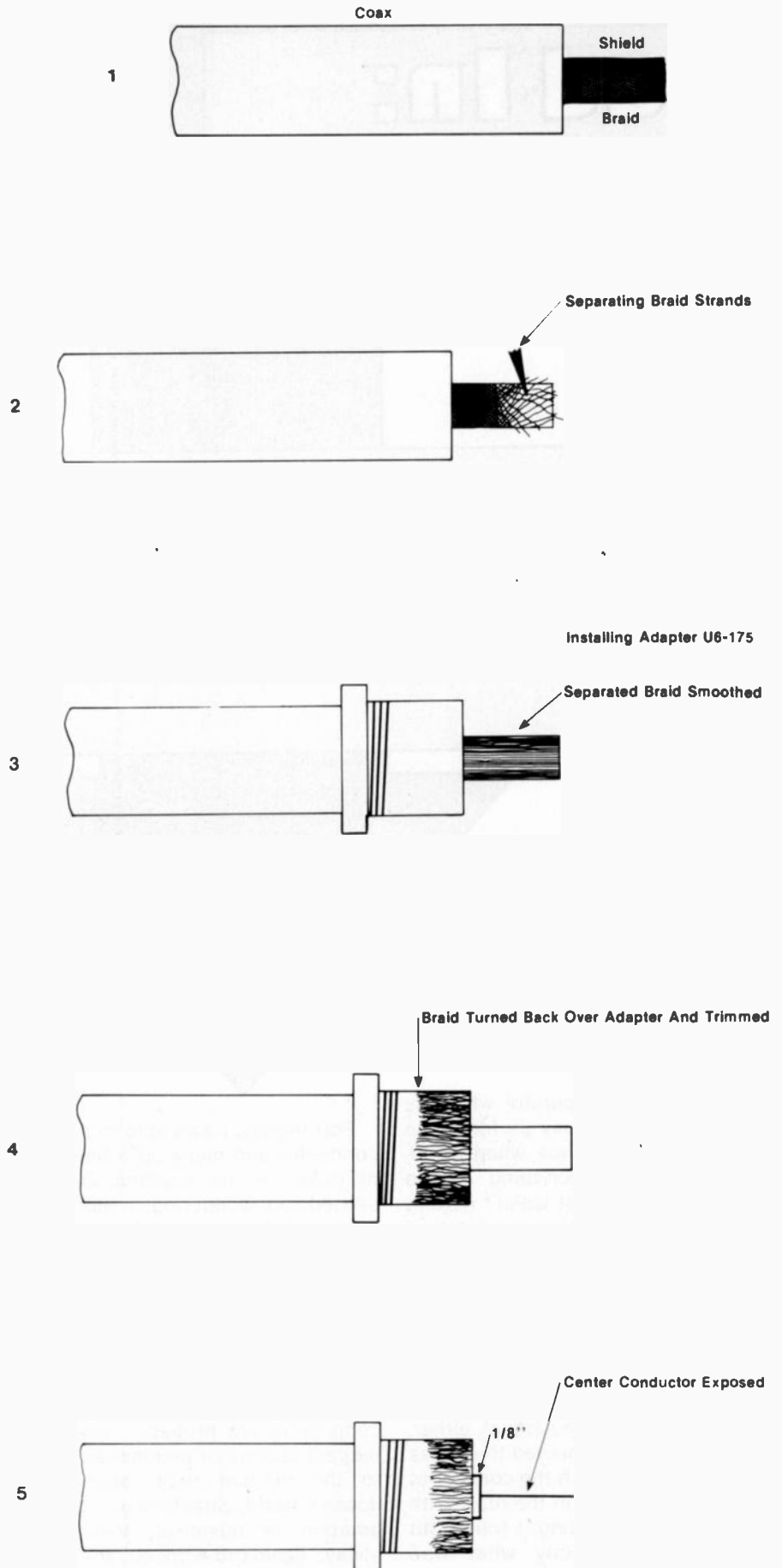
After the outer covering is removed, carefully deraid the cable's shield braid. Do this with the scribe or awl or pick (whichever you choose). Don't hurry here and try to force it. Sure, it may be easier to pull it through a little hole in the braid, but you're looking for trouble—poor performance or shorts—if you do it this way.

Once you've finished debraiding, take a look at the plug you've removed from the end of the line. If it's in good shape, try to salvage it with the soldering iron. All you have to do is heat the center plug and the solder inside will melt and the cable stub should pull free.

If the plug is shot, don't waste your time. You can buy a new one at Radio Shack for 89 cents or so. You'll also need an adapter, called a UG-175. These are also available at Radio Shack.

After you've finished debraiding, take the adapter and slide it over that end of the cable. Slide it down until its neck is just flush with the remaining outer covering. At this time, too, you'll have to install one of the barrels that come with the coax connector. By the way, these are the PL-259's you hear so much about.

To slide the adapter down, you're going to have to smooth the debraided coax and make sure that it's parallel with the center conductor's insulation before you attempt to slide the adapter down. If you know you're going to need a new plug, then slide



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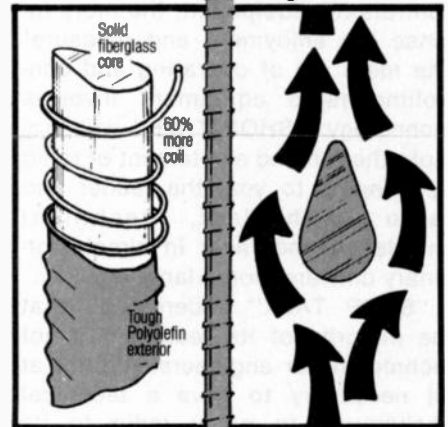
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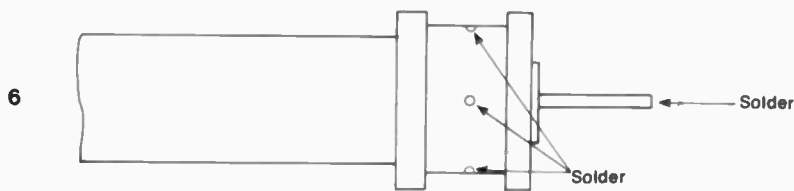
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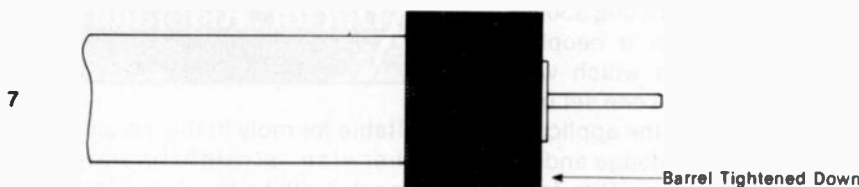
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CIRCLE 16 ON READER SERVICE CARD

Plug Body Installed



Completed Job



the adapter on before you start cutting the outer covering. It can make it much easier.

The remaining steps take no time at all. The next one is to push the debraided cable over the adapter and then trim it. You can use a pair of scissors for this. Trim the debraided shield about halfway down the barrel of the adapter.

With this done, the next step is stripping away the center insulation. Use the wire strippers, and when you're doing this, keep the cut very shallow. Don't risk nicking the center wire conductor because this may do nasty things to the signal when you're all done. And you don't want to have to go through this again, do you?

With the center conductor wire bare, all you have to do is slide the body of the PL-259 plug over the end and then screw it down to the adapter.

Some people will tell you you're all done at this point, but nothing could be further from the truth. The reason

is that you have to solder the outer braid—which should be visible through four little solder holes—to the connector itself.

If you use a high-wattage iron—60 will do—and a narrow point, all you'll have to do is heat the area for a brief time and let the solder flow. This is all there is to it, but it has to be done four times.

The next step is moving to the front of the plug and heating the center connector's body. This is the one with the wire hanging out. Heat both the wire and the tube out of which it's hanging and then run in solder until it is full.

Wait for it to cool. Don't touch it quickly or you'll burn your fingers; I know, I've done it many times. Then pull the barrel of the plug over the whole assembly and tighten it up.

It doesn't take long to become proficient. You'll quickly become the coax expert of your neighborhood once you've done this a couple of times.



SHOP TALK

On The Technical Scene of HOBBY RADIO

By Doctor Rigormortis, the Radio Doctor

Hi! I'm "Doctor Rigormortis," Radio Doctor and Engineer. I'm writing a new column starting this month devoted strictly to the fun and pleasure of playing radio...all kinds of radio! There are as many ways of enjoying radio as there are operators, but one of the ways right up-front is by talking, listening and manipulating the equipment. The more an operator controls his equipment, the more intense his enjoyment and pleasure! The mere act of operating and controlling radio equipment involves technology. "SHOP TALK" will promote the fun and excitement of radio by bringing to you, the reader and radio enthusiast, technical knowledge and facts in simple, ordinary conversational language.

"SHOP TALK" understands that the majority of its readers are not technicians or engineers. It's not at all necessary to have a technical background to enjoy radio to its fullest. We do want and need to know some of the basics of the technology behind radio in order to get on the air and to stay on the air. Some of the basic essentials and a few High Performance tricks will readily distinguish one radio station from another. A poorly performing station results in disgust, frustration and sometimes very gross displays of temper. A top-performing radio station is a pleasure to operate!

High Performance Radio is fun! It is relatively simple to achieve. First, we have to master some of the basics, much like learning how to drive and maintain a vehicle. We also have to uncover and dispose of the myths and mistruths about radio which are commonly spread around the channels by those "who know it all." There are two mistaken notions which come to mind about how to have fun and pleasure in radio:

1) You have to have a lot of money to put into a station.

2) You either have to be a technician or have close access to one.

Neither is true. It is readily possible for a \$300 station to perform equal to or better than one costing \$3000! It is just as possible for a neophyte to assemble a station which will perform right along with one set up by an engineer. HOW? By the application of certain simple knowledge and techniques which the pro's often forget or overlook!

One way "SHOP TALK" will work to make radio more fun and enjoyable for everyone is by answering readers' technical or performance related questions. Readers and radio enthusiasts from CB, Amateur, Freeband, Shortwave Listening, or other realms of radio are invited to submit questions relating to any procedural or technical aspect of radio. If your radio station is not performing "up to snuff" or if you wish to improve performance in a definite aspect, address these and all other similar questions to:

"DOCTOR RIGORMORTIS"
P.O. Box 10723, Edgemont Sta.
Golden, Colorado 80401

A determined effort will be made to answer all reasonable and honest questions, but space limitations will restrict the number of questions to be answered in this column. Personal replies are not guaranteed, but might be possible sometimes when the workload is light. In order for any question to be considered for reply in this column, the reader must provide his or her name and address. Only the name and city-state will be published with the question, however, unless the reader asks to remain anonymous. If a question is not



suitable for reply in this column but is otherwise straightforward and honest, it will be forwarded to another department at S9 for consideration. Questions about conducting blatantly illegal operations are not encouraged, but there is no objection to discussing any purely technical or theoretical aspect of radio.

Until the number of questions exceeds the space allotted for this column, I will present a topic of general interest on High Performance Radio. This month, we will briefly examine sources of potential weakness in every radio station: accessories and peripheral equipment!

PERFORMANCE THIEVES

Absolutely nothing of any good use can happen to a radio signal from the time it leaves the connector on the rear of the set until it is accepted by the antenna. Conversely, nothing of value can happen to a signal from the moment it enters the antenna until it is detected by the receiver. (Linear amplifiers and receiver preamplifiers excepted.) The very best that can happen to a signal as it travels between equipment and antenna is NOTHING! Usually, however, something happens and it is always bad. For example, a 4-watt signal leaves the transmitter, but by the time it gets to the antenna it has weakened to 1 to 3 watts! From the other point of view, a signal received by the antenna is not always received by the receiver. Alas,

there are always losses in coaxial cable of any length between equipment and antenna. Losses are added and sometimes multiplied when accessory equipment such as wattmeter, frequency counter, coax switch box or monitor scope are added to the signal line between equipment and antenna. Coaxial cable and accessory equipment actually absorb some of the signal as it passes through. Some coaxial cable and accessories steal more signal than other types. Sometimes the problem is due to a faulty component or connection; sometimes the fault is in the design of the cable or equipment. The first thing to do is to determine how much of the signal is absorbed by accessory equipment and coax patch cables. This is easily determined by the following test.

Get a fellow operator located some miles from your station to cooperate. Set your station up as it is normally operated, with any and all accessories used in place. Ask the other operator to transmit a brief carrier at which time you note and write down the strength of his signal as it appears on your S-meter. Then, transmit a brief carrier to the other operator and ask him to write down the strength of your signal as it appears on his S-meter. This done, take a pause and remove all accessory equipment from your signal lines. Hook the antenna directly to the connector on the rear of the radio. Now repeat the above test, again writing down the signal strengths of both stations. Compare the results of the two tests. Ideally, both tests should give the same results; however nothing in radio is ideal, and you will probably find that strong measurements were taken on the second test. If the results of the second test were within 1/2 S-unit, you will have little or no performance loss in your accessories and patch cables. If the difference is 1/2 S-unit or greater, then something is reducing your performance by a very significant margin! The cause will be in one of the accessories or patch cables. It may be that repair is needed, or it simply could be poor quality equipment by design. The objective at this point is to merely determine *how much* performance is being stolen by your accessories and coax patch cables. The solution to this and similar problems will be discussed in a forthcoming column.

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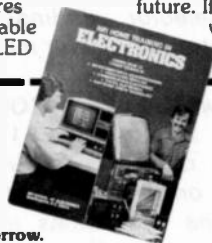
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Tomcat's Mailbag

By S9 Editor
Tom Kneitel



Tomcat answers some of his more interesting mail in this column from time to time. Address your letters to Tomcat's Mailbag, S9 Magazine, 14 Vanderventer Ave., Port Washington, N.Y. 11050.

A CHANGE FOR THE WORSE?

The channel selector on our TV set offers 30 channels. Every time there's a commercial on my kids proceed to click through the stations by pressing every button on the selector box. They do this every night during every commercial. Is it just a coincidence that the TV serviceman comes to our house about once every 4 to 6 weeks?

Carlo Leone,
Chicago, Ill.

Could be! You haven't really given enough information about that selector box to justify telling the kids to keep their little fingers off the buttons (except when necessary). If that selector box controls cable TV programs, then all of the programs have been put on only 1 of the set's channels and pressing the buttons on the control box does not affect the tuner in the TV set itself. If your selector box operates by digital remote control—in other words, an electronic tuner with digital countdown circuitry—the channels are being changed by electrical pulse rather than a motor, and that's easy on the set. On the other hand, the old fashioned remote control is hard on the set because it has a motor at the back of the tuner that is actually turning the dial. It's the same as if you were turning it by hand and too much of that will certainly take its toll by weakening the switch. In addition, if you have remote control, that motor at the back of the tuner can heat up.



The answer really lies in whether your selector box works with electronic signals (easy on the set), or whether it is a mechanical device (which may cause problems if someone indiscriminantly plays around with the buttons). If in doubt, why not just take the control box away from the little darlings and remove any doubt from your mind?

YOU SCRATCH MY BACK -- I SCRATCHED YOURS!

I claim to be the Messiah and have lectured at several leading universities, including Columbia. I am contacting editors of magazines with the suggestion that they write about me. Please call or write.

Morris Silwen,
New York, N.Y.

OK, Morris, it's a deal. I'm writing about you. Now what are you going to do for me?

FREEDOM TO LISTEN

In a recent editorial you explored the reasons why S9's coverage of "Free Radio" broadcasters (some call us "Pirates") will continue. You also pointed out that several DX clubs have recently decided to discontinue listing such stations in their news-publications. Bravo for S9's courage! Anybody who doesn't want to listen to a station because it is operating without a license is free to listen elsewhere, however it is not the right of any news medium to censor information on station activities simply because those who control that medium desire to impose their own personal views upon others. I have resigned my membership in a DX club because of this attempt to lay their censorship trip on me; I had joined because they said that their monthly publication was going to offer station information and frequency data. I quit when I found out that they were filter-

ing and screening the information they received from members for inclusion in their publication. This very same club (like most DX clubs) sees no problems in running numerous listings from red bloc government broadcasting systems located in countries which openly and deliberately jam radio broadcasts from other nations. I wouldn't like to see that information censored either, however I can't help but wonder how the sanctimonious club decided to retain such information and yet remove from coverage (only) American based Free Radio stations. Their set of values is curious, wouldn't you agree?

"Roger The Dodger,"
Free Radio Station
RADIO DALLAS-1620
Dallas, Texas

While your point is well made, Roger, you'll have to ask the club(s) about the reason(s) for running certain items while they concurrently censor other listings from their membership. If you ask me, I think there are already far too many people attempting to force others to think and do as they say without the willingness to permit a choice based upon a free and full evaluation of the facts. I always wonder if such persons were themselves denied the right to make a choice or if they simply decided that their powers of evaluation are better than everybody else's. However, in the situation you mention, my own course of action would not have been to resign my membership but, instead, remain in the club in order to attempt to end the censorship situation. Walking away from these things only contributes to their continuance. Stay, fight, squawk, write letters, and try to affect change from within. It's much more effective than being a quitter—that accomplishes nothing at all.

HOW HIGH IS UP?

If all tall structures are required to have red lights overhead to warn aircraft, why are there none on a broadcasting tower located near my home?

Roger Manoogian,
Appleton, Wisc.

The Federal Aviation Administration sets the rules for warning lights and any tower, building, smokestack, or skeletal structure which is more

than 200 feet tall must have such lights. In addition, skeletal structures must be painted with a distinctive pattern as an added precaution. Also, under certain conditions, depending upon the proximity of the structure to an airport, warning lights may be required when a structure is less than 200 feet high. After a building permit is granted, the FAA will routinely conduct a study (about 1,500 are made each year) to see if the proposed structure will interfere with aircraft landing or takeoff patterns at any airports in the area. Some radio towers and other structures are designed to be slightly under 200 feet in height with the hope of avoiding the FAA regulation. I would venture a guess that the tower located near your home is (1) less than 200 feet in height, and (2) not located near an airport.

AUDIO CLEAR AS MUD

My CB rig has a problem which is driving me batty and nobody seems to be able to offer any reasonable solution. Everybody sounds squawky on it! The circuits have all been checked out several times and nothing appears to be out of kilter. The funny thing is that when I use a headset the audio is crystal clear, and it's clear when I talk. But the rest of the time it's squawk, squawk, squawk. Can you offer any help?

L. Lamarr,
Pilottown, La.

Sounds like you've eliminated almost every possible cause of the problem, but not the right one yet. Since the audio is clear when you modulate or when the headset is plugged in, but not when the speaker is working, I would become suspicious of that component; especially since you didn't mention checking it out. Many service technicians check out speakers by using a flashlight cell and seeing if the speaker makes a "pop," but this quickie-check isn't good enough for your problem. Try disconnecting your present speaker entirely and hooking up a substitute. Your rig probably uses a 4-ohm universal-replacement speaker in the 4-inch size; any similar unit will work as a substitute. If the sound clears up, replace the speaker. Tear the cone out of the old one and give the frame to the kids to play with; it has a rather potent magnet in it.

SHUTTLE SHUFFLE

I missed the April Space Shuttle communications because I didn't have a communications receiver. Now I have a new Yaesu FRG-7700 and I'm all set for the ones to come. Could you let me know the frequencies which are used and also when the three remaining Space Shuttles will be completed?

Art O'Brien,
Beaver Falls, Pa.

Communications between the Space Shuttle itself and Houston are conducted on frequencies outside the range of your receiver. I'm afraid—for instance one of the frequencies in use is 296.5 MHz, which is in the UHF aero band. Although several frequencies are reported as being set aside for communications used during the actual launch, the one noted with the heaviest action during the April flight was 10.780 MHz (Upper Sideband) which provided CAPE RADIO, CAPE LEADER, GULL PHOTO and other ground and aircraft stations prior to the Space Shuttle going into orbit. You shouldn't have any problem hearing that on your equipment. Except for minor differences, all Space Shuttles will be of essentially the same size and design. The next one to be built will be named the CHALLENGER and is scheduled for completion in the summer of next year; the next one after that, DISCOVERY, is slotted for late 1983; while ATLANTIS is supposed to be ready in early 1985. Present plans are that when all four shuttles have been built, there will be one orbiting the earth every week—but that's a long way off.

* * * * *

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S9'S MONTHLY PRODUCT REVIEW

HOW TO TELL A TYPE

Many radio hobbyists have discovered that it's not too difficult to tune in on loads of communications stations sending RTTY (for the uninitiated, that means *radioteletype*.) Amongst the things which can be copied over RTTY are news and weather reports, military communications, hams, Interpols, ships at sea, and many other stations. All it takes is a communications receiver and a little gizmo about the size of a few packs of cigarettes which clips to the speaker leads of the receiver in a few seconds. A new book has been published which not only gives details of getting started in RTTY monitoring (plenty of product and how-to info) but then goes on to display three different master lists of times of transmission plus frequencies used by 50 news (press) services throughout the world for their English language RTTY transmissions. This includes AP, UPI, Reuters, Tass, the Voice of America and many more. It's a fascinating aspect to monitoring, and the book "World Press Service Frequencies," by Tom Harrington (W80MV) will tell you how to get started if

you're a beginner, and how to get the most out of monitoring RTTY if you're already in on RTTY stations. By the way, the book is written in non technical language and the listings section contains many hundreds of stations, schedules and frequencies and is extremely comprehensive—in fact the largest compilation of this information we have ever heard of or come across. This publication can be ordered at \$5.95 per copy from Universal Electronics, 1280 Aida Drive., Reynoldsberg, OH 43068. Next month in S9 we will have more information for you on this fascinating aspect of monitoring.

GENERAL LINE INSTRUMENT CATALOG NOW AVAILABLE

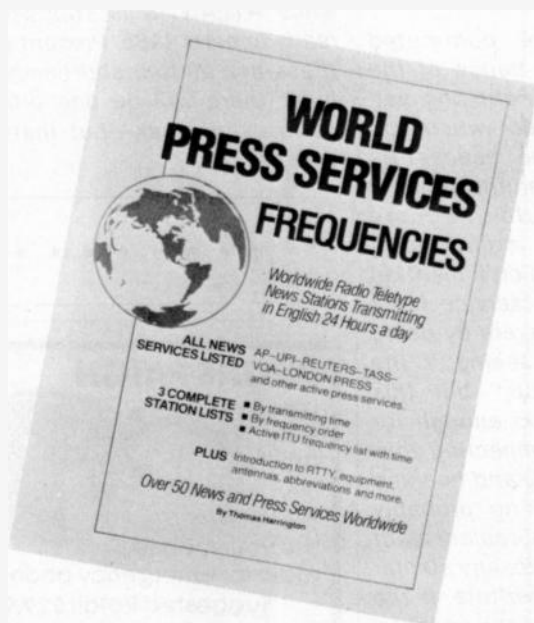
The new 44-page BK-81 general line test instrument catalog is now available—free—from B&K PRECISION/Dynascan Corporation.

The catalog features a broad range of over 50 high-quality test instruments including oscilloscopes, frequency counters, digital and analog multimeters, function and RF signal generators, capacitance meters, digital and pulser probes, semiconductor testers, power supplies, and two-way radio and television test instruments. Each product description includes a detailed specification section and suggested popular applications. Also included is a complete line of instrument probes, connecting cables, carrying cases and other accessories.

New products include a portable dual-trace miniscope; an autoranging capacitance meter; an autoranging microcomputer controlled DMM; a bench top DMM; and new 30 MHz scopes.

The entire line of instruments described in the catalog is locally stocked at distributors throughout North America. Selected products are stocked at distributors worldwide. Most products are available for off-the-shelf delivery.

Catalog BK-81 is available without charge from B&K PRECISION, Dynascan Corporation, 6460 W. Cortland Street, Chicago, IL 60635.



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FCC certified, and License Free! 5 channels available for operation. Each TR-50HH has a built-in crystal controlled FM transmitter, super hetrodyne receiver, standard 9 volt battery supply, 7" receiving antenna, and Hard Hat complying with ANSI regulations. (Also available without Hard Hat). A sensitive squelch circuit drives the receiver into "quieting" during times of no transmission. Each operator hears his own side tone as an indicator that transmission is taking place. Soft, foam-filled vinyl, ear cushions surround the ear without pressure. Complete adjustability for individual custom fit. Request Bulletin 3U for complete details.

Contact R-Columbia Products Co., Inc., 2008 St. Johns Ave., Highland Park, IL 60035 or mark 54 on Reader Service.

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NEW INSTANT-TUNING WEATHERADIO®

Radio Shack announced a new three-channel VHF-FM weather broadcast receiver. This latest addition to the company's line of Weatheradio® receivers features crystal control of tuning for instant station selection with a simple three-position switch, eliminating the problem of off-channel tuning and drift.



The new Crystal Controlled Weatheradio (12-152) receives NOAA (National Weather Service) broadcasts on any of the three channels used: 162.550, 162.475 or 162.400 MegaHertz. Because of the precise frequency selection possible with crystal control, stations can be accurately selected with a three position switch instead of the usual manual tuning knob. Also, the crystal control of frequency means that the problem of drifting off channel has been eliminated.

NOAA/National Weather Service broadcasts offer continuous weather advisories in over 350 cities nationwide. Details are available at Radio Shack stores and participating dealers.

A "front end" RF (radio frequency) amplifier in this new Weatheradio brings in NOAA VHF weather stations "loud and clear" at a range of up to 50 miles, making this receiver effective virtually anywhere in the United States.

This new Crystal Controlled Weatheradio is handsomely styled with a sleek, low profile design and a simulated rosewood finish. It measures just 1½ x 5¼ x 3½ inches (H x W x D). The convenient top-mounted Play-Bar turns the unit on and off; the channel selector and volume control are hidden beneath the unit, since these settings are seldom

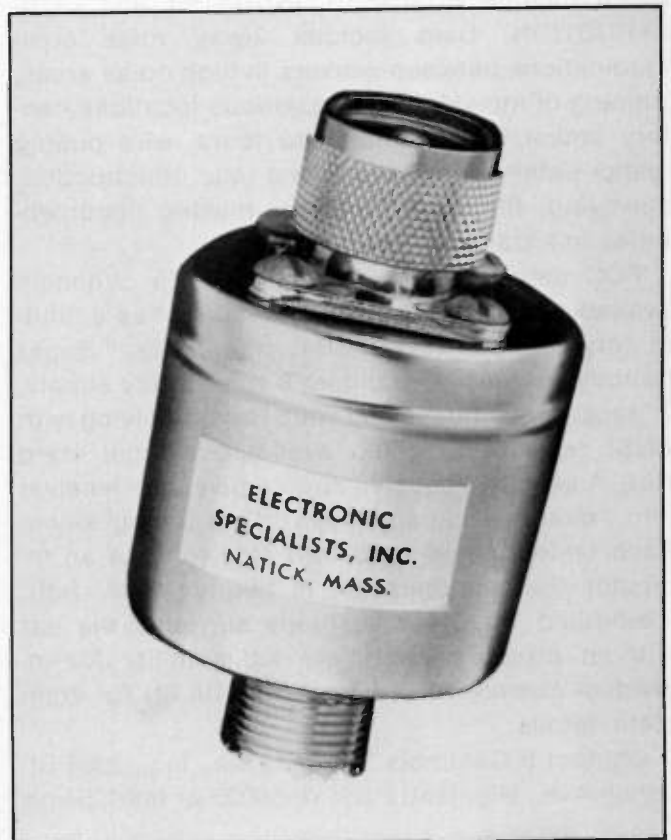
changed in actual use. A 2¼ inch (diameter) speaker is top-mounted for excellent clarity.

Signals are captured by an attached antenna, which can be telescoped down and folded behind the unit for easy storage, if desired. Power is provided either from a 9 Volt battery (not supplied) or an optional AC adapter (not included, available separately).

The Model 12-152 Crystal Controlled Weatheradio is available now at Radio Shack stores and participating dealers. The companion UL-listed AC adapter, Model 273-1431, is also available.

COMPACT LOW PASS FILTER

ELECTRONIC SPECIALISTS announced the introduction of an easy to install compact, low pass filter. *Designed specifically for CB*, this filter connects directly to the rig without any additional cables or connectors. Housed in a sturdy plated metal case, this filter effectively *eliminates any harmonics* which may cause trouble to TV, FM and aircraft frequencies. Contact Electronic Specialists, Box 122, Natick, Mass. 01760, or mark 56 on Reader Service.



HIGH-PERFORMANCE SYNTHESIZED SINGLE SIDEBAND UNVEILED

A new fully synthesized single sideband radio that features keyboard selection of any desired frequency between 1.6 MHz and 30 MHz as well as fast access to 192 pre-programmed ITU channels and 10 factory pre-programmed frequencies is now being marketed by Intech. For even greater convenience, an optional PROM circuit module allows storing of an additional 15 random frequencies for quick channel access.



Designated the Intech Mariner 3600, this ruggedly built synthesized single sideband has a maximum power output of 150 Watts making it an ideal radiotelephone for world-ranging marine vessels, vehicles traveling in remote areas and fixed base stations with worldwide communications responsibilities, and many other uses.

Keyboard entry of all selected frequencies or channels is microprocessor controlled. Each frequency is phased locked to a highly stable temperature compensated crystal oscillator that permits a precise 10 Hz resolution between individual channels. Selected frequencies and channels are displayed on a bright, easy-to-read digital readout display. An illumination control regulates brightness. A unique synchronous AM detector provides superior AM/DSB and AME/SSB reception while an audio derived squelch circuit substantially reduces operator fatigue.

Selected factory options greatly enhance the use of the Mariner 3600. For example, addition of the optional RTTY, radio teletype data transmission, permits unattended wireless data transmission between a vessel and its base station.

The all solid-state circuitry, use of service-proven industrial grade components and individual plug-in circuit modules assures years of top performance and reliability.

The Mariner 3600 is now in production. For more information and product literature, contact Intech, Inc., 282 Brokaw Road, Santa Clara, CA 95050, or mark 58 on the Reader Service card.

MODEL TG-105 PULSE GENERATOR

The new Sinclair-Thandar Model TG-105 is a 5 Hz to 50 MHz pulse generator with an output capability of 100 ns to 100 ms with present or variable pulse widths and repetition rates. Output automatically goes to ground if selected pulse width exceeds period. Additional controls include external or manual triggering, free run mode, and output invert. Outputs include synch, TTL compatible (fan out of 20), and a 50 ohm output adjustable from 0.05 to 5.0 volts.

The TG-105 operates on 110/220 VAC 50 or 60 Hz and consumes 9VA. Size: 255mm (10 in.) x 150mm (5.9 in.) x 50mm (1.96 in.). Weight: 1.2 kg (2.64 lbs.).

For further information contact: Henrick K. Gille, Energy Electronic Products, 6060 Manchester Ave., Los Angeles, CA 90045.

Mark number 60 on Reader Service Card.

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CIRCLE 11 ON READER SERVICE CARD

NEW MAGNETIC MOUNT MOBILE CB ANTENNA

The MAG-20 magnetic mount mobile CB antenna, introduced by Armstrong Industries, Division of MCS, Inc., offers a full 100-pound direct pull attachment force to iron and steel surfaces of cars, trucks, RV's and boats. Also featured is an exclusive Uni-Axis® ball joint that permits a 45° whip tilt in all directions for perfect vertical positioning from all mounting angles. A 17-7PH stainless steel shock spring is also provided.

The black and chrome base loaded antenna design is shunt fed for quiet operation. Tests of the "Q" of the new antenna by an independent group "indicates full frequency coverage with an SWR below 1.2 to 1 from 26.500 MHz to 28.000 MHz."

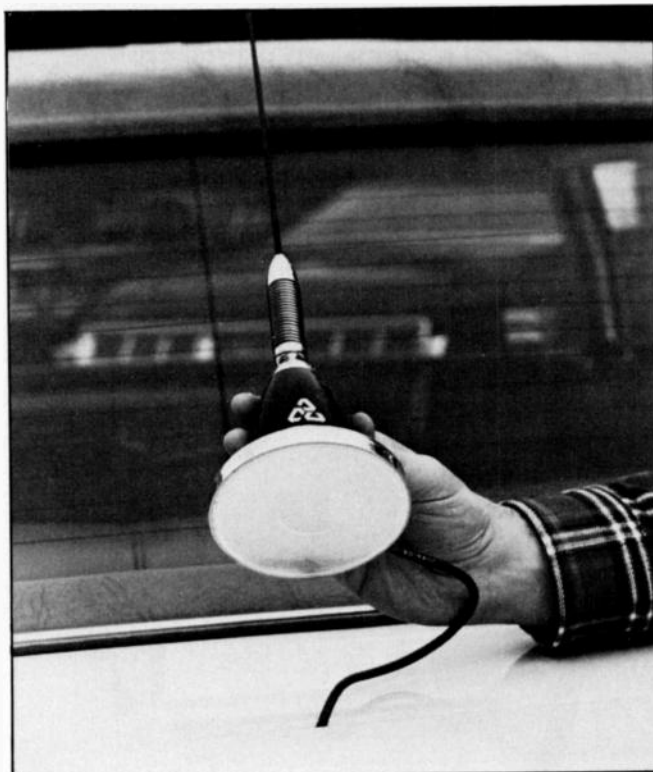
The first truly hollow coil form is utilized in the coil assembly to eliminate losses and boost RF output. The coil form and water tight cover are made of high strength, low loss NORYL glass filled plastic impervious to the elements. Wattage rating is 500 watts continuous or 100 watts intermittent with a lifetime coil bum-out guarantee.

All model parts are stainless steel or triple chrome plated for rust prevention. The new MAG-20's factory pre-tuned 17-7PH stainless steel 42" long whip is taper designed to achieve optimum efficiency due to whip deflection at road speeds. Copper plating adds a full 1 dB gain. The semi-rigid whip is covered with a special black coating helping to prevent corrosion. Also, an anti-static tip is furnished on the 26.5 to 28 MHz antenna.

No soldering is required for installation. 18 feet of braided RG Grade of 58-AU type cable with stranded inner conductor and in-line coax connectors to simplify installation are also provided. An exclusive two-year warranty also covers antennas installed by the ultimate consumer. A quick disconnect 1 3/4 turn helps disassemble the MAG-20 antenna for storage or transfer to another type of Armstrong mount. The new antenna fits six other Armstrong mounts.

The MAG-20 with shock spring and the MAG-10 without shock spring are available from Armstrong Industries distributors nationwide and are clear packaged with instructions, magnetic mount and cable on an attractive red, white and blue display card for protection and easy selection.

For more information on the MAG-20 and the complete line of "All American" antennas, contact



Armstrong Industries, Division of MCS, Inc., Route 24, PO Box 237, Watseka, IL 60970, or mark 55 on Reader Service.

NEW HAMTRONICS® CATALOG

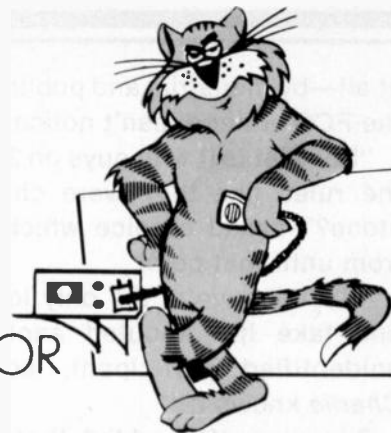
Hamtronics, Inc. announces publication of a new expanded catalog crammed full of goodies for the VHF/UHF/OSCAR enthusiast and two-way shops.

The 40 page, two-color catalog features a new 5 channel, 10 Watt VHF FM transceiver, new COR and CWID modules for repeater builders, and new accessories, such as RF tight enclosures for repeaters and power supplies. Also featured are the new T51 (VHF) and T451 (UHF) FM Exciter modules. Many new ranges of transmitting and receiving converters have been added, as well as a series of receiving converters to extend the frequency coverage of scanners to new or offbeat military, satellite, and commercial bands. The catalog also includes the full line of VHF & UHF antennas for ham or scanner use.

For your free copy of this attractive new catalog, write to Hamtronics, Inc., 65F Moul Rd., Hilton, NY 14468. (For overseas mailing, please send \$2.00 or 5 IRC's.)

TOMCATTIN' WITH TOMCAT!

ACROSS THE CHANNELS WITH S9'S EDITOR
TOM KNEITEL, TOMCAT/SSB-13



UNANSWERED QUESTIONS: Not long ago I was part of a multi-station QSO on the lower side of .365. It was one of those open-ended type conversations with everybody invited to pitch in their opinions on the various aspects of many topics which were pretty much unrelated, but which all somehow led from one into another as the QSO rambled on. Somehow this jaw festival managed to cover energy costs, car problems, hunting, sports, and a dozen other things before it got to the inevitable topic of 27 MHz communications and related matters such as equipment, the FCC, and where people felt such things were going.

Operators on 27 MHz love to talk about CB related matters, and such things are where most round robin QSO's seem to end up. This night they were talking about some of the observations the operators had made about their favorite hobby, especially the things which don't seem to have any answers.

For instance, one operator brought up the point that he owns a commercial fishing vessel and spends a good part of his time operating on the VHF marine band. He pointed out that the salty language on those frequencies would hardly be tolerated on 27 MHz by most operators and yet the FCC appears to be a little concerned with such matters. He added that the use of FCC callsigns is a scarcity on most of the intership frequencies used by commercial fishermen and yet again, the FCC appears indifferent to it all, although the agency blows lots of smoke on the subject of 27 MHz operators not using callsigns even during contacts which are otherwise devoid of X-rated language.

Someone else hopped in to say that the point had been well taken but the big unanswered question relating to callsigns on 27 MHz was more a matter of the FCC harassing Sidebanders along

these lines rather than AM'ers who used their handles minus any FCC callsign.

Now the topic was heating up! A voice from what sounded like "way out in the distance" chimed in to observe that the reasons the fishing vessels so openly and easily say whatever they want is that, because of their constantly changing positions, it would be practically impossible for the FCC to locate them by direction finding, or a strike force team cruising the streets, or by checking out their licensees by means of the callsigns. He added that there is yet another point, that being the possibility of any FCC personnel waiting on the dock with the hope of harassing one of these guys might well be laughed out of the area or sent in for a quick swim.

Now another voice piped in to observe that on the channels used to pass phone calls from car telephones through mobile operators, the calls are easily identified by the vehicle's "phone numbers" which are given each time a call is placed. Yet, the observer noted, the language and topics discussed frequently are what would far surpass any limits of what could be within the FCC rules governing just about any other radio service—and yet the FCC has never been known to hassle Ma Bell or any of her mobile phone customers for their on-the-air procedures or operations.

I added my own comment at that point, speculating that the FCC would be little inclined to change this policy even when the proposed "cellular" mobile phone systems go into operation in the future and place 900 MHz mobile telephones into operation on a far wider basis with the public than is presently in effect with the 152 and 454 MHz mobile phone bands.

"And speaking of callsigns," one other operator chimed in, "if you listen on the scanner bands you very seldom hear callsigns being used properly—if

at all—by industrial and public safety stations, and the FCC either doesn't notice it or doesn't care."

"So what is it with guys on 27 MHz being hung to the rules like they were chisled into tables of stone?" asked a voice which hadn't been heard from until that point.

"Because we're the only idiots who'll sit down and take it!" shouted another voice from an unidentified participant, adding, "And *Uncle Charlie* knows it!"

Someone else added that the FCC's feelings were that marine radiotelephones were a part of the vessels' safety equipment—that some boats may well be required to have a 2-way radio aboard—and the FCC was more or less stuck with some amount of rule violations by these people who viewed the radios as a very minor part of their "thing" in life. On the other hand, 27 MHz people, as well as hams and broadcasters, are by their very nature "communicators," and using the radio was their *main thing*. This causes the FCC, he figured, to be little inclined to put up with much straying from their regulations. On that level, he said, "guys with business band radios, aircraft radios, ship radios, and mobile telephones can get away with lots of over-the-air violations, the FCC being primarily concerned with the radio equipment itself being in adequate shape from a strictly technical point of view."

One of the more frequently heard voices in this QSO said that the FCC didn't really bother 27 MHz operators who stayed within the Channel 1-to-40 band limits, and that it was mostly when they caught some operator outside of those frequencies that they then nit picked over lots of other violations such as shooting skip, running power, and anything they could find, including not using a call sign.

"Oh yeah? That's a crock!" said the fishing captain. He said that one of the broadcasters in Connecticut (WMMM) regularly uses a VHF marine radiotelephone channel (156.45 MHz) for direct "live" remote pickup broadcasts from a boat which gives fishing tips to listeners—and that no station is authorized to use marine radio channels for broadcast purposes. Yet this continuing practice is apparently tolerated by the FCC. He asked how much of a difference that was from two guys holding a contact upstairs above Channel 40; and who the FCC views as being sinister and evil misusers of the public airwaves.

Nobody had any answers for that question, but

some other operator wanted to know why there really was any need for about 75% of the present FCC rules and regulations governing 27 MHz, especially since they were: rejected by the public, impractical, not supportive of good communications, in violation of Constitutional rights to free speech, limiting to the full use and enjoyment of the communications equipment owned by citizens, and enforceable only on the most limited scale.

No answers to that one either, although after about 15 seconds of silence someone jumped in to say, "If the regulations are stupid and can't even be enforced, then what is everybody so worked up about? Why should anybody care one way or the other? Why even think about the regulations?"

"Because they're there?" asked one operator after another long period of contemplative silence. "Y'know, like Mount Everest," he offered as a follow-up.

There were no more talkers—"because they're there" was about the best and only answer this noble council could offer after long discussion and deliberation. It made me think back to one of the comments made early in this segment of the QSO, "we're the only idiots who'll sit still and take it."

Ultimately that seemed to be the key to the whole discussion. *Are we the only idiots who'll be concerned about and/or intimidated by dumb regulations and a paper tiger agency which can't enforce them?* If that's so, then I suppose that with the exception of the couple of wormy apples in our ranks (like the CB'er in San Diego who broadcasts Hitler speeches over the channels), 27 MHz operators are apparently concerned about being on good terms with the FCC and its regulations, if only the FCC would make an effort to get its act together and approach us in an honest and realistic manner and without the deceit which has long marked its attitude towards 27 MHz.

The people who operate "upstairs" above Channel 40, in total defiance of the FCC, are the very same people who will wait for a red light at a deserted traffic intersection in the middle of the boondocks and not drive an inch into the intersection until they get a green signal, even though there is no safety hazard and no possible chance of getting a ticket from *Smokey*. If the FCC had any smarts they would realize this, and then make every effort to reorient their warped and impractical approach to 27 MHz.

Why don't they do this? Well, as you might imagine, that's probably a great topic for another long

discussion of the late night group on the lower side of .365—as long as there's still something people are interested in discussing, there's still some hope of getting things straightened out. The—er—ah—problem is that we are the ones discussing it, and with ourselves.

The FCC is the one with the dumb rules and no ability to enforce them. And they're not even talking amongst themselves anymore, much less to the licensees!



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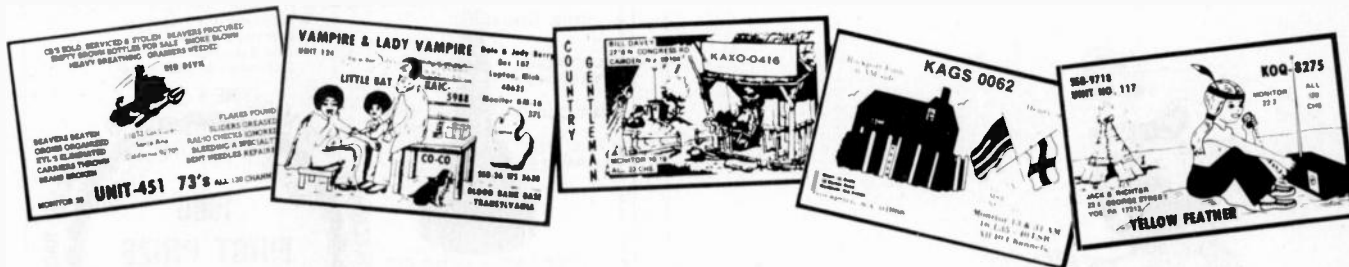
SIDEBAND ID NUMBERS?

They don't use "handles" to ID on the sideband channels, stations use "Sideband ID Numbers." If you're an active Sidebander you may already have several local or regional group ID numbers—if you're a newcomer or a future Sidebander, you may not have any Sideband ID numbers at all! Whether you have a dozen numbers or none at all, it's easy and important to you to get yourself a set of *national* ID numbers from the *SSB Network*, and become a vital part of the growing national Sidebanding movement by affiliating with the oldest (1964) and most prominent national sideband group. Old timers, newcomers, and future Sidebanders should obtain information and an application for national *SSB Network* numbers by sending a self-addressed stamped envelope to: *SSB Network*, P.O. Box 381-XF, Smithtown, NY 11787.

Cardswappers Unlimited

S9's Column for QSL Cardswappers

Conducted By: Dorothy Ferrentino



The Cardswappers Unlimited Column is dedicated to the hobby of swapping or exchanging CB QSL cards (wallpaper). The below listed CB'ers have submitted their names to this column to indicate that they invite other CB'ers to send them QSL cards for swapping purposes, and will respond to all who do so with a QSL of their own. Those readers wishing to swap cards with these people, should mail QSL cards directly to the addresses indicated, and NOT to the offices of CB RADIO/S9. Readers wishing to be listed as Cardswappers are requested to obtain a copy of our rules and standards for becoming a part of this column. These rules were outlined in the December (1979) issue of CB RADIO/S9; a reprint is available for 25 cents and a self-addressed stamped envelope. Address all requests to: Dorothy Ferrentino, Cardswappers Unlimited, CB RADIO/S9, 14 Vanderventer Ave., Port Washington, NY 11050.

KPM-0221 Hazel Gettinger, 78 Hudsonsdale St., Weatherly, PA 18255

R-CAT-6 Al Eisner, Vinnell (Sang) Corp., P.O. Box 5396, Riyadh, Saudi Arabia

KBGD-5575 Patrick Clinch, 22 Division St., Brick Town, NJ 08723

UNIT 776 Jerry Willis, FMC TMC 1 Box 43, APO 09710 N.Y.

KAST-6919 Mildred S. Bugbee, Rte. 1, Box 39, Pennville, IN 47369

SSB-451 2000 Center, Box 1134, Berkeley, Ca 94704

KDO-0025 Jean M. Delphart, 160 Smith St., Buffalo, N.Y. 14210

KLF-8464 L.P. Sell, Sr., 9423 Waverly Dr., El Paso, TX 79924

KBLL-6250 Jerry Willis, FM TMP 1, Box 43, APO 09710 N.Y.

KFO-3678 John P. Tinker, Rte. 2, Box 61, Jefferson, MD. 21755

SSB-L16 John P. Tinker, Rte. 2, Box 61, Jefferson, MD 21755

KBLX-6051 P.O. Box 14786, Philadelphia, PA 19134

KES-1734 Walter Cummings, 106 Haskell St., Westbrook, Maine 04092

KAOZ-9736 Herman & Mamie Daley, 22 Teetsel St., Saugerties, NY 12477

KAIF-3799 P.O. Box 509, Gig Harbor, WA 98335

KAPZ-7857 Jay Ehret, P.O. Box 173, Oaklyn, NJ 08107

KBBV-1422 Loys & Rosemary Marsh, 4971 Hwy. H., Kewaskum, WI 53040

UNIT 124 Dale & Judy Berry, Box 187, Lupton, Mich. 48635

KFO-3678 John P. Tinker, Rte. 2, Box 61, Jefferson, MD 21755

KAYL-1977 P.O. Box 3268, Marlon, Indiana 46952

SSB-451 2000 Center, Box 1134, Berkeley, Ca. 94704

KOQ-8275 Jack B. Richter, 23 E. George St., Yoe, PA 17313

KCS 6872 Cecilia & Wayne Roberson, Box 11014, Parkwater Station, Spokane, Wn. 99211

KND-6021 Al Eisner, Box 058, Vinnell (Sang) Corp., APO New York 09038

KHN-4892 Mike Zimer, 2917 Coventry Blvd., N.E., Canton, Ohio 44705

KAIN-9936 John Jesse, 727 Webster, Mexico, MO 65285

UNIT 183 Vernon Ferguson, P.O. Box 183, Henderson, TX 75652

RED DEVIL 11632 Las Lucas, Santa Ana, California 92705

KBRE-9298 Claudia Mitchell, Box 2607, Providence, RI 02907

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By Craig, VX-42/Unit 342-X-ray/SSB-7042

Readers of this column are requested to let us know any overseas addresses they come across or hear on the air. We would also like to receive copies of any DX cards received by our readers so we can run them in the Hello Skipland Column. Since we don't wish to be responsible for the "safety" of any rare DX QSL's we request that readers send in copies (Xeroxes or other office type copying machine prints are fine) and not the original cards.

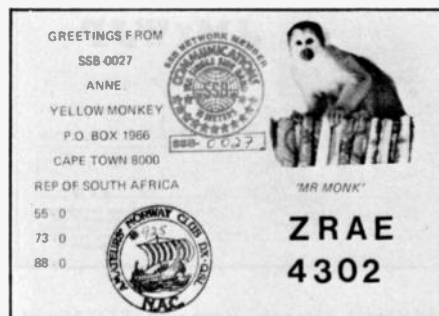
OVERSEAS ADDRESSES

KIT-017, Neville, Box 1620, 1930 Vereening, Rep. South Africa
 ARP-262, Giovanni, Box 22, Scottomarina (VE) 30019, Italy
 KIT-279, Guido, Box 343, Willemstad, Curacao, Neth. Antilles
 HR-203, Rafael, Santa Lucia F.M., Honduras (Central America)
 KIT-147, Sten, Box 3021, Angered S-424-03, Sweden
 RG-539E, Jerry, 8 Ave., 29-67 Zona 11, Guatemala City, Guatemala
 ARP-219, Ken, Box 37, Yandina, Qld. 4561, Australia
 UNIT 44, Ricardo, P.O. Box 857, San Pedro Sula, Honduras (Central America)
 ARO-145, Otavio, Box 145, Belo Horizonte 3000, Brazil

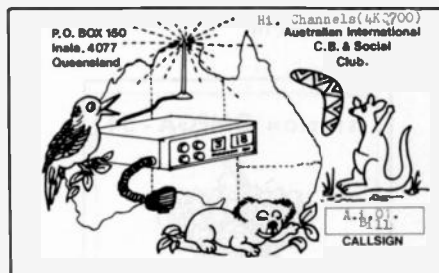
PW-713, P.O. Box 272, Hamilton 5, Bermuda
 UNIT 951, Jeff, P.O. Box 1219, St. Johns, Antigua, West Indies
 UNIT 0194, Maurice, P.O. Box 223, Kingston 8, Jamaica, West Indies
 UNIT 554, Lindsay, P.O. Box 123, Haberfield, Sydney, N.S.W. 2045, Australia
 CT-132, Carlos, P.O. Box 549, Curacao Netherlands Antilles
 CLAUDIO, Box 11, 37065, Leghago, Italia
 UNIT 582, Carlos, Box 362, Barranquilla, Columbia
 UNIT 70, Herby, P.O. Box 2B, Nueva Laredo, Mexico
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 CDX-01, Carlos, P.O. Box 1242, Niteroi, Rio de Janeiro ZC 24250, Brazil
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 LSO-90, P.O. Box 753, Luxembourg (Europe)
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 ICEI, P.O. Box 221, Frederica, Denmark 7000
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 Gabriel, P.O. Box 3134, Beirut, Lebanon
 ARP-449, Enrico, Box 74, Cesano Moderno 20031, Italy



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 AUSTRALIA INT'L 01, Bill Ballis, Box 150, Inala, Qld. 4077, Australia
 AUSTRALIA INT'L 04, Brian Pederson, Box 35, Inala, Qld. 4077, Australia
 AUSTRALIA INT'L 05, Charlton Pascoe, Box 88, Spring Hill, Brisbane 4000, Qld., Australia
 AUSTRALIA INT'L 34, David Facy, Box 150, Inala, Qld. 4077, Australia
 AUSTRALIA INT'L 27, Mark Swain, 3 Conway St., Riverview, Qld. Australia

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Australia

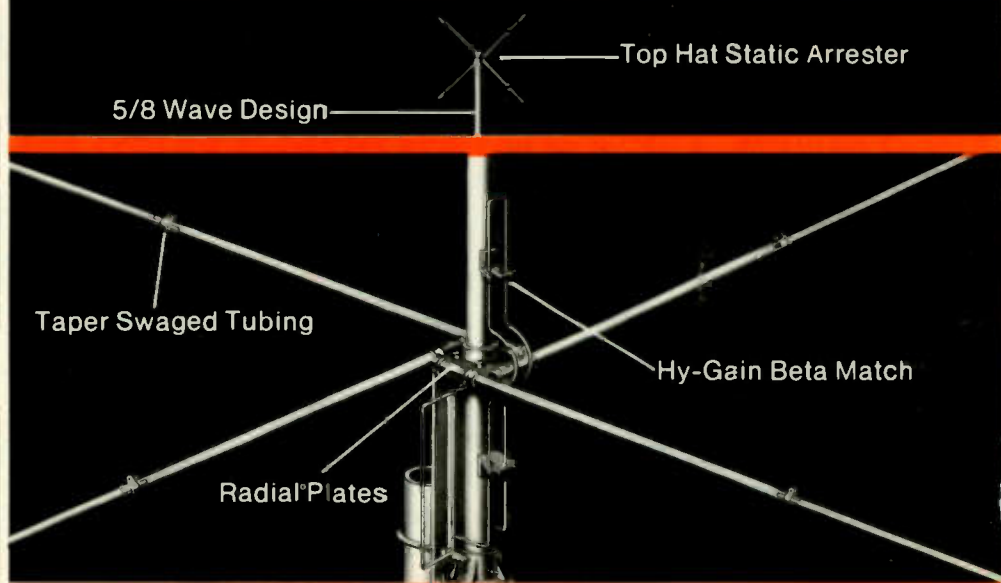


- JM1WJP, Hiroshi Yamada, 856 Nishishimojo-cho Kofu-shi, Yamanshi-ken 400, Japan
- SSB-05, Budi Susatyo Goenarso, P.O. Box 439, Bandung, Indonesia
- SSB-0111, Doddy, Borobur DX Group, P.O. Box 142-KBY, Jakarta, Indonesia
- SSB-0119, Alessandro Ficcadeti, P.O. Box 1, San Savino, Italy 63030
- SSB-0120, Javier Vera Ferron, Calle #246 Co. Aleman, Merida, Yucatan, Mexico
- SSB-0122, Donand W. Scott, P.O. Box 158, Melville, Western Australia 6156, Australia



- WG-1823, Jim & Lovy, 64 Thatcher St., Castlecliff, Wanganui, New Zealand
- CH-3329, The Moose, P.O. Box 105, Kaiapoi, N. Canterbury, So. Island, New Zealand
- HN-1410, B.T. Southwood, 152 Elizabeth Dr., Tokoroa, New Zealand
- WD-87, Daryl Smith, P.O. Box 532, Salisbury 5108, Australia
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Hy-Gain uses taper swaged, heavy-gauge, aircraft quality, seamless aluminum tubing for all radials and radials. This gives our coll nears less wind loading and more stability than with most other designs available.
4. **The Top Hat Static Arrester.**
Hy-Gain engineering expertise developed what we call the "Top Hat" Static Arrester. This wire configuration atop many of our base station antennas is designed to reduce precipitation static to an absolute minimum, resulting in crystal-clear, two-way communication.
5. **Radial Plates.**

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coming events

OCTOBER

Bossier City, LA. 2nd Annual 1 Break, October 3-4, at the National Guard Armory Building on Military Road. Live music, booths and displays, door prizes and trophies. General admission \$1.00; Saturday night dance admission \$3.00. For more information contact Jerri Blandino, 650 Yarbrough, Bossier City, LA 71111, or call (318) 742-4075.

West Seneca, New York. 11th Annual Jamboree organized by the International Dial Twisters Citizen Band Radio Club; held Sunday, October 11, 11 a.m. to 6 p.m. at the Ironworkers Hall Local #6, 196 Orchard Park Rd. (Rt. 240). Cash prizes, drawings, trophies, displays, refreshments and an auction. For more information write to club chairman Leonard Perrino, 110 Richfield Ave., Buffalo, NY 14220.

Huntington Beach, CA. Regional Meeting, open to all interested in the SWL/DX hobbies. To be held Saturday, Oct. 17th, 9 A.M. to 5 P.M., at the Village View School, 5361 Sisson Drive. On hand will be receiver displays, discussions/lectures, Q&A session, radio auction, and door prizes. Coffee/Donuts to be served. If you're interested in shortwave, this is a great way to spend your Saturday. For more info contact: SCADS, 3809 Rose Avenue, Long Beach, CA 90807.

NOVEMBER

Greenfield, Indiana. 5th Annual Citizens Band Jamboree, Saturday, November 7, from 12 Noon to 9 P.M. at the Fairgrounds in the 4H Building. Live entertainment, trophies, door prizes and 3 large cash prizes. 50% of the profits will be donated to the Pleasant Run Children's Home. Free admission and parking; public invited. For Display Booth information, write M.C.B.T.B.C.A.I., P.O. Box 19088, Indianapolis, IN 46219.

The world's most popular CB base antenna! Hy-Gain was the first to design a 5/8 wave collinear antenna. It was the ultimate omni when we invented it and it still is. Its impressive 5.3 dB gain in all directions has become the industry standard that other 5/8 wave omnis are measured against.

The Penetrator's signal is compressed at the horizon for extra power and distance because of its extra long 22' 9" (6.9m) radiator length. Its unique top hat discharges static buildup to nearly eliminate noise. This is not just another ground plane antenna; its superb design and heavy-duty construction will handle 1500 watts of power with no problem because there are no power-robbing loading coils to burn out.

Model 500 The Super Penetrator

- 5.3 dB gain
- 1500 watts power handling capability
- Low signal-to-noise ratio
- Compressed signal for extra power

Model 473 CLR II

This is the most copied 5/8 wave collinear antenna on the market. The CLR II achieves a powerful, no-nonsense 4.2 dB gain at the horizon, and a big 500 watts of power handling capability. This is, by far, the best value in Base Station Antennas available today.

Model 410 The Original Long John

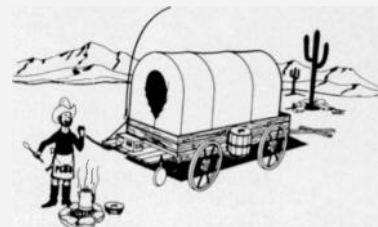
This five-element yagi with 24' (7.3m) boom delivers an amazing 12.5 dB forward gain with 31 dB front-to-back ratio.

For long distance, high powered action, this one has all other five-element yagis beat. This famous Hy-Gain Long John can handle 2000 watts of power with ease. Top quality materials and exclusive Beta Match feedpoint system with direct dc ground guarantees efficient power transfer and increases your talk power 18.4 times the normal output of your radio.

Model 542 SDB 6

Two 12' (3.7m) beams on a 14' (4.3m) cross boom for 12.7 dB forward gain.

THE CB PIONEERS' CORNER



By Judy, SSB-99/PCBS-99

THE QUEST FOR A "CHANNEL 9"

It's odd how things get forgotten or twisted around as time continues on its never ending slide into eternity. The other day I was watching a TV program and someone was saying, with what appeared to be much authority, that CB radio was started by the truckers in 1974! Two monstrous goofs right in that one sentence—CB radio on 27 MHz was in full swing 15 years earlier and the truckers had nothing to do with its creation. In fact, I don't think the truckers even bothered with CB radio until well into the 1970's!

I'm always reminded of the story which appeared in another CB publication just after the death of Elvis Presley. It said that he first became interested in CB radio when he was a trucker. Of course the story was absolutely preposterous. Elvis' career as a "trucker" was limited to driving a local delivery truck ("6-wheeler"), and by the time CB radio became legalized, it was well after he was a popular star. Elvis did later acquire an interest in CB radio, but that was well on into the 1970's, and the use had nothing to do with trucking. However, in the mythology of "The King" somehow the legend started to go astray—the facts were distorted by time.

Another thing which even throws active 27 MHz operators is the fact that Channel 9 wasn't always set aside by the FCC as an official emergency channel. Surprised? The idea to set aside Channel 9 was first proposed in 1960 and not by REACT, which had come into being in the very early 1960's. The idea actually appeared in the 1960 issue of the CB CALLBOOK and was proposed by International Crystal Manufacturing Co. of Oklahoma City. REACT, on the other hand, was (at that time) being sponsored by Hallicrafters, a competitor of International Crystal in the manufacture of CB equipment. Actual-

ly it was International Crystal's President, Roy Freeland, Sr., who thought of the Channel 9 concept.

The Channel 9 idea was first given major national publicity in the monthly CB column which Tom Kneitel was at that time writing for *Popular Electronics*. Later, when Tom edited the first issue of *CB Horizons* (in 1961), he continued to plug Channel 9, adding the informal title NATCH-9 (National Calling Channel-9) to help popularize it. *CB Horizons* was also plugging the idea that operators monitoring Channel 9 paint the top 6 inches of their mobile whips a fluorescent red to signify their support of NATCH-9. The NATCH-9 concept was constantly mentioned in stories and editorials, however with the exception of International Crystal Mfg. Co., manufacturers were indifferent to the idea.

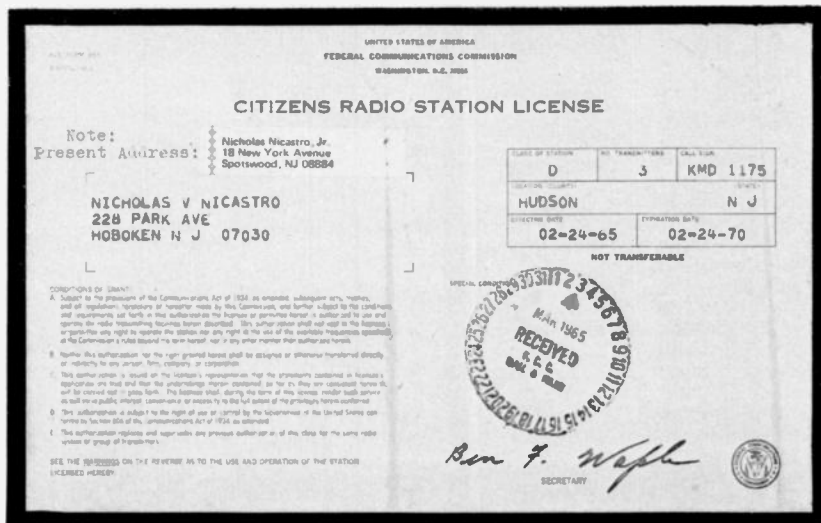
When Tom left *CB Horizons* to start *S9* in 1962, he made NATCH-9 one of his major editorial concepts. After lots of hammering away it finally looked as if the FCC was finally about to recognize 9 as the emergency channel and give it some sort of official status. Again, editorials flowed in order to support the idea and convince the FCC of its soundness. REACT announced that it was using Channel 9 and so did dozens of other organiza-

tions. Petitions, letters, and post cards were sent to the FCC in support of the idea. The result was heartbreaking; when the FCC announced their decision, it was only the recognition that some people were unofficially using Channel 9 for emergencies and that the FCC did not object to such voluntary use. But that's as far as it went. The FCC did not give the idea any official sanction.

Then, in mid-1967, the idea was revived up again. Several petitions were again broadsided at the FCC, most notably one from the Electronics Industry Association (EIA), the group which represents CB manufacturers.

In early 1969, REACT took a try at getting the FCC to approve the idea. At that time REACT was newly under the sponsorship of *General Motors*, and they sent a detailed petition which spelled out numerous reasons why the FCC should finally grant Channel 9 official status. The FCC went back into a huddle.

In October of 1969, they adopted a Notice of Proposed Rule Making which set forth the Channel 9 idea; and on April 27th, 1970, Docket 18705 was released which adopted Channel 9 as the CB emergency channel. It had been a 10 year fight! CB won!



SOME PIONEERS

Waldron Smith, of Stroudsburg, Pa., started out in CB in about 1965. His first callsign was KKG-5045, however now he is known as KMG-3644, or UN-CLE BARRY.

Emmaline Galliher, now KAKK-8822, and her OM, John, now KCH6111, of Vermont, Ill., started out in about 1960 with the callsigns 18Q6148 and 18Q2082. Emmaline reports "CB has always been an enjoyment."

Ray Montanez commenced his CB operations way back in 1959 under the callsign 2A5581 which was issued when he lived in New York City. At that time he was modulating on an EICO 762 which he had built from a kit. In the 1960's Ray moved to Nebraska and for a few years he was out of CB altogether. These days Ray lives in Waverly, Nebraska, and operates as KAJV-7742.

As KMD-1175, Nick Nicastro appeared on the air in 1965 using a Hallicrafters CB-5—a 6 channel rig. He still owns the old rig! Nick hails from Spotswood, N.J., however in the old days he lived in Hoboken, N.J.

Old time S9 reader Edward W. Pritzker, of Fairfield, Conn., better known as THE HAWAIIAN BEAGLE, began his CB career as 1W3887 in 1960. Those were the days he used a Lafayette HE-15 at the base and an HE-20 in the mobile. Later he became KBA-7172 and then KBS2155. Ed's a science teacher at Jonathan Law High School in Milford, Conn.

George A. Berdovich, KHC-0262, is also SSB-311, from his base station in Gary, Ind. His first license, issued in 1963, identified him as KHC-0262 and, in fact, he is one of the few operators who has managed to hang on to his original callsign. He started out with a Knight 2500 and then went to a white faced Johnson. Later he got into Sidebanding and these days he has a Cobra 138. As of November of '78 he's also had a ham ticket—KA9CTR.

Glenn W. Dye, KNM-2200, of Wildwood, N.J., is also known as THE SOUTH JERSEY REBEL, however back in the early days he was 3W2750. Glenn's a Sidebander and a member of the SSB Network, holding membership number SSB-237. He is lucky enough to live in one of the beautiful ocean resort areas along the shore in southern New Jersey—in fact (unfortunately) the location of the worst Holiday Inn I've ever stayed at in all of my travels across the nation!

Moving up?

More sidebanders prefer President SSB over any other brand. There must be a reason!



AR 144
40-Channel AM/SSB Mobile Radio

There are reasons why more single sideband operators prefer President! Start with our years of engineering expertise. We have the state-of-the art technology to design and build our radios for maximum range and voice fidelity, ease of use and total reliability. In fact, our radios are so superior that we back them with a Two-Year Full Warranty . . . the strongest warranty in the industry!

Take, for instance, the President AR 144, featured above. It represents a lot of engineering ingenuity in a 4½ pound package. It features Solid State construction and Phase Lock Loop circuitry to deliver sideband performance second to none. And it has all of the controls, switches and other features you're looking for . . . but won't find . . . in comparably priced competitive radios.



Grant
40-Channel AM/SSB Mobile Radio
For serious single sideband CB'ers, the Grant is the way to go for peak performance . . . compact size. Start with the way it looks. Fantastic but functional. And beauty that isn't just skin deep.



Washington
40-Channel AM/SSB Base Station
Washington means leadership. And this 40 channel beauty has led the way, since its introduction, as the most requested SSB base station on the market. Full-featured, with power to spare!

President . . . the ultimate in Single Sideband!

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The Radar Column

by "Jammer"

COUPLE CHALLENGES ARREST

Eugene and Linda Frederick will soon find out if their arrest by Channahon police was properly handled.

Police it seems, arrested Mrs. Frederick at her home on a traffic charge. The police did not have an arrest warrant.

Mrs. Frederick was arrested about 10:30 p.m. Nov. 24th for speeding and resisting a police officer. The vehicle she was allegedly driving had been traveling 47 mph in a 40 mph zone.

Her husband was arrested for battery, for allegedly poking an officer in the chest after a scuffle. Frederick had ordered police off his property when they could not show proof of the alleged speed of his wife's vehicle on a radar unit.

The arresting officers asked for aid from another local police chief who told the officers they should get a warrant; based on a Supreme Court ruling in April 1980. Instead, the Channahon officers pushed their way into the home as Mrs. Frederick was trying to keep them out. She testified she was knocked to the floor.

Mrs. Frederick was finally arrested and held almost three hours before being released from custody. Her husband, handcuffed and also arrested, was released several hours later on bond.

ESP ON TRIAL

If a device is 80% electrical, but contains electronic parts, can the device be categorized as electronic?

That is one of the crucial questions that Judge Eugene Creany might have to answer in deciding the fate of the controversial Excessive Speed Preventor or ESP, that has been purchased by about 450 municipalities in Pennsylvania.

A device is electrical if it is powered by electricity, and electronic if it has a signal that must be amplified, according to expert testimony.

The question arose in an overtime day for the Cambria County Court judge hearing four appeals concerning speeding arrests made by the Lower Yoder Township Police using ESP.

If the township loses its case, the municipalities that have brought ESP's and those that have bought

similar devices, such as the Vascar used commonly on the eastern part of the state, could find the equipment useless if the judges ruling calls the device electronic or knocks down the state regulations as too vague or unconstitutional.

The Pennsylvania State Vehicle Code allows any policeman to use mechanical or electrical speed timing devices, but says only the state police can use electronic devices, such as radar.

We will keep you posted as to the outcome of the trial.

UNMARKED POLICE CARS MAY BE BANNED

Banning the use of unmarked Oregon State Police cars to ticket speeding motorists would seriously affect highway safety, an Oregon State official says.

Mayor Harris Kirby, head of the agency's traffic division, told the Senate Transportation Committee that unmarked cars are needed to catch drivers who use radar detectors, CB radios, and other means to avoid getting nabbed by marked patrol cars.

The committee is considering a bill that would prohibit state police from using unmarked cars for traffic enforcement. The bill's sponsor, Senator John Kitzhaber, said that the bill raises two valid concerns—that it is easy for someone to impersonate a police officer by placing a flashing light atop a light colored car and that marked cars serve as a better deterrent to speeders.

The agency has 128 unmarked cars statewide.

LEGISLATIVE UPDATE

The states of Florida and Louisiana both introduced legislation in the month of April regarding prohibitions on radar detectors.

Florida's bill, Senate 926, was introduced by Senator Poole on April 7, 1981. If passed, possession, sale, and use of radar detectors will be prohibited.

Louisiana's bill, H.B. 424, was introduced by Bella on April 20, 1981. This bill will also prohibit use or sale of radar detectors.

Currently, these are the only two bills active on radar detectors.

RADAR COULD HALT DEATHS

A dream of automotive engineers is to make cars smart enough to protect even the most negligent driver.

Sophisticated computers are becoming standard equipment on automobiles. That coupled with advances in microwave technology are bringing automotive radar systems out of the realm of dreams.

RCA Corporation has already developed a radar breaking system that could be adopted to cars in the very near future—all that's lacking is a major commitment from an automaker.

Working through a list of problems, the company came up with a radar system that won't stop a car short of collision, but will significantly reduce the impact speed.

False targets—bridges, viaducts, roadway signs or anything that could trigger the braking mechanism at the wrong time—were the toughest problem for the new system.

Its attractiveness is increased by another use—a radar cruise control device that adjusts itself automatically to match the speed of the vehicle ahead.

In that application—already in use on RCA test vehicles—the driver is spared having to disengage the cruise control to slow down and then reset it to resume full speed. It's done automatically.

N.Y. DETECTOR CONVICTION REVERSED

In a case which could have statewide implications, Columbia County, New York Judge Warren E. Zittel has overturned the conviction of a Glens Falls man last year in Chatham, New York town court.

Zittel's long awaited ruling said radar detection devices are not specifically outlawed by Section 397 of the New York State Vehicle and Traffic Law.

A state trooper who saw a unit in Carmen Canale's car when he stopped it on the state thruway's Berkshire spur in the town of Chatham charged him with violating Section 397.

This section makes it a misdemeanor in New York to use a motor vehicle equipped with "a radio receiving set capable of receiving signals on the frequencies allocated for police use."

A town court jury found him guilty last March, but it was appealed and has now been overturned.

Judge Zittel noted that radar was not utilized in the enforcement of speed limits when the Section was passed back in 1933, so radar detectors were not contemplated.

It might be here noted that inasmuch as the FCC has changed the licensing of police radar from the

Police Radio Service to the Radiolocation Radio Service, *Pictoretakers* do not even qualify as operating on frequencies allocated for police use."

SPEED TRAP SIGNS RULED A NECESSITY

Municipalities in Cambria County, Pennsylvania must erect warning signs before using a device known as "ESP" to nab speeding motorists, a local judge has ruled.

Judge Eugene Creany also ruled municipalities must adopt local ordinances allowing them to use the Excessive Speed Preventor or similar devices.

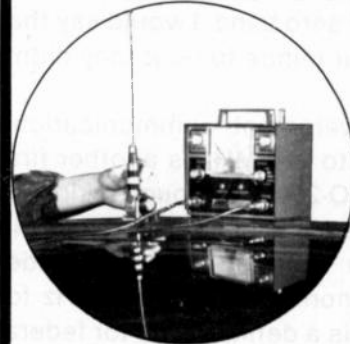
Speeding charges against four men arrested by the Lower Yoder Pennsylvania Township Police Department were dropped as a result of Creany's ruling.

Attorneys who represented the four men argued before the judge that "ESP" is an electronic device and therefore allowed only for state police use under Pennsylvania's vehicle code.

Joseph Chobot, an engineer employed by the manufacturer, told the judge that the device was not electronic in nature.

The judge agreed in his ruling but said the state vehicle code requires notices publicizing the use of the machines be placed where they are being used.

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CIRCLE 12 ON READER SERVICE CARD

THE MONITOR POST

RICK MASLAU/KNY2GL SCANS THE CHANNELS

LET'S LOOK AT THE NEW PRO-2002 SCANNER

One of the best things about the constantly increasing interest in scanners is that it has spurred manufacturers into what can only be described as a competition to bring out more dazzling scanners than ever before; scanners with new or unique features which seem tantalizingly well designed to call out to monitoring buffs, "take me home with you."

There's no denying that the new Radio Shack PRO-2002 was designed and put together with that plaintive call as a part of its mettle. The initial thing the scanner enthusiast notices about the PRO-2002 is its super frequency coverage, offering new and exotic high-interest frequency bands never before included in a sophisticated scanner offering of *frequency search* feature. This scanner offers the following bands: 30 to 50 MHz; 108 to 136 MHz; 138 to 174 MHz; and 410 to 512 MHz. For starters, the 108 to 118 MHz segment of the VHF aero band is a set of frequencies which has been ignored by other manufacturers of keyboard programmable scanners and when you take into account that about 2 years ago the Radio Shack people told me they had little interest in the VHF aero band, I would say that when they made up their minds to do it they didn't spare the enthusiasm!

Coverage of the government communications band running from 138 to 144 MHz is another first chalked up by the PRO-2002, although skipping over the 136 to 138 MHz artificial satellite band will no doubt cause *some* scanner fans to wonder "why?" The ability to monitor 138 to 144 MHz for the first time, however, is a definite plus for federal frequency fans and opens up many military frequencies to scrutiny for the first time.

The exciting and rapidly expanding UHF federal communications frequencies have been given some attention too by the PRO-2002, and the coverage starts at 410 MHz which gives the user a good toe-hold on many tactical and surveillance frequencies employed by the more interesting agencies. One might wonder why the UHF coverage didn't start at 400 MHz, where the (AM mode) UHF aero band leaves off and the non-aero federal frequencies commence. In this respect I would say that from 400 to 406 MHz about the only things you'd hear are telemetry operations from



artificial satellites, radiosonde balloons, and from earth-based transmitters monitoring geophysical phenomena such as might be employed along earthquake fault lines, around Mt. St. Helens, and by remote automatic weather stations. It is apparent from the "missing" 136 to 138 MHz coverage in addition to the "missing" 400 to 406 MHz coverage that the PRO-2002's designers didn't think a sufficient number of people would be interested in hearing these coded tone transmissions to bother including these frequencies in the scanner. I would say, however, that as long as they were going to pick up coverage at 410 MHz they would or could have started the ball rolling at 406 MHz where the federal agency voice operations commence. Why this 3 MHz wide swath was left out is somewhat of a mystery since the *most* interesting and exotic agencies are to be monitored *above* 410 MHz. There's good stuff between 406 and 410 MHz too, however, and it would have been nice to have this in the PRO-2002 as long as they were going to the trouble to include UHF federal frequency coverage.

And, of course, the 225 to 400 MHz UHF aero band wasn't included, but that's an old story and is *perhaps* a future mountain to climb! Fact is, the PRO-2002 really offers much more frequency coverage than is yet available in any other scanner!

GENERAL DESCRIPTION

OK, so we've explored the frequency coverage, now let's see what else is going on. Yes, it's got 50-channel coverage, each of the channels scanned is easily programmed from the front panel keyboard and you can intermix frequencies from the various frequency ranges. Five "banks" of channels (10 frequencies each) are provided so that

the user can lock out entire blocks of 10 channels if it is desired to do so rather than lock out the channels one at a time. A delay feature can be added to any frequencies it is desired to monitor for 3 seconds after the station leaves the air, and any channel can be selected as a "priority" frequency.

The PRO-2002 has dual scanning rates, 3 or 6 channels per second. I am a fan of fast scanning and personally have never had any use for the slower scanning rate of any scanner. Frankly, I would have liked to have seen the PRO-2002 scan even *faster* than 6 channels per second! When the receiver is turned on it does not remember which scanning rate had been programmed in the previous time the set was used so it scans at the slower of the two rates. The user must depress the scanning rate button if the faster of the two speeds is wanted each time the scanner is turned on.

A replaceable battery is used to preserve the electronic memory in the event of power failure or accidental knocking the power plug out of the wall. It should be noted that even without the battery installed the PRO-2002 will be able to hang onto the programming information for a brief period of time. The built-in digital clock will continue to operate for about 10 seconds if you've got the battery connected during a power failure, however after that the clock must be re-set (only in the morning) "from scratch."

One feature of the PRO-2002 which I liked especially is the 10.7 MHz and 455 kHz IF design. At my specific location, scanners with 10.8 MHz IF's have dropped phantom and image signals at some extremely inconvenient places on the dial—such as the 2-meter ham band repeater which knocks out my ability to monitor the FCC's repeater frequency, or the aircraft traffic which devastates the Coast Guard on 157.15 MHz. Possibly this is not a problem in your area, and, indeed, you may find that local frequency use makes a 10.8 MHz IF "ideal" for your purposes. For my area, 10.7 MHz works out best, and phantom signals have not popped up at places I neither want nor need them.

OPERATION

While your first look at the multi-buttoned front panel gives the impression that it's going to take a year to figure it out, the unit is really most straightforward in operation and is accompanied by an instruction book which is very thorough without bogging down in a sea of words that confuse more than inform (as has been noted with various pieces of consumer electronics gear).

I have not put the PRO-2002 onto a test bench to attempt to verify Radio Shack's specs of ± 9 kHz at -6 db and ± 15 kHz at -50 db selectivity, nor have I bench tested the sensitivity specs of 1 uv on the VHF aero band and UHF band, 0.6 uv on the other bands. The main and most important "bottom line" test, of course, is what the scanner can do when connected to a good antenna and tuned on to do its "scanning" thing, although the specs offered by Radio Shack would be adequate for suitable operation. Using a simple VHF high band ground plane antenna mounted outside at a height of 30 feet, I have had no difficulty in copying many base stations on the high/low/and UHF bands from 60 and more miles distant. I found that stacking up quite well against other scanners connected to the same test antenna; I had no complaints with this, and none with the unit's selectivity or ability to reject spurious signals. All in all I found it to be an excellent unit and would mention only one minor detraction which could possibly have been unique to the particular unit I had for testing. This consisted of a *very slight* hum heard under the modulation any time the scanner was stopped on a channel while in the *search* or *scan* mode. Placing it into *manual* operating mode at such times would instantly remove the hum.

The Radio Shack PRO-2002 covers well over 20,000 individual frequencies, and it does it by means of advanced circuitry incorporating 143 chips, transistors, diodes, microprocessors and other sophisticated hardware. It was meant to be impressive, and the high-pitch "beep" sound the PRO-2002 makes each time it is given a programming instruction is all part of the slick package Radio Shack has put together here, right down to its wide low-profile appearance and black/brushed aluminum color scheme. Quite frankly, they succeeded in impressing me! The PRO-2002 is going to be a hard act to follow.

SEARCH FEATURES

Now here's a really nifty feature—the *automatic search*. The way this feature is generally designed, the user selects a segment at the spectrum to be searched and then programs the upper and lower limits into the scanner. In the PRO-2002 you can scan in this manner, but on up to *five* frequency segments in continuous succession. So you might, for instance, search 32.50 to 33.00 MHz, 163.00 to 163.475 MHz, 122.0 to 122.95 MHz, 414.00 to 414.975; and 49.50 to 49.90 MHz in one swoop through the search cycle! Very nice, indeed!

WHAT'S NEW? YOU AIN'T SEEN NOTHIN' YET!

Wow! This is certainly an eventful month! It looks like all of the leading scanner folks decided to unload the heavy artillery at the same time! Lots of new products for scanner fans and they're all sure to cause a stir. Let's scan these exciting innovations and products without delay!

FIRST HAND HELD SYNTHESIZED SCANNER

Electra Company has announced a breakthrough in scanning radios with their new Bearcat® 100 hand held portable. Fully synthesized, it requires no crystals. Compressed into a 3" x 7" x 1 1/4" case is more scanning power than many full-sized units. The unit has a full 16 channels with extended frequency coverage. Power consumption is kept extremely low by using a liquid crystal display and several low power integrated circuits which are new to the industry and to Electra Company.



The Bearcat 100 produces audio power output of 500 milliwatts and a hefty one full watt when used in conjunction with the accessory AC adapter included in the package. The unit has patented Track Tuning, selectivity of better than 50 dB down, and sensitivity of less than a microvolt on all bands and all channels.

Electra took pains to insure the compactness of this new Bearcat addition. They devised an ingenious frame made of high strength, heavy duty aluminum that acts not only as a structural element, but at the same time provides shielding for the internal circuitry. It has chrome plated keys for functions that are user controlled such as: lockout, manual stepping of all 16 channels and automatic

scan. Even search is provided, both manual and automatic, and Electra exclusive.

The unit operates on 6 AA batteries and has a battery low LED indicator to signal when to recharge. A special internal circuit protects against overcharging while also preventing excess drain on the batteries.

The unit's wide frequency coverage includes all public service bands (low, high, UHF, and "T" bands), both 2-meter and 70-centimeter amateur bands, plus military and federal land mobile frequencies. The unit has direct channel access and a built-in automatic scan delay.

The package includes a sturdy carrying case, earphone, battery charge/AC adapter and has a suggested retail price of \$449.95.

Complete details are available from Bearcat scanner suppliers, by writing to Electra Company, 300 East County Line Road, Cumberland, Indiana 46229, or by marking 51 on the Reader Service card.

PROGRAMMABLE SCANNER

Regency Electronics, Inc., has introduced the computer synthesized, 10 channel D100 scanner. The programming capability allows the user to choose from over 15,000 frequencies covering 6 bands.

Programming is accomplished by touching a pressure sensitive, backlighted keyboard that "beeps" when a correct entry is made. In addition, the keyboard allows selection of scan, search, manual or delay modes.

Other features of the D100 include priority control, dual level display, channel lockout, display messages, and CMOS memory battery which saves entered frequencies up to six months.

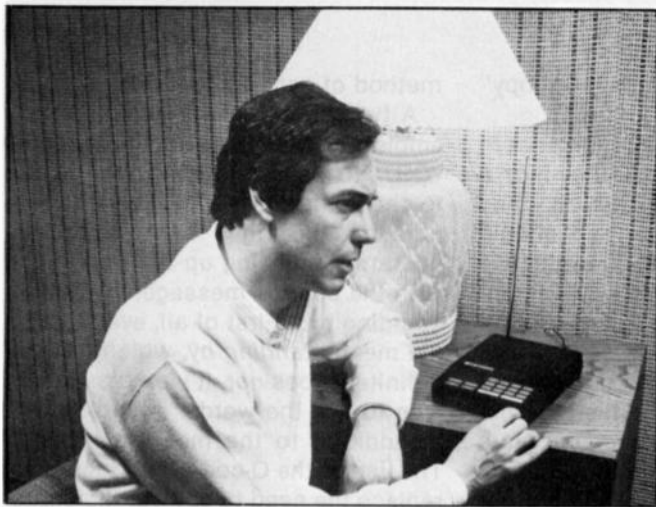
The unit is available at a retail price of \$249.95.

For further information contact Regency Electronics, Inc., 7707 Records Street, Indianapolis, Indiana 46226, or by marking 52 on the Reader Service card.



FOX ENTERS SCANNER MARKET

Fox Marketing, Inc., the sales arm of Fox Radar Detectors, hopped into the scanner market with their new Fox BMP 10/60 (base, mobile, portable). It is the first scanner to offer the unique features of base, mobile and portable systems in a sleek, compact and lightweight unit.



The Fox BMP 10/60 is also the first scanner at the low suggested retail price of \$349.95 to offer 60 pre-programmed active frequencies, scanning for up to the moment breaking news on police, fire, weather, marine and mobile telephone calls.

The scanner also offers more common technological features of channel lock-out, delay, and action. Scanner listeners are able to skip individual channels not currently of interest; activate a pre-selected action channel of their choice, so no action is missed; and also pause longer on individual channels in order to hear all of the two-way communications between police car and dispatcher.

In addition, the BMP 10/60 has a semi-automatic search feature that seeks out unknown frequencies.

The Fox scanner is compact and light at 6½" (w) x 1¾" (h) x 9" (d) at 1½ lbs.

The Fox BMP 10/60 illustrates contemporary design with a smooth, touch sensitive keyboard which responds with a distinctive "beep" to verify positive contact of a selected key.

As a mobile unit to operate in the user's car, boat, truck or motorhome, the Fox scanner will slide into an optional handsome mounting bracket. The bracket package will include a DC power cord adaptor to operate the scanner from the vehicle's cigarette lighter. The bracket is 5" (l) x 7" (w) x 2¼" (d) and allows the Fox BMP 10/60 to easily slide into place for monitoring while driving.

The bracket also allows for quick removal of the

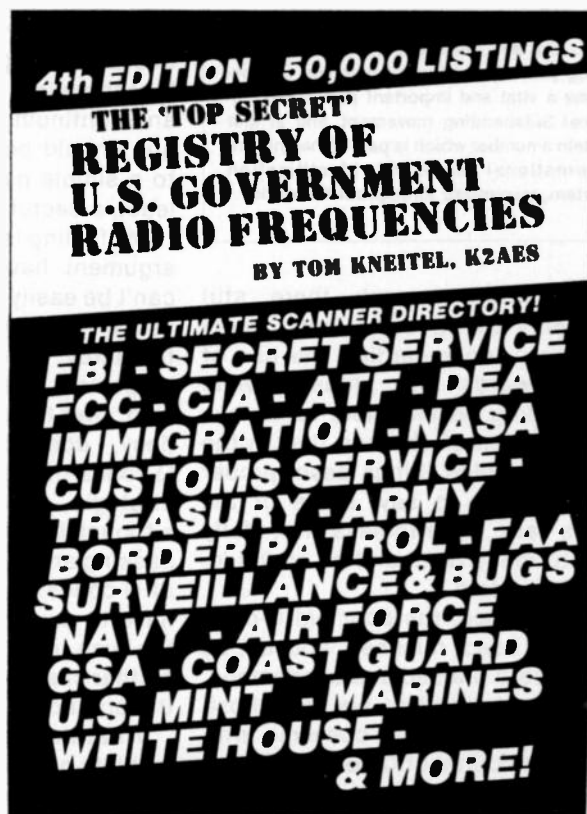
scanner to place it in a glove compartment for security or to carry it along to the next location.

Other optional accessories will include Porta-Pac, a portable carrying case which contains a separate antennae and earphone to keep the scanner by your side for reports anytime...anywhere.

For more information, contact Fox Marketing, 4518 Taylorsville Rd., Dayton, OH 45424, or mark 50 on the Reader Service card.

NEW "TOP SECRET" REGISTRY FOR 1982

Just at press time I received a copy of the all new 4th edition of Tom Kneitel's "Top Secret" Registry of U.S. Government Radio Frequencies. The new edition is in a handy 5¼" x 8½" format, and has about 50,000 listings—all this in a book which has grown to a formidable 120 pages! A few of the many new features in the book are loads of frequencies used by major government contractors in the fields of electronics, aviation, avionics, ship-building, armaments, etc. And, of course, greatly expanded information on frequencies of military,



FBI, Secret Service, Treasury and countless other agencies which use scanner frequencies. More about this amazing new book in the next issue. In the mean time, you can get one of the very first copies available. The new 4th edition is \$9.95 plus \$1 for First Class Mailing from CRB Research, P.O. Box 56, Commack, N.Y. 11725. Keep scanning!

ON THE SIDE

S9'S MONTHLY COLUMN FOR SIDEBANDERS

BY BILL SANDERS/SSB-295, KW-5304, KBAH6794

FIXEM-UP: GETTING NATIONAL NUMBERS

Single Sideband operators don't use "handles." Instead we identify by special sideband numbers. Those many readers who write to us asking how they may obtain a set of these numbers are advised that we recommend obtaining a set of permanent national numbers from the SSB Network, which is the largest, most prominent, and oldest Sidebanding organization in the world. There are no dues! We suggest that ALL Sidebanders now avail themselves of the opportunity to become part of the vast network—future sidebanders, new sidebanders, and even experienced old-timers with "this many" local and regional numbers. A self-addressed stamped envelope sent to The SSB Network, P.O. Box 908, Smithtown, N.Y. 11787, will bring you information on how you can become a vital and important part of the national Sidebanding movement, and at last obtain a number which is part of the uniform international Sideband identification system, recognized throughout the world.

Surprisingly enough there still seems to be some controversy and confusion regarding the use of various words and phrases while Sidebanding. While there is always some amount of ebb and flow in the matter of which things seem proper and improper to say, some of the basics are nevertheless not fully clear to many Sidebanders or would-be Sidebanders.

For instance, the poor old Q-code has been used, misused, abused, as well as both praised and condemned. In a general overview, we have those operators who easily converse with copious amounts of Q-codes dropped into their QSO's—oops—I mean contacts. They think and talk in terms of this code; not only is it a verbal shorthand for them and their listeners (they say), it also helps to maintain what has become more or less of an "in" language of some areas of radio communications and, as such, helps in establishing the mystique of an "inner circle" or exclusive clique of those involved in the hobby. Also,

they are reputed to be easy to "copy" through interference.

Those who don't like the Q-codes in Sidebanding argue that they are a hand-me-down code which was created for use in CW and should have been left there; that they usually do not actually save any significant amount of time in a contact (even if there was any reason to save time!), and they rob the speaker of the ability to sound natural in his or her speech—sounding (they claim) more like a talking computer than a human. Furthermore, some have pointed out that they are no easier to copy through heavy interference than uncoded messages, and any thought that there is a benefit to establishing and continuing an inner circle mystique should best be transferred over to a simple password or, at the very least, a secret handshake.

My feeling is that both sides of this argument have made points which can't be easily dismissed by the other "side." Certainly I would not be foolhardy enough to make any flat judgement one way or the other. My own over-the-air practice, I cannot deny, does include a couple of Q-codes occasionally sprinkled in at strategic points in most contacts, although I am far from meeting or surpassing any world records for the use of Q-codes. In fact, I would probably have to say that I am ambivalent to the use of Q-codes on Sideband, neither championing nor condemning the practice.

What does bug me is the seeming inability of so many operators who do use them to use them properly! That is to say, to use a Q-code to correctly state the message they wish to convey. All too often the message they are sending doesn't quite match up with what they mean to convey and, to me, that seems awfully counterproductive; made doubly offensive when it happens in the SSB subculture of CB which sets itself aside and prides itself on being *the* superior

method of communications.

A typical, in fact very common example is the use of the Q-code "QRT" to mean "standing by" (similar to the AM-side "10-7"). Every time I turn on the rig I hear countless operators finishing up their contacts with the curious message, "QRT and standing by." First of all, even if QRT did mean *standing by*, which it most definitely does *not*, it would be pointless to say the words "standing by" in addition to the message "QRT." The use of the Q-code is supposed to replace the need to say out the entire message—so why would they both be used? Makes no sense!

Secondly, as I mentioned, QRT doesn't mean *standing by* anyway. It means almost the opposite, that the station has completed its communications and is being taken out of service for the time being, that the equipment is to be turned off and shut down and no operator will be available to offer further communications. Therefore to say "QRT and standing by" is one of the dumbest of all possible messages to send since it is totally self-contradictory. The only way a person might conceivably be both QRT and simultaneously standing by would be if the rig was shut off and they were going to be *standing by* it in the physical sense (being upright on their feet and located in close proximity to the shut-down transmitter) or in the moral sense (like a person who says they'll *stand by* the flag, ready to act if and as needed should any infidel say or do anything to impune its dignity). I suppose that there are actually instances where either or both situations could happen but certainly not as often as you'd be able to account for by the number of times you can hear it over the air.

Those who have completed one contact and who will be remaining at the controls of their station in the hopes of securing additional contacts with other stations would use

the Q-code "QSX" to announce that status. Or they might prefer to forget the Q-codes and simply say that they were "standing by." The Q-code "QSX" means, basically, *standing by*—or as might be said on AM-side, "10-8." It would be proper to use one or the other of these messages, but redundant to use them together as in "QSX and standing by." Saying these two together would make as much sense as telling someone, "Hello, which is the word I use to greet those whom I first meet for the day." So, take yer pick, but don't say QRT when you mean QSX! However, if you are indeed signing off for a while, then be my guest and say you're "QRT."

Another badly violated Q-code is "QSK." It would be more correctly used to notify others who are holding a conversation (QSO) that you are not only monitoring them but that you would very much like to join in their contact and become part of it.

The problem which has arisen with "QSK" (which was adopted into 27 MHz SSB use much later than most other Q-codes) is that it has fallen easy prey to being maligned by newcomer converts from AM-side

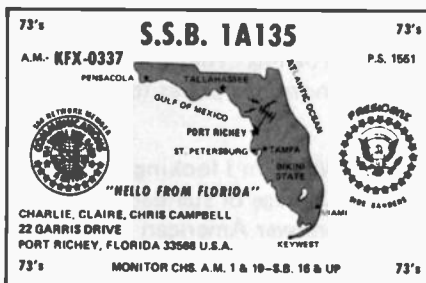
And how many operators realize the difference between QRM and QRN? I hear these being used almost interchangeably. While it's true that they are related to one another in that they both result in difficulty in communicating, that's where the similarity ends. The code QRM (usually said as "Q-R-Mary") means difficulty in receiving or copying another station because of interference from other stations on the frequency or bleeding over from an adjacent frequency. On the other hand, QRN ("Q-R-Nancy") denotes difficulty in receiving because of static or any naturally occurring RF interference such as from lightning or atmospheric noises. Of course you might just as easily say, "I can't get a good copy on you because there are too many stations on the frequency," or "Sorry, can't copy you through the static at this end."

Those are the main problem Q-codes; however, for the information of those who are a bit fuzzy on all Q-codes and would like to know more about them in order to best decide to either use or ignore them, the other commonly encountered Q-codes used on Sideband include:

to care about) "QRD," which relates to finding out which direction one portable station is bound while in motion, or "QTE," a signal which is used to indicate that information on "true bearings" is required or about to be transmitted. These, as pointed out, were originally devised for CW use, primarily between shore stations and ships on the high seas. CW operators, or *brasspounders* as they became known, had to be familiar with a wide variety of codes and message abbreviations.

Sidebanders, thankfully, really only have to be familiar with plain language and at least a working knowledge of the Q-codes in order to find joy and communications efficiency. It is a matter of an individual's free choice as to which of the two systems will prevail during their own operations, and I suspect that most Sidebanders use a combination of both approaches.

One thing about which I would caution the ardent Q-code user, and that is to not become so enamored with this infernal code that its use bleeds over into landline or direct "eyeball" conversation, especially on topics which are totally unrelated to communications. I have an acquaintance who freely uses the Q-codes in all of his conversations. Once, while we were fishing together, he said that after lunch we should "change our QTH" to get a better shot at the fish because "there's too much QRM from these other boats." I'm sure that if the fish were listening they never understood a word. I certainly did although I thought he was a little off the wall. I would only wonder about how his poor wife lived with this, and what they must wonder about him on the job! Anyway, he isn't unique—I've run into surprisingly more of these people during my years in Sideband. Please don't be one of them.



who are having some confusion and difficulty in accepting the fact that on Sideband there is no need to ask any mysterious "channel master" or "channel monitor" for permission to communicate over a frequency or channel which isn't in actual use at the moment. So, given the fact that they understand that there is a distaste for using the AM-side word "break" to gain access to a channel at such times, they figure that a much more adequate way to make their call on an unused Sideband frequency is by asking someone (*anyone*) for a "QSK." I've heard people repeat their "QSK" attempt at securing an AM-type "break" several times until someone came back to them and explained that "breaks" aren't needed or given on Sideband!

QRX, which means "wait a minute, I'll be right back."

QRZ, meaning that you realize someone has called your station but you somehow managed to miss their complete identification because of QRM or daydreaming.

QSL, and I assume that most operators know about *wallpaper*.

QSY, which means "changing to another operating frequency."

QTH, or as they say on AM-side, the 10-20; the location of a station.

There are dozens of other Q-codes which would be found by anyone taking the trouble to research the topic, however, with few exceptions, they are not even remotely of any potential value to what 27 MHz Sidebanding is all about. It is not likely that you would have occasion to use (or even

FIRST...AGAIN!

We've heard of famous firsts, but this is too much! Hardly having just gotten over the hullabaloo over the recent Bicentennial, here comes the very first souvenir celebrating the Tricentennial! A mere 95 years ahead of its time, it figures that it's tied in with Sidebanding—the communications tool which is perhaps 95 years ahead of its time.

The world's first Tricentennial Souvenir is a disc shaped good luck

pocket piece which is being made available *at no cost to all* 27 MHz operators. It's a real attention getter too. I had one when I went to a recent coffee break and the first guy I showed it to promptly convinced me that it was imperative that I immediately present it to him as a gift—I explained that they could be sent away for, but he didn't want to wait. He spent the rest of the coffee break showing it to everybody and sending dozens of people over to me to find out how to get one for themselves!



These great Tricentennial Souvenirs are available from the SSB Network, P.O. Box 908, Smithtown, N.Y. 11787—but everybody can get one; it *isn't* necessary to be a member of the SSB Network. You *do* have to enclose a self-addressed stamped (35¢ in stamps only) return envelope however, and if you are already a member of the SSB Network, please give your membership number for an *extra free gift*. If you're not (yet) a member of the SSB Network (you should be), please mention any other Sideband group membership numbers which you may have—or if you have none, please say so. It's all part of a survey the SSB Network is conducting which will, ultimately, provide the Network with information which it is hoped will benefit the hobby. A word to the wise—there are only a limited number of these which were made up and they're sure to be collectors' items, so my suggestion is to not wait too long before getting yours. One to a customer, as they say, and I can almost guarantee that most people you show it to will want one or ask you to give them yours! Be sure to tell them how to get one, but not to wait too long to try!

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DANGER!!

FERROEQUINOLOGIST AT LARGE



Hi, I'm Dick Cowan. I'm the publisher of S9. I'm also one of the country's most ferocious ferroequinologists. You don't recognize the word? It translates out to "collector of old toy trains."

Anyway, I have bought hundreds of old trains from S9 readers in the past six years, but my hunger for a bigger collection keeps growing. That's why I want you readers to know that I'll pay enormous prices to add good trains to my collection.

What am I looking for? Primarily Lionel, and that includes O gauge or standard gauge. But I'll also consider old Marklin, Ives, pre-war American Flier, and several others. No HO or N gauge, please. I wouldn't know what to do with them.

How much will I pay. Perhaps a few hundred dollars, perhaps a few thousand. It depends on what you've got and what condition it's in. Just as an example, a Lionel 5344 engine can bring a thousand dollars or more, and lots extra for the freight or passenger cars. A 400E will bring at least as much. Complete sets, especially in the original boxes and set cartons can be worth as much as \$5,000. In other words, I'm very serious about this whole train collecting thing.

If you've got old trains stored away in the basement or attic, just jot down the numbers on the engines and cars. A polaroid picture will help, but it isn't all that necessary. I want those trains and I'll go to any lengths to get 'em. Why not drop me a line, or better still, give me a call.

Richard Cowan, Publisher
S9 Magazine
14 Vanderventer Ave.
Port Washington, N.Y. 11050

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DX KORNER

C.M. STANBURY II REPORTS ON THE INTERNATIONAL SHORT WAVE SCENE

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MEDIUM WAVE

When the Voice of America put a new 50 KW transmitter into operation on the island of Antigua this spring, they were getting a head start in what promises to be an all out war for control of the standard AM band in the Caribbean—a struggle which will result in more interference for listeners in all parts of North America. On November 3, Cuba is scheduled to officially withdraw from the North America Regional Broadcasting Agreement—that treaty which allocates MW broadcast channels amongst this continent's nations.

Of course the Habana government has violated NARBA for the past 20 years: eg. the 150 KW transmitter on 600 kHz presently used as a Radio Moscow relay. But Cuba's official abrogation of this agreement coincides with an international conference which will draw up new frequency allocations for all the Americas. The conference will have to contend with Cuban demands for substantial power boosts such as 500 KW on 550 and 1010 kHz, and possibly a U.S. proposal to switch from 10 to 9 kHz spacing (although the FCC is under heavy pressure to reverse its position on this issue).

The latter plan (which is also favored by the Castro government) would increase the number of channels but, according to its opponents, further degrade overall AM reception. The scheme is also disastrous for DXers because it means almost all Trans Atlantic and Trans Pacific loggings would be blocked. MW broadcast stations outside the Americas already use 9 kHz spacing and presently are assigned frequencies between North American channels.

Meanwhile another station one jump ahead of the impending chaos is Caribbean Beacon, a new religious broadcaster on the tiny island of Anguilla. Shortly after VOA commenced testing its eastern Caribbean service on 1580 kHz, the "beacon" began

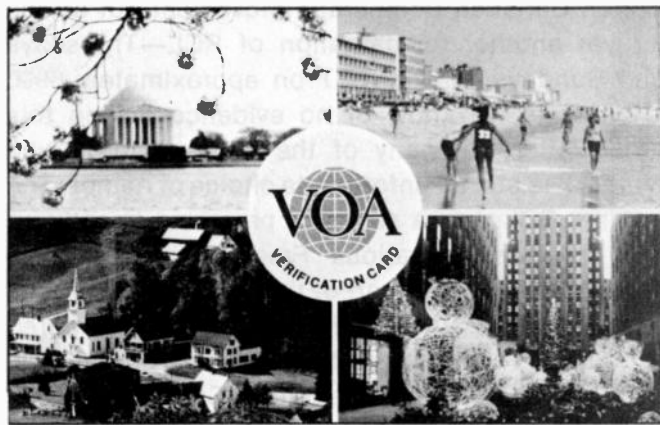


Figure 1: VOA QSL card for their new new Antigua relay.

operations on 1610 kHz—a frequency reserved in the U.S. for flea powered Travellers Information Service outlets.

The original NARBA was drafted at Habana in 1937. According to all the signs we are in for a period of BCB chaos unequalled since the era of the Mexican border stations, the 1930's and very early 1940's (until shortly before Pearl Harbor). The most notorious of these, Doc Brinkley's 500 KW ZERA (aka XER) dabbled in neo-fascist hate broadcasts, quack medicine and channel stealing while contributing funds to William Dudley Pelley's "silver shirt" Nazis. Gerald Carson's definitive biography "The Roguish World of Doctor Brinkley" (Holt Rinehart & Winston, 1960) notes "A long memorandum going into Doctor's background...The FCC still sits on its copy of the memo as 'classified' material." It was during this approximate period that future Lee Harvey Oswald associate, George De Moreschildt, was in Mexico apparently engaged in intelligence and/or propaganda activities: he was subsequently arrested and deported from Mexico in 1942. We've traced Oswald's later (1960's) broadcast links in previous columns.

Back in 1933, Carson tells us, one of XER's lobbyists—a former Vice President of the United States—was able to scuttle the first North American Radio Conference. The AM Broadcast Band of the 1980's will probably be in a similar state of anarchy but now there are many more stations (and political

interests) involved. Mexican border stations, incidentally, continued with similar formats (but legitimately allocated channels) well into the 1960's and played a major role in the distribution of religious hate literature during the 1960 Nixon-Kennedy presidential campaign.

RADIO CUBA LIBRE

In April an anti-Castro group calling itself the Cuban Christian Democratic Movement put on the air yet another reincarnation of RCL—Thursdays and Sundays at 2200 EST on approximately 6990 kHz. While we know of no evidence linking this organization with any of the earlier Radio Cuba Libres, it is still an unfortunate choice of names. The original RCL was a series of programs (mostly on MW) sponsored by various "Free Cuba" committees and were an integral part of the ill fated Bay of Pigs scenario. The names of these committees differed slightly from location to location. The one in New Orleans, for example, was the "Crusade to Free Cuba Committee." But all were CIA backed and therefore essentially linked. In addition, the New Orleans committee raised funds for the Cuban Revolutionary Council which had also been organized by the CIA.

Further, as this does seem to be the year of the assassin (or would-be assassin) it is appropriate to note strong circumstantial links between these committees and Lee Harvey Oswald. Again these links have been previously detailed here in DXK, in testimony before the House Assassinations Subcommittee, and in Anthony Summers controversial but very detailed "Conspiracy" (McGraw-Hill, 1980). Among other things, Summers traces links between Oswald, Free Cuba committees, and the Mafia. Clearly the Cuban Democratic Christian Movement should change the name of its clandestine station.

HONDURAS

Also in April a new anti-Sandinista clandestine station went on the air calling itself Radio 15 de Diciembre (Nicaragua's original independence day) and most often heard during the 2300-2400 EST time period. Their choice of frequencies, approximately 5565 kHz, is a poor one as it could interfere with Eastern Caribbean aeronautical traffic on 5566.6 kHz. Radio 15 de Diciembre told the press that it broadcast from "impenetrable" Honduran jungles near the Nicaraguan border. However an earlier anti-Sandinista station (Voice of the Special Anti-communist Guerrilla Forces) turned out to be secretly using a transmitter belonging to Radio Swan de Honduras at San Pedro Sula.

Radio Swan de Honduras appeared on the scene in 1975, claimed links with the Bay of Pigs station—Radio Swan—which they further claimed originally operated from a ship. While alternate sites had been planned, Radio Swan's main site was on Swan Island where a portable BCB unit had been set up in the spring of 1960. Thus the 1975 tale could only be true if Radio Swan's shortwave outlet was aboard the "Matusa Time"—a floating broadcast ship operated by the CIA. This would explain the persistent but obviously garbled rumor that Radio Cuba Libre operated from a ship. Radio Swan was the very first station to carry RCL programs. A never confirmed report carried by the trade publication BROADCASTING just before Radio Swan's debut claimed the station would transmit from a ship anchored at the island.

Incidentally, if we count Swan Island as a part of Honduras (which it has been since 1973) this is one of the oldest utility radio countries in the world. United Fruit first operated a transmitter on the island in 1911—almost a decade before KDKA made its initial broadcast. For a modern day Honduran utility logging try AHF1B on 13950 kHz in the U.S. Embassy at Tegucigalpa. 13950 is primarily a Military Amateur Radio Service channel in Central America.

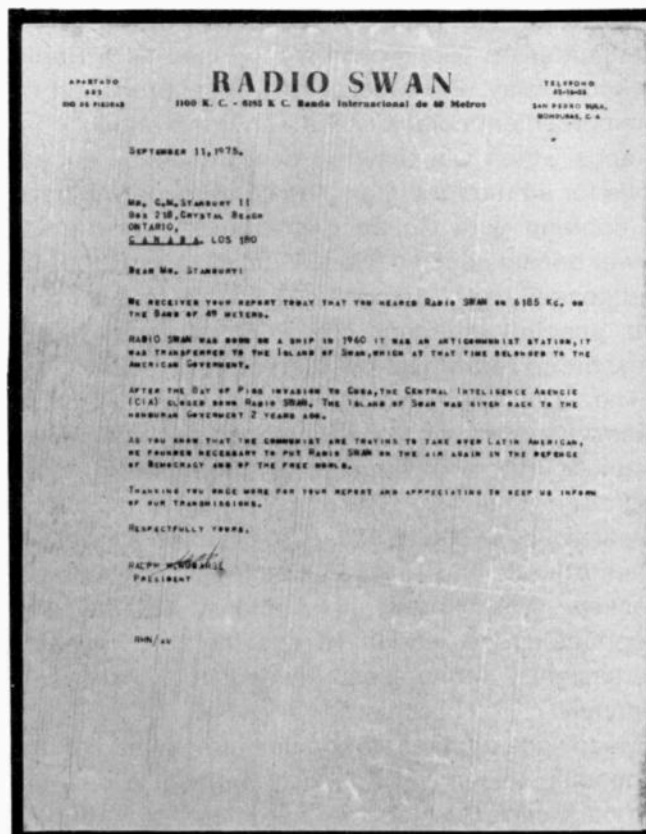


Figure II: Letter from Radio Swan de Honduras.

WASHINGTON OUTLOOK

WHAT'S HAPPENING AT UNCLE CHARLIE'S

FCC PROPOSES EMERGENCY SHUTDOWNS OF RADIO EQUIPMENT THAT THREATENS LIFE OR PROPERTY

A new proposal would give the FCC authority to shutdown temporarily equipment that interferes with other communications facilities and threatens the safety of life or property.

The proposal applies to equipment licensed under Part 74 of the rules covering various secondary broadcast services that share frequencies. Demand for these frequencies is increasing, along with opportunities for interference between users, even when all are operating lawfully.

The rule proposal comes in the wake of an interference problem that threatened space shuttle communications in April. On April 13, the National Aeronautics and Space Administration (NASA) told the FCC it was receiving severe interference to its space shuttle communications equipment at Edwards Air Force Base, the shuttle's landing site. FCC Field Operations Bureau staff determined the interference was caused by television electronic news gathering (ENG) equipment which, although it met FCC standards, was nonetheless causing harmful interference due to the extremely sensitive equipment NASA was using. Operators of the offending equipment stopped using it voluntarily, and the potentially life-threatening interference was eliminated before the shuttle landed.

In that case, the Commission had enough time to seek the voluntary cooperation of the users of interference-causing equipment. However, the agency is concerned about situations where it might be necessary to act on a moment's notice to eliminate interference to vital communications. It therefore proposed a rule giving the Commission power to temporarily suspend the operation of interfering equip-

ment until the emergency has passed. The chief of the Commission's Field Operations Bureau would administer the rule under delegated authority.

The Commission stressed the narrow scope of this proposal; it would apply only when the agency determines that an immediate threat to life or property exists and when offending users do not promptly eliminate the interference themselves.

The Commission based its authority for this action on the Administrative Procedure Act, which permits the suspension of various procedural rights when public health, interest or safety requires it. However, the FCC said it welcomes comment on the applicability of the Act to the proposed rule, as well as on the Commission's legal authority to take expedited action in the event of a violation of the proposed rule.

HOUSTON MAN FINED FOR USE OF FRAUDULENT RADIO OPERATOR LICENSE

The FCC fined W. Shapp of Houston, Texas \$750 for operation of a television broadcast transmitter with a fraudulent operator license.

Shapp, who does not hold any class of FCC operator license, acquired the First Class Radiotelephone Operator License of another person and altered it by changing the name to his own. He then used the forged document to obtain employment as a television transmitter operator.

The fine was assessed under the authority of Public Law 95-234, which was enacted by Congress on February 21, 1978. This law amended Section 503 of the Communications Act of 1934, as amended, and authorized the Commission to issue forfeitures of up to \$5000 to any person who violates any provision of the Act, and Commission's Rules, or any treaty to which the United States is a party.

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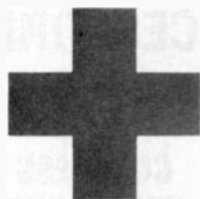
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STAFF REPORT ON RADIO INTERFERENCE ISSUED; INQUIRY CONTINUED

The Commission has issued a report by its staff on radio frequency interference (RFI) and has adopted a further notice of inquiry to receive more comments on this problem.

The original notice of inquiry in this matter was issued on November 14, 1978, in response to the large number of complaints about RFI to home electronic entertainment equipment.

The staff report was written jointly by the Office of Science and Technology, Field Operations Bureau, Office of Plans and Policy and the Office of Public Affairs. It contains a summary of comments received in this docket, an explanation of the problem and its current status and the reasons why RFI is becoming an increasingly important issue.

The staff report singled out interference to televisions caused by CB transmitters as the predominant source of complaints. This type of interference is responsible for about 30 percent of all interference complaints.

The staff went on to identify five specific policy alternatives that could be used to reduce RFI:

- Mandatory performance standards;
- voluntary standards;
- shared liability between transmitter and receiver;
- strict transmitter liability; and
- a Commission sponsored labeling program.

The Commission asked for comments on these alternatives, emphasizing the costs of each policy to consumers, service providers, equipment manufacturers and the FCC.

It noted that publication by the Electronic Industries Association of a performance guideline in this area gave hope that significant improvement was possible. The FCC asked for comments on this guideline, specifically on appropriate criteria for evaluating susceptibility and test procedures.

The Commission stressed that although the emphasis of the staff report was on CB-related TV interference, RFI is a complex problem, requiring more than a single solution. It said CB interference to television was a well-documented, well-recognized and prevalent problem that continues to dominate Commis-

sion interference activities. However, it said, solving this problem would not solve all RFI problems and further work must continue on the other causes and manifestations of interference described in the staff report.

FCC WARNS UNLICENSED RADIO OPERATOR

The Federal Communications Commission says it has been receiving complaints of CB interference from the local Washington, D.C. Citizens Band community for over two years about Mr. Jimmie Lee Simmons of Washington D.C. Mr. Simmons' high powered operations have been on a CB channel directly adjacent to emergency channel 9. His unauthorized transmissions have been especially disruptive to the communications of public service organizations which assist local public safety departments with traffic and accident reporting. The Commission's records show no evidence that Mr. Simmons ever held an FCC radio license. Therefore, his operations were in repeated violation of Section 301 of the Communications Act of 1934, as amended, claims the FCC.

After following all of the prescribed steps in the Administrative Procedure Act, the Commission issued to Jimmie Lee Simmons an Order to Cease and Desist Unlicensed Operation. Subsequently, Mr. Simmons was again positively identified as the operator of a CB radio station in Washington, D.C., in direct violation of the Commission's Order to Cease and Desist. In view of Mr. Simmons' repeated violations of the Communication Act, the Commission referred this matter to the United States Attorney's office in Washington, D.C. for possible criminal prosecution. Mr. Simmons appeared at the U.S. Attorney's office and forfeited his linear amplifier and promised to dismantle his radio station and discontinue further unlicensed operation. As a result of the forfeiture of Mr. Simmons linear amplifier and his promise to cease and desist all radio operations, it was determined that any prosecution of Mr. Simmons for his repeated apparent violations of the Communications Act would be held in abeyance, pending evaluation of his future conduct.

CB SHOP



TWO WAYS TO ADVERTISE YOUR PRODUCTS & SERVICES IN THIS SECTION

- 1. By-The-Word Ads**
Commercial, Clubs, Organizations, \$1.00 per word (\$40 minimum per issue).
- 2. Display Ads**
\$120 per inch minimum per insertion plus \$60 per 1/2-inch additional to maximum of 4-inches deep.

Closing Date—All advertising in this section will now close the 10th of the third preceding month; i.e., January 10th for the April issue.

PAYMENT — All ads must be pre-paid by check or money order (payable to Cowan Publishing Corp.), or through Bank Americard (Visa) or MasterCard. On charge orders, include card number, expiration date and inter-bank number. Permanent address and phone number must be supplied if not identified in actual ad copy. Publisher reserves the right to refuse any advertising deemed unsuitable or inappropriate. Because advertisers, services, and equipment contained in CB Shop have not been investigated, the publisher cannot vouch for the merchandise or services listed therein. Direct all orders and correspondence to: Eileen Lucey, S9/Hobby Radio, 14 Vandeventer Avenue, Port Washington, N.Y. 11050. Phone: (516) 883-6200.

THE NEW 4th EDITION IS HERE! Yes, it's arrived! Tom Kneitel's "TOP SECRET" REGISTRY OF U.S. GOVERNMENT RADIO FREQUENCIES (25 to 470 MHz) is now a spectacular 120 page book in a handy new 5 1/4 x 8 1/2" format! Now it covers about 50,000 listings including FBI, Secret Service, Custom, Treasury, Border Patrol, Immigration, CIA, Alcohol, Tobacco & Firearms, UHF aero, all military services, and much more! Latest available info compiled into a totally unique book; nothing else ever like it! Several times more listings than the previous edition including revised and expanded introductory how-to text. Details of station locations, call signs, QSL's, tactical ID's, channel code names, etc. It's the ultimate scanner guide! No scanner installation is complete without this invaluable book. Order your copy now. Only \$9.95 plus \$1 for speedy First Class Mailing. From CRB Research, P.O. Box 56, Commack, N.Y. 11725. Dealers—have we got a deal for you; as us about it!

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GET MORE CHANNELS and power with our crystals, frequency expander kits and how-to-books: Secret CB Volumes 1-11; Technical CB Application 3rd Edition; SSB Engineering Practice Volumes, I, II, and III; PLL Data Book; Secrets of Satellite TV. Write or call for prices, COD orders and free literature. Cobra's Two Way Discount Supply, Rt. 5, Box 123, Hope, AR. 501-777-3220.

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SCANNER OPERATORS! Are you registered? Be assigned your own personal monitoring ID letters inscribed on beautiful 2-color bordered certificate, plus discounts and goodies! Thousands already registered! Only \$5, ppd. from CRB Research, Box 56-T, Commack, NY 11725.

AIR-SCAN (new 3rd Edition) is here! Latest edition is a thick 80-page book in a handy new size. Contains 30,000 VHF aero band scanner frequencies 108 to 136 MHZ. Now covers U.S.A. (including Alaska, Hawaii, Puerto Rico, Virgin Islands), Canada, Mexico. Reveals highly detailed frequency data; control towers, approach/departure, Unicom, flight schools, FAA facilities, test pilots, airline "company" operations, crash trucks, etc. Includes all airports large/small, including commercial, military, private, even "unlisted" ones not open to public! Now lists worldwide airline HF/SSB route frequencies below 25 MHZ. Lots of other new sections too; aviation weather communications, international aircraft call signs, expanded how-to-listen info, monitoring in 1931, QSL's, and much more! Largest collection of aero frequency data ever assembled in one unique book! Only \$7.95 (+\$1 for rapid First Class Mailing). CRB Research, P.O. Box 56, Commack, N.Y. 11725.

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RK 76

Turner has combined noise cancelling features and the range-boosting advantages of a power mike. Noise cancelling keeps your transmission free of background noise while the preamp circuit assures you full modulation, maximum range and optimum clarity.

If you're really serious about CB, put your money where your mike is.

Serious CB operators who want to get the most from their transceivers have been setting aside the microphones that came with their radios and replacing them with Turner Microphones. In the United States, they've been doing this since the 1950's. Now they are doing it in 33 countries around the world.

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So, if you want to improve your radio's performance quickly, inexpensively and effectively, then get serious and put your money where your mike is — on a Turner Microphone.



RK 56

This is the "truckers' favorite" A combination of economy and exceptional noise cancelling, dynamic performance. In large truck cabs, an extra long rugged coil cord provides easy mike handling and the noise cancelling feature blocks out unwanted background noise for clearer transmissions.



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+3B

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