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PAARA GRAPHS

vol. 25
MARCH
1982

palo alto
AMATEUR
RADIO ASSN.

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PAARAgraphs is the official organ of
The Palo Alto Amateur Radio Association & the Menlo Park Civil Defense Radio Club

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Club net	147.54 MHZ, Mon. 8:30 pm L.T.		

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Membership in PAARA is $6.00 per calendar year (payable in January), which membership includes a subscription to PAARAgraphs. Freebee distribution to those who indicate an interest in the Club and as an inducement to their becoming members, and is subject to change with changing interests in the Club. Make payment to: PAARA, P.O. Box 911, Menlo Park, CA 94025.

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Written contributions to the P.O. Box above, or to the Editor, 1140 Sherman Avenue, Menlo Park, CA 94025. Deadline is two or three days after the Board of Director's meeting.

Friday, April 2, 1982 7:30 pm

R E G U L A R M E E T I N G

HOME SATELLITE TELEVISION - RECEIVE ONLY.

by

Mike Gustafson, WB6PZX
of
Satellite Receiving Systems, Inc.

This talk should provide a glimpse into a communication technology which will probably be commonplace in just a few years. Be there!

Meeting to be held at the Menlo Park Recreation Centre. Future meetings: May 7, 1982, June 4, 1982.

Circle the Date.

April 2, 1982.

PRESIDENT'S CORNER: This year continues its blazing pace. My crystal ball shows field day picnics, and auctions coming in rapid fire order. The Shuttle talk by Patty Winter, N6BIS, and Steve Greenberg was well received; my thanks to both. Sy Stein, by mutual agreement, turned in his gramme of Shuttle Dust for a beautiful landing photograph. After starving all winter, we get two flea markets on the same weekend. How do these things happen? That reminds me that we can use a volunteer to represent us at the CCRC, (Central California Radio Council), which meets every month in South San Francisco, (QTH of W6QIE). If you are interested in this, let me know. Our speaker next month has proven very popular at other clubs, and if you have any interest in experimentation, I know you will enjoy the presentation of WB6ZX. It comes complete with a demonstration of what a ham friend of mine calls the best quality video in town.

de Gerry, WA6LNV

CLUB MEETING & BOARD MEETING REPORTS: The Club meeting of March 5, 1982, was held in the Menlo Park Recreation Centre, with a fair crowd in attendance.

The Post 599 report was submitted and the schedule of meetings is the 2nd and 4th Friday of the month at the Luice Stern Centre, at Middlefield and Embarcadero, in Palo Alto. The Post runs a code and theory class for adults, teenagers and those even younger!

Gerry, W6NIR, reported the death of Al Stainback, WA6GVP, who will be sadly missed. Al bequeathed some of his gear to the Club, said Gerry, but it will be some time before the Club receives it, as probate has to be gone through.

Gerry, W6NIR, also reported on at least two Flea Markets, the first on Saturday, March 27, at the Foothill Electronic Museum Parking Lot T, from 9 to 2; and the second on Sunday, March 28, at Quement's Parking Lot at 1000 South Bascom Avenue, San Jose, starting at 8am. Hope this issue of PARAgraphs reaches all readers in time!

Gerry Starkey, WA6LIJ reported on the amateur radio response to the recent rainstorm disaster. Overall, Gerry thought that the ham effort lacked direction; that it consisted of many well-meaning people who were uncoordinated. The main competition in message handling was the Citizen's Band nets. (See also the Board Meeting report. Ed.)

The Speakers of the evening were Patty Winter, N6BIS, and Steve Greenberg, both working press photographers, who were accredited by an astronomy magazine to cover the landings of the space shuttle, Columbia. Some very good slides were shown of the landing despite the fact that the photographers had to contend with layer effects in the air due to heat, and with lots of dust. In fact, Patty brought a capsule of dust painstakingly brushed off her car, to be donated to the raffle.

Steve had also gone to Cape Canaveral to photograph the lift-off of the space shuttle, and the slides were very impressive. Steve and Patty also had photographs of the Enterprise, the Columbia's predecessor.

When Patty & Steve had finished their talk, they were well applauded and the Club members then dug into their pockets for their raffle tickets, hoping that the raffle would go smoothly this time, which it did, to the relief of the committee, especially.

The meeting then broke up with many members, but not the Editor, going over to the Village Host for beer, Pizza and good eyeball QSO's.

****

The Board meeting of March 10, 1982, was held at the Club Trailer, and present were: Gerry, WA6LNV; Wally, K6URO; Ed, W6AIN; Gerry, W6NIR; Fred, K6YT; Bill, KA6LZI; John, KD6ZL and George, GI3OEN. Gerry, WA6LNV, chaired the meeting.

The first item for discussion was the Club picnic, which is usually held in spring, but by popular demand, will be held this year, if we can get the reservation, at the Miewok Shelter, Huddart Park, Woodside, on Sunday, July 25. Fred, K6YT, hopes to have the Field Day scores by then for a preliminary Victory celebration. Foothill members are invited to attend!

Fred, K6YT, was then asked about Field Day preparations and it seems that all is going well. Any member of the Club who would like to help on Field Day, but is unfamiliar with the Club's effort, should contact Fred.

John, KD6ZL, then talked a little about the Post. The Post is settling in at the Lucie Stern Centre, but they miss the freedom of their old quarters, and they still hope that better quarters may be found. There is a possibility that a room may be available in one of the buildings in one of the Palo Alto Parks.

At about this point in the meeting, Gerry, W6NIR, left, which was a pity as he would have been interested in the discussion that followed.

As many readers know, your Editor was asked, in January, to publish humourous articles in PAARAgraphs without the author's name being given. Remembering the affair of the anonymous author, the Happy Fliers and the then-Editor, Bill King, an affair well described by Gerry Wagstaffe last winter in PAARAgraphs, your Editor said: "You must be kidding! No, a thousand times, no! I can learn from other Editor's experiences!"

Your Editor thought that the matter had been disposed off, but the matter came up for discussion again at the Board meeting. By way of background, because many members present at the meeting had not been in the club at the time of the affair of the Happy Fliers, Fred, K6YT, described the events.

The Club had invited a member of the Happy Fliers to give a talk at our regular monthly meeting. (The Happy Fliers are a group of hams/pilots). When the Speaker arrived, he was wearing his military uniform and, apparently, carrying side-arms.

During the course of his talk, the speaker apparently irked that anonymous author, before mentioned, who was in the audience. The speaker's wearing of his military uniform and side-arms also irked the anonymous author.

After the meeting, in the subsequent issue of PAARAgraphs, an anonymous article appeared, poking fun at the speaker, his talk and his wearing of his uniform. Your Editor has not been able to get a copy of that particular issue of PAARAgraphs, so he does not know if any reasonable person would have been upset by the article; however, the speaker from the Happy Fliers group certainly was. He first approached Bill King, the then Editor (and soon to be former Editor), and asked for the name of the author of the article. Bill King did not know who had written the article; he had printed it without finding out. The anonymous author did not come forward, and the Club, PAARA, was threatened with a libel suit. Bill King, correctly figuring that he did not need any more headaches than he could get at work, resigned as Editor, and the Happy Fliers, after a cooling-off period, withdrew the threat of a libel suit.

Anyway, back to the present time, the Board discussed the request from a member to publish articles anonymously, and it was decided that: if the author was a Club officer, he could sign his articles with the title of his office, for example, Secretary, as the holder of the office is already identified on page 3 of PAARAgraphs. This was the limit of the concession.

Then, one of the Board members asked Fred, K6YT, about another topic entirely, his view of the amateur response to the rainstorm emergency in Santa

Cruz County. Fred replied that the Citizen's Band nets carried most of the emergency messages, and that probably CB will be the most useful mode in future emergencies. It is, of course, true that many more people have CB sets and that with ham emergency communications, there just is no ham in the right spot, frequently.

If this is so, obviously, we need to rethink ham radio's role in emergency preparedness. Citizen's Band radio may be phasing us out of emergency communications, at least local communications. There will still be a need for ham radio in long-distance emergency communication. Perhaps the emergency teams need to plan on using citizens band equipment for local nets and ham band equipment for long-distance nets.

After that enlightening discussion, the Board adjourned.

****

LETTER TO THE EDITOR: (This section is out of its normal sequence because it bears on the preceding section) Ed.

From Rick Ferranti, WA6NCX/1, March 3, 1982. Massachusetts Institute of Technology, Cambridge, Mass.

Dear George:

Since the March issue of PARAgraphs mentioned me not once but twice, I thought I'd drop a line to you and let you know what's up in Massachusetts.

First, PARAgraphs is really a fine publication now; you've done a great job in getting articles, etc.

I might mention that when I was Editor - back from 1973 - 1976, I did print the thing on a wheezy mimeo machine (my father had to put up with 25 boxes of oatmeal paper stacked in the garage!) But Vance, W6PLE, did it that way for years before I took it over. Though expensive, the current printing really looks much better than stencils and mimeo ink (which, fortunately, never got on the guest-house floor!)

The latest issue also mentions Volkswagens; - even one for sale. We recently sold ours here (a 1969 model, 110,000 miles on it, 98% rust, no heat, etc.) for $300 - $50 less than we paid for it two years ago! At least they're <u>reliable.</u>

I'm still pursuing a degree in Electrical Engineering (Gerry Tucker, W6 LNV, would be happy to hear that I'm taking a course in classical feedback theory.), but during the summer and semester breaks, I'm working on a UHF spread spectrum radio at MIT Lincoln Laboratory. This is an Air Force project; the thing may still work after I'm finished with it!

On the home front, I finished a panoramic adaptor for my station - it's kind of a spectrum analyzer for the IF signals of the receiver. All solid-state, dual conversion with double-balanced mixers, a log video detector IC, and 300HZ resolution! I'm hoping to have it published in HAM RADIO magazine nest summer.

Speaking of articles, the mention of that June 1978 CQ Magazine brought mixed emotions - happiness for Erv et al for the 1,000 or so more transformers that he unloaded from the article, and anger at the fact that I had to threaten legal action for CQ to pay me for writing the article itself! Good thing a certain lawyer friend is also a ham!

By the way, please don't require everyone to sign their submitted articles - some of the best stuff PARAgraphs ever published was "anonymous". (Anyway, everyone had a pretty good idea who wrote it.) Though I'm sorry for Bill King, that particular piece of prose was priceless, not to mention factual.

Once again I'll miss PARA's field day - though I'm always eager to work them that day from W1HEB, the Middlesex Club effort. You are amazing to win for so many years (ever since I left ... h'm) - there's a ham here at W1MX whose home club comes in second or third behind us in 6A.

Well, back to Maxwell's equations and semiconductor physics - again congratulations on your excellent work on PAARAgraphs, George.

73's
Rick, WA6NCX/1

EDITOR'S REPLY: Thank you, Rick, for the nice things that you said in your letter. As you know yourself, being Editor is a mixture of headaches and nice moments that you remember for ever, like getting your letter. I do the job, probably, for the same reason that you did, and for the same reason that most of the Club's officers do their jobs, and that reason is that I feel that it is my duty to give some of my time and effort to the Club, to help it run smoothly and grow.

Concerning the requirement that the authors of articles be identified, there is an old saying: "Once bitten, twice shy." I can learn from other people's experiences; I don't have to be bitten!

On a more serious note, if a similar situation to the Happy Fliers was to arise again, I believe that our Club insurance would not cover us against a libel suit if we concealed the identity of the author.

Another consideration is that we should treat our speakers with courtesy; we don't want our potential speakers to feel that they are playing Russian Roulette with the next issue of PAARAgraphs.

I also believe that contributors should be proud of the articles that they write; that they should want it known that they wrote an article in PAARAgraphs.

Lastly, I would like to protect the author of an article such as the Happy Fliers article from himself; if the author is required to sign the article, he might revise it one more time and tone down any objectionable parts.

To close, thank you again for your letter; if you would like to write an article for PAARAgraphs, signed, of course, ...

George, GI3OEM

POST 599 CORNER: K6OTR, bet you have not heard that call in a while. Well, never fear, it's back by popular demand, and bigger and better than ever!

First, for the good news: K6OTR/R450 is up and operational! But, now the bad news: it is sitting at the house of Mark, KA6RMA, in Redwood City, and you can't hit it without a thousand watts and a beam, from Palo Alto. But, some more good news: within a month, (barring Murphy's Law) (Ed. I must protest this taking of Murphy's name in vain so close to St. Patrick's Day) it will be up on Skyline and be blasting away at the Bay Area from a vantage point that has a view of just about every ham around. However, it will not be on our pre-ordained frequency of 442.8 (+5 split), because it seems that there are a couple of other systems around that may hear a lot more of us when we go high-level than they would like to. At last word, Chris, WB6WBK, has been working on a new frequency, but that is still up in the air for now (literally), but you can be sure that we'll keep you informed. By the way, most of our Post is now on the 450mc band; only a couple of members and our advisors are still on the lowband (hi, hi). And while I'm on the subject of 2-metres .....

K6OTR/R2-metres (144.57/145.17) is back on the air! Unfortunately, the only way you can hit it is similar to the method used for accessing 442.8. Plans are to move it from its temporary residence in Redwood City and install it in our new site atop Northern California Savings in sunny downtown Palo Alto as soon as 450 is up and running smoothly.

And now: the same topic you have probably heard of before in past PAARAgraphs: we need a meeting place! Our shack is being turned into a condominium and our present meeting place may not last long. We have, of late,

been holding our meetings in the Boy Scout Office at the Lucie Stern Centre every 2nd and 4th Friday of the month. However, last week we arrived to find ourselves locked out. We had to return to our ill-fated shack and squeeze ourselves in there once again. Oh well ... but if you do find out about a good meeting place and/or equipment wharehouse and/or station location, please let us know, preferably through Rob, KA6NAN (advisor), or Alan, WA6 AZF, (assoc. advisor).

And last but not least, congratulations are due to Erik Dean, (ex-KA6FRY, KE6HY), on his new call, NI6G (Ed. I like that call). At last the Post has its own extra.

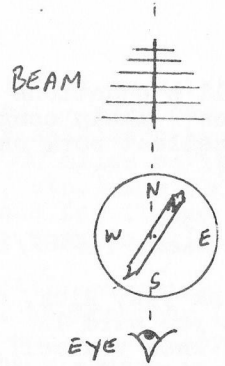
So, 73's till the next time

de Art, KA6POV

USING A COMPASS: The recent article on compass headings of major cities in the world from the Bay area seems to have been quite popular but the method given of adding 17 degrees (now 16 degrees as Magnetic North moves) to the bearing from the table seems to be a method fraught with hazard. Below is the standard method of using a compass.

First, Magnetic North is not at the North Pole; if it was, there would be no problem. Instead, it is in Northern Canada. Here in the Bay Area, it is 16 degrees East of true North.

So, place your compass on a flat, non-magnetic surface (keep your flashlight well away if you are in an attic, or if it is nightime in the woods). Turn the compass so that the needle points to 16 degrees East of North. The north/south line on the compass now points to true north/south. You can sight across the compass as in the drawing below. If you do not have a compass, a watch can be used for rough bearings, after adjustment for summer time, if needed.



EDITOR'S NOTE: Due to pressure of work, your Editor has not gotten round to checking out competitive prices on printing PAARAgraphs for this issue but he will for the issue printed in April.

Your Editor would especially like to thank Hank Martin, W6UCE, for volunteering to go around printers, and another club member, whose name, I regret to say, I have forgotten, who came up with the names of some printers to try. Thanks, both of you, and in April, we will get some prices.

George, GI3OEN

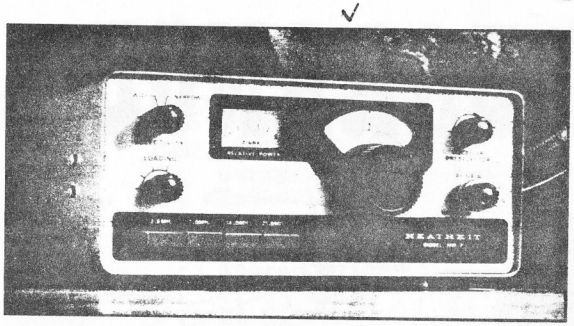
SILENT KEYS: Al Stainback, WA6GVP

ROSTER CHANGES: Mac McDermott, KA6NDX
349 San Luis Avenue, Los Altos, CA 94022
(Change from Bill McDermott.)

MEMBER'S ADS: For Sale - Stop worrying about PAARA net crystals and get this beautiful ICOM IC-2AT synthesized 2m FM handheld transceiver. Perfect shape - no mods (never had it's case even opened!) - in original box with TT pad, Nicads, charger, earphone, belt clip, carry strap, flex antenna, and manual. Shipped Air Mail prepaid for $210.

Rick Ferranti, WA6NCX/1
215 Herrick Road
Newton Centre,
MA 02159

For Sale: Heathkit transmitter 80 - 10m, with manual. Works good! Great for hf work for novice or general. $120 or offer. Call Tony Maciejowski, WA6KSS at 408 739-1145 evenings.



For real CW fun, you can't do better than the popular Heathkit HW-8 QRP Transceiver

$169.95

- 80,40,20 and 15 meters CW
- 0.2 μV receiver sensitivity
- Adjustable T/R delay and semi break-in
- 2-Position active audio filter
- Front panel meter to show relative power

The rugged portability of this great little CW transceiver means that now you can take your Amateur Radio hobby with you wherever you go, whether it's on a camping expedition or a business trip. The Heathkit HW-8 CW Transceiver is small enough to fit in a suitcase, and not too bulky to back pack. A trail bike's battery will power it. Or join the growing number of hams experimenting with solar-powered QRP (low power) operation. You can even run it off of your automobile's lighter socket. And, of course, you can also operate your HW-8 at home on 120 or 240 VAC power with the HWA-7-1 Power Supply (right).

No matter where you operate or how you power yours, the HW-8 is a great performer – you can be sure of that. Performance begins with a quiet, super-sensitive receiver section. Hum and noise figures are minimal, and as little as 0.2 μV in at the antenna terminal gives you a usable signal. Couple that with a tunable preselector, direct conversion with RF amplification, a balanced product detector followed by active audio processing, and you have a hot little receiver that's going to dig in and dig out the stations you're chasing to assure you of a wall covered with QSL cards from all over the globe.

The transmit section's the same story...performance. You'll get a minimum of 3.5 watts in on 80 meters, 3.0 watts in on 40 and 20, and 2.5 watts in on 15. Each band is individually selected, and crystal controlled heterodyne circuitry insures accurate frequency mixing. The HW-8's VFO features an MPF-105 FET in a temperature compensated Hartley configuration. This design approach provides overall stability and covers the Transceiver's 3.5-3.75, 7.0-7.25, 14.0-14.25 and 21.0-21.25 MHz operating ranges with excellent accuracy. Operating convenience hasn't been forgotten either. The HW-8 features an RF and AF gain control, solid-state band switching, pushbutton band selection, and semi break-in CW operation, including adjustable T/R delay. The clean, modern front panel includes a relative power meter.

The HW-8 is an easy and enjoyable kit to build, too, with most parts mounting on a single printed circuit board. There's a minimum of point-to-point wiring. And, of course, the thorough Heathkit assembly manual guides you every step of the way. The manual for the HW-8, incidentally, even includes hints to help you make more contacts once the fun of construction is finished and it's time for you to get your Transceiver on the air.

Just imagine all the fun you're going to have, transmitting your HW-8's signal into a dipole stretched between two towering pines out in the wilderness...or strung from corner to corner of your hotel room, high in a metropolitan skyscraper. Reading articles on QRP operation in the national Amateur Radio magazines will give you more ideas on using your HW-8. And, by the way, these articles may surprise you when you discover the number of DX and domestic contacts that Hams are making with this quality-engineered CW Transceiver, using ordinary antenna configurations you can build and erect.

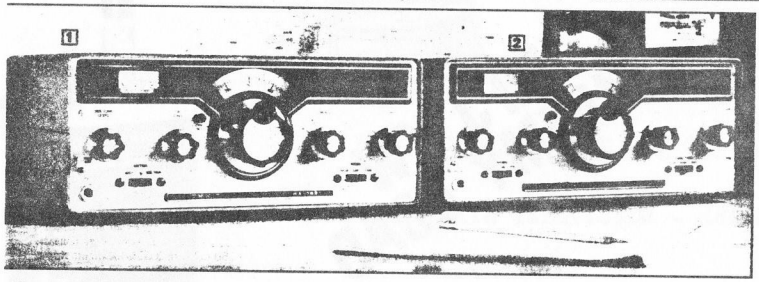
A great performer that's going to give you hours of fun – that's the Heathkit HW-8. Order yours now and join the growing fraternity of QRP operation with the Heathkit HW-8 QRP Transceiver. Requires headphones (Assembled GD-396 Superex Headphones listed below).

Kit HW-8, Shpg. wt. 6 lbs. **169.95**

Kit HWA-7-1, AC Power Supply. Designed to operate your HW-8 from standard 120/240 VAC house current. Shpg. wt. 4 lbs. **24.95**

GD-396, Superex Headphones, Fully assembled, 2 lbs. **7.95**

HW-8 SPECIFICATIONS: TRANSMITTER – DC Power Input: 3.5 watts (80 meters); 3.0 watts (40 meters); 3.0 watts (20 meters); 2.5 watts (15 meters). **Frequency Control:** built-in VFO. **Frequency Stability:** Less than 150 Hz/hour drift after 60 minute warm-up. **Output Impedance:** 50 Ω, unbalanced. **Spurious and Harmonic Levels:** – 35 dB or better. **Offset Frequency:** approximately – 750 Hz, fixed on all bands. **RECEIVER – Sensitivity:** 0.2 μV for readable signal; 1 μV or less for 10 dB S + N/N. **Selectivity:** wide, – 750 Hz @ – 6 dB narrow, – 375 Hz @ – dB. **Audio Output Impedance:** 1000 Ω, nominal. **GENERAL – Frequency Coverage:** 3.5-3.75 MHz (80 meters); 7-7.25 MHz (40 meters); 14-14.25 MHz (20 meters); 21-21.25 MHz (15 meters). **Frequency Stability:** less than 100 Hz/hour drift after 30 minute warmup. **Power Requirement:** 12-16 VDC, 90 mA, receive; 430 mA, transmit. **Dimensions:** 4¼" H x 9¾" W x 8½" D (10.8 x 23.5 x 21.6 cm). **Net Weight:** 2 lbs.



This Receiver/Transmitter combo adds up to enjoyment, value

1 Full break-in (QSK) CW Transmitter

$199.95

- 100 watts out on 80-15, 75 watts out on 10

Whether you're a veteran brass-pounder or have just earned your Novice ticket, the HX-1681 Transmitter is ideal for use with virtually any solid-state or tube-type receiver. It's an unbeatable value, too! Full break-in capability means you can hear other stations whenever your key is up...even between individual dits and dahs of your own transmission. A pair of rugged 6146A finals combine with solid-state design to give you a clean 100 watts minimum on 80-15, and 75 watts out on 10. The HX-1681 features built-in T/R switching, adjustable sidetone output, and receiver muting. Keying is provided for adding an external power amplifier. Harmonic radiation is 50 dB down at rated output, and spurs are down 60 dB. Covers 3.5-4.0, 7.0-7.5, 14.0-14.5, 21.0-21.5 and 28.0-28.5 MHz. Requires the PS-23 Power Supply described on page 61. 6¾" H x 12¾" W x 12" D.

Kit HX-1681, Shpg. wt. 16 lbs. **199.95**

Kit PS-23, Power Supply, 17 lbs. **84.95**

2 HR-1680 Ham Bands Receiver

$229.95

- Dual conversion front end works 70 through 10 meters

Looking for your first receiver? The solid-state HR-1680 is the right choice. It combines high performance and low cost for serious Ham band listening. A perfect companion for the HX-1681 QSK CW Transmitter (described at left), the HR-1680 Receiver is both fun to build and enjoyable for Ham band operation. A hot dual-conversion front end and 0.5 μV sensitivity cover 80 through 10 meters: 3.5-4.0, 7.0-7.5, 14.0-14.5, 21.0-21.5, 28.0-28.5, and 28.5-29.0 MHz. Selectivity is outstanding. With a matched 4-pole crystal filter in the IF, you can count on your 1680 to be razor sharp. A tunable preselector filters out unwanted signals. Includes built-in 100 kHz calibrator. Align without instruments. 120/240 VAC or 11.5-15 VDC. 6¾" H x 12¾" W x 12" D.

Kit HR-1680, Shpg. wt. 14 lbs. **229.95**

Kit HS-1661, Matching Speaker, 5 lbs. **29.95**

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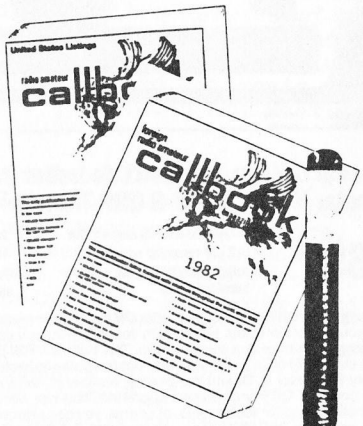

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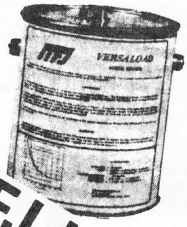

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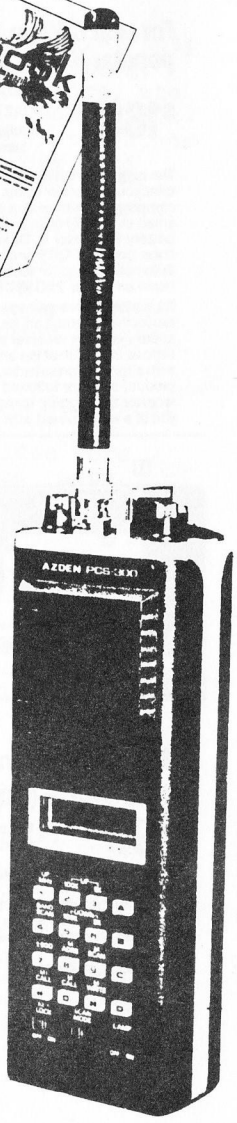
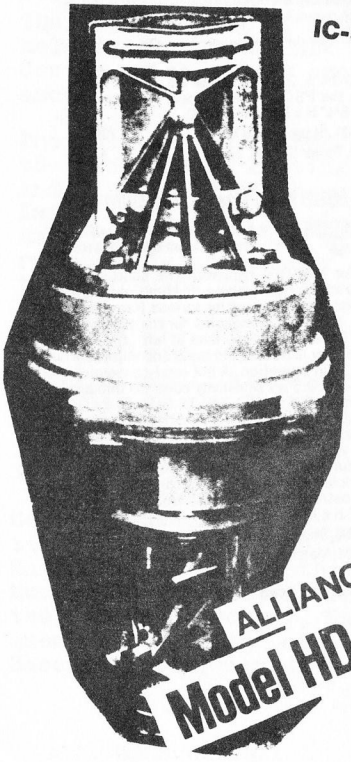
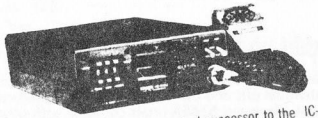
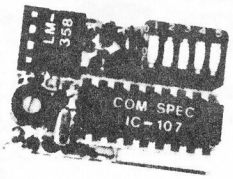




ALLIANCE
Model HD-73



IC-22U 800 channel synthesized successor to the IC-22S. Same case & styling but frequency selection by a pushbutton & thumbwheels. Output 10 or 1W. HM-7 microphone w/clip, mobile mount, DC cord & plugs. 2½"w× 1¼"w×8¼"d, 4½ lbs..... **Regular $329.00**



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National NC183

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