

good DX info for this page? I am sure a little publicity would not hurt anyone. We will of course mention your call as the source of the DX info you send to me. 73 till next month.

73 es DX,

de, *gus* BPD

GOING FIRST CLASS !

Using the EBC-144 Jr. 2m
Transceiver

Synthesis, with no limitations, is the name of the game with the new Emergency Beacon transceiver. For the first time we were able to dial up even the most oddball of repeaters.

The ads for the Emergency Beacon "Dream Machine" transceiver — a rig which could obviously do everything, including scanning, total synthesis, tone burst, continuous tone, Touch-tone, 600 kHz splits, 990 kHz splits, one meg splits, simplex — and you name it — the ads for this rig got a lot of fellows all excited, nervously putting away money now and then in case they talked themselves into getting one.

Unfortunately, as with most pieces of really sophisticated equipment, the delivery on some of the special parts required to put the rig into production stretched on maddeningly and the boys at Emergency Beacon decided to proceed with their secondary project, a junior model of the Dream. This is the EBC-144 Jr and it has all of the basic functions of the big rig such as synthesis down to 5 kHz steps, a priority channel scanning system, 600 kHz high or low split automatically for repeater operation, provision for connecting a scanner, and things like that.

The fellows at EBC were not only having problems getting the zillions of parts needed for the big unit, but they also found that while bread and milk had inched up only 25 to 50%, the prices on parts had in many cases doubled and tripled! This brought the price of the big rig from about \$1000 to \$1500, with many signs that even this stiff price might have to be increased substantially. The customers who placed their orders at the early price had indeed gotten in on a very good thing.

The Junior has been priced at \$599 for starters. We'll be greatly surprised if this doesn't go up before long. And

considering what the rig does, even at \$600 this has got to be one of the best bargains in ham gear on the market today.

One of the first moves we made with the Junior was to mount it in the 73-mobile and head for the top of the local mountain to see how it would do up there in the high density rf that prevails. We checked it out on every repeater we could reach — and we can reach a bunch from up there. All we had to do was set up the "A" channel on the repeater output and switch to "Auto" on the mode switch and we were right in there.

While not too many rigs can weather the rf storm on top of the mountain without intermod and other garbage, the Junior was absolutely quiet. Even the several local commercial repeaters didn't break through! And they put out a lot of microvolts. Next we started checking out the splinter repeaters to see how the Junior could handle the 15 kHz spacing — particularly when the repeater was right in the next channel to a strong and oft used repeater. For instance we checked into WR1ACL in Salem NH which is set up on 147.165, right between WR1ABB in Framingham (Mass) on 147.15 and WR1ADF in Bridgewater (Mass) on 147.18, both of which are pretty active. Oh, we could hear some crosstalk, but it wasn't enough to hurt anything. It proved that it is possible to build a receiver which can handle the 15 kHz splits. Both ADF and ABB pinned the meter, which ACL was only about half way up at S-6.

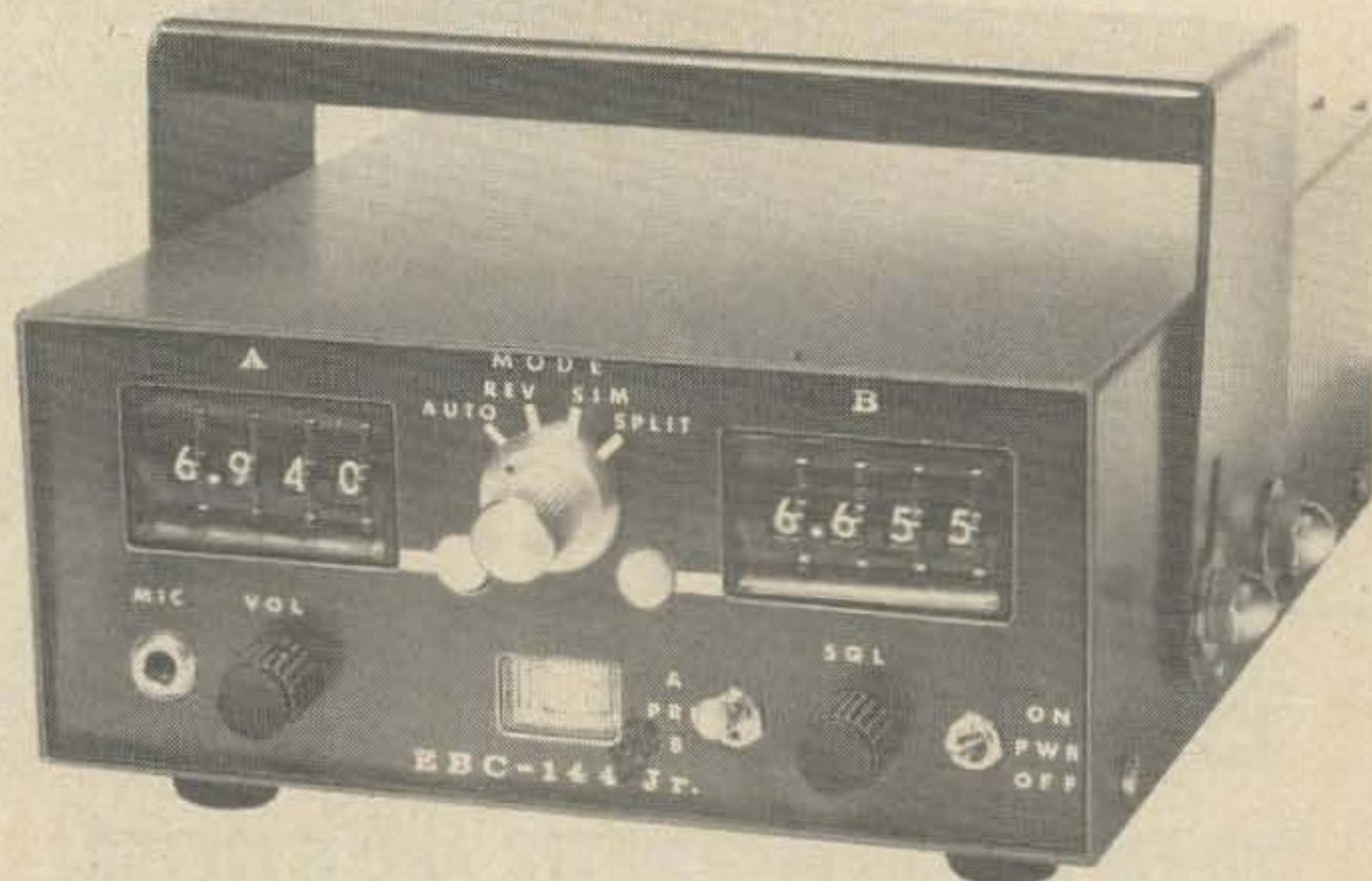
Next we dialed up WR1ADC in Somerset (Mass), a 990 kHz repeater with input on 146.43 and output on 147.42. No strain with the Junior — just set the mode on "Split" and put the receive channel on "A" and the transmit channel on "B" dials, and kerchunk, there was ADC, loud and clear.

Aha, what about that private closed repeater in Manchester NH, the one with the secret input channel? We knew their input had been around 145.88 or so in the past and the output on 147.33 so we set up the rig to listen on 147.33 and, sure enough, there was the repeater with someone talking away. We quickly dialed up 145.88 and moved up and down, centering on 145.89, listening to the repeater input. Next we set up "A" on 145.89 and "B" on 147.33 in the Split mode and broke in with a short "Hello." It worked! "Who was that who broke in and said hello?" We gave our call and they promptly turned off the repeater. They do that to anyone who calls in who is not a member of their small closed group. There may be more unfriendly repeaters in the country, but word has not reached us about them. This is most distressing to the rest of the New Hampshire amateurs, who are rather proud of the warm and friendly reception they give visitors on the other New Hampshire machines — and there are a bunch of them.

Just to bolster our confidence in 2m FM and be reassured that the reception on WA1KVV was highly unusual, we checked into WR1ABQ on 25-85 in Derry NH, WR1ABU in Concord NH, WR1ACQ in Deerfield NH, WR1ACN in Londonderry NH, WR1ABF in Salem NH, and WR1ADX in Wolfeboro NH. All were outstandingly nice.

The reports on the rig were most complimentary — not only was it right on channel, but the audio was superb.

True to the "Never Say Die" motto which is more than a catchword at 73, we set up the rig to work on channel "A" and listen in with priority on channel "B" on 147.33 so we could hear KVV when they turned it back on again. After a while someone did tone it on and we knew it immediately for the Junior works fine on



channel A, but every few seconds it flips briefly to B to see what is doing there and then back to A again. That little function keeps you from missing anything. Fortunately cooler heads prevailed and nothing was done to further invade the privacy of the KfV group, despite some of the inflammatory remarks that were being passed.

In most cases where a repeater suffers jamming and heavy kerchunking, you'll find that there are some good reasons why this repeater has been singled out for harassment. The KfV group is certainly asking for it, but since few ops have synthesizers as yet — particularly synthesizers which will cover the entire band and go down below 146.0, they've been relatively free of troubles. The Junior covers from 143.5 to 148.5, thus making it simple to get into all of these weirdo repeaters as well as MARS and even CAP repeaters which are just outside of the 2m band.

In the Automatic mode the rig transmits 600 kHz lower than the received channel within the 146 MHz segment and transmits 600 kHz higher in the 147 MHz segment, per the standard used just about everywhere in the country now. Some of the repeaters on 147.00 MHz have their input on 146.40, so you have to turn the mode switch to reverse for this. There are a few repeaters in the 147 segment which have input low and

this will solve that problem too. Band openings and inversions drive these non-standard repeaters batty as they lock up on other repeaters sharing their channels, but with reversed input/outputs.

The Junior has a big plus in the back which mates with the EBC scanner and turns your receiver into a six channel scanning receiver. More about that extra option when we have a chance to check it out at length.

The transmitter is rated at 20 watts output, but the Bird Wattmeter indicated close to 25 watts on our unit. You don't really need an amplifier much when you're starting out with that amount of power.

The Junior has a built in speaker, like most 2m rigs (but not all), plus a jack in the back for an external speaker (we prefer to use the external speaker in the car which is mounted where it can easily be heard).

While there is not a lot of activity in New England below 146 MHz, with the exception of Oscar and a couple of repeaters which still have inputs below 146 (WA1KfV and WR1ACY in Glastonbury CT 145.47-147.09), it is nice to be able to tune down and actually hear what is going on in the rest of the band. The Auto function on the mode switch cuts out below 146 and the rig is simplex in that part of the band automatically. You'll find that the AM boys, what few there are

left of them, will generally be able to copy your FM signals if you feel like calling them. If the FCC ever does open up more of the 2m band to repeaters, as many ops are beginning to think they should, the Junior will be able to cover the new band for you right off.

The receiver sensitivity was everything we could ask — the size perfect — the flexibility fantastic. Two meter rigs have certainly come a long, long way in the last couple years! When you consider the savings on crystals, even the cost of the synthesized rigs is not out of line. The Standard 1400 rig that we used for a couple of years required 44 crystals — at \$4 each that came to \$176 in crystals alone! Even if you've been managing to get along with a 12-channel rig, that's \$96 investment in crystals.

One has to face up to a simple philosophical question — are you going to be satisfied to stick with one or two repeaters or are you the type of person who wants to be able to use all repeaters — who wants to have a rig that can be taken anywhere and put you in touch with what is happening? A lot of 2m ops get on one repeater and never go anywhere else. Presumably they are happy, so there is a chance that you can get along with this limitation and don't need a synthesized rig. We feel you'll miss a lot this way.

AMSAT NEWS

OSCAR
6

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AMSAT-OSCAR 7 is scheduled to be launched from Vandenberg Air Force Base in California on October 10, 1974, sometime between 1600-1700 GMT. W6AB will broadcast the countdown on twenty meters. AMSAT members will be on the air most of the day, two frequencies to monitor will be 14,280 kHz, and 3850 kHz.

AMATEUR SATELLITE MATCHING FUNDS

William Eitel WA7LRU/W6UF and Herbert Hoover, III W6APW, have generously offered to match, dollar-for-dollar up to a total of \$25,000, donations to the ARRL Foundation earmarked for use in the amateur satellite program.

Funds are urgently needed to support the construction of AMSAT-OSCAR 8, which is estimated will cost on the order of \$100,000.

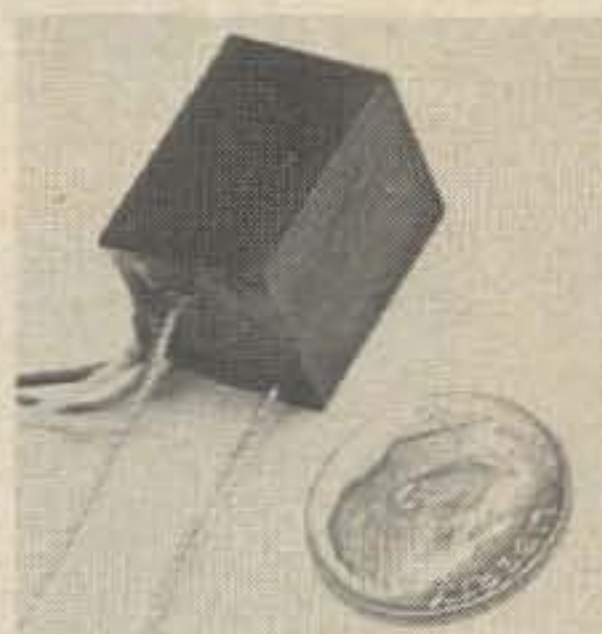
We urge you to support the amateur satellite program with a financial contribution. Contributions to the ARRL Foundation are tax deductible under Section 170 of the Internal Revenue Code.

Thank you for your support!

NEW



PRODUCTS



Looking for a SUBAUDIBLE TONE GENERATOR for your small hand held or portable FM radio? 'THE CUBE' is only 1.27cm x 1.52cm x 1.78cm (.5" x .6" x .7") in physical size, but it has a whopping sine wave signal out. Designed to be used with any of the subaudible guarded systems, it works on 9-16V and has no moving parts. It can be set on any frequency between 98 and 240Hz with a trim resistor. THE CUBE is available from RGS Electronics at the low price of \$19.95. For an extra \$5.00, it can be set on frequency by the factory. Contact: RGS Electronics, 3650 Charles Street, Suite K, Santa Clara CA 95050.

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Jan King W3GEY, A-O-B Project Manager installing A-O-B in Thermal Vacuum for testing.