

TESTING THE COMCRAFT CTR-144



Can an FM nut live comfortably with a tunable receiver and a vfo transmitter?

As an old time two meter addict my hands began to shake with anticipation as I plugged in the new Comcraft transceiver, just looking forward to being able to tune the receiver dial and get back to the old familiar concept of frequency being marks on a slide rule dial instead of numbers on a switch.

Sure enough, as I tuned from 146.5 to 147.0 there were all the repeaters, blasting through. And even though this segment of the two meter band takes up only about 3/8" of the dial, I still could identify most of the repeater channels by their position on the dial. The receiver was quite sensitive and I was able to hear repeaters right on down to New Haven, some 150 miles or so away.

The most exciting discovery was that "secret" repeater up in Manchester (NH) up above 147 MHz. I knew their input frequency, but had not been able to get them to spill the beans on the output so I could get crystals and their promises of getting crystals for me had been dragging on for a couple of years, so when I tuned across the repeater output I let out a whoop and zeroed in the Comcraft vfo and called in. There was a stunned moment of silence and then they

acknowledged me. I didn't tell them how I found them.

The vfo is stable enough to work through FM repeaters with no problem. My counter shows it to hit within 25 Hz or so each time it is keyed! There are three internal crystal positions plus a front panel jack for a fourth crystal position. The rig uses the very popular 8 MHz FT-243 type crystals, which are still around by the thousands from WW II.

The CTR-144 is basically an up-to-date solid state Communicator. It tunes from 144-148, with enough overlap to bring joy to the MARS and CAP enthusiasts. My unit tuned from 144.00 to 148.15 on both receiver and vfo, but this could be easily changed enough to add or subtract a half MHz or so by touching the band-setting capacitors.

The power supply is built in for 117V ac operation, plus the usual 12V dc power cord for mobile use. A little battery test button on the front panel lets you check the battery condition. This test button may not be of great interest for mobile applications, but if the unit is used in conjunction with the accessory CBP-12 Comcraft battery pack, it will tell you how things are going. This battery pack is automatically recharged by the ac supply, by the way.

2 Rigs in one!

THE COMCRAFT CTR-144



MADE IN U.S.A.

The First AM-FM Solid-State Transceiver For Two Meters

No longer is it necessary to choose between AM and FM on two meters. Now you can have both in one compact unit. Join the gang on the new FM repeaters yet still be able to "rag chew" with old friends either AM or FM anywhere in the two meter band.

COMPARE THESE FEATURES

TRANSMITTER:

- Built-in VFO (Frequency converted for stability)
- AM and FM both crystal and VFO
- Four transmit crystal positions (8 MHz)
- 12 watt input AM and FM
- High level transmitter modulation on AM
- Bandpass coupled transmitter requiring only final tune and load
- Three internal transmit crystal sockets with trimmers for netting
- One transmitter crystal socket on the front panel
- Deviation limiting
- 146.94 MHz crystal included

RECEIVER:

- Double conversion
- Crystal controlled first conversion
- MOS FET receiver front-end
- Integrated circuit limiter and discriminator for FM
- Envelope detector and series gate noise clipper for AM
- Built-in squelch for both AM and FM

GENERAL:

- Separate transmitter and receiver tuning
- Built-in 115VAC power supply
- Direct 12VDC operation for mobile or portable operation
- Optional portable rechargeable snap-on battery pack available
- "S" Meter also used for transmitter tune up
- Military style glass epoxy circuit boards
- Anodized lettering and front panel
- Baked epoxy finish on the cabinet
- 47 transistors, 22 diodes, 1 integrated circuit
- Dimensions: 10 1/4" W x 6 1/4" H x 7 1/2" D

Warranty—90 Days Parts and Labor

The CTR-144 is available at your
DEALER

\$459.95



COMCRAFT COMPANY

P.O. BOX 266—GOLETA, CALIF. 93017

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The receiver gets its selectivity and rejection of images by a clever system of i-f management. The first local oscillator is at 65 MHz and is crystal controlled. This doubles to 130 and the output is in the 14–18 MHz range which is tuned by the first i-f. The second local oscillator drops the i-f to 2 MHz and then the signal is channeled into either an FM or AM detector.

The 65 MHz oscillator is used by the transmitter to beat the 7–9 MHz vfo up to 72–74 MHz. This is then doubled to the output frequency.

While I find a counter quite helpful in putting the CTR exactly on a repeater input frequency, I have had little trouble zeroing in just by listening for the repeater squelch-tail and tickling the vfo dial until I hit the pass-band. While visiting New York I cut a 19" length of coathanger and stuck it into the antenna conductor, zipped onto WA2SUR's input on 146.19 and found myself talking with a number of old friends. This was from my livingroom in Brooklyn about five miles away!

While I appreciate the benefits of channeled operation as much as anyone, I do have to admit that I like it a lot that I can now tune the 144 MHz band complete and check to see what is going on. And who can afford all the crystals it takes to get all of the repeaters? With new repeaters coming on the air by the week, who can keep up with it? I'd be ordering more crystals every week and, at \$4 to \$6 each, this is a luxury beyond the means of a mere magazine editor.

One thing I did learn from being able to tune the entire 144 MHz band... the FM activity is just about the only activity that I'm going to hear up this way. I may be able to get into seventeen FM repeaters from my home, but I have heard one and only one AM signal on the band in several weeks of listening. I haven't had a good chance to tune the entire band since my NC-300 receivers were swiped a few years ago. The band sure has changed!

The Comcraft CTR-144 may not meet the demands of the purist FM old timer, but it sure does do its job well and is a lot of fun. And it will run AM if you need it!

...W2NSD/1