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The Waters Codax

Somewhere in, under or around the new Waters Codax there must be the switch I'm looking for—the one that turns on the heating element under the top so it will heat my coffee for me while I'm operating. It does everything else, so I can't see why they would have left that simple feature out.

What the Codax does do is send code for you so automatically and effortlessly that it almost seems to be wired straight into the nerve-endings, taking out of CW operation all the old pain of whangety-whang-whang on a straight key until your fingers go numb. It is also an audio-tone keyer which will make a CW transmitter out of an SSB or AM transmitter. And to top it off, it is a keying monitor and even a practice key. Do you wonder I'm looking for the heater switch?

Sitting there on the operating table, the Codax is a little thing, a pale-grey box with rounded edges, about 2½ high by 4 by 4, plus 2 inches of double paddle sticking out the front. But touch the left paddle with your thumb and the dots start rippling out, touch the other with your finger and the dashes flow. And I do mean touch. You can set the spacing and tension of the paddles to such a delicate point that a hard look will trip them. This of course causes a tendency at first to spray surplus dots around like a jittery BAR man, but this comes under control with a little practice.

Specifications: the Codax is a solid-state automatic keyer with the paddles built right in, the only addition required being six small 1.35-volt batteries supply all the power. Dots and dashes are made with a blocking oscillator set into motion by the paddles. Briefly, pulses

from the oscillator are sent to a flip-flop which in turn operates a relay at whatever keying rate you have set on the dial. For dashes, the same oscillator pulses feed a second flip-flop operating at half the dot rate, which then goes through a gate opened by the dash paddle. In short, a dash is made up of one double-length dot followed instantaneously by a single dot, all this put together by a summing circuit. This may seem unnecessarily detailed unless you are a student of such things, but a moment's thought will show that by this method the dots, dashes and spaces are all kept in their proper proportion no matter what the speed. Also, as Waters points out, you don't have to wait for a running dash-oscillator to get around to making a dash after you press the paddle—the oscillator starts when you press.

The speed can be set anywhere from 5 to 50 wpm, according to the specs. I only know that I have run it up to about 25 in practice, far beyond my ability to tap on a straight key, and it still sounds smooth and regular. I still can't copy 25, but one of the features of the Codax is that I'm sure I will be able to soon. There's a kind of sticking point you get to, somewhere between 15 and 20, when you can't send any faster than with a straight key, but I know my own copying rate has gone up two or three wpm after only a few sessions with the keyer. Things go smoother and quicker from text to code, and the reverse seems to begin to operate. Hearing yourself send faster and smoother—and you do hear it with the Codax—you begin to get the hang of what fast code sounds like, and up goes your speed.

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PRICED AT ONLY \$299⁵⁰

SPECIFICATIONS

Freq. Range: 3780-4010 KC, 7180-7320 KC, 14130-14360 KC

Semiconductors: 2-8042 instant heating tubes, 18 transistors,
2-varicaps, 1-zener, 9 diodes

Size: 4³/₈ H x 11³/₈ W x 8³/₄ D. Weight 10 lbs.

TRANSMITTER

Power Input: 165W pep

Carrier Suppression: -45 DB

S.B. Selection: 80-40M lower
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Ant. Imped.: 30-100 ohm adj.

Power Consumption: .5 amps
Receive, 12-15 amps
SSB XMIT.

Operation: P. T. T. No tube
filament on in rec.

RECEIVER

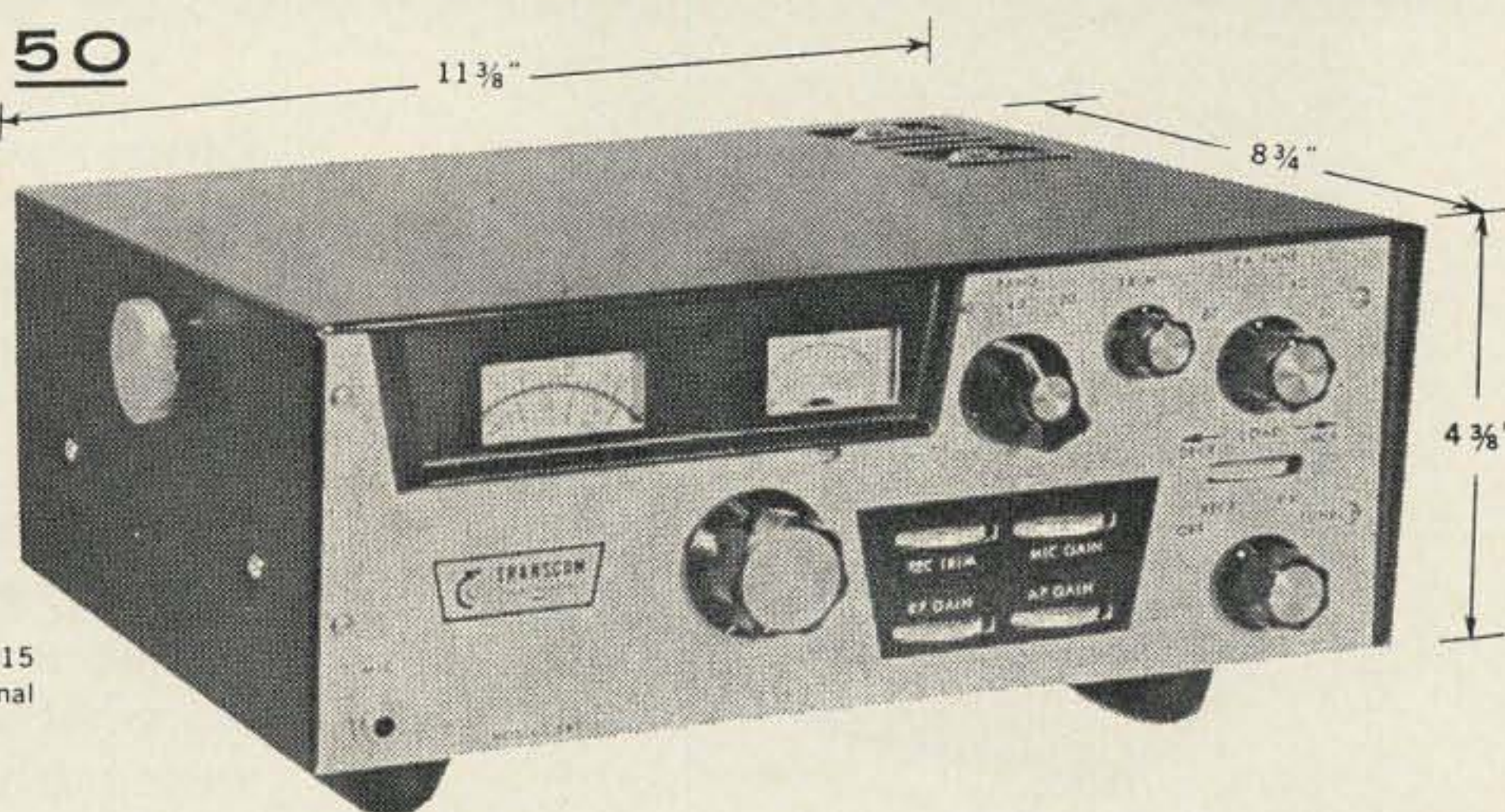
Sensitivity: .5 μ v for 10 DB
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Selectivity: 3 KC @ 6 DB

Spurious: Image better than
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Stability: Less 100 cps in any 15
min. period under normal
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Audio Output: 2 watts



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And there's more. Just in case you have one of those transceivers without CW provision, you can use the Codax to send code USB or LSB. Along with pulses for normal CW, the keyer generates an audio tone of about 1500 cycles at .05 volts, which can be fed right into your mike jack. I've tried it. It works. The first dit trips the VOX and the last one lets it drop, and you have break-in keying, sideband style. It'll do MCW code on AM, too, but remember it's illegal below 50 megs, while audio-keyed SSB is OK anywhere.

For monitoring purposes, either straight CW or audio, there is a phone jack on the back of the Codax. Plug in your phones and the panel volume control lets you listen to yourself key. Also, of course, you can plug in the phones without connecting the keyer to anything, which is an excellent idea at first, while you learn to send letters instead of sprays of dots and dashes. Oh yes, and if you want to feed your receiver audio into the phones at the same time, which is logical enough, you plug an already-wired phone plug into your receiver's phone jack. A mixer inside does all the work for you.

The Codax has provisions for grid-block keying for use with the lower priced transceiv-

ers which have a tendency to produce clicks and thumps when square wave audio is fed into their filters.

All the cables are already on the back of the box—one for wiring to whatever type of mike connector you use if you want audio keying, one with the phone plug, and one for key plug. In my own set-up, I just stuck the key-plug connections into the terminals of my straight key, so I'd have a way of holding key-down for tune-up (although you can tune quite nicely on a string of dashes), and also so I could go back and forth occasionally just for comparison.

There is, in fact, no comparison at all. In operation the Codax practically takes over the sending for you. The CQ DX's just ripple out, and in the course of QSO's I now find myself actually saying things, making conversation, instead of sticking to the old deadly round of RST, QTH, name, 73's es tn timer fb qso om—keying is now so easy. I still spray an occasional extra dot or dash around as I keep pushing my copying and sending speed up, but, heh heh, it's right easy to send a string of "error" dits now.

Tired of that CW straight-key drudgery? Get fast (!) relief with Codax. . . . WA2TDH