

73 Tests - The WRL TC-6A 6M Transceiver

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SIX METERS IS ONE of the finest mobile bands we have these days, particularly if you aren't planning to spend several hundred dollars in a sideband transceiver. It is virtually impossible to find a section of the country remote enough to be without contacts and the frequency of band openings assures you of QRM free local contacts most of the time-

Six meter mobile is not only one of the best bands for keeping in touch with the local gang, but if you do any traveling it is the finest for getting to know the bunch when you drive into a new town.

Those of you contemplating six meter mobile operation would do well to take a careful look at the World Radio Labs Tech-Ceiver TC-6A. This transceiver sells for only \$39.95 in kit form less power supply and gives a lot for the little money it costs. WRL sells power supply kits to match the rig for \$15.95 for the ac unit and \$24.95 for the 12 vdc model just in case you don't have something satisfactory kicking around.

The receiver is a superhet, which is remarkable at this price level. Naturally they have gotten it down to basics with one RF stage, an oscillator-mixer stage, a 2.1MHz IF stage and two audio stages. Diodes are used for second detector and noise limiter, A loudspeaker is mounted right in the front panel. The receiver tunes from 50-54 mc. and has a selectivity of 20 kc at the 6 dB points, which is ideal for mobile operation since it allows some flexibility in the tuning and is not as apt to bring about expensive car damage while you are attempting to zero a signal into the receiver.

The transmitter which runs about five watts input and one watt output, utilizes a 6CX8 triode/pentode tube. One great benefit of this transmitter is its use of the inexpensive 8 MC crystals. The oscillator triples the crystal frequency and feeds it into the pentode half of the tube where it is doubled and presented to the antenna (SO-239) connector via a built-in push-to-talk operated transmit-receive relay. The two audio stages used in the receiver are switched over and used as a high gain mike preamplifier and plate modulator.

The whole unit is quite small. As far as we know this is the smallest six meter transceiver on the market, measuring only 5" x 9" x 6" and weighing in at 5 lbs.

The unit provided us for test was assembled and wired in one evening following the almost exasperatingly simple instructions in the 50 page instruction book. Not only were all the parts there, but they all worked! We hooked the rig to a test power supply and fired it into the five element beam up on the chimney and practically had to beat calling stations off with a stick. Even way up here in the remote wilderness of New Hampshire this little old one watt output was attracting attention. All the reports were the same: good signal, good modulation. There was a dismaying lack of difference

between the sensitivity of the receiver and the home station converter-communications receiver setup. We did beat it on selectivity, though this didn't make a lot of difference most of the time.

OK, it works in the home shack, how will it do in the car? We decided to mount it in the VW station wagon, which presented some problems due to its six volt system. This took some digging into the junk box. Down deep we came across a Kupfrian transistorized supply which was small enough to fit in one hand and worked from six volts!

The Kupfrian supply was screwed to the bottom of the rig and the rig mounted under the dash. ! suppose there is no use in revealing the little turmoils that plagued us before everything was working smoothly. Much of it was our own fault For instance the first mounting place looked fine and seemed just right, the only trouble was that you smashed your knuckle on the rig whenever you shifted into first gear. It was a little trouble to mount there and we tried to make do with a handy supply of Band-Aids. As more and more cripples reported back from trips to the post office every day we decided to move the rig.

Then there was the little matter of the high pitched whine in the receiver from the supply, Hmnm, no hash filter - - - what do you know! We should have solved this one on the workbench instead of under the dash for fellows get to acting funny when they have been upside down for an hour or two and the blood has drained down into the head cavity.

Someone could have warned us about the six meter output of the VW engine too, I think it has more output than the rig. We put Sprague condensers in everything but the gas line and got the noise down to an acceptable level.

First we tested the unit by talking to it from the home station while someone was out for mail or food. This was easy for in a small town like this everything is almost within shouting distance. We then peaked up the rig as best as we could and headed for our little nearby mountain top: Pack Monadnock, just 3.5 miles down the road and 2600 feet high. Up there we ran into QRM. There were stations on all over southern New Hampshire and we could hear them right down through Massachusetts into northern Connecticut. The band was really quite crowded and we had a fine time working one station after another until way after midnight. We've been up there a few times since and the response is always the same: lots of contacts.

Though we really haven't had time, we've kind of looked the Tech-Ceiver over rather carefully to see what we could do in the way of modification. About the only change we would make would be to add a separate oscillator stage in there somewhere and change the present one over to a doubler, allowing us to run straight through in the final. This would be mostly just for something to do for we never have had much trouble as a result of the low power output of the rig - but then we've never tried to use it for DXing during a band opening.

Taken as it is, this is an excellent low cost, small portable, six meter transceiver which easily mounts in any car and turns in a creditable performance.