

NEW PRODUCTS

ITC MULTI-2000

Synthesized FM, sideband and CW, all in one little rig! The Multi-2000 is an amazing package, and sells for not much more than an ordinary synthesized two meter FM rig: \$695.

The FM part first. The 2000 has a fully synthesized circuit and covers the entire two meter band, from 144-148 MHz. It switches in 1 MHz, 100 kHz and 10 kHz segments, with a ± 7 kHz offset pot so you can get on any frequency you want. This means you can work any 30 kHz channel repeater or even the 15 kHz splinter channels. It will even permit you to zero in on oddball repeaters such as the Boston 146.39-99 machine.

The channel switch permits you to operate simplex — sending and receiving on the same channel — or duplex, transmitting either 600 kHz up or down from the received channel. There are also four crystal controlled channels available, if you want to use them. If you want to work with a repeater with other than 600 kHz split there is simple mod for the 2000 to meet this emergency, too.

There are two meters on the unit — an S-meter and a discriminator meter which indicates frequency deviation. Using the RIT control you can zero an off channel repeater without having your own transmitter off frequency. Most synthesized rigs send and receive 600 kHz apart and are locked into this.

The 2000 puts out about 12 Watts in the high power position (rated at 10 W) and about one Watt in low power.

Touchtone? Plugs right into the handy accessory socket in the back.

Quality reports on the speech have been universally excellent — it is clean, crisp, sounds great — and has good punch due to speech processing.

Sideband

In addition to all that FM up there between 146-148 MHz, there is a lot of sideband excitement going on in the lower reaches of the band. If you have any interest whatever in DX you need sideband. All aurora work is by sideband or CW — and most real long distance work is by sideband and CW.

All this brings us to Oscar — if you haven't listened in to Oscar yet you are hiding your head in the sand. Oscar is fantastic — both Oscars are

fantastic. More and more of the Multi-2000s are being used to work through Oscar from 145.95 MHz to 29.5 MHz. You can do it barefoot! Some fellows are up over 20 states and several countries with these rigs barefoot through the Oscars. The rig is well worth the price for that application alone.

When Oscar 7 goes by you can tune it in with the 2000 and hear all those fellows having a ball. You tune from 145.925 to 145.975 — the 50 kHz is spread out in 10 kHz segments on the 2000 so there is no problem separating everyone. The Oscar 7 signals come in on lower sideband, so you need a mod on the 2000 to copy them, the rig being set for upper sideband work. This calls for a change of the sideband selecting crystal inside (takes a moment). If you want to have switchable sidebands you add a toggle switch, the crystal and a couple of switching diodes. Oscar 6 and 7 require upper sideband input to work through to 29.5 MHz, so that is all set to go as is.

On sideband and CW operation the noise blanker circuit is available — and that is a state of the art invention which works like magic.

The 2000 is exceptionally well built — as a matter of fact the insides were used as the background for the picture of Judy Repeater on the cover of the April FM issue of 73. It is built in Japan, where the rig has been very popular. Since there are more Japanese two meter amateurs than there are in the U.S., the large volume of units being made has kept the price down substantially — so we are benefiting directly from the fantastic expansion of amateur radio in that country.

The importer sent along some specifications which seem reasonable. Sensitivity 0.2 μ V for 12 dB Sinad — 1.0 μ V for 20 dB quieting. Desense at 100 kHz greater than 135 dB. SSB sensitivity 0.12 μ V for 10 dB S/N. Intermods more than 72 dB down for 3rd order Intermod products. Stability better than 10 Hz drift after 2 minute warmup. I-f of 16.9 MHz.

The 73 Mountain was snowed in, so tests of the 2000 in a high rf atmosphere had to be made in the Boston rf pollution by Tufts Radio entrepreneur Chuck Martin in Medford. Chuck, who runs a split channel repeater, is all too familiar with the deficiencies of virtually all FM rigs as far as adjacent channel signals are concerned. He claims that in the month he's used the Multi-2000 he hasn't heard one spillover from the other repeaters! And he says the 2000 is the best he's every used for sharpness of the i-f. After a couple days with the 2000, he got so many local amateurs interested that he opened an account with International Telecommunications and ordered several 2000s for his customers.

In addition to the outstanding performance on FM, Chuck has been doing a lot of mobile sideband work, getting remarkable ground wave ranges with it. There apparently is a re-awakening interest in two meter sideband and in two meter DXing. Chuck claims that more and more fellows are coming on sideband every week in the greater Boston area and many are able to easily make contacts out over 100 miles, with some out to 200 miles.

73 and Hotline will be interested in reports of sideband occupation of 2m in other parts of the country.

The Multi-2000 is a good step ahead — a fine FM rig — a good sideband rig — and a needed link for satellite work.

CHRONEX WATCHES

A couple of years ago I sent my Rolex watch in to the company office in New York for cleaning. It disappeared.

That was a blow. I'd become used to having a watch which would go anywhere with me and provide accurate time. Jean Sheppard K2ORS had gotten the watch for me in Ireland back around 1956.

Once the insurance money was in hand I decided to get a digital electronic watch... the question was,

