



73 Tests

THE ICOM IC-21 TRANSCEIVER

The word has leaked out around the U.S. about the Japanese IC-20 and IC-21 transceivers, fueled by a handful of units brought back by visitors to Japan and returning servicemen. Now, at last, these goodies are being made available through a U.S. importer.

Adirondack Radio was kind enough to lend their first sample for a test and it certainly was impressive. The most spectacular aspect of the rig is the 24-channel frequency switch, complete with an easy-to-get-at board for the 24 crystals and tweaking capacitors immediately at hand.

Now, while you may live in an area which only has one or two repeaters, those of us in the northeast are living in an entirely different world, one jammed with repeaters on just about every pair of channels. Though the 73 HQ is in a remote corner of lower New Hampshire, there are now about 17 repeaters that can be used with a simple antenna. Three miles away, from the top of Pack Monadnock mountain, where we test out new equipment, there are a whole bunch more within easy reach. A 24-channel transceiver looks awfully good for a spot like this.

The IC-21 has so many nice features that it is difficult to decide which is the most desirable. It has an ac supply built in and will operate from either 115V ac or 13.6V dc, making it a dandy unit for both base and mobile applications... and particularly valuable to the operator who wants to be able to use one rig both in the car and at home.

The transmitter puts out 10 watts on the high power position of the output switch and one watt on the low position, making it possible to save on battery power when operating through most repeaters.

Experienced FM operators will appreciate the variety of meters on the IC-21. Just above the channel switch is a deviation meter which indicates how much off frequency the incoming signal is. This meter is calibrated plus and minus 5 kHz. There is a control on the front panel to compensate for this off-channel stuff... a Receiver Incremental Tuning control which swings the receiver back and forth about 5 kHz. Since not all 94 repeaters are on 94 and not all 76 repeaters are exactly on 76, this is a handy control to have when you are moving from one area to another.

The S-meter on the receiver comes in handy when you want to identify which of several repeaters you are hearing and there is no identification at the moment. At our mountain lab site we hear W1ALE in Concord on 94 at umpteen over 9, WA1MHN in Somerville, Mass., at S-9, WA1KGR in Holyoke, Mass., at S-8, and W1KOO on Mt. Mansfield, Vt., at S-1, so you can tell from the S-meter reading exactly which repeater is being heard at any time. On 88 the S-meter permits instant identification between W1ABI, WA1KFX, K1AOI, W1ZAW, WA1JTB, and WA1KHK.

The S-meter becomes a plate tuning meter on transmit or an SWR-meter, with a flick of the front panel switch. There is a

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the **IC-21** **\$389.00 Net**

- 24 Channel capability.
- A new high — very useful in these days of new repeaters going on the air constantly.
- Front panel — P.A. tune control — a real advantage to get maximum output.
- Separate S and discriminator meter ± 5 KHz — panel.
- R.I.T. — control on receive — either 1 watt or 10 watt output.
- S and SWR meter combined.
- Remote VFO plug.
- 12 volt DC or 110 volt AC operation.
- AC and DC cable supply.
- Discriminator meter — a real addition.
- Crystals — supplied with 4 channels.

This is an entirely new approach in 2 meter FM gear. Just imagine 24 channel capability, SWR meter and S meter, plus netting condenser on each transmit and transceive crystal, plus many other features original with this unit.

Manufactured by Inoue Communication Equipment Corp. of Osaka, Japan, already well known to 2 meter FM users. Send your order today.

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plate tuning control on the panel, permitting the plate to be peaked on any channel, thus overcoming the serious drop in power you suffer with some rigs when you change frequency from one end of the band to the other.

The mike gain control on the front panel is useful for setting your deviation to match the repeater you are using. Some are wide-band, some narrow, and some compromises. With a little fiddling around you can find out what works best with each repeater and use that deviation from then on.

Some of the statistics, briefly: weight 14 lbs; size 4 1/2" high, 9" x 10", will obviously fit under most dashboards; draws 0.2 A on receive, 2.1 A on high power, and 1.2 A on low power; uses 18 MHz crystals for the transmitter and 15 MHz for the receiver; i-f is the usual 10.7 and 455 kHz.

An automatic protection circuit disables the driver transistor if anything happens to the antenna, thus keeping the final transistor from going west when the antenna is shorted or opens up.

A low-pass filter on the output is designed to keep interference down to neighboring television sets.

The IC-21 is designed to be mounted by means of a bracket in the car and a built-in folding foot stand angles it for use on the operating table.

An external vfo may be used with the IC-21. It plugs into one side of the cabinet. There is a jack in the back for an external speaker, which is very handy for car installations where you would prefer to listen to the regular car radio speaker than the smaller one on the transceiver.

Since the transmitter and receiver units are independent of each other, a good technician might be able to convert this rig rather easily into a repeater. It wouldn't take a whole lot of work. The modular construction of this rig would make such a "conversion" much easier than with most transceivers. The fact is that you can get at almost everything on the IC-21.

The IC-21 is being imported by Adirondack Radio, Amsterdam, New York and sells for \$389.00.

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