

## The ICOM IC-R72

by Don Moman

The R72 was released several years ago but, due to some legal entanglements, has only become available in North America in late 1991. It doesn't replace the popular R71, but it does offer several additional features and an improved operating system. Unfortunately, some of the features that made the R71 popular among DXers are missing - notably passband tuning, notch filter and dual VFOs. No AGC OFF position is available, and no RF GAIN control either. On the plus side, the amber LCD display is very viewable and displays the frequency to 10 hertz resolution. In addition, changing sidebands is accomplished without having to retune - a very welcome change from the R71.

The R72 tunes 100 khz (30 khz with reduced specs) to 30 Mhz in AM, SSB and CW. FM is optional. Sensitivity is enhanced above 1.6 Mhz where the switchable pre-amplifier is available. At 14 Mhz, a signal of .15 uv was detectable but severely bothered by an internally generated heterodyne. Whether this is a function of this particular radio or a fault of the new DDS\* PLL system, I don't know. In actual listening use, this wasn't detected. Below 1.6 Mhz sensitivity dropped by about 10 db. The switchable preamp is controlled below 1.6 Mhz by Q15, but with surface mount technology making everything so tiny, it's not a simple matter physically to allow the amp to function below 1.6 Mhz.

The front end appears respectable, at least compared to my Kenwood TS 850. AT the new QTH (approx 55 km from the nearest MW 50 kw'er) using a 1000 foot beverage pointed right back at the transmitter site (many 50 kw'ers in this same general area) the '850 needs (usually) both the 6 and 12 db attenuators activated to reduce IMD products to a similar level of the stock R-72. At this point both have approximately the same degree of (in?)sensitivity. On other beverages pointing away from the city, the extra sensitivity of the '850 can be used.

The MW band seemed quite free from internally generated garbage and even the longwave spectrum wasn't too badly overloaded (again, it acted much like the TS-850).

AM selectivity is either too wide or too narrow. The AM wide filter is: 6 khz / 20 khz at -6/-50 db and is a 4 pole discrete crystal affair, much like that of the Kenwood R-5000. Too broad and too sloppy but gives good sound when conditions allow. No optional filter is available from ICOM, but it appears that the much better FL-33 6 khz AM filter (originally used in the IC-751 transceiver) or the aftermarket 4 khz ESKAB filter could be shoehorned into the set for better AM. The 9 Mhz crystal SSB filter is rated as 2.3 khz / 4 khz at the usual -6/-60 db steps. It's used in AM narrow and in CW as well. Pretty muddy sound in AM but adequate when used in the SSB mode. An optional CW narrow filter is available. Another feature is a center tuning LED indicator. Not really too useful but interesting anyway....

Operating controls are sparse with only 3 knobs to turn; none of them are even dual function! The keypad buttons are small and rubbery feeling, I much prefer the solid feel of the R71 keypad. Trailing zeroes or the decimal point must also be keyed in unless you are only entering a 1 or 2 digit Mhz selection. Also available are 99 memory channels which store frequency and mode. Another two channels store the upper and lower scan limits. Multiple scan modes including programmed scan, selected memory scan, memory scan and auto memory write are available. A major annoyance is the lack of dual VFOs, very handy for many DX situations or for comparing two signals without having to store them in a memory channel.

For unattended recording, the R72 has a built in clock and timer function, plus relay outputs on the rear for controlling a recorder through its remote input. A high level (AUX input on most recorders) fixed audio output is available on the rear panel.

The operators manual mentions the "R72 Battery type" model which has a sealed lead-acid gel cell battery backup installed internally, that provides about 1 hour of listening time. Certainly not enough for a weekend listening expedition, but at least an accessory 12 VDC socket is provided. This uses a commonly available coaxial style DC power connector. Current draw is about 1 amp. Mine was not the "Battery Type" version and I have not seen any mention of this variation of the R72 in their ads.

R68-2-2

Audio from the built in speaker is rather decent, in my opinion, especially considering the tiny speaker. As usual, an external speaker would be even better.

Passport to World Band Radio 1992 summed up the R72 as "nice but nothing special". I'd agree with that. I'd also agree with most of their comments but note that not all units come with the 1 hour battery pack feature and that the R72 does not replace the R71; both are still available at the moment. Comparing the R72 to other models in the same price range such as the Yaesu FRG-8800 and Kenwood R-2000, I'd certainly pick it as the clear winner. But considering the field, that's not saying a lot.

\*DDS--direct digital synthesis. One chip looks after frequency synthesis right through to sine wave output. Supposed to lock up more quickly and be quieter than older methods of frequency synthesis, though Don still feels that the R72 signal handling is limited by synthesizer noise.

(the above review first appeared in CIDX Messenger; Don has added further MW notes for its IRCA printing)