

■ Equipment Review

ICOM IC-2340H Dual Band FM Transceiver

Reviewed by Gil Sones VK3AUI

The ICOM IC-2340H is a compact, dual band, mobile FM transceiver offering high power output with full features in a package which is capable of being shoe-horned into a modern car. These days, in addition to the constraints of space in the dashboard area, you must look out for the possible action of airbags. This radio is small and you should be able to find a spot for it.

The microphone socket is on a lead coming out from the back panel so that you have some freedom where you attach it. The socket is one of the modular ones like an overgrown US phone socket.

A consequence of small size and high power output is the need to adequately ventilate the radio. A small

fan is provided which operates for a period after the PTT is pressed. Alternatively, you can program the fan to operate continuously. Another need is to provide a power lead direct to the battery. The lead supplied is well fused and thick enough to minimise voltage drop.

Most of the front panel is taken up by a large display which shows both bands. The display also has signal strength and power output graphs plus displays of mute, memory, VFO, repeater, etc status. Around the display are 10 pushbuttons and four rotary controls.

The rotary controls for each band are mute/volume and tuning/memory selection controls. The mute and volume are concentric and could be

a trifle fiddly whilst mobile. Still, there must be some compromise in the small space available.

When switched on, the display goes into a self test routine which is arranged to be innovative and visually attractive, rather like some screen saver routines. This display also appears if you haven't used the controls for a period. After some time, if the display gyrations pall, you can dispense with it as this is one of the software options.

There are many software options which lead to an instruction book of 56 pages. This book is truly an operation manual with only a one page specification and no block or circuit diagram.

One feature you may be tempted to deactivate are the beeps which are emitted when various things happen. However, this may be unwise as they also are used to confirm various operations.

Some interesting timeouts are available. The length of transmission can be limited which is handy in the situation where you manage to drive down the road sitting on the microphone. It will also tend to limit your monologues if you are operating simplex. The timeout has several times available from 3 minutes to 30 minutes. The radio can also be set to switch off, if not used for a time between 30 minutes and 2 hours, so as not to leave you with a flat car battery if you leave it running.

Repeaters with odd offsets can be easily accommodated as the offset can be varied from the standard one. Both bands have the standard offsets programmed as the default values.

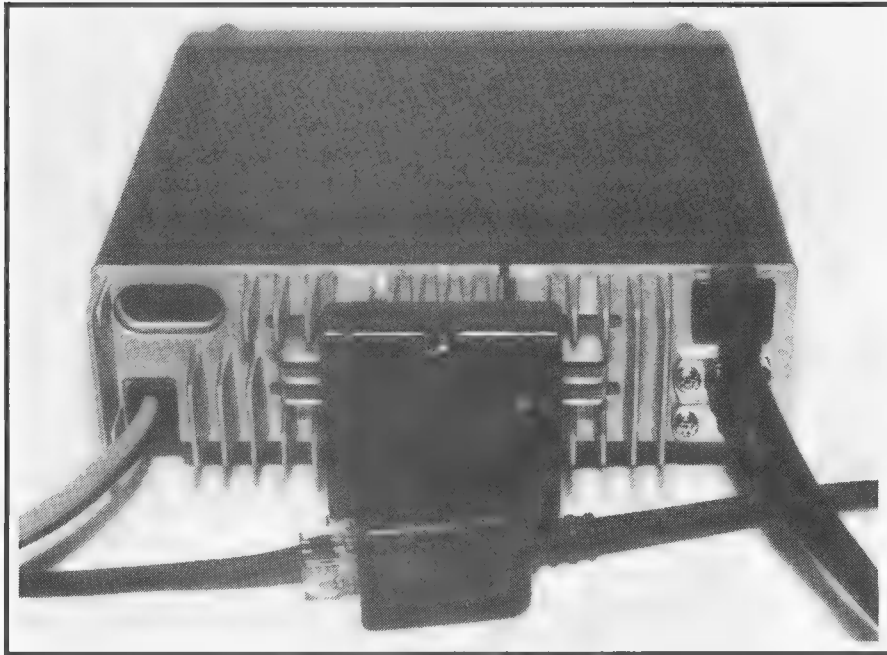
Memory capacity is 50 memories per band plus the scan edge memories. The memories can store offsets and, if required, CTCSS info. The memory medium is an EEPROM which is non volatile and does not depend on a lithium battery. Even so, when operating from a mains supply, a glitch was able to so scramble things that a major reset was needed. The glitch apparently came from builders' equipment a few doors away.

Mains power supplies need to be quite hefty if you use the radio in the shack. The transmit current drain can be around 10 amps and this is a



The IC-2340H. Note the small size in relation to the handheld microphone, and the modular mic socket which is on a lead coming from the back of the transceiver.

(Photo by Ron Fisher VK3OM)



**A rear view of the IC-2340H, again showing the modular mic socket and plug, and the programmable fan, very necessary as a consequence of the small size and high power output of the transceiver.
(Photo by Ron Fisher VK3OM)**

steady drain unlike an HF sideband rig. The result is that the power supply for mains operation needs to be of the same size as that used for many HF transceivers. The recommended ICOM supply is the IC-PS30 which is rated up to 25 amps peak.

To fully utilise the radio at least some of the optional modules would be needed. These are a CTCSS encoder/decoder, a DTMF encoder/decoder and matching microphone, and the voice synthesiser unit.

Locally, the DTMF option is probably less usable although it does enable some interesting code operations.

The CTCSS, or sub audible tone, will be needed if you use one of the many repeaters using this system.

The voice synthesiser will be of interest for mobile operation or if you have trouble reading the display.

All the modules are small items which many users should have installed by the agent. The size and delicacy of the connectors is such that, unless you have the skill, you should leave it to an expert.

The transmit frequency coverage is limited to the amateur bands but the actual receive range is quite wide.

The receiver performance is only guaranteed within the amateur bands. Very many other services can be heard. Indeed, at some times and in some locations, they can make their presence felt even within the amateur band. Disturbance from pagers is no worse than with other similar radios.

Disturbance from other services such as pagers is an area all manufacturers should address. It is a problem common to all makers. It is possible to do better. HF radios have had a lot of work done on them in this area and the same techniques can be extended to VHF and UHF.

The output connector is a UHF socket on a wander lead. Such a connector is totally inappropriate for such a fine transceiver. The connector should be a type N, or similar, constant impedance connector. ICOM are not alone in this but a UHF connector is really unsuitable for a VHF/UHF radio.

The ICOM IC-2340H is a well built radio which should give excellent service. It is well built and operates very smoothly.

Thanks to ICOM (Australia) Pty Ltd for the loan of the review transceiver.

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