



● Tough and tiny...but a good performer. Rob Mannion G3XFD - once he'd seen this amazingly little performer - enjoyed using it and coined the phrase "It's as tough as tank" - hence this month's front cover on PW!

days of taking delivery of the car on the first of September, PW's News and Production Editor **Donna Vincent G7TZB** suggested I take on the job of reviewing the Yaesu FT-1500M as it fitted so well in the roof compartment above the driver's seat.

At the time of writing this article - in mid-November 2001, I've driven almost 5000 miles in the Toyota. It's proved ideal for my

To be quite frank...some pseudo-military/Amateur Radio equipment concepts don't work out. In the recent past I've openly criticised the approach of manufacturers who - in my opinion - have tried to redirect military look-alike equipment in the direction of unsuspecting Amateur Radio enthusiasts. On those occasions I was critical because there often seemed to the disadvantages of what was originally designed as military and marine equipment - with no

# Yaesu's Tough & Tiny Talker

The chance to try out Yaesu's rugged-looking little FT-1500M transceiver came just as G3XFD took delivery of his new car. Since 1 September 2001 Rob's driven almost 5000 miles...and the Yaesu's been with him all the time!

● Needing to convey the size of the Yaesu FT-1500M to readers, Rob G3XFD asked Donna G7TZB to 'Lend a hand' and she took him literally! Donna's hand is truly ladylike in size and so it's possible to get a good impression of the transceiver's neat format.

**M**y new Toyota Yaris Verso mini-MPV car is deal for the Radio Amateur as it's full of little nooks and crannies (my Grandson Freddie - who'll be three in January - says it's full of "Crooks and Grannies" for my radios). Because of this and literally within

portable radio operations and as a result the Yaesu transceiver has had much use and had also proved to be as tough and reliable as it looks. So, in answering the question "How long have you had the rig on review?", I can answer...almost 5000 miles!

real consideration for our hobby's special requirements. Only my personal opinion of course...and I fully realise (from the correspondence received from those who disagree) that other people have differing opinions!

But this time my finger's not pointing at Yaesu because although there may be some comparisons with military-style transceivers the FT-1500M transceiver is a little thoroughbred. It's a no-nonsense Amateur rig built (externally) in a similar way to military equipment, with the necessary reliability for when it's used in the field....and priced at an Amateur Radio level.

## Interesting Concept

The Yaesu FT-1500M is an interesting concept and I was reminded of Yaesu's promotional material referring to its military type styling when it first appeared on the market several years ago. However, for some reason the chance to review this interesting little rig never came my way then, but better late than never!

Weighing in at 1kg (2.2lbs) the transceiver feels surprisingly 'chunky' for the physical dimensions of 127 x 35 x 126mm (5 x 1.4 x 5in). Another surprise is that this little package can provide up to 50W output, and it was because of this and the



convenient size that Donna and I thought it would be ideal to try out in my Toyota.

Designed around a double conversion receiver with a (surprisingly low) first i.f. of 21.7MHz and second i.f. of 450kHz, Yaesu claim a sensitivity of better than 0.2µV (for 12dB SINAD) and a selectivity (-6/ -60dB) at 12 and 28kHz (see 'On Air' comments later).

For mobile use a good audio output level is required...and despite its miniature looks this little transceiver provides an impressive 3.5W into 4Ω (again more on this later).

## Facts & Features

Let's now look at the basic facts and features offered by the FT-1500M - and they're far from basic! I'm not listing them all - but only those which I regard as being really noteworthy. If you want check everything - please check out an FT-1500M when you next attend a show, rally or Yaesu dealer!

Power levels are controllable from 50 to 25, 10 and 5W easily using one of the top mounted switches. There's also expanded receiver coverage (137-174MHz - not within the scope of this review as I'm concentrating on the Amateur Radio aspects of equipment), keyboard entries from the microphone, packet radio capability via a rear panel mounted jack, 130 memories to store repeater shifts, CTCSS tones, with user-tagged alpha-numerical labels for channel recognition. There's built-in CTCSS encoder/decoder circuitry (becoming a necessity with many repeaters beginning to use CTCSS nowadays).

### The 'Smart Search' feature was very helpful indeed!

Although many features of this kind aren't used by grey-beard G3XFD...this one was! The (up to the usual Yaesu standard) manual says :”The Smart Search Feature, which automatically sweeps a band and loads active frequencies

into dedicated memory banks, is ideal for identifying active repeaters”. And it did so very well too!

I used Smart Search, it can be commanded by operating P2 button on the microphone (Control button P1, next to P2, on the microphone operates the 1750HZ tone burst) when I was driving from Dorset to North Yorkshire for a club visit, and then onwards to Rochdale for the QRP Convention with impressive results. The feature soon enabled me to listen in to 144MHz local 'chat'



- Access to the insides of the rugged and robust casing - its wouldn't be a fair description to refer to it as a 'shell' or 'cover' as neither term adequately describes the impressive looks - is via an Allen key. But, despite the miniature control buttons the transceiver is exceptionally neat, and even with his larger fingers G3XFD had few difficulties operating the radio.

frequencies as I passed by on my 780 mile (1255km) round trip... a great way to enjoy listening in to other Amateurs.

## On The Air

As I've already mentioned, the Yaesu FT-1500M was on loan to me for much longer than is usual for reviews and on the air appraisals. I was grateful for the opportunity to use no-nonsense simple-to-install rig to use while I got used to using the new car and sorting out what equipment was to be semi- installed.

Very few of my QSOs are actually 'mobile' nowadays because, apart from the usual safety factors it's exceedingly difficult for me as I use hand-controls to drive. I've now graduated from the purely mechanical push-pull lever for brake and accelerator (the accelerator control is now in the form of an Italian-made 'Guido Simplex' inner ring on the steering wheel itself, operating the vehicle's throttle via a servo motor which I'm pleased to say doesn't

seem to have any EMC problems when I'm transmitting on h.f. or v.h.f).

The brakes are controlled from a custom-designed mounted hand-operated lever next to my left knee! Very comfortable to drive yes, but leaving no room - in all senses of the word - for operating on the move. I only mention these facts because I know there are many other disabled Amateurs and they may well pass on some of their own ideas to help myself and others in the same situation.

My usual practice is to take a

break on journeys and go on to the h.f. or v.h.f.

bands...and I can be on either within seconds of stopping. To help, the FT-1500M had been mounted above my head in the high-roofed Toyota, placed in a useful parcel shelf, ideal for the purpose. Large ventilation holes in the bottom of the shelf allow for natural cooling to take place, and the audio from the relatively small loudspeaker is reflected downwards towards me.

Incidentally, the audio from the FT-1500M is surprisingly good bearing in mind just how small the speaker is and (in my car) I was listening from below, to a speaker mounted on the upper casing, directing the output towards the inner roof of the car. Additionally, the audio output power was more than adequate when on the move because, although I rarely transmitted when mobile...I listened a very great deal.

On my various trips to visit clubs and also for personal travel, I tend to time my breaks at favourite high spots so I can get the best results on the air. I've no doubt that many of you know Birdlip Hill in Gloucestershire, Clee Hill in Shropshire, and the Hills around Llangollen - all are favourite G3/GW3XFD operating sites often used when I pass through.

Unfortunately though, many of my favourite high spots are also occupied by high power v.h.f. /u.h.f Private Mobile Radio (PMR)

### Product

The Yaesu FT-1500M 144MHz v.h.f. f.m. 50W mobile transceiver.

### Pros & Cons

*Pros: An amazingly compact, rugged and easy-to-use 144MHz f.m. transceiver. Ideal for those who don't want to dominate their car with Amateur Radio gear but who want a potent transmitter. Fit, forget it's there...and use it as much as you like...tough as a tank in looks and circuitry!*

*Cons: Very small control buttons which are slightly 'fiddly', l.c.d. screen could be brighter.*

### Company

Yaesu (UK) Ltd.

### Contact

Sales  
Telephone (01962)866667

### Price

£229 inc. VAT

### Summary

*In my opinion the Yaesu FT-1500M is a reliable 'go literally anywhere' f.m. transceiver. It's so small and neat it could be fitted in literally any car, lorry or boat. I've even seen one mounted on a bicycle...the FT-1500M is that versatile!*

### Thanks

*My thanks for the extended loan of the review FT-1500M go to Yaesu UK, Unit 12, Sun Valley Business Park, Winnall Close, Winchester, Hampshire SO23 0LB.*



TOUGH AS A TANK SAYS G3XFD!



The Yaesu FT-1500M is provided with a fist microphone providing many facilities. Rob G3XFD - having come across this method before - soon became adjusted to using the special P1 button to provide a 1750Hz tone burst where necessary. The microphone is illuminated for night time use and the built-in keypad provides many control functions. Particularly useful is the 'Smart Search' control button P2 (See text).

transmitters and the dreaded wide area paging systems - famed for their effects on modern v.h.f./u.h.f. equipment. A 144MHz rig has got to have adequate cross-modulation characteristics nowadays because paging transmitters are to be found everywhere - particularly on what we also consider to be good v.h.f. sites!

I'm mentioning my operating choices because I was pleased to find that the FT-1500M coped extremely well with nearby paging transmitters on several of my favourite hill-top sites. Additionally, not far from my temporary home in Ferndown in Dorset, there's a nest of potent PMR, paging and other v.h.f. /u.h.f. transmitters within 500 metres or so of the house. And even when I had the '1500M in the shack monitoring the band as I worked on the bench...there was minimum break-through observed.

Bearing in mind that the FT-1500M has a relatively low (for modern equipment) first i.f. of 21.7MHz, image problems and general selectivity were also impressive. I had adequate proof of this one Saturday when operating from the car park at Birdlip Hill (not far from the Air Balloon pub) on the way home from North Wales. In the distance either side of my spot I could see two other Amateurs

who were also working on 144MHz. We were all within 500 metres of each other and my own QSOs were completed satisfactorily. Needless to say I was impressed.

The audio from the FT-1500M is extremely good on transmit - many friends commented during QSOs that they immediately recognised my voice. "Clear & crisp" was the most often heard report.

Whilst up in North Wales, when parked in Caernarfon,

together with the 50W output would have certainly helped in a QSO.

Finally, I should mention the FT-1500's blue background l.c.d. screen. This was more than adequate for inside the car in the screened (from the direct sunlight) position I had it mounted into. However, mounted on the dashboard with bright ambient light, I think the blue background colour placed the screen at a disadvantage.



Don't be deceived - there's much more inside an FT-1500M than you think on first glance! In the review G3XFD comments on the surprisingly good audio available from the FT-1500M's relatively small speaker (Underneath the released top casing - on the right in this photograph).

overlooking the Menai Strait, using my 5/8λ mobile whip (normally only employed when stationary) I heard the Limerick Repeater in south-west Ireland coming through at S8 over the long sea path. However, despite trying...I didn't work anyone in EI although (on the simplex channels) I heard the usual gang of EI stations based in and around

Clonmel in County Tipperary. Quite oblivious of how far their f.m.

transmissions were travelling - my friends in the **Tipperary Amateur Radio Group (TARG)** weren't looking out for DX stations! On the other hand - the sensitivity of the FT-1500M,

So, my advice for anyone contemplating fitting an FT-1500M - is to place it away from the direct influence of bright ambient light. But to be fair, I've also had to be careful positioning the main screen on other equipment in my car - those with a yellow tinted background also losing apparent contrast due to direct light. With some thought given to positioning it should not be a problem.

The main rotary controls were very straightforward in everyday use, but the very small control push-buttons (set above the main screen on the top edge of the front panel) are rather small. I soon got to know which was which by remembering what they were and where they were...but personally, I'd like them to be slightly more 'proud'. In this way even the largest fingers could locate the wanted control easily, especially if the transceiver was mounted in such a way to take advantage of a small parcel, or some other narrow shelf. It would make the transceiver even more versatile in my opinion!

PW

The antenna socket provides an extra clue to just how small the Yaesu FT-1500M transceiver is. This photograph also graphically illustrates the massive heat-sinking effect provided by the chunky - but still very neat - outer casing. Even with prolonged use G3XFD found that the rig was extremely reliable with surprisingly good quality audio from the small internal speaker.

