

switch to AM/ANL. It is suggested that the supplied connectors are used and these should be crimped on to the ends of the connecting leads. It will then be possible to unplug the FM7 module should service be required.

If it is required to de-modulate fairly wide FM signals on the FRG7, such as those used by some 2 metre repeaters, then an alternative connection will be required ahead of the 455kHz filter. This modification is not particularly easy, although with a little time and patience it should be possible to achieve. Locate L405 which is in the drain of the last mixer FET Q402, and replace it with a 455kHz tuned circuit. This should be a YHCS11100 with a 22pF in parallel, as used in the discriminator. In the group of three pins use the outside two to fit in the holes where L405 was located. This should be done with the smallest possible length of connection wire, certainly no longer than 0.5 inch. Earth the can of the transformer to the nearest earth track on the receiver. Couple the output from the drain of Q402 via a 10pF capacitor to a suitable length of coax into the FM7 adaptor. No adjustment of this extra coil should be necessary. An additional kit of

parts for this modification is available from Timestep.

Operating

Tune the receiver to an FM signal and adjust the tuning for maximum signal strength reading. Switch the receiver to its new FM position and adjust L1 for maximum recovered audio (there are two peaks — be careful to select the one with the maximum output — this will be very close to its normal setting as supplied). Experience has shown that with the superior manufacturing capability of Toko that the coil L1 requires not more than 1/8 of a turn. Tune to a blank frequency and adjust R12 until the noise just disappears, you will find now that the receiver will be quiet until an FM signal is heard. Note that the module will not open up if R12 is turned all the way round.

Kits

A complete kit for this FM detector is available from Timestep Electronics Ltd., Egremont Street, Glemsford, Sudbury, Suffolk. Readers should note than *Ham Radio*

Today has negotiated a special price with Timestep. The FM7 kit is now £9.50 and the FM7 tested module £13.50. Both these prices include VAT and postage and packing. The FM42 is by quotation only depending on the IF frequency, although an experienced constructor may prefer to modify an FM7 by himself.

Readers wishing to build this discriminator without buying a kit will find the PCB layouts, circuitry and instructions correct. Please note that Timestep Electronics Ltd. hold the full copyright on the PCB design.

Service

Should your FM7 or FM42 module not perform correctly then Timestep Electronics has offered to service it providing it is constructed to a suitable standard. If there are no constructional errors then only return postage will be charged. The nominal service charge is £2.50 but please enclose with your module a cheque crossed "not over £5". Service turnaround by Timestep is between 2-4 weeks but may take longer if commercial customers are queuing.

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WPO COMMUNICATIONS

PROJECT HIGH PERFORMANCE HF TRANSCEIVER

Are you building Project Omega yet???

The initial response totally overwhelmed us so we apologise for the delays in supplying kits, but it's worth waiting for with our initial tests on the finalised modules very encouraging. Remember, Omega can build any combination of facilities from a single band receiver only to a full 9 band SSB/CW/FM/AM Transceiver.

The October issue (published September) sees Omega as a complete 9 band SSB/CW receiver with the publication of the VFO and digital readout plus receive only SSB adaptor. November will see the 5 watt PA/filters and switching units to complete the QRP 9 band CW Transceiver. Next comes the Tx/Rx SSB adaptor in December, followed by the remaining units (QRP PA, FM adaptor etc). Other additions will include a 2 metre Unit (usable with any HF rig) and in-line SWR Bridge.

Kits available so far:

Main CIPPU unit (i.f.)	£69.50 (July HRT) (pcb only £6.50)
Active Filter (SSB/CW)	£15.45 (July HRT) (pcb only £2.20)
Preselector	£11.00 (Aug HRT) (Pair pcb's)
Notch Filter	£11.20 (Aug HRT) £2.60)
Then, VFO Unit	£64.00 (Oct HRT) (Pair pcb's £7.90) plus crystals @ £5.00 ea or £40 set of 10.
Digital LCD Readout	£31.00 (Oct HRT)
Rx only SSB Adaptor	£6.20 (Oct HRT)

Watch these ads for the rest of the modules. Each kit is available just after publication of the relevant issue, and includes a copy of the article.

We have a mailing list for all actual or potential builders (ask to be put on if you are interested). This will carry latest info/mods, plus quick notification of any errors in the articles). Once the QRP PA is published, we shall also be starting an Omega Net on HF.

KITS

VHF to HF TRANSVERTER

Work the world with a VHF handitalkie

Published in the August issue of HRT, this looks like being a real winner. If you can't afford Omega, try this way of getting on HF using your expensive VHF Multimode Transceiver or SSB handheld. Whatever your VHF rig does on 2 metres, it will now do on HF!

G4DHF's design gives you the capability of Rx/Tx operation on 20, 15 and 10 metres using one neat little unit into which you just plug the VHF rig. With a minimum of 2 watts (typically 3 watts) output at HF and driveable by any VHF rig, the unit is ideal for portable/mobile work, or a QRP base station (or drive a linear). direct kHz frequency translation off your VHF dial. Our kit for this project comes with both drilled pcb's, all for £61.00. The crystals (one per band) are extra — get them from QSL Ltd (see last month's Ad or the article for details).

HAVE YOU BUILT THE DSB80 YET? Over 200 of these little transceivers sold — see previous ads for more details. 80 or 160 Meter version now available as kits. Both at £37.45 inc for full pcb kit with reduction drive, VFO capacitor etc.

2 METRE FM RECEIVER — our popular kit costs ONLY £30.65 including S20 crystal. 6 channel max <0.2V sensitivity. Helical RF filter, 10.7MHz roofing filter, 455kHz ceramic filter. Prewound inductors. +12v dc operation.

CAPACITY ADD-ON UNIT (Sept 82/May 83 RadCom) — very popular unit for turning your DFM into a Digital Capacitance meter. Kit with case only £13.65 inc.

VHF PRESCALER — lots of these sold at only £5.49 inc for the kit including case! Divide by 10 to 150MHz (usually 200MHz) + 12v operation.

RX80 ATU — as in Aug 82 RadCom. SWI or QRP Antenna Matching Unit. Kit complete with case, capacitors, toroid, wire, knobs etc at £25.32 inc.

IAMBIC KEYS — ready built and cased keys for PP3 or +12v use. Solid state auto polarity keying. Needs a paddle such as Benchet etc. ONLY £20.65 inc.

All prices include VAT/ Post. Allow 1-4 weeks for delivery if not ex-stock, we'll let you know anyway if over 1 week. All kits complete including pots, wire etc and detailed instructions. RS COMPONENTS range also available to order. MAIL ORDER ONLY — CASH WITH ORDER. EXPORT no problem. SAE for more details/enquiries please.