

on the rear of the interface plate, behind the head of the bolt immediately above the top PA transistor. This bolt should be removed, the sensor tab mounted with a very small amount of heatsink compound and then replaced, with its pins facing upwards.

Bend the sensor pins back away from the interface plate. Use a length of twisted pair insulated wire to link the pins of the sensor (use sleeving at the solder junctions to avoid shorts) along the top of the interface plate and back in through the grommeted hole to the right of the SO239 socket with pins J & H on the accessory PCB. The twisted pair can be run in a length of sleeving to improve the appearance if required. Note: the grommeted hole referred to appears to be missing from the drilling diagrams published so far - its position is shown as the additional hole X in Fig.3.

## Finishing Wiring

The permanent wiring may now be made, using the diagram given on p56 of the April '85 issue. +12V to the PCB comes from the feedthrough on the side of the PA screen. Run the PCB wiring that goes to the front panel switch/controls as a multiple twisted pair, dropping straight down from the PCB, between the VCO and screen and thence along the base of the chassis to the front panel controls.

The sensor LED indication uses the spare LED provided on the front panel which originally had no allocation.

## More Omega

The final part of the Omega series will be the AM/FM adaptor,

Compon	ent Lieting	- Andrews - Andrews	10 n ceramic disc
Component Listing		C7	47 uF Lo-Leak electrolytic
Resistors	and the state of the state of the	C11	1 uf tantalum bead
R1 ,2	27R1W	TC1	140 pF mica trimmer
R3 2k2		Samiconductore	
R4,5,6,11,15 10k		01 04 00220 - 00220	
R7,16	1 M2	01-04	BC238 OF BC239
R8,14	2 M2		CA3240-E
R9	470R	D1,2,6	OA91
R10	The set of the set of the 1k	D3,4,5	1N4148
R12 18	334	ZD1	10v400mW Zener
P13	684	TS1	75 deg sensor
D17	201		RS type 307-935
D10	JJK		
RIS	5 K0	RFC1,2	100 uH Toko choke
H20	150R		(coded 101)
H21	390R		Contaut Maund on Fair Dite
R22	820R	Contraction of Sources	See text. wound on Fair-Rite
All resistors are carbon film, 0.25W 5% unless otherwise stated.		59-61001101 or 59-61001102	
RV1 100k Alps pot		A kit of parts for this board in-	
VR1,3	47 k or 50 k hor 10 mm preset	or 50k hor 10 mm preset cluding PCB, sensor and all com-	
VR2	100k hor 10 mm preset	ponents is available from WPO	
VR4	10k hor 10 mm preset	Communications for £10 45 with	
VR5	100k vert 10 mm preset	communications for £19.45 with	
Capacitors		boards ald	one at £5.25, both inc
C1	2 p2 silver mica	post. Th	e sensor is available
C2,3,4,5,6,8,9,10		separate	ly for £4.38 inc.

## Notes On Project Omega

1. Interstage wiring — a number of people have reported various degrees of 'clicking' on CW when all the modules are in place, and also strange feedback problems on SSB, especially when the QRO PA is in use, although this can occur with only the QRP PA in use. These problems are connected with voltage drops introduced into the CIF-PU + 12V supply by the method of wiring. It can be demonstrated that even a small voltage drop on the CIFPU + 12V feed will introduce clicks (sometimes violent) as the rig is keyed, originating in the areas around the product detector and noise blanker stages by the small DC shift introduced.

The cure is to make sure that +12V to the CIFPU is taken direct from the feedthrough on the internal screen, and *not* via a point which may have several feet of wiring ahead of it! Likewise, as the QRP PA itself takes an appreciable current when in operation (300 mA bias + drive), the wire used to connect +12V to this should be taken direct from the feedthrough using a short length of heavy gauge wire, with no further +12V connections taken from the PA +12V pin itself. It is important that the muting voltage connected to point AA is in operation *both* on CW and SSB ie the connection is taken from a point *before* the mode switch. Otherwise SSB will be heard via the audio stages on transmit.

Another source of clicks is from the QRP PA which can oscillate at VHF if incorrectly built, while apparently working normally otherwise. The usual cause is an inadvertent partial short in the input transformers, or possibly in the trifilar output transformer.

2. Digital Display — the existing display connections are prone to the display being affected by harmonics from the VFO stage affecting the reading (giving the impression that the VFO is unlocking). The cure is to use a 470R resistor in series with a 10n capacitor as the interconnection rather than the single low-value capacitor used at present. These two components can be soldered directly behind the display output socket on the VCO box.

3. AM/FM Adaptor — This is currently under development with a revised circuit and will be published later. It will also be usable with other 10.7 MHz if modules such as the G4 CLF and G3 ZVC designs.