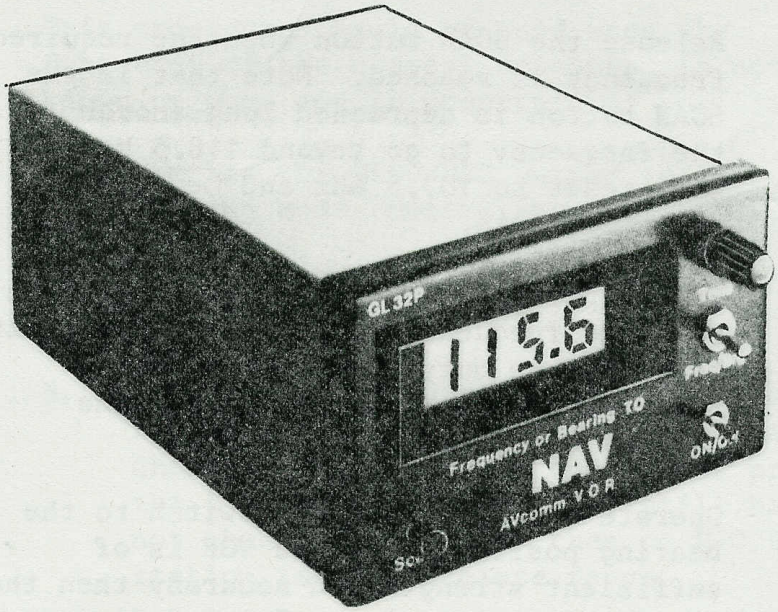
AVcomm

PORTABLE
V.O.R. RECEIVER



OPERATING INSTRUCTIONS

OPERATING INSTRUCTIONS FOR AVCOMM PORTABLE V.O.R.

A. Manually Tuning a Selected V.O.R.

1. Operate the frequency/bearing switch to frequency and centralise the tuning knob. Switch the rear power selector to INT.

2. Slide the main power ON/OFF switch to ON.

3. Push the SCAN button and note that the frequency display begins to count upwards.

4. Release the SCAN button when the required frequency is reached. Note that if the SCAN button is depressed long enough for the frequency to go beyond 118.5 MHz it will reset to 107.5 MHz and begin to count up again.

5. Having released the SCAN button once the required frequency has been reached, listen to the phone output whilst carefully rotating the fine tune to obtain the maximum output and ident tone.

6. Operate the FREQUENCY/BRG switch to the bearing position. If the VOR is of sufficient strength and accuracy then the display will illuminate F and 3 figures giving the magnetic radial FROM the beacon. (see also A.9.).

7. If at any time the selected VOR beacon is out of range then the display will read F.FFF but also see Note A.8. and A.9.

5. Switch back to BRG and the display will show the bearing in magnetic degrees ETN FROM the selected beacon (see also A.9.).

6. To automatically select another station, rotate the TUNE knob clockwise until the display reads F.FFF, then repeat steps B.3. to B.5.

7. At any time the receiver can be tuned manually by selecting FREQ and pressing the SCAN button until the desired frequency is reached.

C. Installation and Maintenance

1. The receiver can be supplied complete with a small helical aerial which is suitable for reception up to 15 miles line of sight. If greater range is required then it is recommended that a standard V.O.R. dipole aerial be used and connected to the antenna socket. A 6BA fixing bush is provided on the rear panel. Fixing screws should not penetrate into the case by more than $\frac{1}{4}$".

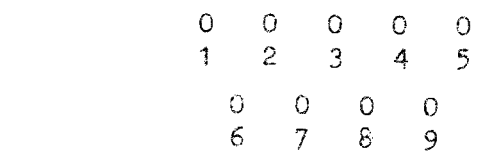
2. The receiver uses 4 X AA Nicad rechargeable batteries, which will power the receiver up to 10 hours of normal use. However, if the receiver is operated permanently in the frequency mode, then battery life will be approximately 5 hours.

Once the batteries have become discharged, which is indicated by a colon sign appearing on the display, (selected VOR bearing still accurate), it is recommended that the batteries are recharged in situ with the charger supplied. (The power switch must be set to 'EXT' for charging). Alternatively a DC voltage of between + 10 and + 15V can be connected between earth and pin 9 of SKA or plugged into the 3 mm Jack SKI JKI (tip positive). ON NO ACCOUNT USE ANY BATTERIES OTHER THAN THOSE SUPPLIED OR SWITCH ON WITH BATTERIES INCORRECTLY INSERTED, AS THIS WILL DESTROY THE RECEIVER. It is recommended that the batteries be examined for serviceability every twelve months.

The receiver can also be powered by an external 10-15 volt power source by plugging it into the rear plug 'PLA' (negative earth). The rear selector switch must then be switched to EXT for the receiver to work. In this position the internal batteries are disconnected and may be trickle charged by the external power when the VOR is switched ON by connecting pins 3 and 4 of 'SKA'.

If it is intended to use the V.O.R. receiver either in the dark or at temperatures below $-10^{\circ}C$ then lamps/heaters can be fitted as an option and are controlled from an external rheostat of 50 ohms 1 watt connected between pins 3 and 8 of 'SKA' (external power source only) or an external 0-12V power source connected between earth and pin 8.

6. Rear connector 'PLA' connections



Pin 1 = earth (chassis)
2 = external volts in (positive + 10 to + 15V)
3 = volts (+10 to +15) out via the ON/OFF switch
4 = trickle charge input (10-15V)
5 = phone output audio into 600 ohms
6 = ext nav audio input (special option)
7 = n/c (special options)
8 = lamps/heater input (options)
9 = battery charge input (10-15V)

7. A 9 way socket is provided and is wired as standard:

Black wire is earth.
Red wire is +10-15V.
Blue wire is phone output.

Options:

Green wire is heater/lamp input via dimmer.
Yellow wire is charger input.

Pins 3 and 4 of the socket are internally connected so that trickle charginf of the batteries occurs automatically when the external power source is switched on.

8. The CHARGER socket JK1 is a separate parallel connection of 'SKA' pin 9 so that a simple external charger can be plugged in. (Power to 'EXT').

9. If at any time a fault should develop the unit should be returned to the manufacturer who will supply replacement circuit boards for an appropriate fee. THERE ARE NO USER ADJUSTMENTS OR FIELD REPAIR SYSTEMS POSSIBLE WITH THIS RECEIVER.

D. Practical Hints on Flying the Digital V.O.R.