DATONG ELECTRONICS LIMITED

Spence Mills, Mill Lane, Bramley,
Leeds LS13 3HE. England.
Telephone: 0532 552461

SERVICE INFORMATION - MODEL AD170

THE CIRCUIT AND SERVICE INFORMATION SUPPLIED IS CONFIDENTIAL AND FOR USE BY DATONG AGENTS ONLY.

1. Refer also to: circuit diagram, data sheet.

2. P.C.B. removal

The PCB in the head unit (AD170) is held in place by the two nuts on the antenna terminals plus the soldered joint to the coaxial connector.

The PCB in the interface unit (IB5) is held in place by the nut on the jack socket and also by two short strips of double sided adhesive foam. If the board is removed the foam pads will need to be replaced.

3. Circuit description

Although the circuits are fairly simple the circuit values are carefully chosen to minimise intermodulation distortion. It is especially important to use the correct transistors for Q1, Q2, Q4, Q5, TR1.

The function of Q3 and Q6 is to automatically set the bias for Q1 and Q5. This means that if the voltage levels shown on the circuit diagram are correct then all transistors are probably OK.

The voltage gain of the AD170 head unit when fed into a 50 ohm load is unity but when testing it is important to use a balanced signal feed to perform the test (e.g. use signal generator together with a ferrite balun output transformer.

A good simple test for normal performance takes advantage of the high input impedance. Connect an oscilloscope to the AD170 output and touch each dipole terminal in turn with a hand held screwdriver (hand touching the metal). Almost the same signal amplitude should be seen in each case. Then contact both terminals at once with the screwdriver. Hardly any signal should then be seen. If an appreciable signal is seen one half of the circuit may be faulty.

The amplifier in IB5 should have an insertion gain of about 12 dbs in a 50 ohm system (test in the 1 MHz to 30 MHz range).

If the ZTX 327 is unavailable possible substitutes are 2N5109 or 2N3866.

Directors: David A. Tong, B.Sc., Ph.d., Melvyn Winburn, F.C.A., Gillian K. Tong. D.S.R.(D).
Registered Office: Spence Mills, Mill Lane, Bramley, Leeds LS13 3HE. England. Registered in England No. 1169448

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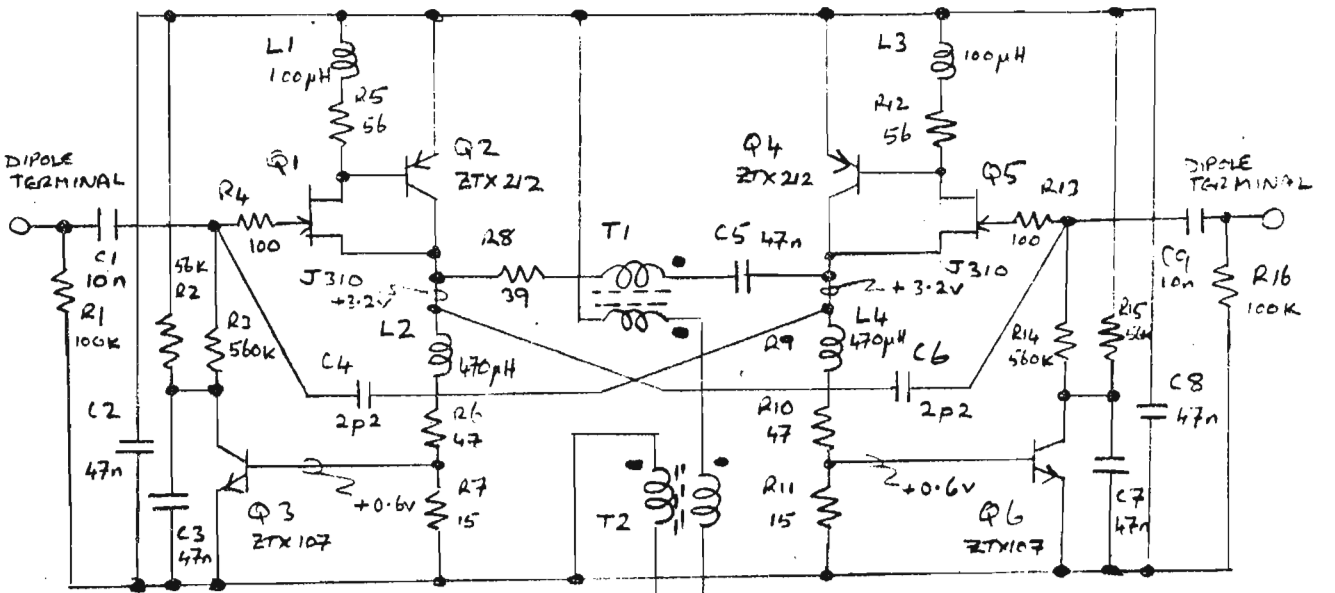
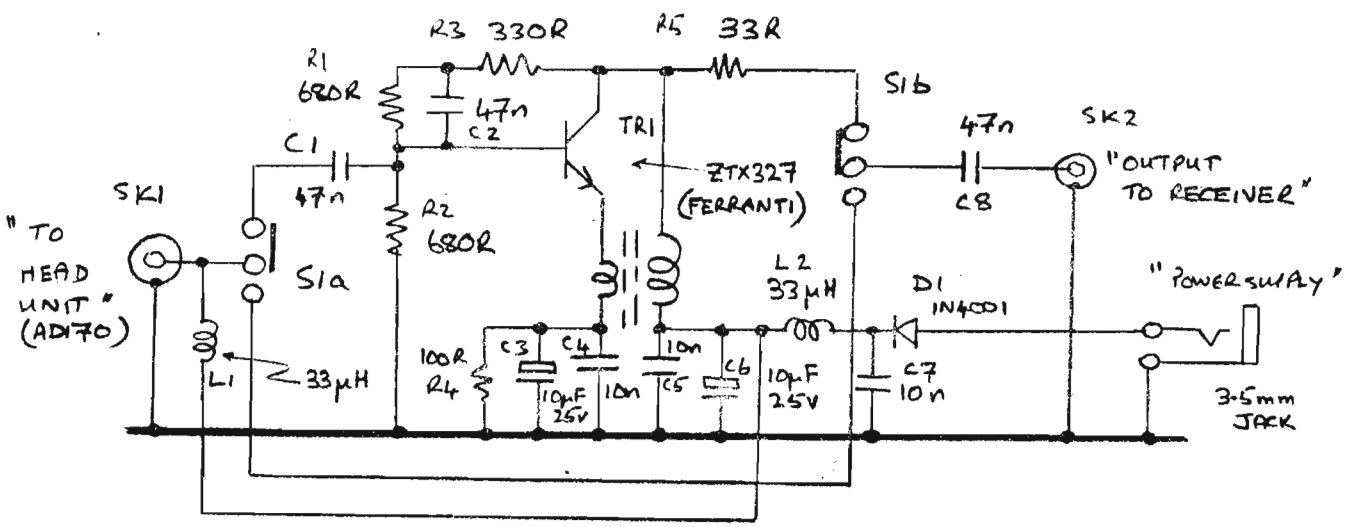


R1-16 C1-9 Q1-6 L1-4
T1-2
AMENDMENTS: 12·1·78

ACTIVE ANTENNA MODEL AD170



C1-8, D1, R1-5,
TR1, L1-2
SK1-2 : BELLING LEE L7345
4·12·78

INTERFACE UNIT MODEL IB5

ACTIVE ANTENNA Model AD170