



DATONG ELECTRONICS LIMITED

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

SERVICE INFORMATION - MODEL D75

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

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

2. Case removal

The outer shell of the case is removed by removing the feet fixing screws.

3. P.C.B. removal

The PCB is supported by the same screws which hold the front and rear panels onto the baseplate. The spacers between panel flange and PCB are loose and must be inserted correctly on reassembly.

4. Circuit description

The input signal from the microphone socket (SK5) goes via S2 (impedance selector) to a non-inverting op.amp. amplifier (half of IC1). It then passes to a 90° phase splitting network associated with both halves of IC2. The two quadrature outputs are present at pins 1 and 7 of IC2. IC4 functions as two independent balanced mixers and a 60 kHz SSB signal appears at pin 12 of IC5. A buffered version of it appears at pin 10 of IC5 and an amplified and clipped version at pin 8 of IC5.

The clipped SSB is filtered by L2 and demodulated to audio again by IC6. IC6 also contains the local oscillator at 240 kHz (tuned by L3, output at pins 8 and 13).

IC7 generates quadrature local oscillator signals at 60 kHz.

The monitor LED ("INPUT") is driven by half of IC3 (pin 1) from a rectified audio signal derived by half of IC1 (pin 7).

5. Setting up procedure

1. Connect oscilloscope to pin 8 of IC5 (or to leg of R29 which goes to pin 8).
2. Inject signal at 1 kHz and peak L3. After this L3 remains fixed.
3. Change signal to 300 Hz and adjust L2 for maximum, then change to 3000 Hz and peak L1. Repeat alternately.

Note: for steps 2 and 3 the input level must always be below clipping point as monitored on scope at pin 8 of IC5.

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Registered Office: Spence Mills, Mill Lane, Bramley, Leeds LS13 3HE, England. Registered in England No. 1169448



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Input Wiring Connections

Model D75 as supplied has its microphone connector wired to suit TRIO/KENWOOD equipment. This is also suitable for most ICOM transceivers and for the Drake TR7 before serial number 1400. For Drake TR7's after serial number 1400 remove the connection to pin 4.

To suit other equipment rewire as in the diagrams below. In all cases the r.f. choke and small capacitor both should go to the pin labelled "MIC" (microphone). The "P.T.T." (push-to-talk) wire is the one which enters the printed circuit board furthest from the front panel.

In the diagrams the pin numbers are as moulded into the plastic body of both plugs and sockets. The view is of the back of the socket as seen looking from inside Model D75.

MIC (2) (3) P.T.T. COMMON (1) (4) COMMON <u>FT221</u>	P.T.T. (2) (3) COMMON MIC (1) (4) COMMON <u>TRIO / KENWOOD</u>	P.T.T. (2) (3) MIC (1) (4) COMMON <u>ICOM</u>
COMMON (2) (3) COMMON MIC (1) (4) P.T.T. <u>UNIDEN 2020</u>	MIC (2) (3) P.T.T. COMMON (1) (4) <u>FT101</u>	P.T.T. (2) (3) COMMON MIC (1) (4) (LEAVE PIN 4 UNCONNECTED) <u>DRAKE TR7</u>



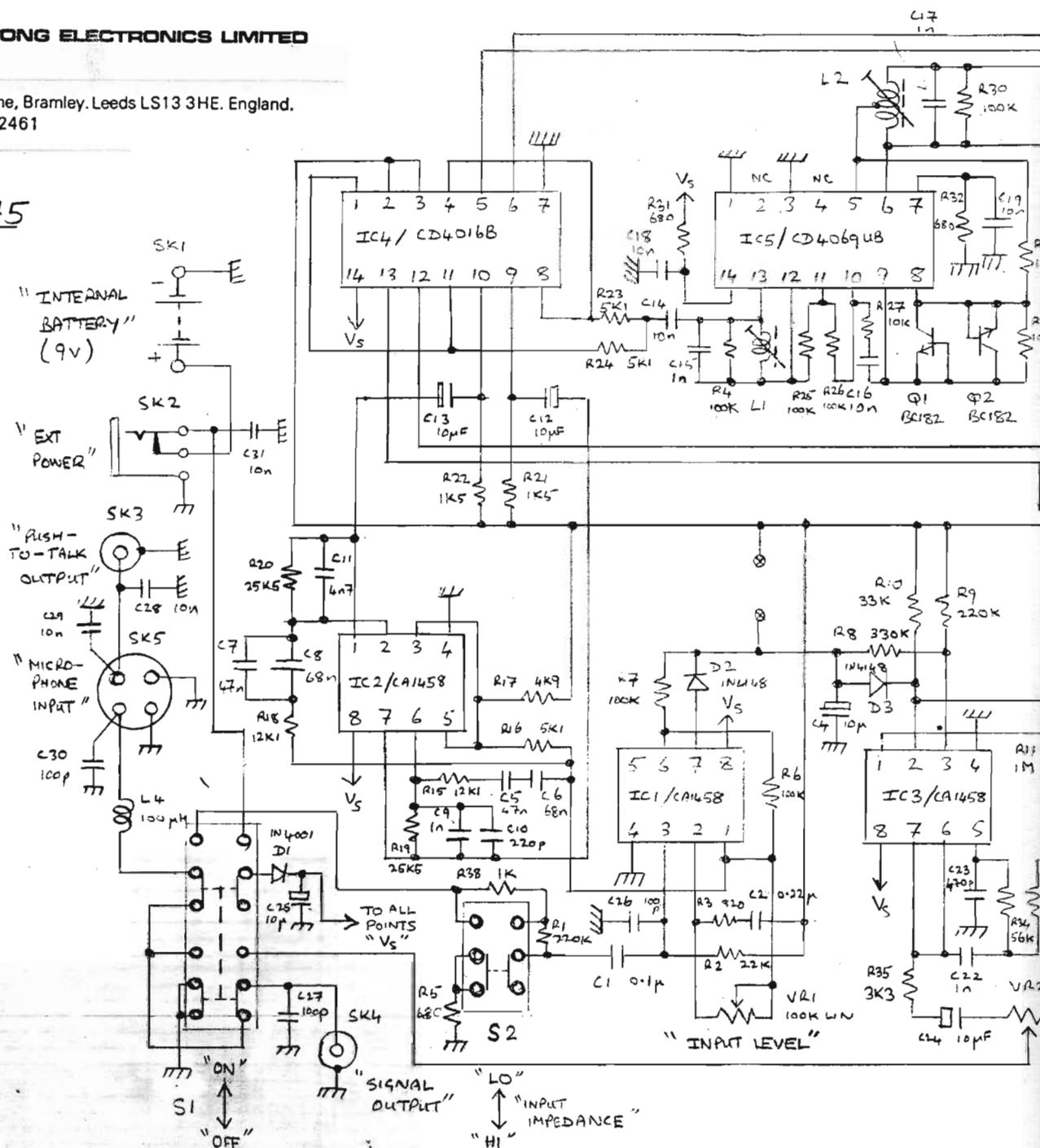
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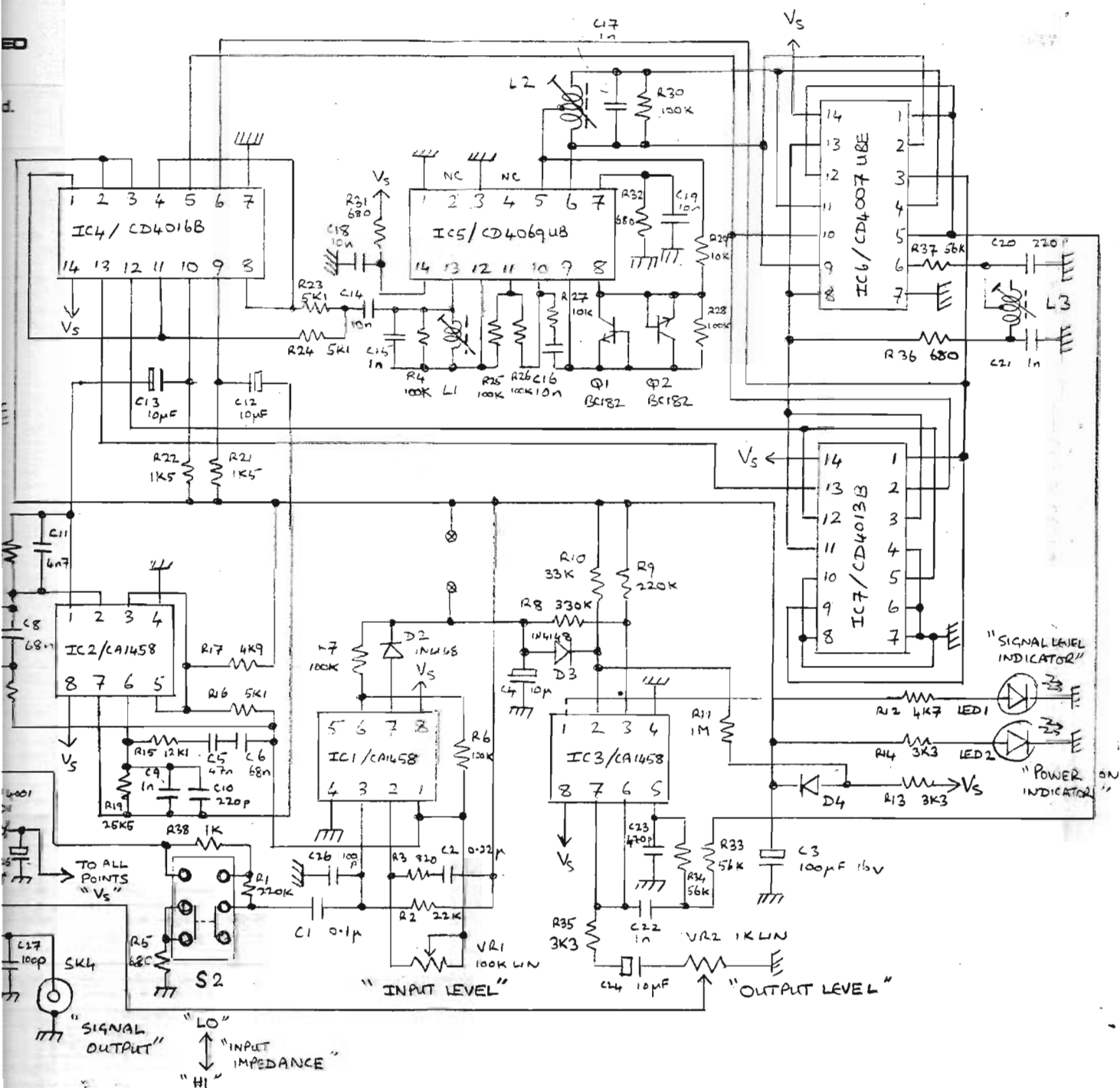
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MODEL D75

R.F. SPEECH PROCESSOR

7.4.79





Conit
PLA

Comp
13.4.79

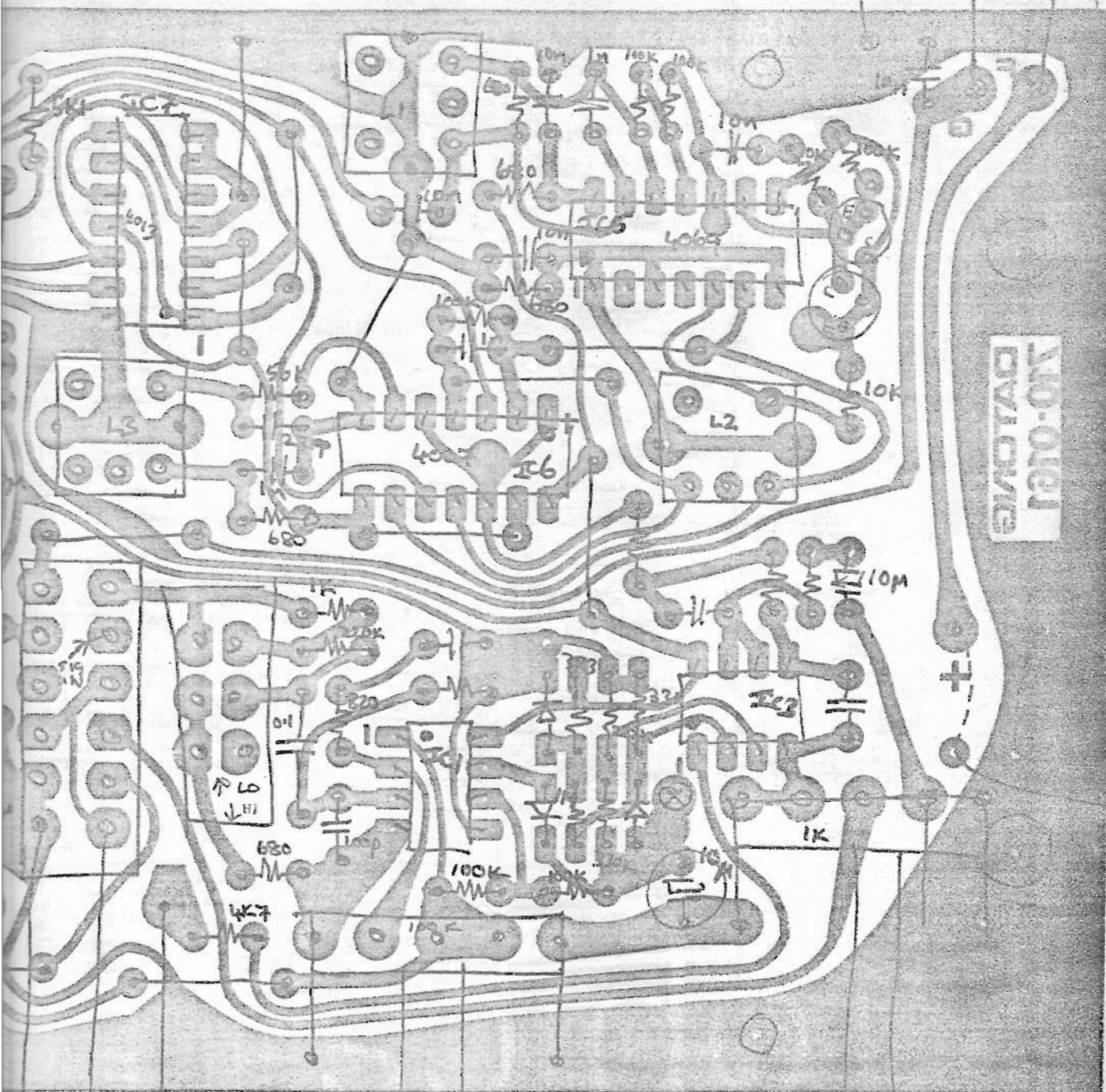
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2497 AD

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INPUT
LEVEL

15.

OUTY UT
LEVEL