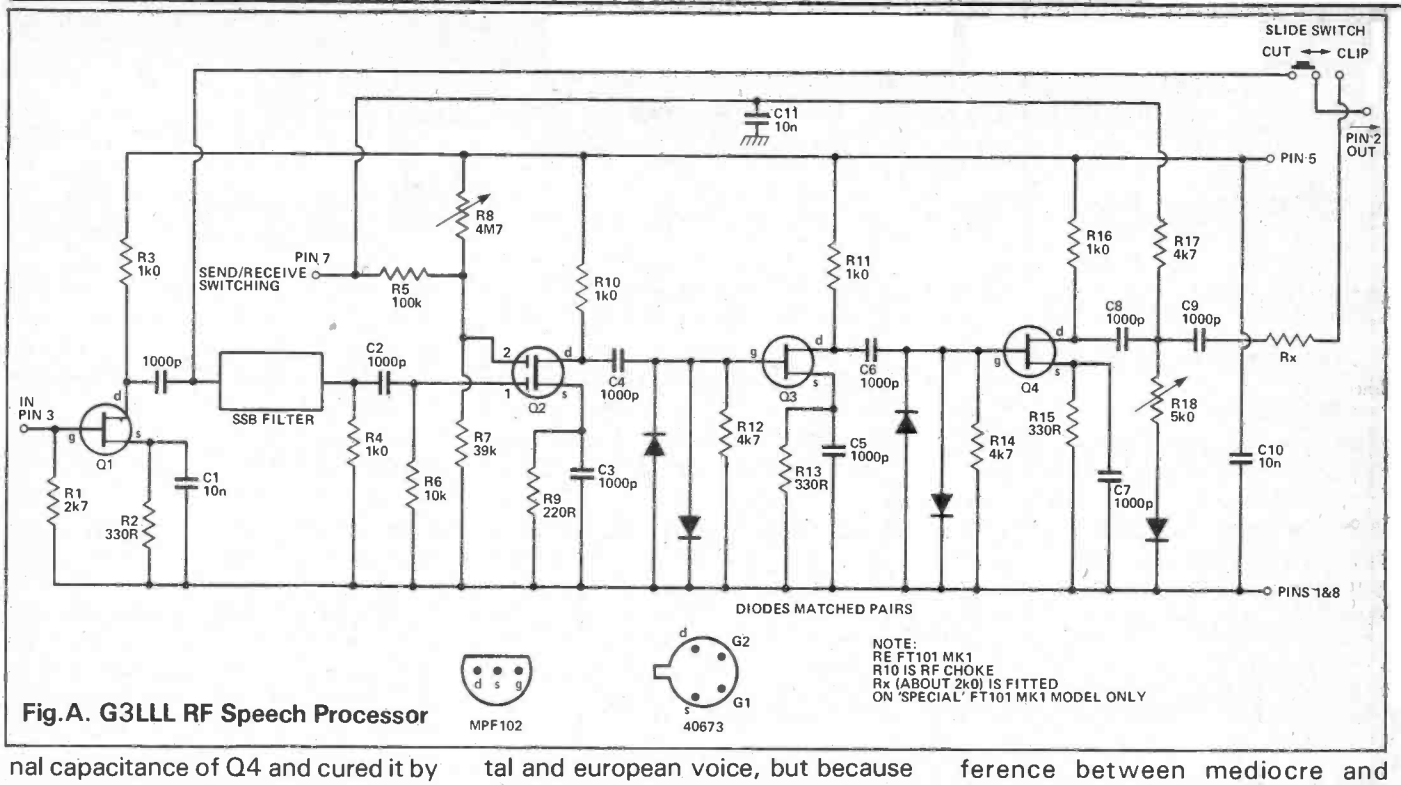

Fig.A. G3LLL RF Speech Processor

nal capacitance of Q4 and cured it by connecting a 200pF capacitor from the source of Q4 to chassis. This simple modification effectively shorts out any signal when Q4 is electrically off, but is not of low enough impedance to short out signals when Q4 is switched on and is acting as a source follower. From about 1977 onwards FT101Es are factory fitted with this capacitor on the reverse side of the processor circuit board, although it is not shown in the circuit in the manual.

Audio Quality

Properly adjusted, even 15 to 20 dbs of RF processing can sound quite reasonable; why then do some stations using the G3LLL or Yaesu clippers sound a muddy, muddled games? RF clipping does seem to 'amplify' any existing audio faults and the main trouble with almost all Japanese microphones is that they are short of treble. Recent correspondence with Yaesu has revealed that this is not so much because the difference in pitch between the oriental and european voice, but because of different syllable emphasis in the languages. Yaesu are now deliberately 'brightening' the audio on their export equipment.

When using speech processing with older equipment much better results will be obtained if a "bright' microphone is used together with a series capacitor (about 0.002 u for 50 Kohm input) to roll off the low frequencies. Even fitting this capacitor to the original mic makes quite a difference at the expense of a slight loss of mic gain. From experience, the Shure 444 plus a little extra LF roll off seems about the best mic to use with the FT101, but unfortunately it is getting rather pricey. Funnily enough, at the abosolute opposite end of the price range, if you can find an original gold coloured Accos (Mic 43) crystal insert, fit it in the Yaesu hand mic without any matching transformer; you will find this comes a very close second.

FT101 ALIGNMENT

Correct alignment makes the difference between mediocre and superb performance with the best equipment, and the FT101 is no exception. Alignment details are given in Yaesu's manual but experience has shown that the full procedure is only necessary if the alignment has been interfered with. In general it is advised that coil cores should be left alone unless there is clear evidence that they have need of adjustment. First, a couple of faults that come under the heading of 'alignment'.

PA and Driver oscillates or exhibits poor neutralization on the 40m band only FT101 MK2 — E. This is caused by misalignment of the extra coil L33 which is switched in on 40m to improve rejection of the transmit 'I.F.'. To cure, melt the wax holding L33 core with a hot iron and then trim until good transmit drive is obtained together with stability. The core is very easy to damage and difficult to obtain so use the correct trimming tool and *do not force it.*

'S' meter does not fall to zero. This effect sometimes only occurs on one side band, and is caused by RF from

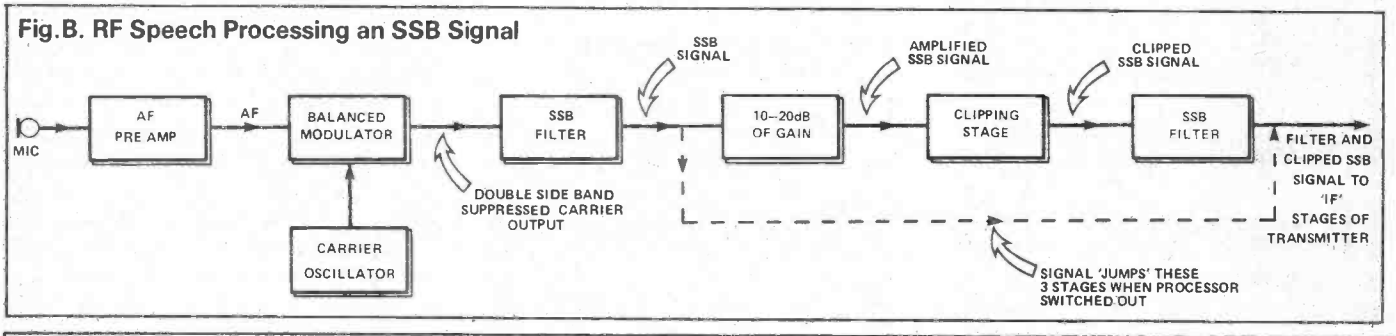

Fig.B. RF Speech Processing an SSB Signal