



12dB, incidentally, is a ratio of four.

My interest in RF speech processors arose with the purchase of a pair of 1.4MHz SSB units at Breadboard, the London electronics show. At £3 each they were a snip and could not be ignored. The resulting circuit of my experimental project is shown in **Fig. C**, block diagram is **Fig. 5**. I confirm that the circuit operates very well and is a substantial improvement on the improved baseband processor of **Fig. 3**. Although both circuits operate on the audio in the same way, the re-

ceived quality of processed audio from the RF design is noticeably better for identical levels of processing. The reason for this is simple. The only SSB modulation frequencies which get clipped are those which are within the passband of the crystal filters with the result that out-of-band derived intermod products are almost non-existent.

The carrier frequency of the filters is relatively un-important. The 34dB gain IC amplifier used in the prototype operates up to 15MHz. The only important criterion is that

the filters are of SSB type and that they are reasonably well matched in terms of centre frequency. I have shown an LC type carrier oscillator for use in conjunction with the 1.4MHz design. This is simply because I didn't have a suitable crystal to hand. A proper crystal controlled oscillator would be far better for stability reasons.

As with the baseband design, a VOGAD circuit ahead of the RF processor would offer some advantage but I haven't tried that yet.

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