

Improvements in and relating to Intermediate Frequency Receivers**Abstract**

There is provided an apparatus and method for isolating an in-phase component I and a quadrature component Q of a received IF signal and for filtering the received signal. The apparatus comprises a DDC for sampling the received signal at four times the frequency of the received signal, each sample having an order k and a filter for reducing noise outside a required bandwidth. The filter has n taps and comprises a first filter portion for receiving the samples where k is even and for outputting an in-phase component I of the received signal and a second filter portion for receiving the samples where k is odd and for outputting a quadrature component Q of the received signal. The first filter portion has x taps and the second filter portion has y taps and $x + y = n$.

Figure for publication – Figure 5



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