

**ABSTRACT:**

Time-discrete stereo decoder.

A receiver having a signal path incorporating a tuner, a demodulator circuit for supplying a stereo multiplex signal comprising a baseband stereo sum signal (L+R), a 19 kHz stereo pilot and a stereo difference signal (L-R) which is double sideband amplitude-modulated on a suppressed 38 kHz subcarrier, a  
5 sampler for converting an analog signal into a time-discrete signal and a stereo decoder for time-division multiplex decoding of a time-discrete stereo multiplex signal into time-discrete left and right stereo signals. In order to realise an effective selection of the stereo multiplex signal by means of an easily integrable low-pass filter, the stereo decoder comprises a time-discrete halfband low-pass  
10 filter circuit having a finite impulse response, with a transition band which is substantially located in the frequency range of said modulated stereo difference signal and with a half-value transfer which is located at the frequency of said 38 kHz stereo subcarrier, which filter circuit has a substantially linear amplitude transfer characteristic as well as a linear phase transfer characteristic in the  
15 transition band, said receiver also including an interpolation circuit which is coupled to an output of the filter circuit for converting time-sequential even and odd sampling values of the output signal of the filter circuit into time-sequential pairs of simultaneously occurring sampling values, and a dematrixing circuit coupled to the interpolation circuit for a linear combination of said pairs of  
20 sampling values and a compensation of the crosstalk between the left and right stereo signals caused by the filter circuit.

Fig. 1.

