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USING SPECIAL NTSC RECEIVER TO DETECT WHEN CO-CHANNEL INTERFERING NTSC SIGNAL ACCOMPANIES A DIGITAL TV SIGNAL

ABSTRACT OF THE DISCLOSURE

A method for detecting when a digital television signal is accompanied by co-channel interfering NTSC signal of substantial amplitude is described for use in a digital television receiver. The video portion of any co-channel interfering NTSC signal is synchrodyned to baseband, for generating an in-phase demodulation result including first artifacts of the digital television signal, and for generating a quadrature-phase demodulation result including second artifacts of the digital television signal. The quadrature-phase demodulation results are phase shifted by 90° at frequencies in a prescribed frequency range before being linearly combined with the in-phase quadrature-phase demodulation results, to generate a linear combining result substantially free of the first and second artifacts of the digital television signal in the prescribed frequency range. An indication that the digital television signal is accompanied by co-channel interfering NTSC signal of substantial amplitude is generated by detecting whenever the amplitude of the linear combining result exceeds a prescribed value.

(Fig. 1)

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