

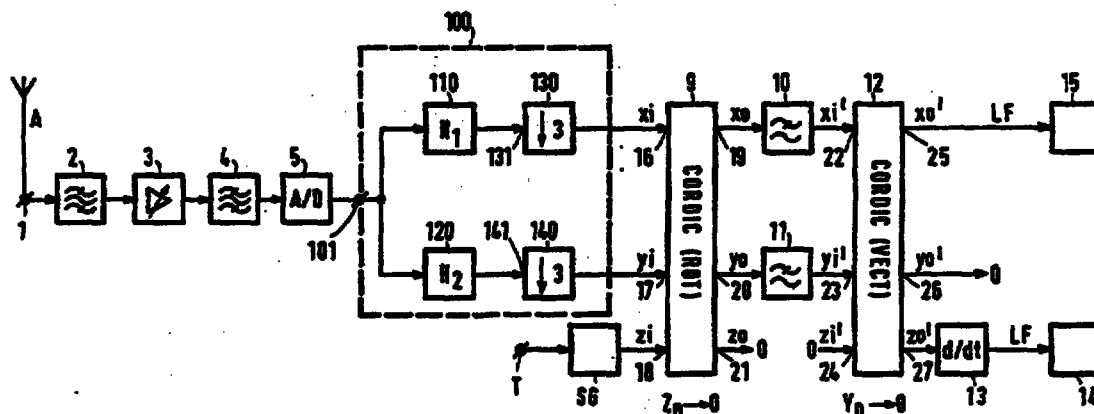


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INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁶ : H03D 3/00		A1	(11) International Publication Number: WO 96/08078
			(43) International Publication Date: 14 March 1996 (14.03.96)
(21) International Application Number: PCT/IB95/00696		(81) Designated States: CN, FI, JP, KR, <u>SG</u> , European patent (AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE).	
(22) International Filing Date: 28 August 1995 (28.08.95)			
(30) Priority Data: 94202518.0 2 September 1994 (02.09.94) EP (34) Countries for which the regional or international application was filed: NL et al.		Published With international search report. Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.	
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(54) Title: RECEIVER WITH QUADRATURE DECIMATION STAGE, METHOD OF PROCESSING DIGITAL SIGNALS



(57) Abstract

In a receiver, a reception signal is digitized (5) with a relatively high sampling frequency. Analog filters (2, 4) prevent aliasing. The digitized reception signal is applied via a splitter (100) to a quadrature digital signal processor (9, 10, 11, 12). In this processor, a desired carrier is selected and demodulated. The splitter (100) transforms the digitized reception signal in accordance with a first and a second transform function (H_1 , H_2) to obtain in-phase and quadrature components (x_i , y_i), respectively. The sampling frequency is reduced (130, 140) in the splitter. A specific relation between the phase and magnitude of the transform functions (H_1 , H_2) prevents aliasing. Such a relation can be achieved with relatively simple digital filters (110, 120).