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(21) International Application Number: PCT/IB99/01182 (22) International Filing Date: 24 June 1999 (24.06.99) (30) Priority Data: 09/107,186 29 June 1998 (29.06.98) US (71) Applicant: KONINKLIJKE PHILIPS ELECTRONICS N.V. [NL/NL]; Groenewoudseweg 1, NL-5621 BA Eindhoven (NL). (71) Applicant (for SE only): PHILIPS AB [SE/SE]; Kottbygatan 7, Kista, S-164 85 Stockholm (SE). (72) Inventor: MOHINDRA, Rishi; Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL). (74) Agent: DEGUELLE, Wilhelmus, H., G.; Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).	(81) Designated States: CN, JP, KR, European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE). Published <i>With international search report.</i> (88) Date of publication of the international search report: 13 April 2000 (13.04.00)	
(54) Title: FREQUENCY OFFSET IMAGE REJECTION (57) Abstract An approach for providing image rejection during signal down conversion involves phase shifting quadrature signals at a frequency other than the down converted center frequency. One or more phase shifters coupled to a summer/subtractor provide forty five (45) degrees and one hundred thirty five (135) degrees of phase shift with respect to two quadrature input signals. The one or more phase shifters perform the phase shifts of the quadrature input signals at a frequency other than the center frequency of the down-converted signal.		

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/IB 99/01182

A. CLASSIFICATION OF SUBJECT MATTER

IPC7: H03D 7/18
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC7: H03D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

SE,DK,FI,NO classes as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5140198 A (DON H. ATHERLY ET AL), 18 August 1992 (18.08.92), claim 1 --	1-15
A	US 5678220 A (JEAN MICHEL FOURNIER), 14 October 1997 (14.10.97), claim 1 --	1-15
A	GB 2321353 A (STEPHEN PETER GRAHAM), 22 July 1998 (22.07.98), claim 1 -- -----	1-15

Further documents are listed in the continuation of Box C. See patent family annex.

<p>* Special categories of cited documents:</p> <p>"A" document defining the general state of the art which is not considered to be of particular relevance</p> <p>"E" earlier document but published on or after the international filing date</p> <p>"I." document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</p> <p>"O" document referring to an oral disclosure, use, exhibition or other means</p> <p>"P" document published prior to the international filing date but later than the priority date claimed</p>	<p>"I" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</p> <p>"X" document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone</p> <p>"Y" document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art</p> <p>"&" document member of the same patent family</p>
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Date of the actual completion of the international search	Date of mailing of the international search report
18 January 2000	24 -01- 2000

Name and mailing address of the ISA: Swedish Patent Office Box 5055, S-102 42 STOCKHOLM Facsimile No. +46 8 666 02 86	Authorized officer: Rune Bengtsson/MN Telephone No. +46 8 782 25 00
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INTERNATIONAL SEARCH REPORT

Information on patent family members

02/12/99

International application No.

PCT/IB 99/01182

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 5140198 A	18/08/92	AU 6147090 A CA 2065283 A DE 69028541 D,T EP 0489749 A,B ES 2094158 T JP 5505069 T WO 9103882 A	08/04/91 01/03/91 06/02/97 17/06/92 16/01/97 29/07/93 21/03/91
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