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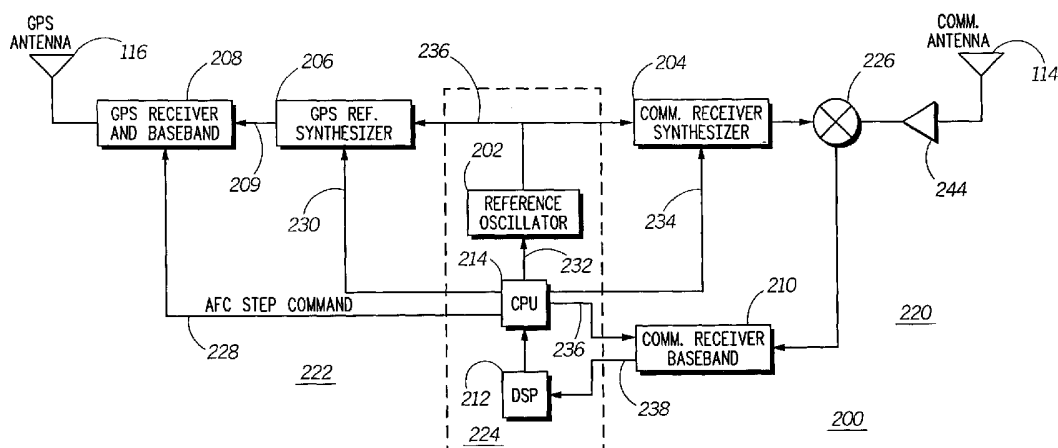
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(54) Title: AUTOMATIC FREQUENCY CONTROL PROCESSING IN MULTI-CHANNEL RECEIVERS



(57) Abstract: A multiple channel receiver (200) includes a communications receiver synthesizer (204) and at least one numerically controlled oscillator (NCO) (406) that produce local oscillator signals that are derived from a common reference oscillator (202). A DSP (212) and CPU (214) perform automatic frequency control (AFC) by adjustment of the reference oscillator (202) based upon a signal received by a receive channel using the local oscillator signal produced by the communications receiver synthesizer (204). The CPU (214) also provides a synchronous indication of adjustments to the reference oscillator (202) to control circuitry for the at least one NCO (406) so that the configuration of the NCO (406) can be altered so as to maintain a substantially constant frequency output during the adjustment of the reference oscillator (202).

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US04/12217

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : H04B 1/06

US CL : 455/141,259,164.1,164.2,147,192.1,275,180.3,182.3,183.2,255; 342/357.15,357.06; 331/176,14, 177R

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)

U.S. : 455/141,259,164.1,164.2,147,192.1,275,180.3,182.3,183.2,255; 342/357.15,357.06; 331/176,14, 177R

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
None

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

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X -- Y	US 5,841,396 A (KRASNER) 24 November 1998, abstract, Fig. 6A to Fig. 6C, Fig. 3, col. 5, lines 46-61; col. 13, line 36 to col. 14, line 54; col. 17, lines 16-21.	1-3, 6, 11
Y	US 6,163,710 A (BLASER ET AL.) 19 December 2000, abstract, Fig. 3; col. 3, lines 30-42; col. 4, line 44 to col. 5, line 21; col. 6, lines 22-24.	4
Y	US 2002/0172,313 A1 (SMITH ET AL.) 21 November 2002; abstract, Fig. 3, [0049].	5
Y	US 6,546,040 B1 (ESCHENBACH) 08 April 2003; abstract, Fig. 2-5C; col. 1, line 59 to col. 2, line 31; col. 2, lines 46-55; col. 13, lines 30-48; col. 14, lines 19-23.	7, 10
Y	US 6,424,826 B1 (HORTON ET AL.) 23 July 2002; abstract, Fig. 3-4; col. 6, line 8 to col. 8, line 54.	8
Y	US 5,416,808 A (WITSAMAN ET AL.) 16 May 1995; abstract, Fig. 3-4; col. 10, line 44 to col. 11, line 18.	9

☐ Further documents are listed in the continuation of Box C.

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