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(54) **Title:** SPREAD-SPECTRUM RECEIVER AND RECEPTION METHOD

(57) **Abstract:** Receivers and reception methods conduct spread spectrum reception using the energy of multiple bits, preferably a substantial number of bits, in a packet for correct alignment of the spreading code at the receiver. Code acquisition, as well as packet detection and acquisition are provided by embodiments of the invention. Preferred embodiment receivers and reception methods provide packet detection at low SINR looking at energy of multiple bits of the packet, frame synchronization using short preamble, timing recovery at low SINR looking at energy of multiple bits of the packet, quick code acquisition using parallel search for all possible code phases, code acquisition at low SINR, and tracking of acquired timing and code phase. Preferred embodiment receivers and reception methods use the energy of multiple bits for making decisions.

INTERNATIONAL SEARCH REPORT

International application No.

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A. CLASSIFICATION OF SUBJECT MATTER
 IPC: **H04B 1/00(2006.01)**

USPC: 375/150
 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. : 375/150

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

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.
X	US 6,115,409 (UPADHYAY et al) 05 SEPTEMBER 2000 (05.09.2000), Figures 3-5 and 7, columns 9-10.	1-3, 5-8, 17-19, 23, 24, 28, 29, 33, 34
X	US 5,450,453 (FRANK) 12 SEPTEMBER 1995 (12.09.1995), Figures 4 and 6, columns 3-5 and 10	9, 10, 12-14
A	US 2004/0071200 A1 (BETZ et al) 12 APRIL 2004 (12.04.2004), Figures 3 and 9, Paragraphs 0047-0058	1-37

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

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"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
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