



(12) **CORRECTED EUROPEAN PATENT APPLICATION**

Note: Bibliography reflects the latest situation

(15) Correction information:  
**Corrected version no 1 (W1 A2)**  
**INID code(s) 74**

(51) Int Cl.7: **H04B 1/40**

(48) Corrigendum issued on:  
**03.08.2005 Bulletin 2005/31**

(43) Date of publication:  
**20.04.2005 Bulletin 2005/16**

(21) Application number: **04078191.6**

(22) Date of filing: **20.02.1998**

(84) Designated Contracting States:  
**BE DE DK ES FI FR GB GR IT SE**

(30) Priority: **20.02.1997 US 803392**

(62) Document number(s) of the earlier application(s) in  
accordance with Art. 76 EPC:  
**98905924.1 / 0 962 061**

(71) Applicant: **Telefonaktiebolaget LM Ericsson**  
**(publ)**  
**164 83 Stockholm (SE)**

(72) Inventors:  
• **Gärdenfors, Karl Hakan Torbjörn**  
**211 50 Malmö (SE)**

• **Mattisson, Sven Erik**  
**237 32 Bjärred (SE)**  
• **Haartsen, Jacobus Cornelis**  
**7623 DK Borne (NL)**

(74) Representative: **Asketorp, Göran et al**  
**Ström & Gulliksson AB**  
**P.O. Box 793**  
**220 07 Lund (SE)**

Remarks:

This application was filed on 22- 11- 2004 as a  
divisional application to the application mentioned  
under INID code 62.

(54) **Radio transceiver on a chip**

(57) A radio for receiving and transmitting high frequency signals. The radio comprises a down-conversion section (206, 208) arranged to down-convert a received first high frequency signal to an intermediate frequency signal; an up-conversion section arranged to up-convert an information signal, to be transmitted, to a second high frequency signal; a filter (220) for filtering the intermediate frequency signal; a detector (224) for information recovery; a variable voltage controlled oscillator (218) connected to the up-conversion section and the down-conversion section for down-converting said first high frequency signal during a receive cycle and up-converting said information signal during a transmit cycle in a time division duplex mode. The up-conversion section, the down-conversion section, and the variable controlled oscillator are integrated on a single IC chip. Also, the variable controlled oscillator is modulated by the information signal during the transmit cycle.

**FIG. 5**

