



INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification⁶:

H04B 1/52

A1

(11) International Publication Number:

WO 98/09382

(43) International Publication Date:

5 March 1998 (05.03.98)

(21) International Application Number: PCT/US97/15274

(22) International Filing Date: 29 August 1997 (29.08.97)

(30) Priority Data:

08/703,631

29 August 1996 (29.08.96)

US

(71) Applicant: ERICSSON INC. [US/US]; 7001 Development Drive, P.O. Box 13969, Research Triangle Park, NC 27709 (US).

(72) Inventors: PRZELOMIEC, Thomas, A.; 5808 Rhonda Road, Lynchburg, VA 24502 (US). LI, Leo; 20902 Raintree Lane, Trabuco Canyon, CA 92679 (US). LANE, John, R.; 1204 Shadow Peak Road, Forest, VA 24551 (US). JUSTIN, Brian, D.; P.O. Box 10293, Lynchburg, VA 24506 (US). TABAIAN, Seyed; 7442 Busey Road, Canal Winchester, OH 43110 (US). ROWLAND, John, R.; Route 2, Box 338CC, Amherst, VA 24521 (US). BLASER, Robert; Route 2, Box 562, Evington, VA 24550 (US).

(74) Agent: LASTOVA, John, R.; Nixon & Vanderhye P.C., 8th floor, 1100 North Glebe Road, Arlington, VA 22201-4714 (US).

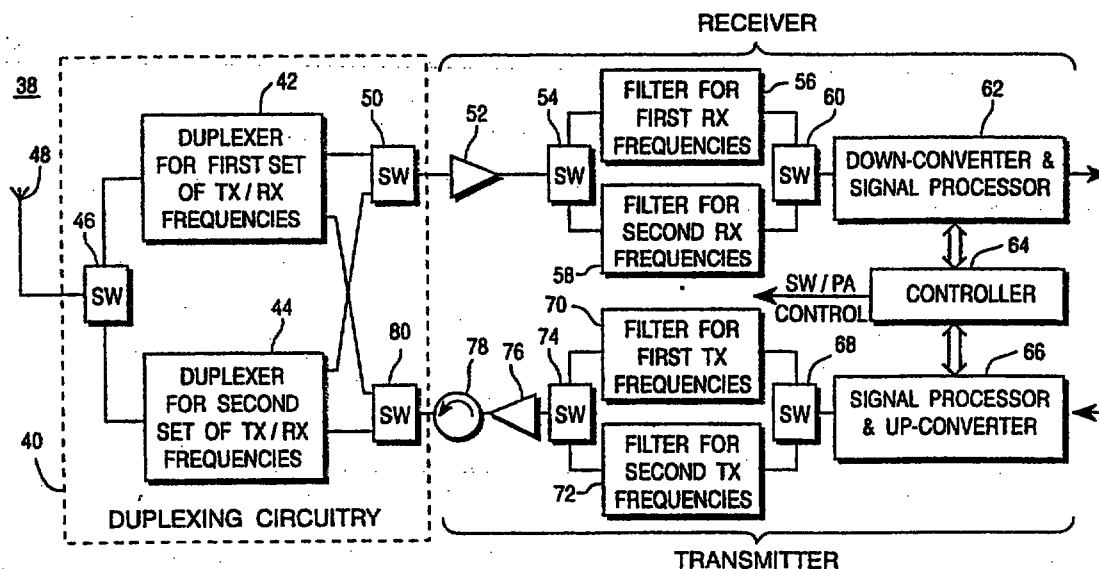
(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, UZ, VN, ARIPO patent (GH, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG).

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.

(54) Title: A SYSTEM AND METHOD FOR ACHIEVING EXTENDED RADIO COVERAGE AND ADDITIONAL CAPACITY USING EXTENDED FREQUENCY BANDS



(57) Abstract

The present invention provides increased geographical coverage and system capacity for mobile/portable radio transceivers using adjacent and typically separate radio communication frequency bands. A radio that transceives in just one frequency band is adapted to provide a configurable duplexing arrangement to permit communications in extended frequency bands. Duplexing circuitry is connected between the radio antenna and the radio transmitter and receiver. Depending upon the mode of operation of the radio transceiver, switches are selectively operated for variously configuring the antenna, duplexer circuitry, receiver, and transmitter to permit communications in a first or a second set of transmit/receive frequency bands. In one preferred example embodiment, only a single duplexer is employed connected to the antenna and transceiving circuitry through plural switches.