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Matero et al.

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ANTENNA SWITCHING CIRCUITS FOR RADIO TELEPHONES			Rapeli
			Vimpari 370/30
Inventors: Jorma Matero, Oulu: Matti I. Kangas.	5,471,652	11/1995	Hulkko 455/76

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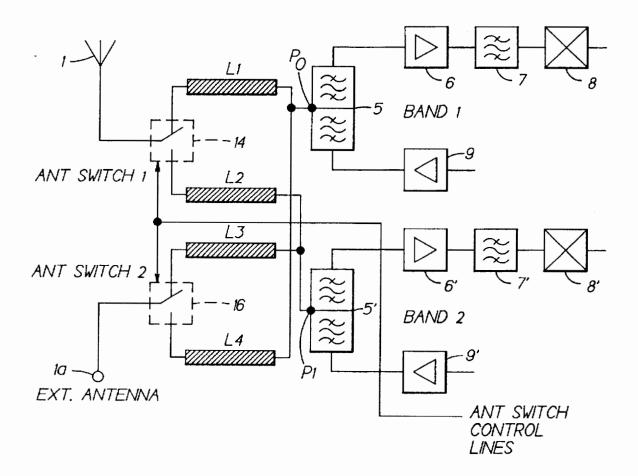
Primary Examiner—Nguyen Vo Attorney, Agent, or Firm—Perman & Green, LLP

[57] ABSTRACT

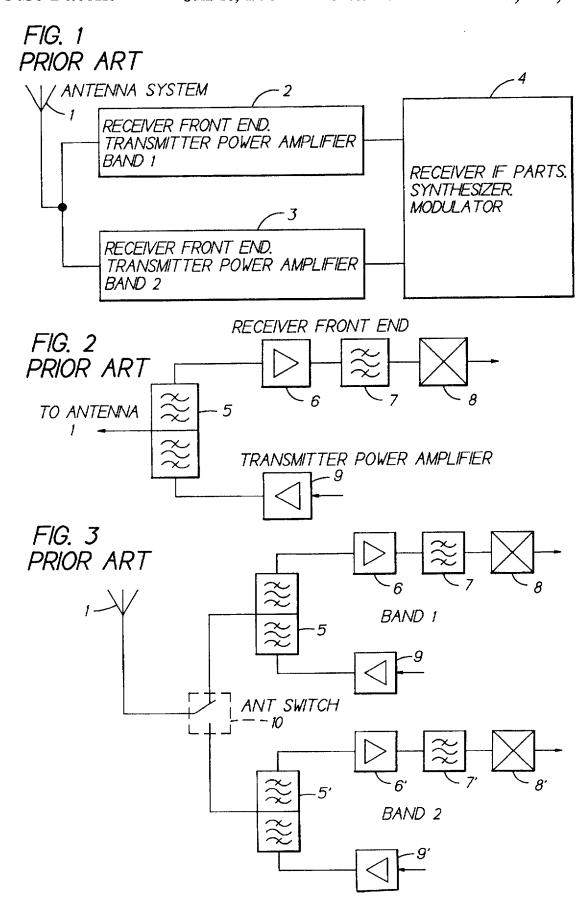
Disclosed are various embodiments of circuitry for coupling first and second transceivers of a dual band radio telephone to integral and external antennas. The circuitry uses impedance matching lengths of transmission lines and switches arranged to provide a minimum insertion loss. Also disclosed is an embodiment for use with a single band radio telephone, such as a digital TDMA radio telephone that either transmits or receives at any given time. Also disclosed is an antenna switching arrangement for a dual band phone that eliminates a requirement for duplexers.

17 Claims, 6 Drawing Sheets

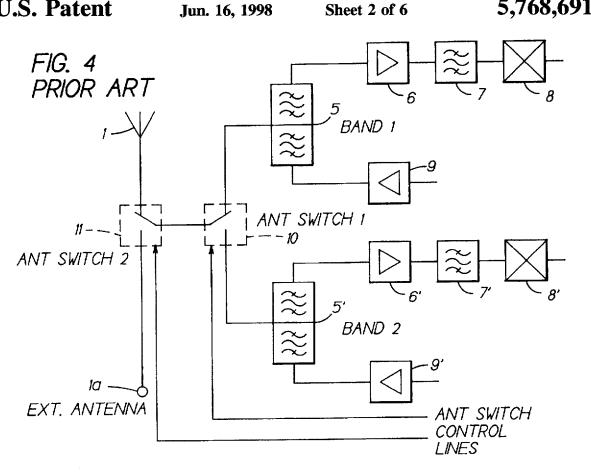
[54]	ANTENNA SWITCHING CIRCUITS FOR RADIO TELEPHONES			
[75]	Inventors: Jorma Matero, Oulu; Matti I. Kangas, Oulunsalo, both of Finland			
[73]	Assignee: Nokia Mobile Phones Limited. Salo, Finland			
[21]	Appl. No.: 692,496			
[22]	Filed: Aug. 7, 1996			
[51]	Int. Cl. ⁶ H04B 1/44			
	U.S. Cl 455/78; 455/84; 333/101; 370/280			
[58] Field of Search 333/101, 103–104;				
	455/73, 78, 82, 83, 84, 575, 132, 272, 99,			
129, 345; 370/276, 277, 278, 280, 282,				
	294			
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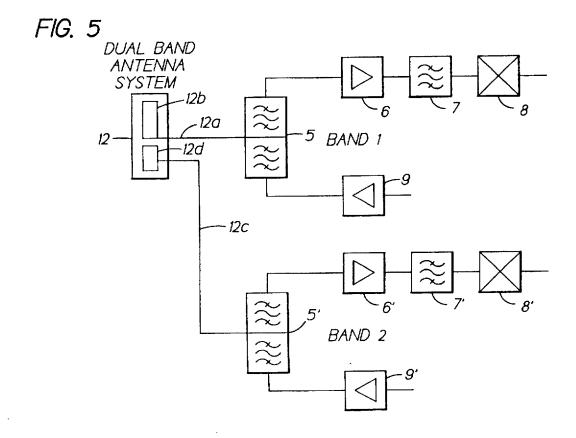




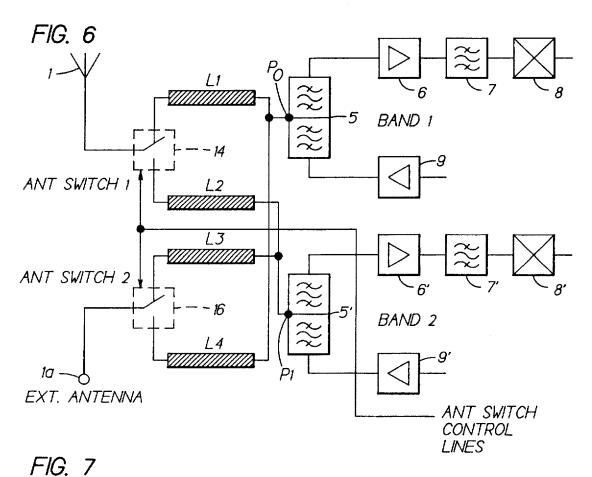


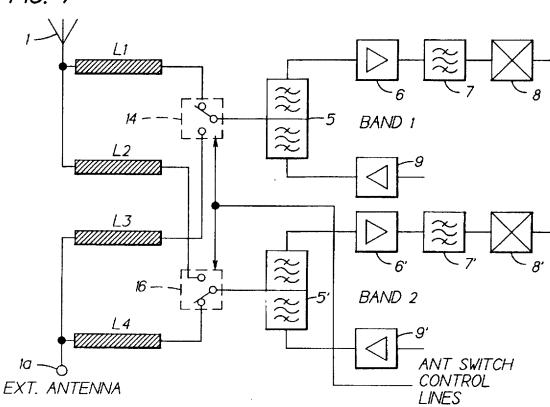














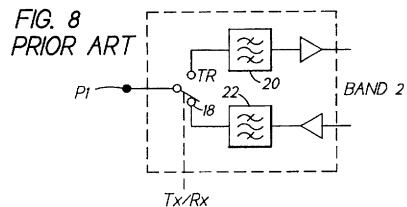
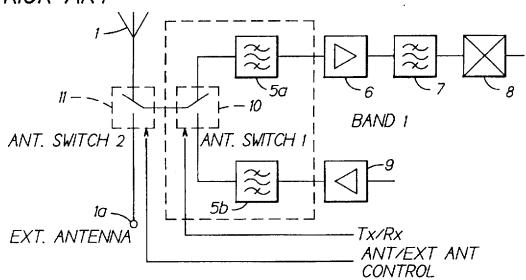
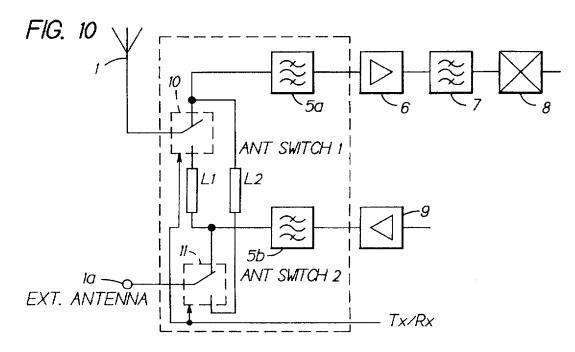


FIG. 9 PRIOR ART





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