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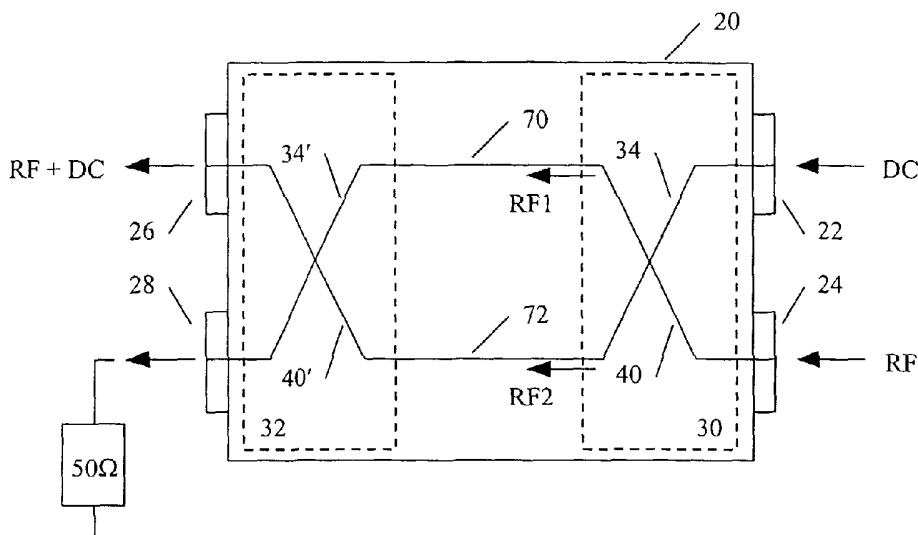
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[Continued on next page]

(54) Title: METHOD OF COMBINING SIGNALS AND DEVICE THEREFOR



(57) Abstract: A bias T device (20) and a method for combining a first DC signal with a second RF signal is disclosed. The device (20) is provided with a first signal splitting means (30) in the form of a hybrid 90 degree (quadrature) coupler having at least two isolated transmission lines (34,40). The first signal splitting means (30) is adapted to receive said first signal at one input (22) and said second signal at another input (24). A second signal splitting means (32) having at least two isolated transmission lines (34', 40') is also provided. Said second signal splitting means (32) is coupled to said first signal splitting means (30) such that the respective sets of transmission lines (34, 34', 40, 40') comprise isolated signal routes (70, 72) through said device (20). An output (26) provides an output signal comprising a combination of said first DC signal and said second RF signal. A coupling effect between at least two of said transmission lines (34, 34', 40, 40') is used to combine said first signal with said second signal.

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— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

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# INTERNATIONAL SEARCH REPORT

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**A. CLASSIFICATION OF SUBJECT MATTER**  
 IPC 7 H03H7/01

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)  
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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 practical, search terms used)

EPO-Internal, WPI Data, PAJ

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	MANTON R G: "CHANNEL COMBINERS FOR RADIO-FREQUENCY TRANSMITTERS" JOURNAL OF THE INSTITUTION OF ELECTRONIC AND RADIO ENGINEERS, INSTITUTION OF ELECTRONIC AND RADIO ENGINEERS. LONDON, GB, vol. 55, no. 10, 1 October 1985 (1985-10-01), pages 335-347, XP002018846 figures 26A,32 page 343, right-hand column, line 17-32 <div style="text-align: center; margin-top: 10px;">             ---              -/--           </div>	1-34

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

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- \* & \* document member of the same patent family

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>US 4 240 155 A (VAUGHAN THOMAS J) 16 December 1980 (1980-12-16)</p> <p>figure 9 abstract column 5, line 10-14, 34-37, 60-62 column 6, line 8-11 ----</p>	<p>1-4, 6-12, 14, 17, 18, 21-25, 31-34</p>
X	<p>GB 2 202 995 A (BRITISH AEROSPACE) 5 October 1988 (1988-10-05)</p> <p>figures 2, 3 abstract page 3, line 15-31 ----</p>	<p>1, 4, 7-13, 17, 19, 21-24, 26, 30, 34</p>
E	<p>GB 2 380 616 A (NOKIA CORP) 9 April 2003 (2003-04-09) the whole document -----</p>	<p>1-34</p>

# INTERNATIONAL SEARCH REPORT

Information on patent family members

Internal	Application No
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Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 4240155	A	16-12-1980	NONE	
GB 2202995	A	05-10-1988	EP 0284442 A2 US 4905239 A	28-09-1988 27-02-1990
GB 2380616	A	09-04-2003	NONE	