



US007782750B2

(12) **United States Patent**
Yamaura et al.

(10) **Patent No.:** **US 7,782,750 B2**
(45) **Date of Patent:** **Aug. 24, 2010**

(54) **RADIO COMMUNICATION METHOD,
RADIO COMMUNICATION SYSTEM, RADIO
COMMUNICATION BASE STATION, RADIO
COMMUNICATION TERMINAL STATION,
AND RADIO COMMUNICATION PROGRAM**

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 2080 days.

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(21) Appl. No.: **10/368,612**

Primary Examiner—Jayanti K Patel
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(22) Filed: **Feb. 20, 2003**

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(65) **Prior Publication Data**

US 2003/0224731 A1 Dec. 4, 2003

(30) **Foreign Application Priority Data**

Feb. 21, 2002 (JP) 2002-045233

(57) **ABSTRACT**

(51) **Int. Cl.**

H04J 11/00 (2006.01)

A radio communication method for exchanging information between a base station and a terminal station. The method includes: communicating the information between the base station and the terminal station by multi-carrier signals by OFDM modulation scheme including plural subcarriers within a bandwidth, communicating control signals in addition to the information between the base station and the terminal station, and wherein part of the control signals addressed to the terminal station from the base station is transmitted by one or more specific subcarriers in the bandwidth for the multi-carrier signals.

(52) **U.S. Cl.** **370/206; 370/208; 455/63.3**

(58) **Field of Classification Search** **370/206, 370/208; 455/63.3; 375/343**

See application file for complete search history.

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17 Claims, 25 Drawing Sheets

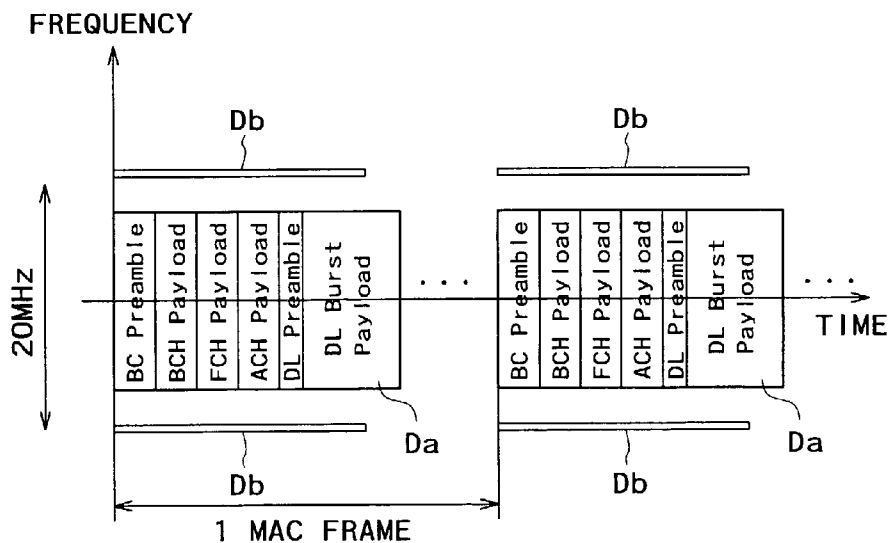


FIG. 1

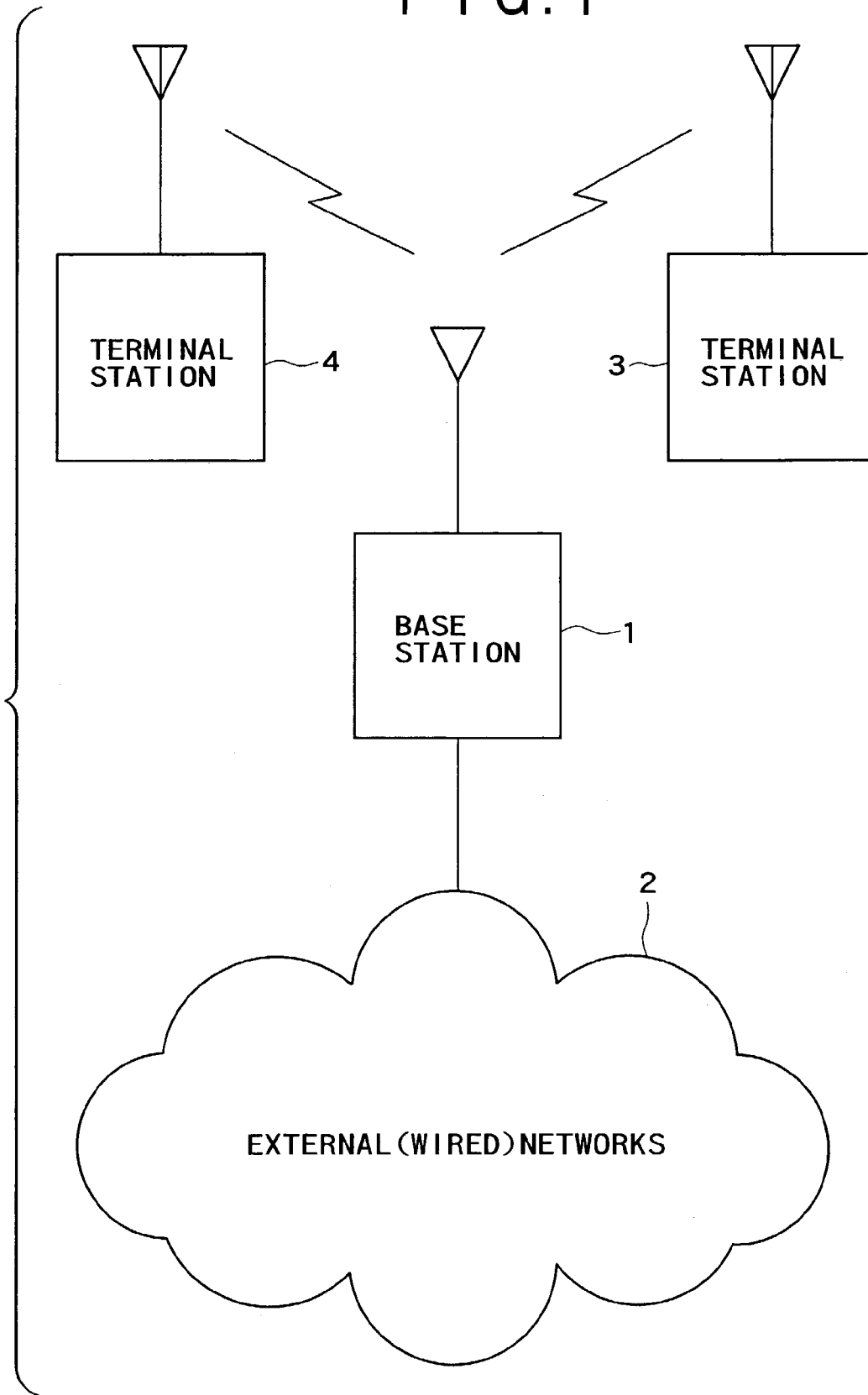


FIG. 2

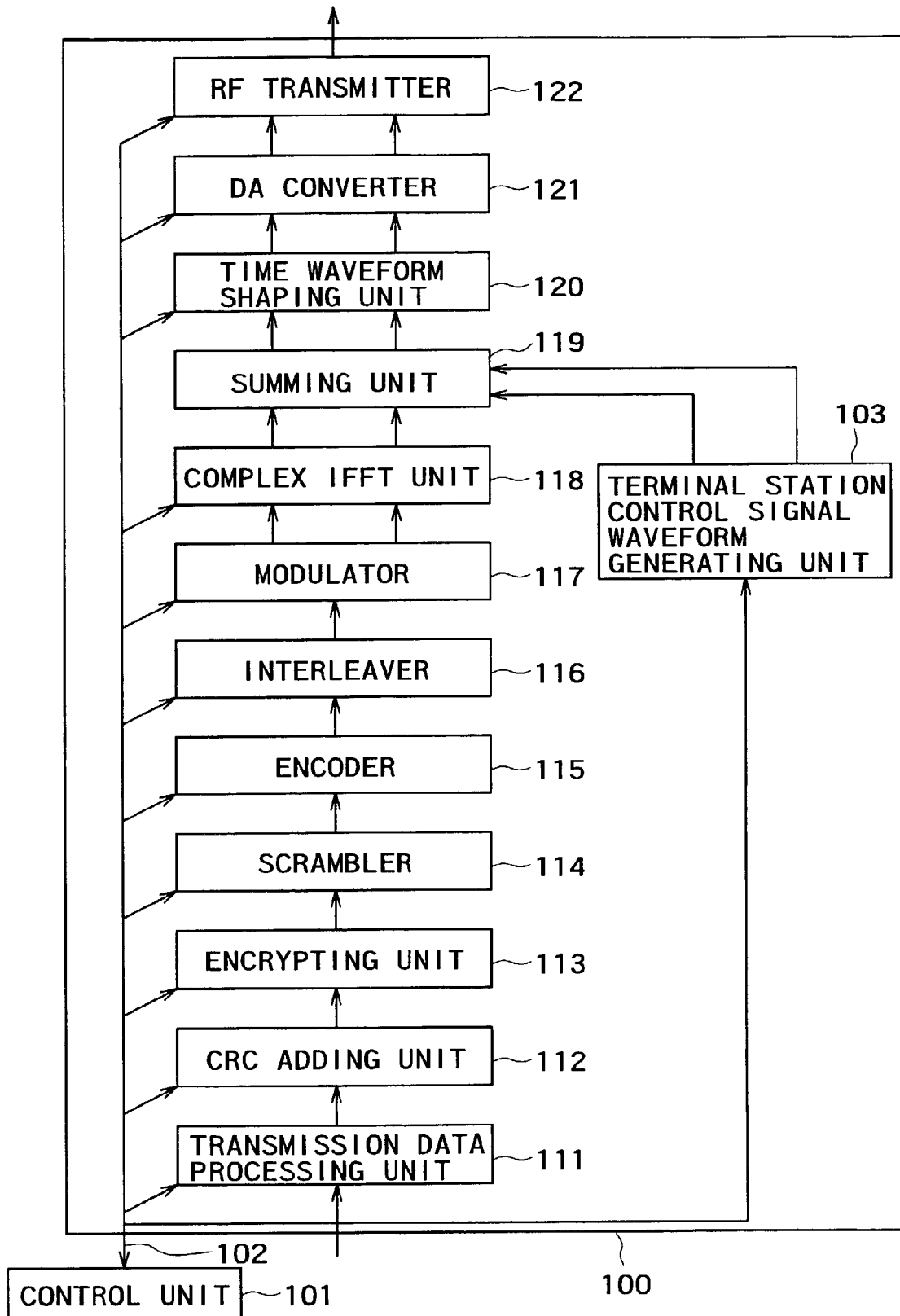


FIG. 3

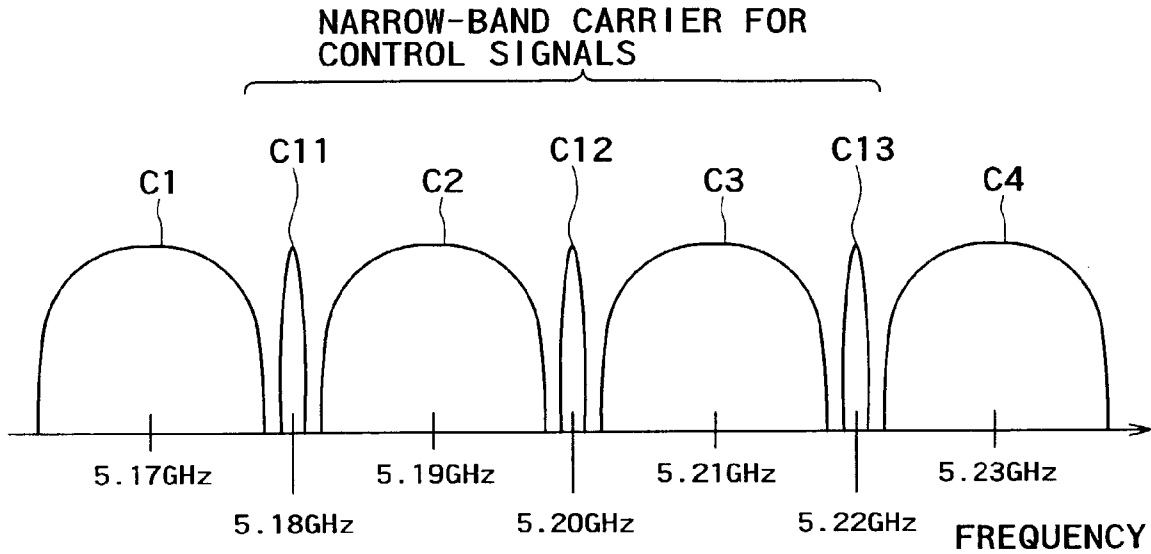


FIG. 4

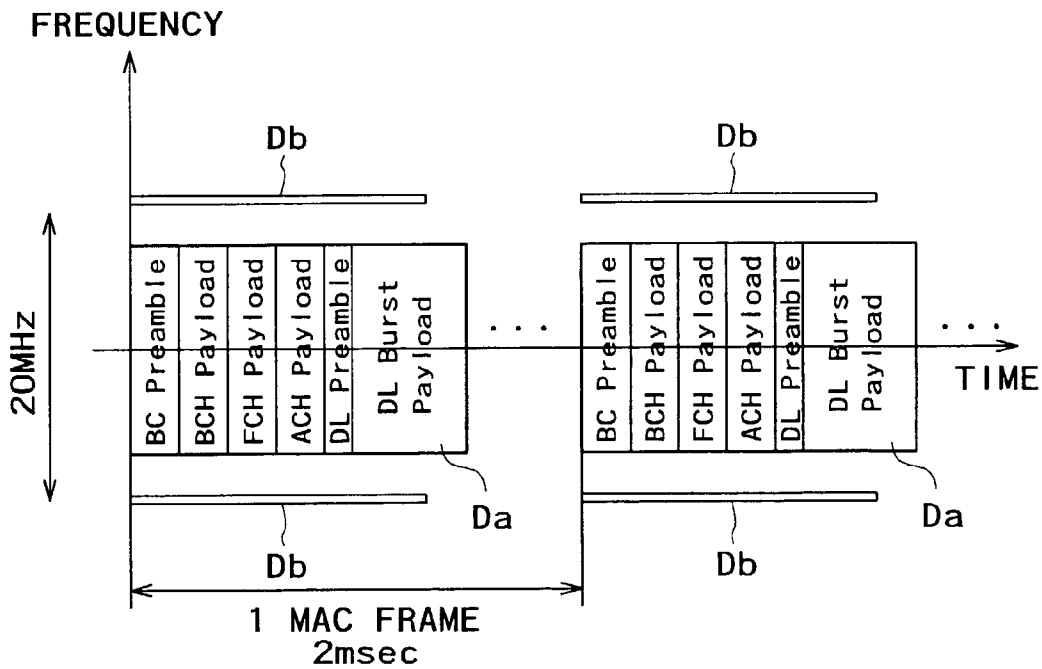
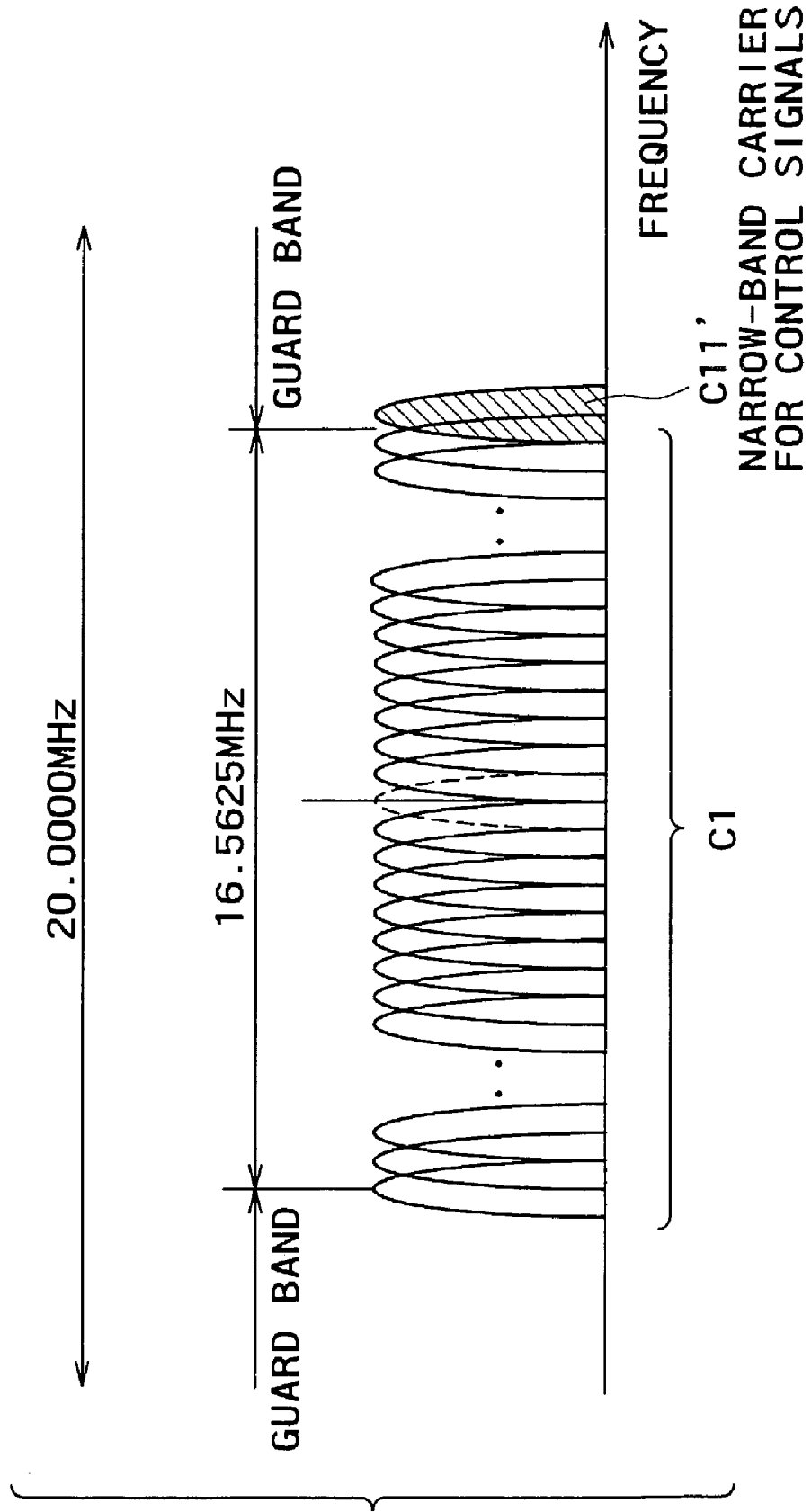


FIG. 5



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