United States Patent [19]

Gillig et al.

[56]

[54] CELLULAR CORDLESS TELEPHONE

[75] Inventors: Steven F. Gillig, Roselle; Glen E. Pederson, St. Charles, both of Ill.

- [73] Assignee: Motorola, Inc., Schaumburg, Ill.
- [21] Appl. No.: 249,041
- [22] Filed: Sep. 23, 1988
- [51] Int. Cl.⁵ H04B 1/40; H04Q 7/04
- [58] Field of Search 455/89, 73; 379/63, 379/58, 59, 61

References Cited

U.S. PATENT DOCUMENTS

3,955,140	5/1976	Stephens et al 455/89
4,481,382	11/1984	Villa-Real 379/61
4,491,966	1/1985	Morcerf et al 455/32
4,627,107	12/1986	Hohlfeld et al 455/11
4,659,878	4/1987	Dinkins 379/61 X
4,677,655	6/1987	Hashimoto 379/61
4,682,351	7/1987	Makino 379/62
4,700,375	10/1987	Reed 379/61
4,706,274	11/1987	Baker et al 379/61
4,741,019	4/1988	Takahashi 379/61
4,745,632	5/1988	Duffy 379/58
4,879,740	11/1989	Nagashima et al 379/61

FOREIGN PATENT DOCUMENTS

58-204640	11/1983	Japan	379/61
63-181534	7/1988	Јарап	379/61
WO89/04569	5/1989	PCT Int'l Appl.	379/59
2162404	1/1986	United Kingdom	379/59

OTHER PUBLICATIONS

"Britain Offers Digital Cordless Phone Service", by

[11] Patent Number: 4,989,230

[45] Date of Patent: Jan. 29, 1991

Roger Woolnough, Electronic Engineering Times, Dec. 14, 1987, p. 25.

"Cordlessphone Model No. KX-T3000 EASA--PHONE", published by Panasonic Company Exhibit D.

"DYNATAC Cellular Mobile Telephone" published by Motorola, Inc. Instruction Manual No. 68P81049E55.

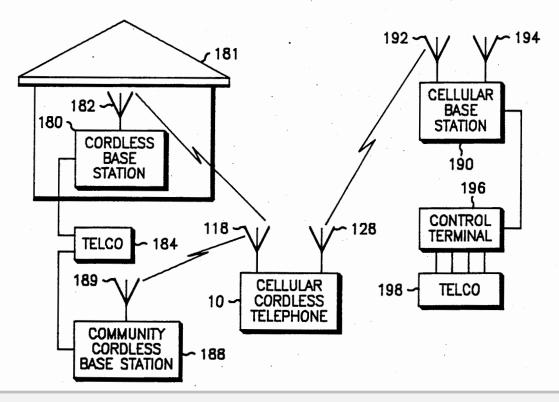
Primary Examiner-Keith E. George

Attorney, Agent, or Firm-Rolland R. Hackbart

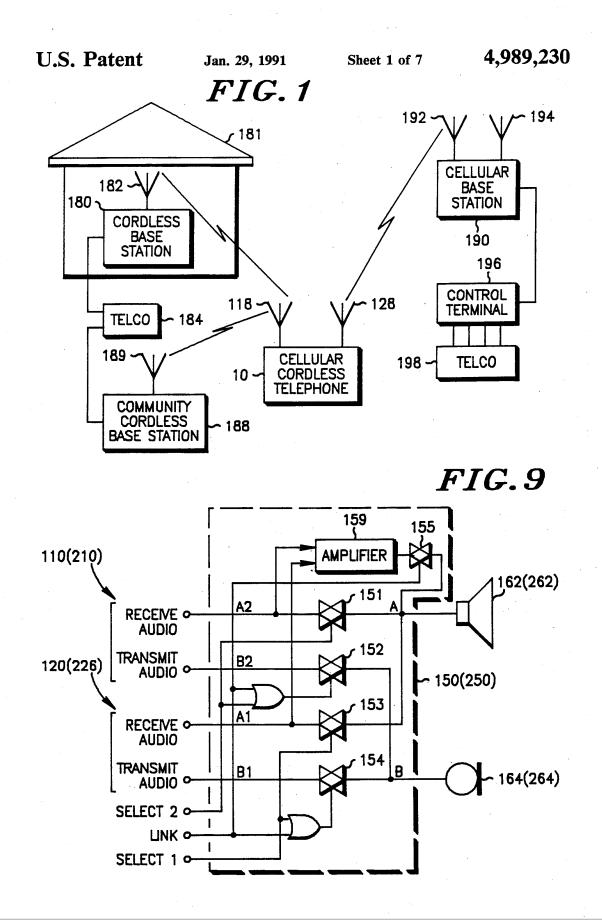
[57] ABSTRACT

A cellular cordless telephone (10) operates with both a cordless base station (180) and a cellular base station (190) and cellular control terminal (196). In one embodiment (FIG. 2), a cellular cordless telephone (100) includes a cellular transceiver (120), antenna (128), keyboard (140), a display (180), handset (160), and microcomputer (130) together with a cordless transceiver (110) and antenna (118), all of which may be in a single housing. In another embodiment (FIG. 3), a cellular cordless telephone (200) includes a cellular telephone (220) and a cordless telephone transceiver (210) which may be a plugable module. Whenever cellular cordless telephone (10) is within range of cordless base station (180), telephone calls may be made over the cordless radio channel or transferred from the cellular radio channels to the cordless radio channel. If the cellular cordless telephone (10) thereafter moves out of range of the cordless base station (180), telephone calls may be made over the cellular radio channels or transferred from the cordless radio channel to one of the cellular telephone channels.

20 Claims, 7 Drawing Sheets



Find authenticated court documents without watermarks at docketalarm.com.



119

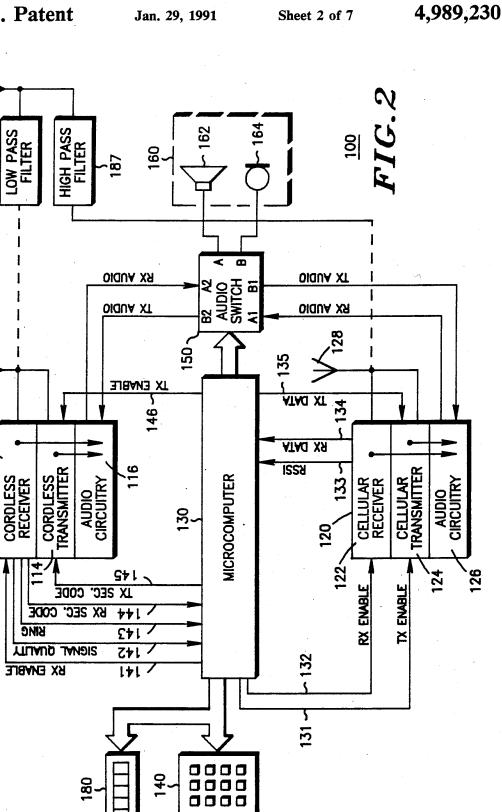
Ł

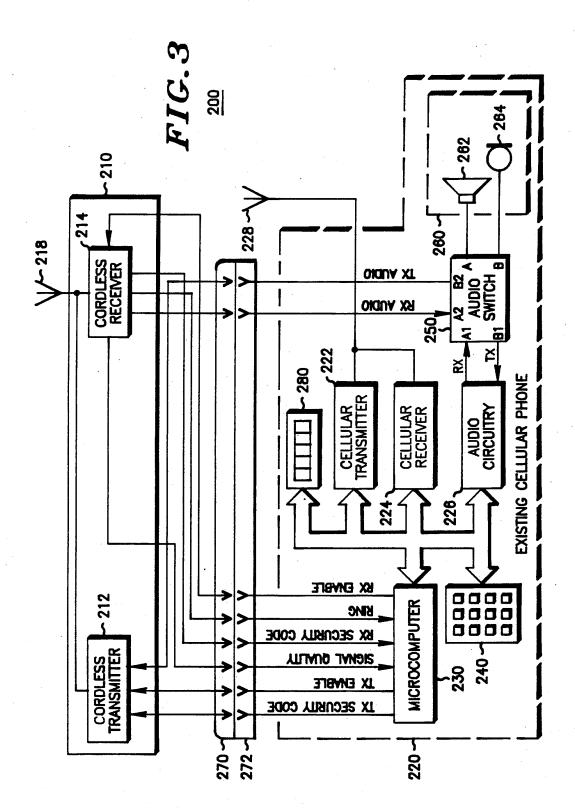
185

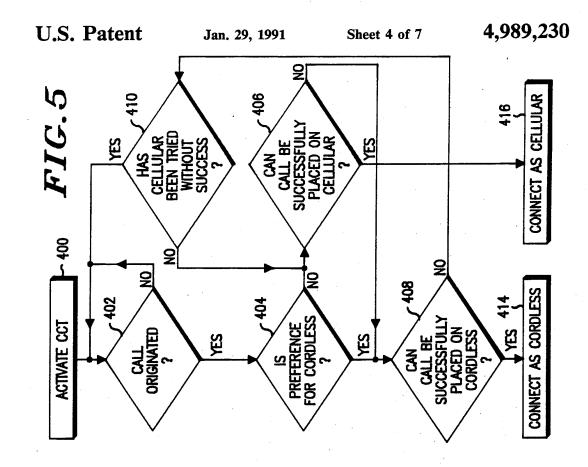
118/118

112

110







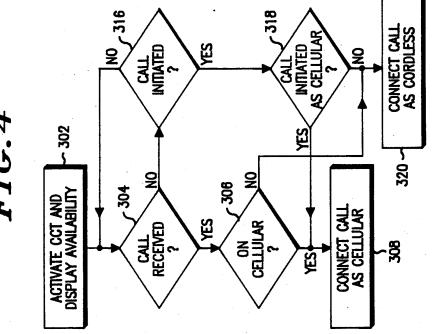


FIG.4

KF

Δ

R M Find authenticated court documents without watermarks at <u>docketalarm.com</u>.

DOCKET A L A R M



Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.