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APPLICATION NUMBER: 09/612,034

FILING DATE: July 07, 2000

PCT APPLICATION NUMBER: PCT/US01/41059

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UTILITY				
PATENT APPLICATION				
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Attorney Docket No. 1280.00187

First Inventor or Application Identifier Irvin et al.
Title "Portable Communication Device With RF*

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	PLICATION ELEMENTS	ADD	ORESS TO: Box Patent Application Washington DC 2021		
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APPLICATION FOR UNITED STATES LETTERS PATENT

SPECIFICATION

TO ALL WHOM IT MAY CONCERN:

Be it known that DAVID R. IRVIN, a citizen of the UNITED STATES OF AMERICA, residing at 1546 Iredell Drive, Raleigh, in the State of North Carolina, GERARD J. HAYES, a citizen of the UNITED STATES OF AMERICA, residing at 209 Lilliput Lane, Wake Forest, in the State of North Carolina, and NILS R. RYDBECK, a citizen of SWEDEN, residing at 202 Rutherglen, Cary, in the State of North Carolina, have invented a new and useful PORTABLE COMMUNICATION DEVICE WITH RF OUTPUT POWER CAPPED WHEN THE DEVICE OPERATES IN VERY CLOSE PROXIMITY TO A HUMAN BODY of which the following is a specification.

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PORTABLE COMMUNICATION DEVICE WITH RF OUTPUT POWER CAPPED WHEN THE DEVICE OPERATES IN VERY CLOSE PROXIMITY TO A HUMAN BODY

FIELD OF THE INVENTION

This invention relates to a mobile terminal used in a wireless communication system and, more particularly, to a mobile terminal operable to limit transmitter power if proximate a human body.

BACKGROUND OF THE INVENTION

A mobile terminal used in wireless communication systems, such as cellular telephone systems, is generally a portable device. In fact, mobile terminals are becoming small enough to fit into a user's pocket, and therefore be very close to the user's body. The mobile terminal includes a transmitter for transmitting a radio frequency (RF) signal through the air.

In a cellular communication system the mobile terminal conducts radio communications with a base station located proximate the mobile terminal. Cellular communication systems include control systems for limiting power. Typically, the base station instructs the mobile terminal to use the least power to avoid interference with other mobile terminals. The base station does so by measuring signal strength and returning instructions to the mobile terminal to modify transmitter power output.



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While conducting a voice call, the mobile terminal is placed in a "talk" position next to the user's head. Although there is no basis for concerns regarding an antenna being proximate the user, for psychological comfort the user can hold the mobile terminal spaced away or at an angle so that the antenna is farther from the user's head. Mobile terminals are also used to provide wireless connection for personal computers and the like to gain access to the Internet. With smaller mobile terminals the user might slip the mobile terminal into a shirt pocket or the like while the call is being conducted.

Again, to provide psychological comfort regarding RF transmitters being very close to a human body, there is a need to control RF power output under such situations.

SUMMARY OF THE INVENTION

In accordance with the invention, there is provided a mobile terminal that caps or limits RF power output when the mobile terminal is very close to the user, and yet permit the mobile terminal to operate without a power cap otherwise.

Broadly, there is disclosed herein a portable communication device operable to limit transmitter power if proximate a human body. The device includes a housing. A transmitter in the housing is connected to an antenna. A detector detects if the housing is proximate a human body. A control is operatively connected to the transmitter and to the detector. The control controls transmitter power and limits transmitter power if the detector



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