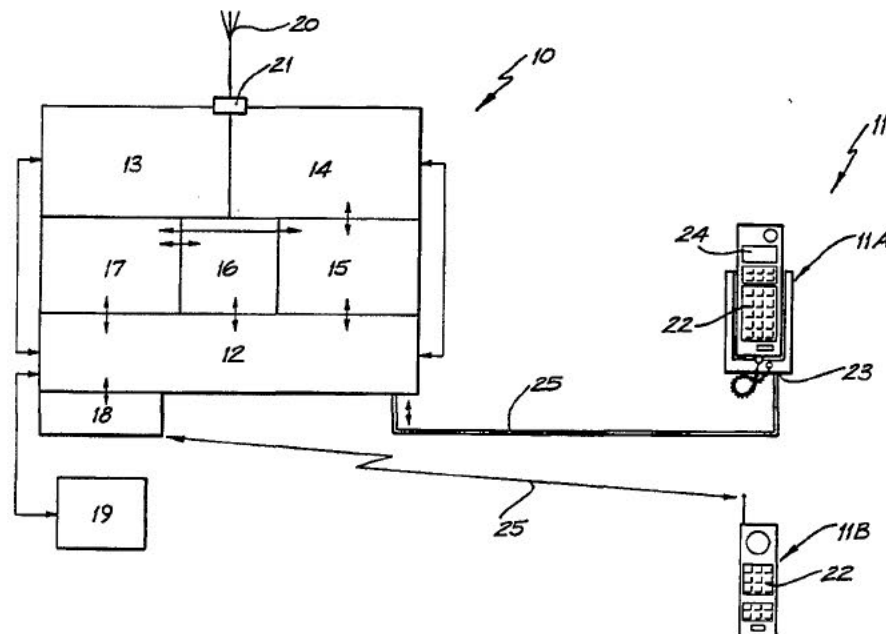


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(54) Title: MULTI-MODE COMMUNICATIONS SYSTEM



(57) Abstract

A multi-mode communication system including a hand-held phone module (11) and incorporating a base unit (10) allowing selection of multiple operational modes. The system allows a user to select from at least two different network communication protocols and standards (i.e. cellular, trunking, cordless, DGPS, etc.). The hand held phone module and the base unit can be a single handset. Mode selection can be either automatic or manual.

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MULTI-MODE COMMUNICATIONS SYSTEM

FIELD OF THE INVENTION

The present invention relates to multi-mode communications systems and, more particularly, to such systems incorporating a hand held means of control.

BACKGROUND ART

There exists today many competing forms of communication systems ranging from cellular mobile telephones through trunking radio systems and on to more specialised forms of network such as the DGPS network and the CT1, CT2, CT3 or DECT systems.

It is an object of the present invention to provide hand held access to more than one of these systems via a single hand held unit.

DISCLOSURE OF THE INVENTION

Accordingly, in one broad form of the invention, there is provided a multi-mode communications system including a hand held phone module and incorporating means allowing selection of one from a multiple of available modes of operation.

Preferably, the modes of operation comprise different forms of network communications protocols and standards.

In a preferred form of the invention, the communications protocols and standards are selected from: cellular telephone (all standards including but not limited to GSM, E-GSM, P-GSM, PCM, AMPS, ETACS, NMT450);

trunking radio system (TRS);
DGPS network;
cordless localised access networks including CT1, CT2,
CT3 and DECT.

5 Preferably said means allowing selection comprises a
base unit in communication with said hand held phone module.

Preferably said base unit includes a system controller
adapted for communication with at least a keypad portion of
said hand held phone module.

10 In one particular form of the invention the system
controller communicates with said keypad portion via a serial
interface. In an alternative preferred form said system
controller communicates with said keypad via a cordless
communication protocol selected from CT1/CT2/CT3 and DECT.

15 Preferably communications between said system
controller and said keypad are at relatively low power and
said base unit incorporates booster means for issuing a high
power communications signal.

In a particular preferred form said base unit is
20 incorporated within said hand held phone module. In a
further particular preferred form the modes of operation
thereof are limited to selection between cellular phone and
trunked radio.

BRIEF DESCRIPTION OF THE DRAWINGS

25 Embodiments of the invention will now be described with
reference to the accompanying drawings wherein:-

Fig. 1 is a block diagram of a base unit and
handset according to a first embodiment of

the invention,

Fig. 2 is a diagram of the base unit and handset of Fig. 1 in a first mode of operation,

Fig. 3 is a diagram of the base unit and handset of Fig. 1 according to a second mode of operation,

5 Fig. 4 is a diagram of the base unit and handset of Fig. 1 according to a third mode of operation,

Fig. 5 is a diagram of the base unit and handset of Fig. 1 according to a fourth mode of operation,

10 Fig. 6 is a diagram of at least portions of a base unit and handset incorporated into a single casing in accordance with a second embodiment of the invention,

15 Fig. 7 is a block diagram of a base unit according to a third embodiment of the invention,

Fig. 8 is a block diagram of a hand set usable with any embodiment of the invention,

20 Fig. 9 is a logic diagram of the operation of the hand set of Fig. 8,

Fig. 10 is a block diagram of a further example of the invention,

25 Fig. 11 is a block diagram of a further example of the invention,

Fig. 12 is a block diagram of a further example of the invention, and

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