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G4N NPL

(56) Documents Cited
GB 2276479 A **GB 2248331 A** **GB 2246891 A**
WO 96/18913 A1 **WO 94/29824 A1**

(58) Field of Search
UK CL (Edition P) **G4N NPL**
INT CL⁶ **G08B 21/00**

(54) Abstract Title

Mobile range sensitive security device

(57) A two part portable system suitably packaged against the elements, comprising Master and Slave transceivers, each with self contained power supply, each sending a uniquely coded signal of deliberately limited range to the other, in response to one received from the other (figures 2 and 3), successive failure of which, triggers an alarm on one or both Units, warning that the Slave Unit has moved beyond a defined distance from the Master Unit. The Slave Unit should be suitably tamper-proofed in itself and the fixing to it's location and both Master and Slave Units should constantly monitor their own power supply to ensure continuous operation.

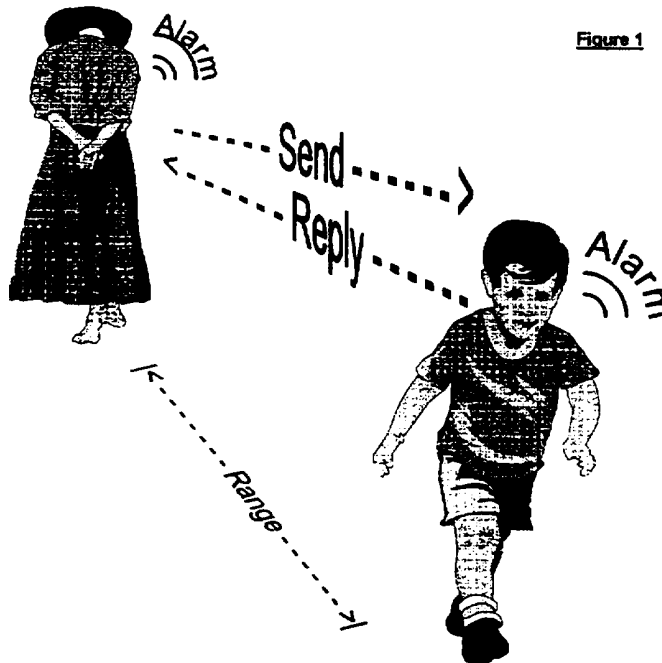


Figure 1

Figure 1

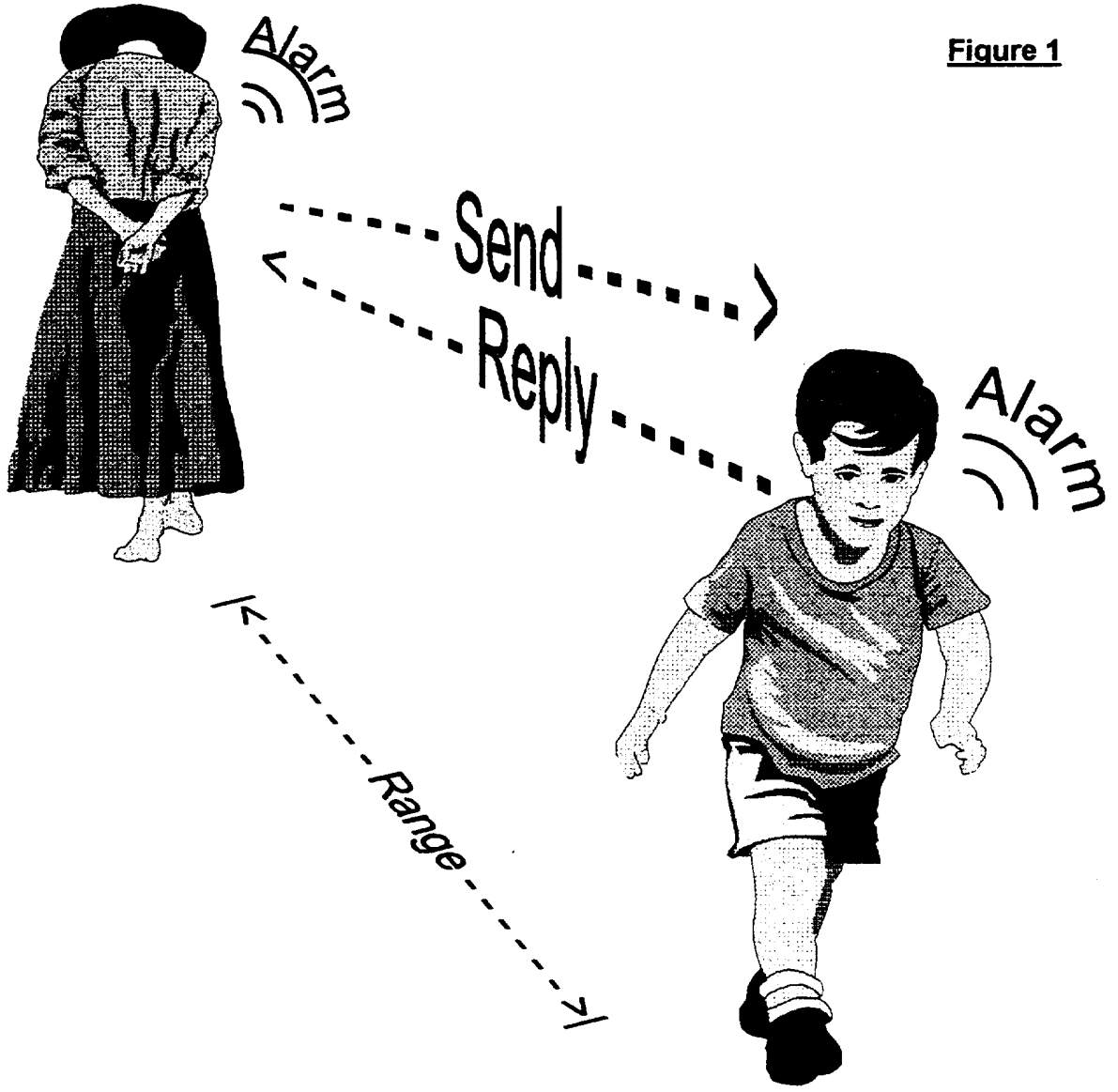


Figure 2

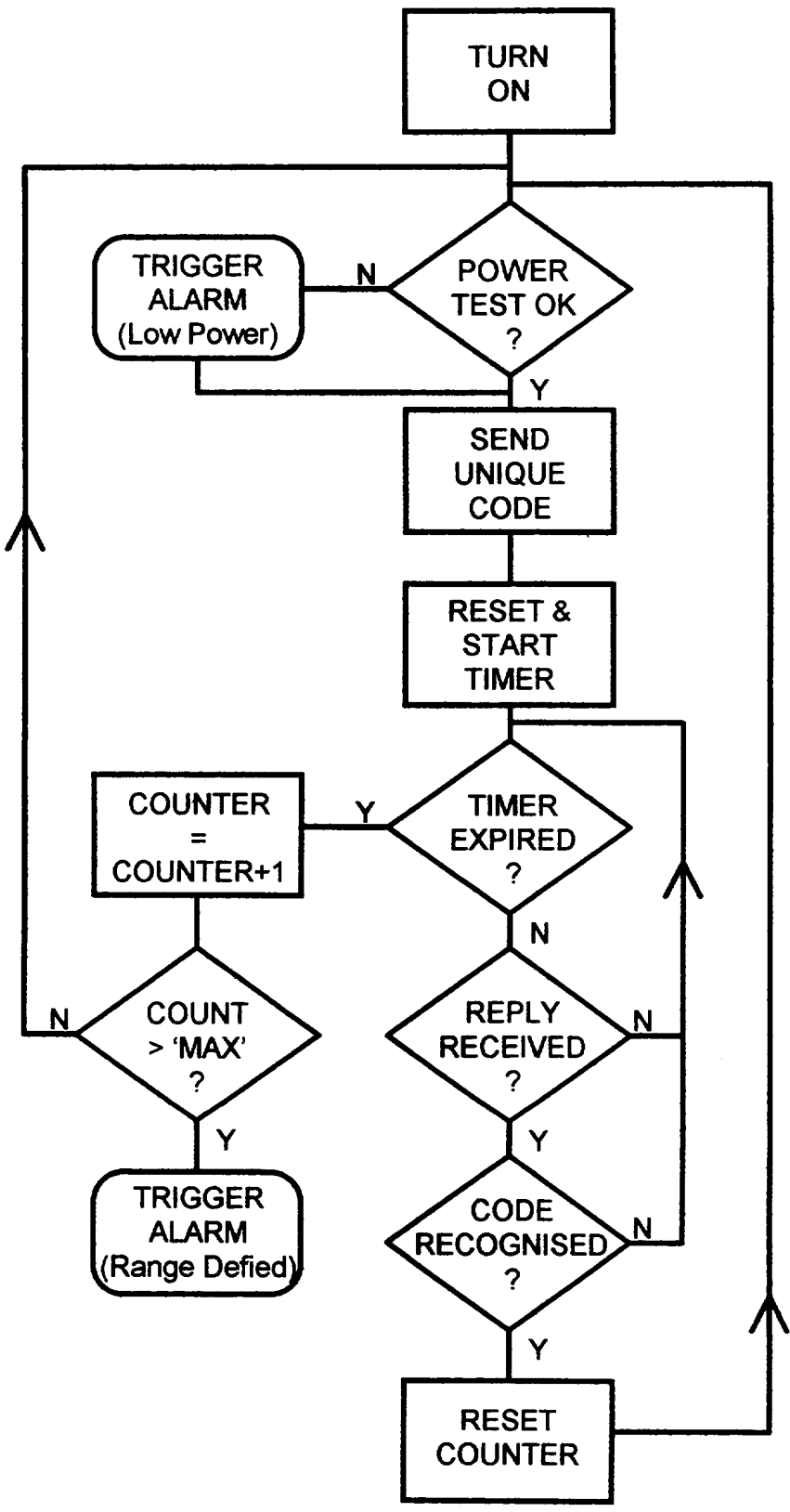
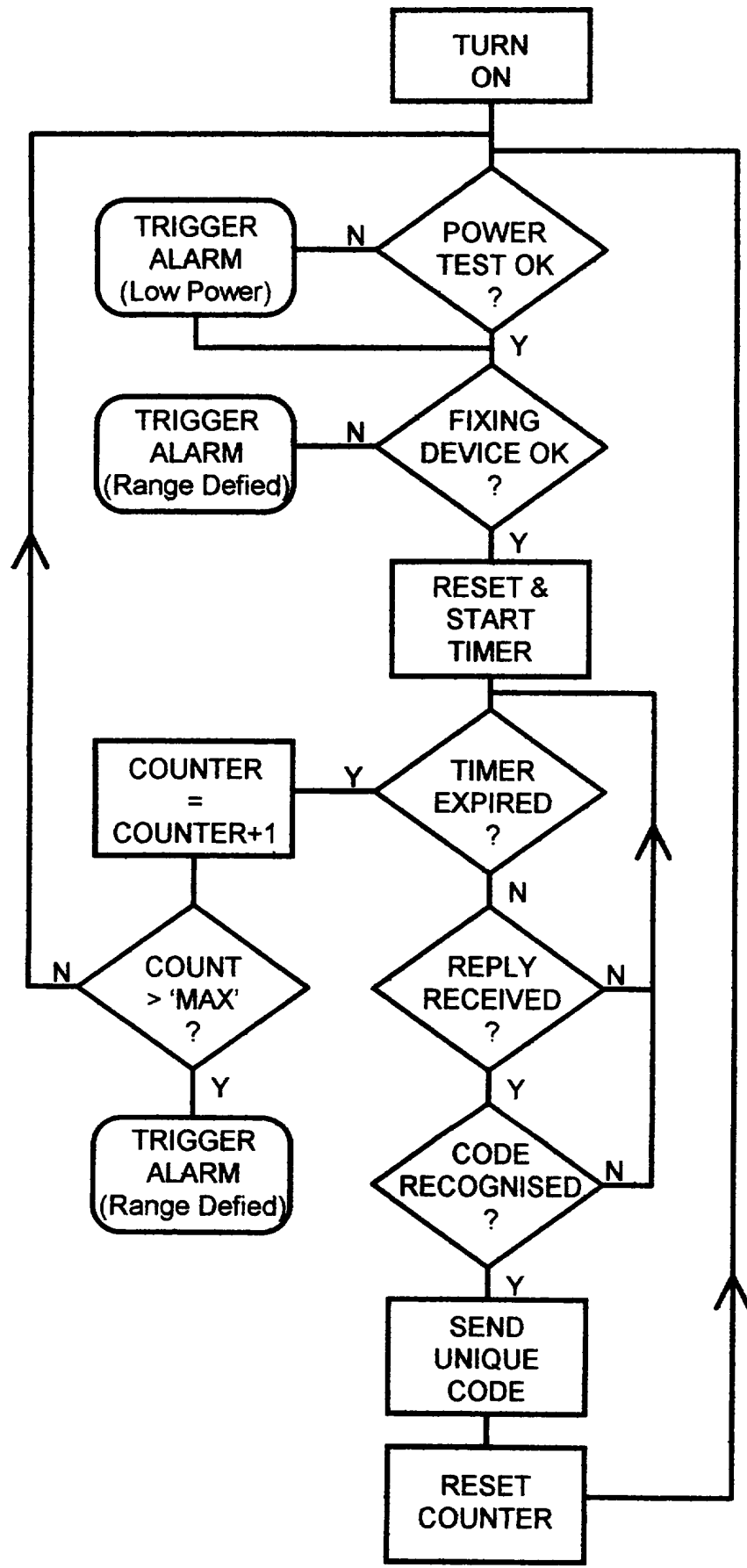


Figure 3



MOBILE, ENCRYPTED RANGE SENSITIVE SECURITY DEVICE

This invention relates to an electronic, encrypted security device.

Security systems which prevent the removal of items from a given location, through the use a fixed detector or sensor are commonplace in the application of shop security systems or child abduction prevention in hospitals. These are limited in use by the permanent or semi-permanent location of the sensor, defining an immobile area of protection and, by responding merely to a magnet or similar 'trigger', limit their use to one such detector within the same area. This does not lend itself to the monitoring of a mobile object such as child, by a mobile detector such as that carried by a mother, in the same area as others doing the same, such as in a supermarket.

According to the present invention there is provided a suitably packaged, two part portable system comprising 'Master' and 'Slave' transceivers, each with audible and/or visual alarms and self contained power supply, each sending a uniquely coded signal of deliberately limited range to the other, in response to one received from the other (handshake routine), successive failure of which, triggers an alarm on one or both Units.

A specific embodiment of the invention is illustrated:

Figure 1: This shows a mother, with the Master Unit mounted on her belt, sending a coded signal to a Slave Unit, mounted on her child's clothing, which responds to the receipt of a recognised code, with it's own coded reply, confirming that it is within the defined range. Alarms would, at the user's choice, sound at one or both units, if the coded 'handshake routine' is broken.

The Master and Slave Units each comprise suitable electronic transceiver and renewable power supply, appropriately packaged for protection against the elements. The circuitry within each unit should function as shown in Figures 2 & 3:

Figure 2: Logic diagram of Master Unit operation

Figure 3: Logic diagram of Slave Unit operation.

Each unit would have a manual on/off switch, that on the Slave Unit being, of limited accessibility or, a suitable 'key-operated' switch. The nature of the Slave Unit and the fixing to it's location, should be tamper-proof such that it's unauthorised removal or damage, whilst in operation, would trigger the alarm on the Master Unit by not being able to continue the handshake routine. In this instance, the alarm on the Slave Unit should also trigger, providing it has not been damaged beyond operation.

CLAIMS

1

A two part portable system comprising Master and Slave transceivers, each with audible and/or visual alarms and self contained renewable power supply, each sending a uniquely coded signal of deliberately limited range to the other, in response to one received from the other (handshake routine), successive failure of which, triggers an alarm on one or both Units.

2

A device as in Claim 1, with adjustable output from the Master Unit, to select the distance at which the handshake routine would fail.

3

A device in Claims 1 or 2, where the Master Unit sends two or more uniquely coded signals to a similar number of Slave Units.

4

A device as in Claims 1, 2 or 3, where the Slave Unit is secured to it's location with a means whereby removal whilst in use, of the Slave Unit from it's location, would trigger an alarm on one or both Units.



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Claims searched: 1-4

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Patents Act 1977
Search Report under Section 17

Databases searched:

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:
UK Cl (Ed.P): G4N (NPL)
Int Cl (Ed.6): G08B 21/00
Other:

Documents considered to be relevant:

Category	Identity of document and relevant passage	Relevant to claims
X	GB 2276479 A (MACWHIRTER)	1-4
X	GB 2248331 A (ARFIELD)	1-4
X	GB 2246891 A (ARROWAXE)	1-4
X	WO 96/18913 A1 (SECURE)	1-4
X	WO 94/29824 A1 (DIREKT)	1-4

X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art.
Y	Document indicating lack of inventive step if combined with one or more other documents of same category.	P	Document published on or after the declared priority date but before the filing date of this invention.
&	Member of the same patent family	E	Patent document published on or after, but with priority date earlier than, the filing date of this application.