embodiments, the RF programmer **1012** may include a receiver and provide an audio (or vibration) indication that the commands have been received and acknowledged by the external infusion device **1010**. In further embodiments, the keypad **1102** on the remote RF programmer **1012** will have the letters defining the capability of the key encoded in Braille, and the ridges that orient the user to the keypad **1102** will be quite pronounced to assist in guiding the user to the proper function key. Other embodiments may utilize keys that have different sizes or shapes to further enhance the ability for users to identify the correct buttons to activate the various features and functions.

[**0065**] A remote RF programmer **1012** will provide convenience and discretion for the user of the external infusion device **1010** by allowing concealment of the external infusion device **1010** under clothes, in pouches, or the like. Preferably, the RF programmer **1012** is an optional accessory item on the external infusion device **1010**, and the external infusion device **1010** will be fully functional without the use of the RF programmer **1012**. However, in alternative embodiments, the keypad **1024** in the external infusion device **1010** may be omitted and all programming would be handled by a local or remote PC, laptop, Communication-Station, RF programmer or the like. In preferred embodiments, the RF programmer **1012** will also provide the user with the ability to perform the following functions: deliver a bolus, suspend/restart the external infusion device, and set and cancel a temporary basal rate. However, in alternative embodiments, the RF programmer may include still additional capabilities such as data transfer (e.g., external infusion device history data or data from other medical devices), updates to software and programming, or the like. In preferred embodiments, the data transfer capabilities between the RF programmer **1012** and the transmitter/receiver **1026** of the external infusion device **1010** are two-way. In alternative embodiments, the data transfer from the RF programmer **1012** to the external infusion device **1010** is one-way, such that the RF programmer **1012** does not receive transmissions from the external infusion device **1010**. In further embodiments, the RF programmer acts as a relay, or shuttle, for data transmission between the external infusion device **1010** and a PC, laptop, Communication-station, or the like.

[**0066**] In addition, as shown in **FIG. 26, a** relay or repeater **1004** may be used with an external infusion device **1010** and an RF programmer **1012** to increase the distance from which the RF programmer **1012** can be used with the external infusion device **1010**. For example, the relay could be used to provide information to parents of children using the external infusion device **1010** and allow them to program the external infusion device **1010** from a distance with the RF programmer **1012**. The information could be used when children are in another room during sleep or doing activities in a location remote from the parents. In further embodiments, the relay **1004** can include the capability to sound an alarm. In addition, the relay **1004** may be capable of providing external infusion device **1010** information to a remotely located individual via a modem connected to the relay **1004** for display on a monitor, pager or the like. In a still further embodiment of the present invention, the external infusion device **1010** is capable of being programmed by multiple RF programmers **1012**, as shown in **FIG. 27**. For instance, each RF programmer **1012** would learn (or be programmed with) the unique code (discussed below) of the external infusion device **1010**. This would be useful for users that desired to have multiple RF programmers **1012**, such as at home, office and/or school or needed a replacement for an RF programmer that was lost.

[**0067**] In preferred embodiments, the RF programmer **1012** is similar in appearance to the type of remote that is used to lock and unlock car doors. It will have four (4) keys on a keypad **1102** on a housing **1104**, which will be laid out in a square grid pattern, similar in appearance and layout to the keypad **1024** on the infusion device **1010**, as shown in **FIGS. 22 and 23**. In alternative embodiments, fewer keys may be used to simplify the RF programmer, reduce manufacturing costs and/or to reduce the number of program capabilities available. Preferably, the RF programmer **1012** should include a ring **1106** that fits on a key ring to lessen the likelihood that it is lost. It should also have a "quick release" feature to allow the user to disconnect it from the key ring.

[**0068**] Preferred embodiments utilize RF frequencies; however, alternative embodiments, may use optical, infrared (IR), ultrasonic frequencies, magnetic effects, or the like, to communicate with the external infusion device **1010**.

[**0069**] Alternative embodiments of the RF programmer (controller or commander) **1012'**, as shown in **FIG. 24**, may have more complex keypad arrangements **1152**, and may include a display device **1150**, such as an LCD, LED, plasma screen, or the like, to assist in programming the external infusion device **1010**. Further alternatives may include a microphone (not shown) and related circuitry to allow voice activated control of the external infusion device. In further alternative embodiments, the RF programmer **1012** may be formed in larger sizes, comparable to a TV controller or a pocket calculator, and may include a display to facilitate more complicated or easier programming. Still further embodiments, may include the ability to receive data and information from the external infusion device **1010** and/or a glucose monitoring device, and the ability to relay the information to another medical device, external infusion device **1010**, glucose monitor device, PC, laptop, Communication-Station, or the like. Data transmission may be to other devices or include the capability to receive data or instructions. An RF activation capability may be included in addition to the programming capability.

[**0070**] In preferred embodiments, the external infusion device **1010** includes a receiver to receive the commands from the RF programmer **1012**. Normally, the receiver is in a standby mode (e.g., not receiving) and becomes active for short periods every 2.5 seconds (approximately) to see if there is any RF activity from the RF programmer **1012**. In alternative embodiments, the receiver of the external infusion device **1010** may be on continuously or may become active more often or less often, with the selection being dependent on power capacity, expected frequency of use of the RF programmer **1012**, or the like. Generally, the receiver of the external infusion device **1010** requires that the RF programmer send an activating message for a period lasting about 5 seconds for the RF programmer to be recognized by the receiver. In alternative embodiments, longer or shorter periods of time for sending the activating message may be used.

[**0071**] Once the receiver recognizes that there is a valid RF programmer **1012** sending a message to the external