

Paradigm Insulin Pump Model MMT-712: Operating Description

The MMT-712 is an external insulin pump w/ a Bolus Estimator designed to deliver 0 to 35 Units/hour in basal rates and up to 25.0 Units per meal bolus for either U50, or U100 insulin. It is desired that the 712 deliver basal in single pulses of 1/2 micro-liter each, thus we would have deliveries of u100 and U50 as 0.05 units, user can choose increment of programming (up to 0.1) within this resolution but even if coarser programming is selected, deliveries will still be single pulses. Font size shall remain the same as in 511. An additional screen shall be added to allow user to choose increment of programming type.

A new drive motor with reservoir (3ml or up to 25% larger pump volumetrically) and proprietary connector shall be utilized. The keypad shall be similar to the 511 except it may be increased in size to be proportional to the case. The pump shall offer the user a choice of either an audible or a vibrating alarm, and an optional accessory (RF remote transmitter) that can program certain basic functions while allowing the pump to be concealed from view. The pump shall provide a warning indicative of a low or empty reservoir situation as well as a low battery indicator which shall include battery depletion levels - normal, low battery and off no power (depleted battery).

The MMT-712 shall utilize a Dot Matrix LCD screen with dedicated Icons that offers multi-language capability as well as a more detailed alarm / error message capability (same as the 511). Programming options shall include up to three customized basal profiles / personal delivery patterns, multiple bolus options and several safety programming options. Selected patterns shall remain in place until user edits / selects to alternate pattern.

The MMT-712 insulin pump shall have the capability to store up to approx. 90 days worth of data and download either complete, or selected memory, via RF communication to a future RF download source. A battery backed RAM memory shall be utilized to contain pump, pump configuration, personal delivery patterns, and additional programming parameters. The pump serial number shall be stored in non-volatile memory.

The MMT-712 shall utilize the same remote transmitter housing as currently used for the 511 product (the transmitter case shall snap together and maintain water resistance). This device shall be able to Suspend, Re-start and program a normal bolus without requiring access to the keypad on the pump. The telemetry range shall be up to 24" with no requirement for orientation. The battery shall remain the same as the MMT-503. Frequencies shall be the same as the 511, (domestic 916.5 Mhz). This device must comply with FCC regulations.