

range; a monochrome segmented display coupled to the processor; a plurality of numbers on the monochrome segmented display that display the numerical blood glucose measurement, a plurality of indicators, comprising target range indicators on the monochrome segmented display located adjacent to the first color area, of color glucose scale, above target range indicators on the monochrome segmented display located adjacent to the second color area of color glucose scale, below target range of indicators on the monochrome segmented display located adjacent to the third color area of color glucose scale, and an indicator scaling module located in meter memory that is non-transient to calculate an indicator range for each of the plurality of indicators in relation to a user target range.

In one aspect, there is provided a blood glucose meter with user interface having programmed graphic indicators, the blood glucose meter comprising: a meter housing having a strip port carried by the meter housing; a meter processor having meter memory carried inside the meter housing; a measurement module coupled to the strip port and connected to the meter processor; a meter communications port coupled to the meter processor; a meter display coupled to the processor, the meter display comprising: a color glucose scale that is static and carried by the meter housing, the color glucose scale comprising: a first color area designating a user target range, a second color area designating an above target range, and a third color area designating a below target range, and a monochrome segmented display coupled to the processor; a plurality of numbers on the monochrome segmented display that display a blood glucose measurement numerically, a plurality of indicators, comprising: target range indicators on the monochrome segmented display located adjacent to the first color area of color glucose scale, above target range indicators on the monochrome segmented display located adjacent to the second color area of color glucose scale, and below target range of indicators on the monochrome segmented display located adjacent to the third color area of color glucose scale, and an indicator scaling module located in meter memory that is non-transiently configured to calculate an indicator range for each of the plurality of indicators in relation to a user target range that is specific to the user.

In another aspect, there is provided a blood glucose measurement system with user interface having programmed graphic indicators, the system comprising: a meter housing having a strip port carried by the meter housing; a meter processor having meter memory carried by the meter housing; a measurement module coupled to the strip port and connected to the meter processor; a meter communications port coupled to the meter processor; a meter display coupled to the processor, comprising a color glucose scale that is static and carried by the housing, the color glucose scale comprising: a first color area designating a user target range, a second color area designating an above target range, and a third color area designating a below target range, and a monochrome segmented display coupled to the processor; a plurality of numbers on the monochrome segmented display that display a blood glucose measurement numerically, a plurality of indicators, comprising: target range indicators on the monochrome segmented display located adjacent to the first color area of color glucose scale, above target range indicators on the monochrome segmented display located adjacent to the second color area of color glucose scale, and below target range of indicators on the monochrome segmented display located adjacent to the third color area of color glucose scale, and an indicator scaling module located in meter memory that is non-transiently configured to calculate an indicator range for each of the plurality of indicators in relation to a user target range that is specific to the user; a computing device comprising: a device housing; a device processor having device memory carried inside the device housing; a device user interface coupled to buttons carried inside the device housing; a device communications port coupled to the device processor; a device display coupled to the processor; and a target range field on the device display for entering a user target range that is communicated from the device communications port to the meter communications port for programming the user target range into the blood glucose meter.

In another aspect, there is provided a blood glucose meter with user interface having programmable graphic indicators, the blood glucose meter comprising: a meter housing having a strip port; a meter processor having meter memory carried inside the meter housing; a measurement module coupled to the strip port and connected to the meter processor; a meter display coupled to the processor, a color glucose scale that is static and located adjacent to the display, the color glucose scale comprising: a first color area designating a user target range, a second color area designating an above target range, and a third color area designating a below target range, wherein the display is configured to display a plurality of numbers that display a blood glucose measurement numerically, and at least one indicator, the at least one indicator comprising: target range indicator displayed adjacent to the first color area of color glucose scale, if the blood glucose measurement is within the user target range, or an above target range indicator displayed adjacent to the second color area of color glucose scale, if the blood glucose measurement is within the above target range, or a below target range indicator displayed adjacent to the third color area of color glucose scale, if the blood glucose measurement is within the below target range, and an indicator scaling module located in meter memory that is non-transient characterized in that the indicator scaling module calculates an indicator range for each of the target ranges based on an user input so that the target ranges are specific to the user and the at least one target range indicator is displayed adjacent to a color area based on the calculated indicator ranges.

In some embodiments, the user's target range can be a standard target range preprogrammed into the meter. In other embodiments, the user's target range can be programmed into the meter using a separate computing device. In some embodiments, the blood glucose meter can be configured into a blood glucose measurement system including a separating computing device such as a mobile phone or personal computer. The computing device has a target range field on a device display for entering a user target range that is communicated from the device communications port to the meter communications port for programming the user target range into the blood glucose meter.

A method for programming graphic indicators on a blood glucose meter with low cost user interface according to the user's blood glucose target range through a separate computing device. The method comprises establishing communications between the blood glucose meter and a computing device; launching a diabetes application on the computing device; entering a target range into the diabetes application; transmitting the target range from the computing device to the blood glucose meter; calculating the target indicator range for each of the target range indicators, by the blood glucose meter, by sub-dividing the user target range by the target range indicators quantity; calculating the above indicator range for each of the above target range indicators, by the blood glucose meter, by sub-dividing a user above target range by the above target range indicators quantity; calculating the below indicator range for each of the below target range

indicators, by the blood glucose meter, by sub-dividing a user below target range by the below target range indicators quantity; storing indicator ranges into non-transient memory the target indicator range for each of the target range indicators, the above indicator range for each of the above target range indicators, and the below indicator range for each of the below target range indicators; inserting a test strip into a strip port of the blood glucose meter to activate the blood glucose meter; applying a blood sample to the test strip to perform a blood glucose measurement; calculating the blood glucose measurement; displaying the blood glucose measurement numerically on the blood glucose meter; and displaying the blood glucose measurement graphically by one of the plurality of indicators indexing the color glucose scale.

In another aspect, there is provided a method for programming graphic indicators on a blood glucose meter with user interface, the method comprising: establishing communications between the blood glucose meter and a computing device; launching a diabetes application on the computing device; entering a target range into the diabetes application on the computing device; transmitting the target range from the computing device to a blood glucose meter; calculating a target indicator range for each of the target range indicators, by the blood glucose meter, by sub-dividing the user's target range by the target range indicators quantity; calculating an above target indicator range for each of the above target range indicators, by the blood glucose meter, by sub-dividing the user's above target range by the above target range indicator quantity; calculating a below target indicator range for each of the below target range indicators, by the blood glucose meter, by sub-dividing a user below target range by the below target range indicator quantity; storing indicator ranges into non-transient memory, by the blood glucose meter, the target indicator range for each of the target range indicators, the above indicator range for each of the above target range indicators, and the below indicator range for each of the below target range indicators; inserting a test strip into a strip port of the handheld blood glucose meter to activate the blood glucose meter; applying a blood sample to the test strip to perform a blood glucose measurement; calculating the blood glucose measurement by the blood glucose

meter; displaying the blood glucose measurement numerically on the blood glucose meter; and displaying the blood glucose measurement graphically by one of a plurality of indicators indexing a color glucose scale.