

Quick Calc by Diabetes Companion
“The Insulin Calculator”

User’s Manual

Quick Calc by Diabetes Companion is design only to be used with RAPID ACTING INSULIN.

Quick Calc by Diabetes Companion is a REFERENCE TOOL ONLY! Please work with your Healthcare Provider to insure that you are correctly using Quick Calc by Diabetes Companion.

The Setup Mode contains five (5) numbers that you will need to input and/or verify. Your Healthcare Provider can assist you in determining these five (5) numbers. **Quick Calc by Diabetes Companion provides factory default numbers that may need to be changed based on each individual's needs and requirements. Your Healthcare Provider can work with you on your specific requirements.**

Please remember, Quick Calc by Diabetes Companion is a **REFERENCE TOOL ONLY!**

Quick Calc by Diabetes Companion will automatically shutoff if the unit is inactive for approximately 40 seconds.

The USB connector, located on the side of Quick Calc by Diabetes Companion, is NOT intended for use. It is for Factory Use ONLY. Plugging a USB cable into the connector could damage Quick Calc by Diabetes Companion.

Please keep a copy of your original bill of sale. In order to obtain warranty service, you will need to provide a copy of your original bill of sale at the time of service. Also, please keep all packing materials and the original packing box to protect your equipment, should you need to transport it for service.

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Section 1

- **Initial Setup (1st Time Use)**

Quick Calc by Diabetes Companion requires the user to enter the Setup Mode the first time the unit is powered on. There are five (5) numbers that need to be verified and/or changed by the user before Quick Calc by Diabetes Companion can be used to determine the user's recommended rapid acting insulin dosage. Each one of the five (5) numbers is specific to the user. **Your Healthcare Provider can assist you in determining the specific values for each of the five (5) numbers.**

Step 1: Press the "ON" button.

The display window will show the following information "SETUP REQUIRED PRESS SETUP"

Step 2: Press the "SETUP" button.

Step 3: The display window will show the following information "CARB RATIO = 1/0".

The top number for Carb Ratio will always be one (1). The bottom number is what you will enter.

You **MUST** enter a number between 1 and 50.

If the number you entered is incorrect, press the "CLEAR" button and enter the correct number, then press the "ENTER" button.

If the number you entered is correct, press the "ENTER" button.

Note: If the user does not know their personal Carb Ratio number or it is not within the 1 to 50 range, please contact your Healthcare Provider for assistance.

This table is for REFERENCE ONLY and is designed to help assist the user in Steps 4 & 5. The numbers in this table are meant to be used as "starting" points based upon the type of insulin that is being used. Quick Calc by Diabetes Companion's default values are Rule of 500 and Correction Ratio Rule of 1800.

Your Healthcare Provider can assist you in determining the specific values for steps 4 & 5.

		Rapid Acting Insulin Novolog & Humalog	Regular Insulin
Step 4	Rule of	500	450
Step 5	Correction Ratio Rule of	1800 Novolog (or 1700 Humalog)	1500

Step 4: The display window will show the following information "RULE OF 500".

If 500 is not the correct number, press the "CLEAR" button and enter the correct number, then press the "ENTER" button.

If 500 is the correct number for your Rule of *nnn*, press the "ENTER" button.

Note: If the user does not know their personal Rule of *nnn* number or it is not within the 200 to 999 range, please contact your Healthcare Provider for assistance.

Step 5: The display window will show the following information "CORRECTION RATIO RULE OF 1800".

If 1800 is not the correct number, press the "CLEAR" button and enter the correct number, then press the "ENTER" button.

If 1800 is the correct number for your Correction Ratio Rule of *nnnn*, press the "ENTER" button.

Note: If the user does not know their personal Correction Ratio Rule of *nnnn* number or it is not within the 1200 to 2200 range, please contact your Healthcare Provider for assistance.

Step 6: The display window will show the following information "LOWER GLUCOSE RANGE = 70 mg/dL".
If 70 mg/dL is not the correct number, press the "CLEAR" button and enter the correct number, then press the "ENTER" button.
If 70 mg/dL is the correct number for your Lower Glucose Range, press the "ENTER" button.

Note: If the user does not know their personal Lower Glucose Range number or it is not within the 60 to 110 mg/dL range, please contact your Healthcare Provider for assistance.

Step 7: The display window will show the following information "UPPER GLUCOSE RANGE = 130 mg/dL".
If 130 mg/dL is not the correct number, press the "CLEAR" button and enter the correct number, then press the "ENTER" button.
If 130 mg/dL is the correct number for your Upper Glucose Range, press the "ENTER" button.

Note: Quick Calc by Diabetes Companion will not allow the Upper Glucose Range number to be less than the Lower Glucose Range. If the user does not know their personal Upper Glucose Range number or it is not within the 100 to 200 mg/dL range, please contact your Healthcare Provider for assistance.

Step 8: The Initial Setup is complete.

The display window will show the following information "SETUP COMPLETE: OFF TO EXIT" and "ENTER TO VERIFY SETUP".
The user may press the "OFF" or "ENTER" button. If the user presses the "OFF" button, the Initial Setup is complete and the unit is turned off. If the user wants to verify the five (5) numbers have been entered correctly before exiting the Initial Setup mode, they may do so by pressing the "ENTER" button and completing the following steps:

Note: Steps to verify Setup:

Step 1: The display window will show the following "CARB RATIO = 1/nn". Verify that the bottom number (indicated by *nn*) is the correct number.

If you have entered the bottom number incorrectly (*nn*), press the "CLEAR" button and enter the correct number, press the "ENTER" button.

If you have entered the bottom number correctly (*nn*), press the "ENTER" button.

Step 2: The display window will show the following "RULE OF nnn". Verify that the number (indicated by *nnn*) is the correct number.

If you entered the number incorrectly (*nnn*), press the "CLEAR" button and enter the correct number, press the "ENTER" button.

If you entered the number correctly (*nnn*), press the "ENTER" button.

Step 3: The display window will show the following "CORRECTION RATIO RULE OF nnnn". Verify that the number (indicated by *nnnn*) is the correct number.

If you entered the number incorrectly (*nnnn*), press the "CLEAR" button and enter the correct number, press the "ENTER" button.

If you entered the number correctly (*nnnn*), press the "ENTER" button.

Step 4: The display window will show the following "LOWER GLUCOSE RANGE = nnn mg/dL". Verify that the number (indicated by *nnn*) is the correct number.

If you entered the number incorrectly (*nnn*), press the "CLEAR" button and enter the correct number, press the "ENTER" button.

If you entered the number correctly (*nnn*), press the "ENTER" button.

Step 5: The display window will show the following "UPPER GLUCOSE RANGE = nnn mg/dL". Verify that the number (indicated by *nnn*) is the correct number.

If you entered the number incorrectly (*nnn*), press the "CLEAR" button and enter the correct number, press the "ENTER" button.

If you entered the number correctly (*nnn*), press the "ENTER" button.

To exit the Initial Setup mode, press the "OFF" button.

Section 2

• **ON Mode (Determining your recommended rapid acting insulin dosage)**

Note: The user must test their blood using a blood glucose monitoring system before performing Step 1.

Step 1: Press the "ON" button.

The display window will show the following information "CURRENT CARB RATIO= 1/nn ("nr" range is from 1 to 50). This display shows the user's current Carb Ratio which has been inputted during the Setup Mode. This display will automatically advance to Step 2 in approximately two (2) seconds.

Step 2: The display window will show the following information "CURRENT GLUCOSE READING= ___mg/dL".

Note: If the user's Carb Ratio needs to be changed, press the "SETUP" button. See Section 3, Step 3 to change the Carb Ratio number.

Enter your current glucose reading number.

If you have entered your Current Glucose Reading number incorrectly, press the "CLEAR" button and enter the correct number, then press the "ENTER" button.

If you have entered your Current Glucose Reading number correctly, press the "ENTER" button.

NOTE: Quick Calc by Diabetes Companion will display comments about the specific range of the user's "Current Glucose Reading". Some ranges will cause Quick Calc by Diabetes Companion NOT to advance to the next step. The user MUST press the "OFF" button.

- Range 1 to 40 mg/dL ⇒ Display will read: DANGER YOU NEED GLUCOSE NOW!! (Quick Calc by Diabetes Companion WILL NOT ADVANCE to Step 3, Press the "OFF" button)
- Range 41 to 60 mg/dL ⇒ Display will read: CAUTION! LOW GLUCOSE LEVEL (Will display this message for approximately 3 seconds)
- Range 61 to 200 mg/dL ⇒ Normal operating range
- Range 201 to 300 mg/dL ⇒ Display will read: CAUTION! HIGH GLUCOSE (Will display this message for approximately 3 seconds)
- Range 301 to 350 mg/dL ⇒ Display will read: HIGH GLUCOSE! CHECK KETONES (Will display this message for approximately 3 seconds)
- Range 351 to 400 mg/dL ⇒ Display will read: DANGEROUS GLUCOSE LEVEL! CHECK KETONES (Will display this message for approximately 3 seconds)
- Range greater than 400 mg/dL ⇒ Display will read: DANGEROUS GLUCOSE LEVEL SEEK IMMEDIATE MEDICAL CARE!! (Quick Calc by Diabetes Companion WILL NOT ADVANCE to Step 3, Press the "OFF" button)

Step 3: The display window will show the following information "TOTAL CARB INTAKE= ___grams".

Enter your Total Carb Intake number.

If you have entered your Total Carb Intake number incorrectly, press the "CLEAR" button and enter the correct number, then press the "ENTER" button.

If you have entered your Total Carb Intake number correctly, press the "ENTER" button.

NOTE: Quick Calc by Diabetes Companion will display comments about the specific range of the user's "Total Carb Intake". Some ranges will cause Quick Calc by Diabetes Companion NOT to advance to the next step. The user MUST press the "OFF" button.

- Range 0 to 200 grams ⇒ Normal operating range
- Range 201 to 250 grams ⇒ Display will read: HIGH CARB INTAKE VERIFY INPUT (Will display this message for approximately 3 seconds)
- Range greater than 250 grams ⇒ Display will read: OUT OF RANGE FOR CARB INTAKE (Quick Calc by Diabetes Companion WILL NOT ADVANCE to the next Step, Press the "OFF" button)

Step 4: The display window will show the following information "RECOMMENDED DOSAGE = nnn.n units".

Quick Calc by Diabetes Companion will display the **RECOMMENDED RAPID ACTING INSULIN DOSAGE** based on the five (5) numbers that you entered in the Setup Mode and the two numbers (Current Glucose Reading and Total Carb Intake) you entered in the ON Mode.

NOTE: If Quick Calc by Diabetes Companion's calculation determines that your Recommended Rapid Acting Insulin Dosage is "negative", the display window will show the following message, "CAUTION YOU NEED GLUCOSE". This message is to let you know that you entered a low Current Glucose Reading and you are not consuming (eating or drinking) enough carbs to raise your blood glucose level above your Lower Glucose Range number.

Step 5: The user has three (3) options:

Option 1; Press the "OFF" button to turn Quick Calc by Diabetes Companion off.

Option 2; Press either the "CLEAR" or "ENTER" button and Quick Calc by Diabetes Companion will return to Step 2, "CURRENT GLUCOSE READING". This allows you to repeat Step 2 through Step 5.

Option 3; Press the "SETUP" button to enter into the Setup Mode (See Section 3, Step 3).

Section 3

- **Edit or View Setup Mode (Carb Ratio, Rule of "nnn", Correction Ratio and Lower & Upper Glucose Range)**

Note: The user can edit or view the five (5) specific numbers that their Healthcare Provider has given to them. The user can change any of the five (5) numbers by completing the following steps:

Step 1: Press the "ON" button.

Step 2: Press the "SETUP" button.

Step 3: The display window will show the following "CARB RATIO = 1/nn". Verify that the bottom number (indicated by *nn*) is the correct number.

If you have entered the bottom number incorrectly (*nn*), press the "CLEAR" button and enter the correct number, press the "ENTER" button. If you have entered the bottom number correctly (*nn*), press the "ENTER" button.

Step 4: The display window will show the following "RULE OF nnn". Verify that the number (indicated by *nnn*) is the correct number.

If you entered the number incorrectly (*nnn*), press the "CLEAR" button and enter the correct number, press the "ENTER" button. If you entered the number correctly (*nnn*), press the "ENTER" button.

Step 5: The display window will show the following "CORRECTION RATIO RULE OF nnnn". Verify that the number (indicated by *nnnn*) is the correct number.

If you entered the number incorrectly (*nnnn*), press the "CLEAR" button and enter the correct number, press the "ENTER" button. If you entered the number correctly (*nnnn*), press the "ENTER" button.

Step 6: The display window will show the following "LOWER GLUCOSE RANGE = nnn mg/dL". Verify that the number (indicated by *nnn*) is the correct number.

If you entered the number incorrectly (*nnn*), press the "CLEAR" button and enter the correct number, press the "ENTER" button. If you entered the number correctly (*nnn*), press the "ENTER" button.

Step 7: The display window will show the following "UPPER GLUCOSE RANGE = nnn mg/dL". Verify that the number (indicated by *nnn*) is the correct number.

If you entered the number incorrectly (*nnn*), press the "CLEAR" button and enter the correct number, press the "ENTER" button. If you entered the number correctly (*nnn*), press the "ENTER" button.

Step 8: The display window will show the following "SETUP COMPLETE: OFF TO EXIT" and "ENTER TO VERIFY SETUP". To exit the Setup mode, press the "OFF" button. To repeat steps 3 thru 7, press the "ENTER" button.

Section 4

- **Battery Replacement**

Quick Calc by Diabetes Companion uses two (2) CR2032 batteries. The user can remove the battery door, located on the backside of the unit, and slide each battery out of their battery holder. The batteries can be removed by using a ballpoint pen or similar object. Do not use a mechanical pencil or sharp pointed object.

The negative (-) side of the batteries will be placed against the printed circuit board and the positive (+) side of the batteries should be visible (facing up) when sliding the new replacement batteries back into the holders. Verify that each battery is installed fully within each holder. **ALWAYS REPLACE BOTH BATTERIES.** After replacing BOTH batteries, snap the battery door back into place.

Note: The user's personal setup data that has been inputted in the Setup Mode will not be affected if the batteries are removed.

Section 5

• **Factory Reset**

Note: The user can restore the original factory values in the Setup Mode. When Quick Calc by Diabetes Companion is purchased from the factory it contains the following five (5) numbers in the Setup Mode.
Carb Ratio = 1 / 0
Rule of 500
Correction Ratio Rule of 1800
Lower Glucose Range = 70 mg/dL
Upper Glucose Range = 130 mg/dL

Diabetes Companion, LLC strongly recommends that the user record their current Setup Mode numbers before performing a "Factory Reset". Write down the five (5) numbers before performing a "Factory Reset". **If any of the five (5) numbers are lost or forgotten, please contact your Healthcare Provider for assistance.**

Step 1: Press the "*ON*" button.

Step 2: Press the "*SETUP*" button.

Step 3: Record the Carb Ratio, and then press the "*ENTER*" button.

Step 4: Record the Rule of *nnn*, and then press the "*ENTER*" button.

Step 5: Record the Correction Ratio Rule of *nnnn*, and then press the "*ENTER*" button.

Step 6: Record the Lower Glucose Range, and then press the "*ENTER*" button.

Step 7: Record the Upper Glucose Range, and then press the "*ENTER*" button.

Step 8: Press the "*ENTER*" button.

Step 9: To perform a "Factory Reset" press both the "*CLEAR*" and "*ENTER*" buttons for approximately 4 seconds.

Note: After a "Factory Reset" is performed, the user will have to perform the steps in Section 1, "Initial Setup (1st Time Use)".

Section 6

• **Warranty**

The limited warranty set forth by Diabetes Companion, LLC with respect to Quick Calc by Diabetes Companion.

Please keep a copy of your original bill of sale. In order to obtain warranty service, you will need to provide a copy of your original bill of sale at the time of service. Also, please keep all packing materials and the original packing box to protect your equipment, should you need to transport it for service. You will need to provide your name, complete and correct mailing address, and telephone number.

This limited warranty set forth by Diabetes Companion, LLC with respect to Quick Calc by Diabetes Companion is only effective upon presentation of proof of purchase (bill of sale) to Diabetes Companion, LLC. Quick Calc by Diabetes Companion, when delivered to you in a new condition in the original container, is warranted against defective materials or workmanship as follows: for a period of one (1) year from the date of purchase, Quick Calc by Diabetes Companion returned to Diabetes Companion, LLC and proved to be defective upon inspection, will be exchanged at Diabetes Companion, LLC sole option, will either repair (using new or remanufactured parts) or replace (with a new or remanufactured unit) the product (of the same or similar model) at no charge. Warranty for replacement shall not extend the original warranty period of the defective Quick Calc by Diabetes Companion product.

When returning Quick Calc by Diabetes Companion under this warranty, you must pre-pay the shipping charges, if any, and enclose a complete explanation of the problem. Except as provided by applicable law, you assume the risk of loss or damage during transit and transportation and are responsible for delivery or handling charges incurred in the transport of Quick Calc by Diabetes Companion to Diabetes Companion, LLC. Quick Calc by Diabetes Companion covered by this limited warranty will be repaired at Diabetes Companion, LLC sole option, and returned to you without charge by Diabetes Companion, LLC. This warranty does not cover batteries that may be supplied with the Quick Calc by Diabetes Companion, as to which batteries there shall be no warranty or replacement.

This limited warranty covers all defects encountered in normal use of Quick Calc by Diabetes Companion, and does not apply to the following cases:

- (a) Loss or damage to Quick Calc by Diabetes Companion due to abuse, mishandling, alteration, accident, electrical current fluctuations, failure to follow operating instructions, maintenance and environmental instructions prescribed in Quick Calc by Diabetes Companion user manual or service performed by other than Diabetes Companion, LLC.
- (b) Use of parts, which damage Quick Calc by Diabetes Companion.
- (c) If any Quick Calc by Diabetes Companion has had its serial number or dating altered or removed.
- (d) Loss or damage to Quick Calc by Diabetes Companion due to leaking batteries, water, chemical, fire, smoke, bending, or visible cracking of the LCD, which are presumed to be damages resulting from misuse or abuse.

NO IMPLIED WARRANTY (OR CONDITION) INCLUDING ANY IMPLIED WARRANTY (OR CONDITION) OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, APPLIES TO QUICK CALC BY DIABETES COMPANION AFTER THE APPLICABLE PERIOD OF EXPRESS WARRANTY STATED ABOVE. AND NO OTHER EXPRESS WARRANTY OR GUARANTY, EXCEPT AS MENTIONED ABOVE, GIVEN BY ANY OTHER PERSON, FIRM OR CORPORATION WITH RESPECT TO QUICK CALC BY DIABETES COMPANION SHALL BIND DIABETES COMPANION, LLC (SOME STATES OR PROVINCES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU). DIABETES COMPANION, LLC SHALL NOT BE LIABLE FOR ANY SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES CAUSE BY THE USE, MISUSE, OR INABILITY TO USE QUICK CALC BY DIABETES COMPANION. QUICK CALC BY DIABETES COMPANION, REGARDLESS OF THE LEGAL THEORY ON WHICH THE CLAIM IS BASED, AND EVEN IF DIABETES COMPANION, LLC HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. NOR SHALL RECOVERY OF ANY KIND AGAINST DIABETES COMPANION, LLC BE GREATER IN AMOUNT THAN THE PURCHASE PRICE OF QUICK CALC BY DIABETES COMPANION SOLD BY DIABETES COMPANION, LLC AND CAUSING THE ALLEGED DAMAGE. WITHOUT LIMITING THE FOREGOING, YOU ASSUME ALL RISK AND LIABILITY FOR LOSS. DAMAGE OR INJURY TO YOU AND YOUR PROPERTY AND TO OTHERS AND THEIR PROPERTY ARISING OUT OF USE, MISUSE, OR INABILITY TO USE QUICK CALC BY DIABETES COMPANION SOLD BY DIABETES COMPANION, LLC NOT CAUSE DIRECTLY BY THE NEGLIGENCE OF DIABETES COMPANION, LLC. (SOME STATES OR PROVINCES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU) THIS LIMITED WARRANTY SHALL NOT EXTEND TO ANYONE OTHER THAN THE ORIGINAL PURCHASER OF ANY QUICK CALC BY DIABETES COMPANION OR THE PERSON FOR WHOM IT WAS PURCHASED AS A GIFT AND STATES YOUR EXCLUSIVE REMEDY.

If Quick Calc by Diabetes Companion is not covered by this limited warranty, or proof of purchase does not meet the terms of this limited warranty, Diabetes Companion, LLC will notify you and will request that you authorize the cost of repair prior to any further repair activity. You must pay for the cost or repair and return shipping costs for the repair of Quick Calc by Diabetes Companion that are not covered by this limited warranty.

Section 7

- **Specifications**

Quick Calc by Diabetes Companion housing is NOT water, chemical and/or explosion proof.

Accuracy = -0.1 / +0.0 recommended units of insulin

Normal Operating Temperature Range: 32°F to 122°F (0°C to +50°C)

Storage Temperature Range: 14°F to 140°F (-10°C to +60°C)

Power Source: Two (2) 3V CR2032 Batteries

LCD Display:

16 Characters x 2 Lines

Character Format: 5 x 7 + cursor

Display Viewing Area: 2.56in (W) x 0.63in (H) (65.0mm x 16.0mm)

Character Size: 0.11in (W) x 0.19in (H) (2.78mm x 4.89mm)

Dimensions: 4.9in (L) x 3.5in (W) x 0.9in (D) (12.4cm x 8.9cm x 2.3m)

Weight: 0.26 lbs (118 grams)

USB Port: N/A

Section 8

- **Contact Information**

www.companionstudios.com (On-line ordering, product information, technical assistance)

Diabetes Companion, LLC

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