

8.10 Time Block Settings

This section is for changing the settings for individual time blocks when bolus advice is turned off. These time block settings include:

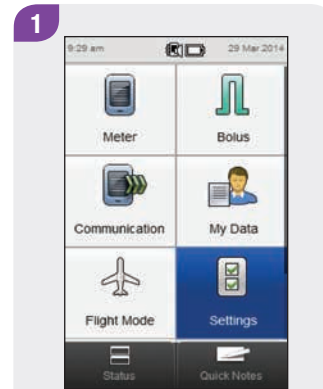
- ▶ Start time
- ▶ End time
- ▶ Target range

NOTE

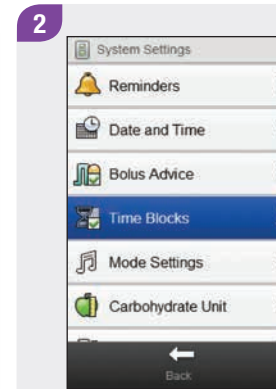
It is recommended that you discuss possible updates to your time block settings with your healthcare professional prior to making changes.



Main Menu > Settings > Time Blocks



From the Main Menu, select **Settings**.



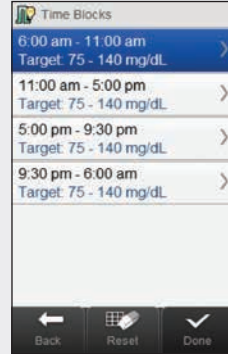
Select **Time Blocks**.

NOTE

Time Blocks cannot be selected if it is shaded. The shading means bolus advice is turned on. If **Time Blocks** is shaded, go to the **Bolus Advice: Time Block Settings** section in the **Changing Bolus Advice Settings** chapter in this user's manual.



3



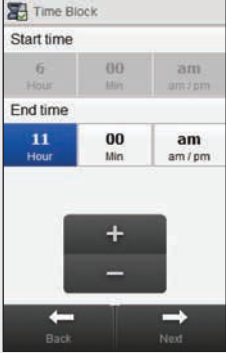
Select a time block to edit.

NOTE

- ▶ The **End time** of a time block is the same as the **Start time** of its following time block. Only an **End time** can be changed, which changes the **Start time** of the following time block.
- ▶ Changing the **End time** of the last time block does not change the **Start time** of the first time block, but it creates a new time block. See the **Adding a Time Block** section in this chapter.
- ▶ To change the **Start time** of the first time block, the time blocks must be reset. See the **Resetting All Time Blocks** section in this chapter.
- ▶ If the **End time** of a time block is decreased until it is the same as its **Start time**, the time block is deleted. See the **Deleting Time Blocks** section in this chapter.

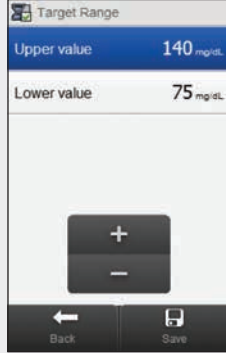


4



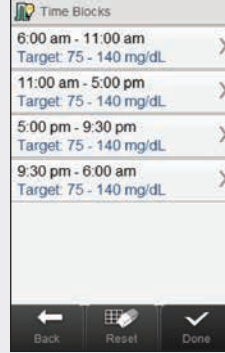
Set the **End time**. Select **Next**.

5



Set the **Upper value** and **Lower value**. Select **Save**.

6



Edit any other time block (reference Step 3). Once all time blocks are complete, select **Done**.

8.11 Adding a Time Block

This section is for adding a time block if bolus advice is turned off.

Before adding a time block, have the following information available:

- ▶ The number of time blocks you need with the start and end times for each
- ▶ The blood glucose target range for each time block

To add a time block, decrease the last time block's end time. After the time block is created, it may be necessary to change the start time, end time, and other information for each time block until all of the time blocks are set up the way you want them.

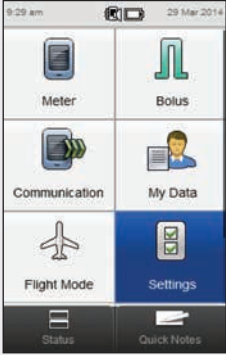
NOTE

It is recommended that you discuss possible updates to your time block settings with your healthcare professional prior to making changes.



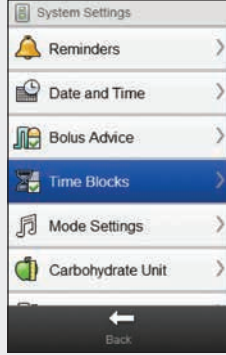
Main Menu > Settings > Time Blocks

1



From the Main Menu, select **Settings**.

2



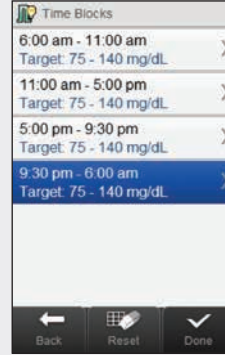
Select **Time Blocks**.

NOTE

Time Blocks cannot be selected if it is shaded. The shading means bolus advice is turned on. If **Time Blocks** is shaded, go to the **Bolus Advice: Adding a Time Block** section in the **Changing Bolus Advice Settings** chapter in this user's manual.



3



Select the **last** time block.

4

Time Block

Start time

9 30 pm
Hour Min am / pm

End time

6 00 am
Hour Min am / pm

+
-

← Back → Next

Decrease the **End time**.

NOTE

- ▶ Decrease the **End time** for the last time block by any amount in order to create a new time block. This creates a time block by splitting the last time block into 2 time blocks.
- ▶ Do not decrease the **End time** until it equals the **Start time** because the meter deletes the time block when you select **Next**.
- ▶ Once the new time block is created, you can change the **Start time** and **End time** for all appropriate time blocks.
- ▶ For this example, a time block is added with a **Start time** of 9:30 pm and an **End time** of 11:00 pm.



5

Time Block

Start time

9 30 pm
Hour Min am / pm

End time

11 00 pm
Hour Min am / pm

+
-

← Back → Next

Select **Next**.

6

Set the **Upper value** and **Lower value** for the new time block. Select **Save**.

7

It may be necessary to change the start times, end times, and settings of other time blocks. Select a time block to edit and continue to Step 8. If you do not need to make any changes, select **Done** and the addition of the time block is complete.

NOTE

- ▶ The **End time** of a time block is the same as the **Start time** of its following time block. Only an **End time** can be changed, which changes the **Start time** of the following time block.
- ▶ To change the **Start time** of the first time block, the time blocks must be reset. See the **Resetting All Time Blocks** section in this chapter.
- ▶ If the **End time** of a time block is decreased until it is the same as its **Start time**, the time block is deleted. See the **Deleting Time Blocks** section in this chapter.



8

Time Block

Start time

5 00 pm
Hour Min am / pm

End time

9 30 pm
Hour Min am / pm

+
-

Back Next

Set the **End time**. Select **Next**.

9

Target Range

Upper value 140 mg/dL

Lower value 75 mg/dL

+
-

Back Save

Set the **Upper value** and **Lower value**. Select **Save**.

10

Time Blocks

6:00 am - 11:00 am	>
Target: 75 - 140 mg/dL	
11:00 am - 5:00 pm	>
Target: 75 - 140 mg/dL	
5:00 pm - 9:30 pm	>
Target: 75 - 140 mg/dL	
9:30 pm - 11:00 pm	>
Target: 75 - 140 mg/dL	
11:00 pm - 6:00 am	>
Target: 75 - 140 mg/dL	

Back Reset Done

Edit any other time block (reference Step 7). Once all time blocks are complete, select **Done**.

8.12 Deleting Time Blocks

This section is for deleting time blocks if bolus advice is turned off. There are 2 different methods for deleting time blocks. The first method deletes one or more time blocks by combining time blocks. The alternative method deletes a single time block.

Before deleting time blocks, have the following information available:

- ▶ The number of time blocks you need with the start and end times for each
- ▶ The blood glucose target range for each time block

After time blocks are deleted, it may be necessary to change the start times, end times, and other information for the remaining time blocks until all of the time blocks are set up the way you want them.

NOTE

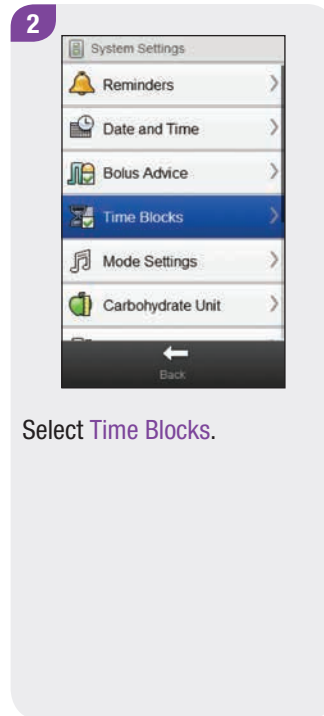
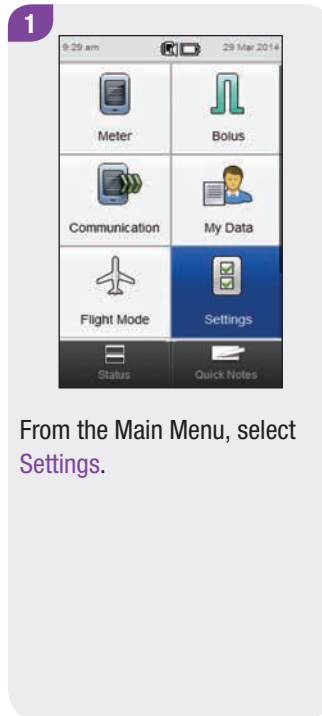
It is recommended that you discuss possible updates to your time block settings with your healthcare professional prior to making changes.



8.12.1 Deleting One or More Time Blocks

This method of deleting one or more time blocks is accomplished by combining time blocks.

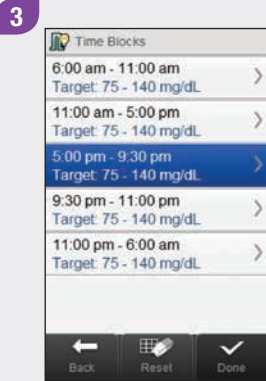
Main Menu > Settings > Time Blocks



NOTE

Time Blocks cannot be selected if it is shaded. The shading means bolus advice is turned on. If **Time Blocks** is shaded, go to the **Bolus Advice: Deleting Time Blocks** section in the **Changing Bolus Advice Settings** chapter in this user's manual.

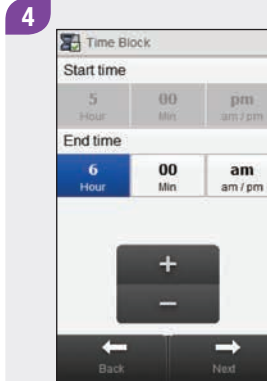




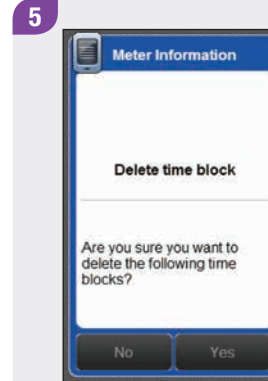
Select the first time block that is to be combined.

NOTE

- ▶ For this example, the last 3 time blocks are combined into one time block.
- ▶ The target range values in this first time block selected are used in the resulting time block.

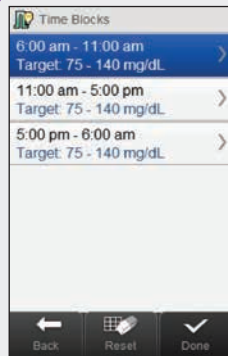


Increase the **End time** until it equals the **End time** of the last time block to be deleted.
Select **Next**.



Select **Yes**.

6



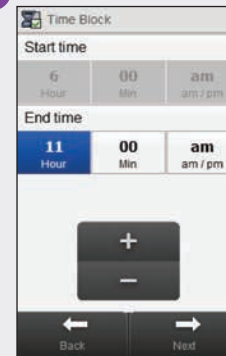
It may be necessary to change the start times, end times, and other information for the remaining time blocks. Select a time block to edit and continue to Step 7. If you do not need to make any changes, select **Done**.

NOTE

- ▶ The **End time** of a time block is the same as the **Start time** of its following time block. Only an **End time** can be changed, which changes the **Start time** of the following time block.
- ▶ Changing the **End time** of the last time block does not change the **Start time** of the first time block, but it creates a new time block. See the **Adding a Time Block** section in this chapter.
- ▶ To change the **Start time** of the first time block, the time blocks must be reset. See the **Resetting All Time Blocks** section in this chapter.



7



Set the **End time**. Select **Next**.

8

Target Range

Upper value 140 mg/dL

Lower value 75 mg/dL

+

-

Back Save

Set the **Upper value** and **Lower value**. Select **Save**.

9

Time Blocks

6:00 am - 11:00 am
Target: 75 - 140 mg/dL

11:00 am - 5:00 pm
Target: 75 - 140 mg/dL

5:00 pm - 6:00 am
Target: 75 - 140 mg/dL

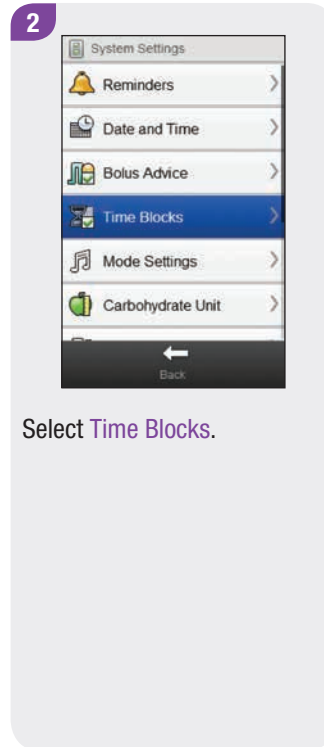
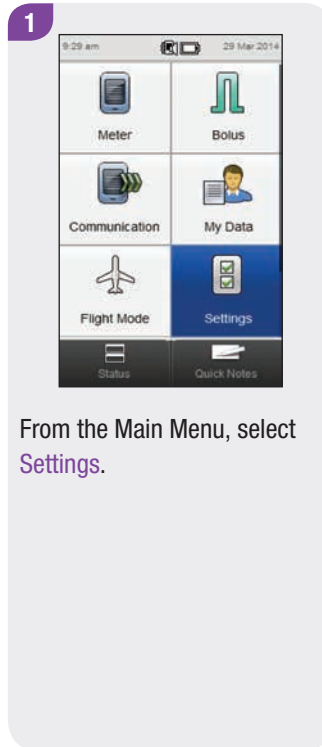
Back Reset Done

Edit any other time block (reference Step 6). Once all time blocks are complete, select **Done**.

8.12.2 Deleting a Single Time Block

To delete a time block, decrease the time block's end time until it equals its start time.

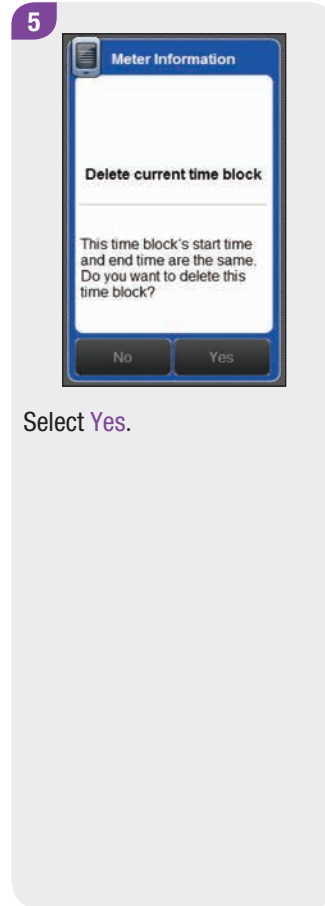
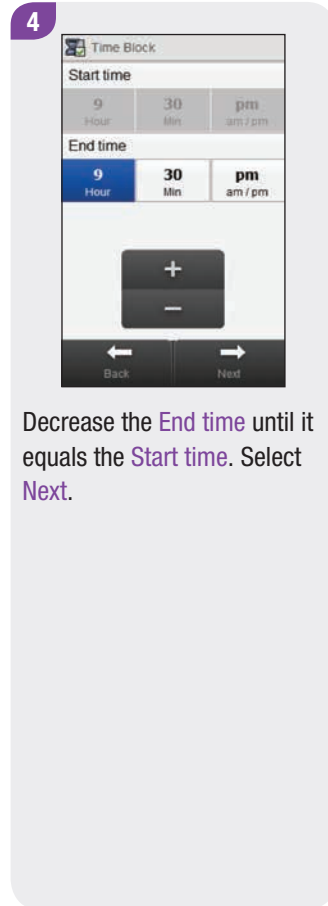
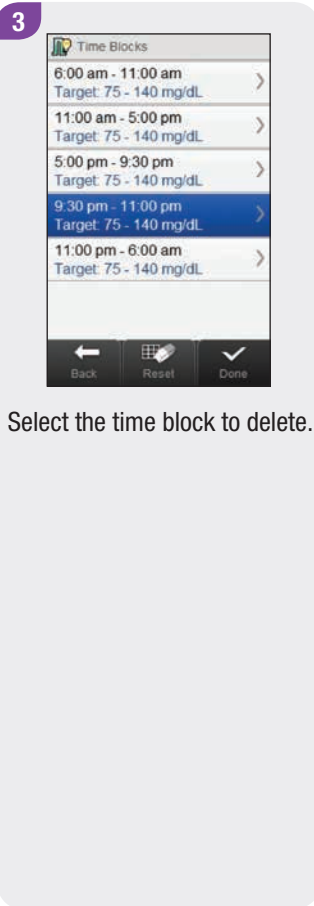
Main Menu > Settings > Time Blocks



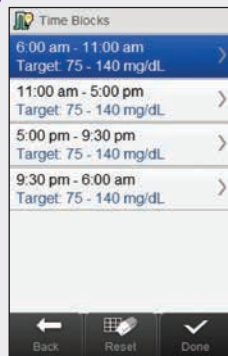
NOTE

Time Blocks cannot be selected if it is shaded. The shading means bolus advice is turned on. If **Time Blocks** is shaded, go to the **Bolus Advice: Deleting Time Blocks** section in the **Changing Bolus Advice Settings** chapter in this user's manual.





6



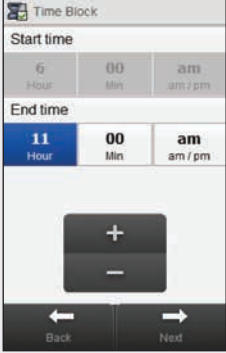
It may be necessary to change the start times, end times, and other information for the remaining time blocks. Select a time block to edit and continue to Step 7. If you do not need to make any changes, select **Done**.

NOTE

- ▶ The **End time** of a time block is the same as the **Start time** of its following time block. Only an **End time** can be changed, which changes the **Start time** of the following time block.
- ▶ Changing the **End time** of the last time block does not change the **Start time** of the first time block, but it creates a new time block. See the **Adding a Time Block** section in this chapter.
- ▶ To change the **Start time** of the first time block, the time blocks must be reset. See the **Resetting All Time Blocks** section in this chapter.

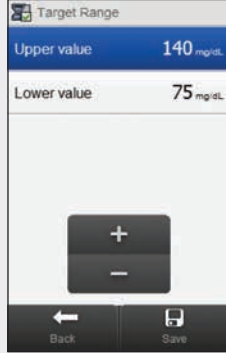


7



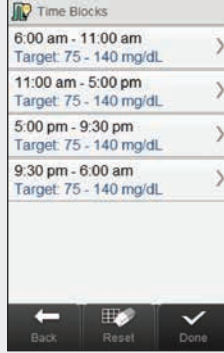
Set the **End time**. Select **Next**.

8



Set the **Upper value** and **Lower value**. Select **Save**.

9



Edit any other time block (reference Step 6). Once all time blocks are complete, select **Done**.

8.13 Resetting All Time Blocks

This section is for resetting and re-entering the settings for **all** of the time blocks if bolus advice is turned off. One reason for resetting the time blocks is to change the start time of the first time block.

Before you reset the time blocks, have the following information available:

- ▶ The number of time blocks you need with the start and end times for each
- ▶ The blood glucose target range for each time block

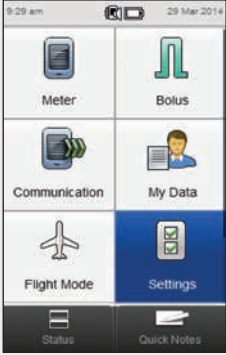
NOTE

It is recommended that you discuss possible updates to your time block settings with your healthcare professional prior to making changes.



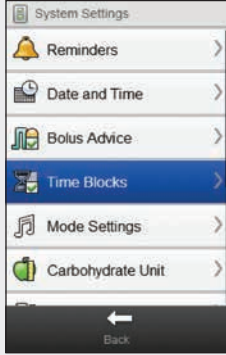
Main Menu > Settings > Time Blocks

1



From the Main Menu, select **Settings**.

2



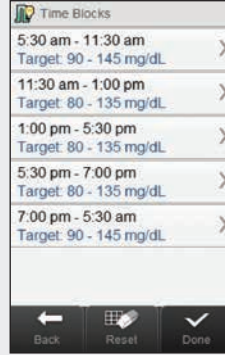
Select **Time Blocks**.

NOTE

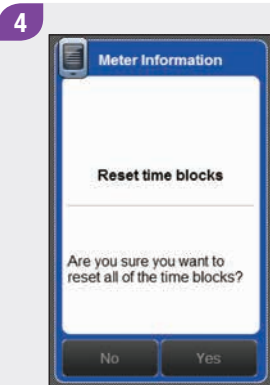
Time Blocks cannot be selected if it is shaded. The shading means bolus advice is turned on. If **Time Blocks** is shaded, go to the **Bolus Advice: Resetting All Time Blocks** section in the **Changing Bolus Advice Settings** chapter in this user's manual.



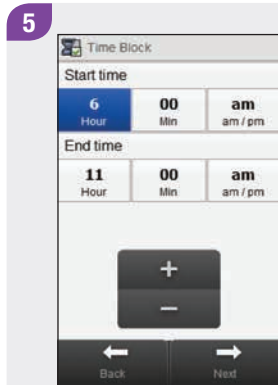
3



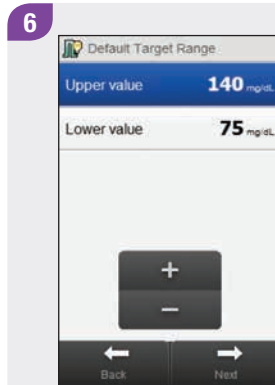
Select **Reset**.



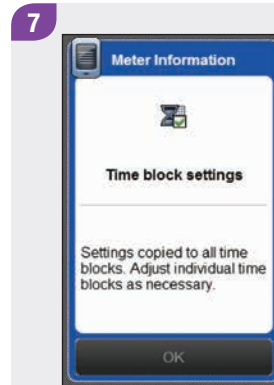
Select **Yes**.



Set the **Start time** and **End time** for the first time block. Select **Next**.

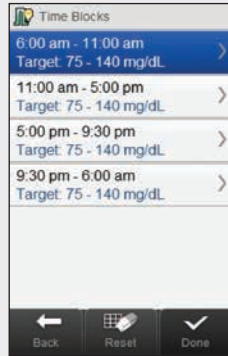


Set the default **Upper value** and **Lower value**. Select **Next**.



Select **OK**.

8



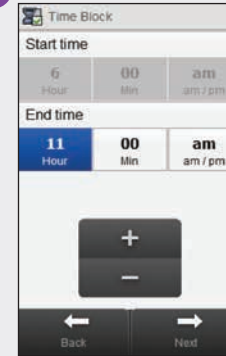
Select a time block to edit and continue to Step 9. If you do not need to make any changes, select **Done** and the resetting of the time blocks is complete.

NOTE

- ▶ The **End time** of a time block is the same as the **Start time** of its following time block. Only an **End time** can be changed, which changes the **Start time** of the following time block.
- ▶ Changing the **End time** of the last time block does not change the **Start time** of the first time block, but it creates a new time block. See the **Adding a Time Block** section in this chapter.
- ▶ If the **End time** of a time block is decreased until it is the same as its **Start time**, the time block is deleted. See the **Deleting Time Blocks** section in this chapter.



9



Set the **End time**. Select **Next**.

10

Target Range

Upper value 140 mg/dL

Lower value 75 mg/dL

+

-

Back Save

Set the **Upper value** and **Lower value**. Select **Save**.

11

Time Blocks

6:00 am - 11:00 am
Target: 75 - 140 mg/dL

11:00 am - 5:00 pm
Target: 75 - 140 mg/dL

5:00 pm - 9:30 pm
Target: 75 - 140 mg/dL

9:30 pm - 6:00 am
Target: 75 - 140 mg/dL

Back Reset Done

Edit any other time block (reference Step 8). Once all time blocks are complete, select **Done**.

8.14 Warning Limits: Hypo, Hyper

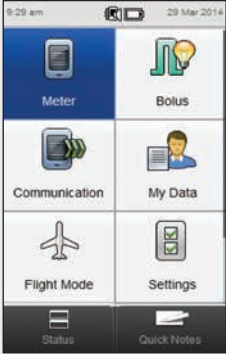
You can set blood glucose warning limits for hypoglycemia (hypo) or hyperglycemia (hyper) conditions. The meter displays the appropriate warning if your blood glucose result is below the hypo warning limit or above the hyper warning limit.

WARNING

Consult with your healthcare professional before changing your hypo and hyper warning limits.

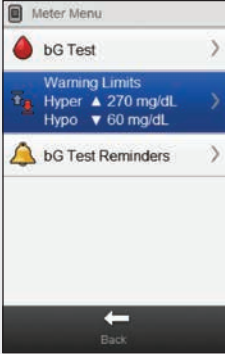
Main Menu > Meter > Warning Limits

1



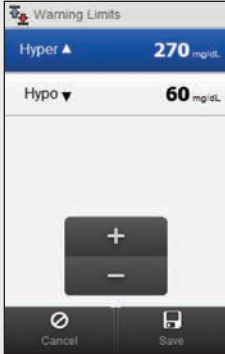
Select **Meter** on either the Main Menu or Status screen.

2



Select **Warning Limits**.

3



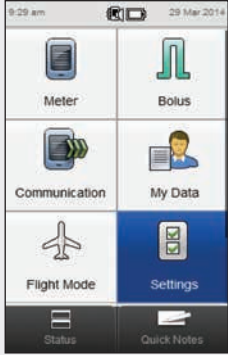
Set the **Hyper** limit and the **Hypo** limit. Select **Save**.

8.15 Insulin Increment

Insulin increment is the amount by which your insulin dose is adjusted when programming a bolus or when entering a manual Logbook entry. The insulin increment can be set to either 0.5 or 1 U.

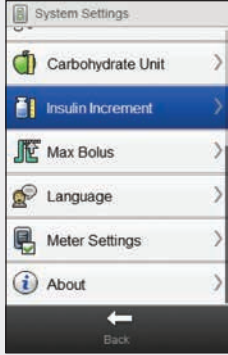
Main Menu > Settings > Insulin Increment

1



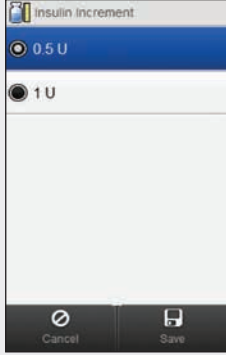
From the Main Menu, select **Settings**.

2



Scroll the screen and select **Insulin Increment**.

3



Choose the desired **Insulin Increment**. Select **Save**.

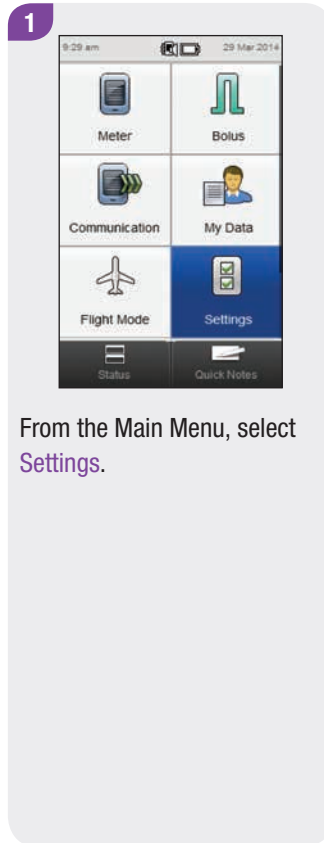
8.16 Max Bolus Amount

Max bolus serves as a safety measure against unintended large boluses. It is a meter setting that specifies a maximum amount of insulin that can be delivered in any single bolus. A bolus that is larger than the max bolus amount requires an additional confirmation. The max bolus can be set between 0 and 25 U in increments of 1 U or 0.5 U (per the insulin increment value).

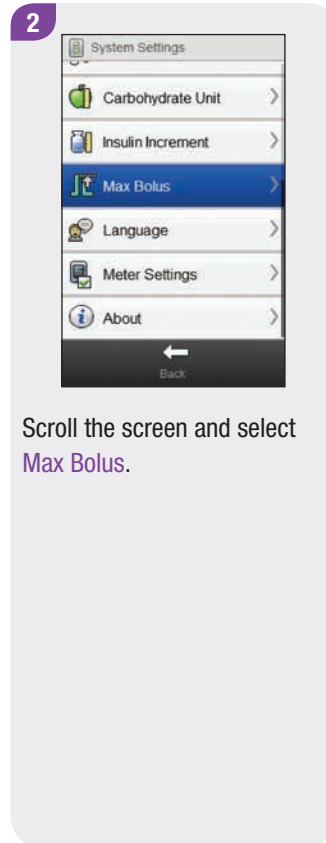
WARNING

Consult with your healthcare professional before changing your max bolus amount.

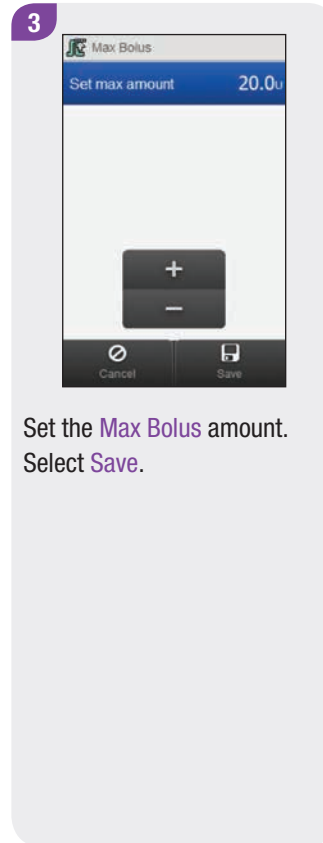
Main Menu > Settings > Max Bolus



From the Main Menu, select **Settings**.



Scroll the screen and select **Max Bolus**.

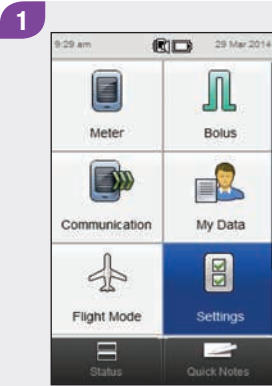


Set the **Max Bolus** amount.
Select **Save**.

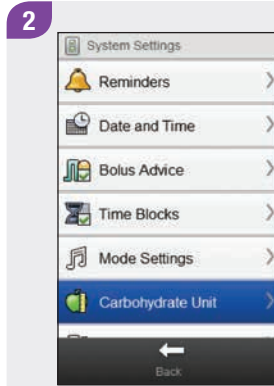
8.17 Carbohydrate Unit

You have a choice of different carbohydrate units (Grams, BE, KE, or CC).

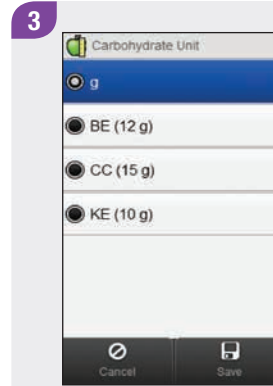
Main Menu > Settings > Carbohydrate Unit



From the Main Menu, select **Settings**.



Select **Carbohydrate Unit**.



Choose the desired **Carbohydrate Unit**. Select **Save**.

NOTE

Grams (g) is the standard unit of measure in the U.S.



9 Meter Reminders

9.1 Overview



WARNING

The meter will not display reminders while it is connected and communicating to a Continua Certified® manager.

NOTE

Blood glucose is sometimes shortened to bG, but it means the same thing.



bG Test Reminders: After Meal, After Low bG, After High bG

- ▶ After Meal reminds you to test after you mark a blood glucose result as **Before Meal**.
- ▶ After Low bG reminds you to test after your blood glucose result is less than the low blood glucose threshold setting.
- ▶ After High bG reminds you to test after your blood glucose result is greater than the high blood glucose threshold setting.
- ▶ At the scheduled time, the meter turns on and displays the reminder (if a test strip has not been inserted). However, if the meter is already on when the reminder is scheduled and no blood glucose test was performed, the reminder is displayed when the meter powers down.
- ▶ When you perform a blood glucose test, the meter dismisses any blood glucose test reminders which are pending within the next 30 minutes. If necessary, a new reminder is scheduled based upon the blood glucose result.

- ▶ After Meal Reminder and After Low bG Test Reminder: Select **Snooze** to reschedule the reminder in 5 minutes, or select **Dismiss** to end the reminder.
- ▶ After High bG Test Reminders: Select **Snooze** to reschedule the reminder in 15 minutes, or select **Dismiss** to end the reminder.

Date Reminders: Dr. Visit, Lab Test, Customized

Date reminders are a helpful way to remind you of an upcoming Dr. visit or lab test. In addition, you can set up a customized date reminder.

- ▶ These reminders are displayed when you turn the meter on and a test strip has not been inserted.
- ▶ Select **Snooze** to reschedule the reminder in 15 minutes, or select **Dismiss** to end the reminder.

Alarm Clock Reminders: bG Test, Other, Basal Injection

Alarm clock reminders are a helpful way to remind you to test your blood glucose, or for any other daily appointment.

- ▶ At the scheduled time, the meter turns on and displays the reminder (if a test strip has not been inserted). However, if the meter is already on when the reminder is scheduled and no blood glucose test was performed for an Alarm Clock bG Test Reminder, the reminder is displayed when the meter powers down.
- ▶ When you perform a blood glucose test, the meter dismisses Alarm Clock bG Test reminders which are pending within the next 30 minutes.
- ▶ You can set up to 8 alarm clock reminders.
- ▶ Select **Snooze** to reschedule the reminder in 15 minutes, or select **Dismiss** to end the reminder.

Medication Reminders

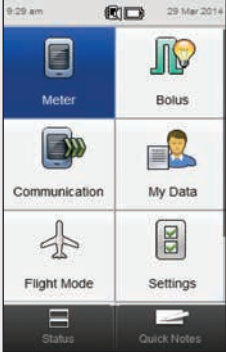
A medication reminder can be used to let you know when it is time to take a medication. A medication reminder can be set to occur one time or every day at the same time.

- ▶ You can set up to 5 medication reminders.
- ▶ You can give each medication reminder a unique name.
- ▶ Select **Snooze** to reschedule the reminder for 15 minutes, or select **Dismiss** to end the reminder.

9.2 Blood Glucose Test Reminder: After Meal

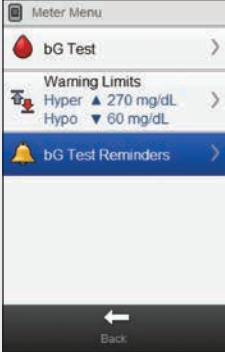
Main Menu > Meter > bG Test Reminders > After Meal

1



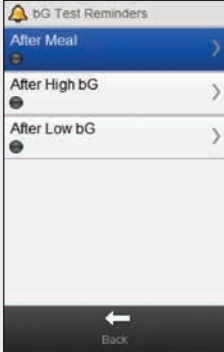
Select **Meter** on either the Main Menu or Status screen.

2



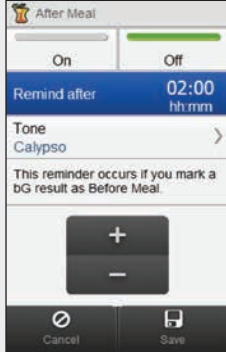
Select **bG Test Reminders**.

3



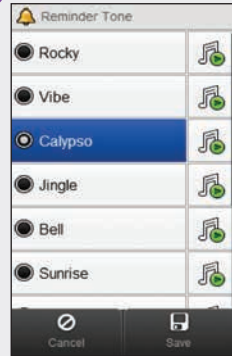
Select **After Meal**.

4



Set the **Remind after** time. To change the tone, select **Tone** and continue to the next step; otherwise go to Step 6.

5



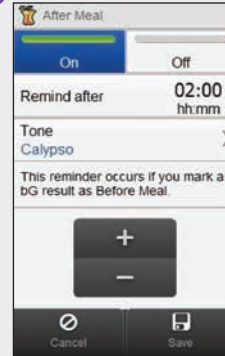
Choose a tone. Select **Save**.

NOTE

- ▶ Select  to hear the tone.
- ▶ Scroll the screen for more tone choices.



6

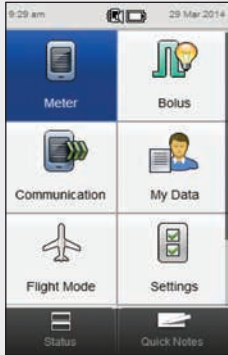


Select **On** to activate the reminder. Select **Save**.

9.3 Blood Glucose Test Reminder: After High Blood Glucose Result

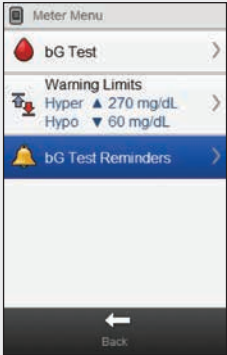
Main Menu > Meter > bG Test Reminders > After High bG

1



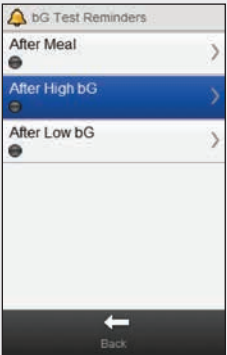
Select **Meter** on either the Main Menu or Status screen.

2



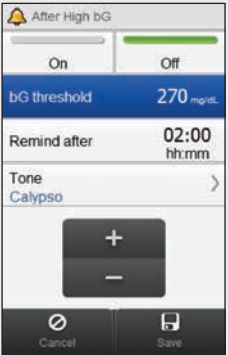
Select **bG Test Reminders**.

3

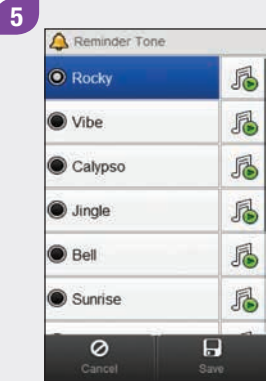


Select **After High bG**.

4



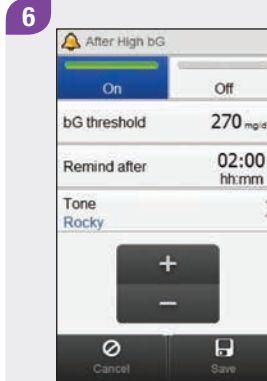
Set the **bG threshold**. Set the **Remind after** time. To change the tone, select **Tone** and continue to the next step; otherwise go to Step 6.



Choose a tone. Select **Save**.

NOTE

- ▶ Select to hear the tone.
- ▶ Scroll the screen for more tone choices.

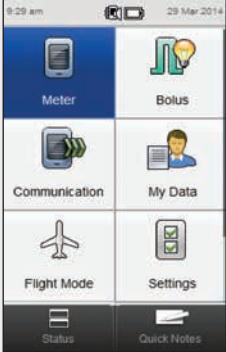


Select **On** to activate the reminder. Select **Save**.

9.4 Blood Glucose Test Reminder: After Low Blood Glucose Result

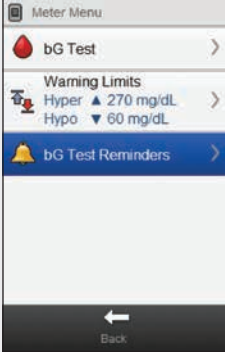
Main Menu > Meter > bG Test Reminders > After Low bG

1



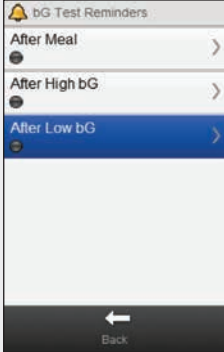
Select **Meter** on either the Main Menu or Status screen.

2



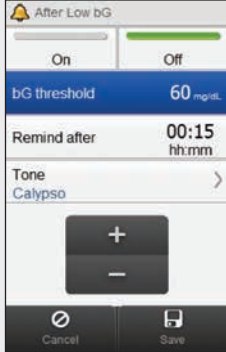
Select **bG Test Reminders**.

3



Select **After Low bG**.

4



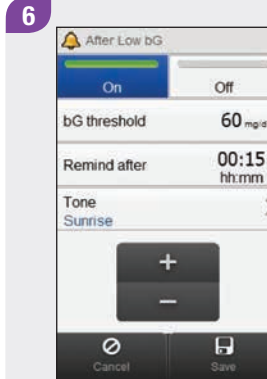
Set the **bG threshold**. Set the **Remind after** time. To change the tone, select **Tone** and continue to the next step; otherwise go to Step 6.



Choose a tone. Select **Save**.

NOTE

- ▶ Select  to hear the tone.
- ▶ Scroll the screen for more tone choices.

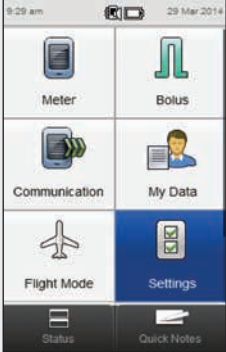


Select **On** to activate the reminder. Select **Save**.

9.5 Doctor Visit Reminder

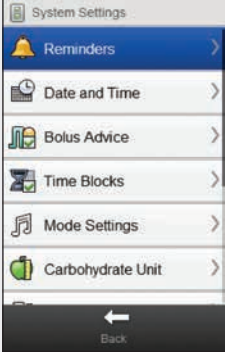
Main Menu > Settings > Reminders > Dr. Visit

1



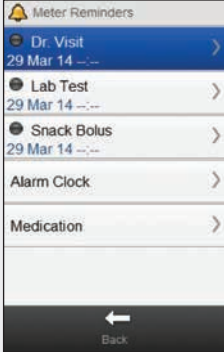
From the Main Menu, select **Settings**.

2



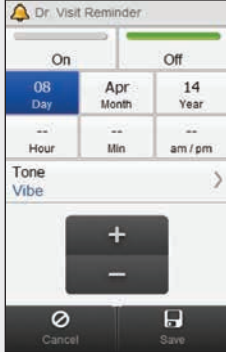
Select **Reminders**.

3



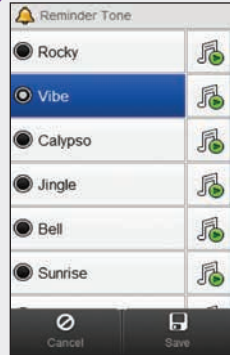
Select **Dr. Visit**.

4



Set the date and time. To change the tone, select **Tone** and continue to the next step; otherwise go to Step 6.

5



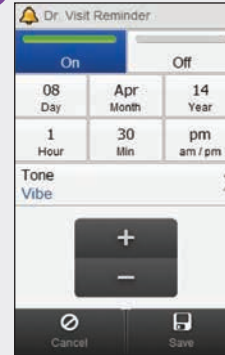
Choose a tone. Select **Save**.

NOTE

- ▶ Select  to hear the tone.
- ▶ Scroll the screen for more tone choices.



6

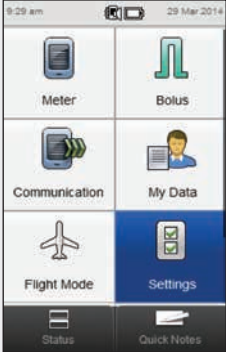


Select **On** to activate the reminder. Select **Save**.

9.6 Lab Test Reminder

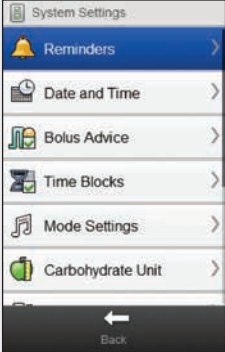
Main Menu > Settings > Reminders > Lab Test

1



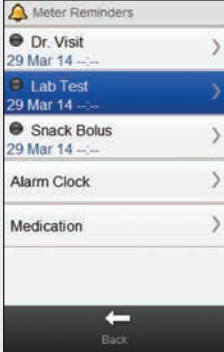
From the Main Menu, select **Settings**.

2



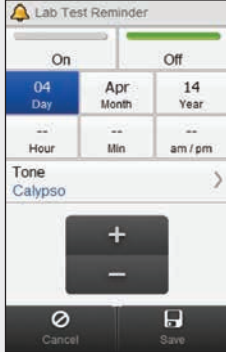
Select **Reminders**.

3



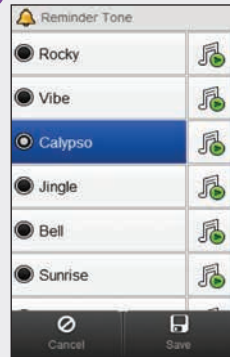
Select **Lab Test**.

4



Set the date and time. To change the tone, select **Tone** and continue to the next step; otherwise go to Step 6.

5



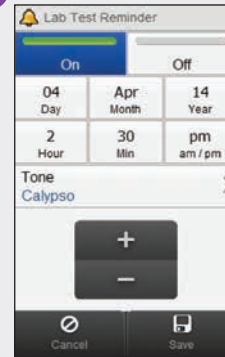
Choose a tone. Select **Save**.

NOTE

- ▶ Select  to hear the tone.
- ▶ Scroll the screen for more tone choices.



6

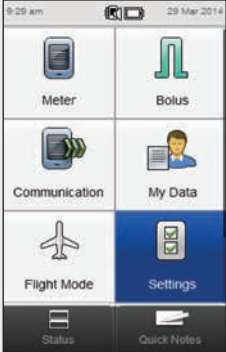


Select **On** to activate the reminder. Select **Save**.

9.7 Customized Reminder

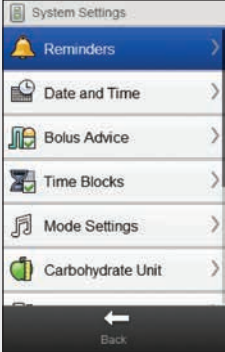
Main Menu > Settings > Reminders > Customized

1



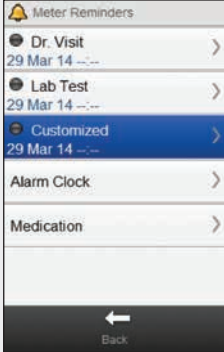
From the Main Menu, select **Settings**.

2



Select **Reminders**.

3

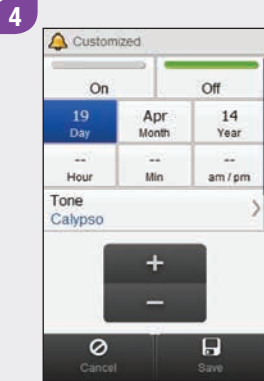


Select **Customized**.

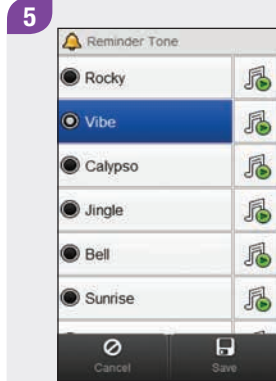
NOTE

If you previously named the reminder, the name is displayed instead of **Customized**.





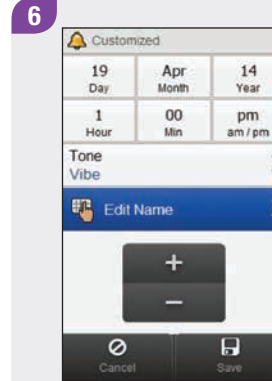
Set the date and time. To change the tone, select **Tone** and continue to the next step; otherwise go to Step 6.



Choose a tone. Select **Save**.

NOTE

- ▶ Select to hear the tone.
- ▶ Scroll the screen for more tone choices.



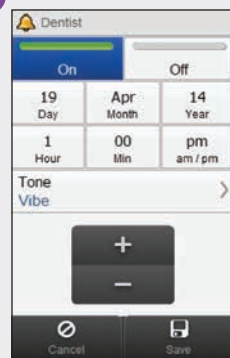
To change the reminder name, scroll the screen and select **Edit Name**; otherwise go to Step 8.

7



Delete the previous name.
Type a name. Select ✓.

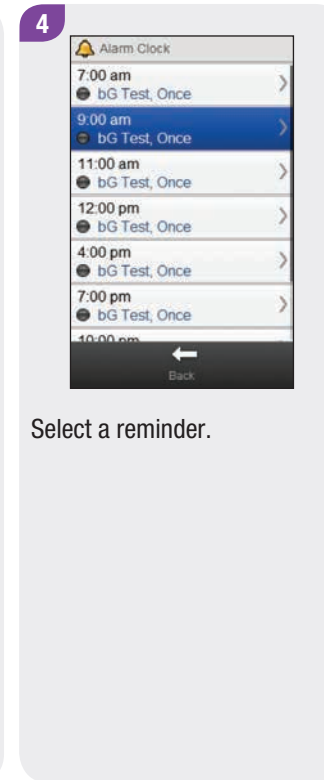
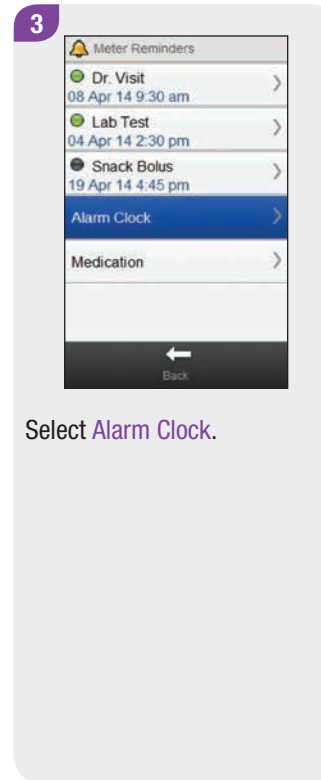
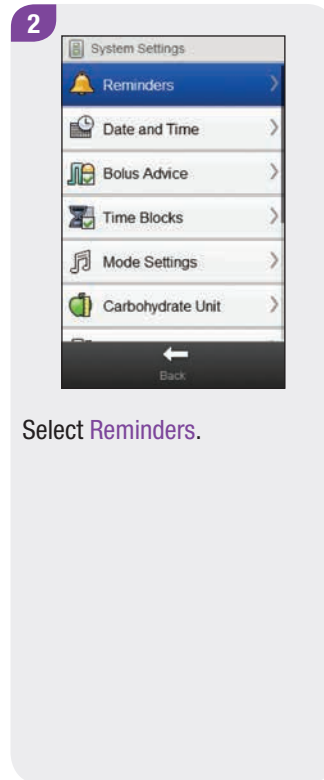
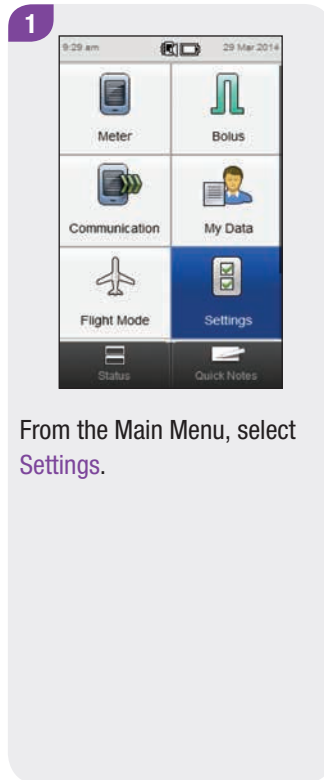
8



Select **On** to activate the
reminder. Select **Save**.

9.8 Alarm Clock Reminder

Main Menu > Settings > Reminders > Alarm Clock

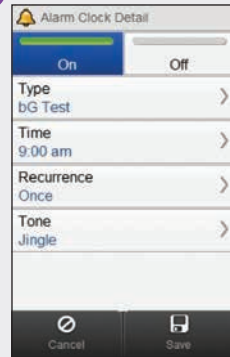


NOTE

- ▶ Scroll the screen to display additional reminders.
- ▶ Reminders that are **On** are shown with a green indicator.



5



Select **On** to activate the reminder or select **Off** to turn off the reminder.

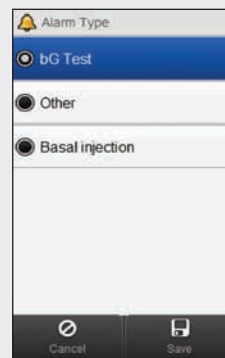
To change this reminder:
Select the field to change and refer to the instructions on the following pages. When setup is completed, select **Save**.

Alarm Clock Detail Entries

Type	The reminder type is displayed when the reminder occurs.
Time	The time of day the reminder occurs.
Recurrence	The reminder occurs one time or every day at the same time.
Tone	Choose a unique tone for each reminder.

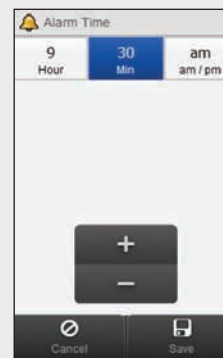
Screens for Entries of an Alarm Clock Reminder

Type



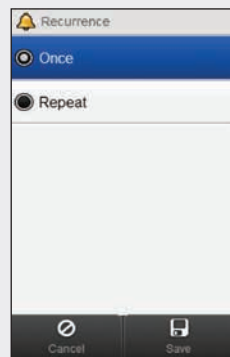
Choose the type of reminder.
Select **Save**.

Time



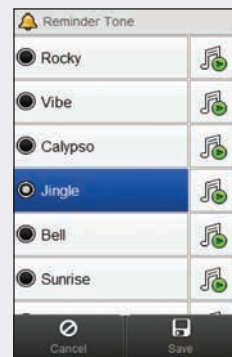
Set the reminder time. Select
Save.

Recurrence



Choose **Once** or **Repeat**.
Select **Save**.

Tone



Choose a tone. Select **Save**.

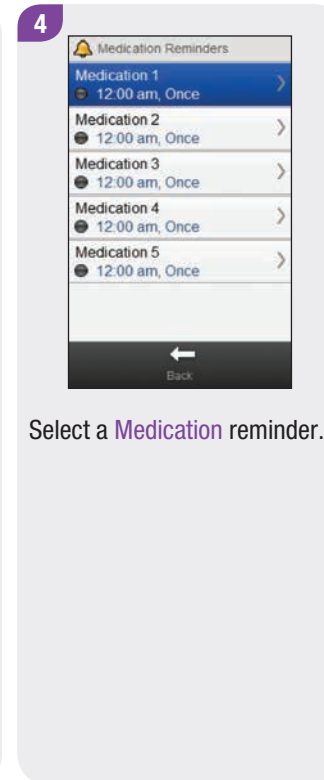
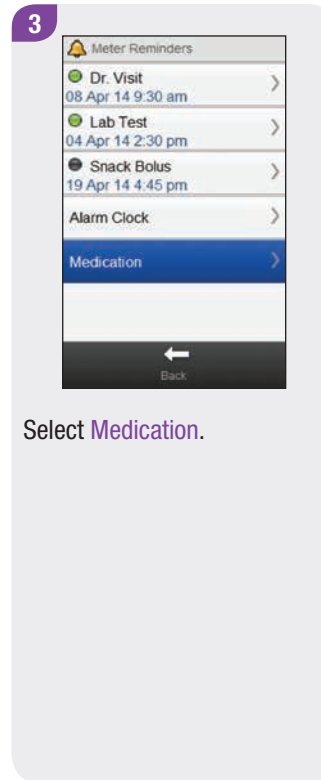
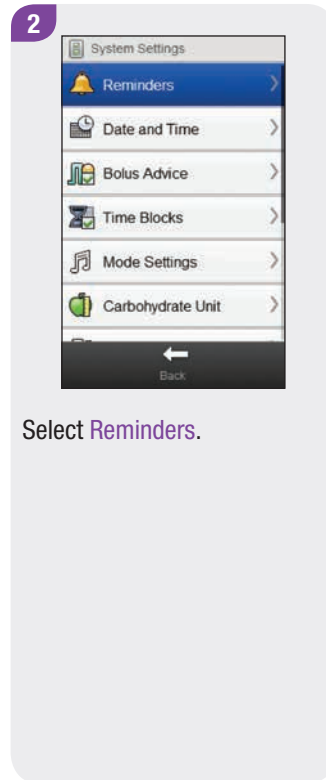
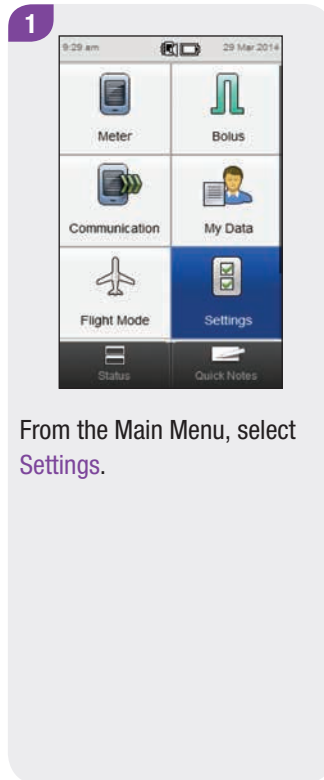
NOTE

- ▶ Select  to hear the tone.
- ▶ Scroll the screen for more tone choices.



9.9 Medication Reminder

Main Menu > Settings > Reminders > Medication

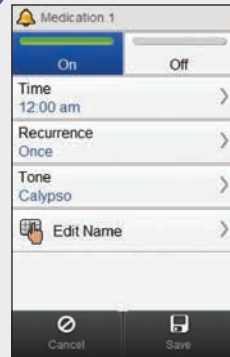


NOTE

- ▶ If you previously named the reminder, the name is displayed instead of **Medication**.
- ▶ Reminders that are **On** are shown with a green indicator.



5



Select **On** to activate the reminder or select **Off** to turn off the reminder.

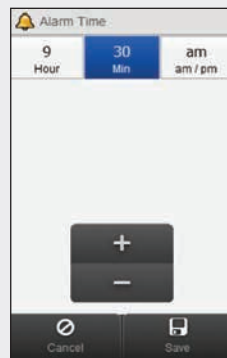
To change this reminder:
Select the field to change and refer to the instructions on the following pages. When entries are completed, select **Save**.

Medication Reminder Entries

Time	The time of day the reminder occurs.
Recurrence	Reminder occurs one time or every day at the same time.
Tone	Choose a unique tone for each reminder.
Edit Name	Name the reminder.

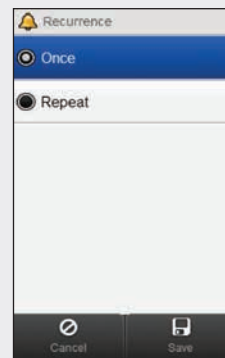
Screens for Entries of a Medication Reminder

Time



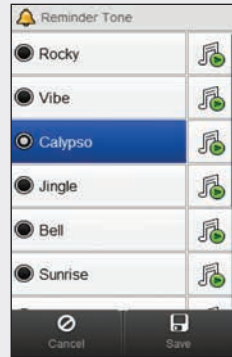
Set the reminder time. Select **Save**.

Recurrence



Choose **Once** or **Repeat**. Select **Save**.

Tone



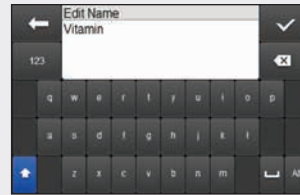
Choose a tone. Select **Save**.

NOTE

- ▶ Select  to hear the tone.
- ▶ Scroll the screen for more tone choices.



Edit Name



Delete the previous name.
Type a name. Select .

10 Communication

10

10.1 Overview

The meter can communicate with a PC using a USB connection to control and share data, as well as send and receive data from any compatible software.

203

10.2 Connecting the Meter to a PC using a USB Cable

1



Plug the small end of the USB cable into the meter.

2



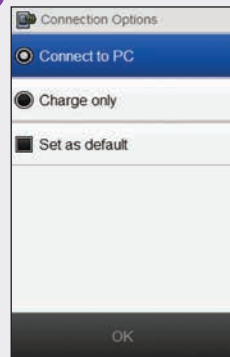
Plug the large end of the USB cable into an available USB port on the PC.

NOTE

- ▶ If the meter is already connected to a PC with a USB cable but is charging in idle status, you can establish a data connection. From the Main Menu, select **Communication** > **Connect to PC**.
- ▶ The meter cannot be used to perform a bG test while connected to a PC.



3



Select **Connect to PC**. Select **OK**.

NOTE

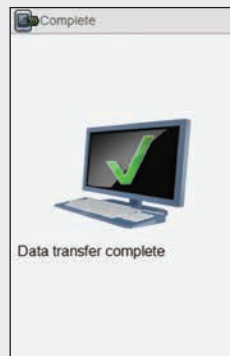
- ▶ If the meter does not respond automatically to being connected to a PC, select **Connect to PC** from the **Communication** menu.
- ▶ By selecting **Charge only**, the meter charges its battery through the USB connection and does not otherwise communicate with the PC.
- ▶ Select **Set as default** to not see this screen again in the future. Every time you connect a USB cable, the meter automatically performs the selected action.



The meter attempts to connect to the PC.



When the meter successfully connects to the PC, the **Connected** screen appears and data transfer begins. Do not disconnect the USB cable during data transfer.



When the meter has completed transferring data, the **Complete** screen appears.

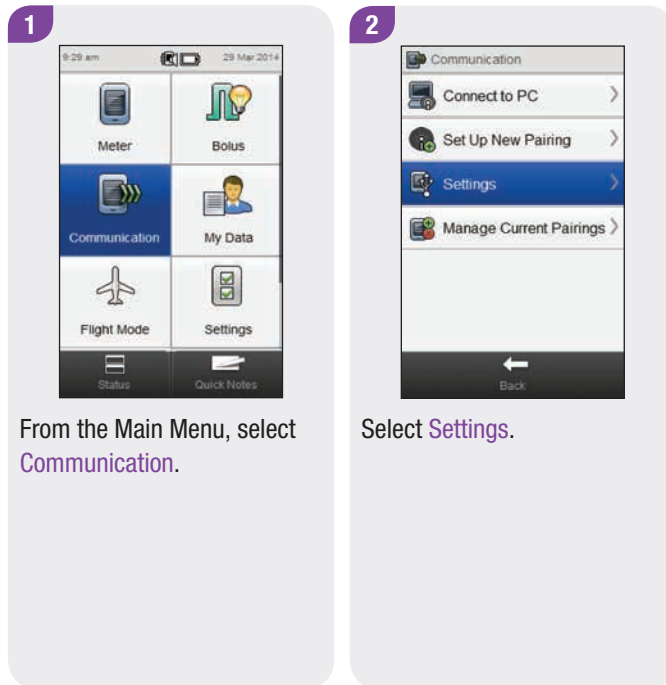


The battery charge screen appears. After about 3 seconds, the meter screen goes blank. Charging continues.

10.3 Changing USB Cable Connection Settings

The **Communication Settings** menu allows you to choose what the meter does when you connect it to a PC with a USB cable.

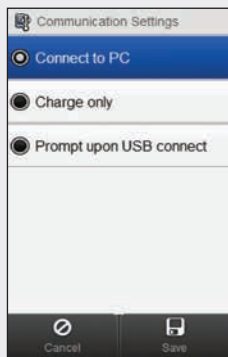
Main Menu > Communication > Settings



From the Main Menu, select **Communication**.

Select **Settings**.

3



Select the desired option.
Select **Save**.

Option	Description
Connect to PC	The meter automatically connects to the PC.
Charge only	The meter takes no immediate action upon being connected and charges the battery only.
Prompt upon USB connect	The meter prompts you to choose your desired communication setting upon being connected.

11

Travel Settings

11

11.1 Overview

Most airlines and many governments ban the use of wireless radio devices during flight. Flight Mode enables the meter to comply with these regulations while retaining your ability to safely use the non-wireless functions of the meter.

NOTE

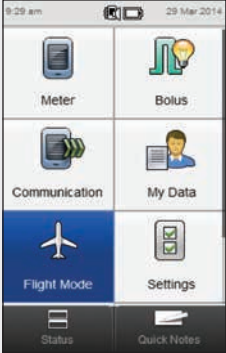
Turning the Flight Mode on can also help to conserve battery power.



11.2 Turning On Flight Mode

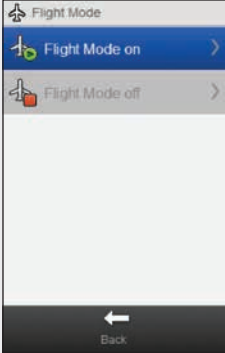
Main Menu > Flight Mode

1



From the Main Menu, select **Flight Mode**.

2



Select **Flight Mode on**.

3

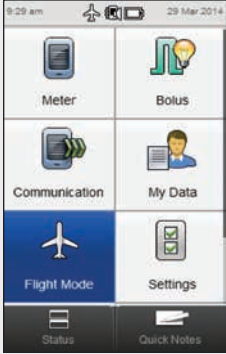


Select **OK**.

11.3 Turning Off Flight Mode

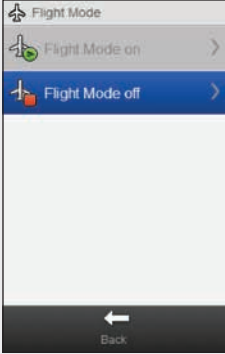
Main Menu > Flight Mode

1



From the Main Menu, select **Flight Mode**.

2



Select **Flight Mode off**.

3



Select **OK**.

12 My Data

12.1 Overview

Analyzing your information stored in the meter is an effective way for you and your healthcare professional to determine how well you are controlling your diabetes. This analysis is a valuable tool for making improvements to your diabetes management. The reports the meter displays help you get the most from your ACCU-CHEK Aviva Insight Diabetes Manager.

The meter generates graphs and reports to help you analyze the information stored in the meter. Graphs can be a good way to view your blood glucose results. The meter can display a line graph to depict the trends of your blood glucose results with other information, such as your bolus history, a graph showing result ranges for a standard day or a standard week, and a pie chart with different colors to illustrate the number of test results within, above, or below your blood glucose target range.

NOTE

Blood glucose is sometimes shortened to bG, but it means the same thing.



12.2 The Logbook

From the logbook records stored in the meter, you are able to view a specific blood glucose result with its attributes (e.g., meal time, carbohydrates, health event, and bolus). In addition, for a specific logbook record, you are able to change or add to its attributes.

NOTE

- ▶ The logbook on the meter replaces the physical blood glucose diary you may have kept in the past.
- ▶ Logbook data cannot be changed if that data was used to calculate bolus advice.



The meter automatically stores up to 2,000 logbook records with the time and date. You can review up to the last 250 logbook records on the meter or up to 2,000 logbook records using a computer with compatible software. Logbook records are stored from the newest to the oldest.

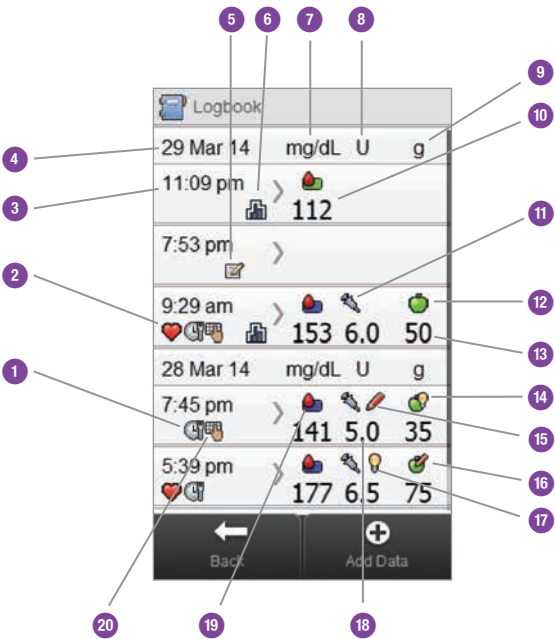
- ▶ Each logbook record can contain: Date and time
- ▶ Blood glucose result
- ▶ Meal time (events)
- ▶ Carbohydrate intake
- ▶ Health event
- ▶ Bolus type
- ▶ Bolus amount
- ▶ Note
- ▶ Quick Notes

NOTE

- ▶ **Do not change your therapy based on one individual record or test result in the logbook.**
- ▶ This chapter shows sample screens. The screens may look slightly different from the screens on the meter. If you have any questions about the meter screens, contact ACCU-CHEK Customer Care Service Center at 1-800-688-4578.
- ▶ The information in the logbook is saved when you replace the meter battery. You should check the time and date after replacing the battery. For more information on changing the battery, see the **Care and Maintenance** chapter of this user's manual.
- ▶ It is very important to have the correct time and date set. Having the correct time and date setting helps ensure accurate interpretation of information by you and your healthcare professional.
- ▶ Once 2,000 records are in the logbook, adding a new record causes the oldest logbook record to be deleted.
- ▶ Control results are stored in the meter, but cannot be reviewed in the logbook. Control results can be reviewed using a computer with compatible software.
- ▶ Before reviewing logbook records or control results on a PC, the stored logbook records must first be transferred to a PC running a compatible software application. For product availability, contact ACCU-CHEK Customer Care Service Center at 1-800-688-4578.
- ▶ Control results are not used in any report or graph on the meter.



12.2.1 Understanding the Logbook



1	Meal time icon
2	Health event icon
3	Time of record
4	Date of record
5	Quick Notes icon
6	Basal icon
7	Indicates bG column
8	Indicates bolus column
9	Indicates carbohydrate column
10	Blood glucose result
11	Bolus type icon

12	Carbohydrates icon
13	Carbohydrates amount
14	Carbohydrates advice accepted icon
15	Bolus advice not accepted icon
16	Carbohydrates advice not accepted icon
17	Bolus advice accepted icon
18	Bolus amount
19	bG value range icon
20	Note icon

NOTE

The [Logbook](#) screen displays the records in the order in which they occurred with the most recent record shown on top.



Icon descriptions

Icon	Icon name	Description
	bG Value Range Indicator	Icon background color indicates where the blood glucose result falls within the target range. The background colors of this icon represent: ▶ Green: within target range ▶ Yellow: below target range ▶ Red: hypo ▶ Blue: above target range or hyper
	Meal time	Icon is displayed when information exists for this record regarding meal time.
	Carbohydrates	Icon is displayed when information exists for this record regarding carbohydrates.
	Carbohydrates advice accepted	Icon is displayed when the carbohydrate amount from the bolus advice recommendation hypo warning screen was used.
	Carbohydrates advice not accepted	Icon is displayed when the carbohydrate amount from the bolus advice recommendation hypo warning screen was changed.
	Health event	Icon is displayed when information exists for this record regarding health events.

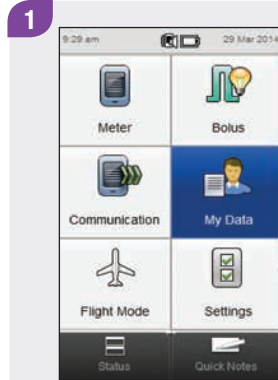
Icon	Icon name	Description
	Basal insulin	Basal insulin entered into your logbook record.
	Bolus advice accepted	Bolus advice recommendation from the meter was accepted.
	Bolus advice not accepted	Bolus advice recommendation from the meter was changed prior to delivery.
	Bolus manually delivered using pen/syringe	Bolus delivered using pen/syringe.
	Quick Notes	Icon is displayed when information exists for this record regarding Quick Notes.
	Note	Icon is displayed when information exists for this record regarding a Note.

12.2.2 Viewing and Adjusting Logbook Data

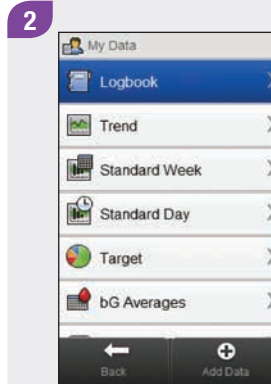
Main Menu > My Data > Logbook

NOTE

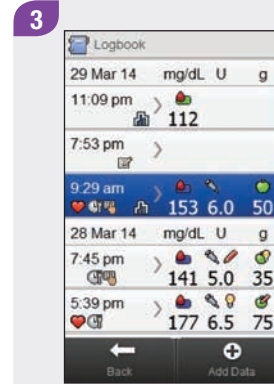
- ▶ Logbook data that has been used for bolus advice (with the exception of notes) cannot be adjusted.
- ▶ Blood glucose results cannot be adjusted.



From the Main Menu, select **My Data**.



Select **Logbook**.

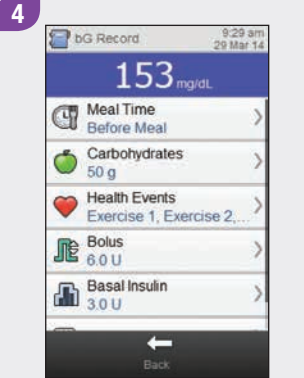


Select the desired logbook record.

For a logbook record with Quick Notes only, go to Step 5.

NOTE

- ▶ Scroll down to view additional records if they are present.
- ▶ Logbook records which have been used for bolus advice contain either the Bolus Advice Accepted icon: 💡 or the Bolus Advice Not Accepted icon: ✖. These records are locked and can be viewed but not adjusted.
- ▶ Locked logbook records do not display the **Save** button at the bottom of the individual data item screens. Only the **Back** button is displayed.



To view and adjust an entry, select it and refer to the instructions on the following pages. When you are finished, select **Back** to return to the **My Data** menu.

Screens for viewing and adjusting entries in the logbook

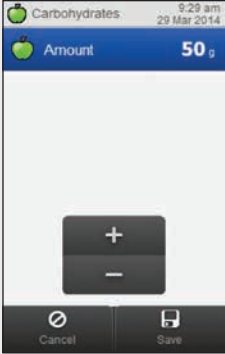
Meal Time



The Meal Time screen shows a list of meal timing options: No Entry, Before Meal (selected), After Meal, Bedtime, Fasting, and Other. Each option has a corresponding icon. At the bottom are Cancel and Save buttons.

Choose applicable meal time.
Select **Save**.

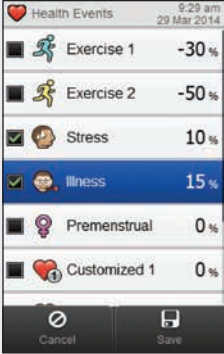
Carbohydrates



The Carbohydrates screen shows a field for Amount with the value 50 g. Below the field is a large +/- button. At the bottom are Cancel and Save buttons.

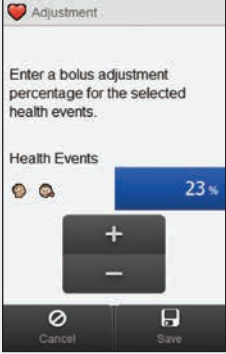
Set the amount of carbohydrates consumed.
Select **Save**.

Health Events



The Health Events screen shows a list of health events with their respective percentages: Exercise 1 (-30%), Exercise 2 (-50%), Stress (10%), Illness (15% and selected), Premenstrual (0%), and Customized 1 (0%). At the bottom are Cancel and Save buttons.

Choose up to 4 health events.
Select **Save**.



The Adjustment screen is reached after selecting multiple health events. It prompts the user to "Enter a bolus adjustment percentage for the selected health events." It shows the selected health events (Stress and Illness) and a summary bar for "Health Events" with a value of 23%. Below this is a large +/- button. At the bottom are Cancel and Save buttons.

If bolus advice is turned on and multiple health events have been chosen, this screen is displayed. Set a single, summarized health event percentage to cover the impact of the chosen health events. Select **Save**.

Bolus

Bolus insulin 9:29 am 29 Mar 14

Correction 1.00 u

Carbs 5.00 u

6.00 u

+ -

Cancel Save

Set bolus amounts.
Select **Save**.

NOTE

If a Carbohydrate Bolus is entered and no Carbohydrate Amount has been entered (**Carbohydrates** displays **No Entry** on the **bG Record** screen in Step 4), you are prompted to enter an amount for carbohydrates. An amount is not required, but the more complete the data the more accurate any future bolus insulin recommendations are when using bolus advice.



Basal insulin

Basal insulin 9:29 am 29 Mar 14

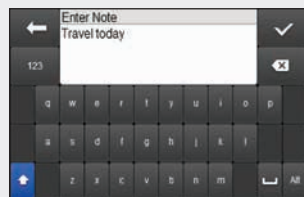
Amount 3.0 u

+ -

Cancel Save

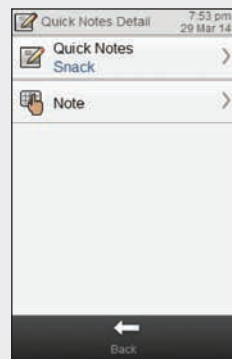
Set the basal insulin amount.
Select **Save**.

Note



Type a note to save with this record. Select ✓.

5

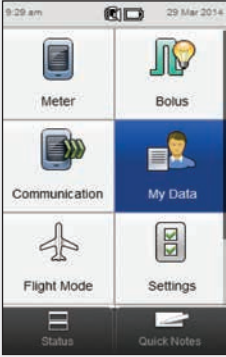


Select **Quick Notes** to make an update. Select **Note** to type a note using the keyboard. Select **Back** to return to Step 3.

12.2.3 Adding New Data to the Logbook

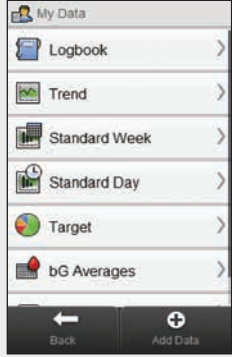
Main Menu > My Data > Logbook

1



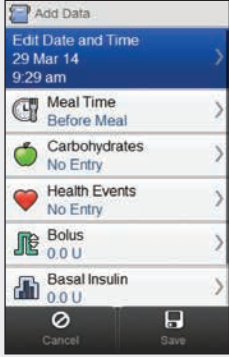
From the Main Menu, select **My Data**.

2



Select **+ Add Data**.

3



Select any of the options on the **Add Data** screen and refer to the instructions on the following pages.

When you are finished, select **Save** to save your entry and return to the **My Data** menu.

Screens for adding new data

Date and Time

Date and Time		
29 Day	Mar Month	2014 Year
9 Hour	29 Min	am am / pm

Set the date and time. Select [Save](#).

Meal Time

Meal Time		9:29 am 29 Mar 14
☐	No Entry	
☒	Before Meal	
☐	After Meal	
☐	Bedtime	
☐	Fasting	
☐	Other	

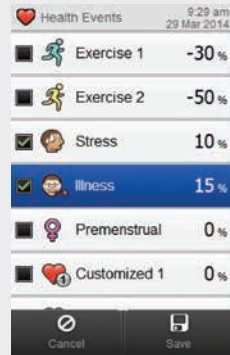
Choose an applicable meal time. Select [Save](#).

Carbohydrates

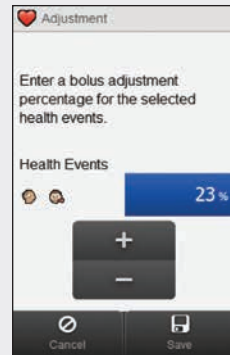
Carbohydrates		9:29 am 29 Mar 2014
Amount	50 g	

Set the amount of carbohydrates consumed. Select [Save](#).

Health Events

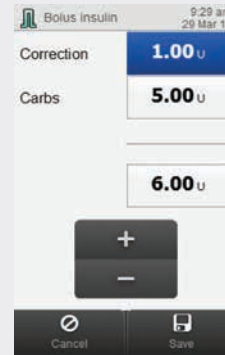


Choose up to 4 health events. Select **Save**.



If bolus advice is turned on and multiple health events have been chosen, this screen is displayed. Set a single, summarized health event percentage to cover the impact of the chosen health events. Select **Save**.

Bolus



Set bolus amounts. Select **Save**.

NOTE

If a Carbohydrate Bolus is entered and no Carbohydrate Amount has been entered (**Carbohydrates** displays **No Entry** on the **Add Data** screen in Step 3), you are prompted to enter an amount for carbohydrates. An amount is not required, but the more complete the data the more accurate any future bolus insulin recommendations are when using bolus advice.



Basal insulin

A screenshot of a mobile app screen titled "Basal insulin". At the top, it shows the time "9:29 am" and the date "29 Mar 14". Below the title, there is a blue bar with a plus icon and the text "Amount 3.0 u". In the center of the screen is a large black button with a white plus sign and a minus sign. At the bottom, there are two buttons: "Cancel" with a circular arrow icon and "Save" with a floppy disk icon.

Set the basal insulin amount.
Select **Save**.

Note

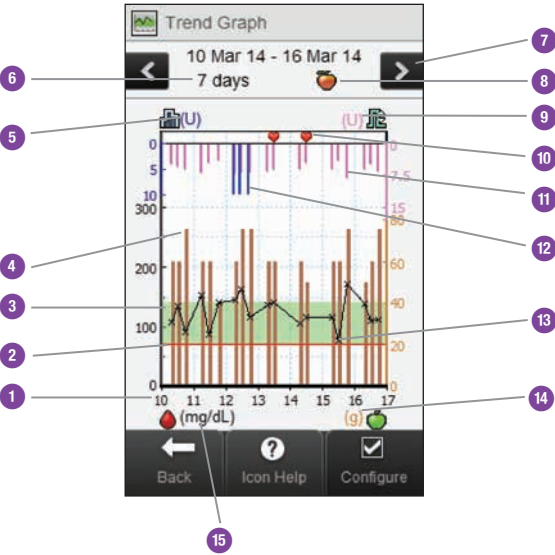
A screenshot of a mobile app screen titled "Note". At the top, it says "Enter Note". Below this is a text input field. To the right of the input field is a checkmark icon. Below the input field is a keyboard with letters, numbers, and symbols.

Type a note to save with this record. Select ✓.

12.3 The Trend Graph

With the trend graph, the meter displays your blood glucose trends and other information using logbook data for the time scale and meal time you choose.

12.3.1 Understanding the Trend Graph



1	Times of day or days of the month	
2	Hypo warning limit	Red horizontal line
3	Green area	Indicates blood glucose target range
4	Carbohydrate value	Brown bar: height shown is in relation to the carbohydrate amount
5	Basal unit of measurement	
6	Time scale	
7	Scroll left / right buttons	Moves forward or back in time by the time scale chosen. Example: For a 7-day time scale, selecting the scroll left icon shows the data from the 7 days before the dates currently shown.

8	Selected meal time	
9	Bolus unit of measurement	
10	Health Event	Indicates a health event exists for this record
11	Bolus	Pink bar: height shown is in relation to the bolus insulin amount
12	Basal value	Blue bar: height shown is in relation to the basal insulin amount
13	Blood glucose result	Displayed as Xs and connected with lines

14	Carbohydrate unit of measurement	
15	Blood glucose unit of measurement	
16	Arrow	(Not shown) Indicates blood glucose data extends beyond screen

NOTE

- ▶ If data is not available, the **No Data Available** screen is displayed.
- ▶ Trend graphs do not include corrupt results or control results.
- ▶ On the upper right side of the graph, the maximum bolus amount indicator is the pink tick mark with the largest value shown beside it (on this example screen: 15 U). The purpose of this indicator is to adjust the scale for the top portion of the graph based on the single biggest bolus insulin amount (callout #11) delivered for the time chosen (callout #6). The maximum bolus amount indicator values available on the meter are 1, 5, 15, 30, and 60 U. For example, if the single biggest amount is 8 U, then the meter scales the upper graph to be between 0 and 15 U.



NOTE

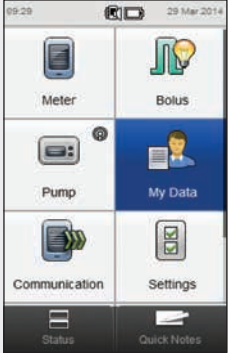
- ▶ On the lower right side of the graph, the maximum carbohydrates amount indicator is the brown tick mark with the largest value shown beside it (on this example screen: 80 g). The purpose of this indicator is to adjust the scale for the bottom portion of the graph based on the single biggest carbohydrate amount (callout #4) for the time chosen (callout #6). The maximum carbohydrates amount indicator values available on the meter are 40, 80, 120, 160, 200, and 240 g, or the equivalent scale for BE, KE, or CC. For example, if the single biggest carbohydrates amount is 76 g, then the meter scales the lower graph to be between 0 and 80 g.
- ▶ On the upper left side of the graph, the maximum basal amount indicator is the blue tick mark with the largest value shown beside it (on this example screen: 10 U). The purpose of this indicator is to adjust the scale for the top portion of the graph based on the single biggest basal insulin amount (callout #12) delivered for the time chosen (callout #6). The maximum basal amount indicator values available on the meter are 1, 2, 5, 10, 20, and 40 U. For example, if the single biggest amount is 9 U, then the meter scales the upper graph to be between 0 and 10 U.



12.3.2 Viewing the Trend Graph

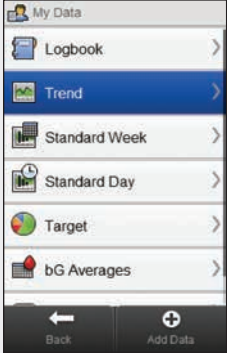
Main Menu > My Data > Trend

1



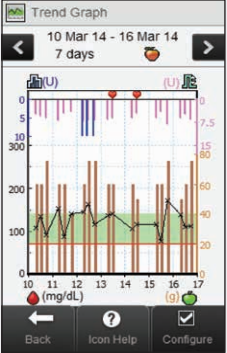
From the Main Menu, select **My Data**.

2



Select **Trend**.

3

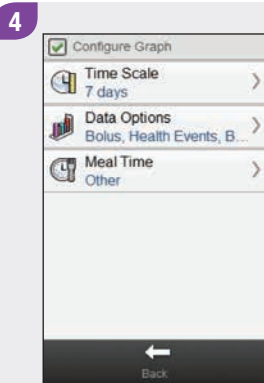


Select  **Configure** to change how the trend graph displays your trend data.

NOTE

Select  to view a list of trend icons and their explanations.



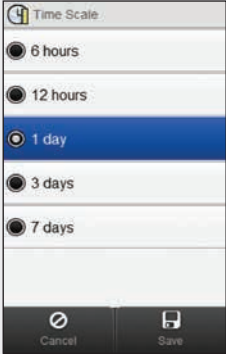


Select any of the options on the **Configure Graph** screen and refer to the instructions in the rest of this section.

When you are finished, select **Back** to return to the trend graph displaying your data in the manner you selected.

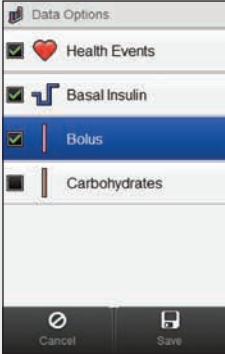
Screens for configuring the trend graph

Time Scale



Select the time scale.
Select **Save**.

Data Options



Select 1 or more data options.
Select **Save**.

Meal Time



Select the meal time.
Select **Save**.

12.4 The Standard Week

With the Standard Week graph, the meter displays your blood glucose averages, number of tests, and standard deviations for each day of an average week, calculated using logbook data from the time scale and meal time you choose.

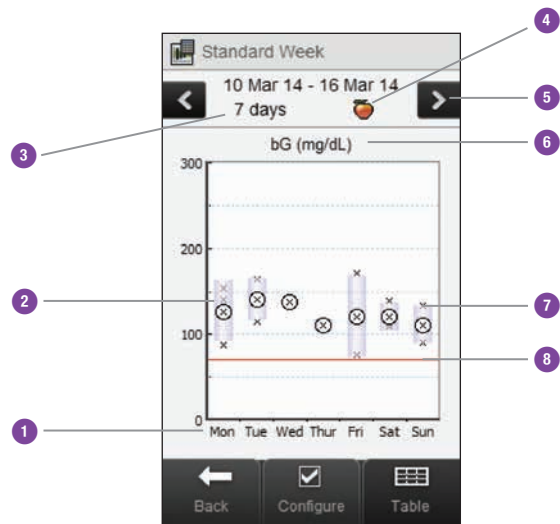
NOTE

The standard deviation measures how spread out the blood glucose results are from the blood glucose average. A high standard deviation means the blood glucose results vary greatly around the blood glucose average.



12.4.1 Understanding the Standard Week Graph and Table

Standard Week Graph

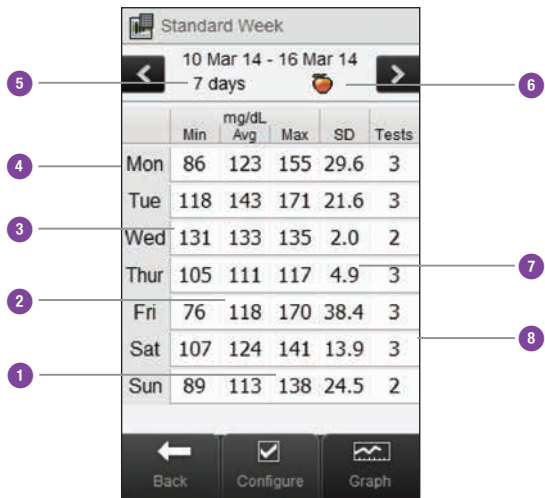


1	Days of week	
2	Box for each day	▶ The top of the box indicates the standard deviation above the average and the bottom of the box indicates the standard deviation below the average. The box is not displayed if there is not enough data to determine standard deviation. ▶ The top of the box is open if the standard deviation is off the top of the graph. ▶ Box and "X" is not displayed for a day if no data is found.
3	Time scale	
4	Meal time selection	

5	Scroll left / right buttons	Moves forward or back in time by the time scale chosen. Example: For a 7-day time scale, selecting the scroll left icon shows the data from the 7 days before the dates currently shown.
6	Blood glucose unit of measurement	
7	X	► Indicates each blood glucose result. ► “X” in the center of a circle indicates the average of all blood glucose results for the selected criteria.
8	Hypo warning limit	Red horizontal line
9	Arrow	(Not shown) Indicates that there is data off the top of the graph.

Standard Week Table

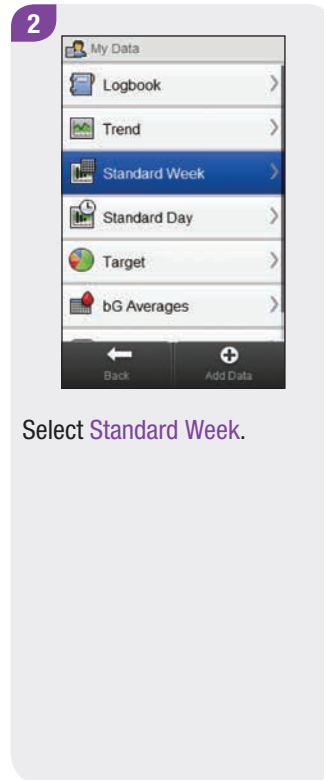
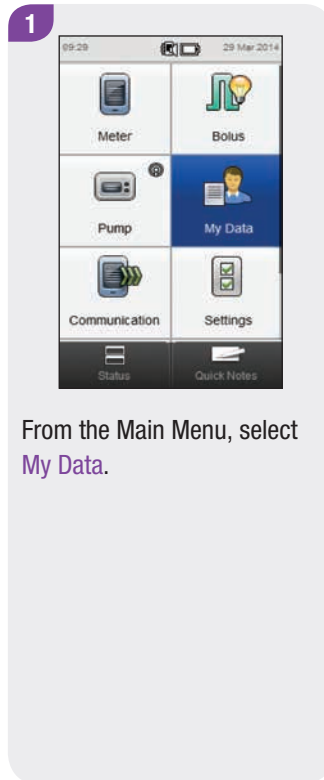
Select **Table** to switch to the standard week table. The standard week table displays the same data as the standard week graph in table format. To return to the standard week graph from the standard week table, select **Graph**.



1	Highest blood glucose result for each day of the week
2	Blood glucose average for each day of the week
3	Lowest blood glucose result for each day of the week
4	Day of week
5	Time scale
6	Meal time selection
7	Standard deviation (SD) for each day of the week
8	Number of tests for each day of the week

12.4.2 Viewing Standard Week Data

Main Menu > My Data > Standard Week

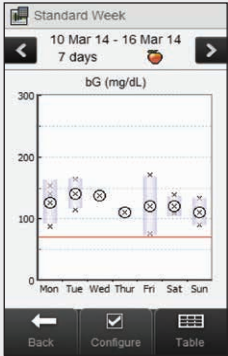


NOTE

- ▶ If there is no data available to display the standard week graph and table for the time scale or meal time chosen, the **No Data Available** screen is displayed.
- ▶ The standard week graph and table do not include corrupt results, control results, HI values, or LO values.



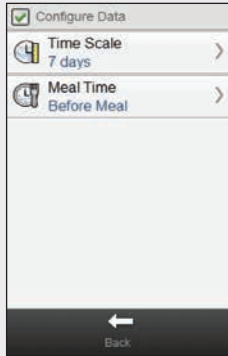
3



The screenshot shows the 'Standard Week' screen with a title bar 'Standard Week'. Below it is a date range '10 Mar 14 - 16 Mar 14' and '7 days'. The main area is a graph titled 'bG (mg/dL)' with a y-axis from 0 to 300 and an x-axis with days of the week. Data points are shown as circles with 'x' marks. At the bottom are three buttons: 'Back', 'Configure' (with a checkmark icon), and 'Table' (with a table icon).

To change the time scale and meal time displayed for the standard week, select  **Configure**.

4

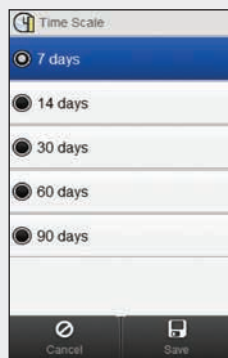


The screenshot shows the 'Configure Data' screen with a title bar 'Configure Data'. Below it are two settings: 'Time Scale' set to '7 days' and 'Meal Time' set to 'Before Meal'. Both settings have a right-pointing arrow. At the bottom is a 'Back' button with a left-pointing arrow.

Select either of the options on the **Configure Data** screen and refer to the instructions in the rest of this section. Select **Back** when finished to return to the Standard Week graph or table.

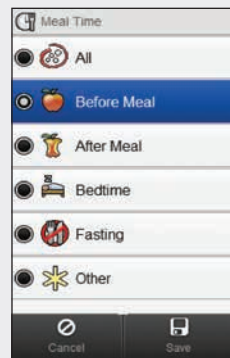
Screens for configuring standard week data

Time scale



Select a time scale.
Select **Save**.

Meal time



Select a meal time.
Select **Save**.

12.5 The Standard Day

With the Standard Day graph, the meter displays your blood glucose averages, number of tests, and standard deviations for each time block, calculated using logbook data from the time scale and meal time you choose.

NOTE

Refer to the **Changing Meter Settings** chapter in this user's manual for instructions on setting up the time blocks.



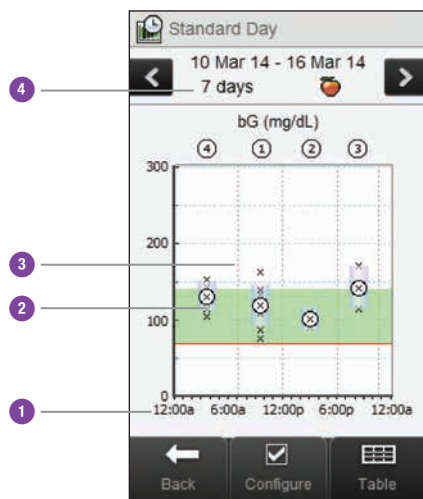
NOTE

The standard deviation measures how spread out the blood glucose results are from the blood glucose average. A high standard deviation means the blood glucose results vary greatly around the blood glucose average.

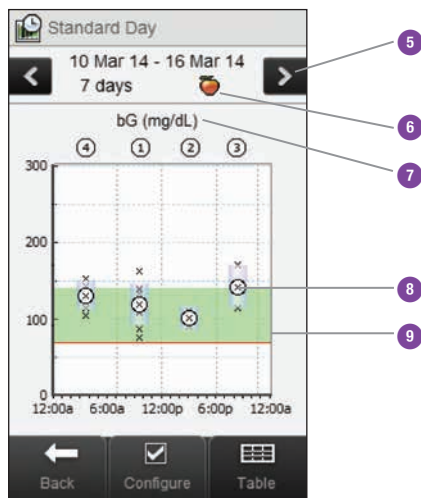


12.5.1 Understanding the Standard Day Graph and Table

Standard Day Graph



1	Time of day	
2	Box for each time block	▶ The top of the box indicates 1 standard deviation above the average and the bottom of the box indicates 1 standard deviation below the average. The box is not displayed if there is not enough data to determine standard deviation. ▶ The top of the box is open if the standard deviation is off the top of the graph. ▶ Box and "X" are not displayed for a time block if no data is found.
3	Time blocks	Separated by the vertical dashed line
4	Time scale	



5	Scroll left / right buttons	Moves forward or back in time by the time scale chosen. Example: For a 7-day time scale, selecting the scroll left icon shows the data from the 7 days before the dates currently shown.
6	Meal time selection	
7	Blood glucose unit of measurement	
8	X	► Indicates each blood glucose result. ► “X” in the center of a circle indicates the average of all blood glucose results for the selected criteria.
9	Hypo warning limit	Red horizontal line
10	Arrow	(Not shown) Indicates that there is data off the top of the graph.

Standard Day Table

Select [Table](#) to switch to the standard day table. The standard day table displays the same data as the standard day graph in table format. To return to the standard day graph from the standard day table, select [Graph](#).

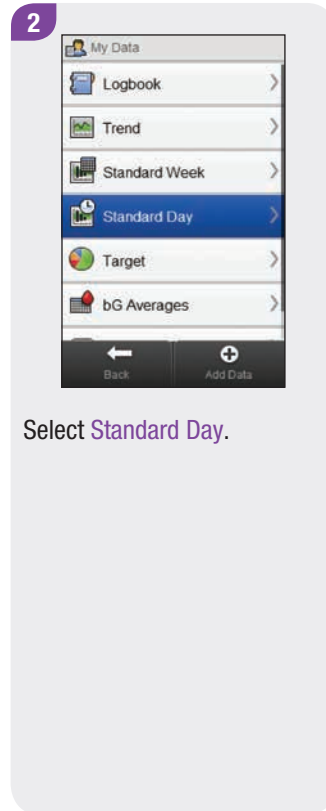
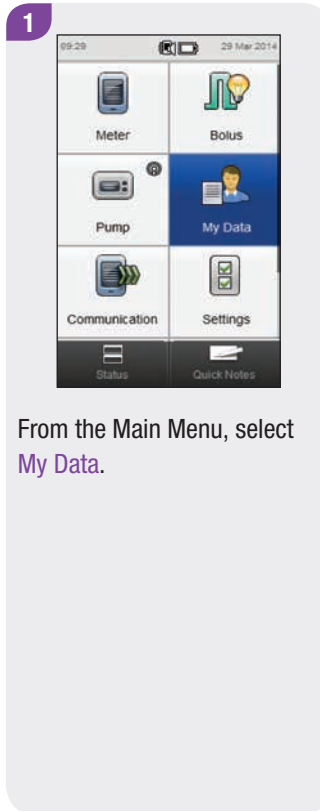
The screenshot shows a mobile application interface titled "Standard Day". At the top, it displays the date range "10 Mar 14 - 16 Mar 14" and "7 days". Below this is a table with columns: Time Block, Min, Avg, Max, SD, and Tests. The table contains data for four time blocks: 7:00a, 12:00p, 6:00p, and 11:00p. At the bottom of the screen are three buttons: Back, Configure, and Graph. Numbered callouts point to various elements: 1 points to the 7:00a time block, 2 points to the Min column, 3 points to the Time Block column, 4 points to the left navigation arrow, 5 points to the right navigation arrow, 6 points to the Max column, 7 points to the SD column, and 8 points to the Tests column.

Time Block	Min	Avg	Max	SD	Tests
7:00a	75	122	165	21.0	10
12:00p	83	116	146	15.0	7
6:00p	110	138	173	34.0	7
11:00p	103	127	155	18.0	9

1	Blood glucose average for each time block
2	Lowest blood glucose result for each time block
3	Time block
4	Time scale
5	Meal time selection
6	Highest blood glucose result for each time block
7	Standard deviation (SD) for each time block
8	Number of tests for each time block

Viewing Standard Day Data

Main Menu > My Data > Standard Day

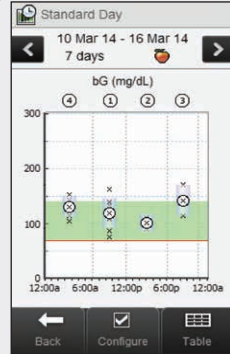


NOTE

- ▶ If there is no data available to display the standard day graph and table for the time scale or meal time chosen, the **No Data Available** screen is displayed.
- ▶ The standard day graph and table do not include corrupt results, control results, HI values, or LO values.

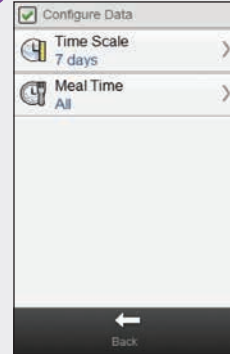


3



To change the time scale and meal time displayed, select **Configure** .

4

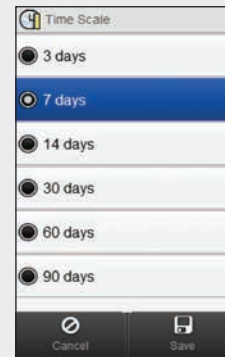


Select either of the options on the **Configure Data** screen and refer to the instructions in the rest of this section.

Select **Back** when finished to save any changes and return to the standard day graph or table.

Screens for configuring standard day data

Time scale



Select a time scale.
Select **Save**.

Meal time



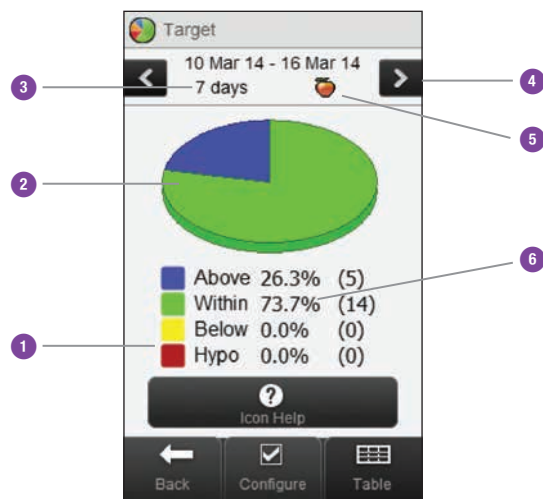
Select a meal time.
Select **Save**.

12.6 Target Data

The meter displays a pie chart and table illustrating your blood glucose results as “Above,” “Within,” “Below,” and “Hypo” for the time scale and meal time you choose.

12.6.1 Understanding the Target Chart and Target Table

Target Chart



1	Legend	Blood glucose result categories
2	Target chart	Represents the percentages for the blood glucose result categories
3	Time scale	
4	Scroll left / right buttons	Moves forward or back in time by the time scale chosen. Example: For a 7-day time scale, selecting the scroll left icon shows the data from the 7 days before the dates currently shown.
5	Meal time selection	
6	Percentage of occurrence	(Number shown in parenthesis represents the number of occurrences)

Target Table

Select **Table** to switch to the target table. The target table displays the same data as the target chart in table format.

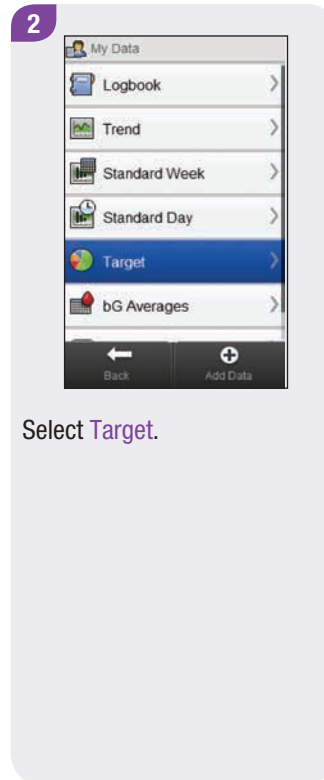
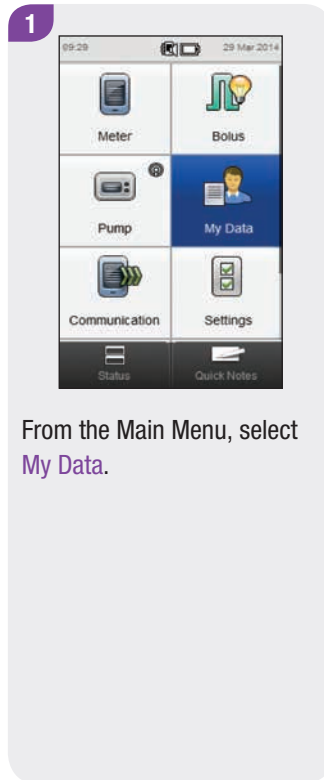
To return to the target chart from the target table, select **Chart**.



1	Number of occurrences	
2	Meal time selection	
3	Legend	Blood glucose result categories
4	Time scale	
5	Scroll left / right buttons	Moves forward or back in time by the time scale chosen. Example: For a 7-day time scale, selecting the scroll left icon shows the data from the 7 days before the dates currently shown.
6	Target table	

12.6.2 Viewing Target Data

Main Menu > My Data > Target



NOTE

- ▶ If there is no data available to display the target chart and table for the time scale or meal time chosen, the **No Data Available** screen is displayed.
- ▶ The target chart and table do not include corrupt results, control results, or HI and LO results.



3

The 'Target' screen displays a pie chart and a table of data. The table shows the following information:

Category	Percentage	Count
Above	26.3%	(5)
Within	73.7%	(14)
Below	0.0%	(0)
Hypo	0.0%	(0)

At the bottom, there are buttons for 'Back', 'Configure', and 'Table'.

To change the time scale and meal time displayed, select **Configure**.

4

The 'Configure Data' screen shows two options: 'Time Scale' (7 days) and 'Meal Time' (Before Meal). At the bottom, there is a 'Back' button.

Select either of the options on the **Configure Data** screen and refer to the instructions in the rest of this section. Select **Back** when finished to save any changes and return to the target chart or table.

Screens for configuring target data:

The 'Time scale' screen shows a list of time scale options: 3 days, 7 days, 14 days, 30 days, 60 days, and 90 days. At the bottom, there are 'Cancel' and 'Save' buttons.

Select a time scale. Select **Save**.

The 'Meal time' screen shows a list of meal time options: All, Before Meal, After Meal, Bedtime, Fasting, and Other. At the bottom, there are 'Cancel' and 'Save' buttons.

Select a meal time. Select **Save**.

12.7 The bG Averages Table

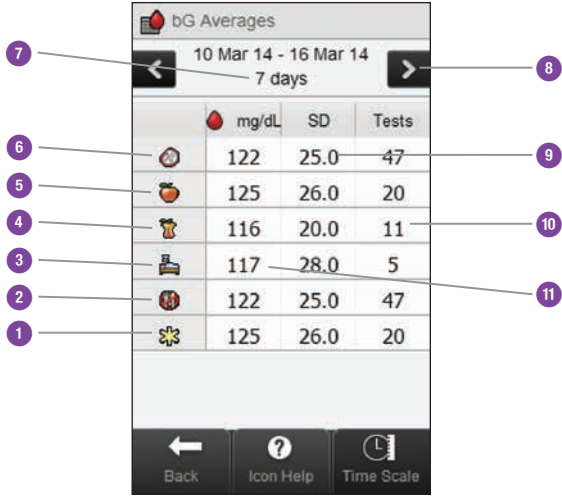
The bG Averages table displays your blood glucose averages and standard deviations for the time scale and meal time you choose.

NOTE

The standard deviation measures how spread out the blood glucose results are from the blood glucose average. A high standard deviation means the blood glucose results vary greatly around the blood glucose average.



12.7.1 Understanding the bG Averages Table

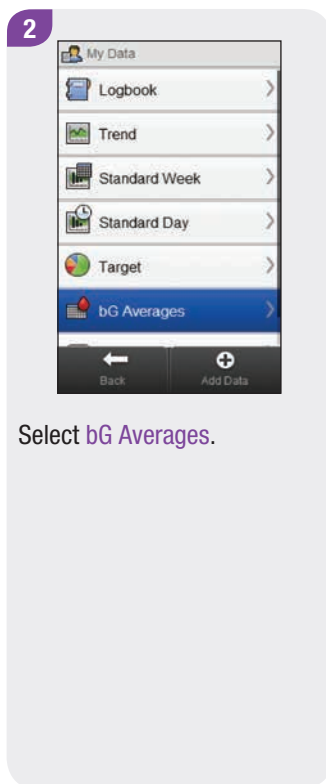
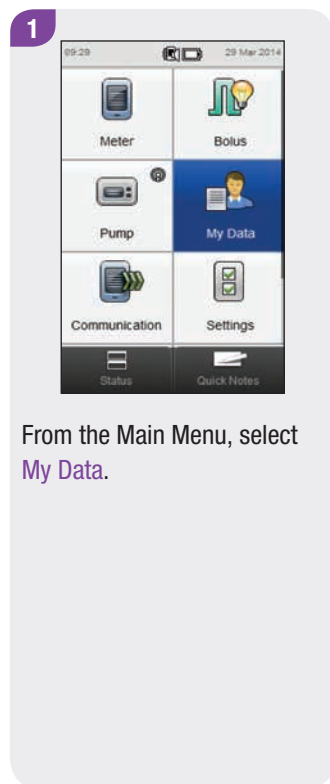


1	Other icon	Data for all test results marked as Other
2	Fasting icon	Data for all test results marked as Fasting
3	Bedtime icon	Data for all test results marked as Bedtime
4	After meal icon	Data for all test results marked as After meal
5	Before meal icon	Data for all test results marked as Before meal
6	All icon	Combined data from all meal times

7	Time scale	
8	Scroll left / right buttons	Moves forward or back in time by the time scale chosen. Example: For a 7-day time scale, selecting the scroll left icon will show the data from the 7 days before the dates currently shown.
9	Blood glucose standard deviation	Calculated for the meal time
10	Number of tests	Used to calculate the averages and standard deviation of each meal time
11	Blood glucose average	Calculated for the meal time

12.7.2 Viewing the bG Averages Table

Main Menu > My Data > bG Averages



NOTE

- ▶ If there is no data available to display the bG averages table for the time scale or meal time chosen, the **No Data Available** screen is displayed.
- ▶ Calculations do not include corrupt results, control results, HI values, or LO values.



3

	mg/dL	SD	Tests
	122	25.0	47
	125	26.0	20
	116	20.0	11
	117	28.0	5
	122	25.0	47
	125	26.0	20

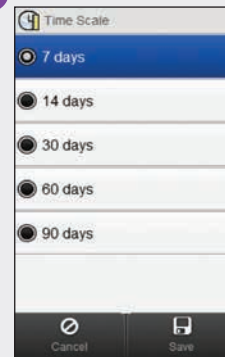
Select **Time Scale** to adjust the time scale of the bG Averages table.

NOTE

Select to view a list of meal time icons and their explanations.



4



Choose a time scale. Select **Save**.

5

	mg/dL	SD	Tests
	122	25.0	47
	125	26.0	20
	116	20.0	11
	117	28.0	5
	122	25.0	47
	125	26.0	20

Select **Back** when finished to return to the **My Data** menu.

13

Cleaning and Disinfecting the Meter and Lancing Device

13.1 Overview

What is the difference between cleaning and disinfecting?

- ▶ **Cleaning** is the removal of dirt from the meter or lancing device.*
- ▶ **Disinfecting** is the removal of most, but not all, disease-causing and other types of microorganisms (bloodborne pathogens) from the meter or lancing device.*

*Healthcare Infection Control Practices Advisory Committee (HICPAC), William A. Rutala, Ph.D., M.P.H., and David J. Weber, M.D., M.P.H. Centers for Disease Control and Prevention, 2008. "Guideline for Disinfection and Sterilization in Healthcare Facilities. Atlanta."

Approved Cleaning and Disinfecting Product

The following product has been approved for cleaning and disinfecting the meter and lancing device:

Super Sani-Cloth (EPA* reg. no. 9480-4)

- ▶ Super Sani-Cloth can be purchased from Amazon.com, Officedepot.com, and Walmart.com. Do not use any other cleaning or disinfecting solutions. Using solutions other than the Super Sani-Cloth could result in damage to the meter and lancing device.
- ▶ The effect of using more than one product interchangeably to clean and disinfect the meter and lancing device has not been tested. Always use Super Sani-Cloth to clean and disinfect the meter and lancing device.

*Environmental Protection Agency

NOTE

For technical assistance or questions on cleaning and disinfecting, contact the ACCU-CHEK Customer Care Service Center at 1-800-688-4578.



13.2 Cleaning and Disinfecting the Meter

To clean and disinfect without damaging the meter, follow these procedures carefully.

When to Clean and Disinfect the Meter

- ▶ Clean the meter to remove visible dirt or other material prior to disinfecting.
- ▶ Clean and disinfect the meter at least once per week, or when blood is present on the surface of the meter.
- ▶ Clean and disinfect the meter before allowing anyone else to handle the meter. **Do not allow anyone else to use the meter on themselves for testing purposes.**

NOTE

Using cleaning and disinfecting products could result in damage to the meter. If you notice any of the following signs of deterioration after cleaning and disinfecting your meter, stop using your meter and contact the ACCU-CHEK Customer Care Center at 1-800-688-4578: residue around buttons, clouding of display, button/touchscreen malfunction, out-of-range results.



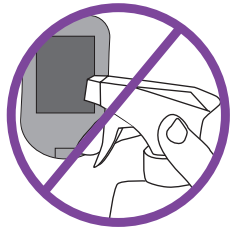
What to Clean and Disinfect

The following parts of the meter should be cleaned and disinfected:

- ▶ The area **around** slots and openings (do not get any moisture in slots or openings)
- ▶ The meter display
- ▶ The entire meter surface

How to Clean and Disinfect the Meter

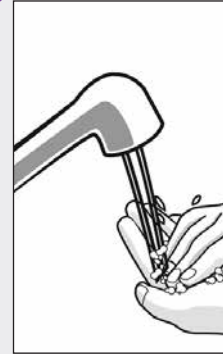
WARNING



Failure to follow these instructions will damage the meter and stop it from working properly.

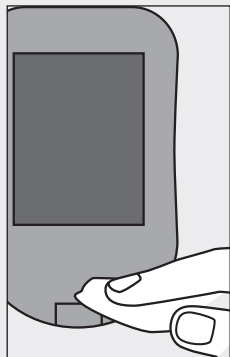
- ▶ DO NOT clean or disinfect the meter while performing a blood glucose or control test.
- ▶ DO NOT get any moisture in slots or openings.
- ▶ DO NOT spray anything onto the meter.
- ▶ DO NOT immerse the meter in liquid.
- ▶ Always use the same product for both cleaning and disinfecting.

1



Wash hands thoroughly with soap and water.

2



Turn the meter off and wipe the entire meter surface with a Super Sani Cloth. Carefully wipe **around** the test strip slot and other openings. Make sure that no liquid enters any slot or opening.

3

A separate Super Sani-Cloth should be used for cleaning and disinfection. For disinfecting the meter, get a new cloth and repeat Step 2, making sure that the surface stays wet for 2 minutes. Make sure that no solution is seen in any slot or opening.

4



Wash hands thoroughly with soap and water.

NOTE

Roche has tested the approved product for a total of 260 cycles, which is equal to cleaning and disinfecting once per week for a 5-year period.



13.3 Cleaning and Disinfecting the Lancing Device

NOTE

- ▶ Do not throw away the lancing device cap after each use. Use approved cleaning and disinfecting product on the cap.
- ▶ Always remove the lancet drum before cleaning or disinfecting the lancing device.



To clean and disinfect without damaging the lancing device, follow these procedures carefully.

When to Clean and Disinfect the Lancing Device

- ▶ Clean the lancing device to remove visible dirt or other material prior to disinfecting.
- ▶ Clean and disinfect the lancing device at least once per week to remove visible dirt or other material for safe handling.
- ▶ Clean and disinfect the lancing device before allowing anyone else to handle the lancing device, for instance, if you have someone assisting you. **Do not allow anyone else to use the lancing device.**

NOTE

- ▶ Using cleaning and disinfecting products could result in damage to the lancing device. If you notice any of the following signs of deterioration after cleaning and disinfecting your lancing device, stop using your lancing device and contact the ACCU-CHEK Customer Care Service Center at 1-800-688-4578: residue around buttons, difficulty in priming the device, difficulty in inserting the lancet drum.
- ▶ You might observe a slight discoloration of the lancing device after multiple cleaning and disinfecting cycles. This does not affect the functionality of the lancing device.



What to Clean and Disinfect

The following parts of the lancing device should be cleaned and disinfected:

- ▶ The entire lancing device surface
- ▶ The cap

How to Clean and Disinfect the Lancing Device

WARNING

Failure to follow these instructions may damage the lancing device and stop it from working properly.

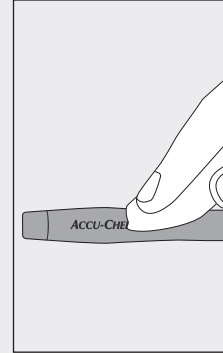
- ▶ DO NOT get any moisture into any openings.
- ▶ Always use the same product for both cleaning and disinfecting.

1



Wash hands thoroughly with soap and water.

2



Wipe the entire surface of the lancing device and the inside of the cap with the approved cleaning and disinfecting product.

3

A separate Super Sani-Cloth should be used for cleaning and disinfection. For disinfecting the lancing device, use a new cloth and repeat Step 2 making sure the surface stays wet for 2 minutes.

4



Wash hands thoroughly with soap and water.

NOTE

Roche has tested the approved product for a total of 260 cycles, which is equal to cleaning and disinfecting once per week for a 5-year period.



14

Care and Maintenance

14.1 Overview

The meter needs little or no maintenance with normal use. It automatically tests its own systems every time you turn it on and lets you know if something is wrong by displaying a message.

If you drop the meter or think it is not giving accurate results, contact ACCU-CHEK Customer Care Service Center at 1-800-688-4578. Do not attempt to repair the meter yourself.

If you have any questions about the care and maintenance of the meter, contact ACCU-CHEK Customer Care Service Center at 1-800-688-4578.

14.2 Charging the Battery

For instructions on charging the battery, see the **Charging the Battery** section in the **Startup** chapter in this user's manual.

14.3 Power-Saving Tips

To conserve battery life:

- ▶ Turn the meter off when you are finished rather than utilizing the automatic power off feature.
- ▶ Only turn on the vibration feature for mode settings when it is needed. See the **Mode Settings: Sound, Vibration** section in the **Changing Meter Settings** chapter in this user's manual.
- ▶ Only turn on the touchscreen tone and vibration features when they are needed. See the **Touchscreen: Tone, Vibration** section in the **Changing Meter Settings** chapter in this user's manual.
- ▶ Keep the brightness level of the display at a minimum. See the **Brightness** section in the **Changing Meter Settings** chapter in this user's manual.
- ▶ Turn on the Flight Mode. See the **Turning On Flight Mode** section in the **Travel Settings** chapter in this user's manual.

14.4 Changing the Battery

The rechargeable battery has a limited number of charge cycles. If you notice that the meter must be charged more often than it did when it was new, you may need to change the battery. The meter requires a custom rechargeable battery provided by Roche. Contact ACCU-CHEK Customer Care Service Center at 1-800-688-4578 to get a replacement battery and then follow the steps in this section.

NOTE

When the battery is replaced, all records remain saved in the logbook.



1



Open the battery door on the back of the meter by pushing in the direction of the arrow and pulling up the door.
Remove the old battery.



WARNING

- ▶ Follow these steps to prevent possible damage to the meter contacts.
- ▶ Do not try to force the battery into the meter. The battery only goes in one way.

2



Align the new battery by placing the (+) (-) end as shown.

3



Slide the (+) (-) end of the battery against the meter contacts. Press battery into meter.

4



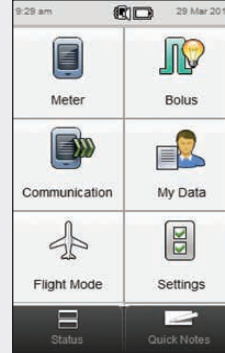
Put the battery door back in place and snap it closed by pushing the battery door in the direction of the arrow.

5



Charge the battery. See the **Charging the Battery** section in the **Startup** chapter in this user's manual.

6



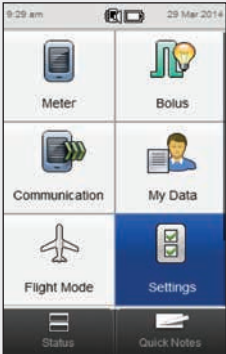
After the battery is fully charged, confirm the date and time are correct on either the Main Menu or the Status screen. To update the date or the time, see the **Date, Time, and Time Format** section in the **Changing Meter Settings** chapter in this user's manual.

14.5 Touchscreen Calibration

Calibrating the touchscreen can help improve the meter's touch sensitivity.

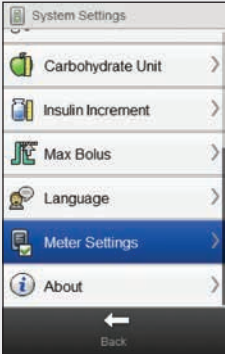
Main Menu > Settings > Meter Settings > Touchscreen > Screen Calibration

1

A screenshot of the Main Menu. It features a 3x2 grid of icons: Meter, Bolus, Communication, My Data, Flight Mode, and Settings. The 'Settings' icon is highlighted in blue. At the bottom, there are 'Status' and 'Quick Notes' buttons.

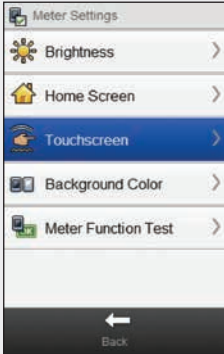
From the Main Menu, select **Settings**.

2

A screenshot of the System Settings menu. It lists various settings: Carbohydrate Unit, Insulin Increment, Max Bolus, Language, Meter Settings, and About. The 'Meter Settings' option is highlighted in blue. A 'Back' button is at the bottom.

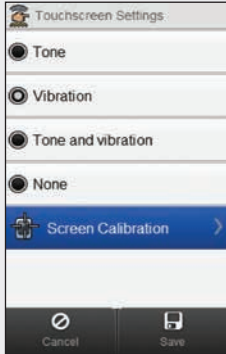
Scroll the screen and select **Meter Settings**.

3

A screenshot of the Meter Settings menu. It lists: Brightness, Home Screen, Touchscreen, Background Color, and Meter Function Test. The 'Touchscreen' option is highlighted in blue. A 'Back' button is at the bottom.

Select **Touchscreen**.

4

A screenshot of the Touchscreen Settings menu. It lists: Tone, Vibration, Tone and vibration, None, and Screen Calibration. The 'Screen Calibration' option is highlighted in blue. 'Cancel' and 'Save' buttons are at the bottom.

Select **Screen Calibration**.

5

Briefly press center of target.
Repeat as target moves around screen.



Screen text: Briefly press center of target. Repeat as target moves around screen.

NOTE

Touchscreen calibration instructions only appear in English.



6

New calibration settings calculated.
Tap screen anywhere to use new settings.
Wait for 30 seconds to keep old settings.

Restoring old settings in : 30 sec

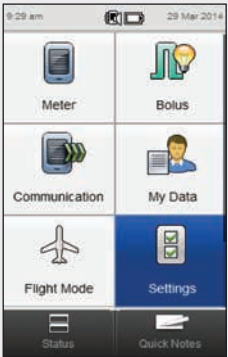
Screen text: New calibration settings calculated. Tap screen anywhere to use new settings. Wait for 30 seconds to keep old settings. Restoring old settings in : 30 sec (countdown timer)

14.6 Meter Function Test

If the meter display is faulty, or you cannot hear or feel the alerts, you can have the meter check the display, vibration, and sound functions for proper operation.

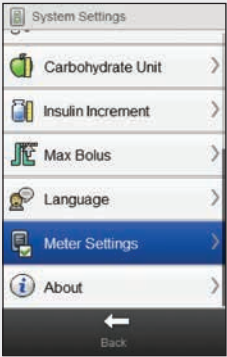
Main Menu > Settings > Meter Settings > Meter Function Test

1



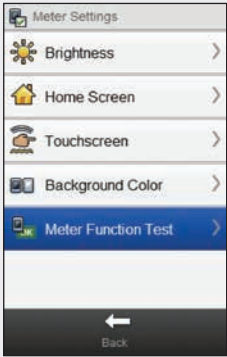
From the Main Menu, select **Settings**.

2



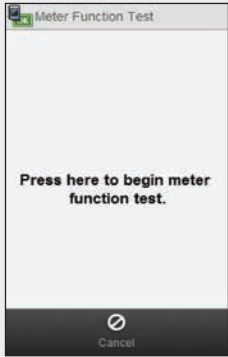
Scroll the screen and select **Meter Settings**.

3



Select **Meter Function Test**.

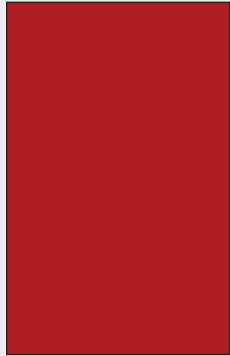
4



Touch the screen where indicated.

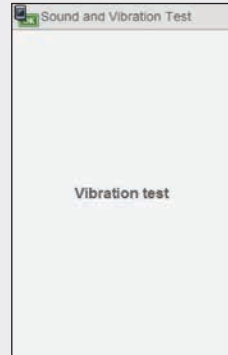
Screens Displayed During the Meter Function Test

Display Test



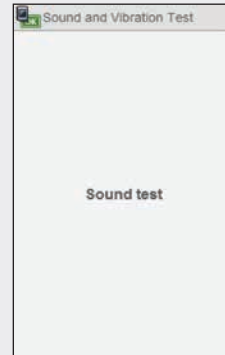
The display cycles through colors (red, blue, green and white).

Vibration Test



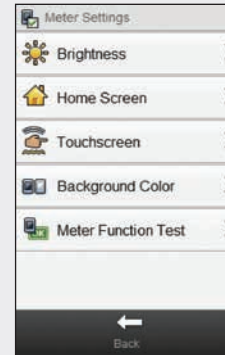
The meter vibrates 3 times.

Sound Test



The meter emits a sound.

5



If the meter does not perform as described in the meter function test, contact ACCU-CHEK Customer Care Service Center at 1-800-688-4578.

15 Troubleshooting

15.1 Overview

For most problems, the meter displays a message with a short description of the problem and a proposed solution. This chapter goes into more detail describing the problem with the possible cause and suggesting possible solutions. The problems are grouped by the type of problem or message (for example, Error or Warning). If the possible solutions do not fix the problem, contact ACCU-CHEK Customer Care Service Center at 1-800-688-4578.

NOTE

- ▶ If you have a problem not included here, contact ACCU-CHEK Customer Care Service Center at 1-800-688-4578.
- ▶ If you drop the meter or think it is not giving accurate results, make sure your test strips and control solution have not expired, and perform a control test.
- ▶ Blood glucose is sometimes shortened to bG, but it means the same thing.



15.2 Troubleshooting the Meter

General Problems

Problem	Possible Causes	Possible Solutions
Display is blank or the meter does not turn on.	The battery is low on power.	See the Charging the Battery section in the Startup chapter in this user's manual.
	The battery may be defective.	Replace the battery if it does not charge. See the Changing the Battery section in the Care and Maintenance chapter in this user's manual.
	The meter has an electronic error.	Reset the meter by pressing and holding the power button for at least 5 seconds.
	The display is damaged.	Contact ACCU-CHEK Customer Care Service Center at 1-800-688-4578.
	The meter is defective.	Contact ACCU-CHEK Customer Care Service Center at 1-800-688-4578.
	The temperature may be outside the meter operating range.	Move the meter to an area with the proper temperature. Wait 5 minutes before turning the meter on. Do not artificially heat or cool the meter.

Problem	Possible Causes	Possible Solutions
Battery does not recharge while the meter is plugged into a computer with a USB cable.	The computer USB port cannot charge the meter battery.	Charge the meter battery using a power outlet. See the Charging the Battery Using a Power Outlet section in the Startup chapter in this user's manual.
Battery must be charged more often than it did when it was new.	The rechargeable battery has a limited number of charge cycles after which its charge capacity is reduced.	Replace the battery. See the Changing the Battery section in the Care and Maintenance chapter in this user's manual.
Display freezes or does not respond.	The meter has an electronic error.	▶ Reset the meter by pressing and holding the power button for at least 5 seconds until the meter screen goes blank. ▶ Remove the battery from the meter and reinsert the battery.
Display is faulty; the color on the screen is incorrect.		Perform a meter function test. See the Meter Function Test section in the Care and Maintenance chapter in this user's manual. If the meter function test indicates there is a problem with the display, contact ACCU-CHEK Customer Care Service Center at 1-800-688-4578.

Problem	Possible Causes	Possible Solutions
Sound is faulty; you cannot hear the alerts.	The sound feature is turned off or is set too low.	▶ Check to see if the active mode setting (Normal, Vibrate, Quiet, Loud) has sound and if the volume is set at a level that is audible. See the Mode Settings: Sound, Vibration section in the Changing Meter Settings chapter in this user's manual. ▶ Check to see if the signal suspension is on and is active. Signal suspension may need to be turned off or its settings changed. See the Mode Settings: Signal Suspension section in the Changing Meter Settings chapter in this user's manual. ▶ Perform a meter function test. See the Meter Function Test section in the Care and Maintenance chapter in this user's manual. If the meter function test indicates there is a problem with the sound, contact ACCU-CHEK Customer Care Service Center at 1-800-688-4578.

Problem	Possible Causes	Possible Solutions
Start time: Cannot change the Start time for the first time block.	The first time set up (Setup Wizard) is already complete, and therefore the start time of the first time block cannot be changed in the device settings.	To change the Start time for the first time block, select Reset on the Time Blocks screen. Once the time blocks are reset, you must re-enter all time block information. ▶ If bolus advice is turned on, see the Bolus Advice: Resetting All Time Blocks section in the Changing Bolus Advice Settings chapter in this user's manual. ▶ If bolus advice is turned off, see the Resetting All Time Blocks section in the Changing Meter Settings chapter in this user's manual.
Touchscreen is not operating properly.	Touchscreen has not been calibrated.	▶ Calibrate the touchscreen. See the Touchscreen Calibration section in the Care and Maintenance chapter in this user's manual. If calibrating the touchscreen does not fix the problem, contact ACCU-CHEK Customer Care Service Center at 1-800-688-4578. ▶ If the touchscreen is calibrated and you still think it is not operating properly, the following may help you know when a selection is made: Set up the touchscreen to emit a tone, vibrate, or do both. See the Touchscreen: Tone, Vibration section in the Changing Meter Settings chapter in this user's manual.

Problem	Possible Causes	Possible Solutions
Touchscreen calibration text is not translated.	Touchscreen calibration instructions only appear in English.	Refer to the Touchscreen Calibration section in the Care and Maintenance chapter in this user's manual. ▶ First English screen: Briefly press center of target. Repeat as target moves around screen. ▶ Second English screen: New calibration settings calculated. Tap screen anywhere to use new settings. Wait for 30 seconds to keep old settings. Restoring old settings in : 30 sec (countdown timer)

Problem	Possible Causes	Possible Solutions
Vibration is faulty; you cannot feel the alerts.	Vibration feature is turned off.	▶ Check to see if the active mode setting (Normal, Vibrate, Quiet, Loud) has vibration. See the Mode Settings: Sound, Vibration section in the Changing Meter Settings chapter in this user's manual. ▶ Check to see if the signal suspension is on and is active. Signal suspension may need to be turned off or its settings changed. See the Mode Settings: Signal Suspension section in the Changing Meter Settings chapter in this user's manual. ▶ Perform a meter function test. See the Meter Function Test section in the Care and Maintenance chapter in this user's manual. If the meter function test indicates there is a problem with vibration, contact ACCU-CHEK Customer Care Service Center at 1-800-688-4578.

Error Messages

Code	Screen Message	Possible Causes	Possible Solutions
E-57	Electronic error	An electronic error has occurred or, in rare cases, a used test strip was removed and reinserted.	▶ Press and hold the power button for at least 5 seconds until the meter screen goes blank. Release the power button. ▶ Remove the battery from the meter and reinsert the battery. ▶ If this does not fix the problem, contact ACCU-CHEK Customer Care Service Center at 1-800-688-4578.
E-60	Internal clock error		Contact ACCU-CHEK Customer Care Service Center at 1-800-688-4578.

Information Messages

Screen Message	Possible Causes	Possible Solutions
Battery low is displayed while the meter is plugged into a computer with a USB cable.	The computer USB port cannot charge the meter battery.	Charge the meter battery using a power outlet. See the Charging the Battery Using a Power Outlet section in the Startup chapter in this user's manual.
Bolus above allowed amount NOTE: This message can only occur if bolus advice is turned on.	The recommended total bolus amount is greater than the maximum allowed total bolus amount. The meter sets the total bolus amount to equal the maximum bolus allowed. The carbohydrate bolus and the correction bolus are adjusted to equal the total bolus amount.	Check the accuracy of all entries. If necessary, contact your healthcare professional.

Screen Message	Possible Causes	Possible Solutions
Bolus too high NOTE: This message can only occur if bolus advice is turned off.	The total bolus amount is greater than the maximum allowed total bolus amount. The meter sets the total bolus amount to equal the maximum bolus allowed. The carbohydrate bolus and correction bolus are adjusted to equal the total bolus amount.	Check the accuracy of all entries. If necessary, contact your healthcare professional.
Carbohydrate ratio not valid	The carbohydrate ratio is outside of the acceptable meter range.	Check your entries and contact your healthcare professional to determine the appropriate settings.
Expired bG record	This message is displayed when the blood glucose test was performed more than 10 minutes earlier.	Perform a blood glucose test to update your blood glucose result to receive bolus advice.

Screen Message	Possible Causes	Possible Solutions
Insulin sensitivity not valid	The insulin sensitivity is outside of the acceptable meter range.	Check your entries and contact your healthcare professional to determine the appropriate settings.
Invalid bolus advice times	The acting time value is less than the offset time value.	The acting time value must be set equal to or greater than the offset time value. Reset the acting time value or revise the offset time value.
Invalid setting with the text Hypo value must be less than time block target ranges.	The hypo warning limit value must be less than all of your target ranges in the time block settings.	Either reset the hypo warning limit so it is below the target ranges of your time blocks or revise the target ranges for the time blocks. See the Warning Limits: Hypo, Hyper section in the Changing Meter Settings chapter in this user's manual.

Screen Message	Possible Causes	Possible Solutions
Invalid setting with the text Hyper value must be greater than time block target ranges.	The hyper warning limit value must be greater than all of your target ranges in the time block settings.	Either reset the hyper warning limit so it is above the target ranges of your time blocks or revise the target ranges for the time blocks. See the Warning Limits: Hypo, Hyper section in the Changing Meter Settings chapter in this user's manual.
Invalid date/time		Re-enter the date or time.
No carbs entered with the text Add a carbohydrates amount?	If a Carbs insulin bolus is entered on the Bolus Insulin screen and no Carbohydrate Amount has been entered (Carbohydrates displays No Entry).	Select Yes on the Information screen to enter an amount for carbohydrates into the logbook. Select No for not adding an amount. NOTE: An amount is not required, but the more complete the data the more accurate any future bolus recommendations are if using bolus advice.

Maintenance Messages

Code	Screen Message	Possible Causes	Possible Solutions
M-51	Test strip error	If you see this message before you applied a drop to the test strip: The test strip is damaged or is not properly inserted into the meter.	▶ Remove the test strip and reinsert it, or replace it if damaged. ▶ If the message reappears, contact ACCU-CHEK Customer Care Service Center at 1-800-688-4578.
		If you see this message after you applied a drop to the test strip, the cause may be one of the following: ▶ The drop is too small. ▶ Your blood glucose may be extremely low.	▶ If you think the drop was too small, retest with a new test strip. ▶ If you are experiencing any of the common symptoms of low blood glucose, contact your healthcare professional immediately. ▶ Treat low blood glucose as recommended by your healthcare professional. ▶ If this does not match how you feel, repeat the blood glucose test. See the Testing Your Blood Glucose chapter in this user's manual.

Code	Screen Message	Possible Causes	Possible Solutions
M-52	Code chip error	The code chip is incorrect.	▶ Turn the meter off. Remove and reinsert the code chip. ▶ If you continue to receive this message, contact ACCU-CHEK Customer Care Service Center at 1-800-688-4578 to get a replacement code chip. Turn the meter off and exchange the code chip with the replacement code chip. If this does not fix the problem, contact ACCU-CHEK Customer Care Service Center at 1-800-688-4578.
M-54	Drop too small	Not enough blood or control solution was drawn into the test strip for measurement or was applied after the test has started.	Discard the test strip and repeat the test with a fresh test strip and a fresh drop of blood or control solution.

Code	Screen Message	Possible Causes	Possible Solutions
M-56	Drop applied too soon	Blood or control solution was applied to the test strip before the Apply Drop screen appeared on the meter.	Discard the test strip and repeat the test with a fresh test strip and a fresh drop of blood or control solution.
M-58	Temperature out of range	The temperature is above or below the proper range for performing a blood glucose test or a control test.	Move the meter to an area within the proper temperature range indicated for test strip use in the test strip package insert. Wait 5 minutes before turning the meter on. Repeat the test. Do not artificially heat or cool the meter.
M-63	Code chip missing	The code chip is not inserted into the meter.	Turn the meter off and insert the code chip. If you need a code chip, contact ACCU-CHEK Customer Care Service Center at 1-800-688-4578.

Warning Messages

Code	Screen Message	Possible Causes	Possible Solutions
W-75	Above hyper warning limit	Your blood glucose result is above the hyper warning limit set in the meter.	▶ Treat high blood glucose as recommended by your healthcare professional. ▶ Consider rechecking blood glucose, ketones, and insulin.
W-76	HI bG warning	Your blood glucose may be higher than the measuring range of the meter.	▶ If you are experiencing any of the common symptoms of high blood glucose, contact your healthcare professional immediately. ▶ Treat high blood glucose as recommended by your healthcare professional. ▶ Consider rechecking blood glucose, ketones, and insulin.

Code	Screen Message	Possible Causes	Possible Solutions
W-80	Below hypo warning limit	Your blood glucose result is below the hypo warning limit set in the meter.	▶ Treat low blood glucose as recommended by your healthcare professional. ▶ If bolus advice is turned on, the meter displays a recommended number of fast carbohydrates for you to eat. It is recommended you retest your blood glucose.
W-81	LO bG warning	Your blood glucose may be lower than the measuring range of the meter.	▶ If you are experiencing any of the common symptoms of low blood glucose, contact your healthcare professional immediately. ▶ Treat low blood glucose as recommended by your healthcare professional. ▶ Consider rechecking blood glucose.

Code	Screen Message	Possible Causes	Possible Solutions
W-85	Bolus advice data reset	When bolus advice is enabled, this warning is displayed when either: ▶ The logbook entries have been deleted, or ▶ An Internal clock error E-60 has occurred.	Wait 8 hours for accurate bolus advice. For additional assistance, contact ACCU-CHEK Customer Care Service Center at 1-800-688-4578.

16

Technical Information

16.1 Product Limitations

Read the literature packaged with the test strips and control solutions for the latest information on product specifications and limitations.

16.2 Specifications

Blood volume	Refer to the test strip package insert.
Sample type	Refer to the test strip package insert.
Test time	Refer to the test strip package insert.
Measurement range	Refer to the test strip package insert.
Test strip storage conditions	Refer to the test strip package insert.
Meter storage conditions	-4 °F to 122 °F
System operating conditions	Refer to the test strip package insert.

Memory capacity	2000 logbook records
Automatic power off	2 minutes
Power supply	▶ 1 custom lithium-ion rechargeable battery ▶ Power adapter: PHIHONG switching power supply Model PSC03R-050
Display	3 inch color TFT touchscreen
Dimensions	4.1 × 2.1 × 0.7 inches LWH
Weight	3.7 ounces
Construction	Hand-held

Protection class	III
Meter type	The ACCU-CHEK Aviva Insight Diabetes Manager is suitable for continuous operation.
Control solution storage conditions	Refer to the control solution package insert.
Interfaces	 USB: micro-B connector; Continua Certified® to a Continua Certified manager.

Electromagnetic Compatibility

This meter meets the electromagnetic immunity requirements as per EN ISO 15197. The chosen basis for electrostatic discharge immunity testing was basic standard IEC 61000-4-2. In addition, the meter meets the electromagnetic emissions requirements as per EN 61326. The meter's electromagnetic emission is thus low. Interference from the meter to other electrically-driven equipment is not anticipated.

Bluetooth® Wireless Technology

The meter utilizes *Bluetooth* wireless technology to communicate and transfer information. *Bluetooth* wireless technology is a form of radio frequency (RF) technology that operates in the unlicensed industrial, scientific, and medical band at 2.4 to 2.485 GHz. The RF channel utilized for communication between the meter and another device is not an open channel.

Performance Analysis

Refer to the test strip package insert.

Test Principle

Refer to the test strip package insert.

Radio Frequency Communication

The device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment complies with FCC and IC radiation exposure limits set forth for an uncontrolled environment. This equipment is in direct contact with the body of the user under normal operating conditions. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- ▶ Reorient or relocate the receiving antenna.
- ▶ Increase the separation between the equipment and receiver.
- ▶ Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- ▶ Consult the dealer or an experienced radio/TV technician for help.

Changes or modifications not expressly approved by the party responsible for compliance (i.e. the manufacturer) could void the user's authority to operate the equipment.

Declaration of Conformity

Roche Diagnostics hereby declares that the ACCU-CHEK Aviva Insight Diabetes Manager conforms with the basic requirements and other relevant regulations of the European Directive 1999/5/EC. The conformity declaration may be found at the following Internet address: <http://declarations.accu-chek.com>

16.3 Product Safety Information



WARNING

- ▶ Choking hazard. Small parts. Keep away from children under the age of 3 years.
- ▶ Strong electromagnetic fields may interfere with the proper operation of the meter. Do not use the meter close to sources of strong electromagnetic radiation.
- ▶ To avoid electrostatic discharge, do not use the meter in a very dry environment, especially one in which synthetic materials are present.

16.4 Discarding the Meter, Test Strips, Lancing Devices, Lancets, and Batteries

WARNING

- ▶ Any product coming in contact with blood is considered contaminated (potentially infectious).*
- ▶ During normal testing, any blood glucose meter may come in contact with blood.
- ▶ Lancing devices may also be considered sharps. Disposal of sharps is regulated by law in many jurisdictions.

Consider recycling the meters and batteries at an appropriate facility. Be aware the meter is potentially hazardous electronics scrap (e-scrap) and should be disposed of accordingly. The batteries are potentially hazardous also and should be discarded accordingly.

Disinfect the meter before recycling or discarding.

Users in professional environments (i.e., healthcare professionals) should follow their existing policies and procedures that govern the proper handling and disposal of potentially infectious waste, e-scrap, and batteries.

*29 CFR 1910.1030 – Bloodborne pathogens

Roche is committed to recycling and sustainability. Comply with any laws or ordinances relating to the disposal of sharps and/or contaminated products. Contact your local health department or other appropriate authorities for proper handling and disposal of used meters, used test strips, used lancets, and used batteries. Consider the following points when discarding used testing materials:

Explanation of Symbols

These symbols may appear on the packaging, on the type plate, and in the user's manual for the meter.

	Caution, refer to safety-related notes in the instructions for use accompanying this product.
Rx only	Federal law (USA) restricts this device to sale by or on the order of a physician per 21 CFR 801.109.*
	Custom lithium-ion rechargeable battery

* Code of Federal Regulations

16.5 List of Icons

The icons and icon names in the meter are:

Icon Name	Icon	Icon Name	Icon
About or Information		All	
Active		Analyzing	
Active Insulin		Background Color	
Add Data		Backspace (Keyboard)	
Advice Options (Bolus Advice)		Basal Insulin	
After Meal		Basal Insulin Locked	

Icon Name	Icon	Icon Name	Icon
Battery (Power Level)		bG or bG Test	
Battery Charging (Empty)		bG Value Range Above	
Battery Charging (Full)		bG Value Range Hypo	
Battery Charging (Partial)		bG Value Range Low	
Bedtime		bG Value Range Normal	
Before Meal		Bolus	
bG Averages		Bolus Advice	

Icon Name	Icon
Bolus Advice Accepted	
Bolus Advice Not Accepted	
Bolus Advice Setting	
Bolus Locked	
Bolus Menu	
Cancel	
Capital Letters (Keyboard)	

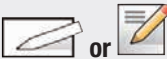
Icon Name	Icon
Carbohydrate Unit	
Carbohydrates	
Carbohydrates Accepted	
Carbohydrates Locked	
Carbohydrates Not Accepted	
Chart	
Communication or Radio Connection	

Icon Name	Icon
Connect to PC	
Control Test	
Data	
Date and Time	
Delete	
Device Connect	
Device Settings	

Icon Name	Icon
Devices	
Display Brightness	
Done	
Edit Name	
Error	
Error Log	
Exercise 1	

Icon Name	Icon	Icon Name	Icon
Exercise 2		Health Event (Custom)	
Fasting		Health Event Locked	
Flight Mode		Help	
Flight Mode (Turn Off)		Home Screen	
Flight Mode (Turn On)		Illness	
Graph		Insulin	
Health Event		Insulin Increment	

Icon Name	Icon	Icon Name	Icon
Language		Max Bolus	
Locked		Meal	
Logbook		Meal Time	
Logbook Locked		Meal Time Locked	
Main Menu		Meter	
Maintenance Message		Meter Function Test	
Manage Devices (Pairings)		Meter Information	

Icon Name	Icon	Icon Name	Icon
Mode Setting		PC (Computer)	
My Data		Pen / Syringe (Bolus)	
No Entry (Meal Time)		Play Tone	
Note		Premenstrual	
Note Locked		Quick Notes	
Other (Meal Time)		Radio Connection	
Pair (New)		Reminder	

Icon Name	Icon	Icon Name	Icon
Reset Timeblocks		Standard Day	
RF (Radio Frequency) Signal		Standard Week	
Save		Status Screen	
Setup Mode		Stress	
Snack		System Settings	
Sound (Volume)		Table	
Sound and Vibrate		Target Data	

Icon Name	Icon
Temperature	
Time Scale	
Timeblock Settings	
Touchscreen Calibration	
Touchscreen Settings	
Trend Graph	
Vibrate	

Icon Name	Icon
Warning	
Warning Limits	

16.6 Warranty and Limited License

ACCU-CHEK Aviva Insight Meter Limited 4-Year Warranty

Roche Health Solutions Inc. ("Roche"), a member of the Roche Group, warrants to the original purchaser of the meter that your ACCU-CHEK Aviva Insight meter will be free from defects in materials and workmanship for 4 years from the date of purchase. If during this 4-year period, the meter does not work properly because of a defect in materials or workmanship, Roche will replace it with a new ACCU-CHEK Aviva Insight meter or equivalent product free of charge. The warranty on the replacement meter will expire on the date of the original warranty expiration or 90 days after the shipment of a replacement system, whichever period is longer. The purchaser's exclusive remedy with respect to the ACCU-CHEK Aviva Insight meter shall be replacement.

This warranty does not apply to the performance of an ACCU-CHEK Aviva Insight meter that has been damaged by accident or has been altered, misused, tampered with, or abused in any way.

THE PRECEDING WARRANTY IS EXCLUSIVE OF ALL OTHER WARRANTIES, AND ROCHE MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION, THE IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT SHALL ROCHE BE LIABLE TO THE PURCHASER OR ANY OTHER PERSON FOR ANY INCIDENTAL, CONSEQUENTIAL, INDIRECT, SPECIAL, OR PUNITIVE DAMAGES ARISING FROM OR IN ANY WAY CONNECTED WITH THE PURCHASE OR OPERATION OF THE METER OR ITS PARTS. NO WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE IF ANY IS IMPLIED FROM THE SALE OF THE METER, SHALL EXTEND FOR A LONGER DURATION THAN FOUR YEARS FROM THE DATE OF PURCHASE.

Some states do not allow limitations on how long an implied warranty will last or the exclusion of incidental or consequential damages, so the above limitation and exclusion may not apply to you. This warranty gives you specific legal rights, which vary from state to state.

Warranty Instructions

All requests for return of ACCU-CHEK Aviva Insight meters under the preceding warranty must be made to ACCU-CHEK Customer Care Service Center. You will be mailed a return authorization label, which must be affixed to your carton for shipping the system to Roche. Cartons received without this label will be returned to you at your expense.

Customers experiencing difficulties should review the troubleshooting information in the **Troubleshooting** chapter in this user's manual. Further inquiries should be directed to ACCU-CHEK customer Care Service Center at 1-800-688-4578.

Be sure to fill out and mail the Warranty Card that comes with the ACCU-CHEK Aviva Insight meter.

Limited License



CAUTION

A RESTRICTED LICENSE LIMITS USE OF THE ACCU-CHEK AVIVA INSIGHT SYSTEM--READ CAREFULLY THE LIMITATIONS RECITED BELOW.

The ACCU-CHEK Aviva Insight system (meter, including the code key, and test strips) and its use are protected by US Patent Nos. 6,645,368 (expires 22-December-2017); 7,276,146 (expires 4-October-2022); 7,276,147 (expires 4-October-2022); 7,407,811 (expires 9-May-2020); 7,452,457 (expires 2-May-2026); 7,488,601 (expires 1-February-2026); 7,494,816 (expires 29-December-2019); 7,569,126 (expires 28-December-2026); 7,604,721 (expires 12-August-2026); 8,298,401 (expires 4-October-2022); 8,303,801 (expires 4-October-2022); and 8,329,026 (expires 4-October-2022). A license to use the ACCU-CHEK Aviva Insight system is required until the expiration of the last-to-expire patent listed above and is only granted when the ACCU-CHEK Aviva Insight meter is used with the ACCU-CHEK Aviva test strips and ACCU-CHEK Aviva code keys.

ACCU-CHEK Aviva test strips are provided with a specifically matched ACCU-CHEK Aviva code key. These test strips and code keys are specifically manufactured for operation with the ACCU-CHEK Aviva Insight meter. Use of other test strips with an unmatched code key or even with the matches code key supplied by another manufacturer may prevent or impair the proper function of the ACCU-CHEK Aviva Insight system.

Using the ACCU-CHEK Aviva Insight system indicates your acceptance of the restricted license to use the ACCU-CHEK Aviva Insight system only with the ACCU-CHEK Aviva test strips and the corresponding ACCU-CHEK Aviva code key. If you do not agree to the terms and conditions of th restricted license, you may return, at the place of purchase, the unused ACCU-CHEK Aviva Insight system for a full refund. If you have any questions, please call the ACCU-CHEK Customer Care Service Center at 1-800-688-4578.

Except where prohibited by statute, all warranties covering the ACCU-CHEK Aviva Insight system are voided by the use of the ACCU-CHEK Aviva Insight system with any test strips or code keys other than the ACCU-CHEK Aviva test strips or code keys.

Patent Information

US Pat.: <http://www.roche-diagnostics.us/patents>

CAUTION

A RESTRICTED LICENSE LIMITS USE OF THE ACCU-CHEK FASTCLIX SYSTEM (device and lancet drums). READ CAREFULLY THE LIMITATIONS RECITED BELOW.

The ACCU-CHEK FastClix system (device and lancet drums) and its use are protected by U.S. Patent Nos. 7,322,998 (expires 3-March-2020) and 7,785,338 (expires 5-January-2026). A license to use the ACCU-CHEK FastClix system is required until the expiration of the last-to-expire patent listed above and is only granted when ACCU-CHEK FastClix lancet drums are used with the ACCU-CHEK FastClix device.

ACCU-CHEK FastClix lancet drums are high precision components that are produced to the close tolerances required for satisfactory operation with the ACCU-CHEK FastClix device. Use of other lancet drums with the ACCU-CHEK FastClix device may prevent or impair proper function of the ACCU-CHEK FastClix device.

Using the ACCU-CHEK FastClix device indicates your acceptance of the restricted license to use the ACCU-CHEK FastClix device only with the ACCU-CHEK FastClix lancet drums. If you do not agree to the terms and conditions of the restricted license, you may return, at the place of purchase, the unused ACCU-CHEK FastClix device for a full refund. If you have any questions, please call the ACCU-CHEK Customer Care Service Center at 1-800-688-4578.

Except where prohibited by statute, all warranties covering the ACCU-CHEK FastClix device are voided by the use of the ACCU-CHEK FastClix device with any lancet drums other than ACCU-CHEK FastClix lancet drums.

16.7 Additional Supplies

Test Strips: ACCU-CHEK Aviva test strips

Control Solutions: ACCU-CHEK Aviva control solutions

16.8 Information for Healthcare Professionals

WARNING

Healthcare Professionals: Follow the infection control procedures appropriate for your facility. Refer to the test strip package insert for additional healthcare professional information.

Sample Handling

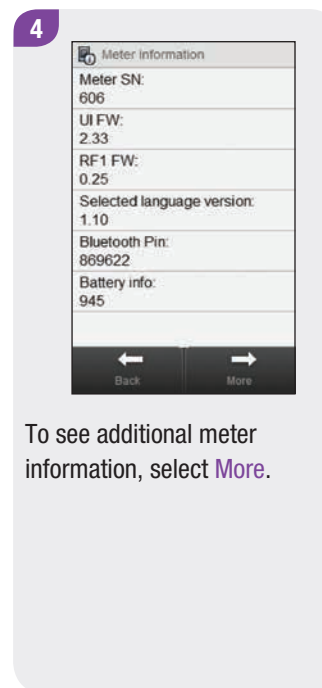
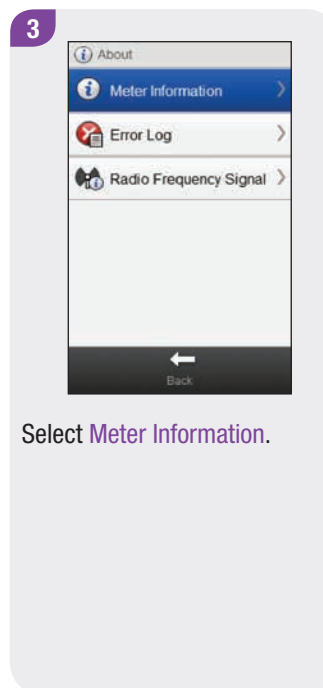
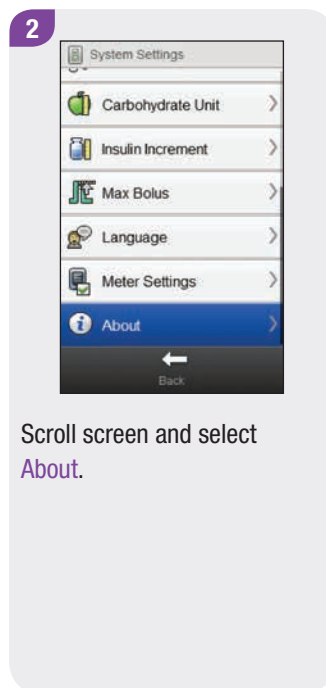
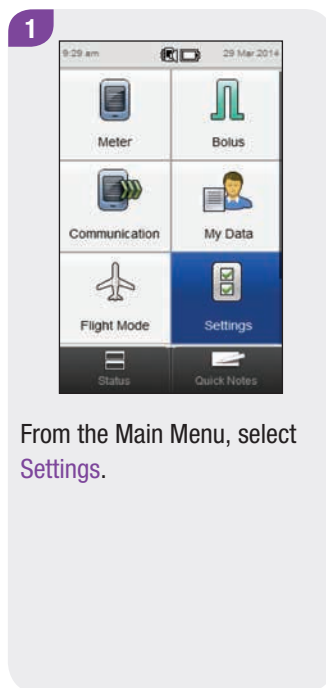
Always wear gloves when handling blood-contaminated items. Always adhere to the recognized procedures for handling objects that are potentially contaminated with human material. Follow the hygiene and safety policy of your laboratory or institution. Prepare the selected blood collection site per facility policy.

Refer to the test strip package insert for additional information regarding acceptable sample types, anticoagulants, and handling instructions.

16.9 Meter Information

This information is primarily for technical support purposes and may be requested by support personnel.

Main Menu > Settings > About > Meter Information

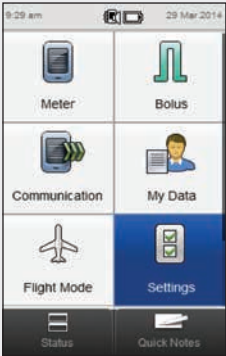


16.10 Error Log

The **Error Log** screen displays up to the last 50 Errors and Maintenance messages starting with the most recent entry.

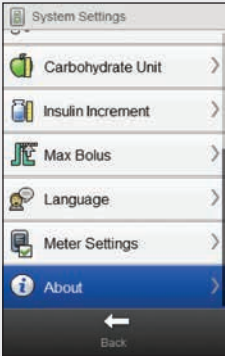
Main Menu > Settings > About > Error Log

1



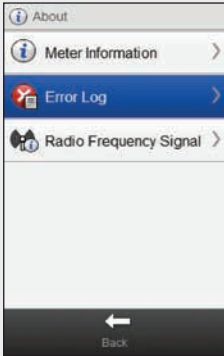
From the Main Menu, select **Settings**.

2



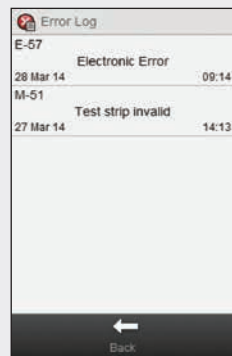
Scroll the screen and select **About**.

3



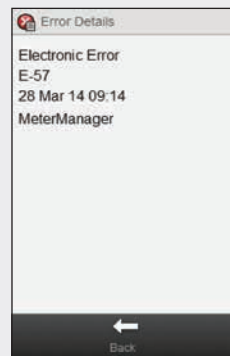
Select **Error Log**.

4



Error Log		
E-57	Electronic Error	
28 Mar 14		09:14
M-51	Test strip invalid	
27 Mar 14		14:13

Scroll to view all **Error Log** records. Select an **Error Log** record to see its details.



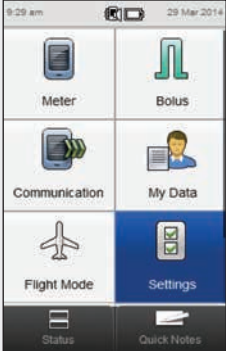
Error Details	
Electronic Error	
E-57	
28 Mar 14 09:14	
MeterManager	

16.11 Radio Frequency (RF) Signal

This information is primarily for technical support purposes and may be requested by support personnel.

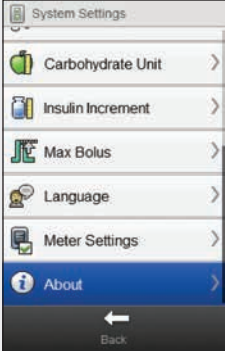
Main Menu > Settings > About > Radio Frequency Signal

1



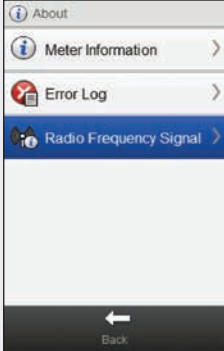
From the Main Menu, select **Settings**.

2



Scroll the screen and select **About**.

3

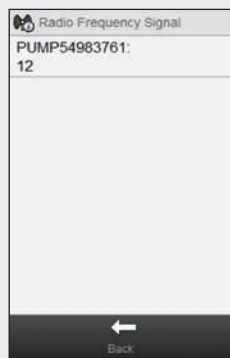


Select **Radio Frequency Signal**.

NOTE

If the meter is not paired to a device, the **Radio Frequency Signal** button is disabled.





The names of the radio frequency devices with the radio frequency signal strength of each are displayed.

16.12 Meter Range Limits and Defaults

Data Type	Unit of Measurement	MIN	MAX	Increments	Default Setting
Acting Time	HH:MM	01:30	08:00	00:15	04:00
After High bG Reminder Duration (Remind after)	HH:MM	01:00	06:00	00:15	04:00
After Low bG Reminder Duration (Remind after)	HH:MM	00:05	00:30	00:05	00:15
After Meal Test Reminder Duration (Remind after)	HH:MM	01:00	04:00	00:15	02:00
Basal Insulin	U	0	99	Insulin Increment	0
bG Result	mg/dL	10	600	1	No Entry (- - mg/dL)

Data Type	Unit of Measurement	MIN	MAX	Increments	Default Setting
bG Threshold (After High bG Reminder)	mg/dL	100	350	1	Hyper Warning Limit
bG Threshold (After Low bG Reminder)	mg/dL	50	100	1	Hypo Warning Limit
Bolus Insulin	U	0	25	Insulin Increment	0
Carb Ratio (carbs)	grams	1	240	1	No Entry (- - - g)
	BE	0.1	20	0.1	No Entry (- - - BE)
	KE	0.1	24	0.1	No Entry (- - - KE)
	CC	0.1	16	0.1	No Entry (- - - CC)
Carb Ratio (insulin)	U	0.1	50	0.1	1
Carbohydrates	grams	0	240	1	No Entry (- - - g)
	BE	0	20	0.1	No Entry (- - - BE)
	KE	0	24	0.1	No Entry (- - - KE)
	CC	0	16	0.1	No Entry (- - - CC)

Data Type	Unit of Measurement	MIN	MAX	Increments	Default Setting
Control Result	mg/dL	10	600	1	No Entry (- - mg/dL)
Customized 1, 2, and 3 (health event)	%	-50	50	1	0
Exercise 1 (health event)	%	-50	50	1	0
Exercise 2 (health event)	%	-50	50	1	0
Hyper Warning Limit	mg/dL	180	350	1	300
Hypo Warning Limit	mg/dL	50	90	1	70
Illness (health event)	%	-50	50	1	0
Insulin Increment*	U	0.5	1		1

*The insulin increment is used when entering bolus and basal insulin data.

Data Type	Unit of Measurement	MIN	MAX	Increments	Default Setting
Insulin Sensitivity (bG)	mg/dL	1	999	1	No Entry (- - - mg/dL)
Insulin Sensitivity (insulin)	U	0.1	50	0.1	1
Lower value (Target Range)	mg/dL	50	140	1	70
Max Bolus	U	0	25	1 or 0.5 (per the insulin increment value)	No Entry (- - - U)
Meal Rise (bG)	mg/dL	30	200	1	50
Offset Time	HH:MM	00:45	Acting Time	00:15	01:00
Premenstrual (health event)	%	-50	50	1	0

Data Type	Unit of Measurement	MIN	MAX	Increments	Default Setting
Snack Size (carbs)	grams	0	24	1	No Entry (- - - g)
	BE	0	2.0	0.1	No Entry (- - - BE)
	KE	0	2.4	0.1	No Entry (- - - KE)
	CC	0	1.6	0.1	No Entry (- - - CC)
Stress (health event)	%	-50	50	1	0
Upper value (Target Range)	mg/dL	100	300	1	140

Appendix A: Bolus Advice Overview

Bolus Calculation

The bolus recommended by the bolus advice feature of the meter consists of two components: a recommendation for a carbohydrate bolus that covers your food intake and a recommendation for a correction bolus to adjust your blood glucose level if it is not within the target range. The correction bolus can be positive if your current blood glucose level is above your target range or negative if it is below your target range.

Carbohydrate Bolus

A carbohydrate bolus is the amount of insulin that needs to be administered to cover the amount of carbohydrates you are planning to eat. It is calculated as:

Carbohydrate Bolus = Carbohydrate Intake x Carbohydrate Ratio

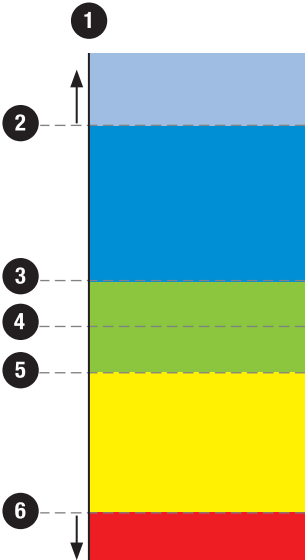
Where:

Carbohydrate Ratio = Insulin ÷ Carbohydrates

Correction Bolus

If your current blood glucose level is not within your target range, a correction bolus is recommended.

Blood Glucose Limits



- 1. bG Result
- 2. Hyper Warning
- 3. Upper Target Limit
- 4. Target
- 5. Lower Target Limit
- 6. Hypo Warning

Discuss your blood glucose limits with your healthcare professional.

The calculation for the recommended correction bolus depends on your current blood glucose result, your insulin sensitivity for the current time block, and whether you are planning to eat. Health event percentages are applied to the bolus advice recommendation.

Example Bolus Advice Calculations

Blood Glucose Level	Without Food Intake (No Carbohydrates)	Prior to a Meal
Above Upper Target Limit	$(bG - \text{Target } bG) \times \text{Insulin Sensitivity}$	$(bG - \text{Target } bG) \times \text{Insulin Sensitivity} + \text{Carbohydrate Bolus}$
Between Upper and Lower Target Limit	No correction bolus is necessary.	$(bG - \text{Target } bG) \times \text{Insulin Sensitivity} + \text{Carbohydrate Bolus}$. A correction bolus can be negative.
Between Lower Target Limit and Hypo Warning	No bolus recommended. The correction bolus is negative.	$(bG - \text{Target } bG) \times \text{Insulin Sensitivity} + \text{Carbohydrate Bolus}$. The correction bolus is negative.
Below Hypo Warning	Hypo warning appears. It is recommended you eat fast-acting carbohydrates. Bolus advice is not available.	Hypo warning appears. It is recommended you eat fast-acting carbohydrates. Bolus advice is not available.

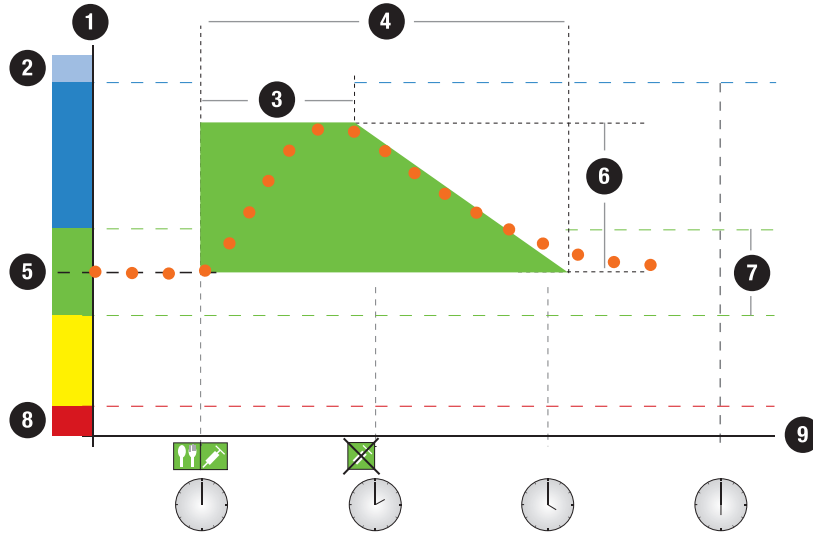
Other Boluses

Subsequent Carbohydrate Boluses

If you are planning to eat several meals or snacks in a short period of time, you should administer a carbohydrate bolus for each meal. The calculation is always the same as a carbohydrate bolus.

Correction Bolus After a Meal

After a meal, it is normal to allow for a rise of your blood glucose level even if you administered the correct carbohydrate bolus. The allowed blood glucose level rise is called meal rise. After a certain period of time (offset time) the meal rise decreases from its maximum until your blood glucose level has returned to the target level. The period of time from the start of the meal rise until your blood glucose level returns to the target level is defined as acting time. During this time, a correction bolus is only recommended if your blood glucose level exceeds the current meal rise level.



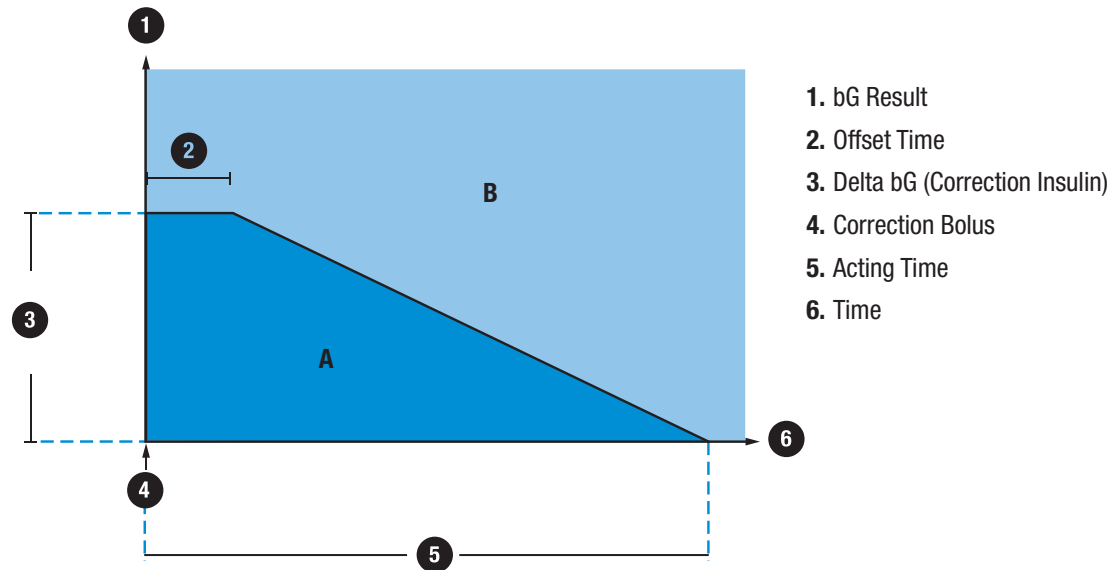
- ● ● Current bG Values
-  Meal
-  Bolus
-  Bolus Not Required
-  Currently Allowed bG Value: Meal Rise

1. bG Level
2. Hyper
3. Offset Time
4. Acting Time
5. Target Value
6. Meal Rise
7. Target Range
8. Hypo
9. Time

The dotted line shows how your blood glucose level might change after a carbohydrate bolus. Bolus advice tolerates an increase in your blood glucose level within the meal rise range (green) without calculating an extra correction bolus. When you enter a carbohydrate amount that is greater than the snack size, the meal rise setting is added to the blood glucose target value. The shape of the meal rise (the width of the green area) is determined by the offset time and the acting time.

Subsequent Correction Boluses

The difference between your current blood glucose level and your target blood glucose level is called Delta bG. A correction bolus administered according to the previous conditions covers this difference for a certain period of time. As the correction bolus starts to take effect, your current blood glucose level should fall and the covered Delta bG decreases after the offset time. At the end of the acting time, your blood glucose level should return to the target limit. You receive a recommendation for another correction bolus only if your current blood glucose result exceeds the current Delta bG level.



Subsequent Correction Boluses: If your blood glucose result is within Section A of the graph, a correction bolus is not recommended. If your blood glucose result is within Section B of the graph, a correction bolus is recommended.

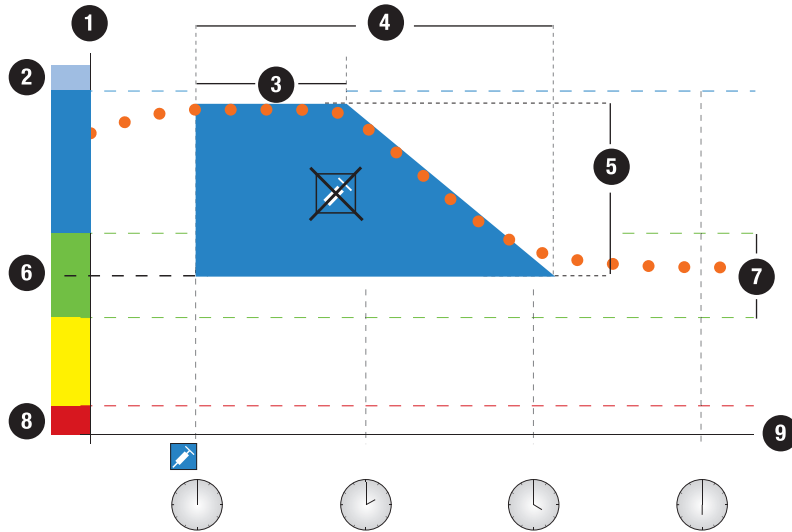
Examples of Bolus Advice Recommendations

The following graphs provide differing examples of how bolus advice considers different factors when calculations are made.

The currently allowed blood glucose value considers the following factors:

- ▶ Target Range Mean Value
- ▶ Meal Rise
- ▶ Correction Bolus

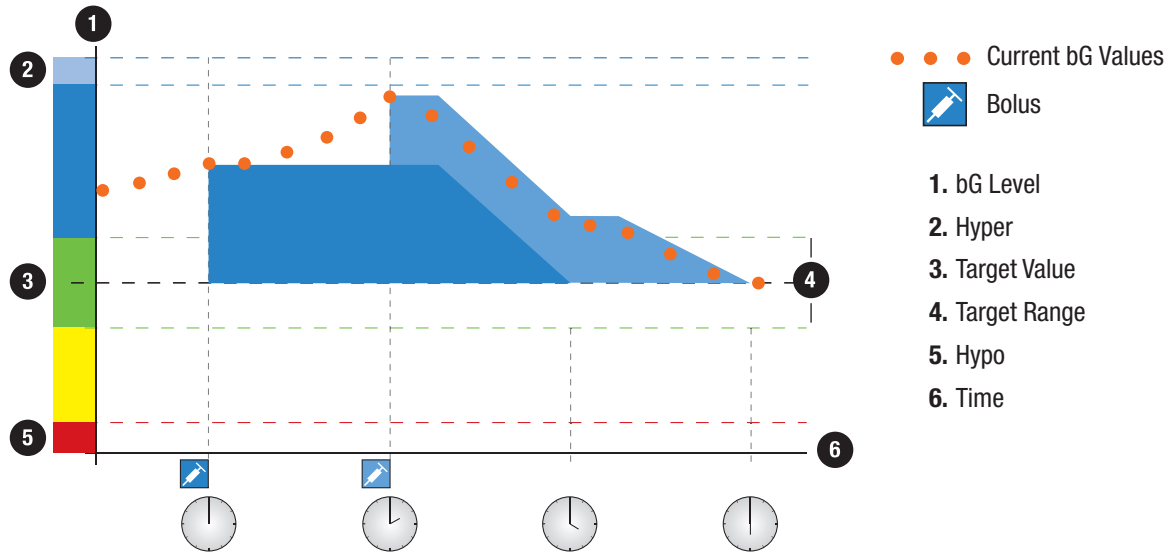
After a Correction Bolus



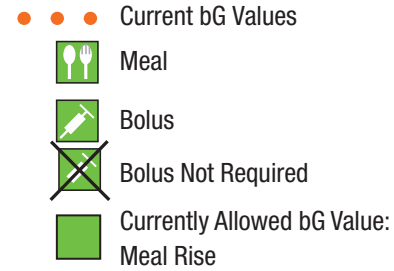
The above diagram shows an example of the effect of this rule. The first correction bolus at 12:00 pm remains active during the acting time (the width of the blue area). If the blood glucose value at 2:00 pm falls below the currently allowed blood glucose value (top of the blue area), another correction bolus is not calculated.

- ● ● Current bG Values
-  Bolus
-  Bolus Not Required
-  Currently Allowed bG Value: Corrected bG

1. bG Level
2. Hyper
3. Offset Time
4. Acting Time
5. Corrected bG
6. Target Value
7. Target Range
8. Hypo
9. Time



When a blood glucose result is greater than the currently allowed blood glucose value, a bolus is calculated (light blue) that only considers the difference between the current blood glucose value (orange dots) and the currently allowed blood glucose value (the top of the blue area).



- ● Current bG Values

 Meal Bolus Bolus Not Required

Currently Allowed bG Value:
Meal Rise

Appendix B: Bolus Advice Calculations

The Mathematical Basis for Bolus Calculations

The following is a list of the most important formulas and the calculation principles on which bolus advice is based. It is difficult to accurately calculate a bolus yourself using these formulas when the acting time and offset time of recent meals and correction boluses are considered.

Carbohydrate Advice

This calculation is made when the blood glucose result falls below the hypo warning limit. It is based on the other values defined for the current time block and the result is calculated as a carbohydrate intake recommendation.

**Carbohydrates = (Target Range Mean Value – Current bG)
x Insulin Sensitivity ÷ Carbohydrate Ratio**

Where:

Insulin Sensitivity = Insulin ÷ ΔbG

Carbohydrate Ratio = Insulin ÷ Carbohydrates

NOTE

- ▶ A minimum amount of 12 g (or equivalent BE, KE, or CC units) is always given. If the calculated value is below 12 g, then 12 g is used.
- ▶ The carbohydrate advice is displayed in the carbohydrate unit of measure you have selected (g, BE, KE, or CC).



Carbohydrate Bolus

The following formula is used to calculate the bolus for meals:

Carbohydrate Bolus = Carbohydrate Intake x Carbohydrate Ratio

Where:

Carbohydrate Ratio = Insulin ÷ Carbohydrates

Currently Allowed Blood Glucose Value

The target range average value used in the calculation of the correction bolus, as shown below, changes with the definition for the time blocks.

Consequently, the currently allowed blood glucose value is calculated as follows:

Currently Allowed Blood Glucose Value = Target Range Mean Value + Meal Rise + Sum of Blood Glucose Range Covered by Correction Bolus

Where:

Meal Rise is from the current active meal

Sum of Blood Glucose Range Covered by Correction Bolus from currently acting correction boluses

When no meal rise or correction bolus acting time is currently in effect, a value of “0” is substituted for these parameters in the formula.

Correction Bolus

Generally, a correction bolus is only calculated if the current blood glucose value is above the hypo bG warning limit and outside the target range. If the current blood glucose value is above the target range, the currently allowed blood glucose value must also be exceeded. Only correction boluses greater than “0” trigger a corresponding acting time.

**Correction Bolus = (Current bG – Currently Allowed bG)
x Insulin Sensitivity**

Where:

$\text{Insulin Sensitivity} = \text{Insulin} \div \Delta\text{bG}$

The blood glucose correction portion depends on the following requirements:

- ▶ If current bG > currently allowed blood glucose value, then blood glucose correction portion = current bG – currently allowed blood glucose value
- ▶ If current bG > hypo warning limit and current bG < target range lower limit, then bG correction portion = current bG – target range average value

Correction Bolus with Carbohydrate Intake

Whenever carbohydrates have been entered, the related carbohydrate bolus is always offset against any (even negative) correction bolus.

When a meal is eaten, the correction bolus is also calculated for blood glucose results that fall within the target range if:

- ▶ The current blood glucose result falls below the target range average value, or
- ▶ The current blood glucose result is above the currently allowed blood glucose value.

Mathematically negative overall boluses are displayed as “0”.

Active Insulin

A calculated value representing the effective amount of insulin currently in the body that is working to lower blood glucose. This amount does not include any insulin that is working to account for carbohydrate intake. It also does not include basal insulin.

Glossary

Term	Definition
Acting time	The period of time from the start of a bolus until your blood glucose level is expected to return to the target level.
Active Insulin	A calculated value representing the effective amount of insulin currently in the body that is working to lower blood glucose. This amount does not include any insulin that is working to account for carbohydrate intake. It also does not include basal insulin.
Advice options	Factors that influence bolus advice recommendations including meal rise, snack size, acting time, and offset time.
After high bG reminder	A reminder to retest your blood glucose. When enabled, this reminder occurs after a high blood glucose result.
After low bG reminder	A reminder to retest your blood glucose. When enabled, this reminder occurs after a low blood glucose result.
After meal reminder	A reminder to retest your blood glucose. When enabled, this reminder occurs after a meal. For this reminder to occur, you must enter the meal time of a bG test as before meal.
Alarm	Audible or vibrating (silent) notification indicating a reminder, warning, error, or maintenance message.
am	Ante Meridiem (12-hour clock notation for “before noon”)
Basal rate	The amount of insulin delivered per hour that is required to cover your basal, meal-independent insulin needs.

Term	Definition
BE	Bread Equivalent
bG test reminders	Reminders to retest your blood glucose after a high blood glucose result, after a low blood glucose result, or after a meal.
bG threshold	A bG test reminder setting; the upper limit is for your blood glucose for a high bG test reminder and the lower limit is for your blood glucose for a low bG test reminder.
Blood glucose (bG)	The level of glucose (sugar) in blood.
<i>Bluetooth</i> Wireless Technology	Wireless short-range communications technology which connects devices in order to exchange information.
Bolus	The amount of insulin delivered (in addition to the basal rate) to cover the intake of food and to correct high blood glucose levels. The bolus amount is determined by your doctor or healthcare team's guidelines, your blood glucose level, your food intake, your activity level, and other factors.
Bolus advice	When enabled, bolus advice provides a suggestion for how much insulin should be delivered for a meal and / or to correct for a blood glucose level.
°C	Degrees Celsius (or Centigrade)
Carbohydrate (or Carb) ratio	The amount of insulin necessary to account for a certain amount of carbohydrates.
Carbohydrates (or Carbs)	Carbohydrates include sugars and starches. Carbohydrates can increase blood glucose levels slowly or rapidly. Carbohydrates are generally counted to calculate a bolus insulin dose.

Term	Definition
CC	Carbohydrate Choice
Control result	Value displayed on meter as the result of a control test. When the control result is within the range shown on the label of the test strip container, the test strips and the meter are working properly.
Control test	A meter test using control solution which lets you know that the meter and test strips are working properly.
Corrupt result	A historical result that cannot be displayed by the meter because of an error.
Current time	The time you set through the Settings menu and then in the Date and Time screen.
Default	The initial settings on the meter before you change or customize them.
Discovery mode	When your meter is “discoverable,” other <i>Bluetooth</i> devices can detect it, pair with it, or connect to it.
Dismiss	Ends a reminder.
End time	The end time of a time block.
°F	Degrees Fahrenheit
FCC	Federal Communications Commission (United States)
Flight mode	This setting disables all wireless communication on the meter to comply with regulations on air travel.

Term	Definition
g	Grams
GHz	Gigahertz
Health event	Information about your current health status or activities (Exercise 1, Exercise 2, Stress, Illness, Premenstrual, or Customized). Up to 4 health events can be selected and stored with a blood glucose result. Each status or activity (health event) accounts for a certain percentage according to your settings and is used to adjust bolus advice recommendations.
HI	Appears on the meter's screen when the test result is above the meter's measurement range.
Hyper	Hyperglycemia: A condition that occurs when the blood glucose level is too high.
Hyper warning limit	A limit set in the meter. When your blood glucose result is above the hyper warning limit, a warning is displayed. The hyper warning limit should be provided by or discussed with your healthcare professional.
Hypo	Hypoglycemia: A condition that occurs when the blood glucose level is too low.
Hypo warning limit	A limit set in the meter. When your blood glucose result is below the hypo warning limit, a warning is displayed. The hypo warning limit should be provided by or discussed with your healthcare professional.
IC	Industry Canada
Insulin increment	The amount in units (U) by which your insulin dose is adjusted when programming a bolus or when entering a manual Logbook entry.

Term	Definition
Insulin sensitivity	The amount of insulin necessary to lower your blood glucose by a certain amount.
ISO	International Organization for Standardization
KE	Kohlenhydrateinheit (carbohydrate unit)
Lanyard	A cord worn around the wrist or neck to carry an object.
LCD	Liquid Crystal Display
LO	Appears on the meter's screen when the test result is below the meter's measurement range.
Max bolus	Max bolus serves as a safety measure against unintended large boluses. It is a meter setting that specifies a maximum amount of insulin that can be delivered in any single bolus. A bolus that is larger than the max bolus amount requires an additional confirmation.
Meal rise	The increase in blood glucose levels during or after meals that is considered normal within a certain range, even though a bolus has been delivered.
Meal time	Information about the time point of a blood glucose result (before meal, after meal, bedtime, fasting, or other). It can be selected from a pop-up menu and is stored with a blood glucose result.
Meter	Blood glucose meter.
mg/dL	Milligrams per deciliter

Term	Definition
Note	Additional information.
Offset time	The amount of time before the insulin begins to lower blood glucose levels.
Paired	Meter and another device exclusively communicate and transfer information with each other when they are paired.
Pen/syringe bolus	A bolus delivered using a pen or syringe.
PIN	Personal Identification Number
pm	Post Meridiem (12-hour clock notation for “after noon”)
Quick Notes	A logbook entry that can quickly be saved from the Main Menu or Status screen.
Remind after	A bG test reminder setting. The amount of time after a high blood glucose result, after a low blood glucose result, or after a meal you want the reminder to occur.
Reminder	When enabled, reminders occur to remind you to test your blood glucose, to retest your blood glucose, or of an event or activity.
RF	Radio Frequency
SD	Standard Deviation
Signal Suspension	Suspends meter signals until the suspension period ends or the meter is turned on.

Term	Definition
Snack size	The snack size defines a threshold of carbohydrates above which a meal rise is triggered.
Snooze	Reschedules a reminder to reoccur in a preset amount of time (for example, in 5 minutes).
Standard deviation	As it is used in this user's manual, standard deviation measures how widely spread the bG results are (e.g., if the bG results are close to the bG average, then the standard deviation is small).
Start time	The start time of a time block.
Target range	The desired upper and lower limits of your blood glucose level considered acceptable when fasting or before a meal as set by your healthcare professional.
Test strip	A plastic strip coated with chemicals that, when inserted into a meter, reacts with a blood drop to deliver a blood glucose reading.
Time block	One of up to 8 time periods within one day.
Time scale	The user sets the duration of time. There is a start and end time.
Touchscreen	A screen that can be touched to interact with the device.
U	Units (insulin units)
USB	Universal Serial Bus
Warning	Describes items and conditions that present hazards and may cause personal injury.

Term	Definition
Warning limit	See Hyper Warning Limit or Hypo Warning Limit.

Index

A

acting time
 description 55
 setting 49, 108, 136
active insulin 97, 348
advice options 49, 55, 136

B

basal insulin, set amount 74, 95, 223, 228
battery
 changing 273
 charging 36
 power-saving tips 22
battery door 14, 274
bG averages table 258
blood glucose result
 adding information 73
 detailed result 72, 73
 screen 71
 status bar descriptions 80
 understanding blood glucose results 79
 unusual blood glucose results 83
blood glucose testing 67

blue text 11
Bluetooth wireless technology 301
bolus advice
 adding a time block 113
 advice options 49, 55, 136
 deleting time blocks 119
 delivering a bolus 91
 overview 53, 87
 resetting all time blocks 128
 setting up 46, 103
 time block settings 109
 turning off 138
bolus advice calculations
 carbohydrate advice 344
 carbohydrate bolus 331, 345
 correction bolus 332, 347
 correction bolus with carbohydrate intake 348
 currently allowed blood glucose value 346
 examples 333
bolus delivery
 with bolus advice 91
 without bolus advice 76

C

- carbohydrate
 - set amount 74, 95, 222, 226
 - unit description 50
 - unit setting 45, 178
- carbohydrate ratio
 - description 53
 - setting 47, 105, 107, 112, 116, 118, 123, 127, 130, 132
- charging the battery 36
- cleaning and disinfecting 261
- code chip 14, 60, 69
- connecting meter to a PC with USB cable 204
- Continua Certified manager 179, 300
- control solution 58, 60
- control solution bottle 15
- control test
 - out-of-range results 63
 - performing 59
 - result 62
- correction bolus after a meal 334
- countdown timer 98

D

- date and time 44, 141
- display
 - setting background color 149
 - setting brightness 148
 - timeout 22
 - troubleshooting 282

E

- error log 322
- error messages, troubleshooting 288

F

- flight mode 210, 211
- function test 278

H

- healthcare professionals 320
- health events
 - choose health event 74, 95, 222, 227
 - description 54
 - setting percentages 48, 108, 134
- HI 82
- high blood glucose symptoms 85
- home screen
 - description 16
 - set as main menu or status screen 146
- hyperglycemia symptoms 85
- hyper warning limit 45, 173
- hypoglycemia symptoms 85
- hypo warning limit 45, 173

I

- icon list 218, 307
- information messages, troubleshooting 289
- insulin increment
 - description 51
 - setting 45, 175
- insulin sensitivity
 - description 54
 - setting 47, 105, 107, 112, 116, 118, 123, 127, 130, 132

K

- keyboard 28

L

- lancing device, cleaning and disinfecting 267
- language 44, 150
- lanyard attachment point 13
- limited license 317
- LO 82
- logbook
 - adding new data 225
 - adjusting data 220
 - description 214
 - record description 214
 - viewing data 220
- low blood glucose symptoms 85

M

- main menu screen 17, 146
- maintenance messages, troubleshooting 293
- maintenance, meter 271

- max bolus
 - description 51
 - setting 45, 176
- meal rise
 - description 55
 - setting 49, 108, 136
- meal time 74, 95, 222, 226, 237
- memory expansion port 13
- meter
 - cleaning and disinfecting 263
 - discarding 305
 - function test 278
 - information for technical support 321
 - maintenance 271
 - range limits and defaults 328
 - reset 21
 - safety information 304
 - specifications 299
 - summary of features 12, 33
 - troubleshooting 281
 - turning on or off 13, 21
- micro USB connector 13
- mode settings
 - signal suspension 144
 - sound and vibration 142
- my data 213

N

- navigation 24
- note, description 11

O

- offset time
 - description 55
 - setting 49, 108, 136

P

- patent information 319
- pen/syringe bolus 78, 100
- power button 13, 21, 43
- power-saving tips 272
- product limitations 299
- purple text 11

R

- radio frequency signal 302, 324
- reminders
 - after high blood glucose test 180, 184
 - after low blood glucose test 180, 186
 - after meal blood glucose test 180, 182
- alarm clock 181, 195
- basal injection 181, 197
- bG test 181, 197
- customized 180, 192
- doctor visit 180, 188
- lab test 180, 190
- medication 181, 199
- other 181, 197
- overview 180
- reset meter 21

S

- scroll bar 17, 24
- setup wizard 41, 43
- signal suspension 144
- snack size
 - description 55
 - setting 49, 108, 136
- sound, mode 142
- specifications
 - Bluetooth wireless technology 301
 - meter 299
- splash screen 43
- standard day graph 247
- standard day table 247
- standard week graph 240
- standard week table 240
- status screen 19, 146
- supplies 320
- symbols 306
- symptoms, low or high blood glucose 85

T

- target chart 252
- target range 46, 107, 112, 116, 123, 127, 130, 132, 153, 157, 158, 163, 167, 170, 172
- target table 252
- test strip
 - description 15
 - using the test strips 30
- test strip container 15, 59, 68
- test strip slot 13, 59, 68
- text color 11
- thermometer icon 18
- time blocks, bolus advice off
 - adding a time block 154
 - changing start time, end time, or target range 151
 - deleting time blocks 159
 - resetting all time blocks 168
- time blocks, bolus advice on
 - adding a time block 113
 - changing start time, end time, target range, carbohydrate ratio, or insulin sensitivity 109
 - deleting time blocks 119
 - resetting all time blocks 128
- time blocks, explanation of 52
- time format 44

- touchscreen
 - calibration 276
 - display 13
 - tone 147
 - vibration 147
- trend graph 230
- troubleshooting
 - meter 281
 - out-of-range control results 63
 - unusual blood glucose results 83

U

- USB
 - cable 36, 39, 204
 - cable connection settings 207
 - connector on meter 13, 300
- use by date 30, 58, 59, 68

V

- vibration
 - mode 142
 - touchscreen 147
- volume buttons 13

W

warning, description 11

warning limits

description 51

setting 45, 173

warning messages, troubleshooting 296

warranty 316

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