

MiniMed 780G

System User Guide

Includes technology developed by **dreomed**
diabetes.ai

MiniMed™ 780G

System User Guide



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







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Icon table

	Follow instructions for use or electronic instructions for use
	Caution: consult instructions for use for important warnings or precautions not found on the label
	Magnetic Resonance (MR) Unsafe
	Do not re-use
	Do not re-sterilize
	Do not use if package is damaged and consult instructions for use
	Single patient multiple use
	Importer
	Manufacturing site
	Recyclable, contains recycled content
	Bluetooth® wireless technology or Bluetooth® enabled
	Single sterile barrier system
	Manufacturer

	Country of manufacture
	Date of manufacture
	Open here
	Non-pyrogenic
	Do not dispose of this product in unsorted municipal waste stream
	Type BF applied part
	Use-by date
	Fragile, handle with care
	Keep dry
	Non-ionizing electromagnetic radiation
	RF Compliance Mark (RCM). Complies with ANZ radio-communications requirement.
	Humidity limitation
	Temperature limit
	Medical device

SN	Serial number
UDI	Unique device identifier
REF	Catalogue number
LOT	Batch code
CH REP	Authorized Representative in Switzerland
STERILE EO	Sterilized using ethylene oxide
STERILE R	Sterilized using irradiation
R_x Only	Requires prescription in the USA
(1x)	One per container/package
FCC ID	Complies with United States regulations for RF devices
IPX8	Protected against the effects of continuous immersion in water
RF	Identification number for global radio frequency certification

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1 Safety and indications

This user guide describes the operation of the MiniMed™ 780G insulin pump with smart device connectivity and interoperable technology. SmartGuard™ technology adjusts insulin delivery based on sensor glucose (SG) values without the need to enter a blood glucose (BG) meter reading for confirmation. The MiniMed 780G insulin pump operates in Manual mode using Predictive Low Glucose technology when the SmartGuard feature is not active.

The MiniMed 780G insulin pump is cleared for use with the following CGM (continuous glucose monitoring) devices:

- Instinct sensor
- Simplera Sync™ sensor
- Guardian™ 4 sensor and Guardian 4 transmitter

Each of the devices above will be referred to as a “compatible CGM device” or “CGM device.” For more information see *System component: CGM device, page 129*.

Consult a healthcare professional before starting insulin pump therapy.

Important system information

Only use rapid-acting U-100 insulin with the MiniMed 780G system. For more information see *Insulin guidelines, page 43*.

The compatible CGM devices do not require calibration. However, when paired with Simplera Sync or Guardian 4, the system uses every blood glucose (BG) meter reading to perform a calibration. When paired with Instinct, the system uses BG meter readings

as a BG check to verify system performance. For more information see *Verifying system performance*, page 160.

Only use MiniMed or Medtronic reservoirs and infusion sets that are specifically designed for use with the MiniMed 780G system. For more information on compatible reservoirs and infusion sets see *Consumables*, page 44.

When using the Instinct sensor, the MiniMed Mobile app must be used to start the sensor for each sensor change. For more information, see *Starting the Instinct sensor using the MiniMed Mobile app*, page 129.

Accessing user guides online

All user guides related to the MiniMed 780G system are available online. You can view or order printed copies by going to this website:
<https://manuals.medtronic.com/manuals>.



Detailed technical specifications and clinical performance data can be found in the MiniMed 780G System Technical Guide.



Using this guide

Use the table of contents at the beginning of the user guide and the index at the end of the user guide to locate specific information.

Refer to the glossary for definitions of terms and acronyms used.

Conventions

Convention	Definition
Select	Press  to activate a screen item, accept a value, or initiate an action.
Select and hold	Press and hold  to perform an action.
Press	Press and release a button.
Press and hold	Press and hold a button.
Bold text	Indicates screen items and buttons, such as “Select Next to continue.”
X	Indicates a value that might appear differently on the pump screen.
Note	Note: A note provides helpful information.

Convention	Definition
Caution	 CAUTION: A caution informs of a potential hazard which, if not avoided, might result in minor or moderate injury, or damage to the equipment.
WARNING	 WARNING: A warning informs of a potential safety hazard which, if not avoided, may result in serious injury or death. It may also describe potential serious adverse reactions.

For instructions about setting up devices on the MiniMed 780G system, such as a sensor or infusion set, refer to the user guide for the related device.

Emergency kit

Keep an emergency kit available at all times and confirm that necessary supplies are available and not expired. Tell a family member or friend where to find the emergency kit.

When traveling, check blood glucose more frequently to accommodate for changes in activity levels and meal times.

Consult your healthcare professional on which of the following items to include in your emergency kit:

- Rapid-acting glucose
- Blood glucose (BG) testing supplies
- Urine or blood ketone monitoring supplies
- Extra infusion set and reservoir
- Extra new AA lithium or alkaline batteries, or fully charged NiMH batteries
- Insulin syringe
- Short-acting insulin, long-acting insulin, or both (with dosage instructions from a healthcare professional)
- Adhesive dressing
- Glucagon



WARNING: Do not use the Bolus Wizard™ feature to calculate a bolus for a period of time after giving a manual injection of insulin by syringe or pen. Manual injections are not accounted for in the active insulin amount. Using the Bolus Wizard feature too soon after a manual injection may result in over-delivery of insulin and may cause hypoglycemia. Consult a healthcare professional for how long to wait after a manual injection before using the Bolus Wizard feature.



WARNING: Do not use the SmartGuard feature for a period of time after giving a manual injection of insulin by syringe or pen. Manual injections are not accounted for in the active insulin amount. Using the SmartGuard feature too soon after a manual injection may result in over-delivery of insulin and may cause hypoglycemia. Consult a healthcare professional for how long to wait after a manual injection before using the SmartGuard feature.

User safety



WARNING: For persons under the age of 18 years, the Simplera Sync sensor is not approved to make treatment decisions in Manual mode. Use the SmartGuard feature with Auto Correction On as much as possible when using the MiniMed 780G system with the Simplera Sync sensor.



WARNING: Do not use the MiniMed 780G system until appropriate training has been received from a healthcare professional. Training is essential to ensure the safe use of the MiniMed 780G system.

Indications for use

MiniMed 780G insulin pump

The MiniMed 780G insulin pump is intended for the subcutaneous delivery of insulin, at set and variable rates, for the management of diabetes mellitus in persons requiring insulin.

The MiniMed 780G insulin pump is able to reliably and securely communicate with compatible, digitally connected devices, including automated insulin dosing software, to receive, execute, and confirm commands from these devices.

The MiniMed 780G insulin pump contains a bolus calculator that calculates an insulin dose based on user-entered data.

The MiniMed 780G insulin pump is indicated for use in persons 7 years of age and older.

The MiniMed 780G insulin pump is intended for single patient use and requires a prescription.

Sensor

Refer to the sensor user guide for indications related to sensor use.

SmartGuard technology

SmartGuard technology is intended for use with compatible integrated continuous glucose monitors (iCGMs), compatible Medtronic continuous glucose monitors (CGMs), and alternate controller enabled (ACE) pumps to automatically adjust the delivery of basal insulin and to automatically deliver correction boluses based on sensor glucose values.

SmartGuard technology is intended for the management of Type 1 diabetes mellitus in persons 7 years of age and older requiring insulin.

SmartGuard technology is intended for single patient use and requires a prescription.

Predictive Low Glucose technology

Predictive Low Glucose technology is intended for use with compatible integrated continuous glucose monitors (iCGMs), compatible Medtronic continuous glucose monitors (CGMs), and alternate controller enabled (ACE) pumps to automatically

suspend delivery of insulin when the sensor glucose value falls below or is predicted to fall below predefined threshold values.

Predictive Low Glucose technology is intended for the management of Type 1 diabetes mellitus in persons 7 years of age and older requiring insulin.

Predictive Low Glucose technology is intended for single patient use and requires a prescription.



WARNING: Do not use the Suspend before low or Suspend on low features to prevent or treat low glucose. Always follow the instructions of a healthcare professional to treat low glucose. Using Suspend before low or Suspend on low features to prevent or treat low BG may result in prolonged hypoglycemia.

MiniMed Mobile App

The MiniMed Mobile app is intended to provide a secondary display for a compatible MiniMed insulin pump system on a suitable consumer electronic device for passive monitoring and to sync data to Carelink™. The MiniMed Mobile app also wirelessly updates the software of a MiniMed insulin pump with smart device connectivity.

The MiniMed Mobile app is not intended to replace the real-time display of continuous glucose monitoring or insulin pump data on the primary display device (i.e., the insulin pump). All therapy decisions should be based on the primary display device.

The MiniMed Mobile app is not intended to be used without a CareLink account. Log into an existing CareLink account or create a new account after downloading the MiniMed Mobile app.

The MiniMed Mobile app is not intended to analyze or modify the continuous glucose monitor data or insulin pump data that it receives. Nor is it intended to control any function of the connected continuous glucose monitoring system or insulin pump. The MiniMed Mobile app is not intended to receive information directly from the sensor or transmitter of a continuous glucose monitoring system.

If there are concerns with viewing the glucose data on the wearable device, use the pump to make any therapy decisions as it is the primary device.

One-press serter

Refer to the One-press serter user guide for indications related to serter use.

Guardian 4 transmitter

Refer to the transmitter user guide for indications related to transmitter use.

Compatible interoperable connected devices and system configurations with SmartGuard technology and Predictive Low Glucose technology

The 780G system includes the following technologies:

- SmartGuard technology, which is utilized by the SmartGuard feature. For more information, see *SmartGuard*, page 185.
- Predictive Low Glucose technology, which is utilized by the Suspend on low and Suspend before low features. For more information, see *Continuous glucose monitoring (CGM)*, page 155.

Compatible interoperable connected devices

Compatible ACE Pumps

The following ACE pump is compatible with SmartGuard technology and Predictive Low Glucose technology:

- MiniMed™ 780G insulin pump (MMT-1884)

Compatible interoperable Medtronic CGMs

The following interoperable Medtronic CGMs are compatible with SmartGuard technology and Predictive Low Glucose technology:

- Simpler Sync™ sensor (MMT-5120)
- Guardian™ 4 sensor (MMT-7040)
- Guardian 4 transmitter (MMT-7841)

Compatible iCGMs

The following iCGM is compatible with SmartGuard technology and Predictive Low Glucose technology:

- Instinct sensor

Compatible system configurations

The following system configurations are compatible with SmartGuard technology and Predictive Low Glucose technology:

- 780G system with Instinct sensor
- 780G system with Simplera Sync sensor
- 780G system with Guardian 4 sensor

Blood glucose meter

The MiniMed 780G system must be used with a commercially available, ISO 15197:2013 compliant blood glucose (BG) meter. Refer to the corresponding user guide for all warnings, precautions, and instructions related to the BG meter.



Note: A blood glucose meter is not provided by Medtronic as part of the MiniMed 780G system. An off-the-shelf commercially available ISO 15197:2013 compliant BG meter is needed for use with the MiniMed 780G system.



Note: The MiniMed 780G insulin pump does not connect wirelessly with a BG meter. BG readings must be entered directly into the pump when they are requested by the system. For more information, see *Entering a blood glucose (BG) meter reading, page 93*.

Contraindications

The MiniMed 780G insulin pump is contraindicated for use in persons under age 7.

Pump therapy is not recommended for people with a significant cognitive or physical impairment that affects their ability to safely operate the pump, including a lack of physical dexterity.

Pump therapy is not recommended for children who are not under the care of a parent or caregiver who is capable of safely operating the pump for the patient.

The reservoir is contraindicated for the infusion of blood or blood products.

Infusion sets are indicated for subcutaneous use only and not for intravenous (IV) Infusion.

Infusion sets are not indicated for the infusion of blood or blood products.

Insulin pump therapy is not recommended for persons who are unwilling or unable to perform BG meter readings.



WARNING: Do not use the SmartGuard feature for people who require less than 8 units or more than 250 units of total daily insulin per day. A total daily dose of at least 8 units, but no more than 250 units, is required to use the SmartGuard feature.

Pump therapy is not recommended for people who are unwilling or unable to maintain contact with their healthcare professional.

Risks and side effects

Risks related to insulin administration and pump use

Risks related to insulin infusion and potential interruptions of insulin delivery include:

- Hypoglycemia
- Hyperglycemia
- Diabetic ketoacidosis
- Seizure
- Coma
- Death

Risks related to insulin pump infusion set

Risks related to insulin pump infusion set use include:

- Localized infection
- Skin irritation or redness
- Bruising

- Discomfort or pain
- Bleeding
- Irritation
- Rash
- Occlusions that may interrupt insulin delivery and lead to hyperglycemia and diabetic ketoacidosis

Follow the instructions in the provided user guides for the insertion and care of infusion sets. If an infusion site becomes irritated or inflamed, dispose of the infusion set in a sharps container, and select a different location to insert a new infusion set.

Risks related to sensor use

Refer to the sensor user guide that came with the device for risks related to sensor use.

Risks related to meter use

For the most current risks, see the user guide that came with the meter.

Risks related toserter use

General risks withserter use may include skin infection around the area where theserter is used.

Risks related to the MiniMed 780G system

- Hypoglycemia
- Hyperglycemia
- Diabetic ketoacidosis
- Seizure
- Coma
- Death

Removing the pump for temporary storage

If there is a need or desire to remove the pump, use the following guidelines:

- Write down the current basal rates and use the Save Settings feature. For more information, see *Saving the settings, page 215*.
- Remove the battery. For more information, see *Storing the pump, page 294*.
- If the pump is disconnected for less than one hour, an insulin adjustment may not be required. If the pump is disconnected for more than one hour, consult a healthcare professional to determine an alternate method of insulin delivery.

General warnings

Pump

- Do not use the pump in the presence of anesthetic mixtures that include oxidizing agents such as oxygen or nitrous oxide. Exposure to these conditions may damage the pump and result in serious injury.
- Always use the fingertip for blood samples when entering a BG meter reading into the pump. All BG values are used for calibration or as a BG check to verify system performance. Do not use blood samples from the palm for BG values entered into the pump. The palm has not been studied for use with the SmartGuard feature and the performance of the system using such blood samples is not known.
- When the SmartGuard feature is active, SG readings are used to calculate basal insulin delivery and correction boluses. Do not use SG readings to make treatment decisions while the pump is in Manual mode or if symptoms do not match the SG value, which can commonly occur during the first 12 hours with a new sensor. SG and BG values may differ. Sensor performance may occasionally vary from sensor to sensor and in different situations for a sensor, such as the first 12 hours of use. A BG meter reading is required in the following situations:
 - Before a correction bolus is given in Manual mode or during the first 12 hours of sensor use.
 - The SG reading is lower than expected.
 - The SG reading is higher than expected.
 - Suspected hypoglycemia or symptoms of hypoglycemia.

- Suspected hyperglycemia or symptoms of hyperglycemia.
- Suspected diabetic ketoacidosis or symptoms of diabetic ketoacidosis.

Do not use SG readings to make treatment decisions while the pump is in Manual mode or during the first 12 hours of sensor use.

- The low SG alert functionality is distinct from the automated insulin dosing function of the MiniMed 780G system. When using the SmartGuard feature, the MiniMed 780G system has been shown to be safe and effective for its intended use in this population. However, when using the Simplera Sync or Guardian 4 sensors, do not rely solely on the use of the Low SG alarm, or the use of “Alert on Low” and “Alert before Low” when those alerts are set at or below 60 mg/dL. At these BG levels, a low SG alarm or alert may not reflect the user’s true BG, and you may not be notified. Do not ignore symptoms of low glucose. Always confirm SG readings with a BG meter, and treat according to the recommendation of a healthcare professional. Solely relying on these SG alerts and readings for treatment decisions could result in missing severe hypoglycemia (low BG) events.
- Do not rely on the pump tones or vibrations to navigate the pump screens or menus. Relying on pump tones or vibrations may result in incorrect menu or setting selection. Always view the pump screen when selecting menus and entering information into the system.
- Only use rapid-acting U-100 insulin prescribed by a healthcare professional for use with an infusion pump. For a list of compatible insulins, see *Insulin guidelines, page 43*. Use of any other drug or medication in the reservoir can cause serious injury.
- Confirm that the infusion set is disconnected from the body before rewinding the pump or filling the infusion set tubing. Never insert the reservoir into the pump while the tubing is connected to the body. Doing so may result in an accidental infusion of insulin, which may cause hypoglycemia.
- Do not insert the reservoir before rewinding the pump. Doing so may result in an accidental infusion of insulin, and may result in hypoglycemia.
- Do not use the MiniMed 780G insulin pump or additional system devices next to other electrical equipment, which may cause interference. This includes mobile communication devices such as cell phones that are not paired with the

MiniMed 780G system, GPS navigation systems, anti-theft systems, and any electrical equipment that has an output transmitter power greater than 1 W. The recommended separation distance between the insulin pump and common RF emitters is 12 in (30 cm). For more information about recommended separation distance guidelines between the insulin pump and common RF emitters, see the MiniMed 780G System Technical Guide (refer to *Accessing user guides online*, page 22). Other electrical equipment that may compromise normal system operation has been contraindicated. For more information, see *Exposure to magnetic fields and radiation*, page 38.

- Do not unscrew or retighten the tubing connector on the reservoir while the infusion set is connected to the body. Doing so may result in an accidental infusion of insulin, and may cause hypoglycemia.
- Do not use Luer sets with the MiniMed 780G system. Only use MiniMed or Medtronic reservoirs and infusion sets that are specifically designed for use with the MiniMed 780G system.
- Do not change or modify the MiniMed or Medtronic reservoir and infusion set. Modification of these components may cause serious injury, interfere with device operation, and void the warranty.
- Do not rely on pump alerts, alarms, or reminders alone to check BG levels. Set additional reminders on other devices, such as a cell phone.
- Do not change or modify the internal RF transmitter or antenna. Doing so may interfere with the safe operation of the equipment.
- The MiniMed 780G system is approved for use with the Guardian 4 transmitter with Bluetooth®* wireless technology (MMT-7841). Use of a transmitter not approved for communication with the pump may cause damage to system components and may result in inaccurate SG readings.
- If other devices that employ radio frequencies are in use, such as cell phones that are not paired with the MiniMed 780G system, cordless phones, walkie-talkies, and wireless networks, they may prevent communication between the sensor and the insulin pump. This interference does not cause any incorrect data to be sent and does not cause any harm to devices. Moving away from, or turning off, these other

devices may enable communication. Contact 24-Hour Technical support if RF interference continues.

- Special Precautions regarding Electromagnetic Compatibility (EMC): This body-worn device is intended to be operated within a residential, domestic, public or work environment, where common levels of radiated “E” (V/m) or “H” fields (A/m) exist. Technologies that emit these fields include: cellular phones that are not paired with the MiniMed 780G system, wireless technology, electric can openers, microwaves, and induction ovens. The MiniMed 780G system generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the provided instructions, may cause harmful interference to radio communications.
- Portable and mobile RF communications equipment can affect the operation of the MiniMed 780G system. If interference occurs, move away from the RF transmitter.
- The MiniMed 780G insulin pump can generate, use, and radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. If the MiniMed 780G insulin pump does cause interference to radio or television reception, try to correct the interference by one or more of the following measures:
 - Decrease the distance between the sensor and the insulin pump to 6 feet (1.8 meters) or less.
 - Increase the separation between the sensor and the device that is receiving/emitting interference.
- The safety of the MiniMed 780G system has not been studied in persons with impaired kidney function. Persons with kidney disease should consult a healthcare professional to determine if the potential benefits of pump therapy outweigh the risks.
- Monitor for diabetic retinopathy. During the beginning of insulin pump therapy, rapid improvement in glucose control and reduction in A1c may result in worsening of existing diabetic retinopathy. Use of the MiniMed 780G system has been associated with rapid improvement in glucose control. Monitor for diabetic retinopathy with retinal eye examinations and if necessary adequate treatment

must be performed by a healthcare professional before beginning a treatment with the MiniMed 780G insulin pump.

- The safety of the MiniMed 780G system has not been studied in pregnant women, persons with type 2 diabetes, or in persons using other anti-hyperglycemic therapies that do not include insulin. Persons in these situations should consult a healthcare professional to determine if the potential benefits of pump therapy outweigh the risks.
- The safety of using the Suspend before low and Suspend on low features in patients who have no pump experience is not known. The Suspend before low and Suspend on low features should not be used if insulin pump settings have not been previously established. Insulin pump settings include basal rates, insulin to carb ratio, and insulin sensitivity factors. Consult a healthcare professional before using the Suspend before low or Suspend on low features.
- The user must have adequate vision and hearing to recognize all functions of the pump, including alerts, alarms, and reminders. Not recognizing an alert, alarm, or reminder could result in a hypoglycemic or hyperglycemic event.
- Always monitor your blood glucose (BG) during air travel. Changes in air pressure that occur during flight takeoff and landing can cause over-delivery or under-delivery of insulin, which may result in hypoglycemia or hyperglycemia. Be ready to respond to alerts and symptoms. Talk with your healthcare professional to see if you need a different treatment plan in place.
- Do not wear or place your pump more than 14 in (35.5 cm) above your infusion site. Doing so can cause an over-delivery of insulin, which may result in hypoglycemia.
- Always replace the batteries immediately when the Low Battery Pump alert sounds after a physical impact. Actions such as dropping or bumping the insulin pump against a hard surface can reduce the battery life. Failing to replace the batteries promptly could stop insulin delivery, potentially leading to hyperglycemia, which could be life-threatening.

Reservoir and infusion sets

See the user guides that came with the device for the most current warnings related to the reservoir and infusion set.

- If insulin, or any other liquid, gets inside the tubing connector, it can temporarily block the vents that allow the pump to properly fill the infusion set. This may result in the infusion of too little or too much insulin, and may result in hyperglycemia or hypoglycemia. If this occurs, start over with a new reservoir and infusion set.
- If a BG reading is unexpectedly high during the infusion of insulin or if an occlusion alarm occurs, check the infusion set for clogs and leaks.
If in doubt, change the infusion set in case the soft cannula is dislodged, crimped, or partially clogged. Consult a healthcare professional to create a plan for rapid insulin replacement in the event this occurs. Check BG to confirm that the appropriate amount of insulin has been administered.
- Only use reservoir and infusion sets manufactured or distributed by Medtronic Diabetes. The pump has been tested to operate when used with compatible reservoirs and infusion sets. Medtronic Diabetes cannot guarantee appropriate operation if the pump is used with reservoirs or infusion sets offered by third parties. Medtronic Diabetes is not responsible for any injury or pump malfunction that may occur in association with the use of incompatible components.

Sensor

For the most current warnings, see the user guide that came with the device.

- Do not use SG values to make treatment decisions, including delivering a bolus, while the pump is in Manual mode. When the SmartGuard feature is active and you are no longer in Manual mode, the pump uses an SG value, when available, to calculate a bolus amount. However, if your symptoms do not match the SG value, use a BG meter to confirm the SG value. Failure to confirm glucose levels when your symptoms do not match the SG value can result in the infusion of too much or too little insulin, which may cause hypoglycemia or hyperglycemia. For more information on using CGM, see *Using CGM, page 179*. For more information on using the SmartGuard feature, see *SmartGuard, page 185*.

The following warning applies to the Instinct sensor:

- Consult a healthcare professional if taking more than 1000 mg of Vitamin C while wearing the sensor. Medications or supplements that contain Vitamin C can falsely raise sensor glucose readings. The level of inaccuracy depends on the amount of

Vitamin C active in the body and can differ for each person. Falsely elevated sensor readings can result in over-delivery of insulin, which can cause hypoglycemia. Vitamin C can be found in some medications, multivitamins, and cold remedies. Check the label of any medications or supplements being taken to see if Vitamin C is an active ingredient. If more than 1000 mg of Vitamin C is taken, use only blood glucose meter readings for all treatment decisions and to confirm blood glucose levels.

The following warnings apply to the Simpler Sync and Guardian 4 sensors:

- Do not use continuous glucose monitoring if hydroxyurea, also known as hydroxycarbamide, is taken. Hydroxyurea is used to treat certain diseases, such as cancer and sickle cell anemia. Hydroxyurea use results in higher sensor glucose readings compared to blood glucose readings. Taking hydroxyurea while using continuous glucose monitoring can result in hypoglycemia caused by over-delivery of insulin, inaccurate or missed alarms and alerts, delay or loss of sensor-enabled insulin suspension, and substantially higher sensor glucose readings in reports than actual blood glucose readings.

Always check the label of any medication being taken to confirm if hydroxyurea or hydroxycarbamide is an active ingredient. If hydroxyurea is taken, consult a healthcare professional. Turn the Sensor feature off to disable continuous glucose monitoring. For more information, see *Deactivating the Sensor feature*, page 178. Use additional blood glucose meter readings to verify glucose levels.

- Consult a healthcare professional if a medication that contains acetaminophen or paracetamol is taken while wearing the sensor. Medications that contain acetaminophen or paracetamol can falsely raise sensor glucose readings. The level of inaccuracy depends on the amount of acetaminophen or paracetamol active in the body and can differ for each person. Falsely elevated sensor readings can result in over-delivery of insulin, which can cause hypoglycemia. Medications that contain acetaminophen or paracetamol include, but are not limited to, cold medicines and fever reducers. Check the label of any medications being taken to see if acetaminophen or paracetamol is an active ingredient. Use additional blood glucose meter readings to confirm blood glucose levels.

- While the SmartGuard feature is active, if acetaminophen or paracetamol is taken, program a temp target for up to eight hours, or the amount of time recommended by a healthcare provider. For more information, see *Setting a temp target, page 203*. Use blood glucose values instead of sensor glucose readings to calculate a meal bolus or correction bolus for up to eight hours, or the duration recommended by a healthcare provider, after taking acetaminophen or paracetamol.

Transmitter

See the user guide included with the device for the most current warnings related to transmitter use.

- Do not allow children to put small parts in their mouth. This product poses a choking hazard for young children.

Meter

For the most current warnings, see the User's Manual that came with the device.

- Always use the fingertip for blood samples when entering a BG meter reading into the pump. All BG values are used for calibration or as a BG check to verify system performance. Do not use blood sample from the palm for BG values entered into the pump. The palm has not been studied for use with the SmartGuard feature and the performance of the system using such blood samples is not known.

Exposure to magnetic fields and radiation

- Do not expose the pump or CGM device to MRI equipment, diathermy devices, or other devices that generate strong magnetic fields (for example, x-ray, CT scan, or other types of radiation). Strong magnetic fields can cause the system to malfunction, and result in serious injury. If the pump is exposed to a strong magnetic field, discontinue use and contact 24-Hour Technical Support for further assistance.

Magnetic fields, and direct contact with magnets, may affect the accurate functioning of the system which may lead to health risks such as hypoglycemia or hyperglycemia.

- Remove the pump and CGM device before entering a room with x-ray, MRI, diathermy, or CT scan equipment. The magnetic fields and radiation in the

immediate vicinity of this equipment can make the devices nonfunctional or damage the part of the pump that regulates insulin delivery, possibly resulting in over-delivery and severe hypoglycemia.

- Do not expose the pump to a magnet, such as pump cases that have a magnetic clasp. Exposure to a magnet may interfere with the motor inside the pump. Damage to the motor can cause the device to malfunction, and result in serious injury.
- Do not send the pump or CGM device through an x-ray scanning machine. The radiation can damage the pump components that regulate insulin delivery, and may result in over-delivery of insulin and hypoglycemia.

All system components, including the pump and CGM device, must be removed prior to being screened with a full-body scanner. To avoid system removal, request an alternative screening method, if necessary.

- Carry the Medical emergency card provided with the device when traveling. The Medical emergency card provides critical information about airport security systems and pump use on an airplane. Not following the guidance on the Medical emergency card may result in serious injury.

General precautions

The pump does not notify the user of leaks in the infusion set or degradation of insulin. If BG is too high, check the pump and the infusion set to confirm that the necessary amount of insulin is being delivered.

Check for adverse reactions where the pump comes into contact with skin. These reactions include redness, swelling, irritation, sensitization, rash, and other allergic reactions. Do not allow the pump to come into contact with skin wounds, as the pump materials have only been evaluated for safe contact with intact skin.



Note: If you drop your pump, be sure to monitor your glucose levels for the next four hours.

Waterproof capabilities

- The pump is waterproof at the time of manufacture and when the reservoir and tubing are properly inserted. It is protected against the effects of being underwater to a depth of up to 8 feet (2.4 meters) for up to 30 minutes.
- If the pump is dropped, hit against a hard object, or otherwise damaged, the waterproof characteristics of the outer casing of the pump may be compromised. If the pump is dropped or might be damaged, carefully inspect it to confirm that there are no cracks before exposing the pump to water.
- This waterproof capability rating applies only to the pump.
- If water may have entered the pump or other pump malfunction is observed, check BG and treat high BG as necessary using an alternative source of insulin. Contact 24-Hour Technical Support for further assistance, and consult a healthcare professional about high or low BG levels or with any other questions about care.

Electrostatic discharge

- Very high levels of electrostatic discharge (ESD) can result in a reset of the pump's software and a pump error alarm. After clearing the alarm, confirm that the pump is set to the correct date and time, and that all other settings are programmed to the desired values. Following a pump reset, the SmartGuard feature may be unavailable for 5 hours to allow active insulin to be updated.
- For more information on pump alarms, see *Pump alarms, alerts, and messages*, page 301. Contact 24-Hour Technical Support with any problems entering pump settings.

Extreme temperatures

Exposure to extreme temperatures can damage the device. Avoid the following conditions:

- Pump storage temperature above 122 °F (50 °C) or below -4 °F (-20 °C).
- Pump operating temperature above 98.6 °F (37 °C) or below 41 °F (5 °C).
- Insulin solutions freeze near 32 °F (0 °C) and degrade at temperatures higher than 98.6 °F (37 °C). In cold weather, wear the pump close to the body and cover it with

warm clothing. In a warm environment, take measures to keep the pump and insulin cool.

- Do not steam, sterilize, autoclave, or otherwise heat the pump.

Skin care products

Some skin care products, such as lotion, sunscreen, and insect repellents, can damage the plastic in the pump case. After using skin care products, wash hands prior to handling the pump. If a skin care product comes into contact with the pump, wipe it off as soon as possible with a damp cloth and mild soap. For instructions on cleaning the pump, see *Cleaning the pump*, page 293.

Infusion sets and sites, CGM device, and meter

Refer to the corresponding device user guide for all warnings, precautions, and instructions relating to the device. Failure to reference the corresponding device user guide can result in minor injury, or damage to the device.

Adverse reactions

Refer to the sensor user guide for adverse reactions related to sensor use. Failure to reference the sensor user guide may result in minor injury, or damage to the sensor.

Security precautions

The MiniMed 780G insulin pump system is designed with security features to help keep the system and the data secure. These security features in the insulin pump system are set in the factory and ready to use when the insulin pump is received. For example, when the pump communicates with other devices in the system, such as a compatible CGM device or compatible mobile device, the data that it sends and receives is secured via encryption, and integrity is ensured via cryptographic message authentication checks. This helps prevent other people from being able to see system data, or to interfere with insulin pump therapy.

To help keep the system secure, follow these instructions:

- Do not leave the insulin pump or paired devices unattended.
- Do not share the pump or CGM device serial number.

- Do not connect the pump to any third-party devices not authorized by Medtronic.
- Do not use any software not authorized by Medtronic to control the system.
- Be attentive to pump notifications, alarms, and alerts because they may indicate that someone else is trying to connect to or interfere with the device.
- Disconnect the Blue Adapter from the computer whenever it is not being used.
- Use good cyber security practices; use anti-virus software and keep computer software up to date.
- Refer to the MiniMed Mobile App User Guide for information on how to keep the compatible mobile device safe for use with the Medtronic devices.

The pump only communicates with paired devices. The short time that it takes to pair the pump with other devices is a sensitive time for security. During this time, it is possible for an unintended device to pair with the pump. While Medtronic has designed security features into the system to prevent this, always follow these instructions to keep the system safe during pairing:

- Pair the CGM device or the compatible mobile device with the pump away from other persons and devices.
- When using the Simplera Sync sensor, if the sensor is not paired with the pump within 20 minutes after the cap is removed from the inserter, enter the code and select **Confirm** to pair the sensor. The code is located on the inserter label on the top of the inserter. This is for security purposes. See *Unpairing the Simplera Sync sensor from the pump, page 136* to delete the sensor from the pump and then follow the steps to pair it again.
- When using the Guardian 4 sensor, when the transmitter successfully pairs with the pump, the green LED on the transmitter stops blinking. If the green LED on the transmitter continues to blink for several minutes or more after it is successfully paired, it may have been paired with an unintended device. See *Unpairing the transmitter from the pump, page 140* to delete the transmitter from the pump and then follow the steps to pair it again.
- When using the Instinct sensor, refer to the MiniMed Mobile App user guide for security precautions.

- After pairing the compatible mobile device with the pump, make sure that the compatible mobile device indicates that pairing was successful.

If there are symptoms of severe hypoglycemia or diabetic ketoacidosis or if unexpected changes of insulin pump settings or insulin delivery are suspected, consult a healthcare professional.

If there is a concern that someone else is trying to connect to or interfere with the device, stop using it and contact 24-Hour Technical Support immediately.

Reporting serious incidents

If a serious incident related to the device occurs, immediately report the incident to Medtronic and the local competent authority.

Insulin guidelines



WARNING: Do not insert an insulin-filled reservoir into the pump, or connect an insulin-filled infusion set into the body while training with the system. Doing so may result in the unintentional infusion of insulin, which may result in hypoglycemia. Start insulin therapy only when directed by a healthcare professional.

The MiniMed 780G system has been studied with, and is intended for use with, the following rapid-acting U-100 insulins:

- U-100 Admelog^{TM*}
- U-100 Humalog^{TM*}
- U-100 NovoLog^{TM*}

Some insulin products are labeled for use in any pump that is compatible with the insulins listed in this section. To see if another insulin not listed in this section can be used, refer to section 2.2 of the prescribing information for that insulin product.



WARNING: Only use rapid-acting U-100 insulin from those listed in this section, as prescribed by a healthcare professional, in the MiniMed 780G system. Use of the incorrect type of insulin, or insulin with a greater or lesser concentration may result in over-delivery or under-delivery of insulin, which may result in hypoglycemia or hyperglycemia. Consult a healthcare professional with any questions about the type of insulin that is compatible with the pump.

Consumables

The pump uses disposable, single-use MiniMed and Medtronic reservoirs and infusion sets for insulin delivery.



WARNING: Only use reservoir and infusion sets manufactured or distributed by Medtronic Diabetes. The pump has undergone extensive testing to confirm appropriate operation when used with compatible reservoirs and infusion sets manufactured or distributed by Medtronic Diabetes. Medtronic Diabetes cannot guarantee appropriate operation if the pump is used with reservoirs or infusion sets offered by third parties and therefore Medtronic Diabetes is not responsible for any injury or malfunctioning of the pump that may occur in association with such use.

- **Reservoirs**—If using an Extended™ infusion set, use the Extended reservoir MMT-342, 3.0 mL (300-unit). Otherwise, use the MiniMed reservoir MMT-332A, 3.0 mL (300-unit).
- **Infusion sets**—Contact a healthcare professional for help in choosing a Medtronic Diabetes infusion set. Change the infusion set per the duration of use in the infusion set user guide.

The following table lists the compatible infusion sets. The MMT numbers may change if other compatible infusion sets become available.



Note: For infusion sets, MMT numbers that include an A (such as MMT-396A, MMT-396-AT) are compatible with the pump system. MMT numbers that do not include an A are no longer compatible with the pump system.

Type	MMT number
MiniMed Quick-set™ infusion set	MMT-386A, MMT-387A, MMT-394A, MMT-396A, MMT-397A, MMT-398A, MMT-399A
MiniMed Silhouette™ infusion set	MMT-368A, MMT-377A, MMT-378A, MMT-381A, MMT-382A, MMT-383A, MMT-384A
MiniMed Sure-T™ infusion set	MMT-862A, MMT-864A, MMT-866A, MMT-874A, MMT-876A, MMT-884A, MMT-886A
MiniMed Mio™ 30 infusion set	MMT-905A, MMT-906A
MiniMed Mio Advance infusion set	MMT-213A, MMT-242A, MMT-243A, MMT-244A
Extended infusion set	MMT-431A, MMT-432A, MMT-433A, MMT-441A, MMT-442A, MMT-443A



Note: Extended infusion sets are available in various pack sizes, each identified by a specific suffix such as A, AH, AJ, AG, and AK. All Extended infusion set packs are compatible with the MiniMed 780G insulin pump system.

Other infusion sets end with the suffix "AT", which also indicates a different pack size and is also compatible with the MiniMed 780G insulin pump system.

Other MiniMed 780G system devices

- **Compatible sensor**—The sensor is a disposable, single-use device inserted just below the skin to measure glucose levels in interstitial fluid. This device is required

for CGM. The following sensors are compatible with the MiniMed 780G insulin pump:

- Instinct sensor (MMT-5420)
 - Simplera Sync sensor (MMT-5120)
 - Guardian 4 sensor (MMT-7040)
- **Guardian 4 transmitter (MMT-7841)**—The transmitter pairs with the pump, collects data measured by the sensor, and wirelessly sends this data to monitoring devices. This device is required for CGM. The Guardian 4 sensor is the only glucose sensor compatible with the Guardian 4 transmitter.
- **MiniMed Mobile app (MMT-6101 for Android™* or MMT-6102 for iOS™*)**—The app provides a secondary display of insulin pump data and uploads system data to CareLink software. The app can check for eligible and available software updates for the pump. The Update pump feature in the app allows you to update the pump software remotely. The app can be installed on multiple mobile devices, but only one mobile device can be paired with the pump at a time.

When using the Instinct sensor, the app is required to start a new sensor. It is not possible to command the pump to pair with the sensor directly.

When using the Simplera Sync and Guardian 4 sensor, the MiniMed Mobile app is an optional accessory that is compatible with the MiniMed 780G system.
- **Compatible mobile device**—The Instinct sensor should only be started with a supported mobile device. Refer to your local Medtronic website or the local Medtronic support representative for information about compatible mobile devices and operating systems.

Optional items

The following items may be used with the MiniMed 780G system.

- **Pump clip**—The pump clip attaches to a belt and can be used to open the battery compartment.
- **Activity guard**—The activity guard helps to prevent the reservoir from being rotated or removed from the pump during physical activities.

- **CareLink Connect app (MMT-6111 for Android or MMT-6112 for iOS)**—The app can be downloaded onto compatible mobile devices from the app store. Refer to the app user guide for setup and operation within the app. This optional app is available to care partners to view patient therapy data and to be notified of selected patient alerts. This app does not replace the real-time display of insulin pump data on the primary display device. All therapy decisions should be based on the primary display device. Refer to the local Medtronic Diabetes website for information about supported devices and operating systems.



Note: This product may be registered under one of the licensed names CareLink Connect or CareLink Share in some countries.

- **App Manager device**—The App Manager is a compatible mobile device available through Medtronic that comes with the MiniMed Mobile app pre-installed. When using the Instinct sensor, use the MiniMed Mobile app to start the sensor. Refer to the App Manager Quick Reference Guide for more information.
- **Blue Adapter**—The Blue Adapter uploads system data to CareLink software through a USB port on a computer. Refer to the CareLink software user guide for setup and operation of the Blue Adapter.

2



2

System overview

In this chapter, you will learn about the components of the system and some important concepts and terminology that you will need to understand when using the system.

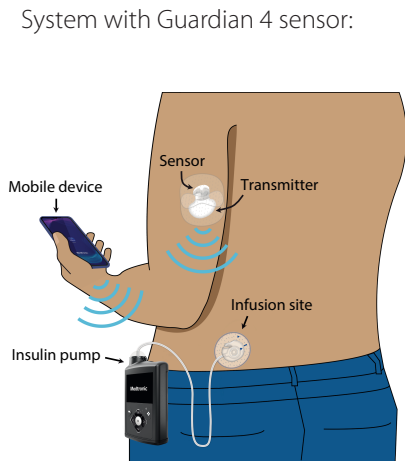
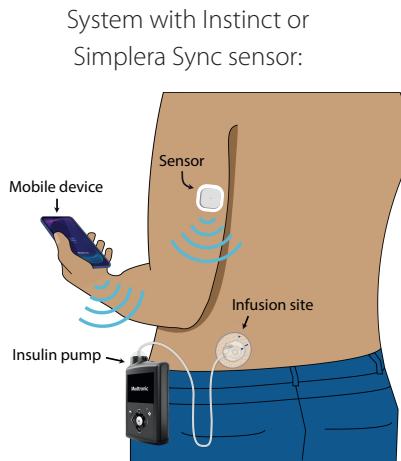
What are the components of the MiniMed 780G system?

The following items are the main system components:

- **MiniMed 780G insulin pump**—The pump delivers insulin into your body through the infusion set, based on the settings provided by your healthcare professional.
- **Infusion sets**—An infusion set connects to both the pump and your body. It carries the insulin as it is pushed out of the pump and delivers it.
- **Reservoirs**—The reservoir is filled with insulin and placed in the pump so that insulin can be delivered into your body through the infusion set.
- **Compatible CGM device**—A compatible CGM device is made up of a sensor or a sensor and transmitter:
 - **Sensor**—The Simpler Sync and Instinct sensors measure glucose in the fluid under your skin and communicate with the pump through a wireless connection. The sensor makes up the CGM device.
 - **Sensor and transmitter**—The Guardian 4 sensor measures glucose in the fluid under your skin. The Guardian 4 transmitter communicates with the pump through a wireless connection. Together, the sensor and transmitter make up the CGM device.

- **MiniMed Mobile app**—The app provides a secondary display of insulin pump data and uploads system data to CareLink software. The app is required when using the Instinct sensor to start a new sensor.
- **Compatible mobile device**—A compatible mobile device is required to control the MiniMed Mobile app.

The following diagrams show what the system components look like and how you may wear them on your body. A diagram later in chapter 3 will show you more details about the infusion set and reservoir.



Note: The illustrations above are for reference only and may not be a true reflection of the actual hardware.

Modes

Your pump operates in two different modes: Manual mode and SmartGuard mode (also called the SmartGuard feature).

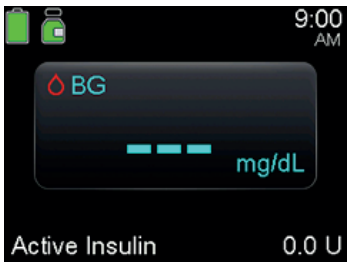
When you first use your MiniMed 780G insulin pump, it is in Manual mode.

Manual mode refers to a group of features that requires your input to deliver boluses for meals and to correct glucose levels. You may use Manual mode with or without CGM. When using CGM in Manual mode, you can see sensor glucose trends, receive low and high sensor glucose alerts, and suspend insulin delivery according to your settings.

After a few days of use in Manual mode, and at the direction of your healthcare provider, you can use SmartGuard. When in SmartGuard, the pump automatically adjusts and delivers basal insulin and can also deliver automatic correction boluses to regulate glucose levels to a target SG value. You will still need to enter carbs that you eat to deliver a food bolus.

The following tables show the main features of Manual mode and SmartGuard. There are details on each of these topics throughout this guide.

Manual mode without CGM



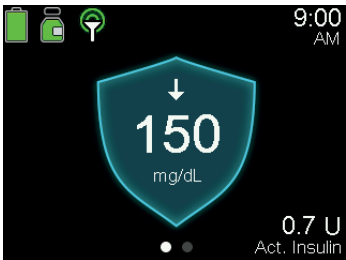
Bolus delivery	Basal delivery	Suspend
<ul style="list-style-type: none">• Bolus Wizard calculates a bolus based on your settings<ul style="list-style-type: none">– A blood glucose (BG) meter reading is needed for a correction bolus– A carb entry is needed for a food bolus• Manual bolus<ul style="list-style-type: none">– You enter the number of units of insulin to cover food, high BG, or both	<ul style="list-style-type: none">• Programmed basal delivery settings• A Temp basal rate can be used to temporarily increase or decrease basal insulin delivery	<ul style="list-style-type: none">• Suspend all delivery<ul style="list-style-type: none">– Choose this option to stop all delivery of insulin

Manual mode with CGM



Bolus delivery	Basal delivery	Suspend
<ul style="list-style-type: none">• Same as Manual mode without CGM	<ul style="list-style-type: none">• Same as Manual mode without CGM	<ul style="list-style-type: none">• Suspend all delivery<ul style="list-style-type: none">– Same as Manual mode without CGM• Suspend before low<ul style="list-style-type: none">– Suspends insulin delivery and alerts based on your settings• Suspend on low<ul style="list-style-type: none">– Suspends insulin delivery and alerts based on your settings

SmartGuard



Bolus delivery	Basal delivery	Suspend
<ul style="list-style-type: none"> SmartGuard bolus feature delivers bolus insulin based on sensor glucose (SG) values and carb entries When SmartGuard requests a BG, a blood glucose (BG) meter reading may be required when a sensor glucose (SG) value does not appear on the Bolus screen The bolus amount cannot be adjusted The pump may automatically deliver an Auto Correction bolus to maximize the time in range. 	<ul style="list-style-type: none"> The pump automatically delivers basal insulin based on recent insulin delivery needs, Sensor glucose (SG) values, and your glucose target A Temp target can be set when less insulin is needed, such as for exercise 	<ul style="list-style-type: none"> Suspend all delivery <ul style="list-style-type: none"> Same as Manual mode without CGM

Delivery settings

The delivery settings table describes whether or not each setting applies to the SmartGuard feature and Manual mode. Consult your healthcare professional before changing delivery settings.

Delivery setting	Impacts SmartGuard therapy	Impacts Manual mode
Active insulin time	Yes	Yes
Basal pattern and basal rates	No	Yes
BG target in Bolus Wizard	No	Yes
Bolus increment	No	Yes
Bolus speed	Yes	Yes
Carb ratio	Yes	Yes
Dual/Square Wave bolus	No	Yes
Insulin sensitivity factor	No	Yes
Max basal	No	Yes

Delivery setting	Impacts SmartGuard therapy	Impacts Manual mode
Max bolus	No	Yes
Preset bolus	No	Yes
Preset temp	No	Yes

3



3

Pump basics

This chapter provides information about the basic features, buttons, and screens of the MiniMed 780G insulin pump.













CAUTION: Do not use sharp objects to press the pump buttons. The use of sharp objects can damage the pump.


Using the buttons and locating important pump information



The following table describes the notification light, how to use the pump buttons, and where to locate important pump information.

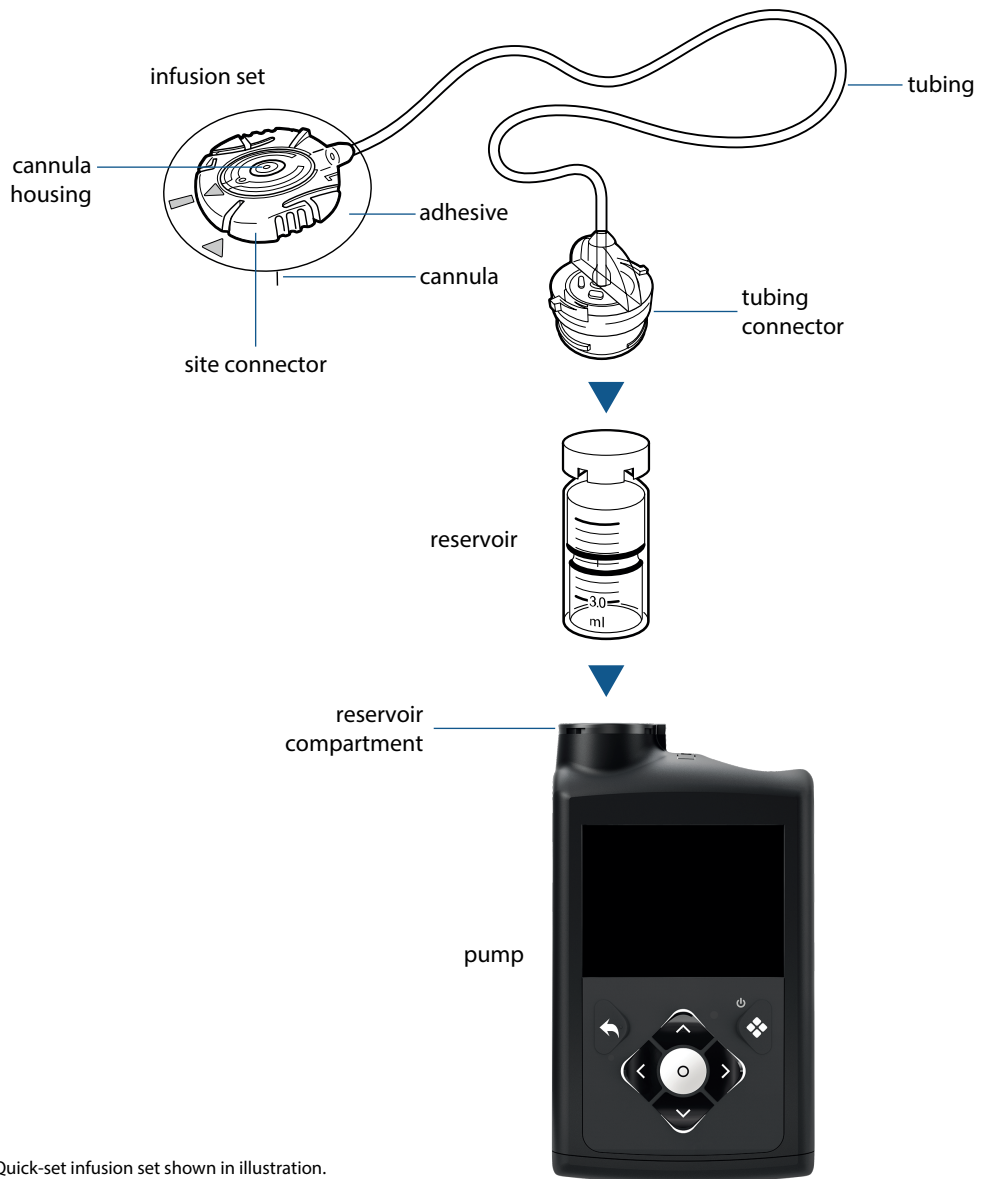
Item	Description
①	Press  to go to the Menu screen from the Home screen and to select a highlighted menu option.
②	Press  or  to scroll up or down, highlight an item on a screen, and to increase or decrease the value of a setting. Press  or  to move left or right on certain screens and to highlight the icons on the Menu screen.
③	Press  to access the Graph screen. Press and hold  to put the pump in Sleep mode.
④	Press  to go back to the previous screen. Press and hold  to return to the Home screen.
⑤	The notification light  flashes when the pump has an alarm or alert. The notification light is not visible unless it flashes.
⑥	The pump serial number is located on the back of the pump.
⑦	The 24-Hour Technical Support number is located on the bottom of the pump.

Sleep mode

The pump screen goes dark if there is no activity for the duration specified in the Backlight setting. Two minutes after the screen goes dark, the pump enters Sleep mode to conserve battery power. Sleep mode does not affect insulin delivery. Press any button to wake up the pump. Press and hold  for two seconds to manually enter Sleep mode.

Pump delivery system

The following diagram shows the parts of the pump delivery system, including the infusion set*, reservoir, and pump.



*Quick-set infusion set shown in illustration.

Infusion set

The infusion set consists of the following components:

- The tubing carries insulin from the reservoir into the body.
- The tubing connector attaches to the reservoir.
- The insertion piece attaches to the body.

- The cannula is a small, flexible tube inserted into the body. Some infusion sets use a small needle instead of a cannula.
- The adhesive holds the infusion set in place.

Change the infusion set according to the user guide provided with the infusion set.

Reservoir

The reservoir stores insulin for delivery and is inserted into the pump reservoir compartment.

Pump

Underneath the reservoir compartment, a piston pushes up on the bottom of the reservoir to move insulin into the tubing, through the cannula, and into the body.

The pump delivers small doses of insulin. The smallest dose of insulin is 0.025 units. The piston inside the pump must be rewound each time a newly filled reservoir is inserted into the reservoir compartment.

Inserting the battery

The pump requires one new AA (1.5 V) battery. For best results, use a new AA lithium (FR6) battery. The pump also accepts an AA alkaline (LR6) or a fully charged AA NiMH (HR6) nickel-metal hydride rechargeable battery.

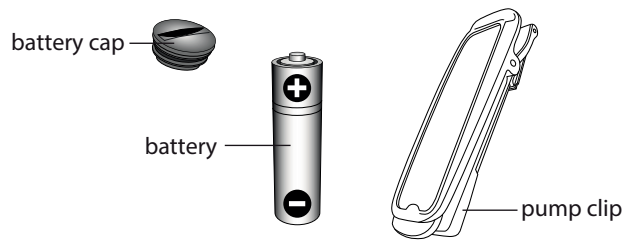


CAUTION: Do not use a carbon zinc battery in the pump. Carbon zinc batteries are not compatible with the pump and can cause the pump to report inaccurate battery levels.



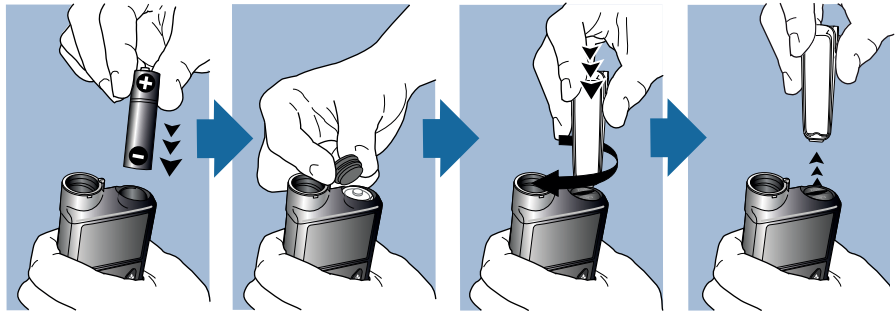
Note: Do not use cold batteries because the battery life may incorrectly appear low. Allow cold batteries to reach room temperature before they are inserted into the pump.

The battery cap is located in the pump box with the accessories. Make sure to use the battery cap that comes with the pump.



To insert the battery:

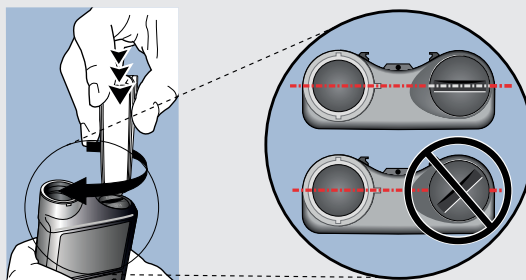
1. Insert a new or fully charged AA battery. Make sure to insert the negative end (–) first.



2. Place the battery cap onto the pump. Use the bottom edge of the pump clip or a coin to tighten the cap.



CAUTION: Do not overtighten or undertighten the battery cap. A battery cap that is too tight can cause damage to the pump case. A battery cap that is too loose can prevent detection of the new battery. Turn the battery cap clockwise until the cap slot is aligned horizontally with the pump case, as shown in the following example.



The first time a battery is inserted into the pump, the Startup Wizard begins. Any other time a battery is inserted into the pump, the Home screen appears and the pump resumes basal delivery.

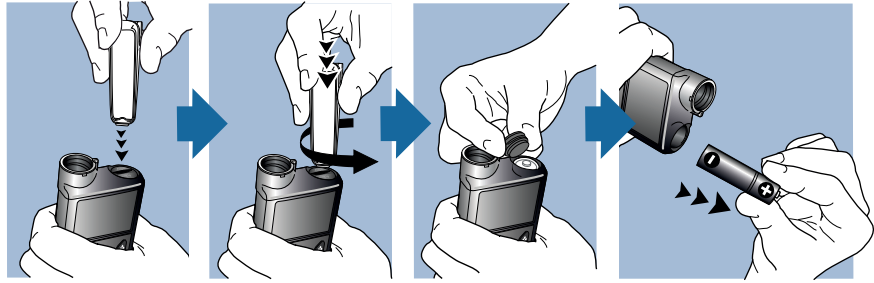
Removing the battery



CAUTION: Do not remove the battery unless a new battery needs to be inserted or to store the pump. The pump cannot deliver insulin while the battery is removed. After an old battery is removed, make sure to replace it with a new battery within 10 minutes to clear the Insert battery alarm and avoid a Power loss alarm. If power loss occurs for an extended period of time, the time and date settings must be re-entered.

To remove the battery:

1. Before a battery is removed from the pump, clear any active alarms or alerts.
2. Use the pump clip or a coin to loosen and remove the battery cap.
3. Remove the battery.



4. Dispose of old batteries in an appropriate container and in accordance with local laws for battery disposal.
5. After a battery is removed, wait until the Insert Battery screen appears before inserting a new battery.

If a battery is removed to place the pump in storage, see *Storing the pump*, page 294 for more information.

Startup settings

The Startup Wizard appears after a battery is inserted for the first time. Use the Startup Wizard to set the language, time format, current time and date, and to rewind the pump. To re-enter these settings later, see *Pump issues*, page 284.

To use the Startup Wizard:

1. On the Select Language screen, select a language.



The Select Time Format screen appears.

2. Select a time format.

Startup 1/3
Select Time Format
12 Hour
24 Hour

3. Enter the current time, and then select **Next**.

Startup 2/3
Enter Time
Time 12:00 AM
Next

The Enter Date screen appears.

4. Enter the current date, and then select **Next**.

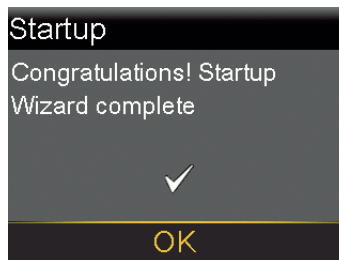
Startup 3/3
Enter Date
Year 2021
Month Jan
Day 1, Fri
Next

A "Rewinding" message appears. The piston returns to its start position in the reservoir compartment. This may take several seconds.



When rewinding is complete, a message appears to confirm the startup is complete.

5. Select **OK** to go to the Home screen.

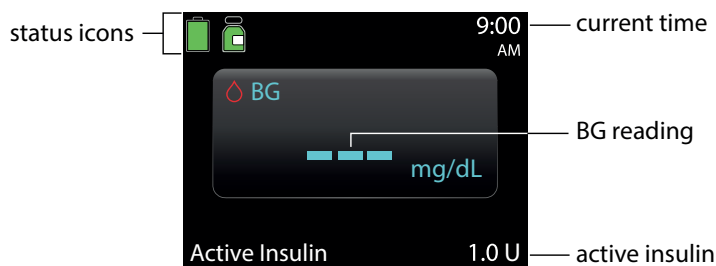


Home screen in Manual mode

The Home screen appears after the battery is changed, when the pump wakes from Sleep mode, and when another screen is not actively being used.



Note: This example shows the Home screen in Manual mode when the Sensor feature is turned off. For information about the Home screen when the Sensor feature is turned on, see *Home screen with CGM in Manual mode, page 179*. For information about the Home screen with the SmartGuard feature, see *Home screen with the SmartGuard feature, page 193*.



The following items appear on the Home screen:

Item	Description
Status icons	The status icons show a quick status of the pump system. For more information, see <i>Status icons</i> , page 69.
Current time	For details on setting the time, see <i>Time and date</i> , page 211.
BG reading	BG reading shows the current blood glucose (BG) meter reading. For more information, see <i>Entering a blood glucose (BG) meter reading</i> , page 93.
Active insulin	Active insulin is bolus insulin delivered by the insulin pump that continues to lower BG levels. Active insulin is not necessarily reflective of the pharmacokinetics and pharmacodynamics of rapid acting insulins. For more details on active insulin, see the description of Active Insulin Time in <i>Bolus Wizard feature in Manual mode</i> , page 96.










Shortcuts from the Home screen












The following table describes shortcuts that can be used to quickly access certain pump functions. These shortcuts only work on the Home screen.








Shortcut	Description
^	Press this button to access the Status screen.
>	Press this button to access the Time in Range screen when the Sensor feature is turned on.
✓	Press this button to access the Bolus screen. The Bolus screen that appears varies depending on the bolus feature that is currently active.

Status icons

The status icons provide the current status of the pump system. For information on viewing detailed status screens, see *Status screen*, page 74.

Icon name	Description	
Active Insulin reset to zero		After the Active Insulin reset to zero alarm occurs, the Active Insulin reset icon appears on the Home screen and Bolus screens until the time shown in the alarm. For more information, see <i>Pump issues</i> , page 284.
Alert silence		The Alert silence icon indicates that the Alert Silence feature is turned on and some alerts will not make a sound or vibration. Sensor alerts can be silenced for a specific duration using the Alert silence feature. For more information, see <i>Silencing sensor alerts</i> , page 176.
Battery	<p>The color and fill level of the icon indicate the charge level of the pump battery. As the battery is used, the icon changes from solid green in the following order:</p> <div>  </div> <div>  <p>The battery is full.</p> </div> <div>  <p>The battery is low.</p> </div> <div>  <p>The battery can be used for less than 30 minutes and needs to be replaced.</p> </div>	
Block mode		The Block mode icon shows that the pump is locked. For more information about Block mode, see <i>Block mode</i> , page 212.
Connection	<p>The connection icon shows the following information:</p> <div>  <p>The Sensor feature is on and communicating.</p> </div> <div>  <p>The Sensor feature is on, but the sensor is not communicating with the pump.</p> </div>	


Icon name	Description
Reservoir	<p>The reservoir icon shows the fill status of the MiniMed or Medtronic 3.0 mL (300-unit) reservoir.</p>  Approximately 85%–100% of the insulin remains in the reservoir.  Approximately 71%–84% of the insulin remains in the reservoir.  Approximately 57%–70% of the insulin remains in the reservoir.  Approximately 43%–56% of the insulin remains in the reservoir.  Approximately 29%–42% of insulin remains in the reservoir.  Approximately 15%–28% of the insulin remains in the reservoir.  Approximately 1%–14% of the insulin remains in the reservoir.  The amount of insulin remaining in the reservoir is unknown.
Sensor life	<p>The number on the sensor life icon indicates the number of days that remain in the life of the sensor. When the Sensor feature is turned on, the icon appears on the Status screen. After a new sensor is inserted, the icon is solid green. When the sensor expires, the icon turns solid black with an X. When one day remains in the life of the sensor, the icon turns red and appears on the Home screen.</p>  If the sensor has a grace period, the icon turns red and appears on the Home screen when the sensor enters the grace period.  If the number of days that remain in the life of the sensor is not yet available, such as when the sensor is warming up, the sensor life icon appears with three dots.  If the number of days that remain in the life of the sensor is unknown, the sensor life icon appears with a question mark.

Icon name	Description
Sensor status	<p>The sensor status icon shows whether the sensor is warming up, is monitoring sensor glucose (SG) values, a BG check is requested by the system, or the sensor status is unavailable. The icon appears only when the Sensor feature is turned on.</p> <ul style="list-style-type: none">  A red icon means a BG reading is requested by the system.  A question mark icon with a blue circle around it means that sensor information is unavailable.  An icon with three white dots on a black background means the pump is waiting for the sensor status to update.
Suspend by sensor	<p> When the current low alert time segment has either the Suspend before low or Suspend on low feature turned on, the Suspend by sensor icon appears on the Home screen.</p> <p> When Suspend before low or Suspend on low feature suspends insulin delivery, the icon flashes.</p> <p> If the Suspend before low or Suspend on low feature is turned on but unavailable, the icon has a red X.</p> <p>This can be due to a recent suspend by sensor event or when no SG values are available.</p> <p>For more information, see <i>The Suspend before low feature</i>, page 167 and <i>The Suspend on low feature</i>, page 169.</p>
Temporary network connection	<p> The temporary network connection icon shows when the pump is temporarily connected to a remote upload device.</p>



Note: Status icons provide limited information. For example, the reservoir icon may indicate the reservoir is low on insulin. The Status screen shows more detailed information about how many units are left. For more information about the status screens, see *Status screen*, page 74.

Menu screen

Use the menu to go to screens that show various features and functions of the system. Press  from the Home screen to go to the menu. The highlighted menu option appears in color. All other menu options appear in black and gray.



Use the menu to go to the following screens:

Menu selection	Menu icon	Description
Insulin		Deliver a bolus, set up and deliver basal insulin, suspend insulin delivery, and stop bolus during bolus delivery.
History & Graph		View history, SG review, graph, and time in range.
SmartGuard		Set up the SmartGuard feature.
Sound & Vibration		Set sound, vibrate, and volume options for notifications.
Reservoir & Set		Set up a new reservoir and infusion set, and fill a cannula.
Blood Glucose		Enter a BG value.
Status		View the status of the pump and other system features.
Paired Devices		Pair devices or CareLink software.
Settings		Set up device settings, delivery settings, and alert settings.










Menu map

Refer to *Menu map*, page 339 to see the menu map diagrams.

Sound & Vibration screen

The sound and vibration options are set on the Sound & Vibration screen. Sensor alerts can also be temporarily silenced. For information about silencing alerts, see *Silencing sensor alerts*, page 176. The alert silence icon on the Home screen indicates when alerts are silenced. For more information, see *Status icons*, page 69.

To adjust the sound and vibration settings:

1. From the Home screen, press , and then select .
2. Adjust the volume:
 - a. Select **Volume**.
 - b. Press , , , or , and then press .
3. Select **Sound**, and then press  to turn the sound on or off.
4. Select **Vibration**, and then press  to turn the vibration on or off.

Status screen

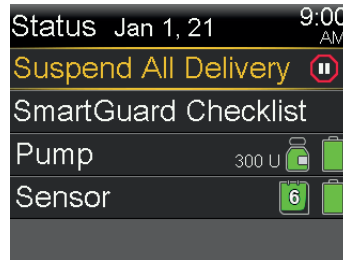
The Status screen provides access to information about the pump and information about the sensor, if applicable. The Status screen also provides the option to suspend all insulin delivery or resume basal insulin delivery.

Use the Status screen to access the following screens or options:

Screen or option	Description
Stop Bolus	This option appears when a bolus delivery is in progress. Select Stop Bolus to stop the active bolus.
Suspend All Delivery or Resume Basal	This option indicates whether insulin delivery is currently suspended. Select Suspend All Delivery to suspend insulin delivery. Select Resume Basal to resume basal insulin delivery. For more information see <i>Suspending all insulin delivery and resuming basal insulin delivery</i> , page 88.
SmartGuard Checklist screen	This screen shows a list of the required conditions before the pump can use the SmartGuard feature. For more information, see <i>SmartGuard Checklist</i> , page 191.
Pump status screen	This screen shows a detailed view of the pump status, the reservoir and infusion set status, battery status, pump serial number, pump name, model number, and other pump details.
Sensor status screen	The Sensor status screen includes information about the CGM device life, serial number, software version, and other details. When using the Guardian 4 sensor, the screen will show the transmitter battery status icon.

To view the status screens:

1. From the Home screen, press , and then select .



2. Press  or  to highlight a status screen, and then press .

4



Basal and bolus insulin delivery

4

Basal and bolus insulin delivery

This chapter explains how to use different types of insulin delivery.

Setting up basal insulin

Basal insulin is the “background” insulin that the body needs throughout the day and night to maintain target blood glucose (BG) meter readings when food is not eaten. Basal insulin accounts for approximately one half of daily insulin requirements. The MiniMed 780G insulin pump simulates a pancreas by delivering insulin continuously over 24 hours.



WARNING: The pump is intended to be used with a basal pattern. The basal pattern must be manually entered and saved into the pump. The pump will operate with a basal rate of 0.0 U/hr until a basal pattern is entered and saved. There is no reminder message to program basal rates. Consult a healthcare professional to determine what basal pattern is needed. For more information about basal patterns, see *Basal patterns, page 81*.

Basal rate

Basal rate is the specific amount of basal insulin that the pump continuously delivers each hour. While some people use one basal rate all day, others require different rates at different times of the day.



Basal rates are set in one or more basal patterns. Each basal pattern covers 24 hours. For specific information about basal patterns, see *Basal patterns, page 81*.

Max basal setting

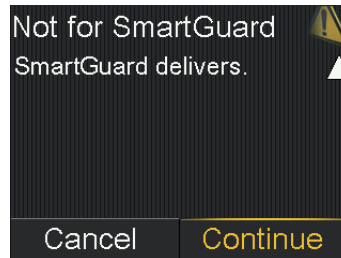
The Max basal setting applies to Manual mode only. SmartGuard does not use the Max basal setting because it determines delivery limits automatically.

The Max basal setting limits the maximum amount of basal insulin per hour that can be programmed. The factory default Max basal setting is 2.00 U/hr. Consult your healthcare professional to personalize your Max basal setting.

To change the Max basal setting:

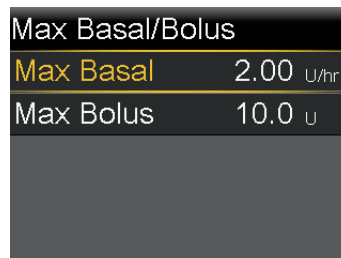
1. From the Home screen, press , and then select .
2. Select **Delivery Settings** > **Max Basal/Bolus**.

The Not for SmartGuard screen appears.

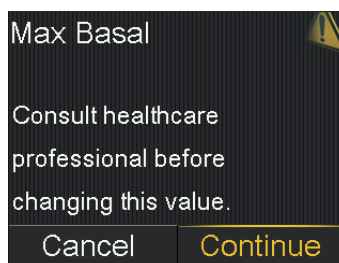


3. Select **Continue**.

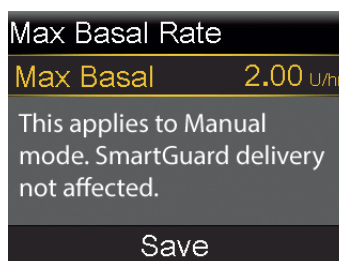
The Max Basal/Bolus screen appears.



4. Select **Max Basal**.



5. To continue to the Max Basal Rate screen, select **Continue**.
6. Select **Max Basal**, and then set the maximum number of basal insulin units per hour.



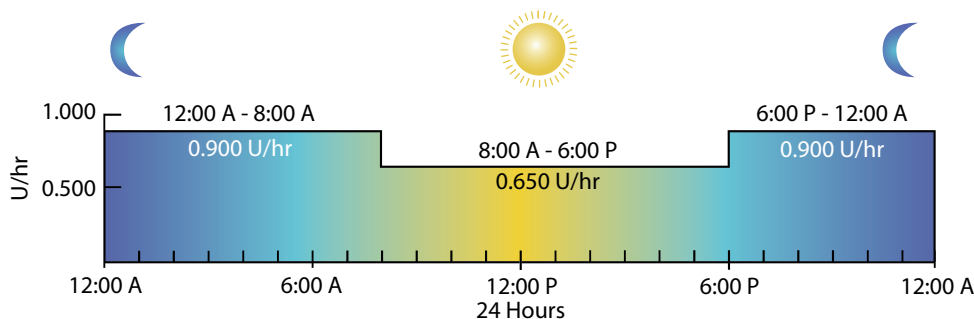
- Enter the value provided by your healthcare professional.
 - The system will display a message when setting the Max basal higher than 6 U/hr. To enter a Max basal higher than 10 U/hr, see *Max basal rate*, page 218.
7. Select **Save**.

Basal patterns

Basal pattern settings apply to Manual mode only and do not affect how much insulin SmartGuard delivers.

The basal pattern determines the amount of basal insulin delivered throughout the day and night while in Manual mode. A basal pattern is made up of one to 48 basal rates that are set to cover a full 24-hour period. Because basal insulin needs can vary, up to eight basal patterns can be set.

The following example represents one basal pattern with three basal rates set for three different time periods.



Consult a healthcare professional to determine the basal pattern. The basal pattern must be manually entered into the pump. There will be no reminder message to program basal rates.





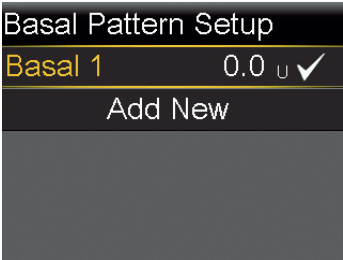
WARNING: Confirm a basal pattern is entered. If a basal pattern is needed but not entered and saved, this could result in an under-delivery of basal insulin. Under-delivery of insulin can potentially cause severe hyperglycemia, which may lead to diabetic ketoacidosis.

Setting up a basal pattern

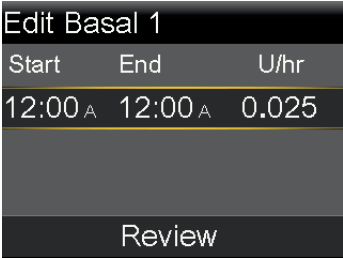
This procedure shows how to set up a basal pattern for the first time. To add an additional basal pattern, see *Adding an additional basal pattern*, page 250.


To set up a basal pattern:

1. From the Home screen, press , and then select .
2. In Manual mode, select **Delivery Settings** > **Basal Pattern Setup**.
3. The system reminds you that basal patterns only apply to Manual mode. Select **Continue**.



- 4. Select **Basal 1**.
- 5. Select **Options**, and then select **Edit**.



- 6. For one basal rate, the End time does not need to change. Press  on the 12:00 A.




Note: For instructions on setting up multiple basal rates over a 24-hour period, see *Settings covering a 24-hour period*, page 84.


- 7. Enter the unit value for the time period.
- 8. Select **Review**.

If your basal pattern rate will deliver significantly more insulin than you typically need, the system displays a message. You can edit the basal pattern or, after consulting with a healthcare professional, you can continue.

Basal 1		
24 hr Total: 24 U		
Start	End	U/hr
12:00 A	12:00 A	1.00
Save		

Review the basal pattern. Press  to return to the previous screen to make changes.



Note: If  is pressed and **Save** is not selected, the changes are not saved.

9. Select **Save**. If you do not select Save, your changes are not saved.

If this is an added basal pattern and you want to activate it, see *Changing from one basal pattern to another*, page 252.



CAUTION: If you have not pressed Save after settings are entered and the screen goes dark, the entered settings will not be saved.



Note: Programming a basal pattern is an important part of setting up the insulin pump for use. Please review the settings to confirm that these are programmed accurately based on settings provided from a healthcare professional.

Settings covering a 24-hour period

Some pump functions allow settings to change over a 24-hour period. Basal rates are one of those settings.

Setting up multiple values over a 24-hour period applies to the following settings:

- Basal patterns

See *Setting up a basal pattern*, page 82

- High SG settings
See *Setting up the high SG settings, page 162*
- Low SG settings
See *Setting up the low SG settings, page 172*
- Carb ratios, insulin sensitivities, and BG targets in the Bolus Wizard feature in Manual mode
See *Setting up the Bolus Wizard feature in Manual mode, page 97*

This screen is an example of a basal pattern with different rates of basal insulin for specific times of the day:

Edit Basal 1		
Start	End	U/hr
12:00 _A	8:00 _A	0.900
8:00 _A	6:00 _P	0.650
6:00 _P	12:00 _A	0.900
Review		

To set up values over a 24-hour period:

1. On the appropriate settings screen, select the End time and enter the end time for the first time period. In this example, the first desired time period is 8 hours. The start time always begins at 12:00 A. To set an 8-hour period, enter an end time of 8:00 A.

Edit Basal 1		
Start	End	U/hr
12:00 _A	12:00 _A	0.025
Review		

2. Enter the unit value for the first time period.

Edit Basal 1		
Start	End	U/hr
12:00 _A	8:00 _A	0.900
Review		

3. Press .

The start time for the next time period appears.

Edit Basal 1		
Start	End	U/hr
12:00 _A	8:00 _A	0.900
8:00 _A	8:30 _A	---
Review		

4. Enter the end time for the next time period.

Edit Basal 1		
Start	End	U/hr
12:00 _A	8:00 _A	0.900
8:00 _A	6:00 _P	---
Review		

5. Enter the unit value for the next time period.

Edit Basal 1		
Start	End	U/hr
12:00 _A	8:00 _A	0.900
8:00 _A	6:00 _P	0.650
Review		

6. Press .

The start time for the next time period appears.

Edit Basal 1		
Start	End	U/hr
12:00 _A	8:00 _A	0.900
8:00 _A	6:00 _P	0.650
6:00 _P	12:00 _A	---
Review		


7. Repeat steps 3-5 for every desired time period until the end time of 12:00 A is reached. This completes the 24-hour duration.

Edit Basal 1		
Start	End	U/hr
12:00 _A	8:00 _A	0.900
8:00 _A	6:00 _P	0.650
6:00 _P	12:00 _A	0.900
Review		


8. Select **Review**.

If your basal pattern rate will deliver significantly more insulin than you typically need, the system displays a message. You can edit the basal pattern or, after consulting with a healthcare professional, you can continue.

Edit Basal 1		
Start	End	U/hr
12:00 _A	8:00 _A	0.900
8:00 _A	6:00 _P	0.650
6:00 _P	12:00 _A	0.900
Review		

Review the basal pattern. Press  to return to the previous screen to make changes.





Note: If  is pressed and **Save** is not selected, the changes are not saved.

9. Select **Save**.



Viewing basal delivery information

To view the current basal rate:

1. From the Home screen, press , and then select .
2. Select **Basal**.

The current basal rate appears at the top of the screen.

To view basal patterns:

1. From the Home screen, press , and then select .
2. Select **Basal**.
3. Select **Basal Patterns**.

The Basal Patterns screen shows a list of configured basal patterns and the 24-hour insulin total for each basal pattern. A check mark appears next to the active basal pattern.

4. To view details for a basal pattern, select the basal pattern.

For more information about basal patterns, see *Basal patterns*, page 81.

Suspending all insulin delivery and resuming basal insulin delivery

Use this feature to suspend all active basal and bolus insulin deliveries. A reminder that insulin is not being delivered occurs every 15 minutes while this feature is active. The pump beeps, vibrates, or both every 15 minutes as a reminder that insulin is not being delivered.



Note: The first reminder occurs 15 minutes after the pump display times out. The pump beeps, vibrates, or both 15 minutes after the pump display times out. If a button is pressed to wake up the pump, the pump beeps, vibrates, or both 15 minutes after the pump display times out again. To adjust the timeout setting, see *Display options*, page 211.

To restart basal insulin delivery, use the Resume Basal feature. The pump starts the programmed basal pattern but does not start any previously programmed bolus deliveries.



Note: To stop a bolus delivery without stopping the basal delivery, see *Stopping a bolus delivery*, page 105.





WARNING: If insulin delivery is suspended during a bolus, check the pump daily history to determine the amount of insulin that was delivered before resuming insulin delivery. Bolus delivery and fill cannula do not restart when insulin delivery is resumed. If needed, program a new bolus or fill the cannula. Failure to resume basal insulin delivery can result in hyperglycemia and diabetic ketoacidosis.



WARNING: Do not rely solely on the sound or vibration notifications when using the sound or vibrate options. These notifications may not occur as expected if the speaker or vibrator in the pump malfunctions. A missed notification may result in the delivery of too much or too little insulin. This is most common when using the Easy bolus feature or when the pump is in manual suspend. Contact 24-Hour Technical Support with any concerns.

To suspend all insulin delivery:

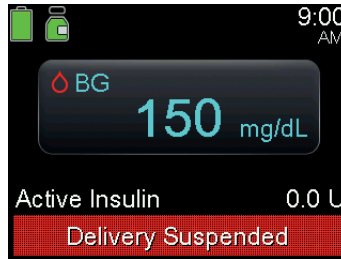
1. From the Home screen, press , and then select .
2. Select **Suspend All Delivery**.

A confirmation message appears.



3. Select **Yes** to suspend all insulin delivery.

The pump functions are limited until insulin delivery is resumed.

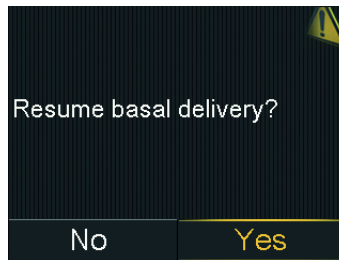
The Delivery Suspended banner appears on the Home screen while insulin is suspended.



To resume basal insulin delivery:

1. While insulin delivery is suspended, from the Home screen press , and then select .
2. Select **Resume Basal**.

A confirmation message appears.



3. To resume basal insulin delivery, select **Yes**.

If a temp basal was active when the pump was suspended, it resumes, provided the time is still within the duration set.



Note: If a bolus delivery that was in progress before delivery was suspended is needed, check the Daily History screen for the actual bolus units delivered and the intended bolus amount. Then set up a new bolus amount as needed. For details about using the Daily History screen, see *Daily History screen*, page 227.

Temp basal rates

The temp basal feature is used to set and start a temporary basal rate that can be used immediately to manage blood glucose (BG) during short-term activities or conditions, such as exercise or meals.

The duration of the temp basal rate can range from 30 minutes to 24 hours. After the temp basal rate delivery is completed or canceled, the programmed basal pattern resumes. The temp basal rates and preset temp basal rates can be defined using either a percentage of the current basal pattern or by setting a specific rate, as described in the table:



Temp basal rate type	Description
Percent	Percent delivers a percentage of the basal rates programmed in the active basal pattern for the duration of the temp basal rate. The temp basal amount is rounded down to the next 0.025 units if the basal rate is set at less than 1 unit per hour, or to the next 0.05 units if the basal rate is set at more than 1 unit per hour. Temp basal rates can be set to deliver from 0% to 200% of the scheduled basal rate. The percentage used is based on the largest basal rate scheduled during the temp basal rate duration and is limited by the Max basal rate.
Rate	Rate delivers a fixed basal insulin rate in units per hour for the duration of the temp basal rate. The amount set is limited by the Max basal rate.

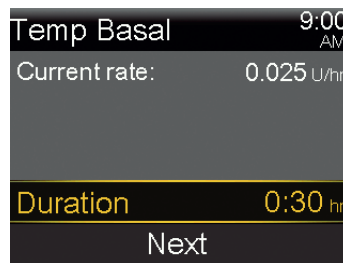
Preset temp basal rates can be set for recurring short term situations. For more information on Preset temp basal rates, see *Preset temp basal rates*, page 247.

Starting a temp basal rate

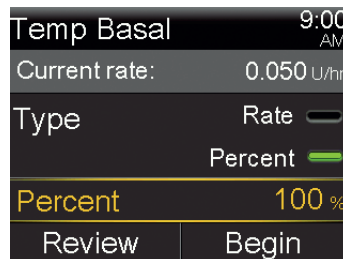
When a temp basal rate starts, basal delivery changes to the temp basal rate for the set duration. When the duration completes, the basal insulin returns to the active basal pattern.

To start a temp basal rate:

1. From the Home screen, press , and then select .
2. Select **Basal** > **Temp Basal**.
3. Set the **Duration**.



4. Select **Next**.
5. Select **Type** to select Rate or Percent.



6. Depending on the type selected, do one of the following:
 - Enter a percentage.
 - Enter a basal rate.

Select **Review** to review the temp basal setting.

7. Select **Begin** to start the temp basal rate.

The Temp Basal banner appears on the Home screen during delivery.





Entering a blood glucose (BG) meter reading

The system may request a blood glucose (BG) meter reading to continue use of sensor. Additionally, a blood glucose (BG) meter reading can be entered at any time, if desired.

The BG screen allows entry of a blood glucose (BG) meter reading. Previously entered BG readings do not appear on the BG screen.

To enter blood glucose (BG) meter readings:

1. From the Home screen, press , and then select .
2. Enter a blood glucose (BG) meter reading. Do not enter a sensor glucose (SG) value in place of a blood glucose (BG) meter reading. A blood glucose (BG) meter reading must always come from a blood glucose meter. The entered glucose value is used to calibrate the sensor or as a BG check to verify system performance.
3. Select **Save**.

To enter blood glucose (BG) meter readings on the Bolus Wizard screen in Manual mode:

- From the Bolus Wizard screen in Manual mode, select **BG**.

Setting up bolus delivery

A bolus is given for two reasons: to cover food that contains carbohydrates or to correct glucose levels that are above the target range.

Manual mode bolus delivery options

Three types of bolus are available using the Bolus Wizard or Manual bolus feature, including normal bolus, Square Wave™ bolus, and Dual Wave™ bolus. Discuss these options with a healthcare professional to determine what is best. For more information, see *Bolus types*, page 257.



Note: Do not use a blood glucose (BG) meter reading if more than 12 minutes have passed since the last BG meter reading was taken. That BG meter reading and the calculated bolus amount may no longer be accurate.

The following table describes how to deliver a bolus using the Bolus Wizard feature or Manual bolus feature. These bolus options are only available in Manual mode.

Feature	Description
Bolus Wizard feature in Manual mode	Enter the BG meter value or the amount of carbs expected from a meal, or both. Then the Bolus Wizard feature in Manual mode calculates an estimated bolus amount based on the individual settings. For details about using the Bolus Wizard feature, see <i>Bolus Wizard feature in Manual mode</i> , page 96.
Manual bolus feature	Calculate and manually enter the bolus amount. For details about using the Manual bolus feature, see <i>Delivering a normal bolus using the Manual bolus feature</i> , page 104.

Max bolus



The Max bolus setting limits the amount of insulin that can be programmed by the user for a single bolus in Manual mode. The pump prevents single bolus insulin deliveries that exceed the Max bolus amount. The Max bolus can be set from 0 to 25 units. Set the Max bolus value as indicated by a healthcare professional.

If the Max bolus is set up after the preset bolus deliveries are set, the Max bolus cannot be set lower than any of the existing preset bolus amounts.

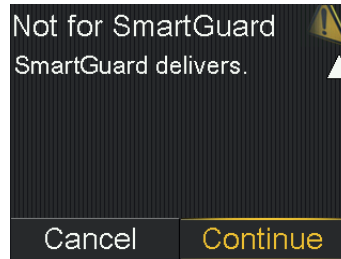
The Max bolus setting applies to boluses programmed by the user in Manual mode.

When the SmartGuard feature is active, SmartGuard determines the limits for each auto correction bolus.

To set the Max bolus:

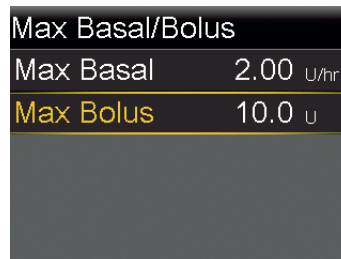
1. From the Home screen, press , and then select .
2. Select **Delivery Settings** > **Max Basal/Bolus**.

The Not for SmartGuard screen appears.

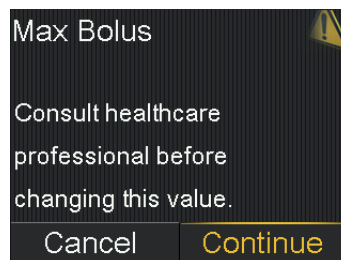


3. Select **Continue**.

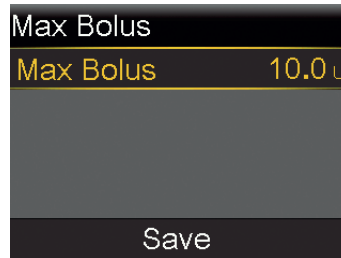
The Max Basal/Bolus screen appears.



4. Select **Max Bolus**.



5. To continue to the Max Bolus screen, select **Continue**.
6. Select **Max Bolus**, and then set the maximum number of insulin units the pump can deliver in one bolus.



7. Select **Save**.

Bolus Wizard feature in Manual mode

In Manual mode, the Bolus Wizard calculates an estimated bolus amount based on the Bolus Wizard settings using the BG readings and carbs that are entered.

After the Bolus Wizard feature is set up, use a normal bolus to deliver a food bolus, a correction bolus, or a food plus correction bolus. For more information, see *Delivering a normal bolus with the Bolus Wizard feature*, page 102.

The Bolus Wizard feature can also be used to deliver a Dual Wave bolus or a Square Wave bolus. For more information, see *Bolus types*, page 257.

Bolus Wizard settings in Manual mode

To use the Bolus Wizard feature, consult a healthcare professional to determine the personal settings that should be used. The carb ratio, insulin sensitivity factor, BG target, and the active insulin time are needed to complete the setup. Always consult a healthcare professional before changes are made to the Bolus Wizard settings. The setup procedure begins on *Setting up the Bolus Wizard feature in Manual mode*, page 97.



Manual mode Setting	Description
Active Insulin Time	Active insulin is the bolus insulin that has been delivered by the pump and is still working to lower glucose levels. In the Bolus Wizard and SmartGuard Bolus feature, the Active Insulin Time setting is used to calculate a correction bolus by subtracting

Manual mode Setting	Description
	<p>the estimated active insulin from each bolus. In SmartGuard, auto correction boluses are delivered up to every 5 minutes. A shorter Active Insulin Time setting may result in more insulin being delivered in correction boluses.</p> <p>A healthcare professional provides the personalized active insulin time based on historic glycemic control data for the individual user. When using SmartGuard, the recommended initial setting is an Active Insulin Time of 2-3 hours. The Active Insulin Time setting in the MiniMed 780G system is not necessarily reflective of the physiological insulin metabolism. Adjustments are not based on the pharmacokinetics and pharmacodynamics of the rapid-acting insulin. The current active insulin amount appears on the Home screen and includes only the bolus insulin received.</p>
BG Target	<p>In Manual mode, the Bolus Wizard feature calculates the estimated bolus based on the BG target range. The high and low values set are the values to which the BG is corrected. To use a single target value rather than a range, set the same value for the high and low value of the BG target.</p> <p>If the BG reading is above the high target value, a correction dose is calculated. If the BG reading is below the low target value, a negative correction is calculated and subtracted from the food bolus.</p>
Carb Ratio	<p>The carb ratio setting is used for food bolus calculations.</p> <p>The number of carb grams that are covered by 1 unit of insulin.</p>
Insulin Sensitivity Factor	<p>The insulin sensitivity factor setting is used to calculate correction bolus amounts.</p> <p>The insulin sensitivity factor is the amount that BG is reduced by 1 unit of insulin.</p>

Setting up the Bolus Wizard feature in Manual mode

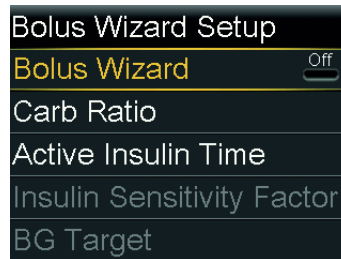
In Manual mode, to use the Bolus Wizard feature to calculate a bolus, first turn on the Bolus Wizard feature and enter the Bolus Wizard settings. There are four settings needed to set up the Bolus Wizard. Each setting is shown using 1/4, 2/4, 3/4, and 4/4 on the screens.

To set up the Bolus Wizard feature:

1. From the Home screen, press , and then select .

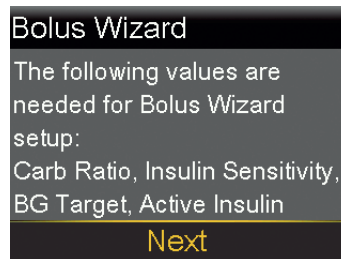
2. Select **Delivery Settings > Bolus Wizard Setup**.

This feature is only available in Manual mode. The Bolus Wizard Setup screen appears.



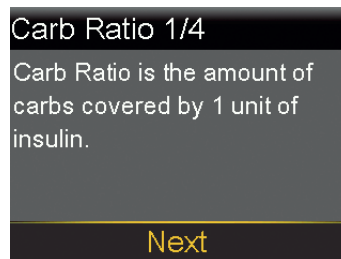
3. Select **Bolus Wizard** to turn on the feature.

If this is the first time the Bolus Wizard feature has been turned on, the following screen appears.



4. Confirm the values needed are ready to be entered, then select **Next**.

The Carb Ratio 1/4 screen appears.



5. Select **Next**.

The Edit Carb Ratio 1/4 screen appears.

Edit Carb Ratio 1/4		
Start	End	g/U
12:00 A	12:00 A	---

- To enter one carb ratio, enter the g/U, and then press .



Note: For instructions on setting up more than one carb ratio over a 24-hour period, see *Settings covering a 24-hour period*, page 84.

- Select **Next**.



Note: If the values are outside of the value range, a message asks to confirm the settings.

The Sensitivity 2/4 screen appears.

Sensitivity 2/4
Insulin Sensitivity Factor (Sensitivity) is the BG amount reduced by 1 unit of insulin.
Next

- Select **Next**.

The Edit Sensitivity 2/4 screen appears.

Edit Sensitivity 2/4		
Start	End	mg/dL per U
12:00 A	12:00 A	---

9. For one sensitivity factor, enter the mg/dL per U, and then press .



Note: For instructions on setting up more than one sensitivity factor over a 24-hour period, see *Settings covering a 24-hour period*, page 84.

10. Select **Next**.

The BG Target 3/4 screen appears.

BG Target 3/4
BG Target is the value your blood glucose level will be corrected to.
Next

11. Select **Next**.

The Edit BG Target 3/4 screen appears.

Edit BG Target 3/4		
Start	End	Lo-Hi (mg/dL)
12:00 A	12:00 A	--- --

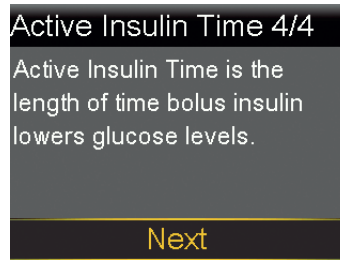
12. For one BG target range, enter the Lo and Hi target, and then press .



Note: For instructions on setting up more than one BG target range over a 24-hour period, see *Settings covering a 24-hour period*, page 84.

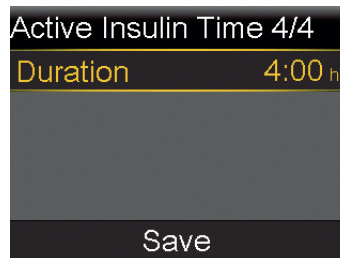
13. Select **Next**.

The Active Insulin Time 4/4 screen appears.



14. Select **Next**.

The Active Insulin Time 4/4 screen appears.



15. Enter the **Duration** of the active insulin time, and then press .



16. Select **Save**.

The Bolus Wizard feature setup is now complete.

Turning the Bolus Wizard feature off

The Bolus Wizard feature can be turned off at any time. The Bolus Wizard settings remain in the pump. When the Bolus Wizard feature is turned off, the Bolus Wizard menu selection does not appear on the Bolus screen, and the insulin sensitivity factor or BG target settings can not be edited on the Bolus Wizard Setup screen.

To turn the Bolus Wizard feature off:

- 1. From the Home screen, press , and then select .
- 2. Select **Delivery Settings > Bolus Wizard Setup**.
- 3. Select **Bolus Wizard** to turn the feature off.

Delivering a Normal bolus

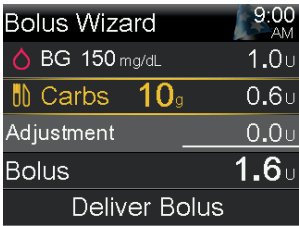

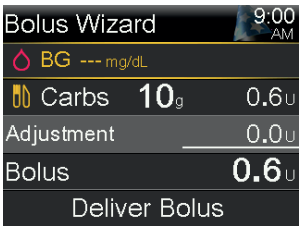
In Manual mode, a normal bolus provides a single immediate dose of insulin. Use a normal bolus to cover food intake or to correct a high BG meter reading or both.





Note: The pump can deliver a normal bolus while a Square Wave bolus or the Square portion of a Dual Wave bolus is being delivered.

Delivering a normal bolus with the Bolus Wizard feature

In Manual mode, the Bolus Wizard screen shows the most recent BG reading, if available. The table indicates the different ways that the Bolus Wizard screen shows the BG reading.

Bolus Wizard screen	Glucose reading information
	The  icon indicates that a recent blood glucose (BG) meter reading is used by the Bolus Wizard feature to calculate a correction bolus. DO NOT enter a sensor glucose (SG) value in place of a blood glucose (BG) meter reading.
	The BG appears as dashes when no BG is available for the Bolus Wizard feature to calculate a correction bolus.

To deliver a normal bolus using the Bolus Wizard feature:

- 1. From the Home screen, press , and then select .
- 2. Select **Bolus > Bolus Wizard**.

This feature is only available in Manual mode. The Bolus Wizard screen appears.

Bolus Wizard		9:00 AM
BG 150 mg/dL		1.0 U
Carbs 0g		0.0 U
Adjustment		0.0 U
Bolus		1.0 U
Deliver Bolus		

3. For a correction bolus or a food bolus with a correction, use a blood glucose (BG) meter for a blood glucose (BG) meter reading. Do not enter a sensor glucose (SG) value in place of a blood glucose (BG) meter reading. A blood glucose (BG) meter reading must always come from a blood glucose meter. The entered glucose value is used to calibrate the sensor or as a BG check to verify system performance.



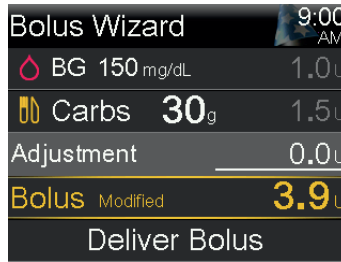
Note: A blood glucose (BG) meter reading can be entered on the Bolus Wizard screen. On the Bolus Wizard screen, select **BG**.

4. For a food bolus, select **Carbs** to enter the carb count of the meal. For a correction bolus where no food was eaten, leave the carbs value at 0.

The calculated bolus appears in the Bolus field.

Bolus Wizard		9:00 AM
BG 150 mg/dL		1.0 U
Carbs 30g		1.5 U
Adjustment		0.0 U
Bolus		2.5 U
Deliver Bolus		

5. If a change to the bolus amount is needed, select **Bolus** and modify the bolus amount.





6. Select **Deliver Bolus** to start the bolus.

The pump beeps or vibrates and a message appears when the bolus starts. The Home screen shows the bolus amount as it is being delivered. The pump beeps or vibrates when bolus delivery is complete.

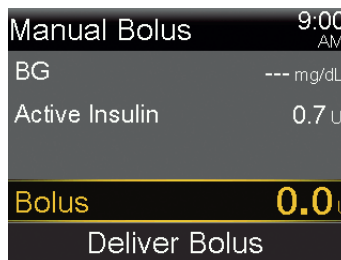
Delivering a normal bolus using the Manual bolus feature

The following procedure describes how to deliver a normal bolus using the Manual bolus feature.

To deliver a normal bolus using the Manual bolus feature:

1. From the Home screen, press , and then select .
2. In Manual mode, do one of the following:
 - Select **Bolus** if the Bolus Wizard feature is turned off.
 - Select **Bolus** > **Manual Bolus** if the Bolus Wizard feature is turned on.

The Manual Bolus screen appears.





3. Select **Bolus** to set the bolus delivery amount in units.
4. Select **Deliver Bolus** to start the bolus.



Stopping a bolus delivery

These procedures describe how to stop a bolus.



WARNING: Always press , select , and then select **Stop Bolus** to stop bolus insulin delivery. Do not use the Suspend All Delivery feature to stop bolus insulin. The Suspend All Delivery feature stops both basal insulin and bolus insulin delivery. Failure to resume basal insulin delivery could result in too little insulin, which may cause high BG.

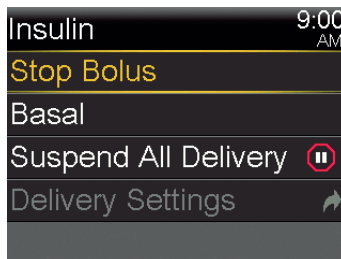


Note: To stop all insulin delivery, use the Suspend All Delivery feature (press , select , and then select **Suspend All Delivery**). For more information on using the Suspend All Delivery feature, see *Suspending all insulin delivery and resuming basal insulin delivery*, page 88.

To stop a bolus delivery:

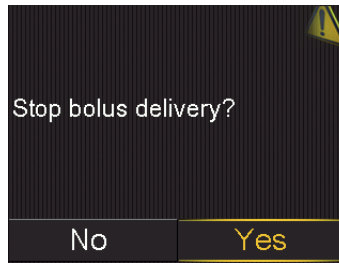
1. While the pump delivers a bolus, press  and then select .

The Insulin menu appears.



2. Select **Stop Bolus**.

A message appears confirming if bolus delivery should be stopped.



3. Select **Yes** to confirm.

The Bolus Stopped screen appears and shows the amount of bolus delivered, and the original bolus amount set up.



4. Select **Done**.



Note: The delivered amount can be viewed in the insulin delivery history screen after the procedure is closed. For more information, see *Daily History screen, page 227*.

5

5

System component: Reservoir and infusion set

The pump has options to change the reservoir and infusion set, reservoir only, or infusion set only. This chapter provides information about setting up the reservoir and infusion set with the Reservoir & Set option.

If the reservoir runs out of insulin and the infusion set has not been used for the duration of use indicated for the infusion set, the New Reservoir Only option may be used to change the reservoir. If only the infusion set needs to be changed, the New Set Only option may be used to change the infusion set.

Refer to the infusion set user guide for the duration of use indicated for the infusion set. Refer to the reservoir user guide for the duration of use indicated for the reservoir.

Do not begin the steps to replace the reservoir and infusion set until training has been received.



WARNING: Always confirm that the infusion set tubing is disconnected from the body before doing the following steps:

- placing the reservoir into the pump
- rewinding the pump
- loading the reservoir
- filling the infusion set tubing

Failing to disconnect the infusion set tubing from the body may result in an accidental infusion of insulin, and may cause hypoglycemia.

Setting up the reservoir and infusion set

Confirm that the time and date on the pump are correct before insulin is used with the pump for the first time. For information about how to change the time and date on the pump, see *Time and date*, page 211. Consult a healthcare professional to determine the appropriate pump settings before insulin is used with the pump.

The following items are needed:

- MiniMed 780G insulin pump
- vial of rapid-acting U-100 insulin
- MiniMed or Medtronic reservoir
- MiniMed or Medtronic infusion set and its user guide



WARNING: Do not use the pump to deliver insulin for the first time until the active insulin has been cleared. If the pump has been used for training with bolus delivery before insulin is used, the active insulin value may be inaccurate. This may result in inaccurate insulin delivery, and serious injury. For details, see *Clearing the active insulin*, page 217.



Note: Different infusion sets may have different instructions for insertion into the body. All the procedures in the sections within this chapter must be followed to change the reservoir and infusion set.

Removing the reservoir and rewinding the pump

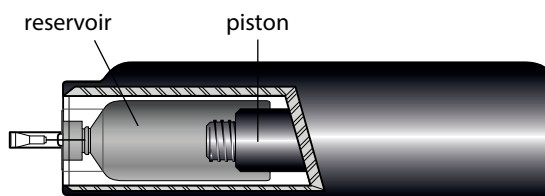
If this is the first time a reservoir is inserted into the pump, proceed to the pump rewind instructions. For more information about the reservoir see the reservoir user guide.



WARNING: Always confirm that the infusion set is disconnected from the body before rewinding the pump or filling the infusion set tubing. Never insert the reservoir into the pump while the tubing is connected to the body. Doing so may result in an unintentional infusion of insulin, and may cause hypoglycemia.

When the pump rewinds, the piston in the reservoir compartment returns to its starting position and allows a new reservoir to be placed into the pump.

The piston is located in the reservoir compartment of the pump. It engages the reservoir and pushes insulin through the tubing.



Start here:

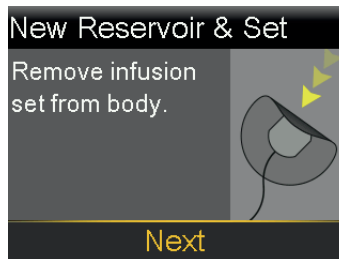
1. Wash hands with soap and water. On the pump, press  to go to the Menu screen.



2. Select , and then select **New Reservoir & Set**.

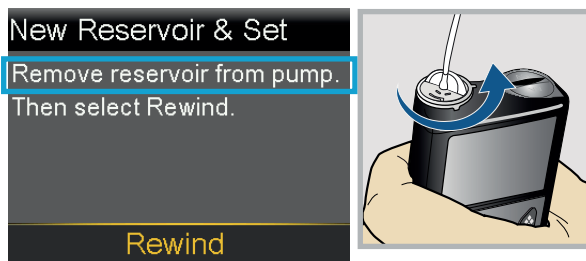


3. Remove the infusion set by loosening the adhesive and pulling the set away from the body. Select **Next**.



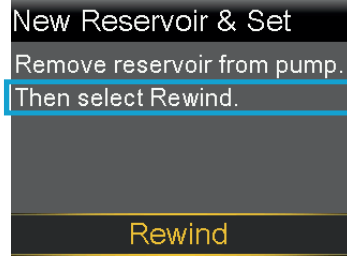
Note: For instructions on how to remove the infusion set from the body refer to the user guide that came with the infusion set.

4. If the optional activity guard is attached to the reservoir compartment on the pump, remove it now.
5. Remove the used reservoir from the pump.



6. Dispose of the used reservoir and infusion set per the disposal information in the corresponding user guide.
7. Select **Rewind**.

Do not connect the infusion set to the body.

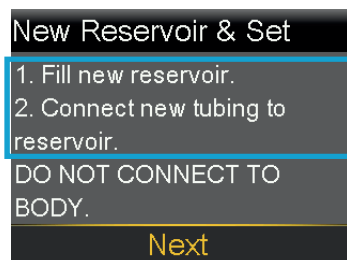


WARNING: Always confirm that the infusion set is disconnected from the body before rewinding the pump. Failing to disconnect the infusion set from the body may result in an accidental infusion of insulin, and may cause hypoglycemia.



8. Follow the next steps to fill the new reservoir with insulin and to connect the infusion set tubing.

Do not select **Next**.



Filling the reservoir and connecting it to the infusion set tubing

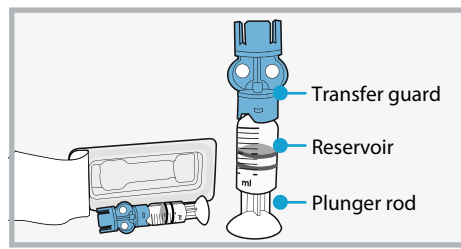


WARNING: Always allow the insulin to reach room temperature before use. Cold insulin may cause air bubbles in the reservoir and tubing, which may result in inaccurate insulin delivery.

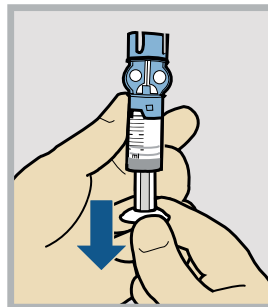
The following procedures must be performed in the order presented.

To fill the reservoir and connect it to the infusion set tubing:

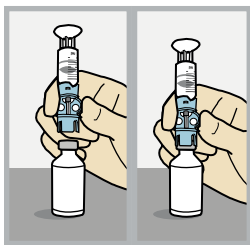
1. Remove the reservoir from the package. Make sure the insulin vial is at room temperature to reduce the risk of air bubbles.



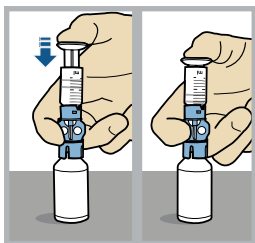
2. Pull the plunger down based on the planned insulin fill amount for the duration of use indicated for the reservoir.



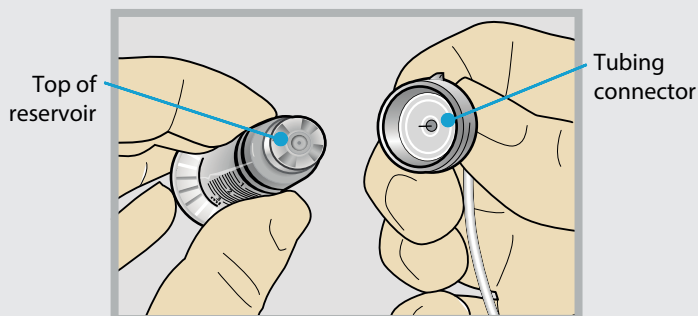
3. Wipe the top of the vial with alcohol. Place the vial on a sturdy flat surface. Firmly press the transfer guard onto the vial.



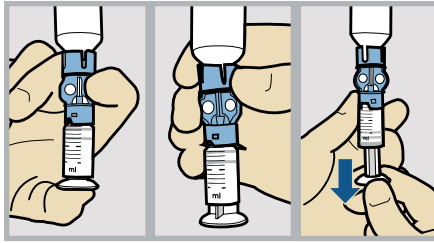
4. Push and hold the plunger down.



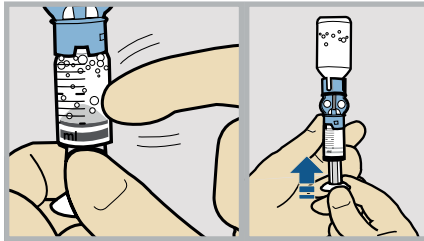
WARNING: Do not use the reservoir or infusion set if insulin or any liquid gets on the top of the reservoir or inside the tubing connector, as shown in the image. Insulin or any liquid may temporarily block the vents. This may result in the delivery of too little or too much insulin, which may cause hyperglycemia or hypoglycemia. If insulin or any liquid gets on the top of the reservoir or inside the tubing connector, start over with a new reservoir and infusion set.



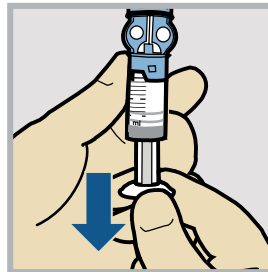
5. Keeping a thumb on the plunger, flip the vial over so the vial is on top. Release the thumb and pull the plunger down to fill the reservoir with insulin.



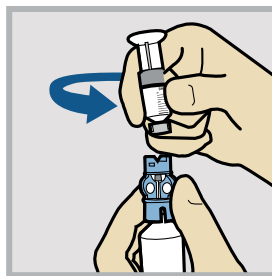
6. Tap the reservoir to move air bubbles to top of reservoir. Push the plunger up to move air into vial.



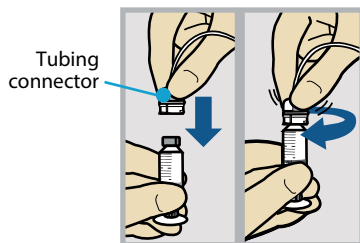
7. Pull the plunger back down to allow the reservoir to fill with the amount of insulin needed for the duration of use indicated for the reservoir.



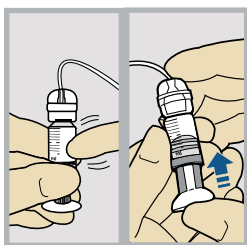
8. To avoid getting insulin on the top of the reservoir, **flip the vial over again so the reservoir is on top**. Hold the transfer guard and turn the reservoir counter-clockwise and remove the reservoir from the transfer guard.



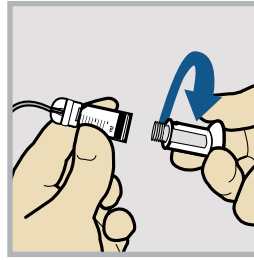
9. Follow the instructions in the infusion set user guide to access the infusion set tubing.
10. Gently push the tubing connector onto the reservoir. Turn the connector clockwise until it is locked into place.



11. Tap the reservoir to move any air bubbles to the top. Push the plunger slightly to move the bubbles into the tubing.



12. Twist the plunger counter-clockwise to loosen it and to remove it.



Placing the reservoir into the pump and filling the tubing with insulin



WARNING: Always rewind the pump before placing a new reservoir. Failing to rewind the pump may result in an unintentional infusion of insulin, which may cause hypoglycemia.

To place the reservoir into the pump and fill the tubing with insulin:



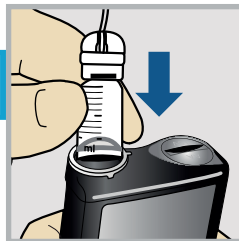
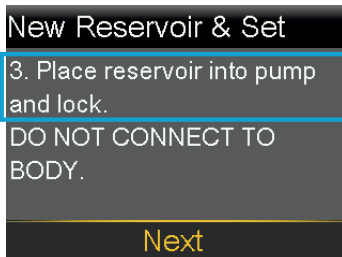
Note: The backlight may have turned off. Press any button to turn the screen back on. Press  to go to the Menu screen, and then select .

1. Select **Next**.



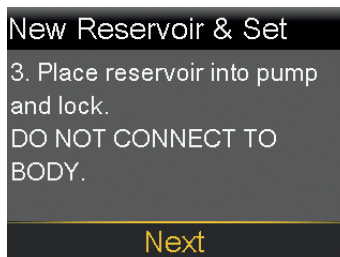
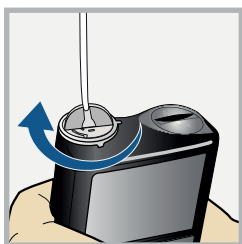
2. Place the reservoir into the pump.


Do not connect the infusion set to the body.



WARNING: Always confirm that the infusion set is disconnected from the body before placing the reservoir into the pump. Failing to disconnect the infusion set from the body may result in an accidental infusion of insulin, and may cause hypoglycemia.

3. Turn the reservoir clockwise until the reservoir locks into place, and select **Next**.




4. Select **Load** and hold  until the checkmark appears on the screen.
Do not connect the infusion set to the body.



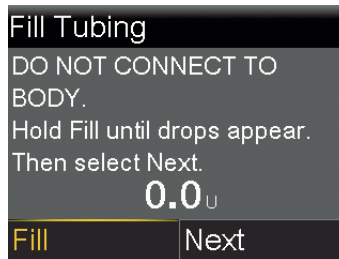
5. When the checkmark appears, select **Next**.



WARNING: Always confirm that the infusion set is disconnected from the body before loading the reservoir and filling the tubing. Failing to disconnect the infusion set from the body may result in an accidental infusion of insulin, and may cause hypoglycemia.

6. Select **Fill** and keep holding  until there are no air bubbles visible in the tubing, and there are drops at the end of the tubing.

Do not connect the infusion set to the body.

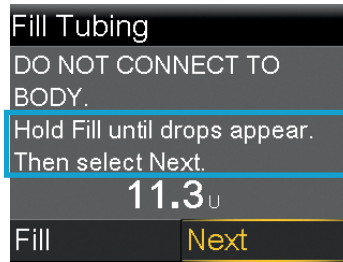


WARNING: Always check the tubing for air bubbles. Continue to press Fill until no bubbles remain in the tubing. Air bubbles may result in inaccurate insulin delivery.

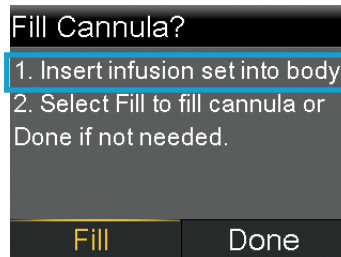
7. After drops appear, press  and select **Next**.



Note: The location of the infusion set needle may be different depending on the type of infusion set being used.



8. Follow the steps in the infusion set user guide to insert the infusion set into the body before proceeding with the steps on the pump screen.



Note: If an infusion set with a steel cannula is used, the cannula does not need to be filled, and **Done** may be selected.

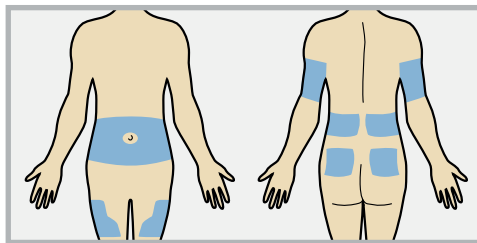
Inserting the infusion set into the body

Always refer to the infusion set user guide and the inserter user guide, if needed, for instructions about how to insert an infusion set into the body.



WARNING: Do not remove the reservoir from the pump while the infusion set is connected to the body. Doing so may result in the delivery of too little or too much insulin, which may cause hyperglycemia or hypoglycemia.

Choose an insertion site from the shaded areas. Clean the insertion site with alcohol or other antiseptic as directed by a healthcare professional.



CAUTION: Do not use the same infusion set insertion site for an extended period of time. This may cause the site to become overused. Rotate the infusion set insertion sites regularly.



CAUTION: Always change the infusion set as indicated by the infusion set user guide. Using the same infusion set for an extended period of time beyond its product labeling can cause infusion set occlusion or site infection.

After the infusion set is inserted into the body follow the steps in the following section to fill the cannula.

Filling the cannula

Filling the soft cannula with insulin is required after the infusion set is inserted into the body and the introducer needle is pulled out. The insulin amount required to fill the cannula depends on the type of infusion set used. Refer to the user guide that came with the infusion set for more information.



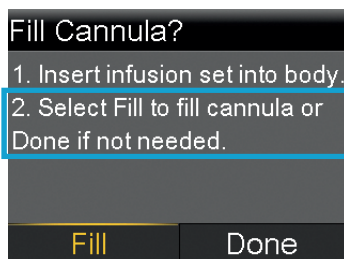
Note: The Fill Cannula action is not required during a reservoir only change. If performing a reservoir only change, select **Done** on the **Fill Cannula?** screen.



WARNING: Never leave the pump on the Fill Cannula? screen. Insulin delivery is suspended while on the Fill Cannula? screen. Always finish filling the cannula or return to the Home screen, to avoid continued insulin delivery suspension. Prolonged suspension of insulin delivery may cause hyperglycemia.

To fill the cannula:

1. After the infusion set is inserted into the body, select **Fill**.



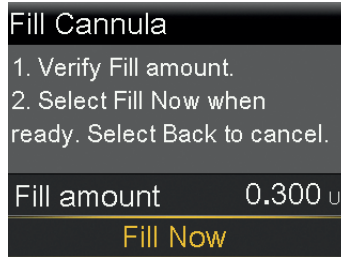
Note: Always verify that the amount shown in the **Fill amount** field is correct. The pump will remember the fill amount last used. Change the **Fill amount** if needed.

- If the Fill amount is correct, press ▼ to select **Fill Now** and then press ⌂.
- If the Fill amount is incorrect, press ⌂. Change to the correct amount and press ⌂. Then select **Fill Now**.

2. Select **Fill amount** and enter the amount per the infusion set user guide. After entering the cannula size, press ⌂.



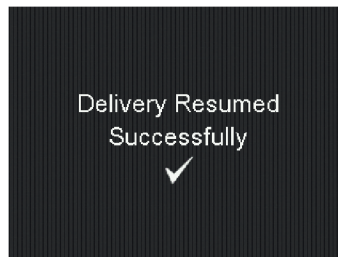
3. Select **Fill Now**.



The screen displays the insulin amount as insulin fills the cannula.

The reservoir and infusion set change is now complete.

Always check blood glucose (BG) using a blood glucose meter one to three hours after changing the infusion set or reservoir.



Note: Use the following procedure only when it is necessary to stop filling the cannula.

To stop filling the cannula:

1. Select **Stop Filling** to stop filling the cannula.



2. Select **Yes**.

The Fill Stopped screen appears.



3. Select **Done**.

Disconnecting the infusion set

Refer to the infusion set user guide for instructions on how to disconnect the infusion set.

Reconnecting the infusion set

Refer to the infusion set user guide for instructions on how to reconnect the infusion set.

6

6

System component: CGM device

Refer to the table below to find instructions specific to each CGM device.

Sensor	Section
Instinct	<i>Instinct, page 129</i>
Simplera Sync	<i>Simplera Sync, page 134</i>
Guardian 4	<i>Guardian 4, page 137</i>

Instinct

This section describes how to get started with the Instinct sensor and includes information on how to operate the sensor with the pump and MiniMed Mobile app. For information on applying the sensor, refer to the instructions in the Instinct Product Insert that came with your sensor. Step-by-step instructions on how to apply the sensor can also be found in the MiniMed Mobile app when starting a sensor.



Note: The MiniMed Mobile app can only be used with one pump at a time. Households with more than one MiniMed 780G insulin pump must be careful to use the correct MiniMed Mobile app when starting a sensor.

Starting the Instinct sensor using the MiniMed Mobile app

The MiniMed Mobile app is required to start the Instinct sensor. Refer to the MiniMed Mobile app user guide for instructions on how to set up the MiniMed Mobile app on your compatible mobile device. The App Manager, with the MiniMed Mobile app pre-installed, may also be used to start the Instinct sensor.

The MiniMed Mobile app must be used to pair the mobile device to the pump before you can start a new sensor. Once started, the sensor communicates with the pump through a wireless connection. To maintain the best connection, it is recommended that the pump and Instinct sensor are worn on the same side of the body.

Only one sensor can be paired with the pump. When you start a new sensor with the app, the existing sensor is automatically unpaired from the pump. If the sensor is unintentionally unpaired, return to the MiniMed Mobile app to restart the sensor.

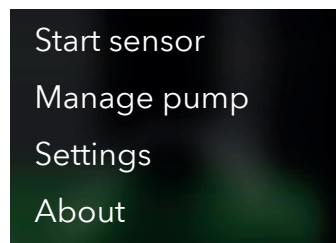
To start the Instinct sensor:

1. Tap the MiniMed Mobile app icon on your compatible mobile device.

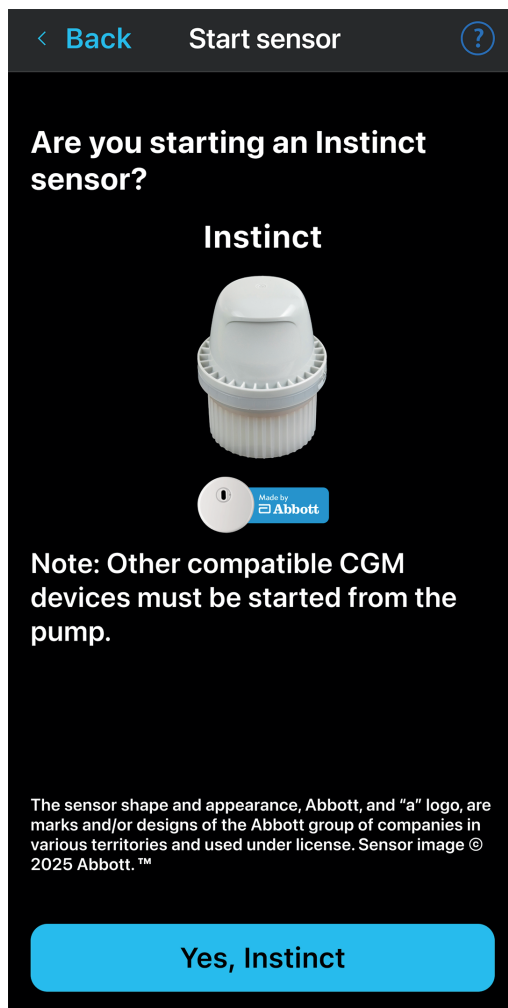


Note: The MiniMed Mobile app must be used to pair the mobile device to the pump before you can start a new sensor. Refer to the MiniMed Mobile app user guide for instructions on how to pair the pump with the compatible mobile device during initial setup.

2. Once the pump is paired with the compatible mobile device, go to the menu on the app home screen and tap **Start sensor**.



3. Confirm you want to start the Instinct sensor by tapping **Yes, Instinct**.



4. Follow the onscreen instructions to start the Instinct sensor. You will be guided on when to apply and scan the sensor.
5. When scanning a new sensor, hold your compatible mobile device near the sensor until you hear a beep or feel a vibration from the device.



Note: The MiniMed 780G insulin pump must be on the Home screen before starting the scan process. Once scanning is complete, the MiniMed Mobile app will return to the app home screen during the 1-hour warm-up period.

6. Once you receive the beep or vibration confirmation, the Instinct sensor will begin to pair with your MiniMed 780G insulin pump.



Note: If the sensor is unintentionally unpaired, return to the MiniMed Mobile app to restart the sensor.

The “Sensor warm up XX min” message appears on the pump Home screen until the sensor warm up is complete. After the warm-up is complete, the pump begins receiving SG readings. If a Sensor failed to pair with pump alert appears, see *CGM device alarms, alerts, and messages, page 316* for more information.



Note: Sensor pairing typically takes 2 minutes but may take up to 5 minutes.

Unpairing the Instinct sensor from the pump

The sensor does not need to be unpaired from the pump before pairing a new sensor.

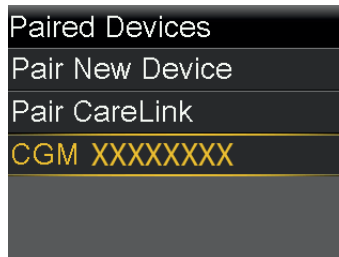
Only one sensor can be paired with the pump. When you start a new sensor with the app, the existing sensor is automatically unpaired from the pump. If the sensor is unintentionally unpaired, return to the MiniMed Mobile app to restart the sensor.

Follow this procedure to unpair the sensor from the pump.

To unpair the Instinct sensor from the pump:

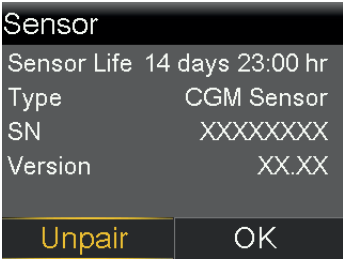
1. From the Home screen, press , and then select .

The Paired Devices screen appears.



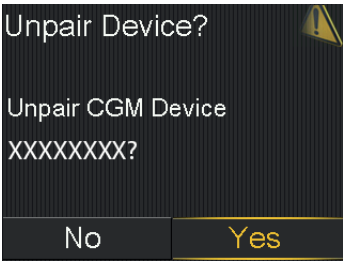
2. Select **CGM** with the correct serial number.

The Sensor screen appears.



3. Select **Unpair**.

The Unpair Device? screen appears.



4. Select **Yes** to confirm. Select **No** to cancel.

When the sensor is unpaired from the pump, a No Paired CGM banner appears on the Home screen.

Removing the Instinct sensor

To remove the Instinct sensor:

1. Pull up the edge of the adhesive that keeps your sensor attached to your skin. Slowly peel away from your skin in one motion.



Note: Any remaining adhesive residue on the skin can be removed with warm soapy water or isopropyl alcohol.

2. Discard the used sensor following directions from your health care professional.



Note: This product should be disposed of in accordance with all applicable local regulations related to the disposal of electronic equipment, batteries, sharps, and materials potentially exposed to body fluids. Contact 24-Hour Technical Support for further information on the appropriate disposal of sensor components.

Simplera Sync



This section describes how to get started with the Simplera Sync sensor and includes information on how to operate the sensor with the pump. For information on inserting and removing the sensor, refer to the Simplera Sync sensor user guide.

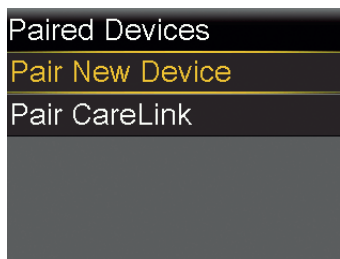
Pairing the Simplera Sync sensor with the pump

The pump and sensor must be paired to use the sensor. When paired, the pump and sensor communicate with each other through a wireless connection. Only one sensor can be paired with the pump.

When you pair a new sensor with the pump, the existing sensor is automatically unpaired.

To pair the Simplera Sync sensor with the pump:

1. Insert the sensor. For details, see the Simplera Sync sensor user guide.
2. From the Home screen, press , and then select .
3. Select **Pair New Device**.



The Searching... screen appears.

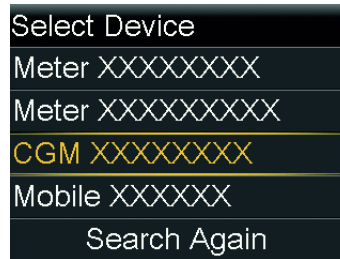


Note: The search process can take up to 20 seconds.

The Select Device screen appears with a list of available devices.

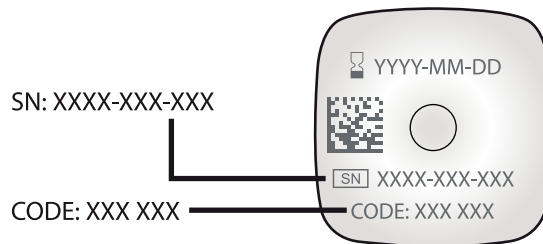
4. Select the CGM device that matches the serial number indicated on the inserter label on the top of the inserter.

If the serial number on the pump screen does not match, select **Search Again**.



The Confirm CODE screen appears.

5. If the code on the pump screen matches the code on the inserter label on the top of the inserter, select **Confirm**.




Select **Cancel** if the code is incorrect.

If the Simplera Sync sensor is not paired with the pump within 20 minutes after the cap is removed from the inserter, enter the code and select **Confirm** to pair the sensor. This is for security purposes.



Note: If the sensor is unintentionally unpaired, go to History > Paired Sensors to find the serial number and code, and pair the sensor again.

When the connection is successful, a “Pairing successful!” message appears on the pump. When the sensor is communicating with the pump, the Sensor feature is turned on and  appears on the Home screen. If a Device not found alert appears, see *Pump alarms, alerts, and messages, page 301* for more information.

After the sensor is inserted, the “Sensor warm up X:XX hr” message appears on the Home screen until the sensor warm up is complete. After the warm up is complete, the pump begins receiving SG readings.

The “Waiting for warm up to start” message might appear briefly on the Home screen.



Note: It may take up to five minutes for the “Sensor warm up X:XX hr” message to appear. The warm up period lasts two hours.

Unpairing the Simplera Sync sensor from the pump

The sensor does not need to be unpaired from the pump before pairing a new sensor.

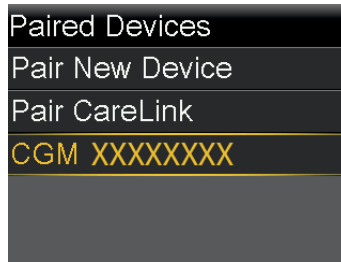
When you pair a new sensor with the pump, the existing sensor is automatically unpaired.

Follow this procedure to unpair the sensor from the pump.

To unpair the Simplera Sync sensor from the pump:

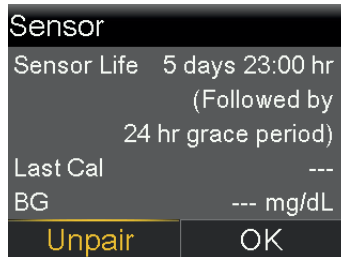
1. From the Home screen, press , and then select .

The Paired Devices screen appears.



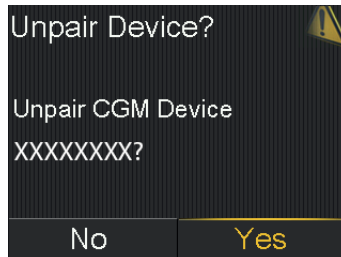
2. Select **CGM** with the correct serial number.

The Sensor screen appears.



3. Select **Unpair**.

The Unpair Device? screen appears.



4. Select **Yes** to confirm. Select **No** to cancel.

When the sensor is unpaired from the pump, a No Paired CGM banner appears on the Home screen.

Guardian 4

This section describes how to get started with the Guardian 4 sensor and includes information on how to operate the transmitter and sensor with the pump. For

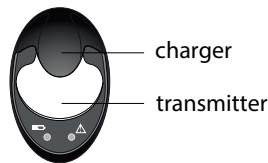
information on inserting and removing the sensor, refer to the Guardian 4 sensor user guide. For information on connecting and disconnecting the transmitter and sensor, refer to the Guardian 4 transmitter user guide.

Pairing the pump and transmitter



The pump and transmitter must be paired to use the sensor. When paired, the pump and transmitter communicate with each other through a wireless connection. Only one transmitter can be paired with the pump. If a transmitter is already paired with the pump, delete the transmitter, and then continue. For instructions on how to delete a transmitter from the pump, see *Unpairing the transmitter from the pump*, page 140.

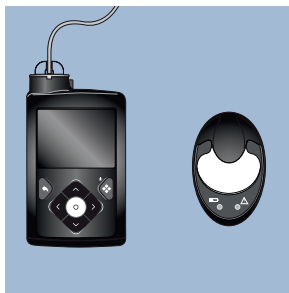
To pair the pump and transmitter:

1. Attach the transmitter to the charger. Fully charge the transmitter. Keep the transmitter attached to the charger.

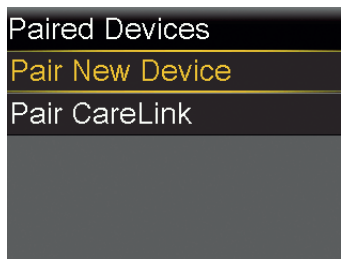


Note: Both lights on the charger are off when the transmitter is fully charged. For more information, see the transmitter user guide.

2. From the Home screen, press , and then select .
3. Place the transmitter (still attached to the charger) next to the pump.



4. Select **Pair New Device**.

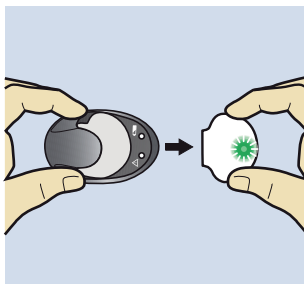


The Searching... screen appears.



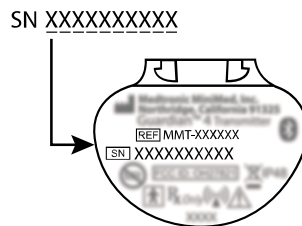
Note: The search process can take up to 20 seconds.

5. Remove the transmitter from the charger. The transmitter light flashes 10 times and turns off.




The Select Device screen appears with a list of available devices.

6. Select the CGM device that matches the serial number indicated on the back of the transmitter.





If the correct serial number does not appear, select **Search Again**.

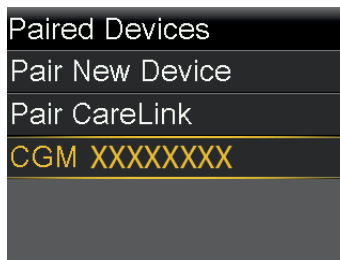
If the connection is successful, a “Pairing successful!” message appears on the pump. When the transmitter is communicating with the pump, the Sensor feature is turned on and  appears on the Home screen. For information on using the sensor with the transmitter, see *Connecting the transmitter to the sensor*, page 141. If a Device not found alert appears, see *Pump alarms, alerts, and messages*, page 301 for more information.

Unpairing the transmitter from the pump

Follow this procedure to unpair the transmitter from the pump, including when the transmitter needs to be replaced.

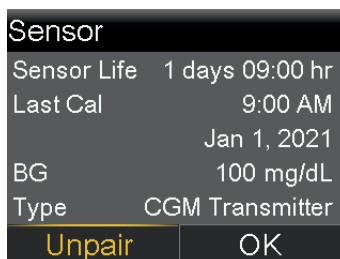
To unpair the transmitter from the pump:

1. From the Home screen, press , and then select .
- The Paired Devices screen appears.



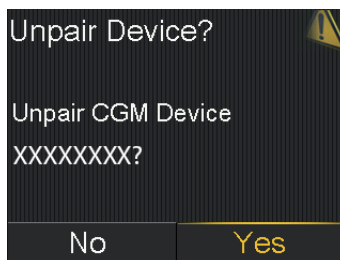
2. Select CGM with the correct serial number.

The Sensor screen appears.



3. Select **Unpair**.

The Unpair Device? screen appears.



4. Select **Yes** to confirm. Select **No** to cancel.

When the transmitter is unpaired from the pump, a No Paired CGM banner appears on the Home screen.

Connecting the transmitter to the sensor

Refer to the Guardian 4 transmitter user guide for instructions on how to connect the transmitter to the sensor.

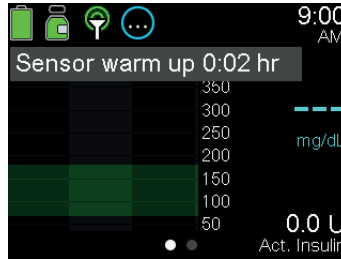
Starting the sensor

After the transmitter is paired to the pump, the sensor is inserted, and the transmitter is connected to the sensor, the pump will display a Start New Sensor screen.

To start a new sensor:

1. Select **Start New Sensor** when it appears on the pump screen.

The “Sensor warm up X:XX hr” message appears.



Note: It may take up to five minutes for the “Sensor warm up X:XX hr” message to appear. The warm up period lasts two hours.

2. Select **OK**.

The “Sensor warm up X:XX hr” message appears on the Home screen until the sensor warm up is complete.

After the warm up is complete, the pump begins receiving SG readings.

Reconnecting the transmitter to a sensor that is already inserted

If the transmitter is removed from a sensor while the sensor is inserted in the body, the pump detects when the transmitter is reconnected to the sensor and a “Sensor connected” message appears.

To reconnect a transmitter to a sensor:

1. Select **Reconnect Sensor**.

The “Sensor warm up X:XX hr” message appears.



Note: It may take up to five minutes for the “Sensor warm up X:XX hr” message to appear. The warm up period lasts two hours.

2. Select **OK**.

The “Sensor warm up X:XX hr” message appears on the Home screen until the sensor warm up is complete.

After the warm up is complete, the pump begins receiving SG readings.

7

7

System component: MiniMed Mobile app

The MiniMed Mobile app is compatible with the MiniMed 780G system. The app provides a secondary display that allows the user to view pump data. A compatible mobile device is required for the app to function. The app is available for both iOS and Android platforms. Consult the MiniMed Mobile app user guide for installation instructions. When using the Instinct sensor, the app is required to start a new sensor. It is not possible to command the pump to pair with the sensor directly. When using the Simpler Sync and Guardian 4 sensor, the app is an optional accessory.

Updating the pump software



Note: This feature may not be available in all geographies.

After an eligibility message for a pump software update is received, use the MiniMed Mobile app to perform the pump software update. The app provides instructions for each step of the process. Follow the instructions provided on the app screens to perform the update.



CAUTION: A stable internet connection is required throughout the entire update process. Avoid the use of unsecure Wi-Fi™* networks or public Wi-Fi hotspots.

Downloading the pump software update

To check if an update is available, ensure you are logged into the MiniMed Mobile app. The Software is Ready screen appears on the app when the download is complete.

Preparing to install the pump software update

To prepare to install the pump software update:

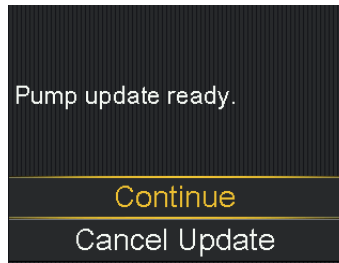


Note: After installation is complete, the SmartGuard feature requires a 5-hour warm-up period before it is active.

- Ensure glucose is within target before starting the update.
- Clear active alerts or alarms.
- If the pump is Suspended on low or Suspended before low, wait until insulin delivery resumes and BG recovers before starting the update.
- If a bolus delivery is in progress, wait until the bolus delivery completes before installing the pump software update.
- If the battery is low, the pump software update will not install. If the battery icon is not green, replace the battery before installing the pump software update.
- Insulin is not delivered and sensor glucose (SG) values are not shown for up to 20 minutes during the pump software installation. Manual injections are not accounted for in the active insulin amount. If an injection is needed during the software update, consult a healthcare professional for how long to wait after a manual injection before using the Bolus Wizard feature. Refer to *Emergency kit*, page 23 for necessary supplies to use for backup insulin delivery if needed.

Installing the pump software update

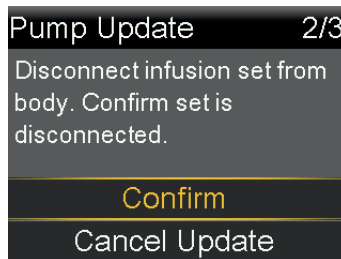
1. When instructed by the app, go to the Home screen on the pump. On the pump, a screen appears when the pump is ready for the software update.
2. Select **Continue**.



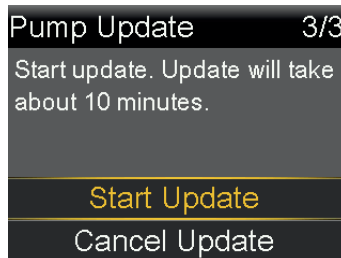
3. Select **Suspend Delivery** to suspend bolus and basal insulin delivery.



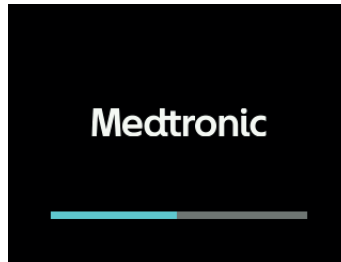
4. Disconnect the infusion set from the body, and then select **Confirm**.



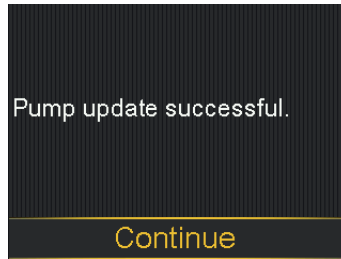
5. Select **Start Update**.



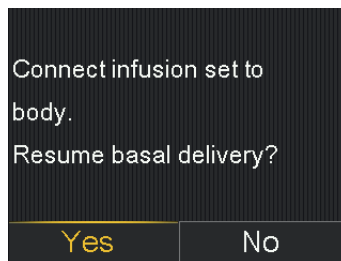
While the pump updates, a screen shows the progress.



6. Select **Continue**.



7. Reconnect the infusion set to the body.
8. Select **Yes** to resume basal insulin delivery.



Note: The previous version of the software is retained if the update is not successful.



Completing the pump software update

Follow the instructions on the app to complete the pump software update.

Uploading device data to CareLink software

Upload system data to CareLink software with the MiniMed Mobile app or the Blue Adapter. Follow the instructions found on the CareLink software to upload system data with the Blue Adapter. Refer to the MiniMed Mobile app user guide for instructions to upload MiniMed 780G system data to CareLink software with the app.

To prepare the pump to upload to CareLink software:

1. From the Home screen, press , and then select .
2. Select **Pair CareLink**.

Follow instructions on the CareLink uploader to complete steps.

Sharing device data with the CareLink Connect app

The CareLink Connect app works with CareLink software. Through the CareLink Connect app, care partners can see information sent from a connected MiniMed Mobile app. A compatible mobile device is required for the app to function. The app is available for both iOS and Android platforms.

For more information about sharing data with the CareLink Connect app, see the MiniMed Mobile app user guide and the CareLink Connect app user guide.

8

8

Continuous glucose monitoring (CGM)

This chapter explains how to enter sensor settings and set up continuous glucose monitoring (CGM). CGM requires these items:

- MiniMed 780G insulin pump
- Sensor alert settings provided by a healthcare professional
- Compatible CGM device
- MiniMed Mobile app (required when using the Instinct sensor to start a new sensor)

CGM overview

What is CGM

CGM is a tool that uses a sensor to continuously measure the amount of glucose in interstitial fluid. CGM consists of the following:

- Sensor Glucose (SG) readings that are displayed every 5 minutes.
- Alerts based on current and predicted high and low glucose levels.
- Graphs that show glucose trends over time.
- Trend arrows that show the rate at which the most recent SG readings are (has been) rising or falling.

When you are using the MiniMed 780G system with the Simplera Sync or Guardian 4 sensor, you do not need to calibrate. However, the system is designed to use every blood glucose (BG) meter reading to calibrate the sensor.

When you are using the MiniMed 780G system with the Instinct sensor, the system is designed to use every blood glucose (BG) meter reading as a BG check to verify system performance.

The following warning applies to the Instinct, Simplera Sync, and Guardian 4 sensors:



WARNING: Do not use SG values to make treatment decisions, including delivering a bolus, while the pump is in Manual mode. When the SmartGuard feature is active and you are no longer in Manual mode, the pump uses an SG value, when available, to calculate a bolus amount. However, if your symptoms do not match the SG value, use a BG meter to confirm the SG value. Failure to confirm glucose levels when your symptoms do not match the SG value can result in the infusion of too much or too little insulin, which may cause hypoglycemia or hyperglycemia. For more information on using the SmartGuard feature, see *SmartGuard*, page 185.

The following warnings apply to the Simplera Sync and Guardian 4 sensors:



WARNING: Do not use continuous glucose monitoring if hydroxyurea, also known as hydroxycarbamide, is taken. Hydroxyurea is used to treat certain diseases, such as cancer and sickle cell anemia. Hydroxyurea use results in higher sensor glucose readings compared to blood glucose readings. Taking hydroxyurea while using continuous glucose monitoring can result in hypoglycemia caused by over-delivery of insulin, inaccurate or missed alarms and alerts, delay or loss of sensor-enabled insulin suspension, and substantially higher sensor glucose readings in reports than actual blood glucose readings.

Always check the label of any medication being taken to confirm if hydroxyurea or hydroxycarbamide is an active ingredient. If hydroxyurea is taken, consult a healthcare professional. Turn the Sensor feature off to disable continuous glucose monitoring. For more information, see *Deactivating the Sensor feature, page 178*. Use additional blood glucose meter readings to verify glucose levels.



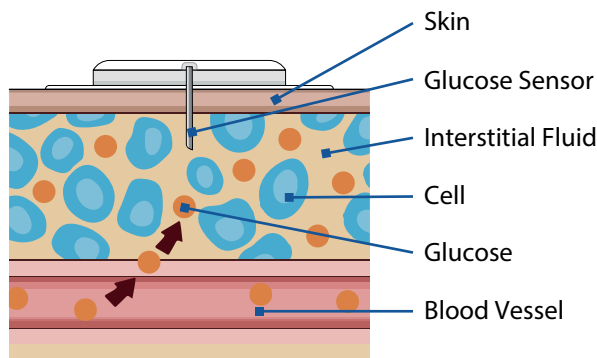
WARNING: Consult a healthcare professional if a medication that contains acetaminophen or paracetamol is taken while wearing the sensor. Medications that contain acetaminophen or paracetamol can falsely raise sensor glucose readings. The level of inaccuracy depends on the amount of acetaminophen or paracetamol active in the body and can differ for each person. Falsely elevated sensor readings can result in over-delivery of insulin, which can cause hypoglycemia. Medications that contain acetaminophen or paracetamol include, but are not limited to, cold medicines and fever reducers. Check the label of any medications being taken to see if acetaminophen or paracetamol is an active ingredient. Use additional blood glucose meter readings to confirm blood glucose levels.

While the SmartGuard feature is active, if acetaminophen or paracetamol is taken, program a temp target for up to eight hours, or the amount of time recommended by a healthcare provider. For more information, see *Setting a temp target, page 203*. Use blood glucose values instead of sensor glucose readings to calculate a meal bolus or correction bolus for up to eight hours, or the duration recommended by a healthcare provider, after taking acetaminophen or paracetamol.

What is blood glucose (BG) and sensor glucose (SG)?

Blood glucose and sensor glucose are measured in different places. It is important to understand the differences between the two, as there are times when the system requires you to enter a blood glucose and there are other times when the system will use a sensor glucose.

Glucose travels between the blood and interstitial fluid. The blood glucose (BG) meter measures glucose levels in your blood. The glucose sensor measures glucose in the interstitial fluid. Blood glucose (BG) meter readings and sensor glucose (SG) readings will be close but will rarely exactly match. This difference is normal and should be expected.



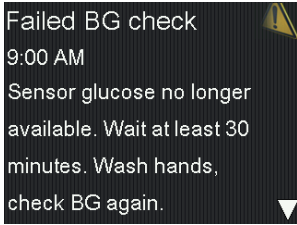
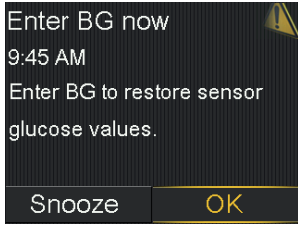
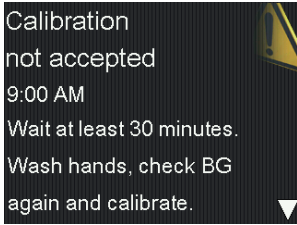
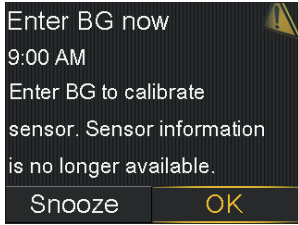
IMPORTANT: When a glucose value is entered into the pump, it must be from a blood glucose (BG) meter.

When using the Simpler Sync or Guardian 4 sensor, the system automatically uses the entered glucose value to calibrate the sensor, unless the system gives you the option to calibrate the sensor.

When using the Instinct sensor, the system automatically uses the entered glucose value as a BG check to verify system performance.

The following table shows when to use a blood glucose (BG) meter reading:

When to use a BG	Examples	
Anytime glucose is entered into the pump, it needs to be a blood glucose (BG) meter reading, not a sensor glucose (SG) value.		
Anytime you deliver a bolus in Manual mode and you want to use a glucose for a correction.		

When to use a BG	Examples	
Anytime the system requests a blood glucose (BG) meter reading.	Instinct sensor:	
		
	Simplera Sync and Guardian 4 sensors:	
		
When your sensor glucose (SG) values are different than the symptoms you are experiencing, which can commonly occur during the first 12 hours with a new sensor.		



Note: See when to use a blood glucose (BG) meter reading when SmartGuard is active in *Entering a BG value in the SmartGuard feature*, page 195.

Verifying system performance

Calibration is the process of using a blood glucose (BG) meter reading to help the sensor glucose (SG) readings more closely match the glucose measured in your blood. For more information, see *Entering a blood glucose (BG) meter reading*, page 93.

When you are using the MiniMed 780G system with the Simplera Sync or Guardian 4 sensor, you do not need to calibrate. However, the system is designed to use every blood glucose (BG) meter reading to calibrate the sensor.

When you are using the MiniMed 780G system with the Instinct sensor, the system is designed to use every blood glucose (BG) meter reading as a BG check to verify system performance.

CGM settings

Sensor alert settings

An SG alert occurs when an SG reading changes at a particular rate, reaches a specified high or low limit, or before a high or low limit is reached. The pump can also be set to suspend insulin delivery before or when a low limit is reached.


High SG settings




High SG settings provide alerts under the following conditions:

- When SG rises rapidly (Rise Alert).
- When SG approaches the high limit (Alert before high).
- When SG reaches the high limit (Alert on high).

The following graph shows the types of high SG settings.



 High SG alert settings



High glucose setting	Description
High limit	The high limit is used as a basis for some high SG settings. The high limit can be set from 100 to 400 mg/dL, for up to eight different time segments.
Alert before high	This setting provides an alert when SG is predicted to reach the high limit, raising awareness of potential high SG.
Time before high	This setting determines how long an Alert before high occurs before the high limit may be reached. It can be set between 5 and 30 minutes.
Alert on high	This setting provides an alert when SG reaches or exceeds the high limit.
High SG alert	This setting provides an alert when SG is at 250 mg/dL or higher for 3 hours. This is a fixed setting and cannot be changed.
Rise Alert	<p>This setting provides an alert when glucose is rising rapidly, such as after a meal or if a bolus is missed. Set the rise rates to match the trend arrows, as shown below, or to a custom rise rate.</p> <ul style="list-style-type: none"> •  - SG is rising at a rate of 1 mg/dL per minute or more. •  - SG is rising at a rate of 2 mg/dL per minute or more. •  - SG is rising at a rate of 3 mg/dL per minute or more. • Custom - SG is rising at a custom rate, set from 1.0 mg/dL to 5.0 mg/dL per minute.
Rise Limit	This setting determines when a Rise Alert occurs.

Setting up the high SG settings

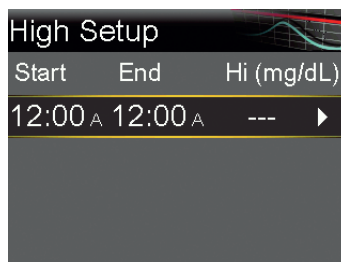
The Sensor feature must be turned on to set up the sensor settings. For more information, see *Turning on the Sensor feature, page 178*.

For details about high SG settings, see *High SG settings, page 161*.

To set up the high SG settings:

1. From the Home screen, press , and then select .
2. Select **Alert Settings > High Alert**.

The High Setup screen appears.

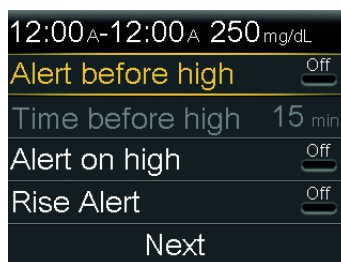


3. Select the time segment. The end time flashes.

The start time of the first time segment is always 12:00 A. Up to eight time segments can be set, each with a different high limit. All the time segments must add up to a 24-hour period.

4. Set the End time.
5. Set your High limit. You can enter a value from 100 to 400 mg/dL, in increments of 5 mg/dL.
6. Select the arrow beside the End time to select the high alerts for the time segment.

A screen appears and shows the high alerts for the selected time segment.

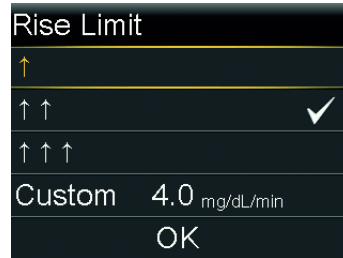


7. Set the following alerts, as desired:
 - a. Select **Alert before high** to receive an alert before the high limit is reached.
 - b. Set the **Time before high** option between 5 to 30 minutes to receive an alert before the high limit is reached.
 - c. Select **Alert on high** to receive an alert when the high limit is reached.
 - d. Select **Rise Alert** to receive an alert when SG is rising quickly.

8. If Rise Alert is on, perform the following steps to set up the Rise Limit. Otherwise, proceed to step 9.

- a. Scroll down and select **Rise Limit**.

The Rise Limit screen appears.



- b. Select one, two, or three arrows for the rise rate, or enter a custom rate.

Arrow selection	Minimum rate that SG is rising when an alert occurs.
↑	SG is rising at a rate of 1 mg/dL per minute or more.
↑↑	SG is rising at a rate of 2 mg/dL per minute or more.
↑↑↑	SG is rising at a rate of 3 mg/dL per minute or more.



Note: These arrows appear on the Home screen to indicate the rate at which SG is rising.



- c. To enter a custom rate, select **Custom**, enter the Rise Limit on the Custom Limit screen, and then select **OK**.
 - d. Select **OK** again to confirm the Rise Limit settings.
9. Select **Next**.
10. If necessary, enter the remaining time segments to complete the 24-hour period.



Note: For instructions on setting up more than one high limit over a 24-hour period, see *Settings covering a 24-hour period*, page 84.

11. Select **Review**.
12. Review the high SG settings and select **Save**.



To change the high SG settings:

1. From the Home screen, press , and then select .
2. Select **Alert Settings** > **High Alert**.
The High Setup screen appears.
3. Select **Edit**.
4. Select and adjust the time segment.
5. Select any alert setting to make adjustments, or to turn the setting on or off.
6. Select **Next**.
7. Select **Review**.
8. Review the high SG settings and select **Save**.

High Snooze

The High Snooze feature sets the amount of time before a high alert repeats. The pump shows the high alert again if the high alert condition still exists after the specified snooze time.

To set the High Snooze:

1. From the Home screen, press , and then select .
2. Select **Alert Settings** > **Snooze High & Low**.
The Snooze screen appears.
3. Select **High Snooze** and enter a time in 5-minute increments from 5 minutes to 3 hours.
4. Select **Save**.

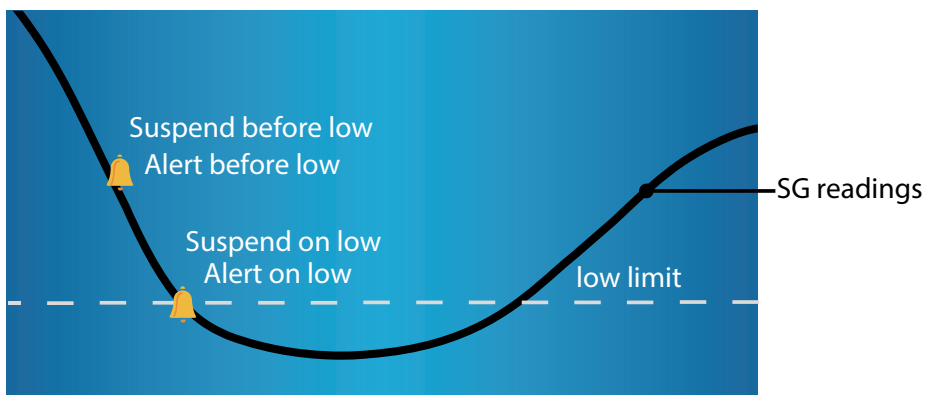
Low SG settings


Low SG settings alert or suspend insulin delivery when SG either approaches or reaches the low limit.



Note: The MiniMed Mobile app may be used to view the sensor graph on a mobile device. Always read and acknowledge all alarms and alerts on the pump. If the pump simultaneously generates more than one alarm or alert, only one of the alarms or alerts appears on the mobile device.

The following graph shows the available low SG settings.



 Low SG alert and suspend settings



WARNING: The Suspend before low and Suspend on low features are not intended to treat low BG. Suspending insulin delivery when SG is low may not bring BG back to the target range for several hours, which may cause hypoglycemia. If symptoms do not match the SG value, use a BG meter to confirm glucose levels before making treatment decisions.

For information about how to program low SG settings in Manual mode, see *Setting up the low SG settings*, page 172. The sensor must be turned on before low SG settings can be programmed.

Low limit

The low limit is used as a basis for optional low SG alerts and Suspend by sensor features. The low limit can be set from 50 mg/dL to 90 mg/dL, for up to eight different time segments.

The Low SG alarm appears when SG readings fall below the preset low SG value for your sensor as defined in the table below:

Sensor	Preset low SG value
Instinct	55 mg/dL
Simplera Sync	64 mg/dL
Guardian 4	64 mg/dL

The Instinct sensor has a different preset low SG value than the Simplera Sync and Guardian 4 sensors. Always ensure to program your low settings as prescribed. Glucose detection and alert rates are less reliable below this threshold. This is a fixed setting and cannot be changed. When the alarm appears, it shows the SG reading next to the Low SG alarm. This alarm does not stop insulin delivery.

The Suspend before low feature

The Suspend before low feature stops insulin delivery when SG is approaching the low limit. This feature can help minimize the amount of time spent with low glucose.



WARNING: Do not use the Suspend before low feature without first reading the information in this user guide and receiving training from a healthcare professional. The Suspend before low feature temporarily suspends insulin delivery for a maximum of two hours. Under some conditions of use, the pump can suspend insulin delivery again, resulting in under-delivery. Prolonged under-delivery of insulin may increase the risk of hyperglycemia and diabetic ketoacidosis. Always be aware of symptoms. If symptoms don't match SG readings, confirm SG with a BG meter reading.

The Suspend before low feature is turned off by default. Consult a healthcare professional before the Suspend before low feature is used.

If the Suspend before low feature is turned on, Alert on low is automatically turned on. Enabling Alert before low is optional.

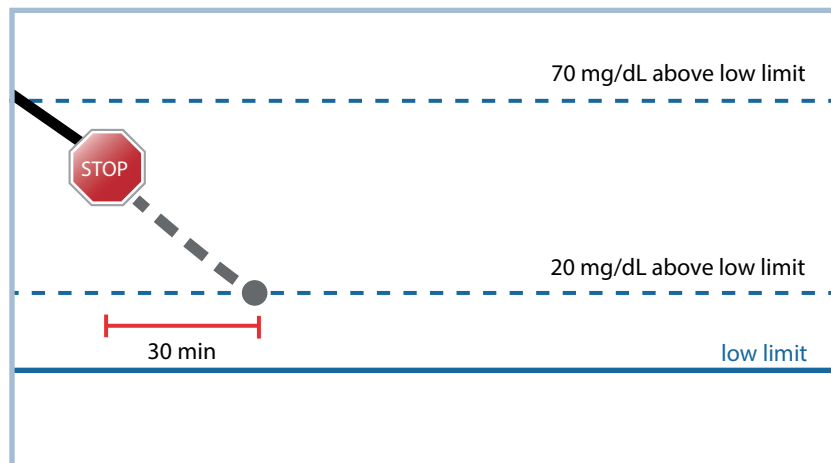
- If Alert before low is off, a Suspend before low alert occurs, but the pump does not beep or vibrate when insulin delivery is suspended.
- The Suspend before low and Suspend on low features cannot be on at the same time. When either feature is on, the Resume basal alert can be activated.

Suspend before low conditions

When a Suspend before low event occurs, insulin delivery is suspended. A Suspend before low event occurs if both of the following conditions are met:

- SG reading is at the low limit or is within 70 mg/dL above the low limit.
- SG is predicted to reach or fall below a level that is 20 mg/dL above the low limit within approximately 30 minutes.

The following image is an example of what can happen during a Suspend before low event.



Responding to a Suspend before low event

When the Suspend before low feature suspends insulin delivery, the icon flashes. If SG reaches the low limit, an Alert on low occurs.

When a Suspend before low event occurs, insulin delivery can be suspended for a minimum of 30 minutes or up to a maximum of two hours. Basal insulin delivery can be manually resumed at any time. For details, see *Manually resuming basal insulin delivery during a Suspend before low or Suspend on low event*, page 175. After 30 minutes, basal insulin delivery resumes if both of the following conditions are met:

- SG is at least 20 mg/dL above the low limit.
- SG is predicted to be more than 40 mg/dL above the low limit within 30 minutes.

If the Suspend before low alert is not cleared within two hours, the pump resumes insulin delivery and displays a Basal delivery resumed alert.

Alert before low

Alert before low provides an alert when SG is predicted to reach the low limit, and increases awareness of potential low SG.

The Alert before low feature works as follows:

- If Alert before low is on, and both suspend features are off, Alert before low occurs 30 minutes before the low limit is reached.
- If the Suspend on low feature is on and Alert before low is on, Alert before low occurs 30 minutes before the low limit is reached.
- If the Suspend before low feature is on and Alert before low is on, a Suspend before low alert occurs when insulin delivery is suspended. For details, see *The Suspend before low feature*, page 167.

The Suspend on low feature

The Suspend on low feature stops insulin delivery when SG readings reach or fall below the low limit. When a Suspend on low event occurs, insulin delivery is suspended. This feature is for situations when a person cannot respond to a low glucose condition and can help minimize the amount of time spent with low glucose.

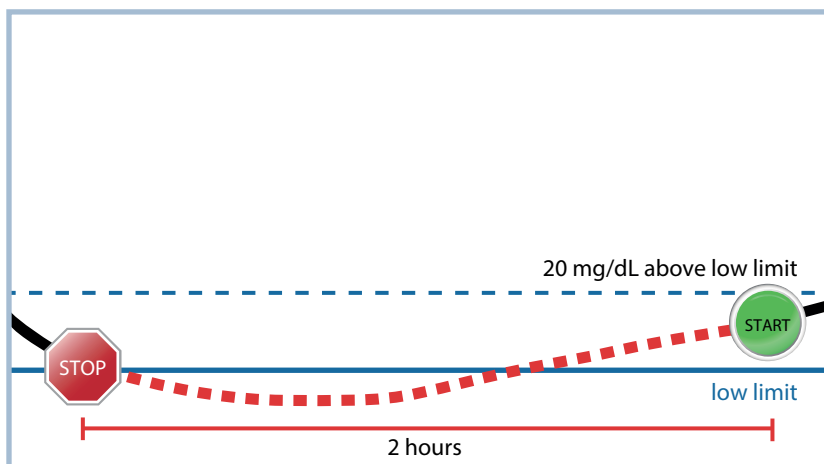


WARNING: Do not use the Suspend on low feature without first reading the information in this user guide and receiving training from a healthcare professional. The Suspend on low feature temporarily suspends insulin delivery for a maximum of two hours. Under some conditions of use, the pump can suspend insulin delivery again, resulting in under-delivery. Prolonged suspension of insulin delivery may increase the risk of serious hyperglycemia, ketosis, and ketoacidosis.

The Suspend on low feature is off by default. Consult a healthcare professional for guidance before the Suspend on low feature is used.

When the Suspend on low feature is on, Alert on low is activated automatically. For more information, see *Alert on low*, page 172.

The following image is an example of what can happen during a Suspend on low event.



Responding to a Suspend on low event

When the Suspend on low feature suspends insulin delivery, the icon flashes.

When a Suspend on low event occurs, a pump alarm occurs and insulin delivery remains suspended for a minimum of 30 minutes, up to a maximum of two hours. Insulin delivery can be resumed manually at any time. For details, see *Manually resuming*


basal insulin delivery during a Suspend before low or Suspend on low event, page 175. After 30 minutes, basal insulin delivery resumes under the following conditions:

- SG is at least 20 mg/dL above the low limit.
- SG is predicted to be more than 40 mg/dL above the low limit within 30 minutes.

If the Suspend on low alarm is not cleared within two hours, the pump resumes insulin delivery and displays an emergency message.

When the Suspend before low or Suspend on low features are unavailable

After a Suspend before low or Suspend on low event, both features are not active for a period of time to help prevent prolonged suspension of insulin delivery. Insulin delivery is suspended for a maximum of two hours. Insulin delivery can be manually suspended at any time. For details, see *Suspending all insulin delivery and resuming basal insulin delivery, page 88.*

When the Suspend before low and the Suspend on low features are unavailable, the suspend by sensor icon on the Home screen appears with a red X .

Response to Suspend before low or Suspend on low events	Duration that the Suspend before low or Suspend on low feature is unavailable
The alert is cleared within two hours and the pump stays suspended for the maximum two-hour suspend time.	The feature is unavailable for 30 minutes after basal insulin delivery resumes.
The alert is cleared within two hours and insulin delivery automatically resumes due to rising SG levels.	The feature is unavailable for 30 minutes after basal insulin delivery resumes.
The alert is cleared within two hours and basal insulin delivery is manually resumed.	The feature is unavailable for 30 minutes after basal insulin delivery resumes.
The alert is not cleared within 2 hours.	Basal insulin delivery automatically resumes and the feature is available.
The alert is cleared within 30 minutes after basal insulin delivery is automatically resumed.	The feature is unavailable for the remaining time left in the 30 minutes after basal insulin delivery resumed.
The alert is cleared between 30 minutes and four hours after basal insulin delivery is resumed.	The feature is available.

Response to Suspend before low or Suspend on low events	Duration that the Suspend before low or Suspend on low feature is unavailable
The alert is not cleared.	The feature is unavailable for four hours after basal delivery automatically resumes.

Alert on low

The Suspend before low and the Suspend on low features automatically activate Alert on low. When Alert on low is on, the pump displays an alert when SG reaches or falls below the low limit. If insulin delivery is suspended by one of these features and the alert is not cleared, an emergency message appears.

Automatically resuming basal insulin delivery after a Suspend before low or Suspend on low event

If insulin delivery is suspended by either the Suspend before low or the Suspend on low feature, basal insulin delivery automatically resumes under one of the following conditions:

- If insulin delivery is suspended for a minimum of 30 minutes and SG readings are at least 20 mg/dL above the low limit and expected to be more than 40 mg/dL above the low limit within 30 minutes
- After a maximum of two hours

Resume basal alert

The Resume basal alert indicates when basal insulin is resumed automatically. When basal insulin delivery resumes and the Resume basal alert is off, a message appears indicating that basal insulin delivery has resumed.



If basal insulin delivery resumes after the maximum suspend time of two hours, an alert appears even if the Resume basal alert is off.

Setting up the low SG settings

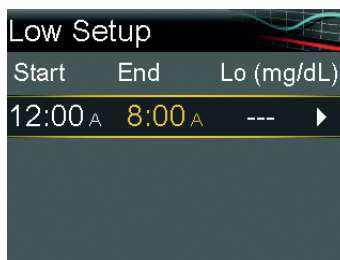
The Sensor feature must be turned on to set up the sensor settings. For more information, see *Turning on the Sensor feature, page 178*.

For information about the low SG settings, see *Low SG settings, page 165*.

To set up the low SG settings:

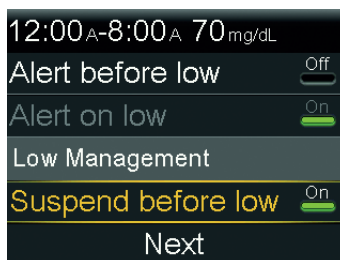
1. From the Home screen, press , and then select .
2. Select **Alert Settings** > **Low Alert**.

The Low Setup screen appears.



3. Select the time segment. The end time flashes.
The start time of the first time segment is always 12:00 A. Up to eight time segments can be set, each with a different low limit. All the time segments must add up to a 24-hour period.
4. Set the End time.
5. Set your low limit. You can enter a value from 50 to 90 mg/dL, in increments of 5 mg/dL.
6. Select the arrow beside the End time to select the low SG settings for the time segment.

A screen appears and shows the available settings for the selected time period.



7. Set the following alerts, as desired:
 - a. Select **Suspend before low** to set the pump to suspend insulin delivery before the low limit is reached.
 - b. Select **Alert before low** to receive an alert before the low limit is reached.
 - c. Select **Suspend on low** to set the pump to suspend insulin delivery when SG reaches or falls below the low limit.
 - d. Select **Alert on low** to receive an alert when SG reaches or falls below the low limit.
 - e. Select **Resume basal alert** to receive an alert when basal insulin delivery resumes during a suspend event. When this alert is off, the Basal delivery resumed message still appears.



Note: The Suspend before low and the Suspend on low features cannot both be on during the same time segment.



8. Select **Next**.
9. If necessary, enter the remaining time segments to complete the 24-hour period.



Note: For instructions on setting up more than one low limit over a 24-hour period, see *Settings covering a 24-hour period*, page 84.

10. Select **Review**.
11. Review the low SG settings, and select **Save**.

To change the low SG settings:



1. From the Home screen, press , and then select .
2. Select **Alert Settings** > **Low Alert**.
The Low Setup screen appears.
3. Select **Edit**.

4. Select and adjust the time segment.
5. Select any alert setting to make adjustments, or to turn the setting on or off.
6. Select **Next**.
7. Select **Review**.
8. Review the low SG settings, and select **Save**.

Low Snooze

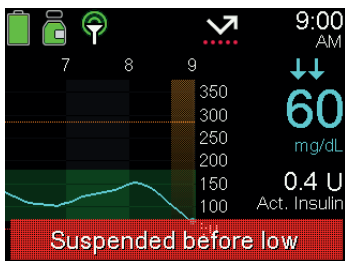
The Low Snooze feature sets the amount of time before a low alert repeats. The pump shows the low alert again if the low alert condition still exists after the specified snooze time.

To set the Low Snooze:

1. From the Home screen, press , and then select .
2. Select **Alert Settings > Snooze High & Low**.
The Snooze screen appears.
3. Select **Low Snooze** and enter a time in 5-minute increments from 5 minutes to 1 hour.
4. Select **Save**.



Manually resuming basal insulin delivery during a Suspend before low or Suspend on low event

When the pump suspends insulin due to a Suspend before low or Suspend on low event, the Home screen shows which event is active in the red banner.




Basal insulin delivery automatically resumes when certain conditions are met. Basal delivery can be manually resumed at any time.

To manually resume basal delivery:

- 1. From the Home screen, press , and then select .
- 2. Select **Resume Basal**.
- 3. Select **Yes** to resume basal insulin delivery.

Silencing sensor alerts

The Alert silence feature silences certain sensor alerts for a set period of time. When using this option, the Alert silence icon  appears on the Home screen. The system still displays any alerts that occur, but there is no sound or vibration if they are silenced. This information can be reviewed in the Alarm History screen.



The Alert silence feature does not silence:

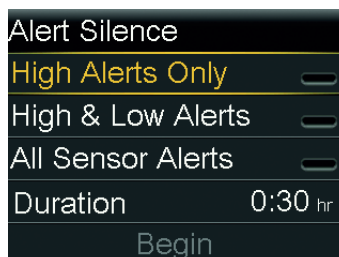
- **High SG alert**—When your sensor glucose (SG) value is above 250 mg/dL for more than three hours
- **Low SG alarm**—When your sensor glucose (SG) value falls below the preset low SG value
- **SmartGuard exit alert**—When the pump exits the SmartGuard feature

The following table describes the sensor alerts that are silenced with each option.

Option	Silences these alerts
High Alerts Only	Alert on high, Alert before high, and Rise Alert
High & Low Alerts	Alert on high, Alert before high, Rise alert, Alert on low, Alert before low, Suspend before low, and Resume basal alert Note: Alert on low cannot be silenced if the Suspend before low or Suspend on low features are turned on
All Sensor Alerts	All alerts listed previously for High & Low Alerts, as well as the following: <ul style="list-style-type: none">• All calibration or BG check alerts, reminders, or error messages that may result from entering a BG reading• All alerts related to the CGM device, including when to change the sensor, sensor updating, and connection issues.

To silence sensor alerts:

1. From the Home screen, press , and then select .
2. Select **Silence Sensor Alerts**.




3. Select **High Alerts Only**, **High & Low Alerts**, or **All Sensor Alerts**. Refer to the previous table for details about the alerts silenced with each selection.

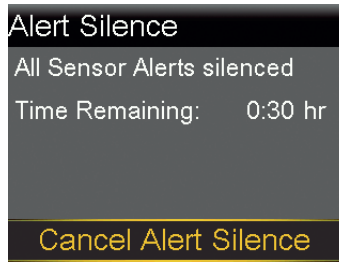


Note: Silencing All Sensor Alerts prevents the sound and vibration of most alerts related to SG readings, and the sensor. Silencing All Sensor Alerts does not silence the SmartGuard exit alert, the High SG alert, or the Low SG alarm for when SG is below the preset low SG value.

4. Set the **Duration**. The duration can be set in 15-minute increments from 30 minutes to 24 hours.
5. Select **Begin**.

To cancel Alert Silence:

1. From the Home screen, press , and then select .
2. Select **Alert Silence**.



3. Select **Cancel Alert Silence**.



Sensor feature

This section describes additional operating instructions for all three sensors.

Deactivating the Sensor feature

The Sensor feature may be turned off at any time. When the sensor is not used, turn off the Sensor feature to avoid a sensor alert. The Sensor feature must be turned on again before settings can be changed. The Sensor feature is turned on when the sensor is paired to the pump.



To deactivate the Sensor feature:

1. From the Home screen, press , and then select .
2. Select **Device Settings** > **Sensor**.
3. Select **Sensor**.
4. Select **Yes** to turn off the Sensor feature.

Turning on the Sensor feature

The Sensor feature automatically turns on when a sensor is paired to the pump. These instructions can help you if you turn the Sensor feature off during sensor use and need to turn the feature back on. The Sensor feature must be on before sensor alerts can be set up and SG levels can be monitored.

To turn on the Sensor feature:

1. From the Home screen, press , and then select .
2. Select **Device Settings** > **Sensor**.
3. Select **Sensor** to turn the feature on or off.

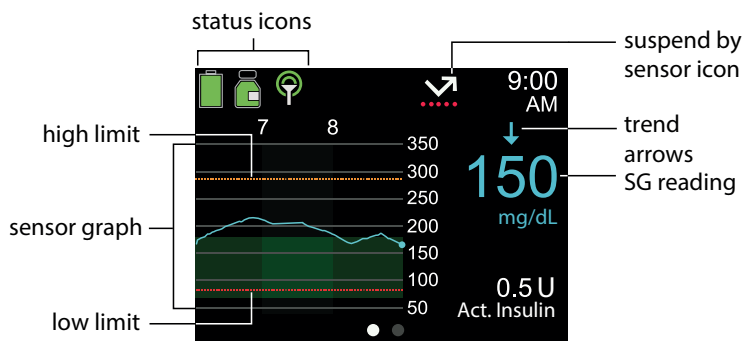
Using CGM

Home screen with CGM in Manual mode

When the Sensor feature is active, the Home screen displays a real-time graph that shows CGM information.

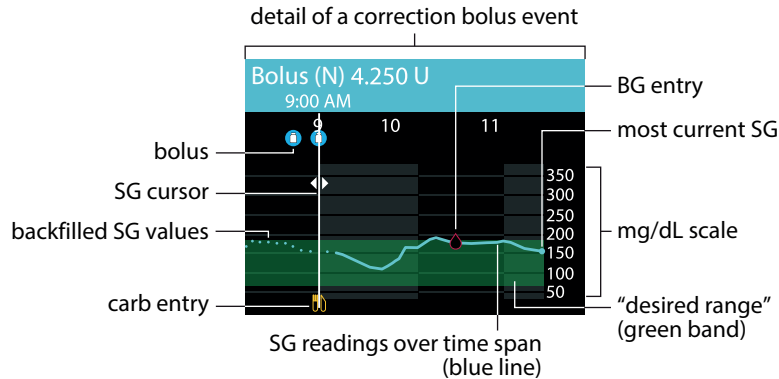


Note: To see the Home screen while the SmartGuard feature is active, see *Home screen with the SmartGuard feature*, page 193.



For more information about the icons that appear on the Home screen with CGM in Manual mode, see *Status icons*, page 69.

Sensor graph



The sensor graph includes the following information:

- The most recent SG reading.
- Historical SG readings for the last 3-hour, 6-hour, 12-hour, or 24-hour periods.
- High and low SG limits.
- Carb entries.
- Delivered boluses.
- Suspend events caused by Suspend before low or Suspend on low.
- BG entries.

The sensor graph may also show a dotted line to represent backfilled SG values, which will be recorded anytime the sensor is out of wireless range from the pump.





There are several reasons why an SG reading may not appear on the graph:

- A recently inserted sensor is warming up.
- A recently connected or reconnected CGM device is not ready.
- An error condition or a sensor-related alert has occurred or is occurring. For a list of sensor alerts, see *CGM device alarms, alerts, and messages*, page 316.

To view the sensor graph:







1. From the Home screen, press the  button.

A full-screen view of the 3-hour graph appears.

2. Press  to navigate to the 6-hour, 12-hour, and 24-hour graphs.
3. Press  to view SG readings and event details.
4. To exit the full-screen view, press , or press the  button again.

Trend arrows

The trend graph indicates how sensor glucose (SG) may have recently changed. The trend arrows indicate the rate at which the most recent SG readings are rising or falling. SG readings may trend up or down during certain activities, such as eating, giving a bolus, or when exercising. These icons appear only when the sensor feature is turned on.

- SG with no trend arrows: Rate of change of SG is less than 1 mg/dL per minute, or in some cases the sensor may be outside of operating limits. For more details, see the Low SG Below XX mg/dL alert in *CGM device alarms, alerts, and messages*, page 316.
-  or : SG has been rising or falling at a rate of 20-40 mg/dL over the last 20 minutes, or 1-2 mg/dL per minute.
-  or : SG has been rising or falling at a rate of 40-60 mg/dL over the last 20 minutes, or 2-3 mg/dL per minute.
-  or : SG has been rising or falling at a rate of more than 60 mg/dL over the last 20 minutes, or more than 3 mg/dL per minute.

Consider any active insulin that is available. Active insulin may cause SG to decrease and can affect treatment decisions. For more information about active insulin, see *Bolus Wizard settings in Manual mode*, page 96.

9

9

SmartGuard

This chapter provides information about how to set up and start using the SmartGuard feature. The SmartGuard feature uses sensor glucose (SG) values provided by the sensor to automatically adjust insulin delivery.



WARNING: Do not use the SmartGuard feature for people who require less than 8 units or more than 250 units of total daily insulin per day. A total daily dose of at least 8 units, but no more than 250 units, is required to use the SmartGuard feature.

Introduction

The SmartGuard feature uses carb information, SG, and SmartGuard target values to control insulin delivery. It also can automatically deliver a correction bolus to help correct a high SG reading. The MiniMed 780G insulin pump requires a minimum of eight units and a maximum of 250 units per day to operate using the SmartGuard feature.



Note: The Auto correction feature uses SG values to determine bolus insulin doses. Auto correction boluses are delivered without user acknowledgment. The accuracy of SG values can be lower than the accuracy of blood glucose (BG) meter readings, which are checked with a blood glucose (BG) meter. While in SmartGuard, use a blood glucose (BG) meter reading if symptoms do not match the SG value, which can commonly occur during the first 12 hours with a new sensor.

The SmartGuard feature is designed to maximize the amount of time that glucose levels stay in the range of 70 mg/dL to 180 mg/dL. The following table describes features that the system uses to maximize time in range.

Feature name	Description
SmartGuard target: 100 mg/dL, 110 mg/dL, or 120 mg/dL	Consult a healthcare provider to determine which SmartGuard target to use to maximize time in range. The default setting is 100 mg/dL.
Auto Basal	When using the SmartGuard feature, basal insulin is automatically delivered based on SG readings and recent insulin delivery needs.
Target for Auto correction bolus based on SG: 120 mg/dL	The MiniMed 780G system may deliver a bolus automatically, as frequently as every 5 minutes, if the SmartGuard feature determines that a correction bolus is necessary. The default setting for Auto correction is set to On.
Temp Target: 150 mg/dL	A temp target can be set for events such as exercise or other times when less insulin is needed. If a temp target is used for exercise, consider starting it one to two hours before beginning the exercise. Auto correction boluses are not delivered while a temp target is active.



Note: When using the SmartGuard feature, meal boluses are still required.

The SmartGuard feature requires accurate sensor measurements and carb information to deliver insulin for meals. This insulin therapy requires the use of the Bolus feature to deliver boluses to cover meals.

When using the SmartGuard feature:

- If an Enter BG now alert occurs, enter a BG meter reading.
- Do not enter an SG reading when the system requests a BG reading.
- Bolus amount cannot be modified when delivering a bolus in the SmartGuard feature. If SG readings do not match with symptoms, enter a BG value from a BG meter.

Auto Basal

When the SmartGuard feature is active, the basal insulin dose is calculated using SG values from the sensor. The automatic delivery of insulin is called Auto Basal.



Note: In Manual Mode, basal insulin will not be delivered if basal settings are not entered and saved. There will be no message that the basal rates are not programmed.

Auto Correction

The pump may deliver a bolus automatically when the SmartGuard feature determines it is needed for correction, to maximize the time in range, between 70 mg/dL and 180 mg/dL. Because this is an automated bolus, no action is required. The Home screen shows when an Auto Correction bolus occurs.

Giving a bolus when the SmartGuard feature is active

A meal bolus can be delivered while using the SmartGuard feature. For more information, see *Delivering a bolus in the SmartGuard feature*, page 197.



WARNING: Always confirm an SG value that does not match your symptoms. When the SmartGuard feature is active and you are no longer in Manual mode, the pump uses an available SG value to calculate a bolus amount. However, if your symptoms do not match, the SG value can result in the infusion of too much or too little insulin, which may cause hypoglycemia or hyperglycemia. While in SmartGuard, use a blood glucose (BG) meter reading if symptoms do not match the SG value, which can commonly occur during the first 12 hours with a new sensor.

Preparing to set up the SmartGuard feature

The SmartGuard feature requires a 48-hour warm-up period before activation. This warm-up period begins at midnight after the pump starts delivering insulin and it does

not require sensor use. During the warm-up period, the pump collects and processes data for use by the SmartGuard feature.



Note: A basal pattern must be programmed for use during the warm-up period and for instances when the pump is in manual mode. During the warm-up period the pump should also be used to give boluses.

To prepare the pump for the SmartGuard feature:

1. Cancel any active Temp Basal rates. See *Canceling a temp basal or preset temp basal*, page 250.
2. Confirm that insulin delivery is not suspended. See *Suspending all insulin delivery and resuming basal insulin delivery*, page 88.
3. Set the carb ratio. See *Changing the carb ratio*, page 260.
4. Review the high and low limit settings. High and low limit settings apply when in Manual mode and when using the SmartGuard feature. See *Sensor alert settings*, page 161 for details.
5. Enter a new BG reading.





WARNING: If the pump has been used in the last 21 days to practice button pressing, or if insulin that was programmed into the pump was not the user's actual insulin delivery, clear active insulin and the total daily doses tracked by the SmartGuard feature before using the SmartGuard feature. Failure to do so may result in the delivery of too little or too much insulin, which can cause hyperglycemia or hypoglycemia. The SmartGuard feature uses the recent delivery history on the pump to determine the insulin delivery amount.

Consult with your healthcare professional about using the Clear Active Insulin feature in the Manage Settings menu to clear both active insulin and the total daily dose for the SmartGuard feature.

Setting up the SmartGuard feature

The SmartGuard feature requires 48-hours of insulin delivery before the feature can be used. This warm up period begins at the first midnight after delivery has started. For more information, see *Preparing to set up the SmartGuard feature, page 187*.

To set up the SmartGuard feature:

1. From the Home screen, press , and then select .
2. Select **SmartGuard** to turn the feature on or off.



Note: Certain additional requirements must be met before the SmartGuard feature activates. For more information, see *SmartGuard Checklist, page 191*.

3. Select **SmartGuard Settings** and enter the following information:
 - Select the SmartGuard target: 100 mg/dL, 110 mg/dL, or 120 mg/dL.
 - Confirm that **Auto Correction** is on to activate automatic correction boluses.



Note: The Auto correction feature is turned on by default. When this setting is on, the pump automatically delivers correction boluses to help correct a high SG reading. For information, see *Delivering a bolus in the SmartGuard feature*, page 197.

4. Select **Save**.

Conditions to activate the SmartGuard feature

If the pump is turned off for more than 2 weeks and is turned back on, the pump requires a 48 hour warm-up period before the SmartGuard feature activates.

If the pump has been off for 2 weeks or less and is turned back on, a 5 hour warm-up period is required before the SmartGuard feature activates.

If the SmartGuard feature is on but not active, the SmartGuard Checklist screen indicates the requirements needed to activate the SmartGuard feature. See *SmartGuard Checklist*, page 191.

The system requires 5 hours for the SmartGuard active insulin amount to update. This update time begins under the following conditions:

- A complete pump reset caused by a loss of power or a software error.
- When the insulin is resumed after being manually suspended for 4 hours or longer.
- When you update the pump software.

SmartGuard active insulin information is valid until one of the conditions listed above occurs, which restarts the 5 hour update time. The SmartGuard feature is unavailable during this time.

Suspending manually while using the SmartGuard feature





For information about manually suspending insulin delivery, see *Suspending all insulin delivery and resuming basal insulin delivery*, page 88.










Suspend before low and Suspend on low features while using the SmartGuard feature












When the SmartGuard feature is active, the Suspend before low and the Suspend on low features are unavailable and automatically turn off. If the system exits the SmartGuard feature, the Suspend before low and the Suspend on low features return to the state they were in before using the SmartGuard feature. For information about turning on the Suspend before low or the Suspend on low feature, see *Low SG settings*, page 165.





SmartGuard Checklist

The SmartGuard Checklist screen indicates the requirements necessary to start or continue using the SmartGuard feature. For more information, see *Staying in the SmartGuard feature*, page 204.

The following table shows what to do when the wait icon  or the question icon  appear by items on the SmartGuard Checklist screen. In general, the wait icon  indicates the system is processing or waiting for information. In general, the question icon  indicates the system needs an action from you.

SmartGuard Checklist		
1	Enter BG	
2	SmartGuard turned off	
3	Sensor not ready	
4	Bolus in progress	
5	Delivery suspended	
6	Carb ratio not set	
7	Basal rate for Manual mode not set	
8	SmartGuard updating	
9	SmartGuard warming up	

Line	Item	Instructions
1	Calibrating... 	The system is using the recent BG meter reading to calibrate the sensor.
	Enter BG 	Enter a new BG meter reading.
	Not ready for BG 	The system requires a BG reading and will ask when it is ready.
2	SmartGuard turned off 	Turn on the SmartGuard feature.
3	Sensor not ready 	<ul style="list-style-type: none"> Confirm the pump shows a sensor serial number on the Paired Devices screen. Example: CGM XXXXXXXX Make sure the pump is paired with a CGM device. For more information, see <i>System component: CGM device</i>, page 129. Check the Home screen. If  displays, move the pump and sensor closer together. It may take 15 minutes to find the sensor signal. If after 30 minutes the pump and sensor are still not communicating, a Lost sensor signal alert appears. Check that the sensor is still inserted in the skin. Move the pump closer to the sensor.
	Sensor off 	Turn on the Sensor feature in Settings > Device Settings.
	No paired CGM 	Pair the pump and CGM device. For more information, see <i>Pairing the Simplera Sync sensor with the pump</i> , page 134.
4	Bolus in progress 	Wait until the bolus is complete or stop the bolus before the SmartGuard feature can be used.
5	Delivery suspended 	If insulin delivery is suspended, the SmartGuard feature cannot be used. Treat low BG as instructed by a healthcare professional.
6	Carb ratio not set 	Enter a carb ratio in the Bolus Wizard feature or in the Bolus Wizard Setup screen.

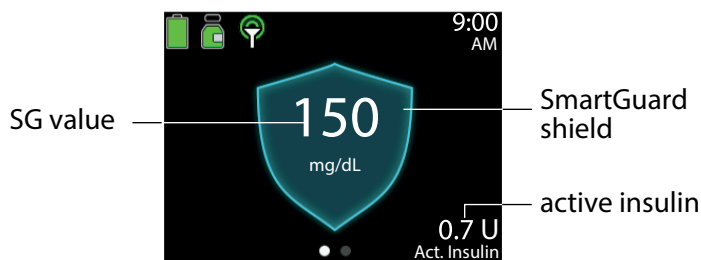
Line	Item	Instructions
7	Basal rate for Manual mode not set 	When no basal pattern is set, the SmartGuard checklist will display "Basal rate for manual mode not set". You must program, confirm, and save a basal pattern before the pump will enter SmartGuard.
	Temp Basal rate 	When a basal pattern is set and the pump is currently running a temp basal, the SmartGuard checklist will display "Temp Basal rate". Stop the temp basal rate delivery before the SmartGuard feature can be used or wait until the temp basal rate delivery is complete.
8	SmartGuard updating 	If SmartGuard active insulin is updating, it will take up to five hours to complete. Wait for the update time to end before the SmartGuard feature can activate.
9	SmartGuard warming up 	Wait for the SmartGuard feature to gather insulin delivery history and determine the basal rate.

To view the SmartGuard Checklist:

1. From the Home screen, press , and then select .
2. Select **SmartGuard Checklist**.

Home screen with the SmartGuard feature

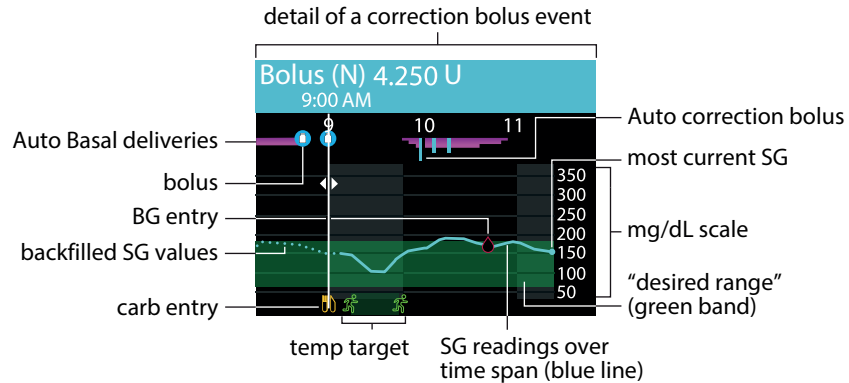
When the pump is using the SmartGuard feature, the **Home** screen displays a shield with the current SG, if available. When a BG is entered, it appears on the Home screen until either the next SG arrives or the BG is 12 minutes old.



Using the SmartGuard feature

The sensor graph with the SmartGuard feature

The sensor graph with the SmartGuard feature shows historical SG readings provided by the sensor.








The SmartGuard feature sensor graph includes the following information:

- When a location on the graph is selected, specific details of the SG or event appear, such as a correction bolus.
- Historical SG readings are displayed for the last 3-hour, 6-hour, 12-hour, or 24-hour periods. They appear as a blue line across the screen.
- Boluses are shown as white vials inside blue circles.
- Carb entries are shown as yellow knife and fork symbols. These represent any bolus amounts that include a carb entry.
- BG entries appear as red drop symbols.
- Magenta bands across the top represent Auto Basal deliveries provided by the SmartGuard feature.
- Blue vertical bars at the top represent Auto correction boluses delivered by the SmartGuard feature.

- A time change event appears as a white clock symbol.
- Temp target is shown as green runners.

To view the sensor graph:

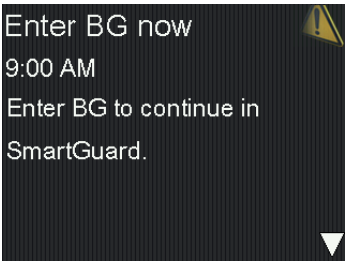
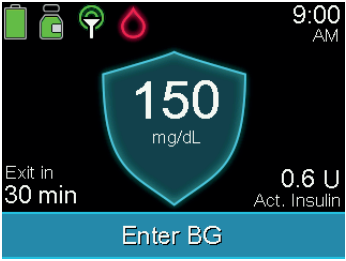
1. From the Home screen, press the  button to display the SG graph.
A full-screen view of the 3-hour graph appears.
2. Press  to navigate to the 6-hour, 12-hour, and 24-hour graphs.
3. Press  to view SG readings and event details.
4. To exit the sensor graph, press  or press the  button again.

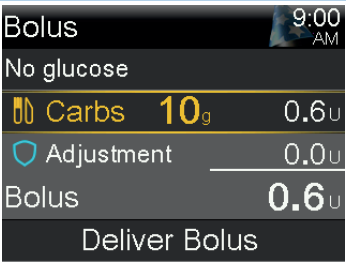
Entering a BG value in the SmartGuard feature

The pump may require a BG value to continue using the SmartGuard feature.

For more information on entering a BG, see *Entering a blood glucose (BG) meter reading*, page 93.

The following table shows when to use a blood glucose (BG) meter reading:

When to use a blood glucose (BG) meter reading	Examples
Anytime the system requests a blood glucose (BG) meter reading.	 

When to use a blood glucose (BG) meter reading	Examples
Anytime you deliver a bolus in SmartGuard when a sensor glucose (SG) value is not displayed on the bolus screen and you want to use a glucose for a correction.	 The image shows a mobile application screen for a bolus calculator. At the top, it says 'Bolus' with a clock icon showing '9:00 AM'. Below that, it says 'No glucose'. Then, there are three rows: 'Carbs 10g' with '0.6U' to its right, 'Adjustment' with '0.0U' to its right, and 'Bolus' with '0.6U' to its right. At the bottom, there is a button that says 'Deliver Bolus'.
When using a medication that impacts glucose levels.	
When your sensor glucose (SG) values are different than the symptoms you are experiencing, which can commonly occur during the first 12 hours with a new sensor.	
<p>The most recent sensor glucose (SG) reading is unavailable. Sensor glucose (SG) readings are unavailable in the following conditions:</p> <ul style="list-style-type: none">• A new sensor is started.• A new sensor has not completed warm up, or a sensor has terminated.• A Sensor updating, Sensor too hot, or Sensor too cold notification appears.• The sensor requires a new blood glucose (BG) meter reading to be entered because the system was unable to use the blood glucose (BG) meter reading that was entered to calibrate the sensor or as a BG check to verify system performance. All blood glucose (BG) meter readings that are entered are used to calibrate the sensor or as a BG check to verify system performance.• A BG check failed, causing a second BG check to be requested by the system.	
There is doubt that sensor glucose (SG) values are correct, which can commonly occur during the first 12 hours with a new sensor.	

The following warning applies to the Simplerx Sync and Guardian 4 sensors:



WARNING: Consult a healthcare professional if a medication that contains acetaminophen or paracetamol is taken while wearing the sensor. Medications that contain acetaminophen or paracetamol can falsely raise sensor glucose readings. The level of inaccuracy depends on the amount of acetaminophen or paracetamol active in the body and can differ for each person. Falsely elevated sensor readings can result in over-delivery of insulin, which can cause hypoglycemia. Medications that contain acetaminophen or paracetamol include, but are not limited to, cold medicines and fever reducers. Check the label of any medications being taken to see if acetaminophen or paracetamol is an active ingredient. Use additional blood glucose meter readings to confirm blood glucose levels.

While the SmartGuard feature is active, if acetaminophen or paracetamol is taken, program a temp target for up to eight hours, or the amount of time recommended by a healthcare provider. For more information, see *Setting a temp target, page 203*. Use blood glucose values instead of sensor glucose readings to calculate a meal bolus or correction bolus for up to eight hours, or the duration recommended by a healthcare provider, after taking acetaminophen or paracetamol.

Delivering a bolus in the SmartGuard feature

A current BG or SG reading is used to determine the bolus amount. A carb amount can be entered for a food bolus.



WARNING: Do not use the SmartGuard feature for a period of time after giving a manual injection of insulin by syringe or pen. Manual injections are not accounted for in the active insulin amount. Using the SmartGuard feature after a manual injection may result in over-delivery of insulin. Too much insulin may cause hypoglycemia. Consult a healthcare professional for how long to wait after a manual injection before resuming the SmartGuard feature.

If the BG or SG is under 120 mg/dL, or if the bolus is zero after the pump accounts for active insulin, or if the SmartGuard feature estimates current basal delivery is sufficient, no correction is recommended.

The BG value must be entered on the BG screen or the Bolus screen while using the SmartGuard feature.



Note: Do not use a blood glucose (BG) meter reading if more than 12 minutes have passed since the last BG meter reading was taken. That BG meter reading and the calculated bolus amount may no longer be accurate.



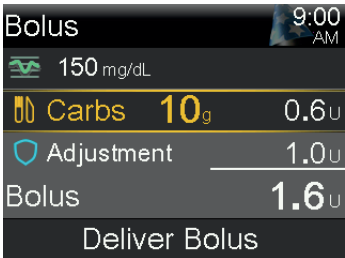

WARNING: SG readings are used to calculate meal boluses or correction boluses when delivering a bolus in the SmartGuard feature. SG is not the same as BG. Sensor performance may occasionally vary from sensor to sensor and in different situations for a sensor, such as on the first day of use.

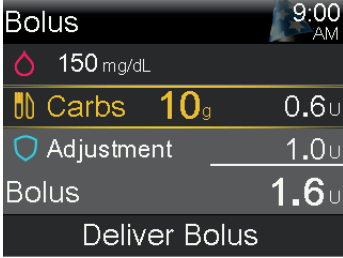
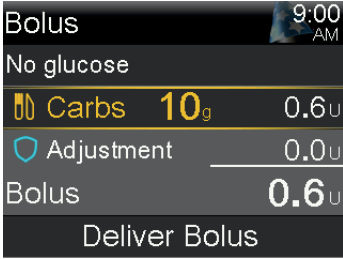
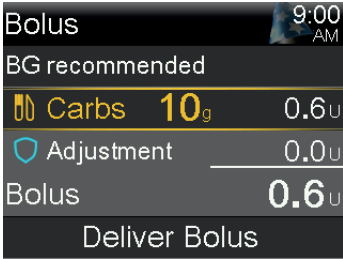
When SG readings are used for meal boluses and for correction boluses, there is a risk of both hypoglycemia and hyperglycemia. If an SG reading is much lower than a BG reading would be at that time, there is a risk of hyperglycemia, because the amount of insulin delivered could be smaller. If an SG reading is much higher than a BG and there are symptoms of feeling low, but the SG reading is not low, and if there are symptoms of a severe hypoglycemic event, a severe hyperglycemic event, or diabetic ketoacidosis, a BG meter reading is needed.

This can also occur when SG readings are used when the Auto correction feature is turned on. For example, when an SG reading is much higher than a BG reading at that time, there is a risk of hypoglycemia, because the amount of insulin delivered could be larger.

If there are symptoms of feeling low, but the SG reading is not low, and if there are symptoms of a severe hyperglycemic event or diabetic ketoacidosis, a BG meter reading is needed.

The following table describes how glucose readings are shown on the SmartGuard bolus screen.

Bolus screen	Glucose reading information
	<p>The  icon indicates the sensor glucose (SG) value when there is no recent blood glucose (BG) meter reading available during the last 12 minutes.</p> <p>A blood glucose (BG) meter reading can be entered to calculate a correction bolus. The</p>

Bolus screen	Glucose reading information
	correction bolus is included in the Adjustment.
	A blood glucose (BG) meter reading is available to calculate a correction bolus. The correction bolus is included in the Adjustment.
	There are no blood glucose (BG) meter readings or sensor glucose (SG) values available. You can enter a carb amount for a food bolus or a blood glucose (BG) meter reading for a correction bolus.
	<p>The BG recommended message indicates that neither a blood glucose (BG) meter reading nor a sensor glucose (SG) reading is available to calculate a correction bolus.</p> <p>Note: If a sensor glucose (SG) value shows on the Home screen, but does not show on the Bolus screen, the system determined that the sensor glucose (SG) value is not optimal to use to calculate a correction bolus. Enter a blood glucose (BG) meter reading if a correction bolus is desired.</p>

Bolus adjustments in the SmartGuard feature

The SmartGuard feature calculates a bolus based on the current BG or SG reading and carbs, and may make an additional adjustment to the bolus.

Bolus adjustment**Example screens**

The bolus amount is adjusted down if the SmartGuard feature predicts a risk of hypoglycemia after the meal. Carbs are saved for use in future bolus adjustment calculations.

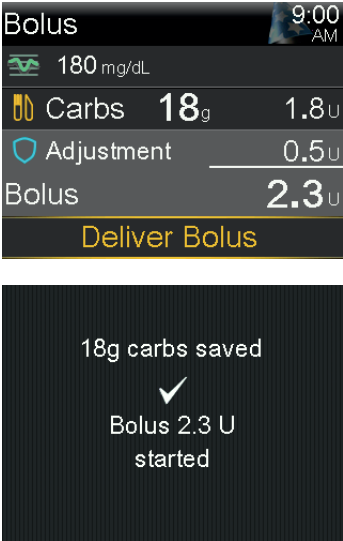
Bolus 9:00 AM
78 mg/dL
Carbs 30_g 3.0_U
Adjustment -0.5_U
Bolus 2.5_U
Deliver Bolus

30g carbs saved
✓
Bolus 2.5 U
started



If the bolus amount is adjusted down to 0.0 for the bolus, no bolus is delivered. Carbs are saved for use in future bolus adjustment calculations.

Bolus 9:00 AM
78 mg/dL
Carbs 15_g 1.5_U
Adjustment -1.5_U
Bolus 0.0_U
Save

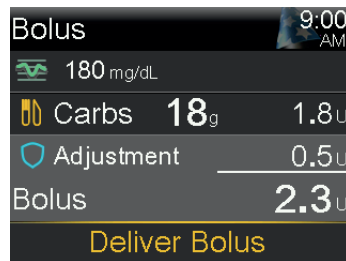
15g carbs saved
✓
No bolus needed

Bolus adjustment	Example screens
<p>The bolus amount is adjusted up if a correction bolus is calculated based on high glucose and low active insulin.</p> <p>Carbs are saved for use in future bolus adjustment calculations.</p>	

To deliver a bolus with the SmartGuard feature:

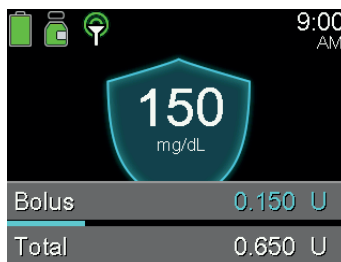
1. From the Home screen, press , and then select .
2. Select **Bolus**.
3. Enter a carb amount, if desired.



The screen indicates the amount of the calculated bolus.



4. Select **Deliver Bolus**.

A screen appears briefly to indicate the bolus delivery has started. The Home screen appears and shows the progress of the bolus delivery.



Note: To stop a bolus, press  from the Home screen, select  and then select **Stop Bolus**. Select **Yes** to confirm.



Setting a temp target

A temporary target (temp target) of 150 mg/dL can be set for events such as exercise or other times when less insulin is needed. Consult a healthcare professional before using a temp target.



Note: The Auto correction feature is not active during an active temp target. It resumes after the temp target completes or when a temp target is canceled.

To set a temp target:

1. From the Home screen, press , and then select .
2. Select **Temp Target** to turn the feature on or off.

The image shows the 'Temp Target' screen. At the top, it says 'Temp Target' and '9:00 AM'. Below that, it says 'Duration' and '2:00 hr'. Then it says 'Set target to 150 mg/dL'. At the bottom, there is a yellow 'Start' button.

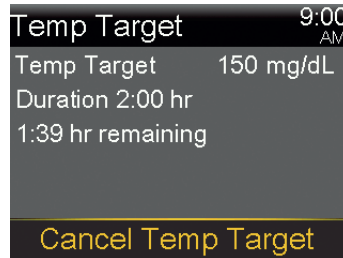
3. Set the Duration, from 30 minutes to 24 hours, in 30-minute increments.
4. Select **Start**.

The screen shows a Temp Target Started message, and then changes to the Home screen, where a banner shows the remaining temp target time.



To cancel a temp target:

1. From the Home screen, press , and then select .

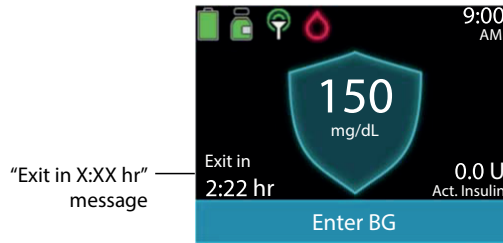


2. Select **Cancel Temp Target**.

Staying in the SmartGuard feature

When the pump requires an action to stay in the SmartGuard feature, it delivers insulin at a fixed basal rate for up to a maximum of 4 hours.

The message “Exit in X:XX hr” appears on the Home screen, showing the time remaining before the pump enters Manual mode. The basal rate delivered during this time is based on insulin delivery history and represents a delivery rate that minimizes the risk of hypoglycemia in situations when SG values are temporarily unavailable. The pump provides a notification of any required actions.



The pump resumes using SG readings for basal insulin delivery when certain conditions are met. The following table describes these conditions and the notification and required action to resume using SG readings for basal insulin delivery.

Condition	Notification and action
The SmartGuard feature has reached the time limit for minimum delivery. The minimum delivery time is 3 to 6 hours, depending on the reason.	A SmartGuard min delivery alert appears. Enter a BG.
The SmartGuard feature has been delivering basal insulin at its maximum limit for 7 hours.	A SmartGuard max delivery alert appears. Check the SmartGuard Checklist to determine the required steps. Enter a BG.
SG readings may be lower than actual glucose values.	An Enter BG now alert appears. Enter a BG.
No SG data has been received for more than 5 minutes.	<ul style="list-style-type: none"> If SG data is not available, three dashes appear on the screen in place of the SG data. If the loss of SG data is intermittent, no action is required. If an action is required, an alert appears such as a Lost sensor signal alert or the Enter BG now alert. Follow the instructions on the screen.



Note: To stay in the SmartGuard feature when changing the sensor, be sure the sensor warmup completes within four hours of the last available SG reading.

Exiting the SmartGuard feature

The SmartGuard feature may stop functioning under the following conditions:

- The SmartGuard feature is turned off.
- The pump is delivering basal insulin based on insulin delivery history, and not SG readings, for four hours. See *Staying in the SmartGuard feature*, page 204.
- All insulin delivery has been manually suspended and has not resumed for four hours.
- The Sensor feature is turned off.

The SmartGuard feature can be turned off at any time. For more information, see *Setting up the SmartGuard feature*, page 189.

Returning to the SmartGuard feature after an exit

The pump indicates any required actions on the Home screen, after an exit from the SmartGuard feature. In the example below, a BG entry is needed. Once the BG is entered, the pump resumes using the SmartGuard feature.



While in Manual mode, resume using the SmartGuard feature by meeting all requirements in the SmartGuard Checklist. For more information, see *SmartGuard Checklist*, page 191.

The SmartGuard feature can be resumed under the following conditions:

- The SmartGuard feature is turned on.
- The sensor is providing SG readings.
- A bolus is not in progress.
- A temp basal rate is not in progress.
- The 48-hour warm-up is complete.

- The SmartGuard feature is not in a 5-hour warm-up period.
- A new BG reading is entered.

If any of these conditions are not met, the SmartGuard feature cannot restart.

Using Block mode with the SmartGuard feature

Block mode lets caregivers lock the pump to restrict access to critical pump features. While the pump is locked, Auto Basal delivery is active, and Auto correction boluses can occur if the feature is turned on. For more information on Block mode, see *Block mode*, page 212.

Alert silence feature

The Alert silence feature silences certain sensor alerts for a set period of time. For more information, see *Silencing sensor alerts*, page 176.

10

■ General settings

10



General settings

This chapter provides information about common tasks for various settings.

Time and date

Confirm that the time and date are always set correctly on the MiniMed 780G insulin pump. Incorrect time and date settings can affect basal insulin delivery and the accuracy of pump history. Change the time or the date to match the time zone or daylight saving time. After the time and date are changed, the pump adjusts all settings automatically.



To change the time and the date:

1. From the Home screen, press , and then select .
2. Select **Device Settings** > **Time & Date**.
3. Select and change the **Time**, **Time Format**, or **Date** as necessary. If a 12-hour clock is being used, specify AM or PM.
4. Select **Save**.

Display options

The brightness of the pump screen can be controlled from the Display Options screen. The duration the backlight is on can also be adjusted.

To adjust the display options:

1. From the Home screen, press , and then select .
2. Select **Device Settings** > **Display**.
3. Select **Brightness** to adjust the brightness of the screen. A level from 1 to 5 can be set, or select **Auto** for the screen to automatically adjust to the current environment.
4. Select **Backlight** to adjust the timeout for the backlight on the pump screen. Select 15 seconds, 30 seconds, 1 minute, or 3 minutes.
5. Select **Save**.



Note: The brightness and backlight can affect the life of the battery. Use a lower brightness level setting, and set the backlight timeout to 15 or 30 seconds to help the battery last longer.



CAUTION: If you have not pressed Save after settings are entered and the screen goes dark, the entered settings will not be saved.

Block mode

Block mode lets caregivers lock the pump to restrict access to critical pump features. While the pump is in Block mode, the pump automatically locks two minutes after the screen goes dark from inactivity.



WARNING: Always monitor the pump while it is locked. The pump can still be manually suspended while locked using the shortcut to the Status screen, which could result in hyperglycemia and ketoacidosis.

The following are examples of functions that are blocked while the pump is locked:



- Access the Menu screen.
- Deliver a bolus
- Start a new basal pattern

- Start a new temp basal delivery
- Change settings

The following are examples of important functions that remain available while the pump is locked:

- Previous bolus and basal deliveries continue normally
- Stop a bolus delivery using the shortcut to the Status screen
- Suspend and resume insulin delivery using the shortcut to the Status screen
- Receive sensor glucose (SG) values and receive and accept blood glucose (BG) meter readings
- Clear alarms and alerts

To turn Block mode on or off:

1. From the Home screen, press , and then select .
2. Select **Device Settings** > **Block Mode**.
3. Select **Block Mode** to turn the feature on or off.
4. Select **Save**.



The pump is in Block mode, but it is not yet locked.

To lock the pump:

Press and hold  to manually enter Sleep mode.

The pump locks when it goes to sleep. While the pump is locked,  appears on the Home screen.

To unlock the pump:

1. Press any button to wake up the pump.
2. Press .
3. Press and hold .

The Screen locked message appears.



Note: When the pump goes to sleep it will lock again.

Self Test

The Self Test option can be used to confirm the pump is operating properly. Self test is additional to the routine tests that run independently while the pump operates.





Note: Insulin delivery is suspended for up to two minutes while the pump runs a self test.

The Self Test option includes the following tests. Observe the pump during these tests.

Test	Description
Display	The display turns on for up to 45 seconds.
Notification light	The notification light turns on for three seconds, and then it turns off.
Vibration	Two vibration tones are generated.
Tone	An alert tone, an Easy bolus step tone, and an alarm tone are generated.

To run the self test:

1. From the Home screen, press , and then select .
2. Select **Device Settings > Self Test**.

A message confirms self test is in progress.

Self test takes up to two minutes to complete. During that time, the display briefly turns white, the notification light blinks, the pump vibrates and then beeps.

If self test does not detect a problem, the Device Settings screen appears. If a problem is detected, a message appears with more information.

If an error message appears or the pump does not perform as indicated during the test, contact 24-Hour Technical Support.

Manage Settings

The Manage Settings screen includes the following options:





- **Save Settings**
- **Restore Settings**
- **Clear All Settings**
- **Clear Active Insulin**
- **Settings History**
- **Max basal rate**

For information on how to use these options, see the procedures in this section.

Saving the settings

The Save Settings option saves a record of the settings to restore the settings at a later date, if necessary.

To save the current settings:

1. From the Home screen, press , and then select .
2. Select **Device Settings** > **Manage Settings**.
3. Simultaneously press and hold  and  until the Manage Settings screen appears.
4. Select **Save Settings**.





If these are the first settings saved, a message confirms that the settings are saved.

If the settings have been saved previously, a screen asks to replace the previous settings with the current settings. Select **Yes** to accept. Select **No** to cancel.

Restoring the settings

The **Restore Settings** option replaces the current pump settings with the last settings that were saved. The **Restore Settings** option is available only if settings were previously saved.

To restore the previous settings:

1. From the Home screen, press , and then select .
2. Select **Device Settings** > **Manage Settings**.
3. Simultaneously press and hold  and  until the Manage Settings screen appears.
4. Select **Restore Settings**.
A screen asks to confirm.
5. Select **Yes** to accept. Select **No** to cancel.

Clearing the settings





The **Clear All Settings** option erases the current settings and returns them to the factory defaults. After the settings are cleared, the Startup Wizard appears and pump settings can be re-entered. The settings must be entered to continue using the pump.

The Clear All Settings option does not delete paired devices, such as the CGM device.



CAUTION: Do not clear the pump settings unless directed by a healthcare professional. If pump settings are cleared they must be re-programmed as directed by a healthcare professional.

To clear all settings:

1. Disconnect the pump from the body.
2. From the Home screen, press , and then select .
3. Select **Device Settings** > **Manage Settings**.
4. Simultaneously press and hold  and  until the Manage Settings screen appears.
5. Select **Clear All Settings**.
A screen asks to confirm.
6. Select **Yes** to continue. Select **No** to cancel.

After the settings are cleared, the Startup Wizard appears. For more details on entering the startup settings, see *Startup settings*, page 66.





Clearing the active insulin

Use the **Clear Active Insulin** option to use the pump with insulin for the first time. This option clears the SmartGuard therapy history and any active insulin values that the pump has tracked.

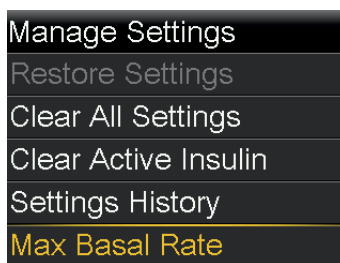
After the existing insulin values are cleared, it sets the active insulin value to zero. If bolus delivery was practiced with the pump prior to using the pump with insulin, the active insulin must be cleared. Clearing active insulin confirms that the Bolus Wizard feature has an accurate active insulin amount for bolus calculations.

Active insulin can be cleared only once. After the active insulin is cleared, this option is no longer available.

To clear the active insulin:

1. From the Home screen, press , and then select .
2. Select **Device Settings** > **Manage Settings**.
3. Simultaneously press and hold  and  until the Manage Settings screen appears.

The Manage Settings screen appears. If the active insulin has never been cleared, the **Clear Active Insulin** option appears.



Note: If the **Clear Active Insulin** option does not appear on the Manage Settings screen, the active insulin has already been cleared.

4. Select **Clear Active Insulin**.

A screen asks to confirm.





5. To clear the active insulin, select **Clear**. If the active insulin should not be cleared, select **Cancel**.

A message confirms that the active insulin is cleared.

Viewing the pump setting history

The **Settings History** option shows a history of activities performed through the Manage Settings screen, such as when pump settings were saved, restored, or cleared.

To view the pump setting history:





1. From the Home screen, press , and then select .
2. Select **Device Settings > Manage Settings**.
3. Simultaneously press and hold  and  until the Manage Settings screen appears.
4. Select **Settings History**.

Max basal rate

If after consulting your healthcare professional, you require a Manual mode Max basal rate higher than 10 units per hour, use **Manage Settings > Max Basal Rate**.

To set your Max basal rate, see *Max basal setting, page 80*.

To increase the Max basal rate above 10 U/hr:

1. From the Home screen, press , and then select .
2. Select **Device Settings > Manage Settings**.
3. Simultaneously press and hold  and  until the Manage Settings screen appears.
4. Select **Max Basal Rate**.

A message appears indicating that changing this value will also change the Max basal rate setting in Delivery Settings. Consult a healthcare professional before changing this value.

Select **Continue** to change the Max basal rate setting or click **Cancel** to return to the previous screen.

5. Change the Max basal rate setting and select **Save**.



The Max basal rate setting applies to Manual mode only. SmartGuard insulin delivery is not affected by this value.

Auto suspend

Auto suspend is a safety feature that stops all insulin delivery and sounds an alarm if a button is not pressed within a specified period of time. Consult a healthcare professional about how to best use this feature.

Auto suspend continues to work if the SmartGuard feature is active.



To set up auto suspend:

1. From the Home screen, press , and then select .
2. Select **Device Settings** > **Auto Suspend**.
3. Select **Alarm**.
4. Select **Time** and enter the number of hours.
5. Select **Save**.

Language

The language that the pump uses to show information can be updated after the startup.

To change the language:

1. From the Home screen, press , and then select .
- A checkmark indicates which language is active.
2. Select **Device Settings** > **Language**.
3. Select a language.
- A screen asks to confirm.
4. Select **Yes** to accept. Select **No** to cancel.

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History and graph

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History and graph

This chapter provides information about how to read historical data in the MiniMed 780G system.

Introduction

The History screens provide details about personal therapy history in the MiniMed 780G insulin pump. The SG Review and Graph screens are available if the Sensor feature is turned on. The Time in Range screen shows the percent of time glucose levels are between 70 mg/dL and 180 mg/dL.

History & Graph menu



The History & Graph menu provides information about insulin delivery, blood glucose (BG) meter readings, sensor glucose (SG) values, paired CGM devices, and any alarms and alerts received.

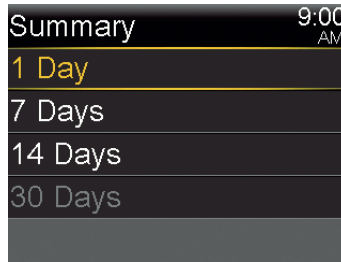
History

Summary screen

The Summary screen displays information about past insulin deliveries, SG readings, and meter readings. Historical details can be viewed for a single day or for multiple days.

To view the Summary screen:

1. From the Home screen, press , and then select .
2. Select **History** > **Summary**.



3. Select the desired time period for the Summary screen.

The Summary screen appears and displays information for the number of days selected.



4. Scroll down to view the entire screen. In the **1 Day** view, use the < and > buttons on the pump to view the history of a specific day.

Understanding the Summary screen

The Summary screen separates information into the following categories:

- Time in range information
- Insulin delivery overview
- Bolus Wizard
- Bolus in the SmartGuard feature
- BG
- Sensor
- Low management mode

Summary screen: Time in SmartGuard and Time in range information

The following table describes the Time in SmartGuard, Time in Target Range, Time below range, and Time above range portions of the Summary screen.

Name	Description
Time in SmartGuard	number of hours / percent of time in the SmartGuard feature

Name	Description
Time in Target Range	number of hours / percent of time in target range (70 mg/dL to 180 mg/dL)
Time below range	number of hours / percent of time below target range (below 70 mg/dL)
Time above range	number of hours / percent of time above target range (above 180 mg/dL)

Summary screen: insulin delivery overview

This summary screen appears when in Manual mode. If **1 Day** view is selected, the values are shown for that day. If multiple days are selected, the values shown are an average of the values for the selected number of days.

Name	Description
TDD	Total daily dose of insulin units.
Basal	<ul style="list-style-type: none">Insulin units devoted to basal delivery.Percentage of insulin devoted to basal delivery.
Bolus	<ul style="list-style-type: none">Insulin units devoted to bolus delivery.Percentage of insulin devoted to bolus delivery.
Total Carbs	Daily carbohydrate amount, in grams.

Summary screen: Bolus Wizard

This summary screen appears when in Manual mode. If **1 Day** view is selected, the values are shown for that day. If multiple days are selected, the values shown are an average of the values for the selected number of days.

Name	Description
Carb bolus	<ul style="list-style-type: none">Total insulin units delivered using the Bolus Wizard feature in Manual mode with a food amount or with a food and glucose correction.Number of times the Bolus Wizard feature delivered a food bolus or a food plus correction bolus in Manual mode.
Glucose correction only	<ul style="list-style-type: none">Total insulin units delivered using the Bolus Wizard feature in Manual mode or a bolus with BG correction amount only.Number of times the Bolus Wizard feature delivered a correction bolus in Manual mode.

Summary screen: SmartGuard

If **1 Day** view is selected, the values are shown for that day. If multiple days are selected, the values shown are an average of the values for the selected number of days.

Name	Description
Auto Correction	Total insulin units delivered by the Auto correction feature.
Bolus	<ul style="list-style-type: none">Total insulin units delivered using the SmartGuard bolus feature.Number of times the SmartGuard bolus feature was used.

Summary screen: BG

The pump provides a summary of entered BG data.

Name	Description
BG	Total number of BG meter readings.
Average BG	Average BG meter readings.
BG Std. Dev.	Standard deviation of BG meter readings.
Low BG	Lowest BG meter reading.
High BG	Highest BG meter reading.

Summary screen: sensor

The sensor portion appears if a sensor has been used at least once.

Name	Description
SG Average	Average SG reading.
SG Std. Dev.	Standard deviation of the SG readings.

Summary screen: low management mode

For information about the Suspend before low and Suspend on low features, see *Low SG settings, page 165*.

Name	Description
Suspend before low	The average number of Suspend before low events per day.
Suspend on low	The average number of Suspend on low events per day.
Time suspended by sensor	The average duration (amount of time) suspended as a result of Suspend before low or Suspend on low events per day.



Daily History screen

Actions performed on the pump can be viewed on the Daily History screen for the selected day. The list shown on the screen provides further details and shows the most recent action first.



Daily History	9:00 AM
Temp Target Comp..	10:45 PM
Temp Target	10:40 PM
SmartGuard Active	10:35 PM
SmartGuard Exit	10:30 PM
◀ Thu, Jan 22 ▶	



To view the Daily History screen:

1. From the Home screen, press , and then select .
2. Select **History** > **Daily History**.
A list of dates appears.
3. Select a specific date. A list appears with any pump actions or events entered on the specified day.
4. Select any item in the list to open the Detail screen and view more information about the selected action or event.

Alarm History screen

Select a specific day to view the history of alarms and alerts that occurred on the selected day. The list provides further details and shows the most recent alarm or alert first.

To view the Alarm History screen:

1. From the Home screen, press , and then select .
2. Select **History** > **Alarm History**.
A list of dates appears.

3. Select a specific date. A list appears showing any alarms or alerts that occurred on the specified day.
4. Select any alarm or alert in the list to open the Detail screen and view more information about the selected alarm or alert.

Paired Sensors screen

The Paired Sensors screen displays the serial number, code, date, and time of the current sensor paired to the pump. The screen also provides a history of the sensors that were paired with and unpaired from the pump. The code is not applicable for the MiniMed 780G insulin pump with the Guardian 4 or Instinct sensors.

Instinct sensor:

Paired Sensors		9:00 AM
<XXXXXXXX>		
Paired	9:00 AM	
(current)	Jan 1	
<YYYYYYYY>		
Paired	9:00 AM	
	Dec 27	



Simplera Sync sensor:

Paired Sensors		9:00 AM
- XXXXXXXX -		
CODE	XXXXXX	
Version	X.XX (X)	
Paired	9:00 AM	
(current)	Jan 1	
- YYYYYYYY -		

Guardian 4 sensor:

Paired Sensors		9:00 AM
- GT1345675C -		
CODE	---	
Version	1.2A	
Paired	6:20 PM	
(current)	Sep 26	
- GT2345675C -		

To view the Paired Sensors screen:


1. From the Home screen, press , and then select .
2. Select **History** > **Paired Sensors**.
A list of CGM devices appears.
3. Scroll down to view the entire screen.

SG Review screen

Pair the pump with a sensor to view a graph of SG history based on high and low limits entered. Information can be viewed for 1 day or refer to an average of SG data over multiple days.


High and low limits set in the SG Review screen are only used to view SG data. These limits are not the same as the high and low glucose limits used for SG alerts. Changing the limits in the SG Review screen will not affect the high and low glucose limits used for the SG alerts.

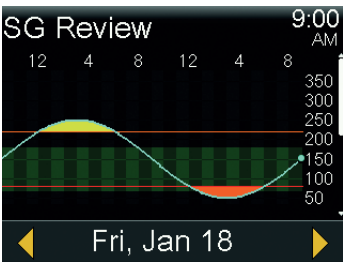
To review the SG history:

1. From the Home screen, press , and then select .
2. Select **Sensor Glucose Review**.

The SG Review screen appears. The high and low limits that appear are either the values entered for the last SG Review, or the default values of 180 mg/dL for the high limit and 70 mg/dL for the low limit.



3. Enter the High Limit and Low Limit for the SG data review.
There must be a minimum of 20 mg/dL difference between the High Limit and the Low Limit.
4. Enter the number of days of SG history to average, and select **Next**.
If only one day is entered, the graph shows details about when the SG was above, below, or within the specified limits. Use the arrow keys to see the data for specific dates. Press  to see information about the time that SG was above, within, or below range. A message appears and states there is no data available if no data was saved.



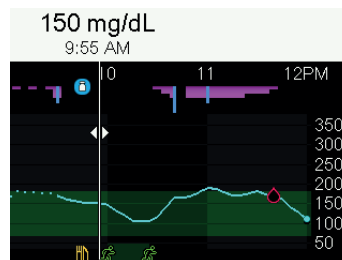
If multiple days are entered, the pie chart shows the average percentage of time that the SG was above, below, or within the specific limits over an average of

multiple days. A message appears and states there is no data available if no data was saved.



Graph screen

The graph shows information about the SG readings and trends, BG entries, auto correction bolus deliveries, and bolus entries. The graph may also show a dotted line to represent backfilled SG values, which will be recorded anytime the sensor is out of wireless range from the pump. The below screen is an example of the graph screen using the SmartGuard feature.



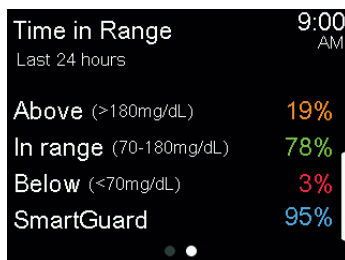
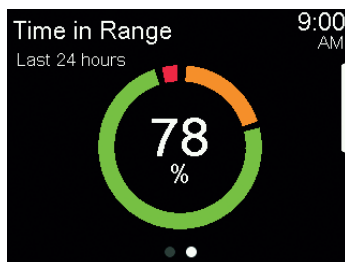
To view the Graph screen:

- Press , or select **Graph** on the History & Graph screen.



Time in Range screen

Time in range is the percentage of time SG is between 70 mg/dL and 180 mg/dL. These values cannot be changed. Use the Time in Range screen to see how much time is spent below, above, and within range in the last 24 hours.

When using CGM, the following information can be viewed:



To view the Time in Range screen:

1. From the Home screen, press , and then select .
2. Select **Time in Range**.

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■ Notifications and reminders

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Notifications and reminders

This chapter describes how to use reminders. It also covers the general behavior of the most common and the most serious notifications and how to resolve them.

Notifications in the MiniMed Mobile app

If the MiniMed Mobile app is used, alarms, alerts, and messages can be viewed on the paired mobile device. For information about how to set the notification preferences in the app, see the MiniMed Mobile app user guide. For a table that describes the meaning, consequences, reasons, and resolutions for the most common or serious notifications, see *Pump alarms, alerts, and messages*, page 301.



WARNING: Do not rely on the MiniMed Mobile app to view all alerts. Alerts will not appear on the MiniMed Mobile app during reservoir set up. Some alerts may only appear on the pump. In some cases, alerts could be sent to the MiniMed Mobile app after they appear on the pump. Relying on the MiniMed Mobile app for all alerts could result in an alert being missed, which may lead to hypoglycemia or hyperglycemia.



Reminders

There are several specific reminders that prompt a specific action. Personal reminders can be used for any purpose.

Personal reminders

Up to 5 personal reminders can be set, along with the specific reminders for blood glucose (BG) meter readings and medication.

To create a new Personal reminder:



1. From the Home screen, press , and then select .
2. Select **Alert Settings** > **Reminders** > **Personal**.
3. Select **Add New**.

The Select Name screen shows the available reminders.

4. Select a reminder.
An edit screen appears for the selected reminder.
5. Enter the time the reminder should occur.
6. Select **Save**.

The Personal reminder occurs at the specified time each day unless it is edited or deleted.



To edit, rename, or delete an existing Personal reminder:

1. From the Home screen, press , and then select .
2. Select **Alert Settings** > **Reminders** > **Personal**.
3. Select a reminder.
4. Do any of the following:
 - Select **Reminder** to turn the reminder on or off.
 - Select **Edit** to change the time of the reminder.
 - Select **Rename** to assign a different name to the reminder. When the Select Name screen appears, select any available name from the list.
 - Select **Delete** to delete the reminder.

Bolus BG Check reminder

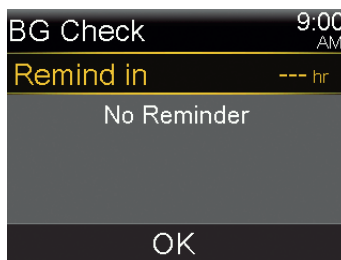
The Bolus BG Check reminder notifies when BG needs to be checked after a bolus delivery. After a bolus is started, the BG Check screen appears and the timer must be set for the reminder. The timer counts down from the time the bolus was started.

To turn on or turn off Bolus BG Check reminders:

1. From the Home screen, press , and then select .
2. Select **Alert Settings** > **Reminders** > **Bolus BG Check**.
3. To turn the reminder on or off, select **Reminder**.
4. Select **Save**.

To use a Bolus BG Check reminder if a bolus is being delivered:

1. If the Bolus BG Check reminder is on, the BG Check screen appears each time a bolus is started.





2. Enter a time between 30 minutes and 5 hours and select **OK**. If no reminder is necessary after the bolus delivery, select the dashes without adding a time, and select **OK**.



Missed Meal Bolus reminder

Missed Meal Bolus reminders can be set up around typical meal times. Up to 8 reminders can be set.

To create a new Missed Meal Bolus reminder:

1. From the Home screen, press , and then select .
2. Select **Alert Settings** > **Reminders** > **Missed Meal Bolus**.
3. Select **Add New**.
4. Select **Start Time** and enter a time.
5. Select **End Time** and enter a time.
6. Select **Save**.

To turn on or off, edit, or delete existing Missed Meal Bolus reminders:

1. From the Home screen, press , and then select .
2. Select **Alert Settings** > **Reminders** > **Missed Meal Bolus**.
3. Select a reminder.
4. Change any of the following:
 - Select **Reminder** to turn this reminder on or off.
 - Select **Edit** to change the time of this reminder.
 - Select **Delete** to delete this reminder.

Low Reservoir reminder

Set a Low Reservoir reminder to occur when the insulin level in the reservoir reaches a specified number of units and again when half of those units have been used.





Note: The number of units that remain in the reservoir can be found on the Pump status screen. For more information, see *Status screen*, page 74.



WARNING: Always check the amount of insulin left in the reservoir when the Low reservoir alert occurs. Confirm that the MiniMed 780G insulin pump has sufficient insulin. The insulin level in the reservoir can reach a low level during a bolus delivery or fill cannula delivery. If this occurs, the Low reservoir alert displays. If the pump does not have sufficient insulin, under-delivery of insulin can occur, which may cause hyperglycemia.



To set up the Low Reservoir reminder:

1. From the Home screen, press , and then select .
2. Select **Alert Settings** > **Reminders** > **Low Reservoir**.
3. Select **Units** to enter the number of units. Set a value from 5 to 50 units.
4. Select **Save**.

Set Change reminder

The Set Change reminder tracks the time between infusion set changes and provides a reminder to change the infusion set.


To turn on or off, or edit the Set Change reminder:

1. From the Home screen, press , and then select .
2. Select **Alert Settings** > **Reminders** > **Set Change**.
3. Select **Reminder** to turn the reminder on or off.
4. Select **Time** and choose the number of days needed for the reminder.
5. Select **Save**.



WARNING: When changing the Set Change reminder, do not set a duration greater than what is indicated on the infusion set labeling. If the infusion set is labeled for three days then the reminder must only be set to two or three days.

Alarms, alerts, and messages

The pump has a sophisticated safety network. If this safety network detects anything unusual, it communicates this information in the form of notifications. Notifications include alarms, alerts, and messages. When more than one notification is received, and there are multiple messages to view, a small white flap appears on the notification icon . When the first notification is cleared, the next notification becomes visible. A white triangle means that ▼ must be pressed to continue.



Note: The notification light flashes when the pump has an alarm or alert.



Note: Promptly address all notifications and confirmations that appear on the pump screen. The notification will remain on the pump screen until it is cleared. When responding to a message, there may be times when another message appears.



WARNING: When the critical pump error occurs, the following screen appears and the pump siren goes off:

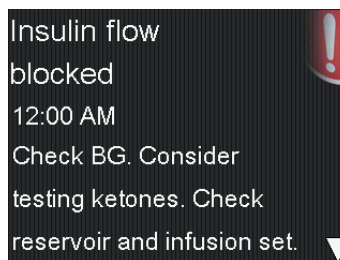


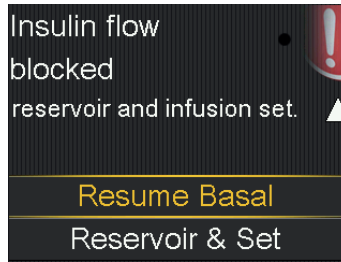
Immediately disconnect the pump and discontinue use. Contact 24-Hour Technical Support.

Insulin delivery is still required when the pump is removed. Consult a healthcare professional to determine an alternate method of insulin delivery while the pump is removed.

Alarms

An alarm warns of a condition that requires immediate attention. Stopped insulin delivery and low glucose levels are the most common reasons for alarms.






WARNING: Always address alarms immediately when they occur. Ignoring an alarm can result in hyperglycemia or hypoglycemia.

When an alarm occurs:

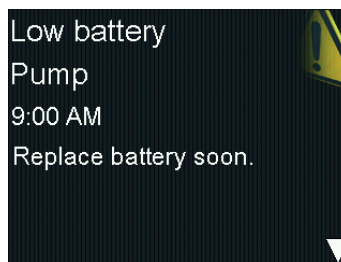
Display: The pump displays a notification with a red icon and instructions.

Notification light: The red notification light blinks twice, followed by a pause, in a continuous repeating pattern.

Audio: Depending on the sound and vibration settings, the pump emits a series of alarm tones and vibrations.

The underlying problem that triggered the alarm must be resolved. In most cases, press  and then make a selection to clear the alarm. Sometimes the underlying problem is not resolved when the alarm is cleared. The alarm repeats until the underlying problem is fixed. If the alarm condition is not resolved after 10 minutes, the alarm tone escalates to a loud emergency siren.

Alerts



Alerts indicate that a situation may require attention. When an alert occurs, check the pump screen to see if any action is required.

When an alert occurs:

Display: The pump displays a notification with a yellow icon and instructions.

Notification light: The red notification light on the pump blinks once, followed by a pause, then blinks once again in a continuous repeating pattern.

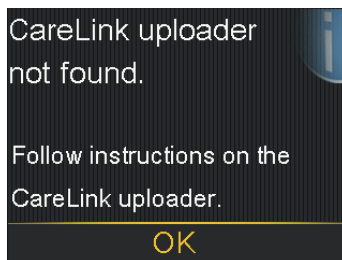
Audio: Depending on the sound and vibration settings, the pump generates a series of tones and vibrations.

To clear an alert, press ✓ and then make a selection. The pump beeps every 5 minutes or every 15 minutes, depending on the alert, until the alert is resolved. Some alerts will also escalate to a loud emergency siren after 10 minutes.



Note: If an alert occurs when the pump is on a screen other than the Home screen, the alert message may only appear after the pump returns to the Home screen.

Messages



A message is a notification that shows the status of the pump or displays when a decision needs to be made.

When a message occurs:

Display: The pump displays a notification with a blue icon and instructions. Some messages show a yellow icon.

Notification light: The red notification light on the pump does not blink.

Audio: Depending on the sound and vibration settings, the pump emits a tone, a one-pulse-only vibration, or it emits a tone and a one-pulse-only vibration. To clear a message, press ▼ and then make a selection.

Pump alarms, alerts, and messages

For a table that describes the meaning, consequences, reasons, and resolutions for the most common or serious notifications, see *Pump alarms, alerts, and messages, page 301*.

13



Additional basal features

13



Additional basal features

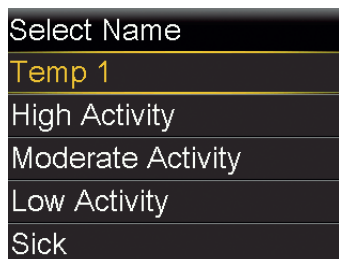
This chapter provides information about setting up additional features for basal insulin delivery.

Preset temp basal rates

Set up preset temp basal rates for reoccurring short-term situations. Up to four preset temp basal rates can be set up for specific situations. There are also four additional preset temp rates available for use in other circumstances (Temp 1 through Temp 4).

To set up a preset temp basal rate:



1. From the Home screen, press , and then select .
2. Select **Delivery Settings** > **Preset Temp Setup**.
3. Select **Add New**.



4. Select a name for the preset temp basal rate.
5. Select **Type** to select **Percent** or **Rate**, and then enter the percentage or the rate in units per hour.

6. Set the **Duration** for the preset temp basal rate to be active.
7. Select **Save**.

To edit, rename, or delete a preset temp basal rate:

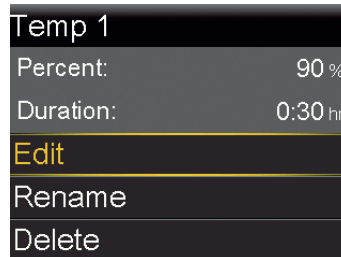
1. From the Home screen, press , and then select .
2. Select **Delivery Settings > Preset Temp Setup**.

The Preset Temp Setup screen appears and shows the settings for any existing preset temp basal rate.



3. Select a preset temp basal rate.

A screen appears that shows the preset temp basal rate information.



4. Do any of the following:
 - Select **Edit** to adjust the type (Percent or Rate), the percent or rate amount, and the duration.
 - Select **Rename** to assign a different name to the preset temp basal rate. When the Select Name screen appears, select any available name from the list.
 - Select **Delete** to delete the preset temp basal rate.

Starting a preset temp basal delivery

Follow the steps to use the preset temp basal rate for basal insulin delivery. If a preset temp basal rate has not yet been set up, see *Preset temp basal rates*, page 247. After the preset temp basal delivery is completed or canceled, basal insulin delivery resumes using the programmed basal rate.

To start a preset temp basal delivery:

1. From the Home screen, press , and then select .
2. Select **Basal > Preset Temp**.

The Preset Temp screen appears and shows the preset temp basal rates set up, along with their percentage or rate amounts.

Preset Temp	9:00 AM
Current rate:	0.025 U/hr
Temp 1	0.100 U/hr
High Activity	25 %
Moderate...	50 %



Note: If a percentage preset temp basal rate was set up so that it could exceed the current Max basal limit, that preset temp is grayed out in the list and cannot be selected.

3. Select a preset temp basal rate to start.
4. Select **Begin**.



The Temp Basal banner appears on the Home screen during delivery.

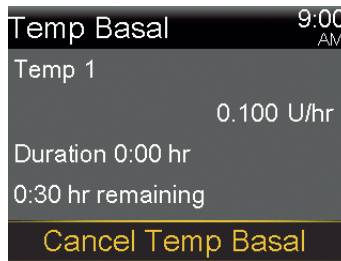


Canceling a temp basal or preset temp basal

A temp basal rate or preset temp basal rate can be canceled at any time. After it is canceled, the scheduled basal pattern automatically resumes.

To cancel a temp basal rate:

1. From the Home screen, press , and then select .
2. Select **Cancel Temp Basal**.
The Temp Basal screen appears.



3. Select **Cancel Temp Basal**.

Additional basal patterns



Adding an additional basal pattern

This procedure shows how to add a new basal pattern after at least one basal pattern has been set. If this is the first time a basal pattern is being set, see *Setting up a basal pattern*, page 82.

The following basal patterns can be set up:



- Basal 1
- Basal 2
- Workday
- Day Off
- Sick Day

To add an additional basal pattern:

1. From the Home screen, press , and then select .
2. Select **Basal > Basal Pattern Setup**.
The Basal Pattern Setup screen appears.
3. To add a new basal pattern, select **Add New**.
The Select Name screen appears.
4. Select a name for the basal pattern.
5. Set the basal rate.
6. Select **Review**.
7. Select **Save**.

Editing, copying, or deleting a basal pattern

To edit, copy, or delete a basal pattern:

1. From the Home screen, press , and then select .
2. Select **Delivery Settings > Basal Pattern Setup**.
The Basal Pattern Setup screen appears



3. Select a basal pattern.
4. Select **Options**.
5. Do any of the following:
 - Select **Edit** to adjust the end time or rate values.
 - Select **Copy** to copy the basal rate information from the selected basal pattern to a new basal pattern. When the Select Name screen appears, select any available name from the list.
 - Select **Delete** to delete the selected basal pattern. The active basal pattern cannot be deleted.

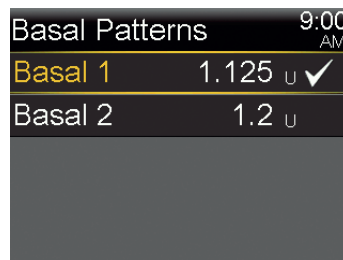
Changing from one basal pattern to another

If more than one basal pattern has been set, the basal pattern can be changed. The MiniMed 780G insulin pump delivers basal insulin according to the selected basal pattern.

To change to a different basal pattern:

1. From the Home screen, press , and then select .
2. Select **Basal > Basal Patterns**.

The Basal Patterns screen appears. A check mark displays next to the active basal pattern.



Basal Patterns		9:00 AM
Basal 1	1.125 U	✓
Basal 2	1.2 U	

3. Select a basal pattern.

Basal 2		9:00 AM
24 hr Total: 1.2 U		
Start	End	Rate (U/hr)
12:00 _A	12:00 _A	0.050
Begin		

4. Select **Begin**.

14

Additional bolus features

14

Additional bolus features

This chapter provides information about additional features for bolus delivery. Square Wave, Dual Wave, Easy, Manual, and Preset bolus are only available in Manual mode. Since these bolus types are only available in Manual mode, remember that you must enter a blood glucose (BG) meter reading when setting up the bolus delivery. Do not use a sensor glucose (SG) value when delivering a bolus in Manual mode.

Bolus types

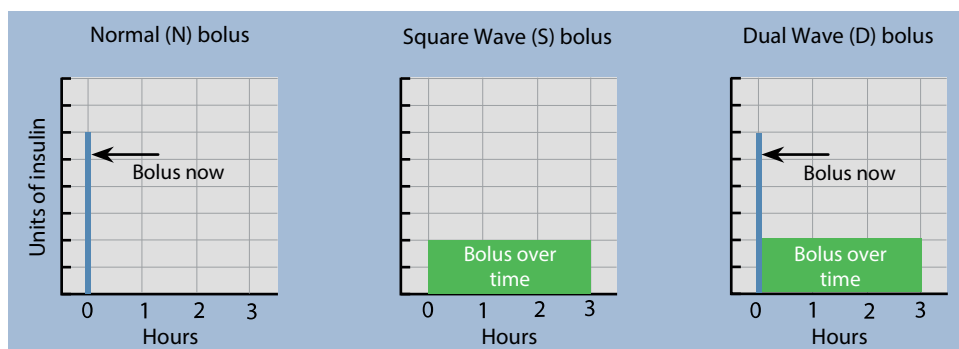
The following table provides general information about the available bolus types.

Bolus type	Description	Purpose
Normal	Normal bolus provides a single immediate dose of insulin.	<p>This is the typical bolus type used to cover food intake or to correct a high blood glucose (BG) meter reading.</p> <p>For details about delivering a normal bolus, see <i>Delivering a Normal bolus</i>, page 102.</p>
Square Wave bolus	Square Wave bolus delivers a single bolus evenly over an extended period of time from 30 minutes up to 8 hours.	<p>A Square Wave bolus can be used for the following reasons:</p> <ul style="list-style-type: none"> • A delayed food digestion due to gastroparesis or meals high in fat. • Snacking over an extended period of time. • A normal bolus drops the BG too rapidly. <p>For details about using the Square Wave bolus feature, see <i>Square Wave bolus</i>, page 262.</p>

Bolus type	Description	Purpose
Dual Wave bolus	Dual Wave bolus delivers a combination of an immediate normal bolus followed by a Square Wave bolus.	<p>A Dual Wave bolus can be used for the following reasons:</p> <ul style="list-style-type: none"> When meals are high in carbs and fat, which may delay digestion. When a meal bolus is combined with a correction bolus for an elevated BG. <p>For details about using a Dual Wave bolus, see <i>Dual Wave bolus</i>, page 266.</p>

Bolus type example

The following example shows how the different bolus types work.





Bolus settings

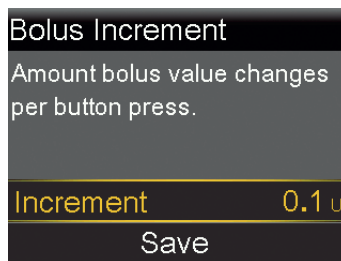
Additional settings are required to use the Bolus Wizard feature in Manual mode. These are described in the section, *Manual mode bolus delivery options*, page 94.

Bolus increment

The Bolus increment is the number of units that are increased or decreased with each button press for the bolus delivery amount in the Bolus Wizard, Manual Bolus, and Preset Bolus screens. Depending on the typical bolus amount, the increment can be set to 0.1 units, 0.05 units, or 0.025 units.

To set the bolus increment:

1. From the Home screen, press , and then select .
2. In Manual mode, select **Delivery Settings** > **Bolus Increment**.
3. Select **Increment** to set the desired increment value.





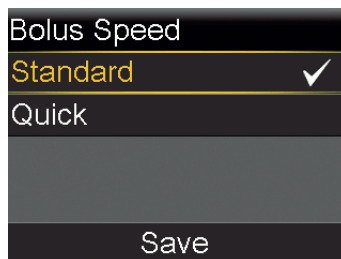
4. Select **Save**.

Bolus speed

The bolus speed sets the rate at which the pump delivers bolus insulin. Set a standard rate (1.5 units per minute), or a quick rate (15 units per minute).

To set the bolus speed:

1. From the Home screen, press , and then select .
2. Select **Delivery Settings** > **Bolus Speed**.
3. Select **Standard** or **Quick**.



4. Select **Save**.




Changing the Bolus Wizard settings in Manual mode

This section shows how to make changes to personal settings after the initial Bolus Wizard feature setup. Consult a healthcare professional before changes are made to the personal settings.

Changing the carb ratio

The carb ratio can be set whether or not the Bolus Wizard feature is turned on.

To change the carb ratio:

1. From the Home screen, press , and then select .
2. In Manual mode, select **Delivery Settings** > **Bolus Wizard Setup** > **Carb Ratio**.
3. Select **Edit**.
4. Select the carb ratio. For one carb ratio, enter the g/U, and then press .

For more than one carb ratio, enter one carb ratio at a time to complete the full 24 hours, which ends at 12:00 A.





Note: For instructions on setting up more than one carb ratio over a 24-hour period, see *Settings covering a 24-hour period*, page 84.

5. Select **Save**.

Changing the insulin sensitivity factor

The insulin sensitivity factor can be set only if the Bolus Wizard feature is turned on.

To change the insulin sensitivity factor:

1. From the Home screen, press , and then select .
2. In Manual mode, select **Delivery Settings** > **Bolus Wizard Setup** > **Insulin Sensitivity Factor**.
3. Select **Edit**.

4. Select the insulin sensitivity factor. For one insulin sensitivity factor, press \wedge and \vee to enter the mg/dL per U, and then press \odot .

For more than one insulin sensitivity factor, press \wedge or \vee to enter one insulin sensitivity factor at a time to complete the full 24 hours, which ends at 12:00 A.



Note: For instructions on setting up more than one insulin sensitivity factor over a 24-hour period, see *Settings covering a 24-hour period, page 84*.

5. Select **Save**.

Changing the BG target

The BG target can be from 60 to 250 mg/dL. The BG target can be set only if the Bolus Wizard feature is turned on.

To change the BG target:

1. From the Home screen, press \odot , and then select ⚙ .
2. In Manual mode, select **Delivery Settings > Bolus Wizard Setup > BG Target**.
3. Select **Edit**.
4. Select the BG target. For one BG target, enter the low BG limit and the high BG limit, and then press \odot .

For more than one BG target, enter one BG target at a time to complete the full 24 hours, which ends at 12:00 A.



Note: For instructions on setting up more than one BG target over a 24-hour period, see *Settings covering a 24-hour period, page 84*.

5. Select **Save**.



Changing the active insulin time

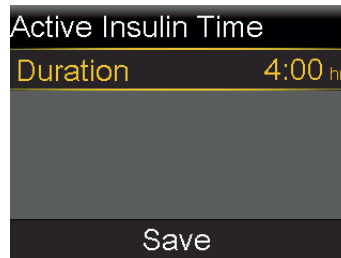
Active insulin is the bolus insulin that has been delivered by the pump and is still working to lower glucose levels. In the Bolus Wizard and SmartGuard Bolus feature, the

Active Insulin Time setting is used to calculate a correction bolus by subtracting the estimated active insulin from each bolus. In SmartGuard, auto correction boluses are delivered up to every 5 minutes. A shorter Active Insulin Time setting may result in more insulin being delivered in correction boluses.

A healthcare professional provides the personalized active insulin time based on historic glycemic control data for the individual user. When using SmartGuard, the recommended initial setting is an Active Insulin Time of 2-3 hours. The Active Insulin Time setting in the MiniMed 780G system is not necessarily reflective of the physiological insulin metabolism. Adjustments are not based on the pharmacokinetics and pharmacodynamics of the rapid-acting insulin. The current active insulin amount appears on the Home screen and includes only the bolus insulin received.

To change the active insulin time:

1. From the Home screen, press , and then select .
2. In Manual mode, select **Delivery Settings** > **Bolus Wizard Setup** > **Active Insulin Time**.
3. Select **Duration**, and adjust the active insulin time in hours, using 15-minute increments.



4. Select **Save**.

Square Wave bolus

A Square Wave bolus delivers a bolus evenly over a period of time from 30 minutes up to 8 hours.

When using the Bolus Wizard feature in Manual mode, a Square Wave bolus is available only when giving a food bolus without a correction for an elevated BG. A Square Wave

bolus is not available for a correction bolus alone or a correction bolus with food bolus. A normal bolus can be delivered while a Square Wave bolus is being delivered, as needed.

A Square Wave bolus can be useful in the following situations:



- Delayed food digestion due to gastroparesis or meals high in fat.
- When snacking over an extended period of time.
- A normal bolus drops BG too rapidly.

Since the Square Wave bolus extends delivery over a period of time, the insulin is more likely to be available as needed.

Turning the Square Wave bolus feature on or off

A Square Wave bolus can be set up and delivered only after the Square Wave bolus feature is turned on.



To turn the Square Wave bolus feature on or off:

1. From the Home screen, press , and then select .
2. In Manual mode, select **Delivery Settings** > **Dual/Square Wave**.
3. Select **Square Wave** to turn the feature on or off.
4. Select **Save**.

Delivering a Square Wave bolus using the Bolus Wizard feature

In Manual mode, the Bolus Wizard feature only delivers a Square Wave bolus if the Square Wave bolus feature is turned on and a carb value is entered. If a BG reading causes the Bolus Wizard feature to calculate that a correction bolus is necessary, then a Square Wave bolus cannot be delivered.

To deliver a Square Wave bolus using the Bolus Wizard feature:

1. From the Home screen, press , and then select .
2. In Manual mode, select **Bolus** > **Bolus Wizard**.

The Bolus Wizard screen appears.

Bolus Wizard		9:00 AM
BG	--- mg/dL	
Carbs	10 _g	0.6 _U
Adjustment	0.0 _U	
Bolus	0.6 _U	
Next		

- For a food bolus, select **Carbs** to enter the carb count of the meal.
- The calculated bolus appears in the Bolus field. To modify the bolus amount, select **Bolus**.
- Select **Next** to review the bolus information.

Bolus Wizard		9:00 AM
Bolus		0.8 _U
Dual		Square
Deliver Bolus		

- Select **Square**.
- Select **Duration** to adjust the time period when the Square Wave bolus needs to be delivered.

Bolus Wizard		9:00 AM
Bolus		2.3 _U
Duration		0:30 _{hr}
Deliver Bolus		

- Select **Deliver Bolus** to start the bolus.





Note: To stop bolus delivery or to see details on the insulin that has been delivered, see *Stopping a Square Wave or Dual Wave bolus delivery*, page 276.

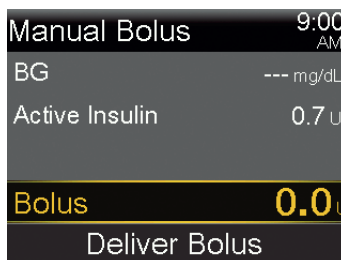
Delivering a Square Wave bolus using the Manual bolus feature

The Square Wave bolus option is available in the Manual Bolus screen only after the Square Wave feature is turned on.

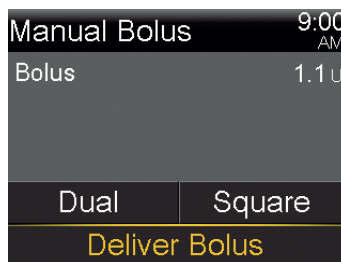
To deliver a Square Wave bolus using the Manual bolus feature:

1. From the Home screen, press , and then select .
2. In Manual mode, do one of the following:
 - Select **Bolus** if the Bolus Wizard feature is turned off.
 - Select **Bolus** > **Manual Bolus** if the Bolus Wizard feature is turned on.

The Manual Bolus screen appears.



3. Set the bolus delivery amount in units, and then select **Next**.



4. Select **Square**.
5. Select **Duration** to adjust the time period when the Square Wave bolus is to be delivered.
6. Select **Deliver Bolus** to start the bolus.



Note: To stop bolus delivery or to see details on the insulin that has been delivered, see *Stopping a Square Wave or Dual Wave bolus delivery*, page 276.

Dual Wave bolus

The Dual Wave bolus feature meets both immediate and extended insulin needs by delivering a combination of an immediate normal bolus followed by a Square Wave bolus. A normal bolus can be delivered while the Square portion of a Dual Wave bolus is being delivered, as needed.



A Dual Wave bolus can be useful in these situations:

- When an elevated BG needs to be corrected before a meal, and a delayed bolus is needed for food that is absorbed slowly.
- When eating meals with mixed nutrients, such as carbs, fats and proteins, that are absorbed at different rates.

Turning the Dual Wave bolus feature on or off

A Dual Wave bolus can be delivered only after the Dual Wave bolus feature is turned on.



To turn the Dual Wave feature on or off:

1. From the Home screen, press , and then select .
2. In Manual mode, select **Delivery Settings** > **Dual/Square Wave**.
3. Select **Dual Wave** to turn the feature on or off.
4. Select **Save**.

Delivering a Dual Wave bolus using the Bolus Wizard feature

In Manual mode, a Dual Wave bolus with the Bolus Wizard feature can be delivered only after the Dual Wave bolus feature is turned on.

To deliver a Dual Wave bolus with the Bolus Wizard feature:

1. For a correction bolus or a food bolus with a correction, use a BG meter to check BG. For a food bolus only, go to step 2.
2. From the Home screen, press , and then select .
3. In Manual mode, select **Bolus** > **Bolus Wizard**.

The Bolus Wizard screen appears.





Note: For more information on how to enter the BG meter reading, see *Entering a blood glucose (BG) meter reading*, page 93.

4. For a food bolus, select **Carbs** to enter the carb count of the meal. For a correction bolus where no food was eaten, leave the carbs value as 0.

The calculated bolus appears in the Bolus field.

5. To modify the bolus amount, select **Bolus**.
6. Select **Next** to review the bolus information.

The screenshot shows the 'Bolus Wizard' screen. At the top right, the time is 9:00 AM. Below the title, the 'Bolus' field displays '0.8 U'. At the bottom, there are two buttons: 'Dual' and 'Square', and a large yellow button labeled 'Deliver Bolus'.

7. Select **Dual**.

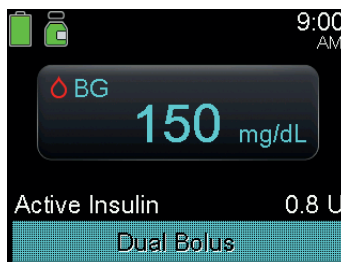
The Bolus Wizard screen appears.

8. To change the amounts, select the area of the screen with the Now % and Square % values and adjust the **Now** % amount.

When adjusting the Now amount, the Square amount adjusts automatically.

The screenshot shows the 'Bolus Wizard' screen with the 'Dual' option selected. The 'Bolus' field still shows '0.8 U'. Below it, the 'Now' portion is set to 75% (0.6 U) and the 'Square' portion is set to 25% (0.2 U). The 'Duration' field shows '0:30 hr'. The 'Deliver Bolus' button is at the bottom.

9. Adjust the **Duration** of the square portion of the bolus to be delivered.
10. Select **Deliver Bolus** to start the bolus.





Note: To stop bolus delivery or to see details on the insulin that has been delivered, see *Stopping a Square Wave or Dual Wave bolus delivery*, page 276.

Delivering a Dual Wave bolus using the Manual bolus feature

The Dual Wave bolus option is available in the Manual Bolus screen only after the Dual Wave feature is turned on.

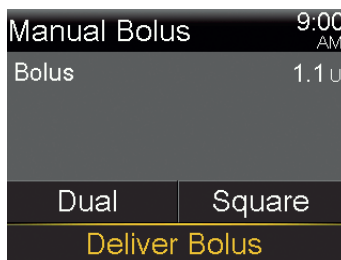
To deliver a Dual Wave bolus using the Manual bolus feature:

1. From the Home screen, press , and then select .
2. In Manual mode, do one of the following:
 - Select **Bolus** if the Bolus Wizard feature is turned off.
 - Select **Bolus** > **Manual Bolus** if the Bolus Wizard feature is turned on.

The Manual Bolus screen appears.

3. Set the bolus delivery amount in units, and then select **Next**.

The Manual Bolus screen appears, with the option to select the bolus type.



4. Select **Dual**.

The Manual Bolus screen appears.

- To change the amounts, select the area of the screen with the Now % and Square % values and adjust the **Now** % value. When the Now amount is adjusted, the Square amount adjusts automatically.

Manual Bolus		9:00 AM
Bolus		0.8 U
Now	50 %	0.4 U
Square	50 %	0.4 U
Duration		0:30 hr
Deliver Bolus		

- Select **Duration** to adjust the time period when the Square Wave bolus is to be delivered.
- Select **Deliver Bolus** to start the bolus.

		9:00 AM
BG		150 mg/dL
Active Insulin		0.4 U
Dual Bolus		



Note: To stop bolus delivery or to see details on the insulin that has been delivered, see *Stopping a Square Wave or Dual Wave bolus delivery*, page 276.

Easy bolus

The Easy bolus feature can be used to deliver a normal bolus using only the **^** button. The Easy bolus feature only works when the pump is in Sleep mode.

When the **^** button is pressed while the Easy bolus feature is used, the bolus amount increases by a certain amount. This amount, or step size, can be set from 0.1 to 2.0 units

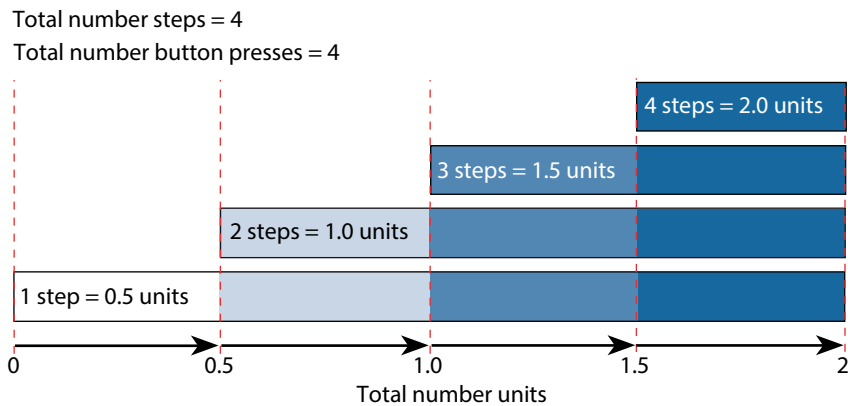
of insulin. The pump makes a tone or vibration each time the \wedge button is pressed to help keep count of the steps.



Note: The step size cannot be greater than the Max bolus amount. The maximum number of steps is 20 for each bolus delivery.

Setting up the Easy bolus feature

The following graph provides an example of setting up a bolus of 2.0 units of insulin using a step size of 0.5 units.



To set up the Easy bolus feature:

1. From the Home screen, press \odot , and then select ⚙ .
2. Select **Device Settings** > **Easy Bolus**.
3. Select **Easy Bolus** to turn on the feature.
4. Set the **Step Size** amount in units.

Select a step size to a number that makes it easy to calculate the total bolus amount.



5. Select **Save**.

Delivering a bolus using the Easy bolus feature



WARNING: Never rely on beeps or vibrations alone while using the Easy bolus feature. Always confirm the insulin delivery by looking at the pump screen. When using the Sound & Vibration options, it is possible that a sound or vibration notification may not occur as expected if the speaker or vibrator in the pump malfunctions. Relying on beeps or vibrations while using the Easy bolus feature may result in over-delivery of insulin.

To deliver a bolus using the Easy bolus feature:

1. While the pump is in Sleep mode, press and hold \wedge for one second or until the pump beeps or vibrates. The bolus can now be set up.



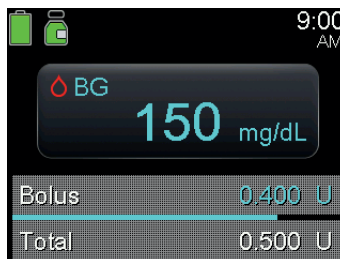
Note: If the pump does not respond when \wedge is pressed, it may not be in Sleep mode, even if the screen is dark. For more information, see *Sleep mode*, page 61.

2. Press \wedge the number of times needed to set the bolus amount. Count the tones or vibrations for each button press to confirm the total bolus amount.



Note: If \wedge is pressed too many times and the bolus amount is too high, press \vee to cancel the Easy bolus delivery and start at step 1 to set up a new bolus.

- When the needed bolus amount is reached, press and hold \wedge to confirm the amount.
- Press and hold \wedge for one second, or until the pump beeps or vibrates, to deliver the bolus.



Note: If the \wedge button is not pressed within 10 seconds after the bolus amount is confirmed, the bolus is canceled and a message appears that the bolus was not delivered.

Preset bolus

The Preset Bolus feature allows frequently used bolus deliveries to be set up in advance. There are four preset bolus names that can be used to match a bolus to a meal that has a known carb content. Four additional preset bolus names can be set for other circumstances. These are numbered from Bolus 1 to Bolus 4.



Note: To set up a Preset bolus as a Dual Wave bolus or Square Wave bolus, the Dual Wave bolus feature or Square Wave bolus feature must be turned on.

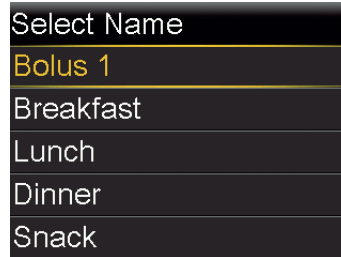
Setting up and managing preset bolus deliveries

To set up preset bolus amounts:

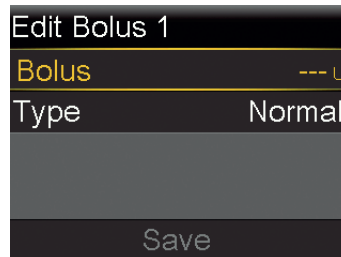
- From the Home screen, press \odot , and then select ⚙ .
- Select **Delivery Settings** > **Preset Bolus Setup**.



3. Select **Add New**.



4. Select a preset bolus.
An edit screen appears.



5. Select **Bolus** to set the bolus amount.
6. Select **Type** to set this as a normal bolus, Square Wave bolus, or Dual Wave bolus.



Note: Square Wave and Dual Wave can be selected in the **Type** field only if the Square Wave bolus and Dual Wave bolus features are turned on.

If the type is set to Square or Dual, do the following:

- For a Square Wave bolus, set the **Duration** of time for the bolus delivery.
- For a Dual Wave bolus, adjust the **Now** % amount. When the **Now** amount is adjusted, the **Square** amount adjusts automatically. Then set the **Duration** of time for the Square portion of the bolus.



Note: If the Dual Wave bolus feature or Square Wave bolus feature is turned off, the existing Preset Bolus settings are still available for use.

7. Select **Save**.



Editing, renaming, or deleting a preset bolus

Dual Wave Preset Boluses and Square Wave Preset Boluses can only be edited when the Dual Wave Bolus and Square Wave Bolus features are turned on.



Note: A preset bolus cannot be edited, renamed, or deleted during preset bolus delivery.



To edit, rename, or delete a preset bolus:

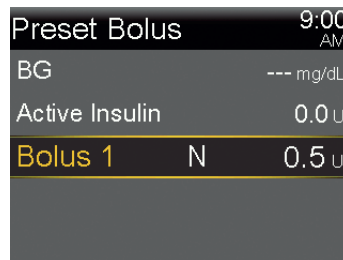
1. From the Home screen, press , and then select .
2. Select **Delivery Settings > Preset Bolus Setup**.
3. Select a preset bolus.
4. Select **Options**.
5. Do any of the following:
 - Select **Edit** to adjust the bolus value and type, if applicable. If changing to a Square Wave bolus, enter the duration. If changing to a Dual Wave bolus, enter the Now and Square values and the Duration.
 - Select **Rename** to assign a different name to this preset bolus. When the Select Name screen appears, select any available name from the list.
 - Select **Delete** to delete this preset bolus.

Delivering a preset bolus

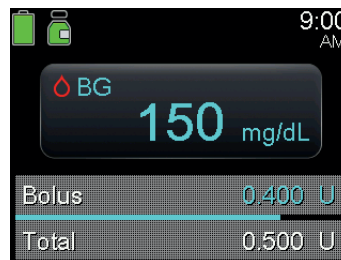
A preset bolus must be set before the Preset Bolus feature can be used. For more information, see *Setting up and managing preset bolus deliveries*, page 273.

To deliver a preset bolus:



1. From the Home screen, press , and then select .
2. Select **Bolus > Preset Bolus**.
3. Select the preset bolus to be delivered.



4. Review the bolus amount, and then select **Deliver Bolus** to start the bolus.



Stopping a Square Wave or Dual Wave bolus delivery

This section describes how to stop a bolus in progress. It does not stop basal insulin delivery. To stop all insulin delivery, use the Suspend All Delivery feature (press , select , and select **Suspend All Delivery**).

This section describes how to stop the following bolus deliveries:


- A Dual Wave bolus during the Now portion delivery
- A Square Wave bolus delivery or a Dual Wave bolus during the Square portion delivery

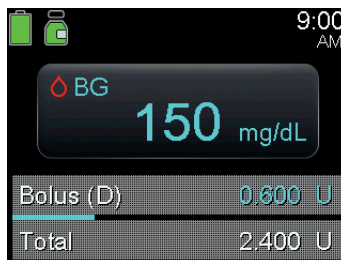
To stop a normal bolus delivery see *Stopping a bolus delivery, page 105*.




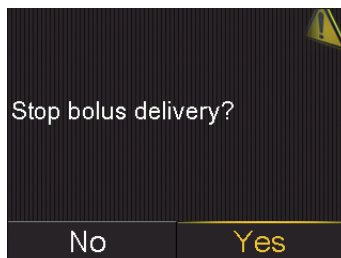
Note: When delivering a normal bolus and a Square Wave bolus at the same time, or a normal bolus and the Square portion of a Dual Wave bolus at the same time, both boluses are stopped.

To stop a Dual Wave bolus delivery during the Now portion:

1. While the pump is delivering the Now portion of a Dual Wave bolus, press  from the Home screen.



2. Select .
3. Select **Stop Bolus**, then select **Yes** to confirm.



The Bolus Stopped screen appears and shows the amount of bolus delivered, and bolus amount that was originally set up.





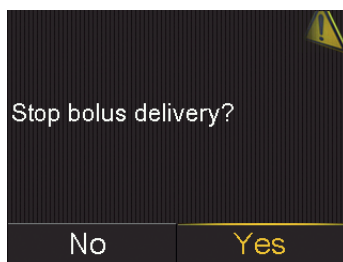
Note: When a Dual Wave bolus is stopped during the Now portion, the Now portion is stopped and the Square portion is canceled.



4. Select **Done**.

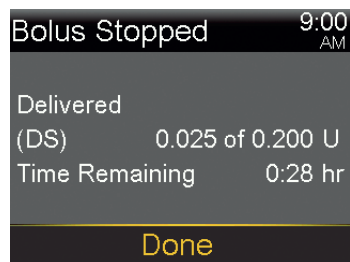
To stop a Square Wave bolus delivery or the Square portion of a Dual Wave bolus delivery:

1. While the pump is delivering a Square Wave bolus delivery or the Square portion of a Dual Wave bolus delivery, press  from the Home screen.
2. Select  and then select **Bolus**.
3. Select **Stop Bolus**, then select **Yes** to confirm.



The Bolus Stopped screen appears and shows the amount of bolus delivered, and the bolus amount that was originally set up.

4. Select **Done**.



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Troubleshooting

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Troubleshooting

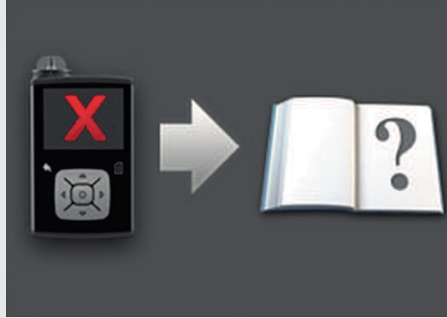
This chapter provides information about common MiniMed 780G insulin pump and sensor issues, as well as possible resolutions.

For a list of alarms, alerts, and messages, see *List of alarms, alerts, and messages*, page 301.

Pump issues




WARNING: When the critical pump error occurs, the following screen appears and the pump siren goes off:






Immediately disconnect the pump and discontinue use. Contact 24-Hour Technical Support.

Insulin delivery is still required when the pump is removed. Consult a healthcare professional to determine an alternate method of insulin delivery while the pump is removed.

The following table provides troubleshooting information for the insulin pump:

Issue	Resolution
 appears on the Home screen or Bolus screens after an Active Insulin reset to zero alarm occurs.	<p>Select OK to clear the alarm.</p> <p>Contact 24-Hour Technical Support for assistance with the following steps:</p> <ol style="list-style-type: none">1. Check the Daily History screen or the sensor graph for the recent bolus amounts, and when they were delivered, before giving any bolus.2. Consult a healthcare professional for how long to wait after active insulin has been reset to zero before relying on the active insulin calculation of the Bolus Wizard feature. The active insulin tracked prior to the Active Insulin reset to zero alarm is not included in new Bolus Wizard calculations.3. Check blood glucose (BG) using a blood glucose meter and treat as needed.


Issue	Resolution
	<div data-bbox="532 144 606 213"></div> <div data-bbox="629 144 1243 326"> <p>WARNING: Do not rely on active insulin tracked in the pump when giving any bolus after active insulin has been reset to zero. Relying on the active insulin shown on the pump screen can result in the infusion of too much insulin, which can cause hypoglycemia.</p> </div>
<p>The pump buttons are stuck during airplane travel.</p>	<p>During atmospheric pressure changes, the pump buttons may not work for up to 45 minutes. For example, during airplane travel, pump buttons may get stuck and the pump will alarm. This is rare. If this occurs, either wait for the problem to correct itself, or confirm the AA battery connection:</p> <ol style="list-style-type: none"> 1. Remove the battery cap. 2. Place the battery cap back onto the pump. The pump will check the AA battery power, and may require a new AA battery. 3. If prompted, insert a new AA battery. For more information about changing the battery, see <i>Removing the battery</i>, page 65. <p>If these steps do not correct the problem, contact 24-Hour Technical Support for assistance.</p>
<p>The pump was dropped or there are concerns that the pump may be damaged.</p>	<div data-bbox="532 885 606 954"></div> <div data-bbox="629 885 1243 1032"> <p>CAUTION: Always inspect the pump for cracks before exposing the pump to water, especially if the pump was dropped or damaged. Water leakage can cause the pump to malfunction and result in injury.</p> </div> <ol style="list-style-type: none"> 1. Disconnect the pump from body. Confirm all infusion set and reservoir connections are secure. 2. Disconnect the pump from body. Check the infusion set, including the tubing connector and tubing, for cracks or damage. 3. Check the display, button area, and pump case for cracks or damage. 4. Confirm the information on the Status screen. 5. Confirm the settings for the basal rates and the pump are correct. 6. Perform a self test. For more information, see <i>Self Test</i>, page 214. 7. If necessary, contact 24-Hour Technical Support and check BG. <p>For health-related questions or concerns, consult a healthcare professional.</p>

Issue	Resolution
The pump experienced physical impact, such as a drop or bump against a hard surface and the battery life seems shorter than usual.	<p>Even with new batteries, the battery life may be very short. Take the following actions to address the issue:</p> <ol style="list-style-type: none"> 1. Replace pump batteries immediately if a Low Battery Pump alert occurs. 2. Keep spare AA lithium, alkaline, or fully charged NiMH batteries stored in your emergency kit and ensure they are easily accessible. <p>If necessary, contact 24-Hour Technical Support.</p>
The pump display times out too quickly.	<p>In order to conserve battery, the pump display times out after 15 seconds. To increase the time, see <i>Display options, page 211</i>.</p>
The pump displays a Check Settings alarm.	<p>The pump has reset to factory settings. Review any settings that were not already set in the Startup Wizard and re-enter them, if necessary.</p>
The pump settings have been cleared and need to be re-entered.	<p>Do not clear pump settings unless directed to do so by a healthcare professional. Certain pump errors may cause the pump to reset to factory default values, which clears the current pump settings. To restore saved pump settings, see <i>Restoring the settings, page 215</i>. Consult a healthcare professional to determine the necessary settings. Have the settings that need to be entered into the pump ready before starting the procedure below.</p> <p>Use the following procedure to re-enter personalized pump settings using the Startup Wizard:</p> <ol style="list-style-type: none"> 1. After the pump resets, the Startup Wizard appears. Select a language, and then press . 2. Select a time format, and then press . 3. Enter the current time, and then select Next. 4. Enter the current date, and then select Next. 5. Select the carb unit, and then press . 6. When the Active Insulin Time screen appears, select Next. For more information, see <i>Bolus Wizard feature in Manual mode, page 96</i>. 7. Enter the Duration, and then select Next. 8. Enter the basal rates for the new basal pattern, and then select Next. For more information, see <i>Setting up a basal pattern, page 82</i>.

Issue	Resolution
	<ol style="list-style-type: none"> Review the basal pattern information, and then select Next. On the Startup screen, a message displays to ask to set up Bolus Wizard now. Do one of the following: <ul style="list-style-type: none"> Select Yes to enter the Bolus Wizard settings in Manual mode. For more information, see <i>Bolus Wizard feature in Manual mode</i>, page 96. Select No to skip the Bolus Wizard setup.

Sensor issues

Issue	Resolution
The pump has lost connection with the sensor.	<p>After 30 minutes without a signal, the Lost sensor signal alert appears. Follow the steps on the pump screen or the steps below to try to resolve the issue.</p> <p>Note: If alerts are silenced and a sensor alert occurs, the alert still appears on the screen.</p> <p>When using the Simplera Sync or Instinct sensor:</p> <ol style="list-style-type: none"> Move the pump closer to the sensor, and then select OK. It can take up to 15 minutes for the pump to find the sensor signal. If the pump still cannot find the sensor signal, the Possible signal interference alert appears. Move away from electronic devices that may cause interference, and then select OK. Do one of the following: <ul style="list-style-type: none"> If the pump cannot find the sensor signal within 15 minutes or if the "Sensor signal not found - See User Guide" alert appears on the SG graph, contact 24-Hour Technical Support. If a Change sensor alert appears, select OK and change the sensor. <p>When using the Guardian 4 sensor:</p> <ol style="list-style-type: none"> Move the pump closer to the transmitter, and then select OK. It can take up to 15 minutes for the pump to find the transmitter signal. If the pump still cannot find the transmitter signal, the Possible signal interference alert appears.

Issue	Resolution
	<ol style="list-style-type: none"> 2. Move away from electronic devices that may cause interference, and then select OK. Wait 15 minutes for the pump to locate the transmitter signal. If a signal is not found, the Check connection alert appears. 3. Confirm that the connection between the transmitter and sensor is secure, and then select OK. The “Check sensor insertion” message appears. 4. Do one of the following: <ul style="list-style-type: none"> • If the sensor connection is secure, select Yes. If the pump cannot find the sensor signal within 15 minutes or if the “Sensor signal not found - See User Guide” alert appears on the SG graph, contact 24-Hour Technical Support. • If the sensor is not securely connected to the transmitter, select No. A Change sensor alert appears. Select OK and change the sensor.
<p>A calibration is not accepted.</p> <p>Note: This issue applies only to Simplera Sync and Guardian 4.</p>	<p>The CGM devices do not require calibration for use with the system. However, when paired with Simplera Sync or Guardian 4, the system uses every blood glucose (BG) meter reading to perform a calibration. A Calibration not accepted alert occurs in one of the following situations:</p> <ul style="list-style-type: none"> • The system cannot use the entered BG meter reading. Only a BG value between 50 mg/dL and 400 mg/dL can be used to calibrate the sensor. Wait at least 30 minutes, wash hands, and try again. • The entered BG meter reading differs too greatly from the most recent SG reading. Check the accuracy of the BG meter reading and try again. • The CGM device cannot receive the calibration BG meter readings from the pump due to a failed sensor signal. Troubleshoot the failed sensor signal.
<p>The suspend by sensor icon appears with a red X. </p>	<p>The suspend by sensor icon appears with a red X when the Suspend before low or the Suspend on low feature is unavailable. This can occur in the following situations:</p> <ul style="list-style-type: none"> • A suspend event recently occurred. For information about the availability of the suspend functionality, see <i>The Suspend before low feature</i>, page 167 or <i>The Suspend on low feature</i>, page 169. • SG readings are unavailable. <p>SG readings may be unavailable in the following situations:</p>

Issue	Resolution
	<ul style="list-style-type: none"> • A BG meter reading is required. • The pump has lost communication with the sensor. Restore pump communication with the sensor. • The sensor is updating. Clear the alert and wait up to 3 hours for the SG readings to resume. <p>If necessary, insert a new sensor. If the issue continues after a new sensor is inserted, contact 24-Hour Technical Support.</p>

MiniMed Mobile app Instinct sensor startup errors

The following is a table of error messages generated by the MiniMed Mobile app that can occur in the app during Instinct sensor startup. Refer to the MiniMed Mobile app user guide for other app error messages that can occur outside the Instinct sensor startup process.

Error message	Instructions
Mobile device not compatible Your mobile device does not support Near Field Communication (NFC). Instinct sensor cannot be started.	The mobile device does not support NFC capability. A list of compatible mobile devices and operating systems is available on your local Medtronic website.
NFC is off Make sure your NFC setting is enabled.	On the mobile device: <ol style="list-style-type: none"> 1. Go to Settings 2. Find and enable NFC settings
Change Sensor Sensor is not working.	Remove the sensor and start a new one with the MiniMed Mobile app.
Scan error Your scan was unsuccessful. Tap the scan button and scan again.	Bring your phone close to the sensor. Tap the scan button and scan again.
Sensor already in use Sensor was started by MiniMed Mobile app using a different user account and cannot be used by this account.	Verify the correct mobile device is being used and restart the sensor, or replace the sensor.
Sensor expired Remove sensor and start a new one.	Remove the sensor and start a new one with the MiniMed Mobile app.
Incompatible sensor	Refer to the system user guide for sensor compatibility information.

Error message	Instructions
This sensor cannot be used with this pump. Check the system user guide for sensor compatibility.	

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Pump Care

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Pump Care

The pump does not require preventative maintenance. This chapter provides information about caring for the components of the MiniMed 780G system.

Clean, store, and dispose of the pump

Cleaning the pump

Prepare the following supplies to clean the pump:

- four small, clean, soft cloths
- mixture of water and mild detergent
- clean water
- 70% alcohol
- clean cotton swabs
- clean cotton balls



CAUTION: Never use organic solvents, such as lighter fluid, nail polish remover, or paint thinner to clean the MiniMed 780G insulin pump. Never use lubricants with the pump. When the pump is being cleaned, be sure to keep the reservoir compartment dry and away from moisture. If organic solvents are used to clean the pump, they can cause the pump to malfunction and result in minor injury.

To clean the pump:

1. Dampen a cloth with water mixed with a mild detergent.
2. Use the cloth to wipe the outside of the pump while keeping the inside of the reservoir compartment dry.
3. Dampen a clean cloth with water and wipe to remove any detergent residue.
4. Dry with a clean cloth.
5. Wipe the pump with a 70% alcohol wipe.
6. Use a dry, clean cotton swab to remove any battery residue from the battery cap.
7. Use a dry, clean cotton swab to remove any battery residue from the battery compartment housing.

Storing the pump

The pump can be stored when it is not in use.

If you place your pump in storage mode, it is important to insert a new AA battery for 8 to 12 hours every six months to ensure that the internal battery does not discharge to a deep discharge. A battery that is deeply discharged may experience decreased performance.



WARNING: After the pump is stored, do not rely on active insulin tracked in the pump when making new Bolus Wizard calculations. Storage mode clears active insulin. Inaccurate Bolus Wizard calculations may result in inaccurate insulin delivery and serious injury.

To place the pump in storage mode:

1. Remove the AA battery from the pump. For details, see *Removing the battery*, page 65.



Note: When the battery is removed, the pump issues an Insert Battery alarm for 10 minutes or until the pump is in storage mode.

2. Press and hold  until the screen turns off.

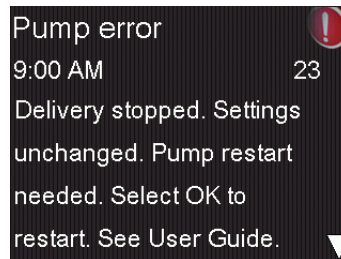


CAUTION: Never expose the pump to temperatures below -4 °F (-20 °C) or above 122 °F (50 °C). Storing the pump in temperatures outside of this range can damage the pump.

To use the pump after it has been stored:

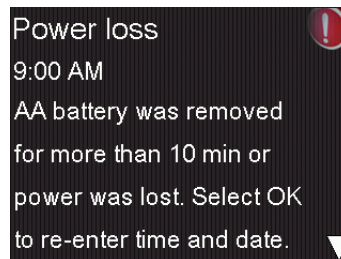
1. Insert a new AA battery into the pump. For details, see *Inserting the battery*, page 63.

A Pump Error alarm appears.



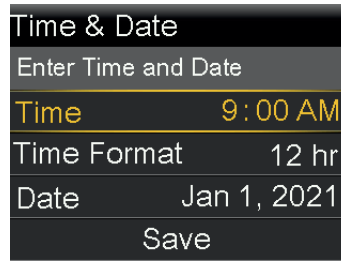
2. Select **OK**.

The pump displays a Power Loss alarm.



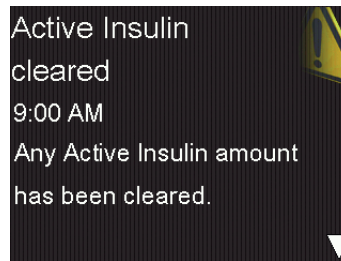
3. Select **OK**.

The Time & Date screen appears.



4. Enter the current **Time**, **Time Format**, and **Date**.
5. Select **Save**.

The pump displays an Active Insulin Cleared alert.



6. Select **OK**.

Confirm that all the settings, such as basal rate, are set as desired. Use the Restore Settings option to reapply the last saved settings, if needed. For more information, see *Restoring the settings*, page 215.

7. Repeat the pairing process for the CGM device. For sensor details, see *System component: CGM device*, page 129.

Pump disposal

Always follow local laws and regulations for the disposal of medical devices.

Do not dispose of the insulin pump in an unsorted municipal waste stream. The pump uses an AA battery and an internal battery.

Waste batteries, waste battery packs, electronics, and packaging are accepted by many recyclers. For information about recycling programs, contact local authorities. In

addition, Medtronic and its distributors engage with many national recycling programs.

For information on the disposal of the components used with the MiniMed 780G system, refer to the corresponding user guide.

Appendix A: List of alarms, alerts, and messages



Appendix A: List of alarms, alerts, and messages

This appendix provides information about alarms, alerts, and messages that can occur in the MiniMed 780G system. Alarms, alerts, and messages are categorized by pump, CGM device, SmartGuard feature, and CareLink software. Refer to the table below to find items in each category.

Category	Section
Pump	<i>Pump alarms, alerts, and messages, page 301</i>
CGM device	<i>CGM device alarms, alerts, and messages, page 316</i>
SmartGuard feature	<i>SmartGuard feature alerts and messages, page 331</i>
CareLink software	<i>CareLink software alerts and messages, page 335</i>


Pump alarms, alerts, and messages

The following table lists the most common or serious alarms, alerts, and messages related to the MiniMed 780G insulin pump. The table also explains the meaning, consequences, and the reasons why these notifications appear, and provides steps for problem resolution.



Note: Use the MiniMed Mobile app to view the sensor graph on a mobile device. Always read and acknowledge all alarms and alerts on the pump. If the pump simultaneously generates more than one alarm or alert, only one of the alarms or alerts appears on the mobile device.

Title and text	Type	Explanation	Next steps
Active Insulin cleared Any Active Insulin amount has been cleared.	Alert	The pump shows the active insulin amount at 0 units. The pump shows this alert when the active insulin is cleared from the Clear Active Insulin option on the Manage Settings screen or if the pump has been shut down and is powered back on.	<ul style="list-style-type: none"> Select OK to clear the alert. The active insulin tracked prior to pump restart is not included in new Bolus Wizard calculations. Consult a healthcare professional for how long to wait after active insulin is cleared before relying on the active insulin calculation of the Bolus Wizard feature. Check Daily History for the last bolus amount and when it was delivered.
Active Insulin reset to zero ? Call local Medtronic support for assistance. See User Guide for phone numbers. Pump Active Insulin may be incorrect until XX:XX AM/PM due to a pump error. Monitor glucose.	Alarm	The pump shows the active insulin amount at 0 units. This occurs when a pump error clears active insulin in the pump. After the Active Insulin reset to zero alarm occurs, ? appears on the Home screen and Bolus screens until the time shown in the alarm.	Select OK to clear the alarm. Contact 24-Hour Technical Support for assistance.
Active Insulin Reminder ? Call local Medtronic support for assistance if needed.	Message	The Active Insulin Reminder message occurs when the Bolus Wizard screen or the Manual Bolus screen is accessed before the time shown in the message. After the Active In-	Select OK to clear the message. Contact 24-Hour Technical Support for assistance with the following steps.


Title and text	Type	Explanation	Next steps
See User Guide for phone numbers. Pump Active Insulin was reset to zero at XX:XX AM/PM. Active insulin may be incorrect until XX:XX AM/PM. Monitor glucose.		Insulin reset to zero alarm occurs,  appears on the Home screen and Bolus screens until the time shown in the Active Insulin reset to zero alarm or the Active Insulin Reminder message.	<ul style="list-style-type: none"> Check the Daily History screen or the sensor graph for the recent bolus amounts, and when they were delivered, before giving any bolus. Consult a healthcare professional for how long to wait after active insulin has been reset to zero before relying on the active insulin calculation of the Bolus Wizard feature. The active insulin tracked prior to the Active Insulin reset to zero alarm is not included in new Bolus Wizard calculations. Check blood glucose (BG) using a blood glucose meter and treat as needed.
Auto Suspend Insulin delivery suspended. No buttons pressed within time set in Auto Suspend.	Alarm	Insulin delivery is currently suspended by Auto Suspend. The Auto Suspend feature automatically suspends insulin delivery and triggers an alarm after no buttons are pressed for a specified period of time. Insulin delivery is suspended until the alarm is cleared and basal insulin delivery resumed.	<ul style="list-style-type: none"> Select Resume Basal to clear the alarm and resume basal insulin delivery. Check BG and treat as needed.
Battery failed Insert a new AA battery.	Alarm	The battery in the pump is low on power.	<ul style="list-style-type: none"> Select OK to clear the alarm. Remove the old battery and insert a new AA battery.

Title and text	Type	Explanation	Next steps
Battery not compatible. See User Guide.	Alarm	The inserted battery is not compatible with the pump.	<ul style="list-style-type: none"> Remove the incompatible battery to clear the alarm. Insert a new AA battery.
Bolus not delivered Bolus entry timed out before delivery. If bolus intended, enter values again.	Alert	A bolus value was entered, but a bolus was not delivered within 30 seconds.	<ul style="list-style-type: none"> Select OK to clear the alert. If a bolus delivery was intended, check BG, re-enter bolus values and redeliver the bolus.
Bolus stopped Cannot resume bolus or cannula fill. XX.XXX of YY.YYY U delivered. ZZ.ZZZ U not delivered. If needed, enter values again.	Alarm	The battery power was exhausted while a bolus delivery or Fill Cannula procedure was in progress or the Resume bolus? message appeared and was not cleared.	<ul style="list-style-type: none"> Note the amount of insulin not delivered. Replace the AA battery. Select OK to clear the alarm. Deliver the remaining bolus amount if needed.
Check settings Startup Wizard settings complete. Check and set up your other settings.	Alert	Some settings have been cleared or reverted to factory default values.	<ul style="list-style-type: none"> Select OK to clear the alert. Review any settings that have not already been set in Startup Wizard and re-enter the values if necessary.
Critical pump error Delivery stopped. Pump not working properly. Stop using pump. Remove infusion set from body. Consider other in-	Alarm	The pump has encountered an error that cannot be resolved. For example, the pump may have a mechanical problem.	<p>The pump is not able to deliver insulin. Disconnect the infusion set and stop using the pump.</p> <ul style="list-style-type: none"> Consider another form of insulin delivery. Check BG, and treat as necessary.

Title and text	Type	Explanation	Next steps
<p>ulin treatment.</p> <p>See User Guide.</p>			<ul style="list-style-type: none"> Write down the error code that appears on the alarm screen. Contact 24-Hour Technical Support for assistance with the pump.
<p>Delivery limit exceeded</p> <p>Delivery stopped. Check BG. See User Guide for more information.</p>	Alarm	<p>The pump has suspended insulin delivery because the hourly delivery limit was reached. This limit is based on the maximum bolus and maximum basal setting. If this alarm occurs during a bolus, the bolus is canceled before it can complete.</p>	<ul style="list-style-type: none"> Check BG. Select Resume Basal. Check Bolus History and re-evaluate insulin needs. Continue to monitor BG.
<p>Device Limit</p> <p>You must delete an existing device (device type) before you can pair a new one (device type).</p>	Message	<p>The pump is already paired with the maximum number of devices for this type. The following list describes the maximum number of each device type to pair with the pump:</p> <ul style="list-style-type: none"> CGM—one Guardian transmitter Mobile Device—one compatible mobile device 	<ul style="list-style-type: none"> Select OK to clear the message. Go to the Paired Devices screen and select the device to unpair from the list of devices. Select Unpair, and then select Yes to confirm or No to cancel. Pair the pump and the desired device.
<p>Device no longer compatible</p> <p>Pump does not pair with BG meters. Enter Blood Glucose readings manually.</p>	Alert	<p>The pump cannot pair with the selected device.</p>	<ul style="list-style-type: none"> Select OK to clear the alert. Contact 24-Hour Technical Support for assistance.


Title and text	Type	Explanation	Next steps
Device not found Make sure device is near pump and in pairing mode. Note: Use MiniMed Mobile app to start a sensor that requires mobile device activation.	Alert	The pump did not pair with the device.	<ul style="list-style-type: none"> • Select OK to clear the alert. • Confirm that the device is not already paired with a pump. • Confirm that the device is ready to pair with the pump. • Make sure the pump is away from any electronic devices that might cause interference, such as cellular phones that are not paired with the MiniMed 780G system and other wireless devices. • Move the device closer to the pump. • Try to pair the pump with the device again. • For Instinct sensor, use the MiniMed Mobile app to start the sensor.
Fill Cannula? Select Fill to fill cannula or select Done if not needed.	Alarm	The Fill Cannula? screen has been active for 15 minutes.	<ul style="list-style-type: none"> • To fill the cannula, select Fill. • If the cannula does not need to be filled, select Done to skip this process.
Insert battery Delivery stopped. Insert a new battery now.	Alarm	The battery was removed from the pump. If a bolus was in progress when the battery was removed, a Resume bolus? message appears and a tone sounds when a new battery	<ul style="list-style-type: none"> • Insert a new AA battery. • The alarm clears when a new battery is inserted. • The pump powers off after 10 minutes unless a new battery is inserted.

Title and text	Type	Explanation	Next steps
		is inserted. The message indicates how much of the bolus was delivered.	
Insulin flow blocked Check BG. Consider testing ketones. Check reservoir and infusion set.	Alarm	The pump has detected that the basal or bolus insulin flow was blocked.	<ul style="list-style-type: none"> • Check BG and ketones. Administer an insulin injection if necessary. • Remove the infusion set and reservoir. • Select Reservoir & Set to start the process with a new infusion set and reservoir. <p>If the alarm occurs during a bolus delivery:</p> <ul style="list-style-type: none"> • Check the Daily History screen for the amount of bolus already delivered before the pump alarmed. • Consider delivering remaining bolus, if the bolus insulin was not included in an insulin injection.



WARNING: Do not use the SmartGuard feature for a period of time after giving a manual injection of insulin by syringe or pen. Manual injections are not accounted for in the active insulin amount. Using the SmartGuard feature too soon after a manual injection may result in over-delivery of insulin and may cause hypoglycemia. Consult a healthcare professional for how long to wait after a manual injection before using the SmartGuard feature.

Title and text	Type	Explanation	Next steps
Insulin flow blocked Reservoir is empty. No insulin delivery. Change the reservoir and infusion set now. Check BG. Consider testing ketones.	Alarm	The pump has detected that the insulin flow is blocked and there is no insulin in the reservoir.	<ul style="list-style-type: none"> • Check BG and ketones. Administer an insulin injection if necessary. • Remove the infusion set and reservoir. • Select Reservoir & Set to start the process with a new infusion set and reservoir. <p>If the alarm occurs during a bolus delivery:</p> <ul style="list-style-type: none"> • Check the Daily History screen for the amount of bolus already delivered before the pump alarmed. • Consider delivering remaining bolus, if the bolus insulin was not included in an insulin injection.
Insulin flow blocked Fill Cannula stopped. Restart the Reservoir & Set procedure.	Alarm	The pump has detected that the insulin flow is blocked while filling the cannula.	<ul style="list-style-type: none"> • Check BG and ketones. Administer an insulin injection if necessary. • Remove the infusion set and reservoir. • Select Reservoir & Set to start the process with a new infusion set and reservoir.
Insulin flow blocked Fill Tubing stopped. Restart the Reservoir & Set procedure.	Alarm	The pump has detected that the insulin flow is blocked while filling the tubing. Possible connection issue between the tubing and reservoir.	<ul style="list-style-type: none"> • Remove the reservoir and select Reservoir & Set to restart the fill tubing process. • Disconnect the tubing from the reservoir.

Title and text	Type	Explanation	Next steps
			<ul style="list-style-type: none"> Confirm that the tubing is not crimped or bent. Continue to follow the steps displayed on the pump using the same infusion set and reservoir. If this alarm occurs again, replace the infusion set.
Loading incomplete Restart the Reservoir & Set procedure.	Alarm	 was pressed after loading began.	<ul style="list-style-type: none"> Remove the reservoir to start again. Select Reservoir & Set and follow the on-screen instructions.
Low battery Pump Replace battery soon.	Alert	The battery in the pump is low on power. Remaining battery life is 10 hours or fewer.	<ul style="list-style-type: none"> Select OK to clear the alert. Replace the AA battery as soon as possible. Otherwise, insulin delivery stops, and the Replace battery now alarm occurs. If the pump is delivering a bolus or filling the cannula, wait until delivery is complete to replace battery.
Low reservoir XX units remaining. Change reservoir.	Alert	The reservoir is low on insulin, according to the number of units set in the Low Reservoir reminder.	<ul style="list-style-type: none"> Select OK to clear the alert. Change the reservoir soon. If the reservoir is not changed after this alert is received, a second Low reservoir alert appears when the insulin level

Title and text	Type	Explanation	Next steps
			reaches half of the original alert amount.
Manage settings error Delivery stopped. Backup settings cleared from Manage Settings. Current settings are working properly. Select OK to restart. See User Guide.	Alarm	A pump error occurred and the pump needs to be restarted. The backup settings have been lost, but the current settings are unchanged.	<ul style="list-style-type: none"> • Select OK to restart the pump. The current settings are unchanged. Only the backup settings are lost. • When the pump restarts, follow instructions on the pump display. • If the pump was delivering a bolus or filling the cannula, check Daily History and evaluate if insulin is needed.
Max Fill reached 3X.X U. Did you see drops at the end of tubing?	Alarm	The number of units expected to fill the tubing has been exceeded. By now, insulin should be visible at the end of the tubing.	<ul style="list-style-type: none"> • If there are drops of insulin at the end of the tubing, select Yes. • If there are no drops of insulin at the end of the tubing, select No. • Follow instructions displayed on the pump.
Max Fill reached 4X.X U. Restart the Reservoir & Set procedure.	Alarm	The number of units expected to fill the tubing has been exceeded. By now, insulin should be visible at the end of the tubing.	<ul style="list-style-type: none"> • Remove the reservoir. • Check if there is still insulin in the reservoir. If there is insulin in the reservoir the same reservoir can be used. • Select Reservoir & Set to restart the new reservoir procedure.

Title and text	Type	Explanation	Next steps
No reservoir detected Restart the Reservoir & Set procedure.	Alarm	There is no reservoir in the pump or the reservoir is not properly locked into place.	<ul style="list-style-type: none"> Select Reservoir & Set. Confirm that the reservoir is filled with insulin. When prompted, confirm that the reservoir is inserted and properly locked into place.
Power error detected Delivery stopped. Record your settings by uploading to CareLink or write your settings on paper. See User Guide.	Alarm	The internal power source in the pump is unable to charge. The pump is operating on the AA battery only.	<ul style="list-style-type: none"> Select OK to clear the alarm. Check BG and treat as necessary. Record the pump settings as soon as possible because the AA battery may not last long. Contact 24-Hour Technical Support for assistance with the pump.
Power loss AA battery was removed for more than 10 min or power was lost. Select OK to re-enter time and date.	Alarm	The battery has been out of the pump for more than ten minutes and the pump has lost power. The date and time must be reset.	<ul style="list-style-type: none"> Select OK to go to the Time & Date screen. Enter the current time, time format, and date.
Pump error Delivery stopped. Current settings cleared. Pump restart needed. Select OK to restart and then re-enter your settings. See User Guide.	Alarm	The pump encountered an error and will restart. The pump settings will return to factory default values.	<ul style="list-style-type: none"> Select OK to restart the pump. When the pump restarts, follow instructions on the pump display. After the pump restarts, check settings and re-enter values as needed. If the backup settings were recently saved in

Title and text	Type	Explanation	Next steps
			<p>Manage Settings, use Re-store Settings.</p> <ul style="list-style-type: none"> • If the pump was delivering a bolus or filling the cannula, check Daily History and re-evaluate if insulin is needed. • If this alarm recurs frequently, write down the error code on the alarm screen (it can also be found in the Alarm History) and contact 24-Hour Technical Support for assistance.
Pump error Delivery stopped. Settings unchanged. Pump restart needed. Select OK to restart. See User Guide.	Alarm	A pump error has occurred, the pump needs to be restarted.	<ul style="list-style-type: none"> • Select OK to restart the pump. • If the pump was delivering a bolus or filling the cannula, check Daily History and re-evaluate if insulin is needed. • If this alarm recurs frequently, write down the error code on the alarm screen (it can also be found in the Alarm History) and contact 24-Hour Technical Support for assistance.
Pump error Delivery stopped. Settings unchanged. Select OK to continue. See User Guide.	Alarm	The pump encountered an error but a restart is not necessary. The issue is resolved. The settings are not changed.	<ul style="list-style-type: none"> • Select OK to resume basal insulin delivery. • If the pump was delivering a bolus or filling the cannula, check Daily History and re-evaluate if insulin is needed.

Title and text	Type	Explanation	Next steps
			<ul style="list-style-type: none"> If this alarm recurs frequently, write down the error code on the alarm screen (it can also be found in the Alarm History) and contact 24-Hour Technical Support for assistance.
Pump restarted Delivery stopped. Settings unchanged. Select OK to continue. See User Guide.	Alarm	The pump has encountered a problem and has restarted. The settings have not been changed.	<ul style="list-style-type: none"> Select OK to continue. If the pump was delivering a bolus or filling the cannula, check Daily History and re-evaluate if insulin is needed. If this alarm recurs frequently, write down the error code on the alarm screen (it can also be found in the Alarm History) and contact 24-Hour Technical Support for assistance.
Replace battery Battery life less than 30 minutes. To ensure insulin delivery, replace battery now.	Alert	Battery power is low and will be exhausted within 30 minutes.	<ul style="list-style-type: none"> Select OK to clear the alert. Replace the AA battery.
Replace battery now Delivery stopped. Battery must be replaced to resume delivery.	Alarm	Insulin delivery has stopped due to low power. The battery was not replaced after the Low battery Pump alert.	Replace the battery immediately to resume insulin delivery.

Title and text	Type	Explanation	Next steps
Reservoir estimate at 0 U To ensure insulin delivery, change reservoir.	Alert	The reservoir level is estimated at 0 U.	<ul style="list-style-type: none"> Select OK to clear the alert. Change the reservoir.
Resume bolus? XXX of YYY U delivered. Resume delivery of ZZZ U?	Message	A normal bolus delivery has been interrupted because the pump battery was removed. If it is within ten minutes since this interruption, the bolus can be resumed.	<ul style="list-style-type: none"> Check the message to see how much of the bolus was delivered. To cancel the remaining bolus delivery, select Cancel. To resume the bolus delivery, select Resume.
Resume Dual bolus? XX of YY U delivered. Resume delivery of ZZ U for XX:XX hr?	Message	The Square portion of Dual Bolus delivery has been interrupted. If it is within ten minutes since this interruption, the bolus can be resumed.	<ul style="list-style-type: none"> Check the message to see how much of the Dual Wave bolus was delivered. To cancel the remaining bolus delivery, select Cancel. To resume the bolus delivery, select Resume.
Resume Dual bolus? XX of YY U delivered. Resume delivery of ZZ U now, and AA U Square for XX:XX hr?	Message	The Now portion of a Dual Wave bolus delivery has been interrupted because the pump battery was removed. If it is within ten minutes since this interruption, the bolus can be resumed.	<ul style="list-style-type: none"> Check the message to see how much of the Dual Wave bolus was delivered. To cancel the remaining bolus delivery, select Cancel. To resume the bolus delivery, select Resume.
Resume Square bolus? XX of YY U delivered for XX:XX hr. Resume delivery	Message	The Square Wave bolus delivery was interrupted. If it is within ten minutes since this interruption, the bolus can be resumed.	<ul style="list-style-type: none"> Check the message to see how much of the

Title and text	Type	Explanation	Next steps
of ZZ U for XX:XX hr?			<p>Square Wave bolus was delivered.</p> <ul style="list-style-type: none"> To cancel the remaining bolus delivery, select Cancel. To resume the bolus delivery, select Resume.
Rewind required Delivery stopped. Rewind was required due to pump error. Select OK to continue. See User Guide.	Alarm	The pump encountered an error.	<ul style="list-style-type: none"> Select OK to clear the alarm after the pump has completed rewinding. Select Reservoir & Set from the Menu screen to start the new reservoir process with a new infusion set and reservoir. For details, see <i>Setting up the reservoir and infusion set</i>, page 110. If this alarm recurs frequently, contact 24-Hour Technical Support for assistance.
Stuck button Button pressed for more than 3 minutes.	Alarm	The pump has detected that a button has been pressed for an unusually long time.	<ul style="list-style-type: none"> Select OK to clear the alarm. If this alarm occurs again, contact 24-Hour Technical Support for assistance with the pump. <p>If the alarm cannot be cleared</p> <ul style="list-style-type: none"> See <i>Pump issues</i>, page 284. Consider another form of insulin, because the pump is not delivering insulin.

Title and text	Type	Explanation	Next steps
			<ul style="list-style-type: none"> Check BG and treat as necessary. Contact 24-Hour Technical Support for assistance with the pump.
Very high Basal setting Basal X is active and delivers YY.YY U per day. Basal X may not be safe because it delivers significantly more insulin than you typically need. Consult health-care professional for basal settings. Monitor glucose.	Alert	The pump has detected the current Manual mode basal pattern that delivers significantly more insulin than you typically need.	<ul style="list-style-type: none"> Select Snooze to postpone receiving this message for a set period of time. Select OK to acknowledge the alert. Note: You will be alerted again if the issue has not been resolved. Check all basal patterns and consult with your healthcare professional.

CGM device alarms, alerts, and messages

The following table lists the most common or serious alarms, alerts, and messages related to sensor glucose (SG) values, as well as the status of the CGM device. The table also explains the meaning, consequences, and the reasons why these notifications appear, and provides steps for problem resolution.

Title and text	Type	Explanation	Next steps	CGM device
Alert before high Sensor glucose approaching High Limit. Check BG.	Alert	The SG reading is approaching the specified high limit.	<ul style="list-style-type: none"> Select OK to clear the alert. Check BG. Follow instructions from a healthcare professional and continue to monitor BG. 	All

Title and text	Type	Explanation	Next steps	CGM device
Alert before low Sensor glucose approaching Low Limit. Check BG.	Alert	The SG reading is approaching the specified low limit.	<ul style="list-style-type: none"> Select OK to clear the alert. Check BG. Follow instructions from a healthcare professional and continue to monitor BG. 	All
Alert on high XXX mg/dL High sensor glucose. Check BG.	Alert	The SG reading is at or above the specified high limit.	<ul style="list-style-type: none"> Select OK to clear the alert. Check BG. Follow instructions from a healthcare professional and continue to monitor BG. 	All
Alert on low XX mg/dL Low sensor glucose. Check BG.	Alert	The SG reading is at or below the specified low limit.	<ul style="list-style-type: none"> Select OK to clear the alert. Check BG. Follow instructions from a healthcare professional and continue to monitor BG. 	All
Alert on low XX mg/dL Low sensor glucose. Insulin delivery suspended since XX:XX AM/PM. Check BG.	Alarm	The SG reading is at or below the specified low limit, and the pump has suspended insulin delivery due to a Suspend before low or Suspend on low.	<ul style="list-style-type: none"> Select OK to clear the alarm. Check BG. Follow instructions from a healthcare professional and continue to monitor BG. 	All
Basal delivery resumed Basal delivery resumed at XX:XX AM/PM after suspend by sensor. Check BG.	Message	The pump is resuming basal insulin delivery after a Suspend before low or Suspend on low event occurred.	<ul style="list-style-type: none"> Select OK to clear the message. Check BG. Follow instructions from a healthcare professional and continue to monitor BG. 	All

Title and text	Type	Explanation	Next steps	CGM device
Basal delivery resumed Low settings change caused basal to be resumed at XX:XX AM/PM. Check BG.	Alert	The pump is resuming basal insulin delivery after a Suspend before low or a Suspend on low event occurred, because the Suspend before low or the Suspend on low feature was turned off.	<ul style="list-style-type: none"> • Select OK to clear the alert. • Check BG. • Follow instructions from a healthcare professional and continue to monitor BG. 	All
Basal delivery resumed Maximum 2 hour suspend time reached. Check BG.	Alert	The pump is resuming basal insulin delivery two hours after a Suspend before low or Suspend on low event occurred.	<ul style="list-style-type: none"> • Select OK to clear the alert. • Check BG. • Follow instructions from a healthcare professional and continue to monitor BG. 	All
Basal delivery resumed Maximum 2 hour suspend time reached. SG is still under Low limit. Check BG.	Alarm	The pump is resuming basal insulin delivery two hours after a Suspend before low or Suspend on low event occurred.	<ul style="list-style-type: none"> • The pump has resumed basal insulin delivery; however, the SG reading is still at or below the low limit. • Select OK to clear the alarm. • Check BG. • Follow instructions from a healthcare professional and continue to monitor BG. 	All
Calibration not accepted Sensor information is unavailable for up to 2 hours. Entered BGs may not calibrate the sensor but can still be used for therapy.	Alert	The system was unable to use the BG meter readings entered to calibrate the sensor. This alert occurs on the first day only.	<ul style="list-style-type: none"> • Wash and dry hands thoroughly. • Select OK to clear the alert. • Consider waiting up to two hours, and then enter a new BG meter reading. • Contact 24-Hour Technical Support for assistance, if needed. 	Simplera Sync Guardian 4

Title and text	Type	Explanation	Next steps	CGM device
Calibration not accepted Wait at least 30 minutes. Wash hands, test BG again and calibrate.	Alert	The system was unable to use the BG meter readings entered to calibrate the sensor.	<ul style="list-style-type: none"> Wash and dry hands thoroughly. Select OK to clear the alert. After 30 minutes, enter a new BG meter reading. If a Calibration not accepted alert is received on the second calibration after 30 minutes, a Change sensor alert occurs. Contact 24-Hour Technical Support for assistance, if needed. 	Simplera Sync Guardian 4
Change sensor Insert new sensor and Start New Sensor.	Alert	No was selected in the Check sensor insertion message, indicating that the sensor is not fully inserted.	<ul style="list-style-type: none"> Select OK to clear the alert. Change the sensor. For details, see the sensor user guide. After the sensor is changed, refer to the sensor user guide. 	Guardian 4
Change sensor Second calibration not accepted. Insert new sensor.	Alert	A Calibration not accepted alert occurs if the entered BG meter reading differs too greatly from the most recent SG reading. This alert occurs when two Calibration not accepted alerts are received in a row.	<ul style="list-style-type: none"> Select OK to clear the alert. Change the sensor. For details, see <i>System component: CGM device, page 129</i>. 	Simplera Sync Guardian 4
Change sensor Sensor not working properly. Insert new sensor.	Alert	This alert occurs when the pump diagnoses a problem with the sensor that cannot be resolved.	<ul style="list-style-type: none"> Select OK to clear the alert. Change the sensor. For details, see <i>System component: CGM device, page 129</i>. 	All

Title and text	Type	Explanation	Next steps	CGM device
Changed Low SG Alarm The low SG alarm will now occur when SG falls below 64 mg/dL. The low SG alarm updated because a new sensor type was paired.	Message	The Low SG XX mg/dL alarm occurs at a higher SG limit.	<ul style="list-style-type: none"> Select OK to clear the alert. 	Simplera Sync Guardian 4
Check connection Ensure transmitter and sensor connection is secure, then select OK.	Alert	The pump fails to detect the transmitter and is unable to receive sensor signal.	<ul style="list-style-type: none"> Select OK to clear the alert. If the sensor is fully inserted, select Yes. If the sensor is not fully inserted, select No. If the sensor was not fully inserted, insert a new sensor. See <i>Pump issues</i>, page 284 for additional assistance, if needed. 	Guardian 4
Check sensor SENSOR FAILED TO START. If sensor is inserted and fully attached to skin, restart sensor using MiniMed Mobile app. If alert occurs after restarting, replace sensor.	Alert	This alert occurs when the sensor is unable to detect interstitial fluid to begin warm-up.	<ul style="list-style-type: none"> Select OK to clear the alert. If the sensor is not inserted, insert the sensor. If the sensor is inserted and applied properly, restart the sensor with the MiniMed Mobile app. If the alert occurs after restarting, use the MiniMed Mobile app to start a new sensor. 	Instinct
Consider sensor change Sensor glucose not available. Wash hands, check BG	Alert	Two BG checks failed consecutively, more than 30 minutes apart. The sensor has not terminated, but sensor change may be the	<ul style="list-style-type: none"> Select OK to clear the alert. Change the sensor. For details, see <i>System component: CGM device</i>, page 129. 	Instinct

Title and text	Type	Explanation	Next steps	CGM device
again. Consider changing sensor.		fastest way to restore SG values.		
Enter BG now Enter BG to calibrate sensor. Sensor information is no longer available	Alert	A BG meter reading is required to calibrate the sensor. SG readings cannot be received until the sensor is calibrated.	<ul style="list-style-type: none"> Select OK to clear the alert. If no BG meter reading is entered within 30 minutes, the Enter BG now alert occurs again. Select Snooze, enter the desired snooze time, and select OK. If no BG meter reading is entered before the Snooze time has ended, the Enter BG now alert occurs again. Enter a BG meter reading to calibrate the sensor. 	Simplera Sync Guardian 4
Enter BG now Enter BG to restore sensor glucose values.	Alert	The BG check failed.	<ul style="list-style-type: none"> Select OK to clear the alert. If no BG meter reading is entered within 30 minutes, the Enter BG now alert occurs again. Select Snooze, enter the desired snooze time, and select OK. If no BG meter reading is entered before the Snooze time has ended, the Enter BG now alert occurs again. Enter a BG meter reading to verify system performance. 	Instinct
Failed BG check Sensor glucose no longer available. Wait at least 30 minutes.	Alert	The system was unable to use the BG meter readings entered to verify system performance.	<ul style="list-style-type: none"> Wash and dry hands thoroughly. Select OK to clear the alert. 	Instinct

Title and text	Type	Explanation	Next steps	CGM device
Wash hands, check BG again.			<ul style="list-style-type: none"> After 30 minutes, enter a new BG meter reading. If a Failed BG check alert is received on the second BG check after 30 minutes, a Change sensor alert occurs. Contact 24-Hour Technical Support for assistance if needed. 	
Failed BG check Sensor glucose not available for up to 2 hours. Entered BGs can be used for therapy.	Alert	The system was unable to use the BG meter readings entered to verify system performance. This alert occurs on the first day only.	<ul style="list-style-type: none"> Wash and dry hands thoroughly. Select OK to clear the alert. Consider waiting up to 2 hours, and then enter a new BG meter reading. Contact 24-Hour Technical Support for assistance if needed. 	Instinct
High SG Glucose was 250 mg/dL or higher for more than 3 hours. Check infusion set. Check ketones. Monitor glucose.	Alert	SG was 250 mg/dL or higher for three hours.	<ul style="list-style-type: none"> Select OK to clear the alert. Check BG and treat as necessary. 	All
Lost sensor signal Move pump closer to sensor. May take 15 minutes to find signal.	Alert	A CGM device signal has not been received for 30 minutes during or after sensor initialization.	<ul style="list-style-type: none"> Move the pump closer to the CGM device. It can take up to 15 minutes for the pump to establish communication with the CGM device. Select OK to clear the alert. 	All
Low battery transmitter Recharge transmitter within 24 hours.	Alert	The battery in the transmitter needs to be recharged within 24 hours.	<ul style="list-style-type: none"> Select OK to clear the alert. Recharge the transmitter as soon as possible. 	Guardian 4

Title and text	Type	Explanation	Next steps	CGM device
Low SG XX mg/dL SG is under 55 mg/dL. Check BG and treat.	Alarm	The SG reading has fallen below 55 mg/dL. This alarm is factory set for use with the Instinct sensor and cannot be changed or turned off. This alarm cannot be silenced and is always active, whether the pump is using the SmartGuard feature or Manual mode.	<ul style="list-style-type: none"> Select OK to clear the alarm. Check BG and treat as necessary. 	Instinct
Low SG XX mg/dL SG is under 64 mg/dL. Check BG and treat.	Alarm	The SG reading has fallen below 64 mg/dL. This alarm is factory set and cannot be changed or turned off. This alarm cannot be silenced and is always active, whether the pump is using the SmartGuard feature or Manual mode.	<ul style="list-style-type: none"> Select OK to clear the alarm. Check BG and treat as necessary. 	Simplera Sync Guardian 4

Note: This alarm does not suspend insulin delivery.

Note: XX represents the current SG reading that appears on the pump. This alarm remains until the alarm is cleared, even if glucose values reach or rise above the preset low SG value.



WARNING: For MiniMed 780G Users Ages 7-13: Do not rely solely on the use of a low sensor glucose (SG) value for “Alert on Low” or “Alert before Low” or the “Low SG” alarm. A low sensor glucose alert may not reflect the user’s true blood glucose at these levels, or may not alert. Do not ignore symptoms of low glucose. Always confirm sensor glucose readings with a blood glucose meter, and treat according to the recommendations of a healthcare professional. Solely relying on these sensor glucose alerts and readings for treatment decisions could result in missing severe hypoglycemia (low blood glucose) events.

Low SG Below XX mg/dL Trend arrows cannot be displayed due to	Alarm	SG readings have fallen significantly below the factory set Low SG limit of 55 mg/dL. As a result, the system is no	<ul style="list-style-type: none"> Select OK to clear the alarm. Check BG and treat as necessary. 	Instinct
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Title and text	Type	Explanation	Next steps	CGM device
very low SG. Check BG and treat.		longer able to display trend arrows. Note: When SmartGuard is off, trend arrows are displayed below 50 mg/dL unless this alarm occurs.		
Max Basal Consult healthcare professional before changing this value.	Message	The Max basal rate setting is being changed.	<ul style="list-style-type: none"> Select Continue or Cancel to clear the message. 	All
Max Basal Error Your max basal rate cannot be lower than an existing basal rate.	Alert	You are trying to lower the Max basal rate setting lower than existing basal rates.	<ul style="list-style-type: none"> Select OK to clear the alert. Lower other basal rates before changing the Max basal rate. 	All
Medical device CALL FOR EMERGENCY ASSISTANCE. I have diabetes.	Alarm	The pump is suspended due to low SG and there has been no response to the alarm within 10 minutes.	<ul style="list-style-type: none"> Select Dismiss. Immediately call for emergency assistance. 	All
No calibration occurred Confirm sensor signal. Calibrate by XX:XX AM/PM.	Alert	The sensor was unable to receive the calibration BG meter readings from the pump.	<ul style="list-style-type: none"> Select OK to clear the alert. Check the status icons on the Home screen to confirm that the pump has a signal from the sensor. If there is no sensor signal, see <i>Sensor issues</i>, page 287. For SG readings to be monitored without interruption, enter a BG meter reading by the time displayed on the pump screen. 	Simplera Sync Guardian 4

Title and text	Type	Explanation	Next steps	CGM device
No calibration occurred Confirm sensor signal. Check BG again to calibrate sensor.	Alert	The sensor was unable to receive the required calibration BG meter readings from the pump. Calibration is required by the system for SG readings to resume. "Calibration required" appears on the sensor graph.	<ul style="list-style-type: none"> Select OK to clear the alert. Take another BG meter reading and calibrate again. 	Simplera Sync Guardian 4
Not for SmartGuard These settings apply to Manual mode only and do not affect how much insulin SmartGuard delivers.	Message	The Max basal or Max bolus rate settings or basal pattern settings are being accessed.	<ul style="list-style-type: none"> Select Continue or Cancel to clear the message. 	All
Outside typical range Max Basal of 6.00 U/hr can allow basal delivery of up to 144 U/day in Manual mode. This amount of insulin may not be safe.	Alert	The Max basal rate setting is being increased past 6 U/hr.	<ul style="list-style-type: none"> Select OK to clear the alert. Consult your health-care professional before increasing the Max basal rate. 	All
Pair new sensor? Only one sensor can be paired to the pump. Select Continue to pair new sensor. The existing sensor will be unpaired.	Alert	This alert occurs when an existing sensor is already paired with the pump, the current sensor has not expired, and a new sensor is selected for pairing. Only one sensor can be paired with the pump.	<ul style="list-style-type: none"> Select Continue to pair the new sensor with the pump. Select Cancel to keep the existing sensor paired with the pump. 	Simplera Sync
Possible signal interference Move away from electronic devices. May take 15 minutes to find signal.	Alert	There may be interference from another electronic device that is affecting the communication between the pump and the CGM device.	<ul style="list-style-type: none"> Move away from other electronic devices. It can take up to 15 minutes for the pump to 	All

Title and text	Type	Explanation	Next steps	CGM device
			<ul style="list-style-type: none"> start communicating with the CGM device. Select OK to clear the alert. 	
Rise Alert Sensor glucose rising rapidly.	Alert	The SG reading has been rising as fast or faster than the preset Rise Alert limit.	<ul style="list-style-type: none"> Select OK to clear the alert. Check BG using a meter. Follow instructions from a healthcare professional. 	All
Safety Alert The sensor was paired and calibrated previously. Did you enter BG X mg/dL at XX:XX AM/PM on WWW, MMM DD?	Alert	While pairing the sensor, the pump detects that the sensor is not new and may have been previously calibrated. Confirm that the BG reading used to calibrate the sensor is correct. If the BG reading is incorrect, entering a new BG value will not fix the sensor.	<ul style="list-style-type: none"> If the BG reading is incorrect, select No. A Safety Alert alert appears. Discard the sensor and insert a new sensor. Note: If not sure, select No and check the pump history or BG log to confirm that the BG reading is correct. If the BG reading is correct, select Yes. 	Simplera Sync
Safety Alert If you are not sure or did not enter BG X mg/dL at XX:XX AM/PM on WWW, MMM DD, this sensor is NOT SAFE to use. The sensor will not be accurate, and entering a new BG will not fix the sensor. Did you enter BG X mg/dL at XX:XX AM/PM on WWW, MMM DD?	Alert	No was selected from the first Safety Alert alert, indicating that the BG reading was not used to calibrate the sensor.	<ul style="list-style-type: none"> If the BG reading is incorrect, select No. A Change sensor alert appears. Discard the sensor and insert a new sensor. Note: If not sure, select No and check the pump history or BG log to confirm that the BG reading is correct. If the BG reading is correct, select Yes. 	Simplera Sync

Title and text	Type	Explanation	Next steps	CGM device
Sensor connected If new sensor, select Start New. If not, select Reconnect.	Message	The transmitter has detected that a sensor is connected. The pump needs to know if this is a new sensor or if an old sensor has been reconnected.	<ul style="list-style-type: none"> If a new sensor has been connected, select Start New Sensor. If a sensor that was already being used has been reconnected, select Reconnect Sensor. In either case, a “Sensor warm up X:XX hr” message appears for two hours. After the warm up, the pump starts receiving SG readings. 	Guardian 4
Sensor connected Start new sensor.	Message	The pump has detected that this is a new sensor, which needs to be started and warmed-up.	Select Start New Sensor . The alert closes and a “Warm-up” message appears on the sensor graph with a progress bar.	Guardian 4
Sensor ending soon Sensor ends in less than [24/X] hour(s). Change sensor soon.	Alarm	The sensor life is ending soon. Have a replacement sensor available.	<ul style="list-style-type: none"> Select OK to clear the alert. Consider preparing replacement sensor. 	Guardian 4
Sensor ending soon Sensor ends in less than [24/X] hours. Use MiniMed Mobile app to start a new sensor soon.	Alarm	The sensor life is ending soon. Have a replacement sensor available.	<ul style="list-style-type: none"> Select OK to clear the alert. Consider preparing replacement sensor. Have the MiniMed Mobile app available to start a new sensor. 	Instinct
Sensor expired Insert new sensor.	Alert	The sensor has reached the end of its useful life. Replace the sensor.	<ul style="list-style-type: none"> Select OK to clear the alert. Change the sensor. For details, see <i>System component: CGM device</i>, page 129. 	All

Title and text	Type	Explanation	Next steps	CGM device
Sensor failed to pair with pump Keep pump near sensor and restart sensor using MiniMed Mobile app.	Alert	This alert occurs when the pump has failed to locate the sensor during pairing.	<ul style="list-style-type: none"> • Select OK to clear the alert. • Use the MiniMed Mobile app to restart the pairing process. 	Instinct
Sensor failed to pair with pump A pump alarm cancelled sensor pairing. Restart sensor using MiniMed Mobile app.	Alert	This alert occurs when a pump alarm has interrupted the pairing process.	<ul style="list-style-type: none"> • Select OK to clear the alert. • Use the MiniMed Mobile app to restart the pairing process. 	Instinct
Sensor grace period starting soon Less than [24/X] hours before grace period starts. Change sensor soon.	Alarm	The sensor grace period is starting soon.	<ul style="list-style-type: none"> • Select OK to clear the alert. • Consider preparing replacement sensor. 	Simplera Sync
Sensor signal not found See User Guide.	Alert	After multiple attempts, the pump failed to detect the sensor and is unable to receive sensor signal.	<ul style="list-style-type: none"> • Select OK to clear the alert. • If the pump still cannot find the sensor signal, contact 24-Hour Technical Support for assistance. 	All
Sensor still calibrating Expect at least 30 minutes for sensor values to calibrate. Entering more BGs during calibration will not change sensor values more quickly.	Alert	Occurs when multiple BGs have been entered but they are not needed since the first BG has passed calibration.	<ul style="list-style-type: none"> • Select OK to clear the message. • Wait at least 30 minutes for sensor values to calibrate. 	Simplera Sync Guardian 4
Sensor still calibrating Enter BGs as needed. Expect at least 30 minutes for sensor values to calibrate.	Alert	Occurs when multiple BGs have been entered but they are not needed since the first BG has passed calibration.	<ul style="list-style-type: none"> • Select OK to clear the message. • Wait at least 30 minutes for sensor values to calibrate. 	Simplera Sync Guardian 4

Title and text	Type	Explanation	Next steps	CGM device
Sensor too hot Sensor glucose not available because sensor is too hot. Monitor BG.	Alert	CGM device temperature is above the maximum threshold for safe operation.	<ul style="list-style-type: none"> Move to an environment within operating temperature range. Select OK to clear the alert. 	Instinct
Sensor too cold Sensor glucose not available because sensor is too cold. Monitor BG.	Alert	CGM device temperature is below the minimum threshold for safe operation.	<ul style="list-style-type: none"> Move to an environment within operating temperature range. Select OK to clear the alert. 	Instinct
Sensor updating Sensor runs continuous quality checks, and sensor glucose readings have been paused. Wait at least 30 minutes for sensor to pass these checks and resume providing SG. Monitor BG and use BG for therapy.	Alert	The SG reading is unavailable due to a temporary situation.	<ul style="list-style-type: none"> Select OK to clear the alert. Follow the instructions on the pump screen. The sensor does not need to be changed. 	Instinct
Sensor updating Updating can take X. Monitor BG. Entered BGs will not calibrate the sensor, but can still be used for therapy.	Alert	The SG reading is unavailable due to a temporary situation.	<ul style="list-style-type: none"> Select OK to clear the alert. Follow the instructions on the pump screen. The sensor does not need to be changed. 	Simplera Sync Guardian 4
Suspend before low Delivery stopped. Sensor glucose approaching Low Limit. Check BG.	Alert	The SG reading is falling. Insulin delivery is suspended according to the Suspend before low setting and the SG is approaching the specified low limit. The Suspend before low feature is not available with the SmartGuard feature.	<ul style="list-style-type: none"> Select OK to clear the alert. Check BG. If necessary, treat BG as directed by a healthcare professional. 	All

Title and text	Type	Explanation	Next steps	CGM device
Suspend on low Delivery stopped. Sensor glucose XX mg/dL. Check BG.	Alarm	The SG reading is at or below the specified low limit. The Suspend on low feature is not available with the SmartGuard feature.	<ul style="list-style-type: none"> Select OK to clear the alarm. Check BG. If necessary, treat BG as directed by a healthcare professional. 	All
Transmitter battery depleted Recharge transmitter now.	Alert	The battery in the transmitter needs to be recharged. SG readings cannot be recorded or transmitted until the transmitter is recharged.	<ul style="list-style-type: none"> Select OK to clear the alert. Recharge the transmitter. 	Guardian 4
Updated Low SG Alarm The low SG alarm will now occur when SG falls below 55 mg/dL. The low SG alarm updated because a new sensor type was paired. To set additional low alerts, adjust low alert settings.	Alert	The low SG occurs at a lower SG limit.	<ul style="list-style-type: none"> Select OK to clear the alert. 	Instinct
Very high Basal setting Basal X will deliver YY.YY U per day when active in Manual mode. This basal pattern may not be safe because it delivers significantly more insulin than you typically need. Consult healthcare professional before changing this value.	Message	When selecting, adding, or editing a basal pattern and the system calculates the pattern would deliver significantly more insulin than typically needed.	<ul style="list-style-type: none"> Select Edit or, if selecting a basal pattern, click Back to change the basal pattern. Select Continue to save or select the basal pattern. 	All

Title and text	Type	Explanation	Next steps	CGM device
Warm up not started Warm up not started after new sensor was paired. If sensor is not inserted, insert it now. If it is more than 30 minutes since insertion, change sensor.	Alert	This alert occurs when the sensor is unable to detect interstitial fluid to begin warm-up.	<ul style="list-style-type: none"> Select OK to clear the alert. If the sensor is not inserted, insert the sensor. If the sensor is inserted, change the sensor. For details, see <i>System component: CGM device</i>, page 129. 	Simplera Sync

SmartGuard feature alerts and messages

The following table lists the most common or serious alerts and messages related to the SmartGuard feature. The table also explains the meaning, consequences, and the reasons why these notifications appear, and provides any necessary steps for problem resolution.

Title and text	Type	Explanation	Next steps
Enter BG now SmartGuard has been at maximum delivery rate for 7 hours. Enter BG to continue in SmartGuard.	Alert	SmartGuard has been delivering at the maximum SmartGuard basal delivery rate for seven hours. This rate is determined automatically by the system.	<ul style="list-style-type: none"> Select OK to clear the alert. Enter a BG meter reading to return to Auto Basal. Follow instructions from a health-care professional and continue to monitor BG.
Enter BG now SmartGuard has been at maximum delivery rate for 7 hours. Enter BG to continue in SmartGuard. This event occurred while pump was suspended, and ac-	Alert	The pump is suspended and the SmartGuard feature has been unable to lower the SG reading. SG is predicted to remain above the SmartGuard target.	<ul style="list-style-type: none"> Select OK to clear the alert. Enter a BG meter reading. Follow instructions from a health-care professional and continue to monitor BG.

Title and text	Type	Explanation	Next steps
tion is required to resume delivery.			
Notes:			
<ul style="list-style-type: none"> The title of the alert appears the same as the previous SmartGuard max delivery alert in the table. If the pump is suspended, there will be no delivery. However, the alert may still occur. 			
Enter BG now SmartGuard has reached the time limit for minimum delivery rate. Enter BG to continue in SmartGuard.	Alert	The SmartGuard feature has reached the time limit for minimum delivery. The minimum delivery time is three to six hours, depending on the reason for the minimum delivery rate.	<ul style="list-style-type: none"> Select OK to clear the alert. Enter a BG meter reading to return to Auto Basal. Follow instructions from a health-care professional and continue to monitor BG.
Enter BG now SmartGuard has reached the time limit for minimum delivery rate. Enter BG to continue in SmartGuard. This event occurred while pump was suspended, and action is required to resume delivery.	Alert	SmartGuard has reached the time limit for minimum delivery. The minimum delivery time is three to six hours, depending on the reason for the minimum delivery rate.	<ul style="list-style-type: none"> Select OK to clear the alert. Enter a BG meter reading. Follow instructions from a health-care professional and continue to monitor BG.
Notes:			
<ul style="list-style-type: none"> The title of the alert appears the same as the previous SmartGuard min delivery alert in the table. If the pump is suspended, there will be no delivery. However, the alert may still occur. 			
Enter BG now Enter BG to continue in SmartGuard.	Alert	The SmartGuard feature requires a BG reading to check the reliability of the sensor.	<ul style="list-style-type: none"> Select OK to clear the alert. Enter a BG meter reading to return to Auto Basal, or to enter the

Title and text	Type	Explanation	Next steps
			SmartGuard feature from Manual mode.
SmartGuard exit Basal X started. Would you like to review the SmartGuard Checklist?	Alert	The pump has exited the SmartGuard feature because: <ul style="list-style-type: none"> the sensor has been turned off the pump has been delivering basal insulin based on insulin delivery history, and not SG readings for the maximum of four hours. This alert cannot be silenced, and is always active whenever the system is using the SmartGuard feature.	<ul style="list-style-type: none"> Select No to clear the alert. Select Yes to view the SmartGuard Checklist. Enter a BG meter reading. Follow instructions from a health-care professional and continue to monitor BG. For details, see <i>Exiting the SmartGuard feature, page 205</i> and <i>Returning to the SmartGuard feature after an exit, page 206</i> .
SmartGuard exit Insulin delivery is still suspended.	Alert	The pump has exited the SmartGuard feature because: <ul style="list-style-type: none"> the sensor has been turned off a suspend event message has not been cleared within four hours the pump has been deliver- 	<ul style="list-style-type: none"> Enter a BG meter reading. Manually resume basal insulin delivery, when appropriate. Follow instructions from a health-care professional and continue to monitor BG. For details, see <i>Exiting the SmartGuard feature, page 205</i> and <i>Returning to the SmartGuard feature after an exit, page 206</i> .

Title and text	Type	Explanation	Next steps
		<p>ing basal insulin based on insulin delivery history, and not SG readings for the maximum of four hours.</p> <p>This alert cannot be silenced, and is always active whenever the system is using the SmartGuard feature.</p>	
<p>SmartGuard exit Manual mode Basal X started. Check basal setting. Monitor glucose.</p>	Alert	The pump has exited the SmartGuard feature and the system has detected a basal pattern that delivers significantly more insulin than you typically need.	<ul style="list-style-type: none"> • Select OK to clear the alert. • Check the active basal pattern.
<p>SmartGuard started Current action canceled.</p>	Alert	An operation that is not allowed while transitioning to the SmartGuard feature has been selected.	<ul style="list-style-type: none"> • Select OK to clear the alert. • Allow the pump to complete its transition to the SmartGuard feature.
<p>SmartGuard will exit soon SmartGuard will exit in less than [24/X] hour(s) because sensor glucose is not available until XX:XX AM/PM. There will be no sensor alerts during this time. Monitor</p>	Alert	This alert occurs if the time to update a sensor will exceed 4 hours.	<ul style="list-style-type: none"> • Select OK to clear the alert. • Use entered BGs for therapy until the sensor is updated and sensor glucose is available.

Title and text	Type	Explanation	Next steps
BG and use BGs for therapy.			
Very high Basal setting SmartGuard is no longer active. Manual mode Basal X started and will deliver YY.YY U per day. Basal X may not be safe because it delivers significantly more insulin than you typically need. Consult healthcare professional for basal setting. Monitor glucose.	Alert	The SmartGuard feature has exited and the system has detected that the current basal pattern would deliver significantly more insulin than you typically need.	<ul style="list-style-type: none"> Select OK to acknowledge the alert. Note: You will be alerted again in 12 hours if the issue has not been resolved. Check all basal patterns and consult with your healthcare professional.
Very high Basal setting Basal X will deliver YY.YY U per day when active in Manual mode. Basal X may not be safe because it delivers significantly more insulin than you typically need. Consult healthcare professional for basal settings.	Alert	The system has determined that if SmartGuard exits, the active basal pattern will deliver significantly more insulin than you typically need.	<ul style="list-style-type: none"> Select Snooze to postpone receiving this message for a set period of time. Select OK to acknowledge the alert. Note: You will be alerted again if the issue has not been resolved. Check all basal patterns and consult with your healthcare professional.

CareLink software alerts and messages

The following table lists the most common or serious alerts and messages related to CareLink software. The table also explains the meaning, consequences, and the reasons why these notifications appear, and provides steps for problem resolution. If an alarm,

alert, or message occurs that is not listed, select **OK** to clear the notification and contact 24-Hour Technical Support.

Title and text	Type	Explanation	Next steps
CareLink uploader not found. Follow instructions on the CareLink uploader.	Message	The pump cannot find the CareLink uploader because the wrong pump code was entered, or the search timed out before the pump found the uploader.	<ul style="list-style-type: none">• Select OK to clear the message.• Follow the instructions on the CareLink uploader. For details, see <i>Uploading device data to CareLink software, page 151</i>.
Download slow Insulin delivery not affected. CareLink download may take longer than usual. Select OK to continue. See User Guide.	Alert	The download of pump data is taking longer than expected. Data will not be affected.	<ul style="list-style-type: none">• Select OK to clear the alert.• Wait for the data to finish downloading.• If problem still persists or if there is no progress in download, call 24-Hour Technical Support for assistance.

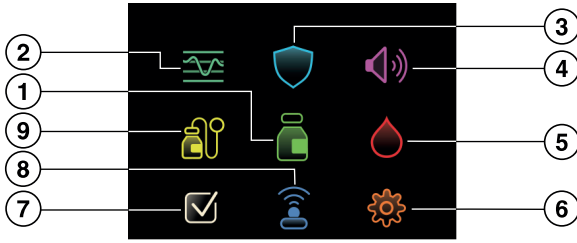







Appendix B: Menu map

Menu map

The following diagrams provide a map to the screens and features that are available from the Menu screen.

<div> <div>1</div> <div></div> </div> <p>Insulin</p> <p>Bolus/Stop Bolus*</p> <ul style="list-style-type: none"> • Bolus Wizard* • Manual Bolus • Preset Bolus* • ➔ Delivery Settings <p>Basal/Cancel Temp Basal*</p> <ul style="list-style-type: none"> • Temp Basal • Preset Temp* • Basal Patterns • ➔ Basal Pattern Setup <p>Suspend All Delivery/Resume Basal*</p> <p>➔ Delivery Settings</p>	<div> <div>2</div> <div></div> </div> <p>History & Graph</p> <p>History</p> <ul style="list-style-type: none"> • Summary • Daily History • Alarm History • Paired Sensors <p>Sensor Glucose Review</p> <ul style="list-style-type: none"> • High Limit • Low Limit • Days to Average <p>Graph</p> <p>Time in Range</p>	<div> <div>3</div> <div></div> </div> <p>SmartGuard</p> <p>SmartGuard Checklist</p> <p>Temp Target/Cancel Temp Target*</p> <p>SmartGuard Settings</p> <ul style="list-style-type: none"> • Target • Auto Correction <p>SmartGuard (On and Off)</p> <div> <div>4</div> <div></div> </div> <p>Sound & Vibration</p> <p>Silence Sensor Alerts</p> <p>Volume</p> <p>Sound</p> <p>Vibration</p> <p>➔ Alert Settings</p> <div> <div>5</div> <div></div> </div> <p>Blood Glucose</p> <p>BG</p>
<p>* indicates an item that is shown when applicable. For example, Stop Bolus is shown when a bolus is being delivered. Preset Bolus is shown when the Preset Bolus feature is set up.</p> <p>➔ This icon indicates a shortcut to the screen.</p>		

		
<div> <div>6</div> <div></div> </div> <p>Settings</p> <p>Alert Settings</p> <ul style="list-style-type: none"> • High Alert • Low Alert • Snooze High & Low • Reminders <p>Delivery Settings</p> <ul style="list-style-type: none"> • Bolus Wizard Setup • Basal Pattern Setup • Max Basal/Bolus • Dual/Square Wave • Bolus Increment • Bolus Speed • Preset Bolus Setup • Preset Temp Setup 	<div> <div>6</div> <div></div> </div> <p>Settings continued</p> <p>Device Settings</p> <ul style="list-style-type: none"> • Sensor (On and Off) • Time & Date • Device Info • Display • Block Mode • Self Test • Review Settings • Manage Settings • Easy Bolus • Auto Suspend • Language 	<div> <div>7</div> <div></div> </div> <p>Status</p> <p>Stop Bolus*</p> <p>Suspend All Delivery/Resume Basal*</p> <p>SmartGuard Checklist</p> <p>Pump</p> <p>Sensor</p> <div> <div>8</div> <div></div> </div> <p>Paired Devices</p> <p>Pair New Device</p> <p>Pair CareLink</p> <p>Mobile</p> <p>Meter</p> <p>CGM</p> <div> <div>9</div> <div></div> </div> <p>Reservoir & Set</p> <p>New Reservoir & Set</p> <p>New Reservoir Only</p> <p>New Set Only</p> <p>Fill Cannula</p>
<p>* indicates an item that is shown when applicable. For example, Resume Basal is shown when insulin delivery is suspended.</p>		



Glossary

ACE	The acronym for alternate controller enabled.
active insulin	Active insulin is bolus insulin delivered by the insulin pump that continues to lower BG levels. Active insulin is not necessarily reflective of the pharmacokinetics and pharmacodynamics of rapid acting insulins.
active insulin time	Affects the length of time that bolus insulin is tracked as active insulin.
activity guard	An attachment that secures the reservoir during activity or when the insulin pump is worn by a child.
alarm	An audible beep or vibration with a message that requires immediate attention.
alarm history	A feature that stores information about recent alarms and alerts.
alert	An audible beep or vibration with a message to inform of a situation that may require attention.
alert before low	An alert that occurs when the low SG reading is being approached.
alert limits	The settings that determine when low and high SG alerts are triggered.
alert on low	An alert that occurs when the SG reading reaches or falls below the low limit.
auto basal	The automatically adjusted basal insulin delivered by the SmartGuard feature based on the current SG readings.
Auto correction	A correction bolus automatically delivered by the MiniMed 780G system to maximize time in range. Auto correction only occurs when using the SmartGuard feature.

auto suspend	A feature that suspends insulin delivery and triggers an alarm if no buttons are pressed for the specified period of time. Insulin delivery resumes when the alarm is cleared.
awake mode	A state in which the pump screen is on. The Home screen appears unless another screen is being used.
basal insulin	Insulin that is continuously delivered by the insulin pump to meet insulin needs between meals and during sleep.
basal pattern	A set of one or more basal rates that covers a 24-hour period.
basal rate	The setting for the amount of continuous basal insulin to be delivered per hour.
BG	The acronym for blood glucose. For more information, see blood glucose (BG) .
BG check for sensor	The pump uses a supplied blood glucose (BG) meter reading to check sensor performance. This check includes predicting how closely the sensor glucose will match blood glucose values.
BG meter	A device that measures glucose levels in the blood.
BG targets	The high and low BG readings used for BG correction when using the Bolus Wizard feature in Manual mode.
Block mode	A feature that restricts the ability to change all settings. Certain functions can still be performed, such as suspend insulin delivery or clear alarms and alerts.
blood glucose (BG)	Glucose that is present in the blood, commonly measured by a BG meter.
bolus BG check reminder	A reminder for a BG check after programming a bolus. The reminder appears when the specified time period has passed.
bolus insulin	Insulin used to cover an expected rise in BG levels due to carbohydrates, or to lower a high BG reading down to the BG target range.
bolus speed	The delivery speed for bolus insulin.

Bolus Wizard feature	In Manual mode, a feature that uses individual Bolus Wizard settings to calculate an estimated bolus amount based on the BG value and the entered carbs. These settings include carb ratio, insulin sensitivity factor, BG target range, and active insulin time.
calibrate	The process of using a blood glucose (BG) meter reading to help the sensor glucose (SG) readings more closely match the glucose measured in your blood.
cannula	Short, thin, and flexible tube placed in the tissue below the skin. Insulin is delivered through the cannula into the body.
carb ratio	The number of grams of carbohydrates covered by one unit of insulin. The carb ratio is used to calculate bolus amounts.
CGM	The acronym for continuous glucose monitoring. For more information, see continuous glucose monitoring (CGM) .
continuous glucose monitoring (CGM)	A monitoring tool that uses a glucose sensor placed below the skin to continuously measure the amount of glucose in the interstitial fluid.
correction bolus	Insulin used to lower a high BG or SG reading down to a target value.
CT scan	The acronym for computed tomography scan.
daily history	Details of the events entered or actions performed using the insulin pump.
diabetic ketoacidosis	A serious condition that occurs when insulin levels are low, BG levels are elevated, and the body uses fat for energy. This process produces ketones, which upset the acid-base balance in the body, leading to a potentially life-threatening situation.
Dual Wave bolus	A type of bolus that provides a dose of insulin delivered as a combination of a normal bolus followed by a Square Wave bolus.
Easy bolus	A feature that delivers a normal bolus in preset increments using sound or vibrate confirmation.

EMC	The acronym for electromagnetic compatibility.
ESD	The acronym for electrostatic discharge.
food bolus	A dose of insulin given to cover an expected rise in glucose levels from carbohydrates.
GPS	The acronym for global positioning system.
high limit	The setting the insulin pump uses to determine when to alert for a high SG condition.
iCGM	The acronym for integrated continuous glucose monitor.
infusion set	Tubing that connects to the reservoir on one end, and has a needle or cannula on the other end, that is inserted into the body. Insulin travels from the insulin pump through the infusion set into the body.
infusion site	The location on the body where the infusion set is inserted.
insulin sensitivity factor	The amount that BG is reduced by one unit of insulin. The insulin sensitivity factor is used to calculate correction bolus amounts.
insulin stacking	Occurs when a bolus is delivered while active insulin from a previous bolus is still lowering glucose levels. Insulin stacking can result in hypoglycemia.
interstitial fluid	The fluid that surrounds the cells in the body.
IV	The acronym for intravenous.
lock	A feature that prevents accidental button presses.
low limit	The setting the insulin pump uses to determine when to alert for a low SG condition and suspend insulin delivery.
Manual bolus	A feature to manually enter and deliver a dose of insulin.
Manual mode	Manual mode refers to system functions that are used when the SmartGuard feature is not active.
Max basal rate	The maximum amount of basal insulin that can be programmed by the user per hour in Manual mode.

Max bolus	The maximum bolus amount that can be programmed by the user in one dose.
meter	A term for any BG meter.
missed meal bolus reminder	A reminder when a bolus is not delivered during the specified time period, which is often around meal times.
MRI	The acronym for magnetic resonance imaging.
NiMH	The acronym for nickel-metal hydride.
normal bolus	A type of bolus that provides an entire dose of insulin immediately.
notifications	All notifications are designed to get attention and convey different types of information. They include alarms, alerts, reminders, and messages.
occlusion	A blockage or crimp of the cannula or tubing that prevents proper insulin flow.
piston	The part of the insulin pump that engages the reservoir and moves insulin through the tubing.
power save mode	A state in which the insulin pump is fully functional, but the screen goes dark to save power.
preset bolus	A feature to set up and save a bolus for specific meals or snacks that are frequently consumed.
preset temp basal	A feature to set up and save temporary basal rates for repeated use.
reminder	A type of notification to help remember an action.
reservoir	The small container that is filled with insulin and inserted into the insulin pump.

Resume basal alert	An alert that occurs when the insulin pump has automatically resumed basal insulin delivery after a Suspend before low or Suspend on low event because the SG readings have met the necessary criteria. This alert always occurs if basal insulin delivery has resumed because the two-hour maximum suspend time has elapsed.
rewind	A feature that returns the piston to its start position to place a new reservoir into the insulin pump.
RF	The acronym for radio frequency.
rise alert	An alert that occurs if the SG reading is rising rapidly.
sensitivity	For more information, see insulin sensitivity factor .
sensor (glucose sensor)	The small part of the CGM system that is inserted just below the skin to measure glucose levels in the interstitial fluid and collect the sensor data. The sensor wirelessly sends the collected sensor data to the pump or other compatible mobile device.
sensor glucose (SG)	Glucose that is present in the interstitial fluid and is measured by a glucose sensor.
set change reminder	A reminder to change the infusion set.
SG	The acronym for sensor glucose. For more information, see sensor glucose (SG) .
Sleep mode	A state in which the insulin pump is fully functional, but the screen is dark. The insulin pump automatically enters Sleep mode when no buttons are pressed for about two minutes.
SmartGuard bolus feature	A feature that assists to calculate a recommended bolus amount based on optional carbohydrate intake and optional BG or SG measurement. One or both of the two optional values may be entered.
SmartGuard feature	An insulin delivery feature that automatically controls basal insulin delivery to regulate BG levels to a target SG value.
SN	The acronym for serial number.

Square Wave bolus	A bolus delivered evenly over the specified time period.
suspend	Suspend features include the Suspend before low feature and the Suspend on low feature.
Suspend before low	A feature that suspends insulin delivery when the sensor predicts the SG reading is approaching the low limit.
suspend delivery	A feature that stops all insulin delivery until it is resumed. Only the basal insulin restarts when delivery is resumed.
Suspend on low	A feature that suspends insulin delivery when the SG reading reaches or falls below the low limit.
TDD	The acronym for total daily dose.
temp basal rate (temporary basal rate)	A feature that temporarily increases or decreases the current basal rate for the specified duration of time.
transfer guard	The plastic piece that comes attached to the reservoir. It is used to connect the reservoir to the insulin vial while the reservoir fills with insulin.



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