REAL-Time CGM
Sensor Start and Initiation
Objective

A step-by-step guide to starting a sensor using the MiniMed Paradigm® REAL-Time Continuous Glucose Monitoring System

Key Points

• Review sensor start and how to program glucose sensor settings
• Review proper technique for sensor placement and insertion
• Review alarms and sensor troubleshooting
MiniMed Paradigm® Insulin Pump Home Screen

- UP Button
- DOWN Button
- BOLUS Button
- ESC Button
- ACT Button
MiniMed Paradigm® Insulin Pump Home Screen

**Alert/alarm Icon**

**Normal mode** (no icon)
The insulin pump is On and delivering insulin as programmed.

**Special mode** (open circle)
Insulin pump is On - delivering insulin as programmed (with certain conditions, temp basal, square/dual wave bolus, low reservoir, low battery, etc.).

**Attention mode** (closed circle)
Insulin pump is NOT delivering insulin.
MiniMed Paradigm® Insulin Pump Home Screen

Antenna Icon

Sensor Communicating

The pump is communicating with the transmitter.

Sensor On

The Sensor Feature is turned ON, but the pump is not communicating with the transmitter.
Accessing the Main Menu

Press the **ACT** button to access the main menu
Accessing Sensor Settings

- Main Menu → Sensor → ACT
- Sensor Setup → ACT
- Review Settings → ACT

- High and Low glucose limits are determined by the HCP and the patient
- Snooze Settings are extremely important in assuring a smooth, nuisance-free sensing experience
- Alarms can be set to remind patients to appropriately calibrate

### Review Settings

<table>
<thead>
<tr>
<th>Setting</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensor</td>
<td>On</td>
</tr>
<tr>
<td>High Glucose</td>
<td>240</td>
</tr>
<tr>
<td>High Snooze</td>
<td>2:00</td>
</tr>
<tr>
<td>Low Glucose</td>
<td>80</td>
</tr>
<tr>
<td>Low Snooze</td>
<td>0:15</td>
</tr>
<tr>
<td>Alarm Snooze</td>
<td>1:00</td>
</tr>
<tr>
<td>Cal Reminder</td>
<td>0:30</td>
</tr>
<tr>
<td>BG Units</td>
<td>mg/dL</td>
</tr>
<tr>
<td>Transmtr ID</td>
<td>XXXXXXXX</td>
</tr>
<tr>
<td>Missed Data</td>
<td>0:30</td>
</tr>
</tbody>
</table>
Glucose Sensor Settings

You program the insulin pump with your own glucose sensor settings. From the Main Menu, go to Sensor> Sensor Setup> Edit Settings, and choose Sensor On. The Edit Settings screen will appear, with the following adjustable settings:

**High Glucose**
- Sets your high glucose limit

**High SNOOZE**
- Sets the interval of the HIGH GLUCOSE alarm

**Low Glucose**
- Sets your low glucose limit

**Low SNOOZE**
- Sets the interval of the LOW GLUCOSE alarm

**Alarm SNOOZE**
- Sets the interval of the METER BG NOW alarm

**Cal Reminder**
- Helps you to remember to enter your meter blood glucose (BG) readings

**BG Units**
- You can select mg/dL or mmol/L as your BG Unit

**Transmitter ID Number**
- You enter this number (found on the back of your RF transmitter) so the RF transmitter and insulin pump can talk to each other

**Missed Data**
- Sets the period of time the insulin pump will wait to alert you of a failed reception of sensor data from the RF transmitter

![Review Settings](image)
Sensor Insertion

• Ensure the Sensor is placed snugly into the SenSerter so that the o-rings are NOT visible

• The *angle* of Sensor insertion is crucial for appropriate Sensor penetration depth and “wetting”

• Insert the Sensor at a minimum of 60° by gently tilting the SenSerter forward
Sensor Backing

- Remove the transparent Sensor tape AFTER the Sensor has been placed in the SenSerter and BEFORE the Sensor is inserted.
- This will eliminate the need to remove the tape after Sensor insertion, and thus minimize pulling or dislodgement of the inserted Sensor.
Placing the Sensor

**Taut Skin**
- Hold the skin taut at the Sensor site. Do not pinch the skin as doing so may prevent optimal Sensor penetration

**Needle Removal**
- Hold the base of the Sensor firmly. Pull the needle out smoothly in one motion and at the SAME ANGLE as inserted
- Do not ROCK the Sensor when pulling out the needle, as this may jeopardize Sensor penetration and may damage the Sensor electrodes

**Bleeding**
- If bleeding occurs after Sensor insertion, apply gentle pressure for 3 minutes
Taping

• After the MiniLink or iPro is connected to the Sensor, application of IV 3000 tape is highly recommended to:
  – Ensure the Sensor remains fully inserted underneath the skin
  – Maintain a tight Sensor to MiniLink or Sensor to iPro connection

Reference electrode should sit beneath the skin in the Subcutaneous Tissue
One Minute Rule

• WAIT 1 MINUTE after disconnecting the MiniLink or iPro from a Charger, Sensor or Tester and before connecting the MiniLink or iPro to a Sensor or Tester

• The MiniLink or iPro may be connected to a Charger at any time

• Once the MiniLink or iPro is connected to a Charger, the MiniLink or iPro must remain in the Charger for a MINIMUM OF 1 MINUTE
MiniLink or iPro Flash

• The MiniLink or iPro should flash green within 20 seconds AFTER it is connected to the Sensor

• The flashing green light signals:
  – The Sensor is wet
  – There is enough power to last for a 3-day Sensor use

Instruct patients to diligently check for the flashing green light
Calibration Tips

• After inserting a glucose sensor and performing a Glucose Sensor Start, a 2-hour warm-up period is required

• The glucose sensor must be calibrated with a meter BG, as prompted by an Enter Meter BG alarm

• On the first day of glucose sensor use, an additional BG reading must be entered within 6-hours after the initial calibration

• Thereafter, the glucose sensor must be calibrated a minimum of twice a day (every 12-hours)
Optimal Calibration

• Calibrate at times when blood glucose (BG) is stable (fasting, premeal, bedtime)

• Avoid calibrations during times of rapid glucose change (post-meal, following a bolus, exercise)

• Calibrate before bedtime to avoid a METER BG NOW alarm during the night

• Use good technique when performing BG fingersticks for calibration
Reading the 3-Hour Graph

• From the Home screen, press **ESC** once
• The 3-hour graph will be displayed
• Useful for post-prandial, after exercise
Reading the 24-Hour Graph

- From the 3-hour graph, press **ESC** again
- The 24-hour graph will be displayed
### Alarm Troubleshooting

<table>
<thead>
<tr>
<th><strong>Meter BG Now:</strong></th>
<th>Enter a meter BG reading for calibration</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Weak Signal:</strong></td>
<td>Change proximity/orientation of insulin pump to transmitter</td>
</tr>
<tr>
<td><strong>Lost Sensor:</strong></td>
<td>Change proximity/orientation of pump to transmitter and go to Find Lost Sensor</td>
</tr>
<tr>
<td><strong>Cal Error:</strong></td>
<td>Calibrate in glucose steady state; <strong>If Cal Error</strong> occurs, delay repeat calibration until glucose is no longer changing rapidly</td>
</tr>
<tr>
<td><strong>Bad Sensor:</strong></td>
<td>2 Cal errors in a row will result in “bad sensor”</td>
</tr>
<tr>
<td><strong>Sensor Error:</strong></td>
<td>Out of range or unstable signal is detected by the transmitter. If this alarms occurs repeatedly, the user should change the sensor. If it is an isolated incident, no action is required</td>
</tr>
</tbody>
</table>