

CareCenter MD[®] OR 9500 Bluetooth Tango+ Interface Notes

To setup Tango+ with the CareCenter MD or 9500 stress system, simply follow the directions below.

1. Verify Correct Communication Cables

- Wireless Receiver with integrated communication cable
- CareCenter MD prompts Tango+ from the USB port to the serial connection when it needs a BP measurement, and allows the Tango+ BP reading to be transferred to the CareCenter MD display and reports.
- The wireless receiver picks up the QRS signal from the radio in the Bluetooth acquisition module and sends the ECG trigger to the Tango+ as a digital sync pulse through the BNC connection.
 - Mortara Part Number = 60-00281-02
 - Connection Ends:



**CareCenter MD Connection
USB**



**Tango+ Connection
9 pin female (A)**



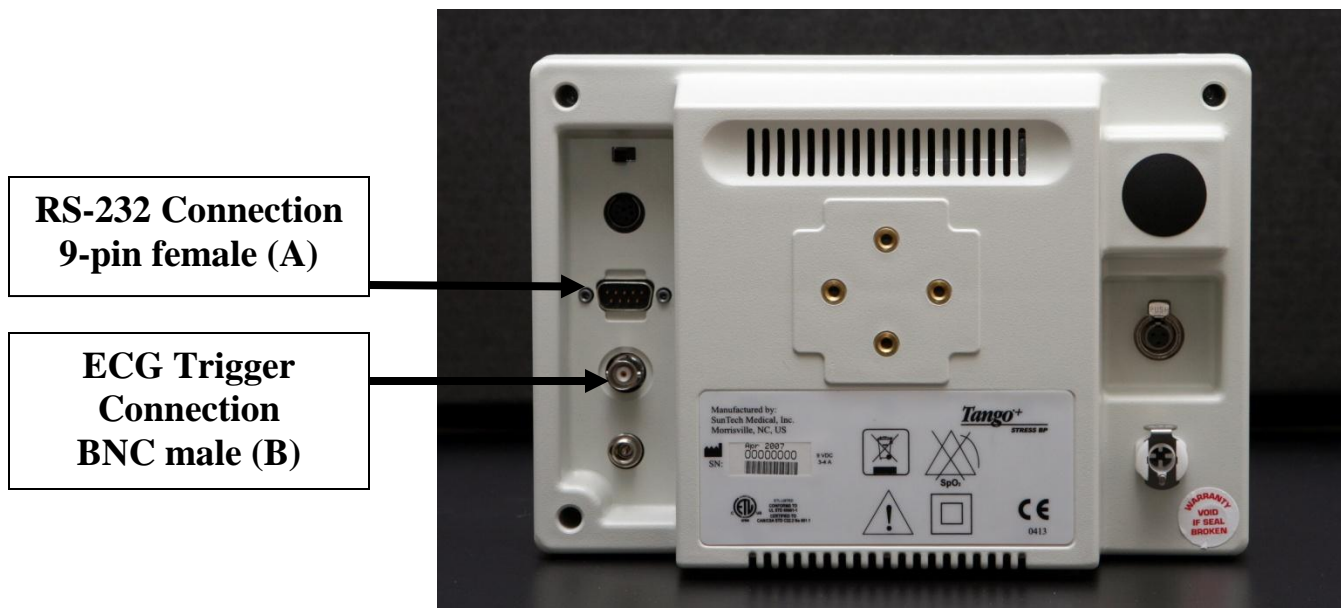
**CareCenter MD Connection
Wireless receiver**



**Tango+ Connection
BNC male (B)**



Tango+ Monitor



2. Connect the RS-232 Cable (A)

To: the RS-232 connection on the rear panel of the Tango+.

3. Connect the ECG Trigger Cable (B)

To: the BNC External ECG connection on the rear panel of the Tango+.

4. Connect the USB Communication Cable

To: an open USB port on the CareCenter MD or 9500 PC.

5. Tango+ Monitor Setup

- When the operating screen is displayed, press the **SELECT** button 2 times. This will bring up the **MAIN MENU** screen.
- Using the UP or DOWN arrows, highlight **MONITOR SET UP** and press the **SELECT** button.
- Using the UP or DOWN arrows, highlight **STRESS SYSTEM** and press the **SELECT** button.
- Using the UP or DOWN arrows, scroll through the list until **Custom** is highlighted and press the **SELECT** button to confirm the choice.
- Set the following options:
 - Protocol: **MARQUETTE**
 - ECG Trigger: **DIGITAL** ↓
- Using the UP or DOWN arrows, select **EXIT** three times to return to the operating screen.

6. CareCenter MD or 9500 System Setup

- Turn the CareCenter MD or 9500 stress system on.
- Select **Start | Control Panel | System** in the **Hardware** tab, click **Device Manager**.
- Browse to the USB Serial Port under Ports (COM & LPT).
Note the COM port number for the USB port.
- Start CareCenter MD by clicking the desktop icon (if not automatically started).

- e. Select File | Options.
- f. On the left hand side go to **Devices** → **SunTech Tango**.
- g. Mark the checkbox '**Enable Blood Pressure unit**'.
- h. Select the correct interface (COM1, COM2, etc) based on step 'c'.
- i. Click on the **Test** button to check the connection to the Tango+ device.
- j. Select an appropriate **Maximum time for BP measurement**. (This is the hold-back time to start the BP measurement before the end of an exercise stage to finish the measurement inside that stage).
- k. On the left hand side go to **Devices** → **CareCenter MD (BT)**.
- l. Enable "**CareCenter MD (BT)**".
- m. Select Enable QRS-Trigger.
- n. Enter the code from the synchronization cable.
The code is printed on the front of the synchronization cable.
- o. Click **Save**.
- p. Exit the **Options** menu.

FAQs for Tango+

- Q. The Tango+ displays a status message. What does it mean and what do I do?**
- A.** See the Quick Set-Up guide (that is attached to your Tango+) or the Troubleshooting section in your User's Guide for details on the Status Message and solution.
- Q. The Tango+ monitor returns results of 0/0 after blood pressure measurements. What do I need to do to get a BP reading?**
- A.** There are certain noisy conditions where the Tango+ cannot accurately measure BP. When the Tango+ encounters these situations, it returns a reading of 0/0. Placement of the microphone attached to the cuff is critical for reliable operation of the Tango+. Follow the instructions in the **Cuff Tutorial** (located on the SunTech Medical website under Products → Tango+) for correct microphone placement. Follow steps 1 and 2 in Conducting the Stress Test in the User's Guide to provide the best conditions to obtain a measurement.
- Q. Can I use a heart rate or blood pressure simulator to test whether the Tango+ is working correctly with my stress system?**
- A.** You cannot use a heart rate or blood pressure simulator to test whether the Tango+ is working with your stress system. The Tango+ monitor requires that the ECG signal and the Korotkoff sounds, collected by the microphone in the cuff, originate from the same source, meaning the patient.
- Q. I cannot clearly see the Tango+ display. How do I fix this?**
- A.** If you cannot clearly read Tango+, you can adjust the contrast of the display by following these steps:
1. When the operating screen is displayed, press the **SELECT** button 2 times. This will bring up the **MAIN MENU** screen.
 2. Using the UP or DOWN arrows, highlight **MONITOR SET UP** and press the **SELECT** button.

3. Using the UP or DOWN arrows, highlight **CONTRAST** and press the **SELECT** button.
4. Using the UP or DOWN arrows, modify the contrast of the screen. When you are finished, and press the **SELECT** button to confirm the choice.
5. Using the UP or DOWN arrows, select **EXIT** twice to return to the operating screen.

Q. My Tango+ displays a message, “Please VERIFY CALIBRATION” or “Equipment Maintenance and Calibration Required.” What do I do?

A. Verification of Pressure Calibration

Equipment Required:

1. Calibrated electronic manometer or equivalent.
2. 500mL volume or the Orbit-K Adult Plus cuff wrapped around something that will not break or crush (no glass).
3. Hand Inflation Bulb with bleed valve.
4. Tubing, Tee pieces, and miscellaneous connectors or you can order the T-Tube Kit (SunTech Part # 98-0030-00).

Procedure:

5. When the operating screen is displayed, press the **SELECT** button 2 times. This will bring up the **MAIN MENU** screen.
6. Using the UP or DOWN arrows, highlight **MONITOR SET UP** and press the **SELECT** button.
7. Using the UP or DOWN arrows, highlight **VERIFY CALIBRATION** and press the **SELECT** button. The monitor will close its bleed valves and will display on its screen the pressure applied to the patient hose connector.
8. Verify the Tango+ calibration by manually inflating and checking the manometer against the pressure reading on the Tango+ display.
9. Once the calibration has been completed, use the UP or DOWN arrows to select **EXIT** twice and return to the operating screen.