

# Delmar Reynolds CardioDirect 12-S with CardioCollect Interface

## Tango M2 Interface Notes

To setup Tango M2 with the CardioDirect stress system, simply follow the directions below.

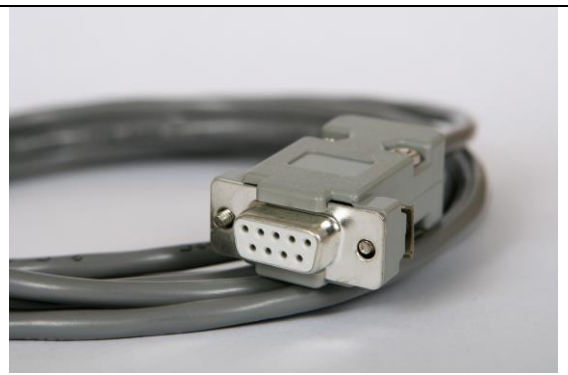
### 1. Verify Correct RS-232 and ECG Trigger Cables

- **RS-232 Cable** – used to communicate with the CardioDirect. This cable enables the CardioDirect to prompt Tango M2 when it needs a BP measurement, and allows the Tango M2 BP reading to be transferred to the CardioDirect display and reports.
  - SunTech Part Number = 91-0013-00
  - Connection Ends:

**CardioDirect Connection**  
**9 pin female**



**Tango M2 Connection**  
**9 pin female**



- **ECG Trigger Cable** – provides the ECG signal from the CardioDirect to the Tango M2.
  - SunTech Part Number = 91-0066-00
  - Connection Ends:

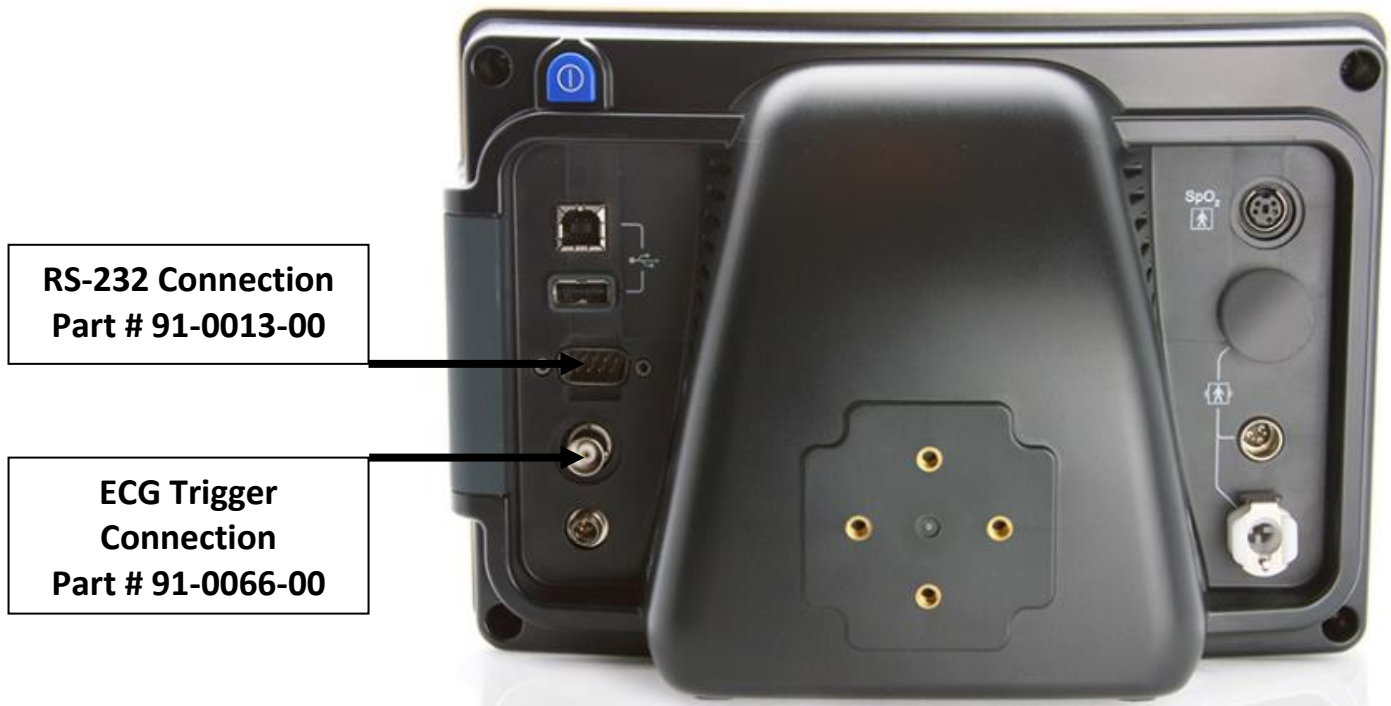
**CardioDirect Connection**  
**25 pin male**



**Tango M2 Connection**  
**BNC male**



## Tango M2 Monitor



### 2. Connect the RS-232 Cable

From: the RS-232 connection on the rear panel of the Tango M2.  
To: the PC port on the back of the CardioDirect system.

### 3. Connect the ECG Trigger Cable

From: the BNC External ECG connection on the rear panel of the Tango M2.  
To: the port on the CardioCollect device.

### 4. Tango M2 Monitor Setup

- When the operating screen is displayed, press the **SELECT** button once. 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 **CardioDirect** is highlighted and press the **SELECT** button to confirm the choice.
- Using the UP or DOWN arrows, select **EXIT** twice to return to the operating screen.

### 5. CardioDirect System Setup

- Start the CardioNavigator on your PC by clicking Start > Programs > Cardionavigator > Cardionavigator.
- Select **File | Options**.
- Select **Interface | Blood Pressure**.
- From there, select **Tango**.
- Then select the appropriate communication port.

- f. In Setup for Tango, set the **Time for NIBP measurement(s)** to 50 seconds.
- g. Check that the CardioNavigator software can communicate with the Tango M2 by using the **Test** button.
- h. You can use the Reynolds Medical CardioCollect device (v1.05 or later) as the ECG interface. In CardioCollect, select the following settings:  
**QRS Trigger: on**  
**Polarity: negative**  
**Pulse width: 50 ms**  
**Delay: 2 ms**

## FAQs for Tango M2

### **Q. The Tango M2 displays a Status Message. What does it mean and what do I do?**

- A. See the eLibrary within your Tango M2 for quick troubleshooting tips. You can find the eLibrary under the Main Menu; select Monitor Setup → E-Library → Status Messages. You can also look in the Tango M2 User Manual under the *Status Messages & Alarms* section for details on each Status Message and solution.

### **Q. The Tango M2 monitor returns a result of 0/0 after blood pressure (BP) measurements. What do I need to do to get a BP reading?**

- A. There are certain noisy conditions where the Tango M2 cannot accurately measure BP. When the Tango M2 encounters these situations, it returns a reading of 0/0. Microphone placement is critical for reliable operation of the Tango M2; there are many places to find cuff placement help.
  - a. See the eLibrary within your Tango M2 for quick cuff placement tutorials. You can find the eLibrary under the Main Menu; select Monitor Setup → E-Library → Tutorials.
  - b. Look in the Tango M2 User Manual under the *Using Tango M2 during a Stress Test* section for details on each type of cuff; the Orbit-K and the Single Patient Use (SPU) kit.
  - c. Follow the instructions in the **Cuff Tutorial** (located on the SunTech Medical website under Support → Customer Technical Support → Video Tutorials) for correct microphone placement.

### **Q. Can I use a heart rate or blood pressure simulator to test whether the Tango M2 is working correctly with my stress system?**

- A. You cannot use a heart rate or blood pressure simulator to test whether the Tango M2 is working with your stress system. The Tango M2 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. How can I adjust the brightness of the Tango M2 display?**

- A. You can adjust the contrast of the Tango M2 display by following these steps:
  1. When the operating screen is displayed, press the **SELECT** button once. This will bring up the **Main Menu** screen.
  2. Using the UP or DOWN arrows, highlight **Monitor Setup** and press the **SELECT** button.
  3. Using the UP or DOWN arrows, highlight **Brightness** 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. How can I get MAP on my Tango M2?**

- A.** Register your Tango M2 Monitor online or through mail to receive MAP as a function on your Tango M2 monitor. Please note that due to FDA Regulations MAP is not available to the United States market.

On the web go to SunTechMed.com → Support → Sales Support → Product Registration

**Q. How do I clean the Orbit-K cuff after a stress test?**

- A.** You can do either of the following:

1. Use a medical grade mild disinfectant wipe on the cuff or spray a cleaning solution onto a cloth and wipe the cuff. Afterwards, lay flat or line dry.
2. Remove the bladder and microphone from the outer shell of the Orbit-K cuff. Machine wash the shell in warm water with a mild detergent (50-140°F or 10-60°C). Lay flat or line dry the cuff. Do not place the cuff in a dryer.

**Q. My Tango M2 displays a message, “Please VERIFY CALIBRATION” or “Equipment Maintenance and Calibration Required.” What do I do?**

- A.** Verification of Pressure Calibration is required every year to maintain the accuracy of the Tango M2’s BP readings. You will need to contact your local SunTech Medical Service Center for help. In addition, the following items will be needed to verify 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).

**Service Centers:**

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