

Marquette: MAC 5000, 5500 Tango M2 Interface Notes

To setup Tango M2 with the MAC 5000/5500 stress system, simply follow the directions below.

1. Verify Correct RS-232, ECG Trigger, and Splitter Cables

- **RS-232 Cable** – used to communicate with the MAC 5000/5500. This cable enables the MAC 5000/5500 to prompt Tango M2 when it needs a BP measurement, and allows the Tango M2 BP reading to be transferred to the MAC 5000/5500 display and reports.
 - SunTech Part Number = 91-0010-01
 - Connection Ends:

MAC 5000/5500 Splitter Cable

Connection

8 pin mini DIN male



Tango M2 Connection

9 pin female



- **ECG Trigger Cable** – provides the ECG signal from the MAC 5000/5500 to the Tango M2.
 - SunTech Part Number = 91-0009-01
 - Connection Ends:

MAC 5000/5500 Connection

9 pin male



Tango M2 Connection

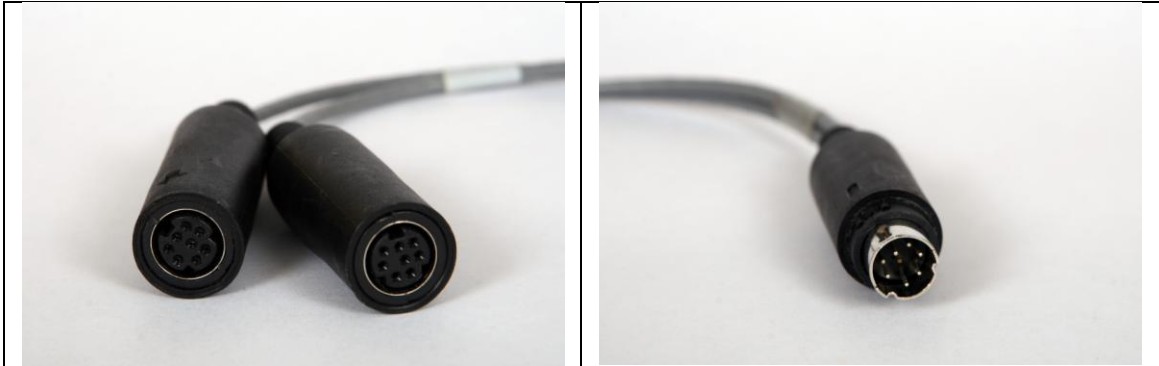
BNC male



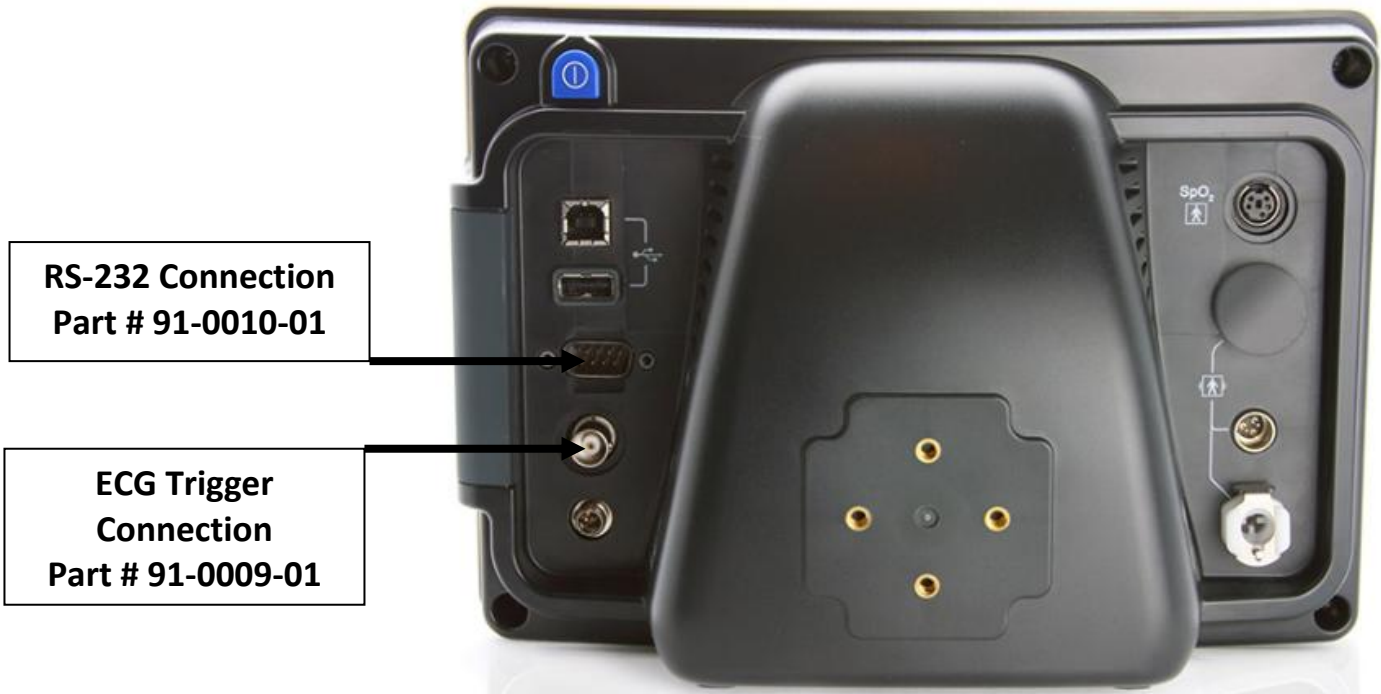
- **Splitter Cable** – required for the MAC 5000/5500
 - SunTech Part Number = 91-0069-00
 - Connection Ends:

MAC 5000/5500 Connection
8 pin mini DIN male

Tango M2 RS-232 Connection
8 pin mini DIN female



Tango M2 Monitor



2. Connect the Splitter Cable

- Connect: the 8 pin mini din labeled **MAC5000**
- To: the COM 1 port on the back of the MAC 5000/5500
- Connect: the 8 pin mini din labeled **T2000**.
- To: the MAC 5000/5500 connector of the cable (GE Healthcare Part # 700607-001) between the T2000 treadmill to the stress system. (Note – the cable from the T2000 to the splitter needs

to be well connected; this will require depressing the actuator on the connector of the T2000 cable and pushing the connectors of the T2000 cable and the splitter closer together until they are well connected).

3. Connect the RS-232 Cable

From: the RS-232 connection on the rear panel of the Tango M2.

To: the 8 pin mini DIN labeled **Tango** on the splitter.

4. Connect the ECG Trigger Cable

From: the BNC External ECG connection on the rear panel of the Tango M2.

To: the ANA/TTL port on the back of the MAC 5000/5500.

5. Tango M2 Monitor Setup

- a. When the operating screen is displayed, press the **SELECT** button once. This will bring up the **MAIN MENU** screen.
- b. Using the UP or DOWN arrows, highlight **MONITOR SET UP** and press the **SELECT** button.
- c. Using the UP or DOWN arrows, highlight **STRESS SYSTEM** and press the **SELECT** button.
- d. Using the UP or DOWN arrows, scroll through the list until **Mac 5000** is highlighted and press the **SELECT** button to confirm the choice.
- e. Using the UP or DOWN arrows, select **EXIT** twice to return to the operating screen.

5. MAC 5000/5500 System Setup

- a. From the Start Up screen, use the Arrow Pad and scroll until the cursor is over **MORE**.
- b. Then scroll to **MAIN MENU** and then press the Return key.
- c. Next, choose **MORE**.
- d. Then choose **SYSTEM SETUP**. System Password will appear. The default is SYSTEM.
- e. Next select **EXERCISE TEST**.
- f. Next select **INPUTS OUTPUTS**.
- g. Go to Blood Pressure and select **SUNTECH**.
- h. Make sure that TTL OUTPUT is set for **QRS DETECT**, POLARITY is **POSITIVE**,
- i. WIDTH is **40 MSEC** and that the DELAY is **0**.
- j. Next choose **RETURN** at the bottom of the screen
- k. At the next screen, choose **RETURN**.
- l. In the System Set Up menu, choose **SAVE SETUP** and then **TO SYSTEM**.
- m. Then select **MAIN MENU**.
- n. Select **MORE**
- o. Select **MORE**

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.
- 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.
 - 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.
 - 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:
- 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 Setup** and press the **SELECT** button.
 - Using the UP or DOWN arrows, highlight **Brightness** and press the **SELECT** button.
 - 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.
 - 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:
- 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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