

Welch Allyn CardioPerfect Workstation

Tango M2 Interface Notes

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

1. Verify Correct RS-232 and ECG Trigger Cables

- **RS-232 Cable** – used to communicate with CardioPerfect. This cable enables CardioPerfect to prompt Tango M2 when it needs a BP measurement, and allows the Tango M2 BP reading to be transferred to the CardioPerfect display and reports.
 - SunTech Part Number = 91-0013-01
 - Connection Ends:

CardioPerfect Connection
9 pin female

Tango M2 Connection
9 pin female



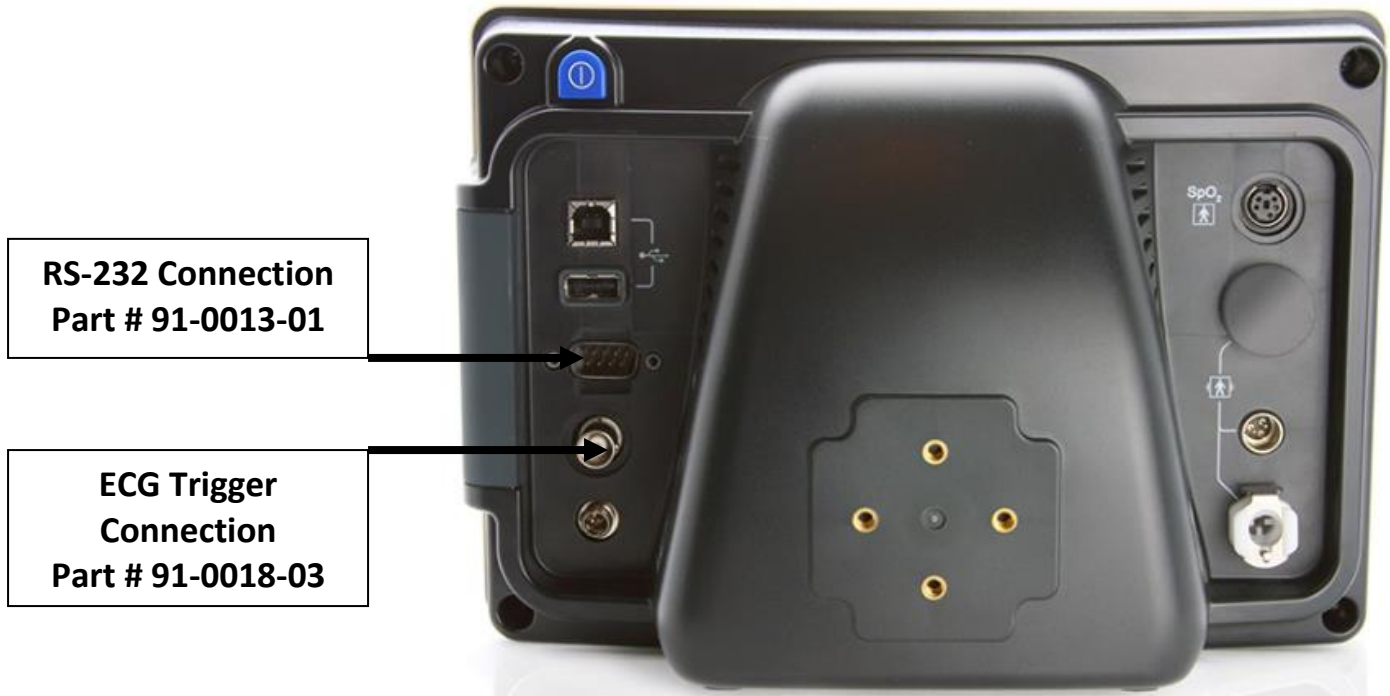
- **ECG Trigger Cable** – provides the ECG signal from CardioPerfect to the Tango M2.
 - SunTech Part Number = 91-0018-03
 - Connection Ends:

CardioPerfect Connection
1/8" phono plug

Tango M2 Connection
BNC male



Tango M2 Monitor



RS-232 Connection
Part # 91-0013-01

ECG Trigger Connection
Part # 91-0018-03

2. Connect the RS-232 Cable

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

To: the **COM2** port on the back of the CardioPerfect computer.

*Note – If the CardioPerfect software is running on a laptop computer, a RS-232 to USB converter is required (the RS-232 connector on the laptop should be used by the treadmill/ergometer). A USB to RS-232 cable can be ordered using SunTech Part Number = 98-0057-00.

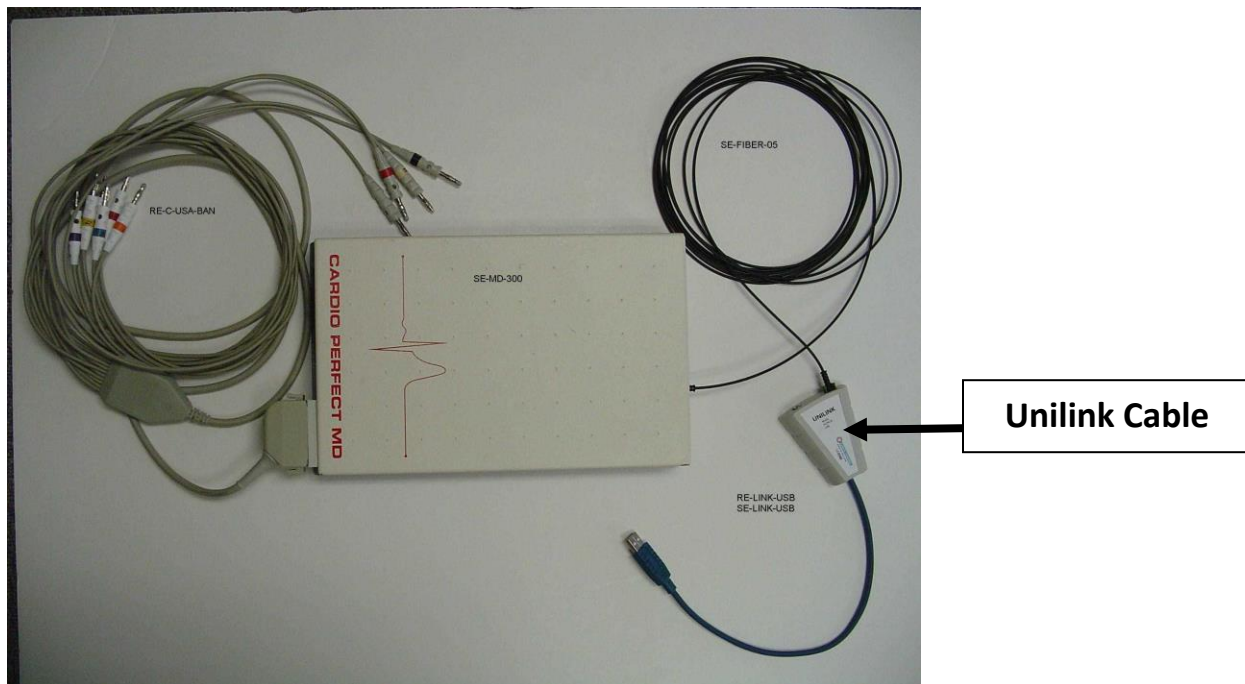


3. Connect the ECG Trigger Cable

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

To: the phono jack on the Unilink interface cable.

* Note: use stereo phono jack splitter if jack is also required for echocardiogram.

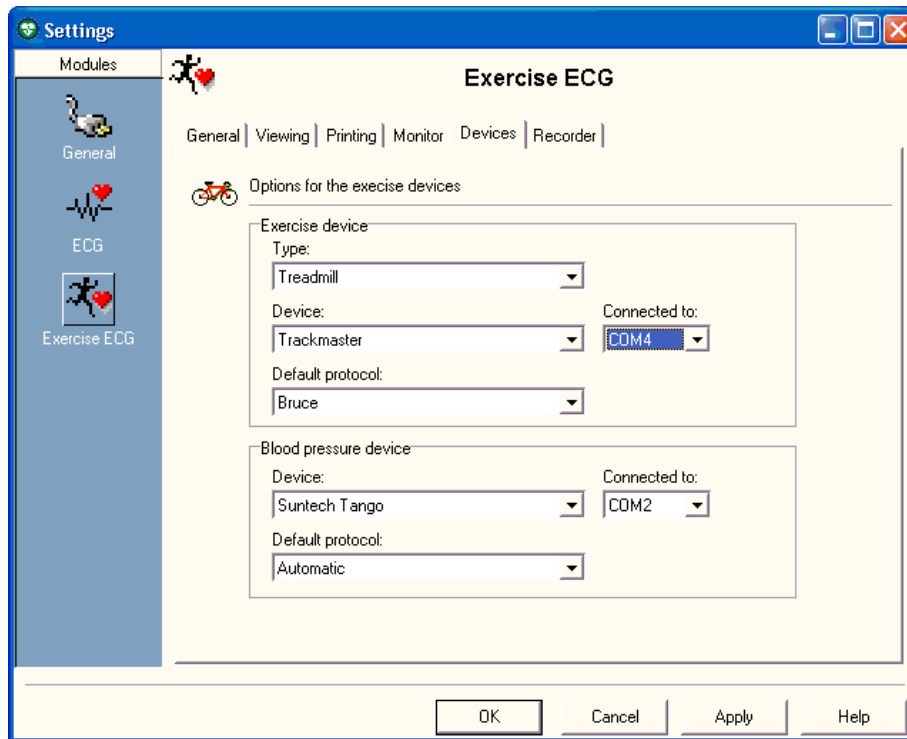


4. Tango M2 Monitor Setup

- 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 **CardioPerfect** 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. CardioPerfect System Setup

- a. From the ECG software, click **File**, then **Settings**.
- b. Select **Exercise ECG**.
- c. On the **Devices** tab, set the following parameters:
 - Under **Blood Pressure Device**, **Device** is **SunTech Tango**
 - Connected to** should be set to the desired Com port, typically **COM2**
 - Default protocol** is **None** for measurements started using the Tango M2 or **Automatic** for measurements started at the end of stage using the stress system.
 - Note: Protocols can be customized; contact Welch Allyn for further details.



- d. Click on the **Recorder** tab, set the following parameters:
Analog output is ECG signal
- e. Click on **OK** and then exit the Workstation Software.
- f. Reopen the workstation for the changes to take affect.
- g. Start a stress test and when you click on the BP button, the Tango M2 will take a measurement.

TIPS

You must have a patient hooked up to the stress system with a valid ECG trace and the BP cuff on the for the Tango M2 to operate correctly. Refer to the Tango M2 manual for proper patient hookup.

While in the Stress ECG software module, you may press the F5 key or the BP icon on the display to initiate a BP measurement.

In order to ensure that the Tango M2 interfaces properly with the CardioPerfect Workstation, start the stress ECG software module immediately after collecting the resting ECG data.

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.
 - 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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