

Cardioline Cubestress V4 Tango M2 Interface Notes

To setup Tango M2 with the Cardioline Cubestress V4 system, simply follow the directions below.

1. Verify Correct USB or RS232 cable and ECG Trigger Cable

- **USB Cable** – used to communicate with the Cubestress. This cable enables the Cubestress to prompt Tango M2 when it needs a BP measurement, and allows the Tango M2 BP reading to be transferred to the Cubestress display and reports.
 - SunTech Part Number = 91-1010-00
 - Connection Ends:

**Cubestress
Connection USB-B**

**Tango M2
Connection USB-A**



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

**Cubestress Connection
9 pin female**

**Tango M2 Connection
9 pin female**



- **ECG Trigger Cable** – provides the ECG signal from the Cubestress to the Tango M2. The ECG trigger is provided by the CARDIOLINE BT Dongle directly through a Cardioline Special Cable which comes out from the BT Dongle and ends with a BNC connector.
 - Cardioline Part Number = 63090700
 - Connection End to Tango M2:

Cubestress Connection



Tango M2 BNC Male



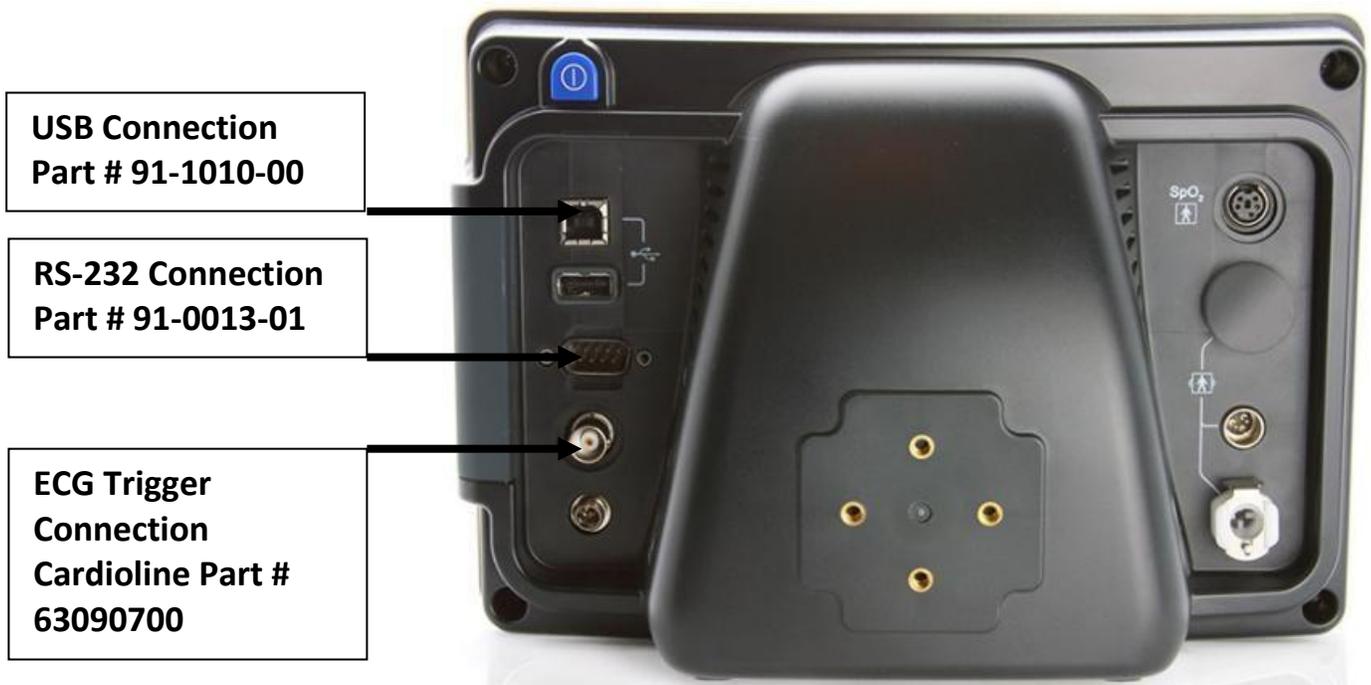
Cardioline ECG Trigger Cable



Cardioline USB BT dongle



Tango M2 NIBP Monitor



2. Connect the RS-232 Cable or

From: the RS-232 connection on the rear panel of the Tango M2.
To: the COM port on the back of the Cubestress system (PC).

2a. Connect the USB Cable

From: the USB-B connection on the rear panel of the Tango M2.
To: a USB port on the back of the Cubestress system (PC).

3. Connect the ECG Trigger Cable

From: the BNC External ECG connection on the rear panel of the Tango M2.
To: The special connection at the bottom of the Cardioline BT dongle

4. Tango M2 Monitor Setup

- a. When the main 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 **CUSTOM** is highlighted and press the **SELECT** button to confirm the choice.
- e. Using the UP or DOWN arrows, highlight **PROTOCOL** and press the **SELECT** button.
- f. Using the UP or DOWN arrows, scroll through the list until **SUNTECH** is highlighted and

- press the **SELECT** button to confirm the choice.
- g. Using the UP or DOWN arrows, highlight **ECG TRIGGER** and press the **SELECT** button.
- h. Using the UP or DOWN arrows, scroll through the list until **DIGITAL** is highlighted and press the **SELECT** button to confirm the choice.
- i. Using the UP or DOWN arrows, select **EXIT** twice to return to the operating screen.

5. Cubestress System setup

- a. Open the Cube Stress software.
- b. From the left bar, select **Configuration** icon . Then the **Equipment** icon .
- c. At Auto/Manual part, beside **NIBP Device**, select **Automatic** for measurement.
- d. At Equipment, select **Treadmill** (or **Bike**) model and the COM port that the treadmill is connected to.
- e. Select **TANGO** as the **NIBP Device** and the COM port that Tango+ is connected to; in case of USB connection a virtual COM is created; go to the Device Manager and expands Ports
- >  **Ports (COM & LPT)** to see which is the Virtual port created (is many virtual ports are available, just disconnect and reconnect the cable to see which is exactly the Tango's Com port)
- f. When the devices are set, you can use the Blood Pressure icon to test that the interface between the computer and Tango+ are working properly.
- g. Click to return to the main screen.

6. 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).

Tango Service Centers:

For customers in the Americas

SunTech Medical, Inc.
507 Airport Boulevard
Suite 117
Morrisville, NC 27560-
8200 USA
Phone: +1.919.654.2300
+1.800.421.8626 (toll free within
US) Fax: +1.919.654.2301
Email: CustomerService@SunTechMed.com

For customers in Europe, the Middle East, Africa, Asia, and the Pacific SunTech Medical, Ltd.

Oakfield Industrial Estate
Eynsham, Oxfordshire OX29 4TS
UK England
Phone: +44 (0) 1865.884.234
Fax: +44 (0) 1865.884.235
Email: CustomerService@SunTechMed.com

Cardioline Service Center :

Cardioline Spa
Via Linz 151, 38121
Trento – Italia
E-mail: Service@cardioline.it
Phone: (+39) 02 94750484