Marquette Case 12, Case 15, Case 16, and Centra Stress Systems
Tango M2 Interface Notes

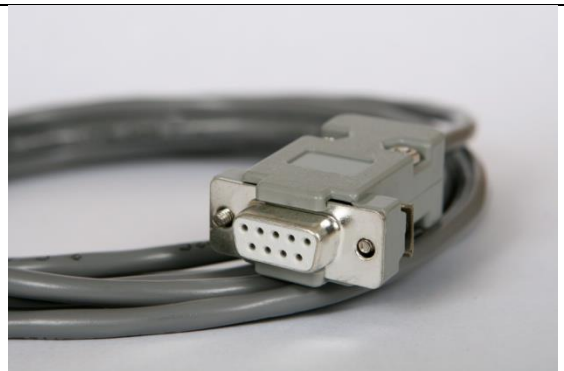To setup Tango M2 with your stress system, simply follow the directions below.

1. Verify Correct RS-232 and ECG Trigger Cables

- **RS-232 Cable** – used to communicate with your stress system. This cable enables the stress system to prompt Tango M2 when it needs a BP measurement, and allows the Tango M2 BP reading to be transferred to the stress system's display and reports.
    - **Case 12, Case, 15, Case 16, and older Centra Systems**
        - SunTech Part Number = 91-0012-00
        - Connection Ends:

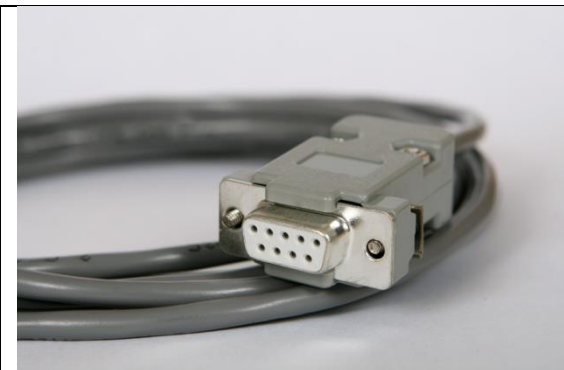| Stress System Connection 25 pin male	Tango M2 Connection 9 pin female

    - **Newer Centra Systems**
        - SunTech Part Number = 91-0013-01
        - Connection Ends:

Stress System Connection 9 pin female	Tango M2 Connection 9 pin female

- **ECG Trigger Cable** – provides the ECG signal from the stress system to the Tango M2.
    - SunTech Part Number = 91-0011-01
    - Connection Ends:
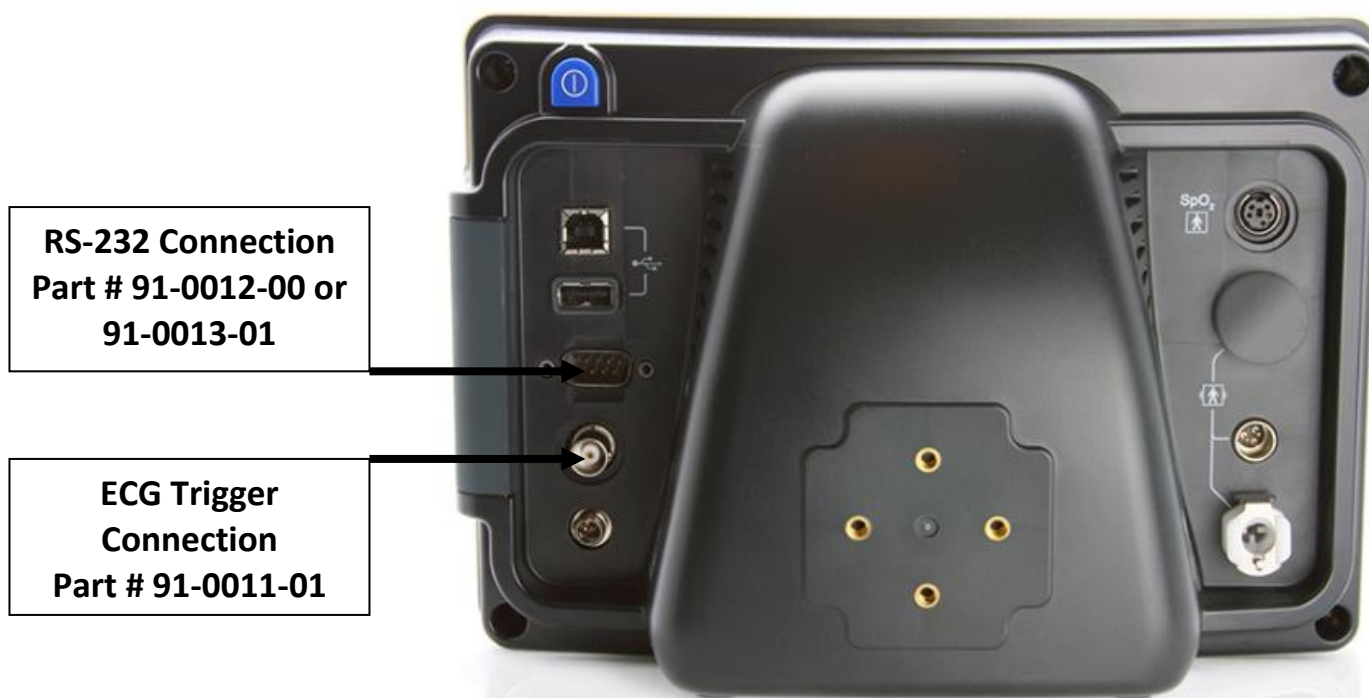
Stress System Connection BNC male	Tango M2 Connection BNC male

Tango M2 Monitor

RS-232 Connection
Part # 91-0012-00 or
91-0013-01

ECG Trigger
Connection
Part # 91-0011-01

2. Connect the RS-232 Cable

For Case 12, Case, 15, Case 16, and older Centra Systems

From: the RS-232 connection on the rear panel of the Tango M2.
To: the 25 pin AX-2 RS-232 port on the back of the stress system.

For newer Centra Systems

From: the RS-232 connection on the rear panel of the Tango M2.
To: the 9 pin AUX/RS-232 port on the back of the stress system.

3. Connect the ECG Trigger Cable

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

To: the Pulse 1 connection on the back of the stress system.

*Note – If Pulse 2 is open, follow the instructions in **Step 4** below for replacing Pulse 1 with Pulse 2.

Alternatively, you may use a splitter cable, SunTech Part Number = 91-0053-01.

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 **Case 12, Case 15, Case 16,** or **Centra** 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. Stress System Setup

a. Turn on the Centra, and the main menu is displayed.

b. Using the trim knob, choose **EXERCISE**.

c. At the Exercise screen, choose **EXERCISE TEST**.

d. At the Pre Test screen, select **MORE**.

e. Select **LOAD**.

f. Select **TASK** and this will display the TASK FILES screen.

g. Select **DESIGN**, wait a few seconds, and the DESIGN MENU will be displayed.

h. Select **DESIGN SET-UP PARAMETERS** and the SET UP SCREEN will be displayed.

i. Select **LOAD**.

j. Select **TREADMILL 60 HZ**.

k. Select **EDIT**, turn the trim knob to **CONTINUE**, and press the knob.

l. Turn the trim knob to **CONTINUE** and press the knob again. Repeat this three more times and you will be at **OUTPUTS** screen.

m. Turn the trim knob to **PULSE 1** and set to **QRS**; set the **WIDTH** to **50 msec**; set **BD DEV** to **MEI 1950**.

n. Turn the trim knob to **CONTINUE** and press the knob.

o. Turn the trim knob to **CONTINUE** and press the knob again.

p. Select **SAVE** and select **DISK** (not DISKETTE).

q. The message, "FILE NAME IN USE" is displayed. Turn the trim knob to **REPLACE** and press the knob. You should now be back at the SET UP screen.

r. Select **RETURN**.

s. Select **SYSTEM INITIALIZATION** and press the trim knob. The message, "Name of the set up file to be used when stress program is started:" is displayed.

t. Press the trim knob to **SELECT SET UP FILE NAME**.

u. Select **TREADMILL 60 MHZ** and press the trim knob.

v. The cursor will be at DEVICE TO INITIALIZE:DISK. Press the trim knob to select **DISK** and press the knob. Go to **OK**? And press the knob. Go to **YES** and press the knob again.

w. At **CONTINUE**, press the knob. The system will save the set up and return to the **DESIGN MENU**.

x. Select **RETURN**. After a few seconds, you will be back at the main test screen.

To Check That All Was Saved:

a. Press the trim knob and select **WRITER**.

b. Select **PRINT**.

c. Select **SET-UP**. The unit will now print out the system configuration. Review outputs to make sure the parameters are set as follows;

- Pulse 1 = QRS, 50 msec
- BP DEV = MEI 1950

Marquette Technical Support = 1.800.558.5120

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).

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