

Field Service Guide for Setting up Tango M2



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Performing a Tango M2 Install

1. Setting up the Tango M2

The Tango M2 Kit will come with a power supply & cord, a patient cable, and assorted Orbit-K cuff sizes. There will be additional items inside your Tango M2 Kit box, please see the tray label on the inside of the box for a detailed list.

- a. Connect the Power Supply to the area appropriate Power Cord. Connect the Power Cord to a grounded wall power source. Do not connect the Tango M2 power cord to a power strip.
- b. Connect the Power Supply to the connection on the rear of the Tango M2. (see Figure 1 for the connection port)
- c. Connect the Patient Cable to the Pneumatic and K-sound Microphone connection ports. (see Figure 1 for the connection port)



Figure 1: Image of the back of Tango M2 Stress BP Monitor

2. Interfacing Tango M2 with a Stress System

The Tango M2 will require an RS-232 communication cable and an ECG trigger cable for proper communication. Please refer to the Interface Notes on the SunTechMed.com webpage for instruction on how to set up the Tango M2 with multiple stress systems.

3. Testing the Tango M2 Setup

BEFORE YOU LEAVE THE FACILITY, YOU MUST VERIFY THE FOLLOWING:

- a. Verify that an ECG trigger is sent to the Tango M2 by watching the HR on the Tango M2.
- b. Verify that serial communication has been established and the stress system is communicating with Tango M2 by looking for the • by the word “MIC” in the K-sound window.
- c. Verify that your client has been trained on proper cuff & microphone placement and Tango M2 functionality.

To verify proper setup of the Tango M2, you will need to hookup a person (preferably yourself or a stress tech) and take a BP measurement. You cannot use a heart rate or blood pressure simulator to test whether the Tango M2 is working with the 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.

4. Inform Client of Proper Method for Conducting a Stress Test using Tango M2

a. Proper cuff size and placement:

Fit the patient with an appropriately sized cuff. Slide the sleeve of the cuff up the patient’s arm and position the ARTERY marker label over the medial (inner) side of the arm, BETWEEN THE BICEP and TRICEP. The sleeve should be approximately 3-5 cm above the elbow (See Figure 2). Wrap the cuff securely around the arm.

Please reference Proper Cuff Placement (pg. 7) for more details.

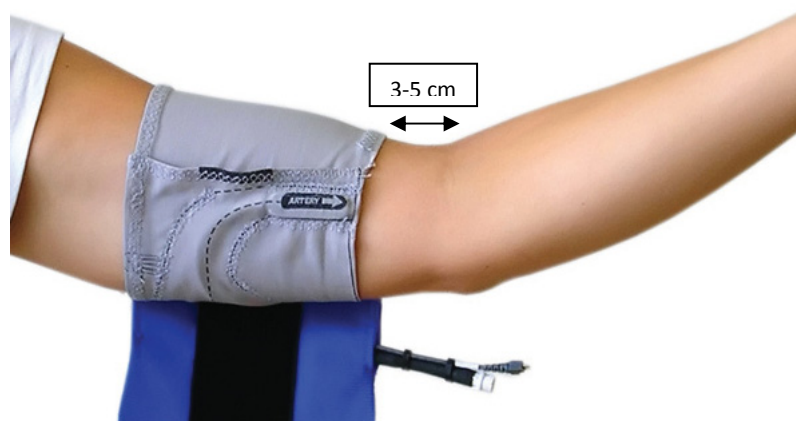


Figure 2: Correct placement of the Orbit-K cuff. The Microphone should be placed 3-5cm from the elbow on the inner portion of the left arm.

b. Taking a BP Measurement:

Ensure that a heart rate is displayed on the Tango M2 measurement screen. If the heart rate is not displayed or if the measurement is not stable, than an ECG signal is not being sent from the stress system to Tango M2.

Make sure to tell your client to take one or two measurements with the patient seated, supine, or standing still. This allows the Tango M2 to gate to that particular patient's physiology.

To take a reading: prompt Tango M2 to take a BP reading from the stress system or press the blue Start/Stop button. During the cuff deflation, look at the waveform display at the bottom of the Tango M2 screen and ensure that there is a rhythmic signal which corresponds to the Korotkoff sounds, or K-sounds, that you would hear if you were taking a manual BP measurement with a stethoscope (See Figure 3).

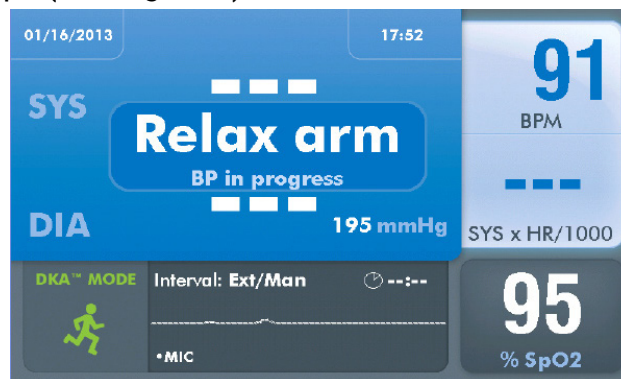


Figure 3: Screen shot of the messaging during the BP Measurement

c. Conducting a Stress Test:

Once you have taken a BP measurement (See Figure 4), you may proceed with the DEMO stress test.

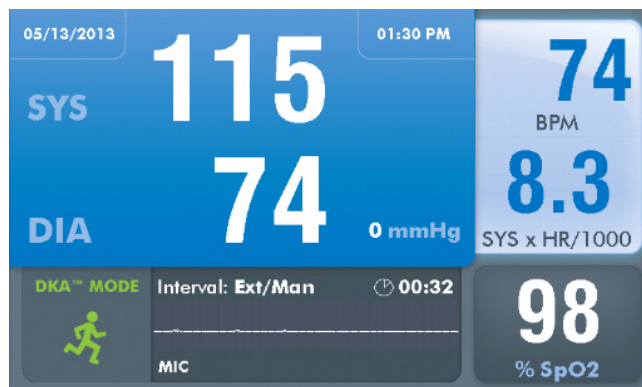


Figure 4: Screen shot of completed DKA BP Measurement

During the test, advice and support your patient to relax the arm with the cuff for the duration of the measurement. Pay close attention to the monitor, and if the display shows an error message, follow the instructions. If there is significant noise as a measurement is being taken, try the following:

- If the patient is holding onto the treadmill bar for support, advise the patient to lightly grip the bar or ask the patient to turn his/her hand over so that the palm is facing upward.
- Instead of the patient gripping the bar for support, have the patient rest their arm with cuff on your shoulder for support while a measurement is being taken.
- If the patient is comfortable have them drop their arm to their side during the BP reading. They may replace their hand on the bar once the reading has completed.

Note: At the end of the test, the Tango M2 will prepare itself for a new study. Generally this occurs when the “End Study” has been selected through the stress system.

d. Using Tango M2 without ECG:

Tango M2 can be used without ECG signal by using the OSC Mode. This mode is not designed to be used during stress testing. When using this mode the cuff is the sensor, not the K-sound Microphone. This mode is often used before the patient is connected to the ECG from the stress system or after the patient has been disconnected from the ECG and another BP reading is desired.

Note: If the stress system is not set-up to have a study the BP measurements will not be sent back to the stress system. The stress system will need to be in “Per-test, Exercise, or Recovery” for the BP measurements to be sent back and recorded by the stress system.

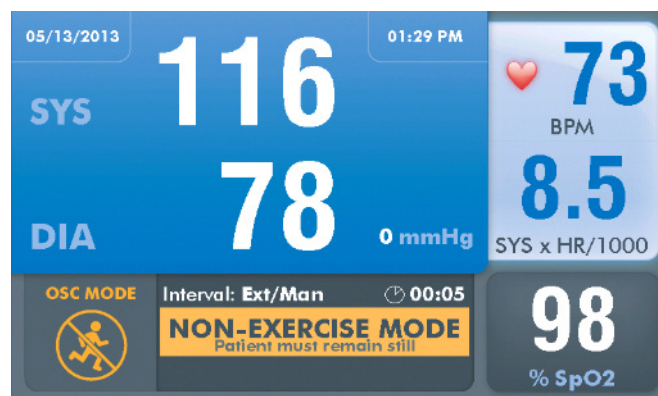


Figure 5: Screen shot of completed OSC BP Measurement

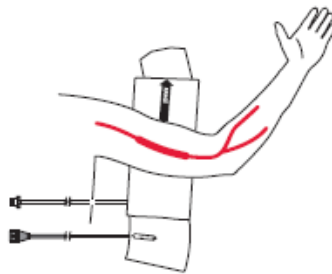
Proper Cuff Placement for Tango M2

1. Orbit-K Proper Cuff Placement (Images)

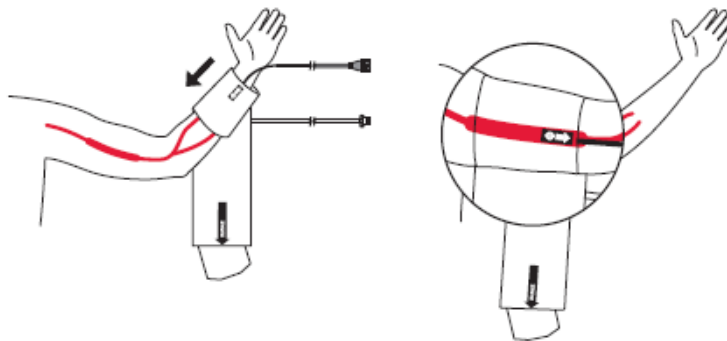
- a. Palpate the brachial artery between the bicep and tricep.



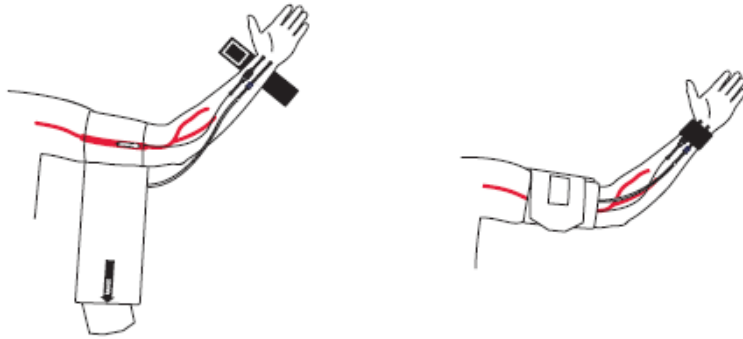
- b. Chose the appropriate sized cuff. The cuff has a range marker on the inside to ensure proper sizing.



- c. Place the cuff on the arm. Ensure that the artery marker points down the arm and that the microphone is placed over the brachial artery, 3-5cm from the elbow.

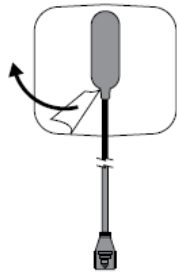


- d. Wrap the cuff securely around the arm. Use the wrist straps provided with your Tango M2 system to secure the patient cable to the patient's wrist as shown below.

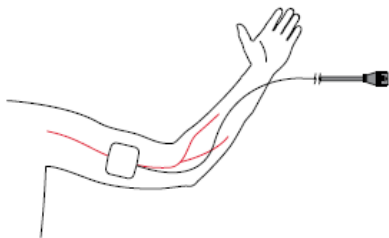


2. Single Patient Use Kit Proper Cuff Placement (Images)

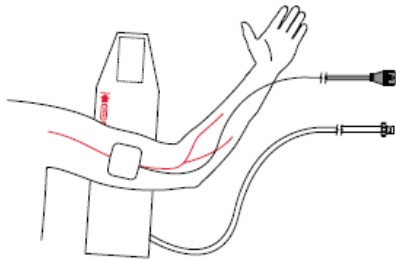
- a. Place the reusable K-sound microphone inside the disposable microphone pad



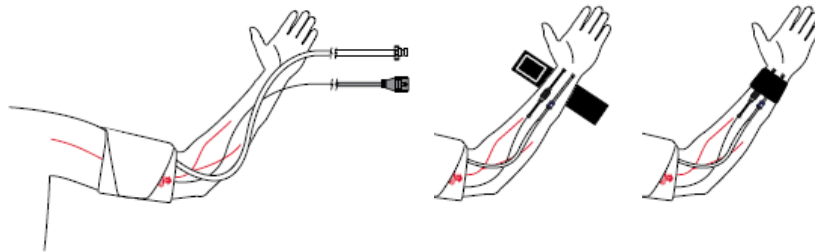
- b. Palpate the brachial artery between the bicep and tricep. Place the microphone over the brachial artery as shown below.



- c. Chose the appropriately sized SunTech Medical disposable cuff. These cuffs have range markers on the inside to ensure proper sizing.



- d. Wrap the cuff securely around the patient's arm. Use the wrist straps provided with your Tango M2 system to secure the patient cable to the patient's wrist as shown below.



Tango M2 Frequently Asked Questions

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

A. There are 2 places where you can find more information about Status Messages:

1. 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.
2. You can also look in the Tango M2 User Manual under the *Status Messages & Alarms* section for details on each Status Message and solution.

Note: Presence of atrial or ventricular fibrillation, arrhythmias, pacemakers, etc. may interfere with the normal functionality of the Tango M2 monitor.

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.

1. 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.
2. 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.
3. 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.

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 the 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:

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