

WEST BOND MANUAL WIREBONDERS

7730E

August 2017

OPERATING PROCEDURES

1.1 System Startup

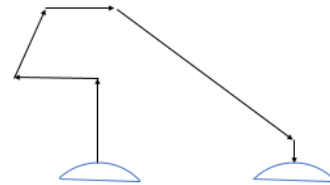
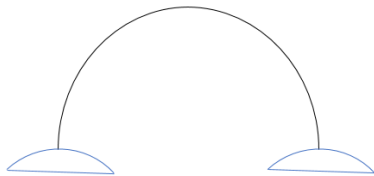
Follow these steps to start-up the machine:

- 1) Turn on the Heat Plate by flipping the power switch on the lower left hand of the machine. Wait to reach temperature of about 140 before proceeding past Startup steps This may take several minutes (About 4.5 minutes or 270 seconds)
- 2) Turn on the Bonder by flipping the power switch on the upper left hand of the machine
- 3) Make sure the compressed air is turned on and flowing through the tubes behind the machines.
- 4) Observe the settings displayed on the 7730E screen. The only parameters that should be adjusted are Power and Time. Increase time to allow the wire to stick more readily to the pad by increasing ultrasonic energy. Decrease the time if using a relatively thin substrate that may be compromised by the excessive power/heat. Power refers to Ultrasonic Power and affects how well the wire and sticks to the plate. To change Power or Time settings, press the EDIT switch from the main screen and use the PREV/NEXT switch to select a parameter or option. Use the UP/DOWN switch to adjust numbers for these settings. Then, press escape or go through the entire editing process to quit editing and start bonding. NOTE: A power level increase generally affects the bonds more than a time increase. (West-Bond Model 7730 High Frequency Ball-Wedge Bonder, p. 19)
- 5) Manipulate the microscope settings to find what best fits for you
 - a. Adjust each eye piece magnification intensity by spinning the rings right under the eye glass. Current magnification is the value that corresponds to the notch that is under the eye glass, but above the magnification ring (Generally keep at 0,0, but can adjust to match eye prescription if necessary)
 - b. Adjust distance between both eye pieces to allow vision through the scope to be possible and comfortable for both eyes. Slide eye pieces horizontally to adjust.
 - c. Adjust focus of microscope by turning the big knobs at the back of the microscope
 - d. Turn on microscope lights to optimize view of plates and wire.

1.2 Operation

Follow these steps to operate the machine:

- 1) After adjusting all the settings above, look through the microscope and use the joy stick on the right side of the machine to maneuver the wire end and to move it towards the center of the large gold plate (The ends are too unreliable and choosing to always aim for the center adds a consistency element). Listen for a clicking sound. Note that the clamp is capable of moving in all directions for this machine.
- 2) After the first end of the wire is attached, bring clamp directly upward and then outward (in the direction opposite to where the other end of the wire will be attached). This allows for the necessary wire length to be pulled out so that when the other end is connected to the next smaller plate, the wire will not be completely straight and in contact with the ground surface between the plates. Now, you can move the clamp toward the center of the second plate. Listen for a clicking sound. Follow the Path below on the right to create a loop like the one the left.
- 3) Repeat 1) and 2) as many times as needed.



1.3 Shutdown

Follow these steps to shut down the machine:

- 1) Turn off microscope lights.
- 2) Reset microscope focus to original setting, if necessary.
- 3) Reset microscope eye piece magnifications to 0,0, if necessary
- 4) Turn off the compressed air
- 5) Turn off the Bonder by flipping the switch on the upper left hand of the machine
- 6) Turn off the Heat Plate by flipping the switch on the lower left hand of the machine