

FINE PITCH FLIP CHIP BONDER FINEPLACERSOP

Revised April 2020

STARTING UP THE SYSTEM

1. Log into the FOM for access to the tool.
2. Turn **ON** power on the **Placer Control Box (1)**.
3. Start up the Computer, log in with the password: **microfab**
4. Open the WINFLIPCHIP software (icon on desktop) and enter the password: **finetech**. Select **Modification Mode**.
5. Open the **RECIPE FILE** for your bonding process.

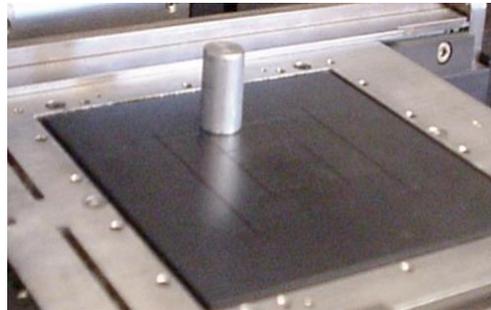


LOADING SAMPLES AND BONDING:

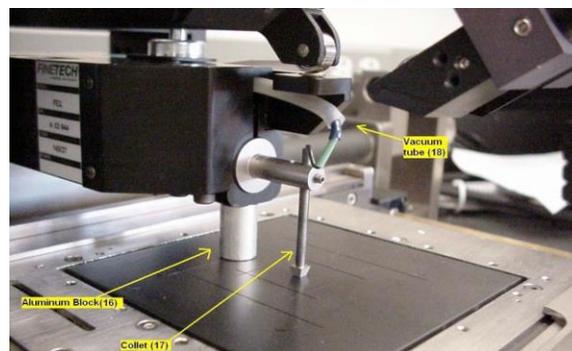
1. Clear the **Chuck** area and adjust lighting.
2. Look through the microscope and adjust the viewing area to achieve maximum magnification. Bring the surface of the chuck into focus by rotating the **Z-axis knob (11)**. Step on the appropriate foot pedal to move the chuck by hand and place the center vacuum hole of the chuck in the center of the viewing area.



3. Place the **aluminum block (16)** just below where the **right pivot arm (6)** will rest when it is lowered to the chuck.



4. Lower the right pivot arm to insert the collet. Make sure the collet can move freely in the right pivot arm.



5. Raise the right pivot arm.

6. Place the lower part of your sample onto the center of the chuck.

7. Lower the **right pivot arm (6)** onto the aluminum block and move the collet, so that it is in contact with the backside of the upper sample.

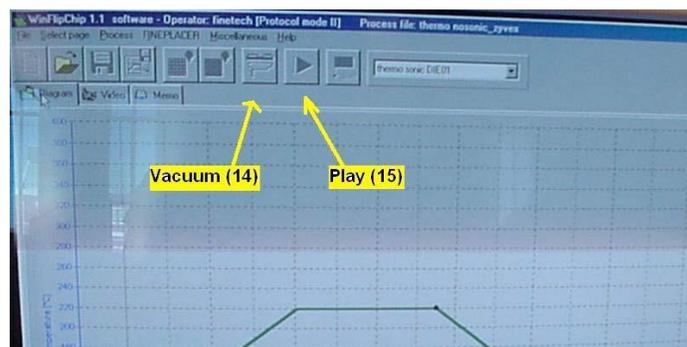
8. Lower the **left pivot arm (8)** and tighten the collet set screw firmly.

9. Turn **ON** the collet vacuum by pressing the right foot pedal situated on the floor. Your upper sample will be held by vacuum to the collet.

10. Raise both the left and right pivot arms.

11. Place your lower sample in the center of the chuck.

12. Apply vacuum by clicking the **vacuum button (14)** on the WINFLIPCHIP main screen.



13. Look through the microscope and adjust the z-axis knob (11) until the top of your bottom sample is in focus.

14. Look through the microscope and switch views from the microscope to the PC screen, by using the **Switch (9)** on the left side of the microscope. However, it is preferable to use the microscope view for alignment precision.

15. Apply vacuum by clicking the **Vacuum button (14)** showing on the WINFLIPCHIP main screen.

16. Perform a rough alignment by looking through the microscope and moving the chuck by pressing the left foot pedal on the floor.

Look through microscope. Both the upper and lower samples should be visible and overlaid onto each other. If the upper sample held by the collet is out of focus, adjust the focus knob near the collet. Both samples should be in focus and ready for alignment.

17. Align the lower sample to the upper sample by maneuvering the chuck using the x-axis, y-axis and rotation. **DO NOT ADJUST THE Z-AXIS.**

18. After alignment your samples ready for bonding.

19. Lower the right pivot arm to bring the top sample in contact with the bottom sample.

20. Lower the left pivot arm.

21. Select your recipe and click on **Play (15)** button on the WINFLIPCHIP main screen.

22. When recipe is finished processing raise the left pivot arm.

23. Remove collet vacuum with the right foot pedal.

24. Raise the right pivot arm.

NOTE: If your sample did not bond then your recipe may require editing.

25. Turn **OFF** the chuck vacuum by clicking on **Vacuum button (14)** in the WINFLIPCHIP main screen to remove sample.

SHUTTING DOWN THE SYSTEM

1. Exit the WINFLIPCHIP software.
2. Shut down the computer.
3. Turn **OFF** the **Placer Control Box (1)**.
4. Logout from the tool in your FOM account.