How to Run Bert - Using Reels -

1. Apply solder paste to the desired board
2. Add parts to be placed in the square boxes on Bert
    a. Make sure they are in the left most corner of the square boxes.
    b. They need to be aligned with how they will be placed on the board. There is no rotation to parts before they are placed on the board.
3. Check the instructions for placing reels on Bert.
4. Plug in the cart (the extension cord is located on the left side of the cart)
5. Turn on the computer, and log in based on the given login information
6. Plug the USB cords into the computer
7. Turn on Bert (button is located on the right side of the machine).
8. Insert USB containing *.dpv file for desired board.
    a. Follow the instructions on importing a new file.
9. Once the file is properly imported.
10. Open the application on the desktop labeled: "***SMTMain -Shortcut***"
11. Please ensure the machine is clear of any obstructions and that hands are clear.
12. An on screen prompt will appear: "***Please CONFIRM to zero the machine****"*. Select "***CONFIRM***"
    a. NOTE: The machine will begin to move quickly. Make sure you are not in its path
13. Confirm cameras are working.
    a. Choose the following to confirm cameras are working:
        i. "**Diagnostics**" -> "**Move**"
        ii. If the camera is not showing the silver of the machine, exit out of the program, turn off Bert, and unplug the USBs from the computer. Repeat steps 4 - 8 until you are able to see out of the camera.
14. Once cameras are working, click on the Green Back Arrow (located on the top right hand side of the screen, until you return to the main menu.
15. Select "**Run**" from the main menu.
16. Select the newly imported file and then select "***Edit****"*.
17. In the components tab, select "***Edit***"
    a. Select the box for "***Speed"***, and change it to "***50%***". This is to ensure the machine does not move too fast and disturb parts located in the reels.
    b. Use the green arrow to advance through each component.
18. Click the Green Back Arrow.

19. Click "***Save***".
20. Click *"**MSTACK**"*
    a. Click once on the row of designator "**U1**"
    b. Select "***EDIT***"
    c. In the box labeled "***Feed***" change the number to correspond with the appropriate feeder the reel is on.
    d. Select "***Coord. Set***".
    e. Use the arrows in order to match the crosshairs with the center of the part.
    f. Select "***Set***" when satisfied with the result.
21. Click the Green Back Arrow
22. Click "***Save***"
23. Select "***PCB Calibrate***" from the tabs.
24. Select "***Edit***"
    a. In the "***Coordinate X***" and *"**Coordinate Y**"* boxes, enter the X and Y coordinates of the first alignment fiducial (in mm).
    b. Repeat the above step for the second and third alignment fiducials.
25. Click on the Green Back Arrow.
26. Click *"**Save**"*
27. Select "***Calibrate***"
    a. Click on the **PLUS** symbol above "***Mark 1***".
    b. Align the crosshairs with the first alignment fiducial, be as accurate as possible. Click "***Save***".
    c. Repeat this process for "***Mark 2***" and "***Mark 3***".
28. Click "***Save***"
29. Click on the Green Back Arrow.
30. Ensure the file you want is highlighted blue, and then select"***Load***"
31. Select "***Run***"