

## ***Navigator***

### **1) Interface**

#### **a) Main**

- **Main**
- **Z Heights**
- **Align Wafer**
- **Index**

#### **b) Menu**

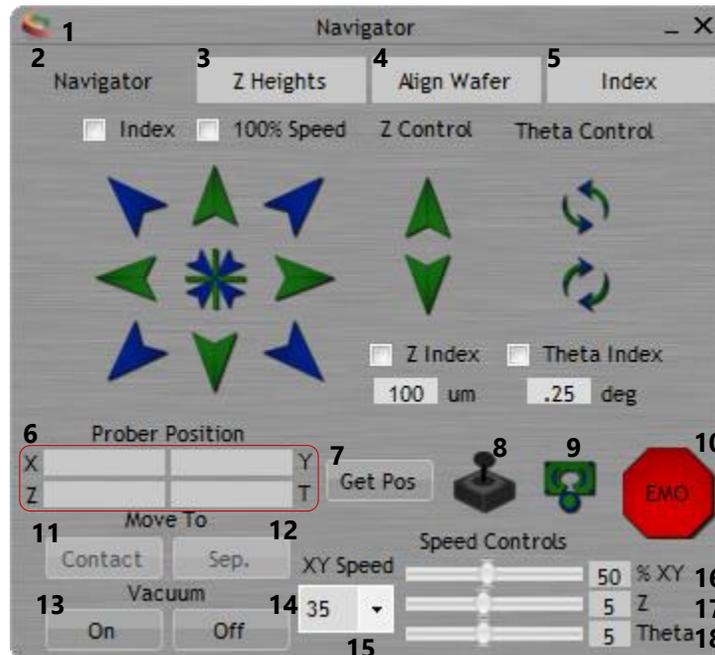
Navigator is the control hub for the probe system. The Navigator module can:

- align a wafer
- set index and Z heights
- control the theta direction
- bring the chuck to contact or separation
- turn the chuck vacuum on or off
- place a wafer in the load position
- enable the joystick
- Set Prober speeds

When a contact position is set the current state will display as a color combination of the Contact and Sep. buttons. The table below shows the color state of the buttons for the different states.

## 1) Interface

### a) Main



#### 1 Menu

**2 Navigator** - Display the Navigator tab.

**3 Z Heights** - Display the Z-Heights tab.

**4 Align Wafer** - Display the Align Wafer tab.

**5 Index** - Display the Index tab.

**6** Displays the X, Y, Z and Theta position of the prober when the Get Pos is clicked.

**7 Get Position** - Read current prober position.

**8 Joystick Control** - Click once to enable the joystick. Click again to disable. Icon colored when enabled.

**9 Load** - Bring the chuck to the load position.

**10 EMO** - Stop all movement of the prober.

**11 Contact** - Moves the chuck into contact.

**12 Sep.** - Moves the chuck into separation.

**13 On** - Will turn the vacuum on.

**14 Off** - Will turn the vacuum off.

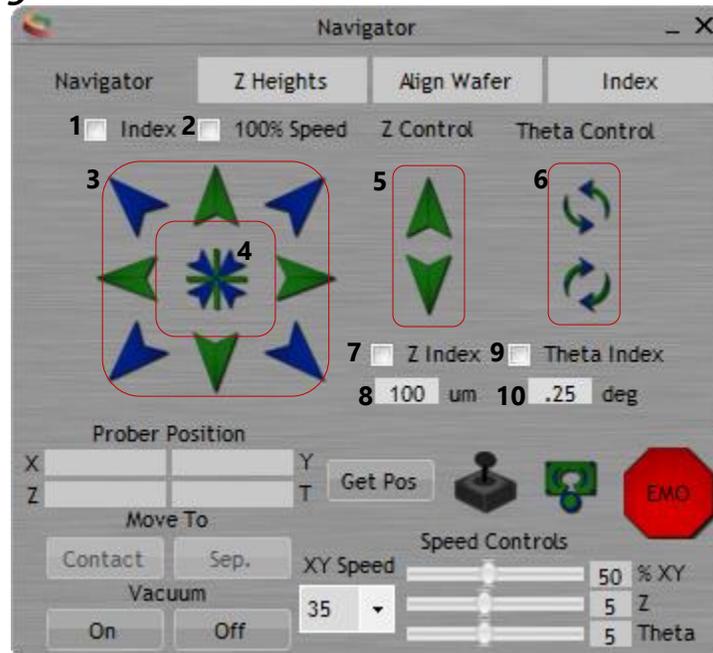
**15 XY Speed** - Choose a speed from the drop down list or enter a speed between .02 and 40.

**16 %XY** - Take a percentage of the speed in 16 and set that as the current XY speed of the chuck.

**17 Z Speed** - Control the Z axis speed.

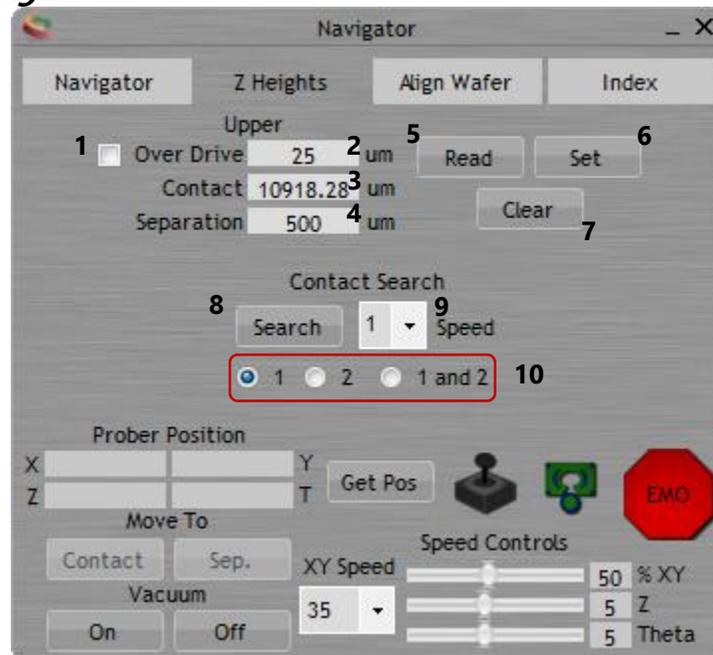
**18 Theta Speed** - Control the Theta axis speed.

- **Navigator**



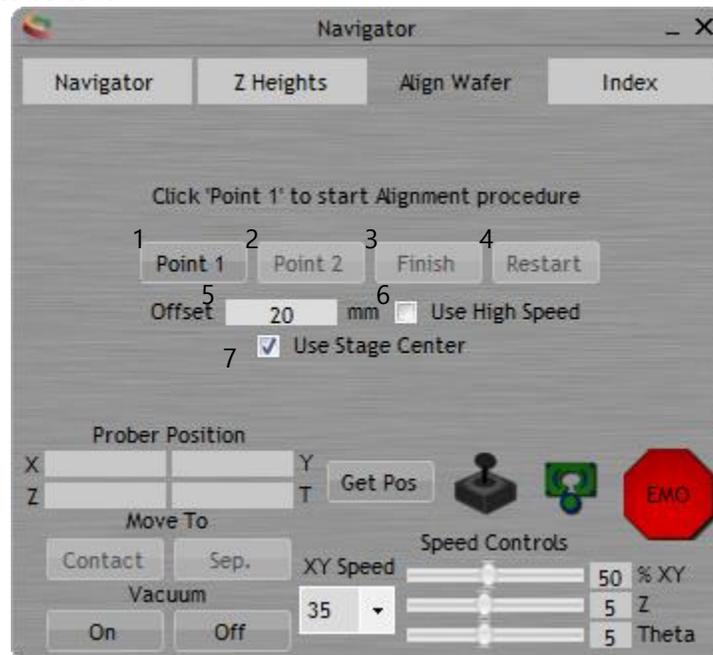
- 1 Index Move** - Move XY by index if checked.
- 2 Full Index Speed** - Move XY by max speed if in index mode.
- 3 Navigation Control** - Controls the XY direction of the chuck.
- 4 Move To Center** - Move to center of XY travel.
- 5 Z Control** - Move Z axis up or down.
- 6 Theta Control** - Rotate Theta clockwise or counter-clockwise.
- 7 Z Index** - Move Z axis by distance specified in 8 when 7 is checked and buttons in 5 are pressed.
- 8** Distance to move in Z index mode.
- 9 Theta Index** - Move Theta axis by distance in 10 when 9 is checked and buttons in 6 are pressed.
- 10** Distance to move in Theta index mode.

## - Z Heights



- 1 Over Drive** - Check to add over-drive value to contact position.
- 2** Specifies the over drive value to add to the Z height in 3 if 1 is checked.
- 3** Displays the Z position when 5 is pressed and indicates the value to use as the contact position.
- 4** Specifies the distance to move from the contact position in 3 when a separation command is issued.
- 5 Read** - Read the current Z height and set this value to the Contact text box.
- 6 Set** - Set the Over Drive, Contact and Separation heights of the prober by the corresponding textboxes.
- 7 Clear** - Clear all the Z height information in the prober.
- 8 Search** - Raise the Z axis until contact is reached with the wafer and the contact circuit. Once contact is made, this height will be set as the contact height.
- 9** Controls the speed at which the z axis will rise when searching for contact.
- 10** Controls which contact circuit to use when performing the Contact Search.

## - **Align Wafer**



**1 Point 1** - Begin the two point alignment procedure to align the wafer by moving to the first alignment position and manually moving to the point you wish to align.

**2 Point 2** - Move prober to position 2 and manually move the prober to the second point you want to align to.

**3 Finish** - Finish the wafer alignment and move the Theta position to bring the wafer into alignment.

**4 Restart** - Restart the alignment process.

**5** Value used when 1 or 2 is pressed and 7 checked.

**6 Use High Speed** - Check to use the full default XY speed as the XY speed of the chuck, otherwise the XY speed will be the current XY speed. This speed is only used when 1 or 2 is pressed and 7 checked.

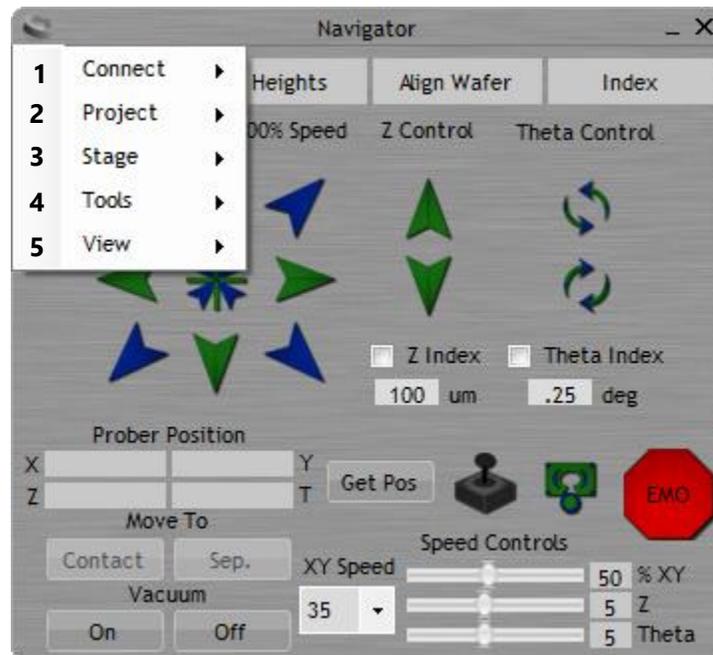
**7 Use Stage Center** - When checked, the prober will move to a point off the center of the X axis as specified by the value in 5 when wither 1 or 2 is pressed. If unchecked, the user manually moves to the points to be used for the alignment.

- **Index**



- 1 Pos 1** - Read the current position of the chuck and use the XY values for the first XY position.
- 2 Pos 2** - Read the current position of the chuck and use the XY values for the second XY position.
- 3 Calculate** - Subtracts position 2 from position 1 and divide by # Dies to give the XY index.
- 4 Set Index** - Set the XY index values of the prober.

## b) Menu



- 1 Connect** - Displays option to connect to the SemiServer or Prober.
- 2 Project** - Displays options for system project handling.
- 3 Stage** - Displays stage settings the user can adjust.
- 4 Tools** - Displays tools available to the user.
- 5 View** - Display option to toggle interface from normal to minimal view.