



QUINTEL MASK ALIGNER

POWER UP PROCEDURE

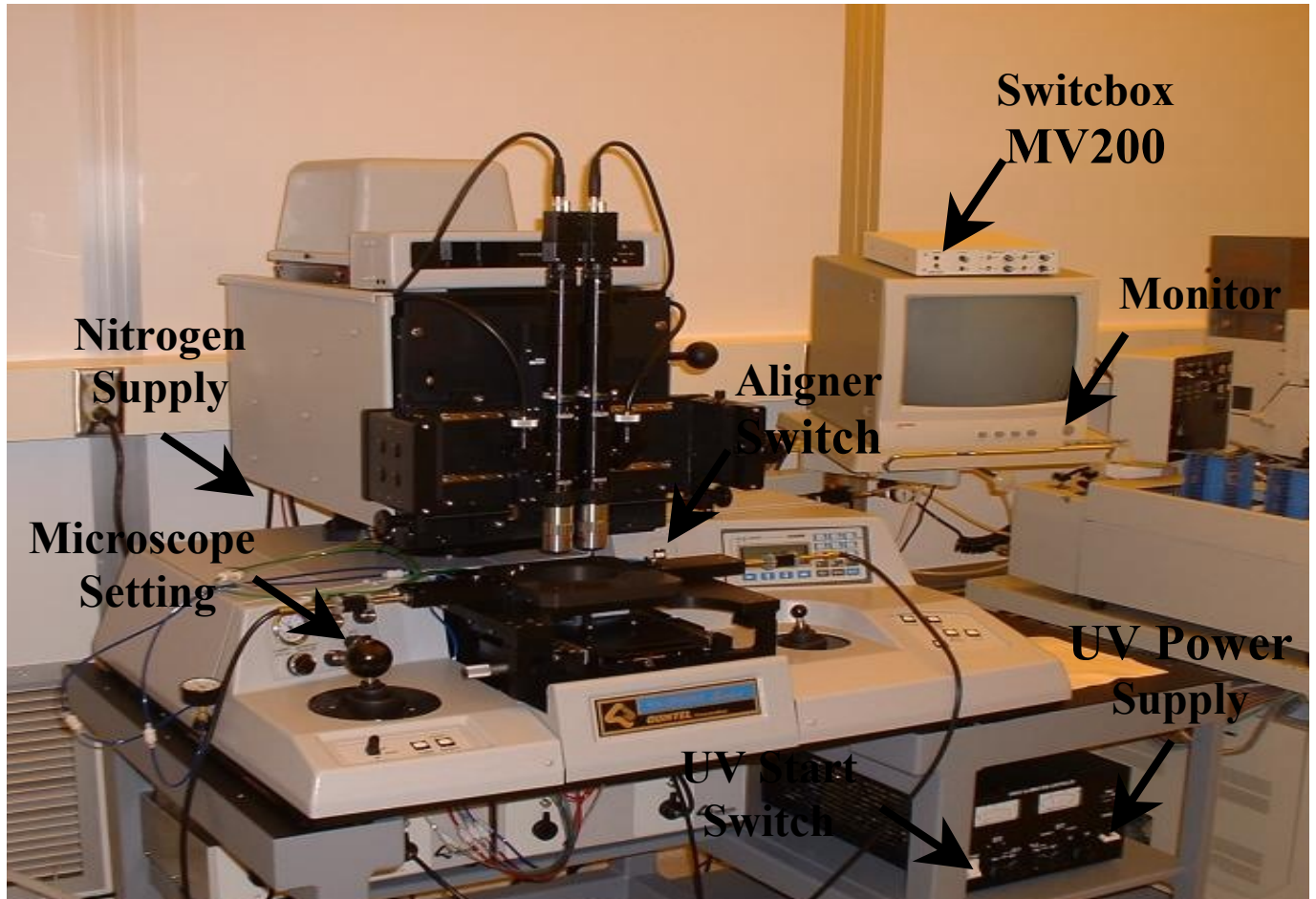
The QUINTEL is powered up using the procedure below (see figure on page 2):

1. Turn on **nitrogen supply** using the valve located behind the aligner
2. Turn on the **switchbox (MV 200)** located on top of the monitor
3. Turn on the **monitor**
4. Turn on the **UV power supply** and press the **START** switch. Voltmeter will read *50V* after a few seconds.
5. Turn on the aligner **power switch**
6. Set **microscope setting** to **MIC**

POWER DOWN PROCEDURE

The QUINTEL is powered down using the procedure below (see figure on page 2):

1. Set **microscope setting** back to **OFF**
2. Turn off the **UV power supply**
3. Turn off the **aligner** using the keypad and display:
 - a. Press **ENTER** to display the main menu
 - b. Press **#6 (Power Off)** and press **ENTER** .
4. Turn off the **monitor**
5. Turn off the **switchbox MV200**
6. Close the **nitrogen supply** valve



SETTING UP QUINTEL PARAMETERS:

1. Press **ENTER** to display the main menu.
2. To set expose time (see table below):
 - select the *ExpTime* parameter by pressing #1
 - press **INSERT** and use the keypad to input the required expose time
 - press **ENTER** to accept the input
 - press **ENTER** to go back to the main menu
3. To set printing (exposure) options (see table below):



- select the *PrMode* parameter by pressing #2
- select the required printing (exposure) mode using the keypad. (asterisk appears next to selected printing mode)
- press **ENTER** to go back to the main menu

PARAMETERS FOR COMMONLY USED PHOTORESISTS:

PHOTORESIST	EXPOSURE TIME	PRINTING OPTIONS
Shipley 1813	5 seconds	Pressure Contact
Shipley 1818	5 ~7 seconds	Pressure Contact

EXPOSING WAFERS

1. Power up the machine and review/change the expose parameters as necessary.
2. Using the right hand joystick control, center the chuck in the mask holder opening.
3. Loading the mask:
 - place mask, pattern side down, on top of the mask holder
 - align the edges of the mask against the mask stops at the left rear
 - press **MASK VACUUM** to hold mask in place
 - using the left hand joystick control and the microscope controls locate the mask alignment marks in their respective fields on the monitor
 - press **MASK VACUUM** and rotate the mask against the stops if further alignment is required
 - upon satisfactory positioning press **MASK VACUUM** to hold the mask in place



4. Loading the substrate:

- pull tray out and position a substrate on the chuck
- pre-align the wafer by aligning the wafer flat to the pre-align block
- press **LOAD** on the lower right panel and flip the pre-align block back
- push the tray in
- coarse align the wafer by using the right hand joystick control and the **COARSE ALIGN** button (located on the lower left panel)
- θ motion is controlled with the left hand micrometer control
- for fine wafer alignment, do not press the coarse align button when using the right hand joystick control
- press **CONTACT** on the lower left panel once satisfactory positioning is achieved
- zoom the objectives to a higher power and verify the alignment accuracy
- adjust alignment if required by pressing the **SEPARATE** button on the lower left panel and re-aligning as necessary
- press **CONTACT** on the lower left panel once satisfactory positioning is achieved (repeat re-alignment steps as necessary to achieve acceptable alignment)
- press the **EXPOSE** button on the front right panel to initiate expose
- pull tray and unload wafer when display reads *UNLOAD WAFER*