

# SET-UP PROCEDURE

## 1.0 Initial Startup

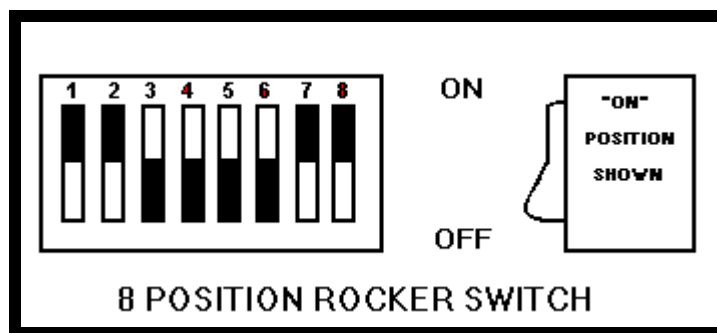
- 1.1 Pressing "HOME - FOCUS UP - FOCUS DOWN" buttons at same time during motor initializing will initiate a setup allowing a reference focal plane setting. Completion of paragraph 2.0 procedure will set all objectives and homes to the same focal plane (default reference focal plane).

## 2.0 Default Reference Focal Plane Setting

- 2.1 Switch Teletrac autofocus pendant into "manual".
- 2.2 Focus microscope "manually".
- 2.3 Using "FOCUS ADJUST" knob only, turn until green focus light is illuminated on laser head.
- 2.4 Switch Teletrac autofocus pendant into "auto".
- 2.5 Press "HOME" button once to enter fine alignment mode.
- 2.6 Use "FOCUS UP" or "FOCUS DOWN" buttons only to set default reference focal plane.
- 2.7 After desired reference focal plane setting is obtained press the "HOME" button to exit this mode.

## 3.0 Alignment Parfocality

- 3.1 Remove metal bottom cover (4 Phillips screws) from Autofocus pendant.
- 3.2 Push switch rocker # 7 to "ON". (Opposite Open)



Black Indicates "ON"

### Typical Switch Positions

1	Objective #1 Gain	"ON"
2	Objective #2 Gain	"ON"
3	Objective #3 Gain	"OFF"
4	Objective #4 Gain	"OFF"
5	Objective #5 Gain	"OFF"
6	Soft Limit Adjust	"OFF"
7	Parfocality Adjust	"ON"
8	Current Position	"ON"

- 3.3 Change to objective #1 (5X) using Microscope Pendant.
- 3.4 Adjust focus using "FOCUS UP" or "FOCUS DOWN" buttons only.
- 3.5 When desired focus is obtained, press the "HOME" button to store focal plane.
- 3.6 Repeat steps 3.3, 3.4, and 3.5 substituting different objectives for step 3.3 until all objectives are parfocaled.
- 3.7 Push rocker # 7 to "OFF".
- 3.8 Install metal bottom cover.

#### 4.0 Soft Limits Adjustment

- 4.1 Remove metal bottom cover (4 Phillips screws) from Autofocus pendant.
- 4.2 Push switch rocker # 6 to "ON".
- 4.3 Using "FOCUS ADJUST" knob or "FOCUS UP" or "FOCUS DOWN" buttons, adjust focus the minimum offset required to fully focus all different substrates "Peaks and Valleys" (height and depth) to the upper direction (Stage increasing height or focus up).
- 4.4 When desired height is obtained, press "HOME" button to store upper limit value for this objective.
- 4.5 Using "FOCUS ADJUST" knob or "FOCUS UP" or "FOCUS DOWN" buttons, adjust focus the minimum offset required to fully focus all different substrates "Peaks and Valleys" (height and depth) to the lower direction (Stage decreasing height or focus down).
- 4.6 When desired height is obtained, press "HOME" button to store upper limit value for this objective.
- 4.7 Repeat steps 4.3, 4.4, 4.5 and 4.6 for each objective.
- 4.8 Push rocker # 6 to "OFF".
- 4.9 Install metal bottom

#### 5.0 Objective Gain Adjustment

- 5.1 Remove metal bottom cover (4 Phillips screws) from Autofocus pendant.
- 5.2 Switch positions 1 thru 5 represent objectives 1 thru 5 respectively. To

increase gain for a particular objective, simply push that switch rocker to "ON". Gain may be obtained for no objectives, random objectives or all objectives, depending which switch rockers have been switched to "ON".

5.3 Install metal bottom.

## 6.0 Parfocality Reset

6.1 In the event parfocality on all objectives are out in the same direction, the Autofocus may be reset by:

6.1.1 First pressing and holding down the "HOME" button.

6.1.2 Then, at the same time press both "FOCUS UP" and "FOCUS DOWN" buttons together.

6.1.3 Release all three buttons.

6.2 The trim motor will now touch the limit switch, then relocate to the parfocality position for the objective selected at that time.

6.3 Parfocality should be restored for all objectives.

## 7.0 Normal Operation (current position "OFF")

7.1 "FOCUS UP" and "FOCUS DOWN" buttons will adjust focus with infinite resolution. Precise focus should be obtained by pressing these buttons.

7.2 "FOCUS ADJUST" knob will adjust focus with infinite resolution. Precise focus should be obtained by rotating this knob clockwise or counter-clockwise.

7.3 Should it be desired to rapidly return to the "Default Reference Focal Plane" position for the current objective, pressing the "HOME" button located on the side of the Pendant will drive the focus to this position.

## 8.0 Normal Operation (current position "ON")

8.1 "FOCUS UP" and "FOCUS DOWN" buttons will adjust focus with infinite resolution. Precise focus should be obtained by pressing these buttons.

8.2 "FOCUS ADJUST" knob will adjust focus with infinite resolution. Precise focus should be obtained by rotating this knob clockwise or counter-clockwise.

8.3 Should it be desired to rapidly return to the "Default Reference Focal Plane" position for the current objective, pressing the "HOME" button located on the side of the Pendant will drive the focus to this position.

8.4. Changing objectives will result in the last current focal plane position will be stored while leaving that objective and then last current focal plane position will be restored to next new objective. This feature is advantages for inspection of substrates with different topologies between lots.