Manually Zeroing the TFX Head to a Plate or Sleeve

Product

Kodak® ThermoFlex® Wide II

Component TFX Head

Background

The z-stage must be in the correct position before the TFX head can be properly focused. This procedure explains how to correctly calculate the z-stage position to overcome TFX head zeroing problems.

1. Load the media to be focused on either the drum or sleeve.
2. Initialize the carriage and z-stage:

   `flexo>>zdrive init`

   `flexo>>carriage init`
3. Close and lock the table.

   `flexo>>table lock`
4. Select the media type to be measured.

   `flexo>>list media` Shows media types by number

   `flexo>>media <#>` Selects media type where # is the number of the media
5. Calculate the optimal position of the z- stage to be in focus on the media:

   Optimal Z-drive Position = zac basefocustdist – radius from centre of drum

   a. To determine the **basefocusdit** value:

      `flexo>>set zac basefocusdist`

   b. To determine the **radius from centre of drum** value:

      For media on the drum = 216 + media thickness

      For sleeve = Sleeve diameter divided by 2

   c. Calculate z- stage position:

      Drum media example: 256.237 – (216 + 1.7) = 38.537

      Sleeve example: 256.237 – (190/2) = 161.237
6. Move the head into focus position on the surface:

   `flexo>>carriage moveto 210` Moves the carriage over the media

   `flexo>>drum init` Initializes the drum

   `flexo>>zdrive moveto <xxx>` Moves z- stage to focus position

   (where **`xxx`** is the value from step 5)

7. Check the SUM and ERROR:

   `flexo>>focus postion`

   Example result: **`>>focus position 13`**

   `>>focus sum 1200`

   OR

   `tfx>>focus install on`

   Example result:

Sum	Error	Lens Position	Focus Actuator Current
1200	13	0.01	.98 amps

   A good result is SUM = 1200 and Position/ERROR = 0

8. If the SUM is 2047 or higher, the focus system is saturated and the error reporting will not be accurate. Recalibrate the focus laser:

   a. **`tfx>>eng`**

      `tfx>>foc cal reflect`

      A surface reflectivity (SR) value is reported.

   b. Enter the SR value in the appropriate media type:

      `tfx>>set med # sr <xxx>`

   c. Reload the media type:

      `flexo>>media <X>`

   d. Check the SUM and ERROR again:

      `flexo>>focus postion` or **`tfx>>focus install on`**

   The SUM should be 1200.

9. If the SUM is less than 256, the focus system will not work and the error reporting will not be accurate.

   Move the z-stage forward and back around the position determined in step 5.

   Note: The z- stage moves in millimeters and error is reported in microns. If the focus error is negative 100, move the z- stage back 0.1 mm. If the focus error is positive 100, move the z- stage forward 0.1 mm.

10. If the SUM does not get higher than 256 by adjusting the z-drive position:

    a. Verify that the head is positioned correctly in front of the media.

    b. Change the value of SR using the **`tfx>>foc cal reflect`** command.

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Date submitted	07 May 2008
Last updated	27 May 2008