

Bare Fiber Polishing with Scepter™

The following is a typical example of bare fiber polishing with Scepter™. A bare fiber polishing program usually consists of three operations: 1) bare fiber adapter leveling, 2) fiber loading and 3) the polishing steps (rough grind and fine polish).

After a bare fiber polishing program has been activated, the Scepter™ will request that the proper workholder be engaged with the base polisher (Figure 1107-1). Click “OK”

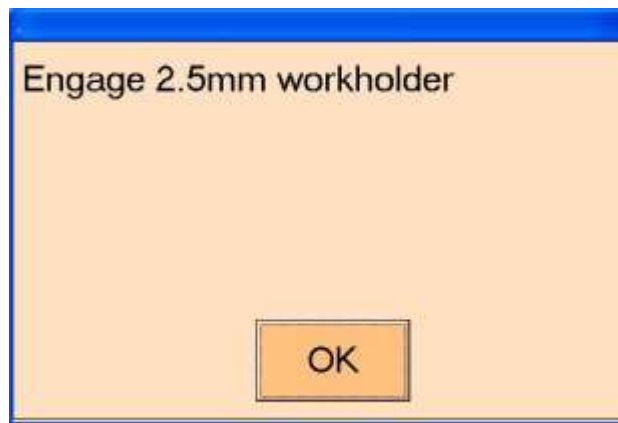


Figure 1107-1

Bare Fiber Adapter Leveling (see Application Note 1007 for description and programming)

The technician is prompted to place a glass reference disk into the polishing platen. See Figure 1107-2. At this time, there is no workholder movement. Click “OK”.

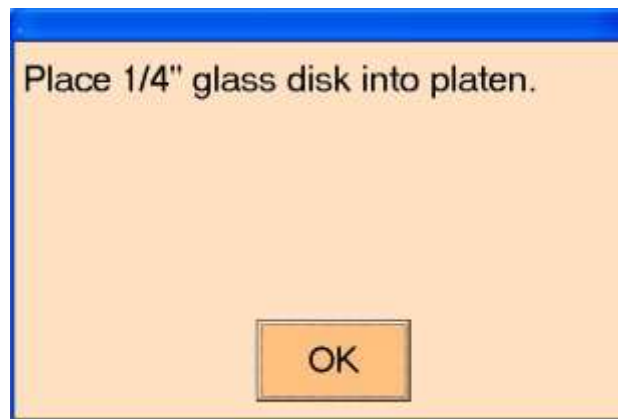


Figure 1107-2

The workholder will move to the “Adapter Leveling Position” into close proximity of the glass reference disk. In this position, the technician is prompted to load the bare fiber adapters into the workholder until their ferrule tips make contact with the glass disk. See Figures 1107-3, 4 and 5).

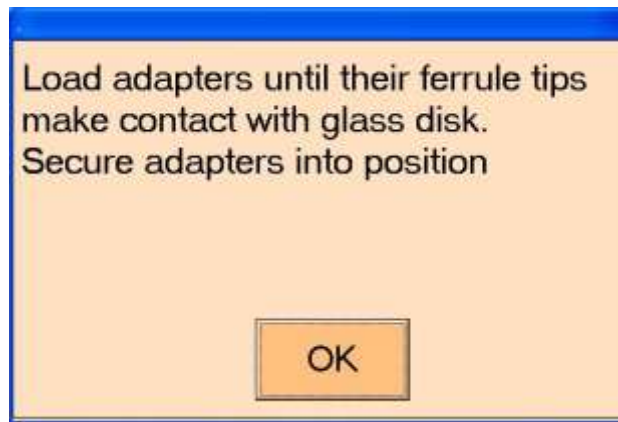


Figure 1107-3

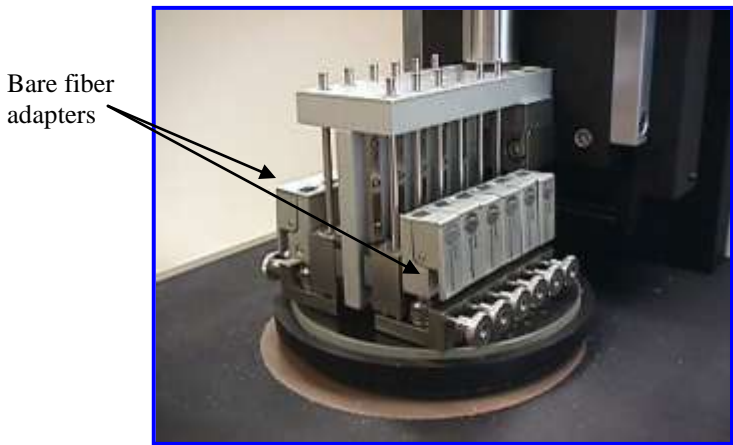


Figure 1107-4

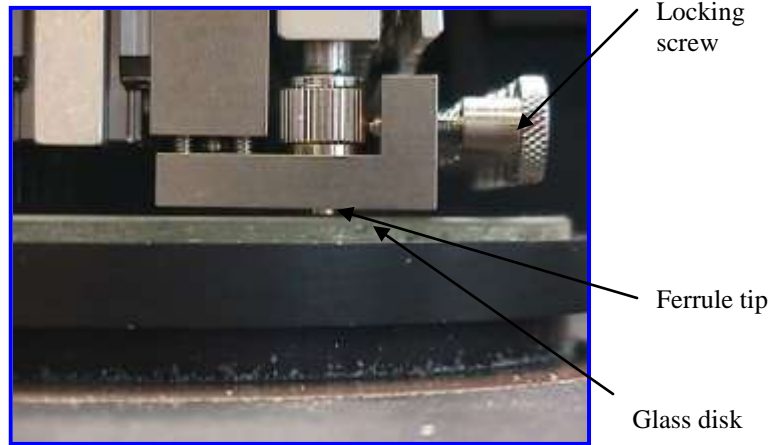


Figure 1107-5

After each adapter have been loaded, secure it into position by turning the workholder locking screw. Click “OK” to continue. The workholder will be returned to its Home position.

Fiber Referencing (see Application Note 1007 for description and programming)

The technician is prompted to remove the glass disk and replace it with the purple pad with 9um polishing film on the top surface. See Figure 1107-6. Click “OK”.

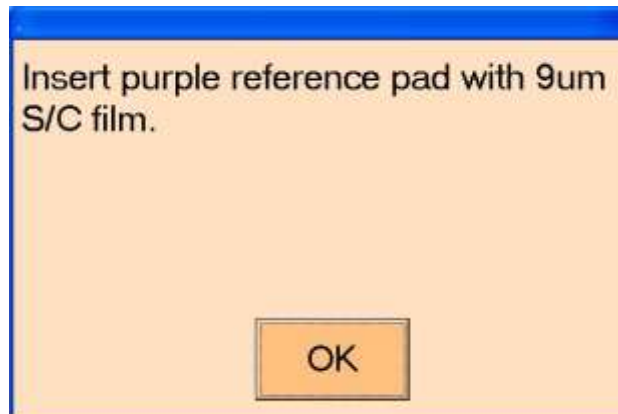


Figure 1107-6

Upon clicking “OK”, the workholder will move to the “Reference Position” above the polishing film surface, and the technician will be instructed to insert the bare fibers. See Figure 1107-7.

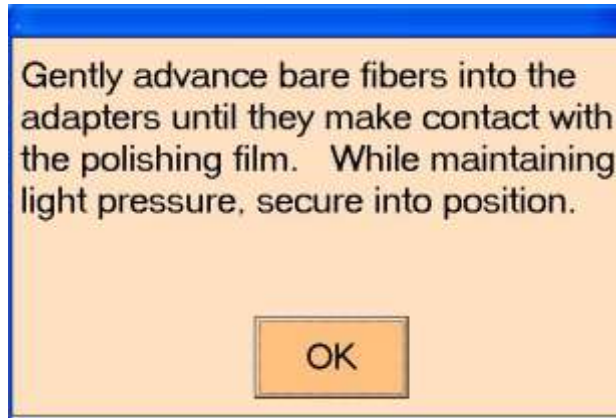


Figure 1107-7

While pressing the spring-loaded adapter, carefully insert the fibers until they make contact with the polishing film. **While maintaining light downward pressure on the fiber**, release the adapter’s spring-loaded securing mechanism. See Figures 1107-8 and 9.

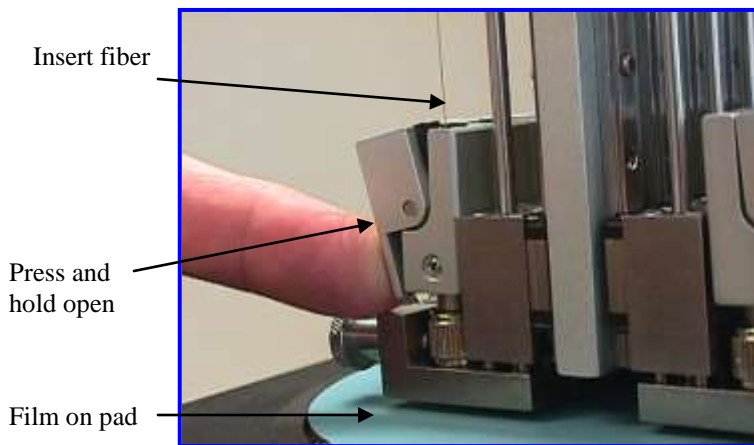


Figure 1107-8

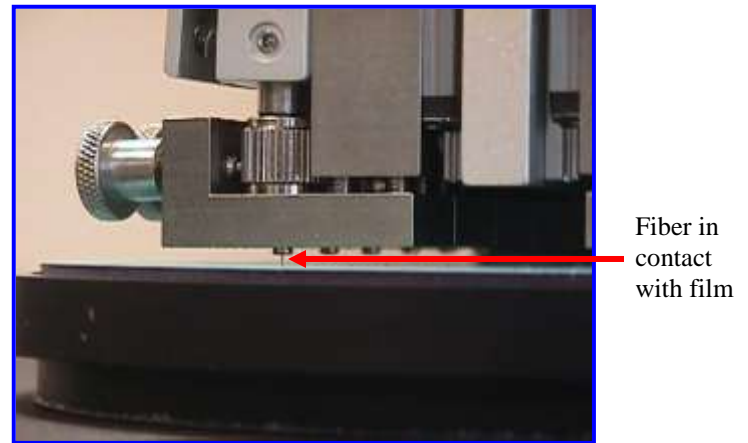


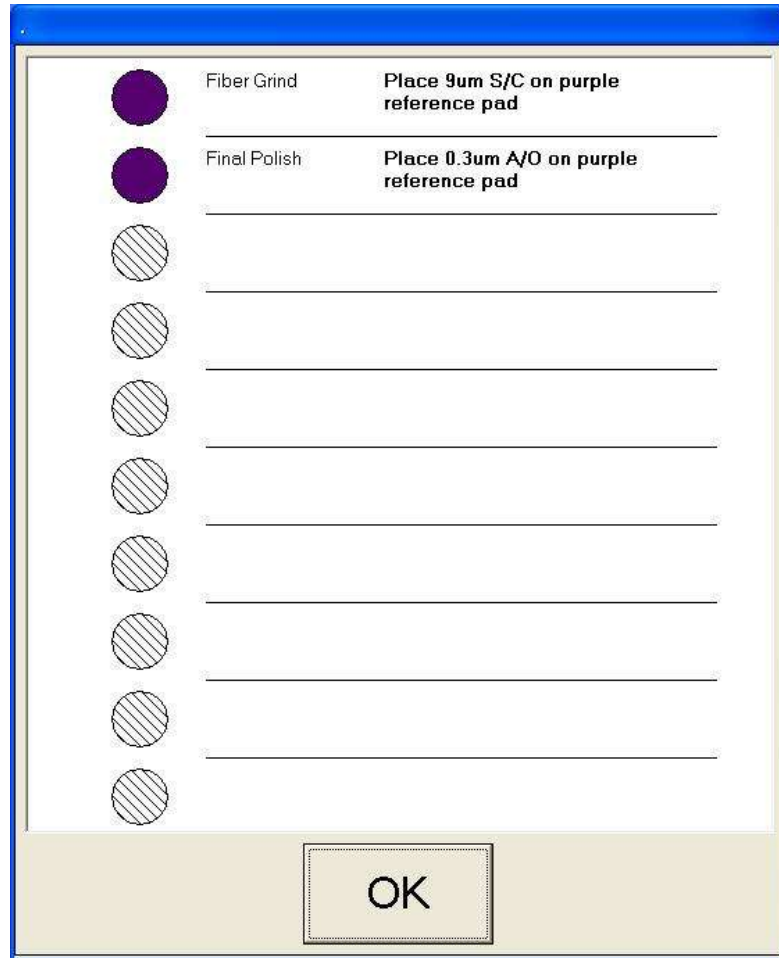
Figure 1107-9

When all the fibers have been secured, press “OK” to continue.











Polishing Steps

The polishing sequence summary is presented (Figure 1107-10). Depending upon the fiber diameter and material, there may be one or several steps. A typical program consists of a “grind” step (to clean and flatten the bare fiber) and a “polish” step (to provide a fine surface finish). Click “OK”

Figure 1107-10



A dialog box with a blue border and a light beige background. On the left, there is a vertical list of ten circular icons. The first two are solid purple, and the remaining eight are white with diagonal hatching. To the right of these icons are two rows of text, each followed by a horizontal line. The first row is labeled 'Fiber Grind' and the second 'Final Polish'. Below these are eight more horizontal lines, corresponding to the hatched icons. At the bottom center, there is a rectangular button with the text 'OK'.

	Fiber Grind	Place 9um S/C on purple reference pad
	Final Polish	Place 0.3um A/O on purple reference pad
		
		
		
		
		
		
		
		

OK

Continue to follow instructions as prompted. See Figures 1107-11 and 12.



A dialog box with a blue border and a light beige background. At the top left, there is a solid purple circle with the number '1' next to it. To its right, the text 'Fiber Grind' is displayed, followed by 'Place 9um S/C on purple reference pad'. The main area of the dialog is empty. At the bottom, there are two buttons: 'Ok' and 'Reference'.

Fiber Grind Place 9um S/C on purple reference pad

1

Ok Reference

Figure 1107-11



A dialog box with a blue border and a light beige background. At the top left, there is a solid purple circle with the number '2' next to it. To its right, the text 'Final Polish' is displayed, followed by 'Place 0.3um A/O on purple reference pad'. The main area of the dialog is empty. At the bottom, there are four buttons: 'OK', 'Repeat Step 1', 'Previous Steps', and 'Reference'.

Final Polish Place 0.3um A/O on purple reference pad

2

OK Repeat Step 1 Previous Steps Reference

Figure 1107-12

Note: After each step, the option of repeating the previous steps is available. Additionally, if it is necessary to re-reference the fibers (i.e. further advance the fibers from the adapter ferrules) before proceeding to the next step, the “Reference” button is available.

At the end of the polishing procedure, a “touch-up” menu is available. See Figure 1107-13.



Figure 1107-13

If inspection deems additional polishing, any previous step in the program can be executed.

If all fibers pass inspection, they can now be removed. By selecting “Reference” the program will return to the referencing procedure (by-passing the adapter leveling routine), and a new set of fibers can be loaded.