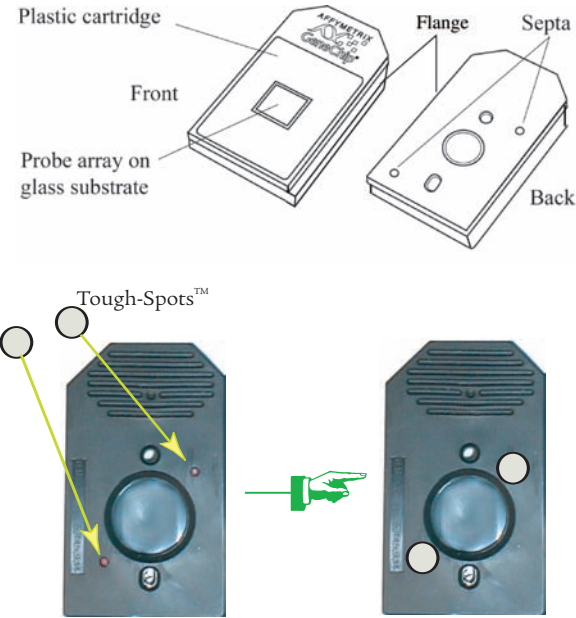


Proper Use of Tough-Spots™ To Prevent Leaking

Before scanning the probe array cartridge, follow this procedure to prevent the leaking of fluids from the cartridge during scanning.

1. On the back of the probe array cartridge, clean excess fluid from around septa.

2. Carefully apply one Tough-Spot over each of the two septa. Press to ensure that the spot remains flat. If the Tough-Spot does not apply smoothly; that is, if you observe bumps, bubbles, tears or curled edges, do not attempt to smooth out the spot. Remove the spot and apply a new one.



3. Insert the cartridge into the scanner and begin scanning. If you observe a focus error message, remove the cartridge and remove the spot and apply a new spot. Ensure that the spots lie flat.

Note: Apply new spots just before scanning. Do not use the same spots that may have been used during the overnight hybridization or applied after fluidics washing.

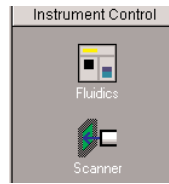
Also: To reduce the risk of leakage, do not use excessively large pipette tips to apply solution to pierce the septa.

Affymetrix recommends the use of Tough-Spots™ obtained from Affymetrix P/N 64-0158 or from USA Scientific, Inc. P.O. Box 3565 Ocala, FL 34478 (800)LAB-TIPS P/N 9185-0000

Starting the GeneChip® Scanner 3000 7G

Press the I/O button to turn on the scanner; the laser automatically is turned on. The laser takes 10 minutes to warm up and stabilize. During the initial power up (CPU boot up), both the green and yellow lights will be off. During the scanner boot up, both the green and yellow lights will be on.

GCOS Instrument Control Shortcut Bar

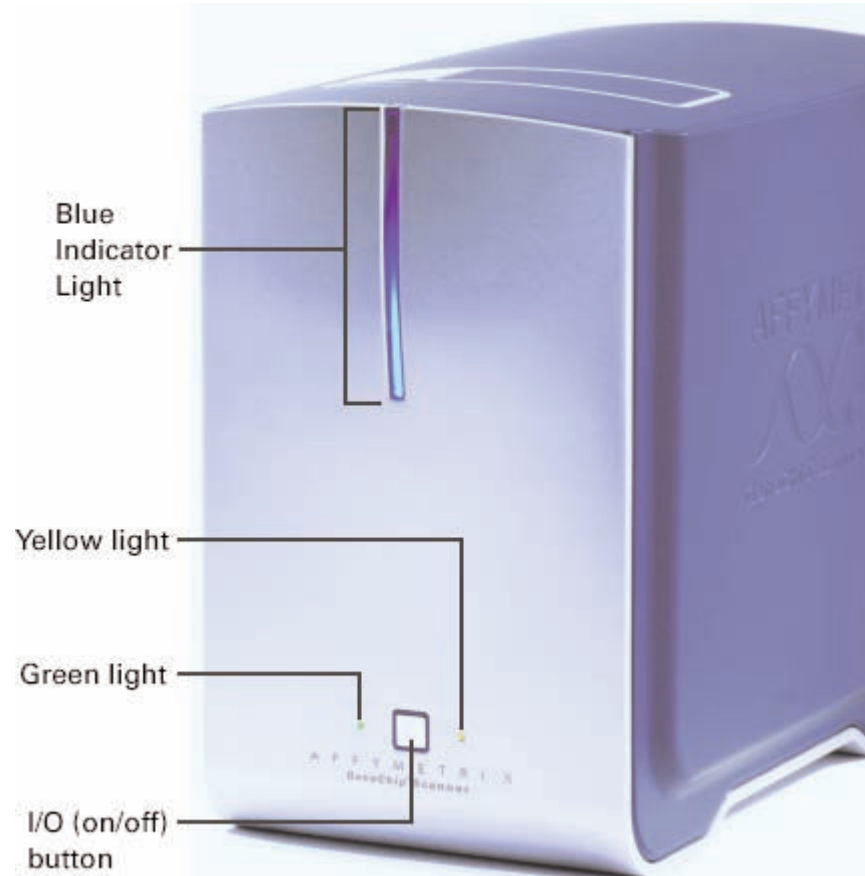


Opens the Station Selection and Fluidics Station dialog box (the same as **Run→Fluidics**).

Opens the Scanner dialog box (the same as **Run→Start Scanner**).

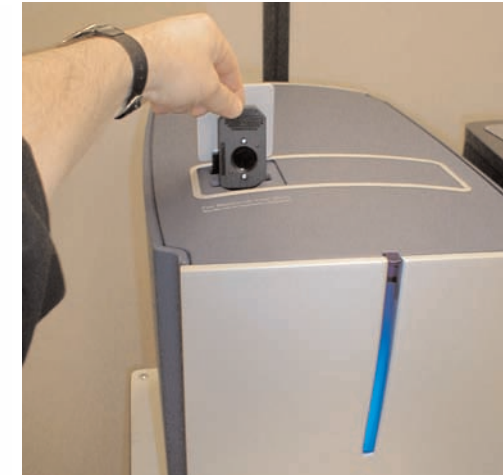
Scanner Indicator Lights

Three lights on the front panel of the scanner indicate the scanner's various states.




Green	Yellow	Blue	Indication
OFF	OFF	ON	Initial boot up
ON	ON	ON	Scanner boot up
OFF	ON	ON	Laser warm up
OFF	Flashing	ON	Scanner in error
ON	OFF	ON	System is ready
Flashing	OFF	ON	Scan in progress

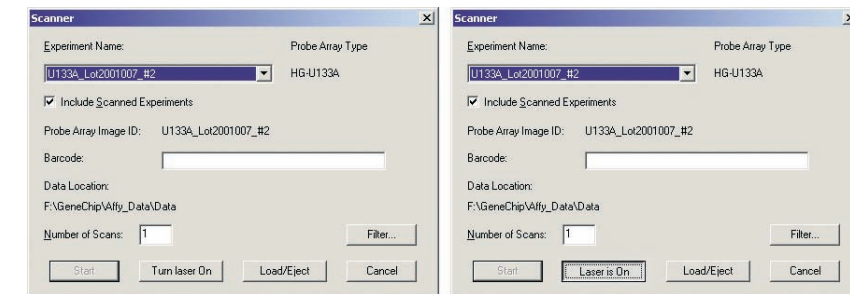
Inserting a GeneChip® Probe Array Cartridge



At the software prompt, insert the GeneChip® probe array cartridge into the chip transport unit and seat snugly as shown on the right. The front of the probe array cartridge (the white label side) must be facing the rear of the scanner.

Scanning a Probe Array


1. Click the **Scanner** button  in the Instrument Control shortcut bar or in the main toolbar, or click **Run→Start Scanner**. The Scanner dialog box opens.
2. If the scanner is in sleep mode, click the **Turn Laser On** button and wait 10 minutes for the laser to warm up. When the laser is ready, the **Start** and **Load/Eject Chip** buttons will highlight.
3. To include scanned experiments in the Experiment Name drop-down list, choose the **Include Scanned Experiments** option.
4. Select the experiment name of the probe array to be scanned from the Experiment Name drop-down list.
5. To average several scans, type in the number of Scans for this experiment.
6. Click **Start** in the Scanner dialog box. The scanner options window opens.
7. Load the probe array in the scanner as prompted and click the **OK** button. The scanner door will close itself and a scan will commence.

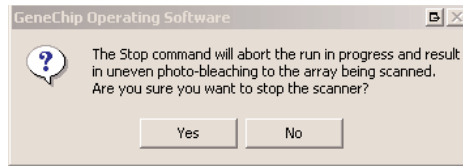


Scanner dialog box, laser off (left) and laser on (right)

Note: If the scanner has entered Park state with a probe array cartridge still in the Chip Transport Mechanism, press the Eject Chip button to raise the cartridge from the scanner.

Stopping a Scan

1. Click the **Stop** toolbar button  or select **Run→Stop Scanner** from the menu bar.
2. At the prompt, click **Yes** to stop the scanner or **No** to resume scanning.
3. If you click **Yes**, you will lose the data from a partial scan. This is different from earlier software versions where you could save the data from a partial scan as a .dat file.
4. After you stop a scan, the scanner will automatically eject the chip.



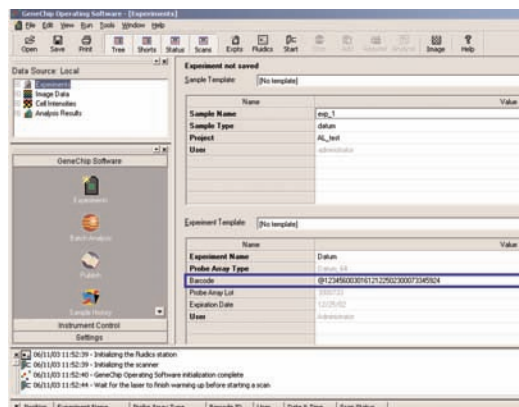
Caution: If you stop the scanner while a probe array is in the process of scanning, you will lose all scan information from that probe array. If you rescan the array, it may be affected due to uneven photo-bleaching. This could potentially make the data from the array difficult to compare to other array data.

Shutting Down the Scanner

1. Close the GCOS software. This is the best way to shut off the laser.
2. Press the I/O button on the front panel to turn off the instrument.

Scanning the Cartridge Barcode

1. Open the GeneChip® Operating Software (GCOS) to the Experiment Information window and place the cursor in the Barcode field.



Note: A new experiment must be opened for each barcode.

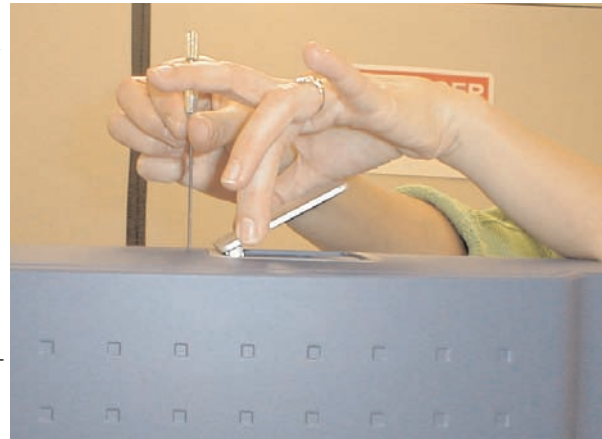
2. Hold a GeneChip probe array cartridge in front of the barcode reader.
3. Squeeze the trigger until you hear a beep. The reader reads and sends the barcode to the GCOS Experiment Information window, Barcode field.
4. After the software adds the barcode, save the experiment.
5. Repeat steps 1 to 4 until all of the probe array cartridges have been read.



Manually Extracting a Probe Array Cartridge

If your probe array cartridge becomes stuck in the scanner, remove the cartridge in the following steps.

1. Shut down the scanner.
2. Insert a paper clip or small Allen wrench into the rescue hole on top of the scanner and press to partially lift the cartridge loading door.
3. Using your fingers, gently lift the front edge of the door. As you lift the front edge, lift the back edge approximately 1/4" to open the door straight up to expose the rescue screw in the front.
4. Using a standard (-) screwdriver, turn the screw in a clockwise direction until the probe array cartridge ascends, then grab the cartridge and lift it out.
5. Rescrew the chip transport mechanism.



Note that the screw is fine pitched and requires a number of turns. Stop if you encounter screw resistance. Do not over torque.

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Class I Laser Product



Affymetrix GeneChip® Scanner 3000 7G

Quick Reference Card

This card provides you with a quick tour of the operation of the GCS3000 7G.

