

Controlling the Scanner

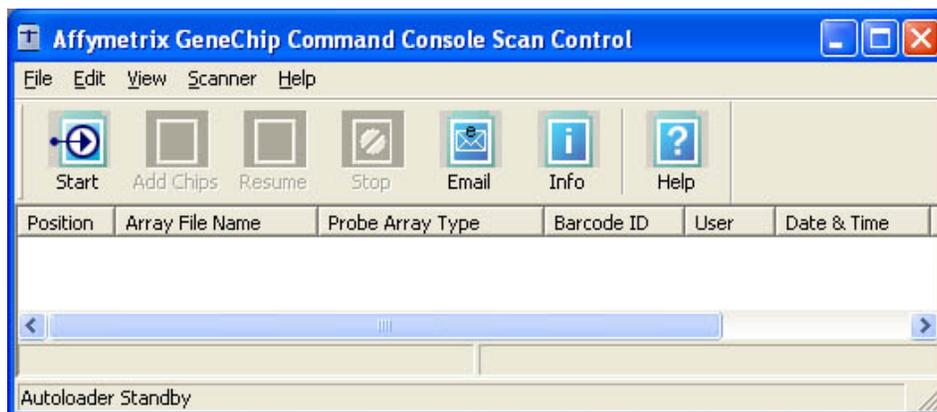
This article describes how to operate the Scanner using Affymetrix GeneChip Command Console (AGCC). It explains the controls used to turn the scanner on and off, as well as the controls used to do the actual scanning.

Powering the Scanner On/Off

To turn on the Scanner: • Press the on/off (I/O) switch on the front panel.

The scanner's onboard computer boots up. The boot-up process takes a few minutes. During this time both the yellow and green light will be on. Next the scanner enters the laser warm-up state, during this warm-up time, the green light will turn off and the yellow light will remain on. The laser will take approximately 10 minutes to stabilize. For more information about the indicator lights see the Autoloader Reference in the on line help.

AGCC Scanner Controls



AGCC Scanner Dialog Buttons

- **Start** - Press to begin scans. This button is only activated if the scanner is connected and ready to begin scanning.
- **Add Chips** - Unlocks cover and allows user to add chips to the carousel. This button is only available during scanning.
- **Resume** - Starts scanning from point at which scanner was stopped previously. The button is only available after stopping the scanner.
- **Stop** - Stop scanner. The scanner will only stop after completing the current scan. This button is only available during scanning.
- **Email** - Opens Email configuration dialog where you can enter email addresses to be notified for particular types of errors.
- **Info** - Shows dialog with Scanner Type, ID, Serial Number, hardware & software versions, filters and pixel sizes available, and number of scans completed.
- **Help** - Opens Affymetrix GeneChip Command Console online user guide.

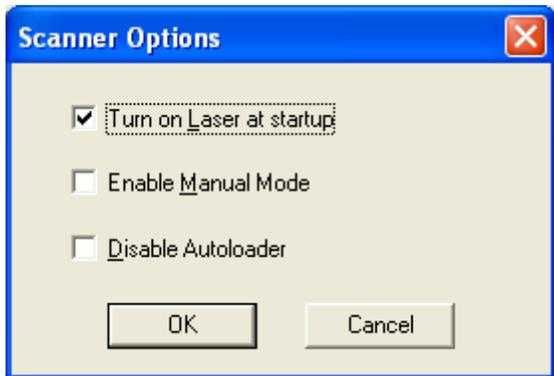
Note: The above buttons (except Email & Help) are also available from the main menu under Scanner.

Scanning a Probe Array with GeneChip® Scanner 3000

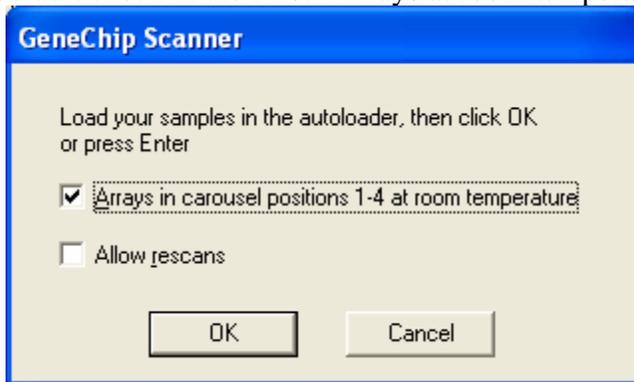
To scan a probe array using the Autoloader:

To scan a probe array using manual scan see “[Using the Scanner in Manual Mode](#)”

1. Turn on the Scanner
2. Start the AGCC Scan Control Software by clicking the AGCC Scan Control icon which you can find in **START | Programs | Affymetrix | Command Console | Scan Control**.
3. The first time you use the station, set the default settings from the **Edit ->Option** menu. The Scanner Options dialog box opens.

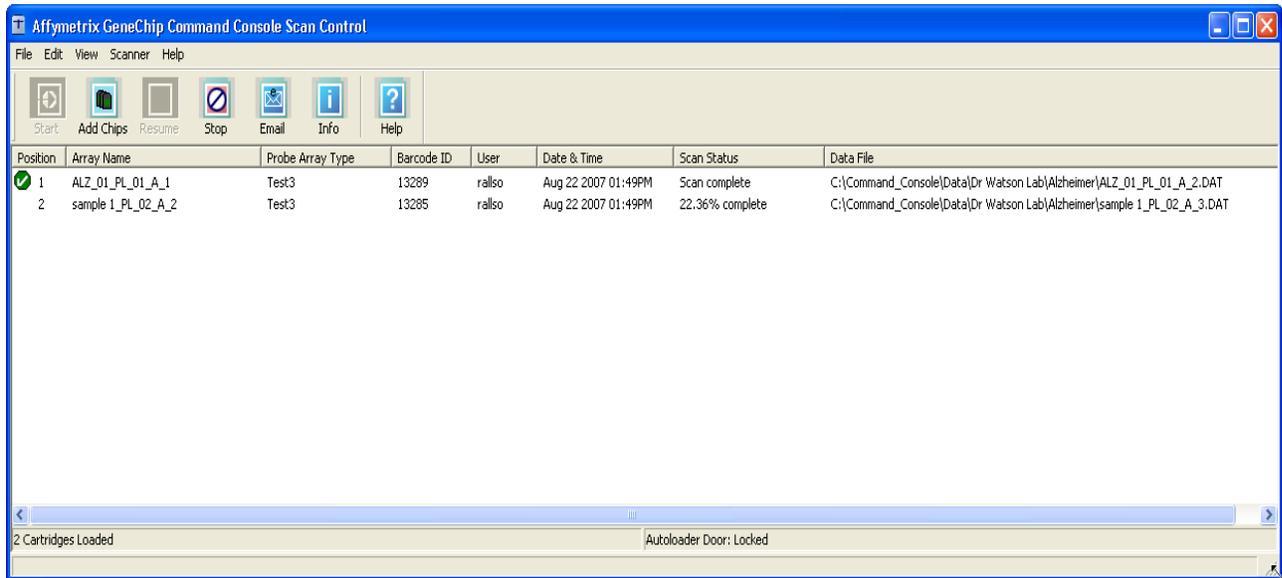


4. Uncheck **Enable Manual Mode**. You only have to enable this mode if you want to scan a single chip manually (in slot #1).
5. Click **OK**
7. Click the **Start** button. The following dialog appears. If the first four arrays are at room temperature, the warm-up period before scanning the first probe array can be skipped by leaving the default check in the First 4 arrays at room temperature box.



8. Click **OK** in the Start Scanner dialog box to start the run.
 - The Autoloader blue indicator light will light up signifying that the Autoloader door is now locked.
 - The carousel automatically homes itself and performs inventory to determine the number and position of cartridges present.
 - The scanning run begins. During the scan, the green light will flash, and the yellow light will be off.
 - The Autoloader completes the autofocus operation before scanning each of the probe arrays. This takes approximately two to three minutes. The scanner cannot be stopped during this period.

- The run will stop automatically when the last array is scanned.
- At the completion of each scan, the AGCC software will attempt grid alignment. If it is successful, the scan data will be automatically advanced to the Grid Alignment processing state. The progress of the scan data can be tracked using the Review Window of the AGCC Viewer.
- The progress of each scan is displayed in the Scan Status window.
- The window displays a list of the arrays as they are being scanned with the information displayed in the Status window.
- If the array was not pre-registered the barcode will be used as the sample file name and the array name, and the files will be saved to the default folder.

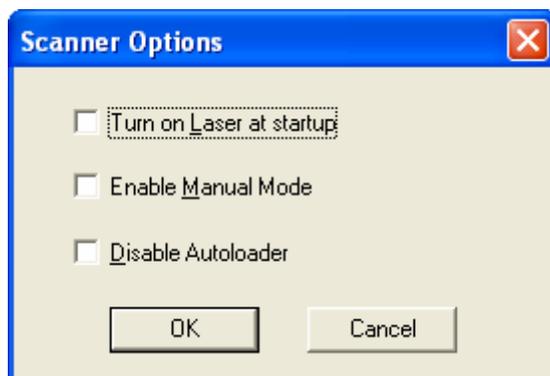


- The scanner status indicates a successful scan when it displays the status message 'Scan complete'.

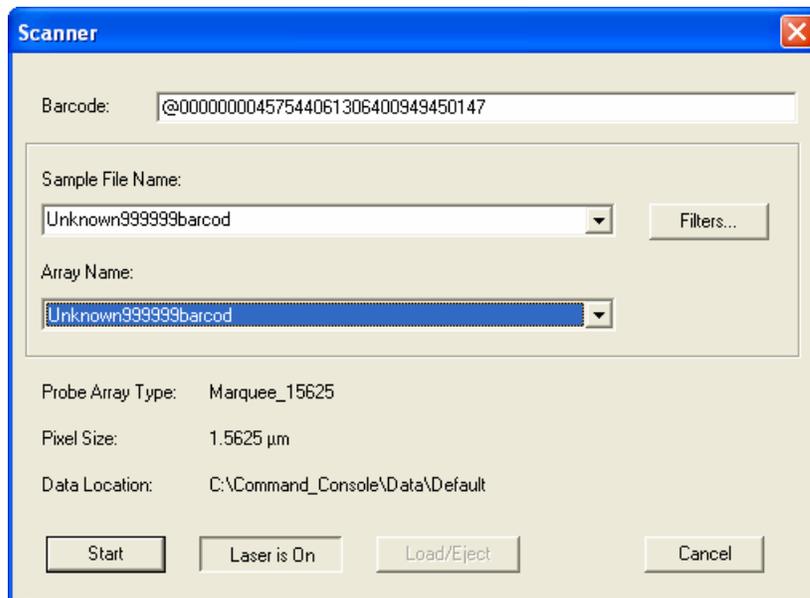
Using the Scanner in Manual Mode

To scan chips manually:

1. Start the AGCC Scan Control Software by clicking the AGCC Scan Control icon located in **START | Programs | Affymetrix | Command Console | Scan Control**.
2. Click on menu option **EDIT | Options**.
3. Click the **Enable Manual Mode** checkbox.



4. Be sure the array is loaded into position one of the scanner carousel.
5. Click the **Start**.



6. Fill in dialog information for Sample Name, Array Name, and / or barcode. If the array was pre-registered the system will fill in the rest of the known information once the array has been identified.
 - a. If the array was not pre-registered the array will be scanned using the Drop and Scan protocol. Drop and Scan uses the barcode as the sample file name, and the array name, and the files will be saved to the default folder.
7. Click **Start**, click **OK** when asked if "**Array at room temperature**".

Shutting Down the Scanner

1. Close the AGCC software by click the X in the top right corner of the window.
2. Press the **I/O (on/off)** button on the front panel to turn off the instrument.