MakerBot Digitizer
(Located on PUBLIC09)

How it works

Two lasers create an outline of the object while the camera takes a rapid sequence of pictures. Photos are combined to create model. The digitizer has an accuracy of up to 2 mm. A single scan takes between 9-12 minutes to complete.

Lasers

Camera / Filter

Turntable
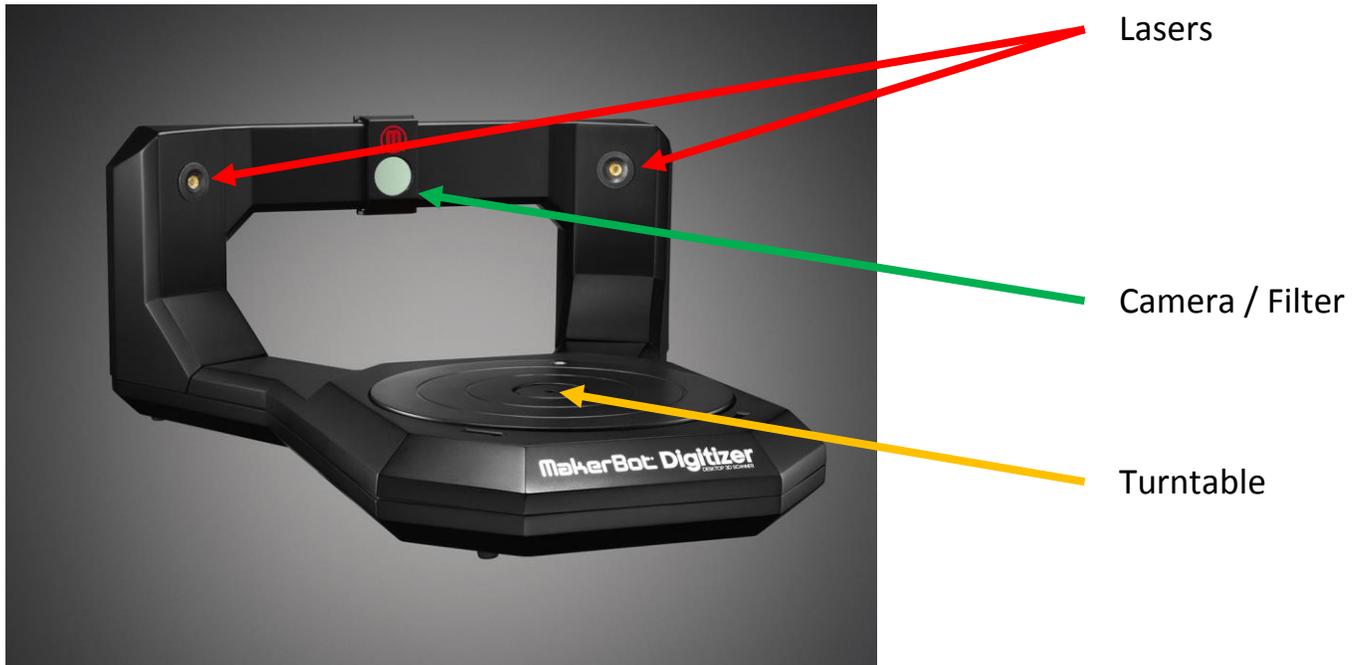
MakerBot object scanning guidelines

Easy to Scan

* Objects larger than 2" x 2" cylinder and smaller than 8" x 8" cylinder
* Objects weighing less than 6.6 lbs
* Bright/non-reflective objects

Difficult to Scan

* Transparent, shiny, reflective, dark or fuzzy objects (i.e. small hairs or fibers)

Do Not Scan

* Objects smaller than 2" x 2" cylinder or larger than 8" x 8" cylinder
* Objects weighing more than 6.6 lbs
* Moving objects

Ways to improve scan

Reflective or dark surfaces can be lessened by painting an object or covering areas of an object with masking tape. For additional tips, visit "Learn More" at http://www.makerbot.com/digitizer.

Scanning process

a) Double-click "MakerWare for Digitizer" icon on desktop

b) Follow steps listed on left-side of application window:
  1) Place object on center of turntable
  2) Select shade of object: LIGHT, MEDIUM or DARK and click "Done"
     On-screen examples can help determine which preset to use.
  3) Make sure filter is over the camera lens (slide left or right)
  4) Click " **START SCAN** "

NOTE: If an object passes within the camera's view while scanning, the object could be inadvertently added to the scan.

c) Once scan is complete, the "Welcome to MakerBot MultiScan Technology" pop-up is presented in the middle of the screen.   To learn more about MultiScan, click on " **NEXT** " at the bottom-right of pop-up window to move between steps and click " **DONE** " to close.

d) On the left-side black panel, below "Scan Complete!" text, is the option to "Name your scan:" By default, the software will use "My Scan ###" as the name.   Change as desired.

e) If unsatisfied with scan result, click on "<< Restart Scan" to try again.

f) Below the area to change the scan name are two options: Start MultiScan and Crop Scan Area.   *NOTE: If satisfied with the current scan, these options can be skipped.*

  1) Choose Start MultiScan to have the digitizer rescan the object, after having changed the object angle, and then attempt to combine scan into previous working scan.   Allows for capturing object surfaces not previously accessible.

  2) Choose Crop Scan Area to retain specific surfaces of a scan. Cropping is especially useful if the camera detects external movement during a scan.   Drag the black bars up or down to select desired area and click Done Cropping to return to prior menu.

g) Click " **FINISH SCAN** ".   If you have a Thingiverse account, sign into and save your scan to the online repository or simply click "X" in the upper-right corner to close.   Click "Save a copy", enter desired file name, select Save as type to choose desired file format (.THING, .OBJ, .STL), choose file location (i.e. your flash drive), and finally, click "Save" to complete process.

g) Scanned image can now be edited in your favorite modeling software, i.e. Blender.   For more information on printing, see additional information located in **3D_Modeling** folder located on desktop.