Digital Still Cameras

The COE Lab has 3 Digital Still Cameras available for you to use. They are all Sony Mavica Cameras and are easy to use.

Digital cameras are similar to a film camera in that you have to have a basic understanding of taking a good picture, such as considering the subject, lighting, and background. The biggest difference is how the pictures are saved. A film camera prints to film and requires a development process. A digital camera records the image on a disk or memory card. The cameras in the COE Lab record to either a floppy disk or a CD-R.

Getting to Know the Equipment

**Sony Mavica 20 x CD-R**
This is the newest addition to the Tech Center’s digital cameras. The 20x CD-R records pictures and movies to a small CD. It has a 20x digital zoom, which allows a lot of flexibility when you are not in close proximity to your subject. The 20x also has a flash and can take 4 sizes of images as well as a 15 second movie.

**The Sony Mavica 14x – Floppy**
The 14x floppy records pictures and movies to a PC (IBM) formatted floppy disk (it doesn’t have to be purple). It has a 14x digital zoom, a flash, and can take 2 sizes of images as well as a 5-second movie.

**The Sony Mavica 10x – Floppy**
The 10x floppy records pictures to a PC (IBM) formatted floppy disk (again, it doesn’t have to be purple). It has a 10x digital zoom, a flash, and can take only 1 size of image.

Getting Started

Note: The COE Lab does not provide media for the cameras. You will need to furnish your own media.

Each camera comes equipped with many of the same features. This section will cover those similar things and then we will look at each camera more specifically.

All cameras must be checked out through a COE Tech Center Assistant prior to the day you will need it. You will need to make sure you have purchased the correct media (floppy or CD-R) for the camera you will be checking out.

**Turning on the Camera:** All cameras have an “on” switch on the back of the camera. You first push in on the green button and then push or pull the on switch.
Batteries: All of our cameras use the same kind of battery. When you check the camera out make sure the battery is in the camera and charged.

To do this:

Turn on the camera. On the LCD screen you will see the minutes remaining on the battery.

The battery can be accessed at the bottom of the camera. Turn the camera over, push and slide the access panel open. The battery may be held in place by a safety latch (a small gray piece of plastic). Pull that latch back and the battery will pop-out. Slide a new battery in (it only fits one way) and you are ready to go.

Note: The lab staff keeps the batteries charged, but you should double check before taking the camera. The cameras are used a lot it is sometimes hard to get a fresh battery in the camera before it is checked out again.

Taking a Picture: Well it doesn’t get easier than this. To take a picture place your finger on the button located on the top of the camera. Push down halfway to focus and then push all the way down. You will hear the camera writing the information to disk.

Zooming: All of our digital cameras have an option to zoom. Each camera will zoom different distances but the technique is the same. The zoom button is in different locations on each camera, however it looks very similar and works the same. You will find the zoom button on the front below the picture button (20x CD-R) on the back of the camera (10x) or on the left barrel (14x). You push the lever back and forth to zoom in (T) and out (W).

Using the Mavica 10x and 14x- floppies

Inserting a Floppy: To insert a floppy into the camera make sure the top of the floppy is facing the back of the camera. Push the floppy into the camera until you hear it click into place.

Display: If you can’t see anything in the LCD screen, make sure the LCD screen is on or push the display button.

Menu: The menu button is on the back of the camera. It looks like a circle with 4 arrows.

Press on the center to access the menu (may need to click on the directional arrows to select menu). Push on the upward arrow to go to image size and press the right arrow to move to the sub-menu. The 10x only has one size 640 x 480; the 14x has 2 sizes 1024 x 768 and 640 x 480.

Note: Deciding on what image size to use is simple. If you are going to put the image on the web or in PowerPoint use 640 x480. If you are going to print the image or want a larger size use 1024 x 768.
Using the Mavica 20xCD-R

This is by far the most complex of our digital cameras. This camera is best used when you know you have a lot of pictures you want to take. This camera burns images to a CD and can hold over 100 images on one CD depending on the image size you choose. You have 4 to choose from.

Menu: You access the menu the same way you do on the other 2 Mavicas however the 20x requires you to navigate to the File option first by using the directional arrows. Then push in the center. Pushing in the center is like clicking “ok” on your computer. After accessing the file menu use the up arrow to navigate to size. Push the center to access the sub-menu. You will see several choices.

Keep in mind that the bigger the number, the bigger the file size. Refer to the chart at the end of the tutorial if you still need help choosing a size.

Initializing the Disk: This is one of the major differences of this camera. The CD-R must be initialized by the camera. Don’t worry, it isn’t difficult, it’s just another step. The disk will also need to be finalized when you are finished using it so you can read it on your computer. If the disk is not full, that is okay, you can use it again and add more pictures later.

To initialize a disk:

1. Put the disk in the camera with the label facing up.
2. Close the back of the camera (you should hear it click shut). From the file menu navigate to disk tools. Push to get the sub-menu and select initialize. Select Initialize and push the center to begin initializing. This is the same place you go to finalize the disk so you can read it on your computer.

Understanding Image Sizes

Screen Size: The chart below shows how large the image will appear on your computer screen. If you want to put something in PowerPoint or on the web, use 640 x 480.

<table>
<thead>
<tr>
<th>Pixel Size</th>
<th>Screen Inches</th>
</tr>
</thead>
<tbody>
<tr>
<td>640 x 480</td>
<td>8 x 6</td>
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<tr>
<td>1024 x 786</td>
<td>14 x 10</td>
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<tr>
<td>1600 x 1200</td>
<td>22 x 16</td>
</tr>
</tbody>
</table>

Print Size: The chart below shows how large the image will appear when printed. The difference here is because the image on your screen contains 72 pixel in an inch, whereas the image that you print typically contains 300 pixels an inch. If you were to print the image the same size as it appears on the screen, it would appear very choppy or pixilated.

<table>
<thead>
<tr>
<th>Pixel Size</th>
<th>Printed Inches</th>
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</thead>
<tbody>
<tr>
<td>640 x 480</td>
<td>2 x 1.5</td>
</tr>
<tr>
<td>1024 x 786</td>
<td>3.5 x 2.5</td>
</tr>
<tr>
<td>1600 x 1200</td>
<td>5.5 x 4</td>
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