

CHAPTER 9

Digitize & PassThrough Mode

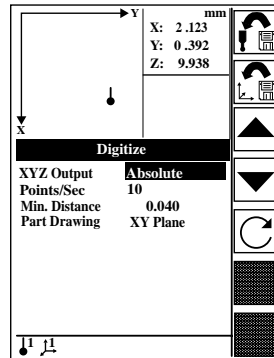
- 9-3 Options in the Digitize Mode
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The Digitize Mode



Digitize Mode Softkey

The Digitize Mode is used to send point data through a null modem serial cable to a waiting host computer. When the Digitize Mode softkey is selected from the "System Modes" screen, the following screen and options appear:



- XYZ Output:** This option determines if points will be output in "Absolute" coordinates or "Incremental" coordinates. Absolute coordinates are references from the current active datum. Incremental coordinates are referenced from the previous measured point.
- Points/Sec:** When using a hard probe, this option controls the number of points taken during the scanning of a part. Allowable values are 1-10 points per second and continuous.
- Min. Distance:** This option specifies the minimum distance the probe must travel before the next point is digitized. The smallest allowable distance is 0.000 mm. This is always a positive value.
- Part Drawing:** This option controls the part drawing display in the upper left corner. You can view the points from the top (XY plane), front (YZ plane) or side (ZX plane). This option has no affect on the data being sent.

Note: As soon as the user begins taking points or scanning, data is automatically being sent out the serial port. It is because of this that using this mode is ideal for setting up serial communications.

Important: The data sent via the Digitize mode is tip center data only, and is not probe tip compensated!

Note: For information on how to send data to Windows 95, 98, or NT's Hyperterminal program or the optional RefleX Scan package, see appendices A5 and A6 respectively.

The Digitize Mode

The following softkeys are available in the Digitize mode:



Recall Probe

The "Recall Probe Tip" softkey allows you to recall a previously qualified tip. To qualify a probe, use the "Probes" softkey in the "Startup Options" screen.



Recall Datum

The "Recall Datum" softkey allows you to recall a previously saved datum created via the Measurement mode.



Scroll Up

The "Scroll up" softkey allows you to scroll upwards through the options listed on the previous page.



Scroll Down

The "Scroll down" softkey allows you to scroll downwards through the options listed on the previous page.



Change Option

The "Change Option" softkey cycles through the available choices for the highlighted option.



Keyin Value

The "Keyin Value" softkey is used to enter values for a selected option. When this key is pressed, you can change the value of the highlighted item using the "+1", "-1", and "+/-" softkeys. After the value has been keyed-in, press the Done softkey to return to the Digitize mode screen.



Done

When the "Done" softkey is pressed, all changes are accepted and you are brought back to the Digitize screen.

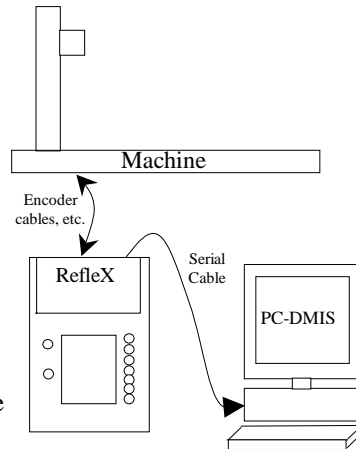
The following is an example of the Digitize mode's serial output:

```
!SOT
!inch
!abs
X 1.18085 Y 1.89919 Z-11.77133
X 4.72437 Y 1.35143 Z-11.77121
X 3.73981 Y 5.41855 Z-11.77128
X 1.18078 Y 4.65511 Z-11.77128
X 2.36207 Y 1.97911 Z-11.77121
X 1.15117 Y 1.90093 Z-11.77149
X 4.69475 Y 1.35325 Z-11.77129
!EOT
```

Passthrough Mode

Passthrough Mode Overview:

Passthrough mode is used to send data from RefleX to a PC software package such as PC-DMIS or Xact Measure. In a typical application, a user has many RefleX machines, yet only 1 laptop running PC-DMIS. For these jobs which require CAD functionality, an operator can simply bring the laptop to the RefleX station, plug in the null modem serial cable, and begin using PC-DMIS as usual.



Setting up PC-DMIS:

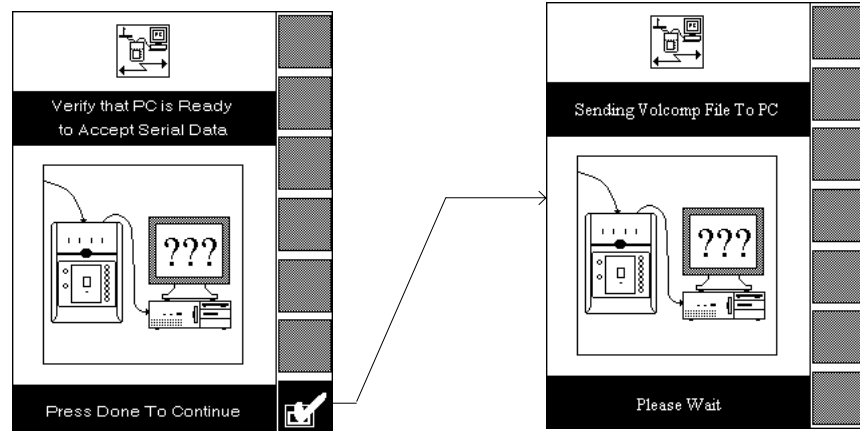
Before using PC-DMIS, the RefleX interface must be installed and enabled in the dongle. After that is done, simply start PC-DMIS.

Setting up RefleX:

In page 4 of the system options (see section 10-16), make sure that the serial settings are set up for 9600, 8, none, 1. This is the default for PC-DMIS's interface driver. Later, if you are having trouble communicating, make sure that these values are set correctly in PC-DMIS.

In the "System Modes" screen press the "Pass-Through" softkey. If the softkey is not visible, enable it in the system options. See section 10-18 for more information about enabling passthrough mode.

After the "Verify PC is Ready" is shown, press the "Done" softkey. The volcomp file in the RefleX controller will then be downloaded to the PC. Because of this methodology, the operator never has to worry about manually switching volcomp files in the PC. At this point, you will notice a "Volcomp File Being Recieved" in PC-DMIS.

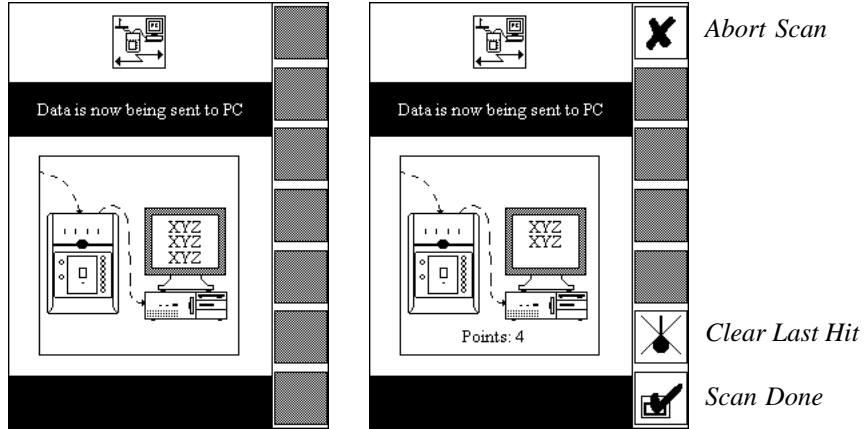


Digitize

Passthrough Mode

Using Passthrough Mode:

After the volcomp file has been sent, it is no longer necessary to look at the RefleX Controller. PC-DMIS can be used as usual, including Z-Mouse functionality. The operator can, however, use RefleX's "Abort Scan", "Clear Last Hit", and "Done Scan" softkeys if desired. A "Points Taken" display is also shown.



*The System Startup
Button*

Exiting Passthrough Mode:

To exit passthrough Mode, simply press the system startup button located on the middle left of the RefleX controller.