Turret Setup User Manual

Revision 1.1 July 31,2002 PN: A1011913



FOR SALES AND SERVICE PLEASE CALL:

S τ :: 626.334.0500 service@ptbsales.com www.ptbsales.com

VIEW OUR INVENTORY

© Copyright 2002 by

The Micromanipulator Company, Inc. 1555 Forrest Way Carson City, Nevada 89706 USA

INTERNET: http://www.micromanipulator.com E-MAIL: sales@micromanipulator.com Voice: (775)882-2400

Printed in USA

Turret Setup Table of Contents

1 Software Installation	1
2 Installation of Objectives	4
2.1 Physical Objective Installation	4
2.2 Software Objective Installation	5
3 Setting Objective offsets	7
4 Selecting Objectives	9
5 Objective Information	0

Turret Setup Table of Contents

<u>NOTES</u>

1 Software Installation

- 1. If pcProbe^{II} is running exit it by selecting File/Exit from the pcLaunch menu bar.
- 2. Insert the pcp2-turret diskette in floppy drive a:
- 3. Select "Start/Run..." from the Windows toolbar. The following screen appears:



- 4. Type in "a:\setup" in the Open text field and select OK.
- 5. The setup program looks for the pcProbe^{II} installation on the computer. The following dialog box appears when the installation is found:



6. Select Next > to continue installation. The following dialog box appears:

pcProbell Turret Option Installation		
	Select Destination	n Directory
	Please select the directory where pc are to be installed.	Probell Tunet Option files
	"Free Disk Space After Install" is ba- selection of files to install. A negative there is not enough disk space to ins specified drive.	red on your current a number indicates that tail the application to the
	C.NPOSLIB	Biowee
	Current Free Disk Space: Free Disk Space After Instalt	138144 k 137764 k
	Kack Next	

C:\POSLIB is the default directory. The pcProbe¹¹ Turret should be installed in the same directory as pcLaunch.

7. Select Next > to continue installation. The following dialog box appears:



 Select Next > to continue installation. The turret option is installed on the computer to the selected directory. When the installation is completed the following dialog box is shown. Select Finish to complete the installation.



2 Installation of Objectives

2.1 Physical Objective Installation

Although any microscope turret slot may contain any objective, it is recommended that the highest power objective be placed in the fixed slot (1). Objectives are mapped to slots by simply matching the physical slots to those used by the software. If a selected objective is already mapped to another slot the new selection is used and the other slot is mapped to <empty>. The physical slots are arranged as follows:



2.2 Software Objective Installation

- 1. Start pcProbe^{II} by clicking on the pcLaunch icor \mathbb{A} .
- 2. Start the Turret Setup program by double clicking its icon . The Turret setup boots to the following screen:

Tunct Setup		
(Control)	Information	Installation
	11 124 10 11	
	4 3	
	2 5	
Reset Focus	Point Objec	tive offsets
Turet		
Microscope	Style: Mit	utoyo
Turret Drive	M	mual
	1	
	[[<u>s</u> unnow	

3. Click on the Installation tab. The following screen is shown:



- 4. Select the microscope style to determine the available objectives. Currently only the Mitutoyo and USMC scopes are supported.
- 5. Select the turret driver. The options are **Manual, TNP** or **Mitutoyo.** The TNP option communicates through the selected RS-232 port to the TNP MT-405 motorized turret. The Mitutoyo option communicates through the selected RS-232 port to the Mitutoyo Power Revolver motorized turret.
- 6. Selection of a new objective requires different actions in different probing scenarios. With this in mind, there are four optional actions available whenever a new objective is selected by the user. These are:
 - ✓ Raise microscope before changing objective
 - ✓ Auto Z Adjust after changing objective
 - ✓ Auto focus from preset down (Only available with the Pattern Recognition Option)
 - ✓ Scale jog move speed according to objective magnification

Typically, the first two are selected to prevent objectives from contacting probes or probe cards.

7 For each turret slot select the installed objective from the drop down list. For example, select a 100X objective for slot 1. Select the **Control** tab when done.

3 Setting Objective offsets

In order for a DUT feature to stay in focus (parfocalized) and in the field of view (parcentered) of the microscope when changing objectives it is necessary to store X,Y,Z offsets of the objectives. The procedure for this is:

 Click on the Control tab and select Objective offsets.... If the fixed slot is not already selected, it is selected at this time. (Note: The microscope will raise and lower if Raise scope before changing obj is enabled in the installation options.) The following dialog is displayed:

XYZ Objective UII:	sets 👘 🕺	
reference location for all other objectives. If there is no objective in this slot just select Accept.		
 Position the microscope over a feature on the wafer Focus the microscope on the feature Position the microscope such that the crosshair is on the lower left corner of the feature 		
Select Accept to store location Select Cancel to quit Select Next >> to set up the next objective		
Accept Frite	Next >>	

2. Perform the displayed steps and select Accept to store the XYZ position.

3. Select Next >> to set up the next objective. The following dialog is shown:



- 4. Perform the steps on the objective and select Accept and then Next>>.
- 5. Repeat steps 3 and 4 until all objectives are installed. Select Finish to complete the installation. The following dialog is shown:

8

	and the second se
	percentage -
Contraction of the second	
A MARK THE AND A MARK AND A	640040-65-60-
A full to an internet water and a full of the full of the second se	202222228FC3
	15:32288853
	Shi hadaan
	1.0 100 00000
C.C.C.S. MIN: A CONTRACT OF A	Contractor of
	C
	111111111111
	181888883
1 State and a state of the s	525555555
and a second	14,342332054
	19192528
and a state of the second s	121212-00
	11.120.000
and a second s	24242962962
	E383836323
And a second sec	10688
and had a summer of the second s	7888F
	333232323
SECOND CONTRACTOR CONT	4 . / A S A 6 A F
- 35-35 1 5 6 6 6 6 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	
CALLER 1. WILLIAM DR. BORNEL MICH. CO. CO. CO. CO. CO. CO. CO. CO. CO. CO	******
	88888
and the second se	10000000000

Select Yes to store the changes.

Entry CARLOUTER TO STORE ST

4 Selecting Objectives

The turret control program displays the available objectives on buttons in the **Control** tab as shown below. Clicking on a button selects that objective using the options set earlier.



The **Reset Focus Point** button adjusts the focus point for the objectives. This value is saved for use by all installed objectives. **Reset Focus Point** is only functional when the objective in the fixed slot is selected.

Note: If the Auto Focus From Preset Down option in the installation options is enabled, resetting the focus point will set the Z-up and Z-down positions for the microscope (in pcNav) to the current position.

5 Objective Information

The optical information for the active objective is accessible by selecting the **Information** tab. The following screen is displayed:

Information
Manual
5.00
ature: 0.140
ce: 1 1336 583
1574.003
0.079
0.551
188.976
mi internet
eret Version 1.0.0
anipulator Company, Inc.
L <u>S</u> hutdown