



WORLD  
PRECISION  
INSTRUMENTS

# INSTRUCTION MANUAL

## 505145

*LED Illuminated Base with Articulating Mirror*

Serial No. \_\_\_\_\_

[www.wpiinc.com](http://www.wpiinc.com)

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## ABOUT THIS MANUAL

The following symbols are used in this guide:



This symbol indicates a CAUTION. Cautions warn against actions that can cause damage to equipment. Please read these carefully.



This symbol indicates a WARNING. Warnings alert you to actions that can cause personal injury or pose a physical threat. Please read these carefully.

NOTES and TIPS contain helpful information.



*Fig. 1— A PZMIII Trinocular Stereo Microscope is mounted on the LED Illuminated Base and Articulating Mirror. The system includes a 76 mm focus mount. The optional PRO-300 HDS camera and screen are mounted on the trinocular port. An MC4 Stage Adapter (not included) is used to mount the M3301 Micromanipulator (not included) on the stage.*

## INTRODUCTION

The Illuminated Base with Articulating Mirror used with the PZM stereo Microscope is perfect for microinjection and transfection. It has a large stable work surface and a rotatable lens/mirror system which provides transmitted LED intensity illumination.

The sliding mirror is gimbaled, allowing for a full range of movement front to back, as well

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as rotation. The mirror rotates 360° on one axis and can slide for further lighting effect directionally, front to back. A knob on the right of the base adjusts the mirror and a locking ring holds the desired mirror position.

The articulating mirror lets you vary the microscope illumination from Brightfield LED to Darkfield LED at an appropriate angle. It is an effective tool for viewing live bacteria. At low magnifications, view tissues, cells or embryo transfer where oblique, transmitted illumination is critical.

This platform includes the PZMIII, PZMIV, PZMTIII or PZMTIV microscope, a focus mount, two stage clips, 94.5 mm glass stage plate, opaque black/white contrast stage plate and an automatic voltage sensing power supply and a 25.4 cm vertical post. The base may be fitted to other microscope heads.

The base can be fitted with our Precision Zoom Microscope line (PZMIII, PZMIV, PZMTIII, PZMTIV).

## Features

- Illuminated base
- Articulating mirror
- Includes opaque, black/white contrast stage plate
- Oblique, transmitted light for low magnification view of tissues, cells or embryo transfer
- Adjustable brightfield and darkfield illumination
- Pseudo DIC illumination

## Parts List

After unpacking, verify that there is no visible damage to the sensor. Verify that all items are included:

- (1) Mirrored base with built-in 5 W power supply for LED illumination (~100 lumen)
- (1) 76 mm Focus mount
- (1) 25.4 cm (10") Vertical mounting pole
- (1) Vertical safety stop
- (2) Stage clips
- (1) 9.45 cm Diameter black/white contrast stage plate
- (1) 9.45 cm Diameter clear glass stage plate
- (1) Spare fuse
  - 0.5A 250 V fast blow 5×20 mm (for 120 V version) or
  - 1.0 A fast blow 5×20 mm (for 230 V version)
- (1) Instruction manual

## Unpacking

Upon receipt of this instrument, make a thorough inspection of the contents and check for possible damage. Missing cartons or obvious damage to cartons should be noted on the delivery receipt before signing. Concealed damage should be reported at once to the carrier and an inspection requested. Please read the section entitled “Claims and Returns” on page 11 of this manual. Please contact WPI Customer Service if any parts are missing at (941) 371-1003 or [customerservice@wpiinc.com](mailto:customerservice@wpiinc.com).

**Returns:** Do not return any goods to WPI without obtaining prior approval (RMA # required) and instructions from WPI's Returns Department. Goods returned (unauthorized) by collect freight may be refused. If a return shipment is necessary, use the original container, if possible. If the original container is not available, use a suitable substitute that is rigid and of adequate size. Wrap the instrument in paper or plastic surrounded with at least 100 mm (four inches) of shock absorbing material. For further details, please read the section entitled “Claims and Returns” on page 11 of this manual.

## INSTRUMENT DESCRIPTION

The stage platform is solid enough to add a stage clamp and a micromanipulator. With a trinocular microscope head (PZMTIII), you may attach a camera. A setup like this facilitates classroom or collaborative environments so everyone can see on the remote screen what the researcher is viewing through the microscope.



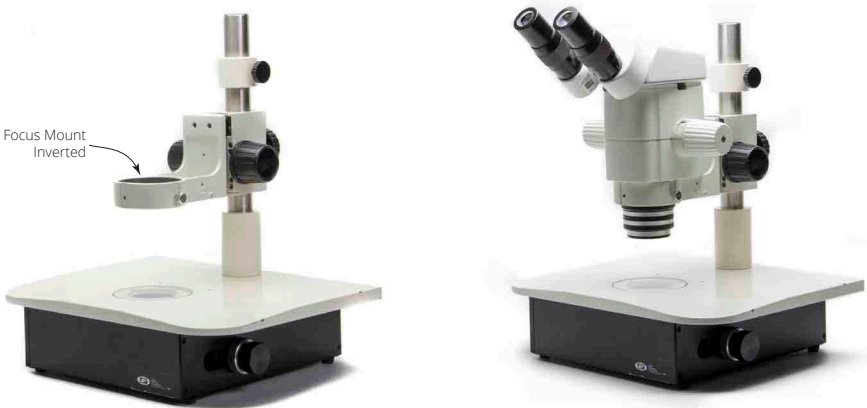
*Fig. 2—(Left) A M3301 micromanipulator is shown attached to the stage platform using an M4C stage adapter. It also has a trinocular PZMT body with a video camera. This is perfect for microinjection studies.*

*Fig. 3—(Right) the PRO300-HDS screen attached for easy viewing. This is perfect for teaching labs.*

The LED illuminated base with articulating mirror works well with a PZMIII or PZMIV stereo microscope head, using the 502009 Universal Focus Mount (76 mm).



*Fig. 4—The PZMIII stereo microscope head is mounted in the 502009 Focus Mount.*



*Fig. 5—When using the PZMIV stereo microscope, the 502009 Focus Mount must be inverted.*





Fig. 6—The dimensions of the LED illuminated base are shown here.



*Fig. 7—The power button is located on back panel.*



*Fig. 8—The brightness control is located on left side panel.*



Fig. 9—Rotate the silver ring to Lock/Unlock the illumination. Rotate the illumination control (center black knob) to adjust the mirror for mirror or oblique subject illumination (dark background with subject illuminated).

There are two reflectors, one is diffuse, the other is a parabolic mirror. The brighter image will be the parabolic mirror.

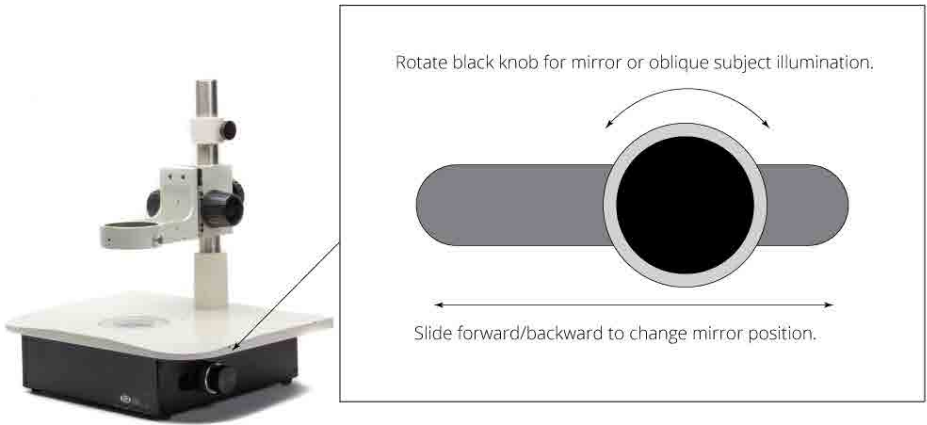


Fig. 10—Slide forward/backward to change mirror position.

## SPECIFICATIONS

This unit conforms to the following specifications:

Upper Stage Dimensions	37 x 29.9 x 9.8 cm (14.9 x 11.8 x 3.87") width x depth x height
Lower Stand Dimensions	26 x 28.5 x 8.3 cm (10.25 x 11.25 x 3.9") width x depth x height
Pillar Height	25.4 cm (10")
Glass Stage Plate	9.5 cm (3.75") diameter
Stage Clips	75 mm clip length, 4 mm pin, paired
Illumination Port	Built in incident and transmitted variable intensity LED illumination
Rotatable Mirror	Dual-reflection lens/mirror system provides transmitted brightfield/darkfield/pseudo DIC illumination
Manufacturer	Made in Japan
Warranty	Limited lifetime warranty
CE	yes
Fuse	1 A fast blow 5×20 mm (230 V) 0.5 A fast blow 5×20 mm (120 V)
LED	5 watts ~100 lm @ 20 lm/W
Focus Mount	Holds 76 mm diameter microscope heads
Shipping Weight	Illuminated Base Only: 9.86 kg (21.75 lbs.) PZMIII with Base: 11.22 kg (24.75 lbs.) PZMIV with Base: 13 kg (28.75 lbs.) PZMIII only: 1.36 kg (3 lbs.) PZMIII with Base: 3.17 kg (7 lbs.)
Package Dimensions	17 x 14 x 9"



## WARRANTY

WPI (World Precision Instruments) warrants to the original purchaser that this equipment, including its components and parts, shall be free from defects in material and workmanship for a period of one year\* from the date of receipt. WPI's obligation under this warranty shall be limited to repair or replacement, at WPI's option, of the equipment or defective components or parts upon receipt thereof f.o.b. WPI, Sarasota, Florida U.S.A. Return of a repaired instrument shall be f.o.b. Sarasota.

The above warranty is contingent upon normal usage and does not cover products which have been modified without WPI's approval or which have been subjected to unusual physical or electrical stress or on which the original identification marks have been removed or altered. The above warranty will not apply if adjustment, repair or parts replacement is required because of accident, neglect, misuse, failure of electric power, air conditioning, humidity control, or causes other than normal and ordinary usage.

To the extent that any of its equipment is furnished by a manufacturer other than WPI, the foregoing warranty shall be applicable only to the extent of the warranty furnished by such other manufacturer. This warranty will not apply to appearance terms, such as knobs, handles, dials or the like.

WPI makes no warranty of any kind, express or implied or statutory, including without limitation any warranties of merchantability and/or fitness for a particular purpose. WPI shall not be liable for any damages, whether direct, indirect, special or consequential arising from a failure of this product to operate in the manner desired by the user. WPI shall not be liable for any damage to data or property that may be caused directly or indirectly by use of this product.

## Claims and Returns

Inspect all shipments upon receipt. Missing cartons or obvious damage to cartons should be noted on the delivery receipt before signing. Concealed loss or damage should be reported at once to the carrier and an inspection requested. All claims for shortage or damage must be made within ten (10) days after receipt of shipment. Claims for lost shipments must be made within thirty (30) days of receipt of invoice or other notification of shipment. Please save damaged or pilfered cartons until claim is settled. In some instances, photographic documentation may be required. Some items are time-sensitive; WPI assumes no extended warranty or any liability for use beyond the date specified on the container

Do not return any goods to us without obtaining prior approval and instructions from our Returns Department. Goods returned (unauthorized) by collect freight may be refused. Goods accepted for restocking will be exchanged or credited to your WPI account. Goods returned which were ordered by customers in error are subject to a 25% restocking charge. Equipment which was built as a special order cannot be returned.

## Repairs

Contact our Customer Service Department for assistance in the repair of apparatus. Do not return goods until instructions have been received. Returned items must be securely packed to prevent further damage in transit. The Customer is responsible for paying shipping expenses, including adequate insurance on all items returned for repairs. Identification of the item(s) by model number, name, as well as complete description of the difficulties experienced should be written on the repair purchase order and on a tag attached to the item.

\* *Electrodes, batteries and other consumable parts are warranted for 30 days only from the date on which the customer receives these items.*

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