



# MT-B Series Digital Microscope Operation Manual



## 1. Introduction

Meiji Techno's MT-B Series Digital Microscopes have a modern compact design. Easy operation is achieved through ergonomic placement of controls makes them ideal for use in laboratories in every field.

The MT-B Series is well suited for a wide variety of routine biological work and high resolution microscopy.

The MT-B Series deliver crisp, distortion-free, high resolution images in multiple modes of operation. Brightfield and phase contrast, bright field and fluorescent, brightfield/phase contrast and fluorescent observation models are available.

Meiji Techno supplies different excitation filters such as GFP/FITC, TRITC/Cy3, DAPI applications for fluorescent models.

### To Get Started

Download Basler Software:

The MT-B300 Pylon Software can be downloaded at the website below:

<https://www.baslerweb.com/en/support/downloads/software-downloads/>

*\*Please note that you will need a PC / laptop with USB 3.0, to connect and download this properly.\**

For technical support, please email: [support.usa@baslerweb.com](mailto:support.usa@baslerweb.com) Inform them you need assistance downloading the correct camera software for their microscopy camera model ACE 1.3MP 48.

You may personally call Basler at, +1- 484-840-7232, for assistance.

Once the software is downloaded into the USB 3.0 PC / laptop, plug the USB 3.0 cord to the Microscope socket, and the other into the USB 3.0 port on the PC/ laptop. Also, plug the DC5V power cord into the microscope and the other into a socket to power the microscope.



Flip the power switch to turn on the microscope, click the Basler software icon on your laptop, and give the software a couple seconds to connect.

If you have any questions or concerns about the use of this microscope please contact us at Meiji Techno America.

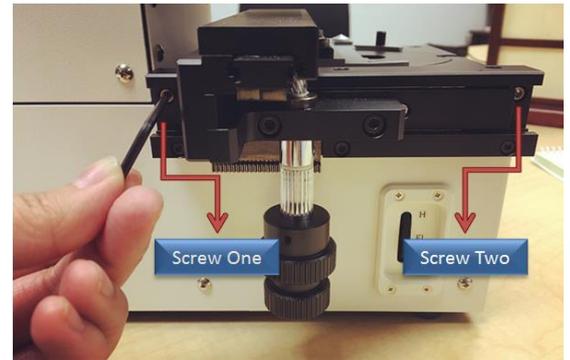
Phone: 408-226-3454

Email: [info@meijitechno.com](mailto:info@meijitechno.com)

## Installing Proper Objectives:

1. Remove the attachable mechanical stage with the supplied Allen key on the left side of the MT-B300.

**Note:** there are two Allen screws to be removed as shown on the picture



2. Lift up circular metal stage plate, unscrew and install proper objective of choice.
3. Place the circular metal stage back, reattach the mechanical stage, and you now may start utilizing the MT-B300 system.



## Compatible Objectives for MT-B300 Microscope:

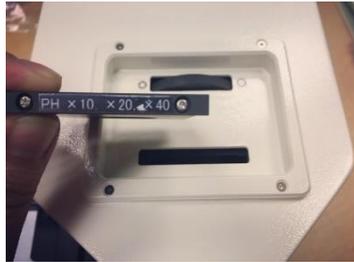
MA821 TC Plan LWD 10X objective  
MA822 TC Plan LWD 20X objective  
MA823 TC Plan LWD 40X objective  
MA826 TC Plan LWD Phase 10X objective  
MA827 TC Plan LWD Phase S20X objective  
MA828 TC Plan LWD Phase S40X objective  
MA850 TC Planachromat F10X objective  
MA851 TC Planachromat F20X objective  
MA852 TC Planachromat F40X objective

## Modalities of Meiji Techno MT-B300:

- A. Brightfield
- B. Phase Contrast
- C. Fluorescence

### A) Brightfield Mode:

1. Install proper objective  
MA821 TC Planachromat 10X objective  
MA822 TC Planachromat 20X objective  
MA823 TC Planachromat 40X objective
2. Make sure phase slider is not inserted on the top slot of the MT-B300 Microscope



3. On the left side of the MT-B300, make sure the Fluorescence control Wheel (FL) is scrolled down to its lowest position.



4. Pull Silver Lever on the right side of the MT-B300, out, to the TL Position (Brightfield)



**Note:** Focus objectives by moving focusing wheel in front of the MT-B300. To control light intensity to TL (Brightfield Mode) move the wheel from the right side of the MT-B300 up or down.



## B)Phase Contrast Mode:

1. Install proper objective  
MA826 TC Planachromat Phase 10X objective  
MA827 TC Planachromat Phase 20X objective  
MA828 TC Planachromat Phase 40X objective
2. Insert phase slider on top of the MT-B300



Note: To adjust iris, move the red iris wheel (AS) to desired position

3. Pull out silver lever on right side of MT-B300 to TL (Brightfield Position)



4. On the left side of the MT-B300, make sure the Fluorescence control Wheel (FL) is scrolled down to its lowest position.



Note: Once steps 1-4 are done, adjust light intensity by moving TL wheel to desired position for Phase Mode



## C) Fluorescence Mode:

1. Install proper objective  
MA850 TC Planachromat F10X objective  
MA851 TC Planachromat F20X objective  
MA852 TC Planachromat F40X objective
2. Push in the silver lever on the right side of the MT-B300 to FL (Fluorescence Position)



3. On the right side of the MT-B300, make sure the TL Wheel (Brightfield) is scrolled down to its lowest position.



4. Make sure phase slider is not inserted on the top slot of the MT-B300 Microscope



Note: Once steps 1-4 are done, adjust light intensity by moving FL wheel on the left side of MT-B300 to desired position for Fluorescence Mode

## Features:

Built-in camera

Basler camera model used on MT-B200/MT-B300 is ace 1.3MP 48 for USB 3.0.

Auto sensing voltage

Main AC 100 to 240V and DC5V 2.5A Switching adapter

Filter

CHROMA filter-AT-DAPI/Hoechst/AlexaFlour 350-3900 mounted in Meiji filter cube, Exciter (EX):AT375/28x, Dichroic (BS):AT415DC, Emitter (EM):AT460/50m (Factory Installed)

You can select one excitation filter set among blue, green and UV filter when you order.

**Slide capacity** : One slide (Option Petri Dish)

**Fixed objective** : 10X, 20X, 40X (Replaceable)

**Focusing** : Manual

**Mechanical stage with specimen holder** : Manual (Option)

## 8.0 Accessories and Replacements Parts

Part numbers and product descriptions for accessories and parts for MT-B Series Digital Microscopes can be found listed below. Accessories and replacement parts for all Meiji Techno products are available through our dealer network.

### MT-B Series Components & Accessories

Brightfield Objectives	
MA821	TC Planachromat 10X objective $\infty/1.0$ N.A.0.25 F.L.20.0 W.D.7.6
MA822	TC Planachromat 20X objective $\infty/1.0$ N.A.0.40 F.L.10.0 W.D.7.0
MA823	TC Planachromat 40X objective $\infty/1.0$ N.A.0.65 F.L.5.0 W.D.2.8
Phase Contrast Objectives	
MA826	TC Planachromat Phase 10X objective $\infty/1.0$ N.A.0.25 F.L.20.0 W.D.7.6
MA827	TC Planachromat Phase 20X objective $\infty/1.0$ N.A.0.40 F.L.10.0 W.D.7.0
MA828	TC Planachromat Phase 40X objective $\infty/1.0$ N.A.0.65 F.L.5.0 W.D.2.8
Fluorescent Objectives	
MA850	TC Planachromat F10X objective $\infty/1.0$ N.A.0.30 F.L.20.0 W.D.7.5
MA851	TC Planachromat F20X objective $\infty/1.0$ N.A.0.40 F.L.10.0 W.D.7.5
MA852	TC Planachromat F40X objective $\infty/1.0$ N.A.0.60 F.L.5.0 W.D.2.9

## 5.0 Troubleshooting

Meiji Techno products are manufactured exclusively in Japan under ISO9001 Quality Management System. However, if you have any difficulty with any Meiji Techno products, feel free to contact us at:

MEIJI TECHNO CO.,LTD. 322-1, Chikumazawa, Miyoshi-machi, Iruma-gun Saitama 354-0043 Japan	Phone: 049-259-0111 Fax: 049-259-0113 E-mail: <a href="mailto:meiji@meijitechno.co.jp">meiji@meijitechno.co.jp</a> Web: <a href="http://www.meijitechno.co.jp">www.meijitechno.co.jp</a>
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MEIJI TECHNO AMERICA 5859 Rue Ferrari, San Jose, CA 95138 U.S.A.	Phone: 1-800-832-0060 Fax: 408-226-0900 E-mail: <a href="mailto:info@meijitechno.com">info@meijitechno.com</a> Web: <a href="http://www.meijitechno.com">www.meijitechno.com</a>
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## 6.0 Technical Specifications:

### Camera including measurement software :

MT-B100 : CMOS 1/3", 1.2MP, USB3.0

MT-B200/MT-B300 : CMOS 1/1.8", 1.3MP, USB3.0

**Light source** : 3W LED with intensity

**Input** : AC100V to 240V 50Hz/60Hz

**Output** : DC 5V 2.5A (Switching adapter)

**Dimensions**: 160 mm (W) x 270 mm (D) x 230 mm (H)

**Net weight** : 6.6 kg



MEIJI TECHNO

## Meiji Techno America, Inc.

5895 Rue Ferrari

San Jose, CA 95138

Tel: 1.800.832.0060 | Fax: 408.226.0900

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