

Light Manager and antiglare device control for manual stands

Unlike motorised stands, every value must be saved individually via the LM Set button before an objective, tube lens or reflector is changed. Light Manager values for transmitted light (TL) and reflected light (RL) are always processed separately.

Operating principles for stands without PC connection option (Axio Imager.A1 / .A1 LED)

In this case the encoding of objective and reflector turret is recognised (\Rightarrow up to two "Master" components) according to the position of the toggle switch RL/TL.

1. Toggle switch RL/TL in position **TL**:

Saves the brightness values for the objective turret (max. 7)

2. Toggle switch RL/TL in position **RL**:

Saves the brightness values for a matrix from the objective turret (max. 7) x reflector turret (6 or 10) (see table below)

Type of illumination	Dependent components (if encoded)	
	Objective turret	Reflector turret
Transmitted light (halogen lamp for transmitted light, toggle switch RL/TL on TL)	X	
Reflected light (halogen lamp for reflected light, toggle switch RL/TL on RL)	X	X

Operating principles for stands with PC connection (stands A1m, D1, D1m as well as A1 with existing / retrofitted PC connection option)

In this case the tube lens turret is under PC control (\Rightarrow up to three "Master" components).

1. Toggle switch RL/TL in position **TL**:

Saves the brightness values for a matrix from the objective turret (max. 7) x tube lens turret (4) (Bertrand lens position is not included: only one brightness can be saved for this position)

2. Toggle switch RL/TL in position **RL**:

Saves the brightness values for a matrix from the objective turret (max. 7) x tube lens turret (4) x reflector turret (max.10) (see table below)

Type of illumination	Dependent components (if encoded)		
	Objective turret	Reflector turret	Tube lens turret
Transmitted light: Toggle switch RL/TL on TL	X		X
Reflected light: Toggle switch RL/TL on RL	X	X	X

Default setting of the stand after switching on:

Transmitted light:

- Toggle switch RL/TL on **TL**
Button **TL** on (shutter open or lamp on)
Button **RL** off

Reflected light:

- Toggle switch RL/TL on **RL**
Button **TL** off
Button **RL** on (shutter open or lamp on)

Saving LM value:

- To save the current lamp voltage for the current objective turret position press the LM Set button briefly

Saving 3200K:

This function determines whether the stand is set at 3200K when it is switched on.

- To set 3200K to be active on switching on: activate 3200K and press LM Set button.
- To set 3200K to be inactive on switching on: deactivate 3200K and press LM Set button.

The 3200K setting is saved globally and is independent of other LM values that have already been saved. The normal LM values are available at any time as soon as 3200K is deactivated.

Overwriting the LM values:

- To save the new value at the relevant position press the LM Set button

Deleting of the LM values:

This is not possible.

Activating an LM value:

This is done by switching on and changing the position of a "Master" component.

Deactivating Light Manager & antiglare device

To permanently deactivate/activate **Light Manager (LM) & antiglare device (AG)**

- Keep the **"RL" button** pressed down when you switch on:
- One beep signifies deactivation.
- Two beeps signify activation.

To permanently deactivate/ activate **Light Manager** only

- Keep **"3200" button** pressed down when you switch on:
- One beep signifies deactivation. Two beeps signify activation.

To permanently deactivate/ activate **antiglare device** only

- Keep **"TL" button** pressed down when you switch on:
- One beep signifies deactivation. Two beeps signify activation

- If button "RL" is pressed when you switch on and only one of the two functions is activated, that function will be deactivated:

Starting condition			Outcome	
LM	AG		LM	AG
1	1	⇒	0	0
1	0	⇒	0	0
0	1	⇒	0	0
0	0	⇒	1	1

These parameters can also be set via MTB 2004 for motorised stands.

Antiglare device:

If there is a shutter in the TL optical path, the lamp voltage remains constant when the objective is changed and the shutter takes over the function of the antiglare device.

If no shutter is present, the lamp is switched off.

Safety function:

If the reflector turret flap is opened or the reflector turret is completely removed, the safety switch-off device automatically closes the reflected light shutter. In addition, the shutter can no longer be opened by pressing a button as long as the reflected light path is "open". The shutter also closes automatically when the stand is switched off.

Dimming the LEDs

The brightness of the Light Control LEDs can be adjusted by the user.

Manual stands:

- Keep SET button pressed down for about 3 seconds until a long beep is heard.

All LEDs go on.

The brightness of the LEDs can now be adjusted by the brightness control (control knob).

However, the brightness cannot be completely extinguished!

Activating the control knob in this mode has **no** effect on the lamp voltage!

This mode is exited automatically by releasing the LM Set button

The setting is saved permanently!

Motorised stands:

The adjustment of the LED brightness is linked with the brightness control of the TFT Display.

Motorised reflector turret on D1(m)

All motorised reflector turrets can be mounted on the stands D1 and D1m. The reflector turrets for the D1 stands have been incorporated into the MTB 2004 in the same way as those for the motorised stands.

The motorised reflector turrets can be operated either by the AxioVision Software or by the keyring in Z drive. If a motorised reflector turret is recognised when the microscope is switched, keys are assigned automatically in the following order:

Refl.turret to the right (Pos. +), Refl.turret to the left (Pos. -), RL shutter, lamp voltage +, lamp voltage -.

Otherwise the default assignment of keys applies:

TL shutter, RL shutter, unassigned, lamp voltage +, lamp voltage -.

The position indication is shown by the LED Bargraph. As soon as a motorised reflector turret is recognised, the LED Bargraph indicates the reflector turret position, if "RL on" was set (by pressing button on the Light Control or on the keyring or via Software). If TL is switched on as well (only possible if the toggle switch HAL is on TL), the reflector position will continue to be displayed, overriding the display of the lamp brightness.