

VariZoom VZ-MC50

Remote Pan/Tilt Head Operating Instructions

PLEASE READ THOROUGHLY BEFORE STARTING

SAFETY PRECAUTIONS: *Keep fingers and loose clothing away from gears and moving parts. *Always unplug VZ-MC50 Pan and Tilt Head when not in use. *Mount only on stable surfaces.

*****TURN OFF YOUR CAMERA'S OPTICAL IMAGE STABILIZER (OIS) WHILE IT IS MOUNTED TO THE PAN/TILT HEAD. OIS DOES NOT REACT WELL TO PAN/TILT SYSTEMS.*****

SETTING UP YOUR NEW PAN AND TILT HEAD –

Fasten the base plate of the VZ-MC50 head securely to jib or tripod mount. The base is designed to mount on a flat surface or 100mm bowl, so an adapter may be necessary for other sizes (consult jib or tripod maker). Optional 100mm ball mount is also available.

MOTOR ATTACHMENT

There are two motors included, one for Panning left/right (to place at the base of the MC50), and one for Tilting up/down (to place at the top).



The motors are easily attached by **a.)** connecting the male stereo plug from the motor to the female plug on MC50 head and **b.)** loosening the clamp lever and sliding the clamp onto the stainless steel post adjacent to the large black arm gears.

For initial setup, leave the motors disengaged (the small brass motor gears should be *pulled away* from the large black gears).

HORIZONTAL CAMERA BALANCING

Securely attach the camera to the mounting plate with bolt and washer. After tightening the bolt, slightly loosen it again so that the camera may slide forward and backward on the mounting plate.

Move the camera forward or backward so that gravity allows it to rest on the plate without tilting up or down, balancing the camera horizontally. The tilt arm that holds the adjustable mounting plate should be exactly parallel to the main arm (straight up).

Now you can thoroughly tighten the camera mounting bolt(s) so that the camera doesn't slide when tilting (you may want to use multiple bolts for large cameras with tripod mounting plates). **CAMERA MUST BE PROPERLY BALANCED FOR OPERATION.**



VERTICAL CAMERA BALANCING

With the camera horizontally balanced, rotate the tilt arm so the camera is exactly vertical. Be sure to keep the gears disengaged so the arm can move freely. If the camera stays vertical, it may be nearly balanced, but if it swings up or down, you need to adjust the position of the camera platform

With the camera still vertical, slightly loosen the thumbscrews and you will be able to slide the camera platform to center the camera's mass on the tilt axis / center of rotation.

If the tilt arm swings down, slide the mounting plate upward / closer to the center of rotation; if the tilt arm swings up, slide the mounting plate downward / away from the center of rotation. Adjust until the camera stays perfectly vertical (see picture right). Tighten the thumbscrews.



NOW TILT THE CAMERA AT VARIOUS ANGLES ALL THE WAY AROUND – IT SHOULD HOLD ANY POSITION IF PROPERLY BALANCED.

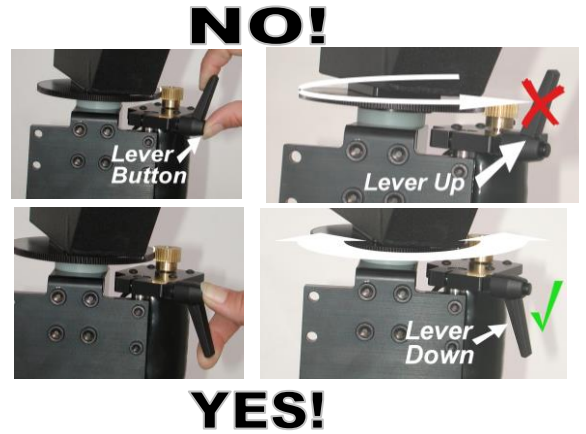
YOU MAY NEED TO TWEAK THE HORIZONTAL AND VERTICAL POSITIONS TO GET IT EXACTLY RIGHT.

A PROPERLY BALANCED CAMERA WILL HOLD ANY TILT ANGLE



Engage the brass motor gears to the black arm gears and tighten. Be sure the levers are pointing away from the rotating arm.

-NOTE: Once tightened, you can adjust the position of the lever by simply pulling out on it and then rotating the lever until it faces away. This will NOT loosen the fastener. *Failure to aim lever away will impede the movement of the MC50.*



Connecting the Cables

Connect the locking 4-pin control cable to the 4-pin motor cord at the base of the MC50.



Connect the other end of the 4-pin control cable to the MC50 Control Unit at the locking 4-pin connector. The additional 3-pin port located beneath the motor cable port will provide 24VDC power output.



Connect the 4-pin XLR power cable from the AC adapter to the 4-pin XLR power connector located on the MC50 Control Unit.



OPERATING THE CONTROL BOX

The joystick controls the head in an intuitive manner. You can change the direction of the pan response by flipping the switch “L” to “R”, while the middle position of the switch “OFF” will put the motor into neutral. This OFF position is very helpful in situations where you want to prevent motion or to pan without tilting (or vice-versa). You can also change the direction of the tilt response by flipping the switch “Up” to “Dn”, while the middle position of the switch “OFF” will put the motor into neutral

Also note the silver dials for changing the maximum pan and tilt speeds. You may want to keep these turned up at least 1/3 of the way for best operation.



******The control box operates most effectively with the speed dials turned up at least 1/3 of the way (“10 o’clock”). We don’t recommend turning the dials all the way down. You may experience drifting issues with the dials turned too far down.******

IMPORTANT NOTES *

*** STORAGE**

We recommend removing the motors from the Pan/Tilt head when storing the MC50 unit in the case. You can do this by loosening the clamp levers and sliding the motors off the stainless steel mounting posts – they can be placed in one of the supplied compartments of the MC50 case. Likewise, you should disconnect all extension cables from the unit and store them in a properly coiled position. When storing the unit, do not subject it to excessive heat, moisture or dust – store in a cool, dry place for optimal long-term performance.

*** TRIPOD MOUNTING**

We recommend mounting the MC50 on a 100mm bowl-type tripod since it will fit snugly and enable you to thread the supplied bolt through the MC50 mounting plate and down through the bowl of the tripod. Using the supplied oversize washer and nut, you can securely bolt the MC50 onto the tripod bowl.

*** 360-DEGREE PANS AND TILTS**

The MC50 is capable of 360-degree turns on either axis, and the only limitation is in the twisting of your cables. Typically, you can go at least 360 degrees before the cables become severely entwined, but you should always be aware of the stress you place on the cables when going past 360 degrees – cable damage may result. Furthermore, improper cable management may result in damage to the camera’s connectors, *so be aware of cable twist when rotating beyond 360 degrees of movement.*

TROUBLESHOOTING: UNWANTED CAMERA MOVEMENT

1-TURN OFF YOUR CAMERA’S OPTICAL IMAGE STABILIZER (OIS) WHILE IT IS MOUNTED TO THE PAN/TILT HEAD. OIS DOES NOT REACT WELL TO PAN/TILT SYSTEMS.

2-TURN THE SPEED DIALS UP

3-MAKE SURE your camera is perfectly balanced by disengaging your motors and tilting the camera at various angles – it should not move at all if the camera is in balance (if necessary, re-balance – see Page 1).

4- IF SOLUTIONS 1-3 DON’T WORK, you may have *motor drift - do not worry!* To find out if you have motor drift, do the following: ***** turn the speed dials all the way up for both pan and tilt**, and with all of the power and control cables connected (a mounted camera is not necessary), disengage the motors so that the brass gears on the motors can spin freely. If the brass gears turn on their own, without your command, the motor control joystick needs to be calibrated (**if they don’t move, the drifting must be attributed to bad balance**).

If Motors Drift:

With **both speed dials turned all the way up** and the motors disengaged from the head so they can spin freely, remove the large black threaded plug on the side of the control box (A.1.) and you will see two dials for calibrating the pan and tilt (A.2). Carefully use a small tip Phillips or flat screwdriver to turn the dials until the motors stop moving. Try to center the dials between the points where the motors begin moving in each direction. * **Do not press hard on these dials or damage may result.** *



TROUBLESHOOTING: ERRATIC CONTROL UNIT

Erratic control unit behavior may also result from damaged cables or bad power connection.

MAINTENANCE:

The MC50 should not require much maintenance, but over time wear and tear may take its toll. The most common wear and tear issue is damaged cables, which are relatively easily replaced. As long as the unit pans smoothly, you shouldn't worry about this. Most other maintenance should be performed by the factory.

REMINDER: KEEP FINGERS, LOOSE CLOTHING, AND HAIR AWAY FROM MOVING PARTS AND GEARS! ALWAYS UNPLUG MC50 PAN AND TILT HEAD WHEN NOT IN USE! *WHEN IN DOUBT ABOUT SAFETY, ASK QUESTIONS FIRST!!!* 888-826-3399 / www.varizoom.com