

# Fine Art Craftsmanship

## Q-Ball Head

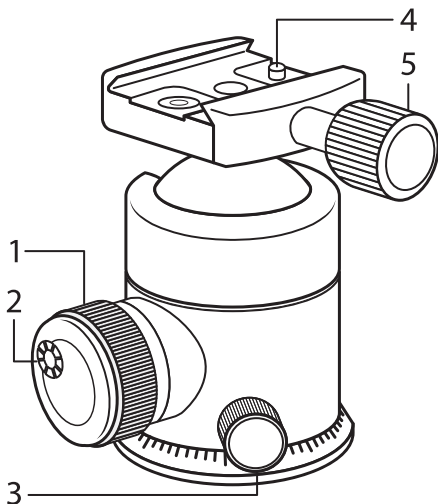
### Operating Instructions

사 용 설 명 서



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Designed by Markins in Korea

#### Functional Description Of Main Parts



1. Ball locking Knob: Fasten or unfasten the ball with friction control
2. Torque Limit Dial: Set the minimum friction
3. Panning Lock Knob: Lock or free the panning base
4. Plate stopper: Prevent the plate from slipping (a feature of Markins plates)
5. Quick Release Clamp Knob: Open or close the clamping jaw

#### General Guidance

- Always lock the panning lock knob except when you need to use the panning action.
- Keep the quick shoe clamp knob in upward position for vertical frame use (with ball rotated into notch)
- Once you get used to the ball locking knob and you are using a variety of photo equipment, you may find that fully unscrewing the torque limit dial and controlling the friction only with the ball locking knob could be more comfortable.

Thank you and congratulations for purchasing the Markins Q-Ball Head. Markins products are designed and engineered by up-to-date technologies in precision machining. The Q-Ball's progressive ball locking mechanism is capable of handling both small 35mm format cameras and large view cameras with ease. So it is not necessary to over-tighten the ball locking knob when normal camera equipment is used. However, additional tightening after the ball is secured will not affect the durability of the parts or unit. With proper care and use, Markins will serve you well in your pursuit of photographic excellence for years to come.

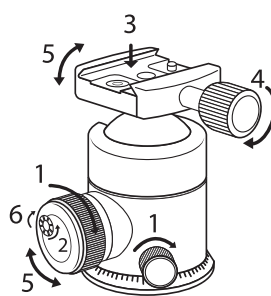


- Keep out of reach of children.
- Be careful not to harm others while carrying your tripod.
- Do not turn the ball locking knob excessively passed its CCW limit while the ball is in loosened condition. Doing so might damage the internal parts.

#### Notes

1. Do not turn the ball locking knob excessively passed its CCW limit. It can be locked if the torque limit dial is in use. If locked, unscrew the torque limit dial with a screw driver, and hold the ball locking knob tight and apply some impulsive torsional force to unlock it.
2. Clean and dry after using at sea or other salty site.
3. Dry after using the unit when it gets moisture or submerged in water.
4. Do not subject the unit to dust, dirt or sand.
5. Use only alcohol or **WD-40** for cleaning. Do not use any other kind of solvent such as benzene or thinner, etc.
6. Do not apply any other kind of lubricant to the ball.

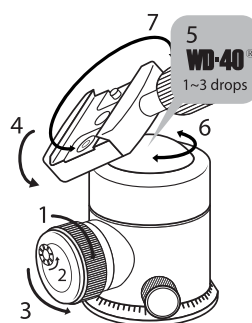
#### Adjusting Torque Limit Dial



1. Lock the ball and panning disk.
2. Unscrew (CCW) the torque limit dial.
3. Mount the camera or lens on the quick shoe.
4. Fasten the quick shoe knob.
5. While slowly loosening the ball locking knob, find the desirable friction level of loaded gear. The friction level that the loaded gear stays exactly where you set it while the loaded gear can be tilted or rotated with ease.
6. Screw in the torque limit dial to set the position.

#### Cleaning and Maintenance

The Markins Q-Ball is manufactured with high precision parts. Clean your unit if it is contaminated by foreign materials such as dirt, sand, salty water, lubricant, etc., to ensure smooth and trouble-free operation. Follow the cleaning instructions carefully.



1. Fasten (CW) the ball locking knob.
2. Unscrew (CCW) the torque limit dial if it is set.
3. Free the ball by unfasten (CCW) the ball locking knob and remove any visible foreign materials from the surface of the ball.
4. Lower the quick shoe.
5. Apply about 1~3 drops of **WD-40** to the ball.
6. Rotate the ball to spread the solution on the whole surface of the ball.
7. Rotate the ball several times and clean the surface with clean, lint-free cotton cloth.

The thin film of **WD-40** left on the surface does not degrade the performance of the ball head. Before going out to the field in cold weather, cleaning will enhance trouble-free operation and prevent from getting moisture and freezing.