Introducing the Paramount Series 6 German Equatorial Mounts

Since 1996, Paramount™ mounts have set the standard for stability, performance, and reliability. The new Paramount Series 6 models offer the following refinements, enhancements, improvements, and changes. See page 4 for a side-by-side comparison of the features and changes in the Paramount Series 6 versus earlier models.

Updated Telescope Control System

The MKS 6000™ is Software Bisque's latest dual-axis DC servomotor telescope control system (TCS) for gear-driven Paramount mounts. The MKS 6000 features:

Expanded Communication Options: Includes USB-C, Ethernet, and Wi-Fi for computer to mount communication.

Improved Reliability: Use either the USB-C or Ethernet ports for hard-wired communications. Or, with a Wi-Fi enabled computer, control the mount from its built-in Wi-Fi hotspot.

MKS 6000 is Compatible with Earlier Models: Upgrade kits will be available for earlier model Paramount MYT, MX+, ME II, and legacy ME mounts. The latest information about upgrade kits is available at www.bisque.com/MKS6000Upgrade.

Optional On-Axis Absolute Encoders

All Paramount Series 6 models offer *optional* on-axis absolute ring encoders that can be installed at the factory or upgraded later. On-axis absolute encoders offer:

- ✓ No homing required.
- ✓ No periodic error.
- ✓ Exceptional pointing and tracking results with fewer TPoint™ calibration points.
- ✓ 26-bit Renishaw absolute ring encoders with 0.02 arc second precision.
- ✓ Extended temperature range (ETR) read heads with a minimum operating temperature of –40° C.

All Paramount Series 6 Models Include TheSky Universal Software Bundle

All Paramount mounts now include TheSky's Universal bundle. Out of the box, you'll receive *TheSky Professional* edition, the *Cameras+* module, the *Domes* module, the *TPoint* module , and the *Weather* module. Additionally, the included *Multi-OS+* module lets you install TheSky on macOS™, Ubuntu™ Linux (ARM64), Ubuntu™ Linux (x86_64), and Windows™ operating systems.

Improvements and Enhancements

Increased Carrying Capacity

- The Paramount MYT Series 6 has larger internal bearings to provide exceptional stability for heavier payloads (see page 4).
- The Paramount MX Series 6 has a larger declination axis that gives a direct and easy route to run cables through the mount with increased stability.

Improved Versa-Plate™ Telescope Mounting Adapter

- Includes four integrated clamping knobs that securely captivate the telescope dovetail.
- Like the Paramount MYT, the Paramount MX Versa-Plate has slotted mounting holes to make finding the ideal balance point easier.
- The new telescope drop-in dovetail design makes attaching the telescope much simpler.
- The Instrument Panel can be attached to either end of the Versa-Plate, putting the power connectors and pass-through Ethernet port close to your equipment.

Streamlined Instrument Panel: The redesigned lower-profile Instrument Panel includes three XT60 power connectors are capable of delivering up to 30A at 500V max power, an Ethernet port for mount control and ample room your USB 3 cables for USB 3-based CMOS cameras.

Updated Through the Mount Power Solution and Cabling: The base of the hour angle axis includes one XT60 power connector, one pass through Ethernet port, and one Keystone module that accepts low-voltage power jacks, CAT6 ports, USB ports and other connectors.

New Polar Axis Altitude Adjuster (Paramount MX Series 6 Only)

- The Paramount MX Series 6 incorporates the same step latching altitude adjustment mechanism found in the classic Paramount MYT. The adjuster makes large scale polar axis elevation adjustments more convenient.
- The polar axis can access latitudes between 0° to 70°.

Relocated Axis Locking Knobs

- The altitude and azimuth locking knobs are now on the gear covers, with axis locking holes at 10-degree increments to make locking the axis during setup easier.
- The wider locking knob is easier to grasp and rotate.

Durable External Finish. The red components are powder coated for a durable, fade-resistant finish. The black components are anodized.

Spring-Captivated Power Input Port

- The DC power in port and the DC power supply connector are new. Together, they provide greater physical contact, and require a greater force to insert and remove the barrel from the port. The MKS 5000 power in connector employed a single spring to captivate the barrel connector while MKS 6000 connector uses six separate springs to captivate the barrel connector. The barrel connector also has two clamping leads that offer a firm connection to the center tip. This means the force required to pull the plug out of the connector is many times greater than typical DC barrel connectors and ensures consistent electrical contact.

On some of the classic models, the barrel connector was captivated with a threaded ring and could only be removed by unscrewing the ring by hand. While the new style connector will remain in place during normal operation, if the power cable ever gets snagged or tripped over, the cable will safely separate from the port without causing damage.

MKS 6000 DC power input jack and power supply connector.

Operational Changes

- For mounts with motor-based encoders, the home position on Paramount Series 6 models is hour angle 0, declination 0.
- The homing position on all earlier Paramount models is hour angle 2, declination 0.

Note that Paramount Series 6 mounts with optional on-axis absolute encoders do not need to be homed.

Paramount Series 6 vs. Paramount Classic Models

The table below lists the significant changes between the Paramount Series 6 and the classic models.

Feature	MYT Series 6	MYT Classic	MX Series 6	MX+	ME Series 6	ME II
Telescope Control System	MKS 6000	MKS 5000	MKS 6000	MKS 5000	MKS 6000	MKS 5000
***Optional* On-Axis Absolute Encoders**	✓	×	✓	×	✓	✓
Maximum Telescope Carrying Capacity	70 lb. (32 kg)	50 lb. (22 kg)	125 lb. (56 kg)	100 lb. (45 kg)	240 lb. (109 kg)	240 lb. (109 kg)
Total Mount Carrying Capacity (telescope+ counterweights)	140 lb. (64 kg)	100 lb. (45 kg)	250 lb. (113 kg)	200 lb. (90 kg)	480 lb. (218 kg)	480 lb. (218 kg)
Mount Weight (counterweight shaft removed)	35 lb. (16 kg)	34 lb. (15 kg)	54 lb. (24 kg)	50 lb. (23 kg)	85 lb. (38 kg)	Est. 85 lb. (38 kg)
Included Software[1]	TheSky Universal Bundle[1]	Paramount MYT Software Suite[2]	TheSky Universal Bundle[1]	Paramount MX+ Software Suite[3]	TheSky Universal Bundle[1]	Paramount ME Software Suite[4]
Versa-Plate and Instrument Panel	• Drop-in dovetail • 4 dovetail locking knobs • 3 XT60 connectors	• Slide-in dovetail • 3 dovetail locking knobs • Auto-guider port	• Drop-in dovetail • 4 dovetail locking knobs • 3 XT60 connectors	• Slide-in dovetail • 3 dovetail locking knobs • Auto-guider port	• Drop-in dovetail • 4 dovetail knobs • 3 XT60 connectors	• Slide-in dovetail • 3 dovetail locking knobs

Feature	MYT Series 6	MYT Classic	MX Series 6	MX+	ME Series 6	ME II
	• Pass through Ethernet port	• Pulse focuser port • 12V and 5V power out ports • Two USB 2.0 ports • Auxiliary power out port	• Pass through Ethernet port	• Pulse focuser port • 12V and 5V power out ports • Two USB 2.0 ports • Auxiliary power out port	• Pass through Ethernet port	• Auto-guider port/Pulse focuser port • 12V/5V power out ports • Two USB 2.0 ports • Auxiliary power out port
Electronics Box	• Ethernet port • USB-C port • Wi-Fi antenna • Spring-captivated power connector	• USB Mini-B connector • Optional Wi-Fi • Threaded power barrel connector	• Ethernet port • USB-C port • Wi-Fi antenna • Spring-captivated power connector Spring captivated 48V DC power in port	• USB Mini-B connector • Optional Wi-Fi • Threaded power barrel connector	• Ethernet port • USB-C port • Wi-Fi antenna • Spring-captivated power connector • Spring captivated 48V DC power in port	• USB Mini-B connector • Optional Wi-Fi • Threaded power barrel connector
Through the Mount Power	XT60 input to 3 XT60 output connector in Instrument Panel	1 A 5V/12V 2.1 mm port, plus a Kycon-connector through the mount power	XT60 input to 3 XT60 output connector in Instrument Panel	1 A 5V/12V 2.1 mm port, plus a Kycon-connector through the mount power	XT60 input to 3 XT60 output connector in Instrument Panel	1 A 5V/12V 2.1 mm port, plus a Kycon-connector through the mount power
Home Position	HA 0 Dec 0	HA 2 Dec 0	HA 0 Dec 0	HA 2 Dec 0	HA 0 Dec 0	HA 2 Dec 0
48V DC Power Input Port Captivation	Six internal springs hold the barrel connector in place.	Barrel connector threads into power port.	Six internal springs hold the barrel connector in place.	Barrel connector threads into power port.	Six internal springs hold the barrel connector	Six internal springs hold the barrel connector in place.
Polar Axis Elevation Adjustment	Unchanged.	• Coarse adjustment: Manually raise or lower the polar axis to the approximate latitude.	• Coarse adjustment: Manually raise or lower the polar axis to the approximate latitude.	Rotating jacking screw.	Unchanged.	Rotating jacking screw.

Feature	MYT Series 6	MYT Classic	MX Series 6	MX+	ME Series 6	ME II
		• Fine adjustment: Rotate a fine-threaded knob.	• Fine adjustment: Rotate a fine-threaded knob.			
External Finish	Red components are powder coated; black components are anodized aluminum.	Red components are anodized; black components are anodized aluminum.	Red components are powder coated; black components are anodized aluminum.	Red components are anodized; black components are anodized aluminum.	Red components are powder coated; black components are anodized aluminum.	Red components are anodized; black components are anodized aluminum.
Axis Locking Positions	Lock axes in 10-degree increments in both HA and Dec.	Lock axes at 90-degree increments in both HA and Dec.	Lock axes in 10-degree increments in both HA and Dec.	Lock axes at 90-degree increments in both HA and Dec.	Lock axes in 90-degree increments in both HA and Dec.	Lock axes in 90-degree increments in both HA and Dec.
Location of Axis Locking Knobs	On the HA and Dec axes.	On the worm block.	On the HA and Dec axes.	On the worm block.	Install locking bolts.	Install locking bolts.

[1]The Universal Bundle includes TheSky Professional, Cameras+ module, Domes module, Multi-OS+ module, TPoint module and the Weather module. The optional annual subscription renewal is $200.

[2]The Paramount MYT Software Suite includes TheSky Professional, Cameras+ module, Multi-OS+ module, and TPoint module. The optional annual subscription renewal is $100.

[3]The Paramount MX+ Software Suite includes TheSky Professional, Cameras+ module, Multi-OS+ module, and TPoint module. The optional annual subscription renewal is $100.

[4]The Paramount ME Software Suite includes TheSky Professional, Cameras+ module, Domes module, Multi-OS+ module, and the TPoint module. The optional annual subscription renewal is $100.

Frequently Asked Questions

Q. When will Paramount Series 6 mounts start shipping?
A. The Paramount MYT and Paramount MX Series 6 will ship in the second half of 2023. The Paramount ME Series 6 will ship in the third quarter of September 2023.

Q. What is an XT60 power connector?
A. XT60 power connectors are typically found in solar panel, electronic bicycle, and RC vehicle wiring systems. They are rated to carry up to *500V* at 30A maximum (that's 15 *KW!*) and accept 12 AWG wires. They can handily carry all the 12V DC power that is needed by the astronomical equipment on your telescope. Pre-made cables with XT60 connectors are widely available and affordable. Search the Web for "*XT60 connectors*" for more information about them.

Q. Can the earlier model Paramount mounts be upgraded to use the MKS 6000?
A. Yes. The latest information about the upgrade kits is available at www.bisque.com/MKS6000Upgrade.

Q. If I purchase a Paramount Series 6 model without the optional on-axis absolute encoders, can they be installed later?
A. Yes, *Paramount Series 6 mounts*, only, can be retrofitted with the optional on-axis absolute ring encoders.

Q. Does the Paramount have an external SBIG ST-4-style autoguider port?
A. No. When autoguiding, TheSky's Direct Guide™ autoguider "relay" issues autoguider corrections directly to the MKS 6000 TCS. Autoguider ports and failure-prone autoguider cables are not required. Third-party automation software accesses Direct Guide through TheSky's scripting interface.

Q. Does the Paramount mount include software?
A. Yes, all Paramount mounts include Software Bisque's *Universal bundle* that includes TheSky Professional edition, the Cameras+ module, the Domes module, the TPoint™ module, and the Weather module. Also included is the Multi-OS+ module that lets you install TheSky on macOS™, Ubuntu™ Linux (ARM64), Ubuntu™ Linux (x86_64), and Windows™ operating systems.

Q. Are the on-axis absolute ring encoders compatible with older model Paramount mounts?
A. No, Paramount Series 6 models, only, can accept the on-axis absolute encoder components.

Q. Do you have a trade-in program for earlier Paramount models?
A. Software Bisque does not presently have a Paramount trade-in program.

Q. When upgraded with the MKS 6000, will the earlier Paramount models have an increased maximum weight capacity?
A. No. The maximum weight capacity of the Paramount Classic models remains the same. See the *Paramount Series 6 vs. Paramount Classic Models* table above for a side-by-side comparison.