

## Hutech AZM-100/200 Motorized Alt-Az Mount



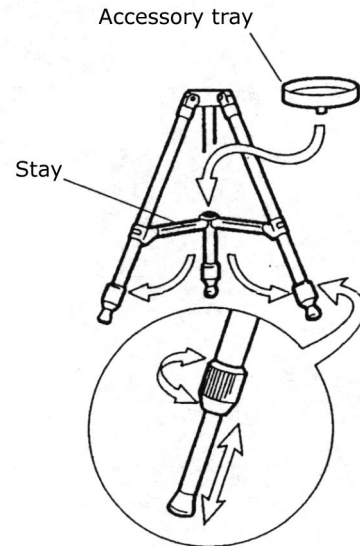
The Hutech motorized mount is a light-weight alt-az mount capable of carrying up to a 3 kg load and mounted either on a standard 3/8-16 thread photographic tripod (AZM-100) or supplied together with an optional tripod (AZM-200). Electric slewing in both axes allows for easy centering and tracking of objects without the vibration caused by manually manipulating the tripod.

### Tripod Setup

For the tripod supplied with the AZM-200,

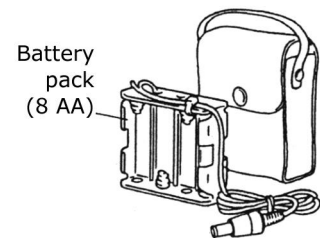
- Set the tripod on firm, level ground such as a paved parking lot or walkway.
- Expand the legs outwards until the stay bars are horizontal.
- Loosen the leg extension clamps to adjust leg lengths as desired and tighten them firmly.
- Install the accessory tray at the center of stay bars.

When using a photographic tripod (AZM-100 head) be sure to use one which has an adequate load capacity for the alt-az head plus your scope and eyepieces. Deploy the tripod according to the manufacturer's instructions, then attach the AZM-100 alt-az head to the top of the tripod in a level position. Note that the AZM-200 head cannot be used with a photographic tripod without an adapter. The tripod's clamps should be securely tightened at all times since any adjustments in viewing position will be done via the alt-az mount's controls.



### Mount Setup

The mount requires 12VDC for operation. A compact power pack, which holds 8 AA batteries, is supplied with the mount. For extended operation, an optional AC adapter or cigarette lighter adapter is available. If you supply your own power adapter, verify the connector size and polarity in the specification section at the end of this document.



Connection procedure:

- With the switch off, plug the hand controller connector into the mount.
- Put fresh batteries into the battery holder and place it into the supplied battery pouch.
- Plug the power connector into the mount.

## Scope Setup

Set the alt-az head so that the scope attachment bracket is horizontal, then attach the rings for the scope to the bracket. If the scope has a 1/4-20 mounting thread, it can be directly attached to the bracket. Cautiously release the mount's altitude clamp and insure that the scope is balanced as well as possible before beginning observing.



Some binoculars may also be mounted using a bracket provided binocular manufacturer (usually for heavier models). The 1/4-20 threaded bracket screw hole is compatible with the alt-az mount head.



## Operation

To view objects, the scope should first be roughly manually positioned by hand and then fine-positioned using the electric controls:

### Manual Operation:

- Loosen the Altitude clamp to adjust the scope position vertically.
- Loosen the Azimuth clamp to adjust the scope horizontally.
- Tighten both clamps when a scope is properly pointed. Leaving the clamps loose will not allow the electric drive to move the scope properly.

### Electrical Operation:

- Change from OFF to LOW or HIGH on the hand control.
- While watching the view through the scope position the target using the 4 push buttons on the hand controller. Press the upper and lower keys to move it vertically and the left and right keys to move horizontally (see Note 1).
- The mount can move upwards until reaching +90 degrees and down to -40 degrees from the level position. But use caution to avoid driving the scope into the mount since protrusions from either the scope or tripod may limit actual freedom of movement.

### Notes:

- Key directions are based on an erected image as seen in spotting scopes. The direction of apparent motion may be reversed when using an astronomical scope with an inverted image or when using a diagonal with the scope.
- Watch the power and hand controller cords to make sure that they do not get snagged or wrapped around the mount during operation, especially since the mount is capable of rotating 360 degrees.
- Use fresh batteries to insure proper operation. Low battery voltage may cause erratic operation of the mount.

## Specifications

Mount	
Alt-azimuth type	Two 1/4"-20 threads / 94mm separation Altitude : -40°to +90° Azimuth : 360°
Control Box	Speed : Off/Low/High switchable (Low : 0.2°/second High : 1°/second)
Power consumption	High : 140mA (single axis) / 280mA (two axes) Low : 120mA (single axis) / 200mA (two axes)
Power interface	12VDC, center contact positive 5.5mm OD, 2.1mm ID
Tripod	
Metal tripod	Height : 855 to 1350mm