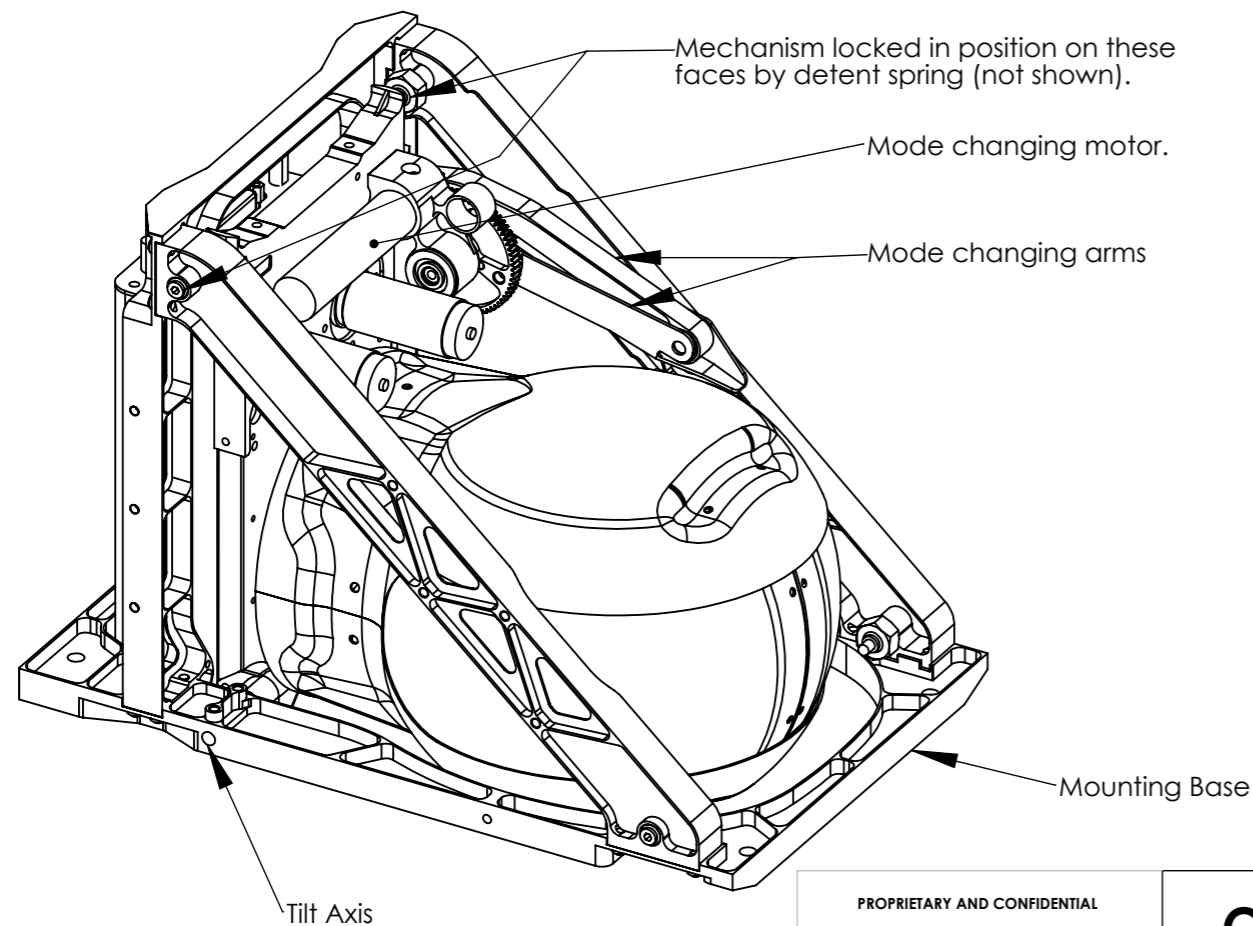


NOTE: Angles depict recommended viewing range.



TASE 3AX has two operating positions, or modes. The first is called overhead and has the "ball" or "head" of TASE withdrawn into the aircraft. This mode is intended for use during take-off, landing and general stowage. It is also intended that the gimbal is used in the overhead mode to receive pictures, as this position has the benefit of avoiding the gimbal lock problem normally associated with 2-axis gimbals with the pan axis pointing down.

If a gimbal is in the standard position, what is referred to here as horizon mode, and the subject of interest is directly below the aircraft, then the pan axis has limited ability to stabilise the image as its axis is pointing towards the target, and thus causes the image to rotate rather than scan when it is moved. With TASE-3AX, the pan axis is rotated by 90° between the two modes. Thus when in overhead mode the gimbal has full authority to stabilise the image as both pan and tilt axes rotations cause motion across the ground. Therefore when the aircraft is flying over the top of a subject of interest, with TASE in the overhead mode the image is fully stabilised in two axis. It is expected that the gimbal will be used like this when the subject of interest is within the zones shown in the drawing above, nearly a complete 90° cone. It should also be noted that in this mode there is less aerodynamic drag.

If the subject of interest is near the horizon then TASE should be put in horizon mode as this provides an unrestricted view of the horizon in all directions as the "ball" is completely in the air flow. When in this position the horizon is always level in the image and the pan axis has continuous rotation. It is recommended that the tilt axis be used in the range shown, but it is not limited to this range and has the standard TASE motion of +23° to -203°.

The selection of modes is a user choice and its control is integrated into the ground control software. There is no requirement to move between the modes as the angle to the target changes. It is expected that the time to change between modes (rotate) will be less than 3 seconds and during this time the gimbal will stay on target and stabilised. In both positions the gimbal will lock into place through the use of special geometry in the actuating linkage and ball plungers. The mechanism requires no power to the actuating motor to stay in position. In the event of total power failure the gimbal will stay in its last position.

Stowage. The camera lens opening in the tilt axis can be rotated into base of the pan axis, thus acting as a lens cap and protecting the camera for take off and landing.

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		0 ±0.5	CHK			Size	A3
		0.0 ±0.1	APP			Units	mm
		0.00 ±0.05					