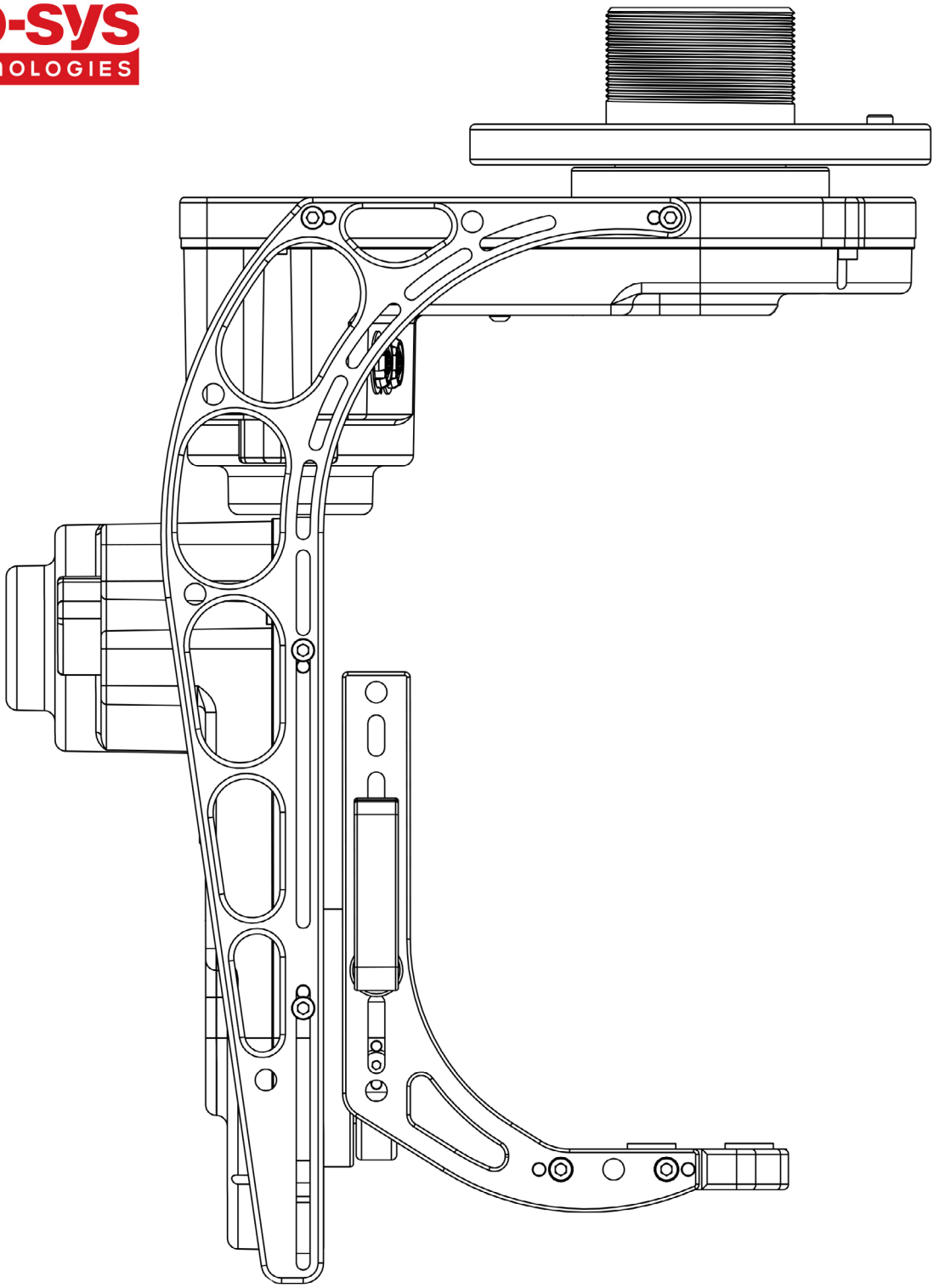
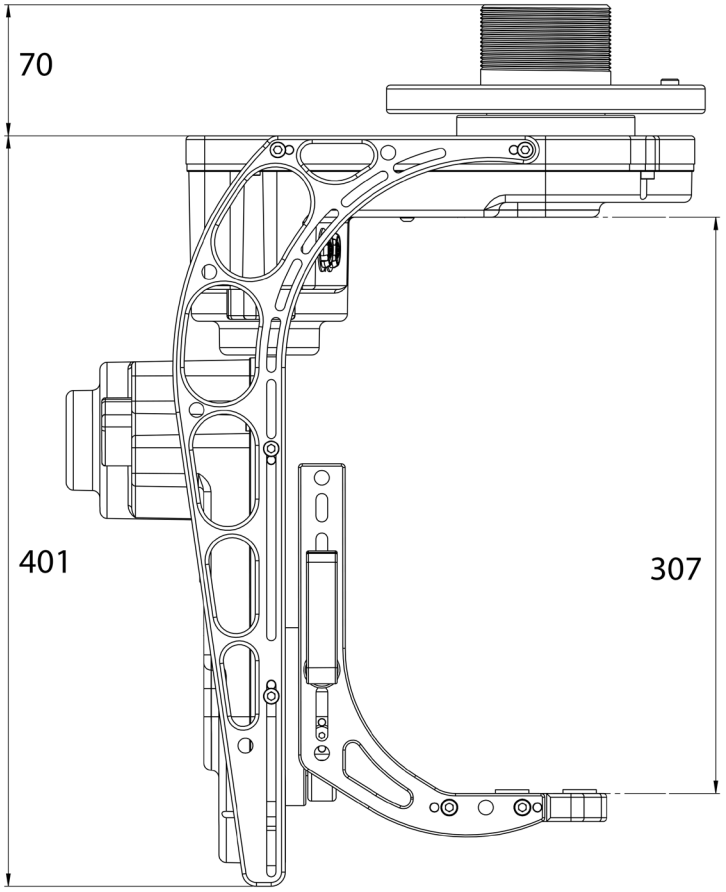
mo-sys TECHNOLOGIES



MO-SYS B20
MANUAL AND USER GUIDE



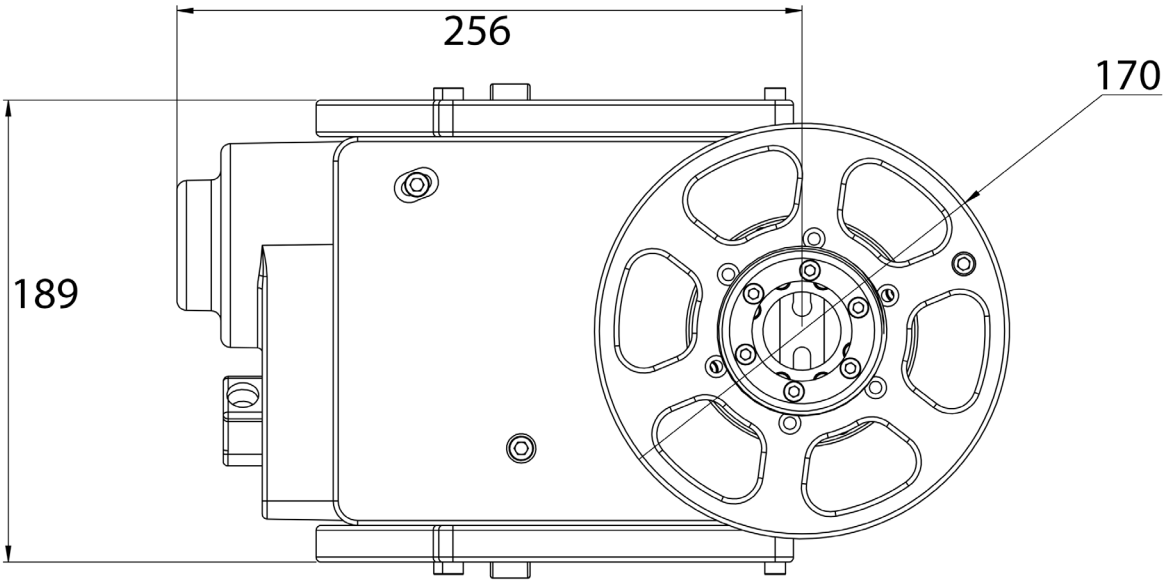
Head Weight: 10Kg

Max. Payload: 20kg

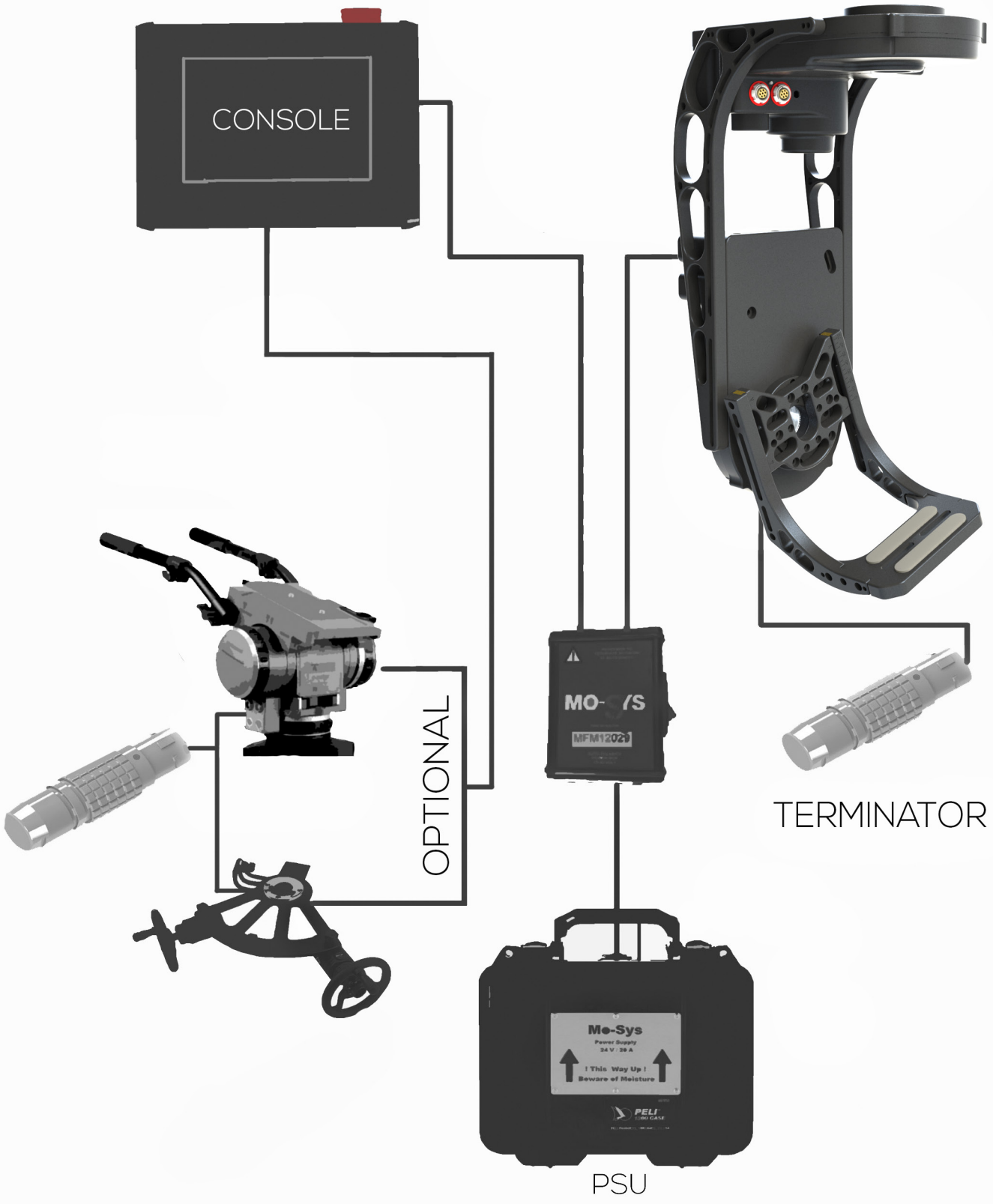
Max movement speed:
180°/Sec. At 24V

Power supply:

Nominal 24V
Nominal 3A
Peak 6A

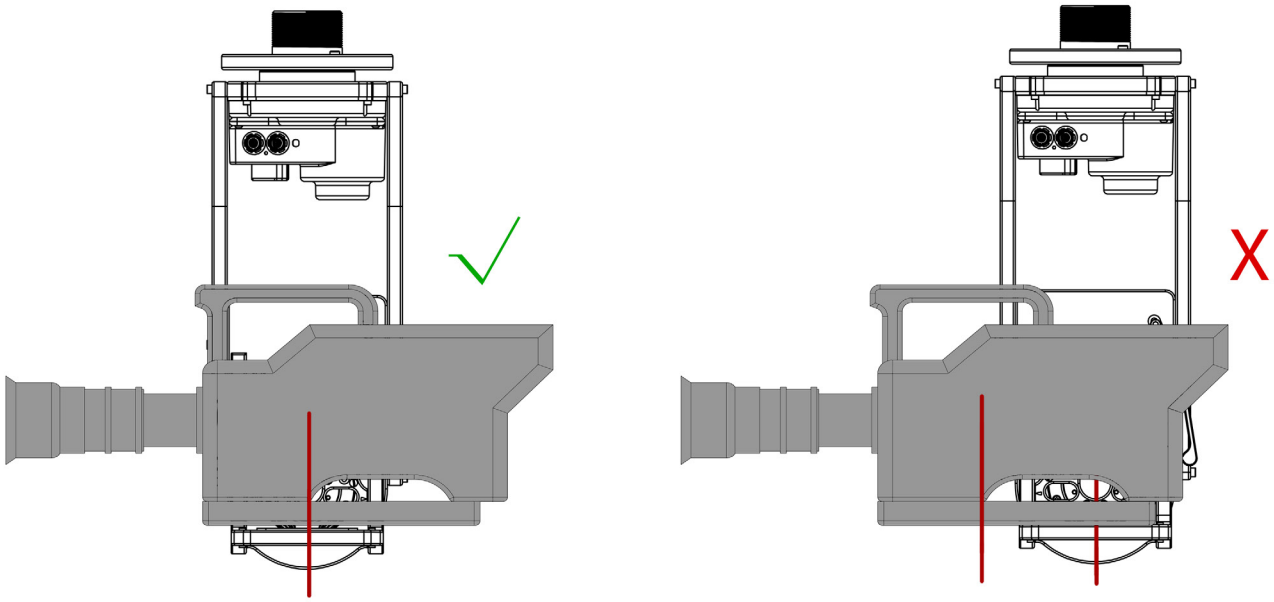


SYSTEM CABLING SETUP

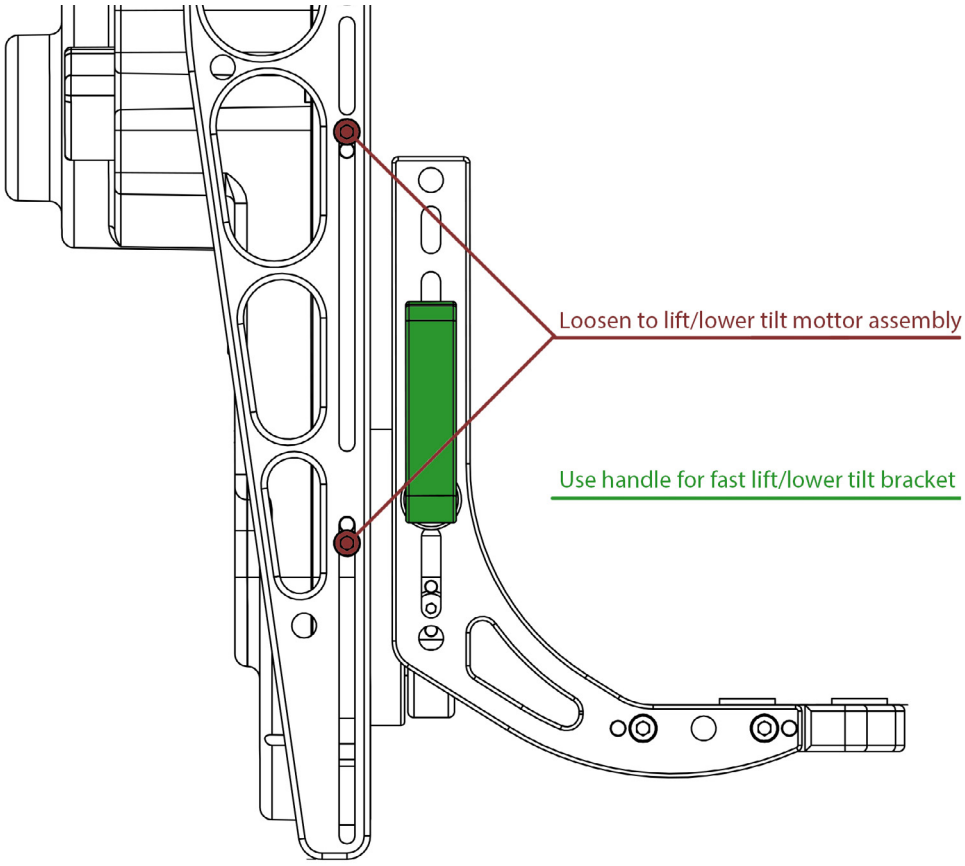


SETUP

Mount camera using the two supplied screws. Adjust camera position so that it is balanced front and back. Adjust camera height to get it's centre of gravity in line with the hole through the tilt axis for best overall balance- this is done by loosening the lever handle on the side of the camera cradle frame and sliding up or down- be careful to support it as it will slide under the weight of the camera.

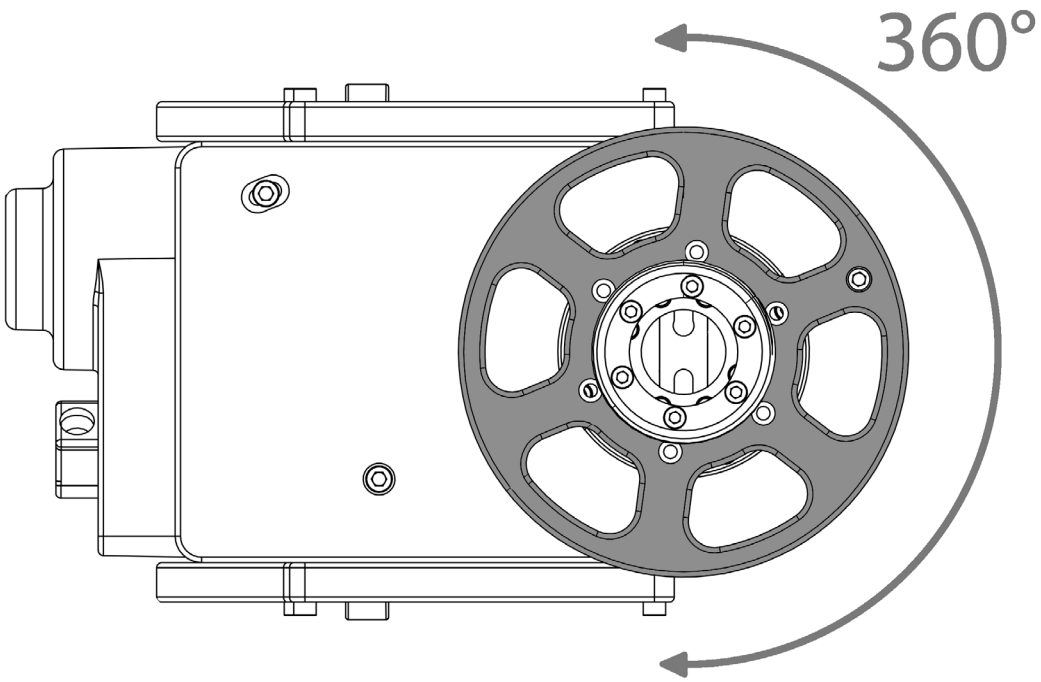


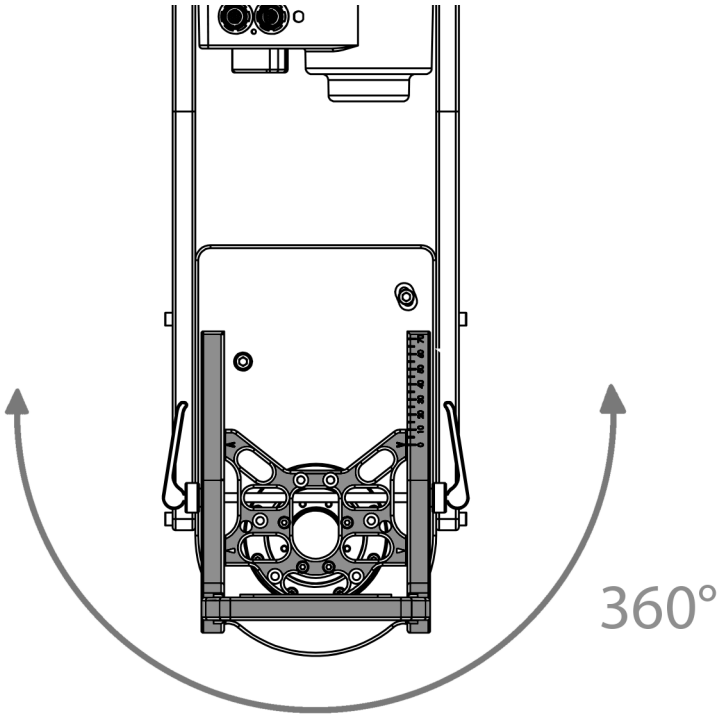
The height of the tilt motor assembly can be adjusted by loosening the 4 screws on the side plates and sliding the motor unit up or down for different camera package sizes.



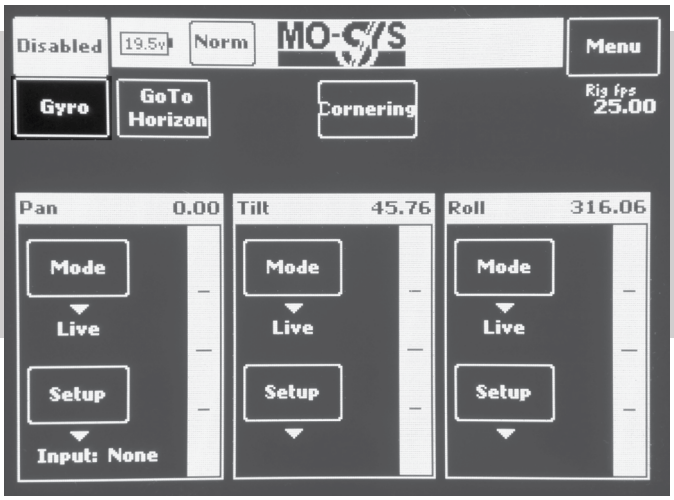
INITIALISATION

The B20 features absolute position encoding ideal for use in virtual set applications. In order to initialise the position output, and to see the degree readout if using the touch screen display console, the pan and tilt axes must be moved through their index positions. **This process must be done slowly in order to pick up the index marker- if moved too quickly they will not register.** The index is in a fixed position so once found it should be easy to find it again. However as the head can be mounted in any orientation, the first time finding the indexes will involve moving each axis slowly until the indexes are found.





CONSOLE GENERAL SETTINGS



When console is turned on, this is the main screen. In this window you can adjust Pan, Tilt, Roll modes and speeds/ smoothing of input devices. Press Gyro button for further gyro options.

Backpan uses a gyro to sense motion of Pan relative to earth. The gyro has excellent drift stability but extreme changes in temperature can lead to drift (unwanted pan motion). If drift is noticed, the gyro head needs to be recalibrated.

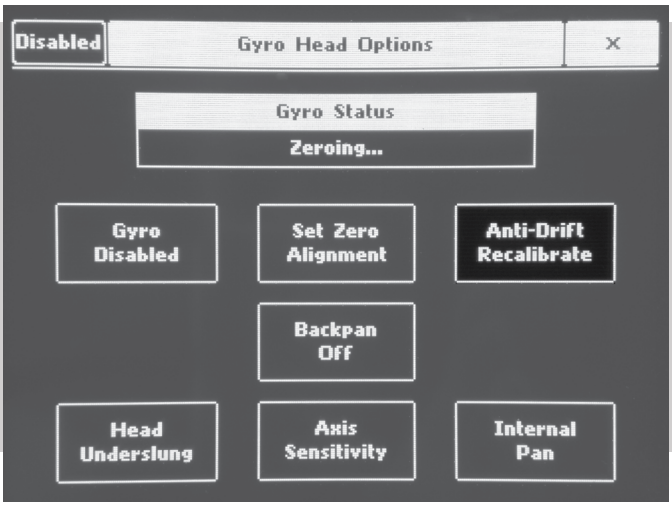
To calibrate gyro, first ensure that head and gyro is DISABLED by checking top left corner. By default, after turning system on, head is always disabled. The gyro should also be disabled . You can disable the gyro by pressing button on left. By default, after turning system on, Gyro is always disabled.

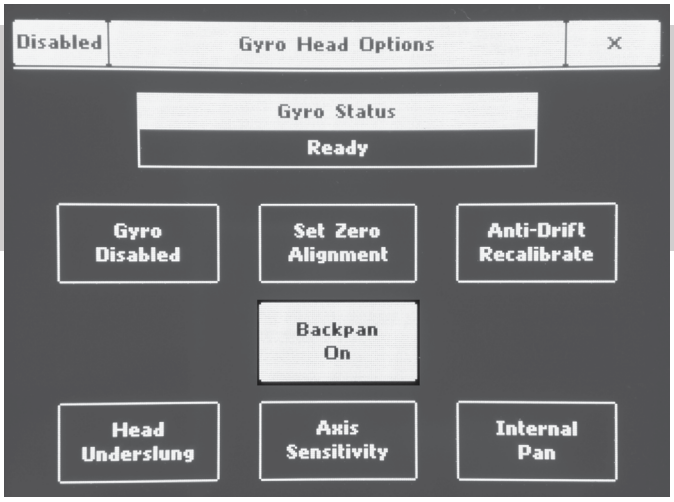
Important- Ensure the head is completely stable and free from vibration.

When head and gyro is disabled, press "Anti-Drift Recalibrate" button. In the gyro Status window it will show

"Zeroing..."

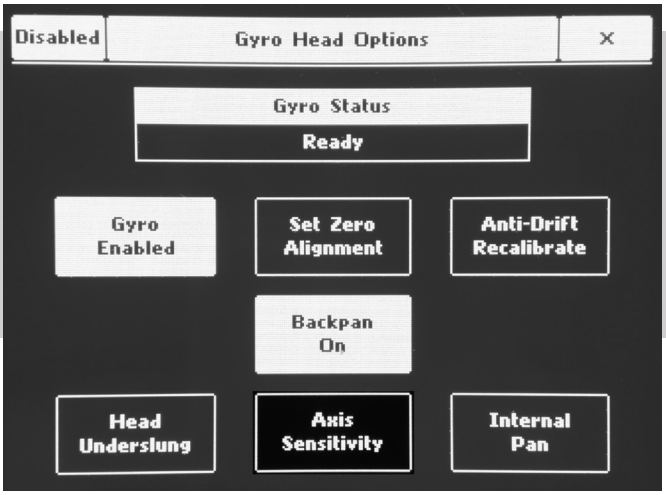
Wait until it shows "Ready".



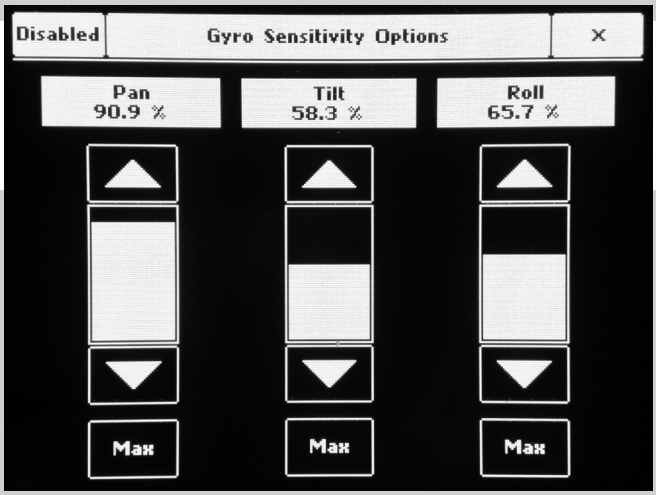


Select Backpan on or off. The Backpan feature is an option for example when using head with a crane. Pan axis of the head tracks rotation of Pan Gyro, so head keeps pointing in the same direction.

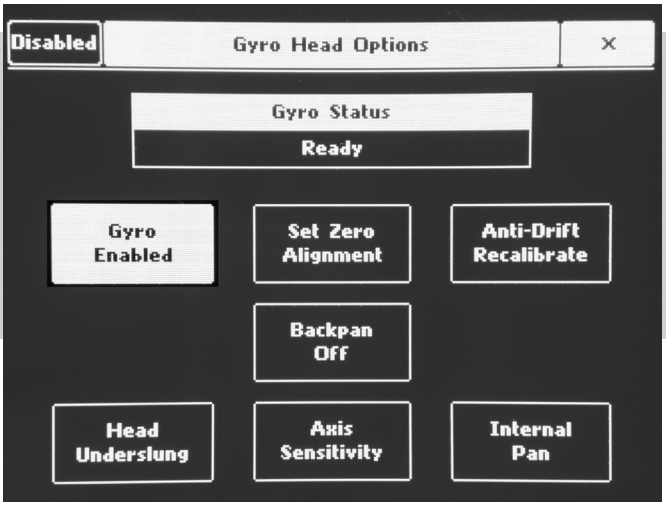
Disable Backpan when moving head in multiple rotations (eg. When mounted on a car) to avoid damaging cables.



To check axis sensitivity, press "Axis Sensitivity" button, where you can reduce or increase sensitivity of each axis separately.



The Backpan function has adjustable sensitivity. The higher the sensitivity is set, the faster the head will track external pan motion. However, setting the sensitivity too high can lead to instability of and oscillation. So the sensitivity must be adjusted according to the solidity of the head mount. As a rule, set sensitivity to 50% initially and adjust higher until optimum performance without oscillation is observed.



After Gyro sensitivity is adjusted, enable gyro by pressing "Gyro disabled" and it will appear as "Gyro Enabled" as shown in image. Then enable head by pressing Enabled/Disabled button in top left corner "Disabled".

Adjust sensitivity of PAN if you have lowered it before. Adjust by gradually increasing PAN until resoance just felt. Reduce it slightly until there is no resonance.

Ignore buttons shown with crosses as they have no function for L40 with backpan.