

HALO
FILM SYSTEMS



HALO 2000 GIMBAL





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The Halo 2000 is a three axes stabilised camera Gimbal, constructed from carbon fibre composite and built with leading-edge technology for film industry use. The carbon fibre chassis is hollow to ensure light weight and high stiffness. The Halo 2000 is designed for DSLR film cameras and is perfect for the following:

- Canon 5D MK3
- Black Magic
- Panasonic GH2/GH3
- Sony NEX5/6/7

Halo gimbals provide stable filming by keeping your camera pointing in the same direction, level with the true horizon, regardless of how the hand-held rig or airframe moves.

An operator input via remote control (or handle orientation change in "Follow-Me" mode) can then execute smooth pans and tilts.

Halo gimbals are well suited for unmanned aircraft such as multi-rotors, mounting on jibs and cranes and as a steady cam replacement/alternative in hand-held use.

- Cameras fitted to the Halo 2000 Gimbal can be perfectly balanced with Photo Higher's innovative 3-axes camera tray, allowing the user to finely adjust the X axis (left and right), Z axis (up and down), and Tilt Angle of the camera live. This allows quick re-balancing for any camera, or even for changes of lens or accessories.
- Halo Series Gimbals run Photo Higher's own high performance stabilisation software, taking data from state of the art motion and position sensors to enable accurate stabilisation.
- Work silently – the Halo 2000 is a direct drive gimbal containing no gearing, fans or other noisy drive technology. This allows use even in quiet studio environments.



- SILENT MOTOR
DRIVE TECHNOLOGY



- DIRECT DRIVE
BRUSHLESS MOTORS



- HIGH PERFORMANCE IMU,
GPS AND COMPASS

Included in the box:

- Halo 2000 Gimbal
- Hand held rig (quick release mount to Gimbal)
- Gimbal stand
- Halo Power Pack Battery
- Battery Charger
- Controller
- Halo Tool Kit
- Aluminium Carry Case for all the above



SPECIFICATIONS

GENERAL

GYMBAL TYPE	3-AXIS ELECTRONIC MULTIPLE IMU STABILISATION
PAN AXIS	360° CONTINUOUS
TILT AXIS	360° CONTINUOUS
ROLL AXIS	360° CONTINUOUS
MAXIMUM SLEW RATES	600°/SECOND (HARDWARE LIMIT)
GUI INTERFACE	USB & BLUETOOTH WINDOWS INTERFACE AND ANDROID GUI

CONTROL MODES

FOLLOW ME (DEFAULT)	STABILISED WITH OPERATOR CONTROL VIA HAND HELD BASE – IF NO RC SIGNAL FOLLOW ME IS THE DEFAULT MODE
SLEW MODE	STABILISED WITH REMOTE OPERATOR
STAND BY	DISABLES ALL DRIVES WHILE KEEPING POSITION SENSING ACTIVE FOR QUICK START
CALIBRATION MODE	GIMBAL PERFORMS SELF-CALIBRATION. ON START-UP OR ON DEMAND

ELECTRICAL AND MECHANICAL

WEIGHT	18KG
VOLTAGE RANGE	12–24V
OVERALL DIMENSIONS	290 × 344(MAX) × 275MM
TRAY DIMENSIONS	175 × 220 × 110MM
LOAD CAPACITY	CAMERAS AND EQUIPMENT UP TO 3.5KG
NUMBER OF AXES	THREE AXES PAN, TILT AND ROLL (ALL DIRECT DRIVE)
TRAVEL LIMIT	UNLIMITED ROTATIONS IN ALL AXES UNLESS LIMITED BY CAMERAS WITH LONG LENSES

ADDITIONAL FEATURES

QUALITY CONSTRUCTION USING PREMIUM MATERIALS

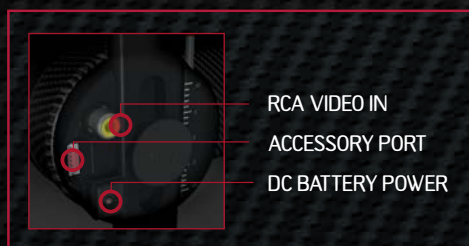
The Halo series use only the finest materials in their construction. The 1K carbon fibre composite monocoque construction provides an ultra-rigid and lightweight frame. The precision CNC machined 6061 aluminium camera tray is fully matte anodised for corrosion resistance and minimal reflectivity.

VIDEO FEED

The Halo 2000 and 2500 feature a Composite RCA video feed from camera tray through to head for video transmitters and displays.

DUAL AUXILIARY POWER POINTS

The gimbal head can share battery power via an industry standard D-Tap connector, and the camera tray features a 2 Amp auxiliary DC battery supply.



INTERNAL CABLE ROUTING

All cables and connections are housed inside the hollow carbon fibre frame, providing superior protection to all componentry. The lack of external cables also guarantees there will never be a stray cable to ruin that perfect shot.

QUICK RELEASE HEAD

Halo gimbals attach via a stable quick release mount for ultimate versatility. Attach it to the provided hand held rig, your own equipment, or on a multi-rotor craft such as our Halo 6 or 8 UAV for aerial filming.

UNLIMITED ROTATIONS ON ALL AXES

Unlimited rotations are possible on all three axes thanks to the Halo's slip-ring construction.

INCREDIBLE STABILITY

Direct Drive Technology provides stabilisation in any orientation. The silent brushless motors give natural and fluid motion control, providing a rock solid filming platform.

CAMERA BALANCE CONTROL

Micro-adjustment dials on the camera tray allows you to perfectly balance a camera in seconds, eliminating torque on the drives. Changes of camera body or lens can be quickly compensated for. Perfect balance increases battery life and motion response.



INDUSTRY STANDARD CONNECTORS

The Halo head features the film industry standard XLR connector for easy power supply from any 12-24V DC source. Use your current power packs for extended drive time.

EASILY UPGRADABLE FIRMWARE

Remote firmware upgrades are done via Windows interface, using the standard mini USB connector on the gimbal head.

COMPATIBLE WITH ACCESSORY ADD-ONS

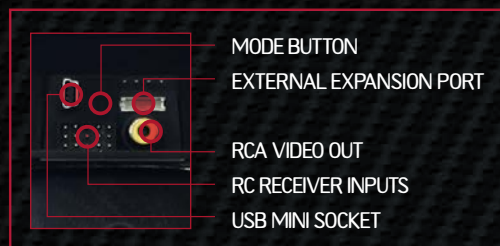
An Accessory Port is provided on the camera tray to allow connection to follow focus and zoom control motors. Model specific interface boards will also be available for camera control.

SETUP STAND

Each Halo Gimbal is provided with a folding stand, which can be used for hassle-free camera balancing or resting your rig.

PRECISE LOCATION MAPPING

The gimbal is driven from twin 9 axis IMUs (Inertial Measurement Units) with compass, for perfect follow-mode shooting.





FREQUENTLY ASKED QUESTIONS

WHAT CAMERAS FIT IN THE HALO 2000?

The Halo 2000 has been designed primarily for DSLR size cameras such as the Canon 5D and Black Magic, but can fit cameras as small as a GoPro, and as large and long as a Sony HDR-PJ760. For a full list of cameras that can be used in the Halo gimbals please refer to the Halo Comparison Chart.

WHAT ARE SLIP RINGS AND WHAT DO THEY DO?

Slip rings allow electrical signals and current to be passed through a rotating joint. Unlike comparable gimbals, the slip rings we use allow all three axes to continuously rotate 360 degrees without getting twisted or tangled.

WHAT IS THE AUXILIARY COM PORT ON THE CAMERA TRAY FOR?

The Auxiliary com port will be used for controlling additional features like Zoom, Iris and Follow Focus, and camera control. These are planned for future development.

IS THERE A POWER FEED AT THE GIMBAL TRAY?

Yes - the power supply on the camera tray can be used for powering auxiliary gear like follow focus motors, HDMI transmitters, or the camera itself providing the voltage is correct. The feed can supply 2A at the same voltage powering the gimbal (i.e. 12-24v).

CAN YOU GET HDMI OR HIGH DEFINITION VIDEO THROUGH THE SLIP RINGS?

No – both HDMI and HD-SDI are high bandwidth and require larger, specialised slip ring and motor construction. However, the Halo 3000 will have an HD-SDI connection through the slip rings.

CAN I USE MY OWN REMOTE CONTROL GEAR?

Yes – the gimbal is compatible with standard Radio Control receivers from brands such as Spektrum, Futaba, JR that send variable pulse width signals. There will be an option to purchase the Halo kit without the remote controller.

CAN I FIT THE HALO GIMBALS TO MY MULTI-ROTOR HELICOPTER OTHER THAN THE HALO 8 OR HALO 6?

Yes. We will be releasing conversion kits for other frames which will allow you to use the Halo quick release system and mount the gimbal to your machine.

WHAT ARE THE HALO 8 AND HALO 6 MULTI-ROTORS?

The Halo 8 and Halo 6 are Photo Higher's industrial line of professional multi-rotor helicopters, which come standard with a quick-release mount for the Halo Series Gimbals.

FREQUENTLY ASKED QUESTIONS

HOW MUCH WEIGHT CAN THE HALO GIMBALS CARRY?

Halo 2000 – 3.5kg (7.5 pounds)

Halo 2500 – 5kg (11 pounds)

Halo 3000 – 10kg (22pounds)

CAN THE HALO GIMBALS BE USED IN SINGLE OPERATOR MODE?

Yes. There are a number of modes which can be accessed; the default mode is "Follow Me Mode".

WHAT IS "FOLLOW ME MODE"?

Follow me mode is the default mode of the camera gimbal and is mainly used for one man operator. The inner IMU basically follows the outer IMU stabilising all the jerky movements and keep it nice and smooth. Which allows the operator to control the pan and tilt of the Halo by manipulating the hand held rig.

HOW DO WE CONFIGURE THE HALO GIMBALS?

The Halo gimbals can be configured through Windows GUI as well as a Bluetooth GUI using your laptop or Android smart phone.

CAN THE HALO GIMBALS BE MOUNTED ON OTHER PLATFORMS?

Yes. We will be releasing conversion kits to allow the Halo gimbals to be fitted to other platforms.

HOW HEAVY ARE THE HALO GIMBALS?

Halo 2000 – 1.8kg (3.96 pounds)

Halo 2500 – 1.9kg (4.18 pounds)

Halo 3000 –TBA

WHAT IS THE DIFFERENCE BETWEEN THE HALO AND OTHER SIMILAR GIMBALS ON THE MARKET?

Please check the Halo Comparison Chart.

HOW LONG DO THE HALO BATTERIES LAST?

The batteries supplied are 2250mAh packs and they will last about 3 hours continuous use, depending on balance and load. Larger and higher voltage batteries can be used to provide a much longer battery life if required.

ARE THERE ANY DISTRIBUTORS FOR THE HALO GIMBALS?

Initially Photo Higher will be managing the sales of the Halo gimbals. For a current list of distributors please check www.photohigher.co.nz. There will be an exclusive distributorship for these gimbals please contact sales@halofilmsystems.com

ARE THERE ANY SHIPPING RESTRICTIONS FROM NEW ZEALAND FOR THE HALO GIMBALS?

We ship via FedEx to most countries on the planet. However we are prevented from shipping to certain countries by international treaties and national restrictions.

WHEN WILL THE HALO 3000 BE READY AND WHAT IS THE COST?

We are currently still developing the Halo 3000 and we are planning to have it ready at the end of 2013. Please subscribe to our Halo newsletter to keep up to date with the most up to date information on the Halo 3000.



FREQUENTLY ASKED QUESTIONS

IS IT EASY TO BALANCE CAMERAS IN THE HALO GIMBALS?

Yes - we have spent a considerable amount of time designing and developing the Halo camera tray to ensure it is simple and easy for people to balance cameras.

DO THE HALO GIMBALS INCLUDE INDUSTRY STANDARD CONTROLLERS OR COMPONENTS?

The gimbal runs on Halo Film Systems' own in-house software, and is made with custom built motors, motor drivers, electronics, and adjustment components. We make all our Carbon Fibre mouldings in-house.

CAN THE HALO GIMBALS DO STILL SHOTS AS WELL?

Yes provided you have a remote shutter control for your camera. The gimbal simply provides stabilisation and isn't aware of whether a camera is filming or taking stills.

WHAT IS THE LONGEST TELEPHOTO LENS I CAN USE?

Our gimbal is good for telephoto work. We will be providing examples of performance with various lenses. Note that physically longer lenses will require the camera body to be further back in the gimbal to balance, and need more room.

WHO SHOULD I CONTACT FOR MORE INFORMATION?

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