

# HS-2010MH



## HS-2010MH PAN AND TILT HEAD

The HS-2010MH remote pan/tilt head is designed to support full facility CCD studio or portable cameras together with any combination of lens, viewfinder or teleprompter up to a maximum payload of 100 kg.

The HS-2010MH is a post head on which the payload is perfectly balanced about the horizontal and vertical centres of gravity. Specifically designed for dual remote / manual operation, the HS-2010MH gives excellent performance in either mode.

Included in both the pan and tilt axes is the well proven Vinten Lubricated Friction (LFT™) drag system which delivers the ultimate in smooth and continuously variable drag over an extremely wide range. When the head is returned to remote operation the drag is declutched by a lever - uniquely preserving the precise pan and tilt drag settings for future use.

The provision of a non-lubricated, self-aligning gear train and 24 bit high precision servo technology gives broadcast quality smooth movement with an excellent 60 arcseconds position repeatability in remote operation.

A key to the very responsive performance of AutoCam™ is fast acceleration. The HS-2010MH achieves excellent acceleration by using very high gain digital / analogue servo amplifiers to provide swift motor response. This combined with an extremely rigid mechanical design allows tight damping without oscillation or overshoot.

All AutoCam™ mechanical, electro-mechanical and electronic sub-systems are designed for very low maintenance and maximum reliability. Mechanical components are rated to withstand loads much higher than would be encountered in normal use.

Communication with the control panel is by RS422 data over a maximum distance of 2400 metres. The HS-2010MH uses a slim 11mm floor cable which connects with a 2U rack mounted power supply over a maximum distance of 150 metres.

Control of zoom and focus is possible with full servo studio lenses and ENG lenses. In the case of an ENG lens, the HP-ZFSLD Lens Drive may be attached to provide motors and follow pots for servo operation. The full zoom and focus ranges are covered at a proportional speed in a minimum of one second, dependent on lens type.

# AutoCam™

HS-2010MH PAN AND TILT HEAD

■ MANUAL / REMOTE HEAD

■ VINTEN LF DRAG SYSTEM

■ 100 kg PAYLOAD CAPACITY

■ 60 Arcsec REPEATABILITY

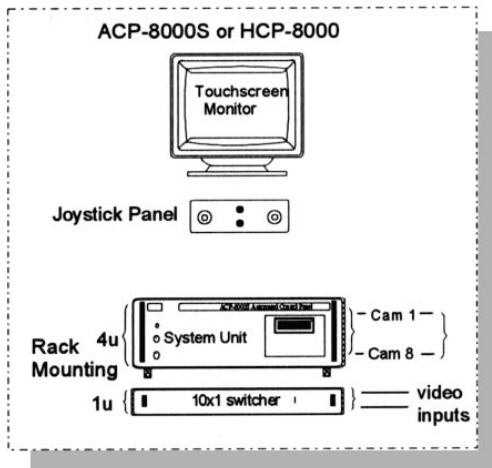
■ 24 BIT SERVO PRECISION

■ MOTION MEMORY

# Vinten

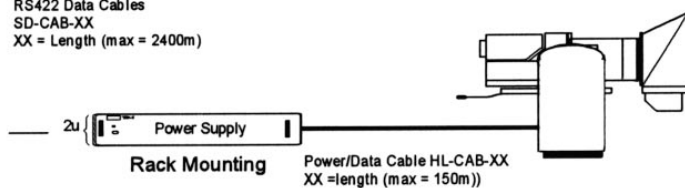
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# AutoCam™



RS422 Data Cables  
SD-CAB-XX  
XX = Length (max = 2400m)

HS-2010MH Pan Tilt Head



## HS-2010MH Specification :

Head Payload		100	kg
Head Weight		47	kg
Angular Range ( pan )		359°	
Angular Range ( tilt )		±45°	
( Dependant upon payload configuration )			
Angular Velocity ( maximum )		90°	s <sup>-1</sup>
Angular Velocity ( minimum )		0.01°	s <sup>-1</sup>
Angular Acceleration ( maximum )		180°	s <sup>-2</sup>
Repeatability ( pan )		60	Arcsecs
Repeatability ( tilt )		60	Arcsecs
Servo Resolution ( pan )		24	bit
Servo Resolution ( tilt )		24	bit
Servo Resolution ( focus )		16	bit
Servo Resolution ( zoom )		16	bit
Response Time ( maximum )		280	ms
Head Dimensions	- height	580	mm
	- width	240	mm
	- depth	480	mm
Power Consumption ( peak )		500	w
Power Supply Requirement ( selectable )		120 V, 60 Hz	
		220 V, 50 Hz	

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