# Eagle PT-50

Advanced engineering and superior performance result in a dynamic combination of pan/tilt and camera system that is simple to use, easy to install, and loaded with features to fit the most demanding applications. Designed to specifically compliment the HV-D30, the PT-50 features smooth quiet movement, proportional speed control, and with the addition of the optional PT-CCB-50 board, complete control of all camera and lens functions, through the use of a single interconnect cable.

# Hitachi HV-D30/SDI

High quality imaging is assured from the Hitachi HV-D30/SDI by the use of 3rd generation Digital Signal Processing that provides 800 TV lines of resolution with a S/N of 62db.

- Quiet Operation
- On Board Computer Controlled
- Proportional Speed Control
- Vector Solving of Pan / Tilt Commands
- Serial RS-485 Control
- Adjustable Preset Speeds
- Adjustable End Limits
- Adjustable Zoom and Focus Speeds
- Normal or Inverted Operation
- Supplies 12 volt DC Power for Camera
- PC Control Software Available
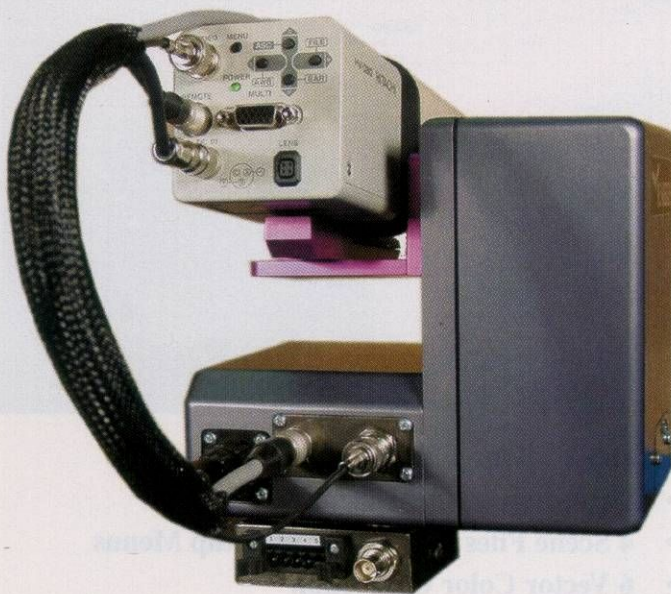- Optional Camera Control Module

- 800 TV Lines of Resolution
- Digital Signal Processing
- 4 Scene Files for Storage of Setup Menus
- 6 Vector Color Correction
- Adjustable Chroma Level
- Digital Noise Reduction
- Auto Tracking White Balance Mode
- Auto Level Control
- Auto Electronic Shutter
- Auto Knee
- Field or Frame Integration
- Long Term Integration 1/30 to 8 seconds
- Composite,Y/C,(Y/R-Y/B-Y,RGB) or SDI output
- Genlock
- RS-232C Remote Control for all Functions

# Eagle PT-50 *with* Hitachi HV-D30/SDI

The **Eagle PT-50** is a high quality, light weight pan / tilt head designed for quiet operation with a maximum weight limit of 6 pounds. Its quiet operation and small size permits use in teleconferencing, city council meetings, churches, medical documentation, and entertainment venues. Ideally suited for use with the **HV-D30** and **Fujinon R11** series lenses, the **PT-50** can provide complete camera and lens control through the use of the optional **PT-CCB-50** camera control chip. Normal or inverted operation is possible, and to eliminate the need for strain relief on the system cables, all external connections are made to the stationary base of the pan / tilt head. Power, video, and control signals are passed through the base to the camera.

For simplified installation a pre-built camera power and control harness along with an adjustable camera mount is provided with each unit. The **PT-50** is compatible with most **Eagle** accessories, allowing the use of different controllers, power supplies, shot boxes, modem control, and power and control splitters.

Power, Data, and Video Output are connected at the stationary base of the PT-50, eliminating the need for service loops on the cables.

**HV-D30** Featuring a 3rd generation DSP circuit with 3 million gates, the **HV-D30** provides exceptional performance in a compact size. A 12 bit A/D is used to convert the analog output of the CCD's to the digital signal for processing by the DSP. 800 TV lines of resolution and a 62 db signal to noise ratio result in outstanding picture quality. Automatic shading compensation is provided to compensate for unwanted color shifts caused by interaction of the C-mount lens and prism assembly. Automatic gain control and auto tracking white balance modes can be selected so the camera can operate properly under a wide range of illumination levels and color temperature levels. A six vector color corrector is provided and allows adjustment of the hue and saturation of the 3 primary and 3 secondary colors. A wide selection of detail functions is provided, including a flesh tone detail circuit. Four scene files are provided for setup, storage and recall of all camera parameters. An RS-232C port allows complete control of all camera functions from a remote location.

## Suggested Lenses for the HV-D30

**Fujinon T16X5.5DA-R11** 1/3" format 16 times zoom. 5.5—88mm f1.4 auto or remote servo control of iris, motorized zoom and focus.

**Fujinon D16x7.3A-R11** 1/2" format 16 times zoom. 7.3—117mm f1.4 auto or remote servo control of iris, motorized zoom and focus.
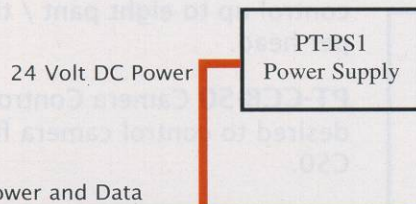
# Eagle PT-C50

The **Eagle PT-C50** was specifically designed to compliment the **Eagle PT-50** pan / tilt head. In addition to providing pan / tilt control, zoom / focus control, access and storage of scene settings, the **PT-C50** can with the optional **PT-CCB-50**, provide complete control of all camera functions. From simple requirements like white balance, or black balance, to complex control of the cameras 6 vector color corrector, the **PT-C50** is able to access and control any camera function to provide the image quality and clarity required by the user. For maximum versatility, pan and tilt limits can be set electronically from the controller to limit movement in desired directions. A single joystick on the **PT-C50** provides proportional speed control for pan and tilt with 3 ranges of coarse speed control. Dedicated Up / Down buttons are provided for control of lens zoom, focus, and iris, with 10 selectable speed ranges. Storage and recall of 20 presets are provided for each **PT-50** pan / tilt head connected to the **PT-C50**. A maximum of 8 pan / tilt heads can be controlled by the **PT-C50**.

- **Controls up to 8 Pan / Tilt Heads**
- **Stores 20 Presets per Head**
- **Provides Complete Camera Control—Requires camera control module in p/t head**
- **Proportional Speed Control of Pan / Tilt, with 3 Selectable Speed Ranges**
- **10 Selectable Speed Ranges for Zoom, Focus and Lens Iris Control**

## Eagle PT-50 System Configuration

PT-50 / HV-D30

24 Volt DC Power

PT-PS1 Power Supply

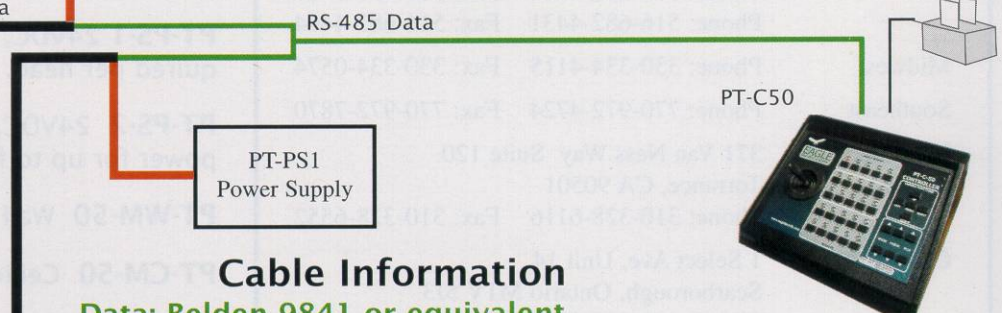Power and Data

RS-485 Data

PT-50 / HV-D30

PT-PS1 Power Supply

PT-C50

**System:**
Maximum of 8 Heads and Cameras
20 Presets per head
For camera control add the PT-CCB50
Requires Wall Or Ceiling Mount for PT-50

### Cable Information
Data: Belden 9841 or equivalent
Power: Belden 8675 or equivalent
Power & Data: Belden 9873 or equivalent

# Specifications

## PT-50 Specifications

| | |
|---|---|
| Mechanical: | High-torque stepper motors drive stainless steel worm gears via polypropylene / stainless steel ladder chain |
| Maximum Load: | 6 pounds |
| Pan Range: | ±179 degrees |
| Tilt Range: | ±45 degrees |
| Pan / Tilt Speed: | 0 to 15 degrees per second / variable |
| Accuracy: | ± 5 arc minutes (0.08 degrees) |
| Noise Level: | Less than 30 dBA |
| Presets: | 64 maximum, 20 when used with the PT-C50 |
| Power: | Requires 24VDC power, minimum 1.5A, max draw with camera is 2.5A |
| Camera Power: | Provides 12VDC camera power |
| Communications: | Switchable RS-485 or RS-232 communications protocol; no adapter needed for control by a PC. |
| Software: | PC control software is available, as is the protocol for remote control for individuals wishing to write their own software. |

**Eagle Products are designed and manufactured in the USA by Display Devices Inc. Arvada, CO. and are distributed exclusively by Hitachi Denshi.**

**WEB SITES:**   www.hitachi-service.net
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## HV-D30/SDI Main Specifications

| | |
|---|---|
| Imager: | 3 x 1/3-inch IT Microlens CCD's |
| Pixels: | 768 x 494 (3) |
| Resolution: | 800 TV Lines |
| Sensitivity: | 2000 lux f9.5 |
| S/N: | 62db |
| Shading: | Automatic Compensation |
| Gain: | 0 - 24 db or auto level (ALC) |
| Shutter: | 1/60 - 1/100,000 or AES |
| Lock Scan: | 1/60.38 - 1/100,000 1 H steps |
| Gamma: | 0.35 or 1.0 selectable |
| White Bal: | ATW / Memory / Preset |
| Masking: | 6 vector saturation and hue |
| Auto Knee: | On / Off |
| Contrast: | Off / Normal / High |
| Integration: | Field / Frame 1/60 - 8 sec. |
| DNR: | Off / Mode 1 / Mode 2 |
| Trigger: | Field-on-Demand Mode |
| Genlock: | VBS, BB, or H and V drive |
| Color Bars: | SMPTE |
| Outputs: | VBS, Y/C,(Y/R-Y/B-Y, RGB) or SDI |
| Remote: | RS-232C |
| Lens Mount: | C-Mount |
| Power: | 12 volts DC 4 Watts/8 Watts SDI |
| Size: (W x H x D) | 65 x 65 x 80 mm/65 x 65 x 105 mm SDI |
| Weight: | 400 grams /470 grams SDI |

**For additional information on the HV-D30 please request the  HV-D30 product brochure, available from your local Hitachi Distributor.**

## Eagle PT-50 Accessories

**PT-C50** Pan / Tilt Controller for the  PT-50. Can control up to eight pant / tilt heads with 20 presets per head.

**PT-CCB-50** Camera Control Chip used when it is desired to control camera functions from the PT-C50.

**PT-PS-1** 24VDC, 2.5 A Power Supply. One required per head.

**PT-PS-2** 24VDC, 12A Power Supply. Provides power for up to four PT-50 Heads.

**PT-WM-50**  Wall Mount for PT-50 Head.

**PT-CM-50**  Ceiling Mount for PT-50 Head.

**PT-T2**  Power and Control Splitter. One input, six output box.