

## Technical Information

### Tall Tripod Systems for Real Estate Photography and Panoramic Presentations

**PHOTOtowers** low altitude aerial photo systems are based on tall tripods with a remote control camera. Several tripod and telescoping mast models allow shooting photographs from elevated positions up to 12 meters (40'), and 17 meters (56'). Black anodized aluminum tubes provide an excellent stability of the professional telescoping mast based tripods at a low weight. All **PHOTOtowers** tripod systems are easy to operate and transport. They can be used on almost every terrain.

**PHOTOtowers** aerial photo systems are designed to take pictures of real estate objects, private homes and commercial buildings. Further applications are public buildings and facilities (e.g. swimming pools). A wide range of business opportunities are landscaping, the documentation of accidents, insurance claims, excavations and event photography, such as weddings, parties, festivals sports and cultural events.

The portable **PHOTOtowers** photo system, the remote control camera, and the use of wide-angle zoom lenses allow an easy and reliable composition of full frame pictures from the best point of view. A single person can operate the tripod system. The shooting of a series of pictures (different camera heights) takes between five and ten minutes per tripod location.

The pointing of the camera at the top of the telescoping mast is performed by a remote camera control system with a color LCD-TFT screen on the ground.



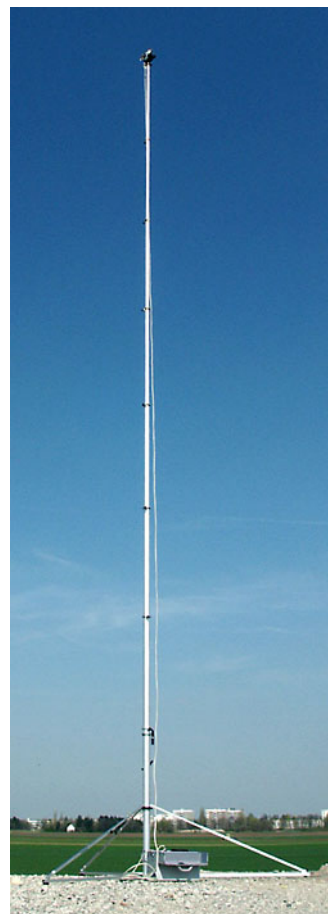
**PHOTOtowers** tripod systems feature either a manual extension of the tubes, or hand pump.

A remote control pan and tilt unit points the camera. An easy joystick operation allows to precisely pointing the camera to the best picture frame. All camera functions - including the setting of the zoom lens (option) - are remote controlled from the ground, or automatically performed by the camera. This includes the motor to wind the film, or store the image on a memory card (digital camera).

The live viewfinder image is transmitted to the color LCD-TFT monitor, which is part of the remote control system, or the LCD glasses / VR helmet on the ground. Digital cameras provide a "video out" signal of the viewfinder image, which is displayed either by the monitor of the remote camera control unit, or LCD glasses. SLR and digital SLR cameras (DSLR) do not provide a digital viewfinder image. For these camera types **PHOTOtowers** provides an optional micro color-video camera, which is mounted at the viewfinder of a SLR or digital SLR camera, to capture the viewfinder image.

A selection of 6 remote control units cover almost all requirements for remote camera controls and pan/tilt units.

All remote camera control models are suitable to operate with a laptop PC and remote capture software.



**STM 120 with Remote Control 2**



**Three Tripods**



**Remote Camera Control  
Remote Control 2 Zoom**



**Pan and Tilt Unit for Remote Control 2 Zoom**

**PHOTOtowers** are designed for payloads up to 4 kg (8 lbs.). The compact design allows the transportation of the STM 120 / 140, and AC 125 in cars, station wagons, minivans with a rear door. The tall PT 120, 150, and 170 Series telescoping masts are designed for transportation in vans, or rooftop transportation. A kit allows the transportation on the trailer hitch / roof rack.

### PHOTOtowers Tripod and Telescoping Mast Models

Tripod Model	Max. Height	Min. Height	# of Tubes	Extension	Weight
<b>STM 120 / 140</b>	12 / 14 m	1.95 / 2.0 m	8 / 9	7 / 8 - manual	18 / 20 kg
<b>PT 120 Mast</b>	12 m	2.15 m	8	7 pneumatic	19 kg
<b>PT 125 Mast</b>	12.5 m	1.82 m	11	10 pneumatic	32 kg
<b>PT 150 Mast</b>	15 m	2.15 m	10	9 pneumatic	35 kg
<b>PT 170 Mast</b>	17 m	2.59 m	9	8 pneumatic	36 kg
<b>PT 1XX Tripod Base (*)</b>	1.7 m	1.7 m	1	No Extension	9 kg

(\*) The Tripod Base allows the installation of the AC 1XX Telescoping Mast on the terrain.

### Features for the PHOTOtowers Aerial Photo Systems

	STM 120 / 140	PT 120/170 Mast
• Tripod / Mast easy to operate and transport:	✓	✓
• Black anodized aluminum tubes:	Option	☐
• Blank anodized aluminum tubes:	✓	✓
• Integrated tripod legs	✓	☐
• Tripod base for installation of the telescoping mast:	☐	Option
• Dolly wheels for easy transportation:	☐	✓ (not PT 120)
• Bubble gauge for vertical alignment:	STM 140	✓
• Removable pan/tilt head:	✓	✓
• Motorized remote zoom lens control:	Option	Option
• Transmission of the video signal to the monitor on the ground:	✓ (*)	✓ (*)
• Remote camera control:	✓	✓
• Remote shutter release:	✓	✓
• Infrared extension unit:	Option	Option
• Remote control cable without cable reel:	✓	✓
• Remote control cable with cable reel:	☐	Option
• Remote Capture by laptop PC	possible	possible
• Hand pump for the extension of the tubes:	☐	✓
• Separate Tripod Base	☐	Option
• Mounting kit for vehicles (trailer hitch / roof reeling):	☐	Option

(\*) **Note:** For SLR and digital SLR cameras the optional micro video camera is required

## Remote Camera Control System (for all Tripod Models)

• <b>Motorized Pan/Tilt Unit:</b>	Remote control, > 360 deg. pan, tilt from horizontal to 30 deg. down. Extended range from 15 deg. (up) to 60 deg. (down)
• <b>Remote Zoom Control:</b>	Remote control zoom motor for zoom lenses with different lens barrel sizes (only available for Remote Control 2 Zoom)
• <b>Shutter Release Cable:</b>	Remote shutter release from the ground. Remote camera control cable is integrated in the remote control unit.
• <b>Display for the Viewfinder Image (Digital Camera):</b>	Integrated LCD-TFT Color Monitor. External monitors or LCD glasses can be connected to the Video Out connector.
• <b>Display for the Viewfinder Image (Digital SLR and SLR Camera):</b>	An additional micro video camera captures the viewfinder image, and displays it on the monitor (4", 5", or 6", depending on the R/C model). Digital SLR cameras only provide the video signal for the last stored image, not the live viewfinder image.
• <b>Control Panel:</b>	Control panel for all functions is on the ground. Depending on the R/C model, an integrated or external power source is provided. For systems with re-chargeable batteries battery charger are provided.

## Specifications for Remote Camera Control Systems

Description	RC Basic	RC 1	RC 1M	RC 1M Plus	RC 2	RC 2 Zoom
Hor. pan range >360 deg.	✓	✓	✓	✓	✓	✓
Tilt range 30 deg.	✓	✓	✓	✓	✓	✓
Selectable +15 to - 60 deg.	✓	✓	✓	✓	✓	✓
Batteries for P/T head	✓	✓	☐	☐	☐	☐
Case for remote control	☐	✓	✓	✓	✓	✓
Case for remote control	☐	CD-Case	CD-Case	Pilot case	Pilot case	Pilot case
Integrated battery	☐	✓	✓	✓	✓	✓
Battery charger	☐	☐	✓	✓	✓	✓
Jack for ext. DC power	☐	☐	✓	✓	✓	✓
LCD-TFT Monitor	☐	☐	4" or 5"	4" or 5"	6"	6"
Jack for ext. video monitor	✓	✓	✓	✓	✓	✓
Remote control cable	up to 3	1	1	1	1	1
Sunshade	☐	☐	✓	✓	✓	✓
Remote shutter release	Option	✓	✓	✓	✓	✓
Custom shutter release	Option	Option	Option	Option	Option	Option
IR extension (*)	Option	Option	Option	Option	Option	Option
Remote capture / laptop	✓	✓	✓	✓	✓	✓
Aluminum camera case	Option	Option	Option	Option	Option	Option

(\*) Remark: Infrared extension for cameras with IR remote control

## Presentation of Panoramic Images

The Internet provides an excellent platform to present panoramic images in a dedicated window. The object can be continuously rotated up to 360 deg., or by a mouse click.

Panoramic presentations are an ideal extension to the aerial photography of buildings, and becoming more popular for the advertising on the Internet (e.g. virtual tours) and printed media (partial panoramic images). This is an attractive market niche. More and more real estate brokers and advertising agencies utilize this presentation technique for the presentation of building and interior rooms.

Panoramic presentations are generated by dedicated software. The use of the "panoramic stitching software" is fairly easy. Each panoramic image is compiled by several individual shots from a platform, which allows shooting sectional photographs every 30 deg. (horizontal). **PHOTOtowers** recommends the stitching software "PhotoVista Panorama", which is available for straight panoramic presentations or virtual tours (PhotoVista Virtual Tour).

All **PHOTOtowers** Aerial Photo Systems are suitable to shoot panoramic images.

## Important Reasons to Buy PHOTOtowers Products:

- High design and manufacturing quality of the systems. PHOTOtowers photo systems are "tools" for the professional photographer.
- Special design of the tripod legs for an extreme stability of the telescoping mast. Long legs allow a compensation of sloped terrain (up to 60 cm / 23 ").
- Straightforward design of the telescoping mast to maintain the vertical alignment of the camera. There is no adjustment required to "level" the camera on top of the telescoping mast. A bubble gauge allows the precise vertical alignment of the telescoping mast.
- The viewfinder image is displayed by the monitor / LCD glasses on the ground. The viewfinder image is also displayed for SLR and digital SLR cameras. For these camera types an optional micro video camera is provided. External video cameras do not display the actual picture frame, as it does not respond to changes of the zoom lens setting.
- Easy operations and easy transport of the systems.
- Extensive training program and preparation for the start of the business of customers.
- Fast service.