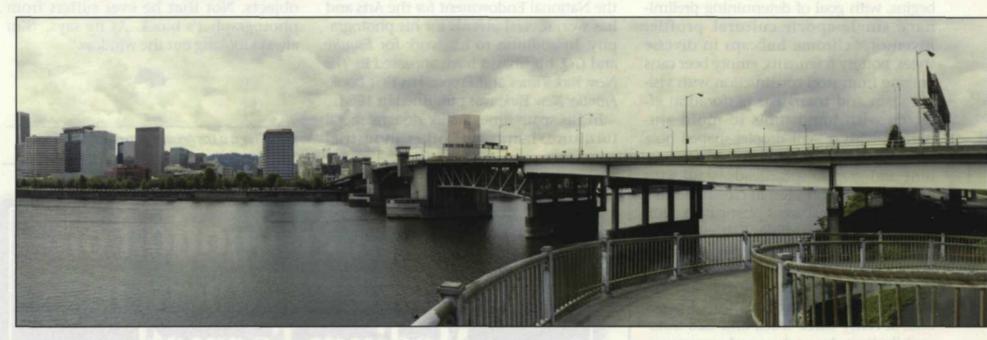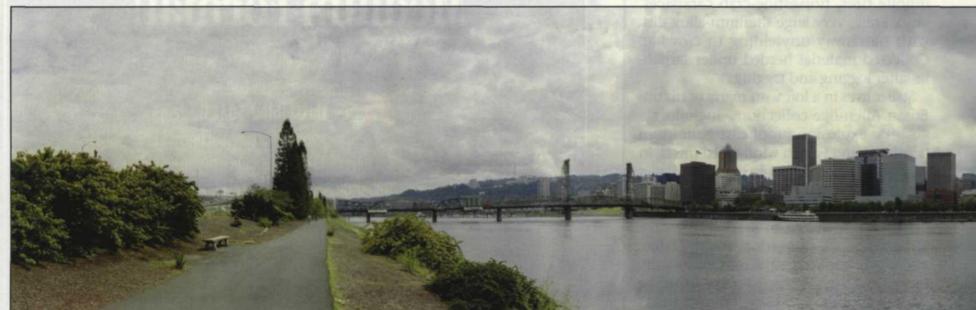## Manfrotto Panoramic Head Systems

Panorama images present a whole new way to view life. Their popularity has gone through several cycles throughout the years, depending on the cameras available, and the cost to transfer the final image onto paper. Today, there seems to be an explosion of interest in panoramas with new camera designs and the resurrection of antique pan cameras. One of the most difficult tasks in taking panoramic pictures is not with the camera itself, but with the tripod that supports the camera. Although setting up a tripod sounds simple enough, setting up a level tripod is not all that easy. Even the smallest movement of the tripod legs translates into a major change to the camera on top of the tripod. Quite often panoramas and leveling tripods equate to a frustrated photographer.
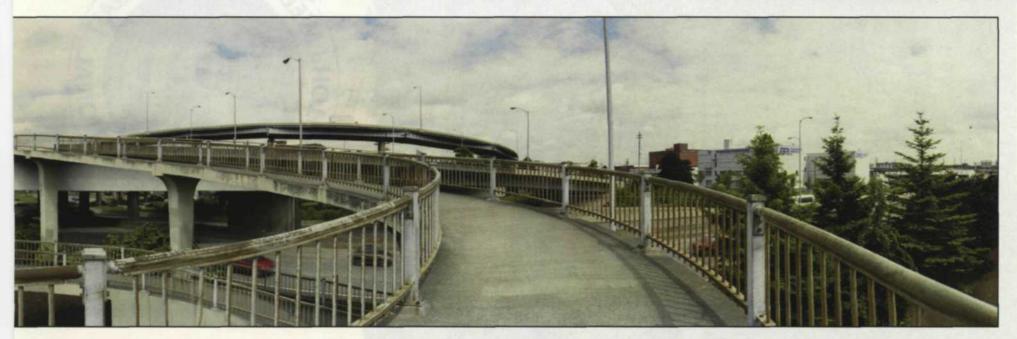
In addition to a level rotational plane,

Manfrotto QTVR head showing the leveling base head, the panoramic head and the QTVR kit.

you also need to be able to repeat the same degree of rotation for each shot in the multi-image panorama. Sounds pretty complex, but don't give up, because Manfrotto, an international leader in the design and manufacturing of camera support systems, has the solution. The Manfrotto Panoramic and QTVR head is a full pan head system comprised of three main parts that can be used individuality or as a whole.

The 338 Leveling Base Head

At the base of the system is the 338 Leveling Base head. Course adjustment to the leveling process is done with the tripod, and then the leveling base takes over. A spirit level atop this unit has a sensitivity of .5°. This level is adjusted with three large thumb screws located between the two leveling plates. These leveling screws can fine-tune adjustments up to ±4°. Once proper leveling is attained, the unit can be locked tightly in

All three panoramas were made with a Nikon F5, 28–200mm AF-Nikkor lens and the Manfrotto QTVR head. Seventeen images were used to produce the full 360° panoramas and the images were stitched together with PhotoVista software.

place with the locking screws at the base of the lower plate.

The 300 Panoramic Head

Next, we add the 300 Panoramic Head. On the side of the pan head you will find click-stop settings at 10°, 15°, 18°, 20°, 24°, 30°, 36°, 45°, 60°, and 90° detents around the head. Each click stop allows a locking

screw to be inserted, so that when you select a specific degree setting, the pan head will stop at equal intervals as you rotate the head. Above each setting is a number indicating just how many click stops will occur for a full 360° turn. For example, the 36° setting indicates that it will take 10 stops to equal a full 360°. So, the head will start at 0°, stop at 36°, followed by 72°, 108° and so on until the

full 360° have been made. This is very handy if you are on frame 28 and are not sure whether you can complete the full pan before you run out of film. If you do find yourself in the middle of a pan and you have to change rolls, this click stop pan head will allow you to back up a couple of frames and continue the pan.

The degree of angle you select will depend on the angle of coverage of the

lens and the amount of overlap you need to make a good panoramic image. In the digital world, each frame usually has a 30-50% overlap, while a traditional film image can have as little as 5-10° image overlap. If you're not sure of the angle of coverage of your lens, you can try one of the degree settings on the on pan head and see how much overlaps. If it's too much, then reduce the degree setting until it's right.

The best part of the click-stop system is that you can repeat the same exact pan over and over. Since each full pan will shoot at exactly the same point, you can bracket exposures on your panoramic image, and intermix them if one frame is slightly off.

The 302 Quick Time Virtual Reality Kit

With today's computer technology and special software programs, you no longer need a special panoramic camera to take full 360° panoramic pictures. A standard 35mm camera, or digital camera can be used to take a sequence of images that are assembled via stitching software to create a full pan image. It is also easy to create panoramic pictures that can be turned into Virtual Reality digital images with the third section of this unique tripod, the 302 Quick Time Virtual Reality kit.

Since most cameras were never designed to take pan images, their tripod sockets are not necessarily in the nodal point [the optical center of the film plane] of the camera. If these off-center cameras are mounted on a tripod, they shift the image as the top of the tripod turns. To achieve accurate panoramas you need to position the camera lens exactly above the panoramic axis of rotation. The QTVR kits has two sliding plates that allow adjustment forward and back and side to side. The top of this unit also has a quick disconnect feature that lets you switch from horizontal to vertical position in seconds, maintaining the nodal point in both positions.
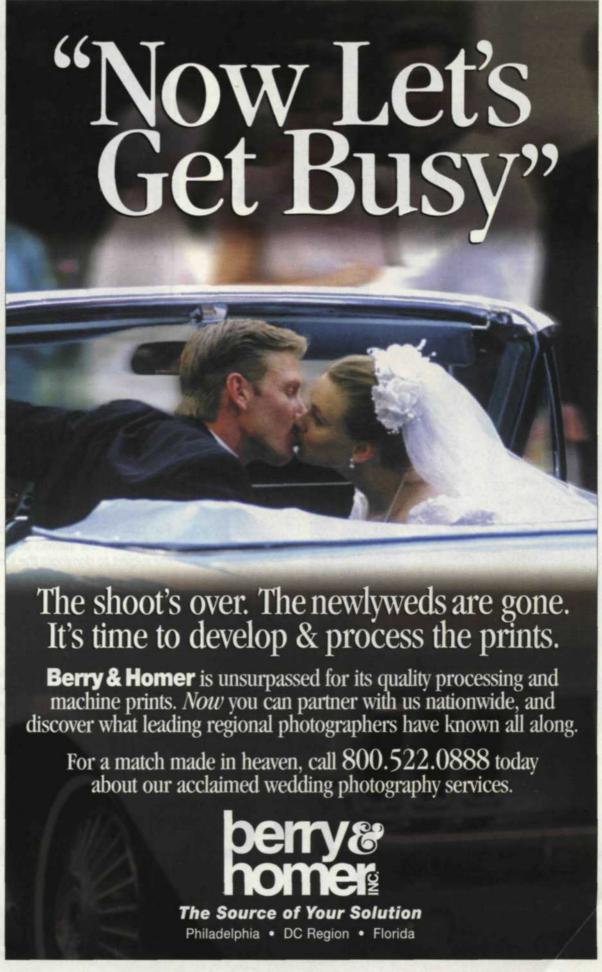
For my test, I used three types of cameras that would fit most panoramic situations today. The first camera was a Noblex 135U panoramic camera. This camera has its own bubble level, but I found that once it registered level, I could still tweak it more with the leveling stage itself. I used the 90° setting on the pan head and ended up with four images to make up the full 360° sweep. I then scanned the

four images into my Pentium computer and used two programs very similar to "QTVR" (Apple Computer Systems) to create my final 360° pan image. Both Photo-Vista (Live Pix) and VideoBrush Photographer (VideoBrush) quickly assembled the four images into one smooth panoramic image.

The next test was with a Nikon F5 and a 28–200mm zoom lens. I zoomed the lens back to 28mm and then rotated the camera so that it was in the vertical position. The nodal point of the F5 is not centered to the film plane from side to side, so I used the sliding plate to center the camera. Seventeen frames later I had my full 360° image. Each frame was scanned

CALENDAR

Call for Entries: Hand Papermaking for accomplished paper artists and photographers	Oct. 1, 1998	Contact Tom Bannister, Hand Papermaking, P.O. Box 77027, Washington, DC 20013; (800) 821-6604.
Norman Phillips: "Rise Above the Crowd '98"	Oct. 7	Westin O'Hare, Rosemont, IL (near Chicago O'Hare); sponsored by Pentax; contact (800) 792-2092.
William Albert Allard & Picture Editor John Echave: The Photographic Essay in Cortona, Italy	Oct. 3–17	Cortona, Italy. Contact Cortona Center of Photography, P.O. Box 550894, Atlanta, GA 30355; (404) 872-3264; fax (404) 843-3263; web site: www.cortonacenter.com/.
22nd Annual International Photography Competition & Exhibit	Oct. 13–27	Photographic Alliance of the Fort Smith Art Center, Fort Smith, AK. Entries in B/W & color. Information: Fort Smith Art Center, 423 No. 6th St., Fort Smith, AK 72901.
Weddings for Love & Money with Stewart & Susan Powers	Oct. 19–21	PPA Merit Course. Contact Jody Alund, Powers Photography, 2001 NW 58th Terrace, Gainesville, FL 32605; (352) 372-9930.
John Paul Caponigro: The Digital Artist in Cortona, Italy	Oct. 17–31	Cortona, Italy. Contact Cortona Center of Photography, P.O. Box 550894, Atlanta, GA 30355; (404) 872-3264; fax (404) 843-3263; web site: www.cortonacenter.com/.
Photographic Arts Workshops with Bruce Barnbaum	Oct. 5–10	The photographic process; North Cascade Mountains, near Seattle. Contact Bruce Barnbaum or Sonja Thompson at Photographic Arts Workshops, P.O. Box 1791, Granite Falls, WA 98252; (360) 691-4105.
PMA Fall Imaging Conference & Mini Trade Show	Oct. 8–10	Orlando Peabody Hotel, Orlando, FL. Contact PMA headquarters (517) 788-8100, fax (517) 788-8371.
DIMA Fall Conference 98 Orlando	Oct. 11–12	Orlando Peabody Hotel, Orlando, FL. Contact PMA (517) 788-8100; e-mail: tcrawford@pmai.org/.
West Coast School	Oct. 12–14	Monterey, CA. Contact West Coast School, 121 W. Jones St., Santa Maria, CA 93454-5627; (800) 439-5839; e-mail: wcs@callamer.com/.
PPNY Hudson Vally & Westchester Sections TEP Program with Clay Blackmore	Oct. 19	Suffern, NY. Contact Pete Stickland, Hudson Valley TEP chairman (914) 692-5171 or Frank Mohalley, Westchester TEP contact (914) 576-2318.
Movie Machine Society Annual Meeting	Oct. 22–24	Toronto, Canada. Contact Larry Boccioletti, 1248 Jane St.Toronto, Ontario, Canada M6M 4X8; (416) 243-1439; web site: http://web.onramp.ca/phsc/; e-mail: larbocci@interlog.com/.
GreenTrack's 8-day Amazon Adventure with Stephen Kirkpatrick	Oct. 24–31	From Miami. Contact George Ledvina, GreenTracks, (800) 966-6539; web site: www.greentracks.com/.
Fall Photographica Fair	Oct. 25	Photographic Historical Society of Canada, Toronto, Canada. Contact Larry Boccioletti, 1248 Jane St. Toronto, Ontario, Canada M6M 4X8; (416) 243-1439; web site: http://web.onramp.ca/phsc/.
Photographic Arts Workshops with Bruce Barnbaum	Oct. 25–31	Canyon Country Exploratory, So. Central UT. Contact Bruce Barnbaum or Sonja Thompson at Photographic Arts Workshops, P.O. Box 1791, Granite Falls, WA 98252; (360) 691-4105.
EPIC Fall School in Forensic Photography	Oct. 30–Nov. 1	Evidence Photographers International Council, Atlanta, GA. Contact EPIC, 600 Main St., Honesdale, PA 18431; (717) 253-5450, fax (717) 253-5011; web site: www.epic-photo.org/.
Veronica Cass Adobe Photo Digital Workshop	Nov. 7–9	Hudson, FL. Contact Veronica Cass, Inc., (813) 862-5327, fax (813) 862-3567; e-mail: veronicacassinc@worldnet.att.net/.
Photographic Arts Workshops with Bruce Barnbaum	Nov. 8–14	View Camera Workshop, Slit Canyon AZ/UT. Contact Bruce Barnbaum or Sonja Thompson at Photographic Arts Workshops, P.O. Box 1791, Granite Falls, WA 98252; (360) 691-4105.
WPPI—Convention & Trade Show	Mar. 21–25, 1999	Rio Hotel & Suites, Las Vegas, NV. Contact Irene Cairns (310) 451-0090; [www.wppi-online.com].

First Exposure
(Continued from page 31)

into the computer via a bulk scanner and then assembled into another full 360° image.

The third and final test was done with an Agfa 1280 digital camera. The camera was set in the horizontal position. The unusual off-center tripod socket position forced me to make nodal-point corrections with both the top and bottom sliders. I set the resolution to a setting that would allow 14 images on one data chip. I reviewed each frame while the camera was still on the tripod and found that one frame was off in exposure. The sun had passed under a cloud and I had not noticed. I simply moved the camera back to that position and picked up that shot without having to repeat the whole process.

Manfrotto also makes motorized version of QTVR system called the Agnoshot. This system has microprocessor control that allows you to set how many shots

and the angle for each in a 360° sweep. Once the data is set, you just push the button and the system automatically moves to each position for that specific exposure.

If you want to find out more information about panoramic heads from Manfrotto, you can log onto the web at http://www.manfrotto.com.

The Manfrotto QTVR Head is distributed exclusively in the U.S. by Bogen Photo Corp., 565 East Crescent Ave., Ramsey, NJ 07446-0506; (201) 818-9500; web site: www.bogenphoto.com/.

Jack and Sue Drafahl are freelance journalists/photographers living in the Pacific Northwest. They have owned and operated a custom lab and service bureau, and studio, Image Concepts, for many years. They contribute widely to a variety of publications and can be reached at: concepts@pacifier.com/.