

advances in

PAN-TILT-ZOOM CAMERA SYSTEMS



CANON BU-50H REMOTE-CONTROL PAN-TILT-ZOOM HD CAMERAS
CHOSEN FOR NEW VIDEO SYSTEM AT A PROMINENT HOUSE OF WORSHIP



Trinity on the Hill United Methodist Church in Augusta, Georgia, has totally renovated its 50-year-old building. In addition to its beautifully appointed new sanctuary, new exposed-truss ceiling, new choir loft, and original stained-glass windows, the church also now features five strategically placed (but very inconspicuous) BU-50H remote-control PTZ (pan-tilt-zoom) 16:9 aspect ratio HD cameras from Canon, a leader in digital imaging. The cameras will be used for high-quality HD capture of church services for broadcast, cable, and Internet distribution, as well as for image magnification and wedding videography.

“As part of the renovation,

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Canon
*image*ANYWARE



MLB NETWORK RELIES ON BU-45H REMOTE-CONTROL PTZ CAMERAS FOR HOME-RUN QUALITY HDTV AT BALLPARKS NATIONWIDE

The MLB (Major League Baseball) Network, which delivers live games, original programming, highlights, classic games,



and coverage of baseball events to millions of cable and satellite homes, is installing multiple Canon BU-45H outdoor remote-control pan/tilt HD cameras at all 30 MLB ballparks nationwide. These BU-45H “Ballpark-Cams” will enable MLB Network’s central broadcast studios in Secaucus,

N.J. to show viewers live HD Ballpark-Cam “look-ins,” dugout interviews, and centerfield shots from the 30 Major League ballparks across the nation.

Darrell Wenhardt, president of CBT Systems, in San Diego, is overseeing this ongoing multi-level BU-45H camera deployment. (CBT Systems also acted as consultants for the design and build of the MLB Network’s Secaucus studio and broadcast facilities, which use Canon studio and portable HD lenses.)

“The Canon BU-45H is an integrated solution that gives us a camera, robotic pan and tilt, and an environmental package,” Wenhardt related. “The BU-45H’s aluminum enclosure gives us both durability and shielding, not only from RFI, but also from the elements.”

“One very impressive fact about the Canon BU-45H is that, in a small compact camera, we actually have a 20:1 zoom

lens,” Wenhardt said. “This gives us really good wide-angle shots, and sufficient ability to zoom-in for the close-ups that we need from the dugout. In addition, we are quite impressed with the camera’s performance in varying – and especially low- light – levels.”

Remote control via IP for each ballpark-deployed Canon BU-45H will reside at MLB Network headquarters in New Jersey. “We’ve subcontracted with Telemetrics, one of the exclusive distributors of the BU-45H camera, to provide us with the necessary interface, and they’re also writing custom software for this application,” Wenhardt added. Each BU-45H will be fixed to a custom Telemetrics “elevator” mount that can raise from heights of 4 to 12-plus feet, allowing the camera to move up for field-level interviews and above the lip of the dugout for seating-area shots.

“The BU-45H is a durable, all-in-one solution,” Wenhardt concluded.

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*Darrell Wenhardt, president,
CBT Systems*



CANON BU-50H REMOTE-CONTROL PTZ HD CAMERAS CHOSEN FOR NEW TELECOMMUNICATIONS CULTURAL CENTER

Santo Domingo, capital of the Dominican Republic and the oldest city in the Americas, is on the cutting edge of technology with its new Telecommunications Cultural Center (TCC). An interactive museum dedicated to the history of communications from jungle drums to PDAs, the TCC was established by Indotel, the Dominican Republic's National Telecommunications Institute. Included in its complement of state-of-the-art AV equipment, the TCC is being outfitted with two Canon BU-50H remote-control robotic indoor 16:9 PTZ (pan-tilt-zoom) HD camera systems so special events inside the new facility's spacious auditorium can be captured in crystal-clear widescreen video.



"Canon is synonymous with high quality," stated Michael W. Banks, President of Nutech Engineering, designer/integrator of the new facility. "With LCD panels and Blu-ray DVD becoming increasingly prevalent, people today expect to see extremely

high-resolution video everywhere. We're transmitting HD from beginning to end in this project, and the Canon BU-50H proved to be cost-effective for meeting our specifications for capturing great video to share with the world."

A highly experienced systems integrator with a long list of design credits, Banks is finding Canon's BU-50H to be

"It's got a lot of desirable features. When you're talking about a 1.6 megapixel-per-picture image, that's really great."

*Michael W. Banks, president,
Nutech Engineering*

the ideal solution for a growing number of projects. "It's got a lot of desirable features," he observed. "When you're talking about a 1.6 megapixel-per-picture image, that's really great. I also like that the BU-50H provides a 20X zoom, with the pan/tilt motor built-in. Its very quiet operation was another feature that I took very much into consideration. We'll be doing shot pre-sets, and I didn't want people to be distracted by the noise. At the TCC, every component in the HD video signal path has to be top quality. We wanted to have a very highly prestigious and reliable name behind the cameras we chose. I didn't have to think twice about selecting Canon."



CANON'S BU-45H REMOTE-CONTROL PTZ CAMERAS SPEED HD PRODUCTION FOR SUNLAND PARK RACETRACK & CASINO

The stakes have been raised for high-quality HD video coverage at racetracks nationwide. At New Mexico's Sunland Park Racetrack & Casino, simulcasting horse races to 800 locations around the world relies on the DTV-ready imagery of Canon BU-45H remote-control robotic pan-tilt-zoom HD camera systems, from Canon U.S.A., Inc., a leader in digital imaging.

Already familiar with the dependability of Canon robotic cameras from previously installed SD units, Sunland didn't hesitate to add the outdoor-ready Canon BU-45H camera into their HD production equipment complement. The racetrack installed the BU-45H in their paddock where horses and jockeys are viewed by fans just prior to the race. The remote camera captures the entire paddock presentation as the jockey mounts the horse to give viewers a close look at each horse right before the animals compete. Prior to installing their Canon BU-45H, Sunland had needed a manned camera and tripod inside the paddock. With the introduction of the robotic BU-45H inside that area, Sunland was able to assign remote control of the camera to their control room, allowing maximum use of their existing human and technical resources.

"The Canon BU-45H camera has been a tremendous addition to our toolbox," said John Nichols, video manager of Sunland Park Racetrack & Casino. "The video from this camera is outstanding. We have a set shot that we can guide remotely from our control room, and we can shoot our talent live for a compelling action shot prior to each race."

"The Canon BU-45H is about a quarter-mile from our control room, where it connects to our MediaZoom controller," added Nichols. "We laid down CAT5 cable to connect it, and then converted that to RS485 to extend the run. It worked right out of the box."

"We have months where it can be very windy with sand blowing through the air, but we've seen that we can set the Canon BU-45H out in any environment and not worry about it. It's totally sealed and self-contained, and the windshield wiper really helps if it rains. Canon's robotic cameras have leaped us forward to the front of this industry. With the BU-45H camera we're getting better shots, improving our performance, and increasing our productivity."

"Canon's robotic cameras have leaped us forward to the front of this industry."

*John Nichols, video manager,
Sunland Park Racetrack & Casino*



CANON BU-45H REMOTE-CONTROL PTZ CAMERAS PROVIDE MULTIPURPOSE HD VIDEO FOR THE MIAMI HEAT

Whether for television broadcasts, giant-screen displays, or facility monitoring, video serves multiple purposes at modern sports stadiums. Faced with the need for a robotic HD camera to meet all three of those applications, the Miami HEAT equipped the American Airlines Arena with four BU-45H remote-control robotic pan-tilt-zoom 16:9 HD camera systems from Canon U.S.A., Inc., a leader in digital imaging.

“We realized that the Canon BU-45H met both a broadcast-niche need as well as a service-niche need, and could seamlessly connect the two applications very easily,”

explained David Vickery, director of broadcast services for the Miami HEAT. Inside the Arena, one Canon BU-45H remote-control robotic pan-tilt-zoom HD camera is mounted just beneath a giant scoreboard high above center court. It is used to capture dramatic overhead HD shots of game action for broadcast as well as close-ups of fans, which serve the display needs of the scoreboard’s four 16-by-9-foot screens. A second Canon BU-45H



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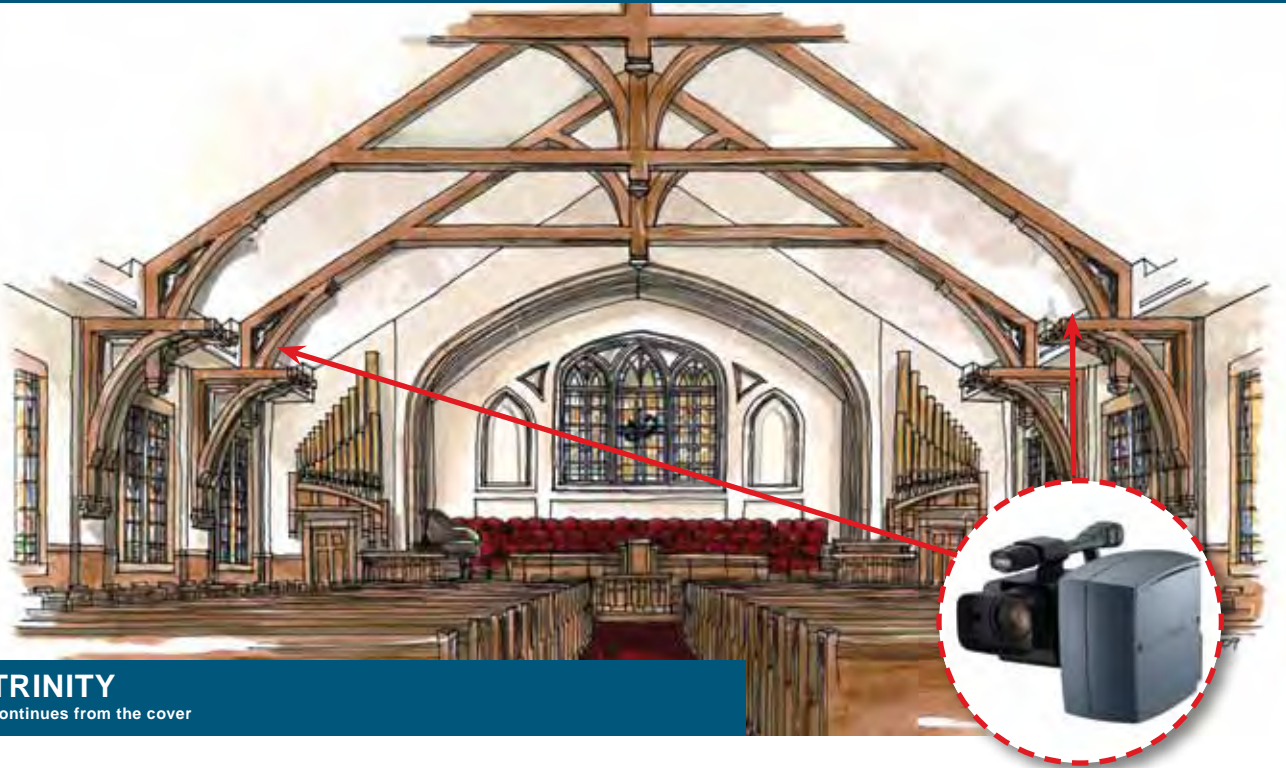
David Vickery, director of broadcast services, Miami HEAT

remote-control camera is mounted in a corner end-zone, providing beautiful HD wide shots for broadcast and additional fan close-ups for display inside the Arena.

“Our directors and producers love the BU-45H,” Vickery noted. “From a TV standpoint, it provides dramatic HD shots and angles that we want to use, making it very important as a production tool. Once we started using Canon BU-45H cameras, however, we realized how well they also worked for POV [point of view] shots. The great HD lens on the BU-45H enables it to zoom into a point of interest or back out for a really nice wide shot.”

Designed for outdoor use, two additional BU-45H remote-control cameras serve the team’s broadcast and service applications

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we removed the church's entire 1972-era analog television system," said Tom Greene, Trinity on the Hill UMC's director of television ministries. Greene added that the church hired Blue Hat Design of Norcross, Georgia to plan and install its all-new digital HDTV system, which will include a control room, fiber-optic routing system, and the five Canon BU-50H remote-control cameras. Blue Hat's initial work on the project included installing the first three Canon BU-50H cameras in a temporary worship center to accommodate the congregation during the church renovation and rebuild.

"The gym on the Trinity on the Hill UMC campus has been carpeted and a big riser stage has been built in it," Greene explained. "That's where services are held. We are on the air every Sunday on a local TV station and on cable three times a week. The three Canon BU-50H cameras we're using are rock-solid. You turn them on, they make beautiful images, and they do everything they're supposed to do in conjunction with our Telemetrics remote-control systems."

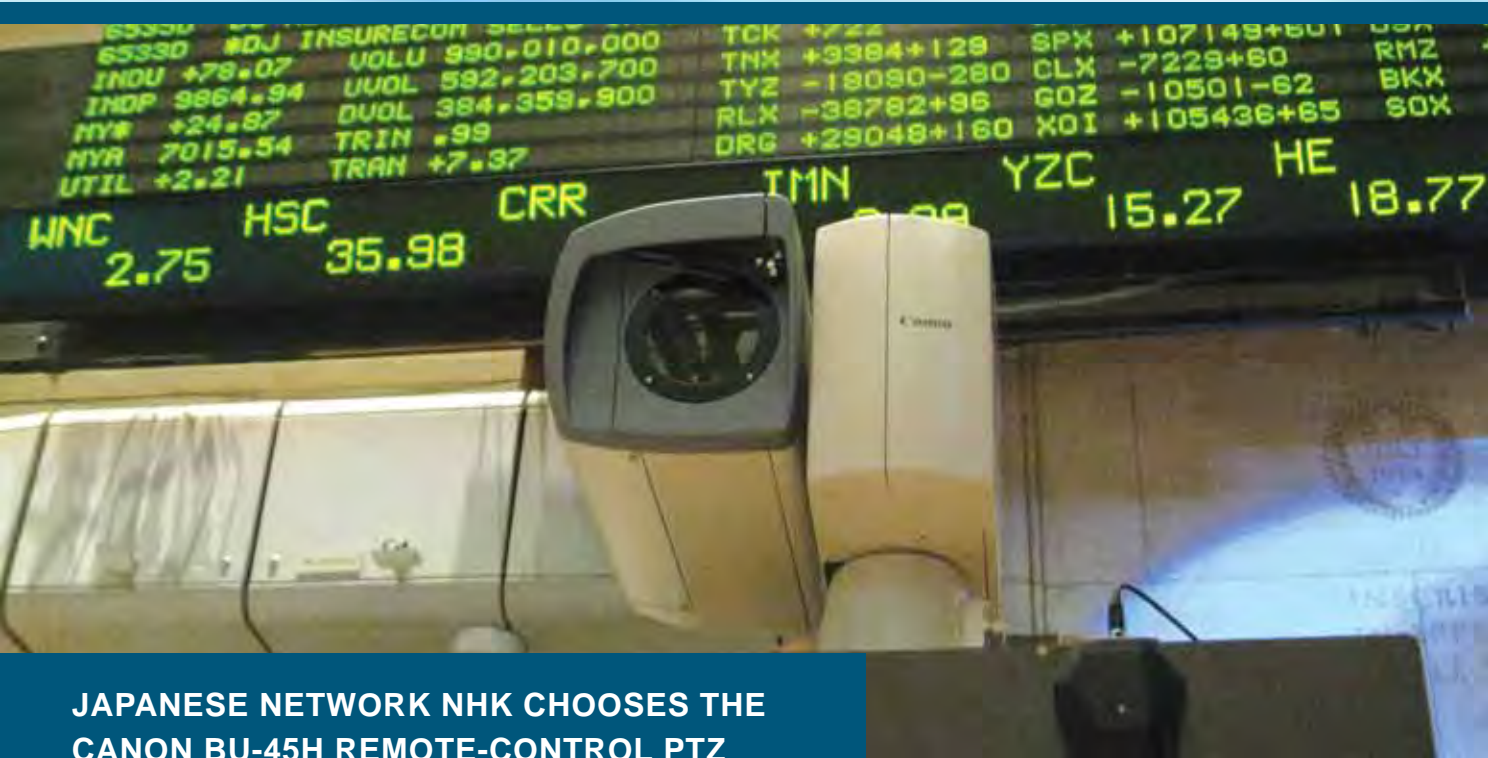
Canon's BU-50H is designed with a non-proprietary control protocol. Users and system integrators can interface the BU-50H with their own control system or one from a leading third-party provider for remote operation of the camera's pan/tilt system, lens, and video functions. Designed for quiet operation, the BU-50H features a maximum noise level of NC30 and is well-suited for use in such indoor environments as houses of worship.

"My personal feeling about televising church services is that the cameras should be invisible," Greene confided. "Our old video system included two big cameras operated by volunteers standing on platforms in front of the congregation. That can be distracting. The BU-50H cameras, however, don't draw much attention and don't bother anybody because they're not obvious."

"I can't say enough about the smoothness of the operation of these BU-50H remote-control cameras," Greene added. "In a project like this, you certainly want to have something you can rely on and are happy with. Canon makes solid cameras, and always has. Plus, when it comes to lenses I prefer Canon."

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*Tom Greene, director of television ministries,
Trinity on the Hill UMC*



JAPANESE NETWORK NHK CHOOSES THE CANON BU-45H REMOTE-CONTROL PTZ HDTV CAMERA FOR LIVE REPORTS

Daily reports from the New York Stock Exchange are of vital interest to investors around the world. Thousands of miles from Wall Street, NHK (Nippon Hoso Kyokai)/Japan Broadcasting Corporation provides its viewers with live on-the-scene HDTV updates from the NYSE. The network captures these reports using the convenience, reliability, and superb HDTV image quality of a BU-45H remote-control robotic PTZ (pan-tilt-zoom) camera from Canon U.S.A., Inc.

“NHK chose the Canon BU-45H remote-control robotic PTZ HDTV camera because it is compact, attractively designed, smooth-moving, and produces good picture quality.”

*Yuji Yamana, senior engineer,
General Bureau for America of NHK*

“NHK uses the Canon BU-45H robotic camera to do live HDTV broadcasting of its correspondent from the New York Stock Exchange,” stated Yuji Yamana, senior engineer, General Bureau for America of NHK. “These live reports are inserted into the news in Japan so that NHK’s more than 10 million viewers can see daily stock prices and the activity on the trading floor.”

Offering exceptional controllability and smooth pan-tilt motion, the BU-45H remote-control PTZ HDTV camera’s robotic mechanism is capable of extremely smooth pans of 340 degrees and tilts of 80 degrees (30 degrees up, 50 down). The pan-tilt mechanism also allows for simultaneous termination of pre-set pan, tilt, and zoom operations, which allows the BU-45H to perform steady movements on-air.

“NHK chose the Canon BU-45H remote-control robotic PTZ HDTV camera because it is compact, attractively designed, smooth-moving, and produces good picture quality,” explained Yamana. “The BU-45H is mounted on a wall at the Exchange, and since it does not require an on-site camera operator, it enables NHK to conserve on both human and technical resources. Depending on the market’s trends, the BU-45H camera may be on-air for only 15 seconds or – if we do a live report – as long as 10 minutes.”

A major user of Canon’s robotic systems, NHK can remotely control its Canon BU-45H robotic PTZ HDTV camera at the New York Stock Exchange from either its Tokyo headquarters or New York bureau. The live HD-SDI output of the BU-45H – combined with embedded audio – is transmitted from New York to Tokyo via four dedicated HD circuits.



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outside the Arena as well. One, located in the West Plaza, is used to capture POV shots of fans arriving through the American Airlines Arena's main gates. That video is displayed on the enormous 3,400-square-foot MiamiMediaMesh screen mounted to the exterior of the building.

"One of the most important tasks facing any sports video facility, and its production group, is to connect the fans with the event," Vickery continued. "The Canon BU-45H cameras are great tools in our arsenal to achieve that goal. They allow our fans to see themselves on giant displays as they enter, or to get picked up with a great on-air move while they're sitting in their seats."

When not shooting fans entering the Arena, the Canon BU-45H

remote-control camera in the West Plaza can also be aimed at the MiamiMediaMesh screen to provide video confirmation that the giant display is working properly. "The BU-45H is a precise tool for the verification of our outdoor MiamiMediaMesh screen's performance," Vickery noted. This same BU-45H remote-control camera is also used to capture POV beauty shots of downtown Miami for insertion into broadcasts.

"The optical quality and built-in Image Stabilization feature of the Canon BU-45H is outstanding," Vickery added.

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