



COLLEGE SPORTS COVERAGE

Pepperdine University

MAKING WAVES IN LIVE COLLEGE SPORTS STREAMING

How Pepperdine University covers more angles with less crew, creating broadcast-quality sports coverage with the Canon CR-X300 PTZ camera.

Pepperdine University is part of a group of schools with a shared mission to deliver broadcast-quality sports to a worldwide audience of alumni and fans.

“Web streaming is an important tool for the department to reach out to our alumni, to let them be involved, to watch our teams play, and to keep them interested so they’ll want to give back to the athletic department,” says Roger Horn, Assistant Athletic Director in charge of communications at Pepperdine University. “We’re trying to make this the highest level broadcast we can, something comparable to what you see on TV.”

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Roger Horne, Assistant Athletic Director,
Pepperdine University

The challenges included:

- Creating big production results with a small production team
- The speed of sports
- Reaching hard-to-reach shots in university stadiums
- Budget and access to pro lens ranges
- Ease of use and kit durability

How Pepperdine powered-up with Canon PTZ cameras

Canon PTZ cameras help provide a solution that can maximize production value while minimizing crew expenses. With the optical and imaging quality of the cameras, broadcasters can capture detailed 4K footage while operating the system remotely.

“The Canon CR-X300 PTZ camera is amazing because it’s got so much flexibility. Sometimes [clients] just don’t have the budget to bring in 16

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cameras, but you still have to create professional-quality footage,” says Willie Rodriguez, co-founder and director at Game-On Entertainment, the team working with Pepperdine to deliver its productions.

They include powerful, practical features such as advanced autofocus technology and flexible control protocols and interfaces, enabling camera operators not only to adjust a PTZ camera’s orientation and zoom remotely.

The CR-X300 supports Real-Time Messaging Protocol and Real-Time Messaging Protocol Secure enables users to share content directly to platforms including YouTube and Facebook, and 6G-SDI connectivity means it can transfer data at 6Gbps for a consistent 4K stream over the course of a game.

“It integrates very easily, which is fantastic for our type of productions, which are quick. We have to have things that work the first time because of the timeframe,” says Rodriguez.

How Canon PTZ cameras supported Pepperdine in raising its streaming game:

1. Cam ops can control multiple PTZs simultaneously

The Canon PTZ gives the team increased flexibility. “Sometimes our crews are a lot smaller, but yet we still have to make it feel like there are 100 cameras, even though maybe we only have four or five,” says Rodriguez.

With the Canon PTZ, you can get all those different angles from different PTZs just with the one controller. One person operating multiple cameras – that’s invaluable to us,” says Jeff McFadden, Video Engineer and Camera Operator for Game On Entertainment. “The Canon PTZ has allowed us to get the camera into some spots where we wouldn’t normally put an operator, so we can get some different angles that we wouldn’t normally be able to get.”

2. Presets and responsiveness that keeps up with the speed of sports

The CR-X300’s consistent quality allowed Game-On to capture TV-level coverage in fast-changing situations. “With live production, it’s about quick hits. You’ve got to get there fast,” says Rodriguez.

In soccer, the team would set a preset for each corner of the field. As play moved, at the hit of a button the players were framed and in focus: “Our director has a shot to go to immediately,” says McFadden.

About the Canon CR-X300

- 4K UHD video at up to 30p
- 1/2.3-inch Type CMOS sensor
- 20x optical zoom
- Hybrid AF
- Internal 1/8-graduated ND filter
- IP65 rated for use outdoors in all conditions
- 6G-SDI connectivity



“One thing I definitely noticed with this camera, transitioning from one preset to another is incredibly smooth, and totally usable on air. I have operated some PTZ cameras before and have noticed some latency issues – but with this one [the Canon CR-X300] I haven’t noticed any of that at all.”

3. Flexibility without compromising high-quality imagery

At the heart of Canon’s PTZ line-up, the CR-X300 features a 1/2.3-inch type CMOS sensor, 20x optical zoom and Canon’s Hybrid AF.

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Jeff McFadden, Video Engineer and Camera Operator for Game On Entertainment



“The [20x optical] zoom is great, especially putting out that 4K image,” says McFadden. “We usually run 1080p, sometimes even 720p, as our stream. Having that 4K image to really get that digital zoom and get some nice closeups on faces, even if they’re pretty far away, has been awesome.”

Via LAN and USB (backed by a USB driver), the CR-X300 can stream video in 4K at up to 30p. However, LAN is a real breakthrough for teams like Game-On. While USB is limited to about a 3-meter cable length, a LAN connection allows for a much longer cable run. At Pepperdine, Game-On was able to utilize Canon’s Webcam Driver to install the camera at the back of a large auditorium without sacrificing reliability or quality.

4. Big budget lens ranges

“We would normally need a giant lens, like a box lens, but you can get that same coverage with the Canon PTZ – that’s been really impressive,” says Rodriguez. “Sometimes in baseball, I have to have the Canon PTZ be able to hit a bullpen on one side and a bullpen on the other side – that’s about 330 ft. down one way and then the other.”

5. Quality design, and quality build

Pepperdine students can be found on both sides of the lens, gaining an education in sports coverage from the Game-On Entertainment team. “Students aren’t used to the gear like the pros are, so it takes abuse – but this Canon PTZ is sturdy; it’s got guts. I would definitely put somebody on there and not be afraid that they are going to break it,” says Rodriguez.

But for students and pros alike, the camera is intuitive to use. “With this PTZ, it’s super simple to operate,” says McFadden. “A lot of student camera operators aren’t as well versed as some of the professionals that we work with sometimes, but they have no problem just jumping on it and getting going.” ■

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