

Around the World at 300fps



A Hi-Motion sporting roundup

The digital slow-motion department at ARRI Media in London has enjoyed another diverse and successful six months of supplying Hi-Motion cameras for the television coverage of prestigious sporting events around the world. Capable of recording true 1920x1080 HD images at up to 300fps, the Hi-Motion is gaining popularity with sports broadcasters for the incredibly detailed slow-motion images it delivers. The cameras can be seamlessly integrated with standard outside broadcast (OB) systems and are frequently used for technical analysis during live action and breaks in action, as well as for dramatic highlight montages. Hi-Motion cameras continuously record a 22-second loop to an integrated RAM recorder while simultaneously providing a live feed. As soon as that live feed is cut by an operator, the preceding 22 seconds of footage are available for instant replay, slowed down by a factor of 6x or 12x.

Later in the year ARRI Media will be sending seven Hi-Motion cameras to cover the 2008 Olympic Games in Beijing. In preparation for what will be the largest slow-motion project the company has undertaken, ARRI Media's Digital High Speed Manager Andy Hayford travelled to Beijing in April with a single camera for a test shoot of a marathon. "We filmed a real race, but for us it was primarily a practical, logistical and communications rehearsal to see if various things would work, including having a high-speed camera on a vehicle," explains Hayford. "The Hi-Motion was on a gyro-head mounted on a car and was one of up to seven separate cameras – some on motorbikes and helicopters – that were all transmitting digital HD to antennas on the camera car. In the front footwell was a camera operator who operated the two gyro-heads on the car. In the back was the Hi-Motion technician and a director with a small vision mixer who was cutting between all those different feeds. No-one's done it quite like that before, but it worked really well."

The client, BOB (Beijing Olympic Broadcasting), was ecstatic with the results of the test run and confirmed their booking of seven Hi-Motion cameras for the games. "The cameras will be used to film slow-motion footage of a wide range of events," continues Hayford. "We'll be covering the marathon, the triathlon, cycle road racing, indoor velodrome cycle racing, mountain biking, fencing, table tennis, athletic field events, badminton and gymnastics. For a lot of those events audiences will not have previously seen footage any slower than the 3x slow-motion typical of sports coverage."

The most significant individual client for ARRI Media's Hi-Motion cameras is Sky Sports, which airs a vast array of televised events ranging from Friday night boxing to rugby in the Guinness Premiership and Heineken Cup. However, their biggest Hi-Motion job of the last six months has been the Premier League football. "We have supplied a great many matches during the current Premiership season for Sky Sports," says Hayford. "The fact that ARRI Media's inventory of Hi-Motion cameras has increased from one to ten over the course of a single year has allowed us to supply such a large number of matches. Each game only requires one camera, but there might be up to three games in a single week, so we need a lot of equipment."



◀ **THE SOLHEIM CUP** international golf tournament for women in Sweden

▲ **A PREMIER LEAGUE** football match at Manchester United

▲ **HORSE RACING** at Cheltenham



▲ **A MARATHON IN BEIJING** where the Hi-Motion was mounted to a moving vehicle for the first time

Sky almost invariably takes the Hi-Motion cameras out on dry hire because they have such extensive and established OB resources. The only exceptions to this are events that require an unusual approach or solution, one example being the Solheim Cup golf tournament in Sweden late last year.

"The director wanted the high speed camera to travel quickly between numerous locations around the 18-hole course," says Hayford. "It would have been a logistical nightmare to put in multiple SMPTE 'drops' over the large distances involved, so we built the Hi-Motion into a golf buggy that ran off batteries powering the system through an inverter and did the replays via a digital link from the buggy back to the trucks. We were completely mobile and it worked very well; they're doing the same thing for the US Open this year."

Televised equestrian sport has also benefited from the added element of dynamic slow-motion footage provided by the Hi-Motion. For the last two years Sky has hired a camera for the international show jumping at Hickstead, which is one of the big events of the equestrian calendar. Shots of horses jumping obstacles at 300fps have proved so popular that Sky is interested in taking two cameras in 2008. The production company High Flyer also turned to ARRI Media to provide Hi-Motion coverage of horse races including the Cheltenham Gold Cup over four days of the Cheltenham Festival Week, which was broadcast on the UK's Channel 4 in March. For this job ARRI Media sent the camera with its own designated van, which was positioned close to the Hi-Motion on a remote stretch of track and transmitted HD images to the main OB hub via an RF link, thereby doing away with the 2km of fibre which would otherwise have been necessary.

ARRI Media has continued to do Hi-Motion work for another well established client over the last six months – the BBC. Again, it is football that has utilised the system most extensively; the BBC hired Hi-Motion cameras for various FA Cup matches, including the final at Wembley in May. Following this the Hi-Motion is set to enliven the BBC's coverage of Wimbledon, the hugely popular international tennis championship, in June and July. ■

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