

# outside broadcasts

## BREAD AND BUTTER

**Dave Liquorice MIBS describes his experience of working on football Outside Broadcasts.**

Another Saturday, another football match. Sky Television provides viewers with coverage of every Premiership football game; some are transmitted live, but the majority are recorded for the highlights programme *Football First*. With 20 teams in the Premiership there could be ten games to cover, but generally there are only around seven on any given Saturday. This account is about one of these regular 'bread and butter,' non-live, football outside broadcasts as viewed from the shop floor rather than the air-conditioned comfort of the scanner.

### On Site

Early on a wet Saturday morning in mid January 2007, I set off to the Reebok Stadium in Bolton. Just as well it is a warm five degrees Celsius, or the rain over Hartside Top, at 1900 feet, would be snow;

snow that frequently closes the roads in this part of the North Pennines during the winter. In Bolton the rain has turned into that horribly fine and very wet drizzle that gets into everything and which can create total havoc on an OB - not a good sign.

I meet up with the rest of the sound crew: Dave Chamberlain, Paul Johnson, Mike Fisher and Julian Brannigan outside 021 Television's Unit 1. This is a 12-camera articulated scanner with enough built-in VTR/EVS capability not to require a separate tape truck for the action replays. The sound desk is a 48 channel Calrec S2, and a programmable 64 x 64 matrix deals with communications.

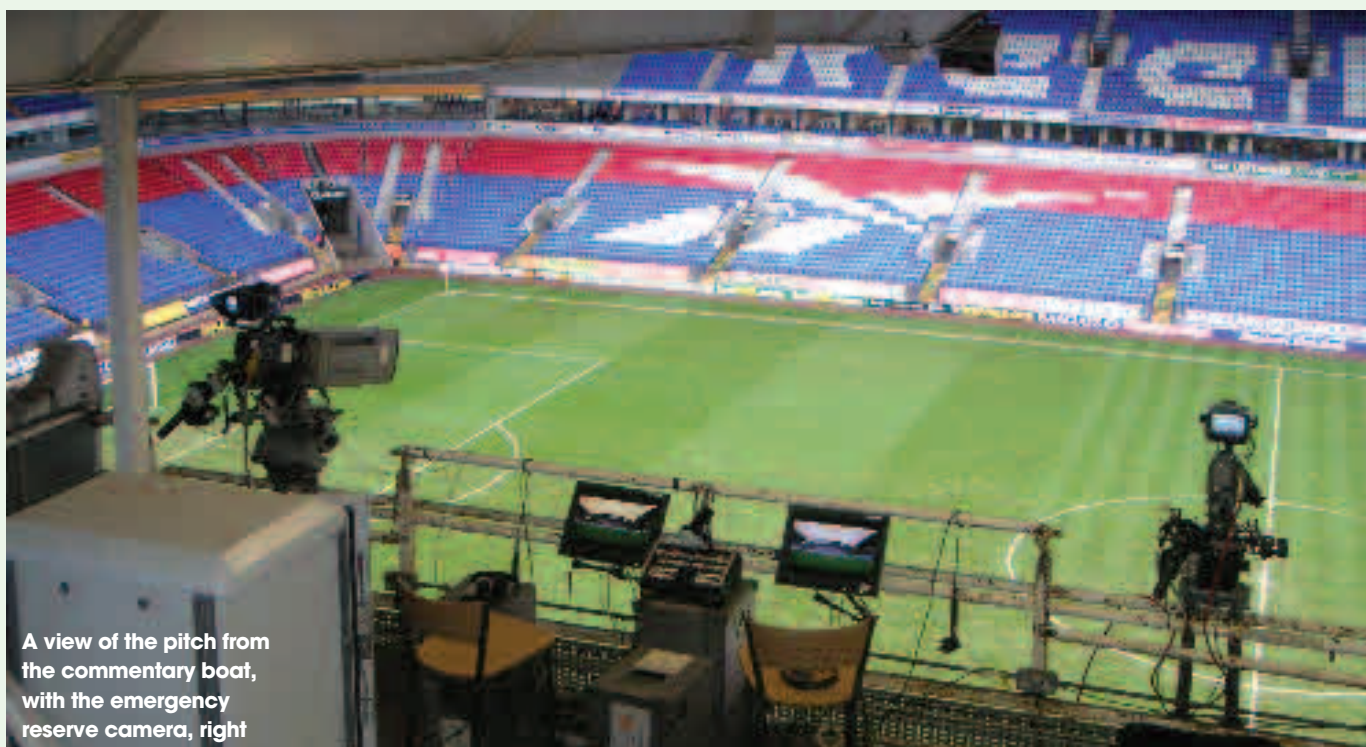
Dave and Paul dive into the scanner to patch up and program the sound and communications circuits. Julian chooses BBC commentary: Sky and the BBC have a mutual agreement so that a commentary position and interview facilities are provided for the other broadcaster at each of the matches they cover. As I had rigged the pitch on the previous football OB, I choose Sky Commentary, leaving Mike to

do the pitch microphones, reporter and interview positions. Nothing to do with the weather, honest!

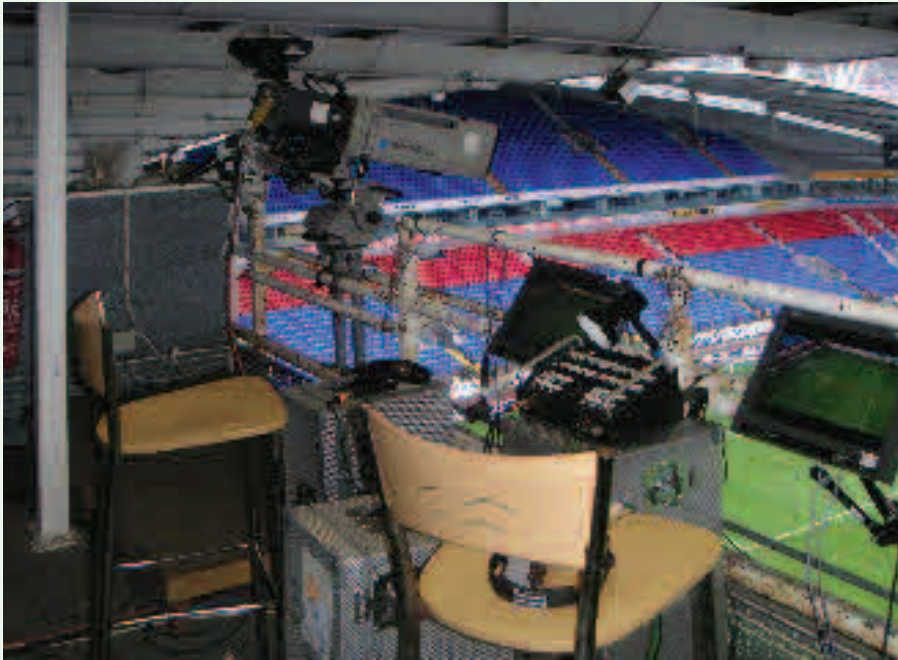
### Rigging

I headed off to the separate articulated Tender that always accompanies the scanner, which is packed with all the cables, cameras, vision and sound gear. Sky commentary uses a CTP Systems CO21 custom commentary box. These can accommodate two commentators, each with their own six-channel external talkback mixer and six lazy outputs. In addition to the six remote sources, there are locally derived feeds from both commentator microphones which are the faithful Coles 4104 lip-ribbons (main and spare for each commentator). They listen to their talkback mixes on Sennheiser HD25 headphones. Other gear taken up to the commentary boat includes a pair of Sennheiser MKH416 microphones for crowd effects, a stereo SQN mixer with another 416, and table lamps. Commentary boats are not normally the best lit of places, and in January it is dark by four o'clock which is only half way through the match. It helps a lot if the commentators can see well enough to read their notes.

The BBC commentary setup uses a Prospect Electronics CMU21 commentary unit, again with 4104 lip microphones and



A view of the pitch from the commentary boat, with the emergency reserve camera, right



HD25 headphones. With careful packing, all the commentary kit can be carried in by just two people in a single journey. The commentary position at Bolton is hung below the stand roof, but access is good with no vertical ladders or exposed walkways. On arriving, we take a minute or two to catch our breath and then start the rig.

This is a regular show so the plugging and multicore cable allocation is fairly standard. There are four seven-pair, multicore audio cables to the commentary boat. The Reebok stadium is a new ground so most of the cable runs are in permanent wiring, terminating in boxes at strategic points around the ground. All the riggers need to do is bring in short ends of multi and triax and put in similar short ends to the vehicles. No more days of rigging cables all the way back to the scanner from every position required for the OB! On the commentary boat, multis 1 and 2 are for Sky, multi 3 for the BBC, and multi 4 for the SQN.

A flail connects the CTP commentators' box to the first multi and this provides all the incoming talkback circuits, the level raised microphone outputs, and the lazy out back to the scanner. Multi 2 carries the spare lips and the crowd effect microphones, while Multi 3 carries all the BBC circuits, commentary out and communications. The BBC doesn't have a spare back to the scanner, but it is normal to rig the second half of the commentators' box so that it can be used if required; normally the BBC stage manager uses it to hear and talk to his commentator and Television Centre via a 4-wire.

Multi 4 is for the SQN mixer, and this

has a passive split of the spare Sky commentary microphones on one output and the third 416 on the other. The SQN is run on batteries and the multi goes direct to the BT fibre links van. The idea is that if there is a major scanner or power failure, the commentator can still continue to talk over pictures provided from a single battery-powered camera on the commentary boat that is also fed directly to the BT van (which has its own independent power source).

This emergency feed of the spare lip mics frequently gives the most trouble during the rig, often with inexplicable hums. For this reason, a dual isolating transformer is normally placed between the SQN outputs and the multi pairs, but hums can still be problem. They can be made to 'go away' but not for any understandable reason. For example, just swapping around which of the XLR sockets are used on the isolation transformer (and they are all paralleled with pin 1 floating) can cure it. Is hum sensitive to the sex of an XLR?

### Sound Check

With everything plugged up for the Sky commentary, I call up Dave in the scanner over sound radio talkback and run through all the commentators' microphones and talkback circuits. Everything works and appears in all the right places, and the headroom of the commentators' box and of the compressor/limiters in the scanner is given a work out by the traditional bellowing of "GOAAALLL!" and attendant strange looks from the ground staff on the near touchline far below.

On to testing the main crowd effects

MKH416s... and the right hand one doesn't work. A quick test with a 'Bright Eyes' phantom power tester [See the June/July 2006 Edition of Line Up for construction details - Ed] shows a faulty cable from multi box to microphone. I replace the cable and the microphone springs into life.

Julian has rigged the BBC position and his tests have all gone without a hitch. The last thing to do up on the boat is to borrow the empty camera and lens boxes from the camera department to provide makeshift tables and monitor stands. Each commentary position has two monitors, both switchable between the scanner output and off-air. The vision engineers bring these monitors up to the boat, rig and test them, but we do the final positioning.

Meanwhile Mike has been getting rather wet running the cables and placing the microphones around the pitch for the close ball effects coverage. There are eleven MKH416s plus a Sennheiser MKH816 mounted on camera 3. This camera is located at pitch level as close as possible to the near end of the centre line. It mainly covers the pitch, but can also pan around to get shots of either team's dugout and the managers shouting instructions to their teams.

The 416s are placed behind each goal, at each corner, slightly towards the centre line from the 18-yard box, and at far centre. Mike also has to rig the reporter's position in the tunnel, and the post match interview position.

The reporter's position, combined with a very occasional pre-match interview position, has a lazy back to the scanner (a press-to-talk fist microphone into a latched 'on' RTS BP325 belt pack), a spare Electrovoice RE50 microphone, and an earpiece feed in case any pre-match interviews are live. The post-match interview position also has a press-to-talk lazy and spare RE50.

Where are the main microphones? These go down the interview camera circuits and are another couple of RE50s. This arrangement helps to ensure that the correct sound is recorded by VT if they pick up the interview camera direct from the matrix rather than from the scanner output.

By the time Julian and I have rigged and tested the commentary positions Mike has rigged, but not tested, everything but the reporter's position. Mike returns to the trucks to collect the final few bits to complete the rig and pass on the pitch microphone plugging details to Paul in the scanner. This may be a regular show with a standard rig, but each ground has its own quirks about where the permanent wiring

boxes are located. The side with the dugouts is the one that varies the most as, for safety reasons, cables are not allowed to cross the front of the dugouts.

Mike and Julian finish the reporter's position and track down the cameras to be used for the interview position. These cameras are also used for the teams-out shots at the start of the match, either pitch side or down the tunnel, so they have camera microphones attached to provide the sound for the close-up pictures. The camera microphones are tested at the same time as the interview RE50 stick microphones.

Meanwhile I've been taking a walk around the pitch to identify and test the pitch microphones. Only one isn't working, but a quick swap to another multi pair solves that problem.

### **Meal Break**

Time for a coffee and biscuit before the 021 Unit Manager and Sky Director's facilities check starts at 12:15. The facilities check passes without a hitch, as it should - after all, it all worked 30 minutes earlier! With the checks complete it is time for the exclusive lunch. New stadiums may have

good modern facilities and parking, but they tend to be built in the middle of nowhere. Older grounds have the surrounding streets with little shops, cafes and chippies. Bolton isn't too bad: there is a large Asda within walking distance, but I have taken to bringing my own sandwiches and eating them on the Tender steps, or while listening to the radio in my car. A football ground pie and chips do not hold much appeal for me.

Just after 14:00 it's time to go back up to the commentary position, but not without donning a few more layers of clothing. You can get quite warm during the rig, even on the coldest days, but sitting still for the best part of two hours on a commentary boat in mid January is a sure-fire way of getting very cold indeed. When I arrive, the commentators are happy with the layout and everything is working as they want it, all well in advance of the 15:00 kick off.

All goes well during the match and the final whistle blows without any technical problems occurring in the commentary box. The commentators say thank you and goodbye, and disappear off to do the post-match interviews. Twenty minutes later we

follow with all the commentary kit de-rigged and packed back into the boxes.

Mike is still tied up looking after the interviews, but we pack the commentary equipment neatly back into the Tender and set off to de-rig the pitch microphones and reporter's position. Fortunately, the wet weather didn't cause any technical problems, and we just have to take off all the wet Rycote Windjammers and hang them up to dry in the Tender. Mike returns with the interview room kit and the last bits are packed away by 18:00.

### **Next!**

Next Saturday is Middlesbrough and I'll be working again with Julian, but none of the others will be there. Not that it matters all that much to have exactly the same crew each week. There is a pool of freelancers and staff who all know what is required and where - the outside broadcast 'just happens.'

Who was playing? Bolton Wanderers v Manchester City on this occasion and neither team scored - but I can't comment on the quality of match I'm afraid... I had my head down making notes for this article!

**ibs**