

## Telerecording the Coronation...and more

Following L Richardson's article in the April issue of *Prospero*, relating to the 'telerecording' of the Coronation, Frank Wood and Geoff Salter sent in this additional information, which readers may find interesting.

I found the article on recording the Coronation of great interest. It just goes to show what the Corporation's engineers could achieve, when supported by sympathetic management.

However, allow me to correct the last paragraphs. The partial stored field FR equipment lasted a lot longer than 1957. When I joined the Corporation in 1964, the Lime Grove installation was still in use, together with a much larger installation at TVC, to which I was posted. There were six 35mm recording cameras, together with seven 16mm cameras. The latter worked on a different principle. The sound was usually taken on 35mm or 16mm magnetically coated film, but the cameras laid down an optical sound track as well.

The cameras may be of interest. They were standard 35mm Mitchell cameras, modified to give as rapid a pull-down as practicable with pin-and-slot accelerators. They were driven by 1 HP 2-phase motors, accurately synchronised with the incoming TV signal. When I say 'accurately', I really mean it. It was necessary to the proper working of the system that the shutter opened on line 37 (625-line). Controlling a large motor, driving an intermittent load, to that degree of accuracy takes some doing, or did in those days. There was a whole bay of electronics, the clever bits of which took up just one rack. It was supplied by the Lancashire Dynamo Company and was highly reliable.

The display was supplied by Cintel and was also very reliable. During routine maintenance, the control positions were logged, and you could see the controls walking off to the ends of their ranges. When they were reached, you did a complete valve change and a complete realignment. Then it was good for another year or so.

The outfit continued working for some time after that, and was preferred for

complex editing to VT. In those days, editing VT was a difficult procedure, involving developing up the recorded tracks with colloidal iron, a jig with a microscope, and a razor blade. Film was easy to edit. What killed it off was colour. The cameras were very tetchy about the film they used, from a mechanical point of view. While efforts were made, the thicker and more complex colour emulsions would not work.

The process had reached the end of the road, and closed down shortly after I left the department for P&ID. I believe that three of the cameras were sold to Technicolor, to make colour separation negatives from VT. Their mechanisms were sufficiently accurate.

I treasure my time with the department, and should be glad to hear from any of my former colleagues. I don't think I could provide a better introduction to general broadcast engineering. The only thing missing was cameras and vision mixers.

**Frank Wood**

**Geoff Salter, who was at one time in charge of TK/Tel Rec Maintenance, later EIC Ealing TS and then TV Project Engineer, writes:**

Telerecording had in fact been well established at AP by 1950, using the ubiquitous Mechau film projector in reverse. In this role it was laced with unexposed film and filmed a conventional monitor in a darkened room. (The mirror drum of the projector giving in effect a still-frame to record.)

A photo in the 1951 BBC Yearbook shows the Telerecording Suite at AP with Ivor Smith in charge in the background and Fred Bateman (the Mechau expert) on one of the machines.

AP had also a 16mm recording system mainly used for Sport. Initially this used a Bell & Howell projector (which had a fairly

quick pull-down) and later an improved Marconi system.

In addition to the 35mm suppressed field system, mentioned by L Richardson, that was installed at AP in time to record the Coronation, an improved version of the Mechau system had been by then installed at Lime Grove. This used a conventional Moy camera for filming, a Cintel monitor for display and RCA optical recording. This suite of three cameras was used to record the whole day's Coronation activities from about 10am till 10pm on close down. Dulcie Meakin was in charge of the team and I was enlisted from Maintenance to record the round. I believe this telerecording was for the archives but was processed on the day.

Later, as was said, the suppressed field system was re-installed at Lime Grove and subsequently modified to a partial stored field system in which the long pull-down of the camera was overcome by storing part of one field in the afterglow of the monitor and using a shaped filter on its face to equalize the brightness.

Although film recording systems could give reasonable pictures, particularly from Emitron high-velocity tubes and 3" Image Orthicon cameras, they were rapidly displaced by videotape as soon as the Ampex 2" machines became available. Film recording did live on for a while outside the BBC at High Definition Films who used non-broadcast standards (ie, more lines, longer field suppression and no interlace). This produced films approaching cinema quality but was too early perhaps for potential use by independents and commercial TV or was not pursued.

I hope this very brief and sketchy history will show how hard Research, Design, P&ID & O&M tried to pursue this tricky field of endeavour.

**Geoff Salter**