

## **BBC high resolution developments**

In the late 1940's the BBC research department at Kingswood warren started to investigate the operation of camera tubes both at 405 lines and at higher line rates than the established system. To facilitate this a test bench was constructed to allow tubes to be investigated under different line scanning rates and to determine the optimum conditions of operation.

The Television Society\* report states that 3 complete vision channels were used and that one of them is a high definition camera which is flexible in its operation. This can be operated with up to 1000 lines with interlaced or sequential vertical scanning.

It is thought that one of the three channels would be the optical test bed, and a photograph of two cameras in a studio shows the "Emitron" camera and what looks to be a Pye type [C841L4 Photicon camera](#). This camera uses a midget Image Iconoscope tube, the Photicon. According to Cairns\*\* this type of tube is capable of up to 1300 lines centre resolution.

In a 1951 paper presented by Lord and Woods\*\*\* to the IEEE at the 1952 Television Convention, a variable line rate camera using a "simple iconoscope" is described. It states that the line scanning circuits are contained within the camera.

Comparisons are reported with operation on 405, 525, 625, and 819 lines with both interlaced and sequential scanning.

A special variable line rate high resolution picture monitor was also constructed. It has a 15 inch aluminiumised tube with a resolution of 800 lines. Video amplifier has a bandwidth of 15Mc/s. Mention is made of the wide range line scanning generator.

A further paper by Lord & woods "The Binary counter as a Frequency Divider for Television" \*\*\*\* details the circuitry for producing the sync pulses.

During this period, 1949, the BBC visited continental broadcasters and attended television conferences to assess the facilities and line standards in use or proposed. Report 1949-33 [Download](#)

## **BBC colour camera investigations.**

The Television Society report also mentions experiments with colour using a sequential system with a colour filter wheel. The practicalities of producing a compatible colour system were also being investigated.

\* Television Society Vol. 6 No. 6 page 230-232

\*\* A small high velocity scanning television pick-up tube - EMI research Laboratories.

\*\*\* A variable-Definition Camera Channel for the Appraisal of Television Standards - BBC Research Department. Pages 811 to 820.

\*\*\*\* The Binary counter as a frequency divider for television, a [BBC Research Department report](#) No. T.025 1942/32. Available to download from the BBC