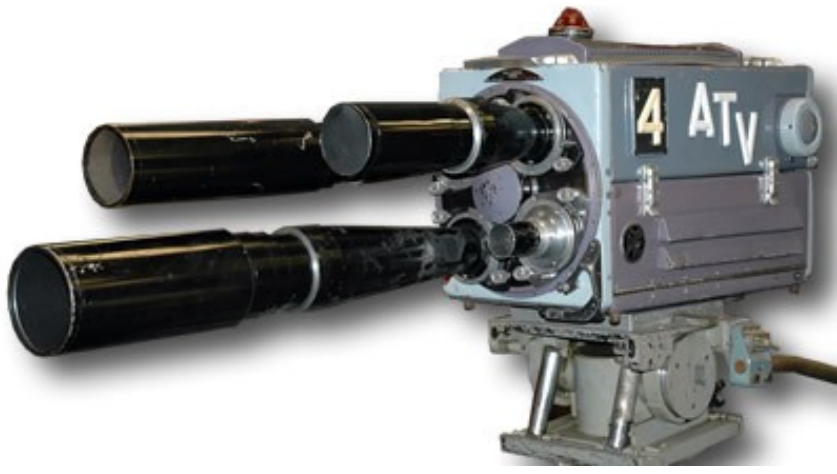


European and American Television Cameras

	Make	Pye
	Model	Mk3 842014
	Country	UK
	Camera Type : Studio and OB monochrome camera with full facilities.	
Camera Description : Image Orthicon camera with 4 lens turret & compact valve construction. Light aluminium pressed panels with "Elektron" castings. Top carrying handles front and rear.		

Data	Data
Tube details	3" Image Orthicon type 5820 or P870
Lens details	4 station turret with iris drive (3)
Sig. to Noise	
Sensitivity	
Resolution	Depends on tube
Viewfinder	5 inch round tube + mag. Lens, fixed
Camera cable	BICC Mk2 and Mk3 (4) 1000ft. max.
Power supply	85-125 or 170-250V. 47-70Hz. 1100W
	Line standards
	Colour standards
	Drives or locking
	Weight *
	Colours
	Dimensions *
	Date introduced

*Excluding Lens

Associated equipment

The camera channel comprised the camera head, CCU type 842309, PSU type 842356, a remote control panel for Iris and lens change. In addition a wide range of studio equipment was available, precision monitors, GP monitors, vision mixers, precision waveform monitors, all in the same blue house style. A Diascope was available that could be fitted in place of one of the lenses to assist with testing and line up.

General description & Features

A valve camera channel using a 3 inch image Orthicon tube in a compact box shape. The 4 station lens turret is motor driven, the position selected by a switch on the back of the camera or at the CCU. The exposure is controlled by a motor system, which drives the iris of the lenses, also locally or remotely controlled by switches. The focus drive system is servo controlled by either of the two focus demand potentiometers fitted in a large control knobs on both sides of the viewfinder. This action could also be controlled from the CCU. A clever feature of this focus servo arrangement was the inclusion of a resistor in the lens mounting plate. This formed part of the control servo system such that the rotation of the focus control had the same range for each lens and the tube adopted a suitable position, on a lens change, to be still at the point of focus for the newly changed lens. The camera viewfinder hinged upwards for servicing, as did some on the other chassis in the camera, all were on plugs & sockets for easy removal.

References

Product catalogue,

Photo Reference

TV Engineering, Amos & Birkinshaw, Pub. Iliffe, page 201

European and American Television Cameras

Innovations

Use of the Image Orthicon tube. Motor and servo control of the lens functions.

History

During the life of the Mk3 series the camera underwent a number of incremental changes to improve the performance and reliability.

Very early cameras used the BICC Mk2 cable and connectors, later replaced by the Mk3 connector.

Some pictures of the first versions show a "gun-sight" ring in the top carrying handles

Early cameras also had a single fan under the top cover with a Lucas car rear light cue dome. Later cameras had two fans in a larger "Roof-Light" style housing with a round Morris Minor cue domes.

The later cameras had ventilation strips down the sides of the camera's lower side panels.

There were also two different CCUs, the compact one had a waveform monitor and the main controls on the front panel. The larger, later, CCU had a built in 8.5 inch picture monitor with the extra controls under a top flap and down one side on the CCU. The PSUs were all quite similar.

A variant of the Pye Mk3 was used by Pye for colour experiments. It is thought that this was a field sequential camera with a colour wheel. Few details are available other than a picture of the camera.

For a few years, from 1949/50, there was a design sharing agreement with Thomson, but no French camera was completely Pye. This agreement was most visible in the French version of the Pye Mk2.

Notes

842028 for 405/50 lines

842014 for 525/60 and 625/50 lines

(1) 842014E switchable for 625/50 or 819/50 lines.

(2) The BBC cameras were supplied in Dove Gray paint finish.

(3) Pye had a unique two bolt lens mounting flange and quadrant gear for the iris drive, the lenses were standard 35mm. format by Dalmayer and others.

(4) Practical TV, May 1952, has a picture of a Pye Mk3 with a Mk2 cable. and pictures exist of very early Pye Mk3 with a Cannon camera cable connector.

(5) It is reported that about 350 units were sold.

Used By

BBC in mobile control rooms, ATV, Granada, ITN, Scottish TV, ABC TV and Anglia TV. The Pye Mk3 was used extensively in Europe, Australia (GTV9 in Melbourne), New Zealand, and was marketed by General Precision Laboratory Inc. in the USA.

Pye Image Orticon Control unit type
2309/N, serial number 355

The two large knobs control Lift (black level) and Gain.

The meter indicates the Iris setting which is operated by the keyswitch, above right of the meter.

There are a large number of controls down the left side and more under a panel in the top panel above the picture tube.

