Camera choice? Broadcast or Industrial?

This issue I am taking a look at the Sony DXC-M3P camera. It is a sub broadcast camera aimed at the industrial and educational market. It is a “one piece” camera, light in weight and it sits comfortably on the shoulder. A multicore cable connects it to the companion VTR or to the PSU/CCU. It is a full stand alone camera so with the local battery box it could be used for radio working.

The Sony DXC-M3P



The camera with the tripod adaptor shoe

It uses 18mm. Saticon tubes and it has good sensitivity for a tube camera, and a low signal to noise ratio of 55dB. It works well in good room lighting and is not too noisy even with 9dB of gain switched in. There is also a good resolution of 650 lines in the picture centre. The camera has a cue light on the viewfinder (switchable) and in the viewfinder eyepiece. An intercom is provided when used with the CCU. A microphone can be connected to the camera’s XLR socket for use with the VTR or routed through to the CCU.

The lens

The lens is one of the areas where economies have been made. The one on the review camera is made by Tamron, a nice clean lens but let down by the slow zoom servo and minimum focus distance of 1 metre. This is mitigated by a macro control on the lens body. There is no range extender. It has a standard “B4” mount for 18mm. tubes, but the “Hi-rose” connector to the camera body is smaller and has fewer pins than its broadcast brethren. The zoom range is 9 to 126mm again not as wide as you might wish for. A remote zoom demand control, type LO24ZS is available to mount on the pan bar for tripod use.

The camera



The camera with the studio viewfinder

The DXC-M3 is a late model tube camera. Subsequent models started to use the CCD sensor. It has a useful range of features, like its broadcast brothers.

- Auto, Black, White, centering, and Iris.
- The viewfinder has a character display of camera status and rudimentary captioning ability for use with the associated VTR.
- A 14 pin camera cable connector goes to the portable u-matic VTR or to the CCU/PSU and supplies power in this mode.
- There are the usual controls, filter wheel, gain switch (0-9-18dB), colour bars/standby.
- The camera can be genlocked and phased with controls on the camera side.

- It has proper BNCs for output and genlock input and a 2 pin connector for external 12 volts at 16 watts.

Accessories

The flexibility of the camera is extended by a range of accessories.

- Large Viewfinder, DXF-40CE
- Battery adaptor, DC-7 for BP-60 battery
- AC Power adaptor, CMA-7CE
- CCU-M3P
- LC-M3 flight case
- Tripod adaptor (shoe), VCT-M3

Maintenance



With the side panel opened the main PCBs can be seen with few adjustments visible. More are accessible when the boards are on an extender card.

This is another camera that is the best part of a quarter century old, but it ***is*** made by Sony and if it has been cared for it should be all right for some time to come. Most of the circuitry is on 4 horizontal plug in cards. The red object in the bottom right corner is an hour meter. The circuitry has the usual Sony complexity, but it is mainly analogue with OP amps and looks fairly fixable. The review camera has not gone wrong yet! (touch wood).

In use

The DXC-M3 was not sold to the broadcast market, so a lot of the cameras had an easy life in industry or education. The review camera is “like new” hardly a mark on it. As it is a tube camera, it was quickly superseded by CCD cameras and I think that many of them spent a long time in cupboards, awaiting disposal. The usual caveats apply when buying one. You need to see it work and make sure you have all the needed parts. If you can get a service manual that would be a good idea, Sony manuals are exceptionally difficult to copy and the one for the DXC-M3 is no exception.

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