OPD display connections & voltages

**Display**

Two colour display models are found with OPDs. Both are by Microvitec, and are similar to the CUB, sold extensively for the QL. The earlier version is medium resolution, but was superseded by a high resolution 1441 model, distinguished by its central OPD badge below the screen.

A single D15D15 cable connects the console to the monitor, bringing in power lines from the PSU and carrying back RGB TTL colour signals. The 15 pins of the D connector to the monitor are as follows:

- to the display:

D1=0V;  
D2=Red:  
D3=Green;  
D4=Blue;  
D5=H-sync;  
D6=V-sync;  
D10=on indicator;

- from the PSU:

D7=OV;  
D8=minus5V;  
D11=+5V;  
D12=+5V;  
D13=+12V;  
D14=+5V.

On the 9" mono display, the RGB signals are combined on a small ICL PCB, before being passed to a Philips VDU chassis. This allows colours to be reproduced as grey shades.

The OPD is designed to be left on and the screen will blank if no keys are pressed for 10 minutes. Pressing any key, or an incoming call, re-activates the screen. For longer periods of inactivity, frontal switches on both the mono and colour monitors can be used to shut down power to the display, without affecting the OPD itself.

Like the QL, the maximum display resolution on the OPD is 256x512, with only black, white, green and red available. This is equivalent to 26 lines of 80 normal or 40 double-width characters, though the bottom two lines are reserved as a status display area for the system and telephone indicators. By halving the horizontal resolution the number of colours can be increased to eight.