

Digital Palette Driver for IDL and PV-WAVE

DEVICE DESCRIPTION

The Polaroid Digital Palette (DP) Model CI-5000 is a high resolution color film recorder which is designed to produce high quality slides, prints and overhead transparencies. It has programmable resolutions up to 4096x3600 pixels and connects to a host computer via the Small Computer System Interface (SCSI) bus.

The DP supports four camera backs:

- 1) 35 mm
- 2) Autofilm
- 3) Pack film
- 4) 4x5 film

All exposure parameters are also programmed digitally, which leads to very reproducible exposure control.

Mechanically the device consists of a high-resolution monochrome CRT with a motorized color filter wheel. The red, green and blue images are exposed sequentially using the appropriate color filter. The Digital Palette has internal film tables which support about 20 different films. Exposure parameters (time and CRT brightness) for each color are optimized in these tables for the speed and color balance of each film.

OVERVIEW OF THE PV-WAVE AND IDL DRIVER

The PV-WAVE and IDL driver for the Digital Palette supports all of the standard graphics and imaging routines. It allows access to most of the advanced features of the Digital Palette including programmable resolutions, fine-tuning of image position and size, and continuous background fill.

The DP driver works as follows:

- 1) A bitmap image of your plot is constructed in the computer memory.
- 2) When the `DEVICE,/EXPOSE` command is issued the internal bitmap is put through the current lookup table and converted to red, green, and blue images which are sent to the device one at a time.

The Digital Palette driver is currently only available for VAX/VMS. It uses the VMS Generic SCSI Class Driver (GKDRIVER) to communicate with the Digital Palette. To port it to UNIX one would only need to re-write the lowest level routines which do the actual SCSI I/O. However, this is probably not a trivial task.

Anyone who would like a copy of the driver should send me e-mail at the address below.

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