There are "Controller Configuration" bits in Rev. 1.6 that are read by the host image acquisition program named voodoo to determine what sort of hardware and software capabilities the controller has. These include such things as shutter support, temperature readout, multiple readout, as well as a specification of what revisions of controller boards are installed.

The bits are defined in the file "timhdr.asm", which is an INCLUDE file in most "tim.asm" files. As an example, the video processor bit definition for is shown below -

BIT #'s	FUNCTION
2,1,0	Video Processor
000	CCD Rev. 3
001	CCD Gen I
010	IR Rev. 4
011	IR Coadder

CCDVIDREV3B	EQU	$000000	; CCD Video Processor Rev. 3
VIDGENI	EQU	$000001	; CCD Video Processor Gen I
IRREV4	EQU	$000002	; IR Video Processor Rev. 4
COADDER	EQU	$000003	; IR Coadder

In "tim.asm" for the PICNIC array the following lines are included to define the constant CC to show that an IR video processor and a fiber optic timing board, Rev 4 are included in the controller -

```
; Include a header file that defines global parameters
                INCLUDE "timhdr.asm"
```

APL_NUM	EQU	0	; Application number from 0 to 3
CC	EQU	IRREV4+TIMREV4	

In the command list in "tim.asm" there is a line

```
        DC              'RCC',READ_CONTROLLER_CONFIGURATION
```

and in the file "timCCDmisc.asm" there are the lines that define the variable CONFIG as being equal to the CC constant, and which writes that value as a reply whenever the 'RCC' = read controller configuration is executed -

```
; Let the host computer read the controller configuration
READ_CONTROLLER_CONFIGURATION
        MOVE        Y:<CONFIG,X0            ; Just transmit the configuration
```

```
        JMP             <FINISH1

CONFIG          DC              CC              ; Controller configuration
```

The image acquisition program voodoo simply gets as a reply the 24-bit word CC whose bits are all set according to the software and hardware capabilities supported by the controller. Voodoo sets up windows and software procedures accordingly.