



VIDEO PERCEPTION INCORPORATED

APPLICATION OF THE SECURITY DEVELOPMENT BOARD

PURPOSE OF THE SECURITY DEVELOPMENT BOARD:

The Security Development board is intended to be used to interface with the customer's Original Equipment Manufacturer (OEM) design-under-evaluation to provide a quick means for product development. This board provides the standardized interconnect of peripheral circuitry to the IPP3000 device. It provides I/O termination to connectors. It also allows for interfacing of a microcontroller with RS232 control. (The microcontroller is not provided since it requires a user supplied program) The printed circuit board was designed for multiple applications; therefore, much of it is not loaded.

DESCRIPTION OF THE SECURITY DEVELOPMENT BOARD DESIGN:

The board contains the Video Perception Inc. IPP3000R device which loads a Programmable Logic Device (PLD) to enable it to become an IPP3000 motion detector. Three Read-Only-Memory (RAM) devices provide the memory support to the IPP3000 for reference image storage and masking storage. The capacity of both the reference image and the masking supports eight channel operation. Timing is provided for 12 second update of the image; the user could modify this timing by changing the R/C values. An RS232 interface is provided to a socket intended for user insertion of a microcontroller. A RAM provides interim storage of masking data with interconnect to the microcontroller.

DESCRIPTION OF THE BOARD I/O PROVISIONS:

The board I/O are terminated at the following connectors:

J1 Connector – This connector provides for power entry to the board, provides for the digitized image data entry, provides for video camera timing controls, and provides for operator controls.

P1 Connector – This connector provides for RS232 interface to the board.

J2 and J4 Connectors – These connectors provide output access and on board signal monitoring.



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The board contains one switch (SW1) to select normal operation or mask testing. The switch section labeled "1" is the only active section. It provides masking test operation in the "ON" position.

- 1) Normal Position Operation: This is the position that would normally be selected for operation. The Mask_In and Ref_In connections from the IPP3000 are connected to the Mask and Reference RAMs respectively.
- 2) Mask Testing Position Operation: This is the position that would be selected when it is desirable to view the data stored in the Mask RAM. To do this, the Mask_In and Ref_In connections to the IPP3000 are reversed. There must not be contrast in the camera viewing area when doing this (cover the lens).

INPUT SIGNAL REQUIREMENTS:

SHADES-OF-GRAY (SOG) SIGNALS: The SOG [0..5] signals are the most significant bits of the digitized video data. An external A/D Converter must be used to supply these signals.

VIDEO SIGNAL TIMING: The Frame_Sync_N, Vert_Sync_N, and Line_Sync_N timing are provided from the camera. The Clock signal is the strobing of the A/D signal. Refer to the IPP3000 data sheets for the timing description.

OPERATOR CONTROLS: The Threshold [0..2], Tolerance [0..3], and Edge_Change signals are controllable as described by the IPP3000 data sheets.

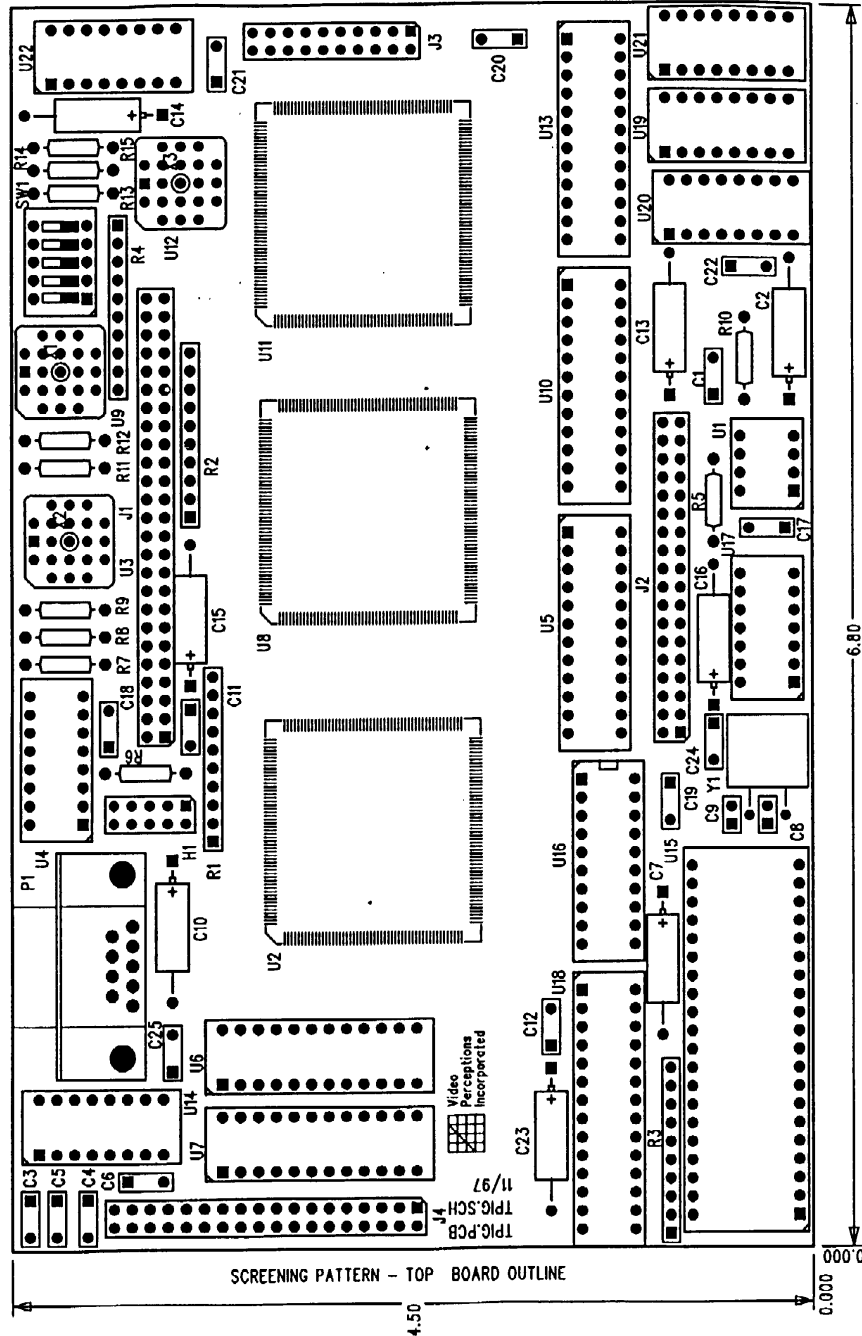
RS-232 CONTROL: Control can be exercised over the masking configuration with a user supplied and programmed microcontroller.

OUTPUT SIGNALS:

The Motion_Out, Motion_Sample, Alarm, MotionHalo, and Halo_Video outputs are the typical outputs used for motion monitoring systems. Refer to the IPP3000 data sheets.

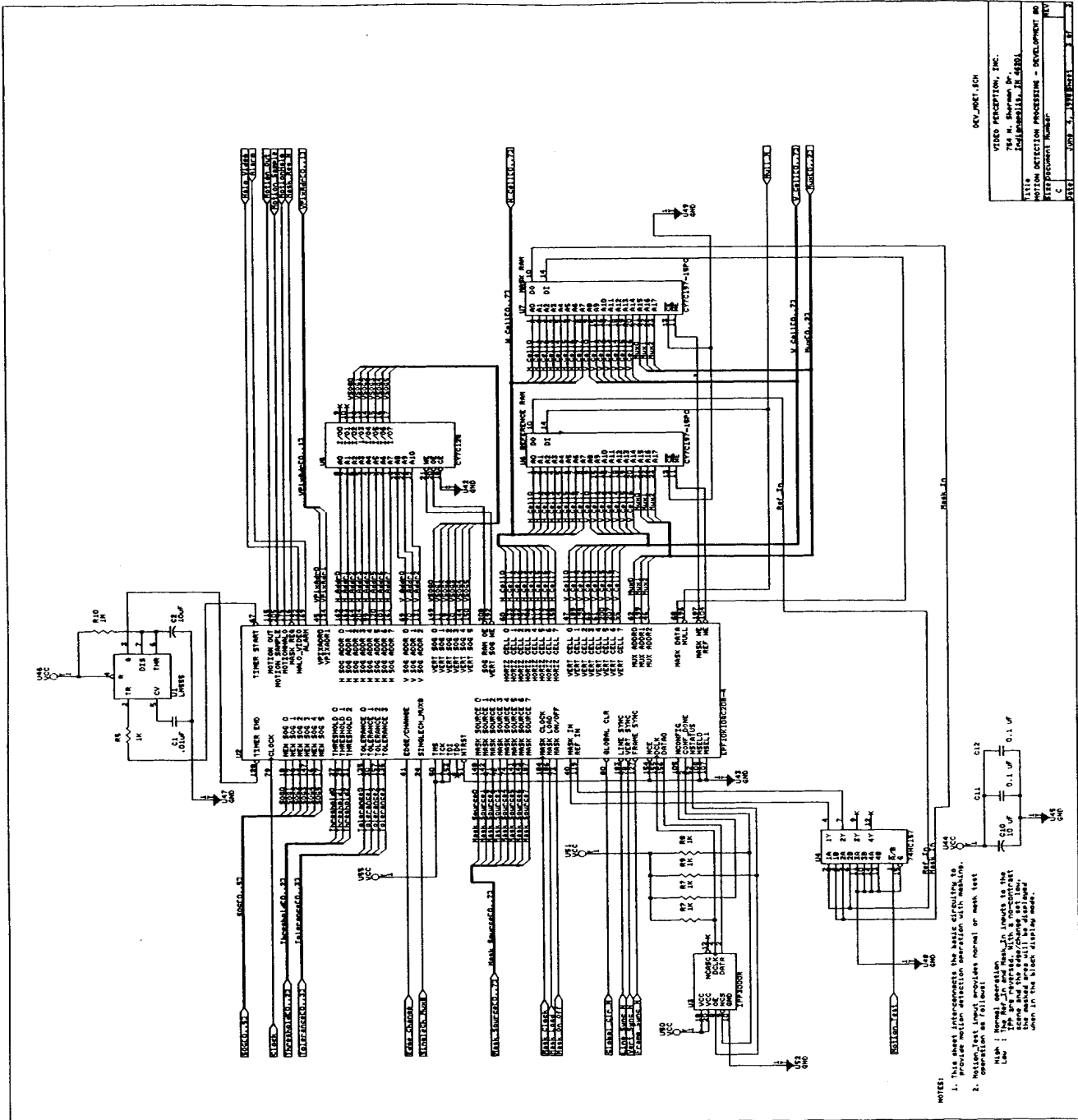


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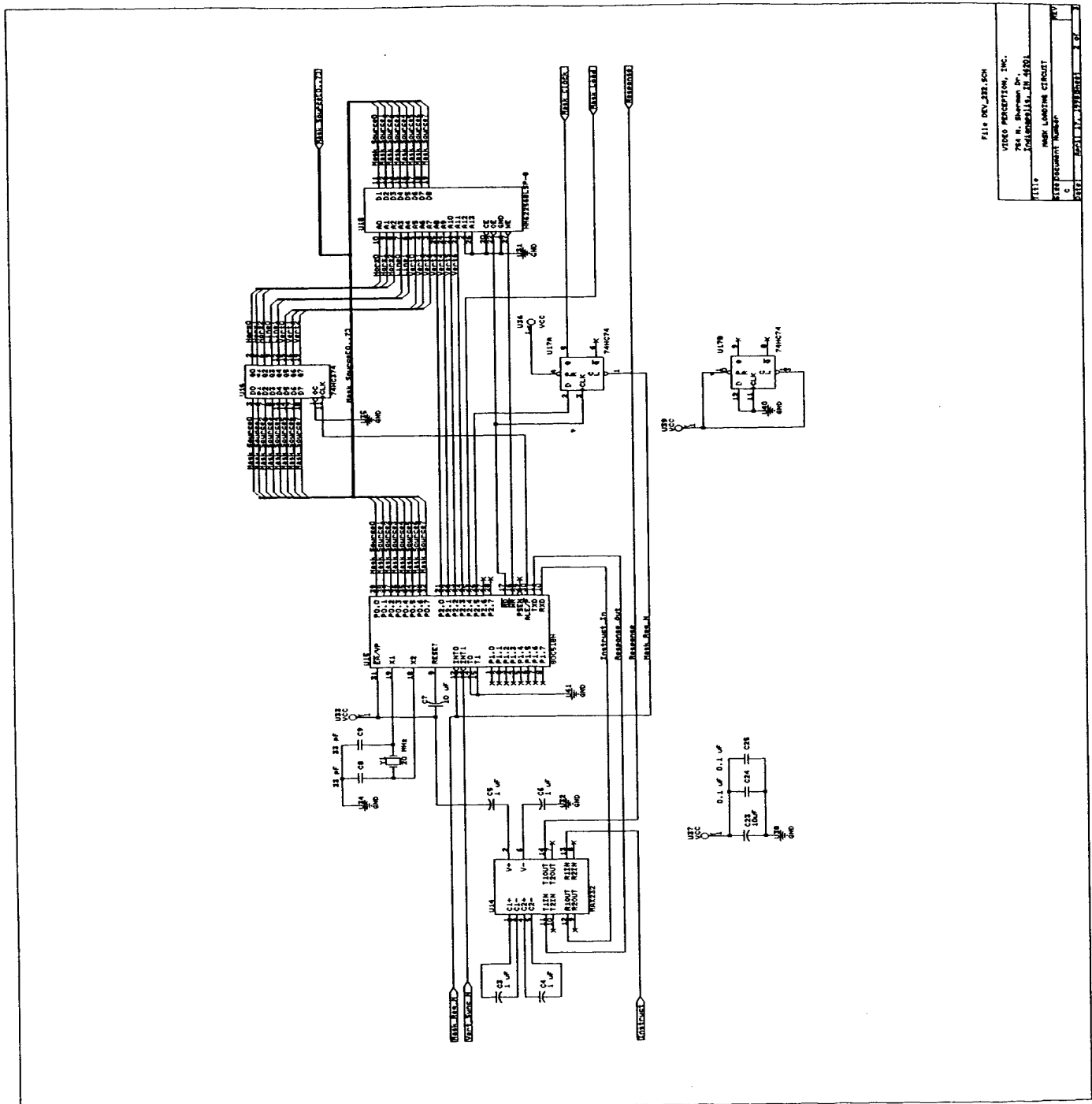


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