A STROBOSCOPIC TECHNIQUE FOR USING CCD CAMERAS IN FLOW VISUALIZATION SYSTEMS FOR CONTINUOUS VIEWING AND STOP ACTION PHOTOGRAPHY

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FIGURE 1c: VIDEO STROBE SYNCHRONIZER.
End of Field N-1 Readout and Field N Integration

Vertical Blanking Interval

Start of Field N Readout and Field N+1 Integration Time

Video Input

Vertical Sync Pulse

Video Input

Vertical Sync Output

5V
0V

Fixed Delay

Trigger Output

5V
0V

~1 Millisecond

FIGURE 3: OSCILLOSCOPE WAVEFORMS OF AN OPERATING VIDEO STROBE SYNCHRONIZER
A Stroboscopic Technique for Using CCD Cameras in Flow Visualization Systems for Continuous Viewing and Stop Action Photography

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A technique for synchronizing a pulse light source to CCD video cameras is presented. The technique permits the use of pulse light sources for continuous as well as stop action flow visualization. The technique has eliminated the need to provide separate lighting systems at facilities requiring continuous and stop action viewing or photography.