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.
FIGURE 2: COMPLETE SCHEMATIC OF VIDEO STROBE SYNCHRONIZER
**End of Field N-1 Readout and Field N Integration**

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

**Video Input**

**Vertical Blanking Interval**

**Video**

**Input**

**Vertical Sync Pulse**

**Vertical**

**Sync Output**

**0V**

**Trigger Output**

**5V**

**Fixed Delay**

**5V m 0V m**

**~1 Millisecond**

**FIGURE 3: OSCILLOSCOPE WAVEFORMS OF AN OPERATING VIDEO STROBE SYNCHRONIZER**
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.