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NASA TECH BRIEF

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Video Switcher for Coupling Video Cameras to Single TV Monitor

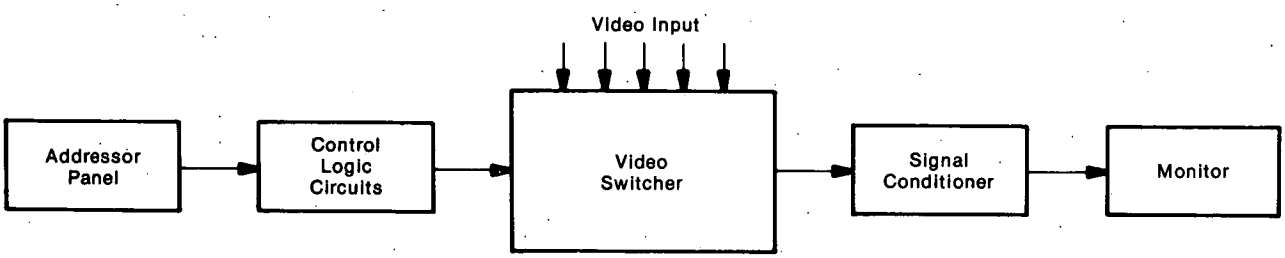
When a TV monitoring system is used for the coverage of several locations at one time, a number of video cameras are set up, each covering a designated area. All of these cameras transmit to a centrally-located monitoring station. Such systems, commonly used in television studios, are being introduced in hospitals, schools, security agencies, and the like.

A monitoring station is equipped with either one or several television monitors. When one set is used, the observer can view only one area at a time. Should he decide to see another area, he has to notify the camera operator covering that area and request to be switched on. The camera operator performs the switching manually. As a result, a certain amount of time is wasted in communicating and in the manual switching.

A more common arrangement includes several monitors. Each monitor is set to receive signals from one camera. Thus, every area is viewed on a separate screen. The difficulty with this arrangement is that an observer may miss an important detail with the multitude of screens in front of him.

A new video switcher has been developed which couples up to 60 TV cameras to a single TV monitor. Video switching is provided by a diode matrix arranged in a 60-by-1 configuration. The switcher can be operated manually or automatically. In the manual mode the observer can select the area he wants to view without communicating with the camera operator. In the automatic mode the system scans through each camera in sequence; several scan rates can be selected.

The new system is set up as shown in the block diagram. It includes an addresser panel equipped with hand-operated controls and monitoring lights, allowing the viewer to select the desired mode and to monitor the system operation. The control panel is connected to logic circuits which feed command signals to the video switcher. Connected to the switcher is a conventional signal conditioner which feeds the TV monitor.



TV Monitoring System With Video Switcher

(continued overleaf)

Note:

Requests for further information may be directed to:

Technology Utilization Officer
Kennedy Space Center
Code AD-PAT
Kennedy Space Center, Florida 32899
Reference: TSP75-10192

Patent status:

This invention has been patented by NASA (U.S. Patent No. 3,900,705). Inquiries concerning non-exclusive or exclusive license for its commercial development should be addressed to:

Patent Counsel
Kennedy Space Center
Code AD-PAT
Kennedy Space Center, Florida 32899

Source: I. A. Richter
(KSC-10782)

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