MODEL 72A

GENERAL DESCRIPTION

The Jorway Visual Readout System provides a means of extracting data from a Camac system and displaying it on a cathode ray tube. Up to 64 data channels can be accommodated in a decimal display format which includes complete channel address (Crate, Station Number, and Subaddress) preceeding each data word. Although primarily intended for readout of scaler systems, it may be used to display Dataway information from any other modules which provide data that would be useful when displayed as a decimal number.

An internal scanner sequentially addresses the system, with only channels responding via the Q line being displayed; addresses which do not contain data are skipped. Front panel controls permit programming the starting channel as well as the total number of channels to be viewed. Other front panel controls and indicators are incorporated to provide flexibility in use.

When used with a scaler system, scanned channels may be reset as well as having their data displayed. In addition, front panel controls for Clear, Initialize, and Inhibit allow manual control over the system. Provision for complete system test permits verification that all elements of the system are operating correctly, including scalers, scanner, binary to decimal converter, and readout lines.

Rear panel connectors make available data and address information, both in parallel binary, and serial BCD form. The parallel data is strobed from the Dataway and latched until it is updated by the scanner. The serial data is stored in a semiconductor memory and thus may be read out without interrogation of the Dataway. Both sets of data may be read out under control of, and at a speed determined by the user, allowing data to be transferred to a wide variety of peripheral devices.

The system consists of a Model 72A Visual Display Module, a Memory Raster Display Unit and a Video Monitor.

The heart of the system is the Model 72A, which is a five width Camac module. An important feature of this unit is its ability to control either single crate "Stand Alone" scaler systems, or multi-crate Branch Highway organized systems using "Type A" Controllers. Such multi-crate systems may also be under computer control. The Model 72A is in reality a Crate Controller / Branch Driver, and may be converted from one function to the other by means of a single toggle switch on the front panel. For single crate Camac systems the unit operates as a crate controller, scanning and displaying data from the crate in which it is installed. For multi-crate applications it becomes a branch driver, exercizing control over up to seven crates via a standard Branch Highway and "Type A" Controllers installed in each crate. Thus, data from any of the crates may be acquired and displayed. For applications where the Branch Highway has a second branch driver controlling it, for example a computer interface, an interrupt feature is designed into the Model 72A. Upon receipt of a "Request" command from the computer via the Branch Highway, the 72A relinquishes control over the Highway. Thus, the two drivers can time share use of the Highway. The Model 72A is always assigned a lower priority, permitting the readout system use of the Highway only when the computer does not require it. This scheme allows the computer access to, and control over, modules within each crate. During the time that the computer is in control, the display is still maintained, since it operates from data previously stored in its memory. The many features of the "Type A" Controller add to the versatility of the system.

The Memory Raster Display Unit is a 19" rack mounting enclosed chassis, containing a semiconductor memory, alpha-numeric character generator, and video circuitry. Its function is to store data processed by the Model 72A, and convert it to composite video form for presentation to the video monitor via a single coaxial cable. The memory can also be used to provide data for readout by external devices for the print out of hard copy, computer input, or various other usage.

The Video Monitor is a standard television type monitor containing the necessary electronics to display information on its cathode ray tube. Monitors are available in several screen sizes from 9" to 23", and additional monitors may be easily added to view the data in more than one location if desired.