

DESCRIPTION

The 1987A is a 48-channel voltage programmable charge source and logic unit. Mated with the model 1976 (TDC-ADC tester) the 1987A provides means for rapid and thorough testing of 2280 series ADCs.

There are two separate charge sources programmed by the same voltage input but enabled independently (see Block Diagram and F-code summary). Each charge source drives 24 channels corresponding to the sets of "odd" or "even" numbered channels on a 2282A. Once enabled, the charge sources are triggered by a gate signal.

As seen by examination of the schematic, the output charge delivered to each channel depends on the loads presented to each of the other 23 channels for a particular group. More on this later.

Two latches and two pulsers controlled via CAMAC are configured with a number of logic gates (see Block Diagram Fig. 1) in order to provide internally generated gates, gates and clears, or alternatively to be "transparent" to the front panel gate. The width of the internally generated gate is adjustable by means of a 10 turn front panel "pot". All logic inputs and outputs are compatible with the "NIM" standard.

In Figure 2, the usual test configuration for testing 2280 series ADCs is shown. Cable assemblies used for interfacing to the ADC type input connectors are shown in figures 3 and 4. The output pulse "wave-shape" is characterized by figures 5 and 6. The peak output amplitude is not quite linear with the input voltage. This dependence is shown for the standard 1987A in figure 7.