

Saturn IC stage.- The Mississippi Test Facility and MSFC each have an RCA 110A and DEE 6 (SDS 930) system for static firing of the S-IC. Similar systems for manufacturing checkout are located at MAF and the Quality Laboratory at MSFC. MSFC also uses a DEE 3 system for engine checkout at MSFC.

In these systems, the RCA 110A is used to control and monitor test and checkout procedures. During the tests, the computer compiles and records an events trail composed of command times and system responses for later evaluation. These data are displayed by computer driven CRT displays or recorded in a printed record.

Saturn II and IVB stages.- The S-IVB and the S-II stages use the CDC 924A computer as the controlling element during static tests. The DEE function is performed by a CDC 8090 computer. These computers perform functions similar to those performed by the S-IB and S-IC checkout computers. Computer systems for the S-IVB stage are located at the Douglas Huntington Beach facility for manufacturing checkout, at Sacramento for static testing, and at a separate facility at Sacramento for post-static-firing tests.

The S-II checkout uses the systems located at Seal Beach (North American Aviation) for manufacturing tests, and at MTF for static firing.

Instrument Unit.- The Instrument Unit (IU) contains the guidance, navigation, and control equipment used during flight by the launch and injection stages. It also contains the TM and communications equipment used to gather and transmit data and to receive information during flight. The complexity of the IU stage checkout task requires two breadboard facilities in addition to an International Business Machines (IBM) facility at Huntsville. The IBM facility contains two RCA 110A computers (one for the S-IB vehicle and one for the S-V vehicle) and two DEE 3 systems. In addition, a DDP 224 computer is used to drive a Sanders Display System associated with the RCA 110A computers. Additional off-line support in the form of a GE 235 computer supplies input data tapes containing parameters needed by the onboard Launch Vehicle Digital Computer (LVDC) and Launch Vehicle Digital Adapter (LVDA). The RCA 110A computer generates test sequences that activate the Electronic Support Equipment (ESE) that interfaces with and supplies test stimuli to the stage subsystems under test. The response of the tested system is then received, processed, and displayed for test personnel.

Instrument Unit, Saturn IB breadboard.- The breadboard facilities provide a simulation of a complete multi-stage vehicle. This