2100A DATA CONTROL UNIT

(DIAGNOSTIC CONSOLE)

TEST PROCEDURES

"DATAPHONE®" II SERVICE

1. GENERAL

1.01 This section contains procedures to be used when testing the DATAPHONE® II service 2100A-L1 data control unit (DCU) diagnostic console (DC) shown in Fig. 1.

1.02 Whenever this section is reissued, the reason for reissue will be contained in this paragraph.

1.03 The DC continually monitors its own "health" and reflects its status via the CONSOLE STATUS light-emitting diode (LED) indicators located on the front panel in the lower left corner. When the DC is operating normally the green LED will light. When a fault in the DC has been detected the red LED will light.

Test Capability

1.04 It is not necessary to disconnect the CC-IN, CC-OUT, and REMOTE port connection prior to testing.

1.05 The only method of testing the DC is via the CONSOLE STATUS-TEST pushbutton. Depressing this pushbutton causes the DC to automatically light all displays and LED indicators in sequence and internally test different sections of the DC. Test result (pass or fail) is indicated in the RESULTS display of the DC at the completion of testing.

Disposition of Failed Unit

1.06 When, during installation or on a maintenance visit, a DC is determined to be defective, the following procedure should be used: The defective item should be tagged to indicate the nature of the trouble (if known) and shipped, protectively packaged, to a Western Electric Company distributing house for repair. Refer to the working station plan in Section 666-617-104 for more information.

2. TEST PROCEDURE

2.01 Momentarily depress CONSOLE STATUS-TEST pushbutton and observe the following:

(1) All LEDs and displays in the NETWORK FAULTS, EIA STATUS, FAULT TYPE, and ADDRESS groups light for approximately 5 seconds, then return to normal. RESULTS display indicates IN PROGRESS, SELECTION display indicates CONSOLE TEST, and the CONSOLE STATUS red LED lights.

(2) All LED segments in the TEST/COMMAND display group light for approximately 5 seconds, then return to normal.

Fig. 1—2100A-L1 Data Control Unit (Diagnostic Console)

(3) SELECTION and RESULTS displays continue to indicate CONSOLE TEST and IN PROGRESS while internal testing is completed.

(4) When all testing is complete the RESULTS display indicates PASS or FAIL. (If the error message enable switch, Fig. 2, is *closed* a FAIL indication will be followed by a 5-digit error code information message.

Note: The error code message is for information only. It may be noted on the tag that is affixed to a defective DC when the DC is returned for repair.

The messages are decoded as follows:

- FAIL 10000 = Random access memory (RAM) failure

- FAIL 01000 = Remote port hardware failure

- FAIL 00100 = Control channel port hardware failure

- FAIL 00010 = Read-only memory (ROM) failure

- FAIL 00001 = Battery failure or battery switch turned *off*.

(5) The –/+ LED lights. The –/+ switch may be operated to display the DC address as DC ADRS=x, where "x" is a number from 1 to 8.

(6) Operating the –/+ switch again causes the RESULTS display to indicate the current version of software used by the DC. The software version is displayed as SFTWR V___.

3. INSTALLATION OR MAINTENANCE TESTING

3.01 The sequence of events during installation or maintenance testing is shown in Fig. 3.

PANEL
STAMPED

CONSOLE TEST
ERROR MESSAGE
ENABLE SWITCH
(NOTE 3)

OPEN

CLOSED

1 2 3 4 5 6 7

SWITCH #1 IS SHOWN
CLOSED (ROCKER
DOWN ON SIDE ADJACENT
TO NUMBER).
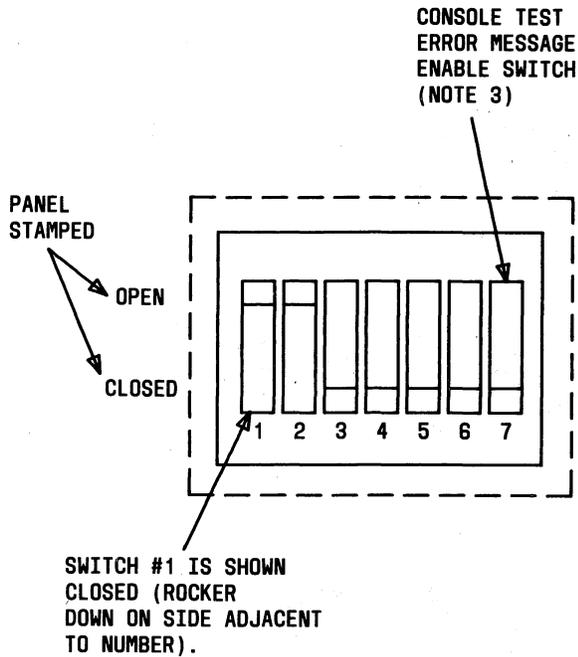
NOTES:
1. SWITCH IS SHOWN AS VIEWED THROUGH
   THE DOOR OPENING.
2. SWITCHES 1 THROUGH 3 ARE USED FOR
   SETTING DC ADDRESS.
3. THE ERROR MESSAGE IS ENABLED WITH
   THE SWITCH IN THE **CLOSED** POSITION.

Fig. 2—Console Test Error Message Enable Switch

4. REFERENCES

4.01 Additional information concerning the DC is contained in the following Bell System Practices:

SECTION	TITLE
592-101-100	2100A Data Control Unit(Diagnostic Console)—Description and Operation—DATAPHONE II Service
592-101-200	2100A Data Control Unit (Diagnostic Console)—Installation and Connections–DATAPHONE II Service
666-617-104	DATAPHONE II Service—Administrative Procedures
745-009-100	Protective Packaging and Handling of Returned Material

```
                                                    ┌─A─┐
                                                    └─┬─┘
                                                      ▼
 ┌───────────┐                               ┌──────────────────┐
 │   START   │                               │ WHEN TESTING     │
 └─────┬─────┘                               │ IS COMPLETE      │
       │                                     │ OBSERVE RESULTS  │
       ▼                                     │ DISPLAY          │
 ┌───────────────┐                           └────────┬─────────┘
 │ INSURE        │                                    │
 │ BATTERY SWITCH│                                    ▼
 │ IS OPERATED   │                            ╱╲
 │ TO ON         │                           ╱    ╲
 └──────┬────────┘                          ╱RESULTS ╲  PASS  ┌──────────┐
        │◄───────────────────┐            ╱ DISPLAY  ╲──────►│ RELEASE  │
        ▼                    │            ╲ INDICATES ╱       │ DC TO    │
 ┌───────────────┐           │             ╲        ╱        │ CUSTOMER │
 │ MOMENTARILY   │           │              ╲    ╱           └──────────┘
 │ DEPRESS CONSOLE│          │               ╲╱
 │ STATUS-TEST   │           │                │ FAIL
 │ PUSHBUTTON    │           │                ▼
 └──────┬────────┘           │            ╱╲
        │                    │           ╱    ╲
        ▼                    │          ╱ SECOND ╲  NO   ┌──────────┐
 ┌───────────────┐           │         ╱ FAILURE OF╲────►│ RETURN TO│
 │ OBSERVE LEDS  │           │         ╲ CONSOLE   ╱     │ START    │
 │ AND DISPLAYS  │           │          ╲  TEST   ╱      └──────────┘
 │ FOR PROPER    │           │           ╲      ╱
 │ OPERATION     │           │            ╲    ╱
 └──────┬────────┘           │ NO          ╲╱
        │                    │              │ YES
        ▼                    │              ▼
   ╱╲                   ╱╲              ┌──────────────────┐
  ╱    ╲               ╱    ╲           │ REPLACE DC       │
 ╱DISPLAYS╲  NO       ╱ SECOND ╲  YES   │ WITH NEW         │
 ╲ AND LEDS╱─────────►╲FAILURE OF╱─────►│ UNIT AND         │
  ╲  OK   ╱           ╲SAME LED OR╱     │ RETURN TO START  │
   ╲    ╱              ╲DISPLAY ╱       └──────────────────┘
    ╲╱                  ╲    ╱
     │ YES               ╲╱
     ▼
   ┌─A─┐
   └───┘
```
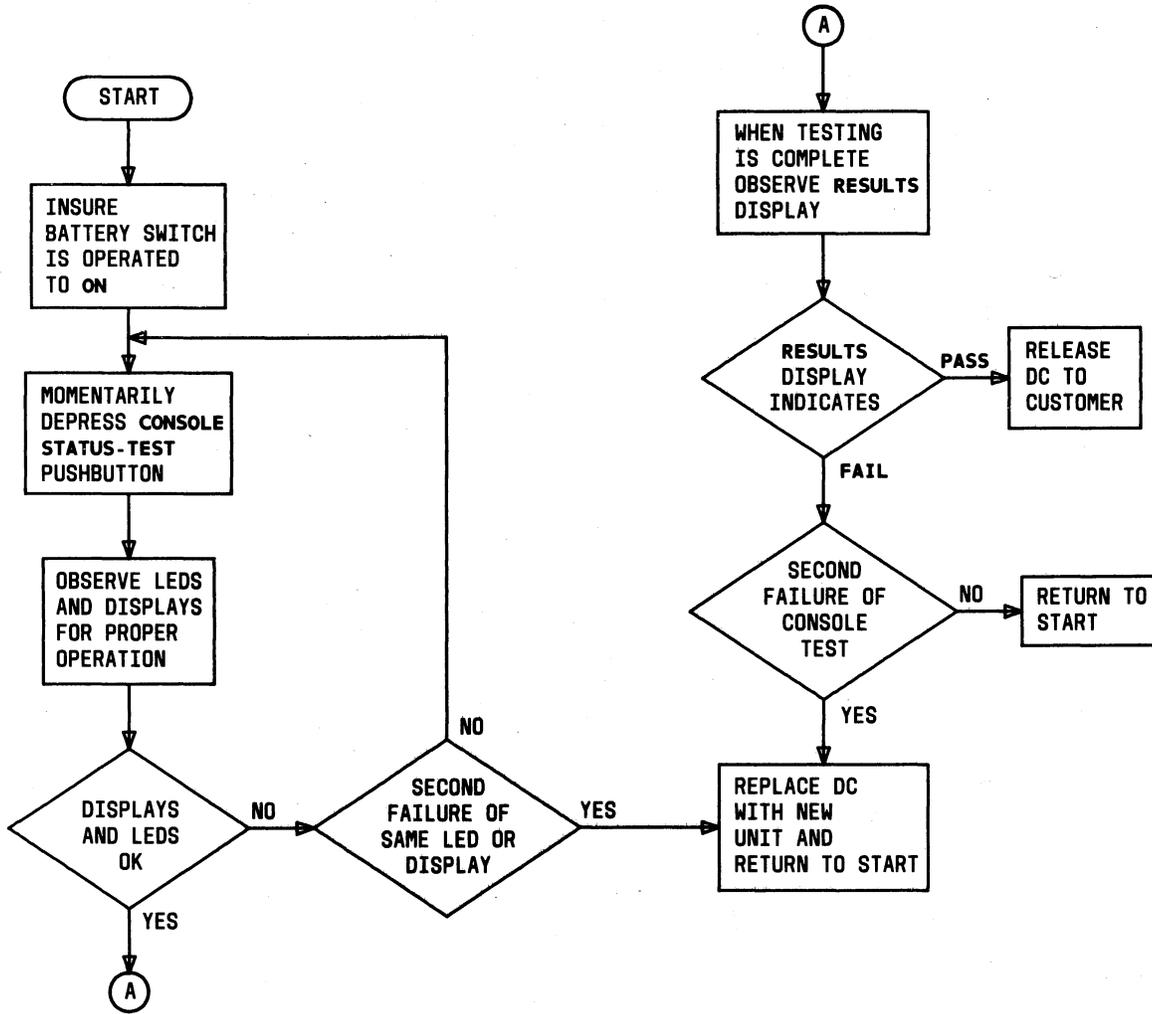
Fig. 3—Installation or Maintenance Testing Sequence