

## ANALOG MULTIPLEX TERMINAL EQUIPMENT

### LMX-2

### OVERALL SYSTEM

### J87288A DC-TO-DC CONVERTER

### OUTPUT VOLTAGE TEST

The dc-to-dc converters J87288A (SD-81797-01) are used in the fuse and converter panels located near the top of the LMX-2 terminal bay. Each converter is powered by the 24-volt office battery and provides regulated -25 volts to the LMX-2 circuits in the bay.

The purpose of this test is to ensure that the converter output voltage is at the required value.

This section is reissued to correct an error in Table A and add Caution 2. Change arrows identify the added information. *Equipment Test Lists are not affected.*

#### APPARATUS

Any voltmeter having 0.5 percent accuracy or better and meeting the sensitivity requirements in Table A

#### STEP

#### PROCEDURE

**Caution 1:** *A hazardous condition exists on the cases of exposed transistors. Do not allow a test pick to touch the transistor case and other exposed parts at the same time, or destructive short circuits may occur. Contact with the exposed transistor case or heat sink could result in a severe burn. Be careful.*

**Caution 2:** *¶If the converter has not been modified in accordance with SD-81797-01, Issue 5B, Option U, allow the converter to cool 15 minutes before attempting a restart. Option U assumes starting at high ambient temperatures and regulation at light loads.¶*

- 1 Prepare the voltmeter for a measurement of approximately -25 Vdc.
- 2 To gain access to the test jacks and ADJ VOLTS control, at the top of the LMX-2 bay, release the latch and swing the fuse panel out.

#### NOTICE

Not for use or disclosure outside the  
Bell System except under written agreement

## STEP

## PROCEDURE

- 3 Connect the voltmeter leads (observe polarity) to the OUTPUT + and - jacks on the front of the J87288A dc-to-dc converter (Fig. 1).

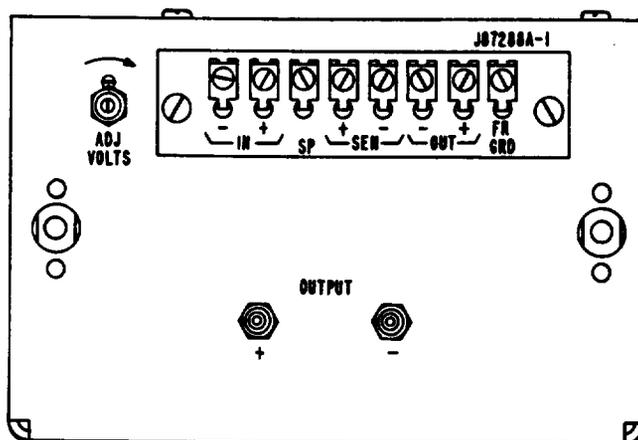


Fig. 1—DC-to-DC Converter (Front View)

- 4 Observe the meter indication.

**Requirement:** Table A voltmeter indication  $\pm 0.3$  volt

- 5 If the requirement of Step 4 is met, proceed to Step 7. If it is **not** met, adjust the ADJ VOLTS control to obtain the Table A voltmeter indication  $\pm 0.1$  volt.

**Caution:** When adjusting the ADJ VOLTS control, monitor the output voltage indication. Do not adjust the output voltage for a corrected meter indication higher than -25 volts.

**Note:** At 29 volts (actual converter output), automatic shutdown will occur; the voltage will drop to 5 volts, and the input fuse will open.

- 6 If the requirement of Step 5 **cannot** be met with the ADJ VOLTS control, the converter is considered to be faulty. Replace the faulty unit with a good unit and test good unit per Steps 1 through 5. (See Caution 2.)
- 7 Disconnect the voltmeter; restore fuse panel to place and close latch.

◆TABLE A◆

| VOLTMETER                  |                |                       | CONVERTER<br>OUTPUT †<br>(VDC) |
|----------------------------|----------------|-----------------------|--------------------------------|
| SENSITIVITY<br>(OHMS/VOLT) | SCALE<br>(VDC) | INDICATION *<br>(VDC) |                                |
| 1000                       | 30             | 21.4                  | 25.0                           |
|                            | 50             | 22.7                  | 25.0                           |
|                            | 60             | 23.0                  | 25.0                           |
|                            | 75             | 23.4                  | 25.0                           |
| 5000                       | 30             | 24.2                  | 25.0                           |
|                            | 50             | 24.5                  | 25.0                           |
|                            | 60             | 24.5                  | 25.0                           |
|                            | 75             | 24.7                  | 25.0                           |
| 20,000                     | 30             | 24.8                  | 25.0                           |
|                            | 50             | 24.9                  | 25.0                           |
|                            | 60             | 24.9                  | 25.0                           |
|                            | 75             | 24.9                  | 25.0                           |
| >100,000                   | All            | 24.9                  | 25.0                           |

\* Voltmeter connected to converter OUTPUT + and - test jacks (Fig. 1).

† At 29 volts automatic shutdown will occur; the voltage will drop to 5 volts and the input fuse will open.