# OVER-THE-HORIZON RADIO SYSTEMS
# ITTL 12A-1 OVER-THE-HORIZON RADIO SYSTEM
# NUS 3298 RECEIVER
# PRIMARY VOLTAGE MEASUREMENTS
# TEST AND MAINTENANCE

This section contains procedures for making primary voltage measurements. The voltage measurements can be made while the equipment is in service if care is taken to avoid test connections which could result in circuit breaker operation or blown fuses.

Any action taken to clear troubles disclosed by voltage measurement requires that the system receivers be operated in dual diversity with the receiver under test removed from service.

**CHART** **PAGE**



**APPARATUS:**

1—Voltmeter, DC, KS-14510 Volt-Ohm-Milliammeter, or equivalent such as Simpson Model 260

## CHART 1

## PRIMARY VOLTAGE MEASUREMENTS

Suggested means of correcting abnormal measurements are given in the chart. Before taking any corrective action verify any measurement which fails to meet requirements by repeating the measurement using a precision meter.

| STEP | PROCEDURE |
|---|---|
| 1 | Lower the receiver alarm and power distribution panel. |

**CHART 1 (Cont)**

| STEP | PROCEDURE |
|---|---|
| 2 | Make voltage measurements at the terminals listed in Table A using the KS-14510 volt-ohm-milliammeter. |

**CHART 2**

**POWER SUPPLY MAINTENANCE**

The 6-Vdc supply rectifiers CR1 and CR2 and the filter capacitors C1 and C2 should be replaced when the supply minimum output voltage requirement is not met. In no instance should only part of a rectifier stack be replaced. Section 169-215-301 describes rectifier maintenance. The testing procedure covering the KS-7160 capacitor in Section 032-110-701 is applicable to the power supply capacitors.

TABLE A

PRIMARY VOLTAGE MEASUREMENTS

| TERMINAL BOARD | TERMINALS | | REQUIREMENTS VOLTS | PROCEDURE IF REQUIREMENT NOT MET |
|---|---|---|---|---|
| | – | + | | |
| TB4 | 6 | 1 | 10.6 to 11.0 dc | Check adjustment of −11 volt supply as described in Section 410-400-503. Check circuit breaker CB1. |
| TB4 | 1 | 7 | 124 to 136 dc | Check 130-volt power supply. Check fuse F2 and receiver wiring. |
| TB4 | 1 | 8 | 240 to 256 dc | Check 250-volt power supply. Check fuse F1 and receiver wiring. |
| TB4 | 9 | 10 | 6.0 to 6.6 dc | Check receiver power supply as described in Chart 2. |
| TB5 | 6 | 1 | 10.6 to 11.0 dc | Check adjustment of −11 volt supply as described in Section 410-400-503. Check circuit breaker CB2. |
| TB5 | 1 | 7 | 124 to 136 dc | Check 130-volt power supply. Check fuse F5 and receiver wiring. |
| TB5 | 1 | 8 | 240 to 256 dc | Check 250-volt power supply. Check fuse F4 and receiver wiring. |
| TB5 | 9 | 10 | 6.0 to 6.6 dc | Check receiver power supply as described in Chart 2. |
| TB6 | 1 | 2 | 115 to 120 ac | Adjust the ac line voltage regulator associated with the receiver under test. |