TITLE
TEST INSTRUCTIONS FOR 125V/24V INTERFACE

FIRST MADE FOR EHC MARK IIA EHC TEST

REVISIONS

26160

61-3

5 APR 1984 T000

? are these tests necessary PJB 4/9/84 presented to JAP

I. CIRCUIT DESCRIPTION

This circuit board converts 125 VDC signals to 24V signals. Relay outputs (normally open and normally closed) are used on the 24V side of the interface circuit. The circuit board is identified as:

Name:	125/24V Interface
Ident. No.:	1PC2-...., 1TM2-....
Assembly No.:	148D1277
Schematic No.:	148D2452

II. CIRCUIT POWER REQUIREMENTS

+24 ± 1.0 VDC at 0.1 Amperes Max.

23 24 25

? The circuit board is to be tested at the minimum, nominal and maximum voltage levels listed above. This ensures that all components meet final test requirements. In reference to #V.A.3.

III. INPUT CIRCUIT REQUIREMENTS

AU1-1, 3, 5, 7, 9, 11	+125 VDC
AU1-16	+125 VDC Common

The listed voltages are associated with the input that must be applied to activate the corresponding input pin.

IV. OUTPUT CIRCUIT REQUIREMENTS

AU1-19 Thru AU1-36	+24 VDC

The listed voltage is associated with the output that is present when the corresponding output pin is active.

273-12
273-138
273-221
273-227

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V. CIRCUIT OPERATION

A. Power Supply

1. Apply +24 VDC to AU1-38.
2. Apply +24 VDC Common to AU1-40.
3. Measure +5 ± 0.25 VDC between TP3 and TP2. (reference II)
4. Verify LED DS7 (GN) is lighted.

B. Relay Connections

1. Connect +24 VDC to AU1-19, 22, 25, 28, 31, 34.
2. Measure +24 VDC at AU1-21, 24, 27, 30, 33, 36.

NOTE: A 2KΩ, .5W resistor is to be connected to the normally open and normally closed contacts of all output relays. This simulates the in-service load on the devices. Lights are acceptable.

C. Relay Operation

Relay Circuit: These relay circuits are specifically designed to pickup and dropout at one specified voltage in order to reject low level noise.

During test, each relay must be checked for (3) major operational points.

1. The relay must pickup between an input voltage range of 60 ---> 100 VDC.
2. Once energized, each relay must de-energize within .1V of its' pickup voltage. This small deadband will verify that the breakdown knee of the zener occurs in an avalanche fashion.
3. Each relay circuit must also be individually checked such that each can operate without falsely energizing any of the others, i.e. via excessive relay noise, high voltage arcing or solder bridges.
4. Lower the ± Power Supply to 20 VDC and recheck items 1 --->3.
5. Raise the circuit input voltage to ≈± 175 VDC and energize all circuits for a period of 3 minutes (This simulates a high battery charging voltage). Remove voltage and allow board to cool. Re-test items 1 --->3.

Jim will Review? → Jim required → per T. Connolly 4-9-84

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REVISIONS

PREPARED BY: T P Connolly DATE: 2/6/84

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