# 3456A-14A
# SERVICE NOTE

SUPERSEDES
3456A-14

-hp- MODEL 3456A DIGITAL VOLTMETER

Serial Numbers Prior to: 2201A06299

ENHANCING ANALOG CIRCUITRY

Instruments in the above range of serial numbers may be subject to a wide variety of operational characteristics caused by intermittent ground paths in the Inguard analog circuitry. The enhancement described below should be performed on each of these instruments the first time the symptoms are observed, or on customer request. The intermittent symptoms can manifest themselves through one or more of the following operational descriptions:

1. Unit will fail any one of the Self-Tests, #3 to #12.

2. Unit will not operate in any mode of operation, but will respond to keyboard operations.

3. Unit display will be in constant over-load.

These symptoms will almost always be intermittent and are likely to disappear temporarily upon any type of service effort, such as re-seating P.C. boards, cleaning contacts, mechanical vibrations, replacing components, etc. the only positive cure is as described below.

## MODIFICATION PROCEDURE

Refer to the 3456A Operating and Service Manual (-hp- P/N 03456-90004) for board locations, disassembly procedures and safety precautions.

CAUTION

*The assemblies and components involved in the following steps are all static sensitive, and should only be handled at a static free work area, and in accordance with approved procedures.*

W/PM,OF/WO

3/88-09/AC

Printed in U.S.A.

3456A-14A

HEWLETT PACKARD

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1. Remove the Inguard Controller (A30), Analog (A20), AC Converter (A40), and Inguard Power Supply (A10) assemblies from the instrument.

2. Place the instrument upside down.

3. Observe the inter-board post connector pins; J15-1, J15-8, J30-1, J21-10, J17-1, and J18-10.

4. Remove only the rivets associated with the connector pins noted above, and allow the solder lugs to remain.

5. Use the following parts in the next step:

| Description | -hp- Part Number |
|---|---|
| 2-56 Panhead Pozidrive Screw .25LG | 0520-0128 |
| 2-56 Nut | 0610-0001 |
| 2-56 Lock Washer | 2190-0014 |

6. Use the parts in step 5 to replace the rivets and firmly tighten the screws.

7. Return the boards to their original positions in the instrument, reconnect all cables, and reassemble.

To verify proper operation, perform the instrument self-tests by pressing the "SELF TEST" button. the instrument should respond by alternately displaying all LEDs and annunciators, blanking out, and then repeating the cycle again. Press the "SELF TEST" button to resume normal operation.