

3421A-16

S E R V I C E N O T E

SUPERSEDES

HP 3421A Data Acquisition and Control Unit

Service Manual Error

Situation:

The HP 3421A may be used to measure temperature using the internal voltmeter along with either options 020, 021 or 022. These options represent different configurations of the HP 44462A module. The temperature calibration procedure needs to be performed for an HP 44462A when it is first added to the system, or the module changes slots. Temperature calibration procedures are provided in the HP 3421A service manual and require the use of a special Calibrator Board (HP Part Number 03421-66505). The temperature calibration procedures include a formula that is both incorrect and unclear.

Continued

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ADMINISTRATIVE INFORMATION

SERVICE NOTE CLASSIFICATION:

INFORMATION ONLY

AUTHOR: GWP	ENTITY: 0900	ADDITIONAL INFORMATION:
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Solution/Action:

The formula in question can be found on:

Page 2-4-15 of Installation and Service Manual 03421-90012, or

Page 4-42 of Service Manual 03421-90008 Rev. A.

The formula in line 60 of the calibration code reads:

$$60 \ D = 1 / (A + B * \text{LOG}(R) + C * \text{LOG}(R) 3) - 273.16$$

This formula should read:

$$60 \ D = 1 / (A + B * \text{LOG}(R) + C * \text{LOG}(R) ^ 3) - 273.16.$$

The symbol representing exponentiation was omitted.

Note:

The log function used here is the NATURAL LOG, not the common logarithm to the base 10. The controller specified by the service manual is the HP 85, which recognizes the LOG command as the natural log function. If using another controller to calibrate the 44462A module, make sure to use the appropriate math command for the natural log function.