

## S E R V I C E N O T E

SUPERSEDES: 5342A-61  
dated Aug 1996

## 5342A Microwave Frequency Counter

**Serial Numbers:** 0000A00000 / 9999A99999

### Revised Option 002 Adjustment Procedures

**Situation:**

Over the years, the Hybrid Sampler (P/N 05342-80005) for option 002 Amplitude Measurements has drifted such that if you perform the service manual adjustments, the readings are 1.5 to 2.0 dB low on Input 1. The specification is  $\pm 1.5$  dB accuracy. (The Input 2 readings are within specification.)

**Solution:**

In order to bring the readings within specification, changes to the adjustment procedures should be made along with the addition of a correction adjustment.

*Continued*

DATE: November 2000

#### ADMINISTRATIVE INFORMATION

SERVICE NOTE CLASSIFICATION:

### INFORMATION ONLY

AUTHOR:

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ENTITY:

0200

ADDITIONAL INFORMATION:



Referring to the latest 5342A Service Manual, P/N 05342-90060, make the following paragraph changes:

5-35c. Change " $(\pm 0.0005)V$ " to " $(\pm 0.005)V$ ".

5-36a. Substitute the 3465A and 3400A RMS Voltmeter with the 3458A Multimeter, or equivalent, in the diagram.

5-36b. This step should read, "Set the 5342A to 50 Ohm, 10 Hz-500 MHz range. Press AMPL, BLUE Key, 1 MHz, SET, SET, 6.

5-36d. Change "3400A" to "3458A". Change " $2.24 (\pm 0.005)V_{rms}$ " to " $2.24 (\pm 0.01)V_{ac}$ ".

5-36e. Change "3465A" to "3458A".

5-37b. Change " $8.9 (\pm 0.1) mV_{rms}$ " to " $8.9 \pm 0.1 mV_{ac}$  on the 3458A."

5-38. Skip the A27 Adjustment for now. Continue to the A11,25 Adjustments outlined in paragraphs 8-39 and 8-40.

After completing the A16, A11, and A25 Adjustments, perform the following "Option 002 - High Frequency Amplitude Check" and "Correction Adjustment".

#### **Option 002 - High Frequency Amplitude Check**

Keep the same equipment setup as in paragraph 5-40.

**Set:** Signal Generator to 500 MHz.

**Adjust:** Signal Generator for output level reading of +20.0 dBm and -22.0 dBm on 436A display.

**Test Limit:** 5342A will probably read -1.0 to -2.0 dB low compared to 436A reading at both levels. If it does, then perform the CORRECTION ADJUSTMENT below.

#### **Correction Adjustment**

Adjust A16R29 so that 5342A display matches 436A display as close as possible at both levels. They should match to within  $\pm 1.5$  dB. If you run out of turns on A16R29, then change the value of star-valued resistor A16R30 to 1 kOhm (P/N 0757-0280) or 1.1 kOhm (P/N 0757-0426). Re-adjust A16R29 until the 5342A display matches the 436A display as close as possible.

Once this is completed successfully, perform the A27 Adjustments in paragraph 5-38 as documented in the manual. The Performance Tests for Option 002 should be performed to determine that Option 002 is within specification across the entire frequency range.