Errata

Title & Document Type: **11036A AC Probe Operating Note**

Manual Part Number: **11036-90001**

Revision Date: **March 1967**

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OPERATING NOTE

MODEL 11036A AC PROBE

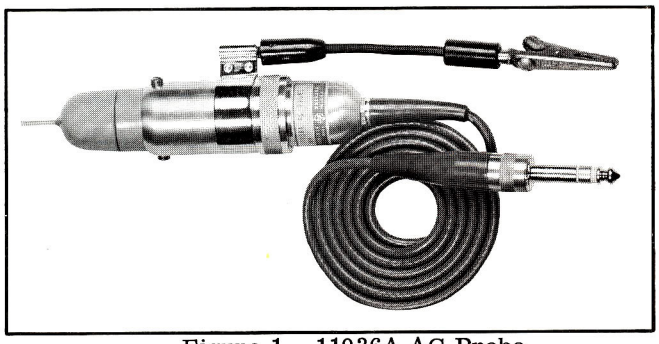

Figure 1. 11036A AC Probe

Table 1. Specifications

11036A AC Probe used with -hp- Model 410C Voltmeter:
Voltage Range: 0.5 V full scale to 300 V.
Accuracy: ±3% of full scale, 100 Hz to 100 MHz. ±10% of full scale, 20 Hz to 100 Hz and 100 MHz to 700 MHz.
Frequency Range: 20 Hz to 700 MHz, usable indications obtainable to 3 GHz.
Input Impedance: 10 megohms shunted by 1.5 pF at low frequencies. At high frequencies impedance drops off due to dielectric loss.

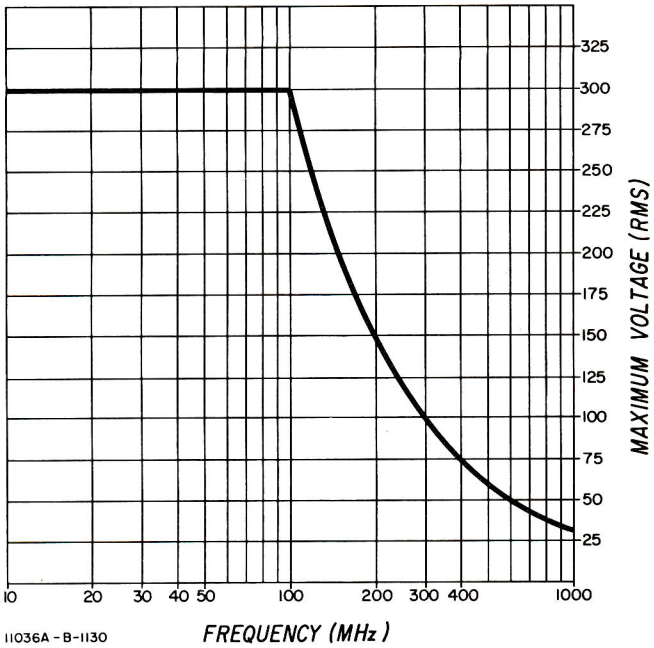

Figure 2. Maximum AC Voltage Chart

1. INTRODUCTION.

2. The 11036A AC Probe is used with the Model 410C for ac voltage measurements from 20 Hz to 700 MHz. The voltmeter, with the probe, has an accuracy of ±3% of full scale from 100 Hz to 100 MHz and ±10% of full scale from 20 Hz to 100 Hz and 100 MHz to 700 MHz. Useable meter indications can be obtained up to 3 GHz. The maximum input voltage for the probe is 30 to 300 volts rms, depending on the frequency of the signal. (Refer to Figure 2). Input impedance at low frequencies is greater than 10 megohms shunted by 1.5 picofarads. At high frequencies, input impedance drops due to dielectric losses. The probe is approximately 1 inch in diameter and 4-1/2 inches in length and is equipped with a ground clip. Accessories and adaptors are available for use with the probe which extend the ac voltage measuring range of the Model 410C. They are: the -hp- 11039A Capacitive Divider and 11018A Adaptor.

3. The Model 11036A is shown in Figure 1 and the specifications are listed in Table 1.

4. OPERATION.

5. Connect the Model 11036A AC Probe to the Model 410C AC Probe input and refer to the maintenance section of the 410C manual for ac voltage range adjustment. Once calibration of the AC mode of operation is complete, refer to the operation section of the 410C manual for AC measurement instructions.

6. DESCRIPTION.

7. Refer to Figure 3 for a schematic diagram of the probe. The Model 11036A AC Probe includes a diode clamper which applies the peak value of the input voltage to the Model 410C Voltmeter. Capacitor C1 is charged to the peak value of the input signal through diode V1, during the positive cycle of the input. Resistor R1 and capacitor C2 form a low pass filter network which shorts to ground the negative cycles of all signals above 20 Hz.

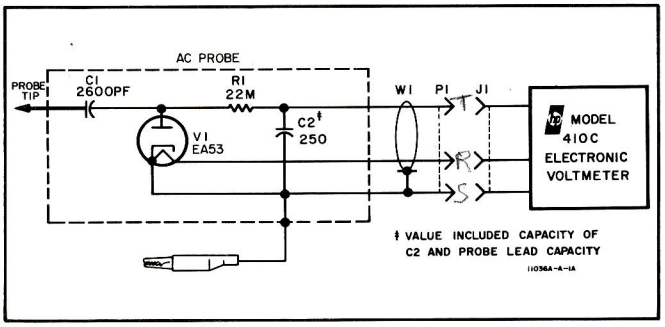

Figure 3. 11036A AC Probe Schematic Diagram

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11036-90001

Ring = +6V

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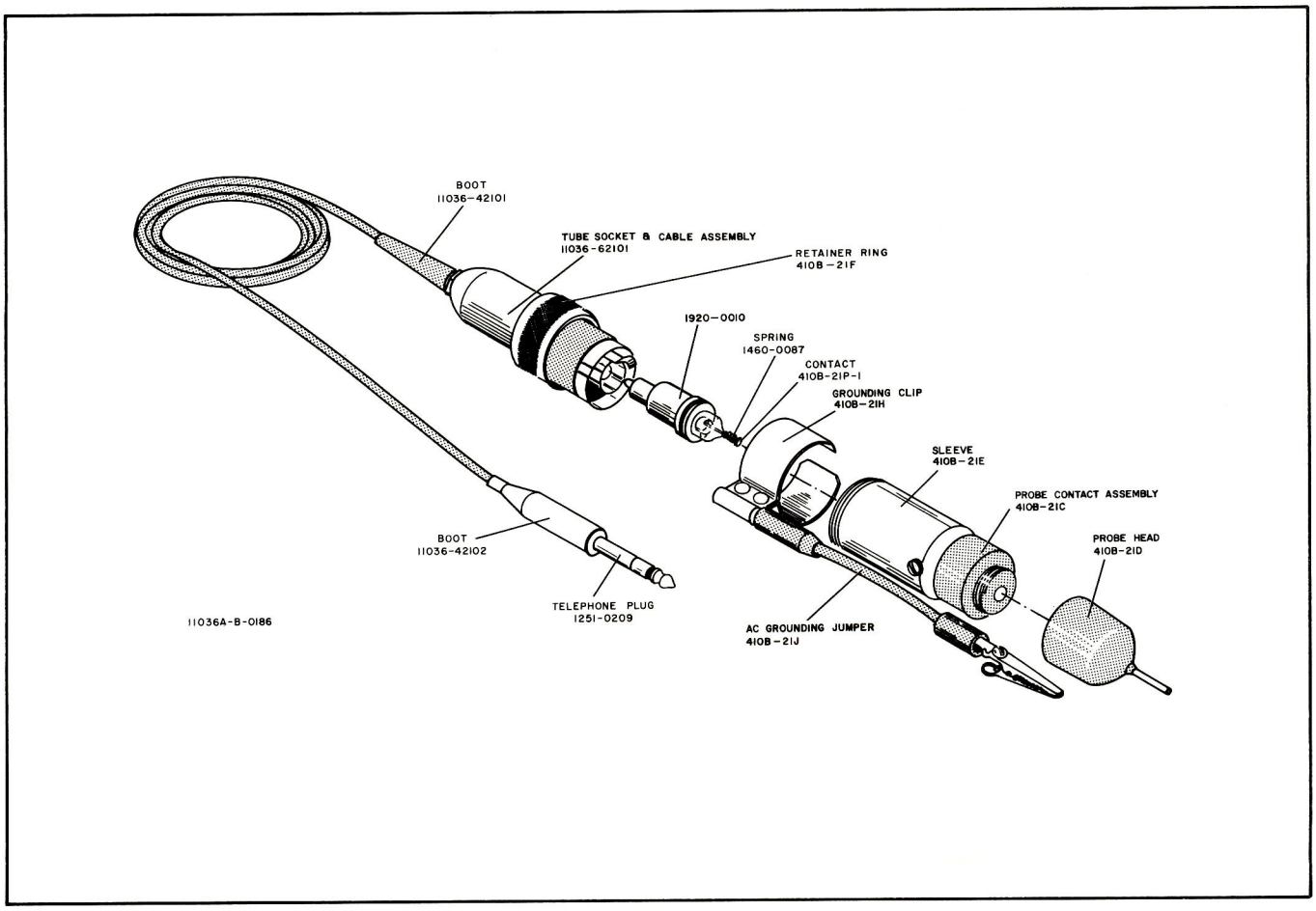

Figure 4. Exploded View

8. MAINTENANCE.

9. An exploded view of the 11036A AC Probe is shown in Figure 4. All assemblies are replaceable. The replacement of an assembly will not require the recalibration of the Model 410C Voltmeter. However, when replacing the diode V1, recalibration of the Model 410C may be necessary. The calibration procedures used for the ac circuit portion of the Model 410C are given in the maintenance section of the Model 410C manual.

10. REPLACEABLE PARTS.

11. INTRODUCTION.

12. This section contains information for ordering replacement parts. Table 2 lists parts in alphanumerical order of their reference designators and indicates the description and -hp- part number of each part, together with any applicable notes. Miscellaneous parts are listed at the end of Table 2.

13. ORDERING INFORMATION.

14. To obtain replacement parts, address order or inquiry to your local Hewlett-Packard Field Office. Identify parts by their Hewlett-Packard stock numbers.

15. NON-LISTED PARTS.

16. To obtain a part that is not listed, include:

a. Instrument model number.
b. Instrument serial number.
c. Description of the part.
d. Function and location of the part.

Table 2. Reference Designation Index for 11036A AC Probe

Circuit Reference	-hp- Part No.	Description	TQ	
C1		C: Not separately replaceable, part of probe head (410B-21D)	1	
C2		C: Not separately replaceable, part of probe contact ass'y (410B-21C)	1	
R1		R: Not separately replaceable, part of probe contact ass'y (410-21C)	1	
V1	1920-0010	Electron Tube: EA53	1	
		MISCELLANEOUS		
	410B-21C-3	Probe Contact Assembly		
	410B-21D	Probe Head		
	410B-21E	Sleeve		
	410B-21F	Retainer Ring		
	410B-21H	Grounding Clip		
	410B-21J	AC Grounding Jumper		
	410B-21P-1	Contact		
	1251-0209	Telephone Plug		
	1460-0087	Spring		
	11036-42101	Boot		
	11036-42102	Boot		
	11036A-62101	Tube Socket and Cable Assembly		

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CERTIFICATION

The Hewlett-Packard Company certifies that this instrument was thoroughly tested and inspected and found to meet its published specifications when it was shipped from the factory. The Hewlett-Packard Company further certifies that its calibration measurements are traceable to the U.S. National Bureau of Standards to the extent allowed by the Bureau's calibration facility.

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