

5328A-43

S E R V I C E N O T E

SUPERSEDES: NONE

HP 5328A Universal Counter

Serial numbers: 0000A00000 / 9999Z99999

Duplicate Note: 5328B-05

Assembly name: A4 Function Board (05328-60005)

Modification to reduce TBOOut error.

To be performed by: HP-Qualified Personnel or Customer.

Parts Required: 0699-0072 resistor and 0160-4383 capacitor.

Situation:

This note applies to all 5328A that have Option 040 or 041. Some units have a hyper-sensitivity to the 100 MHz generated in the A14 multiplier assembly. For these units, the Time Base OUT signal at the BNC connector on the rear panel may be as much as 25% too high in frequency.

Continued

DATE: January 1996

ADMINISTRATIVE INFORMATION

SERVICE NOTE CLASSIFICATION:			
MODIFICATION RECOMMENDED			
ACTION CATEGORY:	<input type="checkbox"/> IMMEDIATELY <input checked="" type="checkbox"/> ON SPECIFIED FAILURE <input type="checkbox"/> AGREEABLE TIME	STANDARDS:	LABOR 1.0 Hours
LOCATION CATEGORY:	<input type="checkbox"/> CUSTOMER INSTALLABLE <input type="checkbox"/> ON-SITE <input checked="" type="checkbox"/> HP LOCATION	SERVICE INVENTORY:	<input type="checkbox"/> RETURN <input type="checkbox"/> SCRAP <input type="checkbox"/> SEE TEXT
		USED PARTS:	<input type="checkbox"/> RETURN <input type="checkbox"/> SCRAP <input type="checkbox"/> SEE TEXT
AVAILABILITY:	PRODUCT'S SUPPORT LIFE	HP RESPONSIBLE UNTIL: January 1998	
AUTHOR: CF	ENTITY: 0200	ADDITIONAL INFORMATION: EOSL 5328A 07/10/1990	

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Is your unit affected?

1. Set function switch to Start A. Set resolution switch to n=10. Put front panel slide switch in CHK position.
2. Measure T.B. OUTput on rear panel with another counter.
3. This frequency should be $1000 \text{ kHz} \pm$ the offset of the oscillator used. (The standard time-base could be off several hundred Hertz but Option 010 oven oscillator should be within 10 Hz.)
4. If the frequency is within limits, there is no problem.

Solution if it is high:

1. Add a capacitor and resistor in parallel from pin 2 of A4U2 to ground (Rev D boards). Revision C boards only need the resistor. We have not been able to test any Revision A or B boards.
2. The resistor is 6.81 Megohms and can be 1/8-watt or larger. A 1/4-watt part number is 0699-0072.
3. The capacitor that works best for most units is 6.8 picoFarads, 50 volts or higher. A 200-volt unit is part number 0160-4383.
4. If this capacitor lowers the T.B.OUTput to less than 1/10 of the actual timebase frequency, reduce the capacitance. A 3.3 pF unit is 0160-4382. If the frequency is still a little high, increase the capacitance by adding 1.5 pF (0160-4381) or 3.3 pF across the 6.8 pF part.
5. If the counter is equipped with the optional DVM (Option 020 or 021), the DVM will need to be recalibrated.

