

Subject

ANALOG SCOPE TROUBLESHOOTING

SYMPTOM	CORRECTIVE ACTION
1. No trace	<p>A. Check front panel brightness control setting</p> <p>B. Check all connectors for proper engagement</p> <p>C. Measure voltage at E521 (CRT cathode)</p> <p><u>If +33 volts is present (Blanking ON)</u></p> <ol style="list-style-type: none">1. Ground E521 with a short jumper. <p><u>If a sweep appears, remove ground lead</u></p> <ol style="list-style-type: none">a. Replace Logic Board 7001-105b. Replace CRT Control Board 7001-107 <p><u>If no sweep appears,</u></p> <ol style="list-style-type: none">a. Replace Horizontal Deflection Board 7009-1202b. Replace Logic Board 7001-105c. Replace Trigger Board 7009-961 <p>D. Measure voltage at the following points</p> <ol style="list-style-type: none">1. +10.5 KV at the CRT anode2. +15V DC at pins E523 through E526 on the CRT control board3. Check for proper B+ and ground readings on all p.c. boards



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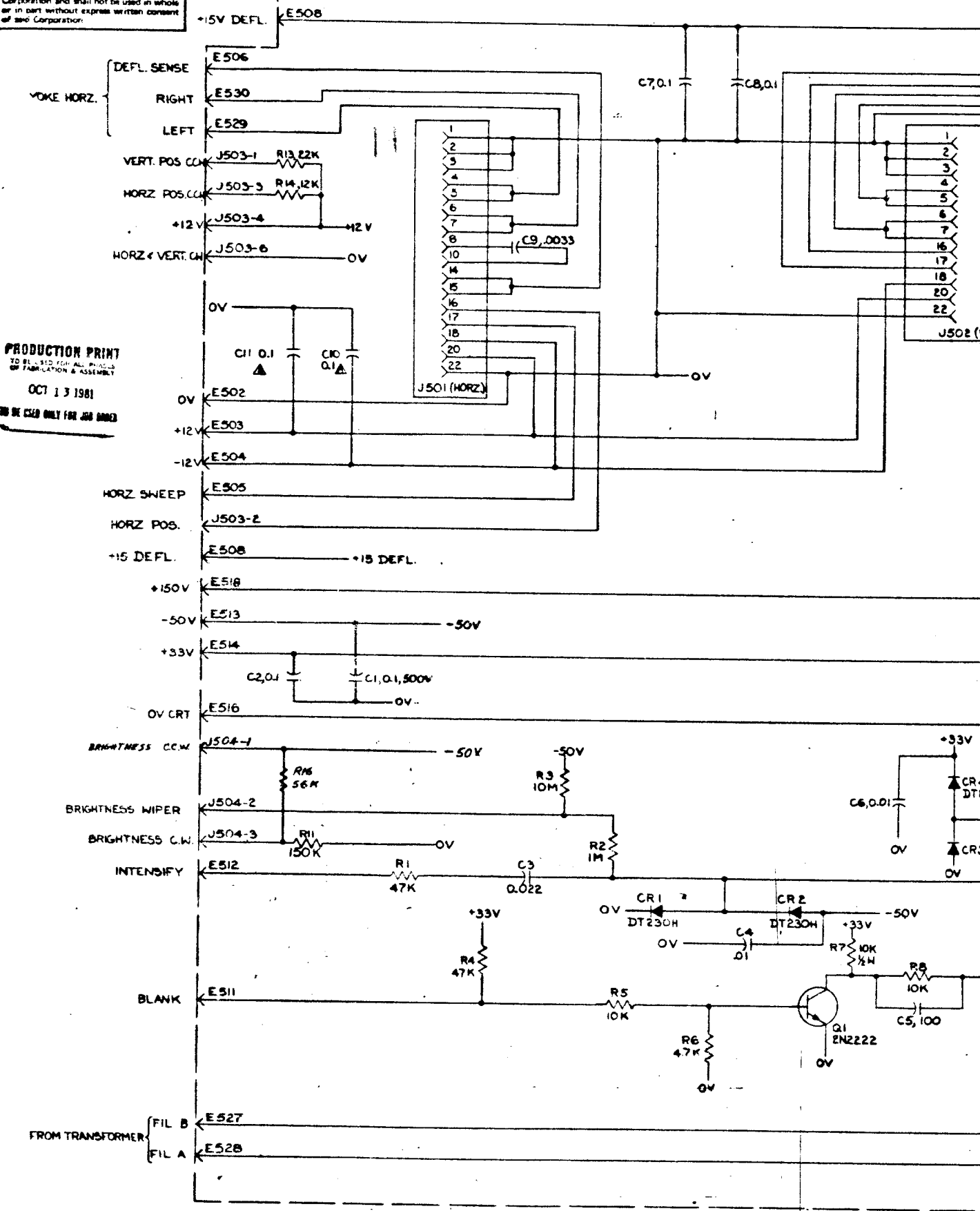
SYMPTOM	CORRECTIVE ACTION
3. No Vertical Deflection (trace sets at mid-screen)	A. Check if there is deflection in either pri (+) pri (-), secondary or alternator positions. <u>If No deflection is observed in any position</u> 1. Change the Vertical Deflection Amplifier 7009-1202 2. Check for +15 volts at E523 and E524 on the CRT Control Board. 3. Change Logic Board 7001-105 4. Check for proper B+ and grounds on the Vertical Deflection and Logic Boards.
4. Horizontal trace sweeps only half of screen	A. Check position of the pattern length control B. Recalibrate sweep length - see calibration section C. Change Horizontal Sweep Board 7009-1202 D. Change Logic Board 7001-105
5. Bright spot or blank spot in trace	A. Adjust R24 on the appropriate Deflection Board
6. Secondary peak amplitude is too high or too low	A. Change pattern pick-up assembly 1747-0101 B. Recalibrate secondary gain as detailed in the calibration section C. Change Logic Board 7001-105 D. Change Trigger Board 7009-961 E. Change Vertical Deflection Board 7009-1202

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SYMPTOM	CORRECTIVE ACTION
12. No alternator mode	A. Change pattern pick-up assembly 1747-101 B. Change Logic Board 7001-105 C. Check for proper control signals from front panel
13. Scope mistriggers	A. Check that Ignition Selector is set correctly B. Change trigger assembly 507-006 C. Change trigger board 7009-961 D. Change Logic Board 7001-105

FIG. 5
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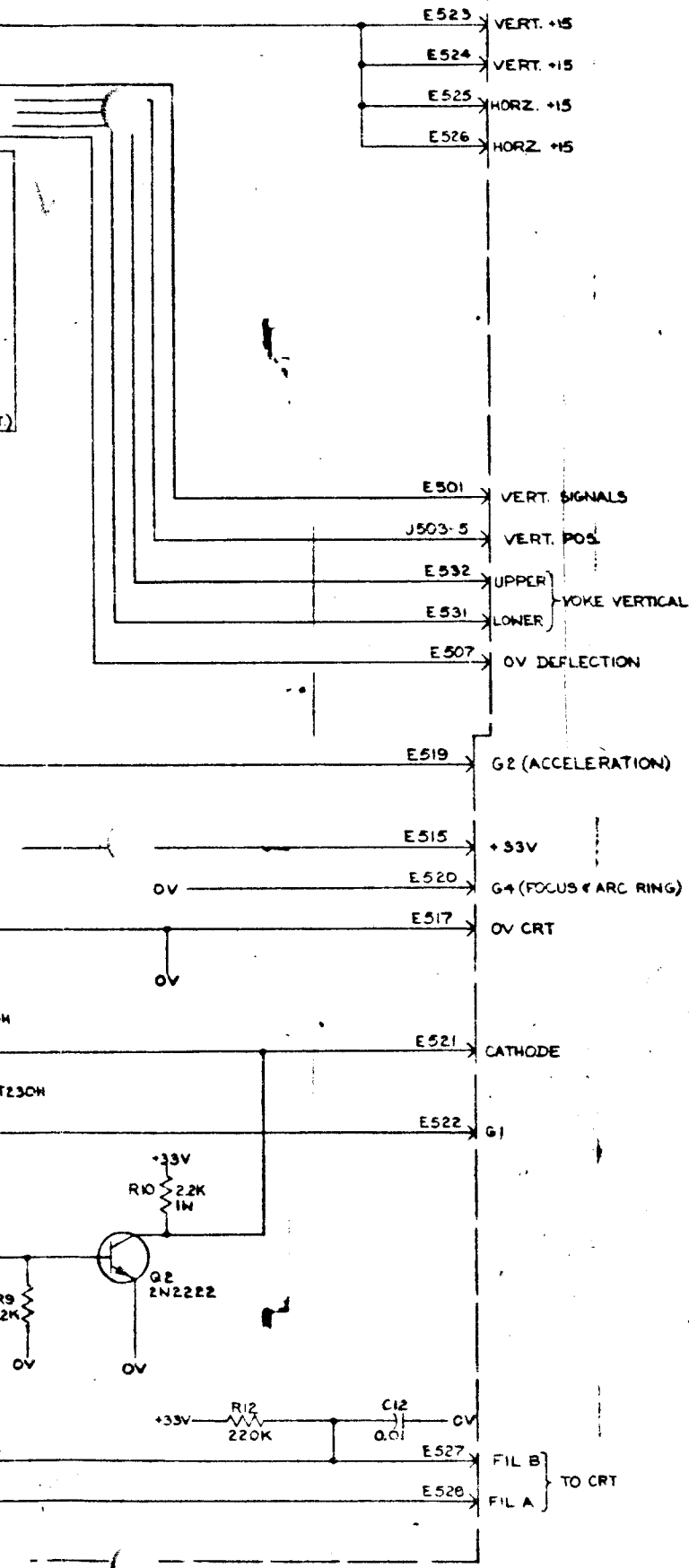
LIST OF MATERIAL

QTY REQD	PART NO.	DESCRIPTION	ITEM NO.

NOTES:
 1. EXCEPT AS SPECIFIED:
 A. ALL RESISTORS ARE IN OHMS, 1/4 WATT, 5%.
 B. ALL CAPACITORS VALUES ARE SHOWN IN MICROFARADS.

LAST NO'S USED:
 R16, C12, CR4, Q2

REF TO DWG. NO. 7001-0107 FOR P.C.B. ASSY.



SYM	DATE	REVISIONS	ECH	APVL
C	8-20-78	ADDED R16 56K, DELETED JUMPER AND R15 DESIGNATION	B.31	APL
B	8-20-78	CHANGED C10 TO 0.01, C11 TO 0.01	B.31	APL
A	8-14-78	REVISED 225-42	B.31	APL

(SCALE) (SCALE) (SCALE)
 TOLERANCES (EXCEPT AS NOTED)
 ANGLES: 1/16" 30°-60°
 FRACTIONS: 1/16" 1/32"

Sun ELECTRIC CORPORATION
 CHICAGO, ILLINOIS 60631 U.S.A.

TITLE: SCHEMATIC CRT CONTROL
 MODEL: EMT-1010
 MAT. AND/OR FINISH:
 DWG BY: JSS / 8-16-78 END APVL: J. J. J. / 8-16-78
 CHK BY: JSS / 8-16-78 ENG APVL: J. J. J. / 8-16-78
 SHEET 1 OF 1
 DRAWING NO. 7092-1347
 SCALE: