

REV NO.	TITLE	CONT ON SHEET	SH NO.
P3K-AL-0327-A01	TEST INSTRUCTIONS FOR AUXILIARY SPEED REFERENCES	11	10
CONT ON SHEET 11	FIRST MADE FOR EHC MARK II (AUXILIARY SPEED CONTROL UNIT)		
Assm. 115D2219 Sch. 115D2216 Patchboard No. _____ PCR _____		REVISIONS	
<u>TEST PROCEDURE</u>			
A. Equipment needed:			
a. DVM SD7005A			
b. Multi ch. voltage source			
c. X-Y plotter Honeywell 530T			
NOTE: All settings and measurements are <u>+ 1</u> MVDC unless specified otherwise.			
B. Patched program is as shown in Fig. A.			
C. <u>GENERAL PROCEDURE</u>			
Before plugging board in:			
1. Adj. VR4 CCW. ALL SWITCHES DOWN.			
2. Set VS1 and VS2 to 0.0 VDC.			
Plug in Board:			
3. Check test supply voltages.			
4. Check crt. bd. supply voltages at TP1 and TP2 for +15.7 and -15.7 VDC (Tol <u>+ 1.0</u> VDC).			
5. Grd. TP5L.			
6. Adj. offset (VR 50) of IC 1 for 0 VDC at TP4.			
7. Adj. offset (VR51) of IC 2 for 0 VDC at TP5.			
8. Adj. VR1 CW.			
9. Check TP3 volts for -16.00 to -17.60 VDC.			
10. Adj. VR1 at TP3 for -11.500 VDC.			
11. S3 up.			
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<p>30. Check range of VR4 at BP5.</p> <p><i>.055 CW</i> <i>.056/.058</i> <i>.046/.048</i> <i>.054/.058</i> <i>+ 51.6</i></p> <p>31. Adj. VR4 at BP5 for <i>+62.7</i> MVDC. <i>at TP50</i></p> <p>32. Adj. VS2 for -10.000 VDC (TP51 is still grounded). <i>✓ R6 = 750K; R6 = 1meg Voltage = 1.000VDC</i></p> <p>33. Check volts at TP5 for <i>+1.330</i> to <i>1.336</i> VDC (Be Patient - time <i>±2%</i> constant involved!!) <i>1.307 1.360</i></p> <p>34. Remove Grd. from TP51. - <i>GRD TP51</i> <i>GRD TP50 (turn off VS2)</i></p> <p>35. Check range of VR5 at TP51.</p> <p><i>37</i> <i>38</i> <i>6.378 ± .0VDC</i> <i>5.967/6.789</i> <i>5.470 ± .37VDC</i> <i>+5.097/5.842</i></p> <p><i>39</i> 36. Adj. VR5 <i>for +6.000VDC at TP51.</i></p> <p>37. Check TP5 volts for -11.250 VDC. <i>-11.17V</i></p> <p>38. Adj. VR5 CCW. <i>Check TP5 for -11.785 to -12.267</i></p> <p>39. Check TP5 volts for -9.731 VDC. <i>Remove grds from TP50 (turn on VS2 to -10VDC)</i></p> <p>40. Jumper TP50 to TP51.</p> <p>41. Check + saturation level (> +14.00 VDC) of IC2 (TP5).</p> <p>42. Adj. VS2 for +10.000 VDC.</p> <p>43. Check - saturation level (> -12.7 VDC) of IC2 (TP5).</p> <p>44. Remove TP50/TP51 jumper.</p>		
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D. COMPENSATING LAG TEST

44. Verify the compensating lag in IC2 by connecting the vertical (Y-AXIS) of the X-Y plotter to TP5.

SET: Y AXIS sensitivity to 100 MV/in.
X AXIS sweep to 0.2 in./sec.
Adj. VS2 for -7.500 VDC.

Grd. TP51 and apply a 0 to -7.500 VDC voltage step into pin 28 by switching S6 up. Observe the step response time constant of the rising exponential as shown in Fig. B. It must be between ~~18 and 22 sec.~~

26.1 ± 9.3 sec

between 17 sec. and 35 sec.

USE WATCH + VOLT meter

*WITH TP51 TO COM
TP5 should be at 0
PUT 7.500VDC TO PIN
28 + PIN 30 should
START START going
+ & should go TO
APP. 63% OF APP. 750VDC
OR APP. 475 in
17 TO 35 SEC*

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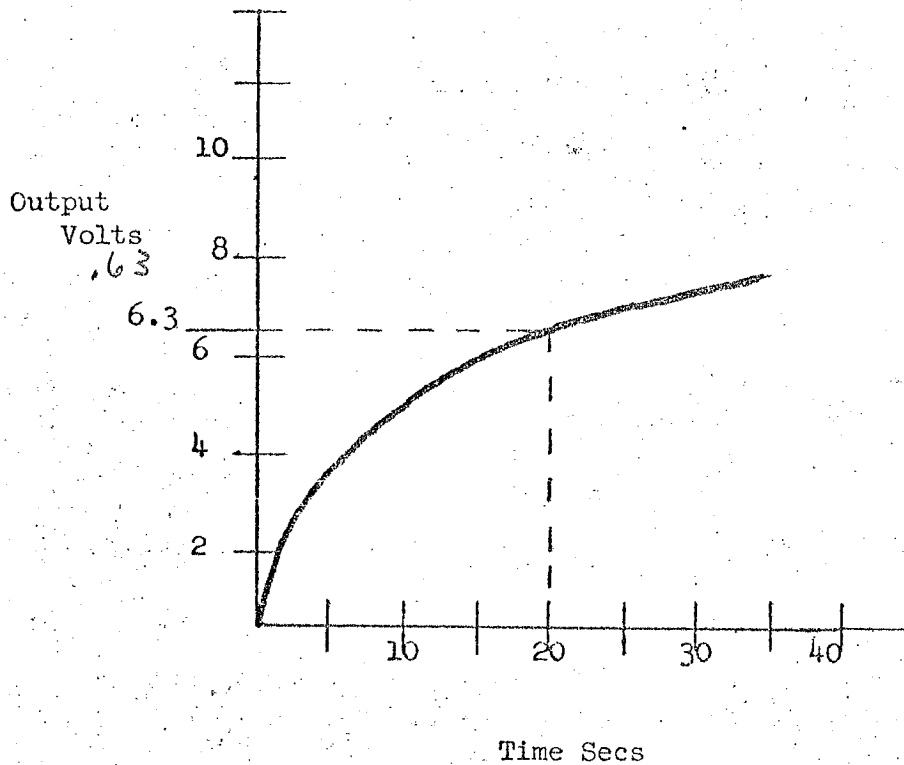
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FIGURE B



The time constant is the time required for the output to rise to 63% of its final value; in this case 6.3 inches.

For acceptance, the time constant must be between 18 and 22 sec.

17 35

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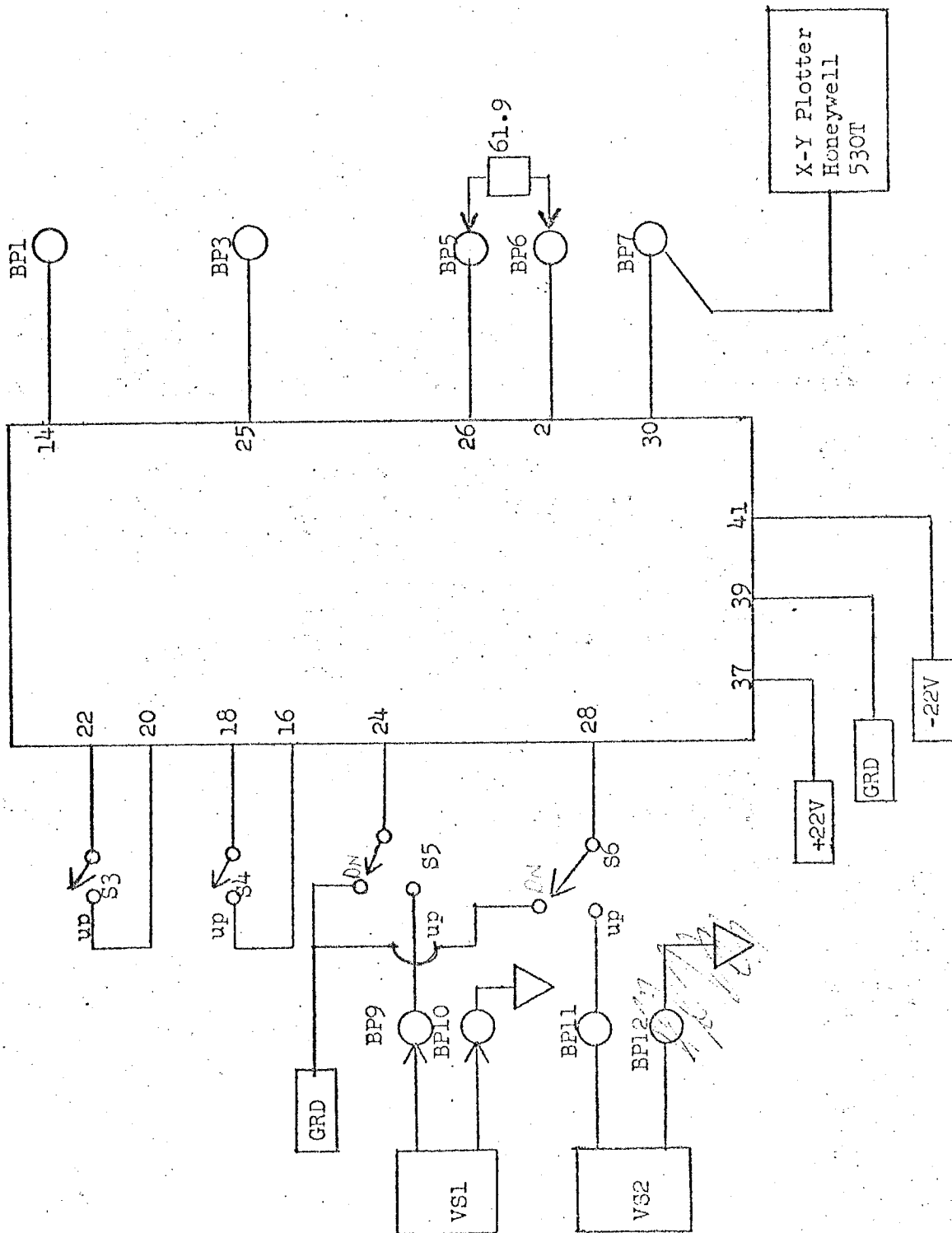
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FIGURE A

Patchboard



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