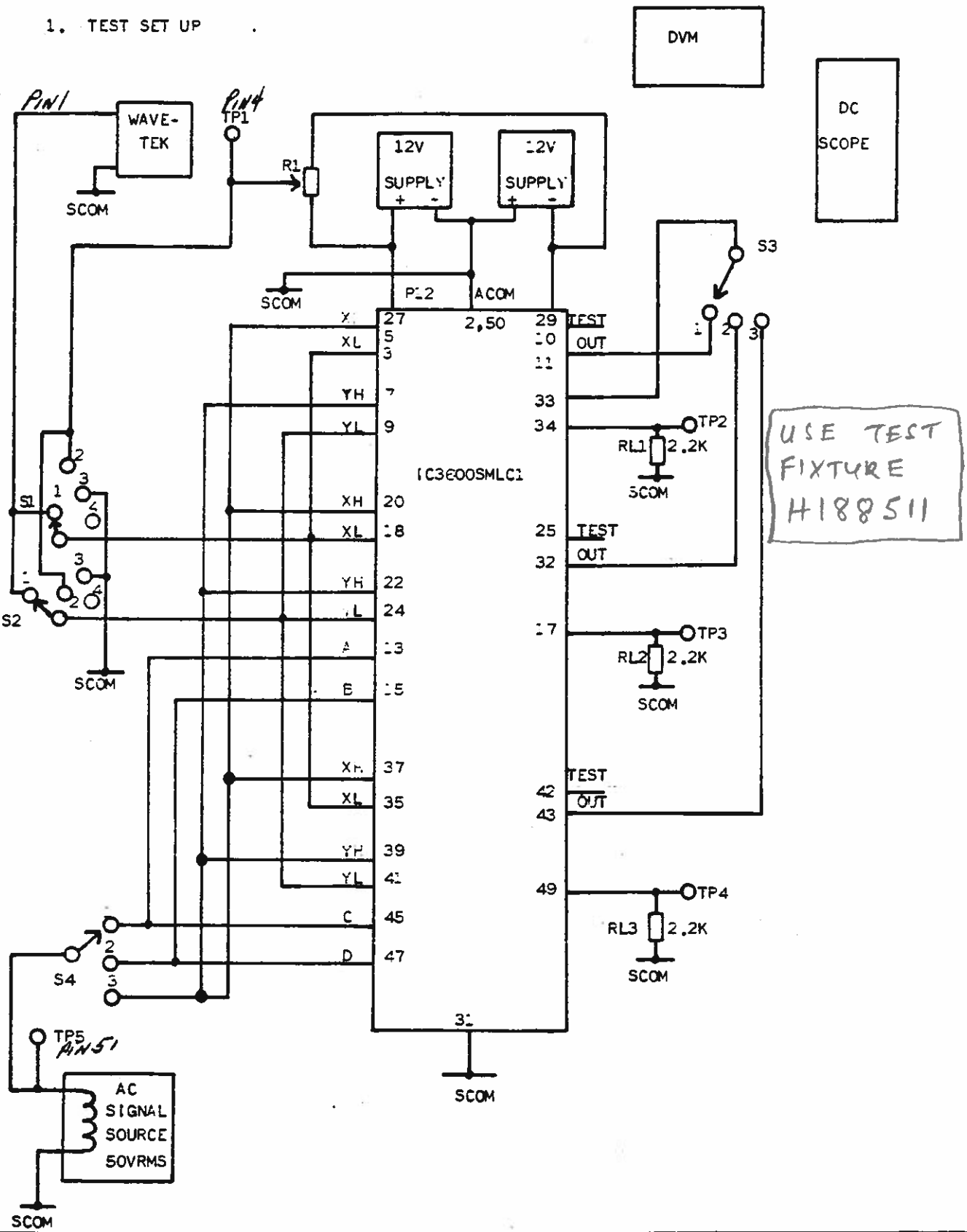
REV NO. A	TITLE TEST INSTRUCTIONS	CONT ON SHEET 2 SH NO 1
6 8 A 9 4 4 7 4 4	MULTIPLIER (3 PH POWER)	
CONT ON SHEET 2 SH NO. 1	FIRST MADE FOR IC3600SMLC1 CYCLOCONVERTER	

REVISION

1. TEST SET UP .



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MADE BY JOHN M. TURNER	APPROVALS FCT	INDUSTRY CONTROL DIV OR DEPT.	6 8 A 9 4 4 7 4 4
ISSUED SEPTEMBER 14, 1972		SALEM, VA LOCATION	CONT ON SHEET 2 SH NO. 1 CODE IDENT.

FF-803 WF (1-72) PRINTED IN U.S.A.

II. EQUIPMENT TEST

1) 12 VOLT POWER SUPPLIES ±12 MV @ > 100 MA (2 EA)
2) POTENTIOMETER R1 10KΩ TO 20KΩ @ > 100MW
3) DIGITAL VOLTMETER - DC VOLTS
4) LOAD RESISTORS 68A7000 TYPE OR EQUIV.
   RL1, RL2, RL3 - 2.2KΩ
5) SWITCHES S1, S2, - 4 POSITION ROTORY
6) SWITCHES S3,S4 - 3 POSITION ROTARY
* 7) WAVE TEK - 1KHZ 5V P-P SINEWAVE
8) DC SCOPE
9) RTV
* 10) AC SIGNAL SOURCE 50VRMS ± 50 MV @ > 1 MA

* NOTE 1) KEEP WAVE TEK AND AC SIGNAL SOURCE OFF UNLESS REQUIRED FOR PERFORMANCE OF TEST.

2) IT IS IMPORTANT TO KEEP LEAD LENGTHS SHORT AND CAPACITIVE COUPLING BETWEEN LEADS TO A MINIMUM WHEN CHECKING THIS CARD. BECAUSE OF THIS IT MAY BE NECESSARY TO TO USE A "PORTABLE "C" TYPE FIXTURE IN ORDER TO MEET THE AC NULL REQUIREMENTS OF THIS TEST INSTRUCTION.

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CONT ON SHEET 4 SH NO 3

TITLE TEST INSTRUCTIONS
MULTIPLIER (3PH POWER)

FIRST MADE FOR IC3600SMLC1 CYCLOCONVERTER

+12V = PIN 27 -12V PIN 29 Com 2, 30, 31

REVISIONS

R31

R28

R30

R24

III. PROCEDURE

A. ADJUST R31 ON ALL THREE CIRCUITS TO APPROXIMATELY 10 TURNS FROM EITHER END.

B. OFFSET AND SCALE FACTOR ADJUSTMENT (CIRCUIT #1)

1. X INPUT OFFSET

WAVETEK IN ON PIN #1
AC = OFF

3 IDENT. CIRC.

A) S1 IN POS 3

B) S2 IN POS 1

C) S3 IN POS 1 CRT CKT CKR 2 3

D) MONITOR TP2 (34) WITH SCOPE (LESS THAN 50MV/CM SENSITIVITY) WITH RESPECT TO SCOM.

E) ADJUST X-OFFSET POTENTIOMETER, R29 FOR AN AC NULL AT TP2. RIPPLE SHOULD BE LESS THAN 50 MV P-P.

2. Y INPUT OFFSET

A) S1 IN POS 1

B) S2 IN POS 3

C) S3 IN POS 1

D) ADJUST Y-OFFSET POTENTIOMETER, R28 FOR AN AC NULL AT (34) TP2 WITH RESPECT TO SCOM. RIPPLE SHOULD BE LESS THAN 50 MV P-P.

3. OUTPUT OFFSET

A) S1 IN POS 3

B) S2 IN POS 3

C) ADJUST OUTPUT OFFSET POTENTIOMETER, R30 UNTIL THE OUTPUT VOLTAGE AT TP2 IS ZERO VOLTS DC ± 10MV.

4. SCALE FACTOR

A) S1 IN POS 2

B) S2 IN POS 2

C) PIN 4 TP1 AT +8.00 VOLTS ± 8MV on Test Box R1 (ADJUST R1 ON AUX CARD)

D) ADJUST R31 TO ACHIEVE -5.333 VOLTS ± 5 MV AT TP2 (34)

E) 4 TP1 AT -8.00 VOLTS ± 8MV

F) NOTE THAT 34 TP2 IS -5.333 VOLTS ± 60MV

G) IF OUTPUT ERROR IS MORE THAN 60MV REPEAT STEPS 1 THROUGH 4.

C. OFFSET AND SCALE FACTOR ADJUSTMENT (CIRCUIT #2) - SAME AS PROCEDURE A FOR CIRCUIT #1 EXCEPT S3 IN POS #2.

D. OFFSET AND SCALE FACTOR ADJUSTMENT (CIRCUIT #3) - SAME AS PROCEDURE A FOR CIRCUIT #1 EXCEPT S3 IN POS #3.

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TITLE TEST INSTRUCTIONS FOR MULTIPLIER (3 PH POWER)

FIRST MADE FOR IC3600SMLC1 CYCLOCONVERTER

68A9447444
CONT ON SHEET 5 SH NO. 4

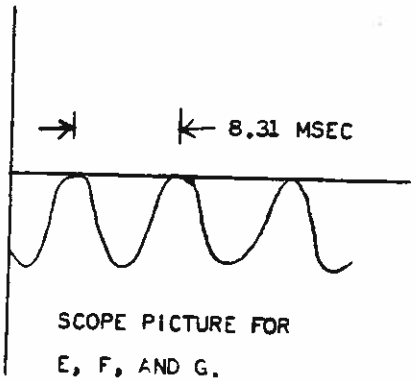
WAVE TEK OFF, A.C. ON

E. X AND Y HIGH INPUTS (CIRCUIT #1)

1. S4 IN POSITION 3
2. S3 IN POSITION #1
3. S1,S2 IN POSITION #4
4. NOTE -4.166 VOLTS ± .17 VOLTS PEAK 120HZ AT TP2 (34) AC HZ ON FLUKE

F. X AND Y HIGH INPUTS (CIRCUIT #2)

1. S4 IN POSITION #3
2. S3 IN POSITION #2
3. S1,S2 IN POSITION #4
4. NOTE -4.166 VOLTS ± .17 VOLTS PEAK 120HZ AT TP2 ~~TP6~~ (34)



SCOPE PICTURE FOR E, F, AND G.

G. X AND Y HIGH INPUTS (CIRCUIT #3)

1. S4 IN POSITION #3
2. S3 IN POSITION #3
3. S1,S2 IN POSITION #4
4. NOTE -4.166VOLTS ± .17 VOLTS PEAK 120HZ AT TP2 ~~TP6~~ (34)

H. SCALING AMPLIFIERS

1. S4 IN POSITION #1 → 8VPP
2. NOTE 2.877 ± .058 VRMS AT TP3 (47) AND TP4 (49) 180° OUT OF PHASE WITH VOLTAGE AT TP5 (51). USE LINE SYNC ON B4K SCOPE
3. S4 IN POSITION #2
4. NOTE 2.877 ± .058 VRMS AT TP3 (47) AND TP4 (49) 180° OUT OF PHASE WITH VOLTAGE AT TP5 (51).
5. JUMPER A,B,C,D, TOGETHER. 13, 15, 45, 47
6. NOTE 5.75 ± .17 VRMS AT TP3 AND TP4.

I. NULL CHECK

1. S1 IN POSITION #1
2. S2 IN POSITION #3
3. (4) +800V TP1 ~~NOTE~~ VOLTS ± 0.5 VOLTS SET WITH R1 ON ANA CARD.
4. S3 AT POSITION #1
5. NOTE OUTPUT OF ZERO VOLTS ± 100 MV AT TP2 (34)
6. S3 AT POSITION #2
7. NOTE OUTPUT OF ZERO VOLTS ± 100 MV AT TP2 (34)
8. S3 AT POSITION #3
9. NOTE OUTPUT OF ZERO VOLTS ± 100 MV AT TP2 (34)
10. S1 IN POSITION #3

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I. NULL CHECK CONTINUED

11. S2 IN POSITION #1
12. TP1 AT -8.00 VOLTS ± 0.5 VOLTS SET with R1 on Aux Card.
13. NOTE OUTPUT OF ZERO VOLTS ± 100 MV AT TP2
14. S3 IN POSITION #2
15. NOTE OUTPUT OF ZERO VOLTS ± 100 MV AT TP2
16. S3 IN POSITION #1
17. NOTE OUTPUT OF ZERO VOLTS ± 100 MV AT TP2

J. APPLY RTV TO ALL TRIM POT SCREWS.

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