

REV NO. A 6 8 A 9 4 4 6 3 6 CONT ON SHEET 1A SH NO. 1	TITLE TEST SPECIFICATIONS GATE PULSE AMPLIFIER FIRST MADE FOR IC3600TPAH1	CONT ON SHEET 1A SH NO. 1 REVISIONS 1 SBH REVISED AND ADDED SH. 1A, 1B, AND 1C. 8/24/72
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ELEMENTARY - IC3600TPAH1

TEST EQUIPMENT

- 1 - +5.3V DC SUPPLY
- 2 - +50V DC 1 AMP
- 3 - -50V DC 1 AMP
- 4 - WAVE TEK
- 5 - OSCILLOSCOPE
- 6 - SIX (6) 270Ω, 2W RESISTORS 68A7002P271
- 7 - OHMMETER

THE IC3600TPAH1 MAY BE TESTED BY THIS TEST SET-UP USING SHEETS 1,2,3, AND 4 OR BY USING TEST SET-UP AND TEST INSTRUCTIONS SHEETS 1A, 1B, 1C WITH SHEETS 3 AND 4.

FOR SHOP TEST CONNECT 270 OHM RESISTORS AND POWER PER FIG 1. (NO SWITCHES) THEN FOLLOW CHART ON SHEET 2, WAVEFORMS ARE ON SHEETS 3 + 4,

FIGURE 1

MADE BY GARY R. HARRIS	APPROVALS <i>[Signature]</i>	INDUSTRY CONTROL SALEM, VIRGINIA	DIV OR DEPT.	6 8 A 9 4 4 6 3 6
ISSUED April 21, 1972			LOCATION	CONT ON SHEET 1A SH NO. 1

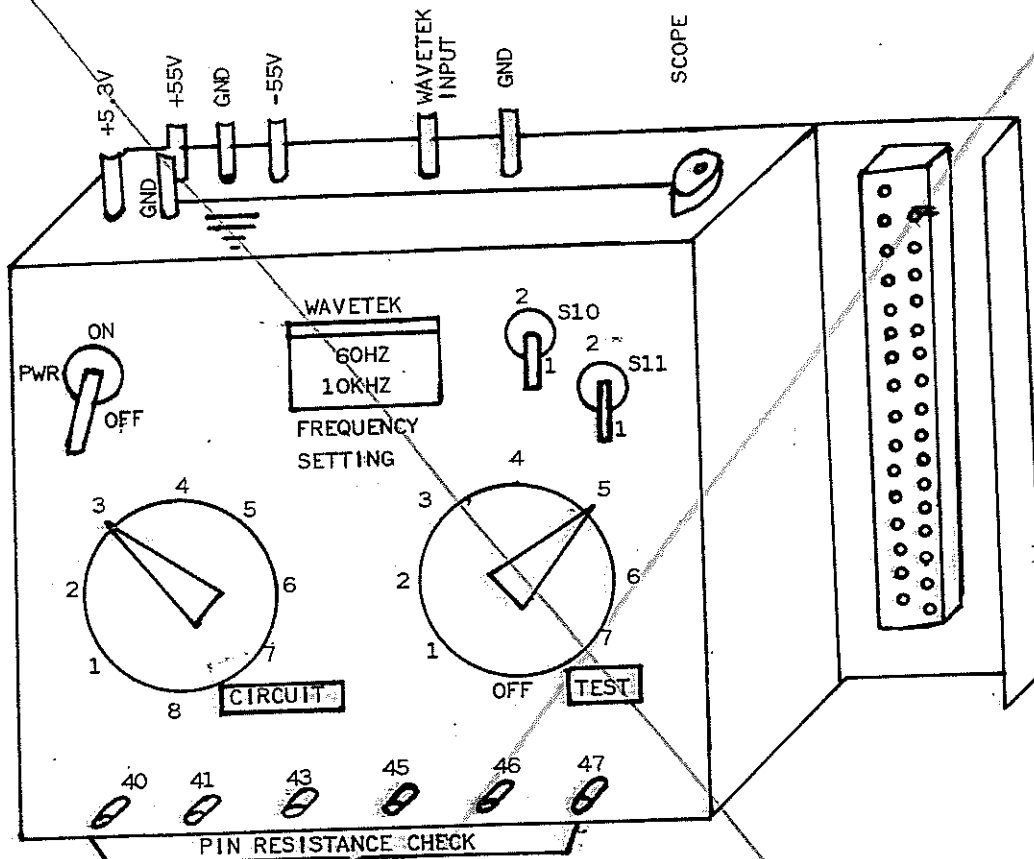
6V
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 2N
 PRINTS TO

CODE IDENT N

REV NO. A
6 8 A 9 4 4 6 3 6
CONT ON SHEET 1B SH NO. 1A

TITLE
TEST INSTRUCTIONS FOR
GATE PULSE AMPLIFIER
FIRST MADE FOR IC3600TPAH1

REVISIONS



PARTS LIST

- 1-BOX
- 1-51 PIN CARD RECEPTICAL WITH MOUNTING SCREWS, ETC.
- 1-3 POLE SINGLE THROW TOGGLE SWITCH.
- 1-OSCILLOSCOPE CABLE RECEPTICAL
- 3-RED INSULATED CONNECTORS FOR POWER SUPPLY LINES
- 3-CHROME GROUND CONNECTORS FOR POWER SUPPLY LINES
- 1-(GREEN, OR OTHER THAN ABOVE COLORS) CONNECTORS FOR POWER SUPPLY LINES
- 6-RECEPTICALS FOR OHMMETER TEST CABLES (FRONT)
- 1-FOUR POLE-EIGHT POSITION GANG SWITCH (OR GREATER)
- 1-THREE POLE-SEVEN POSITION GANG SWITCH (OR GREATER)
- 1-DUEL PANEL INDICATOR LAMP ASSEMBLY WITH 2 #387 BULBS
- 2-1 POLE SINGLE THROW TOGGLE SWITCH

6V

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PRINTS TO

MADE BY
S.B. HILL
ISSUED
September 11, 1972

APPROVALS

INDUSTRY CONTROL

DIV OR
DEPT.

6 8 A 9 4 4 6 3 6

SALEM, VIRGINIA

LOCATION

CONT ON SHEET 1B

SH NO. 1A

CODE IDENT NO.

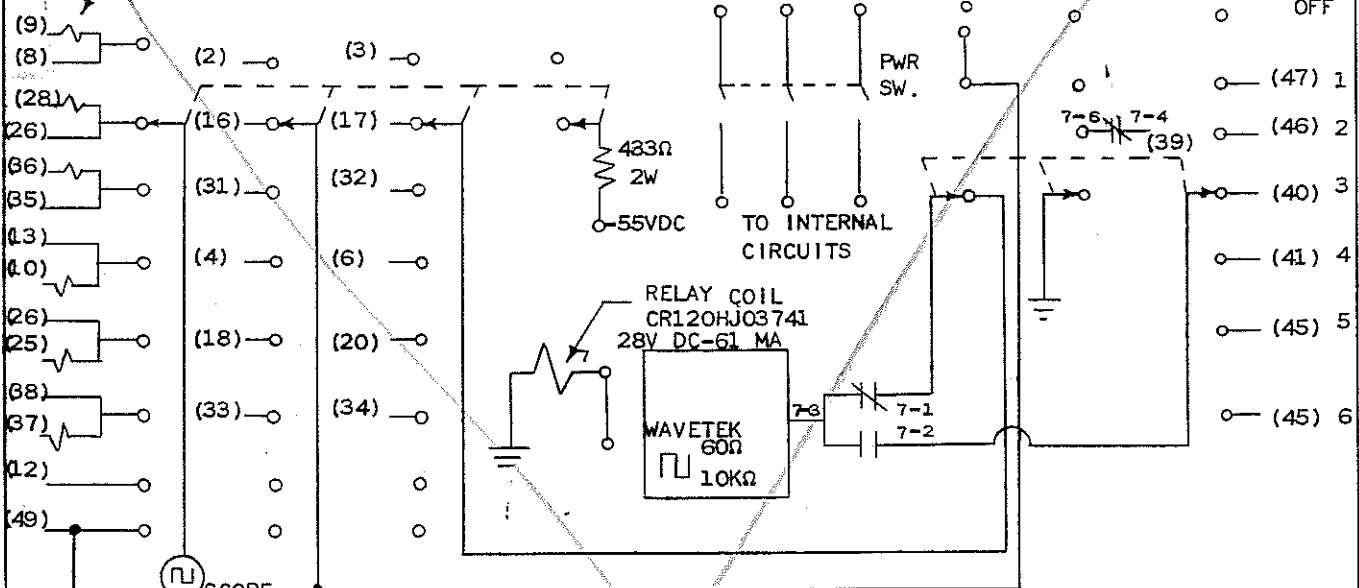
REV NO. A
6 8 A 9 4 4 6 3 6
CONT ON SHEET 1C SH NO. 1B

TITLE
TEST INSTRUCTIONS FOR
GATE PULSE AMPLIFIER
FIRST MADE FOR IC3600TPAH1

REVISIONS

CIRCUIT POSITION
4 POLE-8POS. EACH

OFF 6 RESISTORS AT 270Ω, 2W



LAMP CIRCUIT (OPTIONAL)

SET WAVETEK AT 60HZ WHEN LIGHT IS ON
SET WAVETEK AT 10KHZ WHEN LIGHT IS ON

LAMP TYPE 327: 28V DC AT 44 MA

CIRCUIT NUMBER

TEST POSITIONS REQUIRED

FREQUENCY SETTING

1	OFF-1-2-3	60HZ
2	1-2-3	60HZ
3	1-2-3	60HZ
4	1-2-3	60HZ
5	1-2-3	60HZ
6	1-2-3	60HZ
7	OFF-1-2-3-4-5-6	10KHZ
8	1-2-3-4-5-6	60KHZ

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PRINTS TO

MADE BY S.B. HILL	APPROVALS	INDUSTRY CONTROL SALEM, VA	DIV OR DEPT. LOCATION	6 8 A 9 4 4 6 3 6 CONT ON SHEET 1C SH NO. 1B
ISSUED <i>September 11, 1972</i>				

REV NO. A

68A944636

CONT ON SHEET 2 SH NO. 1C







TITLE

TEST INSTRUCTIONS FOR
GATE PULSE AMPLIFIER

FIRST MADE FOR IC3600TPAH

REVISIONS

- NOTE PINS 40, 41, 43, 45, 46, 47 ARE BROUGHT OUT TO FRONT JACKS WITH POWER SWITCH OFF, PLUG IN CARD AND CHECK PINS 40, 41, 43, 45, 46, AND 47 WITH OHMMETER. EACH PIN SHOULD READ IN EXCESS OF 200KΩ TO ALL OTHER PINS. AT OHMMETER - "4" TO PIN 40 "-" TO PIN 41. THERE "+" TO 41 "-" TO 40, ETC. THERE ARE 30 CHECKS IN ALL.
- REFER TO DRAWINGS 68A999167 SHEETS 3 AND 4 (WHEN TESTING TPAB1)
REFER TO DRAWINGS 68A944447 SHEETS 3 AND 4 (WHEN TESTING TPAE)
REFER TO DRAWINGS 68A----- SHEETS 3 AND 4 (WHEN TESTING TPAH)
AND OBSERVE PROPER WAVEFORM ON SCOPE ACCORDING TO THE FOLLOWING SCHEDULE. FREQUENCY SETTING LIGHTS WILL INDICATE PROPER WAVETEK SETTING FOR EACH TEST. SET WAVETEK AMPL. 4VPP.
SET S10 AND S11 TO POS 1 FOR ENTIRE TEST OF TPAB
SET S10 PER TEST STEPS AND S11 TO POS 1 FOR ENTIRE TEST OF TPAE
SET S10 AND S11 PER TEST STEPS FOR TPAH

WAVETEK FREQ.	SHEET 3 OR 4 WAVEFORM NUMBER	REFORM SW POS #		
		CKT-TEST-S10-S11	CKT-TEST-S10-S11	CKT-TEST-S10-S11
60HZ	1	1 - 1 - 1 - 2 2 - 1 - 1 - 2	3 - 1 - 1 - 2 1 - 3 - 2 - 2	2 - 3 - 2 - 2 3 - 3 - 2 - 2
60HZ	2	4 - 1 - 1 - 2 5 - 1 - 1 - 2	6 - 1 - 1 - 2 4 - 3 - 2 - 2	5 - 3 - 2 - 2 6 - 3 - 2 - 2
60HZ	3 (+50V LEVEL)	1-OFF (0) - 1 - 1 1 - 2 - 1 - 1	2 - 2 - 1 - 1 3 - 2 - 1 - 1	
60HZ	4 (-50V LEVEL)	4 - 2 - 1 - 1	5 - 2 - 1 - 1	6 - 2 - 1 - 1
10KHZ	5	7-OFF (0) - 1 - 2		
* (60HZ ON 10KHZ TPAH)	6	7 - 1 - 1 - 1 7 - 2 - 1 - 1	7 - 3 - 1 - 1 7 - 4 - 1 - 1	7 - 5 - 1 - 1 7 - 6 - 1 - 1
10KHZ	7	8 - 1 - 1 - 1 8 - 2 - 1 - 1	8 - 3 - 1 - 1 8 - 4 - 1 - 1	8 - 5 - 1 - 1 8 - 6 - 1 - 1
FOR TPAE AND TPAH INCLUDE NEXT 2 STEPS (TRIGGER ON CHAN A, CHAN "A" TO WAVETEK CHAN "B" TO TEST FIXTURE)				
60HZ	CHAN A. 			
TPAE	CHAN B.  -OV	1 - 3 - 2 - 2	2 - 3 - 2 - 2	3 - 3 - 2 - 2
TPAH	CHAN B.  -OV			
60HZ	CHAN A. 	4 - 3 - 2 - 2	5 - 3 - 2 - 2	6 - 3 - 2 - 2
TPAE	CHAN B.  -OV			
TPAH	CHAN B.  -OV			

6V

P6A

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2N

PRINTS TO

MADE BY	S. B. HILL	APPROVALS	INDUSTRY CONTROL	DIV OR DEPT.	68A944636
ISSUED	September 11, 1972		SALEM, VIRGINIA	LOCATION	CONT ON SHEET 2 SH NO. 1C

REV NO. A
6 8 A 9 4 4 6 3 6
CONT ON SHEET 3 SH NO. 2

TITLE
TEST SPECIFICATIONS
GATE PULSE AMPLIFIER
FIRST MADE FOR IC3600TPAH1

REVISIONS

A. FOLLOW CHART - FIRST 7 COLUMNS ARE INPUTS, LAST COLUMN IS OUTPUT TO SCOPE, REFER FIGURE 1.

WAVE TEK TO P1A	SCOPE TO	1 = 39 OPEN 2 = 39 $\frac{1}{2}$	WAVE TEK TO	IGNORE	1 - 60 HZ 2 - 10 KHZ 3 - OFF	1 TO	SEE WAVEFORMS SCOPE SW 1	2 = 49 $\frac{1}{2}$ 1 = 49 OPEN	2 = $\frac{1}{2}$ TO
POSITION	POSITION	POSITION	POSITION	POSITION	CONDITION	POSITION	PICTURE	POSITION	POSITION
SW 1	SW 2	SW 3	SW 4	SW 5	WAVE TEK	SW 6	SW 2 OUT	S11	S10
1 7 OPEN	1 8	1 39 OPEN	7 OPEN N/C	1 ONLY	3 OFF	7 OPEN	3 + 50V	1	1 OPEN
2 1 2	1 8	1	7	1	1 60 HZ SQUARE WAVE	7	1	2 49 $\frac{1}{2}$	1
3 2 14	2 21	1	7	1	1 8 VP-P	7	1	2	1
4 3 31	3 35	1	7	1	1	7	1	2	1
5 4 4	4 13	1	7	1	1	7	2	2	1
6 5 18	5 26	1	7	1	1	7	2	2	1
7 6 33	6 38	1	7	1	1	7	2	2	1
8 1 2	1 8	2 39 $\frac{1}{2}$	7	1	1	7	3	2	1
9 2 16	2 21	2	7	1	1	7	3	2	1
10 3 31	3 35	2	7	1	1	7	3	2	1
11 4 4	4 13	2	7	1	1	7	4	2	1
12 5 18	5 26	2	7	1	1	7	4	2	1
13 6 33	6 38	2	7	1	1	7	4	2	1
14 7 OPEN	7 12	1 39 OPEN	7 OPEN N/C	1	1	7	5	2	1
15 7	7 12	1	1 47	2	1	7	6	1 49 OPEN	1
16 7	7 12	1	2 46	2	1	7	6	1	1
17 7	7 12	1	3 40	2	1	7	6	1	1
18 7	7 12	1	4 41	2	1	7	6	1	1
19 7	7 12	1	5 43	2	1	7	6	1	1
20 7	7 12	1	6 45	2	1	7	6	1	1
21 7	8 49	1	1 47	2	2 10 KHZ 8 VP-P	7	7	1	1
22 7	8 49	1	2 46	2	2	7	7	1	1
23 7	8 49	1	3 40	2	2	7	7	1	1
24 7	8 49	1	4 41	2	2	7	7	1	1
25 7	8 49	1	5 43	2	2	7	7	1	1
26 7	8 49	1	6 45	2	2	7	7	1	1 OPEN
27 1 GROUNDED 2 5V 3 10	1 8	1	7 OPEN	2	1 60 HZ	1 $\frac{1}{2}$ 3	3 + 50V	2 49 $\frac{1}{2}$	2 $\frac{1}{2}$ 2
28 2	2 21	1	7	2	1	2 $\frac{1}{2}$ 17	3 + 50V	2	2 $\frac{1}{2}$ 16
29 3	3 35	1	7	2	1	3 $\frac{1}{2}$ 32	3 + 50V	2	2 $\frac{1}{2}$ 31
30 4	4 13	1	7	2	1	4 $\frac{1}{2}$ 6	4 - 50V	2	2 $\frac{1}{2}$ 4
31 5	5 26	1	7	2	1	5 $\frac{1}{2}$ 20	4 - 50V	2	2 $\frac{1}{2}$ 18
32 6	6 38	1	7	2	1	6 $\frac{1}{2}$ 34	4 - 50V	2	2 $\frac{1}{2}$ 33

MADE BY
GARY R. HARRIS

ISSUED
April 21, 1972

APPROVALS

[Signature]

INDUSTRY CONTROL

SALEM, VIRGINIA

DIV OR DEPT.

LOCATION

6 8 A 9 4 4 6 3 6

CONT ON SHEET

3

SH NO.

2

CODE IDENT NO.

REV NO. A
6 8 A 9 4 4 6 3 6
CONT ON SHEET 4 SH NO. 3

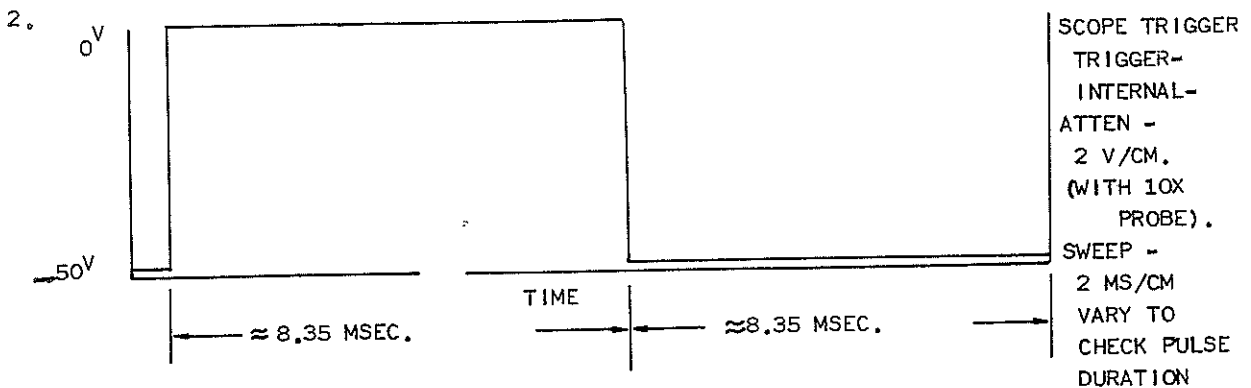
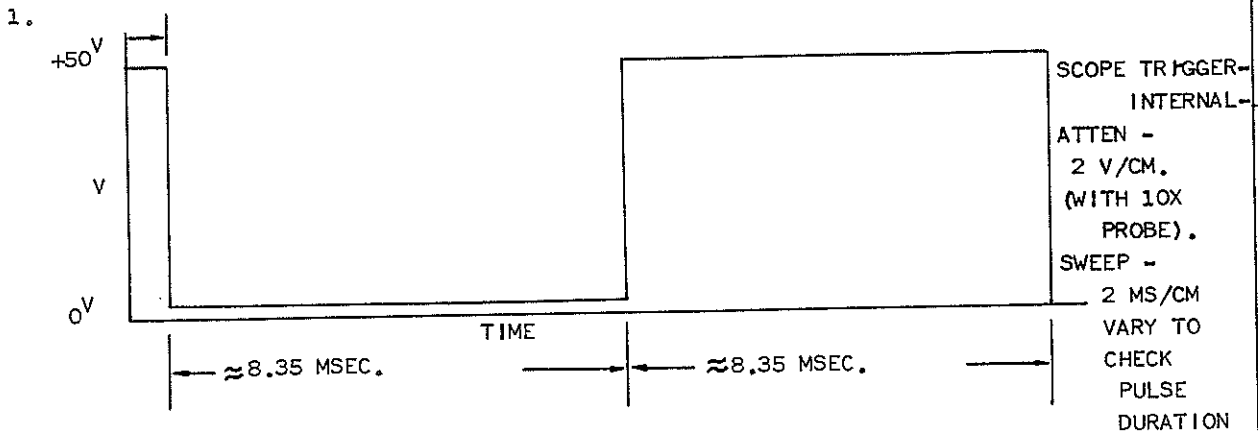
TITLE
TEST SPECIFICATIONS
GATE PULSE AMPLIFIER
FIRST MADE FOR IC3600TPA H

REVISIONS

WAVE TEK CONDITION

1. FREQUENCY 60 HZ SQUAREWAVE, AMPLITUDE $\pm 4^V$.
2. FREQUENCY 10K HZ SQUAREWAVE, AMPLITUDE $\pm 4^V$.
3. OFF.

SW 2 - OUT - OSCILLOSCOPE PICTURES



3. +50V DC LEVEL
4. -50V DC LEVEL

2N

P6A

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6V

PRINTS TO

MADE BY
GARY R. HARRIS
ISSUED
April 21, 1972

APPROVALS


INDUSTRY CONTROL

SALEM, VIRGINIA

DIV OR
DEPT.

LOCATION

6 8 A 9 4 4 6 3 6

CONT ON SHEET 4 SH NO. 3

CODE IDENT NO.

REV
NO. A

6 8 A 9 4 4 6 3 6

CONT ON SHEET FL. SH NO. 4

TITLE

TEST SPECIFICATIONS
GATE PULSE AMPLIFIER

FIRST MADE FOR IC3600TPAH1

REVISIONS

5.

+4V MIN

0V

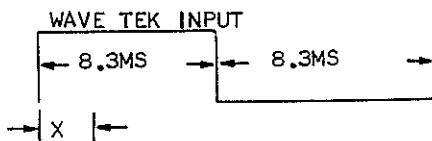
SCOPE

TRIGGER - INTERNAL +

ATTEN - .05V/CM (WITH 10X PROBE)

SWEEP 10 μ S/CM

6.



OUTPUT
PIN 12

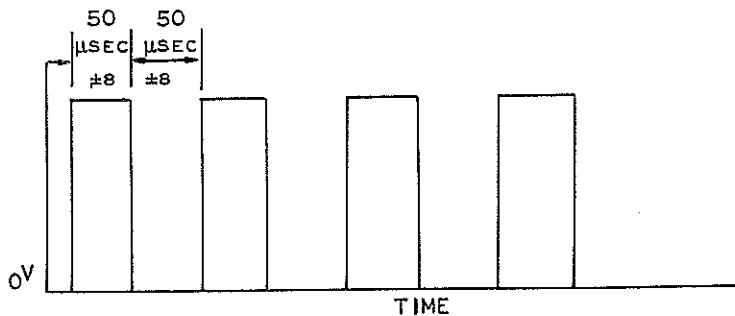
SCOPE

TRIGGER - EXTERNAL POS. TO WAVE
TEK

ATTEN - .2V/CM (WITH 10X PROBE)
SWEEP - 10 μ SEC/CM

X = 90 μ SEC \pm 20 μ SEC DELAY ON
OUTPUT WHEN INPUT STARTS TO GO
POSITIVE.

7.



SCOPE

TRIGGER - INTERNAL +

ATTEN - .5 V/CM (WITH 10X PROBE)

SWEEP - .1 MS/CM.

B. WITH OHMMETER; CHECK THAT PINS 47, 46, 40, 41, 43, 45 EACH READ A RESISTANCE IN
EXCESS OF 200K Ω TO EACH OTHER

NOTE: REMOVE ± 67 V POWER AND AC REFERENCER BEFORE INSERTING OR REMOVING CARD FROM TEST FIXTURE.

1 SBH REVISED 8/24/72
2 SBH REVISED 11/2/72

2EF1

1EL1

1338

49A3

PRINTS TO

MADE BY
GARY R. HARRIS

ISSUED April 21, 1972

APPROVALS

G. B. Garrison

INDUSTRY CONTROL

SALEM, VIRGINIA

DIV OR
DEPT.

LOCATION

6 8 A 9 4 4 6 3 6

CONT ON SHEET FL. SH NO. 4

CODE IDENT NO.