GENERAL 🏈 ELECTRIC 68 A 9 4 4 7 2 4 CONT ON SHEET 2 TITLE TEST INSTRUCTIONS -PULSE AMPLIFIER AND VOLTAGE SOISOR 68 A 9 4 4 7 2 4 CONT ON SHEET 2 FIRST MADE FOR IC3606TPAJ1 SH NO. 1 + REVISIONS 1. TEST SET UP **50**V R1 DVM SUPPLY VAC - VDC DC S3A SCOPE + TO TOP OF ACOM R5 AND R10 **338** NEG Хз **1**2 103606 TPAJ1 AC SOURCE WAVE INTER-SIGNA TEK FACE VAC 60HZ FIG.: P28 287 + SUPPLY GND TP1 GO **S**5 P12 12V + SUPPLY 56 **φ** TP3 4 ACOM WAVE-**OUTPU** + 12V + SUPPLY SWITCH TEK FIG.2 N12 ± 50v SUPPL DL12 2520 + PRINTS TO MADE BY DIV OR 68 4 9 4 4 7 2 4 CONNER INDUSTRY CONTROL CONT ON SHEET 2 CODE IDENT HO FF-803-WF (10/70) PRINTED IN U.S.A.

SENERAL (S) ELECTRIC 68 A 9 4 4 7 2 4 CONT ON SHEET 3 SH NO. 2 TITLE TEST INSTRUCTIONS PULSE AMPLIFIER AND VOLTAGE SENSOR 684944724 FIRST MADE FOR CONT ON SHEET \$H NO. 2 1C3606TPAJ1 REVISIONS II. EQUIPMENT LIST 1. DC SCOPE 2. 50VDC 10MA POWER SUPPLY (2 EA) 3. 28VDC 700MA POWER SUPPLY 4. 12VDC 50MA POWER SUPPLIES (2 EA) 5. SOVAC GOHZ @ > 10MA SIGNAL SOURCE 6. WAVE TEK (SQUARE WAVE), OUTPUT AMPLITUDE GREATER THAN +3.0 VOLTS AND LESS THAN 10 VOLTS 7. LOAD RESISTORS A) RL1 - TWO 100 2W 5% IN PARALLEL B) RL2 - " " " " " C) R3 - 10KΩ, 1/2W, 5% D) R4 - 221K, 1/2W,1% 68A7030P221G INTERFACE CIRCUIT - SEE FIG. 1 9. SHUNT SWITCH CIRCUIT - SEE FIG. 2 10. MISC. SWITCHES 51-S6 11. POTENTIOMETER 5 TO 10KΩ 1 WATT 12. DIGITAL VOLTMETER DL12 2520 PRINTS TO MADE BY DIV OR

ECT M. A. CONNER INDUSTRY CONTROL ISSUED 7-11-72 SALEM, VA

68 A 9 4 4 7 2 4

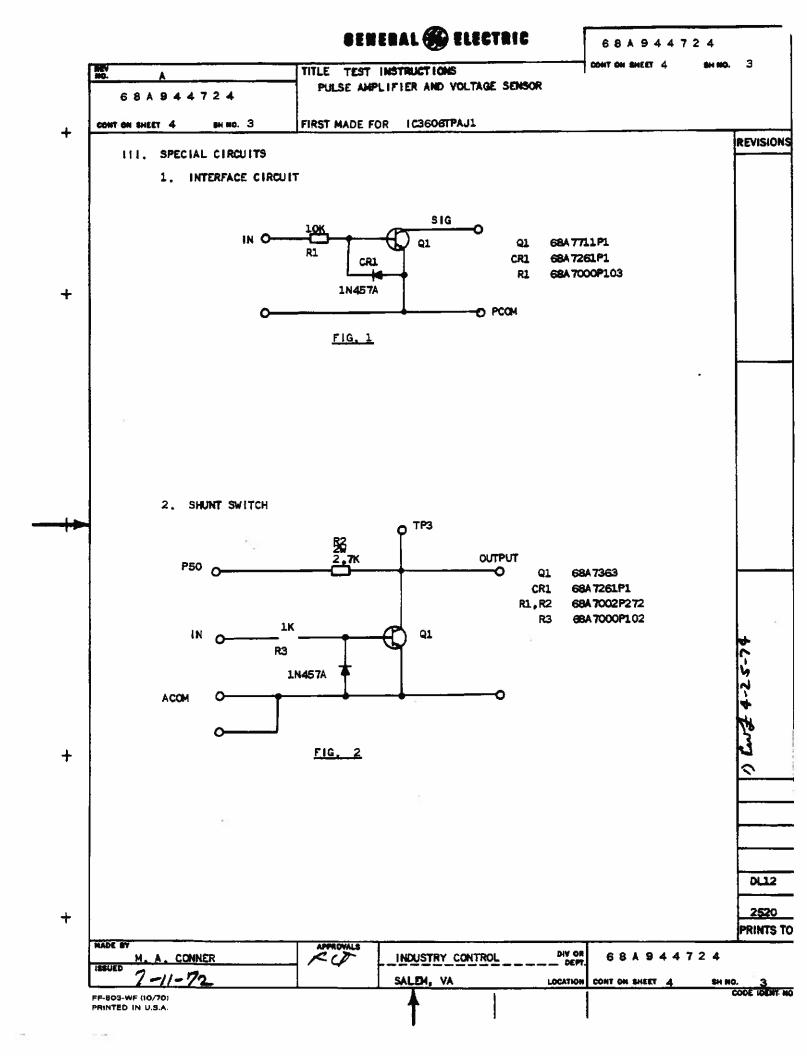
LOCATION CONT ON SHEET 3

SH NO. 2 CODE IDENT NO

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CONT ON SHEET 5

REVISIONS

TITLE TEST INSTRUCTIONS A PULSE AMPLIFIER AND VOLTAGE SENSOR 68 4 9 4 4 7 2 4 CONT ON SHEET 5 SH NO. FIRST MADE FOR IC3606TPAJ1

IV. PROCEDURE

- A. COMMON MODE NULL
- 1. CLOSE SWITCH S3
- 2. APPLY 50 VAC ± 10 VAC AT AC SIGNAL SOURCE
- 3. MONITOR "TP1" WITH DC SCOPE (TP1 TO ACOM)
- 4. ADJUST R43 SO AS TO MINIMIZE THE PEAK TO PEAK VOLTAGE EXCURSIONS AT "TP1". PEAK TO PEAK AMPLITUDE SHALL BE LESS THAN 20MY.
- 5. CHECK THAT "TP1" OUTPUT SWING IS WITHIN #272NV FROM "ACOM".
- 6. OPEN ALL SWITCHES, AND DISCONNECT WIRE LEADS TO R5 AND R10.

- B. GAIN
- 1. CONNECT SCOPE BETWEEN "ACOM" AND "GO"
- 2. CONNECT WIPER OF RI TO "NEG"
- 3. ADJUST WIPER OF RI FOR LESS THAN 10 VOLTS
- 4. "GO" SHALL BE AT ZERO VOLTS 0.4 VOLTS
- 5. CHANGE WIPER OF RI SO AS TO INCREASE WOLTAGE UNTIL "GO" CHANGES STATE.
- 6. "GO" SHALL BE EQUAL TO P12 0.1%
- 7. WIPER OF R1 SHALL BE 40 VOLTS ± 6.6 VOLTS
- 8. RETURN WIPER OF RI TO LESS THAN 10 VOLTS
- 9. REMOVE WIPER OF RI FROM "NEG"
- 10. CONNECT WIPER OF RI TO "X2"
- 11. ADJUST R1 TO POINT WHERE "GO" CHANGES STATE. R1 WIPER SHALL BE EQUAL TO 40 VOLTS . 6.6 VOLTS
- 12. OPEN ALL SWITCHES

NOTE: ALL SWITCHES OPEN UNLESS SPECIFIED

2520 PRINTS TO

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HADE BY APPROVALS M. A. CONNER DIV OR r u INDUSTRY CONTROL 68 A 9 4 4 7 2 4 ーリーク SALEM, VA LOCATION CONT ON SHEET SH NO. FF-803 WF (1-72) PRINTED IN U.S.A.

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GENERAL (SE) ELECTRIC TITLE TEST SPECIFICATIONS CONT ON SHEET PULSE AMPLIFIER AND VOLTAGE SENSOR 68 A 9 4 4 7 2 4 FIRST MADE FOR 103606TPAJ1 CONT ON SHEET 6 **зн но.** 5 REVISIONS C. DELAY TIME 1. CLOSE SWITCH S5 AND TIE X2 TO A COM 2. ADJUST WAVETEK #2 FOR 5KHZ ± 1KHZ 3. TRIGGER SCOPE FROM TP3 OR WAYETEK #2 OUTPUT (POSITIVE EDGE ON WAYETEK, NEGATIVE EDGE AT TP3) 4. MONITOR "GO" WITH SCOPE. ("GO" TO "ACOM") 5. RECORD TIME DELAY BETWEEN NEGATIVE GOING EDGE AT TP3 AND NEGATIVE GOING EDGE AT "GO". 6. TIME DELAY SHALL BE LESS THAN 40 USEC. 7. OPEN SWITCH S5 8. CLOSE SWITCH S6 AND TIE NEG. TO A COM 9. RECORD TIME DELAY BETWEEN NEGATIVE GOING EDGE AT TP3 AND NEGATIVE GOING EDGE AT "GO" 10. TIME DELAY SHALL BE LESS THAN 40µSEC. 11. OPEN SWITCH S6. DLIZ 2520 PRINTS TO MADE BY APPROVALS M. A. CONNER INDUSTRY CONTROL 68 A 9 4 4 7 2 4

7-11-22 FF-803 WF (1-72)

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SALEM, VA

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LOCATION

CONT ON SHEET 6

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FITLE TEST INSTRUCTIONS

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COURT ON SHEET 7 SH NO. 6

FIRST MADE FOR [C3606TPAJ]

REVISIONS

- D. PULSE AMPLIFIER #1
- 1. CLOSE SWITCH S1
- 2. MONITOR "X1" TO "X2" ON SCOPE
- 3. ADJUST WAYETEK #1 FOR SQUARE WAYE AT FREQUENCY OF 1.0KHZ # 100HZ.
- 4. MEASURE VOLTAGE RISE TIME ON RL1 OF LESS THAN 1.0 μSEC AT 75% OF MAXIMUM AMPLITUDE.
- 5. AMPLITUDE OF PULSE SHALL BE 4.7 VOLTS + 0.5 VOLTS.
- 6. ADJUST WAVETEK #1 FOR SQUARE WAVE AT FREQUENCY OF 2.0 KHZ = 200HZ.
- 7. NOTE PULSE AMPLITUDE OF 3\_5 VOLTS + 0.7 VOLTS.
- 8. NOTE PULSE WIDTH AT BASE OF 250µSEC ± 50µSEC.
- 9. NOTE GENERAL SHAPE AND PULSE FALLING EDGE WITH 1 VOLT MINIMUM AS SHOWN IN FIG. 3
- 10. OPEN SWITCH S1.
- E. PULSE AMPLIFIER #2
- 1. CLOSE SWITCH S2
- 2. MONITOR "X3" TO "X4" ON SCOPE
- 3. ADJUST WAVETEK #1 FOR SQUARE WAVE AT FREQUENCY OF 1.0KHZ + 100HZ.
- 4. MEASURE VOLTAGE RISE TIME ON RL2 OF LESS THAN 1.0 SEC AT 75% OF MAXIMUM.
- 5. AMPLITUDE OF PULSE SHALL BE 4.7 VOLTS ± 0.5 VOLTS
- 6. ADJUST WAVETEK #1 FOR SQUARE WAVE AT FREQUENCY OF 2.0KHZ ± 200HZ
- 7. NOTE PULSE AMPLITUDE OF 3.5 VOLTS ± 0.7 VOLTS
- 8. NOTE PULSE WIDTH AT BASE OF 250µSEC ± 50µSEC
- 9. NOTE GENERAL SHAPE AND PULSE FALLING EDGE WITH 1 VOLT MINIMUM AS SHOWN IN FIG. 3
- F: PULSE AMPLIFIER GAIN CHECK
- 1. OPEN SWITCH S7 , CLOSE S1, S2
- 2. NOTE ABSENSE OF PULSES "X1" TO "X2" AND "X3" TO "X4". VOLTAGE ACROSS TERMINALS SHALL BE LESS THAN  $\pm_2$ V.

DL12 2520 PRINTS TO

M. A. CONNER

ISSUED 7-11-12

INDUSTRY CONTROL DIV OR DEPT

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SALEM, VA LOCATION CONT ON SHEET

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PULSE AMPLIFIER AND VOLTAGE SENSOR

CONT ON SHEET FL. SH NO. 7

REVISIONS

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TITLE TEST INSTRUCTIONS

CONT ON SHEET PL. SH NO. 7

FIRST MADE FOR 103606TPAJ1

G. PULSE AMPLIFIER WAVE SHAPES (2KHZ, RL = 50)

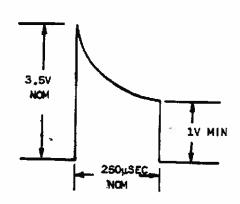


FIG. 3 NORMAL PULSE

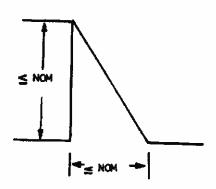


FIG. 4 LOSS OF RESET

- G. LIGHT RESISTORS
- MEASURE DC RESISTANCE OF 120KD + 6KD BETWEEN "NEG" AND "LT4"
- 2. "X4" AND "LT3"
- З. "X4" AND "LT2"
- "X2" AND "LT1"

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