g GE Energy ***Parts & Repair Services*** ***Louisville, KY***	**Functional Testing Specification** **LOU-GED-IC3600TFMA1**

Test Procedure for a IC3600TFMA1

DOCUMENT REVISION STATUS: Determined by the last entry in the "REV" and "DATE" column

REV.	DESCRIPTION	SIGNATURE	REV. DATE
A	Copied from previous written document	G. Chandler	10/27/2009
B			
C			

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DATE	**DATE**	**DATE**	**DATE**
5/29/2009			5/29/2009

Functional test procedure for an IC3600TFMA1 card.

1. SCOPE

1.1 This is a functional testing procedure for an IC3600TFMA1 card.

2. STANDARDS OF QUALITY

2.1 Refer to the current revision of the IPC-A-610 standard for workmanship standards.

3. APPLICABLE DOCUMENTS

3.1 The following document(s) shall form part of this specification to the extent specified herein. Unless otherwise indicated, the latest issue shall apply.
3.1.1 Check board electronic folder for more information.

4. ENGINEERING REQUIREMENTS

4.1 Equipment Cleaning
4.1.1 Equipment should be clean and free of debris prior to applying power unless performing an initial check. Refer to the local documented procedures for cleaning guidelines.
4.2 Equipment Inspection
4.2.1 Equipment should be visually inspected for any defects prior to applying power. This inspection should include the following as a minimum:
4.2.1.1 Wires broken or cracked
4.2.1.2 Terminal strips / connectors broken or cracked
4.2.1.3 Loose wires
4.2.1.4 Components visually damaged
4.2.1.5 Capacitors leaking
4.2.1.6 Solder joints damaged or cold
4.2.1.7 Circuit board burned or de-laminated
4.2.1.8 Printed wire runs burned or damaged

5. EQUIPMENT REQUIRED

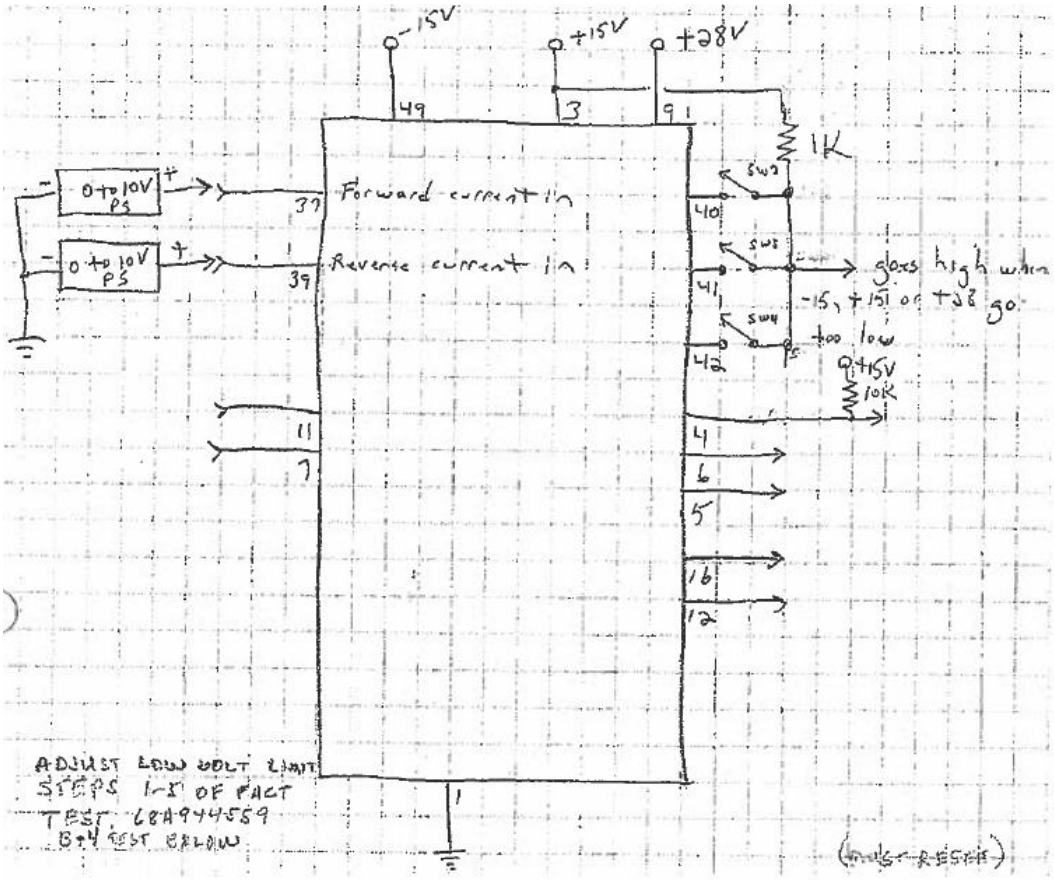
5.1 The following equipment is required to perform the process requirements. Equipment may be substituted provided that all accuracy's and test ratios are equivalent or better.

Qty	Reference #	Description
3		Fluke 87 DMM (or Equivalent)
1		IC3600 Rainbow box
2		15VDC Power Supplies
1		28VDC Power Supply
2		0 to 10VDC Power Supplies

6. TESTING PROCESS

6.1 Setup

6.1.1 Wire Fixture first



Special Note: The test procedure can't be used with an IC3600TFMA1A card. Documentation is not available for the 1A revision.

6.2 Test Procedure

6.2.1 Turn R70 fully CCW, turn on the power supplies, reset S1, and verify that the supply drain is the following.

Pin-3	+15V	<150ma
Pin-49	-15V	<60ma
Pin-9	+28V	<150ma

6.2.2 Connect multimeter to Pin-41 (+) to Pin-25 (-).

6.2.3 Connect multimeter to Pin-3 (+) to Pin-25 (-).

6.2.4 Lower +15V supply to +13.00V

6.2.5 Reset SW1 and adjust R70 until LED 2 goes from “ON” to “OFF” state. Multimeter should go from +2.5V (+/-1) to 13V.

6.2.6 Return +15V supply to normal level and reset.

6.2.7 Adjust both 0 to 10V supplies to 0.0V

6.2.8 Verify voltage LED is “ON” and current LED is “OFF”. If not press reset switch.

6.2.9 With board hooked up as shown on previous page, connect pin-40 to 1K resistor and press reset on front panel of board.

6.2.10 Verify approx. <1V on pin-40

6.2.11 Reduce +28V supply to +17V.

6.2.12 Verify +15V on pin-40.

6.2.13 Return +28V supply to +28V and verify pin-40 stays at +15V.

6.2.14 Disconnect pin-40 from 1K resistor and repeat the procedure using pin-41 & +15V supply reduced to +12V.

6.2.15 Disconnect pin-41 from 1K resistor and repeat the procedure using pin-42 & -15V supply reduced to -12V.5.

6.2.16 Verify voltage LED on front panel is “OFF”.

6.2.17 Return all supplies to proper levels and press reset on front panel. Voltage LED should be “ON”.

6.2.18 Verify approx. 0V on pin-12

6.2.19 Connect pin-11 to common and verify pin-12 goes to +15V

6.2.20 Connect pin-7 to common.

6.2.21 Verify +15V on pin-5 & pin-6. Disconnect pin-7 and leave pin-11 connected to common.

6.2.22 Press reset on front panel and verify approx. 0V on pin-16.

6.2.23 Connect pin-22 to common and verify approx. +15V on pin-16, current lamp should come “ON”

6.2.24 Disconnect pin-22

6.2.25 Press rest on front panel, current lamp should go “OFF”.

6.2.26 Verify 0V on pin-4, pin-11 must still remain connected to common

6.2.27 Press reset, current lamp should go “OFF”

6.2.28 Monitor voltage on pin-16 while slowly increasing 0 to 10V power supply connected to pin-37.

6.2.29 Pin-16 should go to +15V when power supply is approx. 5.50 to 6.0V

6.2.30 Reduce power supply to 0V and press reset.

6.2.31 Connect pin-33 to common

6.2.32 Monitor voltage on pin-16 while slowly increasing 0 to 10V power supply connected to pin-39

6.2.33 Pin-16 should go to +15V when power supply is approx. 5.50 to 6.0V

6.2.34 Reduce power supply to 0V and press reset.

6.2.35 Connect pin-33 to common

6.2.36 Adjust power supply connected to pin-39 to +10V and verify 0V on pin-16.

6.2.37 Connect pin-15 to common

6.2.38 Raise power supply on pin-37 to +7V and verify 15V on pin-6

6.2.39 Disconnect pin-15 to common and verify +15V on pin-6

6.2.40 Adjust power supply on pin-37 to 0V

6.2.41 Press reset and verify 0V on pin-6.

6.3 ***Test Complete***

Special Note: When testing the +15V supply, the voltage at pin-41 will go to whatever the +15 volt supply has been reduced to because pin-41 is pulled up by the +15V supply.

7. Notes

7.1 None at this time.

8. Attachments

8.1 None at this time.