Parts & Repair Services *Louisville, KY*	**Functional Testing Specification** **LOU-GED-IS200FOSA**

Test Procedure for a

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

REV.	DESCRIPTION	SIGNATURE	REV. DATE
A	Initial release	John Madden	9/25/08
B	Corrected 6.2.3 Table pin errors	Jeffery Barton	11/1/12
C	Re write test to include test fixture	Jimmy Morgan	11/30/2020

PREPARED BY	REVIEWED BY	REVIEWED BY	QUALITY APPROVAL
Jimmy Morgan	Richard Martin		
DATE 11/20/2020	**DATE** 11/20/2020	**DATE**	**DATE**

1. SCOPE

1.1 This is a functional testing procedure for An IS200FOSA 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's 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 site specific SRA's 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, cracked, or loosely connected
4.2.1.2 Terminal strips / connectors - broken or cracked
4.2.1.3 Components - visually damaged
4.2.1.4 Capacitors - bloated or leaking
4.2.1.5 Solder joints - damaged or cold
4.2.1.6 Circuit board - burned or de-laminated
4.2.1.7 Printed wire runs / Traces - 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
1		Fluke 87 DMM (or Equivalent)
1		Tenma Power supply -15,+15 and 5V required
1	H190223	FOSA Test box

6. Modifications/Upgrades

6.1 None

7. Testing Process

7.1 Setup

7.1.1 Set all selector switches to position (1).

7.1.2 Connect +15VDC, -15VDC, 5VDC to the top of the test fixture in the correct banana jacks.

7.1.3 Connect the commons of the supplies together and plug in to the GND banana jack on the fixture.

7.1.4 Carefully insert the card on top of the text fixture

7.1.5 All led's should be off at this time.

7.2 Testing Procedure

7.2.1 Fiberoptic output testing

7.2.1.1 With Selector switch D in position (1) press the red "test" button on the fixture. The transmitter for IG-A3 and IG-A4 will light along with their corresponding led on the board.

7.2.1.2 Using the table below test the rest of the fiber optic outputs.

Transmitter	Selector "D" Position	Schematic Sheet
IG-A3, IG-A4	1	Sh.3
IG-B1, IG-B2	2	Sh.5
IG-B3, IG-B4	3	Sh.5
IG-C2, IG-C1	4	Sh.7
IG-C3, IG-C4	5	Sh.7
SC-DC, IG-DB1	6	Sh.9
IG-DB2, SPARE	7	Sh.9
IG-A1, IG-A2	12	Sh.3

7.2.2 Fiber Optic Input Testing

7.2.2.1 With selector “D” still in the (12) position, attach one end of a fiber optic cable to IG-A2 on the board. (*This step can be omitted and you can use a flashlight instead, but the cable makes it a bit faster*).

7.2.2.2 Connect your multimeter common into the orange (output 1) jack on the top of the test fixture.

7.2.2.3 Connect + of the multimeter to the Red test jack on the front of the unit.

7.2.2.4 Connect the other end of the fiber optic cable to IG-A1 receiver (blue are receivers and gray are transmitters)

7.2.2.5 Make sure Selector “A” is in position (1)

7.2.2.5.1 The meter should read 5VDC

7.2.2.5.1.1 Press the red “Test” button on the fixture and the multimeter should change to a Low, approx. .3-.4VDC. The onboard led for that circuit will also illuminate.

7.2.2.5.1.2 Follow the table below to test the rest of the inputs

Test Jack	Selector	Selector Position	Schematic sheet	Receiver name\ Fiber Optic Input
Red	A	1	SH.2	IG-A1
Red	A	2	SH.2	IG-A2
Red	A	3	SH.2	IG-A3
Red	A	4	SH.2	IG-A4
Red	A	5	SH.2	IV-VAB
Red	A	6	SH.2	IV-VBC
Red	A	7	SH.2	IV-VA(S)
Red	A	8	SH.2	IV-VA(I)
Red	A	9	SH.2	TF-A
Red	A	10	SH.4	IG-B1
Red	A	11	SH.4	IG-B2
Red	A	12	SH.4	IG-B3
Black	B	1	SH.4	IG-B4
Black	B	2	SH.4	VADC(P)
Black	B	3	SH.4	VADC(N)
Black	B	4	SH.4	IVIB(S)

Black	B	5	SH.4	IVIB(I)
Black	B	6	SH.4	TF-B
Black	B	7	SH.4	IG-C1
Black	B	8	SH.4	IG-C2
Black	B	9	SH.6	IG-C3
Black	B	10	SH.6	IG-C4
Black	B	11	SH.6	VASRC(BA)
Black	B	12	SH.6	VASRC(CA)
Purple	C	1	SH.6	IV-IC(S)
Purple	C	2	SH.6	IV-IC(I)
Purple	C	3	SH.6	TF-C
Purple	C	4	SH.8	VA-DB
Purple	C	5	SH.8	IG-DB1
Purple	C	6	SH.8	IG-DB2
Purple	C	7	SH.8	SC-DC
Purple	C	8	SH.8	VA-MID
Purple	C	9	SH.8	TF-DB
Purple	C	10	SH.8	TF-SRC
Purple	C	11	SH.8	SPARE

7.2.3 **TEST COMPLETE**

7.3 Post Testing Burn-in Required ___ Yes __X_ No

Note: All MARK I, II, & III Turbine related cards require a post testing burn-in of 100 hours.

7.3.1 Apply BUS or Operational power to the card for a period of 100 hours.

7.3.2 Re-test card while warm using the above procedure.

7.4 ***TEST COMPLETE ***

8. Notes

8.1 None at this time?

8.2 Attachments