g GE Energy	**Functional Testing Specification**
Parts & Repair Services ***Louisville, KY***	**LOU-GED-DS3800HCIB**

Test Procedure for a DS3800HCIB

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1. SCOPE

1.1 This is a functional testing procedure for a DS3800HCIB.

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		Rainbow Box
1		DS3800 Power Supply
1		DS3800 Connector Box
1		DS3800 Switch Expander

6. TESTING PROCESS

6.1 Setup

6.1.1 J1=Gone

6.1.2 Connect PA1-PA9

6.1.3 Make the following connections and set switches as follows

SW81-PA39-H

SW82-PA31-L

SW83-PA32-H

SW84-PA40-L

SW85-PA35-H

SW86-PA38-L

SW87-PA36-H

SW88-PA34-L

SW89-PA66-H

JA8-COM

JA7-5VDC

6.2 Testing Procedure

6.2.1 Apply power

6.2.2 Verify 1.45Mhz signal at J1

6.2.3 Toggle SW89 L-H

6.2.4 Verify the following:

PA49 and JE5 = L

PA50 and JE4 = H

PA55 and JE6 = L

PA56 and JE14 = H

PA48 and JE12 = L

PA54 and JE8 = H

PA46 and JE10 = L

PA53 and JE16 = H

6.2.5 Reverse SW81-SW88

6.2.6 Toggle SW89 L-H

6.2.7 Verify the following:

PA49 and JE5 = H

PA50 and JE4 = L

PA55 and JE6 = H

PA56 and JE14 = L

PA48 and JE12 = H

PA54 and JE8 = L

PA46 and JE10 = H

PA53 and JE16 = L

6.2.8 Reverse SW81-SW88

6.2.9 Move the following connections:

PA39-PA22

PA31-PA25

PA32-PA21

PA40-PA26

PA35-PA20

PA38-PA23

PA36-PA19

PA34-PA24

6.2.10 Toggle SW89 L-H

6.2.11 Verify the following:

PA2 and JE1 = L

PA8 and JE13 = H

PA13 and JE11 = L

PA10 and JE7 = H

PA6 and JE9 = L

PA4 and JE15 = H

PA11 and JE3 = L

PA12 and JE2 = H

6.2.12 Reverse SW81-SW88

6.2.13 Toggle SW89 L-H

6.2.14 Verify the following:

PA2 and JE1 = H

PA8 and JE13 = L

PA13 and JE11 = H

PA10 and JE7 = L

PA6 and JE9 = H

PA4 and JE15 = L

PA11 and JE3 = H

PA12 and JE2 = L

6.2.15 Move the following connections:

PA22-PA39

PA25-PA31

PA21-PA32

PA26-PA40

PA20-PA35

PA23-PA38

PA19-PA36

PA24-PA34

JE25-SW90

6.2.16 Set SW81-SW88 – H

6.2.17 Set SW89 – L

6.2.18 Make the following connections on the DS3800 switch expander

JE44-left most green jack

JE41-next

JE38-next

JE35-next

JE39-next

JE42-next

JE45-next

JE43-right most green jack

6.2.19 Toggle SW90 until all LED's = On

6.2.20 Verify binary count down till all LED's = Off

6.2.21 Connect JA10-5VDC

6.2.22 Set SW89-L

6.2.23 Momentarily connect JA8 to Com

6.2.24 Verify ON LINE LED = ON momentarily

6.2.25 PA42=H when LED = On

6.2.26 Remove connections at JA8 and JA10

6.2.27 Momentarily connect JA13 to +15VDC

6.2.28 Verify ON LINE LED = ON momentarily

6.2.29 Momentarily connect JA14 to +15VDC

6.2.30 Verify ON LINE LED = ON momentarily

6.2.31 Momentarily connect JA3 to +15VDC

6.2.32 Verify ON LINE LED = ON momentarily

6.2.33 Momentarily connect JA4 to +15VDC

6.2.34 Verify ON LINE LED = ON momentarily

6.2.35 Momentarily connect JA11 to +15VDC

6.2.36 Verify ON LINE LED = ON momentarily

6.2.37 Momentarily connect JA12 to +15VDC

6.2.38 Verify ON LINE LED = ON momentarily

6.2.39 Momentarily connect JA9 to +15VDC

6.2.40 Verify ON LINE LED = ON momentarily

6.2.41 Momentarily connect JA10 to +15VDC

6.2.42 Verify ON LINE LED = ON momentarily

6.2.43 Verify JA25 = H

6.2.44 Verify JA26 = L

6.2.45 Connect PA58-5VDC

6.2.46 Verify JA25 = L

6.2.47 Verify JA26 = H

6.2.48 Verify JA23 = H

6.2.49 Verify JA24 = L

6.2.50 Move PA58-PA60

6.2.51 Verify JA23 = L

6.2.52 Verify JA24 = H

6.2.53 Verify JA21 = H

6.2.54 Verify JA22 = L

6.2.55 Move PA60-PA74

6.2.56 Verify JA21 = L

6.2.57 Verify JA22 = H

6.2.58 Verify JA19 = H

6.2.59 Verify JA20 = L

6.2.60 Move PA74-PA76

6.2.61 Verify JA19 = L

6.2.62 Verify JA20 = H

6.3 ***TEST COMPLETE ***

7. NOTES

7.1 None at this time.

8. ATTACHMENTS

8.1 None at this time.