g GE Energy	**Functional Testing Specification**
Parts & Repair Services ***Louisville, KY***	**LOU-GED- DS3800HLEA**

Test Procedure for a DS3800HLEA

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

REV.	DESCRIPTION	SIGNATURE	REV. DATE
A	Initial release	Steve Pharris	01/04/10
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PREPARED BY	REVIEWED BY	REVIEWED BY	QUALITY APPROVAL
Steve Pharris			Charlie Wade
DATE	**DATE**	**DATE**	**DATE**
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1. SCOPE

1.1 This is a functional testing procedure for a DS3800HLEA.

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

6. TESTING PROCESS

6.1 Setup

6.1.1 Make the following connections and set switches as noted

PA1-PA9

PA51-PA1

SW81-PA20-High

SW82-PA14-Low

SW83-PA24-High

SW84-PA13-Low

SW85-PA25-High

SW86-PA8-Low

6.2 Testing Procedure

6.2.1 Apply power to card

6.2.2 Verify CR16 is illuminated

6.2.3 Verify CR1 is illuminated

6.2.4 Verify PA12-High

6.2.5 Verify PA2-Low

6.2.6 Reverse position of SW83-SW86

6.2.7 Verify CR1 is off

6.2.8 Verify PA12-Low

6.2.9 Verify PA2-High

6.2.10 Power Down

6.2.11 Move the following connections and set as noted

PA20-PA6-High

PA14-PA22-Low

PA24-PA21-High

PA13-PA10-Low

6.2.12 Remove connections from SW85 and SW86

6.2.13 Apply power

6.2.14 Verify CR2 is illuminated

6.2.15 Verify PA34-High

6.2.16 Verify PA33-Low

6.2.17 Reverse position of SW83-SW84

6.2.18 Verify CR2 is off

6.2.19 Verify PA34-Low

6.2.20 Verify PA33-High

6.2.21 Power Down

6.2.22 Move the following connections and set as noted

PA6-PA46-High

PA22-PA36-Low

PA21-PA49-High

PA10-PA35-Low

SW85-PA50-High

SW86-PA31-Low

6.2.23 Apply Power

6.2.24 Verify CR3 is illuminated

6.2.25 Verify PA4-High

6.2.26 Verify PA11-Low

6.2.27 Reverse position of SW83-SW86

6.2.28 Verify CR3 is off

6.2.29 Verify PA4-Low

6.2.30 Verify PA11-High

6.2.31 Power Down

6.2.32 Move the following connections and set as noted

PA46-PA30-High

PA36-PA48-Low

PA49-PA47-High

PA35-PA32-Low

6.2.33 Remove connections from SW85 and SW86

6.2.34 Apply Power

6.2.35 Verify CR4 is illuminated

6.2.36 Verify PA69-High

6.2.37 Verify PA64-Low

6.2.38 Reverse position of SW83-SW84

6.2.39 Verify CR4 is off

6.2.40 Verify PA69-Low

6.2.41 Verify PA64-High

6.2.42 Power Down

6.2.43 Move the following connections and set as noted

PA30-PA65-High

PA48-PA59-Low

PA47-PA67-High

PA32-PA60-Low

SW85-PA72-High

SW86-PA56-Low

6.2.44 Apply Power

6.2.45 Verify CR5 is illuminated

6.2.46 Verify PA28-High

6.2.47 Verify PA29-Low

6.2.48 Reverse position of SW83-SW86

6.2.49 Verify CR5 is off

6.2.50 Verify PA28-Low

6.2.51 Verify PA29-High

6.2.52 Power Down

6.2.53 Move the following connections and set as noted

PA65-PA55-High

PA59-PA70-Low

PA67-PA68-High

PA60-PA57-Low

6.2.54 Remove connections from SW85 and SW86

6.2.55 Apply Power

6.2.56 Verify CR6 is illuminated

6.2.57 Verify PA63-High

6.2.58 Verify PA66-Low

6.2.59 Reverse position of SW83-SW84

6.2.60 Verify CR6 is off

6.2.61 Verify PA63-Low

6.2.62 Verify PA66-High

6.2.63 Power Down

6.2.64 Move the following connections and set as noted

PA55-PA19-High

PA70-PA17-High

PA68-PA15-High

PA57-PA23-High

6.2.65 Apply Power

6.2.66 Verify PA40-High

6.2.67 Verify PA40-Low if any one switch is Low

6.2.68 Power Down

6.2.69 Move the following connections and set as noted

PA19-PA26-High

PA17-PA27-High

PA15-PA16-High

PA23-PA18-High

6.2.70 Apply Power

6.2.71 Verify PA39-High

6.2.72 Verify PA39-Low if any one switch is Low

6.2.73 Power Down

6.2.74 Move the following connections and set as noted

PA26-PA37-Low

PA27-PA38-Low

PA16-PA61-Low

6.2.75 Remove connection at SW84

6.2.76 Apply Power

6.2.77 Verify PA44 inversely follows SW81

6.2.78 Verify PA42 inversely follows SW82

6.2.79 Verify PA62 inversely follows SW83

6.2.80 Momentarily connect TPG to PA1 and verify CR16 turns off

6.2.81 Remove connection at TPG

6.2.82 Power Down

6.2.83 Move the following connections and set as noted

PA37-PA53-Low

PA38-PA54-Low

PA61-PA58-Low

6.2.84 Apply Power

6.2.85 Verify PA76 inversely follows SW81

6.2.86 Verify PA78 inversely follows SW82

6.2.87 Verify PA80 inversely follows SW83

6.2.88 Set SW81-SW83-Low

6.2.89 Connect PA41-PA1

6.2.90 Verify LED's CR13, CR14, andCR15 are illuminated

6.2.91 Set SW81-High

6.2.92 Verify CR13 is off

6.2.93 Set SW81-Low

6.2.94 Verify CR13 is illuminated

6.2.95 Set SW82-Low

6.2.96 Verify CR14 is off

6.2.97 Set SW82-High

6.2.98 Verify CR14 is illuminated

6.2.99 Set SW83-High

6.2.100 Verify CR15 is off

6.2.101 Set SW83-Low

6.2.102 Verify CR15 is illuminated

6.3 ***TEST COMPLETE ***

7. NOTES

7.1 None at this time.

8. ATTACHMENTS

8.1 None at this time.