g GE Energy	**Functional Testing Specification**
Parts & Repair Services ***Louisville, KY***	**LOU-GED-IS220UCSA**

Test Procedure for an IS220UCSA Mark 6e Stand Alone System Controller

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

REV.	DESCRIPTION	SIGNATURE	REV. DATE
A	Initial release	J. Francis	03/19/2013
B			
C			

PREPARED BY	REVIEWED BY	REVIEWED BY	QUALITY APPROVAL
J. Francis			Charlie Wade
DATE	**DATE**	**DATE**	**DATE**
03/19/2013			3/26/2013

1. SCOPE

1.1 This is a functional testing procedure for an **IS220UCSA** MARK VIe Stand Alone System Controller.

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	H188922	Mark Vie Simplex Test Rack with computer

6. TESTING PROCESS

6.1 Testing Procedure

Note: Make sure any unit being tested has the proper TDK Choke installed instead of the original Laird Choke. In the wrong environment these can fail.

6.1.1 Factory Tests

6.1.1.1 Install unit to be tested into Mark Vie Simplex Test Rack. Do not apply power at this time.

6.1.1.2 Install Compact Flash labeled “UCSXFUNCTEST” into UCSx to be tested.

6.1.1.3 Install 5 Loopback Plugs into UCSx T1, S1, R1, ENET1, and ENET2 Connectors.

6.1.1.4 Connector cable labeled “COM1” on Mark Vie Simplex Test Rack should be installed into COM port of UCSx.

6.1.1.5 Install Jump Dive into USB port of UCSx.

6.1.1.6 On computer of Mark Vie Simplex Test Rack open HyperTerminal.

6.1.1.7 Apply power to UCSx, watching HyperTerminal window to ensure communications have been established.

6.1.1.8 After boot sequence completes, you should see the “login:” prompt displayed on Hyper Terminal.

6.1.1.9 Type in “**roo**t” at login prompt and hit enter.

6.1.1.10 Type in “**GE**” at password prompt and hit enter.

6.1.1.11 Type “l**s**” at # prompt to list files on Compact Flash, make sure “**ucsxfunctest**” is listed.

6.1.1.12 Type in the following line, which is case sensitive, to run tests: ucsxfunctest –a –vvv –d 201301011200.00 –g IS200UCSAH1ACC

6.1.1.13 Tests should start running and then reboot unit under test. The unit is being restarted to verify the WATCHDOG timer.

6.1.1.14 Type in “**roo**t” at login prompt and hit enter.

6.1.1.15 Type in “**GE**” at password prompt and hit enter.

6.1.1.16 Type “l**s**” at # prompt to list files on Compact Flash, make sure “**ucsxfunctest**” is listed.

6.1.1.17 Type in the following line, which is case sensitive, to run tests: ucsxfunctest –a –vvv –d 201301011200.00 –g IS200UCSAH1ACC

6.1.1.18 If all previous parts of the tests PASS, then you will see:

```
****************************************
*    Inspect LEDs and Press Any Key    *
****************************************
```

6.1.1.19 At this time make sure all 17 LED's on UCSx are illuminated and press any key on keyboard.

6.1.1.20 If the tests all PASSED, you should see:

```
TEST_SUMMARY   :
TEST_SUMMARY   : FUNCTIONAL_TEST_FINAL_STATUS                    : PASS
                 ****************************************
                 *          END_FUNCTIONAL_TEST         *
                 ****************************************
#
#
```

6.1.1.21 Remove power from UCSx, remove all Loopback Plugs, remove Jump Drive, and remove Compact Flash labeled "UCSXFUNCTEST".

6.1.1.22 If unit has PASSED all tests proceed to step 6.1.2.

6.1.2 Plug Mark VIe Simplex Test Rack cables for UCSx into appropriate connectors on UCSx to be tested.

✍ **Note: The following portions of the test assume you are familiar with using ToolboxST.**

6.1.3 Open **ToolboxST** and open "**USCAH1_Simplex_Vie**" by double-clicking on it.

6.1.4 Insert Compact Flash card into San Disk Compact Flash Reader.

6.1.5 From the menu, Download Controller Setup by going to **Device->Download->Controller Setup.** Follow instructions in dialog boxes that follow, selecting Format Flash.

6.1.6 Remove Compact Flash from reader and install into UCSx to be tested.

6.1.7 Apply to UCSx to be testing and watching Hyper Terminal wait for unit to finish boot-up process.

6.1.8 From the menu, use Download Wizard to finish loading files as needed (probably three) by going to **Device->Download->Download Wizard.** Follow instructions in dialog boxes that follow.

6.1.9 After all downloads completed successfully, bring unit online in ToolboxST and check for appropriate live values on any of the cards.

6.1.10 Let unit run online for at least 48 hours.

6.2 ***TEST COMPLETE ***

7. NOTES

7.1 None at this time.

8. ATTACHMENTS

8.1 None at this time.