



GE Energy

Functional Testing Specification

Parts & Repair Services
Louisville, KY

LOU-GED-DS215UCVB

Test Procedure for a Universal Controller Assy, UCVB

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1. SCOPE

1.1 This is a functional testing procedure for a Mark VI/Innovation Universal Controller Assy.

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 N:\Design Folders\IS2\IS215\UCVB

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	H188665	Innovation rack for Sim47

6. TESTING PROCESS

6.1 Setup

6.1.1 Setup is called out in each step.



UCVBG#GE	ISBus	DLAN	Sim #
G1A	0	1	SIM47

6.2 Testing Procedure

6.2.1 Initial Inspection: Look the card over very closely. Physical damage & corrosion have been found on these units, along with missing hardware. Most failures in these cards are related to either the processor or Genius sections, for which we have no repair at this time. These units will require either exchange or RLR.

6.2.2 Clearing the Flash: The flash must be cleared prior to testing. Remove J4. It can be found on the outside corner of the processor card, opposite side of the board from P1, adjacent a metal bracket that holds the cards together. Slide unit into the rack, then power it up. Wait until all the status led's flash in unison. This will indicate that the flash has been cleared successfully. Re-install J4.

6.2.3 Backplane testing, using Sloader (Serial Loader): Call up the program on the Innovation pc called Sloader. This is a serial loader program that will set up the TCP/IP address in the unit's flash memory so that the pc can find the unit on the Ethernet. When that program opens, there will be a **Platform** drop-down menu from which you can select the unit you have on hand. Once you've done this, click on **TCP/IP settings**, and correct both **IP Address** and **Router IP** boxes to **192.168.101.47** (47 means whatever Sim # you have, say **47** for H1/H2 units). Then click **OK**. If you have a DLAN unit, set the dipswitch for the same 47 number at this time. Now click on **Serial Port Settings**, and select **COM1** and **19200** bps, and then click **OK**. Now, check the white boxes next to **Configure TCP/IP**, **Load Flash File System**, and **Display Summary Information**. Click on **Start Command**, and follow the instructions given in the dialog box. The first and last ones will be to *Cycle Power on Target*, which means cycle power on the unit. The second time you cycle power, while the unit is OFF, slide the SIOB card into position.

6.2.4 Backplane testing, using GE Control Systems Solutions Toolbox: If Toolbox is already open, check to make sure the Sim file for your particular unit is up already. If

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not, then open up another instance of Toolbox and open the file you need. You may be prompted for a password. If so, enter **gesalem9**. It will then bring up another window, basically asking for the privilege level you want, select **Change All Parameters**. Now power up the unit. Once it boots up, highlight **SIM47** on the left side (5x being whatever Sim file you're working with), click on **Device**, then **Download**, and **Product Code**. When it's done, it will prompt you for a reboot. Click NO and then cycle power to the rack. Once unit has finished booting up again, click on the button in the upper toolbar that has a checkmark on it. The window below should ultimately reflect "**Validation complete with 0 errors & 0 warnings**". Next, click on the Build button, which has a hammer and ruler on it, and the lower window should display "**xx records with 0 errors-SUCCESS**" (xx records can be any number). Go online by clicking the button on the upper right of the toolbar with two mating yellow plugs. You should see a small window on the lower right side of the screen with *NO CODE*. Now go to the Download button, the one with the red arrow pointing downward, click OK, then look for the box that said *No Code* to turn green and display *Equal*. Look for the BACC led on the SIOB card to be lit, indicating backplane communications have been achieved. Now click on **Hardware and I/O Definitions**, **VME7: VME Interface**, and **SIOB1**. You should now see some sort of activity in the *Value* column indicating activity. It won't be much, because at this time we have no items connected to the card to indicate, but there will be a little drift in the voltages you see.

- 6.2.5 Clear Flash to Default:** This is very important. The unit **MUST** be reset to factory default flash settings to prevent conflicts in the field, or possible corruption when the customer goes to set the unit up for their needs. Return to step 6.2.2 once again for this procedure.



Note: The technician, lead tech, or MSO determines burn-in requirement on an as-needed basis, or per customer request. If none has been directed, 1 hour should be sufficient.

6.3 *TEST COMPLETE *****

7. NOTES

7.1 None at this time

8. ATTACHMENTS

8.1 None at this time