GE Energy *Parts & Repair Services* *Louisville, KY*	**Functional Testing Specification** **LOU-MVT-MeggerVerification**

Megger Verification Instruction for Louisville MVT System

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

REV.	DESCRIPTION	SIGNATURE	REV. DATE
A	Initial release	J. Barton	5/22/2013

PREPARED BY	REVIEWED BY	REVIEWED BY	QUALITY APPROVAL
J. Barton			Charlie Wade
DATE	**DATE**	**DATE**	**DATE**
5/22/2013			5/22/2013

1. SCOPE

1.1 This is a megger verification instruction for the Louisville MVT test system.

2. STANDARDS OF QUALITY

2.1 Verification shall only be done under the following environmental conditions.

2.1.1 Temperature 70°F ±10°F (60°F to 80°F)

2.1.2 Humidity 20 - 75% Relative Humidity

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 All verifications will be made with a calibrated Keithley DMM or equivalent.

3.1.2 IES 13503 Manual

4. EQUIPMENT REQUIRED

4.1 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	H190082	Keithley DMM
1	H190078	1 Ohm 5W resistor
1	H190081	Megger SMRT1
1	H190015	RMS9 Trip Test System

5. Calibration Requirements

5.1.1 The Keithley DMM shall be calibrated at least once every 12 months (unless cycle is extended per QMS requirements).

5.1.2 All verification measurements from this instruction shall be recorded in a spreadsheet form MMCVF1, MVT Megger Calibration Verification Form, dated 5/22/2013. Form is located N:\Design Folders\GE Micro Versa Trip\Test Equip. Once form has been completed it shall be printed out and added to the RMS9 Trip Tester Folder as a record.

6. Megger Verification Instruction

6.1 The SMRT1 Amplifier should be verified at least annually for proper operation. Use the front panel connections of the amplifier to verify voltage, using a calibrated DMM and SMRT1 diagnostic program.

6.2 Disconnect the machine Voltage and Current leads from the front of the Megger.

6.3 Connect the DMM to the VOLTAGE output connections of the MEGGER.

6.4 If the IES application is running, stop and exit the application.

6.5 Start the SMRT application by clicking on the icon for “PowerDB 10 Advanced” on the Desktop screen. The “Select an Instrument” menu should appear.

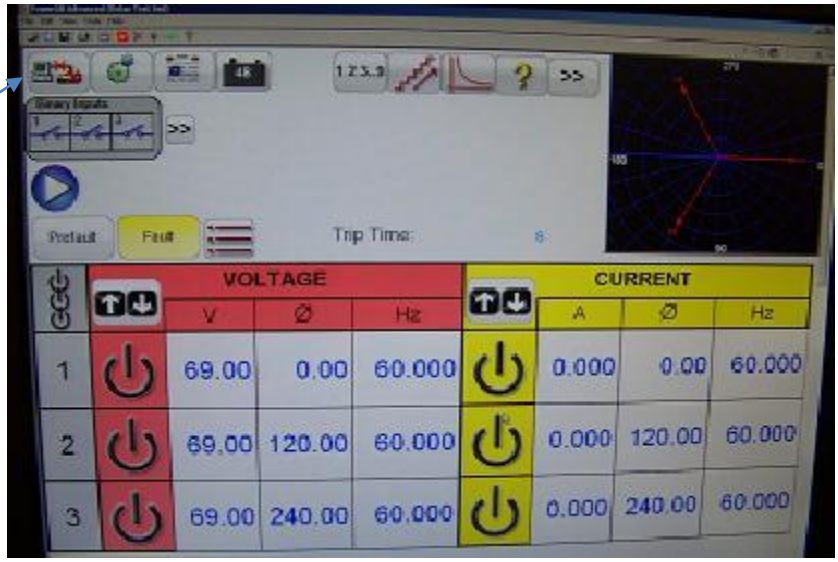
6.6 From the “Select an Instrument” list, Select “MPRT/SMRT” in the RELAY column. The Instrument Configuration Screen should appear.

6.7 Click “OK” on the Instrument Configuration screen. (No change is necessary.) The “Select a Form” screen should appear.

6.8 On the “Select a Form” menu, choose “SMRT and MPRT STVI.”

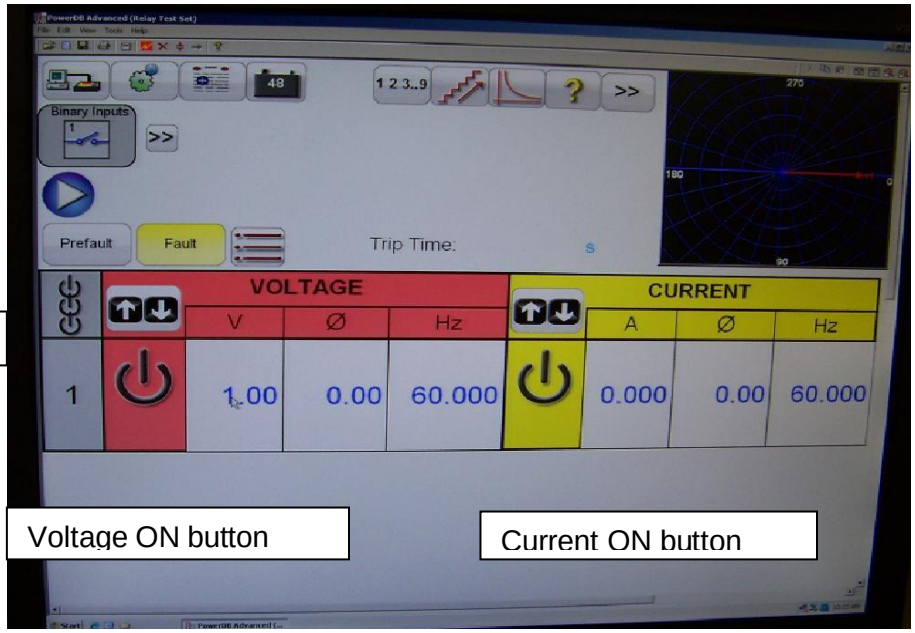
6.9 The program will start with the default 3-Phase supply.

Click the Connect Icon to start communications to the Megger.



6.10 Click on the CONNECT icon (upper left); if the connection is successful, the display will automatically update to the proper single-phase supply.

ALL ON button



6.11 Change the voltage to 1.0 volts.

6.12 Click the ALL ON icon. (icon will turn Green).

6.13 Click the Voltage ON icon.

6.14 Measure the voltage at the DMM.

6.15 Repeat for 0.100V, 0.500V, 1.767V, 2.00V and 2.697V. And record results on MEGGER Verification Sheet. This covers the entire operating range of the IES tests.

6.16 If any measurement is not within 1% of the requested value, please contact IES.

6.17 Use the front panel connections and an appropriate load to verify current, using a calibrated DMM and the SMRT1 diagnostic program.

6.18 Disconnect the machine Voltage and Current leads from the front of the Megger.

6.19 Connect an ammeter to the Current output connector; an appropriate load MUST be inline with the ammeter. A 1-Ohm, 5W resistor is suitable. (H190078 – located on MVT rear cabinet door).

6.20 If the IES application is running, stop and exit the application.

6.21 Start the SMRT application by clicking on the icon for "PowerDB 10 Advanced." The "Select an Instrument" menu should appear.

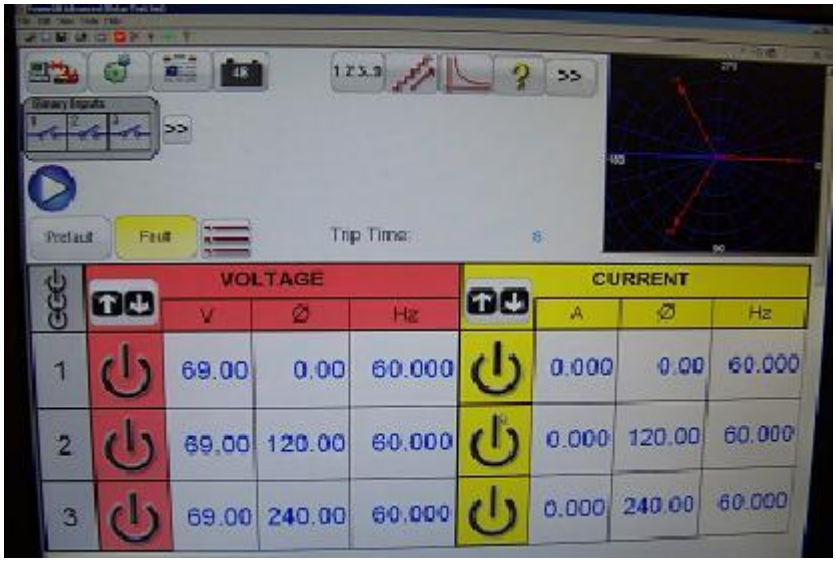
6.22 From the "Select an Instrument" list, Select "MPRT/SMRT" in the RELAY column. The Instrument Configuration Screen should appear.

6.23 Click "OK" on the Instrument Configuration screen. (No change is necessary.) The "Select a Form" screen should appear.

6.24 On the "Select a Form" menu, choose "SMRT and MPRT STVI."

6.25 The program will start with the default 3-Phase supply (see image, above). Click on the CONNECT icon (upper left). If the connection is successful, the display will automatically update to the proper single-phase supply.

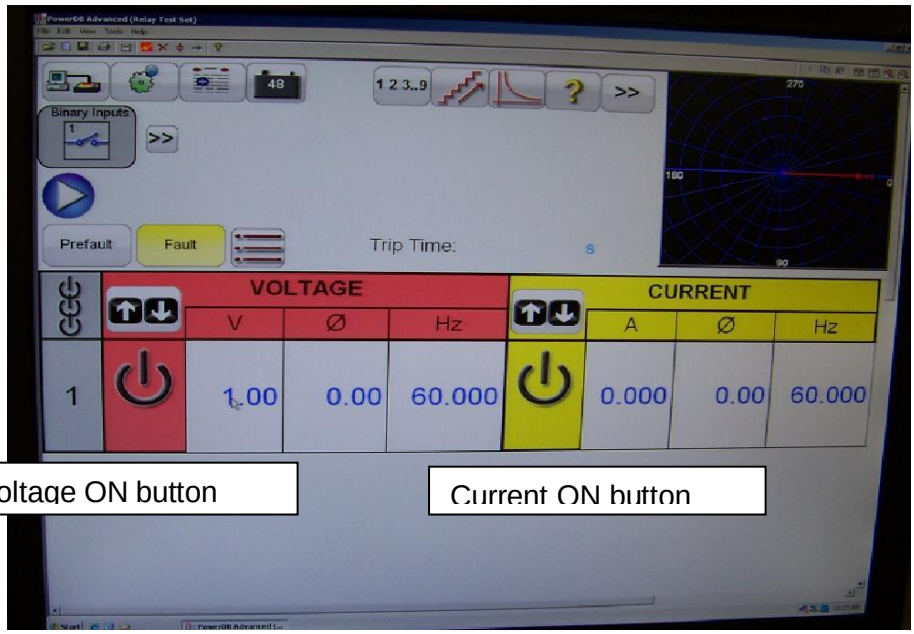
Click the Connect Icon to start communications to the Megger.



6.26 Change the voltage to 0.0 volts.

6.27 Change the current to 0.5 amps.

6.28 Click the ALL ON icon.



6.29 Click the Current ON icon.

6.30 Measure the current at the ammeter. (Set DMM to measure A).

6.31 Repeat for 0.200A, 1.000A, and 2.00A. And record results on MEGGER Verification Sheet.

6.32 This covers the entire operating range of the IES tests.

6.33 If any measurement is not within 1% of the requested value or +/- 6mV, please contact IES.

6.34 You are finished!

7. Additional Notes

7.1 Form is located N:\Design Folders\GE Micro Versa Trip\Test Equip.

8. Attachments

8.1 None at this time.