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

Calibration Procedure for Louisville ATE System

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

REV.	DESCRIPTION	SIGNATURE	REV. DATE
A	Initial release	E. Rouse/P. Kelley	10/25/2001
B	Updated and transcribed to an electronic format.	E. Rouse	10/15/2010
C	Updated to more comprehensive procedure.	E. Rouse	12/03/2010
D	Updated with pictures and Calibration tag	J. Barton	3/2/2016

PREPARED BY	REVIEWED BY	REVIEWED BY	QUALITY APPROVAL
E. Rouse/P. Kelley	E. Rouse		Charlie Wade
DATE	**DATE**	**DATE**	**DATE**
10/25/2001	12/3/2010		10/15/2010

1. SCOPE

1.1 This is a calibration procedure for the Louisville ATE test system.

2. STANDARDS OF QUALITY

2.1 Calibration of tester will only be done with a currently calibrated Fluke 45 Dual Display Digital Multimeter or equivalent equipment.

2.2 Tolerances on the five ATE Universal Interface cards are set at +-0.03V. These cards were built specific for this fixture.

2.3 Calibration shall only be done under the following environmental conditions.

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

2.3.2 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 The internal virtual meter of the ATE can only read to hundredths of a volt. Whereas the Fluke 45 will read to thousandths of a volt. All adjustments will be made to calibrated standard of the Fluke 45 meter or equivalent.

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		Fluke 45 Dual Display Digital Multimeter or equivalent
1	H033890	Rainbow Interface Box
1	H033779	ATE System

5. Calibration Requirements

5.1.1 Five Universal Interface boards in the system require calibration on a yearly basis, using the procedure listed in section 6. Each Universal Interface board is comprised of 26 interface channels that require calibration, for a total of 130 channels. All yearly measurements from the procedure are recorded in a spreadsheet on the server as follows: **J:\Biz_Data\Test Development\Documents\ATE System #1\ATECal Data\ATE Calibration Data mm-dd-yy. Located in the sdata directory. Use the ATE Calibration Blank.xls as your Template. DO NOT WRITE OVER the Template, Save with the Cal Date as a suffix to the file name.**

6. Calibration Procedure

6.1.1 Power the ATE system down.

6.1.2 Remove all 5 Universal Interface Boards from the system and remove their heat sink plates and bars to allow access to all calibration potentiometers. (Testing has found that removing the Heat sinks may not be necessary if ALL Channels PASS calibration tolerances)

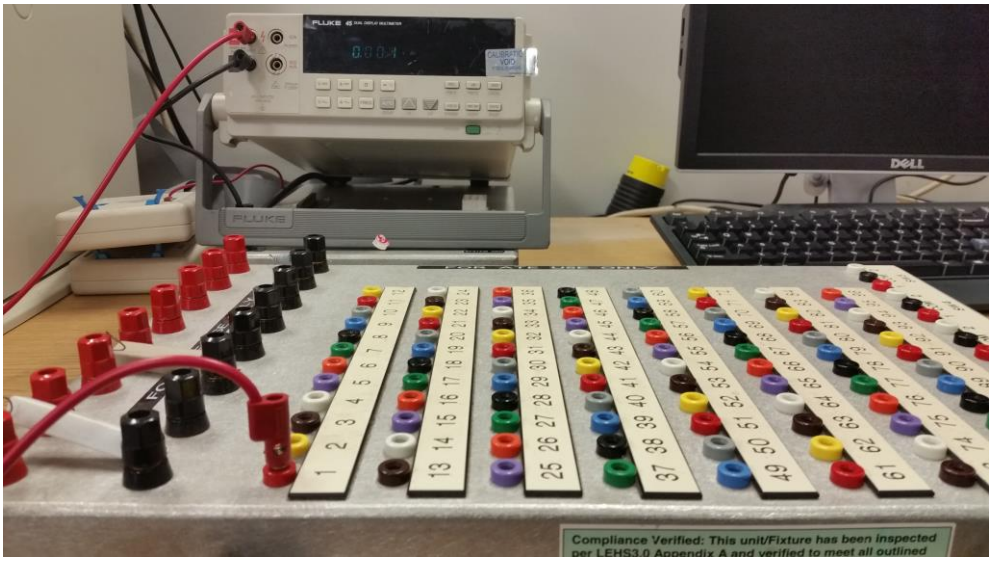
6.1.3

6.1.4 Install the Extender Card for the Universal Interface Boards into Slot #1.

6.1.5 Re-insert Universal Interface Board#1 into slot 1 (far left) and power the system back up.

6.1.6

6.1.7 Connect the Rainbow interface box to the system.



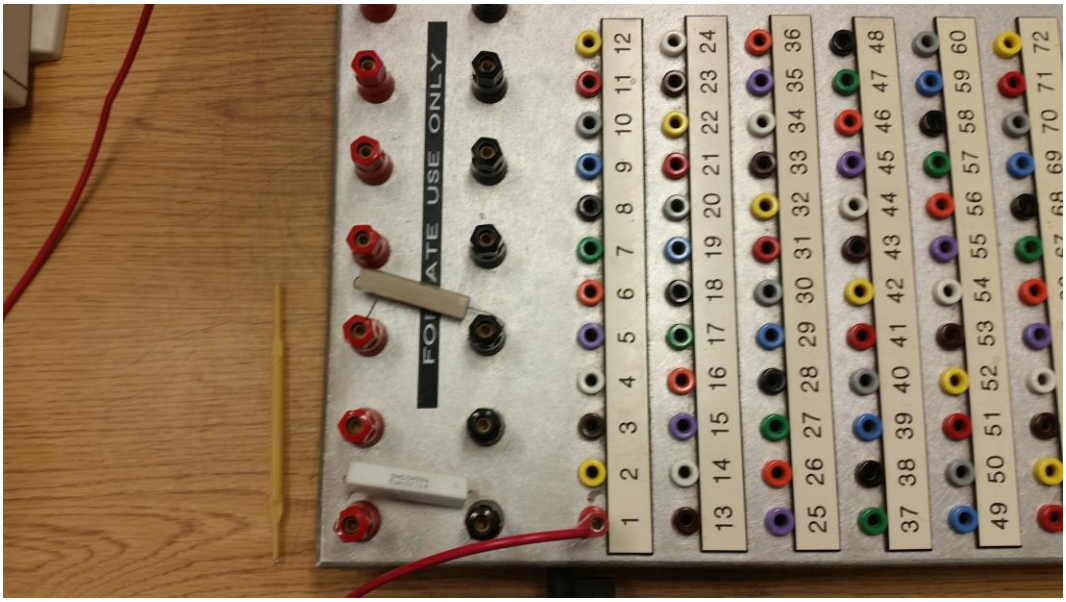
6.1.8

6.1.9 Connect the negative lead of the Fluke 45 Meter (classified as a measurement standard) to system ground.

6.1.10

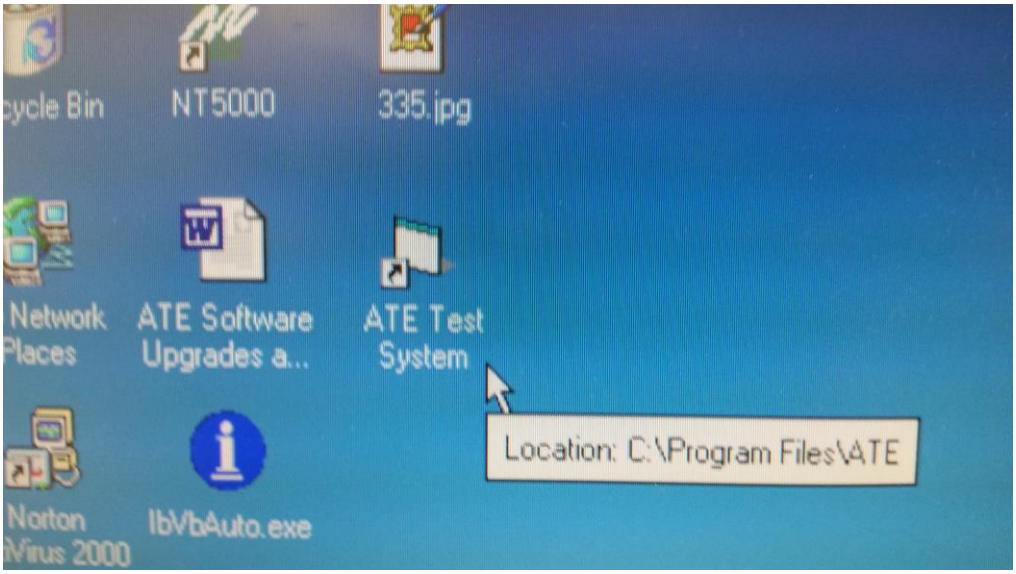
6.1.11 Connect the positive lead of the Fluke 45 Meter to the particular interface channel you are calibrating on the Rainbow box. Start with channel 1 and finish with channel 26.

6.1.12

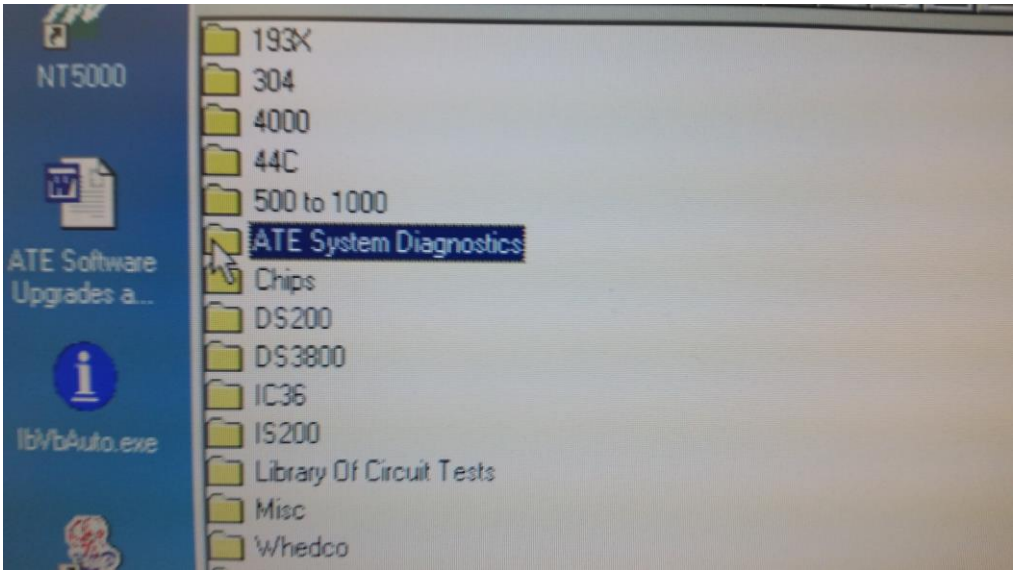


6.1.13 Run the “ATE Calibration Tool” program under “ATE System Diagnostics” to send 0.00vdc to the channel you are calibrating.

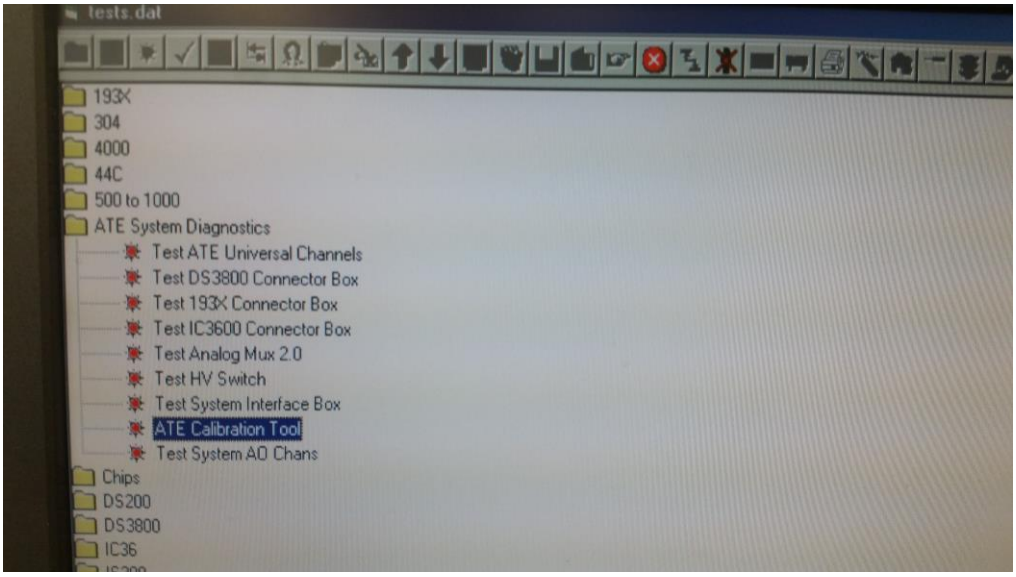
6.1.14



6.1.15

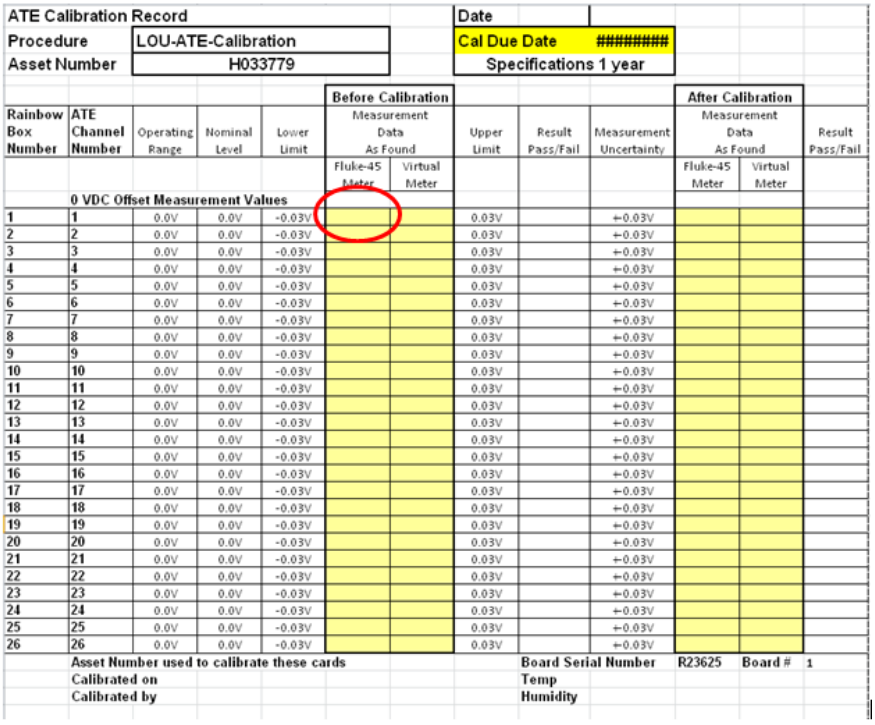


6.1.16



6.1.17 Within the “ATE Calibration Tool” will display a virtual voltmeter on the screen to measure the channel you are calibrating.

6.1.18 Record the Offset voltage displayed on the Fluke 45 Meter in the “Before Cal Offset Voltage-Fluke 45 Meter” column of the ATE Calibration Record form.



ATE Calibration Record — Date

Procedure: LOU-ATE-Calibration — Cal Due Date: ######## — Specifications 1 year

Asset Number: H033779

Rainbow Box Number	ATE Channel Number	Operating Range	Nominal Level	Lower Limit	Before Calibration Measurement Data As Found: Fluke-45 Meter	Before Calibration Measurement Data As Found: Virtual Meter	Upper Limit	Result Pass/Fail	Measurement Uncertainty	After Calibration Measurement Data As Found: Fluke-45 Meter	After Calibration Measurement Data As Found: Virtual Meter	Result Pass/Fail
	0 VDC Offset Measurement Values											
1	1	0.0V	0.0V	-0.03V			0.03V		±0.03V			
2	2	0.0V	0.0V	-0.03V			0.03V		±0.03V			
3	3	0.0V	0.0V	-0.03V			0.03V		±0.03V			
4	4	0.0V	0.0V	-0.03V			0.03V		±0.03V			
5	5	0.0V	0.0V	-0.03V			0.03V		±0.03V			
6	6	0.0V	0.0V	-0.03V			0.03V		±0.03V			
7	7	0.0V	0.0V	-0.03V			0.03V		±0.03V			
8	8	0.0V	0.0V	-0.03V			0.03V		±0.03V			
9	9	0.0V	0.0V	-0.03V			0.03V		±0.03V			
10	10	0.0V	0.0V	-0.03V			0.03V		±0.03V			
11	11	0.0V	0.0V	-0.03V			0.03V		±0.03V			
12	12	0.0V	0.0V	-0.03V			0.03V		±0.03V			
13	13	0.0V	0.0V	-0.03V			0.03V		±0.03V			
14	14	0.0V	0.0V	-0.03V			0.03V		±0.03V			
15	15	0.0V	0.0V	-0.03V			0.03V		±0.03V			
16	16	0.0V	0.0V	-0.03V			0.03V		±0.03V			
17	17	0.0V	0.0V	-0.03V			0.03V		±0.03V			
18	18	0.0V	0.0V	-0.03V			0.03V		±0.03V			
19	19	0.0V	0.0V	-0.03V			0.03V		±0.03V			
20	20	0.0V	0.0V	-0.03V			0.03V		±0.03V			
21	21	0.0V	0.0V	-0.03V			0.03V		±0.03V			
22	22	0.0V	0.0V	-0.03V			0.03V		±0.03V			
23	23	0.0V	0.0V	-0.03V			0.03V		±0.03V			
24	24	0.0V	0.0V	-0.03V			0.03V		±0.03V			
25	25	0.0V	0.0V	-0.03V			0.03V		±0.03V			
26	26	0.0V	0.0V	-0.03V			0.03V		±0.03V			

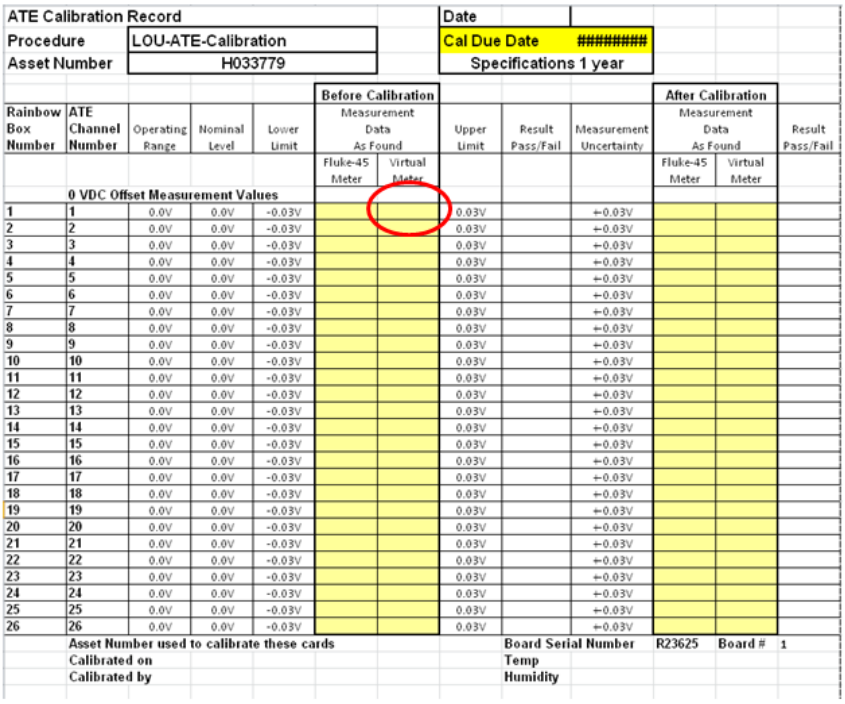
Asset Number used to calibrate these cards — Board Serial Number R23625 — Board # 1

Calibrated on — Temp

Calibrated by — Humidity

6.1.19

6.1.20 Record the Offset voltage displayed on the Virtual Meter in the “Before Cal Offset Voltage-Virtual Meter” column of the ATE Calibration Record form.



ATE Calibration Record — Date

Procedure: LOU-ATE-Calibration — Cal Due Date: ######## — Specifications 1 year

Asset Number: H033779

Rainbow Box Number	ATE Channel Number	Operating Range	Nominal Level	Lower Limit	Before Calibration Measurement Data As Found: Fluke-45 Meter	Before Calibration Measurement Data As Found: Virtual Meter	Upper Limit	Result Pass/Fail	Measurement Uncertainty	After Calibration Measurement Data As Found: Fluke-45 Meter	After Calibration Measurement Data As Found: Virtual Meter	Result Pass/Fail
	0 VDC Offset Measurement Values											
1	1	0.0V	0.0V	-0.03V			0.03V		±0.03V			
2	2	0.0V	0.0V	-0.03V			0.03V		±0.03V			
3	3	0.0V	0.0V	-0.03V			0.03V		±0.03V			
4	4	0.0V	0.0V	-0.03V			0.03V		±0.03V			
5	5	0.0V	0.0V	-0.03V			0.03V		±0.03V			
6	6	0.0V	0.0V	-0.03V			0.03V		±0.03V			
7	7	0.0V	0.0V	-0.03V			0.03V		±0.03V			
8	8	0.0V	0.0V	-0.03V			0.03V		±0.03V			
9	9	0.0V	0.0V	-0.03V			0.03V		±0.03V			
10	10	0.0V	0.0V	-0.03V			0.03V		±0.03V			
11	11	0.0V	0.0V	-0.03V			0.03V		±0.03V			
12	12	0.0V	0.0V	-0.03V			0.03V		±0.03V			
13	13	0.0V	0.0V	-0.03V			0.03V		±0.03V			
14	14	0.0V	0.0V	-0.03V			0.03V		±0.03V			
15	15	0.0V	0.0V	-0.03V			0.03V		±0.03V			
16	16	0.0V	0.0V	-0.03V			0.03V		±0.03V			
17	17	0.0V	0.0V	-0.03V			0.03V		±0.03V			
18	18	0.0V	0.0V	-0.03V			0.03V		±0.03V			
19	19	0.0V	0.0V	-0.03V			0.03V		±0.03V			
20	20	0.0V	0.0V	-0.03V			0.03V		±0.03V			
21	21	0.0V	0.0V	-0.03V			0.03V		±0.03V			
22	22	0.0V	0.0V	-0.03V			0.03V		±0.03V			
23	23	0.0V	0.0V	-0.03V			0.03V		±0.03V			
24	24	0.0V	0.0V	-0.03V			0.03V		±0.03V			
25	25	0.0V	0.0V	-0.03V			0.03V		±0.03V			
26	26	0.0V	0.0V	-0.03V			0.03V		±0.03V			

Asset Number used to calibrate these cards — Board Serial Number R23625 — Board # 1

Calibrated on — Temp

Calibrated by — Humidity

6.1.21

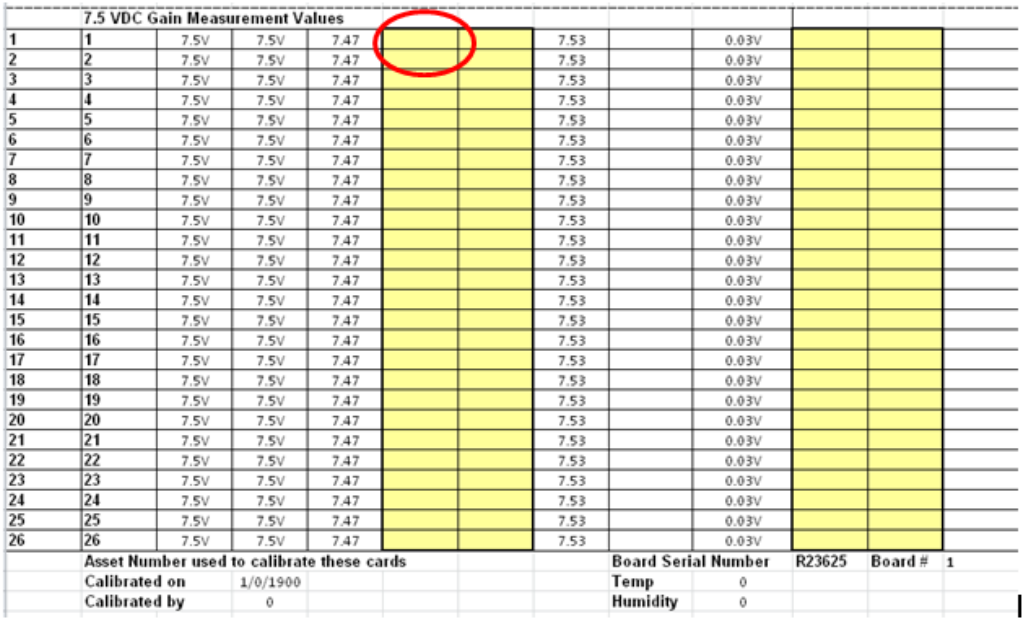
6.1.22 Record a P or F in the "Before Cal Pass/Fail" column of the ATE Calibration Record form to indicate whether the Offset and Gain voltages were within tolerance.

ATE Calibration Record							Date					
Procedure	LOU-ATE-Calibration						Cal Due Date	########				
Asset Number	H033779						Specifications 1 year					
					Before Calibration					After Calibration		
Rainbow Box Number	ATE Channel Number	Operating Range	Nominal Level	Lower Limit	Measurement Data As Found		Upper Limit	Result Pass/Fail	Measurement Uncertainty	Measurement Data As Found		Result Pass/Fail
					Fluke-45 Meter	Virtual Meter				Fluke-45 Meter	Virtual Meter	
	0 VDC Offset Measurement Values											
1	1	0.0V	0.0V	-0.03V			0.03V		+-0.03V			
2	2	0.0V	0.0V	-0.03V			0.03V		+-0.03V			
3	3	0.0V	0.0V	-0.03V			0.03V		+-0.03V			
4	4	0.0V	0.0V	-0.03V			0.03V		+-0.03V			
5	5	0.0V	0.0V	-0.03V			0.03V		+-0.03V			
6	6	0.0V	0.0V	-0.03V			0.03V		+-0.03V			
7	7	0.0V	0.0V	-0.03V			0.03V		+-0.03V			
8	8	0.0V	0.0V	-0.03V			0.03V		+-0.03V			
9	9	0.0V	0.0V	-0.03V			0.03V		+-0.03V			
10	10	0.0V	0.0V	-0.03V			0.03V		+-0.03V			
11	11	0.0V	0.0V	-0.03V			0.03V		+-0.03V			
12	12	0.0V	0.0V	-0.03V			0.03V		+-0.03V			
13	13	0.0V	0.0V	-0.03V			0.03V		+-0.03V			
14	14	0.0V	0.0V	-0.03V			0.03V		+-0.03V			
15	15	0.0V	0.0V	-0.03V			0.03V		+-0.03V			
16	16	0.0V	0.0V	-0.03V			0.03V		+-0.03V			
17	17	0.0V	0.0V	-0.03V			0.03V		+-0.03V			
18	18	0.0V	0.0V	-0.03V			0.03V		+-0.03V			
19	19	0.0V	0.0V	-0.03V			0.03V		+-0.03V			
20	20	0.0V	0.0V	-0.03V			0.03V		+-0.03V			
21	21	0.0V	0.0V	-0.03V			0.03V		+-0.03V			
22	22	0.0V	0.0V	-0.03V			0.03V		+-0.03V			
23	23	0.0V	0.0V	-0.03V			0.03V		+-0.03V			
24	24	0.0V	0.0V	-0.03V			0.03V		+-0.03V			
25	25	0.0V	0.0V	-0.03V			0.03V		+-0.03V			
26	26	0.0V	0.0V	-0.03V			0.03V		+-0.03V			
	Asset Number used to calibrate these cards							Board Serial Number		R23625	Board #	1
	Calibrated on							Temp				
	Calibrated by							Humidity				

6.1.23

6.1.24 Hitting ENTER will initiate the ATE system to send out +7.50vdc to the universal channel you are calibrating.

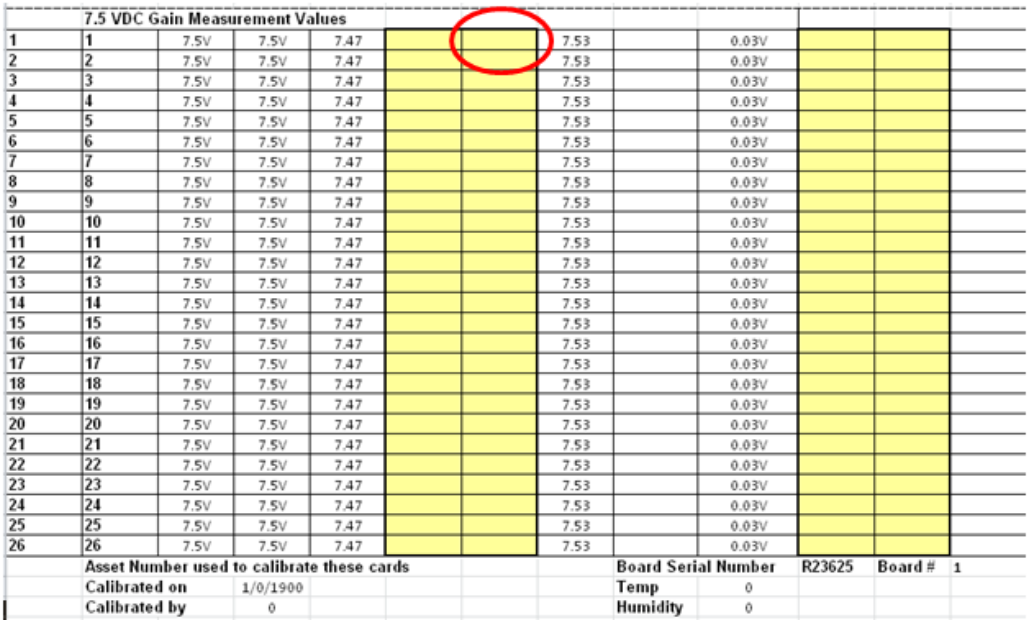
6.1.25 Record the Gain voltage displayed on the Fluke 45 Meter in the "Before Cal Gain Voltage-Fluke 45 Meter" column of the ATE Calibration Record form.



	7.5 VDC Gain Measurement Values											
1	1	7.5V	7.5V	7.47			7.53		0.03V			
2	2	7.5V	7.5V	7.47			7.53		0.03V			
3	3	7.5V	7.5V	7.47			7.53		0.03V			
4	4	7.5V	7.5V	7.47			7.53		0.03V			
5	5	7.5V	7.5V	7.47			7.53		0.03V			
6	6	7.5V	7.5V	7.47			7.53		0.03V			
7	7	7.5V	7.5V	7.47			7.53		0.03V			
8	8	7.5V	7.5V	7.47			7.53		0.03V			
9	9	7.5V	7.5V	7.47			7.53		0.03V			
10	10	7.5V	7.5V	7.47			7.53		0.03V			
11	11	7.5V	7.5V	7.47			7.53		0.03V			
12	12	7.5V	7.5V	7.47			7.53		0.03V			
13	13	7.5V	7.5V	7.47			7.53		0.03V			
14	14	7.5V	7.5V	7.47			7.53		0.03V			
15	15	7.5V	7.5V	7.47			7.53		0.03V			
16	16	7.5V	7.5V	7.47			7.53		0.03V			
17	17	7.5V	7.5V	7.47			7.53		0.03V			
18	18	7.5V	7.5V	7.47			7.53		0.03V			
19	19	7.5V	7.5V	7.47			7.53		0.03V			
20	20	7.5V	7.5V	7.47			7.53		0.03V			
21	21	7.5V	7.5V	7.47			7.53		0.03V			
22	22	7.5V	7.5V	7.47			7.53		0.03V			
23	23	7.5V	7.5V	7.47			7.53		0.03V			
24	24	7.5V	7.5V	7.47			7.53		0.03V			
25	25	7.5V	7.5V	7.47			7.53		0.03V			
26	26	7.5V	7.5V	7.47			7.53		0.03V			
	Asset Number used to calibrate these cards							Board Serial Number		R23625	Board #	1
	Calibrated on	1/0/1900						Temp	0			
	Calibrated by	0						Humidity	0			

6.1.26

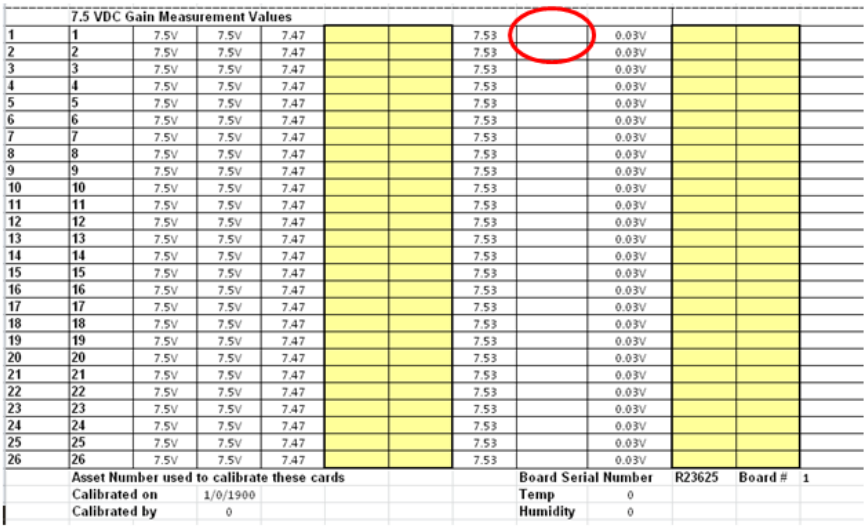
6.1.27 Record the Gain voltage displayed on the Virtual Meter in the “Before Cal Gain Voltage-Virtual Meter” column of the ATE Calibration Record form.



	7.5 VDC Gain Measurement Values											
1	1	7.5V	7.5V	7.47			7.53		0.03V			
2	2	7.5V	7.5V	7.47			7.53		0.03V			
3	3	7.5V	7.5V	7.47			7.53		0.03V			
4	4	7.5V	7.5V	7.47			7.53		0.03V			
5	5	7.5V	7.5V	7.47			7.53		0.03V			
6	6	7.5V	7.5V	7.47			7.53		0.03V			
7	7	7.5V	7.5V	7.47			7.53		0.03V			
8	8	7.5V	7.5V	7.47			7.53		0.03V			
9	9	7.5V	7.5V	7.47			7.53		0.03V			
10	10	7.5V	7.5V	7.47			7.53		0.03V			
11	11	7.5V	7.5V	7.47			7.53		0.03V			
12	12	7.5V	7.5V	7.47			7.53		0.03V			
13	13	7.5V	7.5V	7.47			7.53		0.03V			
14	14	7.5V	7.5V	7.47			7.53		0.03V			
15	15	7.5V	7.5V	7.47			7.53		0.03V			
16	16	7.5V	7.5V	7.47			7.53		0.03V			
17	17	7.5V	7.5V	7.47			7.53		0.03V			
18	18	7.5V	7.5V	7.47			7.53		0.03V			
19	19	7.5V	7.5V	7.47			7.53		0.03V			
20	20	7.5V	7.5V	7.47			7.53		0.03V			
21	21	7.5V	7.5V	7.47			7.53		0.03V			
22	22	7.5V	7.5V	7.47			7.53		0.03V			
23	23	7.5V	7.5V	7.47			7.53		0.03V			
24	24	7.5V	7.5V	7.47			7.53		0.03V			
25	25	7.5V	7.5V	7.47			7.53		0.03V			
26	26	7.5V	7.5V	7.47			7.53		0.03V			
	Asset Number used to calibrate these cards							Board Serial Number		R23625	Board #	1
	Calibrated on	1/0/1900						Temp	0			
	Calibrated by	0						Humidity	0			

6.1.28

6.1.29 Record a P or F in the “Before Cal Pass/Fail” column of the ATE Calibration Record form to indicate whether the Offset and Gain voltages were within tolerance.



	7.5 VDC Gain Measurement Values											
1	1	7.5V	7.5V	7.47			7.53		0.03V			
2	2	7.5V	7.5V	7.47			7.53		0.03V			
3	3	7.5V	7.5V	7.47			7.53		0.03V			
4	4	7.5V	7.5V	7.47			7.53		0.03V			
5	5	7.5V	7.5V	7.47			7.53		0.03V			
6	6	7.5V	7.5V	7.47			7.53		0.03V			
7	7	7.5V	7.5V	7.47			7.53		0.03V			
8	8	7.5V	7.5V	7.47			7.53		0.03V			
9	9	7.5V	7.5V	7.47			7.53		0.03V			
10	10	7.5V	7.5V	7.47			7.53		0.03V			
11	11	7.5V	7.5V	7.47			7.53		0.03V			
12	12	7.5V	7.5V	7.47			7.53		0.03V			
13	13	7.5V	7.5V	7.47			7.53		0.03V			
14	14	7.5V	7.5V	7.47			7.53		0.03V			
15	15	7.5V	7.5V	7.47			7.53		0.03V			
16	16	7.5V	7.5V	7.47			7.53		0.03V			
17	17	7.5V	7.5V	7.47			7.53		0.03V			
18	18	7.5V	7.5V	7.47			7.53		0.03V			
19	19	7.5V	7.5V	7.47			7.53		0.03V			
20	20	7.5V	7.5V	7.47			7.53		0.03V			
21	21	7.5V	7.5V	7.47			7.53		0.03V			
22	22	7.5V	7.5V	7.47			7.53		0.03V			
23	23	7.5V	7.5V	7.47			7.53		0.03V			
24	24	7.5V	7.5V	7.47			7.53		0.03V			
25	25	7.5V	7.5V	7.47			7.53		0.03V			
26	26	7.5V	7.5V	7.47			7.53		0.03V			
	Asset Number used to calibrate these cards							Board Serial Number		R23625	Board #	1
	Calibrated on		1/0/1900					Temp	0			
	Calibrated by		0					Humidity	0			

6.1.30

6.1.31 Hitting ENTER will command the ATE system to send out +0.00vdc to the NEXT universal channel you are calibrating.

6.1.32 Adjust PotB* of the channel you are calibrating for 0.000vdc (+/-.001v) as seen on Fluke 45 Meter.

6.1.33 Record the Offset voltage displayed on the Fluke 45 Meter in the “After Cal Offset Voltage-Fluke 45 Meter” column of the ATE Calibration Record form.

ATE Calibration Record							Date					
Procedure	LOU-ATE-Calibration						Cal Due Date	########				
Asset Number	H033779						Specifications 1 year					
					Before Calibration					After Calibration		
Rainbow Box Number	ATE Channel Number	Operating Range	Nominal Level	Lower Limit	Measurement Data As Found		Upper Limit	Result Pass/Fail	Measurement Uncertainty	Measurement Data As Found		Result Pass/Fail
					Fluke-45 Meter	Virtual Meter				Fluke-45 Meter	Virtual Meter	
	0 VDC Offset Measurement Values											
1	1	0.0V	0.0V	-0.03V			0.03V		+0.03V			
2	2	0.0V	0.0V	-0.03V			0.03V		+0.03V			
3	3	0.0V	0.0V	-0.03V			0.03V		+0.03V			
4	4	0.0V	0.0V	-0.03V			0.03V		+0.03V			
5	5	0.0V	0.0V	-0.03V			0.03V		+0.03V			
6	6	0.0V	0.0V	-0.03V			0.03V		+0.03V			
7	7	0.0V	0.0V	-0.03V			0.03V		+0.03V			
8	8	0.0V	0.0V	-0.03V			0.03V		+0.03V			
9	9	0.0V	0.0V	-0.03V			0.03V		+0.03V			
10	10	0.0V	0.0V	-0.03V			0.03V		+0.03V			
11	11	0.0V	0.0V	-0.03V			0.03V		+0.03V			
12	12	0.0V	0.0V	-0.03V			0.03V		+0.03V			
13	13	0.0V	0.0V	-0.03V			0.03V		+0.03V			
14	14	0.0V	0.0V	-0.03V			0.03V		+0.03V			
15	15	0.0V	0.0V	-0.03V			0.03V		+0.03V			
16	16	0.0V	0.0V	-0.03V			0.03V		+0.03V			
17	17	0.0V	0.0V	-0.03V			0.03V		+0.03V			
18	18	0.0V	0.0V	-0.03V			0.03V		+0.03V			
19	19	0.0V	0.0V	-0.03V			0.03V		+0.03V			
20	20	0.0V	0.0V	-0.03V			0.03V		+0.03V			
21	21	0.0V	0.0V	-0.03V			0.03V		+0.03V			
22	22	0.0V	0.0V	-0.03V			0.03V		+0.03V			
23	23	0.0V	0.0V	-0.03V			0.03V		+0.03V			
24	24	0.0V	0.0V	-0.03V			0.03V		+0.03V			
25	25	0.0V	0.0V	-0.03V			0.03V		+0.03V			
26	26	0.0V	0.0V	-0.03V			0.03V		+0.03V			
	Asset Number used to calibrate these cards							Board Serial Number		R23625	Board #	1
	Calibrated on							Temp				
	Calibrated by							Humidity				

6.1.34

6.1.35 Record the Offset voltage displayed on the Virtual Meter in the "After Cal Offset Voltage-Virtual Meter" column of the ATE Calibration Record form.

ATE Calibration Record							Date					
Procedure	LOU-ATE-Calibration						Cal Due Date	########				
Asset Number	H033779						Specifications 1 year					
					Before Calibration					After Calibration		
Rainbow Box Number	ATE Channel Number	Operating Range	Nominal Level	Lower Limit	Measurement Data As Found		Upper Limit	Result Pass/Fail	Measurement Uncertainty	Measurement Data As Found		Result Pass/Fail
					Fluke-45 Meter	Virtual Meter				Fluke-45 Meter	Virtual Meter	
	0 VDC Offset Measurement Values											
1	1	0.0V	0.0V	-0.03V			0.03V		±0.03V			
2	2	0.0V	0.0V	-0.03V			0.03V		±0.03V			
3	3	0.0V	0.0V	-0.03V			0.03V		±0.03V			
4	4	0.0V	0.0V	-0.03V			0.03V		±0.03V			
5	5	0.0V	0.0V	-0.03V			0.03V		±0.03V			
6	6	0.0V	0.0V	-0.03V			0.03V		±0.03V			
7	7	0.0V	0.0V	-0.03V			0.03V		±0.03V			
8	8	0.0V	0.0V	-0.03V			0.03V		±0.03V			
9	9	0.0V	0.0V	-0.03V			0.03V		±0.03V			
10	10	0.0V	0.0V	-0.03V			0.03V		±0.03V			
11	11	0.0V	0.0V	-0.03V			0.03V		±0.03V			
12	12	0.0V	0.0V	-0.03V			0.03V		±0.03V			
13	13	0.0V	0.0V	-0.03V			0.03V		±0.03V			
14	14	0.0V	0.0V	-0.03V			0.03V		±0.03V			
15	15	0.0V	0.0V	-0.03V			0.03V		±0.03V			
16	16	0.0V	0.0V	-0.03V			0.03V		±0.03V			
17	17	0.0V	0.0V	-0.03V			0.03V		±0.03V			
18	18	0.0V	0.0V	-0.03V			0.03V		±0.03V			
19	19	0.0V	0.0V	-0.03V			0.03V		±0.03V			
20	20	0.0V	0.0V	-0.03V			0.03V		±0.03V			
21	21	0.0V	0.0V	-0.03V			0.03V		±0.03V			
22	22	0.0V	0.0V	-0.03V			0.03V		±0.03V			
23	23	0.0V	0.0V	-0.03V			0.03V		±0.03V			
24	24	0.0V	0.0V	-0.03V			0.03V		±0.03V			
25	25	0.0V	0.0V	-0.03V			0.03V		±0.03V			
26	26	0.0V	0.0V	-0.03V			0.03V		±0.03V			
	Asset Number used to calibrate these cards							Board Serial Number		R23625	Board #	1
	Calibrated on							Temp				
	Calibrated by							Humidity				

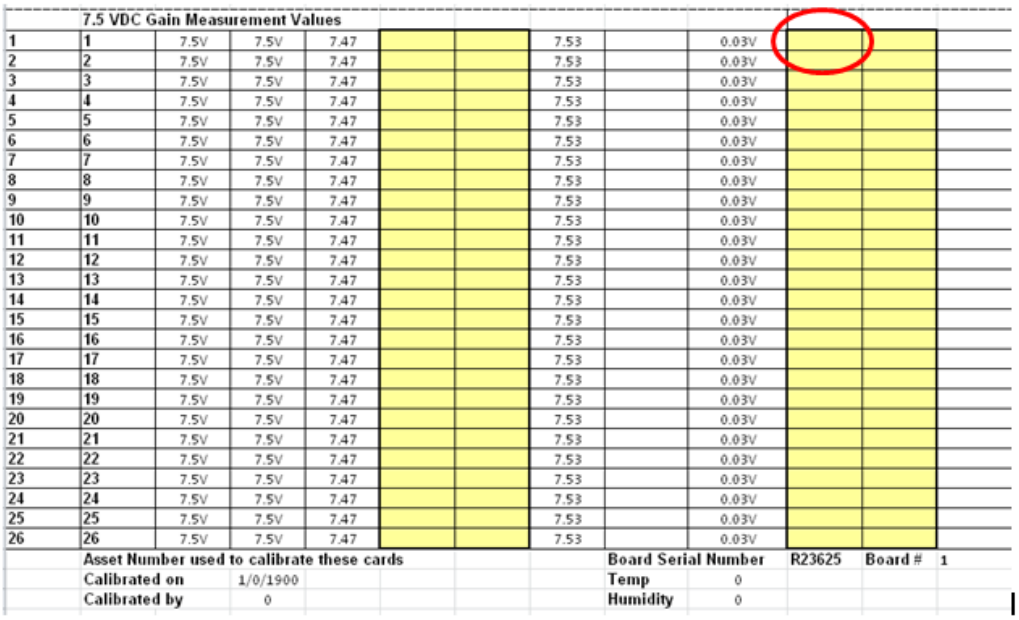
6.1.36

6.1.37 Hitting ENTER will command the ATE system to send out +7.500vdc to the universal channel you are calibrating.

6.1.38 Adjust PotA* of the channel you are calibrating for a Gain voltage of 7.500vdc (+/-.001v) as seen on Fluke 45 Meter.

6.1.39 Adjust PotC* of the channel you are calibrating for a Gain Voltage of 7.50vdc (+/-.01v) as seen on Virtual Meter.

6.1.40 Record the Gain voltage displayed on the Fluke 45 Meter in the "After Cal Gain Voltage-Fluke 45 Meter" column of the ATE Calibration Record form.

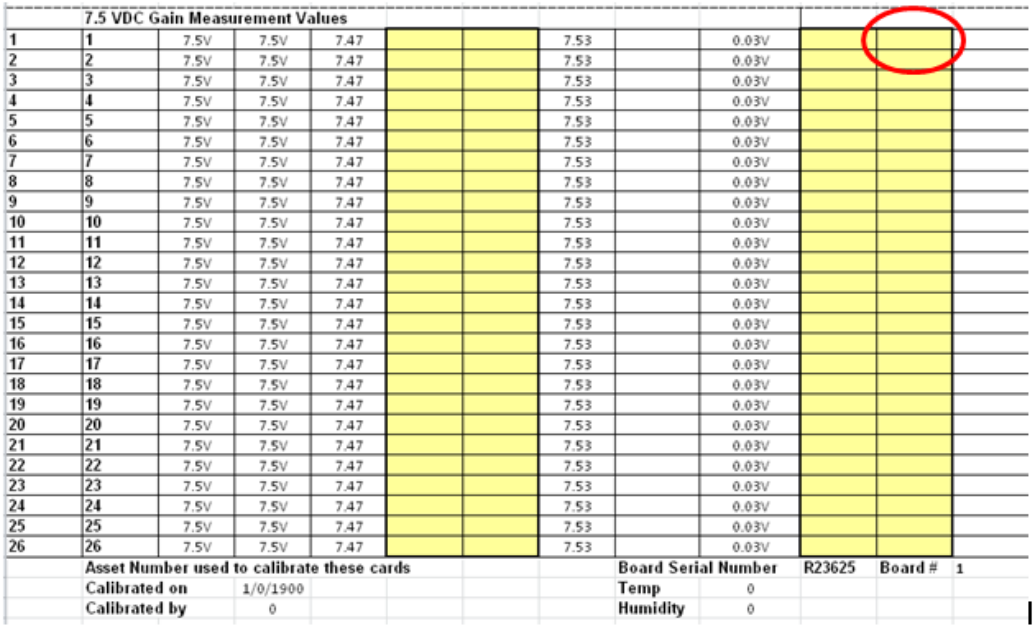


	7.5 VDC Gain Measurement Values											
1	1	7.5V	7.5V	7.47			7.53		0.03V			
2	2	7.5V	7.5V	7.47			7.53		0.03V			
3	3	7.5V	7.5V	7.47			7.53		0.03V			
4	4	7.5V	7.5V	7.47			7.53		0.03V			
5	5	7.5V	7.5V	7.47			7.53		0.03V			
6	6	7.5V	7.5V	7.47			7.53		0.03V			
7	7	7.5V	7.5V	7.47			7.53		0.03V			
8	8	7.5V	7.5V	7.47			7.53		0.03V			
9	9	7.5V	7.5V	7.47			7.53		0.03V			
10	10	7.5V	7.5V	7.47			7.53		0.03V			
11	11	7.5V	7.5V	7.47			7.53		0.03V			
12	12	7.5V	7.5V	7.47			7.53		0.03V			
13	13	7.5V	7.5V	7.47			7.53		0.03V			
14	14	7.5V	7.5V	7.47			7.53		0.03V			
15	15	7.5V	7.5V	7.47			7.53		0.03V			
16	16	7.5V	7.5V	7.47			7.53		0.03V			
17	17	7.5V	7.5V	7.47			7.53		0.03V			
18	18	7.5V	7.5V	7.47			7.53		0.03V			
19	19	7.5V	7.5V	7.47			7.53		0.03V			
20	20	7.5V	7.5V	7.47			7.53		0.03V			
21	21	7.5V	7.5V	7.47			7.53		0.03V			
22	22	7.5V	7.5V	7.47			7.53		0.03V			
23	23	7.5V	7.5V	7.47			7.53		0.03V			
24	24	7.5V	7.5V	7.47			7.53		0.03V			
25	25	7.5V	7.5V	7.47			7.53		0.03V			
26	26	7.5V	7.5V	7.47			7.53		0.03V			
	Asset Number used to calibrate these cards							Board Serial Number		R23625	Board #	1
	Calibrated on	1/0/1900						Temp	0			
	Calibrated by	0						Humidity	0			

6.1.41

6.1.42 Record the Gain voltage displayed on the Virtual Meter in the “After Cal Gain Voltage-Virtual Meter” column of the ATE Calibration Record form.

6.1.43



	7.5 VDC Gain Measurement Values											
1	1	7.5V	7.5V	7.47			7.53		0.03V			
2	2	7.5V	7.5V	7.47			7.53		0.03V			
3	3	7.5V	7.5V	7.47			7.53		0.03V			
4	4	7.5V	7.5V	7.47			7.53		0.03V			
5	5	7.5V	7.5V	7.47			7.53		0.03V			
6	6	7.5V	7.5V	7.47			7.53		0.03V			
7	7	7.5V	7.5V	7.47			7.53		0.03V			
8	8	7.5V	7.5V	7.47			7.53		0.03V			
9	9	7.5V	7.5V	7.47			7.53		0.03V			
10	10	7.5V	7.5V	7.47			7.53		0.03V			
11	11	7.5V	7.5V	7.47			7.53		0.03V			
12	12	7.5V	7.5V	7.47			7.53		0.03V			
13	13	7.5V	7.5V	7.47			7.53		0.03V			
14	14	7.5V	7.5V	7.47			7.53		0.03V			
15	15	7.5V	7.5V	7.47			7.53		0.03V			
16	16	7.5V	7.5V	7.47			7.53		0.03V			
17	17	7.5V	7.5V	7.47			7.53		0.03V			
18	18	7.5V	7.5V	7.47			7.53		0.03V			
19	19	7.5V	7.5V	7.47			7.53		0.03V			
20	20	7.5V	7.5V	7.47			7.53		0.03V			
21	21	7.5V	7.5V	7.47			7.53		0.03V			
22	22	7.5V	7.5V	7.47			7.53		0.03V			
23	23	7.5V	7.5V	7.47			7.53		0.03V			
24	24	7.5V	7.5V	7.47			7.53		0.03V			
25	25	7.5V	7.5V	7.47			7.53		0.03V			
26	26	7.5V	7.5V	7.47			7.53		0.03V			
	Asset Number used to calibrate these cards							Board Serial Number		R23625	Board #	1
	Calibrated on	1/0/1900						Temp	0			
	Calibrated by	0						Humidity	0			

6.1.44

6.1.45 Record a P or F in the “After Cal Pass/Fail” column of the ATE Calibration Record form to indicate whether the Offset and Gain voltages were within tolerance.

	7.5 VDC Gain Measurement Values											
1	1	7.5V	7.5V	7.47			7.53		0.03V			
2	2	7.5V	7.5V	7.47			7.53		0.03V			
3	3	7.5V	7.5V	7.47			7.53		0.03V			
4	4	7.5V	7.5V	7.47			7.53		0.03V			
5	5	7.5V	7.5V	7.47			7.53		0.03V			
6	6	7.5V	7.5V	7.47			7.53		0.03V			
7	7	7.5V	7.5V	7.47			7.53		0.03V			
8	8	7.5V	7.5V	7.47			7.53		0.03V			
9	9	7.5V	7.5V	7.47			7.53		0.03V			
10	10	7.5V	7.5V	7.47			7.53		0.03V			
11	11	7.5V	7.5V	7.47			7.53		0.03V			
12	12	7.5V	7.5V	7.47			7.53		0.03V			
13	13	7.5V	7.5V	7.47			7.53		0.03V			
14	14	7.5V	7.5V	7.47			7.53		0.03V			
15	15	7.5V	7.5V	7.47			7.53		0.03V			
16	16	7.5V	7.5V	7.47			7.53		0.03V			
17	17	7.5V	7.5V	7.47			7.53		0.03V			
18	18	7.5V	7.5V	7.47			7.53		0.03V			
19	19	7.5V	7.5V	7.47			7.53		0.03V			
20	20	7.5V	7.5V	7.47			7.53		0.03V			
21	21	7.5V	7.5V	7.47			7.53		0.03V			
22	22	7.5V	7.5V	7.47			7.53		0.03V			
23	23	7.5V	7.5V	7.47			7.53		0.03V			
24	24	7.5V	7.5V	7.47			7.53		0.03V			
25	25	7.5V	7.5V	7.47			7.53		0.03V			
26	26	7.5V	7.5V	7.47			7.53		0.03V			
	Asset Number used to calibrate these cards							Board Serial Number		R23625	Board #	1
	Calibrated on		1/0/1900					Temp	0			
	Calibrated by		0					Humidity	0			

6.1.46

6.1.47 Repeat the recording and calibrating process for all 26 channels of the board.

6.1.48 Power the system down (Remove Power Supply's via the icon in the program) and remove Board#1 from slot 1. Bolt the heat sink components back on and move on to calibrating Board#2 in slot 1. It is much easier to calibrate all 5 boards using slot 1.

6.1.49 Insert Board#2 into Slot#1 and Initiate Calibration program.

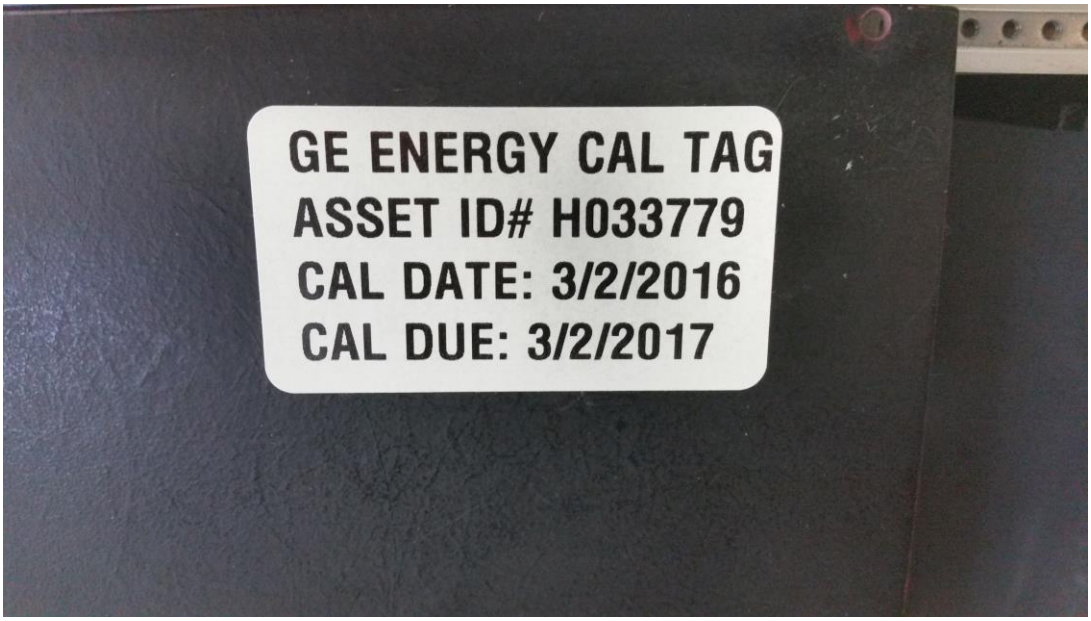
6.1.50 Complete ALL Channels and ALL Boards by going to Step 6.1.18 and Repeating as necessary.

6.1.51 After calibrating all five boards, put the system back together.

6.1.52

6.1.53 Create Calibration Tag – See QA Work leader for Calibration Due Date

6.1.54



6.1.55 Run the Test ATE Universal Channels Test to verify all boards are seated correctly and operating normally.

7. Additional Notes

7.1 None at this time.

8. Attachments

8.1 None at this time.