Certificate/Report of Calibration

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CalNet®

Manufacturer:	FLUKE	**Test Result:**	PASS
Model:	45	**Cal Date:**	10-Oct-2003
UUT Description:	DIGITAL MULTIMETER	**Cal Due Date:**	10-Oct-2004
Serial Number:	7733010	**Data Type:**	FOUND-LEFT
Asset Number:	7733010	**Received:**	IN TOLERANCE
Customer Name:	STATE OF SOUTH CAROLINA	**Returned:**	IN TOLERANCE
Customer P.O.#:	40775	**Failed Tests:**	0
Calibrated by:	Glenn Moore	**Temperature:**	23°C
Technician #	84310	**Relative Humidity:**	49 %
Procedure Name:	FLUKE 45: (1 YEAR) RS-232C CAL VER/ALT FLUKE 5700A		
Procedure Revision:	1.2		

Fluke certifies that the above listed instrument meets or exceeds all specifications as stated in the referenced procedure (unless otherwise noted). It has been calibrated using measurement standards traceable to the National Institute of Standards and Technology (NIST), or to NIST accepted intrinsic standards of measurement, or derived by the ratio type of self-calibration techniques. This calibration complies with MIL-STD-45662A and ANSI/NCSL Z540.1-1994(R2002). This instrument has been calibrated IAW current Fluke quality documents.

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Note: Any Test Uncertainty Ratio (TUR) that is less than four to one will appear under the "TUR" heading on the data record. If the TUR meets or exceeds four to one, the field is left blank.

Remarks:

Standards Used

Asset	Manufacturer	Model	Description	Cal Date	Due Date
8810	FLUKE	5720A	CALIBRATOR	08-Sep-2003	08-Jan-2004
8057	FLUKE	5725A	AMPLIFIER	02-Jul-2003	02-Apr-2004

Test Data

PARAMETER	TRUE VALUE	TEST RESULT	ACCEPTANCE LIMITS LOW	HIGH	TUR
DIRECT VOLTAGE PERFORMANCE VERIFICATION					
100mV Range					
0.000mV		0.003	-0.006	0.006	

PARAMETER	TRUE VALUE	TEST RESULT	ACCEPTANCE LIMITS LOW	HIGH	TUR
90.000mV		90.002	89.971	90.029	
1000mV Range					
900.00mV		900.00	899.71	900.29	
300mV Range					
0.00mV		0.00	-0.02	0.02	
300.00mV		300.00	299.90	300.10	
3V Range					
3.0000V		2.9999	2.9990	3.0010	
-3.0000V		-2.9999	-3.0010	-2.9990	
30V Range					
30.000V		29.999	29.990	30.010	
-30.000V		-30.000	-30.010	-29.990	
300V Range					
300.00V		299.99	299.90	300.10	
-300.00V		-299.99	-300.10	-299.90	
1000V Range					
1000.0V		1000.0	999.5	1000.5	
-1000.0V		-999.9	-1000.5	-999.5	
DIODE TEST PERFORMANCE VERIFICATION					
0.0000V		0.0000	-0.0008	0.0008	
0 Ohm	1000000000.0	1000000000	999999999	1000000001	
ALTERNATING VOLTAGE PERFORMANCE VERIFICATION					
300mV Range					
0.00mV		0.26	0.00	0.75	
15.00mV @ 1kHz		15.06	14.87	15.13	
15.00mV @ 100kHz		14.02	13.75	16.25	
300.00mV @ 1kHz		300.05	299.30	300.70	
300.00mV @ 100kHz		290.52	284.50	315.50	
3V Range					
3.0000V @ 1kHz		3.0006	2.9930	3.0070	
30V Range					
30.000V @ 1kHz		30.005	29.930	30.070	
300V Range					

PARAMETER	TRUE VALUE	TEST RESULT	ACCEPTANCE LIMITS LOW	HIGH	TUR
300.00V @ 1kHz		300.05	299.30	300.70	
750V Range					
750.0V @ 1kHz		750.1	747.5	752.5	
RESISTANCE PERFORMANCE VERIFICATION					
300Ω Range					
0.00 Ohm		0.00	0.00	0.04	
190.00 Ohm	189.993	189.99	189.86	190.13	
3kΩ Range					
0.0000K Ohm		0.0001	0.0000	0.0002	
1.9000 kOhm	1.89996	1.8999	1.8988	1.9012	
30kΩ Range					
19.000 kOhm	19.0001	19.000	18.988	19.012	
300kΩ Range					
190.00 kOhm	189.988	189.99	189.87	190.11	
3MΩ Range					
1.9000 MOhm	1.89993	1.8997	1.8986	1.9012	
30MΩ Range					
19.000 MOhm	18.9992	18.995	18.948	19.050	
300MΩ Range					
100.0 MOhm	99.99	99.9	98.0	102.0	
FREQUENCY PERFORMANCE VERIFICATION					
9.000kHz @ 1V		9.000	8.995	9.005	
LOW CURRENT PERFORMANCE VERIFICATION					
30mA Range					
30.000mA		30.000	29.982	30.018	
30.000mA @ 1kHz		30.006	29.840	30.160	
100mA Range					
100.00mA		100.00	99.93	100.07	
100.00mA @ 1kHz		100.06	99.40	100.60	
HIGH CURRENT PERFORMANCE VERIFICATION					

PARAMETER	TRUE VALUE	TEST RESULT	ACCEPTANCE LIMITS LOW	HIGH	TUR
10A Range					
10.000A		10.001	9.975	10.025	
10.000A @ 1kHz		10.015	9.890	10.110	

End of Test Data

Glenn Moore
Technician

Technical Manager

Calibration Report Number: 827543-7733010:1065770045
Certificate/Report of Calibration October-10-2003