An Axiometrix Solutions Brand

Calibration Services
9290 SW Nimbus Ave
Beaverton, Oregon 97008
USA

ACCREDITED
Calibration Cert #2527.01

Calibration Report

Accredited Calibration

Report Number: XXXXXXXXX-XXXXXX-X

Model: APx525 **Data Type:** **AS SHIPPED, NEW** **Program:**
Serial Number: XXXXXXXXX **Date of Cal:** 30-Oct-2025 APxCalibration.exe 24.01

Internal Module Status and Data			
AP Name	***Description***	***Serial No.***	***Revision***
BRIO	Backplane module	XXXXX	600
BSL3	Clock module	XXXXX	202
BMEG	Analog Output module	XXXXX	408
BOTA	Analog Input module	XXXXX	403
BAES	DIO module	XXXXX	402
BSAT	Option AG52	XXXXX	401
BROT	Option BW52	XXXXX	400

Explanatory notes to the last three columns of the calibration report

"MU" - The column labeled "MU" lists the expanded measurement uncertainties derived from equipment specifications, repeatability data, and other significant sources. These are stated at a minimum confidence of 95% using a coverage factor k=2 (except as appropriate) following the recommendations in ISO/IEC 98-3 *Guide to the expression of uncertainty in measurement (GUM:1995)* , BIPM JCGM 100:2008, and NIST Technical Note 1297.

"TUR" - The column labeled "**TUR**" lists the test uncertainty ratio calculated by dividing the lesser of the lower and upper reading tolerances by the 95% expanded measurement uncertainty. An entry of "**na**" indicates [1] the specified limits are one-sided, or [2] the performance characteristic is not accredited.

"Result" - The column labeled "Result" lists color-coded assessments that the observed characteristic is within its specified limits of performance. There are three possible indications:

pass -- *The READING is within the specified upper and lower limits reduced by guard-bands equal to the 95% expanded measurement uncertainty. The probability or risk of false acceptance is very low, typically <0.2%.*

uncertain -- *The READING is within the specified upper and lower limits, but it is close to one of the limits by an amount that is less than the 95% expanded measurement uncertainty. The probability or risk of false acceptance is elevated.*

>> FAIL << -- *The READING is outside of the specified limit range.*

Accredited measurements listed in the following pages correlate to Audio Precision's Scope of Accreditation as noted:

note 1 - Frequency Measurement
note 2 - AC Voltage Measurement
note 3 - AC Flatness Measurement
note 4 - Resistance Measurement
note 5 - DC Voltage Measurement
note 6 - AC Voltage Source and AC Flatness Source for testing AC Measurement Equipment
note 7 - DC Voltage Source for testing DC Measurement Equipment

This report is valid only when accompanied by a signed Certificate of Calibration.

Item	Setting(s)	Lower Limit	READING	Upper Limit	MU	TUR	Result
ANALOG GENERATOR CHARACTERISTICS							
[1] Sine Frequency Accuracy (Hz) - *note 1*							
	10 kHz	9999.9700	**10000.0016**	10000.0300	0.0054	5.6	**pass**
[2] Sine Amplitude Accuracy, 1 kHz (Volts, mVolts) - *note 2*							
Channel 1	13.33 V	13.2840	**13.3302**	13.3761	0.0066	7.1	**pass**
	5.000 V	4.9828	**5.0034**	5.0173	0.0014	≥10	**pass**
	3.000 V	2.9897	**3.0010**	3.0104	0.0011	9.6	**pass**
	1.500 V	1.49483	**1.50045**	1.50519	0.00054	9.7	**pass**
	1.000 V	0.99655	**1.00004**	1.00346	0.00036	9.7	**pass**
	100 mV	99.655	**99.995**	100.346	0.038	9.2	**pass**
	12 mV	11.959	**12.003**	12.042	0.013	3.2	**pass**
Channel 2	13.33 V	13.2840	**13.3316**	13.3761	0.0066	7.1	**pass**
	5.000 V	4.9828	**5.0043**	5.0173	0.0014	≥10	**pass**
	3.000 V	2.9897	**3.0015**	3.0104	0.0011	9.6	**pass**
	1.500 V	1.49483	**1.50072**	1.50519	0.00054	9.7	**pass**
	1.000 V	0.99655	**1.00019**	1.00346	0.00036	9.7	**pass**
	100 mV	99.655	**100.006**	100.346	0.038	9.2	**pass**
	12 mV	11.959	**12.005**	12.042	0.013	3.2	**pass**
[3] Sine Flatness, 1.15 Vrms (dB) - *note 3*							
Channel 1	10 Hz	-0.0080	**-0.0002**	0.0080	0.0018	4.4	**pass**
	20 Hz	-0.0080	**-0.0003**	0.0080	0.0017	4.7	**pass**
	20 kHz	-0.0080	**-0.0022**	0.0080	0.0019	4.2	**pass**
	50 kHz	-0.0300	**0.0009**	0.0300	0.0040	7.5	**pass**
	80 kHz	-0.1000	**0.0265**	0.1000	0.0092	≥10	**pass**
Channel 2	10 Hz	-0.0080	**-0.0001**	0.0080	0.0018	4.4	**pass**
	20 Hz	-0.0080	**-0.0002**	0.0080	0.0017	4.7	**pass**
	20 kHz	-0.0080	**-0.0020**	0.0080	0.0019	4.2	**pass**
	50 kHz	-0.0300	**0.0017**	0.0300	0.0040	7.5	**pass**
	80 kHz	-0.1000	**0.0313**	0.1000	0.0092	≥10	**pass**
[4] DC Offset (mV), Unbal - *note 5*							
Channel 1	10.0 V	-25.10	**4.06**	25.10	0.40	≥10	**pass**
	1.000 V	-2.600	**0.418**	2.600	0.046	≥10	**pass**
	100 mV	-0.350	**0.050**	0.350	0.024	≥10	**pass**
	10 mV	-0.125	**0.020**	0.125	0.024	5.2	**pass**
Channel 2	10.0 V	-25.10	**0.14**	25.10	0.40	≥10	**pass**
	1.000 V	-2.600	**0.026**	2.600	0.046	≥10	**pass**
	100 mV	-0.350	**0.011**	0.350	0.024	≥10	**pass**
	10 mV	-0.125	**0.020**	0.125	0.024	5.2	**pass**
[5] Source Resistance Accuracy (Ω) - *note 4*							
Channel 1 Unbalanced	20 Ω	19.600	**20.028**	20.400	0.048	8.3	**pass**
	50 Ω	49.250	**50.077**	50.750	0.060	≥10	**pass**
	75 Ω	74.100	**74.959**	75.900	0.070	≥10	**pass**
	100 Ω	99.000	**99.841**	101.000	0.080	≥10	**pass**
	600 Ω	594.00	**599.90**	606.00	0.28	≥10	**pass**
Channel 1 Balanced	40 Ω	39.400	**40.013**	40.600	0.076	7.9	**pass**
	100 Ω	99.00	**100.12**	101.00	0.10	≥10	**pass**
	150 Ω	148.50	**149.89**	151.50	0.12	≥10	**pass**
	200 Ω	198.00	**199.66**	202.00	0.14	≥10	**pass**
	600 Ω	594.00	**599.76**	606.00	0.30	≥10	**pass**
Channel 2 Unbalanced	20 Ω	19.600	**20.040**	20.400	0.048	8.3	**pass**
	50 Ω	49.250	**50.090**	50.750	0.060	≥10	**pass**
	75 Ω	74.100	**74.971**	75.900	0.070	≥10	**pass**
	100 Ω	99.000	**99.858**	101.000	0.080	≥10	**pass**
	600 Ω	594.00	**599.87**	606.00	0.28	≥10	**pass**
Channel 2 Balanced	40 Ω	39.400	**40.034**	40.600	0.076	7.9	**pass**
	100 Ω	99.00	**100.13**	101.00	0.10	≥10	**pass**
	150 Ω	148.50	**149.89**	151.50	0.12	≥10	**pass**
	200 Ω	198.00	**199.66**	202.00	0.14	≥10	**pass**
	600 Ω	594.00	**599.57**	606.00	0.30	≥10	**pass**

Item	Setting(s)	Lower Limit	READING	Upper Limit	MU	TUR	Result
ANALOG ANALYZER CHARACTERISTICS							
[6] Input Termination Accuracy (Ω) - *note 4*							
Channel 1	300 Ω	297.00	**300.92**	303.00	0.18	≥10	**pass**
	600 Ω	594.00	**601.23**	606.00	0.30	≥10	**pass**
Channel 2	300 Ω	297.00	**301.13**	303.00	0.18	≥10	**pass**
	600 Ω	594.00	**601.73**	606.00	0.30	≥10	**pass**
[7] DC Measurement Accuracy (Volts, mVolts) - *note 7*							
Channel 1	+160 V	158.720	**159.975**	161.280	0.096	≥10	**pass**
	+100 V	99.200	**99.983**	100.800	0.060	≥10	**pass**
	+30 V	29.758	**29.994**	30.242	0.018	≥10	**pass**
	+10 V	9.9200	**9.9981**	10.0800	0.0060	≥10	**pass**
	+3 V	2.9758	**2.9994**	3.0242	0.0018	≥10	**pass**
	+1 V	0.99200	**0.99982**	1.00800	0.00060	≥10	**pass**
	+300 mV	297.10	**299.97**	302.90	0.18	≥10	**pass**
	0 mV	-0.800	**0.051**	0.800	0.046	≥10	**pass**
	-300 mV	-302.90	**-299.87**	-297.10	0.18	≥10	**pass**
	-1 V	-1.00800	**-0.99977**	-0.99200	0.00060	≥10	**pass**
	-3 V	-3.0242	**-2.9994**	-2.9758	0.0018	≥10	**pass**
	-10 V	-10.0800	**-9.9979**	-9.9200	0.0060	≥10	**pass**
	-30 V	-30.242	**-29.995**	-29.758	0.018	≥10	**pass**
	-100V	-100.800	**-99.981**	-99.200	0.060	≥10	**pass**
	-160 V	-161.280	**-159.969**	-158.720	0.096	≥10	**pass**
Channel 2	+160 V	158.720	**159.948**	161.280	0.096	≥10	**pass**
	+100 V	99.200	**99.969**	100.800	0.060	≥10	**pass**
	+30 V	29.758	**29.991**	30.242	0.018	≥10	**pass**
	+10 V	9.9200	**9.9969**	10.0800	0.0060	≥10	**pass**
	+3 V	2.9758	**2.9990**	3.0242	0.0018	≥10	**pass**
	+1 V	0.99200	**0.99971**	1.00800	0.00060	≥10	**pass**
	+300 mV	297.10	**299.93**	302.90	0.18	≥10	**pass**
	0 mV	-0.800	**0.056**	0.800	0.046	≥10	**pass**
	-300 mV	-302.90	**-299.82**	-297.10	0.18	≥10	**pass**
	-1 V	-1.00800	**-0.99960**	-0.99200	0.00060	≥10	**pass**
	-3 V	-3.0242	**-2.9990**	-2.9758	0.0018	≥10	**pass**
	-10 V	-10.0800	**-9.9972**	-9.9200	0.0060	≥10	**pass**
	-30 V	-30.242	**-29.991**	-29.758	0.018	≥10	**pass**
	-100V	-100.800	**-99.974**	-99.200	0.060	≥10	**pass**
	-160 V	-161.280	**-159.963**	-158.720	0.096	≥10	**pass**
[8] Input Common Mode Rejection (mV) - non-accredited							
Channel 1 (5V CM signal)	3.2V range, 200 Hz	0	**0.026**	0.500	0.070	na	**pass**
	3.2V range, 5 kHz	0	**0.064**	0.500	0.082	na	**pass**
	3.2V range, 20 kHz	0	**0.25**	1.26	0.18	na	**pass**
	10V range, 20 kHz	0	**1.39**	15.81	0.23	na	**pass**
	100V range, 20 kHz	0	**3.01**	28.12	0.27	na	**pass**
Channel 2 (5V CM signal)	3.2V range, 200 Hz	0	**0.022**	0.500	0.070	na	**pass**
	3.2V range, 5 kHz	0	**0.103**	0.500	0.082	na	**pass**
	3.2V range, 20 kHz	0	**0.41**	1.26	0.18	na	**pass**
	10V range, 20 kHz	0	**0.49**	15.81	0.23	na	**pass**
	100V range, 20 kHz	0	**5.64**	28.12	0.27	na	**pass**

Item	Setting(s)	Lower Limit	READING	Upper Limit	MU	TUR	Result
ANALOG ANALYZER, continued							
[9] Level Meter AC Accuracy, 1 kHz (Volts, mVolts) - *note 6*							
Channel 1	160 V	159.448	**159.975**	160.554	0.090	6.2	**pass**
	90 V	89.690	**89.985**	90.311	0.050	6.3	**pass**
	30 V	29.897	**29.995**	30.104	0.017	6.2	**pass**
	9 V	8.9690	**8.9981**	9.0311	0.0050	6.2	**pass**
	3 V	2.9897	**2.9995**	3.0104	0.0017	6.2	**pass**
	0.9 V	0.89690	**0.89985**	0.90311	0.00050	6.2	**pass**
	300 mV	298.97	**299.94**	301.04	0.17	6.2	**pass**
	5 mV	4.9828	**4.9991**	5.0173	0.0031	5.6	**pass**
500 kHz BW	3 V	2.9897	**2.9987**	3.0104	0.0017	6.2	**pass**
Channel 2	160 V	159.45	**159.96**	160.55	0.090	6.2	**pass**
	90 V	89.690	**89.976**	90.311	0.050	6.3	**pass**
	30 V	29.897	**29.991**	30.104	0.017	6.2	**pass**
	9 V	8.9690	**8.9973**	9.0311	0.0050	6.2	**pass**
	3 V	2.9897	**2.9992**	3.0104	0.0017	6.2	**pass**
	0.9 V	0.89690	**0.89974**	0.90311	0.00050	6.2	**pass**
	300 mV	298.97	**299.90**	301.04	0.17	6.2	**pass**
	5 mV	4.9828	**4.9984**	5.0173	0.0031	5.6	**pass**
500 kHz BW	3 V	2.9897	**2.9982**	3.0104	0.0017	6.2	**pass**
[10] Level Meter AC Flatness, 1.15 Vrms (dB) - *note 6*							
Channel 1	10 Hz	-0.0080	**-0.0013**	0.0080	0.0030	2.7	**pass**
	20 Hz	-0.0080	**-0.0002**	0.0080	0.0029	2.8	**pass**
	20 kHz	-0.0080	**0.0021**	0.0080	0.0024	3.3	**pass**
	50 kHz	-0.0300	**0.0068**	0.0300	0.0031	9.7	**pass**
	80 kHz	-0.1000	**-0.0147**	0.1000	0.0061	≥10	**pass**
500 kHz BW	100 kHz	-0.1000	**-0.0093**	0.1000	0.0061	≥10	**pass**
	200 kHz	-0.200	**-0.033**	0.200	0.021	9.5	**pass**
Channel 2	10 Hz	-0.0080	**-0.0013**	0.0080	0.0030	2.7	**pass**
	20 Hz	-0.0080	**-0.0002**	0.0080	0.0029	2.8	**pass**
	20 kHz	-0.0080	**0.0021**	0.0080	0.0024	3.3	**pass**
	50 kHz	-0.0300	**0.0063**	0.0300	0.0031	9.7	**pass**
	80 kHz	-0.1000	**-0.0157**	0.1000	0.0061	≥10	**pass**
500 kHz BW	100 kHz	-0.2000	**-0.0075**	0.2000	0.0061	≥10	**pass**
	200 kHz	-0.200	**-0.026**	0.200	0.021	9.5	**pass**

Item	Setting(s)	Lower Limit	READING	Upper Limit	MU	TUR	Result
ANALOG ANALYZER, continued							
[11] Phase Measurement Offset (Deg) - non-accredited, self-test							
Ch1 - Ch 2	50Hz, AC coupled	-0.200	**0.003**	0.200	0.001	na	**pass**
	200Hz, DC coupled	-0.200	**0.000**	0.200	0.001	na	**pass**
	5kHz, DC coupled	-0.200	**0.005**	0.200	0.004	na	**pass**
	20kHz, DC coupled	-0.800	**0.019**	0.800	0.016	na	**pass**
	50kHz, DC coupled	-2.000	**0.051**	2.000	0.040	na	**pass**
[12] Frequency Measurement Accuracy (uHz/Hz) - *note 1*							
	10 kHz	-3.00	**-0.16**	3.00	0.54	5.6	**pass**
[13] Input Residual Crosstalk at 20 kHz (dB) - non-accredited							
Ch2 into Ch 1		-999	**-149.7**	-130.0	4.0	na	**pass**
Ch 1 into Ch 2		-999	**-150.8**	-130.0	4.0	na	**pass**
OPTION AG52 CHARACTERSITICS							
[14] Squarewave Amplitude Accuracy (Volts) - *note 2*							
	100 Hz, 1 Vpk	0.9886	**0.9997**	1.0116	0.0008	≥10	**pass**
[15] Squarewave Risetime (usec) - non-accredited, oscilloscope referenced							
	5 kHz, 1 Vpk	0.00	**1.64**	2.00	0.06	na	**pass**
[16] Squarewave Even Harmonic Content (dB) - non-accredited, self-test							
	20 Hz, 1 Vpk	-999	**-121.0**	-100.0	4.0	na	**pass**
	5 kHz, 1 Vpk	-999	**-105.4**	-100.0	2.0	na	**pass**
	20 kHz, 1 Vpk	-999	**-94.7**	-90.0	1.0	na	**pass**
[17] DIM Amplitude Accuracy (Volts) - *note 2*							
	DIM100, 1Vpk	0.7958	**0.8041**	0.8143	0.0006	≥10	**pass**
[18] Residual IMD, DIM100 (%) - non-accredited, self-test							
Balanced,	Ch 1	0.00000%	**0.00075%**	0.00180%	0.00020%	na	**pass**
21.2Vrms	Ch 2	0.00000%	**0.00081%**	0.00180%	0.00020%	na	**pass**

Item	Setting(s)	Lower Limit	READING	Upper Limit	MU	TUR	Result
NON-ACCREDITED CHARACTERISTICS							
[19] Sine THD+N (dB) - non-accredited, self-test							
Channel 1	20 Hz, 21.2V, 20k BW	-999	**-112.1**	-105.0	1.0	na	**pass**
Balanced	1 kHz, 21.2V, 20k BW	-999	**-111.9**	-105.0	1.0	na	**pass**
	5 kHz, 21.2V, 20k BW	-999	**-111.5**	-105.0	1.0	na	**pass**
	20 kHz, 21.2V, 20k BW	-999	**-112.5**	-105.0	1.5	na	**pass**
Unbalanced	20 Hz, 2.5V, 20k BW	-999	**-114.2**	-105.0	1.0	na	**pass**
	1 kHz, 2.5V, 20k BW	-999	**-114.0**	-105.0	1.0	na	**pass**
	20 kHz, 2.5V, 20k BW	-999	**-113.3**	-105.0	1.5	na	**pass**
	1 kHz, 2.5V 40k BW	-999	**-110.4**	-98.0	1.0	na	**pass**
	10 kHz, 2.5V, 40k BW	-999	**-109.1**	-98.0	1.0	na	**pass**
	1 kHz, 2.5V 80k BW	-999	**-103.1**	-90.0	1.0	na	**pass**
	20 kHz, 2.5V, 80k BW	-999	**-101.3**	-90.0	1.5	na	**pass**
	20kHz, 2.5V, 250k BW	-999	**-93.7**	-85.0	1.5	na	**pass**
	20kHz, 2.5V, 500k BW	-999	**-91.7**	-82.0	1.5	na	**pass**
Channel 2	20 Hz, 21.2V, 20k BW	-999	**-111.7**	-105.0	1.0	na	**pass**
Balanced	1 kHz, 21.2V, 20k BW	-999	**-111.7**	-105.0	1.0	na	**pass**
	5 kHz, 21.2V, 20k BW	-999	**-111.0**	-105.0	1.0	na	**pass**
	20 kHz, 21.2V, 20k BW	-999	**-112.4**	-105.0	1.5	na	**pass**
Unbalanced	20 Hz, 2.5V, 20k BW	-999	**-114.5**	-105.0	1.0	na	**pass**
	1 kHz, 2.5V, 20k BW	-999	**-113.5**	-105.0	1.0	na	**pass**
	20 kHz, 2.5V, 20k BW	-999	**-113.3**	-105.0	1.5	na	**pass**
	1 kHz, 2.5V 40k BW	-999	**-110.2**	-98.0	1.0	na	**pass**
	10 kHz, 2.5V, 40k BW	-999	**-108.9**	-98.0	1.0	na	**pass**
	1 kHz, 2.5V 80k BW	-999	**-103.0**	-90.0	1.0	na	**pass**
	20 kHz, 2.5V, 80k BW	-999	**-101.3**	-90.0	1.5	na	**pass**
	20kHz, 2.5V, 250k BW	-999	**-93.9**	-85.0	1.5	na	**pass**
	20kHz, 2.5V, 500k BW	-999	**-91.8**	-82.0	1.5	na	**pass**
[20] Residual Crosstalk (dB), Output Related, 20kHz - non-accredited, self-test							
Unbalanced,	*2 into 1*	-999	**-152.4**	-130.0	4.0	na	**pass**
10.6V, 20 kHz.	*1 into 2*	-999	**-156.2**	-130.0	4.0	na	**pass**
Balanced,	*2 into 1*	-999	**-159.3**	-130.0	4.0	na	**pass**
21.2V, 20 kHz.	*1 into 2*	-999	**-163.4**	-130.0	4.0	na	**pass**
[21] Residual Noise (uVolts) - non-accredited, self-test							
Balanced Input,	Ch 1, 20 kHz BW	0	**0.97**	1.30	0.06	na	**pass**
inputs shorted.	Ch 2, 20 kHz BW	0	**0.97**	1.30	0.06	na	**pass**
	Ch 1, 500 kHz BW	0	**5.74**	11.40	0.20	na	**pass**
	Ch 2, 500 kHz BW	0	**5.71**	11.40	0.20	na	**pass**
[22] Residual SMPTE IMD (%), 4:1, 60Hz:7kHz - non-accredited, self-test							
Balanced,	Ch 1	0%	**0.00048%**	0.00180%	0.00030%	na	**pass**
21.2 Vrms.	Ch 2	0%	**0.00059%**	0.00180%	0.00030%	na	**pass**
[23] Residual MOD IMD (%), 4:1, 60Hz:7kHz - non-accredited, self-test							
Balanced,	Ch 1	0%	**0.00044%**	0.00180%	0.00020%	na	**pass**
21.2 Vrms.	Ch 2	0%	**0.00058%**	0.00180%	0.00020%	na	**pass**
[24] Residual DFD IMD (%), mean 19.5kHz, diff 1kHz - non-accredited, self-test							
Balanced,	Ch 1	0%	**0.00010%**	0.00050%	0.00012%	na	**pass**
21.2 Vrms.	Ch 2	0%	**0.00011%**	0.00050%	0.00012%	na	**pass**
[25] Digital Output Amplitude Accuracy (Volts) - non-accredited							
Unbal, consumer	0.5 Vpp	0.450	**0.497**	0.550	0.009	na	**pass**
Unbal, professional	1.0 Vpp	0.900	**0.984**	1.100	0.014	na	**pass**
Balanced	5.0 Vpp	4.500	**5.058**	5.500	0.077	na	**pass**

Item	Setting(s)	Lower Limit	READING	Upper Limit	MU	TUR	Result
ADVANCED DIGITAL I/O CHARACTERISTICS						**>> Option Not Installed**	
[26] Output Voltage Accuracy (Volts) - non-accredited, oscilloscope referenced							
[27] Input Voltage Measurement Accuracy (Volts) - non-accredited, oscilloscope referenced							
[28] Variable Rise Time Accuracy (nsec) - non-accredited, oscilloscope referenced							
[29] Normal Mode Noise Amplitude (Volts) - non-accredited, oscilloscope referenced							
[30] Common Mode Sine Amplitude (Volts) - *note 2*							
[31] Jitter Amplitude Accuracy at 500 Hz (nsec) - non-accredited, self-test							
[32] Jitter Flatness (dB) - non-accredited, self-test							
[33] Residual Jitter, 700 Hz - 100 kHz BW (psec, pk) - non-accredited, self-test							

END OF REPORT