



Calibration Services
 5750 SW Arctic Drive
 Beaverton, Oregon 97005
 USA



Calibration Cert #2527.01

Calibration Report

Accredited Calibration

Report number: SYS2-31448-070713-1

Model: 2722-192K
 Serial Number: 31448

Data Type: AS SHIPPED, NEW
 Date of Cal: 13-Jul-2007

Program:
 S2FamilyCal app 1.13

Option Status

BUR	Installed
IMD	Installed
WFA	Not Installed
EURZ	Installed
S-AES17	Installed
OPT-2020	Not Installed

Internal Module Status and Data

AP Name	Type	Serial No.	Revision
GEN	Hi-Perf	02278	015
INP	Hi-Perf	02246	005
ANL	Hi-Perf	02184	006
DSP	Hi-Perf	02123	011
DIO	192k	11789	104

Explanatory notes to the last three columns of the calibration report

"MU" - The column labeled "MU" lists the expanded measurement uncertainties derived from published specifications of the calibration equipment, resolution factors, and statistical data of repeatability which may include inter-lab comparisons and/or other information. These are based on a coverage factor of 2 (k=2) corresponding to a confidence level of 95% using the recommendations in the Guide to the Expression of Uncertainty in Measurement, 1993, ISO Geneva; and NIST Technical Note 1297 (1994).

"TUR" - The column labeled "TUR" lists the test uncertainty ratio calculated by dividing the lesser of the lower and upper reading tolerances by the expanded measurement uncertainty. An entry of "na" indicates [1] the specified limits are one-sided, or [2] the performance characteristic is a self-test or system specification that is not independently certifiable.

"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 expanded measurement uncertainty or "MU". The confidence level is 95% or higher the observed characteristic is within specification.

pass (<95%) -- 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 expanded measurement uncertainty or "MU". Conformance to specification is more probable than not, however the confidence level may be <95%.

>> FAIL << -- The observed characteristic is out of specification.

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 - AC Voltage Source for testing AC Measurement Equipment

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

File name: Sys2MReport.xls

File version: REV1.07-25JUN2007-SR

Item	Setting(s)	Lower Limit	READING	Upper Limit	MU	TUR	Result
ANALOG GENERATOR CHARACTERISTICS							
[1] Sine Frequency Accuracy (Hz) - note 1							
<i>Fast Mode</i>	10 Hz	9.9500	10.0012	10.0500	0.0020	>10	pass
	100 Hz	99.500	99.978	100.500	0.020	>10	pass
	1 kHz	995.00	999.95	1005.00	0.20	>10	pass
	10 kHz	9950.0	9997.5	10050.0	2.0	>10	pass
	100 kHz	99500	99978	100500	30	>10	pass
	200 kHz	199000	200146	201000	60	>10	pass
<i>High-Acc Mode</i>	10 Hz	9.99700	10.00007	10.00300	0.00060	5.0	pass
	100 Hz	99.9700	100.0016	100.0300	0.0060	5.0	pass
	1 kHz	999.700	1000.027	1000.300	0.060	5.0	pass
	10 kHz	9997.00	10000.29	10003.00	0.60	5.0	pass
	100 kHz	99970.0	100002.1	100030.0	6.0	5.0	pass
	200 kHz	199940	200002	200060	12	5.0	pass
[2] Sine (D/A) Frequency Accuracy (Hz) - note 1							
	10 kHz	9999.9800	9999.9999	10000.0200	0.0063	3.2	pass
[3] Sine Amplitude Accuracy (Volts, mVolts) - note 2							
<i>Channel A</i>	10.00 V	9.9300	9.9966	10.0700	0.0041	>10	pass
	5.000 V	4.9650	5.0003	5.0350	0.0021	>10	pass
	2.500 V	2.4825	2.5003	2.5175	0.0011	>10	pass
	1.200 V	1.1916	1.2010	1.2084	0.0017	4.9	pass
	600 mV	595.80	600.48	604.20	0.84	5.0	pass
	300 mV	297.90	299.82	302.10	0.42	5.0	pass
	150 mV	148.95	149.93	151.05	0.21	5.0	pass
	80 mV	79.44	80.02	80.56	0.11	5.1	pass
	40 mV	39.720	40.011	40.280	0.056	5.0	pass
	20 mV	19.860	20.015	20.140	0.028	5.0	pass
<i>Channel B</i>	10.00 V	9.9300	10.0047	10.0700	0.0041	>10	pass
	5.000 V	4.9650	5.0012	5.0350	0.0021	>10	pass
	2.500 V	2.4825	2.5005	2.5175	0.0011	>10	pass
	1.200 V	1.1916	1.2023	1.2084	0.0017	4.9	pass
	600 mV	595.80	601.08	604.20	0.84	5.0	pass
	300 mV	297.90	300.16	302.10	0.42	5.0	pass
	150 mV	148.95	150.07	151.05	0.21	5.0	pass
	80 mV	79.44	80.16	80.56	0.11	5.1	pass
	40 mV	39.720	40.081	40.280	0.056	5.0	pass
	20 mV	19.860	20.016	20.140	0.028	5.0	pass
[4] Sine (D/A) Amplitude Accuracy (Volts) - note 2							
<i>Channel A</i>	2.500 V	2.4825	2.5008	2.5175	0.0020	8.8	pass
<i>Channel B</i>	2.500 V	2.4825	2.5004	2.5175	0.0020	8.8	pass
[5] Sine Flatness (dB) - note 3							
<i>Channel A</i>	10 Hz	-0.0080	0.0012	0.0080	0.0017	4.7	pass
	20 Hz	-0.0080	0.0006	0.0080	0.0016	5.0	pass
	50 Hz	-0.0080	0.0002	0.0080	0.0014	5.7	pass
	10 kHz	-0.0080	0.0002	0.0080	0.0019	4.2	pass
	20 kHz	-0.0080	-0.0005	0.0080	0.0019	4.2	pass
	50 kHz	-0.0300	0.0006	0.0300	0.0033	9.1	pass
	100 kHz	-0.1000	0.0068	0.1000	0.0095	>10	pass
	200 kHz	-0.300	0.158	0.200	0.027	7.4	pass
<i>Channel B</i>	10 Hz	-0.0080	0.0014	0.0080	0.0017	4.7	pass
	20 Hz	-0.0080	0.0006	0.0080	0.0016	5.0	pass
	50 Hz	-0.0080	0.0002	0.0080	0.0014	5.7	pass
	10 kHz	-0.0080	0.0003	0.0080	0.0019	4.2	pass
	20 kHz	-0.0080	-0.0004	0.0080	0.0019	4.2	pass
	50 kHz	-0.0300	0.0009	0.0300	0.0033	9.1	pass
	100 kHz	-0.1000	0.0082	0.1000	0.0095	>10	pass
	200 kHz	-0.300	0.160	0.200	0.027	7.4	pass

Item	Setting(s)	Lower Limit	READING	Upper Limit	MU	TUR	Result
ANALOG GENERATOR, continued							
[6] Sine (D/A) Flatness (dB) - note 3							
Channel A	10 Hz	-0.0300	-0.0002	0.0300	0.0019	>10	pass
	20 Hz	-0.0100	-0.0003	0.0100	0.0019	5.3	pass
	10 kHz	-0.0100	-0.0025	0.0100	0.0021	4.8	pass
	20 kHz	-0.0100	-0.0014	0.0100	0.0020	5.0	pass
	30 kHz	-0.0300	0.0082	0.0300	0.0037	8.1	pass
	50 kHz	-0.1000	0.0227	0.1000	0.0086	>10	pass
Channel B	10 Hz	-0.0300	0.0003	0.0300	0.0019	>10	pass
	20 Hz	-0.0100	-0.0004	0.0100	0.0019	5.3	pass
	10 kHz	-0.0100	-0.0025	0.0100	0.0021	4.8	pass
	20 kHz	-0.0100	-0.0006	0.0100	0.0021	4.8	pass
	30 kHz	-0.0300	0.0082	0.0300	0.0037	8.1	pass
	50 kHz	-0.1000	0.0202	0.1000	0.0086	>10	pass
[7] Sine THD+N (%) - non-accredited, self-test							
Channel A	20 Hz, 26.6V, 22k BW	0%	0.00129%	0.00200%	0.00020%	na	pass
	30 Hz, 26.6V, 22k BW	0%	0.00022%	0.00032%	0.00006%	na	pass
	1 kHz, 26.6V, 22k BW	0%	0.00019%	0.00032%	0.00002%	na	pass
	5 kHz, 26.6V, 22k BW	0%	0.00020%	0.00032%	0.00002%	na	pass
	1 kHz, 26.6V, 80k BW	0%	0.00028%	0.00050%	0.00002%	na	pass
	20 kHz, 26.6V, 80k BW	0%	0.00030%	0.00050%	0.00002%	na	pass
	10 Hz, 13.3V, 500k BW	0%	0.00168%	0.00400%	0.00050%	na	pass
	20 Hz, 13.3V, 500k BW	0%	0.00054%	0.00100%	0.00020%	na	pass
	20 kHz, 13.3V, 500k BW	0%	0.00057%	0.00100%	0.00010%	na	pass
	100kHz, 13.3V, 500k BW	0%	0.00080%	0.00400%	0.00010%	na	pass
Channel B	20 Hz, 26.6V, 22k BW	0%	0.00105%	0.00200%	0.00020%	na	pass
	30 Hz, 26.6V, 22k BW	0%	0.00021%	0.00032%	0.00006%	na	pass
	1 kHz, 26.6V, 22k BW	0%	0.00021%	0.00032%	0.00002%	na	pass
	5 kHz, 26.6V, 22k BW	0%	0.00020%	0.00032%	0.00002%	na	pass
	1 kHz, 26.6V, 80k BW	0%	0.00029%	0.00050%	0.00002%	na	pass
	20 kHz, 26.6V, 80k BW	0%	0.00031%	0.00050%	0.00002%	na	pass
	10 Hz, 13.3V, 500k BW	0%	0.00147%	0.00400%	0.00050%	na	pass
	20 Hz, 13.3V, 500k BW	0%	0.00054%	0.00100%	0.00020%	na	pass
	20 kHz, 13.3V, 500k BW	0%	0.00058%	0.00100%	0.00010%	na	pass
	100kHz, 13.3V, 500k BW	0%	0.00084%	0.00400%	0.00010%	na	pass
[8] Sine (D/A) THD+N (%) - non-accredited, self-test							
Channel A	20 Hz	0%	0.00041%	0.00070%	0.00010%	na	pass
	1 kHz	0%	0.00030%	0.00070%	0.00002%	na	pass
	5 kHz	0%	0.00033%	0.00070%	0.00002%	na	pass
	20 kHz	0%	0.00024%	0.00070%	0.00002%	na	pass
Channel B	20 Hz	0%	0.00048%	0.00070%	0.00010%	na	pass
	1 kHz	0%	0.00053%	0.00070%	0.00002%	na	pass
	5 kHz	0%	0.00049%	0.00070%	0.00002%	na	pass
	20 kHz	0%	0.00044%	0.00070%	0.00002%	na	pass
[9] Output Crosstalk (dB) - non-accredited, self-test							
Ch B into Ch A	20 kHz	-999	-123.6	-120.0	1.4	na	pass
	100 kHz	-999	-116.2	-106.0	1.4	na	pass
Ch A into Ch B	20 kHz	-999	-136.5	-120.0	1.4	na	pass
	100 kHz	-999	-129.4	-106.0	1.4	na	pass
[10] Source Resistance Accuracy (Ω) - note 4							
Channel A	40 Ω Bal	39.000	40.621	41.000	0.020	>10	pass
	200 Ω Bal	198.000	200.943	202.000	0.040	>10	pass
	600 Ω Bal	597.00	600.62	603.00	0.12	>10	pass
	20 Ω Unbal	19.000	20.496	21.000	0.010	>10	pass
	600 Ω Unbal	597.00	600.15	603.00	0.12	>10	pass
Channel B	40 Ω Bal	39.000	40.617	41.000	0.020	>10	pass
	200 Ω Bal	198.000	200.886	202.000	0.040	>10	pass
	600 Ω Bal	597.00	600.64	603.00	0.12	>10	pass
	20 Ω Unbal	19.000	20.493	21.000	0.010	>10	pass
	600 Ω Unbal	597.00	600.23	603.00	0.12	>10	pass

Item	Setting(s)	Lower Limit	READING	Upper Limit	MU	TUR	Result	
ANALOG ANALYZER CHARACTERISTICS								
[11] Input Termination Accuracy (Ω) - note 4								
Channel A	600 Ω	594.00	600.25	606.00	0.12	>10	pass	
	300 Ω	297.000	300.367	303.000	0.060	>10	pass	
Channel B	600 Ω	594.00	600.39	606.00	0.12	>10	pass	
	300 Ω	297.000	300.543	303.000	0.060	>10	pass	
[12] Input Common Mode Rejection (dB) - note 5								
Channel A	2.5V range, 10 Hz	-999	-95.3	-80.0	5.0	na	pass	
	2.5V range, 1 kHz	-999	-94.6	-80.0	5.0	na	pass	
	2.5V range, 20 kHz	-999	-93.0	-80.0	5.0	na	pass	
	10V range, 1kHz	-999	-92.6	-65.0	2.0	na	pass	
	10V range, 20 kHz	-999	-74.1	-65.0	2.0	na	pass	
	40V range, 1kHz	-999	-70.7	-50.0	2.0	na	pass	
	160V range, 1kHz	-999	-63.2	-50.0	2.0	na	pass	
Channel B	2.5V range, 10 Hz	-999	-91.6	-80.0	5.0	na	pass	
	2.5V range, 1 kHz	-999	-91.1	-80.0	5.0	na	pass	
	2.5V range, 20 kHz	-999	-91.5	-80.0	5.0	na	pass	
	10V range, 1kHz	-999	-85.4	-65.0	2.0	na	pass	
	10V range, 20 kHz	-999	-74.7	-65.0	2.0	na	pass	
	40V range, 1kHz	-999	-68.3	-50.0	2.0	na	pass	
	160V range, 1kHz	-999	-64.6	-50.0	2.0	na	pass	
[13] Input Residual Crosstalk (dB) - note 5								
Ch B into Ch A	20 kHz	-999	-147.7	-140.0	1.1	na	pass	
	100 kHz	-999	-134.2	-126.0	1.1	na	pass	
Ch A into Ch B	20 kHz	-999	-163.3	-140.0	1.1	na	pass	
	100 kHz	-999	-147.6	-126.0	1.1	na	pass	
[14] Level Meter Accuracy (Volts, mVolts) - note 5								
Channel A	120 V	119.400	119.960	120.600	0.052	>10	pass	
	60 V	59.700	59.980	60.300	0.026	>10	pass	
	30 V	29.850	29.975	30.150	0.013	>10	pass	
	16 V	15.9200	15.9875	16.0800	0.0068	>10	pass	
	8 V	7.9600	7.9963	8.0400	0.0035	>10	pass	
	4 V	3.9800	3.9985	4.0200	0.0019	>10	pass	
	2 V	1.99000	1.99906	2.01000	0.00085	>10	pass	
	1 V	0.99500	0.99947	1.00500	0.00043	>10	pass	
	500 mV	497.50	499.77	502.50	0.23	>10	pass	
	240 mV	238.80	239.77	241.20	0.10	>10	pass	
	120 mV	119.400	119.883	120.600	0.052	>10	pass	
	60 mV	59.700	59.930	60.300	0.027	>10	pass	
	30 mV	29.850	29.965	30.150	0.014	>10	pass	
	5 mV	4.9750	4.9976	5.0250	0.0032	7.8	pass	
	Channel B	120 V	119.400	119.888	120.600	0.052	>10	pass
		60 V	59.700	59.946	60.300	0.026	>10	pass
		30 V	29.850	29.978	30.150	0.013	>10	pass
16 V		15.9200	15.9895	16.0800	0.0068	>10	pass	
8 V		7.9600	7.9988	8.0400	0.0035	>10	pass	
4 V		3.9800	3.9998	4.0200	0.0019	>10	pass	
2 V		1.99000	1.99956	2.01000	0.00085	>10	pass	
1 V		0.99500	0.99975	1.00500	0.00043	>10	pass	
500 mV		497.50	499.92	502.50	0.23	>10	pass	
240 mV		238.80	239.81	241.20	0.10	>10	pass	
120 mV		119.400	119.895	120.600	0.052	>10	pass	
60 mV		59.700	59.942	60.300	0.027	>10	pass	
30 mV		29.850	29.970	30.150	0.014	>10	pass	
5 mV		4.9750	4.9947	5.0250	0.0032	7.8	pass	

Item	Setting(s)	Lower Limit	READING	Upper Limit	MU	TUR	Result
ANALOG ANALYZER, continued							
[15] Level Meter Flatness (dB) - note 5							
Channel A	10 Hz	-0.1000	-0.0046	0.1000	0.0028	>10	pass
	15 Hz	-0.0300	0.0005	0.0300	0.0026	>10	pass
	20 Hz	-0.0080	0.0003	0.0080	0.0026	3.1	pass
	50 Hz	-0.0080	-0.0008	0.0080	0.0018	4.4	pass
	20 kHz	-0.0080	-0.0008	0.0080	0.0020	4.0	pass
	50 kHz	-0.0300	-0.0057	0.0300	0.0027	>10	pass
	100 kHz	-0.1000	-0.0193	0.1000	0.0055	>10	pass
Channel B	500 kHz	-0.500	-0.014	0.200	0.027	7.4	pass
	10 Hz	-0.1000	-0.0087	0.1000	0.0028	>10	pass
	15 Hz	-0.0300	-0.0011	0.0300	0.0026	>10	pass
	20 Hz	-0.0080	-0.0011	0.0080	0.0026	3.1	pass
	50 Hz	-0.0080	-0.0008	0.0080	0.0018	4.4	pass
	20 kHz	-0.0080	-0.0011	0.0080	0.0020	4.0	pass
	50 kHz	-0.0300	-0.0060	0.0300	0.0027	>10	pass
[16] Amplitude Meter Accuracy (Volts, mVolts) - note 5							
Channel A	100 kHz	-0.1000	-0.0204	0.1000	0.0055	>10	pass
	500 kHz	-0.500	-0.011	0.200	0.027	7.4	pass
	2.000 V	1.9800	1.9983	2.0200	0.0012	>10	pass
	500 mV	495.00	500.08	505.00	0.32	>10	pass
	120 mV	118.800	120.012	121.200	0.075	>10	pass
	30 mV	29.700	29.994	30.300	0.020	>10	pass
Channel B	8.0 mV	7.9200	7.9913	8.0800	0.0051	>10	pass
	2.0 mV	1.9800	1.9951	2.0200	0.0017	>10	pass
	2.000 V	1.9800	1.9974	2.0200	0.0012	>10	pass
	500 mV	495.00	499.88	505.00	0.32	>10	pass
	120 mV	118.800	119.965	121.200	0.075	>10	pass
	30 mV	29.700	29.983	30.300	0.020	>10	pass
[17] Amplitude Meter Flatness (dB) - note 5							
2.000 Vrms	8.0 mV	7.9200	7.9854	8.0800	0.0051	>10	pass
	2.0 mV	1.9800	1.9953	2.0200	0.0017	>10	pass
	15 Hz	-0.0500	-0.0226	0.0500	0.0028	>10	pass
	20 Hz	-0.0200	-0.0033	0.0200	0.0027	7.4	pass
	20 kHz	-0.0200	0.0005	0.0200	0.0021	9.5	pass
	50 kHz	-0.0500	-0.0038	0.0500	0.0027	>10	pass
120 mVrms	100 kHz	-0.1500	-0.0182	0.1500	0.0055	>10	pass
	200 kHz	-0.300	-0.087	0.200	0.019	>10	pass
	15 Hz	-0.0500	-0.0226	0.0500	0.0043	>10	pass
	20 Hz	-0.0200	-0.0031	0.0200	0.0042	4.8	pass
	20 kHz	-0.0200	0.0023	0.0200	0.0022	9.1	pass
	50 kHz	-0.0500	-0.0020	0.0500	0.0033	>10	pass
8 mVrms	100 kHz	-0.1500	-0.0130	0.1500	0.0076	>10	pass
	200 kHz	-0.300	-0.074	0.200	0.018	>10	pass
	15 Hz	-0.0500	-0.0215	0.0500	0.0029	>10	pass
	20 Hz	-0.0200	-0.0021	0.0200	0.0024	8.3	pass
	20 kHz	-0.0200	0.0011	0.0200	0.0021	9.5	pass
	50 kHz	-0.0500	-0.0085	0.0500	0.0028	>10	pass
	100 kHz	-0.1500	0.0072	0.1500	0.0059	>10	pass
	200 kHz	-0.300	-0.148	0.200	0.010	>10	pass

Item	Setting(s)	Lower Limit	READING	Upper Limit	MU	TUR	Result
ANALOG ANALYZER, continued							
[18] Bandreject & THD+N Accuracy (dBV) - note 5							
20 Hz notch	40 Hz	-0.300	-0.050	0.300	0.010	>10	pass
	60 Hz	-0.300	0.033	0.300	0.010	>10	pass
	20 kHz	-0.300	0.021	0.300	0.010	>10	pass
	120 kHz	-0.300	-0.014	0.300	0.021	>10	pass
1 kHz notch	20 Hz	-0.300	0.011	0.300	0.010	>10	pass
	500 Hz	-0.300	-0.074	0.300	0.010	>10	pass
	2.0 kHz	-0.300	-0.056	0.300	0.010	>10	pass
	3.0 kHz	-0.300	0.033	0.300	0.010	>10	pass
	20 kHz	-0.300	0.020	0.300	0.010	>10	pass
	120 kHz	-0.300	-0.014	0.300	0.021	>10	pass
20 kHz notch	20 Hz	-0.300	0.011	0.300	0.010	>10	pass
	10 kHz	-0.300	-0.087	0.300	0.010	>10	pass
	40 kHz	-0.300	-0.058	0.300	0.010	>10	pass
	60 kHz	-0.300	0.017	0.300	0.011	>10	pass
	120 kHz	-0.300	-0.017	0.300	0.021	>10	pass
100 kHz notch	20 Hz	-0.300	0.011	0.300	0.010	>10	pass
	20 kHz	-0.300	0.027	0.300	0.010	>10	pass
	50 kHz	-0.300	-0.056	0.300	0.010	>10	pass
[19] Bandpass Accuracy (dBV) - note 5							
20 Hz	19.60 Hz BP	-0.300	-0.016	0.300	0.010	>10	pass
	20.00 Hz BP	-0.300	0.048	0.300	0.010	>10	pass
	20.40 Hz BP	-0.300	-0.038	0.300	0.010	>10	pass
1 kHz	0.980 kHz BP	-0.300	0.013	0.300	0.010	>10	pass
	1.000 kHz BP	-0.300	0.043	0.300	0.010	>10	pass
	1.020 kHz BP	-0.300	-0.052	0.300	0.010	>10	pass
20 kHz	19.60 kHz BP	-0.300	-0.056	0.300	0.010	>10	pass
	20.00 kHz BP	-0.300	0.004	0.300	0.010	>10	pass
	20.40 kHz BP	-0.300	-0.087	0.300	0.010	>10	pass
100 kHz	98.0 kHz BP	-0.300	0.011	0.300	0.021	>10	pass
	100.0 kHz BP	-0.300	0.057	0.300	0.021	>10	pass
	102.0 kHz BP	-0.300	0.004	0.300	0.021	>10	pass
[20] Bandwidth Limiting Filters (dB) - note 5							
22 Hz Highpass	22.4 Hz	-6.000	-1.724	0.000	0.020	na	pass
	31.5 Hz	-0.500	-0.234	0.500	0.020	>10	pass
	50 Hz	-0.500	-0.005	0.500	0.010	>10	pass
100 Hz Highpass	95 Hz	-999	-3.496	-3.000	0.030	na	pass
	105 Hz	-3.000	-2.268	0.000	0.030	na	pass
400 Hz Highpass	380 Hz	-999	-3.857	-3.000	0.010	na	pass
	420 Hz	-3.000	-2.492	0.000	0.010	na	pass
22 kHz Lowpass	5 kHz	-0.500	-0.002	0.500	0.010	>10	pass
	16 kHz	-0.500	-0.044	0.500	0.010	>10	pass
	22.4 kHz	-6.000	-2.848	0.000	0.010	na	pass
30 kHz Lowpass	28.5 kHz	-3.000	-2.248	0.000	0.010	na	pass
	31.5 kHz	-999	-3.541	-3.000	0.010	na	pass
80 kHz Lowpass	76 kHz	-3.000	-2.310	0.000	0.011	na	pass
	84 kHz	-999	-3.526	-3.000	0.011	na	pass

Item	Setting(s)	Lower Limit	READING	Upper Limit	MU	TUR	Result
ANALOG ANALYZER, continued							
[21] Residual Noise (uVolts) - non-accredited, self-test							
Channel A	22-22k BW	0	0.84	1.00	0.04	na	pass
	10-80k BW	0	1.57	2.00	0.04	na	pass
	Full BW	0	4.26	6.00	0.04	na	pass
	5 kHz bandpass	0	0.20	0.25	0.02	na	pass
	20 kHz bandpass	0	0.37	0.50	0.02	na	pass
	200 kHz bandpass	0	1.12	1.50	0.02	na	pass
Channel B	22-22k BW	0	0.83	1.00	0.04	na	pass
	10-80k BW	0	1.56	2.00	0.04	na	pass
	Full BW	0	4.26	6.00	0.04	na	pass
	5 kHz bandpass	0	0.20	0.25	0.02	na	pass
	20 kHz bandpass	0	0.37	0.50	0.02	na	pass
	200 kHz bandpass	0	1.12	1.50	0.02	na	pass
[22] Residual THD+N (%) - non-accredited, self-test							
Channel A	20 Hz, 1.5V, 22k BW	0%	0.00017%	0.00032%	0.00002%	na	pass
	1 kHz, 1.5V, 22k BW	0%	0.00018%	0.00025%	0.00002%	na	pass
	5 kHz, 1.5V, 22k BW	0%	0.00022%	0.00032%	0.00002%	na	pass
	20 kHz, 1.5V, 22k BW	0%	0.00020%	0.00032%	0.00002%	na	pass
	1 kHz, 1.5V, 80k BW	0%	0.00029%	0.00050%	0.00002%	na	pass
	20 kHz, 1.5V, 80k BW	0%	0.00033%	0.00050%	0.00002%	na	pass
	1 kHz, 1.5V, 500k BW	0%	0.00056%	0.00100%	0.00002%	na	pass
	20 kHz, 1.5V, 500k BW	0%	0.00060%	0.00100%	0.00002%	na	pass
	50 kHz, 1.5V, 500k BW	0%	0.00080%	0.00400%	0.00003%	na	pass
	100 kHz, 1.5V, 500k BW	0%	0.00109%	0.00400%	0.00006%	na	pass
Channel B	20 Hz, 1.5V, 22k BW	0%	0.00019%	0.00032%	0.00002%	na	pass
	1 kHz, 1.5V, 22k BW	0%	0.00018%	0.00025%	0.00002%	na	pass
	5 kHz, 1.5V, 22k BW	0%	0.00022%	0.00032%	0.00002%	na	pass
	20 kHz, 1.5V, 22k BW	0%	0.00020%	0.00032%	0.00002%	na	pass
	1 kHz, 1.5V, 80k BW	0%	0.00029%	0.00050%	0.00002%	na	pass
	20 kHz, 1.5V, 80k BW	0%	0.00033%	0.00050%	0.00002%	na	pass
	1 kHz, 1.5V, 500k BW	0%	0.00056%	0.00100%	0.00002%	na	pass
	20 kHz, 1.5V, 500k BW	0%	0.00060%	0.00100%	0.00002%	na	pass
	50 kHz, 1.5V, 500k BW	0%	0.00079%	0.00400%	0.00003%	na	pass
	100 kHz, 1.5V, 500k BW	0%	0.00120%	0.00400%	0.00006%	na	pass
[23] Phase Measurement Offset (Deg) - note 5							
	10 Hz, dc coupled	-0.50	0.01	0.50	0.060	8.3	pass
	10 Hz, ac coupled	-0.50	-0.01	0.50	0.060	8.3	pass
	1 kHz	-0.50	-0.01	0.50	0.060	8.3	pass
	5 kHz	-0.50	-0.03	0.50	0.060	8.3	pass
	20 kHz	-1.00	-0.12	1.00	0.060	>10	pass
	50 kHz	-2.00	-0.25	2.00	0.060	>10	pass
[24] Frequency Measurement Accuracy (uHz/Hz) - note 1							
	20 kHz	-6.0	-0.3	6.0	1.0	6.0	pass
[25] High Resolution A/D Distortion (dB) - non-accredited, self-test							
Channel A	5 kHz	-999	-110.0	-105.0	1.0	na	pass
Channel B	5 kHz	-999	-112.1	-105.0	1.0	na	pass
[26] High Bandwidth A/D Distortion (dB) - non-accredited, self-test							
Channel A	20 kHz	-999	-101.3	-90.0	1.0	na	pass
Channel B	20 kHz	-999	-101.4	-90.0	1.0	na	pass

Item	Setting(s)	Lower Limit	READING	Upper Limit	MU	TUR	Result
OPTION "BUR" RELATED							
[27] Burst OFF Ratio Accuracy (dB) - note 2							
	0 dB	-0.300	-0.052	0.300	0.020	>10	pass
	-10 dB	-10.300	-10.013	-9.700	0.020	>10	pass
	-20 dB	-20.300	-20.009	-19.700	0.020	>10	pass
	-40 dB	-40.300	-40.116	-39.700	0.020	>10	pass
	-60 dB	-60.300	-60.051	-59.700	0.042	7	pass
[28] Squarewave Amplitude Accuracy (Volts) - note 2							
	1.000V, 100Hz	1.3859	1.4146	1.4425	0.0024	>10	pass

OPTION "IMD" RELATED							
[29] IMD Signal Amplitude Accuracy (Volts) - note 2							
	SMPTE 4:1,100/7k,1V	0.8081	0.8324	0.8411	0.0012	>10	pass
	SMPTE 1:1,100/7k,1V	0.6930	0.7075	0.7212	0.0010	>10	pass
	DFD, 14k/15k, 1V	0.6859	0.7126	0.7283	0.0014	>10	pass
	DIM-100, 1V	1.1081	1.1297	1.1533	0.0023	>10	pass
[30] SMPTE LF Tone Accuracy (Hz) - note 1							
	40 Hz	39.400	40.044	40.600	0.032	>10	pass
	50 Hz	49.250	50.156	50.750	0.040	>10	pass
	60 Hz	59.100	59.929	60.900	0.048	>10	pass
	70 Hz	68.950	69.838	71.050	0.056	>10	pass
	100 Hz	98.500	100.365	101.900	0.080	>10	pass
	125 Hz	123.13	125.15	126.83	0.10	>10	pass
	250 Hz	246.25	250.25	253.75	0.20	>10	pass
	500 Hz	492.50	496.49	507.50	0.40	>10	pass
[31] DIM Squarewave Accuracy (Hz) - note 1							
	DIM-100 (3.15 kHz)	3118.5000	3150.5979	3181.5000	0.0063	>10	pass
	DIM-B (2.96 kHz)	2930.4000	2960.3309	2989.6000	0.0059	>10	pass

[32] IMD Measurement Accuracy (dB) - non-accredited, self-test							
	SMPTE, -60 dB	-60.50	-60.19	-59.50	0.020	na	pass
	DFD, -60 dB	-60.50	-59.86	-59.50	0.020	na	pass
	DIM, -60 dB u4	-60.70	-60.97	-59.30	0.020	na	pass
	DIM, -60 dB u5	-60.70	-60.16	-59.30	0.020	na	pass

[33] Residual IMD (%) - non accredited, self-test							
Channel A	SMPTE 4:1,60/7k,26V	0%	0.00063%	0.00150%	0.00010%	na	pass
	SMPTE 4:1,60/7k,1V	0%	0.00066%	0.00150%	0.00010%	na	pass
	SMPTE 4:1,60/7k,0.2V	0%	0.00097%	0.00150%	0.00010%	na	pass
	DFD, 14k/15k, 26V	0%	0.00011%	0.00020%	0.00002%	na	pass
	DFD, 14k/15k, 1V	0%	0.00006%	0.00020%	0.00002%	na	pass
	DFD, 14k/15k, 0.2V	0%	0.00008%	0.00020%	0.00002%	na	pass
	DIM-100, 26V	0%	0.00088%	0.00200%	0.00010%	na	pass
	DIM-100, 1V	0%	0.00083%	0.00200%	0.00010%	na	pass
Channel B	DIM-100, 0.2V	0%	0.00112%	0.00200%	0.00010%	na	pass
	SMPTE 4:1,60/7k,26V	0%	0.00070%	0.00150%	0.00010%	na	pass
	SMPTE 4:1,60/7k,1V	0%	0.00062%	0.00150%	0.00010%	na	pass
	SMPTE 4:1,60/7k,0.2V	0%	0.00105%	0.00150%	0.00010%	na	pass
	DFD, 14k/15k, 26V	0%	0.00011%	0.00020%	0.00002%	na	pass
	DFD, 14k/15k, 1V	0%	0.00006%	0.00020%	0.00002%	na	pass
	DFD, 14k/15k, 0.2V	0%	0.00008%	0.00020%	0.00002%	na	pass
	DIM-100, 26V	0%	0.00085%	0.00200%	0.00010%	na	pass
DIM-100, 1V	0%	0.00079%	0.00200%	0.00010%	na	pass	
DIM-100, 0.2V	0%	0.00108%	0.00200%	0.00010%	na	pass	

Item	Setting(s)	Lower Limit	READING	Upper Limit	MU	TUR	Result
OPTION "W&F" RELATED				>> Not Installed			
[34] W&F Measurement Accuracy (%) - non-accredited, self-test							
IEC	1.000% peak						
NAB/JIS	0.7071% rms						
[35] Residual Wow & Flutter (%) - non-accredited, self-test							
IEC	Weighted						
	Unweighted						
NAB	Weighted						
	Unweighted						
SCRAPE	12.5 kHz tone						

OPTION "S-AES17" RELATED							
[36] Option Response (dB) - note 5							
20 kHz Pre-Filter	1 kHz	-0.100	-0.027	0.100	0.010	10	pass
	15 kHz	-0.100	-0.020	0.100	0.010	10	pass
	20 kHz	-0.100	-0.058	0.100	0.010	10	pass
	25 kHz	-4.000	-2.820	-2.000	0.010	na	pass
40 kHz Pre-Filter	1 kHz	-0.100	0.011	0.100	0.010	10	pass
	30 kHz	-0.100	0.017	0.100	0.010	10	pass
	40 kHz	-0.100	-0.004	0.100	0.010	10	pass
	50 kHz	-4.000	-2.698	-2.000	0.010	na	pass
20 kHz AES17 mode	20 Hz	-0.100	-0.041	0.100	0.010	10	pass
	10 kHz	-0.100	0.006	0.100	0.010	10	pass
	15 kHz	-0.100	-0.007	0.100	0.010	10	pass
	20 kHz	-0.100	-0.055	0.100	0.010	10	pass
	24 kHz	-999	-75.48	-60.00	0.40	na	pass
	27 kHz	-999	-69.19	-60.00	0.40	na	pass
40 kHz AES17 mode	200 kHz	-999	-75.65	-60.00	0.40	na	pass
	20 Hz	-0.100	-0.007	0.100	0.010	10	pass
	20 kHz	-0.100	0.045	0.100	0.010	10	pass
	30 kHz	-0.100	0.034	0.100	0.010	10	pass
	40 kHz	-0.100	-0.018	0.100	0.010	10	pass
	48 kHz	-999	-72.45	-60.00	0.40	na	pass
	54 kHz	-999	-65.40	-60.00	0.40	na	pass
	200 kHz	-999	-72.72	-60.00	0.40	na	pass
[37] Option Residual THD+N (%) - non-accredited, self-test							
20 kHz AES17 mode	8 V	0%	0.00019%	0.00030%	0.00002%	na	pass
	50 mV	0%	0.00160%	0.00200%	0.00008%	na	pass
40 kHz AES17 mode	8 V	0%	0.00023%	0.00040%	0.00002%	na	pass
	50 mV	0%	0.00222%	0.00280%	0.00008%	na	pass

OPTION "OPT-2020" RELATED							
>> Not Installed							
[36A] Option Response (dB) - note 5							
20 kHz AES17 mode	20 Hz						
	10 kHz						
	15 kHz						
	20 kHz						
	24 kHz						
	27 kHz						
	200 kHz						
[37A] Option Residual THD+N (%) - non-accredited, self-test							
20 kHz AES17 mode	8 V						
	50 mV						

Item	Setting(s)	Lower Limit	READING	Upper Limit	MU	TUR	Result
AES/EBU DIGITAL I/O CHARACTERISTICS							
[38] Output Voltage Accuracy (Volts) - non-accredited, oscilloscope referenced							
Output I, balanced	8.00 Vpp	7.200	7.980	8.800	0.098	na	pass
	0.800 Vpp	0.640	0.796	0.960	0.010	na	pass
Output II, balanced	8.00 Vpp	7.200	7.980	8.800	0.098	na	pass
	0.800 Vpp	0.640	0.798	0.960	0.010	na	pass
Output I, unbal	2.00 Vpp	1.840	2.000	2.160	0.027	na	pass
	0.200 Vpp	0.164	0.198	0.236	0.003	na	pass
Output II, unbal	2.00 Vpp	1.840	2.019	2.160	0.027	na	pass
	0.200 Vpp	0.164	0.199	0.236	0.003	na	pass
[39] Input Voltage Measurement Accuracy (Volts) - non-accredited, oscilloscope referenced							
Input I, balanced	8.00 Vpp	7.600	7.908	8.400	0.098	na	pass
	0.800 Vpp	0.735	0.807	0.865	0.010	na	pass
Input II, balanced	8.00 Vpp	7.600	7.906	8.400	0.098	na	pass
	0.800 Vpp	0.735	0.807	0.865	0.010	na	pass
Input I, unbal	2.00 Vpp	1.900	1.990	2.100	0.027	na	pass
	0.200 Vpp	0.184	0.204	0.216	0.003	na	pass
Input II, unbal	2.00 Vpp	1.900	1.973	2.100	0.027	na	pass
	0.200 Vpp	0.184	0.204	0.216	0.003	na	pass
[40] Variable Rise Time Accuracy (nsec) - non-accredited, oscilloscope referenced							
Output I	25 nsec	20.0	22.6	30.0	1.0	na	pass
	100 nsec	80.0	100.8	120.0	2.0	na	pass
Output II	25 nsec	20.0	22.8	30.0	1.0	na	pass
	100 nsec	80.0	99.0	120.0	2.0	na	pass
[41] Normal Mode Noise Amplitude (Volts) - non-accredited, oscilloscope referenced							
Output I, unbal	0.500 Vpp	0.450	0.486	0.550	0.014	na	pass
	0.100 Vpp	0.075	0.098	0.125	0.008	na	pass
Output II, unbal	0.500 Vpp	0.450	0.484	0.550	0.014	na	pass
	0.100 Vpp	0.075	0.098	0.125	0.008	na	pass
[42] Common Mode Sine Amplitude (Volts) - note 2							
Output I, balanced	20.00 Vpp	18.00	20.01	22.00	0.16	>10	pass
	1.200 Vpp	0.920	1.337	1.480	0.010	>10	pass
Output II, balanced	20.00 Vpp	18.00	19.99	22.00	0.16	>10	pass
	1.200 Vpp	0.920	1.226	1.480	0.010	>10	pass
[43] Common Mode Voltage Measurement Accuracy (Volts) - note 5							
Input I, balanced	20.00 Vpp	18.00	19.51	22.00	0.08	>10	pass
	1.200 Vpp	1.030	1.177	1.370	0.005	>10	pass
Input II, balanced	20.00 Vpp	18.00	19.52	22.00	0.08	>10	pass
	1.200 Vpp	1.030	1.181	1.370	0.005	>10	pass
[44] Jitter Accuracy (UI) - non-accredited, self-test							
Generator	4.90 UI	4.40	4.90	5.40	0.06	na	pass
	0.305 UI	0.263	0.305	0.347	0.006	na	pass
Analyzer	0.305 UI, Avg Det	0.268	0.304	0.341	0.006	na	pass
	0.305 UI, Peak Det	0.268	0.307	0.341	0.006	na	pass
[45] Jitter Flatness (dB) - non-accredited, self-test							
	100 Hz	-1.00	0.01	1.00	0.06	na	pass
	200 Hz	-1.00	0.00	1.00	0.06	na	pass
	1 kHz	-1.00	-0.01	1.00	0.06	na	pass
	5 kHz	-1.00	-0.04	1.00	0.06	na	pass
	20 kHz	-1.00	-0.05	1.00	0.06	na	pass
	50 kHz	-1.00	-0.11	1.00	0.06	na	pass
[46] Residual Jitter (nsec, pk) - non-accredited, self-test							
Output I	48 kS, full BW	0	0.312	1.000	0.100	na	pass
	96 kS, full BW	0	0.357	1.000	0.100	na	pass
	192 kS, full BW	0	0.357	1.000	0.160	na	pass
Output II	48 kS, full BW	0	0.357	1.000	0.100	na	pass
	96 kS, full BW	0	0.312	1.000	0.100	na	pass
	192 kS, full BW	0	0.401	1.000	0.160	na	pass