



**DEQX Pty Limited**  
 ABN 39 078 435 060  
 Tel: +61 (0)2 9905 6277  
 Email: [sales@deqx.com](mailto:sales@deqx.com)

## PDC 2.6 Technical Specification 050524-1

### 1. Introduction

The DEQX Calibrated™ PDC-2.6 Processor is a 2-input, 6-output digital processor offering individual speaker driver correction, extremely high order digital crossovers (up to 300dB/octave), room correction, time alignment, and much more.

This document provides a basic specification for the filtering possible using the DEQX Calibrated™ PDC-2.6 Processor, as well as measurements of the converter stages used on a standard PDC-2.6 or PDC-2.6P.

All measurements are taken using an industry reference Audio Precision S2 Dual-Domain analyzer.

#### 1.1 Filter processing

Specification	Conditions	Value	Unit
Crossover frequency resolution		1	Hz
Crossover slope (min)	Linear phase	48	dB/Octave
	Butterworth	6	dB/Octave
	Linkwitz-Riley	12	dB/Octave
Crossover slope (max)	Linear phase	300	dB/Octave
	Butterworth	300	dB/Octave
	Linkwitz-Riley	300	dB/Octave
Time alignment resolution	48kHz	0.02	ms
Magnitude correction	default value (user can set arbitrarily)	0.2	dB
Group delay correction	default value (user can set arbitrarily)	0.5	ms
Speaker correction filter length	48kHz, firmware v58.7	4096	taps
		85.3	ms
Parametric EQ bands		10	
Parametric EQ resolution		1/12	Octave
Parametric EQ frequency resolution		0.01	Hz
Parametric EQ gain resolution		0.01	dB

#### 1.2 RCA Output Measurements – PDC 2.6P

Measurement	Conditions	Value	Unit
Full Scale Level	Jumper setting 1	0.83	V <sub>rms</sub>
		+0.6	dBu
	Jumper setting 2 (Default)	1.66	V <sub>rms</sub>
		+6.6	dBu

*Specification Subject to Change*



**DEQX Pty Limited**  
 ABN 39 078 435 060  
 Tel: +61 (0)2 9905 6277  
 Email: [sales@deqx.com](mailto:sales@deqx.com)

## PDC 2.6 Technical Specification 050524-1

	Jumper setting 3	2.04 +8.4	V <sub>rms</sub> dBu
	Jumper setting 4	2.42 +9.9	V <sub>rms</sub> dBu
	Jumper setting 5	3.97 +14.2	V <sub>rms</sub> dBu
Dynamic Range		-108.9	dB-A
THD	1kHz, -6dBFS	-118 0.00013	dB %
	1kHz, 0dBFS	-103 0.0007	dB %
	5kHz, -6dBFS	-108 0.0004	dB %
	5kHz, 0dBFS	-100 0.001	dB %
Frequency Range	10Hz	-0.03	dB
	22kHz	-0.225	dB
Impedance		75	Ohms

### 1.3 RCA Input Measurements – PDC 2.6P & PDC 2.6

Measurement	Conditions	Value	Unit
Full Scale Level	Jumper setting 1 (Default)	2.3	V <sub>rms</sub>
		9.5	dBu
	Jumper setting 2	3.4	V <sub>rms</sub>
		12.8	dBu
Dynamic Range		-107.4	dB-A
THD	1kHz, -6dBFS	-120 0.0001	dB %
	1kHz, 0dBFS	-106 0.0005	dB %
	5kHz, -6dBFS	-112 0.0003	dB %
	5kHz, 0dBFS	-107 0.0005	dB %
Frequency Range	10Hz	-1.2	dB
	22kHz	-0.1	dB
Impedance		47k	Ohms

### 1.4 XLR Input Measurements – PDC 2.6P & PDC 2.6

Measurement	Conditions	Value	Unit
Full Scale Level		6.0	V <sub>rms</sub>

*Specification Subject to Change*



**DEQX Pty Limited**  
 ABN 39 078 435 060  
 Tel: +61 (0)2 9905 6277  
 Email: [sales@deqx.com](mailto:sales@deqx.com)

## PDC 2.6 Technical Specification 050524-1

		17.9	dBu
Dynamic Range		-111.7	dB-A
THD	1kHz, -6dBFS	-122 0.00008	dB %
	1kHz, 0dBFS	-106 0.0005	dB %
	5kHz, -6dBFS	-116 0.00016	dB %
	5kHz, 0dBFS	-112 0.00025	dB %
Frequency Range	10Hz	-1.1	dB
	22kHz	0	dB
Impedance		47k	Ohms

### 1.5 Digital-in to digital-out Specification – PDC 2.6P & PDC 2.6

Measurement	Conditions	Value	Unit
THD	48kHz, 0dBFS, 1kHz	-156	dB
	48kHz, 0dBFS, 5kHz	-152	dB

### 1.6 Digital output Specification – PDC 2.6P & PDC 2.6

Measurement	Conditions	Value	Unit
External Clock Sync Frequency (min)		32	kHz
External Clock Sync Frequency (max)		96	kHz

### 1.7 Latency Measurements

Impulse filters (Bypass mode) selected for all latency measurements

Measurement	Conditions	Value	Unit
D-D	48kHz	2.4	ms
	44.1kHz	2.6	ms
A-D	48kHz	3.2	ms
D-A	48kHz	3.4	ms
	44.1kHz	3.7	ms
A-A	48kHz	4.2	ms

*Specification Subject to Change*



DEQX Pty Limited  
ABN 39 078 435 060  
Tel: +61 (0)2 9905 6277  
Email: [sales@deqx.com](mailto:sales@deqx.com)

## PDC 2.6 Technical Specification 050524-1

### 2. Measurement graphs

Audio Precision FFT SPECTRUM of THD Residual @ 1kHz - 4 averages 05/24/05 15:35:39

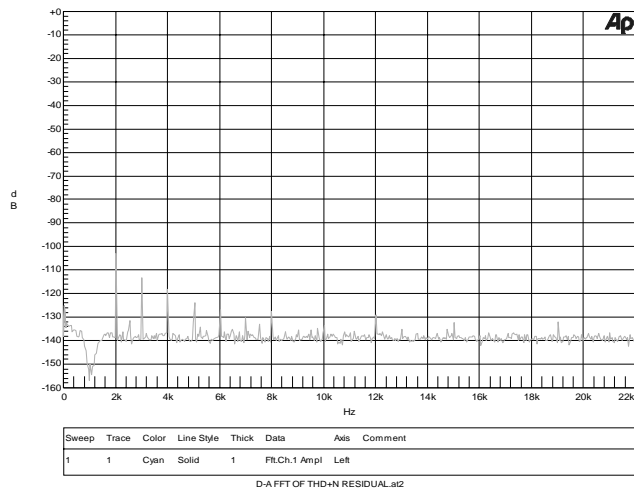


Figure 1 – RCA output, 0dBFS@1kHz

Audio Precision FFT SPECTRUM of THD Residual @ 1kHz - 4 averages 05/24/05 15:36:09

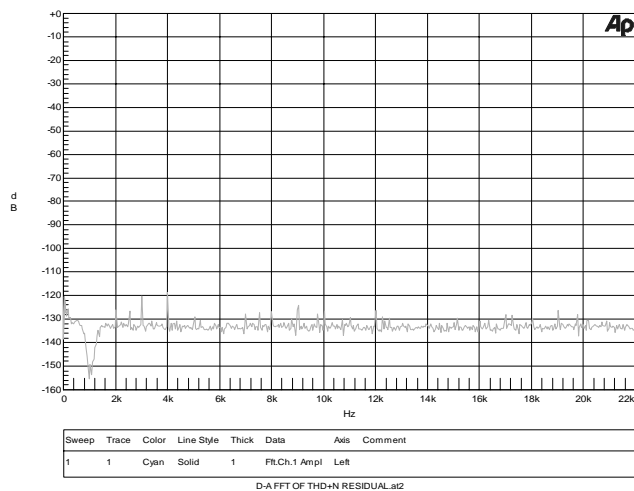


Figure 3 – RCA output, -6dBFS@1kHz

Audio Precision FFT SPECTRUM of THD Residual @ 5kHz - 4 averages 05/24/05 15:32:58

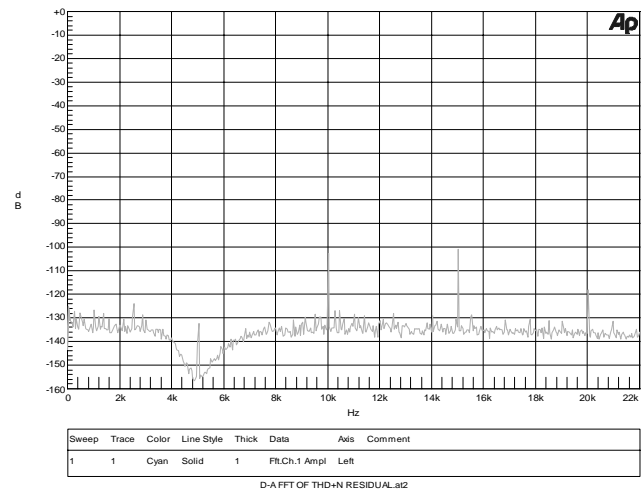


Figure 2 – RCA output, 0dBFS@5kHz

Audio Precision FFT SPECTRUM of THD Residual @ 5kHz - 4 averages 05/24/05 15:36:45

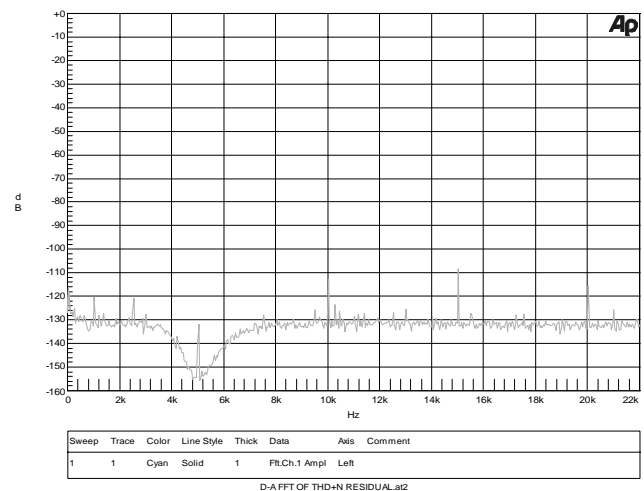


Figure 4 – RCA output, -6dBFS@5kHz

Specification Subject to Change



DEQX Pty Limited  
ABN 39 078 435 060  
Tel: +61 (0)2 9905 6277  
Email: [sales@deqx.com](mailto:sales@deqx.com)

### PDC 2.6 Technical Specification 050524-1

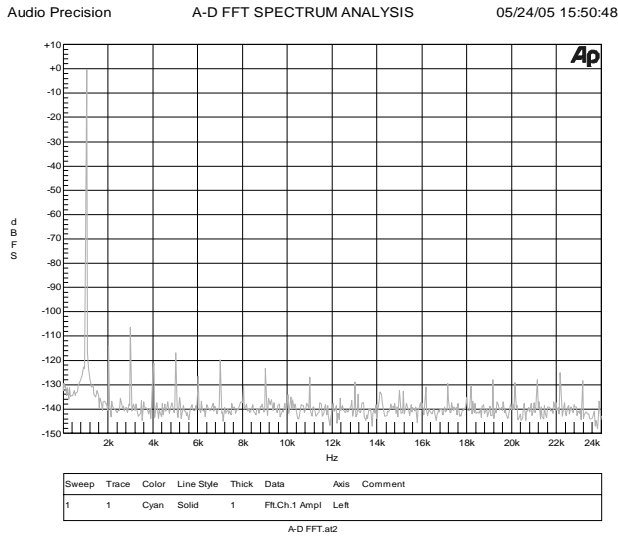


Figure 5 – RCA Input, 0dBFS@1kHz

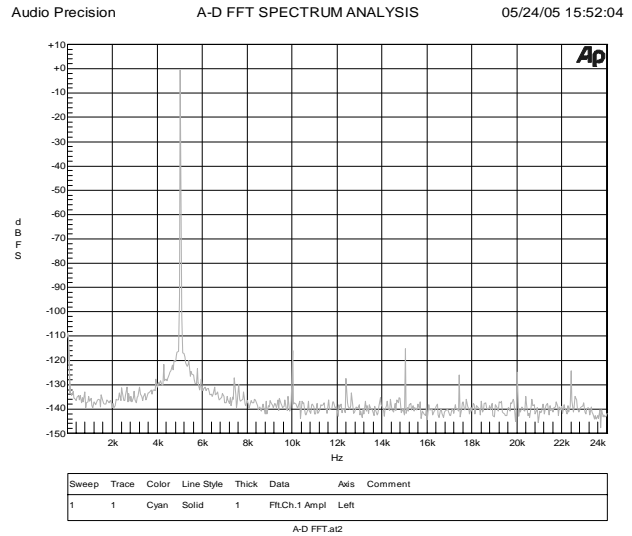


Figure 6 – RCA Input, 0dBFS@5kHz

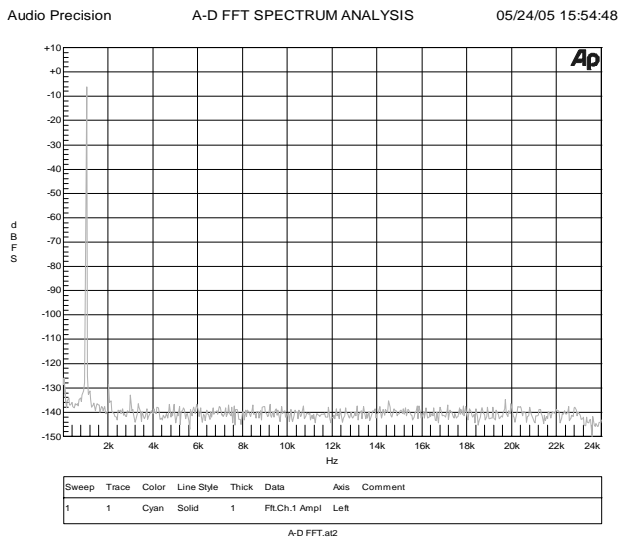


Figure 7 – RCA Input, -6dBFS@1kHz

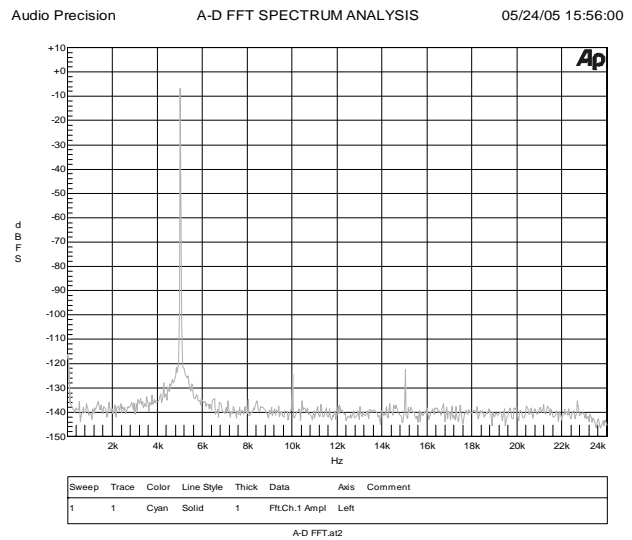


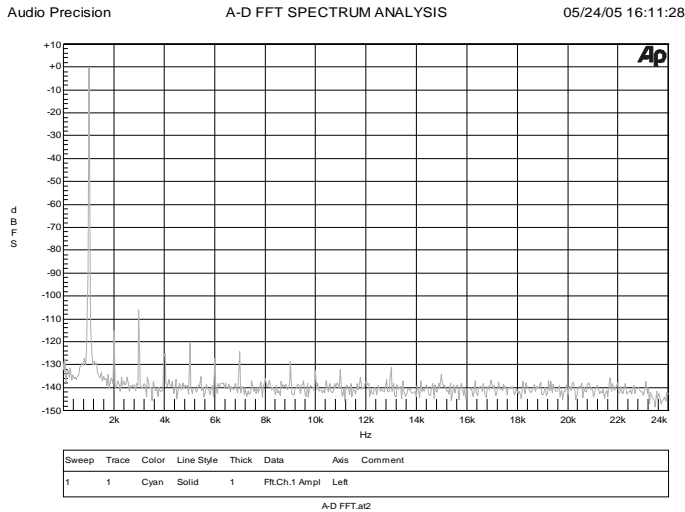
Figure 8 – RCA Input, -6dBFS@5kHz

Specification Subject to Change

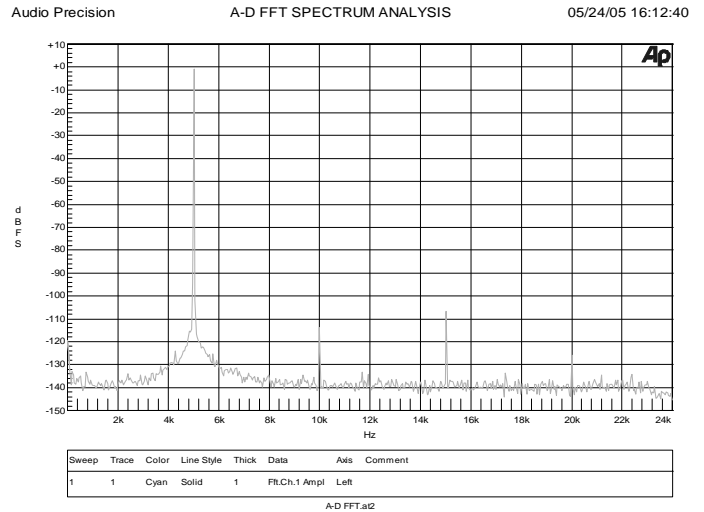


DEQX Pty Limited  
ABN 39 078 435 060  
Tel: +61 (0)2 9905 6277  
Email: [sales@deqx.com](mailto:sales@deqx.com)

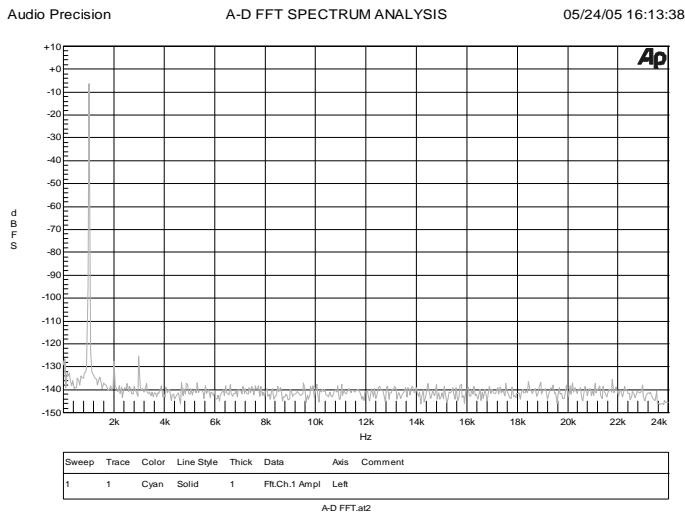
## PDC 2.6 Technical Specification 050524-1



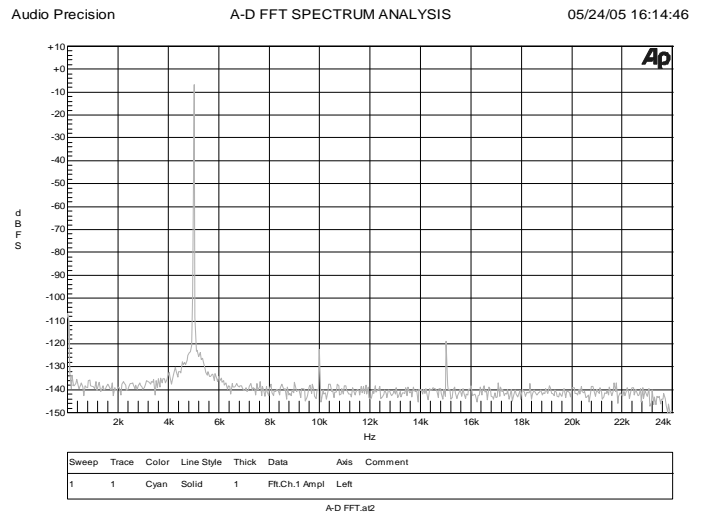
**Figure 9 – XLR Input, 0dBFS@1kHz**



**Figure 10 – XLR Input, 0dBFS@5kHz**



**Figure 11 – XLR Input, -6dBFS@1kHz**



**Figure 12 – XLR Input, -6dBFS@5kHz**

*Specification Subject to Change*



DEQX Pty Limited  
ABN 39 078 435 060  
Tel: +61 (0)2 9905 6277  
Email: [sales@deqx.com](mailto:sales@deqx.com)

### PDC 2.6 Technical Specification 050524-1

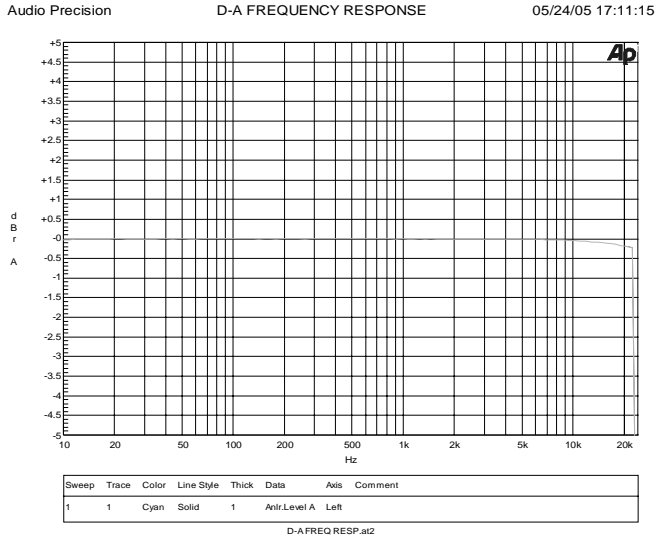


Figure 13 – RCA Output Frequency Response

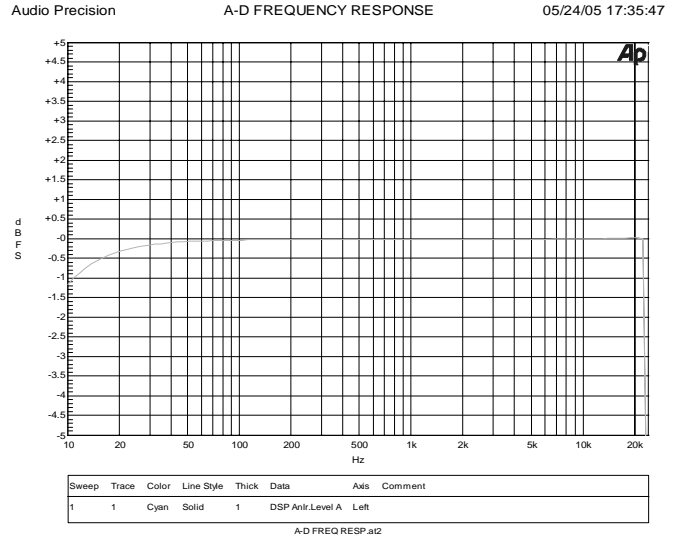


Figure 14 – RCA Input Frequency Response

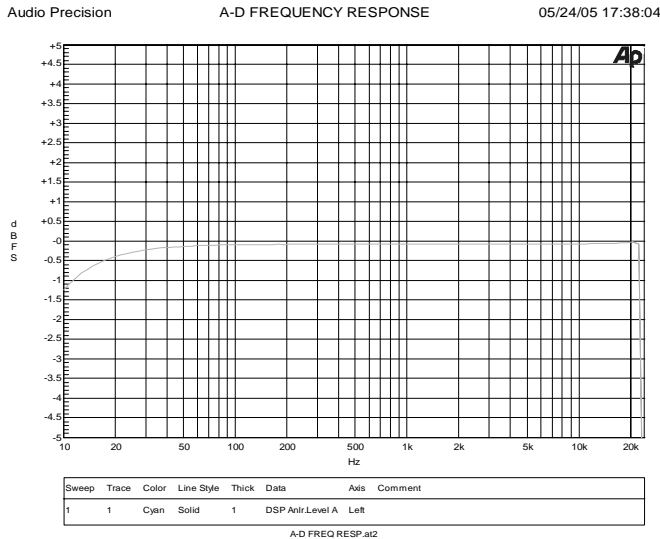


Figure 15 – XLR Input Frequency Response

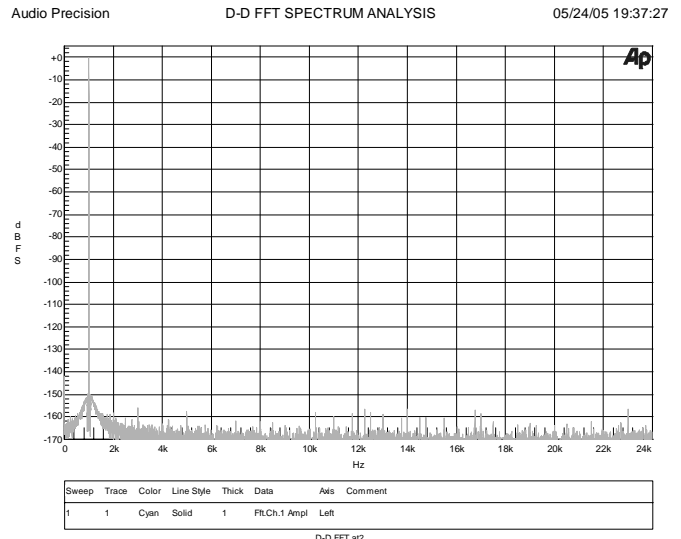


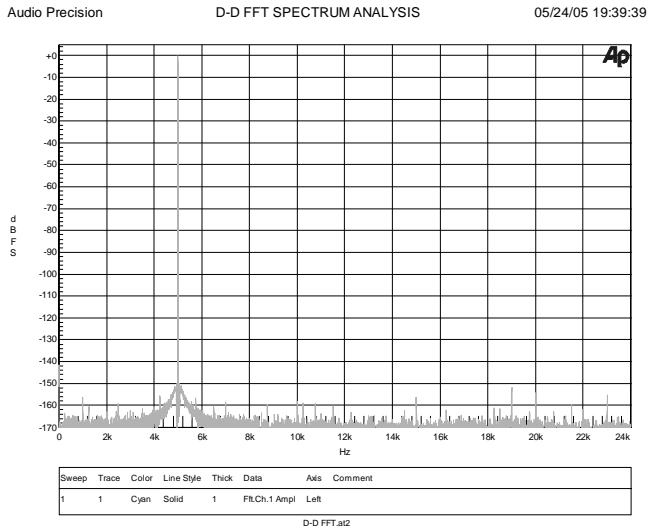
Figure 16 – Digital Input to Digital Output 1kHz

Specification Subject to Change



**DEQX Pty Limited**  
ABN 39 078 435 060  
Tel: +61 (0)2 9905 6277  
Email: [sales@deqx.com](mailto:sales@deqx.com)

**PDC 2.6 Technical Specification 050524-1**



**Figure 17 - Digital Input to Digital Output 5kHz**

*Specification Subject to Change*