

System Two Cascade Specifications Errata

APWIN version 2.1 software improves some System Two Cascade specifications. These changes apply only to System Two Cascade running under APWIN version 2.1 or later.

This errata applies to the *System Two Cascade Description, Installation, and APWIN Software Guide*, Audio Precision PN 8211.0078, dated April 2000. The errata lists the pages and headings and shows the areas affected, with specific changes in **bold**.



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On page 2-5, under Other Signals, add to Maximum Length Sequence (MLS) Frequency Range parameters as follows:

Maximum Length Sequence (MLS)

Sequences	4 pink, 4 white
Sequence Length	“32k” (32767) or “128k” (131071)
Frequency Range	10 Hz to 43% of sample rate, ±0.1 dB

On page 2-28, add to Quasi-Anechoic Acoustical Tester parameters as follows:

Quasi-Anechoic Acoustical Tester (MLS)

Signals	Four pink sequences, four white sequences
Frequency Range	Sample rate ÷ 2000 to sample rate ÷ 2
Frequency Resolution (Max)	1.465 Hz at 48.0 ks/s
Acquisition Length	32767 samples or 131071 samples
FFT Length	32768
Energy Time Windows	half Hann Hann <240 Hz > 8 kHz <120 Hz > 16 kHz
Time Windows (percent of data record to transition from 0 to full amplitude)	<5% <10% <20% <30%
Averaging	1 – 4096 in binary steps. Averaging algorithm is synchronous

On page 2-29, change Digital Output Characteristics as follows:

Digital Output Characteristics

Output Formats	AES/EBU (per AES3-1992) SPDIF-EIAJ Optical (Toslink®) General purpose serial General purpose parallel Serial interface to chip level via optional SIA-2322 accessory
Sample Rates	27 kHz – 108 kHz AES/EBU, 54 kHz – 216 kHz dual connector AES/EBU, general purpose serial; 8 kHz to 216 kHz parallel; independent of input sample rate
Sample Rate Resolution	1/64 Hz (approx. 0.0156 Hz)
Sample Rate Accuracy	±0.0002% [±2 PPM] using internal reference, lockable to external reference
Word Width	8 to 24 bits
Encoding	Linear, μ-Law, A-Law
Output impedance	
Balanced (XLR)	110 Ω
Unbalanced (BNC)	75 Ω approx

On pages 2-36 and 2-37, change Wideband Level Amplitude parameters as follows:

Embedded Audio Measurements

Wideband Level/Amplitude (ANALYZER)

Range	0 dBFS to <-140 dBFS
Frequency Range	< 10 Hz to 45.8% of sample rate < 10 Hz to 20.2 kHz at 44.1 ks/s < 10 Hz to 22.0 kHz at 48 ks/s < 10 Hz to 44.0 kHz at 96 ks/s
Accuracy	±0.01 dB, 0 dBFS to -120 dBFS
Flatness	±0.01 dB, 15 Hz – 22 kHz, with <10 Hz high-pass filter selection
High pass Filters	<10 Hz, 4-pole Butterworth 22 Hz, 4-pole Butterworth 100 Hz, 4-pole Butterworth 400 Hz, 4-pole Butterworth 400 Hz, 10-pole elliptical <i>when not using notch filter or bandpass mode</i> (response is -120 dB for ≤ 250 Hz , +0.02 dB, -0.1 dB for ≥400 Hz)
Low pass Filters	20 kHz 6-pole elliptic low-pass 15 kHz, 6-pole elliptic low-pass both: 0.1 dB pp ripple, ≥110 dB stopband attenuation

Errata

Weighting Filters	ANSI-IEC "A" weighting, per IEC Rec 179 CCIR QPk per CCIR Rec 468 CCIR RMS per AES 17 C-message per IEEE Std 743-1978 CCITT per CCITT Rec. 0.41 "F" weighting corresponding to 15 phon loudness contour (see <i>Figure 2-29</i>) HI-2 Harmonic weighting
Residual Noise (at 48 ks/s and 96 ks/s SR)	-141 dBFS unweighted -144 dBFS A-weighted -140 dBFS CCIR RMS -130 dBFS CCIR QPk -142 dBFS 20 kHz LP -143 dBFS 15 kHz LP -139 dBFS "F" weighting -152 dBFS CCITT -151 dBFS C Message

On page 2-40, change *Digital Interface Analyzer* text as follows:

Digital Interface Analyzer (INTERVU)

INTERVU operates in conjunction with an autoranged 8-bit A/D converter clocked at 80.0 MHz, providing interface signal measurements with >30 MHz bandwidth. INTERVU can display the interface signal in time or frequency domain, as an eye pattern, or probability graphs of amplitude or pulse width. INTERVU also can demodulate the jitter signal and display it in time or frequency domain or as a **histogram**. The jitter signal or the data on the interface may be reproduced through the monitor loudspeaker.