Audio Loudness problems are nothing new. For years broadcasters have had the challenge of providing audio and video content to their target audience while minimizing complaints about the drastic variations in audio loudness between program and commercial.

The 7800IDA8-3G+IG IntelliGain™ processor is designed to normalize perceived differences in audio loudness in real time for any 3G/HD/SD-SDI signal with embedded audio. This module will internally de-embed the audio signals, regulate the signal level based on a used defined target loudness level, then re-embed the corrected audio signals back into the video output.

The 7800IDA8-3G modules are VistaLINK™ Pro capable, offering remote monitoring, control and configuration via Simple Network Management Protocol (SNMP).

The 7800IDA8-3G occupies one module slot within the 7000 series 3RU frames, which will hold up to 15 modules or the 7701FR 1RU frame, which will hold up to three modules.
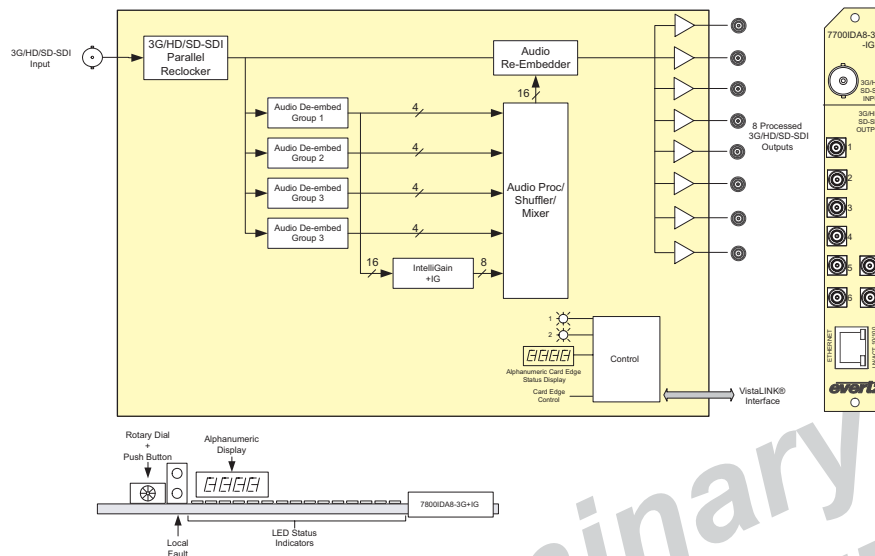
There are two main complaints:
1. Commercial Loudness
2. Channel to Channel loudness variation.

As more and more channels with inconsistent audio levels are distributed to the home, public annoyance has increased. Some recent studies have shown up to a 17 dB deviation in perceived loudness of programming between channels. Home listeners have had to tolerate this problem by either muting the commercials or adjusting the volume as they watch their programs.

Evertz has recognized this dilemma and presents IntelliGain™ (patent pending) as the solution.

IntelliGain™ Offers:
• Consistent audio loudness levels applying the ITU-R BS.1770 algorithm
• Gain control within a program interval to preserve audio dynamic range
• Artifact-free transitions between program and commercials
• Elimination of drastic volume changes during commercials and interstitials
• Fully Integrated Dynamic Range Processor, also referred to as a compander
• Ideal for aggregator applications and multi-channel playout facilities (DTH, Cable, IPTV…)
• VistaLINK™ controlled and monitored!

▶**Specifications**

Serial Video Input:

Standard:	Auto-detects standard 3Gb/s SMPTE 424M, 1.5Gb/sec SMPTE 292M, 270Mb/s SMPTE 259M-C (525i/59.94 or 625i/50)
Connector:	1 BNC per IEC 60169-8 Amendment 2
Input Equalization:	Automatic to 100m @ 3Gb/s, 140m @ 1.5Gb/s & 350m @ 270Mb/s
Return Loss:	> 20dB up to 270Mb/s
	> 15dB up to 1.5Gb/s
	> 10dB up to 3Gb/s

Serial Video Outputs:

Standard:	Same as input
Number of Outputs:	8
Connector:	Mini Din 1.0/2.3 connector
Signal Level:	800mV nominal
DC Offset:	0V ±0.5V
Rise and Fall Time:	200ps nominal for 3G/HD-SDI 900ps nominal for SD-SDI
Overshoot:	< 10% of amplitude
Return Loss:	> 20dB up to 270MHz
	> 15dB at 1.5Gb/s
Jitter:	< 0.20 UI

Electrical:

Voltage:	+12V DC
Power:	9W
EMI/RFI:	Complies with FCC regulations for class A devices Complies with EU EMC directive

Physical:

Number of slots:	1

▶**Ordering Options**

7800IDA8-3G+IG	3G/HD/SD-SDI Intelligent Distribution Amplifier (1x8) with IntelliGain™
Ordering Options	Rear plate must be specified at time of order Eg: Model +3RU

Rear Plate Suffix

+B-D+3RU	3RU Rear Plate with standard BNC input and Mini Din BNC outputs for use with 7700FR-C Multiframe
+B-D+1RU	1RU Rear Plate with standard BNC input and Mini Din BNC outputs for use with 7701FR Multiframe
+B-D+SA	Standalone Enclosure Rear Plate with standard BNC input and Mini Din BNC outputs

Enclosures

7700FR-C	3RU Multiframe which holds up to 15 single slot modules
7800FR	3RU Multiframe which holds up to 15 single slot modules
7701FR	1RU Multiframe which holds up to 3 single or dual slot modules
S7701FR	Standalone enclosure