



NEWSLETTER

BROADCAST LOUDNESS CONTROL

Review: Jünger Audio @ NAB 2008

Dear Readers,

Once again the NAB show has been a very interesting event for Jünger Audio and we were quite successful introducing a couple of really powerful new extensions and applications in the field of Broadcast Loudness Control.



Marc Judor
at NAB,
with Jünger
Audio since
April 2008.

Our traditional LEVEL MAGIC series designed for Radio and TV Broadcasters (Level control for Ingest, Transmission, Post production, etc...) kept on gaining recognition and new customers thanks to their traditional strengths like Ease of Use; "All Modules-All formats" in one Box; and consistent but transparent and reliable level control. Steady success as well for our MIX4, a tiny but extremely powerful mixer for editing, newsroom and on air back up.

HDTV being more and more a hot topic, Jünger Audio introduced a series of new features targeted to those rising applications...but profiting to the others as well !

- LEVEL MAGIC Compliancy with the ITU.1770 loudness standard
 - Capacity to encode (E/D/D+) and decode (E/D) the Dolby Surround signals (5.1)
 - Ability to use, carry or generate the DOLBY 5.1 associated Metadata enabling LEVEL MAGIC to handle DIALNORM
 - SNMP Monitoring for LEVEL MAGIC C8000 Series
- which are all together issues helping TV broadcasters to move towards improved and harmonized level control.

Furthermore Jünger Audio prepares a series of new features for its LEVEL MAGIC product range like 16 ch de-embedder & embedder cards but also renewed platforms for the entire B boxes series, which will be revealed during next IBC in fall 2008.

We hope to see you next September at IBC 2008 (Booth 9.E35) in Amsterdam !

Marc Judor
International Marketing and Sales Manager
e-mail: marc.judor@junger-audio.com
Tel: +33 (0)6 8556 3050

You've got to hear it to believe!

LEVEL MAGIC

Broadcast Loudness Control

New!
compliant to ITU-R BS.1770!

for DTH, IPTV,
DVB, DAB,
Playout, Ingest,
Contribution...

See us at IBC 2008!
hall 9, E35

www.junger-audio.com
sales@junger-audio.com

Broadcast Loudness Control with Level Magic™ Product Range

Radio and TV Broadcasters and cable networks have long been plagued by 'surprise' level changes when switching from one source to another. Not only peak levels, but also average operating levels can vary wildly from one source to another, wreaking havoc with unattended operation. Junger Audio is offering a unique problem solution - Level Magic™.

Level changes from different feeds, level differences between different program parts or even loudness problems in broadcasting – Level Magic™ will take care of them automatically, with a result the Listener will want to hear. Typical applications are station output, automated playout facility and cable headend as well as all kind of ingest stations.

Richard Hulse from Radio New Zealand says: „We've been impressed so far with the transparency of the unit under some fairly extreme conditions. We've tried it with a range of pre-produced programmes and have found it is very close to the sort of gain-riding that a human would do. The way peak control is balanced against AGC action is much better than our current units.“

Level Magic™ Application in focus: IPTV and cable headend projects

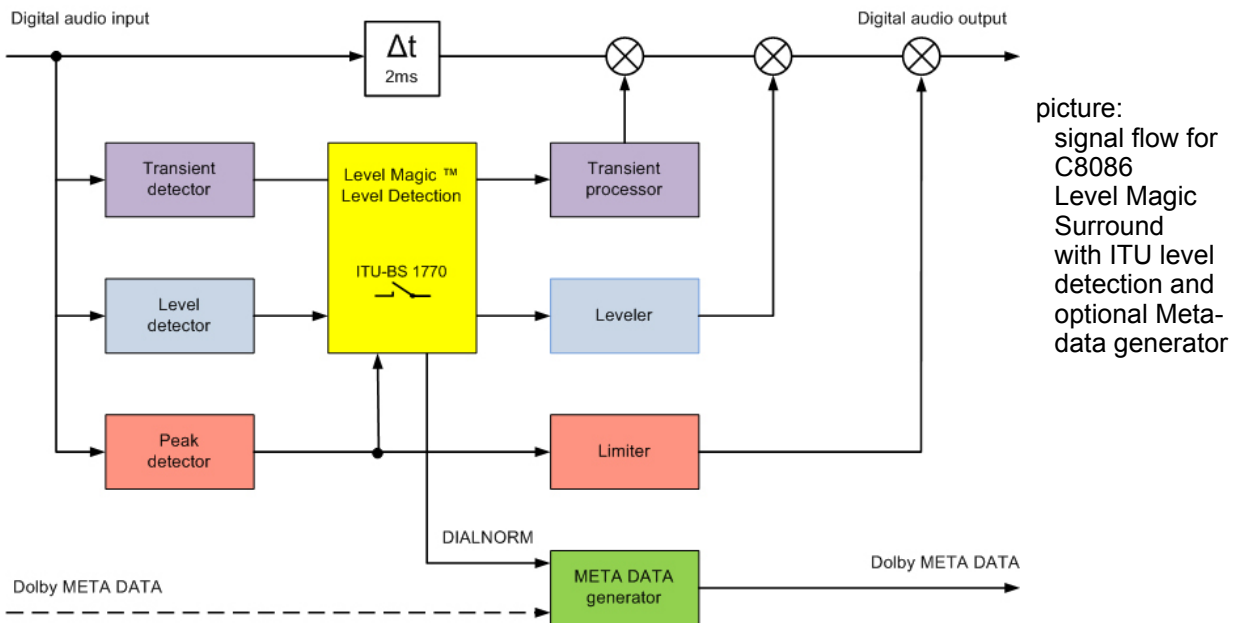
One of the first projects the technology went in was the digital head end for Casema, a large cable operator in Netherlands, built in 2004. Since then the technology has been used for more then 2.000 TV channels in broadcast installations world wide!

Junger Audio has taken part in a number of projects where the Level Magic™ products are used as audio equalization for IPTV installations. The hardware is placed in Super Head Ends as well as in Video Hub Offices. Some of the most important IPTV installations world wide are using Level Magic™ technology - PCCW in Hongkong, Telefonica's IPTV service Imagenio for Spain and Latin America and since September 2007 also the T-Home platform by major German internet service provider T-Online International. French IPTV provider Orange will start to use Level Magic™ technology summer 2008 powered by network specialist Globecast.

Level Magic™ and ITU-R BS.1770

In July 2006, the International Telecommunication Union's Radiocommunication sector (ITU-R) published a new recommended algorithm for estimating program loudness levels for use in digital broadcasting: ITU-R Rec. BS.1770—Algorithms to Measure Audio Programme Loudness and True-Peak Audio Level.

From June 2008 all broadcast versions of our Level Magic™ processor boxes can perform audio level control according to ITU recommendation ITU-R BS.1770. That means Jünger Audio can offer sophisticated automatic audio leveling performing broadcast loudness control according to the ITU specification!



ITU-R BS.1770 and Dolby® Dialnorm value

„Setting the dialogue normalization metadata value within broadcast programs that use Dolby® Digital, Dolby Digital Plus, or Dolby E must begin with an accurate estimation of the dialogue loudness throughout an entire program. Speech-based measurements made on a given sample of programming—using both Leq(A) and ITU-R Rec. BS.1770—have shown that, while BS.1770 is slightly more accurate than Leq(A), the average difference is fairly small. Either Leq(A) or the new ITU-R Rec. BS.1770 measurement method will, on average, yield the same results.” That means for practical work: Level Magic with ITU is loudness control acc. to Dialnorm!

Dolby document: Estimating Dialogue Loudness with Leq(A) or ITU-R Rec. BS.1770

Going Dolby® Surround with C8000 modular processing system

Jünger Audio is offering a range of Dolby® hardware modules to maintain seamless 5.1 audio broadcasting scenarios. Including Level Magic audio level control and proper Metadata generation!



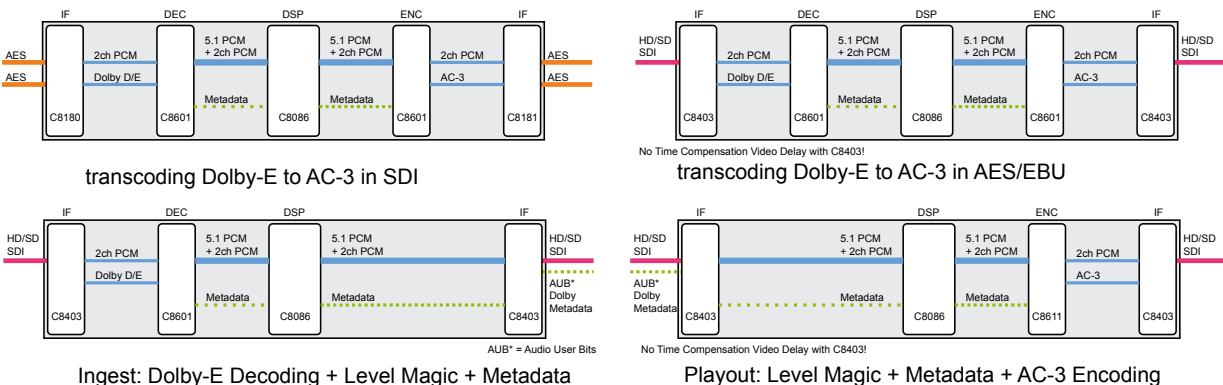
- C8601**
- Dolby® E-Decoder
 - Dolby® D-Decoder
 - RS 485 Metadata output
 - Unbalanced, asynchronous AES input for Dolby® encoded signals
 - 16 / 20 / 24 Bit Audio data format
 - Automatic Dolby® format detection (E / D / PCM)
 - Unique Metadata inserter to combine PCM audio and Metadata
 - Decodes up to 8 channels (Dolby E programs)
 - Program monitoring (down mix and mono function)
 - Program specific Metadata display

- C8611**
- Fully compliant Dolby®-E Encoder
 - 16 / 20 / 24 Bit Audio data format
 - RS485 Metadata input
 - Metadata selectable from audio input, external or presets
 - Eight Metadata presets
 - Dolby® Metadata display and editing
 - Coded output stream available on internal bus as well as on unbalanced AES output for Dolby® encoded signals
 - Remote control (web interface) via C8702 frame controller

- C8612**
- Fully compliant Dolby® Digital (AC3) or Dolby® Digital+ Encoder
 - 5.1 and independent 2.0 Encoders
 - 5.1 transcoder AC3 to Dolby® Digital+
 - 16 / 20 / 24 Bit Audio data format
 - RS485 Metadata input
 - Metadata selectable from audio input, external or presets
 - Eight Metadata presets
 - Dolby® Metadata display and editing
 - Coded output stream available on internal bus as well as on unbalanced AES output for Dolby® encoded signals
 - Remote control (web interface) via C8702 frame controller

- C8086**
- 8ch Level Magic Surround
 - optional Dolby® Metadata Generator
 - Control of audio level according to Dialnorm
 - Audio follow Metadata or Metadata follow Audio Processing
 - Eight Metadata presets
 - Dolby® Metadata display and editing
 - Remote control (web interface) via C8702 frame controller

Level Magic™ & Dolby® workflow for C8000 modular processing system



The drawings are showing useful workflow schemes in combination Level Magic Surround with Metadata generator and Dolby® Decoder/Encoder hardware modules. Some more combinations are possible and might be of interest for dedicated applications. Pls. ask you Jünger Audio dealer or products specialists at Jünger Audio for more information.

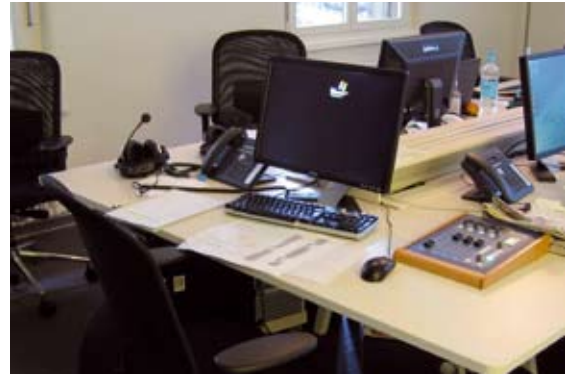
Dolby® Digital, Dolby® Digital Plus and Dolby® are registered trademarks of Dolby Inc..

More information? See www.junger-audio.com or email to sales@junger-audio.com or call +49 30 6777210!

RADIO 1 in Zurich - modern radio facility design with Jünger Audio products



Radio1 is the newest radio installation in Zurich. Just started it is targeting a wide audience to become one of the big radio players in Switzerland. Radio pioneer Roger Schwinsky came back to Radio business after many years working for TV broadcast.



MIX4 at journalist desk for production.

d07 in the station output On Air rack.

Consulting, design and installation by Swiss company Media Engineering. Mixing desks by Mandozzi. As satellite mixers for telephone interview places there are 9 pieces of small digital desktop mixer MIX4 by Jünger Audio. And looking for an audio processor guaranteeing transparent sound and optimum output level the job goes to d07 transmission signal processor! All Jünger Audio products delivered by Gotham AG Switzerland!



MIX4 is available with HD/SD-SDI interface card!

Direct access to embedded audio coming along with HD-SDI? No deal for the MIX4! With auto-sensing HD/SD-SDI interface MIX4 is the choice for all small postproduction/editing/voice-over places!

Picture impressions from trade shows we participated in 2008!

Jünger Audio = Broadcast Loudness Control



NAB 2008 in Las Vegas.



ANGA Cable 2008 in Cologne.

See us and our products at these shows and conventions!



12.-16.09.2008
Amsterdam, Netherlands

IBC - a showcase for broadcasting technology



13. - 16.11.2008
Leipzig, Germany

Tonmeistertagung

About Junger Audio

Established in 1990, Junger Audio specializes in dynamic range and audio signal processing in the digital domain. The Company serves all segments of the radio and television broadcasting industries with high quality professional audio products with an integrated SDI interface for direct processing of embedded audio. Headquartered in Berlin, Germany, Junger maintains solid representation in more than 40 countries worldwide through sales partners.