



AEV Digital Audio Processor Xtreme II



Digital Audio Processor 5 bands XTREME MKII



FULLY Digital Audio PROCESSOR

We have worked tirelessly for 4 years in developing our most ambitious project. To find the perfect evolution involved an entire staff composed of engineers, DSP technology experts, and sound technicians who are among the most specialized in the broadcasting sector.

Sound is the measuring element defining the Radio Stations' image. Sound is what amazes and keeps the listener tuned in.

The project was clear right from the start: to create a product with far-out features, ready for the new "**Fully-Digital**" era, without compromises or penny-pinching in selecting from among the most innovative and prestigious DSP technologies.

We started from a simple concept: today, competition among broadcasters can be seen in the search for better and better audio quality. "Digital sound does not have the same warmth as analog sound...." this is what all broadcaster have said up to now.

At this point, our aim was clear! A new audio processor made with fully digital technology, but with a warm, wrap-around sound just like analog.

We sure made it! The result was **eXtremely** surprising: an audio processor that stands out from all other existing equipment. The name of the new baby could be no other than **Xtreme**.



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CHARACTERISTICS AND PERFORMANCES

- 5-band, 100% digital audio processor
- 9 DSPs for processing the most powerful radio algorithms needed to ensure amazing loudness, clean, crystal clear high frequencies plus powerful, punch bass notes able to break the sound barrier !!!
- Unparalleled flexibility and control to create your unique, customized sound
- User-friendly programming
- 82 excellent, easy-to-recall format presets
- Full, powerful modulation always under control
- High performing digital stereo coder
- Available in FM, AM and TV versions.
- AES/EBU IN OUT

DSP TECHNOLOGY YOU'VE NEVER HAD BEFORE

Xtreme exploits all the advantages of DSP technology to achieve performances that traditional analog technologies could never hope to attain.

The processor's heart is nine 24-bit Motorola DSPs of the very latest generation. Each is capable of as much as 80 million instructions per second, ensuring all the necessary calculating speed of audio algorithms, to create the most powerful sound you've ever listened to.

EASY ADJUSTMENTS AND EASY CUSTOMIZING

The simplicity and flexibility of control operations are one of the success factors of an audio processor.

Xtreme contains 20 recommended format presets, which are the simplest prerequisite for obtaining a special sound at once, perfectly adaptable to your musical format. Listen to them one at a time, select the one that's most suitable for your sound, and by using detailed, precise controls of all process parameters, feel free to create your customized, original sound.

And now...save it all at a touch - it's now there, ready to be retrieved any time you want.





AEV Digital Audio Processor Xtreme II

USER FRIENDLY PROGRAMMING INTERFACE

A wide LCD graphic display allows you to easily execute all set-up, adjusting and programming operations with Xtreme. **Xtreme** will guide you step-by-step, intuitively, through all process parameters to create your unique, perfect sound.

READY FOR ALL APPLICATIONS

Xtreme comes in different versions to ensure digital power in all broadcast sectors.

XTREME FM DIGITAL

XTREME TV DIGITAL

XTREME AM DIGITAL

TECHNICAL FEATURES

PERFORMANCE:

Frequency response	30 Hz ÷ 15 KHz. ± 0.25 dB (By-pass)
Stopband Rejection	Greater than 78 dB beyond 17 KHz
Total Distortion @ 1 KHz	0.01 % (Proof mode)
Total separation	Greater than 85 dB DIN Audio
Signal to Noise ratio	Output noise depends on processing parameters Greater than 75 dB Din Audio in all conditions

ANALOG AUDIO INPUT:

Configuration	Left and Right
A/D Conversion	24 Bit , 128x oversampled
Impedance	10 K Ohm electronically balanced
Sensitivity	- 35 dBu to + 24 dBu to produce 10 dB gain reduction at 1KHz
Max input level	+ 29 dBu
Common Mode Rejection	Greater than 45 dB (30 Hz ÷ 20 KHz)
Connectors	XLR type-female EMI suppressed Pin 1 GND, Pin 2 Inphase, Pin 3 Return Pin 2 and 3 electronically balanced

ANALOG AUDIO OUTPUT:

Configuration	Left and Right. Flat or pre-emphasized software selectable
D/A Converter	24 Bit , 128x oversampled
Impedance	30 Ohm electronically balanced
Output level	Max + 10 dBu into 600 Ohm
Connectors:	XLR type-male EMI suppressed Pin 1 GND, Pin 2 Inphase, Pin 3 Return Pin 2 and 3 electronically balanced

DIGITAL AUDIO INPUT:

Configuration	AES/EBU Standard, 24 bit resolution
Sampling Rate	32, 44.1 or 48 KHz automatically selected
Connectors	XLR type-female EMI suppressed
J.17 De-emphasis:	Software selectable





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DIGITAL AUDIO OUTPUT:

Configuration	AES/EBU Standard, Flat or pre-emphasized software selectable
Sample Rate	32, 44.1 or 48 KHz software selectable
Output level	Max + 6 dBFS
Connectors	XLR type-male EMI suppressed

STEREO GENERATOR

Configuration	2 outputs with independent level control Output 2 may be configured as a pilot tone ref.
Pilot frequency	19 KHz \pm 0.001 % Max over temp.
Pilot injection	4 \div 12 % adjustable
Frequency response	30 Hz \div 15 KHz. \pm 0.1 dB
Signal to Noise ratio	Greater than 96 dB Din audio
Stereo separation	Greater than 67 dB 30 Hz \div 15 KHz (78 dB @ 1 KHz)
Crosstalk Main to Sub	Greater than 46 dB 30 Hz \div 15 KHz (61 dB @ 1 KHz)
Crosstalk Sub to Main	Greater than 50 dB 30 Hz \div 15 KHz (64 dB @ 1 KHz)
Distortion @ 1KHz	Less than 0.005%
38 KHz Subcarrier suppression	Greater than 80 dB
76 KHz & sideband suppression	Greater than 90 dB
Pilot Tone Protection	Greater than 70 dB relative to 10% pilot injection
RDS/RBDS Protection	Greater than 70 dB relative to 4% subcarrier injection
Preemphasis	50-75 μ S. Software selectable
Composite output level	0 \div + 12 dBu
Impedance	50 Ohm
Connector	2 x BNC floating over chassis, EMI suppressed
Max cable length	10 mt. RG 58 A/U
SCA/RDS input	1 Vpp for 10% modulation of main carrier
Impedance	600 Ohm
Connector	BNC floating over chassis, EMI suppressed

DIGITAL SIGNAL PROCESSOR

Device	Motorola DSP 56301
Performance	24 bit processing

REMOTE COMPUTER INTERFACE

RS 232-C at rear, asynchronous

REMOTE CONTROL INTERFACE

Configuration	Eight (8) inputs
Voltage	6-24 V AC or DC, momentary or continuous
Connector	DB-25 male, EMI Suppressed
Control	Programmable software of all the inputs

GENERAL DATA

Power requirement	115 \div 230 VAC 50 \div 60 Hz
Consumption	200 W
Dimension	483 x 178 x 385 mm. 4 rack units
Weight	12 Kg.
Operating temperature	0 \div 50°C





RDS SPECIFICATIONS (available in Xtreme FM/RDS only)

PI (Program Identifier)	EON (Enhanced Other Network)
PS (Program Service Name)	FT (Fast Tuning)
TP (Traffic Program)	LIC (Language Identifier)
TA (Traffic Announcement)	PTYN (Program Type Name)
AF (Alternative Frequencies)	ECC (Extended Country Code)
PTY (Program Type)	LI (Linkage Identifier)
RT (Radiotext)	TMC (Traffic Message Channel)
CT (Clock Time)	PIN (Program Item Number)
M/S (Music-Speech)	TDC (Transparent Data Channel)
DI (Decoder Identifier)	IH (In House Application)

TECHNICAL SPECIFICATIONS

RDS SIGNAL

Standard specification EBU Doc. Tech. 3244-E and Cenelec PrEN 50067

Coding	Differential and biphase
Modulation	DSB - suppressed carrier
Frequency	57 KHz
Bandwidth	+/- 2.4 KHz
RDS level out	0 _s - 16 dBu
Phase	0 _s 90°

19 KHz INPUT:

Impedance	10 KW
Connector	BNC

SYNCHRONIZATION

Terminal interface	RS 232-C at rear, asynchronous
Data input	Full duplex
Format	Selectable
Transmission speed	1200 ± 19200 baud
Connector	9 contact subminiature cannon female
RDS data management	Microprocessor controlled
	128 Kbyte non-volatile memory RAM
Data retention	10 years

