

## Digital Audio Processor

# CONDOR 50

The CONDOR 50 is a 5 band digital audio processor integrating a bass enhancer, a noise gate, a digital stereo enhancer, a MPX stereo coder and a RDS coder.

The CONDOR 50 has two RS 232 serial ports optically isolated (not optically coupled) which assure maximum immunity for disturbing noises coming from other equipment.

The equipment is supplied with a PC control software for both local and remote control, to greatly simplify the management to broadcasters.

Through a standard PC, the software allows the remote

monitoring and control of all the processor stages (starting from the generation of the MPX signal at AGC level) as well as the statement of the messages and information provided by the RDS encoder.

By means of its exclusive design, the CONDOR 50 allows an extraordinary saving of space and money, since it includes four digital units in a single box, thus avoiding compatibility problems with the connection to any type of equipment and manufacturers.



The CONDOR 50, fully digital unit based on 9 powerful DSP, features:

- 5 band digital processor operated by 30 factory pre-sets programmed curves.
- Editing up to 10 different user pre-sets (in non-volatile memory) personalised equalizations, easily saveable and recallable.
- Setting parameters to create a unique sound, which will identify the radio station in an unmistakable way.

Alternative parameters that can be set are:

Super Bass Type, Super Bass Level, Bass Compressor, Mid1 Compressor, Mid2 Compressor, Mid3 Compressor, High Compressor, Broadband Density, Brilliance.

Digital MPX clipper built-in into the Stereo coder, assuring no audible artefacts and a perfect control of max frequency deviation.

Digital stereo enhancer with setting parameters, needed to reach the psychoacoustic desired effect. This integrated feature allows maximum expression of stereophonic effect and full control of the parameters without affecting the modulation stability.

CODE	MODEL	DESCRIPTION
F519.2	CONDOR 50	Digital 5 Band Audio Processor
F519.04	CONDOR 50A	Digital 5 Band Audio Processor with Option A
F519.05	CONDOR 50B	Digital 5 Band Audio Processor with Option B
F519.03	CONDOR 50AB	Digital 5 Band Audio Processor with Option A + B
AVAILABLE OPTIONS:		Digital input AES/EBU - Digital coder RDS - SPDIF optical and coaxial.

## Technical data

INPUT SIGNAL			
ANALOGUE INPUT		DIGITAL INPUT	
Conversion	24 bit	Connectors	Type XLR female Optical standard connector tos-link
Connectors	Type XLR female	Formats	AES/EBU, S/PDIF, IEC60958, EIAJCP1201
Sensitivity	-30 dBu to 22 dBu	Sample Rates	32KHz / 44.1 KHz / 48 KHz / 96 KHz with automatic selection and jitter correction
Maximum Input Level	22 dBu	Connectors	Type XLR female input and Optical input
Impedance	600 Ω bal. or 10 KΩ unbal., MI – suppressed	AGC Range	± 20 dB
AGC Gain Offset	± 6 dB	AGC Speed	Adjustable from 0 to 6 dB/sec.
AGC Range	± 20 dB	<b>RDS INPUT</b>	
AGC Speed	Adjustable from 0 to 6 dB/sec	Input	-40 to 0 dBm for ± 2 KHz of main carrier
<b>BY-PASS MODE (Analogue Input, AGC = Off, Gain Offset = 0 dB, Output Level = 0 dB)</b>			
Frequency Response	20 Hz ÷ 21 KHz (± 0.3 dB)	Impedance	10 KΩ
Output Noise	-102 dB (A-weighted)	Connectors	BNC floating over chassis, EMI sup.
Total Harmonics Distortion	0.005 %	<b>SCA INPUT</b>	
Total Harmonics Distortion + Noise	-95 dB	Input	-40 to 0 dBm for ± 2 KHz of main carrier
Pass Band Ripple	± 0.01 dB	Impedance	10 KΩ
<b>CONNECTORS</b>			
<b>ANALOGUE INPUT</b>		<b>DIGITAL INPUT</b>	
Type XLR female		Type XLR female Optical standard connector tos-link	
BNC floating over chassis, EMI sup.		BNC floating over chassis, EMI sup.	

Low Pass	15 KHz (FIR-84 Taps, 15 KHz / -0.1 dB, 17 KHz / -70 dB)		
Control	Super Bass Type (Disco Soft Bass, Club Long Bass, Tight Hard Bass) Super Bass level (0 ÷ +12 dB) Bass Level (± 6) Mid1 Level (± 6) Mid2 Level (± 6) Mid3 Level (± 6) High Level (± 6) Broadband Density (0 ÷ +12 dB) Pre-set: 30 pre-set factory programmed and 10 user-editable		
<b>REMOTE CONTROL (2 x RS232 optically decoupled)</b>		<b>STEREO ENHANCER MODULE (Controls)</b>	
Satellite Date	4800 baud	Effect Depth	Effect Depth
PC Host Communications	19200 Baud	Effect Band	3 KHz / 5 KHz / 8 KHz / 15 KHz
Control Link Mode	38400 Baud	Effect Level	-29 dBu to -6 dBu
<b>MPX MODULE</b>		<b>RDS MODULE (standards EBU service)</b>	
Conversion	16 bit		
Pilot Frequency	19 KHz ± 0.001 %	PS	Program Service Name
Pilot Injection	Adjustable from -26 dB to -14 dB	PI	Program Identifier
Pilot Phase	Adjustable 6 degrees	PTY	Program Type
S/N	> 90 dB	TA	Traffic Announcement
Stereo Separation	> 65 dB	TP	Traffic Program
Cross-talk Main to Sub	> 65 dB	M/S	Music/Speech
Cross-talk Sub to Main	> 65 dB	AF	Alternative Frequency
38 KHz Subcarrier Suppression	> 75 dB	RT	Radio Text
Composite output level	-∞ to +12 dB	PIN	Program
Impedance	50 Ohm	DI	Decoder Identifier
Output Connectors	BNC floating over chassis, EMI sup.	IH	In House Applications
Pilot reference output	TTL Level Wave	EM	Emergency Messages
Pilot reference phase error	± 8 degrees		



SPECIFICATIONS	CONDOR 50
Power supplies	From 220/230 V ( 110/115 V internal setting); 50-60Hz, single phase.
Dimensions (W x H x D ) mm	482 x 44 x 352 (570 x 130 x 420 Package)
Weight	6 Kg (7 Kg. Package)
Output filter characteristics	Low Pass 15 KHz (FIR-84 Taps, 15 KHz / -0.1 dB, 17 KHz / -70 dB)
Output Connectors	Type XLR male
Conversion	24 bit Codec
Configuration	Pre-emphasized (50µs or 75 µs) internal or external
Output Level	-4 dBu to 20 dBu (Adjustable with 1 dBu Steps)
Output Impedance	600 Ohm balanced EMI suppressed
Input / Output Delay	< 1.5 m sec.
Tone generation	1 KHz, Ref 100 % Modulation