STEREO GENERATOR AND AUDIO PROCESSOR
COM LIM 20

The **COM LIM 20** audio processor is the combination of a professional digital stereo generator (with more than 60dB channel separation) and a high-dynamic limiter, with stop band rejection higher than 90dB above 75KHz. A 4-band equalizer is integrated, too. All these advanced characteristics give the COM LIM 20 an outstanding range of professional features, really useful in radio studios. It also includes RDS/RBDS digital encoder, and programming, visualization and control trough LCD display.

GENERAL CHARACTERISTICS

WEIGHT	4.5Kg approximately
DIMENSIONS	1 standard rack unit of 19", 352x483x44mm
AC RATE	220VAC/110VAC
PRESET CURVES	30, factory programmed

ANALOG STEREO AUDIO INPUT

CONVERSION	24bit
CONNECTOR TYPE	XLR (F) el. Balanced
MAX. INPUT LEVEL	+20dBu
LEVEL RANGE	-12dBu to 12dBu (1dB steps)
IMPEDANCE	600 Ohm/10Kω EMI – suppressed
AGC RANGE	±20dB (relative sensibility)

DIGITAL AUDIO INPUT (OPTIONAL)

CONNECTOR TYPE	XLR el. Bal. + optical Tos link
FORMATS	AES/EBU, SPDIF
SAMPLING RATES	32KHz/44.1KHz/48KHz/96KHz
CONFIGURATION	Automatic selection and jitter correction
INPUT SENSIBILITY	200mVpp
AGC RANGE	0 to -20dBFs

AGC OPERATION

AGC SPEED	0 to 6dB/sec. (adjustable - 0.2dB steps)
AGC HOLD TIME	Selectable, from 0 to 3 seconds
AGC MAX. GAIN	Selectable 8, 10, 12, 15 or 20dB

PROCESSING

Nº OF BANDS	4
Nº OF PRESETS	30
BASS COMPRESSOR	THR: related to the chosen preset ATCK. Time: 80ms, REL Time: 250ms, Compression Ratio: 1: INF
MID COMPRESSOR	THR: related to the chosen preset ATCK. Time: 30ms, REL Time: 90ms, Compression Ratio: 1: INF
HIGH COMPRESSOR	THR: related to the chosen preset ATCK. Time: 10ms, REL Time: 50ms, Compression Ratio: 1: INF
BROAD BAND LIMITER	ATCK Time: 5ms, REL Time: 50ms. Applied to high frequencies band
DYNAMIC EXPANDER (NOISE GATE)	Gate threshold adjustable between -51dB and -80dB. Expansion ratio 2:1 (fixed)

STEREO AUDIO OUTPUT (ST VERSION ONLY)

CONNECTOR TYPE	XLR (M) el. balanced
CONVERSION	24bit
IMPEDANCE	600 Ohm/10kOhm EMI – suppressed
LEVEL	-10dBm to +14dBm (0.5dBm steps)

REMOTE CONTROL

SERIAL PORTS	2 RS232 Sub D 9P optically decoupled
BAUD RATE	19200 Baud

LOW PASS 15KHz INPUT FILTER

IIR 8th ORDER ELIPTIC, 15KHz/-0.1dB, 17KHz/-60dB	
BY-PASS MODE (AGC Off, Gain Ofst 0dB, Out Lvl 0dB)	
FREQUENCY RESPONSE	30Hz-15KHz (±0.1dB)
OUTPUT NOISE	-90dB (A-weighted)
THD	0.01%
PASS BAND RIPPLE	±0.1dB

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SIGNAL PROCESS FILTERS

LP 400Hz	IIR 2º Order-Butterworth
BP 400Hz-5KHz	IIR 4º Order-Butterworth
BP 5KHz-15KHz	IIR 4º Order-Butterworth
HIGH FREQUENCY DENOISER	Threshold adjustable -51 to -80dB

MPX OUTPUT (FM VERSION ONLY)

CONVERSION	24bit
PILOT FREQUENCY	19KHz ± 1Hz
PILOT INJECTION	-15.5 to -25.0dB (0.1dB steps, from 5.6% to 16.8%)
PILOT PHASE	Adjustable ±12 degrees (1dB steps)
S/N	>85dB
STEREO SEPARATION	55dB typical on the whole band
CROSSTALK M/S	60dB
CROSSTALK S/M	60dB
38KHz SUPPRESSOR	Less than measurable level
MPX OUTPUT LEVEL	-9dBm to +15dBm (0.1dBm steps)
OUTPUT IMPEDANCE	600 Ohm
OUTPUT CONNECTOR	BNC floating over chassis, EMI supp.
PILOT REF. OUTPUT	TTL level wave
PRE-ENPHASIS	50/75 usec.

AUX INPUT (1 Y 2) (MPX VERSION ONLY)

CONNECTOR TYPE	Floating BNC, EMI suppressed
INPUT LEVEL	-40 to 0dB
IMPEDANCE	10 KOhm
PURPOSE	SCA, RDS inputs

CODER RDS/RBDS (FM VERSION ONLY)

SUPPORTED STANDARDS	RDS (RADIO DATA SYSTEM) according to standard CENELEC EN50067; RBDS (RADIO BROADCAST DATA SYSTEM) according to standard NRSC
STANDARD CODING METHODS	PI, TP, TA, M/S, RT, PSN, PTY, DI, AF (8 lists)
CUSTOM CODING METHODS	PS Sequence (up to 8 messages), PS Scrolling (up to 32 characters)
RDS SUBCARRIER FREQUENCY	57KHz ±3Hz
RDS OUTPUT LEVEL	Adjustable from -44dB to -20dB (0.1dB steps)
SYNCHRONIZATION	To internal 19KHz pilot tone

* The images and/or technical specifications are subject to change without previous notice.