

Technical Data

COMPOSED

Exciter	ETG151
Amplifiers	E5000
Mounted in 19" standard rack	Yes

GENERAL_DATA

Output Nominal Power	5000 W adjustable
Operating band	87.5 - 108 MHz
Output Low-pass Filter	W.B. 87.5 MHz - 108 MHz
Corrosion	All mechanical parts are stainless steel
Internal bus RS232/RS485	Yes
Points of measure	RF Sample-MPX Monitor
Displayed Parameters	More than 50 parameters displayed on a LCD
Adjustments	From the frontal panel trough LCD /from PC
Microprocessor controlled	Yes
Power supply redundancy	Yes
Blower redundancy	Yes
Number of MOSFETs	16
Final stage technology	ICEFET
Transistor type	BLF278 Philips
Number of power supplies	3
Dimensions: Rack units	4+3 U
Dimensions: Width	48,5 cm
Dimensions: Height	(17,6+13,5cm.) Tot. 31,1 cm
Dimensions: Depth	70 cm
Weight	(50+22Kg.) Tot.72 Kg
Power supply units maximum weight	9 Kg
Number of cooling fans or wind turbines on the amplifiers	6
Number of cooling fans or wind turbines on the exciter	1

CONNECTORS

RF Output connector	7/8"
RF Output connector exciter	N
RF Input connector	N
Input connectors LEFT & RIGHT	XLR female
Input connectors AES/EBU	XLR female
MPX Input connector	BNC female
SCA Connector	BNC female
Remote control connector	DB25
RS485/232 Connector	DB9

RF

Automatic gain control	Yes
Overall output power stability	+/-0,1 dB
Output impedance	50 Ω
Harmonic suppression	> 70 dB
Spurious signal suppression	> 80 dB
Driving power final stage	110 W
Input impedance final stage	50 Ω
Gain final stage	16 dB
Software V.S.W.R. intervention threshold	500 W
Fast V.S.W.R. intervention threshold	550 W
Asynchronous residual AM (typical values)	60dB
Synchronous residual AM (typical values)	50dB
RF Efficiency	65% typ.
Output nominal power	5000 W Adjustable with continuity
L/R Audio input level	+12/-12 dBm to produce 75KHz standard deviation

AUDIO

L/R Audio input level	+12/-12 dBm to produce 75KHz standard deviation
L/R level adjustment	Soft adjust 0,1dBm steps from front panel
L/R Input Impedance	Selectable 10K- 600Ω
MPX audio input level	+12/-12 dBm to produce 75KHz standard deviation
MPX level adjustment	Soft adjust 0,1dBm steps from front panel
MPX Input impedance	5KΩ selectable
SCA/RDS audio input level	0 dBm to produce 75KHz standard deviation
PILOT level adjustment	Adjustable Trimmer
PILOT Phase adjustment	Yes
SCA/RDS level adjustment	Yes
SCA/RDS Input Impedance	10KΩ
19KHz Output	Yes
AES/EBU-Analog input automatic changeover	Yes

PERFORMANCE EXCITER

Time of adjustment - frequency	< 1 minute
Time of adjustment - power	< 1 minute
MTBF	10 Years
Programmed Maintenance	5 Years
Intermodulation distortion	<0.05% Measured with two of tones 1KHz & 1.3KHz, ratio 1:1 at 100% modulation
Frequency deviation	+/- 75 KHz 0.1dB steps adjustable
Frequency steps	10 KHz
THD+N	<0.03% @ 1KHz
Pre-emphasis	50/75 microseconds +/-0,1dB
FM S/N MPX FCC	82 dB 20Hz - 23KHz - 50uS - ref @ 53KHz - RMS
FM S/N STEREO CCIR Weight	72 dB Weight-ref@53KHz-Qpk
FM S/N STEREO CCIR Unweight	72 dB Unweight-ref@53KHz-QPk
Mono frequency response	+/-0.15 dB 30Hz - 15KHz
MPX frequency response	+/-0.1 dB 30Hz - 100KHz, -45dB at 19 KHz
Stereo frequency response	+/-0.15 dB 30Hz - 15KHz
SCA frequency response	+/-1 dB 20KHz - 100KHz, -45dB at 19KHz
Type of modulation	F3 Direct FM modulation of the RF oscillator in fundamental frequency
Stereo Crosstalk	75 dB @ 1KHz
Pilot tone frequency	19 KHz
Pilot tone deviation	7,5 KHz Adjustable
Pilot tone frequency stability	+/-1 Hz
Attenuation at 19KHz	> 45 dB
Phase Response	0.1 degree From linear phase; 53kHz to 100kHz
Frequency stability	1 ppm from 0 to +40°C
Time for starting up	30 sec. from OFF/ON
Time for starting up	1 sec. from interlock close
Modulation Capabilities	+/-250 KHz

INSTALLATION REQUIREMENTS	
Power supply	220, 380 Threephase- singlephase 50-60Hz VAC
Power consumption	9 KVA
Current Consumption @220VAC/single phase	40 Amp.
Conductor Size @220VAC/single phase	10 sq.mm
Conductor Size @220VAC/single phase	7 AWG
Current Consumption @220VAC/three phase	24 Amp.
Conductor Size @220VAC/three phase	6 sq.mm
Conductor Size @220VAC/three phase	9 AWG
Current Consumption @380VAC/three phase	15 Amp.
Conductor Size @380VAC/three phase	4 sq.mm
Conductor Size @380VAC/three phase	11 AWG
COOLING SYSTEM	
Cooling flow (m3/h)	Variable from 600 to 1200 m3/h
Air temperature increase between output /input	17 °C
Cooling system	Forced air-cooling through 6 axial fans
ENVIRONMENT	
Temperature range (operating)	0 - +45 °C
Temperature range (non operating)	-20 - +70 °C
Humidity range (operating)	95% at 40 °C
Humidity range (non operating)	90% at 65 °C
Altitude range (operating)	<4600 meters
Altitude range (non operating)	<15000 meters
TELECONTROL & TELEMETRY	
Remote control	Yes
Remote Control at clean contacts	Yes
SNMP option	Under development

CONFORMITY REGULATIONS	
High frequency radiations from the enclosure	Below limit imposed by technical regulations.
Functioning type	h24 uninterrupted
Electromagnetic fields immunity	Higher than specified by laws on electromagnetic fields compatibility
CE Mark	Conform to 1999/5/CE European Directive
MANUFACTURING DATA	
Year of the model	2009
Spares availability guaranteed for	10 years from the date of purchase
PRE- & POST- MAINTENANCE	
Recurrence	4/8 years
Blower Replacement recurrence	4 years
Air blowers quantity	6
Lithium batteries replacement recurrence	10 years
Batteries	Yes, only for alarm list storage
Time to realize the preventive maintenance every 4 years	1 Hour
Time to realize the preventive maintenance every 8 years	2 Hours
Level and number of technician for maintenance	1 technician
Electrical safety	EN60215 (Standard CE)
Average repair time (change of an RF module or power supply)	1 Hours
SET	
Power supply cable	Yes
Installation manual Quick Start	Yes (On electronic format)
User manual	Yes
Maintenance manual	Yes
Tests report	Yes
Troubleshooting manual	Yes