

FM Transmitters Up to 10 kW



POWERFUL PERFORMANCE

- 1+1 redundancy level
- Digital modulator «Direct to Channel»
- 5-Band Sound Processor*
- MPX over AES compatibility



POWERFUL CONTROL

- TCP/IP, SNMP management and Email Notifications
- Advanced Measurement Interface
- 24h graphical history log
- Expert Maintenance Reporting (EMR)



POWERFUL SAVINGS

- Up to 76% efficiency + SmartFM
- Hot swappable amplifiers, PSU and fans
- Built-In functionality
- Increased life span

SMARTFM[®]

Artificial intelligence for radio



DIGITAL EXCITER



CONTROL



EFFICIENCY



SOUND PROCESSOR



FEATURES

Up to
10
YEARS
WARRANTY

AS SOLID
AS A
1+1



Key Benefits



1+1 LEVEL OF REDUNDANCY*

- Dual mains breakers
- Up to 8 x 3500W power supplies with load sharing
- Up to 6 x 2300W power amplifiers
- Passive coupler with maximum robustness
- Oversized coupling loads for unlimited operation on fault
- Redundant digital exciters
- Redundant fans cross fed by redundant PSU's
- Stay ON AIR even on control unit fault
- Intelligent design, maximum reliability and redundancy.

*Figures given in this chapter may vary depending on the transmitter power level and version

[More details on the Tech Note](#)



DIGITAL EXCITER

- Digital FM modulator « direct to channel»
- Highest signal quality
- Perfect audio fidelity
- Several built-in broadcast tools
- Control of all signal parameters



5 BAND SOUND PROCESSOR

- Hosted in direct to frequency Digital Modulator
- Highest quality processing from audio input to RF output
- Powerful DSP-based processing
- Complete 5-band architecture
- Factory presets for all formats
- Easy to fine tune through intuitive GUI
- Real-time meters at each stage
- No additional hardware: maximum reliability, no maintenance.



ADVANCED CONTROL

- Advanced Measurement Interface (AMI)
- Expert Maintenance Reporting (EMR)
- Intuitive Web Interface
- Full SNMP Management



UP TO 76% EFFICIENCY

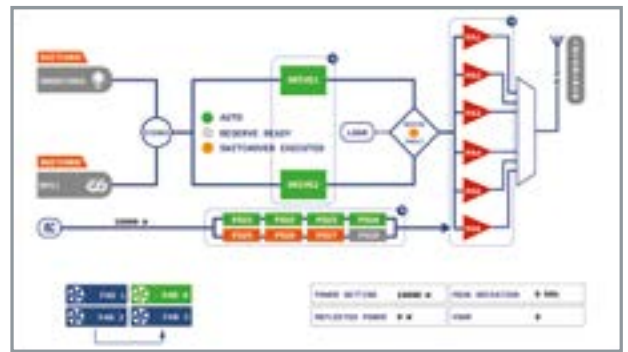
- 6th MOSFET generation and new planar design
- Reduced consumption and operational costs
- Reduced heat and cooling costs
- Customized air flow configuration
- Hot swappable power amplifiers, power supplies and fans
- Reduced maintenance costs

[More details on the Tech Note](#)

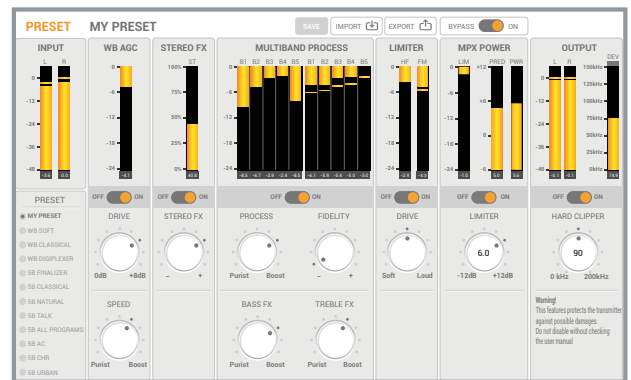


Artificial intelligence for radio

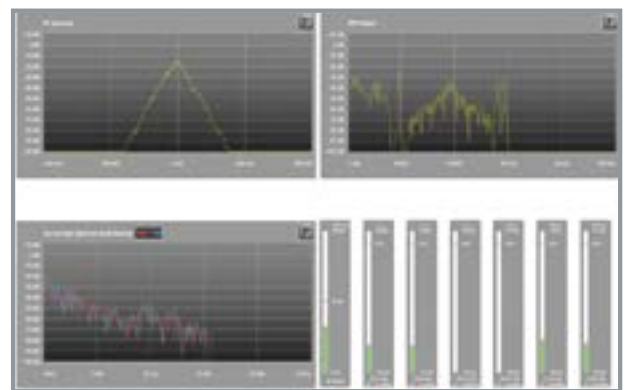
- #1 Enhances the listening experience
- #2 Lowers energy costs by 10 to 40%
- #3 Reduces CO₂ emissions



Intuitive web interface



Sound Processor Interface



Advanced Measurement Interface (AMI)

Ecreso offers a standard warranty of 3 years



on all our FM transmitters and up to 10 Years, yes TEN YEARS Warranty on our range of compact FM transmitters for a small additional charge. No other FM Transmitter Manufacturer even comes close to that commitment or confidence! We can offer the 10 Year Warranty with confidence thanks to:

- Our exceptional design quality
- The outstanding efficiency of our transmitters
- Advanced diagnostics capabilities

Built-in Features

Advanced Communication



- Intuitive and secured Web Interface (TCP/IP)
- Advanced Measurement Interface
- Full SNMP Management
- Audio Backup on μ SD card

Multiband Sound Processor*



- DSP based 5-band or wide-band processing
- Presets for all applications and formats
- Intuitive GUI to fine tune your sonic signature
- Low distortion Final Limiter
- MPX Power Limiter (ITU 412)

Dynamic RDS Encoder



- Supports PI, PS, TP, TA, MS, PTY, PTYN, DI, CT, AF, RT
- Dynamic PS Scrolling
- Pure and stable signal thanks to Digital Modulator
- Delivers Audemat's expertise in RDS

Single Frequency Network



- 10 MHz input for RF Carrier synchronization
- Adjustable program delay (on audio / MPX inputs)

Scheduler*



- Automatic change of preset
- RF Power scheduling and consumption saving
- Schedule any parameter of your ECRESO FM

Digital Stereo Encoder



- High speed DSP circuitry
- Subcarrier Perfect synchronization
- Amazing signal quality

Email Notifications*



- Alarm sending by SMTP
- Easy configuration of each notification
- Same notifications can be sent by SNMP

MPX Over AES Input*



- Improved MPX signal quality
- No hardware change
- Compatible with MPX over IP APT codecs

* verify your version compatibility



Reliability & ease of maintenance



Watch the video

Expert Maintenance Reporting (EMR)



EMR is a proactive service which sends regular reports on the status of key parameters such as temperatures, currents and voltages, plus information on the performance and lifespan of components such as the fan and the power supply of the transmitter. Thanks to a powerful firewall-friendly Web protocol, EMR works securely over a regular Internet connection (ADSL, 3G, ...) even when the connection bandwidth is limited.



Watch the Video on
Ecreso FM 5kW / 10kW

Technical Features

Technical specification

Specification	ECRESO FM 5 kW	ECRESO FM 10 kW
Frequency Range	87.5 to 108 MHz in 10 kHz Steps	
Frequency Stability	< 10 ⁻⁶ per Year	
HF Output	1"5/8 Type, 50 Ω	
Power range	0.5-5.5 kW	1-11 kW
Power setting	0-6kW	0-12kW
Power factor	> 0.95	
VSWR	< 1.35, optimal performance: < 1.1 , protection : >1.5	
Spurious and harmonic suppression	> 82 dBc	> 85 dBc
Efficiency	up to 76%	
Voltage	3 phase wye + neutral, 340-457 VAC, 47-63 Hz	
Fuses	10 AT (Exciter and Control Unit)	
Analog input (LINE1)	2 XLR connectors, balanced, >10 kΩ (600 Ω jumpers selectable), Software adjustable level (-18/+18 dBu range)	
AES Input (LINE2)	1 XLR connector, balanced, >110 Ω, software adjustable level (-20 to 0dBFS range), AES 16,24,32 bits, up to 192 kHz	
2 Composite (MPX/SCA/RDS) inputs	2 BNC type, unbalanced, >5 kΩ, Software adjustable level (-18/+18 dBu range)	
Composite operation		
Bandwidth	> 40 Hz to 53 kHz @ 0.1 dB, > 20 Hz to 60 kHz @ 0.2 dB, > 60 kHz to 80 kHz @ 0.4 dB	
Intermodulation distortion	< 0.02%	
FM S/N ratio	> 80 dB RMS @ 75 kHz deviation	
AM noise	>55 dB, weighted/unweighted, sync/async, RMS/CCIR (20-20 000 Hz)	
Stereo operation		
Bandwidth	> 40 Hz to 53 kHz @ 0.1 dB, > 20 Hz to 60 kHz @ 0.2 dB, > 60 kHz to 80 kHz @ 0.4 dB	
38 kHz discontinuance	> 50 dB	
Stereophonic crosstalk	> 50 dB	
Mono operation		
Bandwidth	> 40 Hz to 15 kHz @ 0.1 dB	
Out of band rejection	> 40 dB @ 19 kHz	
Preemphasis	0 μs, 50 μs or 75 μs	
Environmental / Physical specifications		
Overall dimensions	29U x 600mm x 1040mm	
Weight	~330 kg	~400 kg
Operating temperature	Nominal: 5°C to 45°C, Maximum: 0°C to 50°C	
Warehouse temperature	-20°C to +70°C, <10 years	
Humidity	5 - 95 % non-condensing relative humidity	
Altitude	Up to 3900 m	
Cooling	Customized external or Internal air cooling configurations	
Marking	CE, FCC	
Standards	2014 30 UE, 2014 53 UE, ETS 302 018 (EMC), ETS 300 384 (Radio), NF EN 60215 (Safety)	

Technical specification are subject to change without prior notice – 11/2018

Order information

STANDARD VERSION	
REF	DESCRIPTION
On request	ECRESO FM 5kW
On request	ECRESO FM 10kW
Several configurations available (redundancy, cooling, mains...): contact us!	
Software Option	
CD00103	SmartFM
CD00106	Dynamic RDS
CD01001	5 Band Sound Processor
Hardware Options	
ST01792	SFN Option
On request	On/Off mains switch
On request	External Surge Protector
10 year warranty	
On request	10 year warranty for ECRESO FM 5kW
On request	10 year warranty for ECRESO FM 10kW

ON DEMAND SERVICES	
Dummy loads, adapters, cables	
Cavity filters, combiners and antenna systems	
Coverage Study	
Turnkey solutions for broadcasting site	

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