DIGITAL EXCITER   CONTROL   EFFICIENCY   RELIABILITY   SOUND PROCESSOR   FEATURES

HI FI · ON AIR

FM Transmitters
Up to 5 000W

POWERFUL PERFORMANCE
- Digital Modulator with Crystal Clear Signal
- 5-Band Sound Processor
- MPX over AES compatibility
- Highly Reliable

POWERFUL CONTROL
- TCP/IP, SNMP Management and Email Notifications
- Advanced Metering Interface
- 24h Graphical History Log

POWERFUL SAVINGS
- Up to 70% Efficiency
- Built-in Functionality
- Increased Life Span

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)
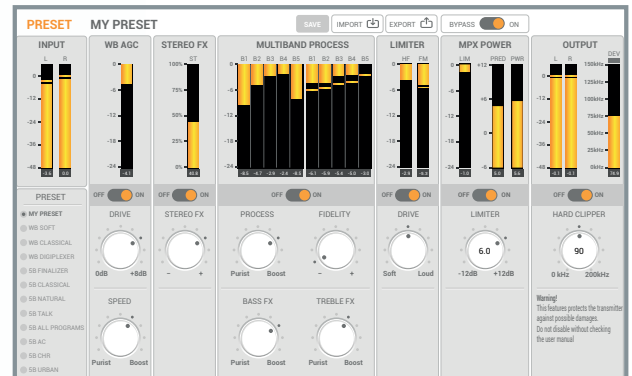- Intuitive Web Interface
- Full SNMP Management

UP TO 70% EFFICIENCY

- 6th MOSFET generation (Worldcast Systems design)
- Reduced consumption and operational costs
- Reduced heat and cooling costs
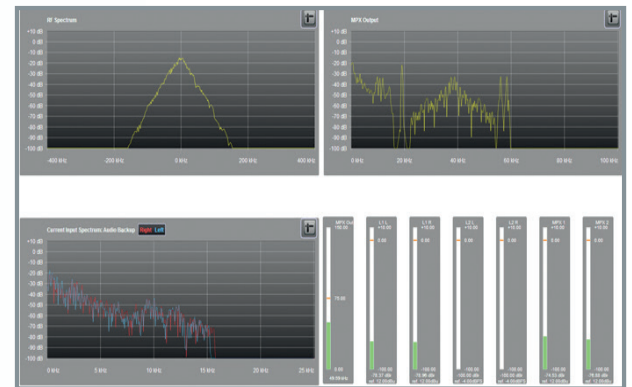- Longer component life span
- Reduced maintenance costs

HIGHLY RELIABLE

- Compact transmitter, modular design
- Protected against VSWR, temperature, overload...
- Switching power supplies with large voltage range
- Active surge current limiting
- Optional Surge Suppressor
- Automatic input switching and recovery (audio and MPX)
- Audio Backup (from µSD card)
- Internal RDS Backup

Sound Processor Interface

Advanced Measurement Interface (AMI)

Ask us for 1+1 and N+1

Advanced Communication Pack

Intuitive and secured Web Interface (TCP/IP)
Advanced Measurement Interface
Full SNMP Management
Audio Backup on µSD 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)

* verify your version compatibility

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

* verify your version compatibility

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

Internal Surge Protector

Powerful protection against lightning
Visible status LED
Easy to replace

Technical specification

Specifications	ECRESO FM 3000W	ECRESO FM 3500W	ECRESO FM 5000W
Frequency Range	87.5 to 108 MHz in 10 kHz Steps		
Frequency Stability	$< 10^{-6}$ per Year		
HF Output	7/8 Type, 50 Ω		1'5/8 Type, 50 Ω
Power range	300-3000 W	400-3800 W	500-5500 W
VSWR	< 1.35, optimal performance: < 1.1		
Spurious and harmonic suppression	> 75 dBc		
Efficiency	up to 70%		
Max consumption	better than 4500W	better than 5500W	better than 7450W
Voltage	184 VAC to 264 VAC, 47 Hz - 63 Hz		
Power factor	> 0.9		
Fuses	10 AT (ECRESO FM 100W)		
Analog input (LINE1)	2 XLR conectors, balanced, >10 kΩ (600 Ω jumpers selectable), Software adjustable level (-18/+18 dBu range)		
AES Input (LINE2)	1 XLR conector, 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	< 0.05%		
FM S/N ratio	> 80 dB RMS @ 75 kHz deviation		
AM noise	< 0.1% (50 dB) RMS (20-20 000 Hz)		
Stereo Operation			
Bandwith	> 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			
Bandwith	> 40 Hz to 15 kHz @ 0.1 dB		
Out of band rejection	> 40 dB @ 19 kHz		
Preemphasis	0 μs, 50 μs or 75 μs		
Environment / Physical specifications			
Overall dimensions	8U x 19"	8U x 19"	11U x 19"
Enclosure depth required	800mm		
Weight	~23 kg		
Operating weight per module	Nominal: 5°C to 45°C, Maximum: 0°C to 50°C		
Warehousing temperature	-20°C to +70°C, <10 years		
Humidity	5 - 95 % non-condensing relative humidity		
Altitude	Up to 3900 m		
Cooling	Air cooled performed by each module from the front panel to the rear (other configurations on demand).		
Marking	CE, FCC, ICC		
Standards	1999/5/CE (R&TTE), ETS 302 018 (EMC), ETS 300 384 (Radio), NF EN 60215 (Safety)		

Order information

Technical specification are subject to change without prior notice – 07/2017

STANDARD VERSION

REF	DESCRIPTION
TF00414-x	ECRESO FM 3000W
TF00438-x	ECRESO FM 3500W
TF00415-x	ECRESO FM 5000W
Software Option	
SP01319	Communication Pack
CD00106	Basic RDS
CD01001	5 Band Sound Processor
Hardware Options	
SP01319	GPIO board
SP01615	Analog GPIO board
SP01322	RF metering board
ST01792	SFN Option
SP01260	Internal surge protector

ON DEMAND SERVICES

Redundancy solutions : Dual Drive, 1+1, N+1

Dummy loads, adapters, cables

Cavity filters, combiners and antenna systems

Coverage Study

Turnkey solutions for broadcasting site