

# MICROSET ST-50

FM RADIO BROADCAST TRANSMITTER | MONO/STEREO | 50 W | READY FOR SCA, MPX, RDS



The new professional ST-50 is a high performance  $\mu$ -processor controlled FM RADIO broadcast mono/stereo transmitter with very low THD - IMD distortion and SCA, RDS and MPX facility.

## Features

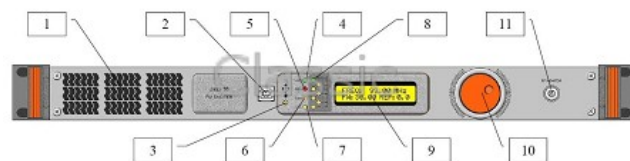
- Frequency 87,5-108 MHz
- Excellent stereo and mono operation
- Extremely low distortion THD-IMD
- Very low noise
- High stereo performances
- $\mu$ P controlled - RDS facility - digital input audio facility
- Seven memory programs, step frequency 10 kHz
- Easy frequency programming and set-up
- Full broadband BW > 20 MHz
- Remote control and programming RS485
- Full control and protection of output power and deviation
- Very reliable, compact, strong and long service
- Compliance to C.C.I.R. & F.C.C. Standards

## RF Characteristics

Power Output : 50 W adjustable from front panel  
 RF output impedance : 50 Ohm unbalanced, VSWR less than 1.5:1  
 Frequency range : 87.5 to 108MHz, 7 channels (10 kHz / step  $\mu$ p selected)  
 storable and recalled from panel  
 Frequency control : Synthesizer  $\mu$ -processor controlled  
 Off lock attenuation : > 80dBc (typical -85 dB)  
 Type of modulation : F3E / F8E direct FM at the carrier frequency  
 Modulation mode : Mono, Stereo, Multiplex, SCA, RDS, AUX (input selected by front panel)  
 Frequency deviation :  $\pm 75\text{kHz} = 100\%$ ,  $\pm 150\text{kHz}$  capability  
 Short term stability :  $\pm 1\text{ppm}$  from -5 to +45°C, can be synchronized by 1-2-2.5-5-10MHz  
 Instantaneous BW : > 20MHz  
 RF harmonics : Exceeds EBU/CCIR/FCC requirements < -70dBc  
 RF spurious : Exceeds EBU/CCIR/FCC requirements < -100dBc @  $\pm 1\text{MHz}$  min. (typical -110dB)  
 Preemphasis : Flat/50/75 $\mu$ s selectable via front panel – precision typical 0,4%  
 Stereo operation : CCIR 450/S2 "pilot tone system"

## Stereo Operation

Stereo Separation : >53 dB (typ. 56 dB) 30  $\div$  80 Hz , >60 dB (typ.70 dB) 80 Hz  $\div$  15 kHz  
 Crosstalk attenuation (M / S) : > 40 dB 30 Hz  $\div$  15 kHz (typ. 55 dB 100 Hz  $\div$  8 kHz)  
 THD+N on encoded channels : < 0.03% 30 Hz  $\div$  15 kHz (typ. -74 dB)  
 IMD - Distortion : < 0.03% Typ. IMD D2 < -83 dB D3 < -88 dB



Article id: **MICROSET ST-50**

Price: **€ 2099,35**

ex VAT € 1735,00

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Audio filter attenuation : > 55 dB @ 19 kHz ; > 45dB 19 kHz ÷ 100 kHz

Common mode rejection : > 45 dB 20 Hz ÷ 15 kHz

Spurious products : > 53 kHz > 50 dB

38 Hz suppression : > 70 dB (typ. -85 dB)

Sub carrier frequency : 38 kHz ± 2 Hz

Pilot frequency : 19 kHz ± 1 Hz

Phase difference : 19/38 kHz 0° ± 2° adjustable

TIM (DIM30) : < 0.03 % (square/sinus) Typ. < -77 dB

Nominal pilot deviation : ± 7 kHz

## Mono Operation

Audio response : ± 0.15 dB 20 Hz ÷ 15 kHz (+0 / -2%)

THD+N on encoded channels : 30 Hz to 15 kHz < 0.02% ( typ. 0.03% ) typ. -74 dB

IMD : D2 < -75 dB , D3 < -80 dB (Typ. D2<-80 dB, D3<-85 dB) (measured with a 1 kHz and 1.3 kHz tones, 1:1 ratio, @ FM 75kHz)

TIM (DIM30) : < -70dB (Typ. < -77dB) (measured with square wave 2.96 kHz - sine wave 14 kHz @ 75 kHz FM )

## Physical & Electrical

Dimensions : Standard 19" chassis rack

Cabinet : D 385 mm x W 485 mm

Antenna output : N connector female

Weight : 4.5 kg approx.

Power supply : 230V single phase AC (+10 / -15%) 50-60 Hz ± 5%

Human interface input device : Rotary encoder with pushbutton or USB

Acoustic Noise : < 56dBA Leq 3min @ 1m

Cooling : Forced air, with internal long life brush-less ball bearing fan

## Environmental

Storage temperature : - 20°C + 60°C

Operating temperature : - 5°C + 45°C

Guaranteed performances temp. : 0°C + 40 °C

Relative humidity : 90% max (no condensing)

Max. operating altitude : 2000 m

Max. extraneous field strength : =10V/m ; = 4A/m

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