

EXC-RTX18B

VHF/UHF/SHF BROADCAST RADIO LINK FAMILY 220-2500MHz



The EXC/RTX18b is a modern direct-synthesis, frequency-agile broadcast quality STL (Studio to Transmitter Link), which may be factory preset on a very wide frequency range from VHF to SHF. The design of this equipment derives from a restyling of the time and field proven EXC/RTX18 series, in a new look conforming the recent EXC30GT FM transmitter series. Both transmitter and receiver offer full digital readout and complete and intuitive front panel control through a simple single jog coupled with extensive remote programmability and monitoring. Excluding the new aesthetical look, the internal controller and other minor internal modifications, the new equipment confirm the same dimensions and the convention cooling (no fans) of the previous series.

The excellent and even better modulation characteristics, i.e. low noise, distortion and broad pass-band, the performance of the optional internal stereo-encoder and decoder, the on field programmability, makes the EXC/RTX18B a superior choice for a broadcast-grade STL, with reliable and maintenance-free operation. They also perfectly mate with external digital companding encoders/decoders.

TECHNICAL DESCRIPTION

- Compact, direct modulated low-noise synthesized, oscillator, with 10 or 25 kHz programming step.
- External on-field programmability of frequency and power, without any special instrument over a broad range
- Simple and modular internal construction facilitates stage testing and servicing.
- Stable, high precision and temperature compensated crystal time-base.
- Balanced/unbalanced audio, MPX and separate auxiliary SCA / RDS channel input., wide range level adjustable in small steps.
- Up to 6 separate LF input and output connectors plus RF/IF monitor for extended flexibility of use.
- Optional high performance digital stepwise stereo-encoder and decoder. This option may also be installed as an upgrade on the field.
- Narrow low-loss microwave input filter for high sensitivity and excellent performance in highly noisy RF environment
- High efficiency, low-noise switch-mode power supply, with extended 90 ÷ 260 Vac input range and battery backup input with recharging option
- Complete digital control of all internal circuitry and extremely wide monitoring facilities. RS232 port for complete remote control
- Password protection of critical data and presets

TECHNICAL SPECIFICATIONS

Factory preset frequency ranges:

215÷245 MHz 240÷270 MHz
 300÷340 MHz 340÷380 MHz
 400÷440 MHz 430÷470 MHz
 840÷890 MHz 890÷930 MHz
 930÷960 MHz 1370÷1390 MHz
 1429÷1433MHz 1510÷1530MHz
 1660÷1670MHz 1700÷1725MHz
 1725÷1750MHz 2367.5÷2372.5MHz
 2440÷2.450MHz 2468.1÷2483.3MHz
 Other sub-ranges on request

- Modulation: FM, 75 kHz peak dev.
 180kF3E in mono
 256kF3E in stereo
- Synthesis step: 10kHz (VHF/UHF) 25kHz (SHF)
- Frequency error: <2.5 ppM 3' after power-on
- RF output power: 7W / 15W (215÷960 MHz)
 2W / 5W (1.3÷2.5 GHz)
- RF harmonic products: <-60 dBc, -70 dBc typ.
- RF spurious products: <-70 dBc, -80 dBc typ.
- Audio/mpx input level: -3.5 ÷ +12.5 dBm
 @ ±75 kHz deviation on female XLR conn.
- Aux channel input level (on 10 k ohm):
 -12.5 ÷ +3.5 dBm @ ±7.5 kHz dev.
 -24 ÷ -8 dBm @ ±2 kHz dev.
- Transmitter LF monitor output level:
 0 ÷ +10 dBm @ ±75 kHz dev.
- Deviation limiter: adjust. between 0 and > +7 dB
- Mpx/mono output level: -1.5 ÷ +12 dBm,
 0.5dB/step on male XLR
- S/N ratio ≥75 dB >80 typ. mono
 (30÷20000 Hz. rms) ≥72 dB >76 typ. stereo
- Preemphasis time constant: 0 / 50 / 75 μs ±2%
- Modulation distortion @ 1kHz / 100% dev.:
 mono ≤0.1% 0.03% typ.
 stereo, 1ch ≤0.30% 0.20% typ.
- Stereo crosstalk (typ): <-50 dB (100 ÷ 5000 Hz)
 <-45 dB (30 ÷ 15000 Hz)
- Audio channel freq. response:
 30 Hz ÷ 15 kHz ±0.1dB
- Wide-band demodulated LF output:
 15 Hz ÷ 120 kHz +0.1/-3dB
- Usable input level: -90 ÷ -10dBm
 (7μV÷70mV)
- Sensitivity (typ): Sin= -90dBm (7μV) mono
 (S/N=60dB) Sin= -70dBm (70μV) stereo
- Dynamic selectivity:>+10dB typ @ δF=300 kHz
 >+35dB typ @ δF=500 kHz
 >+45dB typ @ δF=1.0 MHz
- I/O lines: RF/LF disable, Direct pw, On the air,
 Low field, Alarm
 RS232 for monitoring and control
- Mains supply: 90 ÷ 260 Vac 50/60 Hz
 Tx 45 W @5W / <80W @15W
 Rx <15W
- Battery backup/supply: 22.0 ÷ 28.0 V
 ≤2.8A @ 24V (0.4A Rx)
- Operating temperature range: 0 ÷ 35 °C recomm.
 -10 ÷ 45 °C max
- Dimensions without handles: 19" 2 un. std. rack
 (each equipment) 483 x 88 x 320 mm
- Weight: 5,5kg (Tx), 5,0kg (Rx)

INFORMATION HEREBY SUPPLIED ARE AS ACCURATE AS POSSIBLE. HOWEVER ALL SPECIFICATIONS ARE PURELY INDICATIVE: SIELCO RESERVES THE RIGHT TO CHANGE THEM OR THE CIRCUITRY, WITHOUT ANY PREVIOUS ADVICE, IN ORDER TO IMPROVE THE PRODUCT.

