

EXC-RTX18B

VHF\UHF\SHF BROADCAST RADIO LINK FAMILY 220-960MHz



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 UHF. The field proven design of this equipment was recently upgraded with new features and options in line with the times (digital IF on Rx, AES/EBU out, LAN and web-server remote control). 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.

The excellent 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, the possible remote control over IP, makes the **EXC/RTX18B** a superior choice for a broadcast-grade STL, with reliable and maintenance-free operation.

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, 30MHz typ.
- 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.
- Universal power supply, with extended 90 ÷ 260 Vac input range and battery backup input with recharging option (not available on 30W option)
- Optional high performance digital stepwise stereo-encoder and decoder which permits LF regeneration with no quality loss on stereo. Includes stereo headphone monitor output
- Digital IF option on the Rx permits uncompromised performances in crowded RF environments or smaller channels width with lower deviation where required
- Digital control of all internal circuitry and wide monitor facilities. RS232 port for complete external control. SNMP or web-server remote control option over IP
- 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	

Other sub-ranges on request

- Modulation: FM, 75 kHz peak dev.
180kF3E in mono
256kF3E in stereo
(may also be preset to 40 or 50kHz dev)

- Synthesis step: 10 / 25 kHz
- Frequency error: <2.5 ppm 3' after power-on

- RF output power: 15W / 20W (215÷960 MHz)

- 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

- Rx output level (Mpx/mono): -1.5 ÷ +12 dBm, /0.5dB/step
(Stereo): 0 ÷ +10 dBm, /0.1dB/step

- S/N ratio ≥72 dB >76 typ. mono
(30÷20000 Hz. rms) ≥70 dB >73 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

- Baseband demodulated LF output:
MPX (digital IF) 15 Hz ÷ 67 kHz +0.1/-0.3dB
WB (analogue IF only) 15 Hz ÷ 120 kHz +0.1/-3dB

- Usable input level: -90 ÷ -10dBm
(7mV÷70mV)

- Sensitivity (typ): Sin= -90dBm (7mV) mono
(S/N=60dB) Sin= -70dBm (70mV) stereo

- Dynamic selectivity: >+25dB typ @ dF=300 kHz
>+35dB typ @ dF=500 kHz
>+45dB typ @ dF=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 <80W @15W
Rx <15W

- Battery backup/supply: 22.0 ÷ 28.0 V
≤2.8A @ 24V (0.4A Rx)

- Operating temperature range: 0 ÷ 35 °C recomb.
-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.

