

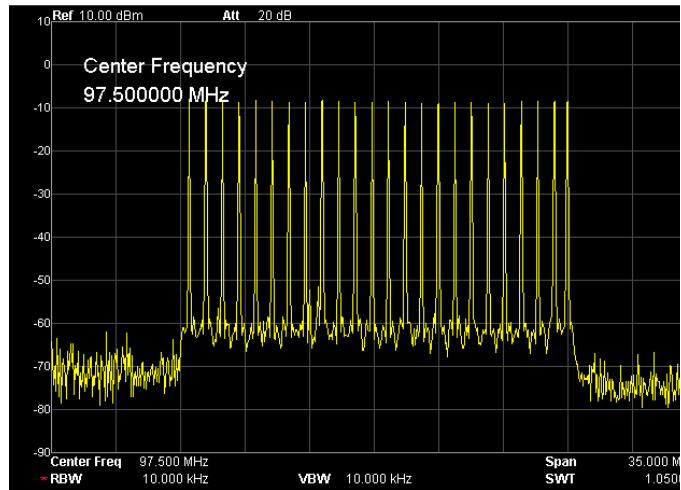


EXC05-xx Multicarrier

EXC05-xx is a low power, compact size **multicarrier** FM transmitter, with a lot of features and capabilities.

It can broadcast the same program on numerous frequencies simultaneously (**up to 24 carriers**).

The frequency and the level of each carrier is independently adjustable through the front panel LCD, or remotely via USB or Ethernet (optional).



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COM3 - PuTTY
?
SigmaCom EXC-24, S/N: 1001
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Format: CAR, LEVEL, FREQ
Example: 3,100,98100 -> set carrier 3, with 100% level at 98.1 MHz
Example: 5,0       -> set carrier 5, off air
Example: 0,0       -> set all carriers off air
Example: 0,68      -> set all carriers at 68% level
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Current status: READY
Date: 19/07/2024, Time:00:05:42
TX mode: EXT MPX, Deviation: 1.7kHz
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C-01: 50% 87500 kHz
C-02: 50% 88400 kHz
C-03: 50% 89300 kHz
C-04: 50% 90200 kHz
C-05: 50% 91100 kHz
C-06: 50% 92000 kHz
C-07: 50% 92900 kHz
C-08: 50% 93800 kHz
C-09: 50% 94700 kHz
C-10: 50% 95600 kHz
C-11: 50% 96500 kHz
C-12: 50% 97400 kHz
C-13: 50% 98300 kHz
C-14: 50% 99200 kHz
C-15: 50% 100100 kHz
C-16: 50% 101000 kHz
C-17: 50% 101900 kHz
C-18: 50% 102800 kHz
C-19: 50% 103700 kHz
C-20: 50% 104600 kHz
C-21: 50% 105500 kHz
C-22: 50% 106400 kHz
C-23: 50% 107300 kHz
C-24: 50% 108200 kHz
Enter command:

```

EXC05-xx is equipped with an embedded digital stereo encoder, RDS encoder, and a basic audio compressor, but also accepts MPX from an external source.

Everything is built on **dedicated DSP hardware, for 100% reliability and stability**. No cheap computer modules inside, no maintenance needed.

PTT (Push to talk) and RDS TA (Traffic Announcement) functionalities, are offered with OPT GPIO

Everything can be set from the front panel LCD UI, through extremely easy, quick and user-friendly menus.

The device is also equipped with a USB port for serial console for controlling the carriers and check the status of the device.

More functionalities are offered with the optional Ethernet control (SNMP, or SERIAL modes of operation).

EtherMPX IP codecs are the perfect choice to transport your audio (L/R or MPX) to the EXC05-xx device, over IP networks (wired or wireless), or fiber cables.

Technical specifications

GENERAL	
Model name	EXC05-xx (xx = max number of carriers)
Dimensions	19" 1U chassis, 15cm length
Weight	2.5kg max
Power supply	100-240VAC 50/60Hz
Power consumption	25W max
Operating temp	-20 to +60 Celsius

OUTPUT	
Frequency range	87.5 – 108.0 MHz
Modulation type	Direct FM (F3E), up to +/-150kHz
Modes of transmission	Mute, Mono, Stereo, external MPX
RF output power	0 dBm per carrier, adjustable (+10dBm when HP-10 option installed)
RF output connector	N type, female, 50 Ohm
Async residual AM	< -70 dB wrt. 100% peak AM
Sync residual AM	< -50 dB wrt. 100% peak AM
IMD	Better than -60dBc (24 carriers, full power)

AUDIO INPUTS	
Left & Right	2 x XLR-3 female, balanced, 10kOhm -6...+6 dBu, adjustable in 0.1dB steps
MPX	1 x BNC female, unbalanced, 10 kOhm -10...+8 dBu, adjustable in 0.1dB steps
Preemphasis	0/50 uS

MONO Operation	
SNR	> 80dB @ 75kHz dev
Frequency response	± 0.5 dB, 20Hz...15KHz
THD	< 0.05%

STEREO Operation	
SNR	> 70dB @ 75kHz dev
Frequency response	± 0.5 dB, 20Hz...15KHz
THD	< 0.05%
Stereo separation	>50dB
DSP resolution	24bit, 192kHz
19kHz pilot level	8...12%, adjustable in 0.1% steps

MPX Operation	
SNR	> 80dB @ 75kHz dev
Frequency response	± 0.5 dB, 20Hz...15KHz
THD	< 0.05%
Stereo separation	>50dB

Embedded RDS	
RDS/RBDS signal	CENELEC EN 50067 / EN 62106
Services supported	PI (program identification) PS (program service) PTY (program type) RT (radio text, up to 29 chars) TP (traffic program) – optional TA (traffic announcement) – optional AF (alternative frequencies) – optional
57kHz pilot level	Off, or 1.9...10%, adjustable in 0.1% steps

USER CONTROL & INTERFACES	
USB	1x Type B, female Serial port, console 9600 bps CRLF
Ethernet (optional)	1x RJ45 10/100 Mbps (optional) SNMP or WEB or REMOTE SERIAL mode
GPIO (optional)	1x DB9 female (optional) Functions: - PTT (input, push to talk) - TA (input, traffic announcement) - ALARM (output, indicates fault)



This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

ORDERING CODES:

- ✓ EXC05-04 = 4 carriers max
- ✓ EXC05-08 = 8 carriers max
- ✓ EXC05-12 = 12 carriers max
- ✓ EXC05-16 = 16 carriers max
- ✓ EXC05-20 = 20 carriers max
- ✓ EXC05-24 = 24 carriers max

OPTIONAL COMPONENTS:

- ✓ OPT HP-10 = +10dBm max per carrier
- ✓ OPT ETH = For remote management
- ✓ OPT GPIO = For PTT, TA and ALARM functionalities

NOTE: Technical specifications are subject to change without notice. Please contact us if you have questions, or to get latest information and updates.