

TRX 3015 M

150 W HF Transceiver



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TRX 3015 M
with optional 19" rack



The TRX 3015 M is a software-based HF transceiver rated at 150 W PEP/average output power for communication in the short wave (HF) frequency band using the new ERX 3003 with optional 24 kHz wideband capability.

The transceiver is particularly suitable for use in fixed military and land-based stations, providing for tactical and strategic HF communications. The TRX 3015 M is designed for voice and data transmission /reception, compatible to all the military standardized waveforms as applicable for the HF Series 3000 family of radios.

FEATURES

HF@SATCOM speed	Up to 24 kHz bandwidth allows up to 120 kBit/s data transmission speed	Operation	At combined transmit/receive antenna or separate transmit and receive antennas
Frequency range	1.5 MHz – 30 MHz transmit, 10 kHz – 30 MHz receive	Software defined	Easy upgrade of waveforms
Output power	150 W PEP and average	ALE	Optional 2 nd , 3 rd and/or 4 th generation ALE
Duty cycle	100 % continuous operation	Frequency hopping	ECCM capability acc. to STANAG 4444
Co-site performance	Enhanced due to high dynamic conversion technology	Full remote control	Via LAN or serial communication interface
		Built-in test	Comprehensive built-in test



Hagenuk Marinekommunikation

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TECHNICAL DATA

Frequency range	1.5 MHz – 30 MHz transmit, 10 kHz – 30 MHz receive
Frequency resolution	1 Hz
Frequency tuning	Via local keyboard or remote control
RF output power	150 W ± 1 dB, PEP/average at 50 Ω
Reducing of output power in steps of	-3 dB, -6 dB, -10 dB, -20 dB
Adjustment of maximum power	In 0.1 dB steps down to -9.9 dB
Channel memory	1000
Frequency stability	< 1x 10 ⁻⁸ per day
Frequency changing time	≤ 10 ms
Modes of operation	
Standard	AM (A3E), SSB (J3E USB/LSB), Data USB/LSB/ISB, ISB (B9W), CW (A1A), FSK (F1B), AME (R3E, H3E, H3W), FM
Optional	
L11	Acc. to MIL-STD-188-203-1A, STANAG 5511 ¹⁾
L22	Acc. to STANAG 5522 ¹⁾
FH	Acc. to STANAG 4444 ²⁾
Input for external frequency standard	10 MHz, 0 dBm ±10 dB, 50 Ω, BNC connector
HF wideband up to 24 kHz	Acc. to MIL-STD-188-110C, Appendix D
2 Channel ISB	Acc. to MIL-STD-188-110C, Appendix F
¹⁾ with external DTS/SPC, ²⁾ with external FH controller	
Interfaces	
I/O Audio	600 Ω balanced, 0 dBm adjustable
Remote control	Serial data RS232, 422, 485 LAN 10/100/1000 BASE-T Ethernet
VoIP	IAX, SIP, ED 137 (option)
Frontpanel socket	Microphone 2 mV / 150 Ω PTT (0V = transmit) Interface for software updates/upgrades
Comprehensive built-in test (BITE)	
Suppression of unwanted sideband	> 60 dB/PEP
Carrier suppression	J3E, ISB, Link 11: > 50 dB/PEP H3E, H3W: 4.5 dB to 6 dB / PEP R3E: 18 dB ± 2 dB / PEP

Suppression of intermodulation products 3. order	> 36 dB / PEP (two-tone signal with power amp.)
Harmonics suppression	> 60 dB / PEP
Noise suppression (inband)	80 dBc / Hz
Noise suppression	Δf = >50 kHz: >138 dBc / Hz Δf = >500 kHz: >145 dBc / Hz

GENERAL DATA

Power supply	
PS 3015 ACL	100 VAC – 264 VAC, 47 Hz – 63 Hz
PS 3015 L (option)	AC: 100 VAC – 264 VAC, 47 Hz – 63 Hz and 21VDC – 32 VDC, floating, auto- matic switch-over in case of mains interruption

Environmental specifications

- Operating temp.	-15 °C to +55 °C
- Humidity	Max. 95 % at 40 °C, non-condensing
- EMI/EMC	Acc. to MIL-STD-461 G

Dimensions	TRX 3015 M	PS 3015 L	PS 3015 ACL
Height	133 mm	88 mm	88 mm
Depth	490 mm	430 mm	430 mm
Width	483 mm	483 mm	483 mm
Weight (approx.)	13.1 kg	9 kg	5.1 kg

INTERNAL OPTIONS

4 Channel ISB	Acc. to MIL-STD-188-110C, appendix F and MIL-STD-188-141B
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ALE 2G^{*)} Acc. to MIL-STD-188-141B

ALE 3G^{*)} Acc. to STANAG 4538

ALE 4G^{*)} Acc. to MIL-STD-188-141 D app. G
(24 kHz WALE)

Data communication^{*)} Narrowband legacy waveforms up to
19,200 bps and wideband waveforms
up to 120,000 bps acc. to MIL-STD-188-
110C, Appendix D

<sup>*) realized with internal modem modules or external modem,
depending on configuration</sup>

OPTIONAL ACCESSORIES

ATU 3015	Automatic antenna tuner unit (ATU) with silent tuning capability, 150 W
ATU 3050 A	ATU with silent tuning capability, 500 W
ATU 3050 C	ATU with silent tuning capability, 500 W

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