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VHF Transceiver XV3088



Photo rf13-f2

The high-performance multirole combat radio

Brief description

The VHF Transceiver XV3088 is a high-performance pouch radio that can be instantly redeployed as a long-duration patrol backpack and has logistic, tactical and cost advantages.

The heart of new integrated communication system is the high-performance lightweight VHF Transceiver XV3088 that offers solution to all aspects of tactical communication. Up to 2320 channels (9 programmable), full data facility and an unparalleled simplicity of operation demonstrate latest technology. Its multirole characteristics are further enhanced by a carefully designed range of ancillaries producing an exceedingly cost-effective and logistically desirable system.

Mobile Operation

XV3088 is upgraded to a complete vehicle communication system by means of Vehicle Mounting Frame KS3088 and Power Amplifier VV3088M/VV3088V with output

power of 25 W or 50 W. The complete communication system is envisaged to be built into practically any military vehicle.

Features and benefits

- Built-in voice scrambler
- Preselection for up to 9 channels and their storage in memory
- Instantaneous erasure of preprogrammed data in case of imminent danger
- Keypad control from handset or transceiver control panel
- Data transmission at 2400 bps using internal modem
- Fill-gun programming
- Scanning
- POST (power-on self test)
- Semiduplex operation
- Detached operation by means of Remote Control Unit GB3088 for a range of at least 500 m using ordinary two-wire field cable
- Compatibility with most transceivers in use around the world
- Standard or 150-Hz subtone squelch

Secure transmission

Built-in voice scrambler provides digital voice encryption by sampling with 32-bit code, scrambling and transmission via the radio channel. The 10000 possible code combinations are entered by means of a fill gun



Remote Control and Rebroadcast Box GB3088 allows remote control of XV3088, ie traffic monitoring, ringing and transmitter keying from a field telephone using two-wire cable (Photo dr13-f1)

Selective calling of up to 99 subscribers

Selective dialling to desired subscriber and fast transmission of message by 3-digit numerical code

Three power stages

High, moderate and low (high only available with 25/50-W RF amplifier)

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Manpack Transceiver XV3088 (Photo rf13-f3)

Two multifunction connectors

Providing both secure and fast data transmission with 2400 bit/s as well as remote-control capabilities and an audio interface, the transceivers can be extended with accessories, such as handset, headset etc.

Simplified operation

Clearly arranged keypad for point and shoot operation and clear override mode.



Radio Data Modem GM3088 is designed for data transmission through XV3088 Transceiver (Photo md13-f1)

Whisper mode

Increased microphone sensitivity for discreet operation in silent environment.



Vehicle Whip Antennas (left: M013.1 with magnetic holder, right: M013) (Photos mo13-f1, mo131-f1)

Compact size

One of the smallest and lightest man-pack radios at a size of just 83mm x 205mm x 252mm with battery pack attached. The rugged package is submersible and withstands harshest environmental and EMC conditions.

Antennas

The range of antennas available include a low-profile antenna that allows discreet operation, 1.5-m whip antenna to increase range as well as long-wire antennas and antennas for mobile use. In case of considerable mismatch, eg antenna damage, the TX LED signals the error by blinking in red.



Mobile System XV3088 (XV3088C)

The basic unit is formed by the XV3088 Transceiver, built-in into various frames together with Power Amplifier VV3088M (VV3088V) 25 W (50 W) (Photos rf13x-ff, rf13x-f4)



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Specifications

XV3088 Transceiver

General data

Frequency range	30.000 MHz to 87.975 MHz
Channel spacing	25 kHz
Number of working channels	2320
Effective audio frequency range	F3 mode 300 Hz to 3.4 kHz data transmission 150 Hz to 9 kHz from handset or control-panel keypad
Channel selection	
Transmission modes	simplex or semiduplex telephony, data transmission of 1.2 kbps or 16 kbps
Voice scrambling	internal digital scrambler

Transmitter

Power output	nominal 5 W (+1.5 dB/-1 dB) reduced 0.2 W (±2 dB) frequency, max. shift 5.6 kHz
Modulation	
Harmonics suppression	-60 dB

Receiver

Sensitivity	>0.5 µV at 12 dB SINAD
AF output power	adjustable, min. 200 mW into 4-Ω load
Squelch	standard or 150-Hz subtone

Power supply

Nominal supply voltage	12 V/4 A NiCd battery pack
Supply voltage range	10 V to 15 V
Period between charging	min. 14 hours at transmit/receive/ standby ratio of 1:1:10 and nominal output power of transmitter

Other specifications

Operating temperature range	-30 °C to +60 °C
Transceiver weight	max. 2.7 kg (without batteries and accessories)
Battery pack weight	max. 2.5 kg
Transceiver dimensions with battery pack attached	83mm x 205mm x 252mm
Weight of complete set in carrying bag with spare battery pack	<10.9 kg
Dimensions of complete set in carrying bag	250mm x 380mm x 450mm
Waterproof	up to 1 m depth

VV3088M (VV3088V) Power Amplifier

Transmitter

RF output power	reduced 0.2 W nominal 5 W increased 25 W, 50 W (VV3088V)
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Internal modem

PC interface	RS-232-C
Transmission speed via radio channel	2400 bps
Data modulation	FSK, 1200/2400 Hz

Power supply

Supply voltage	from vehicle battery 12 V or 27 V (VV3088V)
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Supply voltage range	10 to 33 V, 18 V to 33 V (VV3088V)
Continuous transmission period	unlimited under normal conditions, 2 hours at 50 °C, 20 min with VV3088V

Power consumption (12 V/24 V)

Reception	max. 0.5 A/0.5 A
Transmission 0.2 W	1 A/0.6 A
Transmission 5 W	2 A/1 A
Transmission 25 W	10 A/5 A
Transmission 50 W (VV3088V)	max. 7 A

Other specifications

Operating temperature range	-30 °C to +60 °C
Weight	max. 3.9 kg
Dimensions	183 mm x 129 mm x 173 mm

Additional accessories (on request)

- Mobile set charger
- Trickle charger
- Vehicle operation accessory
- Headset
- AF, RF and antenna cable sets, cables for PC interconnection

Antennas

- Vehicle antennas
- Log-periodic antenna
- Groundplane antenna
- Discone antenna

Military standards

XV3088 fulfills all relevant military standards

Ordering information

VHF Transceiver	XV3088	6092.1507.02
VHF Transceiver with Encryption Card	XV3088C	6092.1559.02
Recommended extras		
Battery Pack	IB3088	6092.1659.02
Handset with Control	GA3088	6092.1707.02
1.5-m Whip Antenna	HV3088L	6092.1759.02
0.5-m Whip Antenna	HV3088S	6092.1807.02
Hang-Up Antenna	HD3088	6092.1859.02
Vehicle Whip Antenna	M013	6000.0011.01
Vehicle Whip Antenna with magnetic holder	M013.1	6000.0011.02
Standard Battery Charger	IC3088S	6092.1959.02
Quick Charger	IC3088R	6092.2003.02
Power Amplifier 25 W	VV3088M	6092.2103.02
Power Amplifier 50 W	VV3088V	6092.2155.02
Radio Modem	GM3088	6092.2255.02
Fill Gun	GP3088	6092.2303.02
Vehicle Mounting Frame, horizontal	KS3088H	6092.2355.02
Voice Encryption Unit	GN3088	6092.2455.02
Remote Control Unit	GB3088	6092.2503.02
Manpack Bag	MZ3088	6092.2603.02



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