

RDX SERIES™ ON-SITE BUSINESS TWO-WAY RADIOS AND ACCESSORIES



YOUR BETTER BUSINESS TOOL



MADE FOR THE WAY YOU DO BUSINESS

A machine operator coordinating materials on a shop floor, abuzz with activity. A retail associate fielding a chorus of customer requests. A foreman overseeing subcontractors in the clamor of construction. How do you make their work environment productive, keep operations on schedule and reduce costs – all while increasing customer satisfaction and company profitability?

The RDX Series™ delivers just what you need to drive success – whether it's enhancing overall efficiency or reducing operational expenses. Our business-essential radios provide the perfect partnership of excellent audio and exceptional durability. So you can expect unstoppable performance and unbeatable dependability anywhere employees communicate – whether working outdoors in a garden center or indoors at a senior community center.

OVERCOME WORKPLACE CONDITIONS

The RDX Series brings workplace noise to its knees by helping to ensure exceptional audio quality in the loudest environments. Designed for noisy areas, our radios are 30% louder than previous Motorola XTN and AX models as a result of 2000 mW of audio output and new design enhancements.

When it comes to durability, you can depend on our radios to stand up to harsh job-site conditions – from knocks and drops to water and dust. With a heavy-duty, metal diecast chassis, the RDX Series meets Military 810 C, D, E, F standards and IP54/55 specifications for shock, rain, humidity, salt fog, vibration, sand/dust, temperature shock, plus high and low temperature.

IMPROVE JOB PERFORMANCE

Whether you need to keep middle school teachers connected or call maintenance to make repairs, the RDX Series gives you a valuable competitive edge. Affordable and easy to use, these high-powered portable performers help your employees work more productively and your enterprise run more profitably.



THE PERFECT BUSINESS PARTNER

- Exceptional audio quality in loud environments
- Durable, water-resistant and designed for the rigors of business
- Narrowband 12.5 kHz compliant
- Customer Programming Software lets you easily program and customize frequencies and radio settings
- Flexible battery-life solutions provides up to 26 hours of battery life*
- Outstanding industrial design features a heavy-duty metal body
- UHF and VHF versions in both non-display and display models; available with 2, 8, 10 or 16 channels
- No costly monthly fees or annual contracts

*Battery-save feature must be activated for optimal battery life. Ultra high capacity battery used.

OUTSTANDING VALUE TO MEET YOUR TIME LINE **AND BOTTOM LINE**

Supervising line workers or summoning hotel staff, you want premium performance and optimum durability to strengthen productivity and your bottom line – without the premium price. Our RDX Series delivers a great value for your dollars and a rapid return on your investment with features such as:

EXCEPTIONALLY CLEAR AUDIO

Crisp, clear audio is essential to your communications – and the RDX Series delivers audio that is 30% louder than previous Motorola XTN and AX radio models. 2000 mW of audio output, speaker magnetic field reduction, wind-noise reduction and improved RF specifications contribute to premium audio quality without the premium price.

DURABLE AND WATER RESISTANT FOR EVERYDAY USE

Manufactured with a durable metal diecast chassis, the RDX Series holds up under demanding industrial conditions and meets Military 810 C, D, E, F and IP54/55 specifications for shock, rain, humidity, salt fog, vibration, sand/dust, temperature shock, plus high and low temperature.

NARROWBAND READY

The RDX two-way radio series is 2013 FCC Narrowband ready. The default factory programming on all new RDX radios is set to operate in 12.5 kHz efficiency while RDX radios currently in service can be programmed to operate in 12.5 kHz.

CUSTOMER PROGRAMMING SOFTWARE (CPS)*

Interfacing with the RDX Series radios is easier than ever before. CPS software will allow users to perform programming functions and provides access to new features such as Reverse Burst to eliminate unwanted noise, Detail Reporting to manage radio profiles, CPS Manager Lock, Transmit Power Select, PL/DPL customization, Time-Out Timer, and much more. (CPS is available as a free internet download. Separate programming cable required).

POWER AND COVERAGE**

2 Watt RDX Series radios provide coverage up to 250,000 sq. ft. or 20 floors. The 4/5 Watt models cover up to 350,000 sq. ft. or 30 floors.

CONVENIENT CHARGING

An easy-to-use drop-in charger keeps radios charged, ready and centrally located.

INNOVATIVE INDUSTRIAL DESIGN

Weighing just 8.6 ounces, the RDX Series is designed for maximum comfort and all-day wear. Plus, the user interface makes the radio simple and easy to use—little or no training is required.

FLEXIBLE BATTERY LIFE SOLUTIONS***

The custom RDX Series Li-Ion battery packs are designed and manufactured for optimum durability with the radio. 2 Watt radios feature a standard Li-Ion battery (up to 12 hrs of life per charge). 4/5 Watt radios feature the ultra-high capacity battery (up to 18.5 hrs). We offer an alkaline battery kit as an optional accessory (up to 26 hrs).

BUSINESS-EXCLUSIVE FREQUENCIES

The RDX Series radios operate on 89 UHF or 27 VHF (expanded vs XTN and AX models) business-exclusive frequencies (varies by model) and feature 219 codes, including customized PL and DPL codes to help ensure a clear signal.

TRI-COLOR LED INTERFACE

A convenient, tri-color LED interface lets you easily identify different radio features and radio status.

EASY CLONING

You can quickly copy settings from radio to radio with either the Radio-to-Radio Cloning Cable or the Multi-Unit Charger accessories. (Both sold separately.)

ADVANCED VOICE ACTIVATION (VOX)

Enjoy the convenience of hands-free operation when you use our optional accessories.

*CPS is available as free download. Windows® XP, Windows® 2000, Windows® Vista and Windows® 7 compatible; optional USB cable required.

**Coverage will vary based on terrain, conditions and the radio model used.

***Battery save feature must be activated for optimal battery life.

SELECT MODELS FEATURE EVEN MORE CAPABILITIES INCLUDING:

CHANNELS

At the touch of a button, change channels to talk with different work groups. Available with 2, 8, 10 or 16 channels.

CHANNEL ALIASING

Assign each channel a user defined name. Available on RDU2080d, RDV2080d, RDU4160d and RDU4163d models.

CHANNEL ANNUNCIATION

Voice support for channel announcement. Available on RDU4100, RDU4160d and RDV5100 models.

DISABLE CHANNEL

Allows users to disable and skip undesirable channels via the CPS.

REPEATER CAPABILITY

Compatible with duplex repeaters so you can significantly extend coverage compared to a radio-to-radio model. Available on all high power models.

DYNAMIC TALK AROUND SCAN

Allows the radio to automatically switch between repeater and talk around modes in order to optimize communications. Available on all high power models.

STANDS UP TO HARD CONDITIONS AND HARSH ENVIRONMENTS



Durable and dependable, our RDX Series radios undergo rigorous testing in the design process – using U.S. Military 810 C, D, E and F Standards—so you can be confident they’ll hold up under demanding conditions. These tests simulate the very harshest environments, including:

Blowing Rain – steady rainfall and wind for 30 minutes on every surface

Salt Fog – 48 hours of exposure

Vibration – up to nine hours of exposure to vibration, simulating the rigors a radio could undergo while being carried or transported

Blowing Dust – six hours of blowing dust on all surfaces

Shock – 18 shocks with a minimum G force of 40 G each

Temperature Storage – multiple hours of exposure to storage temperatures as low as -67° F and as high as 160° F

IP54/55 STANDARD

The RDX Series radios are also tested to IP54/55 standards—highly demanding tests for water and dust resistance. The radios are subjected to a high-speed, high-volume shower from all directions for three minutes.

With their Military and IP ratings, the RDX Series radios prove they’re durable enough to handle the harsh conditions they’ll be exposed to in daily business use. The result is maximum uptime and productivity for your business, all at an exceptional value.

TAKE CARE OF BUSINESS WITH HIGH-PERFORMING ACCESSORIES

AUDIO

Remote Speaker Microphone 53862 Speak and listen without having to reach for your radio. Easily clips on a shirt or collar.

Dual Pin Surveillance Earpiece HKLN4477 Provides simple, efficient and discreet hands-free communications. Microphone and push-to-talk are integrated into a single wire, while translucent tubes let you wear the earpiece discreetly.

Headset with Swivel Boom Microphone 53865 Ideal for noisy work conditions or to avoid disturbing others in the area.

Ultra-Lightweight Headset with Boom Microphone 53815 Extremely lightweight and comfortable for extended wear.

Earbud with Clip Microphone and Push-to-Talk 53866 Small, comfortable and unobtrusive. An in-line push-to-talk and microphone let you communicate without removing the radio from your belt.

Temple Transducer Headset with In line Push-to-Talk Microphone RMN5114 Uses bone conduction so you can communicate without covering your ears. You hear both the radio audio and surrounding environment. In-line push-to-talk and microphone make it easy to communicate without removing the radio from your belt.

Earpiece with In-line Push-to-Talk Microphone 56517 Convenient earpiece lets you communicate without removing the radio from its holster. In-line push-to-talk button and microphone let you communicate without removing the radio from your belt.

Earpiece with In-line Microphone 53940 Convenient, simple and streamlined so you can communicate without removing the radio from your belt.

Swivel Earpiece RLN6423 Comfortable, flexible earpiece designed for all-day wear. In-line push-to-talk makes communication easy when your radio is not readily accessible.

53862
Remote Speaker Microphone



HKLN4477
Dual Pin Surveillance Earpiece with PTT



53865
Headset with Swivel Boom Microphone



56517
Earpiece with In-line Push-to-Talk Microphone



RLN6423
Swivel Earpiece



CARRY

Hard Leather Carry Case RLN6302 Durable leather case offers extra protection in tough work environments.

Spring Action Belt Clip RLN6307 Heavy-duty belt clip provides extra durability.

CONNECTIVITY / ANTENNAS

Radio-to-Radio Cloning Cable RLN6303 Save time by cloning all programming and user menu settings at the touch of a button.

CPS Programming Cable RKN4155 Provides connectivity to CPS software for performing various programming functions. CPS software is Windows® XP, Windows® 2000, Windows® Vista and Windows® 7 compatible.

UHF Stubby Antenna 450-470 Mhz RAN4033 Helps provide improved signal penetration.

BATTERIES AND CHARGERS

Ultra High Capacity Lithium Ion Battery RLN6308

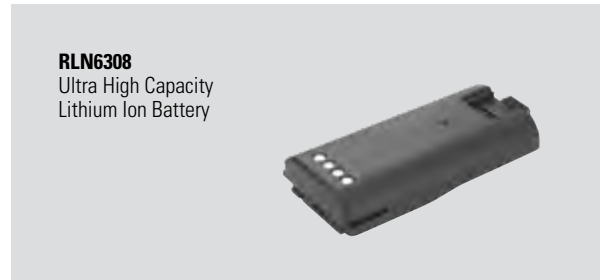
Rechargeable battery provides up to 26 hours of battery life per full charge on 2 Watt models, up to 18.5 hours per charge on 4/5 Watt models.*

Alkaline Battery Frame RLN6306 Lets you use AA batteries with RDX Series radios in emergency situations. Provides up to 26 hours of battery life.*

Multi-Unit Charger RLN6309 Lets you drop-in charge up to six radios and/or batteries from a single outlet. Also acts as a central storage location for radios at the end of a work shift.

Rapid Charger Kit RLN6304 Lets you fully charge your RDX Series radio in 2 hours.

*Battery save feature must be activated for optimal battery life



RDX SERIES STANDARD PACKAGE

- One RDX Series On-Site Two-Way Business Radio
- Li-Ion Battery
- Belt Clip
- Charging Adapter
- Drop-in Charging Tray
- User Guide
- Safety Sheet



RDX SERIES
SPECIFICATIONS

GENERAL SPECIFICATIONS

	RDU2020/2023	RDU2080d	RDV2020	RDV2080d	RDU4100/4103	RDU4160d/4163d	RDV5100
Frequency Range	UHF (450 to 470 MHz)		VHF (150.8 to 160)		UHF (438 to 470 MHz)		VHF (146 to 174)
Audio Output	2000 mW						
Channel Capacity	2 Channels	8 Channels	2 Channels	8 Channels	10 Channels	16 Channels	10 Channels
Channel Bandwidth	12.5/25 kHz						
Dimensions with Standard Li-Ion Battery with High Capacity Li-Ion Battery with Ultra High Capacity Li-Ion Battery	4.5 in H x 2.2 in W x 1.6 in D (115.6 mm H x 57.6 mm W x 40.5 mm D) 4.5 in H x 2.2 in W x 1.8 in D (115.6 mm H x 57.6 mm W x 45.1 mm D) 4.5 in H x 2.2 in W x 1.8 in D (115.6 mm H x 57.6 mm W x 45.1 mm D)				N/A N/A 4.5 in H x 2.2 in W x 1.8 in D (115.6 mm H x 57.6 mm W x 45.1 mm D)		
Weight with Standard Li-Ion Battery with High Capacity Li-Ion Battery with Ultra High Capacity Li-Ion Battery	8.6 oz (244 g) 10.3 oz (293 g) 10.3 oz (293 g)				N/A N/A 10.3 oz (293 g)		
Average Battery Life @ 5/5/90 (with Battery Save On): with Standard 1100 mAh Li-Ion Battery with High Capacity 2200 mAh Li-Ion Battery with Ultra High Capacity 2400 mAh Li-Ion Battery with Optional Alkaline Battery Accessory	Up to 12 hours Up to 24 hours Up to 26 hours Up to 26 hours				N/A N/A Up to 18.5 hours Up to 26 hours		
Power Supply Voltage	7.2 Volts DC (Li-Ion Battery Pack or Alkaline)						

RECEIVER

Sensitivity (12 dB SINAD)	-122 dBm (0.18 µV)
Adjacent Channel Selectivity	60 dB @ 12.5 kHz 65 dB @ 25.0 kHz
Intermodulation Rejection	60 dB
Spurious Response Rejection (blocking 1 MHz)	80 dB
Audio Distortion	< 5%
CSQ Hum and Noise @ 12.5 kHz	-50 dB
PL Hum and Noise @ 12.5 kHz	-50 dB
DPL Hum and Noise @ 12.5 kHz	-45 dB
Radiated Spurious Emissions (< 1 GHz)	< -54 dBm
Radiated Spurious Emissions (> 1 GHz)	< -52 dBm
Audio Output @ < 5% Distortion	1.5W @ 8 ohms

TRANSMITTER

RF Output High Low	2 Watts 1 Watt	4 Watts 2 Watts	5 Watts 2 Watts
Frequency Stability	< 2.5 ppm	< 2 ppm	< 2.5 ppm
Spurs and Harmonics	< -45 dBc	< -50 dBc	
FM Hum and Noise	-40 dB @ 12.5 kHz -45 dB @ 25.0 kHz		
Modulation Limiting	±2.5 kHz @ 12.5 kHz ±5.0 kHz @ 25.0 kHz		
Adjacent Channel Power	60 dBc		
Radiated Spurious Emissions @ 12.5 kHz	< -20 dBm		
Radiated Spurious Emissions @ 25 kHz	< -13 dBm		
Audio Frequency Response (0.3 - 3.0 kHz)	+1 to -3 dB		
Audio Distortion	< 2%		

MILITARY SPECIFICATIONS

Standard	MIL 810 C Methods/Procedures	MIL 810 D Methods/Procedures	MIL 810 E Methods/Procedures	MIL 810 F Methods/Procedures
Low Pressure	500.1 / Procedure 1	500.2 / Procedure 2	500.3 / Procedure 2	500.4 / Procedure 1
High Temperature	501.1 / Procedure 1,2	501.2 / Procedure 1,2	501.3 / Procedure 1,2	501.4 / Procedure 1,2
Low Temperature	502.1 / Procedure 1	502.2 / Procedure 1,2	502.3 / Procedure 1,2	501.4 / Procedure 1,2
Temperature Shock	503.1 / Procedure 1	503.2 / Procedure 1	503.3 / Procedure 1	503.4 / Procedure 1
Solar Radiation	505.1 / Procedure 1	505.2 / Procedure 1	505.3 / Procedure 1	505.4 / Procedure 1
Rain	506.1 / Procedure 1,2	506.2 / Procedure 1,2	506.3 / Procedure 1,2	506.4 / Procedure 1
Humidity	507.1 / Procedure 2	507.2 / Procedure 2,3	507.3 / Procedure 2,3	507.4 / Procedure 3
Salt Fog	509.1 / Procedure 1	509.2 / Procedure 1	509.3 / Procedure 1	509.4 / Procedure 1
Dust	510.1 / Procedure 1	510.2 / Procedure 1	510.3 / Procedure 1	510.4 / Procedure 1
Vibration	514.2 / Procedure 8,10	514.3 / Procedure 1	514.4 / Procedure 1	514.5 / Procedure 1
Shock	516.2 / Procedure 1,2,5	516.3 / Procedure 1,4	516.4 / Procedure 1,4	516.5 / Procedure 1

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature	-30°C to +60°C (Radio)
Sealing	IP55
Shock and Vibration	Polycarbonate Housing passes EIA 603
Dust and Humidity	Satisfied EIA 603

For more information on how RDX Series radios can be your better business tool, visit motorolasolutions.com/rdx.

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