



# RPU2160

## RPX On-site Portable Repeater

### Extend your Range, Improve your Communications.

The Motorola RPX repeater improves communications coverage by overcoming dead spots and increasing your two-way radios' range. This compact durable solution is easily deployable for both indoor and outdoor applications. Available with 16 user-selectable repeater frequency pairs, battery backup, and computer programmability RPX provides the flexibility to customize your repeater needs.

#### General Features:

- 16 pre-programmed channels
- Programmable via PC or CPS software
- MIL SPEC 810 and IP55 environmental certification
- Alkaline/Li-Ion backup battery solutions
- Manager Lock
- Time-Out Timer
- Courtesy beep
- Battery back-up alert
- Repeater ID
- Transmission Hang time
- Reverse Burst

#### Fully compatible with RDX high power radios

Take full advantage of your RDX radios and accessories with the RPX repeater. Pick up and re-use the RDX, batteries and programming cables.

#### Power and Coverage

2W repeater supports analog transmissions in the UHF (TX 450-455 MHz / RX 455-460 MHz) band to extend range and eliminate deadspots.

#### Rugged and Water Resistant

Durable to withstand harsh environments. Meets Military 810 C, D, E and F and IP55 specifications for shock, rain, humidity, salt fog, vibration, sand/dust, temperature shock, high and low temperature.

#### Cost Effective Solution

Feature rich solution at an affordable price for a wide range of markets including: education, hospitality, tourism, retail, construction and property management.

#### Flexible and Durable Battery Solutions

Several battery solutions are available for permanent or temporary on-site power. The standard Alkaline Battery Frame, provides up to 16 hours of backup power via 12AA batteries. Optional vehicular charger and Li-Ion battery frame kit available.

#### Battery Back-up Tone

Sends a warning alert notifying users they are on back-up battery supply.

#### Portable and Easily Deployable

Light weight (2 lbs) and easily deployable in on-scene situations. RPX offers 16 different pre-programmed channels to facilitate setting up multiple repeaters for different user groups.

#### Customer Programming Software (CPS)

Use your PC to program your repeater and provide access to customizable features.

#### Standard Features

The RPX repeater ships standard with the following features:

- Wall Mount Holster
- 110V/220V Power Supply
- Alkaline battery Frame
- Dipole Antenna

#### Optional Accessories

RPX offers a full line of accessories to meet the versatile needs of different market segments:

- Vehicle Charger
- Li-On Battery Frame Kit
- Magnetic Mount/ Antenna/RF Cable Kit
- UHF Dipole Antenna
- Wall Mount Holster



**PRODUCT SPECIFICATIONS**
**RPU2160**

	UHF 25 kHz	UHF 12.5 kHz
Power Output	2W	2W
FCC ID	AZ492FT4887	AZ492FT4887
Emission Designators	16K0F3E	11K0F3E
Operating RF Band (MHz)	450-470	450-470
Frequency Separation	10 MHz	10 MHz
TX Freq band	450-455 MHz	450-455 MHz
RX Freq band	465-470 MHz	465-470 MHz
Channel Spacing (narrow and wide band)	25 kHz	12.5 kHz
Mode of Operation	Duplex	Duplex
Band Separation:	10 MHz	10 MHz
Station Identifier Signaling	Morse Code	Morse Code
Number of Operating Channels	1 (TX/RX) Channel	1 (TX/RX) Channel
Number of software Programmable Channels/ Knob channels	16	16
Synthesized steps	1 Hz	1 Hz
Tone/Code Signalling	PL/DPL	PL/DPL
Hang-Time Timer	0-50 seconds (Programmable)	0-50 seconds (Programmable)
Time-out timer	1, 2 or 3 min	1, 2 or 3 min
RF Connector	Mini UHF	Mini UHF
Vehicle Charger	Yes	Yes
Antenna Impedance	50 Ohms	50 Ohms
Duty Cycle	100%	100%
PL Codes	39 + 6 programmable codes	39 + 6 programmable codes
DPL Codes	DPL + 84 Inverted DPL	DPL + 84 Inverted DPL
Input Voltage	110/220 Vac / 12 Vdc	110/220 Vac / 12 Vdc

**Input Current Repeater (@ 110 Vac and 2W operation)**

TX/RX	215 mA	215 mA
Standby	33mA	33mA

**Input Current Transceiver (@ 12 Vdc and 2W operation)**

TX/RX	1.3 A	1.3 A
Standby	200 mA	200 mA

**Transmitter**

Frequency Range (MHz)	450-455 MHz	450-455 MHz
Carrier RF Output	2.0 Watts	2.0 Watts
Frequency Stability	+/- 1.5 PPM (-30C to + 60C)	+/- 1.5 PPM (-30C to + 60C)
Modulation	Direct FM	Direct FM
Deviation (Modulation Limiting)	± 5.0kHz	± 2.5.kHz
FM Hum & Noise	-50 dB	-45 dB
Adjacent Channel Power	60dBc	60dBc
Radiated Spurious Emissions	<-13dbm	<-20dbm

**Receiver**

Frequency Range (MHz)	465 - 470	465 - 470
Frequency Stability	+/- 1.5 PPM (-30C to + 60C)	+/- 1.5 PPM (-30C to + 60C)
Audio Frequency	300Hz to 3 kHz	300Hz to 3 kHz
Sensitivity (12 dB SINAD)	-119 dBm (0.25 uV)	-119 dBm (0.25 uV)
Selectivity (Adjacent Channel Selectivity)	-75 dB	-70 dB
Intermodulation rejection	-70 dB	-70 dB
Spurious response Rejection (blocking 1Mhz)	-90 dB	-90 dB
Radiated Spurious Emissions	< -57 dBm	< -57 dBm
Input impedance	50 Ohms	50 Ohms

Other Product Specs	UHF 25 kHz	UHF 12.5 kHz
Li-On Battery Solution	Available as an accessory	Available as an accessory
Alkaline Battery Frame Solution	Yes	Yes
Dimensions (H x W x D) (inches):	4.7H x 7.4W x 2.0D	4.7H x 7W x 2.0D
<b>Weight</b>		
Repeater with Li-On Frame and Batteries	2.1 lbs	2.1 lbs
Repeater with with Alkaline Frame and Batteries	2 lbs	2 lbs
Average Battery Life @ 100% duty (20%/80% operation):		
With Alkaline Frame	16 Hours	16 Hours
With Li-On Battery	16Hrs (2400 mAH)	16 Hrs (2400 mAH)
Charging Time (@ repeater 100% charging 0% transmitting):		
	3.5 Hrs (2400 mAH)	3.5 Hrs (2400 mAH)

### Military Standards

Shock	516.3 / 1, 4				
Standard	810 - C	810 - D	810 - E	810 - F	810 - G
Low Pressure	500.1/ 1	500.2/ 2	500.3 / 2	500.4 / 1	500.5 / 1
High Temperature	500.1/ 1	500.2/ 1, 2	501.3 / 1, 2	501.4 / 1, 2	501.5 / 1, 2
Low Temperature	500.1/ 1	502.2/ 1, 2	502.3 / 1, 2	502.4 / 1, 2	502.5 / 1, 2
Temperature Shock	500.1/ 1	502.2/ 1, 2	503.3 / 1	503.4 / 1	503.5 / 1
Solar Radiation	500.1/ 1	502.2/ 1, 2	505.3 / 1	505.4 / 1	505.5 / 1
Rain	500.1/ 1	506.2/ 1, 2	506.3 / 1, 2	506.4 / 1,2,3	506.5 / 1,2,3
Humidity	500.1/ 1	507.2/ 2, 3	507.3 / 1, 2	507.4 / 1	507.5 / 1
Salt Fog	500.1/ 1	507.2/ 2, 3	509.3 / 1	509.4 / 1	509.5 / 1
Dust	500.1/ 1	507.2/ 2, 3	510.3 / 1	510.4 / 1	510.5 / 1
Vibration	500.1/ 1	507.2/ 2, 3	514.4 / 1	514.5 / 1	514.6 / 1
Shock	500.1/ 1	507.2/ 2, 3	516.4 / 1, 4	516.5 / 1	516.6 / 1

### Environmental Specs

Operating Temperature (on power supply)	-30°C to +60°C (Repeater)	-30°C to +60°C (Repeater)
Sealing	IP55	IP55
Shock & Vibration	Polycarbonate Housing passes EIA 603	
Dust & Humidity	Satisfied EIA 603	
UL Approval	Type 1	



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