
Photo Courtesy of Cpl Erik Villagran

READY FOR ACTION. BUILT TO LAST.

SRX 2200 COMBAT RADIO

Choppers roaring. Cargo trucks rumbling. Wind howling. In the heat of action, soldiers depend upon every word being heard and every transmission being understood. They need a rugged, reliable radio with crystal-clear and secure communication that stands up to the harshest environments, loudest noises and longest hours.

They require a military-specific radio as advanced as their mission. Compact, yet power-packed with easy-to-locate controls and a large, top display. The SRX 2200 delivers battle-ready features such as embedded Individual Location Information (ILI), night vision goggle compatibility, tactical inhibit, FIPS validated encryption for secure voice and data communications and radio-to-radio text messaging for superior discretion.

The SRX 2200 Combat Radio delivers it all – in a rugged "grab and go" unit that's ready for action and built to last, from base to battlefield.

SPECIAL FEATURES PREVENT ATTACKS

The SRX 2200 Combat Radio is designed specifically for tactical and base personnel, with an array of special features that are battle-tested and military-trusted.

For example, to protect radio communications from the most aggressive adversaries, the SRX 2200 is tamperproof and features FIPS 140-2 Level 3 validation. The 256 bit AES encryption, along with Tactical and P25 Over-The-Air-Rekeying" (OTAR), ensure that personnel have access to updated encryption keys for secure voice and data communications. Even text messaging on the SRX 2200 is AES encrypted for extra security. And you can protect the integrity of your system if any radio is lost or stolen by remotely disabling it with the tactical inhibit feature.

For added discretion and low detection, every SRX 2200 radio includes ultra-low power operation, the ability to disable lights and tones, and dimmable top and front displays that can be used with night vision goggles.

HEAR LOUD AND CLEAR

Leading a patrol or launching a military response, soldiers need to communicate clearly and the SRX 2200 responds. It's equipped with the latest Advanced Multi-Band Excitation (AMBE) digital vocoder and dual microphones to locate the talker while it cancels out background noise.

The SRX 2200 is P25 Phase 2 TDMA-capable for twice the voice capacity so you can add more personnel without adding frequencies or infrastructure. Backward- and forward-compatible with all deployed Motorola radio systems and with RF specifications that handle the harshest environments, this radio is outfitted for immediate use.

TOUGH AS THE TERRAIN

Rugged as the mission, the SRX 2200 uses a COTS-based, proven digital platform, so soldiers can "grab-and-go" with no additional training required. A large control top with well-spaced knobs and easy-read top display are comfortable to use, even with gloves on.

Blowing sand, dust, and water submersion, this durable, coyote-colored radio meets the most rigorous military specs. Plus, a multi-unit charger allows you to charge your SRX 2200 radios at higher temperatures, critical in desert climates.

- Channel Capacity:
  - Model 1.5 - 800
  - Model 3.5 - 3,000
- Enlarged Push-to-Talk
- T-Grip for reliable handling
- Dual Battery Latch
- Emergency button
- 16 position rotary switch
- 2 position concentric switch
- 3 position toggle switch
- 3 programmable side buttons
- Transmit LED indicator
- Backlit Keypad:
  - Home and Data buttons
  - 3 soft keys
  - 4 direction navigation key
  - 4" x 3" keypad
- Full Bitmap Display:
  - 2 lines of icons
  - 4 lines x 14 characters of text
  - Status icons

FEATURES AND BENEFITS:

Available in 800Mhz, VHF, and UHFR1 frequency bands

Trunking standards supported:
- Clear or digital encrypted ASTRO®25 Trunked Operation
- Capable of SmartZone®, SmartZone Omnilink, SmartNet®

Analog MDC-1200 and Digital APCO P25 Conventional System Configurations

Narrow and wide bandwidth digital receiver (6.25 kHz equivalent / 12.5 kHz / 20 kHz / 25 kHz)

Embedded digital signaling (ASTRO & ASTRO 25)

Available in 2 models

Integrated Individual Location Information (ILI) capable

Intelligent Lighting

Radio Profiles

Unified Call List (Model 3.5 only)

User programmable voice announcement

Meets Applicable MIL-STD-810C, D, E, F and G

Rugged submersible housing - standard (2 meters, 2 hours)*

Tactical Coyote Brown housing

Custom recess label areas

Superior Audio Features:
- 0.5 W high audio speaker
- Dual microphones
- 2-mic noise canceling technology

Utilizes Windows XP, Vista and Windows 7 Customer Programming

Software (CPS)
- Supports USB communications
- Built in FLASHport™ support

Full portfolio of accessories including IMPRES batteries, chargers and audio devices

Military Data Package includes:
- Programming Over Project P25
- Radio Packet Data (IV&D)
- Individual Location Information (ILI) Activation and Functionality
- Text Messaging
- Tactical Inhibit

OPTIONAL FEATURES:

Enhanced Encryption capability

Over the Air Rekeying (OTAR)

Mission Critical Wireless***

Night Vision Goggle Profile

Text Messaging

* Radios meet industry standards (IPx7) for immersion.
**0.25W transmit in UHFR1 is for tactical use only.
*** Compatible with BT 2.0 and HSP and PAN BT Profiles

TRANSMITTER - TYPICAL PERFORMANCE SPECIFICATIONS

		700/800	VHF	UHF Range 1
Frequency Range/ Bandsplits	700 MHz 800 MHz	763-776, 793-806 MHz 806-824, 851-870 MHz	136-174 MHz	380-470 MHz
Channel Spacing		25/12.5 kHz	25/20/12.5 kHz	25/20/12.5 kHz
Maximum Frequency Separation		Full Bandsplit	Full Bandsplit	Full Bandsplit
Rated RF Output Power Adj[1]	700 MHz 800 MHz	0.25 to 2.5W 0.25 to 3W	1-6 Watts Max	0.25W**, 1-5 Watts Max
Frequency Stability[1] (–30°C to +60°C; +25°C Ref.)		±0.00010 %	±0.00010 %	±0.00010 %
Modulation Limiting[1]		±5 kHz / ±4 kHz / ±2.5 kHz	±5 kHz / ±4 kHz / ±2.5 kHz	±5 kHz / ±4 kHz / ±2.5 kHz
Emissions (Conducted and Radiated)[1]		–75 dB	–75 dBc	–75 dBc
Audio Response[1]		+1, –3 dB	+1, –3 dB	+1, –3 dB
FM Hum & Noise	25 kHz 12.5 kHz	-48 dB/-47 dB -46 dB/-45 dB	-47 dB -45 dB	-48 dB -45 dB
Audio Distortion[1]	700 MHz 800 MHz	0.60 % 1 %	0.50 %	0.60 %

SRX 2200 ACCESSORIES

NNTN8182A	LiIon 2900 MAh battery (coyote brown), Rugged
NNTN8269A	SRX 2200 carrying pouch (coyote brown)
NNTN8235	Remote Speaker Microphone (coyote brown), IP57
NNTN8236	Remote Speaker Microphone with 3.5mm audio jack (coyote brown), IP54

This list represents accessories specifically designed for the SRX 2200.

The SRX 2200 is compatible with additional APX accessories. Please see your Motorola sales representative for a complete list of those accessories.

BATTERIES FOR SRX 2200

Battery Capacity / Type	Dimensions (HxWxD)	Weight	Battery Part Number	Battery Capacity
Li-Ion 2900 mAh Rugged***	3.07" x 2.34" x 1.65"	6.53 oz	NNTN8182	2900 mAh
Li-Ion IMPRES 2900 mAh IP67	3.07" x 2.34" x 1.65"	6.53 oz	NNTN7038	2900 mAh
Li-Ion IMPRES 4200 mAh IP67	5.07" x 2.34" x 1.65"	11.29 oz	NNTN7034	4200 mAh
Li-Ion IMPRES 4100 mAh FM² IP67	5.07" x 2.34" x 1.65"	11.29 oz	NNTN7033	4100 mAh
NiMH IMPRES 2100 mAh IP67	5.12" x 2.34" x 1.57"	11.82 oz	NNTN7037	2100 mAh
NiMH IMPRES 2000 mAh FM² Rugged	5.12" x 2.34" x 1.57"	11.82 oz	NNTN7035	2000 mAh
Li-Ion IMPRES 2300 mAh FM² Rugged	3.39" x 2.34" x 1.65"	6.53 oz	NNTN8092	2300 mAh

***Standard shipping battery

PRODUCT SPEC SHEET
SRX 2200 COMBAT RADIO

RADIO MODELS

	MODEL 1.5	MODEL 3.5
Display	Full bitmap monochromatic LCD top display 1 line text x 8 characters 1 line of icons No menu support Multi-color backlight	Top display plus: Full bitmap color LCD display 4 lines of text x 14 characters 2 lines of icons 1 menu line x 3 menus White backlight
Keypad	none	Backlight keypad 3 soft keys 4 direction navigation key 4x3 keypad Home and Data buttons
Channel Capacity	3000	3000
FLASHport Memory	64 MB	64 MB
700/800 MHz (763-870 MHz)	H99UCD9PW5AN Q360LE	H99UCF9PW6AN Q360NJ
VHF (136-174 MHz)	H99KGD9PW5AN Q360NK	H99KGH9PW7AN Q360HM
UHF Range 1 (380-470 MHz)	H99QDD9PW5AN Q360NL	H99QDH9PW7AN Q360HN/Q360JD (Ultra Low Power)
Buttons & Switches	Large PTT button • Angled On/Off volume control • Emergency button • 16 position top-mounted rotary switch • 2-position concentric switch • Multi-color backlight • 3-position toggle switch • 3 programmable side buttons	
Transmitter Certification		
700/800 (764-869 MHz)	AZ489FT5863*	
VHF (136-174 MHz)	AZ489FT3829*	
UHF Range 1 (380-470 MHz)	AZ489FT4892*	
FCC Emissions Designators		
FCC Emissions Designators	11K0F3E, 16K0F3E, 8K10F1D, 8K10F1E, 8K10F1W, 20K0F1E	
Power Supply		
Power Supply	One rechargeable 2900 mAh Li-Ion Battery Standard (NNTN8182), with alternate battery options available.	

* Full featured model with Bluetooth® capability

RECEIVER - TYPICAL PERFORMANCE SPECIFICATIONS

		700/800	VHF	UHF Range 1
Frequency Range/ Bandsplits	700 MHz 800 MHz	763-776 MHz 851-870 MHz	136-174 MHz	380-470 MHz
Channel Spacing		25/20/12.5 kHz	25/20/12.5 kHz	25/20/12.5 kHz
Maximum Frequency Separation		Full Bandsplit	Full Bandsplit	Full Bandsplit
Audio Output Power at Rated[1]		500mW	500mW	500mW
Frequency Stability[1] (–30°C to +60°C; +25°C Ref.)		±0.00010 %	±0.00010 %	±0.00010 %
Analog Sensitivity[3] Digital Sensitivity[4]	12 dB SINAD 1% BER (800 MHz) 5% BER	0.250 µV 0.347 µV (0.333 µV) 0.251 µV	0.216 µV 0.277 µV 0.188 µV	0.216 µV 0.305 µV 0.18 µV
Selectivity[1]	25 kHz channel 12.5 kHz channel	75.7 dB 67.5 dB	79.3 dB 70 dB	78.1 dB* 67.0 dB
Intermodulation		80 dB	80.5 dB	81.2 dB
Spurious Rejection		76.6 dB	93.2 dB	80.6 dB
FM Hum and Noise	25 kHz 12.5 kHz	-54 dB -48 dB	-53.8 dB -48 dB	-55.2 dB -47.4 dB
Audio Distortion[1]		0.9 %	1.20 %	0.87 %

*Measured per single-tone procedure

DIMENSIONS OF THE RADIOS WITHOUT BATTERY

	Inches	Millimeters
Length	5.47	139
Width Push-To-Talk button	2.39	60.7
Depth Push-To-Talk button	1.40	35.6
Width Top	2.98	75.7
Depth Top	1.58	40.1
Depth Bottom of Battery	1.24	31.5
Weight of the radios without battery	10.9 oz	309 g

GPS SPECIFICATIONS

Channels	12
Tracking Sensitivity	–159 dBm
Accuracy[5]	<10 meters (95%)
Cold Start	<60 seconds (95%)
Hot Start	<10 seconds (95%)
Mode of Operation	Autonomous (Non-Assisted) GPS

PORTABLE MILITARY STANDARDS 810 C, D, E , F & G

	MIL-STD 810C		MIL-STD 810D		MIL-STD 810E		MIL-STD 810F		MIL-STD 810G	
Low Pressure	500.1	I	500.2	II	500.3	II	500.4	II	500.5	II
High Temperature	501.1	I, II	501.2	I/A1, II/A1	501.3	I/A1, II/A1	501.4	I/Hot, II/Basic Hot	501.5	I/A1, II/A2
Low Temperature	502.1	I	502.2	I/C3, II/C1	502.3	I/C3, II/C1	502.4	I/C3, II/C1	502.5	I/C3, II/C1
Temperature Shock	503.1	I	503.2	I/A1C3	503.3	I/A1C3	503.4	I	503.5	I/C
Solar Radiation	505.1	II	505.2	I	505.3	I	505.4	I	505.5	I/A1
Rain	506.1	I, II	506.2	I, II	506.3	I, II	506.4	I, III	506.5	I, III
Humidity	507.1	II	507.2	II	507.3	II	507.4	1 Proc	507.5	II/Aggravated
Salt Fog	509.1	I	509.2	I	509.3	I	509.4	1 Proc	509.5	1 Proc
Blowing Dust	510.1	I	510.2	I	510.3	I	510.4	I	510.5	I
Blowing Sand	1 Proc	1 Proc	510.2	II	510.3	II	510.4	II	510.5	II
Immersion	512.1	I	512.2	I	512.3	I	512.4	I	512.5	I
Vibration	514.2	VIII/F, Curve-W	514.3	I/10, II/3	514.4	I/10, II/3	514.5	I/24	514.6	I/24
Shock	516.2	I, III, V	516.3	I, V, VI	516.4	I, V, VI	516.5	I, V, VI	516.6	I, V, VI
Shock (Drop)	516.2	II	516.2	IV	516.4	IV	516.5	IV	516.6	IV

MULTI-UNIT CHARGER SPECIFICATIONS

Model Number	NNTN8185
Input Voltage	90-265 VAC
Charging Current (maximum)	1.5 A (Max charge rate for NNTN8182 battery is 1.0A)
Warranty	1 Year
Operating Temperature	5 to 40 C (41° to 104°F) – NNTN8182 battery can initiate a charge at a 5C higher ambient temperature
Charging Method	CCDT / Negative Pulse (NiCd / NiMH) and CCCV (Li-ion)

ENCRYPTION

Supported Encryption Algorithms	ADP, AES, DES, DES-XL, DES-OFB, DVP-XL
Encryption Algorithm Capacity	8
Encryption Keys per Radio	Module capable of storing 1024 keys. Programmable for 64 Common Key Reference (CKR) or 16 Physical Identifier (PID)
Encryption Frame Re-sync Interval	P25 CAI 300 mSec
Encryption Keying	Key Loader
Synchronization	XL – Counter Addressing OFB – Output Feedback
Vector Generator	National Institute of Standards and Technology (NIST) approved random number generator
Encryption Type	Digital
Key Storage	Tamper protected volatile or non-volatile memory
Key Erasure	Keyboard command and tamper detection
Standards	FIPS 140-2 Level 3 FIPS 197

RUGGED OPTION SPECIFICATIONS

Leakage (immersion)	MIL-STD-810 C,D,E,F and G Method 512.X Procedure I
Housing Availability	Tactical Coyote (Standard)

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature[6]	-30°C / +60°C
Storage Temperature[6]	-40°C / +85°C
Humidity	Per MIL-STD
ESD	IEC 801-2 KV
Water and Dust Intrusion	IP67, MIL-STD
Immersion	MIL-STD 512.X/I

[1] Measured in the analog mode per TIA / EIA 603 single-tone method under nominal conditions
[2] When used with an FM approved intrinsically safe radio
[3] Measured conductively in analog mode per TIA / EIA 603 under nominal conditions.
[4] Measured conductively in digital mode per TIA / EIA IS 102.CAAA under nominal conditions.
[5] Accuracy specs are for long-term tracking (95th percentile values >5 satellites visible at a nominal –130 dBm signal strength).
[6] Temperatures listed are for radio specifications. Battery storage is recommended at 25°C, ±5°C to ensure best performance.

Specifications subject to change without notice. All specifications shown are typical. Radio meets applicable regulatory requirements.

Motorola Solutions, Inc. 1301 East Algonquin Road Schaumburg, Illinois 60196, U.S.A. 800-367-2346
motorolasolutions.com

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