THE LIGHTWEIGHT HEAVYWEIGHT

APX™ 6000XE PROJECT 25 PORTABLE RADIO

In the heat of a wildfire or the smoke of a structure fire, you can't afford to struggle with controls or strain to hear commands. You need a radio so reliable and responder-focused, it's second nature to use. Working with first responders around the world, we developed APX™ radios to be safer and tougher than others – and to deliver innovative technology in an ultra-rugged, glove-friendly form.

Our APX 6000XE is the "lightweight heavyweight" – a small, single band radio with extreme ergonomics and excellent audio that takes on the tough tasks of fire service and EMS. It's the two-way radio that can strengthen safety precisely because it is engineered for extreme conditions.

REAL-WORLD RUGGEDNESS

Everything about the APX 6000XE is designed with first responders in mind – starting with a large top display with intelligent lighting so you can see information at a glance. Then oversized controls that are easy to operate when you're wearing bulky gloves –including the volume and channel selector and X-large emergency button. With its rugged MIL specs, FM certification and optional color housings, it's the portable performer you can rely on in the harshest environments.

LOUD, CLEAR AND NOISE-CANCELLING

Racing to a medical emergency or reporting from a rural fire, you need crystal-clear audio— and the APX 6000XE delivers. Its dual microphone design locates the talker while it cancels out ambient noise. Not only is the APX 6000XE equipped with the latest AMBE digital voice vocoder, its extreme audio profile reduces background noise and improves voice clarity. Plus, a unique speaker grill design improves water runoff to keep communications going strong.

SMALL SIZE, BIG TECHNOLOGY

- Three lightweight, mission extreme models
- Easy-to-use keypad for front panel programming and text messaging
- P25 Phase 2 capable for twice the voice capacity
- Backwards and forwards compatible with all Motorola mission critical radio systems
- Mission Critical Wireless and GPS location tracking application support to improve safety

APX™ 6000XE SPECIFICATIONS

FEATURES AND BENEFITS:

- Available in 700/800 MHz, VHF, and UHF Range 1 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 (6.25KHz equivalent/12.5KHz/20KHz/25KHz)
- Embedded digital signaling (ASTRO & ASTRO 25)
- Available in 3 models
- Intelligent Lighting
- Radio Profiles
- Unified Call List (Models 2 and 3 only)
- User programmable voice announcement
- Meets Applicable Mil Specs 810C, D, E, F and G
- Ships standard Intrinsically Safe and Rugged*
- Yellow and green colored housing options
- Custom recessed label areas

Superior Audio Features:

- 0.5 W high audio speaker
- Dual microphones
- Extreme audio profile

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

OPTIONAL FEATURES:

GPS Location Tracking
Mission Critical Wireless
Enhanced Encryption capability
Programming Over Project 25
Over the Air Rekey
Text Messaging

TRANSMITTER - TYPICAL PERFORMANCE SPECIFICATIONS

		700/800	VHF	UHF Range 1
Frequency Range/Bandsplits	700 MHz 800 MHz	763-775MHz; 793-805MHz 806-824MHz; 851-869MHz	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
Rated RF Output Power Adj[1]	700 MHz 800 MHz	1-2.5 Watts 1-3 Watts	1-6 Watts	1-5 Watts
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 dB	–75 dB
Audio Response[1]		+1, –3 dB	+1, –3 dB	+1, –3 dB
FM Hum & Noise		–47 dB	–47 dB	–47 dB
Audio Distortion[1]		< 1 %	0.50 %	0.50 %

BATTERIES FOR APX 6000XE

Battery Capacity / Type	Dimensions (HxWxD)	Weight	Battery Part Number	Battery Capacity
Li-Ion IMPRES 2150 mAh IP67	3.39" x 2.34" x 1.46"	5 oz	PMNN4403	2150 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 FM[2] 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 FM[2] IP67	5.12" x 2.34" x 1.57"	11.82 oz	NNTN7036	2000 mAh
NiMH IMPRES 2000 mAh FM[2] Rugged	5.12" x 2.34" x 1.57"	11.82 oz	NNTN7035	2000 mAh
NiMH IMPRES 2100 mAh Rugged	5.12" x 2.34" x 1.57"	11.82 oz	NNTN7573	2100 mAh

* Immersible radios meet industry standards (IPx7) for immersion.

PRODUCT SPEC SHEET
APX 6000XE



RADIO MODELS

	MODEL 1	MODEL 2	MODEL 3
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	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 Home and Data buttons	Backlight keypad 3 soft keys 4 direction navigation key 4x3 keypad Home and Data buttons
Channel Capacity	96	870	870
FLASHport Memory	64 MB	64 MB	64 MB
700/800 MHz (764-870 MHz)	H98UCD9PW5AN Q360CY/Q360EF	H98UCF9PW6AN Q360CY/Q360EF	H98UCH9PW7AN Q360CY/Q360EF
VHF (136-174 MHz)	H98KGD9PW5AN Q360DD/Q360EG	H98KGF9PW6AN Q360DD/Q360EG	H98KGH9PW7AN Q360DD/Q360EG
UHF Range1 (380-470 MHz)	H98QDD9PW5AN Q360DA/Q360EH	H98QDF9PW6AN Q360DA/Q360EH	H98QDH9PW7AN Q360DA/Q360EH
Buttons & Switches	Large PTT button • Angled On/Off volume knob • Orange emergency button • 16 position top-mounted rotary knob 2-position concentric switch • 3-position toggle switch • 3 programmable side buttons		
Transmitter Certification			
700/800 (764-870 MHz)	AZ489FT5859/ AZ489FT5863 *		
VHF (136-174 MHz)	AZ489FT3824/ AZ489FT3829 *		
UHF Range1 (380-470 MHz)	AZ489FT4899/ AZ489FT4892 *		
FCC Emission Designators			
FCC Emission Designators	11K0F3E, 16K0F3E, 8K10F1D, 8K10F1E, 8K10F1W, 20K0F1E		
Power Supply			
Power Supply	One rechargeable 2300 mAh FM/Rugged Li-Ion Battery Standard (NNTN8092), 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	763-775 MHz 851-869 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	0.234 µV 0.307 µV 0.207 µV
Selectivity[1]	25 kHz channel 12.5 kHz channel	75.7 dB 67.5 dB	79.3 dB 70 dB	78.3 dB 68.1 dB
Intermodulation		80 dB	80.5 dB	80.2 dB
Spurious Rejection		76.6 dB	93.2 dB	80.3 dB
FM Hum and Noise	25 kHz 12.5 kHz	-54 dB -48 dB	-53.8 dB -48 dB	-53.5 dB -47.4 dB
Audio Distortion[1]		0.9 %	1.20 %	0.91 %

PRODUCT SPEC SHEET
APX 6000XE

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

	MIL-STD 810C		MIL-STD 810D		MIL-STD 810E		MIL-STD 810F		MIL-STD 810G	
	Method	Proc./Cat.	Method	Proc./Cat.	Method	Proc./Cat.	Method	Proc./Cat.	Method	Proc./Cat.
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	Only 1 Proc	507.5	II/Aggravated
Salt Fog	509.1	I	509.2	I	509.3	I	509.4	Only 1 Proc	509.5	Only 1 Proc
Blowing Dust	510.1	I	510.2	I	510.3	I	510.4	I	510.5	I
Blowing Sand	Only 1 Proc	Only 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

DIMENSIONS OF THE RADIOS WITHOUT BATTERY

	Inches	Millimeters
Length	7.39	187.0
Width Push-To-Talk button	2.39	60.7
Depth Push-To-Talk button	1.40	35.5
Width Top	3.32	84.3
Depth Top	2.13	54.1
Depth Bottom of Battery	1.64	41.6
Weight of the radios without battery	13.9 oz	395 g

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 128 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 140-3 FIPS 197

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

RUGGED OPTION SPECIFICATIONS

Leakage (immersion)	MIL-STD-810 C,D,E,F and G Methood 512.X Procedure I
Housing Availability	Black, Public Safety Yellow and High Impact Green

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature[6]	-30ºC / +60ºC
Storage Temperature[6]	-40ºC / +85ºC
Humidity	MIL-STD 507.x PROC. II
ESD	IEC 801-2 KV
Water and Dust Intrusion	IP67, MIL-STD 506.x and 510.x
Immersion	MIL-STD 512.X/I

For more information on the APX 6000XE, visit www.motorolasolutions.com

[1] Measured in the analog mode per TIA / EIA 603 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.

R3-4-2035A

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