Legistar#: 110617
Districts: All

VILLAGE OF LOMBARD
REQUEST FOR BOARD OF TRUSTEES ACTION
For Inclusion on Board Agenda

__X__ **Resolution or Ordinance (Blue)**
_____ **Recommendations of Boards, Commissions & Committees (Green)**
_____ **Other Business (Pink)**

TO : PRESIDENT AND BOARD OF TRUSTEES

FROM: David A. Hulseberg, Village Manager

DATE : September 28, 2011 **B of T:** October 6, 2011

SUBJECT: A Resolution authorizing the Village President and Village Clerk to sign a change order for the DuPage Emergency Dispatch Interoperable Radio System for the Starcom Radio Project

SUBMITTED BY: Michael J. Torrence, Fire Chief MJT

BACKGROUND/POLICY IMPLICATIONS:

This resolution would authorize the Village President and Village Clerk to sign off on a change order with the DuPage ETSB/DuComm for the additional purchase of seventeen portable fire radios and 13 mobile radios.

Fiscal Impact/Funding Source:

$90,000.00

Review (as necessary):
Finance Director _____ Date _____
Village Manager _____ Date _____

NOTE: All materials must be submitted to and approved by the Village Manager's Office by 12:00 noon, Wednesday, prior to the Agenda distribution.

TO: **David A. Hulseberg, Village Manager**

FROM: **Michael J. Torrence, Fire Chief** MJT.

DATE: **September 29, 2011**

RE: **STARCOM RADIO CHANGE ORDER**

Please place the following on the October 6, 2011 Board of Trustees' Agenda.

Background:

This memorandum provides background and a recommendation to sign off on a change order to purchase 17 portable radios and 13 mobile radios to be utilized by the fire department through the countywide Starcom Radio project. The Emergency Telephone Systems Board of DuPage County (ETSB) has been overseeing the Starcom Radio project. Police and fire agencies throughout the county have been asked to review their current radio orders through the grant program and make necessary changes at this time. The fire department identified the need for all firefighters to have portable radios which created a shortfall of 17 portables in addition to 13 mobile radios. Funding for the additional radios will come from various cost centers of the fire department.

As mentioned during the budget cycle the fire department through a grant will be receiving 48 portable radios to be used with the Starcom Radio System. One portable radio will be issued to every firefighter and officer. The fire department will be receiving more than $281,904.00 worth of radios and accessories through this grant. Our department will be purchasing an additional 17 portable radios (Apex7000 models) at a cost of $99,841.00 ($5,873.00 each) to be utilized by firefighters and officers. The 13 mobile radios will be used by the fire fleet and command vehicles at a cost of $75,600.00 ($5,815 each). The fire department recognized this additional expense for the 17 portable radios and 13 mobile radios. The radios will be funded by the Illinois Municipal Fund (settlement through DuPage Communications) of $85,000 (a tentative intergovernmental agreement has been approved by the Executive Committee of DuComm and is awaiting final approval by the DuComm Board of Directors in October). The additional $90,441 will be funded by: $80,000 through the Foreign Fire Tax Fund (2375), $6,000 through Emergency Preparedness Account (2360), and $4,441.00 through the Donation account (8502).

Firefighter/Paramedic Michael Ringa had the insight to approach the Foreign Fire Tax Board for assisting the funding of the radio purchase. The Village does not have access to Foreign Fire Tax dollars. It is up to the Foreign Fire Tax Board to disseminate those funds how they see fit. That Board chose to take more than fifty percent of their coffer and put it into this purchase. I commend them for making that choice, ensuring the highest level of safety by enhancing our emergency communication abilities.

Change Order-September 16, 2011

This past week a letter was sent out to all agencies to review their orders and make any changes so that the ETSB can work on Change Order #3 with the vendor. The fire department is locked into the initial portable radio order. However no mobile radios were part of this order and a shortfall of 17 portable radios was discovered to outfit all firefighters.

It is important that all firefighters and officers carry portable radios as communication is vital.

Thirteen fire vehicles (engines, trucks, medic units and command vehicle) have been identified and are in need to keep the same communication level available in place as it exists today. When the Starcom Radio System goes live sometime after January our communication will be reduced and cause issues if we do not have these mobile radios in place.

The Command Vehicle needs a mobile radio to monitor channels from a primary channel. For instance, on the fire scene they will need to monitor Fire East and fire ground channels. Additionally, we will monitor secondary channels for our special events.

The vendor is offering four years of free air time on the mobile and portable radios purchased through this change order along with a four year warranty on the radios. If we purchase a mobile radio or portable radio, not part of the project, the warranty on the radio is one year and no free airtime at the municipality's monthly expense. Having this incentive of free air time for four years per radio and four years of warranty along with maintaining the same level of communication in all radios is why staff is requesting this change order of behalf of the Lombard Fire Department.

Recommendations:

Staff recommends the Village President and Clerk to sign off on the change order 17 APEX7000 Portables and 13 Mobiles APEX7500 to be included in the ETSB's Change Order #3 with the vendor.

MJT:lh

Attachments

R _____11 RESOLUTION

A RESOLUTION AUTHORIZING THE VILLAGE PRESIDENT TO SIGN A CHANGE ORDER WITH DUCOMM / ETSB FOR THE STARCOM RADIO SYSTEM PROJECT FOR THE PURCHASE OF SEVENTEEN MOBILE FIRE RADIOS ON BEHALF OF THE LOMBARD FIRE DEPARTMENT.

WHEREAS, the Corporate Authorities of the Village of Lombard have received a Change Order request; and,

WHEREAS, the Change Order serves to provide the authority to purchase the 17 portable radios and 13 mobile radios through the Starcom Radio Interoperability Project; and,

WHEREAS, the Change Order establishes protocols for the ETSB to order the Mobile Radios on our behalf under the Project; and,

WHEREAS, the Corporate Authorities deem it to be in the best interest of the Village of Lombard to approve such agreement,

NOW, THEREFORE, BE IT RESOLVED BY THE PRESIDENT AND BOARD OF TRUSTEES OF THE VILLAGE OF LOMBARD, DU PAGE COUNTY, ILLINOIS as follows:

SECTION 1: That the Village President is hereby authorized to sign on behalf of the Village of Lombard said Change Order as attached hereto.

SECTION 2: That the Village Clerk be and hereby is authorized to attest said Change Order as attached hereto.

Adopted this _____ day of _____, 2011.

Ayes:_____

Nays:_____

Absent:_____

Approved this _____ day of _____, 2011.

_____
William J. Mueller
Village President

ATTEST:

_____
Brigitte O'Brien
Village Clerk

APPROVAL AS TO FORM:

_____
Thomas P. Bayer, Village Attorney

MOTOROLA

Date: Sep. 29, 2011

Customer Proposal 1301 E Algonquin Rd Schaumburg, IL 60196 Quote #: Lombard FD APX Pricing

Prepared By: Coty Cooper *Phone:* 954-270-9740 *Fax:* (847) 576-8020 CUSTOMER #: Lombard FD

Prepared For:	Chief Michael Torrence	Address:	Lombard Fire Service
Company:	Lombard Fire Service		255 E Wilson Ave
Phone:			Lombard, IL 60148
Fax:			

Equipment Detai s and Pricing

Qty.	Model	Description	Unit Price	Total Price
		APX7500 MOBILES FOR LOMBARD FIRE SERVICE		
17	APX7000 XE	APX7000 XE FIRE PORTABLE PACAKGE - DUAL BAND VHF	$5,873.00	$99,841.00
9	APX7500	APX7500 MOBILE - DUAL BAND VHF - REMOTE MOUNT	$5,664.00	$50,976.00
4	APX7500	APX7500 MOBILE - DUAL BAND VHF - DUAL CONTROL HEAD	$6,156.00	$24,624.00

QUOTE PAGE TOTAL **$175,441.00**

QUOTE TERMS AND CONDITIONS :

3. Title will pass upon shipment, risk of loss will pass upon delivery to purchaser's facility.
4. Ordered equipment may be returned for a full refund, less a 20% restocking fee, if the equipment is returned unused and undamaged in its original packaging with in six months after shipment.
5. Prices quoted are valid for thirty(30) days from the date of this quote.
6. Unless otherwise stated, payment will be due within thirty days after invoice.
7. Motorola's standard equipment warranty(which will be furnished upon request) applies to all ordered equipment MOTOROLA DISCLAIMS ALL OTHER WARRANTIES WITH RESPECT TO THE ORDERED PRODUCTS, EXPRESS OR IMPLIED INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.
8. MOTOROLA'S TOTAL LIABILITY ARISING FROM THE ORDERED PRODUCTS WILL BE LIMITTED TO THE PURCHASE PRICE OF THE PRODUCTS WITH RESPECT TO WHICH LOSSES OR DAMAGES ARE CLAIMED. IN NO EVENT WILL MOTOROLA BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES.
9. These terms will prevail over any inconsistent or additional terms on any purchase order submitted by the purchaser.

CHANGE ORDER #3

By: _____
William J. Mueller, Village President

Attest: _____
Brigitte O'Brien, Village Clerk

Date: _____

EMERGENCY TELEPHONE SYSTEM BOARD OF DU PAGE COUNTY

421 N. County Farm Road Wheaton, Illinois 60187
Tel: 630-550-7743 Fax: 630-955-1130

September 15, 2011

Dear DuPage Emergency Dispatch Interoperable Radio System Participant:

Attached to this letter please find your original equipment list [first page] and your most recent list.

In an effort to consolidate the current equipment order from Change Order #2 with a proposed Change Order #3 it has taken some time to look at requested equipment changes and new requests. This has been done in order to avoid unnecessary additions and costs to the project.

These forms will be utilized to create the final counts. As such, please review the most current document, provided any specific changes requested if any, sign and date the document the first page and initial the other pages including any supplemental pages you add. The signature should be of the executive of your agency for billing purposes.

A supplemental page is recommended if you have multiple changes so that we can clearly understand your requests.

If your order included ruggedized radios please be sure to indicate the number of ruggedized and whether they will be standard black or the fashionable green.

You may fax this to ETSB at the number listed above, when completed.

For DU-COMM agencies, please provide this information to DU-COMM so that Director Tegtmeyer can have final oversight prior to submission to ETSB.

It is our intent to have a purchase order for Change Order #2 in to Motorola for FY11 final invoices, so we are asking that your respond as quickly as possible to this request or **by September 23.**

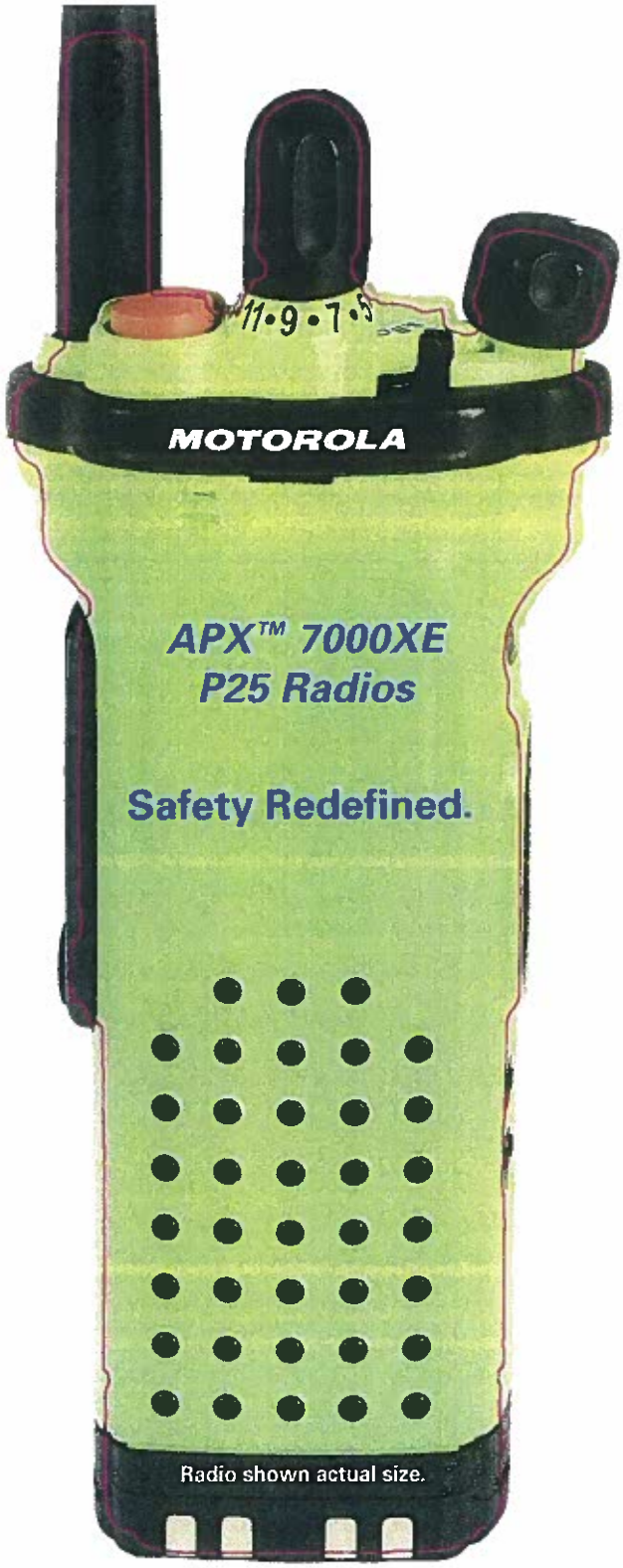
Also, additional equipment orders cannot be made for agencies that have not submitted an IGA. If your IGA is under review with attorneys, it considered in process and can be part of an additional order. You may submit your order so that it can be considered in the event that the IGA is submitted in the interim.

Thank you for all of your hard work and assistance with this major project.

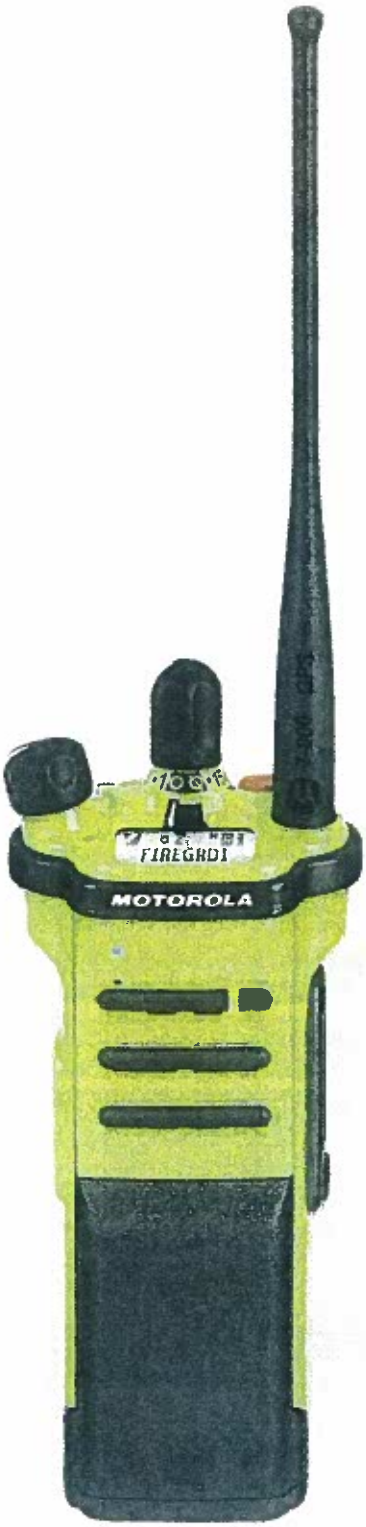
Sincerely,

Linda M. Zerwin

/lmz


MOTOROLA
APX™ 7000XE
P25 Radios
Safety Redefined.
Radio shown actual size.

SPECIFICATION SHEET



APX™ 7000XE

PROJECT 25 MULTI-BAND PORTABLE RADIO

We take the safety of first responders personally, which is why we designed the APX™ 7000XE – the most advanced, ultra-rugged radio with innovative features designed by first responders for first responders working in extreme environments.

Together we have created an ergonomically-superior radio that is easy to operate, with glove-friendly controls and a large top display. Significantly louder and clearer so that every word is heard when you're battling noise in almost any environment. A mission critical multiband, multi-protocol radio so seamless, you can be confident your communications are truly interoperable.

Focus on the task, not the technology, with the high-performing portable that stands up and stands out in the toughest conditions.

- Channel Capacity
  - 96 standard
  - 1250 max
- Universal Push-to-Talk
- T-Grip
- Dual Battery Latch
- Orange emergency button
- 16 position rotary knob
- 2 position concentric switch
- 3 position toggle switch
- 3 programmable side buttons
- Transmit LED indicator
- Full Bitmap Top Display
  - 1 line of icons
  - 1 line x 8 characters of text
- Standard Rugged
- FM (Intrinsically Safe)

ADVANCED ERGONOMICS FOR EXTREME CONDITIONS

- Easy to grip, hold and control in harsh conditions
- Glove-friendly controls are big, recognizable and easy to distinguish
- Well-spaced knobs eliminate accidental activation
- Enlarged top display is easy to read, in dark or low light
- Shielded push-to-talk button is easy to use with a gloved hand
- Largest emergency button in the industry with programmable time delay

EXCEPTIONAL AUDIO MEANS EVERY WORD IS HEARD

- 50% louder and clearer without distorting transmissions
- Dual microphone locates the talker, cancels out ambient noise
- Extreme Audio Profile reduces background noise and improves voice clarity
- Equipped with the latest AMBE digital voice vocoder
- New speaker grill design for improved water runoff

NEXT GENERATION TECHNOLOGY TO RELY ON NOW

- Project 25 Phase 2 technology provides twice the voice capacity
- Multiband operation ensures seamless interoperability
- Backwards and forwards compatible with all Motorola mission critical radio systems
- Future-ready for applications like Mission Critical Wireless and GPS location tracking

APX™ 7000XE SPECIFICATIONS

FEATURES AND BENEFITS:

- Available in 700/800 MHz, VHF, and UHF Range 1 and 2
- Optional multiband operation
- 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 /12.5 kHz / 25 kHz)
- Embedded digital signaling (ASTRO & ASTRO 25)
- Integrated GPS capable
- Seamless wideband scan
- Intelligent Lighting
- Radio Profiles
- Expansion Slot
- Micro SD removable memory card
- User programmable voice announcement
- Meets Applicable MIL-STD-810C, D, E, F and G
- Ship standard Intrinsically Safe and Rugged*
- Yellow and green colored housing options
- Superior Audio Features:
  - Extreme Audio Profile
  - 1W high audio speaker
  - Dual sided 2 microphone noise canceling technology
- Utilizes Windows XP, Windows 7 and Vista
- Customer Programming Software (CPS)
  - Supports USB communications
  - Built in FLASHport™ support
- Full portfolio of accessories including IMPRES batteries, chargers and audio devices

OPTIONAL FEATURES:

- Mission Critical Wireless
- Enhanced Encryption capability
- Programming Over Project 25
- Over the Air Rekey
- Text Messaging

* Rugged radios exceed industry standards (IPx7) for immersion and provide a higher level of water protection—MIL-STD-810E, Method 512.3 Immersion. These radios meet the incremental requirement of submersion in 1 meter of fresh water that is 27C colder than the product.

TRANSMITTER - TYPICAL PERFORMANCE SPECIFICATIONS

		700/800	VHF	UHF Range 1	UHF Range 2
Frequency Range/Bandsplits	700 MHz 800 MHz	763-775, 793-805 MHz 806-824, 851-869 MHz	136-174 MHz	380-470 MHz	450-520 MHz
Channel Spacing		25/20/12.5 kHz	25/20/12.5 kHz	25/20/12.5 kHz	25/20/12.5 kHz
Maximum Frequency Separation		Full Bandsplit	Full Bandsplit	Full Bandsplit	Full Bandsplit
Rated RF Output Power Adj[1]		1-3 Watts	1-6 Watts	1-5 Watts	1-5 Watts
Frequency Stability[2] (–30°C to +60°C; +25°C Ref.)		±0.00010 %	±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	±5 kHz / ±4 kHz / ±2.5 kHz
Emissions (Conducted and Radiated)[1]		–75 dB	–75 dB	–75 dB	–75 dB
Audio Response[1]		+1, –3 dB	+1, –3 dB	+1, –3 dB	+1, –3 dB
FM Hum & Noise	700 MHz 800 MHz	–48 dB –47 dB	–47 dB	–47 dB	–47 dB
Audio Distortion[1]	700 MHz 800 MHz	0.60 % 1 %	0.50 %	0.50 %	0.50 %

BATTERIES FOR APX 7000XE

Battery Capacity / Type	Dimensions (HxWxD)	Weight	Battery Part Number	Battery Capacity
Li-Ion IMPRES 2300 mAh FM² Rugged**	3.39" x 2.34" x 1.65"	6.53 oz	NNTN8092	2300 mAh
Li-Ion IMPRES 2150 mAh IP67	3.39" x 2.34" x 1.45"	5.0 oz	PMNN4403	2150 mAh
Li-Ion IMPRES 2900 mAh IP67	3.39" 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 IP67	5.12" x 2.34" x 1.57"	11.82 oz	NNTN7036	2000 mAh
NiMH IMPRES 2000 mAh FM² 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

** Standard shipping battery

RECEIVER - TYPICAL PERFORMANCE SPECIFICATIONS

		700/800	VHF	UHF Range 1	UHF Range 2
Frequency Range/Bandsplits	700 MHz 800 MHz	763-775, 793-805 MHz 806-824, 851-869 MHz	136-174 MHz	380-470 MHz	450-520 MHz
Channel Spacing		25/20/12.5 kHz	25/20/12.5 kHz	25/20/12.5 kHz	25/20/12.5 kHz
Maximum Frequency Separation		Full Bandsplit	Full Bandsplit	Full Bandsplit	Full Bandsplit
Audio Output Power at Rated[1]		1000mW	1000mW	1000mW	1000mW
Frequency Stability[1] (–30°C to +60°C; +25°C Ref.)		±0.00010 %	±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	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	78.3 dB 67.5 dB
Intermodulation		80 dB	80.5 dB	80.3 dB	80.2 dB
Spurious Rejection		76.6 dB	93.2 dB	80.3 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	-53.5 dB -47.4 dB
Audio Distortion[1]		0.9 %	1.20 %	0.91 %	0.91 %

RADIO MODELS

Top Display

Display	Full bitmap monochromatic LCD display • 1 line text, 8 characters • 1 line of icons • No menu support • Multi-color backlight
Keypad	None
Channel Capacity	96 channels standard, optional 1250 with Enhanced Zone Bank
FLASHport Memory	64 MB
700/800 MHz (764-870 MHz)	H49TGD9PW1AN QA00569
VHF (136-174 MHz)	H49TGD9PW1AN QA00570
UHF Range1 (380-470 MHz)	H49TGD9PW1AN QA00571
UHF Range2 (450-520 MHz)	H49TGD9PW1AN QA00572
Buttons & Switches	Large PTT button • Angled On/Off • Volume knob • X-large emergency button • 16 position top mounted rotary knob • 2-position concentric switch • 3-position toggle switch • 3 programmable side buttons
Embedded GPS	Yes
Embedded LED	Multi-color

Transmitter Certification

VHF – 700/800 MHz	AZ489FT7036 (136-174 MHz and 764-870 MHz)
UHF R1 – 700/800 MHz	AZ489FT7040 (380-470 MHz and 764-870 MHz)
UHF R1 – VHF	AZ489FT4886 (380-470 MHz and 136-174 MHz)
UHF R2 – 700/800 MHz	AZ489FT7042 (450-520 MHz and 764-870 MHz)
UHF R2 – VHF	AZ489FT4893 (450-520 MHz and 136-174 MHz)
Bluetooth Option Board	AZ489FT6000

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

DIMENSIONS OF THE RADIOS WITHOUT BATTERY

	Inches	Millimeters
Length	6.94	176.3
Width Push-To-Talk button	2.39	60.8
Depth Push-To-Talk button	1.47	37.2
Width Top	3.32	84.3
Depth Top	2.13	54.1
Depth Bottom of Battery	1.64	41.7
Weight of the radios without battery	15.4 oz	438 g

GPS SPECIFICATIONS

Channels	12
Tracking Sensitivity	–151 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	
	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 (Delta-T)	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

* Applicable to Rugged products only

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

RUGGED OPTION SPECIFICATIONS

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

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature	-30°C / +60°C
Storage Temperature	-40°C / +85°C
Humidity	MIL-STD 507.x PROC. II
ESD	IEC 801-2 KV
Water and Dust Intrusion	IP67 and MIL-STD's noted above
Immersion (Delta-T)	MIL-STD 512.X/I

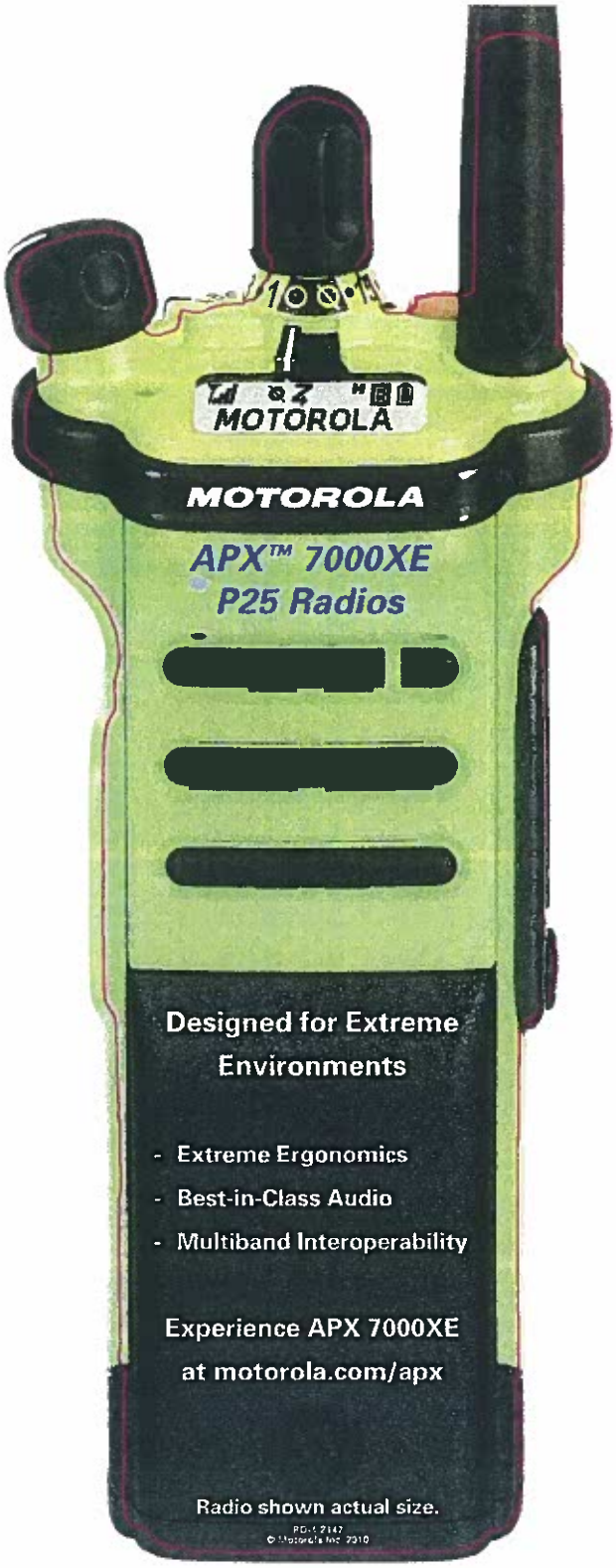
[4] Measured in the analog mode per TIA / EIA 603 under nominal conditions
[5] When used with an FM approved intrinsically safe radio
[7] Measured conductively in analog mode per TIA / EIA 603 under nominal conditions
[8] Measured conductively in digital mode per TIA / EIA IS 102.CAAA under nominal conditions
[9] 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

Motorola, Inc. 1301 E. Algonquin Road, Schaumburg, Illinois 60196 U.S.A. www.motorolasolutions.com

R34-7003AA


MOTOROLA
MOTOROLA
APX™ 7000XE
P25 Radios
Designed for Extreme Environments
- Extreme Ergonomics
- Best-in-Class Audio
- Multiband Interoperability
Experience APX 7000XE at motorola.com/apx
Radio shown actual size.