BE BETTER EQUIPPED TO BE MISSION READY

APX™ 2500 PROJECT 25 MOBILE RADIO

A downed power line or the city transit system coming to a halt during rush hour, when the unexpected strikes, you must interoperate seamlessly and securely with other agencies and responders – often across multiple Project 25 (P25) systems. You need to instantly connect and be informed to make better decisions and respond effectively. While the advanced technology of APX radios expertly equips you for the unexpected, your organisation may be challenged to improve operating expenses.

That's where the APX 2500 P25 mobile radio fits the bill perfectly. It delivers all the benefits of TDMA technology in a compact P25 capable mobile. The APX 2500 brings together powerful technology in an easy-to-use radio that's easy on your budget. It seamlessly unifies public works, utility, rural public safety agencies and transportation users to first responders so they can communicate effectively in the moments that matter.

CONVENIENTLY SMALL, EASY TO INSTALL

The APX 2500 is designed to get the job done without getting in the way. A simplified design makes installation quick and easy, fitting into the existing XTL™ footprint so you can reuse mounting holes and cables.

Count on the APX 2500 to withstand wet, dusty and hazardous conditions, too. Its IP56 durability rating is the highest level of certification for uncompromising durability and world class quality in a mobile performer you can hose down.

KEEPS EVERYONE IN TOUCH, AND UP TO THE MINUTE

Safety runs in the APX family and the APX 2500 mobile is no exception. Like all our APX P25 radios trusted by responders worldwide, the APX 2500 mobile redefines safety. Your teams can count on quick, seamless interoperability and extended range – whether they are talking from the top of a pole or the bottom of a trench.

With integrated GPS in the APX 2500, you can keep an eye on responders and assets you can't see, tracking their locations continuously. With a variety of installation and control head options, the APX 2500 can be mounted either remotely or in the dash and is compatible with the O2, O3 and O7 control heads. The colour display is easy to read and operates in all lighting conditions, from bright sunlight to dark streets. The intelligent lighting feature notifies your workers when a call is received, an emergency arises, or when they are out of range. Plus, an enlarged multifunction knob on the O2 and O7 control heads makes it easy to use talk-group and volume settings when they're wearing gloves.

Over-the-air programming on the APX 2500 keeps your crews current in the field. You can update the latest mobile without interrupting voice communications while they work.

SIZED RIGHT FOR YOUR BUDGET

The APX 2500 lets you reuse many accessories which utilise the O5 and O3 control heads on XTL radios, so you can maximise your investment while you benefit from the latest technology. Since the APX 2500 is P25 Phase 2 capable for twice the voice capacity, you can add more users without adding more frequencies or infrastructure. It is backwards and forwards compatible with all Motorola Solutions mission critical radio systems, so you can interoperate with confidence while you improve operating expenses.

APX 2500 SPECIFICATIONS

FEATURES AND BENEFITS:

Available in 700/800 MHz, VHF, UHF R1 and UHF R2 bands

Channels: Standard 1000

Trunking Standards supported:
• Clear or digital encrypted Trunked Operation

• Capable of SmartZone®, SmartZone Omnilink, SmartNet®

Analogue MDC-1200 and Digital APCO P25

Conventional System Configurations

Narrow and wide bandwidth digital receiver

(6.25kHz/12.5kHz/25kHz/30 kHz)

Embedded digital signaling (ASTRO and ASTRO 25)

Integrated GPS capable

Intelligent lighting

Radio profiles

Unified Call List

Full rate AMBE vocoder for Phase 1 (FDMA)

Half rate AMBE+2 vocoder for Phase 2 (TDMA)

Meets applicable MIL-STD 810C, D, E, F, G

Ships standard IP56

Utilises Windows Customer Programming Software (CPS)

• Supports USB Communications
• Built in FLASHport™ support

Re-use of most XTL™ accessories, plus new IMPRES accessories

OPTIONAL FEATURES:

Programming over Project 25 (POP25)

Text Messaging

12 character RF ID asset tracking

Over the Air Rekeying (OTAR)

APX 2500 CONTROL HEAD PORTFOLIO

O2 RUGGED CONTROL HEAD
- Large colour display with intelligent lighting
- 3 lines of text 14 characters max / 1 line of icons / 1 line of menus
- Multiple control head configuration (up to 2)
- Built in 7.5 watt speaker
- Multifunction volume/channel knob
- Night/day mode button

O3 HAND HELD CONTROL HEAD
- Large colour display with intelligent lighting
- 2 lines of text 14 characters max / 1 line of icons / 1 line of menus
- Integrated full size DTMF keypad
- Hand-held control head with intuitive user interface
- Two quick-access side buttons
- Display contrast selector

O7 ENHANCED CONTROL HEAD
- Large colour display with intelligent lighting
- 3 lines of text 14 characters max / 1 line of icons / 1 line of menus
- Available with Lighting & Siren Controls or DTMF Keypad
- Multiple control head configuration (up to 2)
- Multifunction volume/channel knob
- Night/day mode button

TRANSMITTER - TYPICAL PERFORMANCE SPECIFICATIONS

	700 MHz		800 MHz		VHF		UHF Range 1		UHF Range 2	
Frequency Range/Bandsplits	764-776 MHz 794-806 MHz		806-824 MHz 851-870 MHz		136-174 MHz		380-470 MHz		450-520 MHz	
Channel Spacing	25/12.5 kHz		25/12.5 kHz		30/25/12.5 kHz		25/12.5 kHz		25/12.5 kHz	
Maximum Frequency Separation	Full Bandsplit		Full Bandsplit		Full Bandsplit		Full Bandsplit		Full Bandsplit	
Rated RF Output Power Adj*	10-30 Watts		10-35 Watts		10-50 Watts		10-40 Watts		10-45 Watts (450-485 MHz) 10-40 Watts (485-512 MHz) 10-25 Watts (512-520 MHz)	
Frequency Stability* (−30°C to +60°C; +25°C Ref.)	±0.00015 %		±0.00015 %		±0.0002 %		±0.0002 %		±0.0002 %	
Modulation Limiting*	±5 kHz / ±2.5 kHz		±5 kHz/±4 kHz (NPSPAC) /±2.5 kHz		±5 kHz / ±2.5 kHz		±5 kHz / ±2.5 kHz		±5 kHz / ±2.5 kHz	
Modulation Fidelity (C4FM) 12.5kHz Digital Channel	±2.8 kHz		±2.8 kHz		±2.8 kHz		±2.8 kHz		±2.8 kHz	
Emissions*	Conducted+ −75/−85 dBc	Radiated+ −20/−40 dBm	Conducted −75 dBc	Radiated −20 dBm	Conducted −85 dBc	Radiated −20 dBm	Conducted −85 dBc	Radiated −20 dBm	Conducted −85 dBc	Radiated −20 dBm
Audio Response*	+1, −3 dB (EIA)		+1, −3 dB (EIA)		+1, −3 dB (EIA)		+1, −3 dB (EIA)		+1, −3 dB (EIA)	
FM Hum & Noise 25 & 20 kHz 12.5 kHz	−50 dB −48 dB		−50 dB −48 dB		−53 dB −52 dB		−53 dB −50 dB		−53 dB −50 dB	
Audio Distortion*	2 %		2 %		2 %		2 %		2 %	

RECEIVER – TYPICAL PERFORMANCE SPECIFICATIONS

	700 MHz		800 MHz		VHF		UHF Range 1		UHF Range 2	
Frequency Range/Bandsplits	764-776 MHz		851-870 MHz		136-174 MHz		380-470 MHz		450-520 MHz	
Channel Spacing	25/12.5 kHz		25/12.5 kHz		30/25/12.5 kHz		25/12.5 kHz		25/12.5 kHz	
Maximum Frequency Separation	Full Bandsplit		Full Bandsplit		Full Bandsplit		Full Bandsplit		Full Bandsplit	
Audio Output Power at 3% distortion*	7.5 W or 15 W ++		7.5 W or 15 W ++		7.5 W or 15 W ++		7.5 W or 15 W ++		7.5 W or 15 W ++	
Frequency Stability* (−30°C to +60°C; +25°C Ref.)	±0.00008%		±0.00008%		±0.00008%		±0.00008%		±0.00008%	
					Pre-Amp	Standard	Pre-Amp	Standard	Pre-Amp	Standard
Analogue Sensitivity* 12 dB SINAD Digital Sensitivity 5% BER	−121 dBm −121.5 dBm		−121 dBm −121.5 dBm		−123 dBm −123 dBm	−119 dBm −119 dBm	−123 dBm −123 dBm	−119 dBm −119 dBm	−123 dBm −123 dBm	−119 dBm −119 dBm
Intermodulation 25 kHz 12.5 kHz	82 dB 82 dB		82 dB 82 dB		84 dB 85 dB	86 dB 86 dB	82 dB 83 dB	86 dB 85 dB	82 dB 83 dB	86 dB 85 dB
Spurious Rejection	91 dB		91 dB		95 dB		93 dB		93 dB	
Audio Distortion at rated*	1.20%		1.20%		1.20%		1.20%		1.20%	
Selectivity* 25 kHz 12.5 kHz 30 kHz	85 dB 75 dB —		85 dB 75 dB —		85 dB 75 dB 90 dB		85 dB 75 dB —		85 dB 75 dB —	

DIMENSIONS

	Inches	Millimetres
Mid Power Radio Transceiver	2 x 7 x 6.4	50.8 x 178 x 163
O2 Control Head	2.7 x 8.1 x 2.1	60 x 207 x 53
O7 Control Head	2 x 7 x 1.5	50.8 x 179 x 40
Mid Power Radio Transceiver and O2 Control Head - Dash Mount	2.7 x 8 .1 x 8.8	69 x 207 x 223
Mid Power Radio Transceiver and O7 Control Head - Dash Mount	2 x 7 x 8.2	50.8 x 179 x 208
Mid Power Radio Transceiver and Remote Mount	2.0 x 7 x 9.6	50.8 x 180.3 x 243.8
Mid Power Radio Transceiver and O2 Control Head Weight	5.28 lbs	2.45 kg
Mid Power Radio Transceiver and O7 Control Head Weight	4.83 lbs	2.24 kg
Mid Power Radio Transceiver and Remote Mount Weight	4.70 lbs	2.18 kg

RADIO MODELS

700/800 (763-870 MHz)	M24URS9PW1AN
VHF (136-174 MHz)	M24KSS9PW1AN
UHF Range 1 (380-470 MHz)	M24QSS9PW1AN
UHF Range 2 (450-520 MHz)	M24SSS9PW1AN

TRANSMITTER CERTIFICATION

700/800 (764-775, 793-805, 806-824, 851-869 MHz)	AZ492FT7055
VHF (136-174 MHz)	AZ492FT3826
UHF R1 (380-470 MHz)	AZ492FT4915
UHF R2 (450-520 MHz)	AZ492FT4916

FCC EMISSIONS DESIGNATORS

FCC Emissions Designators	8K10F1D, 8K10F1E, 8K10F1W, 11K0F3E, 16K0F3E, 20K0F1E

MOBILE MILITARY STANDARDS 810 C, D, E , F, G

	MIL-STD 810C Method	MIL-STD 810C Proc./Cat.	MIL-STD 810D Method	MIL-STD 810D Proc./Cat.	MIL-STD 810E Method	MIL-STD 810E Proc./Cat.	MIL-STD 810F Method	MIL-STD 810F Proc./Cat.	MIL-STD 810G Method	MIL-STD 810G Proc./Cat.
Low Pressure	500.1	I	500.2	II	500.3	II	500.4	II	500.5	II
High Temperature Storage	501.1	I	501.2	I/A1	501.3	I/A1	501.4	I/Hot	501.5	I/A1
High Temperature Operation	501.1	II	501.2	II/A1	501.3	II/A1	501.4	II/Hot	501.5	II
Low Temperature Storage	502.1	I	502.2	I/C3	502.3	I/C3	502.4	I/C3	502.5	I/C3
Low Temperature Operation	502.1	I	502.2	II/C1	502.3	II/C1	502.4	II/C1	502.5	II
Temperature Shock	503.1	-	503.2	I/A1-C3	503.3	I/A1-C3	503.4	I/Hot-C3	503.5	I/C
Solar Radiation	505.1	II	505.2	I	505.3	I	505.4	I	505.5	I/A1
Rain Blowing	506.1	I	506.2	I	506.3	I	506.4	I	506.5	I
Rain Steady	506.1	II	506.2	II	506.3	II	506.4	III	506.5	III
Humidity	507.1	II	507.2	II	507.3	II	507.4	-	507.5	II-Aggravated
Salt Fog	509.1	-	509.2	-	509.3	-	509.4	-	509.5	1 Proc
Blowing Dust	510.1	I	510.2	I	510.3	I	510.4	I	510.5	I
Blowing Sand		-	510.2	II	510.3	II	510.4	II	510.5	II
Vibration Min. Integrity	514.2	VIII/F, Curve-W	514.3	I/10	514.4	I/10	514.5	I/24	514.6	I-Cat.24
Vibration Loose Cargo	514.2	XI	514.3	II/3	514.4	II/3	514.5	II/5	514.6	-
Shock Functional	516.2	I	516.3	I	516.4	I	516.5	I	516.6	I, V, VI

POWER AND BATTERY DRAIN

Model Type	136-174 MHz, 380-470 MHz, 450-520 MHz, 764-870 MHz
Minimum RF Power Output	10-35 Watt (764-870 MHz), 10-50 Watts (136-174 MHz), 10-40W (380-470 MHz), 10-45Watts (450-485 MHz), 10-40Watts (485-512 MHz), 10-25Watts (512-520 MHz)
Operation	13.8V DC ±20% Negative Ground
Standby at 13.8V	0.85A (764-870 MHz), 0.85A (136-174 MHz), 0.85A (380-470 MHz), 0.85A (450-520 MHz)
Receive Current at Rated Audio at 13.8V	3.2A (764-870 MHz), 3.2A (136-174 MHz), 3.2A (380-470 MHz), 3.2A (450-520 MHz)
Transmit Current (A) at Rated Power	136-174 MHz (10-50 Watt) 13A (50W) 8A (15W) 764-870 MHz (10-35 Watt) 12A (35W) 8A (15W) 380-470 MHz (10-40 Watt) 11A (40W) 8A (15W) 380-470 MHz (10-40 Watt) 11A (45W) 8A (15W)

SIGNALING (ASTRO MODE)

Signaling Rate	9.6 kbps
Digital ID Capacity	10,000,000 Conventional / 48,000 Trunking
Digital Network Access Codes	4,096 network site addresses
ASTRO® Digital User Group Addresses	4,096 network site addresses
Project 25 – CAI Digital User Group Addresses	65,000 Conventional / 4,094 Trunking
Error Correction Techniques	Golay, BCH, Reed-Solomon codes
Data Access Control	Slotted CSMA: Utilises infrastructure-sourced data status bits embedded in both voice and data transmissions.

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature	-30°C / +60°C
Storage Temperature	-40°C / +85°C
Humidity	Per MIL-STD
ESD	IEC 801-2 KV
Water and Dust Intrusion	IP56, MIL-STD

GPS SPECIFICATIONS

Channels	12
Tracking Sensitivity	−153 dBm
Accuracy**	<10 metres (95%)
Cold Start	<60 seconds (95%)
Hot Start	<10 seconds (95%)
Mode of Operation	Autonomous (Non-Assisted) GPS

*   Measured in the analogue mode per TIA/EIA 603 under nominal conditions

** Accuracy specs are for long-term tracking (95th percentile values >5 satellites visible at a nominal −130 dBm signal strength)

\+   Specs includes performance for the non-GNSS/GNSS bands

++ Output power in to 8 and 3.2 Ohm external speakers respectively

Specifications subject to change without notice. All specifications shown are typical.

Radio meets applicable regulatory requirements.

For more information on how to make your business more efficient and better connected, visit motorolasolutions.com.au

MOTOROLA SOLUTIONS

SILL 2500 08/16