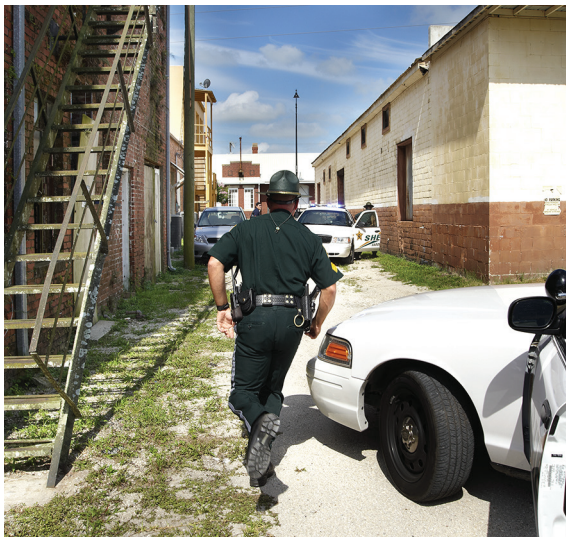

WORK SAFER WHEREVER THE MISSION TAKES YOU

APX™ 1500 PROJECT 25 MOBILE RADIO

Whether a marathon race is passing through the streets of downtown or a water main breaks in the city's largest pipeline, you need the ability to interoperate seamlessly and securely with other agencies and responders. You need to instantly connect and be informed to make better decisions to keep your responders and the community safe. While the advanced technology of APX radios expertly equips you for your day to day operations and the unexpected, your organization may be challenged to improve operating expenses.

The APX 1500 P25 mobile radio is equipped with all the features you need at a price you can afford. It delivers all the benefits of TDMA technology in the most compact P25 capable mobile in the industry. The APX 1500 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 and transportation users to first responders so they can interoperate effectively in the moments that matter.

BE UP TO THE MINUTE INFORMED

Keeping your crew safe is your number one priority. Like all our APX P25 radios trusted by responders worldwide, the APX 1500 mobile redefines safety. Your crews can count on quick, seamless interoperability and extended range wherever the mission may take them. You can depend on ADP software encryption for secure, tamperproof voice and data communications every time they connect.

The O2 Control Head with color display is easy to read and operate in all lighting conditions, from bright sunlight to dark streets. The intelligent lighting on the O2 Control Head notifies your workers when a call is received, an emergency arises, or when they are out of range. Plus, an enlarged multifunction knob makes it easy to use talk-group and volume settings when they're wearing gloves.

SIZED RIGHT FOR YOUR BUDGET

The APX 1500 gives you the ruggedibility and reliability you need at an affordable price. Since the APX 1500 is P25 Phase 2 capable for twice the voice capacity, you can add more users without adding more frequencies or infrastructure. Count on APX quality for years to come. The APX 1500 can withstand wet, dusty and hazardous conditions.

APX 1500 SPECIFICATIONS

FEATURES AND BENEFITS:

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

Channels: Standard 512

Trunking Standards supported:
- Clear or digital private Trunked Operation

Analog MDC-1200 and Digital APCO P25 Conventional System Configurations

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

Embedded digital signaling (ASTRO and ASTRO 25)

Intelligent lighting

Radio profiles

Unified Call List

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

Ships standard IP56

Utlizes Windows XP, Vista and Windows 7 and 8 Customer Programming Software (CPS)*
- Supports USB Communications
- Built in FLASHport™ support

Uses standard Dash mounted APX accessories

Software Key

ASTRO 25 Integrated Voice and Data

ADP Privacy

OPTIONAL FEATURES:

GPS Outdoor Location Tracking

Programming over Project 25 (POP25)

Text Messaging

12 character RF ID asset tracking

* CPS version R12.00.00 and greater ordered after June 2014 will only support Windows 7 and 8

APX 1500 CONTROL HEAD PORTFOLIO

O2 RUGGED CONTROL HEAD

- Large color display with intelligent lighting
- 3 lines of text 14 characters max / 1 line of icons / 1 line of menus
- Built in 7.5 watt speaker
- 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	25/20/12.5 kHz	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	Full Bandsplit
Rated RF Output Power Adj*	3-30 Watts (2-3 Watts Itinerant)	3-35 Watts	1-50 Watts	1-40 Watts	1-45 Watts
Frequency Stability* (–30°C to +60°C; +25°C Ref.)	±0.8 PPM	±0.8 PPM	±0.8 PPM	±0.8 PPM	±0.8 PPM
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	1.5%	1.5%	2.5%	1.1%	1.1%
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	–52 dB –51 dB	–51 dB –48 dB	–51 dB –48 dB
Audio Distortion* 25 & 20 kHz 12.5 kHz	0.50% 0.50%	0.50% 0.50%	0.50% 0.50%	0.50% 0.50%	0.50% 0.50%

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	25/20/12.5 kHz	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	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.)	±0.8 PPM	±0.8 PPM	±0.8 PPM	±0.8 PPM	±0.8 PPM
Analog Sensitivity* 12 dB SINAD Digital Sensitivity 5% BER	–120 dBm –121 dBm	–120 dBm –121 dBm	Pre-Amp –123 dBm –123 dBm Standard –119 dBm –119 dBm	Pre-Amp –123 dBm –123 dBm Standard –119 dBm –119 dBm	Pre-Amp –123 dBm –123 dBm Standard –119 dBm –119 dBm
Intermodulation Rejection 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	91 dB	91 dB
Audio Distortion at rated*	2%	2%	2%	2%	2%
Selectivity* 25 kHz 12.5 kHz 30 kHz	85 dB 75 dB —	85 dB 75 dB —	89 dB 77 dB 90 dB	83 dB 72 dB —	83 dB 72 dB —

DIMENSIONS

	Inches	Millimeters
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	69 x 207 x 53
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 O2 Control Head Weight	5.28 lbs	2.45 kg

RADIO MODELS

700/800 (763-870 MHz)	M36URS9PW1AN
VHF (136-174 MHz)	M36KSS9PW1AN
UHF Range 1 (380-470 MHz)	M36QSS9PW1AN
UHF Range 2 (450-520 MHz)	M36SSS9PW1AN

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: Utilizes infrastructure-sourced data status bits embedded in both voice and data transmissions.

PRODUCT DATA SHEET
APX™ 1500 MOBILE RADIO

POWER AND BATTERY DRAIN

Model Type	136-174 MHz, 380-470 MHz, 450-520 MHz, 764-870 MHz				
Minimum RF Power Output	2***-25 Watts (764-776 MHz), 2***-25 Watts (794-806 MHz), 2***-25 Watts (806-824 MHz), 2***-25 Watts (851-870 MHz), 1-25 Watts (136-174 MHz), 1-25 Watts (380-470 MHz), 1-25 Watts (450-520 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 (1-25 Watt) 380-470 MHz (1-25 Watt) 450-520 MHz (1-25 Watt)	9.5A (25W) 9.5A (25W) 9.5A (25W)	764-870 MHz (10-35 Watt)	(2***-25 Watts)	9.5A (25W)

MOBILE 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 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

ENCRYPTION

Supported Encryption Algorithms	ADP SW
Encryption Type	Digital
Key Storage	Tamper protected volatile or non-volatile memory
Key Erasure	Keyboard command

* Measured in the analog 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.

Version 2, Dec 14

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

TRANSMITTER CERTIFICATION

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

FCC EMISSIONS DESIGNATORS

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

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