



WIRELESS DISPATCH EVERYWHERE

APX™ 7500 MULTIBAND CONSOLETTTE

Racing to an emergency or repairing a power outage, every moment matters as you mount a response. The right control station can make all the difference in making sure communications are clear, continuous and coordinated – across multiple users, agencies and miles.

The APX™ 7500 Consolette is the ideal complement to your dispatch console. It's the low cost, mid-power RF control station for the ASTRO® 25 system when you want a wireless dispatch solution. Plus, you can use it as an emergency backup station when infrastructure is off-line or for wireless access to different system types for increased interoperability between agencies.

CONNECT WITH CONFIDENCE

Designed for the APX 7500 mid power series and O5 control head, the APX 7500 Consolette combines forward-thinking technology with time-tested functionality. Project 25 Phase 2 technology delivers twice the voice capacity so you can add more users without adding more frequencies or infrastructure. And its multiband operation assures seamless interoperability – so you can talk with confidence from a squad car or desk station, a job site across town or an incident in the next county.

MIGRATE AT YOUR OWN PACE

The APX 7500 Consolette is backwards and forwards compatible, developed to meet current P25 standards and future-ready to support new technology and data applications. Now you can achieve your interoperability objectives—whether upgrading an existing system or designing a new one—based on your dollars and deadlines.

BUILT FOR THE TOUGHEST TASKS

Innovative design and skillful engineering make the APX 7500 Consolette a tireless performer. It can be easily serviced or programmed without removing the lid and the robust metal housing assures extra durability. An integrated front panel numeric keypad on the APX 7500 Consolette gives you fast access to radio controls. And it meets stringent FCC and UL certifications for exceptional safety.

ROBUST AND MISSION-READY

When a power loss occurs, count on the automatic battery revert to connect your people 24/7. All you need is a DC source, such as a marine battery, to switch over automatically and keep communications going strong.

Rich in features, the APX 7500 Consolette gives you easy access to contact information with one unified call list and the largest number of interface connections to a wide variety of consoles and desk sets. What's more, an ACIM wireless interface provides back-up dispatch if your console's link to the ASTRO 25 trunked system is ever lost.

APX 7500 MULTIBAND CONSOLETTTE

STANDARD FEATURES

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

Up to 2000 Channels

Optional multiband operation

Trunking Standards supported:

- Clear or digitally 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/30 kHz/25 kHz)*

Embedded digital signaling (ASTRO and ASTRO 25)

Integrated Encryption Hardware

Seamless wideband scan

Intelligent lighting

Radio profiles

Unified Call List

Tone remote control

ACIM/CCGW interface including:

- ID decode
- Call alert encode

Interfaces supported:

- Recorder
- Wireline
- Vehicle Interface Port
- Crosspatch
- Headsets (2)**

110/220VAC operation with battery revert capability

VU Meter and Clock

Expansion Slot Standard

2 configurations available:

- Full featured front panel
- Limited front panel

Customer Programming Software:

- Utilizes Windows 7, XP and Vista
- Supports USB Communications
- Built in FLASHport™ support

OPTIONAL FEATURES:

Enhanced Encryption Software Options

Programming over Project 25 (POP25)

Text Messaging

Over the Air Rekeying (OTAR)

Extended Dispatch Operation including:

Emergency Alarm ACK Encode

Radio Inhibit/Uninhibit Encode

Radio Monitor Encode

Radio Check Encode

Status Query Encode

Status Query Response Decode

Status Update Decode

Message Update Decode

*Per the FCC Narrowbanding rules, new products (APX7500 UHF R1 with UHF R2 Mid Power combination AND UHF R1 High Power with 700/800 MHz combination) submitted for FCC certification after January 1, 2011 are restricted from being granted certification at 25KHz for United States – State & Local Markets only.

** Available on full featured models only.



05 CONTROL HEAD FEATURES

Tri-color LCD display

- 4 lines: 2 lines text (14 characters), 1 line icons, 1 line soft menu keys
- 3 x 6 keypad microphone accessory with 3 programmable soft keys
- 5 programmable soft key buttons and 5 scroll-through menus with up to 24 programmable soft keys

AUXILIARY DISPLAY FEATURES

LCD display

3 soft menu buttons to activate or control the following Consolette features:

- Clock
- Volume Units Meter (VU)
- Crosspatch Linking
- Auxiliary Controls/VIP Activation
- Over-the-air Audible TX Alert Tones

PRODUCT SPEC SHEET
APX™ 7500 MULTIBAND CONSOLETTTE

SIGNALLING (ASTRO MODE)

Signalling 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.

APX 7500 CONSOLETTTE

Dimensions (W x D x H)	Limited Front Panel Configuration 16" x 18" x 4.2" (406 x 457 x 107mm)
	Full Featured Front Panel Configuration 16" x 18.75" x 4.2" (406 x 476 x 107mm)
Weight	Limited Front Panel Configuration 18.5 lbs (8.4 kg)
	Full Featured Front Panel Configuration 19.5 lbs (8.9 kg)

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 (NPSAPC) /±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+ -70/-85 dBc	Radiated+ -20/-40 dBm	Conducted + -70 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	-40 dB -34 dB	-40 dB -34 dB	-40 dB -34 dB	-50 dB -40 dB	-45 dB -40 dB	-45 dB -40 dB	-45 dB -40 dB	-45 dB -40 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*	2.5W++		2.5W++		2.5W++	2.5W++		2.5W++		
Frequency Stability* (-30°C to +60°C; +25°C Ref.)	±0.00015 %		±0.00015 %		±0.0002 %	±0.0002 %		±0.0002 %		
Analog Sensitivity*	12 dB SINAD	0.25 µV	0.25 µV		Pre-Amp 0.2 µV	Standard 0.3 µV	Pre-Amp 0.2 µV	Standard 0.3 µV	Pre-Amp 0.2 µV	Standard 0.3 µV
Digital Sensitivity	1% BER	0.3 µV	0.3 µV		0.25 µV	0.4 µV	0.25 µV	0.4 µV	0.25 µV	0.4 µV
	5% BER	0.25 µV	0.25 µV		0.2 µV	0.3 µV	0.2 µV	0.3 µV	0.2 µV	0.3 µV
Intermodulation	80 dB		80 dB		80 dB	85 dB	80 dB	85 dB	80 dB	85 dB
Spurious Rejection	90 dB		90 dB		90 dB	90 dB		90 dB		
Audio Distortion at rated*	3.00 %		3.00 %		3.00 %	3.00 %		3.00 %		
Selectivity*	25 kHz	80 dB	80 dB		—	82 dB		82 dB		
	12.5 kHz	65 dB	65 dB		70 dB	70 dB		70 dB		
	30 kHz	—	—		90 dB	—		—		

PRODUCT SPEC SHEET
APX™ 7500 MULTIBAND CONSOLETTTE

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), 10-40 Watts (380-470 MHz), 10-45 Watts (450-485 MHz), 10-40 Watts (485-512 MHz), 10-25 Watts (512-520 MHz)																		
AC Operation	110 to 220VAC 50-60Hz																		
AC Current	110VAC: 0.85A (Idle/Rx) 1.7A (Tx) 220VAC: 0.42A (Idle/Rx) 0.85A (Tx)																		
AC Surge Spec	EN6100-4-5 Level 5																		
DC Operation	13.8V DC +/-20% Negative Ground																		
Standby at 13.8V	1.25A (764-870 MHz), 1.25A (136-174 MHz), 1.25A (380-470 MHz), 1.25A (450-520 MHz)																		
Receive Current at Rated Audio at 13.8V	1.5A (764-870 MHz), 1.5A (136-174 MHz), 1.5A (380-470 MHz), 1.5A (450-520 MHz)																		
Transmit Current (A) at Rated Power	<table border="1"> <tr> <td>136-174 MHz (10-50 Watt)</td> <td>13A (50W)</td> <td>8A (15W)</td> <td>764-870 MHz (10-35 Watt)</td> <td>12A (50W)</td> <td>8A (15W)</td> </tr> <tr> <td>380-470 MHz (10-40 Watt)</td> <td>11A (40W)</td> <td>8A (15W)</td> <td></td> <td></td> <td></td> </tr> <tr> <td>450-520 MHz (10-45 Watt)</td> <td>11A (45W)</td> <td>8A (15W)</td> <td></td> <td></td> <td></td> </tr> </table>	136-174 MHz (10-50 Watt)	13A (50W)	8A (15W)	764-870 MHz (10-35 Watt)	12A (50W)	8A (15W)	380-470 MHz (10-40 Watt)	11A (40W)	8A (15W)				450-520 MHz (10-45 Watt)	11A (45W)	8A (15W)			
136-174 MHz (10-50 Watt)	13A (50W)	8A (15W)	764-870 MHz (10-35 Watt)	12A (50W)	8A (15W)														
380-470 MHz (10-40 Watt)	11A (40W)	8A (15W)																	
450-520 MHz (10-45 Watt)	11A (45W)	8A (15W)																	

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

+ Specs includes performance for the non-GNSS/GNSS bands
 ++ Output power into 20 Ohm internal speaker

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

Radio meets applicable regulatory requirements.

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 140-2 Level 3 FIPS 197

ENVIRONMENTAL SPECIFICATIONS	
Operating Temperature	-30°C / +60°C
Storage Temperature	-40°C / +85°C
Humidity	95% relative humidity
ESD	IEC 61000-4-2
Duty Cycle	EIA/TIA Intermittent Duty Cycle

FCC TYPE ACCEPTANCE ID	
FCC ID	BAND AND POWER LEVEL
AZ492FT5858	10-35 Watts (764-870 MHz)
AZ492FT3824	10-50 Watts (136-174 MHz)
AZ492FT7037	10-50 Watts (136-174 MHz) and 10-35 Watts (764-870 MHz)
AZ492FT7047	10-50 Watts (136-174 MHz) and 10-45 Watts (450-520 MHz)
AZ492FT4895	10-50 Watts (136-174 MHz) and 10-40 Watts (380-470 MHz)
AZ492FT4894	10-40 Watts (380-470 MHz)
AZ492FT7043	10-40 Watts (380-470 MHz) and 10-35 Watts (764-870 MHz)
AZ492FT4904	10-40 Watts (380-470 MHz) and 10-45 Watts (450-520 MHz)
AZ492FT4896	10-45 Watts (450-520 MHz)
AZ492FT7044	10-45 Watts (450-520 MHz) and 10-35 Watts (764-870 MHz)

For more information about how to interoperate without boundaries, visit motorolasolutions.com/apx

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

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