

Designed with input from public safety users, the rugged Jaguar portable excels in the challenging public safety environment. The Jaguar 700Pi portable is a digital two-way radio with immersion resistance that operates on trunked and conventional communications systems for both voice and data. Critical features such as Status Message, encryption, ProFile[™], ProScan[™], and Priority System Scan are easily field programmable for added efficiency of operation. The latest models of the Jaguar portable have a faster C5416 Digital Signal Processor (DSP) that allows Project 25 Common Air Interface (CAI) and an expanded conventional feature set, as well as an enhanced channel knob.



Product Overview

The Jaguar portable was designed to meet the critical communication demands of public safety users. Firefighters, law enforcement officers, and administrative users were interviewed to determine the most useful mix of features, functions, and physical attributes for the portable. The result is a rugged radio that meets MIL-STD-810E and is designed specifically for the communications challenges of public safety users. The Jaguar 700P and 700Pi work in ProVoice digital EDACS, analog voice EDACS, analog conventional, and Project 25 digital modes.

Ergonomic Features Users Require

The Jaguar portable provides features that are unique to the needs of public safety users.

- For Fire Service use, the Pi version withstands immersion of 1 foot for 2 hours.
- FM/CSA intrinsically safe models are available.
- The large speaker is especially useful in high noise environments.
- The large push-to-talk button, talkgroup knob, and buttons on the front of the portable are designed to provide greater control for users wearing gloves.
- The volume knob is smaller, making it easier to distinguish from the talkgroup knob and more difficult to accidentally change.
- The recessed emergency button can be located easily and prevents accidental activation.

- The large 3-line display and ergonomically designed controls make the portable easy to use for both routine and low-visibility situations.

Flexible and Efficient Design

The Jaguar portable rises to the challenges of the public safety environment. With its software-based design, the Jaguar is readily configurable for a specific user's needs. The feature set is easily expandable through software upgrades.

- The Jaguar portable stores up to 800 trunked system/group combinations and up to 200 conventional channels.
- The Jaguar portable stores 99 individual call ID numbers and 99 telephone interconnect numbers in memory.
- ProFile offers easy over-the-air programming for efficient updates of radios.
- ProScan provides the user smooth automatic roaming between sites.
- The portable includes the full conventional feature set, including dual priority scan and various tone signaling formats.

Advanced Digital Voice

The Jaguar portable is available with M/A-COM's third-generation digital voice technology. ProVoice utilizes the acclaimed Improved MultiBand Excitation (IMBE[™]) vocoder. State-of-the-art digital signal processing techniques used in ProVoice also

allow the Jaguar portable to deliver exceptional voice quality in areas where the signal strength from the repeater is weak. For users who require additional security, DES encryption is an available option.

EDACS Security Key

The Jaguar portable supports the EDACS Security Key (ESK), which is a new EDACS/ProVoice feature. ESK prevents unauthorized users from programming radios for use on an EDACS system and accessing the system.

Project 25 Interoperability

The Jaguar 700Pi portable is primarily used as an EDACS/ProVoice trunked portable. It also contains the Project 25 Common Air Interface (CAI) for talkaround/conventional interoperability. The portable provides digital interoperability with other Project 25 users during critical communications situations.

For More Information

For more information about this or any other M/A-COM Wireless Systems product, call 1-800-431-2345. From outside the U.S. call +1-434-455-9489.

General Specifications

Dimensions (H x W x D):

(Without Knobs and Antenna)

With battery:

6.75 x 2.58 x 1.79 in.
(171.4 x 65.5 x 44.7 mm)

Weight (with NiCd Battery):

28.1 oz (797 g)

Input Voltage:

7.5 VDC (nominal)

Vibration:

5 G (per U.S. Forest Service)

Battery Life (at 5% Tx, 5% Rx, and 90% standby):

NiCd: 9 hours (1600 mAh)

NiMH: 11 hours (2400 mAh)

Operating Temperature Range:

NiCd: -22 to +140°F
(-30 to +60°C)

NiMH: +14 to +122°F
(-10 to +50°C)

Relative Humidity:

90% @ 122°F (+50°C)

Altitude:

Operational: 15,000 ft (4,572 m)
In Transit: 50,000 ft (15,240 m)

Color (case):

Black

Options and Accessories

Headset, earpiece, speaker microphones, PC programming software and cables, subminiature surveillance accessories, antennas, cases, straps, belt loops and swivel mounts, desk chargers, wall chargers, and vehicular chargers.

Intrinsically Safe Options

Factory Mutual Intrinsically Safe for Class I, II, and III, Division 1, Groups C, D, E, F, and G, Temp T3C, TA=+60°C; Nonincendive for Class I, Division 2, Groups A, B, C, and D, Temp T4, TA=+60°C.

CSA Intrinsically Safe for Class I, Groups C and D; Class II, Group G (Coal Dust); Class III; Nonincendive for Class I, Division 2, Groups A, B, C, and D.

Transmitter

	800
Frequency Range (MHz):	806-825, 851-870
Rated RF Power Trunked (W):	1, 3
Rated RF Power Talkaround (W):	1, 3
Frequency Stability (-30 to +60°C; +25°C Ref) (ppm):	±1.5
Modulation Deviation (kHz):	±5.0 (±4.0 NPSPAC)
FM Hum and Noise (Companion Receiver) (dB):	<-40 (non-NPSPAC), <-38 (NPSPAC)
Audio Response (dB):	+1/-3
Spurious and Harmonics (dBm):	<-16
Frequency Separation (MHz):	Full bandwidth
Audio Distortion:	<3% at rated audio @ 1000 Hz, 3 kHz deviation

Receiver

	800
Frequency Range (MHz):	851-870
Channel Spacing (kHz):	25/NPSPAC
Sensitivity (12 dB SINAD) (μV):	0.28
Selectivity	
@ 12.5 kHz (dB) NPSPAC:	>20
@ 25 kHz (dB):	>72
Intermodulation (dB):	>72
Spurious and Image Rejection (dB):	>70
Frequency Stability (-30 to +60°C; +25 Ref) (ppm):	±1.5
Frequency Separation (MHz):	Full bandwidth
Rated Audio Output (mW):	500 @ 3% maximum distortion

Environmental Specifications

Standard	Parameter	Methods & Procedures
MIL-STD-810E*	Low Pressure	500.3/1,2
	High Temperature	501.3/1,2
	Low Temperature	502.3/1,2
	Temperature Shock	503.3/1
	Solar Radiation	505.3/2
	Blowing Rain	506.3/1
	Humidity	507.3/2
	Salt Fog	509.3/1
	Blowing Dust	510.3/1
	Vibration (Minimum Integrity)	514.4/1, Category 1
	Vibration (Basic Transportation)	514.4/1, Category 10
	Shock (Functional/Basic)	516.4/1
	Shock (Transit Drop)	516.4/4
	U.S. Forest Service	USDA LMR Standard, Section 2.15
	Immersion**	1 foot for 2 hours
*Also meets equivalent MIL-STD-810C and -D		
** Jaguar 700Pi version only		

Digital Operation

Vocoding Method:	Improved MultiBand Excitation (IMBE)
Data Rate:	9600 bps
Modulation:	GFSK for ProVoice, C4FM for P25

Regulatory Data

Frequency Range (MHz)	RF Output (W)	Frequency Stability (ppm)	FCC Type Acceptance Number	Applicable FCC Rules	Industry Canada Certification Number	Applicable Industry Canada Rules
806-869	1-3	1.5	OWDTR-0014-E	22, 90	3636B 12069	RSS-119

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