

KENWOOD



P25 Mission Critical

VM-600 Single-Band

700/800 MHz • VHF

Multi-system P25 Phase 2 radio equipped with industry leading audio, color display and advanced features including Over-the-Intranet (OTIP) programming.

ROBUST & FLEXIBLE

- Compatible with Motorola® System v 7.x, Motorola Astro® & SMARTNET® II/SmartZone®
- All supported protocols (Phase 1 & 2, Motorola SMARTNET® II/SmartZone®, FM Analog) available simultaneously
- Advanced P25 features such as Authentication & Over-the-Air-Rekeying
- Industry-standard encryption capabilities: AES & DES-OFB
- ARC4™ software encryption; compatible with ADP™
- Conventional vote scan is standard
- Supports MDC-1200 and GE-Star signaling
- Up to 1024 channels
- Over-the-Air programming (OTAP) option enables you to program radios in the field
- Over-the-Intranet programming (OTIP) allows you to program radios through a wireless access point or Ethernet interface
- Enhanced radio security using software & hardware system keys
- Armada® programming software provides simple fleet management of radios with features including profile templates & sorting/filtering by function or agency

DATA & CONTROL INTERFACES

- Supports P25 IP packet data
- GPS AVL data (requires external GPS receiver)

MULTIPLE CONFIGURATION OPTIONS

- Dash mount
- Remote mount
- Dash mount with remote control head
- Dual remote control heads
- Internal or external speaker
- Fixed control stations

OPTIONAL VIKING® CONTROL HEAD

- Display resolution: 480 x 128 pixels
- Transmissive color display - high contrast for direct sunlight & night time viewing; not affected by polarized sunglasses
- Wide viewing angle - 120°

ACCESSORIES

- Complete line of accessories including microphones, speakers & antennas. Download the accessory catalog at www.efjohnson.com/products/accessories.



Viking VM600 Mobile SPECIFICATIONS

GENERAL	VHF	700/800 MHz
Frequency Range (band splits)	136 - 174 MHz	762 - 806 MHz 806 - 869 MHz
Channel Spacing	Analog: 25 kHz, 12.5 kHz P25 Digital (Phase 1 and 2): 12.5 kHz; supports 2-slot Phase 2 TDMA	
Max Frequency Separation	Full Band Split	
Display	Viking Control Head - transmissive color display, 16 display text characters plus Zone, Channel, and Status, blue illumination theme	
Power Supply	<i>Nominal Voltage (negative ground)</i> 13.6 VDC <i>Operating Supply Voltage Range</i> 10.9 - 16.3 VDC <i>Standby Current</i> 1.0 A <i>Receive Current at Rated Audio Power</i> 2.95 A <i>Current at Max Rated Transmit Power</i> 12.5 A	
Temperature Range	Operating: -30°C to +60°C; Storage: -40°C to +85°C	
Nominal Dimensions (H x W x D) exclusive of mounting, cables, & knobs	2.1" x 7.2" x 8.3" (5.3 cm x 18.3 cm x 21.1 cm)	
Nominal Weight	6.5 lbs (2.3 kg)	
FCC ID:	ATH2425M80 (Pending)	
Industry Canada	IC:933B-2425M80 (Pending)	
Vocoder	AMBE+2 (version 1.6)	
Transmitter	700/800 MHz, 30/35 W; VHF, 50 W	
TRANSMITTER	VHF	700/800 MHz
RF Output Power (variable)	15 to 50 W	15 to 25 W (700 MHz) 15 to 35 W (800 MHz)
Transmitter Frequency Ranges	136 - 174 MHz	762 - 775 MHz, 792 - 806 MHz 806 - 824 MHz, 851 - 869 MHz
Maximum Frequency Separation	Full Band Split	
Frequency Accuracy (-30°C to +60°C, +25°C ref.)	±1.5 ppm	
Modulation Limiting	25 kHz Channels (Analog): ±5 kHz 12.5 kHz Channels (Analog): ±2.5 kHz	
Modulation Fidelity (Digital)	<5% C4FM (Phase 1) <5% H-CPM (Phase 2)	
Spurious Emissions	75 dB	
Audio	<i>Analog Frequency Response</i> +1 dB, -3 dB (Per TIA-603-D) <i>FM Hum and Noise Ratio (25 kHz Analog)</i> 46 dB <i>FM Hum and Noise Ratio (12.5 kHz Analog)</i> 40 dB <i>Distortion</i> 2%	
FCC Emission Designators	8K10F1D, 8K10F1E, 8K10F7E, 11K0F3E, 14K0F3E, 16K0F3E	
RECEIVER	VHF	700/800 MHz
Receiver Frequency Ranges	136 - 174 MHz	792 - 806 MHz 851 - 870 MHz
Maximum Frequency Separation	Full Band Split	
Sensitivity	<i>Analog Mode: 12 dB SINAD</i> -119 dBm <i>Digital Phase 1: (5% BER)</i> -119 dBm <i>Digital Phase 2: (5% BER)</i> -119 dBm	
Selectivity (Adjacent Channel Rejection)	25 kHz Channels, Analog 75 dBm 12.5 kHz Channels, Analog 60 dBm Digital Phase 1 60 dBm Digital Phase 2 60 dBm	
Intermodulation	80 dB	
Spurious Response Rejection	80 dB	
Audio	<i>Analog Frequency Response</i> +1 dB, -3 dB (per TIA-603-D) <i>Hum and Noise Ratio (25 kHz Analog)</i> 46dB <i>Hum and Noise Ratio (12.5 kHz Analog)</i> 40dB <i>Output Power (3Ω load)</i> 15 W <i>Distortion</i> <2%	

Environmental Specifications I		
Environment	Mil Spec	810G
	M	P
Low Pressure	500.5	II
High Temp.	501.5	I, II
Low Temp.	502.5	I, II
Temp. Shock	503.5	I (D)
Solar Radiation	505.5	I (A1)
Rain/Blown Rain	506.5	I, III
Humidity	507.5	II
Salt Fog	509.5	NA
Dust and Sand	510.5	I, II
Vibration	514.6	I (4), II
Shock	516.6	I, II, V, VI
M=Method, P=Procedure Also meets equivalent superseded C, D and E standards.		
International Protection Standard		
Dust & Water	IP54 (Standard control head with VM600) IP56 (Viking control head with VM600)	
Encryption Options FIPS VALIDATOR 140 2		
Supported Encryption	AES, DES, DES-OFB, ARC4	
Encryption Key/Radio	126 Common Key Reference (CKR), 126 Physical Identifier, (PID), Compatible w/ Motorola Key Variable Loader	
Encryption Frame Re-sync Interval	P25 CAI 360 MSEC	
Encryption Keying	External Key Loader, OTAR	
Synchronization	CFB-Cipher Feedback OFB-Output Feedback	
Vector Generator	National Institute of Standards and Technology (NIST) Approved random number generator	
Encryption Type	Digital	
Key Erasure	Keyboard Command	
Code Key Initialization	Internal Pseudorandom Generator	
Standards	FIPS 46-3, FIPS 81, FIPS 140-2, FIPS 197	



Viking® Control Head



Standard Control Head

All specifications are subject to change without notice. Please check the website for the latest version.
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EF Johnson Technologies, Inc.
 1440 Corporate Drive, Irving, TX 75038-2401
 800.328.3911 • www.efjohnson.com

JVCKENWOOD Group

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