

## VM6000

VHF · UHF (High & Low) · 700/800 MHz

P25 Phase 1 & 2 · Viking16

Uncompromised quality and performance with public safety ergonomics, the KENWOOD Viking® is the industry's only mobile platform providing TrueVoice™ noise cancellation.

### Features

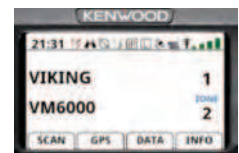
- Mixed protocol operation (P25 Phase 1 & 2 Trunking, P25 Conventional, Viking16, FM Analog)
- 1024 channels (2048 and 4096 options)
- Mixed protocol zones
- P25 Authentication (Link Layer Authentication)
- P25 IP packet data
- P25 GPS data (built in GPS)<sup>1</sup>
- MDC-1200 & GE-Star signaling
- Analog & P25 Conventional vote scan
- Remote mount only (KCH-20RV Control Head)
- Dual Control Heads (option)
- External speaker
- Fixed control station
- WiFi
- Bluetooth
- Instant Recording Replay (IRR)
- Voice Recording
- Text Messaging
- Bluetooth Low Energy
- Custom Transmit Power Levels
- Encryption
  - ARC4™ software encryption; compatible with Motorola ADP™
  - DES-OFB
  - AES-256 (FIPS 140-2) Single and Multi-Key
  - Over-the-Air-Rekeying (OTAR)
  - VK5000 or Motorola KVL3000/KVL4000 Keyloaders

<sup>1</sup>Refer to the Viking VM6000 operating manual for detailed requirements & conditions for proper GPS operation.



### Enhanced Control Head

- Large display - 2.75" (36 x 60 mm)
- Resolution of 400 x 240 pixels
- Viewing angle of 140°
- Multi-color LCD + TX/RX (green/red) LEDs
- D-Pad & more PF keys, dedicated emergency key and channel/volume control knobs
- Replaceable A/B/C button labels
- User selectable themes (8 themes available)
- Day & night display options
- An optional KCH-21RV Handheld Control Head (HHCH) can be used with the VM6000 radio



Day - High Contrast



Night - High Contrast

### Compatible With P25 Systems

- ATLAS® P25 Phase 1 and Phase 2 System
- Motorola Astro® 25 - P25 Phase 1 & Phase 2
- Harris VIDA® - P25 Phase 1 & Phase 2
- Airbus (formerly Cassidian) VESTA™ Radio - P25 Phase 1 & Phase 2

### Accessories

Complete line of accessories including microphones, speakers & antennas. Download the accessory catalog at <https://info.efjohnson.com/viking-accessory-catalog/>

We combine P25 design expertise with recognized quality & reliability along with advanced technology to make KENWOOD Viking radios simple to use & maintain.



#### Perpetual Software Licensing

Adds greater value to your radios by extending the life of the software into your next hardware platform — you own the software option forever, and your licenses are simple to manage with our cloud-based tool — Vault™.



#### Armada® Fleet Management

Update your radios in a group rather than one at a time. One template programs both portables & mobiles. Supports direct computer connection, Over-the-Air Programming (OTAP), or Over-the-Internet Programming (OTIP).



#### TrueVoice™ Noise Cancellation

Software-based noise cancellation automatically filters out noise source frequencies and eliminates the need for extra configuration. Works in analog or digital mode and with any accessory.

# VM6730/6830/6930 Mobile Specifications

| General                                                                                   |                      | VM6730                                                                                                                   | VM6830                                                                                             | VM6930                                                                 |
|-------------------------------------------------------------------------------------------|----------------------|--------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|
| Frequency Range                                                                           |                      | 136-174 MHz                                                                                                              | Type 1: 450-520 MHz<br>Type 2: 380-470 MHz                                                         | RX: 762-776, 851-870 MHz<br>TX: 762-776, 792-806, 806-825, 851-870 MHz |
| Max. Channels Per Radio                                                                   |                      | 1024 (2048 and 4096 options)                                                                                             |                                                                                                    |                                                                        |
| Number of Zones                                                                           |                      | 255                                                                                                                      |                                                                                                    |                                                                        |
| Max. Channels Per Zone                                                                    |                      | 255                                                                                                                      |                                                                                                    |                                                                        |
| Channel Spacing                                                                           | Analog               | 12.5/15/20/25*/30* kHz                                                                                                   | 12.5/25* kHz                                                                                       | 12.5/25 kHz                                                            |
|                                                                                           | Digital              | 12.5 kHz                                                                                                                 | 12.5 kHz                                                                                           | 12.5 kHz                                                               |
| Power Supply                                                                              |                      | 13.6 V DC $\pm 15\%$                                                                                                     |                                                                                                    |                                                                        |
| Current Drain                                                                             | Standby              | 1.2 A                                                                                                                    |                                                                                                    |                                                                        |
|                                                                                           | RX                   | 3.0 A                                                                                                                    |                                                                                                    |                                                                        |
|                                                                                           | TX                   | 14 A                                                                                                                     |                                                                                                    |                                                                        |
| Operating Temperature                                                                     |                      | -22 °F to +140 °F (-30 °C to +60 °C)                                                                                     |                                                                                                    |                                                                        |
| Frequency Stability<br>[-22 °F to +140 °F<br>(-30 °C to +60 °C),<br>+77 °F Ref. (+25 °C)] |                      | $\pm 1.0$ ppm                                                                                                            |                                                                                                    |                                                                        |
| Dimensions (W x H x D):<br>RF Deck + KRK-17BF<br>(not including KCH-20RV)                 |                      | 6.73 x 1.89 x 7.24 in.<br>(171 x 48 x 184 mm)                                                                            |                                                                                                    | 6.73 x 1.89 x 8.03 in.<br>(171 x 48 x 204 mm)                          |
| Weight: RF Deck + KRK-17BF<br>(not including KCH-20RV)                                    |                      | 3.44 lbs (1.56 kg)                                                                                                       |                                                                                                    | 3.88 lbs (1.76 kg)                                                     |
| Receiver                                                                                  |                      | VM6730                                                                                                                   | VM6830                                                                                             | VM6930                                                                 |
| Sensitivity                                                                               | P25 Digital (5% BER) | -119 dBm (0.25 $\mu$ V)                                                                                                  |                                                                                                    |                                                                        |
|                                                                                           | Analog (12 dB SINAD) | -119 dBm (0.25 $\mu$ V)                                                                                                  |                                                                                                    |                                                                        |
| Selectivity                                                                               | P25 Digital          | 60 dB                                                                                                                    |                                                                                                    |                                                                        |
|                                                                                           | Analog @ 12.5 kHz    | 60 dB                                                                                                                    |                                                                                                    |                                                                        |
|                                                                                           | Analog @ 25 kHz      | 75 dB                                                                                                                    |                                                                                                    | 75 dB                                                                  |
| Intermodulation                                                                           |                      | 80 dB                                                                                                                    |                                                                                                    |                                                                        |
| Spurious Rejection                                                                        |                      | 85 dB                                                                                                                    |                                                                                                    | 87 dB                                                                  |
| Audio Distortion                                                                          |                      | 2%                                                                                                                       |                                                                                                    |                                                                        |
| Audio Output Power                                                                        |                      | RF Deck: 4 W/4 $\Omega$                                                                                                  |                                                                                                    |                                                                        |
| Modulation                                                                                |                      | FM, C4FM, H-DQPSK                                                                                                        |                                                                                                    |                                                                        |
| Transmitter                                                                               |                      | VM6730                                                                                                                   | VM6830                                                                                             | VM6930                                                                 |
| RF Output Power                                                                           |                      | 5W/50W                                                                                                                   | 5W/45W – (Type 1: 450-485 MHz)<br>5W/40W – (Type 1: 485-520 MHz)<br>5W/40W – (Type 2: 380-470 MHz) | 2W/30W (700 MHz)<br>2W/35W (800 MHz)                                   |
| Spurious Emission                                                                         |                      | -73 dB                                                                                                                   | -75 dB                                                                                             | -80 dB                                                                 |
| FM Hum & Noise                                                                            | Analog @ 12.5 kHz    | 45 dB                                                                                                                    |                                                                                                    | 40 dB                                                                  |
|                                                                                           | Analog @ 25 kHz      | 50 dB                                                                                                                    |                                                                                                    | 45 dB                                                                  |
| Audio Distortion                                                                          |                      | 2%                                                                                                                       |                                                                                                    |                                                                        |
| Emission Designator                                                                       |                      | VM6730/6830: 16K0F3E, 11K0F3E, 8K10F1E, 8K10F1D, 8K10F1W<br>VM6930: 16K0F3E, 14K0F3E, 11K0F3E, 8K10F1E, 8K10F1D, 8K10F1W |                                                                                                    |                                                                        |
| Modulation                                                                                |                      | FM, C4FM, H-CPM                                                                                                          |                                                                                                    |                                                                        |

| Mil Standard     | 810C        | 810D        | 810E        | 810F         | 810G         |
|------------------|-------------|-------------|-------------|--------------|--------------|
| Low Pressure     | 5001/ I     | 5002/ I, II | 5003/ I, II | 5004/ I, II  | 5005/ I, II  |
| High Temperature | 5011/ I, II | 5012/ I, II | 5013/ I, II | 5014/ I, II  | 5015/ I, II  |
| Low Temperature  | 5021/ I     | 5022/ I, II | 5023/ I, II | 5024/ I, II  | 5025/ I, II  |
| Temp. Shock      | 5031/ I     | 5032/ I     | 5033/ I     | 5034/ I, II  | 5035/ I      |
| Solar Radiation  | 5051/ I     | 5052/ I     | 5053/ I     | 5054/ I      | 5055/ I      |
| Rain             | 5061/ I, II | 5062/ I, II | 5063/ I, II | 5064/ I, III | 5065/ I, III |

| Mil Standard                      | 810C                    | 810D          | 810E          | 810F         | 810G        |
|-----------------------------------|-------------------------|---------------|---------------|--------------|-------------|
| Humidity                          | 5071/ I, II             | 5072/ II, III | 5073/ II, III | 5074         | 5075/ II    |
| Salt Fog                          | 5091/ I                 | 5092/ I       | 5093/ I       | 5094         | 5095        |
| Dust                              | 5101/ I                 | 5102/ I       | 5103/ I       | 5104/ I, III | 5105/ I     |
| Vibration                         | 514.2/ VIII, X          | 514.3/ I      | 514.4/ I      | 514.5/ I     | 514.6/ I    |
| Shock                             | 516.2/ I, V             | 516.3/ I, V   | 516.4/ I, V   | 516.5/ I, V  | 516.6/ I, V |
| International Protection Standard |                         |               |               |              |             |
| Dust & Water                      | IP54, IP55 <sup>1</sup> |               |               |              |             |

<sup>1</sup>IP54: RF Deck of the mobile radio; IP55: Remote Control Head for the mobile radio.

| Encryption Options                |                                                                                                           |
|-----------------------------------|-----------------------------------------------------------------------------------------------------------|
| Supported Encryption              | AES, 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                                                                                 |
| Mode                              | OFB-Output Feedback                                                                                       |
| Encryption Type                   | Digital                                                                                                   |
| Key Erasure                       | Keyboard Command                                                                                          |
| Standards                         | FIPS 46-3, FIPS 81, FIPS 140-2, FIPS 197                                                                  |

\*25/30 kHz in VHF/UHF Bands are not included in the models sold in the USA or US territories. Analog measurements made per TIA 603 and specifications shown are typical. Digital measurements made per TIA 102CAAA and specifications shown are typical. VM6730/6830/6930 Mobile SPECIFICATIONS All specifications are subject to change without notice. Please check the website for the latest version. V.02.01.23  
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