

# EVX-S24

## COMPACT, DISCREET, LIGHTWEIGHT

### PORTABLE DIGITAL RADIO

Give your team members a compact, discreet, and lightweight radio that allows them to be comfortable in any situation.

Worn on a belt, tucked away in a pocket or clipped to a lapel, the water-submersible and dust-proof EVX-S24 is designed to survive demanding conditions. It operates in both analog and digital modes, so it's ideal for use with mixed fleets. And in digital mode, enjoy noise cancellation for crisp audio and clear conversations.

#### GENERAL FEATURES

- Water Submersible and Dust Proof (IP67)
- Channel Capacity:
  - 256 Channels/ 16 Groups
- 4 Programmable Keys
- 8 Character Alphanumeric Display
- Safety Features:
  - Lone Worker Alert
  - Emergency Alert
- Multiple Scan Options
- Better Radio Call Quality with AMBE+2™ Vocoder
- Battery Status Indicator (Low Battery Alert)
- Battery Saver
- Busy Channel Lock Out (BCLO)
- Time Out Timer
- Key Lock
- AF Minimum Volume
- Auto Power Off
- Escalating Alerts
- Low Power
- Whisper Mode
- RSSI Indicator
- Internal VOX (VH-190 Required)

#### SIGNALING FEATURES

- MDC-1200® ANI Encode
  - MDC-1200 ANI
  - MDC-1200 Call Alert
  - MDC-1200 Sel Call
  - MDC-1200 Radio Check
  - MDC-1200 Stun/Revive
- FleetSync® ANI Encode
- CTCSS/DCS Encode and Decode
- 2-Tone Encode/Decode
- 5-Tone Encode/Decode
- Stun/Kill/Revive (5-Tone and DTMF Pager)
- DTMF Encode/Decode
- DTMF ANI
- DTMF Paging
- DTMF Speed Dial

#### ANALOG MODE FEATURES

- Busy Tone Lock Out (BTLO)
- Auto Range Transponding System (ARTS™)
- Voice Inversion Encryption

#### DIGITAL MODE FEATURES

- Direct Mode
- Transmit Interrupt
- Site Search
- Message Control and Privacy
- Text Message
- All, Group and Private Call
- Basic and Enhanced Privacy
- Radio Check
- Radio STUN/REVIVE
- Remote Monitor (Decode)
- Call Alert
- Call History
- Simplex Only and Repeater Capable Encryption
- Emergency
- Radio Enable/Disable
- Scan Options:
  - Scan (Mixed Mode - Analog/Digital Channels)
  - Scan (Operator Selectable On/Off)



GOODBYE  
CROSSTALK



BROADEN  
YOUR REACH



COME IN LOUD  
AND CLEAR



KEEP YOUR  
TEAM SAFE



POWER THROUGH  
THE SHIFT



## GENERAL SPECIFICATIONS

|                                               |                                                     |
|-----------------------------------------------|-----------------------------------------------------|
| Frequency Range                               | UHF: 403 – 470 MHz                                  |
| Dimension (H x W x D)                         | 3.58 x 2.17 x 1.24 Inches (91 x 55 x 31.5 mm)       |
| Weight Approx. with Antenna, Belt Clip        | 7.6 oz [215 g] with [FNB-V142LI, ATU-20, Belt Clip] |
| Display                                       | 8 Character Alphanumeric                            |
| Channel Spacing                               | 25/12.5 kHz                                         |
| Number of Channels and Groups                 | 256/16                                              |
| Programmable Buttons                          | 4 (Front: 3, Side: 1)                               |
| Battery Life [5-5-90 Duty with Battery Saver] | Digital 3W: 12 Hours/Analog 2W: 11 Hours            |
| IP Rating                                     | 67                                                  |
| Power Supply Voltage                          | 3.7 VDC (Nominal)                                   |
| Operating Temperature Range                   | -22° F to +140° F (-30° C to +60° C)                |
| Frequency Stability                           | ± 1.5 ppm                                           |
| RF Input-Output Impedance                     | 50 Ohms                                             |

## RECEIVER SPECIFICATIONS

measured by TIA/EIA 603

|                              |                                                                           |
|------------------------------|---------------------------------------------------------------------------|
| Sensitivity                  | Analog 12 dB SINAD: 0.25 uV<br>Digital 1% BER: 0.28 uV                    |
| Adjacent Channel Selectivity | TIA603: 70/60 dB (25 kHz/12.5 kHz)<br>TIA603D: 70/45 dB (25 kHz/12.5 kHz) |
| Intermodulation              | 70 dB                                                                     |
| Spurious Rejection           | 70 dB                                                                     |
| Audio Output                 | 500 mW @ 4 Ohms 10 % THD                                                  |
| FM Hum and Noise             | 45/40 dB (25 kHz/12.5 kHz)                                                |
| Conducted Spurious Emission  | -57 dBm                                                                   |

## TRANSMITTER SPECIFICATIONS

measured by TIA/EIA 603

|                             |                                                                                                                       |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------|
| Output Power                | Digital 3 W/2 W/1 W/0.5 W, Analog 2 W/1 W/0.5 W                                                                       |
| Modulation Limiting         | ± 5 kHz (25 kHz); ± 2.5 kHz (12.5 kHz)                                                                                |
| Conducted Spurious Emission | -36 dBm (≤1 GHz), -30 dBm (>1 GHz)                                                                                    |
| FM Hum and Noise            | 45/40 dB (25 kHz/12.5 kHz)                                                                                            |
| Audio Distortion            | < 5 % @ 1 kHz                                                                                                         |
| Adjacent Channel Power      | 70/60 dB                                                                                                              |
| Analog FM Modulation        | 16K0F3E [25 kHz], 11K0F3E [12.5 kHz]                                                                                  |
| 4FSK Digital Modulation     | 12.5 kHz Data: 7K60F1D/7K60FXD<br>12.5 kHz Voice: 7K60F1E/7K60FXE<br>Combination of 12.5 kHz Voice and Data: 7K60F1 W |
| Digital Vocoder Type        | AMBE+2                                                                                                                |
| Digital Protocol            | ETSI102 361-1, -2, -3                                                                                                 |

## APPLICABLE MIL-STD

| Standard          | Methods/Procedures |                                     |                                     |                                    |                                                    |
|-------------------|--------------------|-------------------------------------|-------------------------------------|------------------------------------|----------------------------------------------------|
|                   | MIL 810C           | MIL 810D                            | MIL 810E                            | MIL 810F                           | MIL 810G                                           |
| Low Pressure      | 500.1 proc 1       | 500.2 proc 2                        | 500.3 proc 2                        | 500.4 proc 1/2                     | 500.5 proc 1/2                                     |
| High Temperature  | 501.1 proc 1/2     | 501.2 proc 1/A1<br>proc 2/A1        | 501.3 proc 1/A1<br>proc 2/A1        | 501.4 proc 1/HOT<br>proc 2/HOT     | 501.5 proc 1/A1<br>proc 2/A2                       |
| Low Temperature   | 502.1 proc 1       | 502.2 proc 1/Cat 3<br>proc 2/Cat 1  | 502.3 proc 1/Cat 3<br>proc 2/Cat 1  | 502.4 proc 1/Cat 3<br>proc 2/Cat 1 | 502.5 proc 1/Cat 3<br>proc 2/Cat 1<br>proc 3/Cat 1 |
| Temperature Shock | 503.1 proc 1       | 503.2 proc 1/A1 Cat 3               | 503.3 proc 1/A1 Cat 3               | 503.4 proc 1                       | 503.5 proc 1/C                                     |
| Solar Radiation   | 505.1 proc 2       | 505.2 proc 1                        | 505.3 proc 1                        | 505.4 proc 1                       | 505.5 proc 1/A1                                    |
| Rain              | 506.1 proc 1/2     | 506.2 proc 1/2                      | 506.3 proc 1/2                      | 506.4 proc 1/3                     | 506.5 proc 1/3                                     |
| Humidity          | 507.1 proc 2       | 507.2 proc 2                        | 507.3 proc 2                        | 507.4                              | 507.5 proc 2/Agg                                   |
| Salt Spray/Fog    | 509.1 proc 1       | 509.2 proc 1                        | 509.3 proc 1                        | 509.4                              | 509.5                                              |
| Dust              | 510.1 proc 1       | 510.2 proc 1                        | 510.3 proc 1                        | 510.4 proc 1                       | 510.5 proc 1                                       |
| Blowing Sand      | —                  | 510.2 proc 2                        | 510.3 proc 2                        | 510.4 proc 2                       | 510.5 proc 2                                       |
| Vibration         | 514.2 proc 8/F, W  | 514.3 proc 1/Cat 10<br>proc 2/Cat 3 | 514.4 proc 1/Cat 10<br>proc 2/Cat 3 | 514.5 proc 1/Cat 24                | 514.6 proc 1/Cat 24                                |
| Shock             | 516.2 proc 1/2/3/5 | 516.3 proc 1/4/6                    | 516.4 proc 1/4/6                    | 516.5 proc 1/4/6                   | 516.6 proc 1/4/6                                   |

## ACCESSORIES

### Antennas

- ATU-6A: 400-430 MHz 6.5" (16.51 cm)
- ATU-6B: 420-450 MHz 6.1" (15.49 cm)
- ATU-6C: 440-470 MHz 6.1" (15.49 cm)
- ATU-6D: 450-485 MHz 6" (15.24 cm)
- ATU-20AS: Stubby 400-430 MHz 3.15" (8 cm)
- ATU-20CS: Stubby 420-450 MHz 3.15" (8 cm)
- ATU-20DS: Stubby 440-470 MHz 3.15" (8 cm)
- ATU-20FS: Stubby 450-480 MHz 3.15" (8 cm)
- ATU-21AS: Super Stubby 400-420 MHz 2" (5.08 cm)
- ATU-21CS: Super Stubby 420-440 MHz 2" (5.08 cm)
- ATU-21DS: Super Stubby 440-460 MHz 2" (5.08 cm)
- ATU-21FS: Super Stubby 460-480 MHz 2" (5.08 cm)

### Battery

- PMNN4468: 2300 mAh Li-Ion Battery

### Carry Solutions

- LCC-S24: Leather Case, Belt Loop
- LCC-S24S: Leather Case, Swivel Belt Loop
- Clip-27: Belt Clip

### Chargers

- PA-57: Power Adapter
- CD-65: Standard Single Unit Charging Cradle
- CD-66: Enhanced Single Unit Charging Cradle
- VAC-6066: Multi Unit Charger

### Audio Accessories

- MH-89A4B: Earpiece Microphone
- MH-90A4B: Compact Speaker Microphone
- MH-66F4B: IP57 Submersible Speaker Microphone
- VH-190: VOX Lightweight Headset, Behind-the-Head



EVX-S24 Yellow

EVX-S24 Black