

SOLICITATION W913FT-11-R-0019

MIDNIGHT COMMUNICATION EQUIPMENT

ITEM	DESCRIPTION	QTY	U. PRICE	T. PRICE
1	<p>VHF-FM Marino IC-M422 – Icom or Equivalent</p> <p>Specifications: Frequency range Tx 156.025-157.425 MHz Rx 156.050 - 163.275 MHz Usable channels: USA, INT, CAN, WX channels Type of emission: 16K0G3E (FM), 16K0G2B (DSC) Power supply requirement: 13.8V DC ±15% Current drain (at 13.8V DC) Tx 5.5A (at 25W output) Rx 1.5A (at AF max.) Operating temp. range: -20°C to +60°C, -4°F to +140°F Antenna impedance: 50Ω (SO-239) Dimensions 164(W) × 78(H) × 139.3(D) mm (Projections not included) 615/32(W) × 31/16(H) × 515/32(D)in, Weight (approx.): 1070g; 2.4lb, NMEA In/out formats: RMC, CGA, GNS, GLL</p> <p>Transmitter Output power: 25W, 1W (at 13.8V DC) Modulation system: Variable reactance freq. mod. Max. freq. deviation: ± 5.0 kHz Frequency error: ± 10.0ppm (-20°C to +60°C) Spurious emissions: Less than -70dBc Residual modulation: More than 40dB Adjacent Ch. Power: More than 70dB Audio frequency response: +1dB to -3dB of 6dB octave from 300 Hz to 2500 Hz</p> <p>Receiver Intermediate freq.: 1st 21.7 MHz, 2nd 450 kHz Sensitivity: 0.22μV typical at 12dB SINAD Squelch sensitivity: Less than 0.22uV Adjacent Ch. Selectivity: More than 70dB Spurious response: More than 70dB Intermodulation: More than 70dB Hum and noise ratio: More than 40dB Audio output power: 4.5W typical at 10% distortion with a 4Ω load , Audio frequency response: +1dB to -3dB of 6dB octave from 300Hz to 2500 Hz.</p>	29 EA		
2	<p>IC-A110 VHF Air Band Transceiver – Icom or Equivalent</p> <p>Specifications: Frequency range: 118.000 - 136.975 MHz Channel spacing (according to version): 8.33/25 kHz auto selection or 25 kHz only Mode: 6K00A3E (AM)</p>	29 EA		

	<p>No. of memory Ch.: 20 Antenna connector: SO-239 (50Ω) Power supply requirement (negative ground): 13.75 V DC or 27.5 V DC automatic selections Current drain (at 13.75 V DC) Transmitting: 5.0A max. Receiving: 4.0A (at AF max.) 0.5A (at stand-by) Operating temperature range: -30°C to +60°C; -22°F to +140°F Frequency stability: ±5 ppm (-30°C to +60°C) Dimensions (projections not incl.): 150(W) × 50(H) × 180(D) mm 529/32(W) × 131/32(H) × 73/32(D) in Weight (approx.): 1.5 kg; 3 lb 5 oz</p> <p>Transmitter Output power: 36 W typ. pep (9 W typ. for CW) Modulation limiting: 70 - 100% (IC-A110) Modulation compression: Linear 85% Max. 95% AF harmonic distortion: Less than 10% (at max. mod.) Hum and Noise ratio: More than 40 dB Spurious emissions: Less than -16 dBm Adjacent Ch. power*: Less than 60 dB (25 kHz) Less than 50 dB (8.33 kHz) Microphone connector: 8-pin modulator (600Ω)</p> <p>Receiver Receiving system: Double conversion superheterodyne Intermediate freq.: 1st 38.85 MHz, 2nd 450 kHz Sensitivity (pd): Less than 1 μV (at 6 dB S/N) Squelch sensitivity (pd; at threshold): Less than 0.3 μV Selectivity 25 kHz Ch. Spacing More than ±8 kHz (at -6 dB), Less than ±17 kHz (at -40 dB), Less than ±25 kHz (at -60 dB), 8.33 kHz Ch. Spacing, More than ±2.778 kHz (at -6 dB), Less than ±7.37 kHz (at -60 dB) Spurious response: More than 74 dBμ Intermodulation Rejection ratio*: More than 64 dB Blocking/desensitisation*: More than 70 dB Cross modulation: Rejection* More than 70 dB Audio output power (at 13.75 V; 10% dist.; 60% mod.), Internal speaker 1.5 W typical w/8Ω load, External Speaker More than 10.0 W w/8Ω load, Headset (side tone) More than 0.1 W w/500Ω load, AF output impedance, EXT SP 8Ω, Headset (side tone) 500Ω</p>			
3	<p>Micom 3T HF-SSB Transceiver – Motorola or Equivalent</p> <p>Specifications Frequency Range: 1.6-30 MHz Number of Channels: 200 Transmission: 125 Watt PEP average Reception: 100 kHz-30 MHz Rx Operating Voltage: 13.8 V ±20%; 24 V operation (option) Bandwidth: Audio: 350 to 2700 Hz Data: 300 to 3300 Hz Frequency Stability: 0.6 PPM (0.1 PPM optional)</p>	29 EA		

	<p>Frequency Resolution: 10 Hz Operating Temperature Range: -30°C to +60°C / -22°F to +140°F Humidity: 95% @ 50°C / 122°F Sensitivity (SINAD): SSB: 0.3 μV for 10 dB SINAD Dimensions Control Head Height 92 mm / 3.7 inches 60 mm / 2.36 inches Width 302 mm / 11.9 inches 187 mm / 7.36 Depth 270 mm / 10.7 inches 70 mm / 2.75 Weight 5.7 Kg / 12.5 lbs 0.32 Kg / 0.71 lbs</p> <p>Options PC control and programming software package, USB for external keyboard, Micom Link interface, ALE DTM/DBM Interface for secure voice device VP116</p>			
4	<p>Marine Intercom System 9800 – David Clark or Equivalent</p> <p>The Series 9800 is a rugged, water-tight intercom system that provides clear intercom and radio communication solutions for the high-noise environments of the “go fast” and high performance racing as well as recreational and work boats.</p> <p>The system includes features such as: Accommodates up to six crew members on intercom, Full duplex voice activated intercom communication, Ability to connect two radios with split audio capability (left ear Radio 1, right ear Radio 2 receive) and is compatible with most marine, mobile, VHF and UHF band radios, Expandable to five radios with optional Multi-Radio Interface Module, AUX-IN connection for stereo music input. Automatic mute during Radio 1 or Radio 2 transmit/receive, Power input range 11-30 VDC, Corrosion-resistant, weather tight shielded enclosure for increased durability, Cell phone adapters.</p>	30 EA		
5	<p>The Mariner Antenna Series 4400 – Shakespeare or Equivalent</p> <p>Shakespeare's newest line of VHF antennas brings you the best performance at the most affordable cost. The Mariner 4400 is designed for small powerboats that require a rugged antenna. Stainless whip and a base loading coil for exceptional performance. Wide 3dB radiation pattern allows boats to pitch and roll without having transmissions get clipped. Mounts on standard 1” x 14 antenna mounts, so you can use it on tubular T-Tops with a clamp-on rail mount, or on hard T-Tops using a ratchet mount.</p> <p>Includes 15’ of coax and a PL-259 coax connector. Coax exits through base of antenna for extra clean</p>	30 EA		

	<p>installations.</p> <p>Note: while this is very similar to the Shakespeare Mariner 4200, this is not for sailboats due to the short coax length and heavier base.</p> <p>Application: Marine VHF Gain: 3dB Length: 3' Material: Stainless-steel whip Elements: Base loaded Base Type: Mirror-finished stainless steel ferrule with 1" 14-thread Lead: 15' RG-58 A/U, PL-259 Warranty: Five years</p>			
6	<p>DSP-9000 Safety Equipment Voice – Technical Communications Corporation TCC or Equivalent.</p> <p>Specifications: All DSP 9000 UNITS: Encryption: TCC proprietary Enhanced Domain Transform (EDT), controlled by a non-linear Key Stream Generator, CRYPTO Key Variables: System key: 8.39 x 1079, Network key: 6.55 x 104, Local key: 7.2 x 1016, Total keys: 4.0 x 10101, Synchronization: In band digitally controlled, FSK sync burst (74 bits), Frequency Control: High-stability crystal oscillator, Frequency Offset: ±120 Hz maximum for HF-SSB, Audio Interface: 'Soft' Selectable Interface Characteristics, Audio Bandwidth: Voice Mode: 300 Hz to 2800 Hz, Data Mode: 300 Hz to 3000 Hz, Required Channel Bandwidth: 500 Hz to 2400 Hz Minimum, Diagnostics: BITE run at power on and on demand from keypad, Humidity: 120 hours, 95% non-condensing, MIL-STD-810C, Method 507 , EMI: MIL-STD-461B, Class A3, MTBF: Exceeds 10,000 hours, per MIL-HDBK-217F & MIL-STD-756, Options and Accessories: Crypto Management System Smart Module™ key fill device, DSP 9000 (Base) Key Storage: 800 Local Keys stored in two key banks containing 400 keys, Key Loading: Smart Module™ or KFD-800 key fill devices, or keypad entry, Bi-Directional Operation: Half duplex and Full duplex models, Size and Weight: Height: 2.25" (5.7 cm), Width: 8.25 " (21 cm), Depth: 11.0" (28 cm) Weight: 5.7 lbs (2.6kg) half duplex; 6.8 lbs (3.1kg) full duplex Power: DC Voltage: +9 to +32 VDC 1 watt (typical), Audio Interface: H-189/HC-250 handset, 4 wire/600 ohm, MIC/Speaker, Telephone direct wired, Push to Talk, Signal: Contact closure to ground or to positive supply (+32 V max), Diagnostics: Full range of BITE including: CPU, RAM, ROM, DSP, analog test, audio loop, keypad, key fill, key storage and display, Environmental: Temperature Operating: -20° C to +70° C, Storage: -40° C to +85° C, Vibration: 1.5G peak, 55-220 Hz, MIL-STD-810C, Method 514, Shock: 40Gs @ 11ms, MIL-</p>	28 EA		

	<p>STD-810C, Method 516, Options and Accessories: TCC Secure Phone KFD-800 key fill device, Remote Control Unit ,19 inch rack mount, single/dual ,Aircraft Mounting Tray (with or without shock mounts),Shock mount assembly, Automatic Test Equipment, DSP 9000 HANDSET Key Storage: 200 Local Keys stored in two key banks containing 100 keys, Key Loading: Smart Module™ key fill device, or keypad entry, Operation: Half duplex / PTT Sync (only). Size and Weight: Height: 9" (23 cm),Width: 2" (5.1 cm), Depth: 4" (10.2 cm), Weight: 2.0 lbs (.9kg),Power Requirements: Externally supplied, 9 - 36 VDC,1 watt (typical),Audio Interface: 6-pin MIL-C-55116 connector, Aux connectors with DC power, Others available on request, Push to Talk Signal: Contact closure to ground. Environmental: Temperature: Operating: -20°C to +60°C, Storage: - 40°C to +85°C, Waterproof: Submersible to 1 meter, Vibration:1 Grams, 5-200 Hz random curve,MIL-STD-810D, Method 514.3, Shock:100 G's at 11 ms,MIL-STD-810D, Method 516.3.</p>			
7	<p>AH-4 HF+50 MHz Automatic Antenna Turner – Icom or Equivalent.</p> <p>Specifications: Frequency range: 3.5–54 MHz (with an antenna longer than 7 m; 23 ft),7–54 MHz (with the AH-2b),Maximum input power: 120 W, Input impedance: 50 Ω, Tuning power required: 10 W (5–15 W), Rated voltage: 13.8 V DC ±15% (current drain less than 1 A),Usable temperature range: –10°C to +60°C (+14°F to +140°F),VSWR: 2.0: 1 or less (except antennas a half wave or multiple of a half wave in length),Weight: 1.2 kg (2.65 lb), Dimensions: 172(W) × 69.5(H) × 230(D) mm; 625/32(W) × 63/4(H) × 91/16(D) in.</p>	29 EA		
8	<p>AH-2B Icom Antenna Element and Base – Icom or Equivalent.</p> <p>Specifications: Bumper mount HF mobile antenna, 8.2 feet (2.5 m) tall. HF mobile antenna, whip type, complete with base and spring, Features a stainless steel spring, Output Power Up to 200 Watts PEP, Frequency Range 3.5 to 28 MHz (when used with antenna tuner), For mobile operation with the AT-140 or AT-130/E,All bands between 7-30MHz can be matched.</p> <p>Includes: Antenna Base (1), Antenna Element, 2.5m (1), Antenna Base Bracket (1), Hex Bolt M16x50 (2),Hex Bolt M6x50 (2), L Angle Bracket (1), Hex Bolt M8x15 (4),Tow Hook Bracket (1),Antenna Feeder Cable 90cm (1),Cable Lock (1), Waterproof Cap (1),Allen Key Wrench (1)</p> <p>Radio Compatibility: IC-F7000,IC-78,IC-756PRO II, III,IC-7400,IC-706MKIIG,IC-718,IC-703 .</p>	29 EA		
9	<p>9505A Satellite Phone – Iridium or Equivalent</p> <p>Specifications:</p>	28 EA		

<p>Dimensions: 158 L x 62 W x 59 D mm, Volume: Under 375 cc (22.9 ci), Weight: Under 375 g (13.2 oz)</p> <p>Battery Life: Provides up to 30 hours of standby time Provides up to 3.6 hours of talk time.</p> <p>Talk Time Features: Provides up to 30 hours of standby time, Provides up to 3.6 hours of talk time.</p> <p>Display: 4 x 16 character illuminated graphic display User-controlled illuminated display.</p> <p>Calling Features: Call barring, Call forwarding – unconditional, mobile subscriber busy, subscriber not reachable, Clear last digit/clear all digits, Fixed Dialing International access key sequence (+ key).</p>			
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