**General**

**Name**
Motorola Transceiver; Astro Spectra W4

**ID# 101**

<table>
<thead>
<tr>
<th>Model Number(s)</th>
<th>Astro Spectra W4</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Technology</strong></td>
<td>Mobile, conventional and trunked portable radio</td>
</tr>
<tr>
<td><strong>Manufacturer</strong></td>
<td>Motorola USA</td>
</tr>
<tr>
<td></td>
<td>1301 E. Algonquin Road</td>
</tr>
<tr>
<td></td>
<td>Schaumburg, Illinois 60196</td>
</tr>
<tr>
<td></td>
<td>800–247–2346 (Tel)</td>
</tr>
<tr>
<td></td>
<td>POC: Ron Zeberlein</td>
</tr>
<tr>
<td></td>
<td>410–712–6014 (Tel)</td>
</tr>
</tbody>
</table>

**Secure Communication Capability**

- Yes

**Availability**

- Available

**Frequency Range**

- VHF: 136 MHz to 174 MHz
- UHF: 403 MHz to 433 MHz, 438 MHz to 470 MHz, 450 MHz to 482 MHz and 482 MHz to 512 MHz, 800 MHz: 806 MHz to 824 MHz and 851 MHz to 870 MHz
- One

**Number of Personnel Supported by System**

- Not specified

**Source**

- Motorola

**Operational Parameters**

- **Number of Channels**
  - 128 channels
- **Transmitter Power Output Levels**
  - 10 W to 110 W
- **Battery Options**
  - Limited options
- **Battery Recharging Options**
  - Not specified

**Physical Parameters**

- **Size**
  - 2 in x 7.1 in x 2.2 in
- **Weight**
  - 6.1 lb
- **Power Requirements**
  - 12 V dc
- **External Power**
  - Not specified

**Available Accessories**

- **Speaker-Microphones**
  - Yes
<table>
<thead>
<tr>
<th>Feature</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carrying Cases</td>
<td>No</td>
</tr>
<tr>
<td>Battery Eliminators</td>
<td>Not specified</td>
</tr>
<tr>
<td>Vehicle Adapters</td>
<td>Not specified</td>
</tr>
<tr>
<td><strong>Logistical Parameters</strong></td>
<td></td>
</tr>
<tr>
<td>Programming</td>
<td>Dealer/User (authorized technician)</td>
</tr>
<tr>
<td>Repairs</td>
<td>Dealer</td>
</tr>
<tr>
<td>Decontamination</td>
<td>Not specified</td>
</tr>
<tr>
<td>Durability/Ruggedness</td>
<td>Standard use</td>
</tr>
<tr>
<td>Environmental Conditions</td>
<td>-22 °F to 140 °F</td>
</tr>
<tr>
<td>Unit Cost</td>
<td>$2.4K MSRP and contact dealer for discount pricing</td>
</tr>
<tr>
<td>Battery Cycle Life</td>
<td>Not specified</td>
</tr>
<tr>
<td>Rapid Charge Battery Cycle Life</td>
<td>Not specified</td>
</tr>
<tr>
<td>Maintenance Cost</td>
<td>Not specified</td>
</tr>
<tr>
<td>Interface Capability</td>
<td>Not specified</td>
</tr>
<tr>
<td><strong>Special Requirements</strong></td>
<td></td>
</tr>
<tr>
<td>Operator Skills Required</td>
<td>Average</td>
</tr>
<tr>
<td>Operator Training Requirements</td>
<td>Average</td>
</tr>
<tr>
<td>Training Available</td>
<td>Yes</td>
</tr>
<tr>
<td>Manuals Available</td>
<td>Yes</td>
</tr>
<tr>
<td>applicable Regulations</td>
<td>Not specified</td>
</tr>
<tr>
<td>Support Equipment</td>
<td>Available</td>
</tr>
<tr>
<td>Warranty</td>
<td>1 yr</td>
</tr>
<tr>
<td>Mil Spec/Mil-Std Ratings</td>
<td>Meets Mil Spec 810E</td>
</tr>
<tr>
<td>Intrinsically Safe</td>
<td>Not specified</td>
</tr>
</tbody>
</table>
### General

**Name**  
Motorola Transceiver; Astro Spectra W5

**ID#** 102

### Model Number(s)

Astro Digital Spectra W5

### Technology

Mobile, conventional and trunked portable radio

### Manufacturer

Motorola USA  
1301 E. Algonquin Road  
Schaumburg, Illinois 60196  
800–247–2346 (Tel)

POC: Ron Zeberlein  
410–712–6014 (Tel)

### Secure Communication Capability

Yes

### Availability

Available

### Frequency Range

- VHF: 136 MHz to 174 MHz
- UHF: 403 MHz to 433 MHz, 438 MHz to 470 MHz, 450 MHz to 482 MHz, and 482 MHz to 512 MHz
- 800 MHz: 806 MHz to 870 MHz

### Number of Personnel Supported by System

Multiple

### Geographic Coverage

Not specified

### Current User(s)

Not specified

### Source

Motorola

### Operational Parameters

**Number of Channels**

128 channels

**Transmitter Power Output Levels**

10 W to 110 W (35 W on 800 MHz)

**Battery Options**

Not applicable

**Battery Recharging Options**

Not applicable

### Physical Parameters

**Size**

2 in x 7.1 in x 2.2 in

**Weight**

6.1 lb

**Power Requirements**

12 V dc

**External Power**

Not applicable

### Available Accessories

**Speaker-Microphones**

Not applicable
| Carrying Cases | Not applicable |
| Battery Eliminators | Not applicable |
| Vehicle Adapters | Not applicable |

**Logistical Parameters**

| Programming | Dealer/User (authorized technician) |
| Repairs | Dealer |
| Decontamination | Not specified |
| Durability/Ruggedness | Standard use |
| Environmental Conditions | -22 °F to 140 °F |
| Unit Cost | $2.4K MSRP and contact dealer for discount pricing |
| Battery Cycle Life | Not specified |
| Rapid Charge Battery Cycle Life | Not specified |
| Maintenance Cost | Not specified |
| Interface Capability | Digital capable |

**Special Requirements**

| Operator Skills Required | Average |
| Operator Training Requirements | Average |
| Training Available | Yes |
| Manuals Available | Yes |
| applicable Regulations | Not specified |
| Support Equipment | Available |
| Warranty | 1 yr |
| Mil Spec/Mil-Std Ratings | Meets Mil Spec 810E |
| Intrinsically Safe | Not specified |
**General**

Name
ID# 103

**Motorola Transceiver; Astro Spectra W7**

**Model Number(s)**
Astro Digital Spectra W7

**Technology**
Mobile, conventional and trunked portable radio

**Manufacturer**
Motorola USA
1301 E. Algonquin Road
Schaumburg, Illinois 60196
800–247–2346 (Tel)

POC: Ron Zeberlein
410–712–6014 (Tel)

**Secure Communication Capability**
Yes

**Availability**
Available

**Frequency Range**
VHF: 136 MHz to 174 MHz
UHF: 403 MHz to 433 MHz, 438 MHz to 470 MHz
450 MHz to 482 MHz, and 482 MHz to 512 MHz
800 MHz: 806 MHz to 870 MHz

**Number of Personnel Supported by System**
Multiple

**Geographic Coverage**
Not specified

**Current User(s)**
Not specified

**Source**
Motorola

**Operational Parameters**

**Number of Channels**
255 channels

**Transmitter Power Output Levels**
10 W to 110 W (35 W on 800 MHz)

**Battery Options**
Not applicable

**Battery Recharging Options**
Not applicable

**Physical Parameters**

**Size**
2 in x 7.1 in x 2.2 in

**Weight**
6.1 lb

**Power Requirements**
12 V dc

**External Power**
Not applicable

**Available Accessories**

**Speaker-Microphones**
Not applicable
<table>
<thead>
<tr>
<th>Specification</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carrying Cases</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Battery Eliminators</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Vehicle Adapters</td>
<td>Not applicable</td>
</tr>
<tr>
<td><strong>Logistical Parameters</strong></td>
<td></td>
</tr>
<tr>
<td>Programming</td>
<td>Dealer/User (authorized technician)</td>
</tr>
<tr>
<td>Repairs</td>
<td>Dealer</td>
</tr>
<tr>
<td>Decontamination</td>
<td>Not specified</td>
</tr>
<tr>
<td>Durability/Ruggedness</td>
<td>Standard use</td>
</tr>
<tr>
<td>Environmental Conditions</td>
<td>-22 °F to 140 °F</td>
</tr>
<tr>
<td>Unit Cost</td>
<td>$2.7K MSRP and contact dealer for discount pricing</td>
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<td>Battery Cycle Life</td>
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<td>Rapid Charge Battery Cycle Life</td>
<td>Not specified</td>
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<tr>
<td>Maintenance Cost</td>
<td>Not specified</td>
</tr>
<tr>
<td>Interface Capability</td>
<td>Digital capable</td>
</tr>
<tr>
<td><strong>Special Requirements</strong></td>
<td></td>
</tr>
<tr>
<td>Operator Skills Required</td>
<td>Average</td>
</tr>
<tr>
<td>Operator Training Requirements</td>
<td>Average</td>
</tr>
<tr>
<td>Training Available</td>
<td>Yes</td>
</tr>
<tr>
<td>Manuals Available</td>
<td>Yes</td>
</tr>
<tr>
<td>applicable Regulations</td>
<td>Not specified</td>
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<tr>
<td>Support Equipment</td>
<td>Available</td>
</tr>
<tr>
<td>Warranty</td>
<td>1 yr</td>
</tr>
<tr>
<td>Mil Spec/Mil-Std Ratings</td>
<td>Meets Mil Spec 810E</td>
</tr>
<tr>
<td>Intrinsically Safe</td>
<td>Not specified</td>
</tr>
</tbody>
</table>
**General**

Name  
ID# 104

**Motorola Transceiver; Astro Spectra W9**

**Model Number(s)**  
Astro Digital Spectra W9

**Technology**  
Mobile, conventional and trunked portable radio

**Manufacturer**  
Motorola USA  
1301 E. Algonquin Road  
Schaumburg, Illinois 60196  
800–247–2346 (Tel)

POC: Ron Zeberlein  
410–712–6014 (Tel)

**Secure Communication Capability**  
Yes

**Availability**  
Available

**Frequency Range**  
VHF: 136 MHz to 174 MHz  
UHF: 403 MHz to 433 MHz, 438 MHz to 470 MHz  
450 MHz to 482 MHz, and 482 MHz to 512 MHz  
800 MHz: 806 MHz to 870 MHz

**Number of Personnel Supported by System**  
Multiple

**Geographic Coverage**  
Not specified

**Current User(s)**  
Not specified

**Source**  
Motorola

**Operational Parameters**

**Number of Channels**  
255 channels

**Transmitter Power Output Levels**  
10 W to 110 W

**Battery Options**  
Not applicable

**Battery Recharging Options**  
Not applicable

**Physical Parameters**

**Size**  
3.4 in x 6.5 in x 1.7 in

**Weight**  
6.1 lb

**Power Requirements**  
12 V dc

**External Power**  
Not applicable

**Available Accessories**

**Speaker-Microphones**  
Not applicable
<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carrying Cases</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Battery Eliminators</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Vehicle Adapters</td>
<td>Not applicable</td>
</tr>
<tr>
<td><strong>Logistical Parameters</strong></td>
<td></td>
</tr>
<tr>
<td>Programming</td>
<td>Dealer/User (authorized technician)</td>
</tr>
<tr>
<td>Repairs</td>
<td>Dealer</td>
</tr>
<tr>
<td>Decontamination</td>
<td>Not specified</td>
</tr>
<tr>
<td>Durability/Ruggedness</td>
<td>Standard use</td>
</tr>
<tr>
<td>Environmental Conditions</td>
<td>-22 °F to 140 °F</td>
</tr>
<tr>
<td>Unit Cost</td>
<td>$3K MSRP and contact dealer for discount pricing</td>
</tr>
<tr>
<td>Battery Cycle Life</td>
<td>Not specified</td>
</tr>
<tr>
<td>Rapid Charge Battery Cycle Life</td>
<td>Not specified</td>
</tr>
<tr>
<td>Maintenance Cost</td>
<td>Not specified</td>
</tr>
<tr>
<td>Interface Capability</td>
<td>Digital capable</td>
</tr>
<tr>
<td><strong>Special Requirements</strong></td>
<td></td>
</tr>
<tr>
<td>Operator Skills Required</td>
<td>Average</td>
</tr>
<tr>
<td>Operator Training Requirements</td>
<td>Average</td>
</tr>
<tr>
<td>Training Available</td>
<td>Yes</td>
</tr>
<tr>
<td>Manuals Available</td>
<td>Yes</td>
</tr>
<tr>
<td>applicable Regulations</td>
<td>Not specified</td>
</tr>
<tr>
<td>Support Equipment</td>
<td>Available</td>
</tr>
<tr>
<td>Warranty</td>
<td>1 yr</td>
</tr>
<tr>
<td>Mil Spec/Mil-Std Ratings</td>
<td>Meets Mil Spec 810E</td>
</tr>
<tr>
<td>Intrinsically Safe</td>
<td>Not specified</td>
</tr>
</tbody>
</table>
### General

<table>
<thead>
<tr>
<th>Name</th>
<th>Motorola Transceiver, Portable; VISAR</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Model Number(s)</th>
<th>VISAR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technology</td>
<td>Portable, conventional</td>
</tr>
</tbody>
</table>
| Manufacturer    | Motorola USA  
1301 E. Algonquin Road  
Schaumburg, Illinois 60196  
800–247–2346 (Tel) |

| POC: Ron Zeberlein | 410–712–6014 (Tel) |

| Secure Communication Capability | No |
| Availability                  | Available |
| Frequency Range               | VHF: 136 MHz to 178 MHz  
UHF: 403 MHz to 470 MHz and 450 MHz to 520 MHz  
800 MHz: 806 MHz to 866 MHz |
| Number of Personnel Supported by System | Unlimited |
| Geographic Coverage | Not specified |
| Current User(s) | Not specified |
| Source | Motorola |

#### Operational Parameters

<table>
<thead>
<tr>
<th>Number of Channels</th>
<th>16 channels</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transmitter Power Output Levels</td>
<td>1 W to 5 W</td>
</tr>
<tr>
<td>Battery Options</td>
<td>2 NiCad 1200 mAH; 1 NiMH 600 mAH; 1 NiMH 1300 mAH; and 1 NiMH 1500 mAH</td>
</tr>
<tr>
<td>Battery Recharging Options</td>
<td>1 desktop, single unit standard charge rate charger; 4 desktop, dual unit rapid charge rate chargers; 16 unit rapid rate charger; 2 multi unit battery maintenance systems; 2 multi unit battery optimizing systems; and 5 conditioning chargers</td>
</tr>
</tbody>
</table>

#### Physical Parameters

<table>
<thead>
<tr>
<th>Size</th>
<th>4.1 in x 2.2 in x 0.6 in (without battery)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight</td>
<td>4.8 oz (without battery)</td>
</tr>
<tr>
<td>Power Requirements</td>
<td>7.5 V dc</td>
</tr>
<tr>
<td><strong>External Power</strong></td>
<td>Yes, with optional battery eliminator</td>
</tr>
<tr>
<td>-------------------</td>
<td>-----------------------------------------</td>
</tr>
<tr>
<td><strong>Available Accessories</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Speaker-Microphones</strong></td>
<td>1 standard model available; 3 ear worn speaker microphones available</td>
</tr>
<tr>
<td><strong>Carrying Cases</strong></td>
<td>6 leather carrying cases; 2 nylon carrying cases; 1 belt clip; universal chest pack; breakaway chest pack; and universal radio pack (worn around waist)</td>
</tr>
<tr>
<td><strong>Battery Eliminators</strong></td>
<td>Yes, available from Motorola</td>
</tr>
<tr>
<td><strong>Vehicle Adapters</strong></td>
<td>No</td>
</tr>
<tr>
<td><strong>Logistical Parameters</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Programming</strong></td>
<td>Dealer/User (authorized technician)</td>
</tr>
<tr>
<td><strong>Repairs</strong></td>
<td>Dealer</td>
</tr>
<tr>
<td><strong>Decontamination</strong></td>
<td>Not specified</td>
</tr>
<tr>
<td><strong>Durability/Ruggedness</strong></td>
<td>Withstands rain testing; impact resistant housing, and weather resistant housing</td>
</tr>
<tr>
<td><strong>Environmental Conditions</strong></td>
<td>-22 °F to 140 °F</td>
</tr>
<tr>
<td><strong>Unit Cost</strong></td>
<td>$1.1K MSRP, contact dealer for discount pricing</td>
</tr>
<tr>
<td><strong>Battery Cycle Life</strong></td>
<td>4+ h at 5/5/90 cycle</td>
</tr>
<tr>
<td><strong>Rapid Charge Battery Cycle Life</strong></td>
<td>Not specified</td>
</tr>
<tr>
<td><strong>Maintenance Cost</strong></td>
<td>Not specified</td>
</tr>
<tr>
<td><strong>Interface Capability</strong></td>
<td>Not specified</td>
</tr>
<tr>
<td><strong>Special Requirements</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Operator Skills Required</strong></td>
<td>Average</td>
</tr>
<tr>
<td><strong>Operator Training Requirements</strong></td>
<td>Average</td>
</tr>
<tr>
<td><strong>Training Available</strong></td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Manuals Available</strong></td>
<td>Yes</td>
</tr>
<tr>
<td><strong>applicable Regulations</strong></td>
<td>Not specified</td>
</tr>
<tr>
<td><strong>Support Equipment</strong></td>
<td>Available</td>
</tr>
<tr>
<td><strong>Warranty</strong></td>
<td>1 yr</td>
</tr>
<tr>
<td><strong>Mil Spec/Mil-Std Ratings</strong></td>
<td>Meets Mil Spec 810C, Mil Spec 810D, and Mil Spec 810E</td>
</tr>
<tr>
<td><strong>Intrinsically Safe</strong></td>
<td>Intrinsically safe option available</td>
</tr>
</tbody>
</table>
### General

Name                  | Motorola Transceiver, Portable; HT 1000
ID#                   | 106

#### Model Number(s)
- HT 1000

#### Technology
- Portable, conventional

#### Manufacturer
- Motorola USA
  - 1301 E. Algonquin Road
  - Schaumburg, Illinois 60196
  - 800–247–2346 (Tel)

- POC: Ron Zeberlein
  - 410–712–6014 (Tel)

#### Secure Communication Capability
- Not specified

#### Availability
- Available

#### Frequency Range
- VHF: 136 MHz to 174 MHz
- UHF: 403 MHz to 470 MHz and 450 MHz to 520 MHz
- 800 MHz: 806 MHz to 825 MHz and 851 MHz to 870 MHz

#### Number of Personnel Supported by System
- Unlimited

#### Geographic Coverage
- Not specified

#### Current User(s)
- Not specified

#### Source
- Motorola

### Operational Parameters

#### Number of Channels
- 2 channels to 16 channels

#### Transmitter Power Output Levels
- 1 W to 5 W

#### Battery Options
- 3 NiCad 1200 mAH; 1 NiCad 1300 mAH; 4 NiCad 1400 mAH; 1 NiMH 1900 mAH; and 1 NiMH 2000 mAH

#### Battery Recharging Options
- 7 desktop, single unit rapid charge rate chargers; 3 desktop, single unit standard charge rate chargers; 3 multi unit rapid rate chargers; 2 multi unit battery maintenance systems; 2 multi unit battery optimizing systems; and 5 conditioning chargers

### Physical Parameters

#### Size
- 6.3 in x 2.3 in x 1.5 in (without battery)

#### Weight
- 3.2 oz (without battery)

#### Power Requirements
- 7.5 V dc
### External Power
Yes, with optional battery eliminator

### Available Accessories

<table>
<thead>
<tr>
<th><strong>Speaker-Microphones</strong></th>
<th>5 standard models available; 6 ear worn speaker microphones available</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Carrying Cases</strong></td>
<td>12 leather carrying cases; 1 nylon carrying case; 2 belt clips; universal chest pack; breakaway chest pack; standard chest pack; and universal radio pack (worn around waist)</td>
</tr>
<tr>
<td><strong>Battery Eliminators</strong></td>
<td>Yes, available from Motorola</td>
</tr>
<tr>
<td><strong>Vehicle Adapters</strong></td>
<td>Not specified</td>
</tr>
</tbody>
</table>

### Logistical Parameters

<table>
<thead>
<tr>
<th><strong>Programming</strong></th>
<th>Dealer/User (authorized technician)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Repairs</strong></td>
<td>Dealer</td>
</tr>
<tr>
<td><strong>Decontamination</strong></td>
<td>Not specified</td>
</tr>
<tr>
<td><strong>Durability/Ruggedness</strong></td>
<td>Durable</td>
</tr>
<tr>
<td><strong>Environmental Conditions</strong></td>
<td>-22 °F to 140 °F</td>
</tr>
<tr>
<td><strong>Unit Cost</strong></td>
<td>$1K MSRP and contact dealer for discount pricing</td>
</tr>
<tr>
<td><strong>Battery Cycle Life</strong></td>
<td>9 h at 5/5/90 cycle</td>
</tr>
<tr>
<td><strong>Rapid Charge Battery Cycle Life</strong></td>
<td>Not specified</td>
</tr>
<tr>
<td><strong>Maintenance Cost</strong></td>
<td>Not specified</td>
</tr>
<tr>
<td><strong>Interface Capability</strong></td>
<td>Not specified</td>
</tr>
</tbody>
</table>

### Special Requirements

<table>
<thead>
<tr>
<th><strong>Operator Skills Required</strong></th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Operator Training Requirements</strong></td>
<td>Average</td>
</tr>
<tr>
<td><strong>Training Available</strong></td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Manuals Available</strong></td>
<td>Yes</td>
</tr>
<tr>
<td><strong>applicable Regulations</strong></td>
<td>Not specified</td>
</tr>
<tr>
<td><strong>Support Equipment</strong></td>
<td>Available</td>
</tr>
<tr>
<td><strong>Warranty</strong></td>
<td>1 yr</td>
</tr>
<tr>
<td><strong>Mil Spec/Mil-Std Ratings</strong></td>
<td>Meets Mil Spec 810C, Mil Spec 810D, and Mil Spec 810E</td>
</tr>
<tr>
<td><strong>Intrinsically Safe</strong></td>
<td>Intrinsically safe option available</td>
</tr>
</tbody>
</table>
**General**

Name  
ID# 107

---

**Motorola Transceiver, Portable; JT 1000**

---

**Model Number(s)**  
JT 1000

**Technology**  
Portable, conventional

**Manufacturer**  
Motorola USA  
1301 E. Algonquin Road  
Schaumburg, Illinois 60196  
800–247–2346 (Tel)

POC: Ron Zeberlein  
410–712–6014 (Tel)

---

**Secure Communication Capability**  
Not specified

**Availability**  
Available

**Frequency Range**  
VHF: 136 MHz to 174 MHz  
UHF: 403 MHz to 470 MHz and 450 MHz to 512 MHz

**Number of Personnel Supported by System**  
Unlimited

**Geographic Coverage**  
Not specified

**Current User(s)**  
Not specified

**Source**  
Motorola

---

**Operational Parameters**

**Number of Channels**  
16 channels

**Transmitter Power Output Levels**  
1 W to 5 W

**Battery Options**  
1 NiCad 1200 mAH; 1 NiCad 1400 mAH;  
and 1 NiMH 2000 mAH

**Battery Recharging Options**  
7 desktop, single unit rapid charge rate chargers; 3 desktop,  
single unit standard charge rate chargers; 1 multi unit rapid  
rate charger; 2 multi unit battery maintenance systems;  
2 multi unit battery optimizing systems; and 5 conditioning  
chargers

---

**Physical Parameters**

**Size**  
6.3 in x 2.3 in x 1.5 in (without battery)

**Weight**  
9.6 oz  (without battery)

**Power Requirements**  
7.5 V dc

**External Power**  
Yes, with optional battery eliminator
### Available Accessories

**Speaker-Microphones**
- 5 standard models available; 6 ear worn speaker microphones available

**Carrying Cases**
- 12 leather carrying cases; 2 nylon carrying cases; 2 belt clips; universal chest pack; breakaway chest pack; standard chest pack; and universal radio pack (worn around waist)

**Battery Eliminators**
- Yes, available from Motorola

**Vehicle Adapters**
- Not specified

### Logistical Parameters

**Programming**
- Dealer/User (authorized technician)

**Repairs**
- Dealer

**Decontamination**
- Not specified

**Durability/Ruggedness**
- Standard use

**Environmental Conditions**
- -22 °F to 140 °F

**Unit Cost**
- $1.2K MSRP and contact dealer for discount pricing

**Battery Cycle Life**
- Not specified

**Rapid Charge Battery Cycle Life**
- Not specified

**Maintenance Cost**
- Not specified

**Interface Capability**
- Not specified

### Special Requirements

**Operator Skills Required**
- Average

**Operator Training Requirements**
- Average

**Training Available**
- Yes

**Manuals Available**
- Yes

**applicable Regulations**
- Not specified

**Support Equipment**
- Available

**Warranty**
- 1 yr

**Mil Spec/Mil-Std Ratings**
- Meets Mil Spec 810C, Mil Spec 810D, and Mil Spec 810E

**Intrinsically Safe**
- Intrinsically safe option available
**General**

**Name**
Motorola Transceiver, Portable; MT 2000 VHF

**ID# 108**

---

**Model Number(s)**
MT 2000 Model I

**Technology**
Portable, conventional and trunked

**Manufacturer**
Motorola USA
1301 E. Algonquin Road
Schaumburg, Illinois 60196
800–247–2346 (Tel)

POC: Ron Zeberlein
410–712–6014 (Tel)

**Secure Communication Capability**
No

**Availability**
Available

**Frequency Range**
VHF: 136 MHz to 178 MHz
UHF: 405 MHz to 470 MHz and 450 MHz to 520 MHz
800 MHz: 806 MHz to 870 MHz

**Number of Personnel Supported by System**
Unlimited

**Geographic Coverage**
Not specified

**Current User(s)**
Not specified

**Source**
Motorola

---

**Operational Parameters**

**Number of Channels**
48 channels to 160 channels (depending upon configuration)

**Transmitter Power Output Levels**
1 W to 5 W

**Battery Options**
NiCad: 4 high capacity (1200 or 1300 mAH); 4 ultra high capacity (1400 mAH) NiMH: 2 high capacity (1900 mAH and 2000 mAH)

**Battery Recharging Options**
7 desktop, single unit rapid charge rate chargers; 3 desktop, single unit regular charge rate chargers; 2 desktop, multi unit rapid charge rate chargers; 2 multi unit battery maintenance systems; 2 multi unit battery optimizing systems; and 4 multi units

---

**Physical Parameters**

**Size**
6.3 in x 2.3 in x 1.5 in (without battery)

**Weight**
9.6 oz (without battery)

**Power Requirements**
6 V dc to 9 V dc
External Power
Yes, with optional battery eliminator

Available Accessories
Speaker-Microphones
5 standard models available and 6 ear worn speaker microphones available

Carrying Cases
11 leather carrying cases; 1 nylon carrying case; 2 belt clips; universal chest pack; breakaway chest pack; standard chest pack; and universal radio pack (worn around waist)

Battery Eliminators
Yes, available from Motorola

Vehicle Adapters
Yes

Logistical Parameters
Programming
Dealer/User (authorized technician)

Repairs
Dealer

Decontamination
Not specified

Durability/Ruggedness
Designed for ruggedness and weather sealed universal connector

Environmental Conditions
-22 °F to 140 °F

Unit Cost
$1.3K MSRP and contact dealer for discount pricing

Battery Cycle Life
8 h at 5/5/90 cycle

Rapid Charge Battery Cycle Life
Not applicable

Maintenance Cost
Not specified

Interface Capability
Not specified

Special Requirements
Operator Skills Required
Average

Operator Training Requirements
Average

Training Available
Yes

Manuals Available
Yes

applicable Regulations
Not specified

Support Equipment
Available

Warranty
1 yr

Mil Spec/Mil-Std Ratings
Meets Mil Spec 810C, Mil Spec 810D, and Mil Spec 810E

Intrinsically Safe
Intrinsically safe option available
## General

**Name**  
Motorola Transceiver, Portable; MTS 2000 Model I

**Model Number(s)**  
MTS 2000 Model I

**Technology**  
Portable, conventional and trunked

**Manufacturer**  
Motorola USA  
1301 E. Algonquin Road  
Schaumburg, Illinois 60196  
800–247–2346 (Tel)

**Secure Communication Capability**  
Yes

**Availability**  
Available

**Frequency Range**  
VHF: 136 MHz to 178 MHz  
UHF: 405 MHz to 470 MHz and 450 MHz to 520 MHz  
800 MHz: 806 MHz to 825 MHz, 851 MHz to 870 MHz,  
896 MHz to 902 MHz, and 935 MHz to 941 MHz

**Number of Personnel Supported by System**  
Multiple

**Geographic Coverage**  
Not specified

**Current User(s)**  
Not specified

**Source**  
Motorola

## Operational Parameters

**Number of Channels**  
48 channels

**Transmitter Power Output Levels**  
1 W to 5 W

**Battery Options**  
NiCad: 4 high capacity (1200 or 1300 mAH); 4 ultra high capacity (1400 mAH)  
NiMH: 2 high capacity (1900 mAH and 2000 mAH)

**Battery Recharging Options**  
7 desktop, single unit rapid charge rate chargers; 3 desktop, single unit regular charge rate chargers; 3 desktop, multi unit rapid charge rate chargers; 2 multi unit battery maintenance systems; 2 multi unit battery optimizing systems; and 4 multi units

## Physical Parameters

**Size**  
6.3 in x 2.3 in x 1.5 in (without battery)

**Weight**  
9.6 oz (without battery)

**Power Requirements**  
6 V dc to 9 V dc
External Power

Yes, with optional battery eliminator

**Available Accessories**

**Speaker-Microphones**

3 standard models available; 6 ear worn speaker microphones available

**Carrying Cases**

11 leather carrying cases; 1 nylon carrying case; 2 belt clips; universal chest pack; breakaway chest pack; standard chest pack; and universal radio pack (worn around waist)

**Battery Eliminators**

Yes, available from Motorola

**Vehicle Adapters**

Yes

**Logistical Parameters**

**Programming**

Dealer/User (authorized technician)

**Repairs**

Dealer

**Decontamination**

Not specified

**Durability/Ruggedness**

Designed for ruggedness and weather sealed universal connector

**Environmental Conditions**

-22 °F to 140 °F

**Unit Cost**

$1.7K MSRP, contact dealer for discount pricing

**Battery Cycle Life**

8 h at 5/5/90 cycle

**Rapid Charge Battery Cycle Life**

Not applicable

**Maintenance Cost**

Not specified

**Interface Capability**

Not specified

**Special Requirements**

**Operator Skills Required**

Average

**Operator Training Requirements**

Average

**Training Available**

Yes

**Manuals Available**

Yes

**applicable Regulations**

Not specified

**Support Equipment**

Available

**Warranty**

1 yr

**Mil Spec/Mil-Std Ratings**

Meets Mil Spec 810C, Mil Spec 810D, and Mil Spec 810E

**Intrinsically Safe**

Intrinsically safe option available
### General

<table>
<thead>
<tr>
<th>Name</th>
<th>Motorola Transceiver, Portable; MTS 2000 Model II</th>
</tr>
</thead>
<tbody>
<tr>
<td>ID# 110</td>
<td></td>
</tr>
</tbody>
</table>

### Model Number(s)

MTS 2000 Model II

### Technology

Portable, conventional and trunked

### Manufacturer

Motorola USA  
1301 E. Algonquin Road  
Schaumburg, Illinois 60196  
800–247–2346 (Tel)

POC: Ron Zeberlein  
410–712–6014 (Tel)

### Secure Communication Capability

Yes

### Availability

Available

### Frequency Range

- **VHF:** 136 MHz to 178 MHz
- **UHF:** 405 MHz to 470 MHz and 450 MHz to 520 MHz  
  800/900 MHz: 806 MHz to 870 MHz, and 896 MHz to 941 MHz

### Number of Personnel Supported by System

Multiple

### Geographic Coverage

Not specified

### Current User(s)

Not specified

### Source

Motorola

### Operational Parameters

#### Number of Channels

160 channels

#### Transmitter Power Output Levels

1 W to 5 W

#### Battery Options

NiCad: 4 high capacity (1200 or 1300 mAH); 4 ultra high capacity (1400 mAH)  
NiMH: 2 high capacity (1900 mAH and 2000 mAH)

#### Battery Recharging Options

- 7 desktop, single unit rapid charge rate chargers; 3 desktop, single unit regular charge rate chargers; 3 desktop, multi unit rapid charge rate chargers; 2 multi unit battery maintenance systems; 2 multi unit battery optimizing systems; and 4 multi units

### Physical Parameters

#### Size

6.3 in x 2.3 in x 1.5 in (without battery)

#### Weight

11.2 oz (without battery)
### Power Requirements
- 6 V dc to 9 V dc

### External Power
- Yes, with optional battery eliminator

### Available Accessories
- **SpeakerMicrophones**: 3 standard models available; 6 ear worn speaker microphones available
- **Carrying Cases**: 11 leather carrying cases; 1 nylon carrying case; 2 belt clips; universal chest pack; breakaway chest pack; standard chest pack; and universal radio pack (worn around waist)
- **Battery Eliminators**: Yes, available from Motorola
- **Vehicle Adapters**: Yes

### Logistical Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Programming</strong></td>
<td>Dealer/User (authorized technician)</td>
</tr>
<tr>
<td><strong>Repairs</strong></td>
<td>Dealer</td>
</tr>
<tr>
<td><strong>Decontamination</strong></td>
<td>Not specified</td>
</tr>
<tr>
<td><strong>Durability/Ruggedness</strong></td>
<td>Designed for ruggedness; weather sealed universal connector</td>
</tr>
<tr>
<td><strong>Environmental Conditions</strong></td>
<td>-22 °F to 140 °F</td>
</tr>
<tr>
<td><strong>Unit Cost</strong></td>
<td>$2.1K MSRP and contact dealer for discount pricing</td>
</tr>
<tr>
<td><strong>Battery Cycle Life</strong></td>
<td>8 h at 5/5/90 cycle</td>
</tr>
<tr>
<td><strong>Rapid Charge Battery Cycle Life</strong></td>
<td>Not applicable</td>
</tr>
<tr>
<td><strong>Maintenance Cost</strong></td>
<td>Not specified</td>
</tr>
<tr>
<td><strong>Interface Capability</strong></td>
<td>Not specified</td>
</tr>
</tbody>
</table>

### Special Requirements

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Operator Skills Required</strong></td>
<td>Average</td>
</tr>
<tr>
<td><strong>Operator Training Requirements</strong></td>
<td>Average</td>
</tr>
<tr>
<td><strong>Training Available</strong></td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Manuals Available</strong></td>
<td>Yes</td>
</tr>
<tr>
<td><strong>applicable Regulations</strong></td>
<td>Not specified</td>
</tr>
<tr>
<td><strong>Support Equipment</strong></td>
<td>Available</td>
</tr>
<tr>
<td><strong>Warranty</strong></td>
<td>1 yr</td>
</tr>
<tr>
<td><strong>Mil Spec/Mil-Std Ratings</strong></td>
<td>Meets Mil Spec 810C, Mil Spec 810D, and Mil Spec 810E</td>
</tr>
<tr>
<td><strong>Intrinsically Safe</strong></td>
<td>Intrinsically safe option available</td>
</tr>
</tbody>
</table>
### General

**Name**

Motorola Transceiver, Portable; MTS 2000 Model III

**ID#** 111

### Model Number(s)

MTS 2000 Model III

### Technology

Portable, conventional and trunked

### Manufacturer

Motorola USA  
1301 E. Algonquin Road  
Schaumburg, Illinois 60196  
800–247–2346 (Tel)

POC: Ron Zeberlein  
410–712–6014 (Tel)

### Secure Communication Capability

Yes

### Availability

Available

### Frequency Range

- VHF: 136 MHz to 178 MHz
- UHF: 405 MHz to 470 MHz and 450 MHz to 520 MHz
- 800/900 MHz: 806 MHz to 870 MHz and 896 MHz to 941 MHz

### Number of Personnel Supported by System

Multiple

### Geographic Coverage

Not specified

### Current User(s)

Not specified

### Source

Motorola

### Operational Parameters

#### Number of Channels

160 channels

#### Transmitter Power Output Levels

1 W to 5 W

#### Battery Options

- NiCad: 4 high capacity (1200 or 1300 mAH); 4 ultra high capacity (1400 mAH)
- NiMH: 2 high capacity (1900 mAH and 2000 mAH)

#### Battery Recharging Options

- 7 desktop, single unit rapid charge rate chargers; 3 desktop, single unit regular charge rate chargers; 3 desktop, multi unit rapid charge rate chargers; 2 multi unit battery maintenance systems; 2 multi unit battery optimizing systems; and 4 multi units

### Physical Parameters

#### Size

6.3 in x 2.3 in x 1.5 in (without battery)

#### Weight

11.2 oz (without battery)
Power Requirements 6 V dc to 9 V dc
External Power Yes, with optional battery eliminator

**Available Accessories**
- Speaker-Microphones 3 standard models available and 6 ear worn speaker microphones available
- Carrying Cases 11 leather carrying cases; 1 nylon carrying case; 2 belt clips; universal chest pack; breakaway chest pack; standard chest pack; and universal radio pack (worn around waist)
- Battery Eliminators Yes, available from Motorola
- Vehicle Adapters Yes

**Logistical Parameters**
- Programming Dealer/User (authorized technician)
- Repairs Dealer
- Decontamination Not specified
- Durability/Ruggedness Designed for ruggedness; weather sealed universal connector
- Environmental Conditions -22 °F to 140 °F
- Unit Cost $2.5K MSRP and contact dealer for discount pricing
- Battery Cycle Life 8 h at 5/5/90 cycle
- Rapid Charge Battery Cycle Life Not applicable
- Maintenance Cost Not specified
- Interface Capability Not specified

**Special Requirements**
- Operator Skills Required Average
- Operator Training Requirements Average
- Training Available Yes
- Manuals Available Yes
- applicable Regulations Not specified
- Support Equipment Available
- Warranty 1 yr
- Mil Spec/Mil-Std Ratings Meets Mil Spec 810C, Mil Spec 810D, and Mil Spec 810E
- Intrinsically Safe Intrinsically safe option available
### General

**Name**

Motorola Trunked Portable Radio; MTX 8000 Model B3

**Model Number(s)**

MTX 8000 Model B3

**Technology**

Portable, conventional and trunked

**Manufacturer**

Motorola USA

1301 E. Algonquin Road
Schaumburg, Illinois 60196
800–247–2346 (Tel)

POC: Ron Zeberlein
410–712–6014 (Tel)

**Secure Communication Capability**

Not specified

**Availability**

Available

**Frequency Range**

- 851 MHz to 870 MHz (8000)
- 896 MHz to 941 MHz (9000)

**Number of Personnel Supported by System**

Multiple

**Geographic Coverage**

Not specified

**Current User(s)**

Not specified

**Source**

Motorola

### Operational Parameters

**Number of Channels**

4/4 or 15/10 systems/talk groups

**Transmitter Power Output Levels**

3 W

**Battery Options**

- 3 NiCad 1200 mAH; 1 NiCad 1300 mAH; 4 NiCad 1400 mAH; 1 NiMH 1900 mAH; and 1 NiMH 1900 mAH

**Battery Recharging Options**

- 7 desktop, single unit rapid charge rate chargers; 3 desktop, single unit standard charge rate chargers; 3 multi unit rapid charge rate chargers; 2 multi unit battery maintenance systems; 2 multi unit battery optimizing systems; and 5 conditioning chargers

### Physical Parameters

**Size**

6.3 in x 2.3 in x 0.6 in (without battery)

**Weight**

9.6 oz (without battery)

**Power Requirements**

- 6 V dc to 9 V dc

**External Power**

Yes, with optional battery eliminator
### Available Accessories

**Speaker-Microphones**
5 standard models available; 8 ear worn speaker microphones available

**Carrying Cases**
12 leather carrying cases; 1 nylon carrying cases; 2 belt clips; universal chest pack; breakaway chest pack; standard chest pack; universal radio pack (worn around waist)

**Battery Eliminators**
Yes, available from Motorola

**Vehicle Adapters**
No

### Logistical Parameters

**Programming**
Dealer/User (authorized technician)

**Repairs**
Dealer

**Decontamination**
Not specified

**Durability/Ruggedness**
Standard use

**Environmental Conditions**
-22 °F to 140 °F

**Unit Cost**
$910 MSRP contact dealer for discount pricing

**Battery Cycle Life**
Not specified

**Rapid Charge Battery Cycle Life**
Not specified

**Maintenance Cost**
Not specified

**Interface Capability**
Not specified

### Special Requirements

**Operator Skills Required**
Average

**Operator Training Requirements**
Average

**Training Available**
Yes

**Manuals Available**
Yes

**applicable Regulations**
Not specified

**Support Equipment**
Available

**Warranty**
1 yr

**Mil Spec/Mil-Std Ratings**
Meets Mil Spec 810C, Mil Spec 810D, and Mil Spec 810E

**Intrinsically Safe**
No
Motorola Trunked Portable Radio; MTX 8000 Model B5

Model Number(s)
MTX 8000 Model B5

Technology
Portable, conventional and trunked

Manufacturer
Motorola USA
1301 E. Algonquin Road
Schaumburg, Illinois 60196
800–247–2346 (Tel)

POC: Ron Zeberlein
410–712–6014 (Tel)

Secure Communication Capability
Not specified

Availability
Available

Frequency Range
851 MHz to 870 MHz (8000)
896 MHz to 941 MHz (9000)

Number of Personnel Supported by System
Multiple

Geographic Coverage
Not specified

Current User(s)
Not specified

Source
Motorola

Operational Parameters
Number of Channels
4/4 or 15/10 systems/talk groups

Transmitter Power Output Levels
3 W

Battery Options
3 NiCad 1200 mAH; 1 NiCad 1300 mAH; 4 NiCad 1400 mAH; 1 NiMH 1900 mAH; and 1 NiMH 1900 mAH

Battery Recharging Options
7 desktop, single unit rapid charge rate chargers; 3 desktop, single unit standard charge rate chargers; 3 multi unit rapid charge rate chargers; 2 multi unit battery maintenance systems; 2 multi unit battery optimizing systems; and 5 conditioning chargers

Physical Parameters
Size
6.3 in x 2.3 in x 0.7 in (without battery)

Weight
11.2 oz (without battery)

Power Requirements
6 V dc to 9 V dc
**External Power**
Yes, with optional battery eliminator

**Available Accessories**

- **Speaker-Microphones**
  5 standard models available; 8 ear worn speaker microphones available

- **Carrying Cases**
  12 leather carrying cases; 1 nylon carrying cases; 2 belt clips; universal chest pack; breakaway chest pack; standard chest pack; and universal radio pack (worn around waist)

- **Battery Eliminators**
  Yes, available from Motorola

- **Vehicle Adapters**
  No

**Logistical Parameters**

- **Programming**
  Dealer/User (authorized technician)

- **Repairs**
  Dealer

- **Decontamination**
  Not specified

- **Durability/Ruggedness**
  Standard use

- **Environmental Conditions**
  -22 °F to 140 °F

- **Unit Cost**
  $1.1K MSRP and contact dealer for discount pricing

- **Battery Cycle Life**
  Not specified

- **Rapid Charge Battery Cycle Life**
  Not specified

- **Maintenance Cost**
  Not specified

- **Interface Capability**
  Not specified

**Special Requirements**

- **Operator Skills Required**
  Average

- **Operator Training Requirements**
  Average

- **Training Available**
  Yes

- **Manuals Available**
  Yes

- **applicable Regulations**
  Not specified

- **Support Equipment**
  Available

- **Warranty**
  1 yr

- **Mil Spec/Mil-Std Ratings**
  Meets Mil Spec 810C, Mil Spec 810D, and Mil Spec 810E

- **Intrinsically Safe**
  No
**General**

<table>
<thead>
<tr>
<th>Name</th>
<th>Motorola Trunked Portable Radio; MTX 8000/9000 Model B7</th>
</tr>
</thead>
<tbody>
<tr>
<td>ID#</td>
<td>114</td>
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</table>

**Model Number(s)**

MTX 8000/9000 Model B7

**Technology**

Portable, conventional and trunked

**Manufacturer**

Motorola USA  
1301 E. Algonquin Road  
Schaumburg, Illinois 60196  
800–247–2346 (Tel)

POC: Ron Zeberlein  
410–712–6014 (Tel)

**Secure Communication Capability**

Not specified

**Availability**

Available

**Frequency Range**

851 MHz to 870 MHz (8000)  
896 MHz to 941 MHz (9000)

**Number of Personnel Supported by System**

Multiple

**Geographic Coverage**

Not specified

**Current User(s)**

Not specified

**Source**

Motorola

**Operational Parameters**

<table>
<thead>
<tr>
<th>Number of Channels</th>
<th>4/4 or 15/10 Systems/talkgroups</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transmitter Power Output Levels</td>
<td>3 W</td>
</tr>
<tr>
<td>Battery Options</td>
<td>3 NiCad 1200 mAH; 1 NiCad 1300 mAH; 4 NiCad 1400 mAH; 1 NiMH 1900 mAH; and 1 NiMH 1900 mAH</td>
</tr>
<tr>
<td>Battery Recharging Options</td>
<td>7 desktop, single unit rapid charge rate chargers; 3 desktop, single unit standard charge rate chargers; 3 multi unit rapid charge rate chargers; 2 multi unit battery maintenance systems; 2 multi unit battery optimizing systems; and 5 conditioning chargers</td>
</tr>
</tbody>
</table>

**Physical Parameters**

<table>
<thead>
<tr>
<th>Size</th>
<th>6.3 in x 2.3 in x 0.7 in (without battery)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight</td>
<td>11.2 oz (without battery)</td>
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<tr>
<td>Power Requirements</td>
<td>7.5 V dc</td>
</tr>
</tbody>
</table>
External Power

Yes, with optional battery eliminator

Available Accessories

Speaker-Microphones
5 standard models available; 8 ear worn speaker microphones available

Carrying Cases
12 leather carrying cases; 1 nylon carrying cases; 2 belt clips; universal chest pack; breakaway chest pack; standard chest pack; and universal radio pack (worn around waist)

Battery Eliminators
Yes, available from Motorola

Vehicle Adapters
No

Logistical Parameters

Programming
Dealer/User (authorized technician)

Repairs
Dealer

Decontamination
Not specified

Durability/Ruggedness
Standard use

Environmental Conditions
-22 °F to 140 °F

Unit Cost
$1.3K MSRP and contact dealer for discount pricing

Battery Cycle Life
Not specified

Rapid Charge Battery Cycle Life
Not specified

Maintenance Cost
Not specified

Interface Capability
Not specified

Special Requirements

Operator Skills Required
Average

Operator Training Requirements
Average

Training Available
Yes

Manuals Available
Yes

applicable Regulations
Not specified

Support Equipment
Available

Warranty
1 yr

Mil Spec/Mil-Std Ratings
Meets Mil Spec 810C, Mil Spec 810D, and Mil Spec 810E

Intrinsically Safe
No
General
Name
Motorola Station/Repeater; QUANTAR
ID# 115

Picture Not Available

Model Number(s) QUANTAR
Technology Functions as a base station or repeater (conventional or trunking)
Manufacturer Motorola USA
1301 E. Algonquin Road
Schaumburg, Illinois 60196
800−247−2346 (Tel)

POC: Ron Zeberlein
410−712−6014 (Tel)

Secure Communication Capability Yes
Availability Available
Frequency Range VHF: 132 MHz to 174 MHz
UHF: 403 MHz to 433 MHz, 438 MHz to 470 MHz, 470 MHz to 494 MHz, and 494 MHz to 512 MHz
800/900 MHz: 806 MHz to 870 MHz and 896 MHz to 941 MHz

Number of Personnel Supported by System Unlimited
Geographic Coverage Not applicable
Current User(s) Not specified
Source Motorola

Operational Parameters
Number of Channels Not specified
Transmitter Power Output Levels 25 W to 125 W
Battery Options Backup battery system available
Battery Recharging Options Backup battery system available

Physical Parameters
Size 8.8 in x 19 in x 17 in
Weight 55 lb
Power Requirements 25 W Model: 12 V dc
100 W to 125 W Models: 24 V dc
External Power Backup battery system available

Available Accessories
Speaker-Microphones Not applicable
Carrying Cases Not applicable
Battery Eliminators Not applicable
Vehicle Adapters Not applicable

**Logistical Parameters**

Programming Dealer/User (authorized technician)
Repairs Dealer
Decontamination Not specified
Durability/Ruggedness Standard use
Environmental Conditions -22 °F to 140 °F
Unit Cost $11K MSRP and contact dealer for discount pricing
Battery Cycle Life Not specified
Rapid Charge Battery Cycle Life Not specified
Maintenance Cost Not specified
Interface Capability Digital capability

**Special Requirements**

Operator Skills Required Average
Operator Training Requirements Average
Training Available Yes
Manuals Available Yes
applicable Regulations Not specified
Support Equipment Available
Warranty 1 yr
Mil Spec/Mil-Std Ratings No
Intrinsically Safe Not specified
| **General** |  
|---|---|
| **Name** | Motorola Station/Repeater; QUANTRO |
| **ID#** | 116 |

| **Model Number(s)** | QUANTRO |
| **Technology** | Repeater, conventional or trunking base station or repeater |
| **Manufacturer** | Motorola USA  
1301 E. Algonquin Road  
Schaumburg, Illinois 60196  
800–247–2346 (Tel) |
| **Secure Communication Capability** | Yes |
| **Availability** | Available |
| **Frequency Range** |  
VHF: 132 MHz to 174 MHz  
UHF: 403 MHz to 433 MHz, 438 MHz to 470 MHz, 470 MHz to 494 MHz, and 494 MHz to 512 MHz  
800/900 MHz: 806 MHz to 870 MHz and 896 MHz to 941 MHz |
| **Number of Personnel Supported by System** | Unlimited |
| **Geographic Coverage** | Not specified |
| **Current User(s)** | Not specified |
| **Source** | Motorola |

| **Operational Parameters** |  
|---|---|
| **Number of Channels** | Up to 128 modes |
| **Transmitter Power Output Levels** | 2 W to 20 W or 3 W to 30 W |
| **Battery Options** | Backup battery system available |
| **Battery Recharging Options** | Backup battery system available |

| **Physical Parameters** |  
|---|---|
| **Size** | 8.8 in x 19 in x 17 in |
| **Weight** | 55 lb |
| **Power Requirements** | Multiple options depending on power output of transmitter |
| **External Power** | Backup battery system available |

<p>| <strong>Available Accessories</strong> |<br />
|---|---|
| <strong>Speaker-Microphones</strong> | Not applicable |
| <strong>Carrying Cases</strong> | Not applicable |</p>
<table>
<thead>
<tr>
<th><strong>Battery Eliminators</strong></th>
<th>Not applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Vehicle Adapters</strong></td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

**Logistical Parameters**

<table>
<thead>
<tr>
<th><strong>Programming</strong></th>
<th>Dealer/User (authorized technician)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Repairs</strong></td>
<td>Dealer</td>
</tr>
<tr>
<td><strong>Decontamination</strong></td>
<td>Not specified</td>
</tr>
<tr>
<td><strong>Durability/Ruggedness</strong></td>
<td>Standard use</td>
</tr>
<tr>
<td><strong>Environmental Conditions</strong></td>
<td>-22 °F to 140 °F</td>
</tr>
<tr>
<td><strong>Unit Cost</strong></td>
<td>$11K MSRP and contact dealer for discount pricing</td>
</tr>
<tr>
<td><strong>Battery Cycle Life</strong></td>
<td>Not specified</td>
</tr>
<tr>
<td><strong>Rapid Charge Battery Cycle Life</strong></td>
<td>Not specified</td>
</tr>
<tr>
<td><strong>Maintenance Cost</strong></td>
<td>Not specified</td>
</tr>
<tr>
<td><strong>Interface Capability</strong></td>
<td>Digital capable</td>
</tr>
</tbody>
</table>

**Special Requirements**

<table>
<thead>
<tr>
<th><strong>Operator Skills Required</strong></th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Operator Training Requirements</strong></td>
<td>Average</td>
</tr>
<tr>
<td><strong>Training Available</strong></td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Manuals Available</strong></td>
<td>Yes</td>
</tr>
<tr>
<td><strong>applicable Regulations</strong></td>
<td>Not specified</td>
</tr>
<tr>
<td><strong>Support Equipment</strong></td>
<td>Available</td>
</tr>
<tr>
<td><strong>Warranty</strong></td>
<td>1 yr</td>
</tr>
<tr>
<td><strong>Mil Spec/Mil-Std Ratings</strong></td>
<td>No</td>
</tr>
<tr>
<td><strong>Intrinsically Safe</strong></td>
<td>Not specified</td>
</tr>
</tbody>
</table>
### General

**Name**
Motorola Portable Repeater; Portable Repeater 2

**ID#**
117

**Picture Not Available**

### Model Number(s)
Portable Repeater 2

### Technology
Conventional repeater

### Manufacturer
Motorola USA
1301 E. Algonquin Road
Schaumburg, Illinois 60196
800–247–2346 (Tel)

POC: Ron Zeberlein
410–712–6014 (Tel)

### Secure Communication Capability
Yes

### Availability
Available

### Frequency Range
- VHF: 136 MHz to 174 MHz
- UHF: 406 MHz to 512 MHz

### Number of Personnel Supported by System
Unlimited

### Geographic Coverage
Not specified

### Current User(s)
Not specified

### Source
Motorola

### Operational Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Channels</td>
<td>Up to 128 modes</td>
</tr>
<tr>
<td>Transmitter Power Output Levels</td>
<td>2 W to 20 W or 3 W to 30 W</td>
</tr>
<tr>
<td>Battery Options</td>
<td>Internal emergency battery</td>
</tr>
<tr>
<td>Battery Recharging Options</td>
<td>Internal emergency backup battery recharger</td>
</tr>
</tbody>
</table>

### Physical Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size</td>
<td>19.8 in x 13.3 in x 7.8 in</td>
</tr>
<tr>
<td>Weight</td>
<td>40 lb</td>
</tr>
<tr>
<td>Power Requirements</td>
<td>110 V ac/240 V ac or external 12 V dc</td>
</tr>
<tr>
<td>External Power</td>
<td>12 V dc</td>
</tr>
</tbody>
</table>

### Available Accessories

<table>
<thead>
<tr>
<th>Accessory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speaker-Microphones</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Carrying Cases</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Battery Eliminators</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Vehicle Adapters</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>
### Logistical Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Programming</td>
<td>Dealer/User (authorized technician)</td>
</tr>
<tr>
<td>Repairs</td>
<td>Dealer</td>
</tr>
<tr>
<td>Decontamination</td>
<td>Not specified</td>
</tr>
<tr>
<td>Durability/Ruggedness</td>
<td>Standard use</td>
</tr>
<tr>
<td>Environmental Conditions</td>
<td>-22 °F to 140 °F</td>
</tr>
<tr>
<td>Unit Cost</td>
<td>$16K MSRP and contact dealer for discount pricing</td>
</tr>
<tr>
<td>Battery Cycle Life</td>
<td>Not specified</td>
</tr>
<tr>
<td>Rapid Charge Battery Cycle Life</td>
<td>Not specified</td>
</tr>
<tr>
<td>Maintenance Cost</td>
<td>Not specified</td>
</tr>
<tr>
<td>Interface Capability</td>
<td>Not specified</td>
</tr>
</tbody>
</table>

### Special Requirements

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operator Skills Required</td>
<td>Average</td>
</tr>
<tr>
<td>Operator Training Requirements</td>
<td>Average</td>
</tr>
<tr>
<td>Training Available</td>
<td>Yes</td>
</tr>
<tr>
<td>Manuals Available</td>
<td>Yes</td>
</tr>
<tr>
<td>applicable Regulations</td>
<td>Not specified</td>
</tr>
<tr>
<td>Support Equipment</td>
<td>Available</td>
</tr>
<tr>
<td>Warranty</td>
<td>1 yr</td>
</tr>
<tr>
<td>Mil Spec/Mil-Std Ratings</td>
<td>No</td>
</tr>
<tr>
<td>Intrinsically Safe</td>
<td>No</td>
</tr>
</tbody>
</table>
# General

**Name**

Racal Transceiver, Portable; MBITR (Multiband Inter/Intra Team Radio)

**ID#** 118

---

**Model Number(s)**

Multiband Inter/Intra Team Radio

AN/PRC-14 (V)(C)

---

**Technology**

Portable, conventional

---

**Manufacturer**

Racal Communications Inc.

5 Research Place

Rockville, Maryland 20850

301–948–4420 (Tel)

301–948–6371 (Fax)

www.racalcomm.com

---

**POC**: Steve Nichols

301–208–7654 (Tel)

steve.nichols@racalcomm.com

---

**Secure Communication Capability**

2 levels embedded: Type 1 COMSEC, commercial COMSEC

Keyfill devices: CYZ 10 (DTD), KYK 13, KOI 18

---

**Availability**

Available

---

**Frequency Range**

30 MHz to 512 MHz

---

**Number of Personnel Supported by System**

Unlimited

---

**Geographic Coverage**

5 W FM/AM LOS, UHF military satellite with proper antenna

---

**Current User(s)**

U.S. SOCOM

---

**Source**

Racal Communications Inc.

---

## Operational Parameters

**Number of Channels**

100 memory preset channels

---

**Transmitter Power Output Levels**

5 levels: 0.1 W, 0.5 W, 1 W, 3 W, and 5 W (FM)

2 levels: 1 W and 5 W (AM)

---

**Battery Options**

Lithium-Ion rechargeable battery

nonrechargeable, disposable, and lithium cells

---

**Battery Recharging Options**

An ac powered single battery charger, ac/dc powered 6–way battery charger, and vehicular charger

---

## Physical Parameters

**Size**

8.4 in x 2.6 in x 1.5 in (with battery)
<table>
<thead>
<tr>
<th><strong>Weight</strong></th>
<th>30.6 oz (with battery)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Power Requirements</strong></td>
<td>Not specified</td>
</tr>
<tr>
<td><strong>External Power</strong></td>
<td>120 V ac, 240 V ac, 12 V dc via chargers</td>
</tr>
<tr>
<td><strong>Available Accessories</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Speaker-Microphones</strong></td>
<td>Speaker microphone and audio connector is compatible with standard military audio devices</td>
</tr>
<tr>
<td><strong>Carrying Cases</strong></td>
<td>Radio system carrying bag</td>
</tr>
<tr>
<td><strong>Battery Eliminators</strong></td>
<td>SAPI accepts 1 V to 32 V</td>
</tr>
<tr>
<td><strong>Vehicle Adapters</strong></td>
<td>Vehicle adapter, radio holster, and radio system carrying bag</td>
</tr>
<tr>
<td><strong>Logistical Parameters</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Programming</strong></td>
<td>Menu selectable groups: user programmable from front panel menu, PC programmer, and radio to radio cloning</td>
</tr>
<tr>
<td><strong>Repairs</strong></td>
<td>Manufacturer</td>
</tr>
<tr>
<td><strong>Decontamination</strong></td>
<td>Not specified</td>
</tr>
<tr>
<td><strong>Durability/Ruggedness</strong></td>
<td>Immiscibility: 20 m maritime version and 2 m urban version</td>
</tr>
<tr>
<td><strong>Environmental Conditions</strong></td>
<td>-22 °F to 140 °F</td>
</tr>
<tr>
<td></td>
<td>Humidity: 95 % noncondensing</td>
</tr>
<tr>
<td><strong>Unit Cost</strong></td>
<td>Not specified</td>
</tr>
<tr>
<td><strong>Battery Cycle Life</strong></td>
<td>&gt;8 h with 10/10/80 cycle, 500 cycles</td>
</tr>
<tr>
<td><strong>Rapid Charge Battery Cycle Life</strong></td>
<td>&gt;8 h with 10/10/80 cycle, 500 cycles</td>
</tr>
<tr>
<td><strong>Maintenance Cost</strong></td>
<td>1 yr warranty</td>
</tr>
<tr>
<td><strong>Interface Capability</strong></td>
<td>NVG compatible, specialized headsets and audio devices mate to standard military audio connector. RF interface to FM conventional, AM, Type 1, and UHF military satellite.</td>
</tr>
<tr>
<td><strong>Special Requirements</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Operator Skills Required</strong></td>
<td>Average</td>
</tr>
<tr>
<td><strong>Operator Training Requirements</strong></td>
<td>Average</td>
</tr>
<tr>
<td><strong>Training Available</strong></td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Manuals Available</strong></td>
<td>Yes, operator and service</td>
</tr>
<tr>
<td><strong>applicable Regulations</strong></td>
<td>Not specified</td>
</tr>
<tr>
<td><strong>Support Equipment</strong></td>
<td>Batteries, battery holder, vehicle adapter, radio holster, radio system carrying bag, battery chargers, antennas, PC programmer, programmer/data cable, and cloning cable</td>
</tr>
<tr>
<td><strong>Warranty</strong></td>
<td>1 yr</td>
</tr>
<tr>
<td><strong>Mil Spec/Mil-Std Ratings</strong></td>
<td>Meets Mil Spec 810E</td>
</tr>
<tr>
<td><strong>Intrinsically Safe</strong></td>
<td>No</td>
</tr>
</tbody>
</table>
### General

**Name**

Racal Transceiver, Portable; MSHR (Miniature Secure Handheld Radio)

**ID#** 119

---

### Model Number(s)

Miniature Secure Handheld Radio (MSHR)

### Technology

Portable, conventional

### Manufacturer

Racal Communications Inc.

5 Research Place

Rockville, Maryland 20850

301–948–4420 (Tel)

301–948–6371 (Fax)

[www.racalcomm.com](http://www.racalcomm.com)

POC: Steve Nichols

301–208–7654 (Tel)

[steve.nichols@racalcomm.com](mailto:steve.nichols@racalcomm.com)

### Secure Communication Capability

Yes, 3 levels embedded: U.S. Type 1 COMSEC, commercial COMSEC, SBCF DES encryption keyfill devices: CYZ 10 (DTD), KVK 13, KOI 18, KVL, and Racal PCP

### Availability

Commercially available

### Frequency Range

136 MHz to 174 MHz

### Number of Personnel Supported by System

Unlimited

### Geographic Coverage

5 W FM LOS

### Current User(s)

U.S. Department of Justice and U.S. Department of Defense

### Source

Racal Communications Inc.

---

### Operational Parameters

**Number of Channels**

100 programmable channels

**Transmitter Power Output Levels**

5 levels: 0.1 W, 0.5 W, 1 W, 2 W, and 5 W

**Battery Options**

Rechargeable Lithium-Ion battery

**Battery Recharging Options**

Single 6–way and 12 V dc vehicular battery charger

---

### Physical Parameters

**Size**

7 in x 2.63 in x 0.88 in (with battery)

**Weight**

15.5 oz with battery and antenna

**Power Requirements**

Not specified
External Power

Available Accessories
Speaker-Microphones: Embedded speaker and microphone, and covert harness
Carrying Cases: Carrying bag
Battery Eliminators: No
Vehicle Adapters: Yes

Logistical Parameters
Programming: Menu driven keypad entry, PC software download, radio-to-radio cloning, and keypad lockout
Repairs: Manufacturer
Decontamination: Not specified
Durability/Ruggedness: Water immersible to 2 m (20 m option available) acceleration: 20 G for 11 ms

Environmental Conditions
-22 °F to 140 °F
Humidity: 95 % noncondensing

Unit Cost: Not specified
Battery Cycle Life: 6 h @ 5/5/90 cycle, 500 cycles
Rapid Charge Battery Cycle Life: 6 h @ 5/5/90 cycle, 500 cycles
Maintenance Cost: 1 yr warranty
Interface Capability: Specialized headsets and audio devices wired through Racal custom side connector. RF interface to FM conventional (CTCSS, DCS), Type 1 encryption, and SBCF DES encryption.

Special Requirements
Operator Skills Required: Average
Operator Training Requirements: Average
Training Available: Yes
Manuals Available: Yes, operator and service
applicable Regulations: Not specified
Support Equipment: Conforming body antenna, covert surveillance harness with wireless ear piece, carrying bag, PC programmer, data mode cable, cloning cable, key fill cable, test box, single, 6-way, and 12 V dc vehicular battery charger
Warranty: 1 yr
Mil Spec/Mil-Std Ratings: Meets Mil Spec 810E
Intrinsically Safe: No
### General

| Name                           | ID# 120 |

### Model Number(s)

- 20 Meter Miniature Secure Handheld Radio

### Technology

- Portable, conventional

### Manufacturer

- Racal Communications Inc.
  - 5 Research Place
  - Rockville, Maryland 20850
  - 301–948–4420 (Tel)
  - 301–948–6371 (Fax)
  - www.racalcomm.com

POC: Steve Nichols
- 301–208–7654 (Tel)
- steve.nichols@racalcomm.com

### Secure Communication Capability

- Yes, 3 levels embedded: U.S. Type 1 COMSEC, commercial COMSEC, SBCF DES encryption
- keyfill devices: CYZ 10 (DTD), KYK 13, KOI 18, KVL, and Racal PCP

### Availability

- Available

### Frequency Range

- 136 MHz to 174 MHz

### Number of Personnel Supported by System

- Unlimited

### Geographic Coverage

- 5 W FM LOS

### Current User(s)

- Navy SPECWAR, COCOM

### Source

- Racal Communications Inc.

### Operational Parameters

#### Number of Channels

- 100 programmable channels

#### Transmitter Power Output Levels

- 5 levels: 0.1 W, 0.5 W, 1 W, 2 W, and 5 W

#### Battery Options

- Lithium-Ion rechargeable battery

#### Battery Recharging Options

- Single, 6–way battery, and 12 V dc vehicular charger

### Physical Parameters

#### Size

- 7.3 in x 2.6 in x 1.2 in (with battery)

#### Weight

- 24.5 oz with battery and antenna

#### Power Requirements

- Not specified

#### External Power

- 120 V ac, 240 V ac, 12 V dc via chargers
Available Accessories
Speaker-Microphones
Carrying Cases
Battery Eliminators
Vehicle Adapters

Carrying bag
1 m submersible speaker microphone and diver headset
No
Yes

Logistical Parameters
Programming
Repairs
Decontamination
Durability/Ruggedness
Environmental Conditions
Unit Cost
Battery Cycle Life
Rapid Charge Battery Cycle Life
Maintenance Cost
Interface Capability

Menu driven keypad entry, PC software download, radio-to-radio cloning, and keypad lockout
Manufacturer
Not specified
Submersible to 20 m acceleration: 20 G for 11 ms
-22 °F to 140 °F
Humidity: 95 % noncondensing
Not specified
6 h @ 5/5/90 cycle, 500 cycles
6 h @ 5/5/90 cycle, 500 cycles
1 yr warranty
Specialized headsets and audio devices wired through Racal custom side connector. RF interface to FM conventional (CTCSS, DCS), Type 1 encryption, and SBCF DES encryption.

Special Requirements
Operator Skills Required
Operator Training Requirements
Training Available
Manuals Available
applicable Regulations
Support Equipment

Average
Average
Yes
Yes, operator and service
Not specified
20 m submersible diver headset, submersible miniature headset, 1 m submersible speaker microphone, carrying bag, PC programmer, data mode cable, cloning cable, key fill cable, test box, single, 6-way, and 12 V dc vehicular battery charger

Warranty
Mil Spec/Mil-Std Ratings
Intrinsically Safe

1 yr
Meets Mil Spec 810E
No
**General**

Name
ID# 121

**Racial Transceiver, Portable; Racial 25**

**Model Number(s)**
Racial 25

**Technology**
Portable, conventional

**Manufacturer**
Racial Communications Inc.
5 Research Place
Rockville, Maryland 20850
301–948–4420 (Tel)
301–948–6371 (Fax)
www.racalcomm.com

POC: Steve Nichols
301–208–7654 (Tel)
steve.nichols@racalcomm.com

**Secure Communication Capability**
Yes, embedded; SBCF DES, OFB DES for project 25
digital channels; keyfill devices: KVL (Motorola), and
Racial PC programmer

**Availability**
Commercially available

**Frequency Range**
136 MHz to 174 MHz

**Number of Personnel Supported by System**
Unlimited

**Geographic Coverage**
5 W FM LOS

**Current User(s)**
U.S. Department of Justice, U.S. Department of Interior,
U.S. Navy, and U.S. Army

**Source**
Racial Communications Inc.

**Operational Parameters**

**Number of Channels**
16 quick select via rotary channel selector
48 quick select via toggle and rotary channel selector
256 selectable from the keypad, and 16 zones of 16
channels

**Transmitter Power Output Levels**
5 levels: 0.1 W, 0.5 W, 1 W, 2 W, and 5 W
(programmable)

**Battery Options**
Lithium-Ion rechargeable battery, AA alkaline cassette
(requires 10 “AA” disposable batteries)

**Battery Recharging Options**
An ac powered single battery charger, ac powered 6–way
battery charger, ac/dc powered 6–way battery charger.
Vehicular charger in development.

**Physical Parameters**
<table>
<thead>
<tr>
<th><strong>Size</strong></th>
<th>7.8 in x 2.6 in x 1.05 in (with battery)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Weight</strong></td>
<td>16.7 oz</td>
</tr>
<tr>
<td><strong>Power Requirements</strong></td>
<td>Not specified</td>
</tr>
<tr>
<td><strong>External Power</strong></td>
<td>No</td>
</tr>
</tbody>
</table>

**Available Accessories**

- **Speaker-Microphones**: Handheld speaker/microphone, surveillance harness, other headsets and audio devices via 6 pin hirose connector
- **Carrying Cases**: Nylon duty case, leather duty case, and nylon tactical carrying case
- **Battery Eliminators**: Yes
- **Vehicle Adapters**: In development, 40 W, 110 W

**Logistical Parameters**

- **Programming**: PC/cloning/front panel keyboard
- **Repairs**: Manufacturer
- **Decontamination**: Not specified
- **Durability/Ruggedness**: Rugged metal housing. Submersible to 2 m.
- **Environmental Conditions**: -22 °F to 140 °F
- **Unit Cost**: Not specified
- **Battery Cycle Life**: >11 h @ 5/5/90 cycle, 500 cycles
- **Rapid Charge Battery Cycle Life**: >11 h @ 5/5/90 cycle, 500 cycles
- **Maintenance Cost**: 1 yr warranty
- **Interface Capability**: Specialized headsets and audio devices mate to 6 pin hirose connector on audio adapter. RF interface to FM conventional (CTCSS DCS), project 25 digital, DES encrypter, and simultaneous multi-mode capability.

**Special Requirements**

- **Operator Skills Required**: Average
- **Operator Training Requirements**: Average
- **Training Available**: Yes
- **Manuals Available**: Yes
- **applicable Regulations**: FCC type accepted and Canadian type approval
- **Support Equipment**: Carrying cases, hand held speaker/microphone, battery chargers, alkaline cassette, narrowband high gain antenna, PC programmer, and cloning cable
- **Warranty**: 1 yr
- **Mil Spec/Mil-Std Ratings**: Meets Mil Spec 810E
- **Intrinsically Safe**: Pending
**General**

- **Name**: BK Base Station; EBU Series
- **ID#**: 122

**Model Number(s)**

- EBU-Series

**Technology**

- Conventional base station

**Manufacturer**

- Relm Communication
  - 7100 Technology Drive
  - West Melbourne, Florida 32904
  - 321–984–1414 (Tel)
  - 321–984–0434 (Fax)

- POC: Mary Stone

**Secure Communication Capability**

- No

**Availability**

- Available

**Frequency Range**

- 400 MHz to 520 MHz

**Number of Personnel Supported by System**

- Unlimited

**Geographic Coverage**

- Not applicable

**Current User(s)**

- Not specified

**Source**

- Relm

**Operational Parameters**

- **Number of Channels**: 2 channels
- **Transmitter Power Output Levels**: 30 W to 125 W
- **Battery Options**: Not applicable
- **Battery Recharging Options**: None

**Physical Parameters**

- **Size**: 19 in x 14 in x 17.3 in
- **Weight**: 50 lb to 70 lb
- **Power Requirements**: 12 V dc/24 V dc/48 V dc
- **External Power**: No

**Available Accessories**

- **Speaker-Microphones**: Yes
- **Carrying Cases**: No
- **Battery Eliminators**: No
Vehicle Adapters

**Logistical Parameters**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Programming</td>
<td>Dealer/User (authorized technician)</td>
</tr>
<tr>
<td>Repairs</td>
<td>Dealer</td>
</tr>
<tr>
<td>Decontamination</td>
<td>Not specified</td>
</tr>
<tr>
<td>Durability/Ruggedness</td>
<td>U.S. Forest Service vibrations test</td>
</tr>
<tr>
<td>Environmental Conditions</td>
<td>-22 °F to 140 °F</td>
</tr>
<tr>
<td>Unit Cost</td>
<td>Not specified</td>
</tr>
<tr>
<td>Battery Cycle Life</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Rapid Charge Battery Cycle Life</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Maintenance Cost</td>
<td>Not specified</td>
</tr>
<tr>
<td>Interface Capability</td>
<td>Not specified</td>
</tr>
</tbody>
</table>

**Special Requirements**

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operator Skills Required</td>
<td>Experienced</td>
</tr>
<tr>
<td>Operator Training Requirements</td>
<td>Experienced</td>
</tr>
<tr>
<td>Training Available</td>
<td>Yes</td>
</tr>
<tr>
<td>Manuals Available</td>
<td>Yes</td>
</tr>
<tr>
<td>applicable Regulations</td>
<td>Not specified</td>
</tr>
<tr>
<td>Support Equipment</td>
<td>Available</td>
</tr>
<tr>
<td>Warranty</td>
<td>2 yr</td>
</tr>
<tr>
<td>Mil Spec/Mil-Std Ratings</td>
<td>Meets Mil Spec 810D, Mil Spec 810E, and U.S. Forest Service vibrations test</td>
</tr>
<tr>
<td>Intrinsically Safe</td>
<td>No</td>
</tr>
</tbody>
</table>
**General**

Name
ID# 123

**Model Number(s)**
EMH 599 2X

**Technology**
Mobile, conventional

**Manufacturer**
Relm Communication
7100 Technology Drive
West Melbourne, Florida 32904
321–984–1414 (Tel)
321–984–0434 (Fax)

POC: Mary Stone

**Secure Communication Capability**
No

**Availability**
Available

**Frequency Range**
136 MHz to 174 MHz

**Number of Personnel Supported by System**
Unlimited

**Geographic Coverage**
Not specified

**Current User(s)**
Not specified

**Source**
Relm

**Operational Parameters**

**Number of Channels**
210 channels continuously selected or programmable for selection groups

**Transmitter Power Output Levels**
50 W can be turned down to 15 W for low power applications

**Battery Options**
Not applicable

**Battery Recharging Options**
Not applicable

**Physical Parameters**

**Size**
6 in x 9.4 in x 2.1 in

**Weight**
5 lb

**Power Requirements**
13.6 V dc to 13.8 V dc

**External Power**
Yes

**Available Accessories**

**Speaker-Microphones**
Not applicable

**Carrying Cases**
Not applicable
| **Battery Eliminators** | Not applicable |
| **Vehicle Adapters** | Not applicable |

**Logistical Parameters**

| **Programming** | Dealer/User (authorized technician) programmable - PC friendly |
| **Repairs** | Dealer |
| **Decontamination** | Not specified |
| **Durability/Ruggedness** | Meets U.S. Forest Service vibrations and TIA/EIA–603 specifications |
| **Environmental Conditions** | -22 °F to 140 °F |
| **Unit Cost** | $1.2K to $1.4K |
| **Battery Cycle Life** | Not applicable |
| **Rapid Charge Battery Cycle Life** | Not applicable |
| **Maintenance Cost** | Not specified |
| **Interface Capability** | Not specified |

**Special Requirements**

| **Operator Skills Required** | Average |
| **Operator Training Requirements** | Average |
| **Training Available** | Yes |
| **Manuals Available** | Yes |
| **applicable Regulations** | Not specified |
| **Support Equipment** | Mobile installation kit and choice of microphone with hang-up box |
| **Warranty** | 2 yr |
| **Mil Spec/Mil-Std Ratings** | Meets Mil Spec 810D, Mil Spec 810E, and U.S. Forest Service vibrations test |
| **Intrinsically Safe** | No |
**General**

**Name**

ID# 124

---

**Model Number(s)**

EMV 499 0A  
EMV 199 0A

**Technology**

Mobile, conventional

**Manufacturer**

Relm Communication  
7100 Technology Drive  
West Melbourne, Florida 32904  
321–984–1414 (Tel)  
321–984–0434 (Fax)

POC: Mary Stone

---

**Secure Communication Capability**

Not specified

**Availability**

Available

**Frequency Range**

403 MHz to 470 MHz

**Number of Personnel Supported by System**

Unlimited

**Geographic Coverage**

Not specified

**Current User(s)**

Not specified

**Source**

Relm

---

**Operational Parameters**

**Number of Channels**

114 channels

**Transmitter Power Output Levels**

EMV 499 0A: 10 W to 40 W and EMV 199 0A: 1 W to 4 W

**Battery Options**

Not applicable

**Battery Recharging Options**

Not applicable

---

**Physical Parameters**

**Size**

6 in x 8 in x 2.1 in

**Weight**

8 lb

**Power Requirements**

13.6 V dc

**External Power**

No

---

**Available Accessories**

**Speaker-Microphones**

Not applicable

**Carrying Cases**

Not applicable
Battery Eliminators
Vehicle Adapters

**Logistical Parameters**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Programming</td>
<td>Dealer/User (authorized technician)</td>
</tr>
<tr>
<td>Repairs</td>
<td>Dealer</td>
</tr>
<tr>
<td>Decontamination</td>
<td>Not specified</td>
</tr>
<tr>
<td>Durability/Ruggedness</td>
<td>Meets U.S. Forest Service vibration and EIA RS–316B vibration and shock specifications</td>
</tr>
<tr>
<td>Environmental Conditions</td>
<td>-22 °F to 140 °F</td>
</tr>
<tr>
<td>Unit Cost</td>
<td>$1.2K to $1.4K</td>
</tr>
<tr>
<td>Battery Cycle Life</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Rapid Charge Battery Cycle Life</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Maintenance Cost</td>
<td>Not specified</td>
</tr>
<tr>
<td>Interface Capability</td>
<td>Not specified</td>
</tr>
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</table>

**Special Requirements**

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operator Skills Required</td>
<td>Average</td>
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<tr>
<td>Operator Training Requirements</td>
<td>Average</td>
</tr>
<tr>
<td>Training Available</td>
<td>Yes</td>
</tr>
<tr>
<td>Manuals Available</td>
<td>Yes</td>
</tr>
<tr>
<td>applicable Regulations</td>
<td>Not specified</td>
</tr>
<tr>
<td>Support Equipment</td>
<td>Mobile installation kit and choice of microphone with hang-up box</td>
</tr>
<tr>
<td>Warranty</td>
<td>2 yr</td>
</tr>
<tr>
<td>Mil Spec/Mil-Std Ratings</td>
<td>Meets Mil Spec 810D, Mil Spec 810E, and U.S. Forest Service vibrations test</td>
</tr>
<tr>
<td>Intrinsically Safe</td>
<td>No</td>
</tr>
</tbody>
</table>
**General**

Name

ID# 125

**Name**

*BK Synthesized FM E Series DES EPH 599, EPU 499 and EPV 499 Models*

**Model Number(s)**

EPH

**Technology**

Portable, conventional

**Manufacturer**

Relm Communication

7100 Technology Drive

West Melbourne, Florida 32904

321–984–1414 (Tel)

321–984–0434 (Fax)

POC: Mary Stone

**Secure Communication Capability**

DES encryption keys: 3 encryption codes in memory

**Availability**

Available

**Frequency Range**

148 MHz to 174 MHz, 403 MHz to 457 MHz, and 450 MHz to 512 MHz

**Number of Personnel Supported by System**

Unlimited

**Geographic Coverage**

Not specified

**Current User(s)**

Not specified

**Source**

Relm

**Operational Parameters**

**Number of Channels**

14 channels/210 channels

**Transmitter Power Output Levels**

Hi: 5 W; low: 4 W

**Battery Options**

NiCad hi-power battery, AA battery cells, and NiMH battery

**Battery Recharging Options**

121 V ac dual rate desktop charger, 121 V ac and 242 V ac Charge Smart NiMH desktop charger

**Physical Parameters**

**Size**

2.6 in x 1.5 in x 6.6 in

**Weight**

20 oz (standard)

**Power Requirements**

10 V dc

**External Power**

No

**Available Accessories**

**Speaker-Microphones**

Speaker microphone with swivel spring clip, hi/lo volume switch, coiled cord, and earphone jack
Carrying Cases
Full leather cover that fits deluxe leather holster with belt loop/swivel

Battery Eliminators
Not specified

Vehicle Adapters
No

Logistical Parameters

Programming
Dealer/User (authorized technician)

Repairs
Dealer

Decontamination
Not specified

Durability/Ruggedness
U.S. Forest Service vibration, EIA RS−316B vibration, and shock specifications

Environmental Conditions
-22 °F to 140 °F

Unit Cost
$2.2K to $2.3K

Battery Cycle Life
Not specified

Rapid Charge Battery Cycle Life
121 V ac dual rate desktop charger (fast-charge and trickle-charge). Charges all NiCad battery packs in 1 h or less.

Maintenance Cost
Not specified

Interface Capability
Not specified

Special Requirements

Operator Skills Required
Average

Operator Training Requirements
Average

Training Available
Yes

Manuals Available
Yes

applicable Regulations
Not specified

Support Equipment
Batteries and power supplies, microphones and speakers, charging accessories, carrying accessories, antennas, speaker microphone, and signaling and channel options (factory installs)

Warranty
2 yr (can be extended up to 5 yr)

Mil Spec/Mil-Std Ratings
Meets Mil Spec 810D, Mil Spec 810E, and U.S. Forest Service vibrations test

Intrinsically Safe
Depends on battery option
**General**

**Name**
ID# 126

**BK Synthesized FM Portable Radio; E Series, EPH 51 and 52 Models**

![Image of a radio](image)

**Model Number(s)**
EPH

**Technology**
Portable, conventional

**Manufacturer**
Relm Communication
7100 Technology Drive
West Melbourne, Florida 32904
321–984–1414 (Tel)
321–984–0434 (Fax)

POC: Mary Stone

**Secure Communication Capability**
No

**Availability**
Available

**Frequency Range**
148 MHz to 174 MHz

**Number of Personnel Supported by System**
Unlimited

**Geographic Coverage**
Not specified

**Current User(s)**
Not specified

**Source**
Relm

---

**Operational Parameters**

**Number of Channels**
14 channels/210 channels

**Transmitter Power Output Levels**
5/2 W RF power

**Battery Options**
NiCad hi-power battery, AA battery cells, and NiMH battery

**Battery Recharging Options**
121 V ac dual rate desktop charger, 121 V ac and 242 V ac Charge Smart NiMH desktop charger

---

**Physical Parameters**

**Size**
2.6 in x 1.5 in x 6.6 in

**Weight**
20 oz

**Power Requirements**
10 V dc

**External Power**
No

---

**Available Accessories**

**Speaker-Microphones**
Speaker microphone with swivel spring clip, hi/lo volume switch, coiled cord, and earphone jack
<table>
<thead>
<tr>
<th><strong>Carrying Cases</strong></th>
<th>Full leather cover that fits deluxe leather holster with belt loop/swivel</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Battery Eliminators</strong></td>
<td>Not specified</td>
</tr>
<tr>
<td><strong>Vehicle Adapters</strong></td>
<td>No</td>
</tr>
</tbody>
</table>

**Logistical Parameters**

<table>
<thead>
<tr>
<th><strong>Programming</strong></th>
<th>Dealer/User (authorized technician)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Repairs</strong></td>
<td>Dealer</td>
</tr>
<tr>
<td><strong>Decontamination</strong></td>
<td>Not specified</td>
</tr>
<tr>
<td><strong>Durability/Ruggedness</strong></td>
<td>U.S. Forest Service vibration and EIA RS–316B vibration and shock specifications</td>
</tr>
<tr>
<td><strong>Environmental Conditions</strong></td>
<td>-22 °F to 140 °F</td>
</tr>
<tr>
<td><strong>Unit Cost</strong></td>
<td>$675 to $1.2K</td>
</tr>
<tr>
<td><strong>Battery Cycle Life</strong></td>
<td>Not specified</td>
</tr>
<tr>
<td><strong>Rapid Charge Battery Cycle Life</strong></td>
<td>121 V ac dual rate desktop charger (fast-charge/trickle-charge). Charges all NiCad battery packs in 1 h or less.</td>
</tr>
</tbody>
</table>

| **Maintenance Cost** | Not specified |
| **Interface Capability** | Not specified |

**Special Requirements**

| **Operator Skills Required** | Average |
| **Operator Training Requirements** | Average |
| **Training Available** | Yes |
| **Manuals Available** | Yes |
| **applicable Regulations** | Not specified |
| **Support Equipment** | Batteries and power supplies, microphones and speakers, charging accessories, carrying accessories, antennas, speaker microphone, and signaling and channel options (factory installs) |
| **Warranty** | 2 yr (can be extended up to 5 yr) |
| **Mil Spec/Mil-Std Ratings** | Meets Mil Spec 810D, Mil Spec 810E, and U.S. Forest Service vibrations test |
| **Intrinsically Safe** | Depends on battery option |
General
Name
ID# 127

BK Synthesized FM Portable Radio; E Series, EPI 510 Models

Model Number(s)
Technology
Manufacturer

EPI
Portable, conventional
Relm Communication
7100 Technology Drive
West Melbourne, Florida 32904
321–984–1414 (Tel)
321–984–0434 (Fax)

POC: Mary Stone

Secure Communication Capability
Availability
Frequency Range
Number of Personnel Supported by System
Geographic Coverage
Current User(s)
Source

No
Available
136 MHz to 160 MHz
Unlimited
Not specified
Not specified
Relm

Operational Parameters
Number of Channels
Transmitter Power Output Levels
Battery Options
Battery Recharging Options

14 channels/210 channels
Hi: 5 W; low: 2 W
NiCad hi-power battery, AA battery cells, and NiMH battery
121 V ac dual rate desktop charger, 121 V ac and 242 V ac Charge Smart NiMH desktop charger

Physical Parameters
Size
Weight
Power Requirements
External Power

2.6 in x 1.5 in x 6.6 in
20 oz (standard)
10 V dc
No

Available Accessories
Speaker-Microphones

Speaker microphone with swivel spring clip, hi/lo volume switch, coiled cord, and earphone jack
**Carrying Cases**
Full leather cover that fits deluxe leather holster with belt loop/swivel

**Battery Eliminators**
Not specified

**Vehicle Adapters**
No

**Logistical Parameters**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Programming</td>
<td>Dealer/User (authorized technician)</td>
</tr>
<tr>
<td>Repairs</td>
<td>Dealer</td>
</tr>
<tr>
<td>Decontamination</td>
<td>Not specified</td>
</tr>
<tr>
<td>Durability/Ruggedness</td>
<td>U.S. Forest Service vibration, EIA RS–316B vibration, and shock specifications</td>
</tr>
<tr>
<td>Environmental Conditions</td>
<td>-22 °F to 140 °F</td>
</tr>
<tr>
<td>Unit Cost</td>
<td>$800 to $1.1K</td>
</tr>
<tr>
<td>Battery Cycle Life</td>
<td>Not specified</td>
</tr>
<tr>
<td>Rapid Charge Battery Cycle Life</td>
<td>121 V ac dual rate desktop charger (fast-charge/trickle-charge). Charges all NiCad battery packs in 1 h or less.</td>
</tr>
</tbody>
</table>

**Maintenance Cost**
Not specified

**Interface Capability**
Not specified

**Special Requirements**

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operator Skills Required</td>
<td>Average</td>
</tr>
<tr>
<td>Operator Training Requirements</td>
<td>Average</td>
</tr>
<tr>
<td>Training Available</td>
<td>Yes</td>
</tr>
<tr>
<td>Manuals Available</td>
<td>Yes</td>
</tr>
<tr>
<td>applicable Regulations</td>
<td>Not specified</td>
</tr>
<tr>
<td>Support Equipment</td>
<td>Batteries/power supplies, microphones and speakers, charging accessories, carrying accessories, antennas, speaker microphone, and signaling/channel options (factory installs)</td>
</tr>
<tr>
<td>Warranty</td>
<td>2 yr (can be extended up to 5 yr)</td>
</tr>
<tr>
<td>Mil Spec/Mil-Std Ratings</td>
<td>Meets Mil Spec 810D, Mil Spec 810E, and U.S. Forest Service vibrations test</td>
</tr>
<tr>
<td>Intrinsically Safe</td>
<td>Depends on battery option</td>
</tr>
<tr>
<td><strong>General</strong></td>
<td><strong>BK Synthesized FM Portable Radio; E Series, EPU &amp; EPV 414 and 499 Models</strong></td>
</tr>
<tr>
<td>-------------</td>
<td>--------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Name</td>
<td>ID# 128</td>
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</table>

<table>
<thead>
<tr>
<th><strong>Model Number(s)</strong></th>
<th><strong>EPV</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Technology</td>
<td>Portable, conventional</td>
</tr>
<tr>
<td>Manufacturer</td>
<td>Relm Communication 7100 Technology Drive West Melbourne, Florida 32904 321–984–1414 (Tel) 321–984–0434 (Fax)</td>
</tr>
<tr>
<td>Secure Communication Capability</td>
<td>No</td>
</tr>
<tr>
<td>Availability</td>
<td>Available</td>
</tr>
<tr>
<td>Frequency Range</td>
<td>403 MHz to 457 MHz (EPV) 450 MHz to 512 MHz (EPU)</td>
</tr>
<tr>
<td>Number of Personnel Supported by System</td>
<td>Unlimited</td>
</tr>
<tr>
<td>Geographic Coverage</td>
<td>Not specified</td>
</tr>
<tr>
<td>Current User(s)</td>
<td>Not specified</td>
</tr>
<tr>
<td>Source</td>
<td>Relm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Operational Parameters</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Channels</td>
</tr>
<tr>
<td>Transmitter Power Output Levels</td>
</tr>
<tr>
<td>Battery Options</td>
</tr>
<tr>
<td>Battery Recharging Options</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Physical Parameters</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Size</td>
</tr>
<tr>
<td>Weight</td>
</tr>
<tr>
<td>Power Requirements</td>
</tr>
<tr>
<td>External Power</td>
</tr>
</tbody>
</table>
Available Accessories

- Speaker-Microphones: Speaker microphone with swivel spring clip, hi/lo volume switch, coiled cord, and earphone jack
- Carrying Cases: Full leather cover that fits deluxe leather holster with belt loop and swivel
- Battery Eliminators: Not specified
- Vehicle Adapters: No

Logistical Parameters

- Programming: Dealer/User (authorized technician)
- Repairs: Dealer
- Decontamination: Not specified
- Durability/Ruggedness: U.S. Forest Service vibrations test
- Environmental Conditions: -22 °F to 140 °F
- Unit Cost: $910 to $1.3K
- Battery Cycle Life: Not specified
- Rapid Charge Battery Cycle Life: 121 V ac dual rate desktop charger (fast-charge and trickle-charge). Charges all NiCad battery packs in 1 h or less.

- Maintenance Cost: Not specified
- Interface Capability: Not specified

Special Requirements

- Operator Skills Required: Average
- Operator Training Requirements: Average
- Training Available: Yes
- Manuals Available: Yes
- applicable Regulations: Not specified
- Support Equipment: Batteries and power supplies, microphones and speakers, charging accessories, carrying accessories, antennas, speaker microphone, and signaling/channel options (factory installs)

- Warranty: 2 yr (can be extended up to 5 yr)
- Mil Spec/Mil-Std Ratings: Meets Mil Spec 810D, Mil Spec 810E, and U.S. Forest Service vibrations test

- Intrinsically Safe: No
<table>
<thead>
<tr>
<th><strong>General</strong></th>
<th><strong>BK Repeater; ERU Series</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Name</strong></td>
<td>BK Repeater; ERU Series</td>
</tr>
<tr>
<td><strong>ID#</strong></td>
<td>129</td>
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</table>

<table>
<thead>
<tr>
<th><strong>Model Number(s)</strong></th>
<th>ERU-Series</th>
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<tbody>
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<td><strong>Technology</strong></td>
<td>Conventional repeater</td>
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<tr>
<td><strong>Manufacturer</strong></td>
<td>Relm Communication</td>
</tr>
<tr>
<td></td>
<td>7100 Technology Drive</td>
</tr>
<tr>
<td></td>
<td>West Melbourne, Florida 32904</td>
</tr>
<tr>
<td></td>
<td>321–984–1414 (Tel)</td>
</tr>
<tr>
<td></td>
<td>321–984–0434 (Fax)</td>
</tr>
<tr>
<td></td>
<td>POC: Mary Stone</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th><strong>Secure Communication Capability</strong></th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Availability</strong></td>
<td>Available</td>
</tr>
<tr>
<td><strong>Frequency Range</strong></td>
<td>400 MHz to 520 MHz</td>
</tr>
<tr>
<td><strong>Number of Personnel Supported by System</strong></td>
<td>Unlimited</td>
</tr>
<tr>
<td><strong>Geographic Coverage</strong></td>
<td>Not applicable</td>
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<tr>
<td><strong>Current User(s)</strong></td>
<td>Not specified</td>
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<tr>
<td><strong>Source</strong></td>
<td>Relm</td>
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</table>

<table>
<thead>
<tr>
<th><strong>Operational Parameters</strong></th>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>Number of Channels</strong></td>
<td>255 channels</td>
</tr>
<tr>
<td><strong>Transmitter Power Output Levels</strong></td>
<td>Hi: 50 W; low: 35 W RF power</td>
</tr>
<tr>
<td><strong>Battery Options</strong></td>
<td>Not applicable</td>
</tr>
<tr>
<td><strong>Battery Recharging Options</strong></td>
<td>None</td>
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</table>

<table>
<thead>
<tr>
<th><strong>Physical Parameters</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Size</strong></td>
<td>19 in x 3.5 in x 14.2 in</td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td>19.8 lb</td>
</tr>
<tr>
<td><strong>Power Requirements</strong></td>
<td>13.8 V dc</td>
</tr>
<tr>
<td><strong>External Power</strong></td>
<td>No</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th><strong>Available Accessories</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Speaker-Microphones</strong></td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Carrying Cases</strong></td>
<td>No</td>
</tr>
<tr>
<td><strong>Battery Eliminators</strong></td>
<td>No</td>
</tr>
<tr>
<td>Feature</td>
<td>Details</td>
</tr>
<tr>
<td>-------------------------</td>
<td>-------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Vehicle Adapters</strong></td>
<td>Not applicable</td>
</tr>
<tr>
<td><strong>Logistical Parameters</strong></td>
<td></td>
</tr>
<tr>
<td>Programming</td>
<td>Dealer/User (authorized technician)</td>
</tr>
<tr>
<td>Repairs</td>
<td>Dealer</td>
</tr>
<tr>
<td>Decontamination</td>
<td>Not specified</td>
</tr>
<tr>
<td>Durability/Ruggedness</td>
<td>U.S. Forest Service vibrations test</td>
</tr>
<tr>
<td>Environmental Conditions</td>
<td>-22 °F to 140 °F</td>
</tr>
<tr>
<td>Unit Cost</td>
<td>Not specified</td>
</tr>
<tr>
<td>Battery Cycle Life</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Rapid Charge Battery Cycle Life</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Maintenance Cost</td>
<td>Not specified</td>
</tr>
<tr>
<td>Interface Capability</td>
<td>No</td>
</tr>
<tr>
<td><strong>Special Requirements</strong></td>
<td></td>
</tr>
<tr>
<td>Operator Skills Required</td>
<td>Experienced</td>
</tr>
<tr>
<td>Operator Training Requirements</td>
<td>Experienced</td>
</tr>
<tr>
<td>Training Available</td>
<td>Yes</td>
</tr>
<tr>
<td>Manuals Available</td>
<td>Yes</td>
</tr>
<tr>
<td>applicable Regulations</td>
<td>Not specified</td>
</tr>
<tr>
<td>Support Equipment</td>
<td>Available</td>
</tr>
<tr>
<td>Warranty</td>
<td>2 yr</td>
</tr>
<tr>
<td>Mil Spec/Mil-Std Ratings</td>
<td>Meets Mil Spec 810D, Mil Spec 810E, and U.S. Forest Service vibrations test</td>
</tr>
<tr>
<td>Intrinsically Safe</td>
<td>No</td>
</tr>
</tbody>
</table>
**General**

**Name**

ID# 130

**Model Number(s)**

GPH21, GPH51

**Technology**

Portable, conventional

**Manufacturer**

Relm Communication

7100 Technology Drive

West Melbourne, Florida 32904

321–984–1414 (Tel)

321–984–0434 (Fax)

POC: Mary Stone

**Secure Communication Capability**

No

**Availability**

Available

**Frequency Range**

148 MHz to 174 MHz

**Number of Personnel Supported by System**

Unlimited

**Geographic Coverage**

Not specified

**Current User(s)**

Not specified

**Source**

Relm

---

**Operational Parameters**

**Number of Channels**

16 channels/240 channels

**Transmitter Power Output Levels**

5 W

**Battery Options**

NiCad hi-power battery, AA battery cells, and NiMH battery

**Battery Recharging Options**

121 V ac dual rate desktop charger, 121 V ac/242 V ac Charge Smart NiMH desktop charger

---

**Physical Parameters**

**Size**

2.55 in x 15 in x 6.6 in (with standard battery)

**Weight**

20.8 oz (with standard battery)

**Power Requirements**

10 V dc

**External Power**

No

---

**Available Accessories**

**Speaker-Microphones**

Speaker microphone with swivel spring clip, hi/lo volume, coiled cord, and earphone jack

**Carrying Cases**

Leather case with belt loop (optional viewing window)
Battery Eliminators
Vehicle Adapters

**Logistical Parameters**

- **Programming**: Dealer/User (authorized technician)
- **Repairs**: Dealer
- **Decontamination**: Not specified
- **Durability/Ruggedness**: Standard use
- **Environmental Conditions**: -22 °F to 140 °F
- **Unit Cost**: $750 to $1.2K
- **Battery Cycle Life**: Not specified
- **Rapid Charge Battery Cycle Life**: 121 V ac dual rate desktop charger (fast-charge/trickle-charge). Charges all NiCad battery packs in 1 h or less.

**Special Requirements**

- **Operator Skills Required**: Average
- **Operator Training Requirements**: Average
- **Training Available**: Yes
- **Manuals Available**: Yes
- **applicable Regulations**: Not specified
- **Support Equipment**: Batteries/power supplies, microphones and speakers, charging accessories, carrying accessories, antennas, speaker microphone, and signaling/channel options (factory installs)

- **Warranty**: 2 yr (can be extended up to 5 yr)
- **Mil Spec/Mil-Std Ratings**: Meets Mil Spec 810C, Mil Spec 810D, Mil Spec 810E, and U.S. Forest Service vibrations test
- **Intrinsically Safe**: Depends on battery option
**General**

Name
ID# 131

**Model Number(s)**

KFM 985

**Technology**

Mobile, conventional

**Manufacturer**

Relm Communication
7100 Technology Drive
West Melbourne, Florida 32904
321–984–1414 (Tel)
321–984–0434 (Fax)

POC: Mary Stone

**Secure Communication Capability**

No

**Availability**

Available

**Frequency Range**

Downband VHF: 136 MHz to 160 MHz
VHF: 148 MHz to 174 MHz
UHF: 450 MHz to 512 MHz
Downband UHF: 403 MHz to 457 MHz

Unlimited

**Number of Personnel Supported by System**

Not specified

**Geographic Coverage**

Not specified

**Current User(s)**

Relm

**Source**

Relm

**Operational Parameters**

**Number of Channels**

Up to 210 channels

**Transmitter Power Output Levels**

VHF: 4 W
UHF: 5 W

Not applicable

**Battery Options**

Not applicable

**Battery Recharging Options**

Not applicable

**Physical Parameters**

**Size**

3 in x 5.8 in x 5.3 in

**Weight**

2 lb

**Power Requirements**

14 V dc

**External Power**

Not applicable

**Available Accessories**

**Speaker-Microphones**

Not applicable
<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carrying Cases</td>
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</tr>
<tr>
<td>Battery Eliminators</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Vehicle Adapters</td>
<td>Not applicable</td>
</tr>
<tr>
<td><strong>Logistical Parameters</strong></td>
<td></td>
</tr>
<tr>
<td>Programming</td>
<td>Dealer/User (authorized technician)</td>
</tr>
<tr>
<td>Repairs</td>
<td>Dealer</td>
</tr>
<tr>
<td>Decontamination</td>
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<tr>
<td>Durability/Ruggedness</td>
<td>U.S. Forest Service vibrations test</td>
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<tr>
<td>Environmental Conditions</td>
<td>-22 °F to 140 °F</td>
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<td>Unit Cost</td>
<td>Not specified</td>
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<tr>
<td>Battery Cycle Life</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Rapid Charge Battery Cycle Life</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Maintenance Cost</td>
<td>Not specified</td>
</tr>
<tr>
<td>Interface Capability</td>
<td>Not specified</td>
</tr>
<tr>
<td><strong>Special Requirements</strong></td>
<td></td>
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<tr>
<td>Operator Skills Required</td>
<td>Average</td>
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<tr>
<td>Operator Training Requirements</td>
<td>Average</td>
</tr>
<tr>
<td>Training Available</td>
<td>Yes</td>
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<tr>
<td>Manuals Available</td>
<td>Yes</td>
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<tr>
<td>applicable Regulations</td>
<td>Not specified</td>
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<tr>
<td>Support Equipment</td>
<td>Not specified</td>
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<tr>
<td>Warranty</td>
<td>2 yr</td>
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<tr>
<td>Mil Spec/Mil-Std Ratings</td>
<td>U.S. Forest Service vibrations test</td>
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<tr>
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### General

<table>
<thead>
<tr>
<th>Name</th>
<th>Relm Mobile Radio; 256NB</th>
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<tbody>
<tr>
<td>ID#</td>
<td>132</td>
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</table>

**Picture Not Available**

### Model Number(s)

- 256NB

### Technology

- Mobile, conventional

### Manufacturer

- Relm Communication
- 7100 Technology Drive
- West Melbourne, Florida 32904
- 321–984–1414 (Tel)
- 321–984–0434 (Fax)
- POC: Mary Stone

### Secure Communication Capability

- No

### Availability

- Available

### Frequency Range

- 150 MHz to 162 MHz

### Number of Personnel Supported by System

- Unlimited

### Geographic Coverage

- Not specified

### Current User(s)

- Not specified

### Source

- Relm

### Operational Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
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<tbody>
<tr>
<td>Number of Channels</td>
<td>1 channel/16 channels</td>
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<tr>
<td>Transmitter Power Output Levels</td>
<td>25 W minimum</td>
</tr>
<tr>
<td>Battery Options</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Battery Recharging Options</td>
<td>Not applicable</td>
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### Physical Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
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<tbody>
<tr>
<td>Size</td>
<td>2.75 in x 6.5 in x 10.75 in</td>
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<tr>
<td>Weight</td>
<td>4.4 lb</td>
</tr>
<tr>
<td>Power Requirements</td>
<td>13.6 V dc</td>
</tr>
<tr>
<td>External Power</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

### Available Accessories

<table>
<thead>
<tr>
<th>Accessory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speaker-Microphones</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Carrying Cases</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Battery Eliminators</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Vehicle Adapters</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>
### Logistical Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Programming</td>
<td>Dealer/User (authorized technician)</td>
</tr>
<tr>
<td>Repairs</td>
<td>Dealer</td>
</tr>
<tr>
<td>Decontamination</td>
<td>Not specified</td>
</tr>
<tr>
<td>Durability/Ruggedness</td>
<td>Not specified</td>
</tr>
<tr>
<td>Environmental Conditions</td>
<td>-22 °F to 140 °F</td>
</tr>
<tr>
<td>Unit Cost</td>
<td>Not specified</td>
</tr>
<tr>
<td>Battery Cycle Life</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Rapid Charge Battery Cycle Life</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Maintenance Cost</td>
<td>Not specified</td>
</tr>
<tr>
<td>Interface Capability</td>
<td>Not specified</td>
</tr>
</tbody>
</table>

### Special Requirements

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operator Skills Required</td>
<td>Average</td>
</tr>
<tr>
<td>Operator Training Requirements</td>
<td>Average</td>
</tr>
<tr>
<td>Training Available</td>
<td>Yes</td>
</tr>
<tr>
<td>Manuals Available</td>
<td>Yes</td>
</tr>
<tr>
<td>applicable Regulations</td>
<td>Not specified</td>
</tr>
<tr>
<td>Support Equipment</td>
<td>Mobile hand microphone, 5 A dc power cord, telephone handset with hookswitch, mounting bracket, DTMF encoder microphone, alternator filter, desk microphone, and external speaker</td>
</tr>
<tr>
<td>Warranty</td>
<td>1 yr</td>
</tr>
<tr>
<td>Mil Spec/Mil-Std Ratings</td>
<td>No</td>
</tr>
<tr>
<td>Intrinsically Safe</td>
<td>No</td>
</tr>
</tbody>
</table>
### General
- **Name**: Relm Portable Radios; MPU08 (UHF)
- **ID#**: 133

#### Model Number(s)
- MPU08 (UHF)

#### Technology
- Portable

#### Manufacturer
- Relm Communication
  - 7100 Technology Drive
  - West Melbourne, Florida 32904
  - 321–984–1414 (Tel)
  - 321–984–0434 (Fax)

- **POC**: Mary Stone

#### Secure Communication Capability
- No

#### Availability
- Available

#### Frequency Range
- 450 MHz to 480 MHz

#### Number of Personnel Supported by System
- Unlimited

#### Geographic Coverage
- Not specified

#### Current User(s)
- Not specified

#### Source
- Relm

### Operational Parameters
- **Number of Channels**: 8 channels
- **Transmitter Power Output Levels**: 4 W
- **Battery Options**: 700 mA battery, 1000 mA battery
- **Battery Recharging Options**: Desk (rapid rate), 6 unit multi-charger, and wall charger

### Physical Parameters
- **Size**: 6.4 in x 2.5 in x 1.4 in
- **Weight**: 15.5 oz
- **Power Requirements**: Not specified
- **External Power**: No

### Available Accessories
- **Speaker-Microphones**: Speaker microphone
- **Carrying Cases**: Carrying case
Battery Eliminators
Vehicle Adapters

Logistical Parameters
Programming
Dealer/User (authorized technician)
Repairs
Dealer
Decontamination
Not specified
Durability/Ruggedness
Standard use
Environmental Conditions
-22 °F to 140 °F
Unit Cost
$458
Battery Cycle Life
Not specified
Rapid Charge Battery Cycle Life
Rapid rate desk charger
Maintenance Cost
Not specified
Interface Capability
Not specified

Special Requirements
Operator Skills Required
Minimal
Operator Training Requirements
Minimal
Training Available
Yes
Manuals Available
Yes
applicable Regulations
Battery charger, battery pack, speaker microphone, carry case, rubber antenna, 12.5 channel space conversion kit for MPV and MPU, cloning cable, and PC programming kit
Support Equipment
Individual warranty provided with each product
Warranty
Mil Spec/Mil-Std Ratings
Not specified
Intrinsically Safe
No
Intrinsically Safe
No
**General**

<table>
<thead>
<tr>
<th>Name</th>
<th>Relm Portable Radios; MPU32 (UHF)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model Number(s)</td>
<td>MPU 32 (UHF)</td>
</tr>
<tr>
<td>Technology</td>
<td>Portable, conventional</td>
</tr>
<tr>
<td>Manufacturer</td>
<td>Relm Communication</td>
</tr>
<tr>
<td></td>
<td>7100 Technology Drive</td>
</tr>
<tr>
<td></td>
<td>West Melbourne, Florida 32904</td>
</tr>
<tr>
<td></td>
<td>321–984–1414 (Tel)</td>
</tr>
<tr>
<td></td>
<td>321–984–0434 (Fax)</td>
</tr>
<tr>
<td>POC</td>
<td>Mary Stone</td>
</tr>
</tbody>
</table>

**Secure Communication Capability**
- No

**Availability**
- Available

**Frequency Range**
- 403 MHz to 430 MHz and 450 MHz to 480 MHz

**Number of Personnel Supported by System**
- Unlimited

**Geographic Coverage**
- Not specified

**Current User(s)**
- Not specified

**Source**
- Relm

**Operational Parameters**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Channels</td>
<td>32 channels/64 channels, option available</td>
</tr>
<tr>
<td>Transmitter Power Output Levels</td>
<td>4 W</td>
</tr>
<tr>
<td>Battery Options</td>
<td>700 mA battery</td>
</tr>
<tr>
<td></td>
<td>1000 mA battery</td>
</tr>
<tr>
<td>Battery Recharging Options</td>
<td>Desk (rapid rate), 6 unit multi-charger, and wall charger</td>
</tr>
</tbody>
</table>

**Physical Parameters**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size</td>
<td>6.4 in x 2.5 in x 1.4 in</td>
</tr>
<tr>
<td>Weight</td>
<td>15.5 oz</td>
</tr>
<tr>
<td>Power Requirements</td>
<td>10.8 V dc</td>
</tr>
<tr>
<td>External Power</td>
<td>No</td>
</tr>
</tbody>
</table>

**Available Accessories**

<table>
<thead>
<tr>
<th>Accessory</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speaker-Microphones</td>
<td>Speaker microphone</td>
</tr>
<tr>
<td>Carrying Cases</td>
<td>Carrying case</td>
</tr>
<tr>
<td><strong>Battery Eliminators</strong></td>
<td>Not specified</td>
</tr>
<tr>
<td>------------------------</td>
<td>---------------</td>
</tr>
<tr>
<td><strong>Vehicle Adapters</strong></td>
<td>No</td>
</tr>
</tbody>
</table>

### Logistical Parameters

<table>
<thead>
<tr>
<th><strong>Programming</strong></th>
<th>Dealer/User (authorized technician)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Repairs</strong></td>
<td>Dealer</td>
</tr>
<tr>
<td><strong>Decontamination</strong></td>
<td>Not specified</td>
</tr>
<tr>
<td><strong>Durability/Ruggedness</strong></td>
<td>Standard use</td>
</tr>
<tr>
<td><strong>Environmental Conditions</strong></td>
<td>-22 °F to 140 °F</td>
</tr>
<tr>
<td><strong>Unit Cost</strong></td>
<td>$473</td>
</tr>
<tr>
<td><strong>Battery Cycle Life</strong></td>
<td>Not specified</td>
</tr>
<tr>
<td><strong>Rapid Charge Battery Cycle Life</strong></td>
<td>Rapid rate desk charger</td>
</tr>
<tr>
<td><strong>Maintenance Cost</strong></td>
<td>Not specified</td>
</tr>
<tr>
<td><strong>Interface Capability</strong></td>
<td>Not specified</td>
</tr>
</tbody>
</table>

### Special Requirements

<table>
<thead>
<tr>
<th><strong>Operator Skills Required</strong></th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Operator Training Requirements</strong></td>
<td>Average</td>
</tr>
<tr>
<td><strong>Training Available</strong></td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Manuals Available</strong></td>
<td>Yes</td>
</tr>
<tr>
<td><strong>applicable Regulations</strong></td>
<td>Not specified</td>
</tr>
<tr>
<td><strong>Support Equipment</strong></td>
<td>Battery charger, battery pack, speaker microphone, carry case, rubber antenna, 12.5 channel space conversion kit for MPV and MPU, cloning cable, and PC programming kit</td>
</tr>
<tr>
<td><strong>Warranty</strong></td>
<td>Individual warranty provided with each product</td>
</tr>
<tr>
<td><strong>Mil Spec/Mil-Std Ratings</strong></td>
<td>No</td>
</tr>
<tr>
<td><strong>Intrinsically Safe</strong></td>
<td>No</td>
</tr>
</tbody>
</table>
Relm Portable Radios; MPV32 (VHF)

Model Number(s)  MPV 32 (VHF)
Technology  Portable, conventional
Manufacturer  Relm Communication
             7100 Technology Drive
             West Melbourne, Florida 32904
             321–984–1414 (Tel)
             321–984–0434 (Fax)

Secure Communication Capability  No
Availability  Available
Frequency Range  136 MHz to 174 MHz
Number of Personnel Supported by System  Unlimited
Geographic Coverage  Not specified
Current User(s)  Not specified
Source  Relm

Operational Parameters
Number of Channels  32 channels/64 channels, option available
Transmitter Power Output Levels  5 W
Battery Options  700 mA battery
                 1000 mA battery
Battery Recharging Options  Desk (rapid rate), 6 unit multi-charger, and wall charger

Physical Parameters
Size  6.4 in x 2.5 in x 1.4 in
Weight  15.5 oz
Power Requirements  10.8 V dc
External Power  No

Available Accessories
Speaker-Microphones  Speaker microphone
Carrying Cases  Carrying case
## Battery Eliminators

### Vehicle Adapters

### Logistical Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Programming</td>
<td>Dealer/User (authorized technician)</td>
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<tr>
<td>Repairs</td>
<td>Dealer</td>
</tr>
<tr>
<td>Decontamination</td>
<td>Not specified</td>
</tr>
<tr>
<td>Durability/Ruggedness</td>
<td>Standard use</td>
</tr>
<tr>
<td>Environmental Conditions</td>
<td>-22 °F to 140 °F</td>
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<tr>
<td>Unit Cost</td>
<td>$473</td>
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<tr>
<td>Battery Cycle Life</td>
<td>Not specified</td>
</tr>
<tr>
<td>Rapid Charge Battery Cycle Life</td>
<td>Rapid rate desk charger</td>
</tr>
<tr>
<td>Maintenance Cost</td>
<td>Not specified</td>
</tr>
<tr>
<td>Interface Capability</td>
<td>Not specified</td>
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### Special Requirements

<table>
<thead>
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<th>Requirement</th>
<th>Specification</th>
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<tr>
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<tr>
<td>Manuals Available</td>
<td>Yes</td>
</tr>
<tr>
<td>applicable Regulations</td>
<td>Not specified</td>
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<tr>
<td>Support Equipment</td>
<td>Battery charger, battery pack, speaker microphone, carry case, rubber antenna, 12.5 channel space conversion kit for MPV and MPU, cloning cable, and PC programming kit</td>
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<tr>
<td>Warranty</td>
<td>Individual warranty provided with each product</td>
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<tr>
<td>Mil Spec/Mil-Std Ratings</td>
<td>No</td>
</tr>
<tr>
<td>Intrinsically Safe</td>
<td>No</td>
</tr>
<tr>
<td><strong>General</strong></td>
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<tr>
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<td>---</td>
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<tr>
<td><strong>Name</strong></td>
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<tr>
<td><strong>ID#</strong></td>
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| **Model Number(s)** | SMV2516 UHF |
| **Technology** | Mobile, conventional |
| **Manufacturer** | Relm Communication  
7100 Technology Drive  
West Melbourne, Florida 32904  
321–984–1414 (Tel)  
321–984–0434 (Fax) |
| **Secure Communication Capability** | No |
| **Availability** | Available |
| **Frequency Range** | 450 MHz to 482 MHz |
| **Number of Personnel Supported by System** | Unlimited |
| **Geographic Coverage** | Not specified |
| **Current User(s)** | Not specified |
| **Source** | Relm |

| **Operational Parameters** |  |
| **Number of Channels** | Either 16 channel or 99 channel formats with scan capability |
| **Transmitter Power Output Levels** | 25 W minimum at 7 MHz  
12.5 W minimum at 10 MHz |
| **Battery Options** | Not applicable |
| **Battery Recharging Options** | Not applicable |

| **Physical Parameters** |  |
| **Size** | 1.5 in x 5.8 in x 7 in |
| **Weight** | 2.4 lb |
| **Power Requirements** | 13.6 V dc |
| **External Power** | Not applicable |

| **Available Accessories** |  |
| **Speaker-Microphones** | Not applicable |
Carrying Cases: Not applicable
Battery Eliminators: Not applicable
Vehicle Adapters: Not applicable

**Logistical Parameters**

<table>
<thead>
<tr>
<th>Description</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Programming</td>
<td>Dealer/User (authorized technician)</td>
</tr>
<tr>
<td>Repairs</td>
<td>Dealer</td>
</tr>
<tr>
<td>Decontamination</td>
<td>Not specified</td>
</tr>
<tr>
<td>Durability/Ruggedness</td>
<td>Specially designed metal covers and a die-cast metal frame offer unparalleled structural durability and protection</td>
</tr>
</tbody>
</table>

**Environmental Conditions**

-22 °F to 140 °F

**Unit Cost**

$550

**Battery Cycle Life**

Not applicable

**Rapid Charge Battery Cycle Life**

Not applicable

**Maintenance Cost**

Not specified

**Interface Capability**

Not specified

**Special Requirements**

<table>
<thead>
<tr>
<th>Description</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operator Skills Required</td>
<td>Average</td>
</tr>
<tr>
<td>Operator Training Requirements</td>
<td>Average</td>
</tr>
<tr>
<td>Training Available</td>
<td>Yes</td>
</tr>
<tr>
<td>Manuals Available</td>
<td>Yes</td>
</tr>
<tr>
<td>applicable Regulations</td>
<td>FCC Type Acceptance</td>
</tr>
<tr>
<td>Support Equipment</td>
<td>DTMF Decoder, external speaker 12 A dc power cord, mobile hand microphone, programmer desk microphone, DTMF Touch-Tone* Microphone, and two-tone sequential decoder</td>
</tr>
</tbody>
</table>

**Warranty**

1 yr

**Mil Spec/Mil-Std Ratings**

No

**Intrinsically Safe**

No
**General**

Name
ID# 137

**Relm Mobile Radios; SMV4016**

Model Number(s)  
SMV4016 VHF

Technology  
Mobile, conventional

Manufacturer  
Relm Communication  
7100 Technology Drive  
West Melbourne, Florida 32904  
321–984–1414 (Tel)  
321–984–0434 (Fax)

POC: Mary Stone

Secure Communication Capability  
No

Availability  
Available

Frequency Range  
150 MHz to 174 MHz

Number of Personnel Supported by System  
Unlimited

Geographic Coverage  
Not specified

Current User(s)  
Not specified

Source  
Relm

**Operational Parameters**

Number of Channels  
Either 16 channel or 99 channel formats with scan capability

Transmitter Power Output Levels  
40 W minimum at 7 MHz  
20 W minimum at 10 MHz

Battery Options  
Not applicable

Battery Recharging Options  
Not applicable

**Physical Parameters**

Size  
1.5 in x 5.8 in x 7 in

Weight  
2.4 lb

Power Requirements  
13.6 V dc

External Power  
Not applicable

**Available Accessories**

Speaker-Microphones  
Not applicable

Carrying Cases  
Not applicable
### Battery Eliminators
Not applicable

### Vehicle Adapters
Not applicable

### Logistical Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Programming</td>
<td>Dealer/User (authorized technician)</td>
</tr>
<tr>
<td>Repairs</td>
<td>Dealer</td>
</tr>
<tr>
<td>Decontamination</td>
<td>Not specified</td>
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<tr>
<td>Durability/Ruggedness</td>
<td>Specially designed metal covers and a die-cast metal frame offer unparalleled structural durability and protection</td>
</tr>
<tr>
<td>Environmental Conditions</td>
<td>-22 °F to 140 °F</td>
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<tr>
<td>Unit Cost</td>
<td>$548</td>
</tr>
<tr>
<td>Battery Cycle Life</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Rapid Charge Battery Cycle Life</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Maintenance Cost</td>
<td>Not specified</td>
</tr>
<tr>
<td>Interface Capability</td>
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### Special Requirements

<table>
<thead>
<tr>
<th>Requirement</th>
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<tr>
<td>Operator Skills Required</td>
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<tr>
<td>Operator Training Requirements</td>
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<tr>
<td>Training Available</td>
<td>Yes</td>
</tr>
<tr>
<td>Manuals Available</td>
<td>Yes</td>
</tr>
<tr>
<td>applicable Regulations</td>
<td>FCC Type Acceptance</td>
</tr>
<tr>
<td>Support Equipment</td>
<td>DTMF Decoder, external speaker 12 A dc power cord, mobile hand microphone, programmer desk microphone, DTMF Touch-Tone* Microphone, and two-tone sequential decoder</td>
</tr>
<tr>
<td>Warranty</td>
<td>1 yr</td>
</tr>
<tr>
<td>Mil Spec/Mil-Std Ratings</td>
<td>No</td>
</tr>
<tr>
<td>Intrinsically Safe</td>
<td>No</td>
</tr>
</tbody>
</table>
Maxon VHF/UHF RF Link Module; SD-125

Model Number(s)  
SD-125

Technology  
Link (repeater), conventional RF Link Module

Manufacturer  
Topaz 3, LLC  
10828 NW Air World Drive  
Kansas City, Missouri 64153  
816–891–6320 ext. 699 (Tel)  
816–891–8815 (Fax)

POC: Liz Hawkins  
Maxon America  
800–821–7848, ext 611 (Tel)  
liz.hawkins@topaz3.com

Secure Communication Capability  
No

Availability  
Available

Frequency Range  
148 MHz to 174 MHz and 440 MHz to 470 MHz

Number of Personnel Supported by System  
Not applicable

Geographic Coverage  
Not specified

Current User(s)  
Not specified

Source  
Topaz 3, LLC

Operational Parameters

Number of Channels  
16 channels

Transmitter Power Output Levels  
1 W to 5 W

Battery Options  
Not specified

Battery Recharging Options  
Not specified

Physical Parameters

Size  
4.6 in x 2.4 in x 1.2 in

Weight  
8 oz

Power Requirements  
9 V dc to 18 V dc

External Power  
No

Available Accessories
<table>
<thead>
<tr>
<th><strong>Speaker-Microphones</strong></th>
<th>Not applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Carrying Cases</strong></td>
<td>Not specified</td>
</tr>
<tr>
<td><strong>Battery Eliminators</strong></td>
<td>Not specified</td>
</tr>
<tr>
<td><strong>Vehicle Adapters</strong></td>
<td>Not specified</td>
</tr>
</tbody>
</table>

### Logistical Parameters

<table>
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<tr>
<th><strong>Programming</strong></th>
<th>Dealer/User (authorized technician)</th>
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</thead>
<tbody>
<tr>
<td><strong>Repairs</strong></td>
<td>Dealer</td>
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<tr>
<td><strong>Decontamination</strong></td>
<td>Not specified</td>
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<td><strong>Durability/Ruggedness</strong></td>
<td>Standard use</td>
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<td><strong>Environmental Conditions</strong></td>
<td>-22 °F to 140 °F</td>
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<tr>
<td><strong>Unit Cost</strong></td>
<td>Not specified</td>
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<tr>
<td><strong>Battery Cycle Life</strong></td>
<td>5/5/90 cycle</td>
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<tr>
<td><strong>Rapid Charge Battery Cycle Life</strong></td>
<td>Not specified</td>
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<tr>
<td><strong>Maintenance Cost</strong></td>
<td>Not specified</td>
</tr>
<tr>
<td><strong>Interface Capability</strong></td>
<td>Not specified</td>
</tr>
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</table>

### Special Requirements

<table>
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<tr>
<th><strong>Operator Skills Required</strong></th>
<th>Average</th>
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<tbody>
<tr>
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<td>Average</td>
</tr>
<tr>
<td><strong>Training Available</strong></td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Manuals Available</strong></td>
<td>Yes</td>
</tr>
<tr>
<td><strong>applicable Regulations</strong></td>
<td>Not specified</td>
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<tr>
<td><strong>Support Equipment</strong></td>
<td>Available</td>
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<tr>
<td><strong>Warranty</strong></td>
<td>2 yr</td>
</tr>
<tr>
<td><strong>Mil Spec/Mil-Std Ratings</strong></td>
<td>No</td>
</tr>
<tr>
<td><strong>Intrinsically Safe</strong></td>
<td>No</td>
</tr>
</tbody>
</table>
## General

**Name**  
ID# 139

## Maxon Scanning Transceiver; SM-2000 Series

**Model Number(s)**  
SM-2150 VHF  
SM-2450 UHF

**Technology**  
Mobile, conventional

**Manufacturer**  
Topaz 3, LLC  
10828 NW Air World Drive  
Kansas City, Missouri 64153  
816–891–6320 ext. 699 (Tel)  
816–891–8815 (Fax)

POC: Liz Hawkins  
Maxon America  
800–821–7848, ext 611 (Tel)  
liz.hawkins@topaz3.com

**Secure Communication Capability**  
No

**Availability**  
Available

**Frequency Range**  
VHF: 148 MHz to 174 MHz  
UHF: 440 MHz to 470 MHz

**Number of Personnel Supported by System**  
Unlimited

**Geographic Coverage**  
Not specified

**Current User(s)**  
Not specified

**Source**  
Topaz 3, LLC

## Operational Parameters

### Number of Channels

UHF: 4 channels (programmable in 5 kHz steps)  
VHF: 4 channels (programmable in 6.25 kHz steps)

### Transmitter Power Output Levels

1 W to 3 W, low  
1 W to 25 W, high

### Battery Options

Not applicable

### Battery Recharging Options

Not applicable

## Physical Parameters

### Size

2 in x 7 in x 6.3 in

### Weight

3.4 lb (with microphone)

### Power Requirements

13.8 V dc negative ground

### External Power

Not applicable
Available Accessories

- Speaker-Microphones: Not applicable
- Carrying Cases: Not applicable
- Battery Eliminators: Not applicable
- Vehicle Adapters: Not applicable

Logistical Parameters

- Programming: Dealer/User (authorized technician), programmable - PC friendly
- Repairs: Dealer
- Decontamination: Not specified
- Durability/Ruggedness: Case material is die-cast aluminum
- Environmental Conditions: -22 °F to 140 °F
- Unit Cost: Not specified
- Battery Cycle Life: Not applicable
- Rapid Charge Battery Cycle Life: Not applicable
- Maintenance Cost: Not specified
- Interface Capability: Not specified

Special Requirements

- Operator Skills Required: Average
- Operator Training Requirements: Average
- Training Available: Yes
- Manuals Available: Yes
- applicable Regulations: FCC Certified and IC Certification
- Support Equipment: Heavy duty remote speaker, heavy duty mobile microphone, base station microphone, power supply (110 V ac/220V ac, 10 A, 50 % duty), and power supply cover
- Warranty: 2 yr
- Mil Spec/Mil-Std Ratings: Meets Mil Spec 810C, Mil Spec 810D, and Mil Spec 810E
- Intrinsically Safe: No
### General

**Name**
Maxon Scanning Transceiver; SM-4000 Series

**ID#** 140

### Model Number(s)
- SM-4150 VHF
- SM-4450 UHF

### Technology
- Mobile, conventional

### Manufacturer
- Topaz 3, LLC
- 10828 NW Air World Drive
- Kansas City, Missouri 64153
- 816–891–6320 ext. 699 (Tel)
- 816–891–8815 (Fax)
- POC: Liz Hawkins
- Maxon America
- 800–821–7848, ext 611 (Tel)
- liz.hawkins@topaz3.com

### Secure Communication Capability
- No

### Availability
- Available

### Frequency Range
- **VHF**: 136 MHz to 150 MHz (L)
- 150 MHz to 165 MHz (M)
- 160 MHz to 174 MHz (H)
- **UHF**: 450 MHz to 470 MHz

### Number of Personnel Supported by System
- Unlimited

### Geographic Coverage
- Not specified

### Current User(s)
- Not specified

### Source
- Topaz 3, LLC

### Operational Parameters

#### Number of Channels
- 16 channel capability

#### Transmitter Power Output Levels
- 40 W (adjustable)

#### Battery Options
- Not applicable

#### Battery Recharging Options
- Not applicable

### Physical Parameters

#### Size
- 2 in x 6 in x 8.3 in

#### Weight
- 4.2 lb (with microphone)

#### Power Requirements
- 13.8 V dc negative ground
External Power
Available Accessories
Speaker-Microphones
Carrying Cases
Battery Eliminators
Vehicle Adapters
Logistical Parameters
Programming
Repairs
Decontamination
Durability/Ruggedness
Environmental Conditions
Unit Cost
Battery Cycle Life
Rapid Charge Battery Cycle Life
Maintenance Cost
Interface Capability
Special Requirements
Operator Skills Required
Operator Training Requirements
Training Available
Manuals Available
Applicable Regulations
Support Equipment
Warranty
Mil Spec/Mil-Std Ratings
Intrinsically Safe

Not applicable
Not applicable
Not applicable
Not applicable
Not specified
Dealer/User (authorized technician)
Dealer
Not specified
Case material is die-cast aluminum
-22 °F to 140 °F
Not specified
Not applicable
Not specified
Not specified
Average
Average
Yes
Yes
FCC Compliance, FCC Identifier, and IC Certification
Heavy duty remote speaker, heavy duty mobile microphone, base station microphone, and power supply (110 V ac, 10 A, 50 % duty)
2 yr
Meets Mil Spec 810C, Mil Spec 810D, and Mil Spec 810E
No
**General**

**Name**
Maxon VHF/UHF Transceiver, Portable; SP-120

**ID# 141**

**Model Number(s)**
SP-120

**Technology**
Portable, conventional

**Manufacturer**
Topaz 3, LLC
10828 NW Air World Drive
Kansas City, Missouri 64153
816–891–6320 ext. 699 (Tel)
816–891–8815 (Fax)

POC: Liz Hawkins
Maxon America
800–821–7848, ext 611 (Tel)
liz.hawkins@topaz3.com

**Secure Communication Capability**
Yes; after market (Midian Electronics)

**Availability**
Available

**Frequency Range**
VHF: 148 MHz to 174 MHz
UHF: 440 MHz to 470 MHz

**Number of Personnel Supported by System**
Unlimited

**Geographic Coverage**
Not specified

**Current User(s)**
Not specified

**Source**
Topaz 3, LLC

**Operational Parameters**

**Number of Channels**
4 channels

**Transmitter Power Output Levels**
2 W

**Battery Options**
NiCad 7.5V dc (with 700 mAh battery or with 1200 mAh battery)

**Battery Recharging Options**
6–unit gang charger (regular and rapid), dual slot/dual rate desktop charger, and pedestal charger

**Physical Parameters**

**Size**
5.6 in x 2.3 in x 1.7 in (with battery)

**Weight**
15 oz (with battery)
Power Requirements
External Power
NiCad 7.5 V dc
No

Available Accessories
Speaker-Microphones
Deluxe speaker/microphone, ear speaker microphone, voice operated mini-VOX control and headset, and 2 wire palm microphone

Carrying Cases
Battery Eliminators
Leather case with swivel and nylon case
Not specified

Vehicle Adapters

Logistical Parameters
Programming
Dealer/User (authorized technician) programmable - PC friendly

Repairs
Dealers
Decontamination
Not specified

Durability/Ruggedness
Manufactured with a die-cast aluminum frame and tough-tested polycarbonate cabinet. Can work in all environments.

Environmental Conditions
-22 °F to 140 °F

Unit Cost
Not specified

Battery Cycle Life
> 8 h

Rapid Charge Battery Cycle Life
6-unit gang rapid charger, dual slot/dual rate "smart" desktop charger

Maintenance Cost
Not specified

Interface Capability
Not specified

Special Requirements
Operator Skills Required
Average

Operator Training Requirements
Average

Training Available
Yes

Manuals Available
Yes

applicable Regulations
FCC Certified for use in USA and its possessions, and IC approved for sale in Canada

Support Equipment
Battery pack, VHF antenna, UHF antenna, battery chargers, speaker/microphone, palm microphone, coil-cord earphone, ear speaker microphone, leather case, and nylon case

Warranty
2 yr

Mil Spec/Mil-Std Ratings
No

Intrinsically Safe
No
**General**

**Name**
Maxon VHF/UHF Transceiver, Portable; SP-130/SP-140

**ID# 142**

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<table>
<thead>
<tr>
<th><strong>Model Number(s)</strong></th>
<th>SP-130/SP-140</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Technology</strong></td>
<td>Portable, conventional</td>
</tr>
<tr>
<td><strong>Manufacturer</strong></td>
<td>Topaz 3, LLC</td>
</tr>
<tr>
<td></td>
<td>10828 NW Air World Drive</td>
</tr>
<tr>
<td></td>
<td>Kansas City, Missouri 64153</td>
</tr>
<tr>
<td></td>
<td>816–891–6320 ext. 699 (Tel)</td>
</tr>
<tr>
<td></td>
<td>816–891–8815 (Fax)</td>
</tr>
<tr>
<td><strong>POC:</strong></td>
<td>Liz Hawkins</td>
</tr>
<tr>
<td><strong>Maxon America</strong></td>
<td>800–821–7848, ext 611 (Tel)</td>
</tr>
<tr>
<td></td>
<td><a href="mailto:liz.hawkins@topaz3.com">liz.hawkins@topaz3.com</a></td>
</tr>
</tbody>
</table>

**Secure Communication Capability**

Yes; after market (Midian Electronics)

VPU II Inversion Voice Scrambler

TVS–2 Rolling Code Scrambler

**Availability**

Available

**Frequency Range**

VHF: 148 MHz to 174 MHz

UHF: 440 MHz to 470 MHz

**Number of Personnel Supported by System**

Unlimited

**Geographic Coverage**

Not specified

**Current User(s)**

Not specified

**Source**

Topaz 3, LLC

---

**Operational Parameters**

**Number of Channels**

4 channels/16 channels programmable

**Transmitter Power Output Levels**

Hi: 5 W; low: 1 W programmable per channel

**Battery Options**

NiCad 7.5V dc

**Battery Recharging Options**

4–station conditioning charger (110 V/220 V), 6–unit gang charger (regular and rapid), dual slot/dual rate "smart" charger, and pedestal charger

---

**Physical Parameters**

**Size**

5.6 in x 2.3 in x 1.7 in (with battery)

**Weight**

16.4 oz (with battery)
Power Requirements
External Power
7.5 V dc
No

Available Accessories
Speaker-Microphones
Deluxe speaker/microphone with angled connector, 2 wire palm microphone, voice operated mini VOX control and headset, and ear speaker microphone

Carrying Cases
Leather case with swivel and nylon case

Battery Eliminators
Not specified

Vehicle Adapters
Not specified

Logistical Parameters
Programming
Dealer/User (authorized technician) programmable - PC friendly

Repairs
Dealer

Decontamination
Not specified

Durability/Ruggedness
Manufactured with a die-cast aluminum frame and tough-tested polycarbonate cabinet. Can adapt to tough work conditions like dust, vibration, and humidity.

Environmental Conditions
-22 °F to 140 °F

Unit Cost
Not specified

Battery Cycle Life
> 8 h

Rapid Charge Battery Cycle Life
6-unit gang rapid charger, dual slot/dual rate "smart" desktop charger

Maintenance Cost
Not specified

Interface Capability
Not specified

Special Requirements
Operator Skills Required
Average

Operator Training Requirements
Average

Training Available
Yes

Manuals Available
Yes

applicable Regulations
FCC Certified for use in USA and its possessions, and IC approved for sale in Canada

Support Equipment
Battery pack, VHF antenna, UHF antenna, battery chargers, speaker and microphone, palm microphone, coil-cord earphone, ear speaker microphone, leather case, and nylon case

Warranty
2 yr

Mil Spec/Mil-Std Ratings
Meets Mil Spec 810C, Mil Spec 810D, and Mil Spec 810E

Intrinsically Safe
SP140 Model only
**General**

**Name**
ID# 143

**Maxon VHF/UHF Transceiver, Portable; SP-200**

**Model Number(s)**
SP-200

**Technology**
Portable, conventional

**Manufacturer**
Topaz 3, LLC
10828 NW Air World Drive
Kansas City, Missouri 64153
816–891–6320 ext. 699 (Tel)
816–891–8815 (Fax)

POC: Liz Hawkins
Maxon America
800–821–7848, ext 611 (Tel)
liz.hawkins@topaz3.com

**Secure Communication Capability**
No

**Availability**
Available

**Frequency Range**
UHF: 403 MHz to 430 MHz
VHF: 136 MHz to 174 MHz
800 MHz: 806 MHz to 824 MHz and 851 MHz to 869 MHz

**Number of Personnel Supported by System**
Unlimited

**Geographic Coverage**
Not specified

**Current User(s)**
Not specified

**Source**
Topaz 3, LLC

**Operational Parameters**

**Number of Channels**
199 channel capability, up to 13 scan groups of up to 16 channels each

**Transmitter Power Output Levels**
1 W or 5 W ± 10 %

**Battery Options**
1350 mAh Ni-MH battery

**Battery Recharging Options**
Rapid rate charger

**Physical Parameters**

**Size**
4.25 in x 2.31 in x 1.5 in

**Weight**
7.65 oz (with battery)

**Power Requirements**
7.5 V dc

**External Power**
No
**Available Accessories**

- **Speaker-Microphones**
  - Ear bud speaker with in-line P-T-T and microphone, lapel speaker/microphone with ear jack, and ear speaker with cord

- **Carrying Cases**
  - Not specified

- **Battery Eliminators**
  - Not specified

- **Vehicle Adapters**
  - Not specified

**Logistical Parameters**

- **Programming**
  - Dealer/User (authorized technician) programmable - PC friendly

- **Repairs**
  - Dealer

- **Decontamination**
  - Not specified

- **Durability/Ruggedness**
  - Industrial use, die cast aluminum chassis, and polycarbonate case

- **Environmental Conditions**
  - -22 °F to 140 °F

- **Unit Cost**
  - Not specified

- **Battery Cycle Life**
  - 8 h at 5/5/90 cycle

- **Rapid Charge Battery Cycle Life**
  - Rapid rate charger

- **Maintenance Cost**
  - Not specified

- **Interface Capability**
  - Not specified

**Special Requirements**

- **Operator Skills Required**
  - Average

- **Operator Training Requirements**
  - Average

- **Training Available**
  - Yes

- **Manuals Available**
  - Yes

- **applicable Regulations**
  - FCC Certified for use in USA and its possessions, and IC approved for sale in Canada

- **Support Equipment**
  - 1350 mAh Ni-MH battery pack, UHF antenna, VHF antenna, rapid rate charger, speaker microphone, and cord

- **Warranty**
  - 2 yr

- **Mil Spec/Mil-Std Ratings**
  - No

- **Intrinsically Safe**
  - No
### General

**Name**
Maxon VHF/UHF Transceiver, Portable; SP-300

**ID#** 144

---

### Model Number(s)

SP-300

### Technology

Portable, conventional

### Manufacturer

Topaz 3, LLC  
10828 NW Air World Drive  
Kansas City, Missouri 64153  
816–891–6320 ext. 699 (Tel)  
816–891–8815 (Fax)

POC: Liz Hawkins  
Maxon America  
800–821–7848, ext 611 (Tel)  
liz.hawkins@topaz3.com

### Secure Communication Capability

No

### Availability

Available

### Frequency Range

- **UHF:** 403 MHz to 430 MHz  
- **VHF:** 136 MHz to 174 MHz  
- **800 MHz:** 806 MHz to 824 MHz and 851 MHz to 869 MHz

### Number of Personnel Supported by System

Unlimited

### Geographic Coverage

Not specified

### Current User(s)

Not specified

### Source

Topaz 3, LLC

---

### Operational Parameters

**Number of Channels**
4 channel/16 channel models

**Transmitter Power Output Levels**
- Hi: 5 W  
- low: 1 W programmable per channel

**Battery Options**
- NiCad 7.5 V dc  
- Bu-MH 1350 mAh

**Battery Recharging Options**
- 6–unit gang charger, 6–unit regular and fast charger, dual slot and dual rate "smart" charger, and pedestal charger

### Physical Parameters

**Size**
5.6 in x 2.3 in x 1.7 in (with battery)

**Weight**
16.4 oz (with battery)

**Power Requirements**
7.5 V dc

**External Power**
No
### Available Accessories

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speaker-Microphones</td>
<td>Speaker microphone with locking connector</td>
</tr>
<tr>
<td>Carrying Cases</td>
<td>Leather case with swivel and nylon case</td>
</tr>
<tr>
<td>Battery Eliminators</td>
<td>Not specified</td>
</tr>
<tr>
<td>Vehicle Adapters</td>
<td>Not specified</td>
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</tbody>
</table>

### Logistical Parameters

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<tr>
<th>Parameter</th>
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<tr>
<td>Programming</td>
<td>Dealer/User (authorized technician) programmable - PC friendly</td>
</tr>
<tr>
<td>Repairs</td>
<td>Dealer</td>
</tr>
<tr>
<td>Decontamination</td>
<td>Not specified</td>
</tr>
<tr>
<td>Durability/Ruggedness</td>
<td>Die cast chassis, polycarbonate case, and tough industrial radio</td>
</tr>
<tr>
<td>Environmental Conditions</td>
<td>-22 °F to 140 °F</td>
</tr>
<tr>
<td>Unit Cost</td>
<td>Not specified</td>
</tr>
<tr>
<td>Battery Cycle Life</td>
<td>&gt; 8 h</td>
</tr>
<tr>
<td>Rapid Charge Battery Cycle Life</td>
<td>6-unit gang rapid charger, dual slot /dual rate &quot;smart&quot; charger</td>
</tr>
<tr>
<td>Maintenance Cost</td>
<td>Not specified</td>
</tr>
<tr>
<td>Interface Capability</td>
<td>Not specified</td>
</tr>
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</table>

### Special Requirements

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Description</th>
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<tbody>
<tr>
<td>Operator Skills Required</td>
<td>Average</td>
</tr>
<tr>
<td>Operator Training Requirements</td>
<td>Average</td>
</tr>
<tr>
<td>Training Available</td>
<td>Yes</td>
</tr>
<tr>
<td>Manuals Available</td>
<td>Yes</td>
</tr>
<tr>
<td>applicable Regulations</td>
<td>FCC Certified for use in USA and its possessions, and IC approved for sale in Canada</td>
</tr>
<tr>
<td>Support Equipment</td>
<td>1350 mAh Ni-MH battery pack, UHF antenna, VHF antenna, rapid rate charger speaker microphone, and cord</td>
</tr>
<tr>
<td>Warranty</td>
<td>2 yr</td>
</tr>
<tr>
<td>Mil Spec/Mil-Std Ratings</td>
<td>No</td>
</tr>
<tr>
<td>Intrinsically Safe</td>
<td>No</td>
</tr>
</tbody>
</table>
**General**

**Name**
ID# 145

**Maxon UHF Transceiver, Portable; SP-150U**

![Image of Maxon UHF Transceiver]

<table>
<thead>
<tr>
<th><strong>Model Number(s)</strong></th>
<th>SP-150U</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Technology</strong></td>
<td>Portable, conventional and trunked</td>
</tr>
<tr>
<td><strong>Manufacturer</strong></td>
<td>Topaz 3, LLC</td>
</tr>
<tr>
<td></td>
<td>10828 NW Air World Drive</td>
</tr>
<tr>
<td></td>
<td>Kansas City, Missouri 64153</td>
</tr>
<tr>
<td></td>
<td>816–891–6320 ext. 699 (Tel)</td>
</tr>
<tr>
<td></td>
<td>816–891–8815 (Fax)</td>
</tr>
<tr>
<td></td>
<td>POC: Liz Hawkins</td>
</tr>
<tr>
<td></td>
<td>Maxon America</td>
</tr>
<tr>
<td></td>
<td>800–821–7848, ext 611 (Tel)</td>
</tr>
<tr>
<td></td>
<td><a href="mailto:liz.hawkins@topaz3.com">liz.hawkins@topaz3.com</a></td>
</tr>
</tbody>
</table>

| **Secure Communication Capability** | No |
| **Availability**                  | Available |
| **Frequency Range**               | 440 MHz to 470 MHz |
| **Number of Personnel Supported by System** | Unlimited |
| **Geographic Coverage**           | Not specified |
| **Current User(s)**               | Not specified |
| **Source**                        | Topaz 3, LLC |

**Operational Parameters**

| **Number of Channels**           | 16 conventional channels |
| **Transmitter Power Output Levels** | 1 W to 5 W ± 10 % |
| **Battery Options**              | NiCad battery |
|                                  | Ni-MH battery |
| **Battery Recharging Options**   | 4–station conditioning charger, dual slot/dual rate "smart" |
|                                  | desktop charger, and pedestal charger |

**Physical Parameters**

| **Size**            | 5.6 in x 2.3 in x 1.7 in |
| **Weight**          | 16.4 oz (with battery) |
| **Power Requirements** | 7.5 V dc |
| **External Power**  | No |
Available Accessories

- Speaker-Microphones: Speaker/microphone
- Carrying Cases: Leather case, nylon case, and spring loaded belt clip
- Battery Eliminators: Not specified
- Vehicle Adapters: Not specified

Logistical Parameters

- Programming: Dealer/User (authorized technician)
- Repairs: Dealer
- Decontamination: Not specified
- Durability/Ruggedness: Industrial use
- Environmental Conditions: -22 °F to 140 °F
- Unit Cost: Not specified
- Battery Cycle Life: 8 h at 5/5/90 cycle
- Rapid Charge Battery Cycle Life: Dual slot/dual rate "smart" desktop charger
- Maintenance Cost: Not specified
- Interface Capability: Not specified

Special Requirements

- Operator Skills Required: Average
- Operator Training Requirements: Average
- Training Available: Yes
- Manuals Available: Yes
- applicable Regulations: FCC Certified for use in USA and its possessions, and IC approved for sale in Canada
- Support Equipment: Battery pack, UHF antenna, battery chargers, speaker and microphone, leather case, and nylon case
- Warranty: 2 yr
- Mil Spec/Mil-Std Ratings: Meets Mil Spec 810C, Mil Spec 810D, and Mil Spec 810E
- Intrinsically Safe: No
**General**

**Name**
Vertex Dual Band (VHF & UHF) Transceiver, Portable; FTH-2070

**ID#** 146

**Model Number(s)**
FTH-2070A

**Technology**
Portable, conventional

**Manufacturer**
Yaesu/Vertex-Standard
17210 Edwards Rd.
Cerritos, California 90703
562–404–2700 (Tel)

POC: Kirk Waddell
720–344–9645 (Tel)
720–344–9647 (Fax)

**Secure Communication Capability**
Yes with optional encryption module

**Availability**
Available

**Frequency Range**
VHF: 150 MHz to 174 MHz; UHF: 409 MHz to 450 MHz, 450 MHz to 480 MHz, or 470 MHz to 490 MHz

**Number of Personnel Supported by System**
Unlimited

**Geographic Coverage**
50+ with repeater; 3 mi line of sight

**Current User(s)**
Not specified

**Source**
Mills’ Communications Inc.
210 Pennsylvania Ave.
Westminster, MD 21157
410–876–8600 (Tel)
410–848–8600 (Tel)
410–857–8600 (Fax)

POC: Jeff Myers
millscom@cct.infi.net

---

**Operational Parameters**

**Number of Channels**
32 channels

**Transmitter Power Output Levels**
Hi: 5 W; low: 2 W

**Battery Options**
12 V NiCad 600 mAH or 1200 mAH (5 W); 12 V NiCad 1000 mAH and NiCad intrinsically safe

**Battery Recharging Options**
Rapid vehicular charger and desktop rapid charger

---

**Physical Parameters**

**Size**
2.6 in x 7.9 in x 1.7 in
Weight
28.8 oz

Power Requirements
12 V dc

External Power
No

Available Accessories

Speaker-Microphones
Yes–heavy duty

Carrying Cases
Yes

Battery Eliminators
Yes

Vehicle Adapters
6–unit multi-charger

Logistical Parameters

Programming
Dealer/User (authorized technician) programmable

Repairs
Dealer

Decontamination
Not specified

Durability/Ruggedness
Meets Mil Spec 810C, Mil Spec 810D, and Mil Spec 810E

Environmental Conditions
-22 °F to 140 °F

Unit Cost
$1.3K

Battery Cycle Life
8.1 h/7.0 h (VHF/UHF) 5/5/90 cycle

Rapid Charge Battery Cycle Life
Not specified

Maintenance Cost
Not specified

Interface Capability
Not specified

Special Requirements

Operator Skills Required
Minimal

Operator Training Requirements
Minimal

Training Available
Yes

Manuals Available
Yes

applicable Regulations
Not specified

Support Equipment
Chargers, batteries, microphones, cases, DTMF keypad, speaker microphone, belt swival attachment, and cables with software

Warranty
3 yr on transceivers and 1 yr on accessories

Mil Spec/Mil-Std Ratings
Meets Mil Spec 810C, Mil Spec 810D, and Mil Spec 810E

Intrinsically Safe
Yes
**General**

**Name**

**ID#** 147

---

**Vertex FTL Series; FTL-1011 (VHF LowBand)**

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**Model Number(s)**

FTL-1011 (VHF LowBand)

**Technology**

Mobile, conventional and trunking capable with optional accessory board

**Manufacturer**

Yaesu/Vertex-Standard  
17210 Edwards Rd.  
Cerritos, California 90703  
562–404–2700 (Tel)

POC: Kirk Waddell  
720–344–9645 (Tel)  
720–344–9647 (Fax)

**Secure Communication Capability**

Voice inversion encryption available and high security rolling code encryption

**Availability**

Available

**Frequency Range**

29.7 MHz to 37 MHz  
37 MHz to 50 MHz

**Number of Personnel Supported by System**

Multiple

**Geographic Coverage**

Not specified

**Current User(s)**

Not specified

**Source**

Mills' Communications Inc.  
210 Pennsylvania Ave.  
Westminster, MD 21157  
410–876–8600 (Tel)  
410–848–8600 (Tel)  
410–857–8600 (Fax)

POC: Jeff Myers  
millscom@cct.infi.net

---

**Operational Parameters**

**Number of Channels**

4 channels, 24 channels, and 99 channels

**Transmitter Power Output Levels**

60 W

**Battery Options**

Not applicable

**Battery Recharging Options**

Not applicable

---

**Physical Parameters**

**Size**

6.3 in x 2 in x 7.1 in

---
Weight 3.3 lb
Power Requirements 13.8 V dc
External Power Not applicable

Available Accessories
Speaker-Microphones Not applicable
Carrying Cases Not applicable
Battery Eliminators Not applicable
Vehicle Adapters Not applicable

Logistical Parameters
Programming Dealer/User (authorized technician) programmable - PC friendly
Repairs Dealer
Decontamination Not specified
Durability/Ruggedness Durable chassis construction and heavy-duty heat sink
Environmental Conditions -22 °F to 140 °F
Unit Cost Not specified
Battery Cycle Life Not applicable
Rapid Charge Battery Cycle Life Not applicable
Maintenance Cost Not specified
Interface Capability Yes

Special Requirements
Operator Skills Required Average
Operator Training Requirements Average
Training Available Yes
Manuals Available Yes
applicable Regulations Not specified
Support Equipment Integrated power supply (117 V ac), integrated power supply (220 V ac to 234 V ac), voice inversion encryption, high security rolling code encryption, two-tone sequential decoder, dc line filter, microphones, external speakers, audio output option, PC based dispatch system, VX-Trunk I (II) Trunking Mobile Logic Board, remote mount kit, and radio to computer programming cable with software

Warranty 3 yr on transceivers and 1 yr on accessories
Mil Spec/Mil-Std Ratings Meets Mil Spec 810C, Mil Spec 810D, and Mil Spec 810E
Intrinsically Safe No
**General**

**Name**
Vertex FTL Series; FTL-1011H (VHF LowBand HiPower)

**ID# 148**

**Model Number(s)**
FTL-1011H (VHF LowBand HiPower)

**Technology**
Mobile, conventional and trunking capable with optional accessory board

**Manufacturer**
Yaesu/Vertex-Standard
17210 Edwards Rd.
Cerritos, California 90703
562–404–2700 (Tel)

POC: Kirk Waddell
720–344–9645 (Tel)
720–344–9647 (Fax)

**Secure Communication Capability**
Voice inversion encryption available and high security rolling code encryption

**Availability**
Available

**Frequency Range**
37 MHz to 50 MHz

**Number of Personnel Supported by System**
Multiple

**Geographic Coverage**
Not specified

**Current User(s)**
Not specified

**Source**
Mills' Communications Inc.
210 Pennsylvania Ave.
Westminster, MD 21157
410–876–8600 (Tel)
410–848–8600 (Tel)
410–857–8600 (Fax)

POC: Jeff Myers
millscom@cct.infi.net

**Operational Parameters**

**Number of Channels**
4 channels, 24 channels, and 99 channels

**Transmitter Power Output Levels**
110 W

**Battery Options**
Not applicable

**Battery Recharging Options**
Not applicable

**Physical Parameters**

**Size**
6.3 in x 2 in x 11.6 in
<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
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<tbody>
<tr>
<td>Weight</td>
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<tr>
<td>Power Requirements</td>
<td>13.8 V dc</td>
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<td>External Power</td>
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</tr>
<tr>
<td>Available Accessories</td>
<td></td>
</tr>
<tr>
<td>Speaker-Microphones</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Carrying Cases</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Battery Eliminators</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Vehicle Adapters</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Logistical Parameters</td>
<td></td>
</tr>
<tr>
<td>Programming</td>
<td>Dealer/User (authorized technician) programmable - PC friendly</td>
</tr>
<tr>
<td>Repairs</td>
<td>Dealer</td>
</tr>
<tr>
<td>Decontamination</td>
<td>Not specified</td>
</tr>
<tr>
<td>Durability/Ruggedness</td>
<td>Durable chassis construction and heavy-duty heat sink</td>
</tr>
<tr>
<td>Environmental Conditions</td>
<td>-22 °F to 140 °F</td>
</tr>
<tr>
<td>Unit Cost</td>
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<tr>
<td>Battery Cycle Life</td>
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<tr>
<td>Rapid Charge Battery Cycle Life</td>
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</tr>
<tr>
<td>Maintenance Cost</td>
<td>Not specified</td>
</tr>
<tr>
<td>Interface Capability</td>
<td>Yes</td>
</tr>
<tr>
<td>Special Requirements</td>
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</tr>
<tr>
<td>Operator Skills Required</td>
<td>Average</td>
</tr>
<tr>
<td>Operator Training Requirements</td>
<td>Average</td>
</tr>
<tr>
<td>Training Available</td>
<td>Yes</td>
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<tr>
<td>Manuals Available</td>
<td>Yes</td>
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<td>applicable Regulations</td>
<td>Not specified</td>
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<tr>
<td>Support Equipment</td>
<td>Integrated power supply (117 V ac), integrated power supply (220 V ac to 234 V ac), voice inversion encryption, high security rolling code encryption, two-tone sequential decoder, dc line filter, microphones, external speakers, audio output option, PC based dispatch system, VX–Trunk I (II) Trunking Mobile Logic Board, remote mount kit, and radio to computer programming cable with software</td>
</tr>
<tr>
<td>Warranty</td>
<td>3 yr on transceivers and 1 yr on accessories</td>
</tr>
<tr>
<td>Mil Spec/Mil-Std Ratings</td>
<td>Meets Mil Spec 810C, Mil Spec 810D, and Mil Spec 810E</td>
</tr>
<tr>
<td>Intrinsically Safe</td>
<td>No</td>
</tr>
</tbody>
</table>
**General**

**Name**

Vertex FTL Series; FTL-2011 (VHF HighBand)

**ID#** 149

**Model Number(s)**

FTL-2011 (VHF Highband)

**Technology**

Mobile, conventional and trunking capable with optional accessory board

**Manufacturer**

Yaesu/Vertex-Standard

17210 Edwards Rd.

Cerritos, California 90703

562–404–2700 (Tel)

POC: Kirk Waddell

720–344–9645 (Tel)

720–344–9647 (Fax)

**Secure Communication Capability**

Voice inversion encryption available and high security rolling code encryption

**Availability**

Available

**Frequency Range**

134 MHz to 160 MHz

148 MHz to 174 MHz

**Number of Personnel Supported by System**

Multiple

**Geographic Coverage**

Not specified

**Current User(s)**

Not specified

**Source**

Mills' Communications Inc.

210 Pennsylvania Ave.

Westminster, MD 21157

410–876–8600 (Tel)

410–848–8600 (Tel)

410–857–8600 (Fax)

POC: Jeff Myers

millscom@cct.infi.net

**Operational Parameters**

**Number of Channels**

4 channels, 24 channels, and 99 channels

**Transmitter Power Output Levels**

40 W

**Battery Options**

Not applicable

**Battery Recharging Options**

Not applicable

**Physical Parameters**

**Size**

6.3 in x 2 in x 7.1 in
<table>
<thead>
<tr>
<th><strong>Weight</strong></th>
<th>3.3 lb</th>
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<tbody>
<tr>
<td><strong>Power Requirements</strong></td>
<td>13.8 V dc</td>
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<tr>
<td><strong>External Power</strong></td>
<td>Not applicable</td>
</tr>
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</table>

**Available Accessories**

<table>
<thead>
<tr>
<th>Available Accessories</th>
<th>Not applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speaker-Microphones</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Carrying Cases</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Battery Eliminators</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Vehicle Adapters</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

**Logistical Parameters**

<table>
<thead>
<tr>
<th>Logistical Parameters</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Programming</td>
<td>Dealer/User (authorized technician) programmable - PC friendly</td>
</tr>
<tr>
<td>Repairs</td>
<td>Dealer</td>
</tr>
<tr>
<td>Decontamination</td>
<td>Not specified</td>
</tr>
<tr>
<td>Durability/Ruggedness</td>
<td>Durable chassis construction and heavy-duty heat sink</td>
</tr>
<tr>
<td>Environmental Conditions</td>
<td>-22 °F to 140 °F</td>
</tr>
<tr>
<td>Unit Cost</td>
<td>Not specified</td>
</tr>
<tr>
<td>Battery Cycle Life</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Rapid Charge Battery Cycle Life</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Maintenance Cost</td>
<td>Not specified</td>
</tr>
<tr>
<td>Interface Capability</td>
<td>Yes</td>
</tr>
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</table>

**Special Requirements**

<table>
<thead>
<tr>
<th>Special Requirements</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Operator Skills Required</td>
<td>Average</td>
</tr>
<tr>
<td>Operator Training Requirements</td>
<td>Average</td>
</tr>
<tr>
<td>Training Available</td>
<td>Yes</td>
</tr>
<tr>
<td>Manuals Available</td>
<td>Yes</td>
</tr>
<tr>
<td>applicable Regulations</td>
<td>Not specified</td>
</tr>
<tr>
<td>Support Equipment</td>
<td>Integrated power supply (117 V ac), integrated power supply (220 V ac to 234 V ac), voice inversion encryption, high security rolling code encryption, two-tone sequential decoder, dc line filter, microphones, external speakers, audio output option, PC based dispatch system, VX–Trunk I (II) Trunking Mobile Logic Board, remote mount kit, and radio to computer programming cable with software</td>
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</table>

**Warranty**

<table>
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<tr>
<th>Warranty</th>
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<tbody>
<tr>
<td>Mil Spec/Mil-Std Ratings</td>
<td>Meets Mil Spec 810C, Mil Spec 810D, and Mil Spec 810E</td>
</tr>
<tr>
<td>Intrinsically Safe</td>
<td>No</td>
</tr>
</tbody>
</table>

3 yr on transceivers and 1 yr on accessories
**General**

**Name**
ID# 150

**Vertex FTL Series; FTL-7011 (UHF)**

<table>
<thead>
<tr>
<th><strong>Model Number(s)</strong></th>
<th>FTL-7011 (UHF)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Technology</strong></td>
<td>Mobile, conventional and trunking capable with optional accessory board</td>
</tr>
<tr>
<td><strong>Manufacturer</strong></td>
<td>Yaesu/Vertex-Standard</td>
</tr>
<tr>
<td></td>
<td>17210 Edwards Rd.</td>
</tr>
<tr>
<td></td>
<td>Cerritos, California 90703</td>
</tr>
<tr>
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<td>562–404–2700 (Tel)</td>
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<td>POC: Kirk Waddell</td>
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<tr>
<td></td>
<td>720–344–9645 (Tel)</td>
</tr>
<tr>
<td></td>
<td>720–344–9647 (Fax)</td>
</tr>
</tbody>
</table>

**Secure Communication Capability**

**Availability**
Available

**Frequency Range**
- 400 MHz to 440 MHz
- 450 MHz to 490 MHz
- 480 MHz to 512 MHz

**Number of Personnel Supported by System**
Multiple

**Geographic Coverage**
Not specified

**Current User(s)**
Mills’ Communications Inc.
210 Pennsylvania Ave.
Westminster, MD 21157
410–876–8600 (Tel)
410–848–8600 (Tel)
410–857–8600 (Fax)

**Source**
POC: Jeff Myers
millscom@cct.infi.net

**Operational Parameters**

**Number of Channels**
4 channels, 24 channels, and 99 channels

**Transmitter Power Output Levels**
25 W

**Battery Options**
Not applicable

**Battery Recharging Options**
Not applicable
**Physical Parameters**

- **Size**: 6.3 in x 2 in x 7.1 in
- **Weight**: 3.3 lb
- **Power Requirements**: 13.8 V dc
- **External Power**: Not applicable

**Available Accessories**

- **Speaker-Microphones**: Not applicable
- **Carrying Cases**: Not applicable
- **Battery Eliminators**: Not applicable
- **Vehicle Adapters**: Not applicable

**Logistical Parameters**

- **Programming**: Dealer/User (authorized technician) programmable - PC friendly
- **Repairs**: Dealer
- **Decontamination**: Not specified
- **Durability/Ruggedness**: Durable chassis construction and heavy-duty heat sink
- **Environmental Conditions**: -22 °F to 140 °F
- **Unit Cost**: Not specified
- **Battery Cycle Life**: Not applicable
- **Rapid Charge Battery Cycle Life**: Not applicable
- **Maintenance Cost**: Not specified
- **Interface Capability**: Yes

**Special Requirements**

- **Operator Skills Required**: Average
- **Operator Training Requirements**: Average
- **Training Available**: Yes
- **Manuals Available**: Yes
- **applicable Regulations**: Not specified
- **Support Equipment**: Integrated power supply (117 V ac), integrated power supply (220 V ac to 234 V ac), voice inversion encryption, high security rolling code encryption, two-tone sequential decoder, dc line filter, microphones, external speakers, audio output option, PC based dispatch system, VX−Trunk I (II) Trunking Mobile Logic Board, remote mount kit, and radio to computer programming cable with software

**Warranty**

- **3 yr on transceivers and 1 yr on accessories**

**Mil Spec/Mil-Std Ratings**

- **Meets Mil Spec 810C, Mil Spec 810D, and Mil Spec 810E**

**Intrinsically Safe**

- **No**