

# MIK-21-75

## Satcom on the Move System



## Operation Manual

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**300 SOUTH 8th STREET, WACO, TX 76701**  
Phone: (254) 752-1411  
Fax: (254) 752-1812  
E-mail: [info@mcdowellresearch.com](mailto:info@mcdowellresearch.com)  
<http://www.mcdowellresearch.com>

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## **Chapter 1 - General Information**

### **1.1 Scope**

This manual has been prepared by McDowell Research, an Ultralife Company for the purpose of providing the user information necessary to understand and maintain the MIK-21-75 Satcom on the Move System.

- **Chapter 1 – General Information**
  - This chapter provides safety and important information about the MIK-21-75.
- **Chapter 2 – Operation**
  - This chapter provides information necessary for operating the MIK-21-75, and theory of operating procedures describing how the MIK-21-75 accomplishes its intended purpose.
- **Chapter 3 – Maintenance**
  - This chapter provides information regarding MIK-21-75 preventive care and corrective maintenance procedures.

### **1.2 Introduction**

- The MIK-21-75 Satcom on the Move System is a self contained Satcom on the Move System which is accompanied by the following equipment.
  - MRC-99 – Interoperable Power Adapter and Charger
  - MRC-67A – Amplified Speaker
  - Ramp-75 – 75 Watt Multi-band Amplifier with Bias Tee
  - MIK-1012 – Power Distribution Unit

### 1.3 Important Safety Instructions

- A. This manual contains important safety and operating instructions for the MIK-21-75 Satcom on the Move System.
- B. Before using the MIK-21-75, read all instructions and cautionary markings on the Amplifier.
- C. Use of an attachment not recommended or sold by McDowell Research may result in risk of fire, electric shock, or personal injury.
- D. Make sure cords are positioned so that they will not be stepped on, tripped over, or otherwise subjected to damage or stress.
- E. Do not operate the system with damaged cable or connector - replace it immediately.

### 1.4 Serviceable Parts and Repair

The MIK-21-75 has **NO** user serviceable parts. Units requiring repair should be sent to a qualified service depot for repair or follow instructions in the maintenance chapter of this manual.

### 1.5 Physical Description

#### 1.5.1 Parameters

- **Length:** 15.8 inches
- **Width:** 17 inches
- **Height:** 15.6 inches
- **Weight:** 57.5 lbs. without Transceiver

### 1.6 Equipment Provided

Equipment	Quantity
MIK-21-75 Operational Manual with installation instructions	1
MIK-21-75 Satcom on the Move System	1
Ramp-75 Operating Manual	1

## 1.7 External Components

- MRC-99
- MRC-67A
- Ramp-75 with Bias Tee
- MIK-1012

## 1.8 Technical Specifications

AC Input Range	95-265 VAC, 47 to 440 Hz
Operating Temperature	-30°C to 55°C
Storage Temperature	-50°C to 65°C
Operating Altitude	27,000 Feet
Storage Altitude	55,000 Feet
Humidity	95% Relative

## Chapter 2 - Operation

### 2.1 Operating Procedures

The subsequent sections will list in chronological order how to operate the MIK-21-75 safely and efficiently.

### 2.2 Controls and Indicators

- The MRC-67A has an on/off switch which is positioned on the populated side of the speaker box.
  - The MRC-67A has volume controls for both the speaker and the handset clearly labeled on the front of the speaker.
  - The green LED indicates that the unit is receiving power.
  - The amber LED indicates that the unit is receiving an audio signal.
- The PDU has an on/off switch located at the opposite end of the input connector.
  - The switch is down, the PDU is on.
  - The switch is up, the PDU is off.

- The MRC-99 has an arm/disarm switch located inside the lip of the housing as well as three LED's that indicate operating status.
  - The arm button will provide power to the unit.
  - The disarm button will cease power provisions to the transceiver.
- See TSE Ramp-75 with Bias Tee documentation provided with the MIK-21-75 for controls and indicators.

### **2.3 Start Up**

- Confirm that the MRC-99 is receiving power by pushing the arm button.
- Slide transceiver into case and connect to the MRC-99. Secure the transceiver to the MRC-99 using the latches.
- Secure a cable to the RF output connector on the Ramp 75 and connect it to an antenna.
- Connect Bias Tee to the transceiver.
- Connect the power source, using a power cable, to the input connector of the MRC-99. McDowell Research can fit any need for a particular cable.
- Turn the Transceiver on.
- Flip the PDU switch to the down position to power up the MIK-21-75, the unit is now operational. To receive audio ensure the MRC-67A is on. Also see the installation instructions provided with this manual.

## **Chapter 3 – Maintenance and Warranty Information**

### **3.1 Preventative Maintenance**

All maintenance procedures should be in the subsequent sections.

### **3.2 Dirt and Dust**

All external components to the MIK-21-75 can be cleaned with a water dampened non-abrasive cloth and allowed to air dry or wipe dry with a clean dry non-abrasive cloth.

### **3.3 Oils and Grease**

All external components of the MIK-21-75 can be cleaned with a mild soap/water solution dampened non-abrasive cloth. Rinse with water dampened non-abrasive cloth and allowed to air dry or wipe dry with a clean dry non-abrasive cloth.

### **3.4 Corrective Maintenance**

The MIK-21-75 has **NO** user serviceable parts. Units requiring corrective maintenance should be sent to McDowell Research for repair. Contact information is provided below in section 3.6.

### **3.5 Contact Information:**

**Please call (254) 752-1411 to obtain an RMA number prior to returning any failed unit(s) to:**

**McDowell Research, an Ultralife Company  
300 South 8<sup>th</sup> Street  
Waco, Texas 76701  
Phone: (254) 752-1411  
Fax: (254) 752-1812**

**Online RMA requests can be located and submitted at:  
<http://www.mcdowellresearch.com/shop/RMArequest.asp> or  
[service@mcdowellresearch.com](mailto:service@mcdowellresearch.com)**

### 3.6 Systems Diagram

- This section will contain all relevant diagrams for the MIK-21-75 Satcom on the move system.

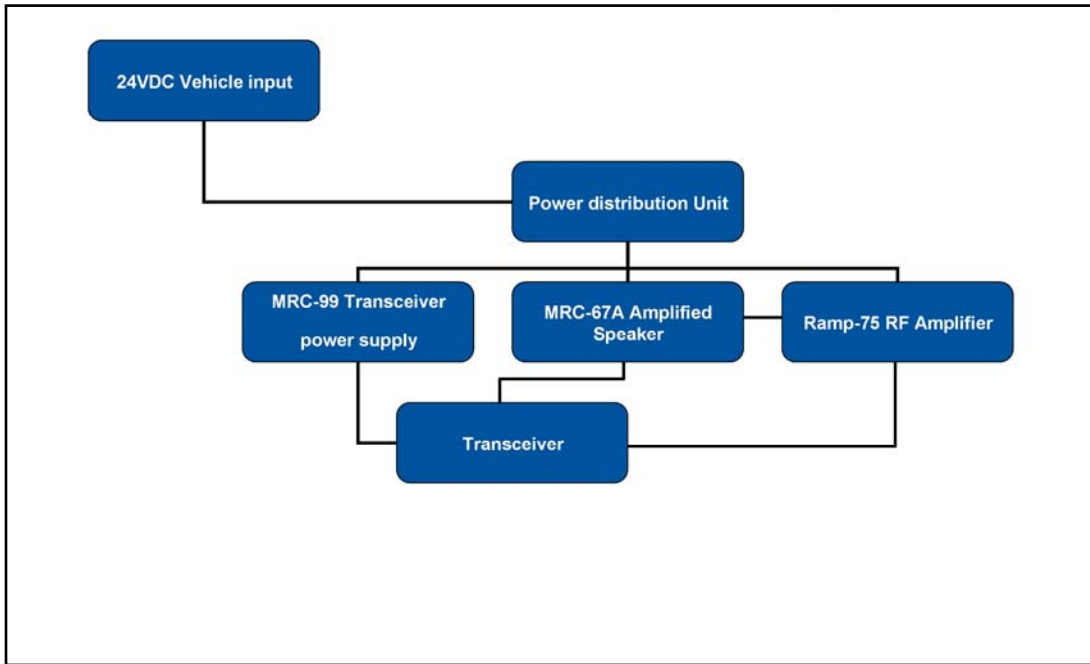


Figure 1 MIK-21-75 Interconnect Diagram

Description of Change	Revision	Date
Initial release	A	03-21-2006