

## GENERAL

|                               |  |
|-------------------------------|--|
| <b>FCC ID:</b>                | AIERIT16-446   |
| <b>Industry Canada ID:</b>    | 1084A-RIT16446   |
| <b>FCC Rule Parts:</b>        | 22, 74, 90, 95A  |
| <b>Frequency Range:</b>       | 450 - 470 MHz  |
| <b>Max. Freq. Separation:</b> | 20 MHz   |
| <b>RF Channels:</b>           | Up to 10 Channels, Independent TX/RX frequencies.  |
| <b>Synthesizer Step Size:</b> | 12.5 kHz   |
| <b>Frequency Stability:</b>   | ± 2.5 PPM (-30 C to +60 C) TX/RX   |
| <b>Tone/Code Signaling:</b>   | CTCSS (Quiet Call)<br>Digital Coded Squelch (Digital Quiet Call)<br>2-Tone Paging Decode<br>DTMF ANI Encode  |
| <b>Dimensions:</b>            | 1.5" H x 3.75" W x 6.0" D  |
| <b>Weight:</b>                | 1 lb. 5 oz. with antenna   |
| <b>Enclosure Material:</b>    | Steel with e-coat finish   |
| <b>Earphone Jack:</b>         | 3.5 mm, disconnects the internal speaker for external earphone, speaker / microphone, or headset. Also provides cable connection for PC programming. |
| <b>Microphone/PTT:</b>        | 2.5 mm, disconnects the internal microphone for external Speaker / microphone or headset.  |
| <b>Antenna Fitting:</b>       | BNC  |

## RECEIVER

|                                   | <u>Wide Mode</u>  | <u>Narrow Mode</u> |
|-----------------------------------|---|--------------------|
| <b>Modulation Acceptance:</b>     | ± 5.0 kHz   | ± 3.75 kHz         |
| <b>Sensitivity (12 dB SINAD):</b> | 0.20 µV   | 0.20 µV            |
| <b>Adjacent Channel (EIA):</b>    | - 65 dB   | - 50 dB            |
| <b>Spurious Rejection:</b>        | - 60 dB   | - 60 dB            |
| <b>Image Rejection (EIA):</b>     | - 65 dB   | - 65 dB            |
| <b>Intermodulation (EIA):</b>     | - 65 dB   | - 65 dB            |
| <b>Noise Squelch Sensitivity:</b> | Programmable per channel, factory set for 12 dB SINAD       |                    |
| <b>Frequency Response:</b>        | 300 - 3000 Hz, de-emphasized                                |                    |
| <b>Audio Output:</b>              | 1 Watt into 8 Ω, with less than 5 % THD @ the earphone jack |                    |
| <b>Receiving System:</b>          | Dual conversion superheterodyne                             |                    |
| <b>I.F. System:</b>               | 1st-43.65 MHz, 2nd - 450 kHz                                |                    |
| <b>L.O. Injection:</b>            | Low side  |                    |
| <b>QC/DQC Decode Time:</b>        | per EIA Standards   |                    |

## TRANSMITTER

|                                  | <u>Wide Mode</u>               | <u>Narrow Mode</u> |
|----------------------------------|--------------------------------|--------------------|
| <b>Emission Designator:</b>      | 16K0F3E                        | 11K0F3E            |
| <b>Deviation:</b>                | ± 5.00 KHz                     | ± 2.50 KHz         |
| <b>FM Hum and Noise:</b>         | - 40 dB                        | - 37 dB            |
| <b>Audio Distortion:</b>         | < 2 %                          | < 6 %              |
| <b>RF Power Output:</b>          | 2.5 Watts @ +13 VDC            |                    |
| <b>Spurious &amp; Harmonics:</b> | - 55 dBc                       |                    |
| <b>Audio Response:</b>           | Meets FCC and EIA requirements |                    |
| <b>Time-out Timer:</b>           | 60 seconds, programmable       |                    |

## POWER REQUIREMENTS @ 12VDC

|                                       |                    |
|---------------------------------------|--------------------|
| <b>Standby:</b>                       | 71 mA              |
| <b>Sleep:</b>                         | 25 mA              |
| <b>Avg. Standby with Power Saver:</b> | 28.5 mA            |
| <b>Receive:</b>                       | 250 mA             |
| <b>Transmit:</b>                      | 750 mA @ 2.5 Watts |

## CONTROLS

|                               |  |
|-------------------------------|--|
| <b>On/Volume Up:</b>          | Radio emits the Channel Beep when turned on, followed by increasing volume as indicated on the Channel Display.  |
| <b>Volume Down/Off:</b>       | Decreasing volume as indicated on the Channel Display, with two tones when turned off.   |
| <b>Both Volume Buttons:</b>   | Alternates between Tone Squelch (single beep) and Carrier Squelch (two beeps). On channels programmed for 2-tone paging decode, three beeps indicates 2-tone paging is set.<br><br>If both buttons are held down until the radio beeps repeatedly, squelch will be disabled.   |
| <b>“Z” Button:</b>            | The Special Function “Z” button can be programmed for one of the following features: <ul style="list-style-type: none"><li>• <b>Scan</b> – The radio emits the Scan Beep and the display will rapidly flash the channels as they are scanned, and will stop when a channel is received.</li><li>• <b>Send DTMF ANI</b> – The radio transmits the pre-programmed DTMF ANI string, and the ANI string is heard on the speaker.</li><li>• <b>Monitor</b> – Alternates the receiver between Tone squelch (single beep), carrier squelch (two beeps), and 2-tone paging decode (three beeps).</li><li>• <b>Call Tone</b> – The radio transmits a Call Alert Tone that is also heard on the speaker.</li></ul> |
| <b>PTT: Channel:</b>          | Activates the transmitter, and is programmable for a single “transmit beep”. The Channel Beep will sound whenever channel 1 is selected.   |
|                               | When the scan channel is selected the radio emits the Scan Beep.   |
| <b>Channel Display:</b>       | The 7-segment LED display indicates current operating channel.   |
|                               | When the scan channel is selected the display will rapidly flash the channels as they are scanned, and will stop when a channel is received.   |
|                               | The channel display also indicates volume level whenever a volume control is pressed.  |
| <b>Transmit/Monitor Lamp:</b> | A single light in the lower right corner of the channel display is lit continuously when the transmitter is active and blinks when the receiver detects a carrier.   |