



Full Duplex UHF Repeater with  
Built-in Duplexer. 2W or 10W Transmitter.

# DMR Digital Liberty™ Repeater

**The DMR Digital Liberty Repeater is the ideal wireless solution to bolster coverage in:**

Schools • Hospitals • Nursing Homes • Shopping Malls • Manufacturing Plants • Warehouses  
Amusement Parks • Golf Courses • Retail Stores • Special Events

For any organization to be effective, you need reliable voice communication that extends to every corner of your operation, keeping your workforce connected. The Ritron Digital Repeaters offer the right features at the right price. And with over 40 years of experience to prove it, they're built to last. The Liberty repeater offers adjustable transmit power settings from 10W to 2W, allowing the repeater to

be programmed for use on low power frequencies, or for larger facilities up to a full 10 Watts. The Liberty Repeater will boost overall radio system coverage for portables, mobiles, and radio callboxes while eliminating dead spots. A well-designed repeater radio system will include a properly selected repeater antenna, a low-loss cabling system and a well thought-out, tested, optimal installation location.





**DMR Digital  
Liberty Repeater  
and Compatible Products**

**DMR/Analog Portable  
2-Way Radios (VHF and UHF)**



**DMR 2-Way Radio Callboxes**  
UHF fixed location radio battery  
or external power.

**DMR/Analog Desktop 2-Way Base Station**  
UHF fixed location radio (110-220V AC or VDC)



**DMR Radio to Intercom Bridge**  
The RIB allows your 2-Way Radio PA  
Announcements over existing wired  
speaker/PA Systems. (VHF/UHF)

**DMR Wireless PA Receiver/Speaker System**  
Position 1 or multiple receiver/speakers around facility.  
Make PA Announcements with your 2-WAY Radios.  
(VHF and UHF)



**SPECIFICATIONS Model RLR-465DMR:**

- Full Duplex UHF Repeater
- 2 or 10 Watts Adjustable Transmit Power
- Includes Built-in Duplexer and Power Supply

Power:	10 Watts, Adjustable down to 2 Watts using PC Programmer.
FCC ID:	AIERIT44-465
IC ID:	1084A-RIT44465
Dimensions:	7"H x 11.6"W x 2.7"D
Weight:	3.5 lbs
Emission Designator:	7K60FXE (DMR voice), 7K60FXD (DMR data), 7K60FXW (DMR voice & data)
Operating Frequency:	450-470 MHz
Frequency Separation:	TX/RX 5 MHz
RF Channels:	1 TX/RX Channel
Channel Synthesizer Steps:	12.5 kHz
Power consumption:	13.8VDC at 2.5 Amps, Nominal
Time-out-timer:	0 to 30 minutes, programmable
RF/Antenna Connector:	"N" type
Aux RJ-45 Connector:	PTT input, Discriminator output, de-emphasized discriminator output, RSSI
DC Power Connector:	P-5 (2.1mm x 5.51mm x 9.5mm)
USB Connector:	PC Programming
Antenna Impedance:	50 ohms
LED Indicators:	Green = Pwr ON, Red = Transmit Bi-Color = Receiver Status
Steady Green On:	DMR signal slot 1 is detected
Steady Red On:	DMR signal slot 2 is detected
Alternating Red/Green:	DMR signal both slots 1&2 detected

**TRANSMITTER:**

Power Output:	10 Watts (measured at output of antenna connector @ 13.8VDC)
Frequency Stability:	+/- 1 ppm (-30 C to +50 C)
Modulation:	4FSK Spurious & Harmonics: <-25 dBm
Duty Cycle:	100% at +25° C (degraded linearly to 10% at +50° C)

**RECEIVER:**

Receiver system:	Fixed tuned, dual conversion super-heterodyne
IF system:	43.65 MHz/450 kHz
Local Oscillator:	Low side injection
Sensitivity:	DMR: -115dBm, 12dB SinAD
Selectivity:	-40 dB @ 6.25 kHz offset
Spurious rejection:	-75 dB
Image rejection:	-80 dB
Intermod rejection:	-70 dB
Frequency Stability:	+/- 1 ppm (-30 C to +50 C)



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