

PSR-VU-9537-U / PSR-U-9537-U

Channelized 5W Digital Repeater for VHF/UHF



The PSR-VU-9537-U and PSR-U-9537-U are a new dual band (VHF/UHF) digital public safety repeater solution designed to protect the lives of first responders and building occupants.

Through the use of digital filtering technology (DSP), the PSR-VU-9537-U and PSR-U-9537-U help eliminate adjacent channel interference to allow band selectivity and support VHF and UHF rebanding. Up to 1 wide band and up to 8 non-contiguous narrow bands can be simultaneously supported in each of the VHF and UHF Public Safety frequencies via ADRF's celebrated web-based GUI, which provides versatility and total control to the user.

The PSR-VU-9537-U and PSR-U-9537-U are fully compliant with International Fire Code (IFC) and National Fire Protection Association (NFPA) and UL Certified to UL 2524 Second Edition. This ensures that first responders have reliable radio communications in small to large buildings. It is the next generation in ADRF's acclaimed PSR Series Public Safety Repeaters.

Product Features

- Tested and approved under UL 2524, Second Edition as comprehensive solution including PSR, annunciator and ADRF BBx Series battery backups
- NFPA 72-2013, NFPA 1221-2016/2019, NFPA 1225, IFC 2015/2018/2021 code compliant and FirstNet compliant
- Alarming output to supervised circuits for: antenna, amplifier, AC or DC power supply, battery, and charger failure including oscillation detection with automatic amplifier shutdown routine
- Oscillation detection feature with automatic amplifier shutdown routine
- NEMA 4 enclosure for both indoor and outdoor environments
- Supports up to 1 wideband and up to 8 non-contiguous narrow bands
- Supports P25 Phase 1 / Phase 2 analog and digital systems

Product Specifications

PSR-VU-9537-U / PSR-U-9537-U

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Technical Specifications

		PSR-VU-9537-U (Simplex for VHF / UHF)	PSR-U-9537-U (Duplex UHF Only)
Frequency Range	Downlink	VHF: 136 - 174 MHz UHF: 380 - 512 MHz	380 - 512 MHz
	Uplink	VHF: 136 - 174 MHz UHF: 380 - 512 MHz	380 - 512 MHz
Composite Output Power	Downlink	VHF: 28 dBm UHF: 37 dBm	37 dBm
	Uplink	VHF: 24 dBm UHF: 27 dBm	27 dBm
System Gain	Downlink	VHF: 85 dB UHF: 85 dB (APCO25) 95 dB (LMR450)	85 dB (APCO25) 95 dB (LMR450)
	Uplink	VHF: 85 dB UHF: 85 dB (APCO25) 95 dB (LMR450)	85 dB (APCO25) 95 dB (LMR450)
Simultaneous Filter Support	Wide	1	
	Narrow	Up to 8 (Non-contiguous)	
Passband Filter Bandwidth	Wide	1/2/4/5 MHz	
	Narrow	6.25 - 331.25 KHz (6.25 x n, n= 1 - 53)	
Filter Roll-off		Wide: 65dBc @ Bandwidth Edge + 500KHz Narrow: 60dBc @ Bandwidth Edge + (Filter BW/2)	
Passband Ripple		±2 dB	
Channel Setting Resolution		0.5 kHz	
Noise Figure @ Max gain		< 3.5 dB w/ out duplexing	
Output ALC Dynamic Range		60 dB	
Gain Dynamic Range		45 dB	
System Group Delay	Wide	1-5 MHz: 5 µs	
	Narrow	6.25 KHz: 231.7 µs 12.5 KHz: 211.7 µs 18.75 KHz: 148.7 µs 25 KHz: 117.6 µs 31.25 KHz: 98.1 µs 37.5 KHz: 84.5 µs 43.75 - 56.25 KHz: 76.7 µs 62.5 KHz: 76.8 µs 68.75 - 87.5 KHz: 56.2 µs 93.75 - 100 KHz: 56.3 µs 106.25 - 150 KHz: 44.5 µs 156.25 - 200 KHz: 37.7 µs 206.25 - 243.75 KHz: 33.8 µs 250 - 293.75 KHz: 31.8 µs 300 KHz: 28.9 µs 306.25 - 331.25 KHz: 29.9 µs	
Spurious		FCC Compliant	
AC Power		110 - 240 VAC, 60 Hz (Free Voltage)	
Power Consumption		UHF Only: 214 W VHF Only: 210 W	
Max RF Input Power		-20 dBm (up to +10 dBm without damage)	
Impedance		50 Ω	
VSWR		<1.5:1	
Humidity		10% - 90% Non-Condensing	
Remote Alarm / Network		Dry Contacts Outputs, Web-GUI, SNMP	
Certification		UL 2524 Certified / Listed FCC: Part 90 Class A / Class B	
Annunciator Decibel Level		100 dB @ 1 m	

Mechanical Specifications

		PSR-VU-9537-U: (Simplex for VHF / UHF)	PSR-U-9537-U: (Duplex UHF Only)
Dimensions	Repeater	12 x 13.51 x 28.05 in. (w/o mounting bracket)	12 x 13.51 x 28.05 in. (w/o mounting bracket)
	Annunciator	5.91 x 2.84 x 6.32 in. (w/o bracket)	5.91 x 2.84 x 6.32 in. (w/o bracket)
Weight	Repeater	74 lbs. (w/o mounting bracket)	80.6 lbs. (w/ 1 ADRF-MPLX-U) 87.2 lbs. (w/ 2 ADRF-MPLX-U)
	Annunciator	2.5 lbs. (w/o bracket)	2.5 lbs. (w/o bracket)
RF Connector		4.3-10 (Female)	
Weather Resistances		NEMA 4	
Operating Temperature		-30°C to +60°C (-22 °F to +140 °F)	

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