

WA-0831

Antenna Distribution System

- Wide frequency range from 0.4 MHz to 1.8 GHz
- 4 antenna inputs, 8 receiver outputs
- Custom configurations available
- Manual or remote control
- High IP3 matrix switches and amplifiers
- High isolation
- Power feed for active antennas
- Ruggedized enclosure for mobile operations

The WiNRADiO WA-0831 Antenna Distribution System is an antenna switching and distribution device. While it particularly excels in combination with the WiNRADiO MS-8118/G3 Multichannel Surveillance and Monitoring System, this device can be also used with third-party receiver systems. It can be operated stand-alone via front panel controls, or remotely via USB or LAN interface.

The WA-0831 system features 4 separate inputs for the HF/VHF/UHF ranges (a suitable mix of HF, VHF and UHF inputs is factory-customizable at the time of order) and 8 receiver outputs.

Internally, the system consists of antenna matrix switches and high dynamic range preamplifiers.

The WA-0831 system is eminently suitable government, defence, law enforcement other demanding high-end applications.



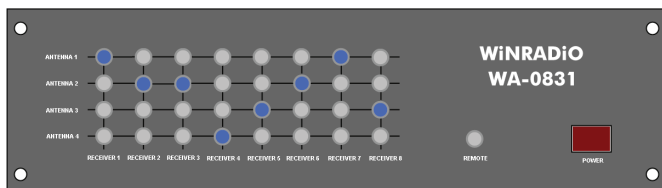
The antenna inputs can be customized and configured to the user request by using HF, VHF, UHF modules for frequencies shown in the table below:

Module	Bottom frequency	Top frequency
HF	0.4 MHz	30 MHz
VHF	30 MHz	300 MHz
UHF	300 MHz	1.8 GHz

The unit also contains convenient power supplies for external antenna preamplifiers (12 V current-limited DC voltage source is internally applied to the antenna leads of HF, VHF and UHF inputs).

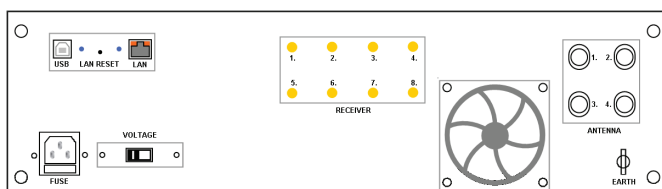
Hardware

The WA-0831 front panel contains 4 x 8 LED-illuminated matrix switch buttons, a remote enable button and the power switch.



The rear panel features four N-type connector antenna inputs. The eight outputs are connected to the receivers using SMA connectors.

A connection to the USB port is via a standard USB-B connector and the LAN network interface is via an RJ-45 connector.



Software

When used with the WinRADIO MS-8118/G3 Multichannel Surveillance and Monitoring System, the WA-0831 software integrates seamlessly with the system.

When used stand-alone, or in conjunction with third-party receiver systems, the WA-0831 unit can be controlled either manually using the operator control panel, or remotely via a supplied software application.

A programmers' SDK API is also available, to facilitate OEM integration and third-party application development.

Configuration

The WA-0831 is factory-configurable to any combination of the four antenna inputs. For example, a WA-0831 unit can have four HF inputs, or four VHF inputs, or one HF plus one VHF plus two UHF inputs, etc.

All combinations are possible, as long as the total number of inputs is four.

How to order

The order code is in the form of WA-0831/nT-nT... where n is the number of inputs of a particular input model type T. There are three possible types:

Module	Type	Bottom frequency	Top frequency
HF	H	0.4 MHz	30 MHz
VHF	V	30 MHz	300 MHz
UHF	U	300 MHz	1.8 GHz

Specifications

Configuration	4 inputs / 8 outputs non-blocking
RF Connectors	8 x input (N-female) 8 x output (SMA-female)
Gain	HF/VHF inputs -2 dB (± 3 dB) UHF input -2 dB (± 4 dB)
NF	HF input 12 dB VHF/UHF inputs 8 dB
Frequency range	Depends on current input module configuration, (0.4 MHz to 1.8 GHz when using all HF, VHF and UHF input modules)
Impedance	50 ohm (all inputs and outputs)
Max. input level	HF/VHF inputs +22 dBm for no damage UHF input +17 dBm for no damage
IIP1	HF input +13 dBm @ 14 MHz VHF input +20 dBm @ 150 MHz UHF input +8 dBm @ 1000 MHz
IIP3	HF input +27 dBm @ 14 MHz VHF input +33 dBm @ 150 MHz UHF input +23 dBm @ 1000 MHz
Isolation	Output-to-output: -109 dB @ 10 MHz -88 dB @ 100 MHz -74 dB @ 400 MHz -68 dB @ 1500 MHz Input-to-output: -60 dB @ 10 MHz -44 dB @ 100 MHz -46 dB @ 400 MHz -48 dB @ 1500 MHz
Power supply for active antennas	12 V DC (max 0.4 A) on antenna inputs of HF, VHF and UHF modules
Remote control interfaces	USB 1.1/2.0 (USB-B connector) LAN interface for TCP/IP networks (RJ-45)
Power	120 / 240 V AC, 50 Hz, selectable 8 - 15 W (according to configuration)
Dimensions	Width: 19" rack Height: 3RU (5.25" = 133 mm) Depth: 14.4" (365 mm)
Weight	Approx. 19.5 lb (8.8 kg) (according to configuration)

Note:

1. All values are typical.

2. Specifications are subject to change without notice due to continuous product development and improvement.

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WinRADIO Communications, 45-47 Islington Street, Collingwood 3066, Australia.
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