QUAD Box

UHF/VHF QuadPak Multicoupler

Feature Highlights

- **Houses up to four UHF or VHF receivers.**
- **Single antenna and power supply**
- **Modular configuration**
- **Distribution module includes RF filters, amplifier, “strip-line” splitter and power distribution.**
- **High RF overload threshold minimizes IM.**
- **Built-in rechargeable gel-cell batteries.**
- **External DC and 9V dry cell batteries provide backup power sources.**
- **Power distribution via independent auto-reset thermal fuses for each receiver.**

Convenience and performance...

The QUADBox multicoupler provides a convenient, highly portable mechanical assembly with integral RF and power distribution for up to four receivers. Two different multicouplers are available to configure the system for either the UCR190 UHF receivers or the CR187 VHF receivers.

The signal from a single antenna is filtered, amplified and distributed to the four receivers through a high performance RF multicoupler. The RF distribution module is a high performance design that applies filtering before gain is applied to the signal. The gain applied to the signal is just enough to compensate for the required loss in the splitter to preserve the excellent RF performance of the receivers. A 2-pole ceramic resonator is used ahead of the RF amplifier to reject energy above and below the passband. The RF amplifier is a high current type with a high overload threshold to minimize intermodulation.

RF strip line splitter...

A 1/4 wave transmission line RF splitter following the RF amplifier is integrated into the multi-layer circuit board to provide isolation between the receivers and low loss RF signal distribution. One of the advantages of this type of splitter is that unused RF outputs do not necessarily have to be terminated, which is important due to the modular configuration of the system.

Modular configuration...

Each of the receivers and the distribution module can be removed for use separately or for service. This makes it easy to use the receivers independently on a camera, in a cart or in a bag, as the need arises.

Powering options...

Built in rechargeable gel-cell batteries provide over 15 hours of operation on a single overnight charge. The assembly can also be powered from external 12V DC via the distribution module, or with 9 Volt batteries in the receivers and the disttrbution module.

Rugged mechanical package...

The housing is constructed of machined aluminum in a rugged design that will withstand heavy use in the field. The receivers and distribution module are nested into pockets milled into the aluminum front panel.

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Specifications and Features

QUAD Box Assembly

The mechanical assembly will accept either the UDM4 UHF distribution module or the UCDM4-SMT VHF distribution module. These two units are the same except for the frequency range of operation.

All rear panel connectors are recessed for protection, yet fully accessible. Receivers and the distribution module are easily removed for use separately or for servicing.

Built-in gel-cell batteries provide up to 9 hours of operation per overnight charge. The batteries are recharged through a 4-pin XLR jack in the rear panel of the distribution module with the supplied charger.

A zippered naugahyde dust cover surrounds the rugged aluminum mechanical assembly. The front and rear zippered covers include pockets with protective stiffeners.

Distribution Modules

The UDM4 is a UHF design for use with UCR190 receivers. The UCDM4-SMT is a VHF design for use with CR187 VHF receivers. Both units offer the same features and benefits and differ only the in frequency band of operation. The module is easily removed for use separately in portable bags or with sound carts.

The RF amplifier offers a high overload threshold to minimize intermodulation. Isolation between receivers is provided by a “strip line” splitter. Power is distributed to the receivers via auto-resetting thermal fuses on each power lead. The fuses operate independently so that a fault on one lead will not affect the others. External DC power for the receivers can be supplied via a 4-pin XLR jack on the rear panel, or from the internal gel-cell batteries.

Distribution module:

Frequencies:	• UDM4: 20MHz passbands from 512 to 608 MHz • UCDM4-SMT: 4 MHz passbands from 150 to 216 MHz
RF bandwidth:	20 MHz (UHF); 4 MHz (VHF)
RF gain:	0.5 to 1.5 dB
3rd order intercept:	+19 dBm
RF filtering:	2-pole ceramic resonator

Mechanical assembly:

Power consumption:	265 mA
Internal batteries:	6.5 Ah rechargeble
Weight:	16 lbs. 5 ozs.
Approx. dimensions:	9 x 8 x 7

The distribution modules can also be powered with an internal 9 Volt battery as a backup power source or for use outside of the QUAD Box assembly

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LECTROSONICS®
581 Laser Rd NE - Rio Rancho, NM - 87124 USA
(800)821-1121 (505)892-4501 Fax(505)892-6243
www.lectrosonics.com *sales@lectrosonics.com*