

SDX



16 CHANNEL UHF - PLL TRUE DIVERSITY WIRELESS SYSTEM

RDU216/MW163U - 16 CHANNEL UHF WITH BELT PACK TRANSMITTER

RDU216/MW165U - 16 CHANNEL UHF WITH HAND-HELD TRANSMITTER

PLL SYNTHESIZED UHF FREQUENCY AGILE - SDX DUAL BAND COMPANDER

TRUE DIVERSITY COMPARATOR SYSTEM - OPTOCOUPLER TYPE LIMITER



Engineering leadership in sound products since 1931

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UHF - PLL

16 CHANNEL - PLL SYNTHESIZED UHF

Model RDU216/MW163U - Complete System with Beltpack Xmitter
Model RDU216/MW165U - Complete System with Handheld Xmitter



RDU216 - RECEIVER

- ✦ UHF PLL Synthesized 16 Channels selectable
- ✦ Microprocessor Controlled Comparator True Diversity System
- ✦ SDX Dual Band Expander
- ✦ XLR Male Balanced and 1/4" Jack outputs
- ✦ Front Panel Output Level Control
- ✦ RF Channel Test Function
- ✦ AF, RF and Diversity LED bar indicators
- ✦ One Half 19" Enclosure
- ✦ Rack mountable with Optional PRK216 Rack Kit

The photo at right shows the RDU216 mounted on the optional Rack Kit PRK216



PLL SYNTHESIZED UHF FREQUENCY AGILE - SDX DUAL BAND COMPANDER/EXPANDER

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SDX

FREQUENCY AGILE TRUE DIVERSITY WIRELESS SYSTEM

In recent years the use of Communication Equipment utilizing RF as a Carrier has increased enormously making the VHF Band practically unusable. The only solution for interference-free operation is the utilization of the UHF Band. A fixed frequency system can cause just as many interference problems when moving from location to location. Employing the latest microcomputer technology the PASO Multi-Channel, PLL Synthesized, UHF Wireless Microphone Systems solve all interference problems delivering High Performance with Frequency Selection Agility and True Diversity.

SDX - Super High Dynamix with Dual Band Componder Design

Advantages of a Dual Componder System:

1. Audio Frequency input is split into high & low frequency bands and compressed by a dual band Compressor (high frequency and low frequency Compressor) at the transmitter side and expanded by a dual band Expander (high frequency and low frequency Expander) at the receiver end.
2. Reduces low frequency distortion, high frequency overload and noise modulation.
3. Increased dynamic range as compared to the single band companding.
4. Reduced common compander noise that exists in most single band companding system.

Optocoupler Type Limiter

Protects the input from over-modulation without generating distortion. Allows more than 30 dB of audio overload at the Transmitter. Meets and exceeds the most stringent FCC standards for over modulation.

RF Test Function

RF test function is a Manual Scanner. By pushing the RF test button a channel per channel check is possible to find a clean channel before operation.

Microprocessor controlled Antenna Diversity vs. True Diversity

The heart of an Antenna Diversity system is the Microprocessor that constantly processes and observes the signal strength received from the two antennas. When it detects that the signal is becoming weak and dropout is imminent, it forces the Receiver to switch over to the other antenna to avoid "dropout" as the signal strengths from two antennas are never the same. In a True Diversity System two sets of identical RF Front End and IF circuit coexist. The Diversity Comparator electronics constantly compares the two signal strengths and switches between the two received signals depending on which is stronger thus efficiently eliminating dropout due to a weak signal. Technically speaking a Microprocessor Controlled Antenna Diversity System performs better than a non-Diversity system and are suitable for many PA applications which are budget conscious, however, for Broadcast, Concert and best performance applications, the True Diversity is the only solution.



TRUE DIVERSITY MICROPROCESSOR COMPARATOR SYSTEM

UHF - PLL



MW165U

*COLOR CAPS NOT AVAILABLE

GAIN CONTROLS

CHANNEL SELECTOR

9V BATTERY



MW163U



TRANSMITTERS

BELTPACK - Model MW163U
HANDHELD - Model MW165U

- 16 frequencies agile in 25 MHz bandwidth
- Optocoupler type Limiter
- +/- 40 KHz peak deviation
- Pilotone Control
- 50 mW** max. allowable transmission power
- Very low spurious emission
- Handheld Model with Built-in Antenna
- Low Handling Noise (Handheld)
- Soft-touch rubberized Enclosure finish (Handheld)
- Two stages Sensitivity Switch
- On-Off single switch operation
- Rotary Switch Channel Selector
- Low current consumption
- Up to 10 hours of operation with a single 9V Alkaline Battery
- 4 pins Mini-XLR MIC Connector (Beltpack)
- Multi-choice Lavalier or Headset Microphones (Beltpack)

SPECIFICATIONS

Overall Specifications

Carrier Frequency Range	UHF high band 750 - 900 MHz
Bandwidth per frequency group	25 MHz
Max. no. of Channels	16
RF Generation	Microprocessor controlled PLL synthesized
Frequency Stability	± 0.005%
Peak Deviation	± 40 KHz
Pilotone Frequency	32.768 KHz
S/N ratio (max)	> 105 dB
T.H.D.	< 0.5 %
Dynamic Range	Super high dynamic SDX > 110 dB
Limiter Circuit	Opto-coupler type

Receiver Specifications

	RDU216
No. of Channels	16
Receiving Method	True Diversity
Display	RF / AF signal LED Indicators
Sensitivity	- 100 dBm at S/N ratio > 80 dB
De-emphasis	50 µS
Noise Reduction	Dual Band Expander (SDX)
Image Rejection	> 85 dB
Spurious Rejection	> 85 dB
Squelch	RF noise squelch, Pilotone squelch
Channel Selector	Rotary Switch
Switches	Power ON / OFF, RF Test
Output Terminations	Phono 1/4" Jack and XLR Male
Audio Output Level	Unbalanced (XLR) : + 4 dBm (1.25V) / 5 KΩ Balanced : +10 dBm (2.5V) / 600 Ω
Antenna Divider	Built-in
Antenna Socket	TNC or BNC type
Rack Mount Kit 19"	PRK216 (Optional)
Rack Size	1 Unit - Accepts two RDU216 or one RDU216 and Diversity Antennas

Transmitter Specifications

Type	HANDHELD	BELTPACK
Models	MW165U	MW163U
RF Output Power	50 m (max)	
Spurious Emission	> 60 dB below carrier	
No. of Channels	16	
Channel Selector	Rotary Switch	
Pre-emphasis	50 µS	
Limiter	Opto-coupler type	
Limiter Range	>30 dB	
Noise Reduction	Dual Band Companding (SDX)	
Battery	9V x 1	
Charging Contacts	No	YES
Battery Life (Alkaline)	Approx. 10 hours	
Microphone Capsule	Condenser type	Electret with TieClip
Line Level Input	n.a.	Electric uitar , other line level audio sources
MIC Connector	n.a.	4 pins mini-XLR
Microphone Directivity		Unidirectional
Antenna	Built-in	1/4-wave, whip antenna
Approval		FCC - CE - ETS (Europe)

Remark : The above specifications are subject to change without prior notice.

ACCESSORIES



PRK216 - 19" Rack Mount Kit for RDU216. ABS Black. Kit includes Dual Antenna Mounting Plate (as shown).



MHS63 - Headset Microphone for MW163. Complete with Headband and Microphone Boom.



MC63 - Collar Microphone for MW163. Flexible and adjustable mini gooseneck.

WP163 - Aerobic Waist Pouch for MW163.



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