Receiver Specifications

	SDR-2816	SDR-1816	SDR-1216
Frequency Range	UHF High Band 600 - 960 MHz		VHF High Band 160 - 260 MHz
Switching Bandwidth	20 MHz		10 MHz
Switchable Frequencies	16		
Display Screen	LED		
Oscillation Type	PLL Synthesized		
Frequency Stability	± 0.005%		
Frequency Scan	RF -TEST		
Receiving Method	True Diversity	Diversity	
Sensitivity	"-100 dBm at S/N ratio > 80 dB		
Image Rejection	> 85 dB		
Spurious Rejection	> 85 dB		
S/N Ratio	> 110 dB		
Peak Deviation	± 40 KHz		
T.H.D	< 0.5%		
Antenna Socket	TNC type		
Audio Outputs	Unbalanced: +4 dBm (1.25 V) / 5 Ω Balanced:+10 dBm (2.5 V) / 600 Ω		
Squelch	Noise squelch & Pilotone squelch		
Power Supply	AC/DC 12~15V 800mA		
Rack Size	1/2 19" rack size (Plastic)		
Dimension (mm, L x W x H)	213 x 155 x 45		
Weight (kg)	1.8		
Matched Transmitter	SQ-916, SM-916, SQ-816, SM-816		SQ-316, SM-316
Patent & Approvals	FCC, CE		

Handheld Wireless Microphone specifications

	SQ-916	SQ-816	SQ-316	SQ-216
Frequency Range	UHF High Band 600 - 960 MHz		VHF High Band 160 - 260 MHz	
Switching Bandwidth	20 MHz		10 MHz	
Switchable Frequency	16			
RF Power Output	< 50mW		< 35mW	
Spurious Emission	> 60 dB below carrier			
Dynamic Range	> 110 dB			
Display Screen	LED			
T. H. D	< 0.5%			
Battery Type	9V * 1	AA * 3	9V * 1	AA * 3
Operating Life (Alkaline)	about 12 hours			about 16 hours
Charging Function	—	YES	—	YES
Peak Deviation	± 40KHz			
Antenna	Built-in			
Microphone Capsule	Dynamic / Condenser type			
Dimension (mm, L x W x H)	φ 50 x 260	φ 45 x 240	φ 50 x 260	φ 45 x 240
Weight (g)	200	240	200	240
Patent & Approval	FCC, CE			

Beltpack Wireless Microphone specifications

	SM-916	SM-816	SM-316	SM-216
Frequency Range	UHF High Band 600 - 960 MHz		VHF High Band 160 - 260 MHz	
Switching Bandwidth	20 MHz		10 MHz	
Switchable Frequency	16			
RF Power Output	< 50mW		< 35mW	
Spurious Emission	> 60 dB below carrier			
Dynamic Range	> 110 dB			
Display Screen	LED			
T. H. D	< 0.5%			
Battery Type	9V * 1	AA * 3	9V * 1	AA * 3
Operating Life (Alkaline)	about 12 hours		about 16 hours	
Charging Function	YES			
Peak Deviation	± 40KHz			
Antenna	1/4 wave, whip antenna		Built-in	
Connector	4 pins mini-XLR type		4 pins mini-XLR	type / Mini phone jack
Microphone Capsule	Lavalier / Headset			
Dimension (mm, L x W x H)	98 x 66 x 22.5	120 x 67 x 26	98 x 66 x 22.5	120 x 67 x 26
Weight (g)	110	110	110	110
Patent & Approval	FCC, CE			

Remark : The above specifications are subject to change without prior notice.
** Output power varies to suit local Telecom regulations.

Accessories

MC-15
Uni-directional Lavalier Microphone Audio-Technica(Japan)

MC-16
Uni-directional Lavalier Microphone (CHIAYO)

MC-520
Omni-directional Lavalier Microphone (Switzerland)

MC-70
Uni-directional Headset Microphone (USA)

MC-72
Uni-directional Headset Microphone (CHIAYO)

MC-73
Uni-directional Headset Microphone Audio-Technica(Japan)

MC-745
Uni-directional Headset Microphone

CY-62
Uni-directional Dynamic Microphone Module

MU-48U
Uni-directional Dynamic Microphone Module(Japan)

MC-87
Uni-directional Condenser Microphone Module(Japan)

HC-36
Handheld Transmitter Charging Station for 3 AA battery

HC-38(for 3 AA)
HC-39(for 9V)
Beltpack Transmitter Charging Station

AD-85(UHF)
AD-15(VHF)
Antenna Divider

CHIAYO

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CHIAYO

Pro Audio Class

PLL Synthesized 16 Channels selectable

VHF/UHF Diversity / True Diversity Wireless Microphone Systems

CHIAYO ELECTRONICS CO., LTD.

Printed in Taiwan July, 2004

If you have a choice, please select multi-channel selectable system instead of a fixed frequency system.

PLL synthesized 16 channels frequency agile VHF Wireless Microphone System.

SDR-1216 (VHF) / SQ-316 / SM-316

VHF band is currently quite crowded. However, it is still the legal frequency in many countries. As RF interference varies from location to location, a conventional fixed frequency quartz-locked system is not capable to handle such fast changing RF environment. To continue using this band effectively and to avoid the many interference problems facing this band the only solution is to go for the PLL Synthesized frequency agile technology. This SDR- series, employing the state-of-the-art microcomputer technology to deliver the PLL Synthesized multi-channel selectable VHF wireless microphone systems, will give you much flexibility.

SDR-1216 (VHF)

- 16 frequencies agile in 10 MHz bandwidth.
- High sensitivity and excellent image rejection.
- Single compander design.
- +/- 40 KHz peak deviation.
- Pilotone Control.
- Antenna Diversity Reception for dependable RF reception 1/2 19" casing.
- XLR balanced output for each receiver and mixed output.
- Selectable MIC or LINE output level.
- RF test function.
- AF, RF and Diversity LED bar indicators.
- Rack mountable with special MP-50 rack mount kit (optional).

RF Test Function

RF test function is indeed a manual scanner. By pushing the RF test button, it defeats the Pilotone and enables user to check channel per channel to look for a clean channel before operation.

Transmitter

- 16 frequencies agile in 10 MHz bandwidth.
- Single compander design.
- +/- 40 KHz peak deviation.
- Pilotone Control
- 50 mW** maximum allowable transmission power.
- Very low spurious emission passed the stringent EU regulation.
- Built-in antenna for handheld.
- Changeable Dynamic or Condenser microphone capsule.
- No handling noise in handheld with condenser capsule.
- Handheld Body coated with rubberized paint for smooth holding.
- Two stages Sensitivity switch.
- Single switch operation.
- Rotary switch channel selector.
- Low current consumption.
- Up to 12 hours of operation with a single 9V Alkaline battery.
- Color cap in handheld as channel identifier.
- 4 pins Min-XLR connector.
- A choice of various Lavalier or Headset microphones.
- MT and GT gain controls.

PLL Synthesized 16 channels UHF Frequency Agile systems.

SDR-1816 (UHF) / SDR-2816 (UHF)

Communication equipments using RF as carrier has increased by leap and bound in recent years. VHF band is currently quite crowded. To avoid this band and to look for clearer sky, the only solution is to go higher up to the UHF band. As RF interference varies from location to location, a conventional fixed frequency quartz-locked system is not capable to handle such fast changing RF environment. PLL Synthesized is the only solution left. This SDR- series, employing the state-of-the-art microcomputer technology to deliver the PLL Synthesized multi-channel selectable UHF wireless microphone systems, will take you to the future.

Super High Dynamix (SDX) with Dual Band Compander Design
SDX -Dual Band Companding is the standard feature of this new series, delivering Super High Dynamic.

Advantages of Dual Compander :

- Audio Frequency input is split into high & low frequency band 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.
- Reduce low frequency distortion , high frequency overload and noise modulation.
- An increased of dynamic range as compared to the single band companding.
- Reduced common compander noise exist in most single band companding system.

Optocoupler type Limiter

-Avoiding clipping in the input.
-Protect the input, control more over-modulation without generating distortion.
-Allows more than 30 dB of audio overload at the transmitter.
-Meeting the most stringent EU standards for avoiding over modulation.

RF Test Function

RF test function is indeed a manual scanner. By pushing the RF test button, it defeats the Pilotone and enables user to check channel per channel to look for a clean channel before operation.

Microprocessor controlled Antenna Diversity vs True Diversity

The heart of an Antenna Diversity system is the microprocessor control unit which maintains constant vigilance on the signal strength from one antenna. When weak threshold is detected and drop-out is imminent, it takes chance and forces the receiver to switch over to the other antenna to avoid drop-out. In certain ways it is effective as the signal strengths from two antennas are never the same at any instant.
Whereas in a True Diversity system, two sets of identical RF front ends, IF circuits and Detector circuits coexist. The Diversity comparator electronics constantly compare the two signal strengths and switches to and forth between the two received signals depending on whichever is stronger. Thus efficiently eliminating drop-out due to weak signal.
Technically speaking, microprocessor controlled Antenna Diversity performs better than a non-Diversity system. It is very suitable for many PA applications which are budget conscious and do not go on live telecast. However, for live Broadcast and live Concert applications, True Diversity is highly recommended.

SDR-1816 (UHF) / SDR-2816 (UHF)

- UHF Synthesized 16 Channels selectable.
- Antenna Diversity (SDR-1816) and True Diversity (SDR-2816) Receivers.
- 1/2 19" Plastic casing.
- Diversity Reception for dependable RF reception.
- XLR balanced output for each receiver and mixed output.
- Selectable output level, MIC or LINE.
- RF test function.
- AF, RF and Diversity LED bar indicators.
- Rack mountable with special MP-50 rack mount kit (optional)

SQ-916 / SQ-816 »

SM-916 / SM-816 »

Handheld / Beltpack Transmitters

- 16 frequencies agile in 20 MHz bandwidth.
- Optocoupler type Limiter.
- +/- 40 KHz peak deviation.
- Pilotone Control
- 50 mW** maximum allowable transmission power.
- Very low spurious emission passed the stringent EU regulation.
- Built-in antenna for handheld.
- Changeable Dynamic or Condenser microphone capsule.
- No handling noise in handheld with condenser capsule.
- Handheld Body coated with rubberized paint for smooth holding.
- Two stages Sensitivity switch.
- Single switch operation.
- Rotary switch channel selector.
- Low current consumption.
- Up to 12 hours of operation with a single 9V
- Alkaline battery.
- Color cap in handheld as channel identifier.
- 4 pins Min-XLR connector.
- A choice of various Lavalier or Headset microphones.
- MT and GT gain controls.