UHF SERIES ONE

UM1 MICRO DIVERSITY SYSTEM

TRUE DIVERSITY

WIRELESS SYSTEMS

UHF 800 MHz — 806 MHz

SAMSON

The UHF Series One Micro Diversity System is designed to provide superlative wireless performance for a wide range of commercial videography, corporate video and specialized broadcast applications.

The system operates on the clear 800 MHz UHF frequency band. This, in conjunction with the UM1 receiver's advanced diversity circuitry, ensures failsafe reception in all kinds of RF conditions.

Providing superior audio, the UM1's extremely compact size allows it to fit seamlessly onto video cameras. The receiver also features a comprehensive metering layout and control scheme along with balanced and unbalanced outputs and specially tuned antennas to further maximize reception. Along with 9 volt battery operation, the
system also includes a special carry case and a host of other practical features.

UM1 Receiver

- Two-function RF Level and Battery Level 3-color LED meter
- Variable Squelch control and Power On/Off switch
- Audio peak and Antenna A-B LED indicators
- Balanced 3-pin lockable mini XLR output connector
- Unbalanced output with level switch
- Supplied mini XLR to XLR cable
- Headphone output with level control
- DC input for powering without batteries
- Foldable tuned, molded antennas

Contact:

UH1 Handheld / UT1 Beltpack Transmitter

- Multicolored 3-segment "Battery-Life" LED meter
- Externally-mounted Audio On/Off switch mutes audio without pops or thumps
- Internal Audio Input Level trimpot
- Attached pigtail antenna on beltpack
- Rotating beltclip allows vertical or horizontal positioning

General

- Carry case included
- 9-volt battery operation

Samson Technologies Corp., P.O. Box 9031, Syosset, NY 11791-9031 • Phone: (516) 364-2244 • Fax: (516) 364-3888 • www.samsontech.com

ARCHITECT'S & ENGINEER'S SPECIFICATION

The UHF Samson Series One Micro Diversity System shall be of a single-channel, Phase-Lock Loop oscillator type operating on selected frequencies from 800–805 MHz. The System shall include a beltpack or handheld Transmitter and a Receiver, and shall allow operation of at least six simultaneous systems on separate channels. The Transmitter and Receiver shall incorporate compander circuitry for noise reduction and maximum dynamic range.

The Receiver shall provide an unbalanced output on a P3 connector. The audio output level shall be adjustable with 3 position switch at -12dB, -20dB and -30dB. The Receiver shall incorporate dual LEDs for carrier indication. The Receiver shall have an automatic signal sensing squelch circuit with a variable attenuator. The Receiver shall incorporate True Diversity circuitry for automatic antenna switching. The Receiver shall use two tuned, molded 1/4 wave rod antennas. The Receiver shall be powered by a 9V alkaline battery.

The Receiver shall be notified under FCC rules, Part 15, and DOC certified under RSP 121. Dimensions of the Receiver shall be 2.5″ 63.5 mm) wide, .875″ (22 mm) deep and 4.25″ (108 mm) high. Weight of the Receiver shall be 9.2 oz. (261 g).

The Transmitter shall provide either a microphone-level input on a Switchcraft TA3F P3-type connector or an instrument-level input on a 1/4″ phone connector. The beltpack audio input sensitivity or handheld microphone output level shall be adjustable with a variable attenuator. The Transmitter shall incorporate a three-segment battery life LED meter and the handheld transmitter shall use an internal dipole antenna while the beltpack transmitter shall use a attached pigtail antenna. The Transmitter shall be powered by a 9 V alkaline battery and shall provide a nominal battery life of not less than 12 hours. The Transmitter type shall be accepted under appropriate FCC rules. Dimensions of the beltpack Transmitter shall be 2.3″ (59 mm) wide, 3.2″ (81 mm) deep and 0.94″ (24 mm) high. Weight of the beltpack Transmitter shall be 3.1 oz. (88 g). The System shall carry a three-year warranty.

The System shall be a SAMSON UHF SERIES ONE MICRO DIVERSITY SYSTEM.

UHF SERIES ONE MICRO DIVERSITY SPECIFICATIONS

System Specifications

Channels:	6 (for simultaneous use)
Frequency Type:	F3
Modulation Type:	FM
Noise Reduction Type:	Compander
Distance:	300 ft.

Transmitters (UH1, UT1L)

Oscillation Type:	Direct PLL
Pre-emphasis:	50 µsec
Antenna:	
UH1:	1/4 Wave Integral Antenna
UT1L:	1/4 Wave Length Wire (Pig Tail)
Input (UT1L):	TB3M QG (Mini XLR) Connector
Maximum Input Level:	3 V p-p
Battery:	Duracell MN 1604 9-volt alkaline
Switches/Controls:	Power On/Off, Audio On/Off
UH1:	AF Level
UT1L:	AF Level
Display (LED):	Battery Low/Mid/High (<5.3V/5.3-7V/7V)
Operating Voltage:	9 Volts +20%/-40%
Current Consumption:	47 mA
RF Power:	10 mW
Frequency Stability:	+ 20 kHz
Spurious Ratio:	2.5 nW
Deviation:	20 kHz (16.5 kHz-23.5 kHz)
T.H.D. (Typical):	0.5%
AF Frequency Response:	50 Hz – 15 kHz (± 3 dB overall)
Battery Life:	12 Hours

Receiver (UM1)

Oscillation Type:	Crystal Controlled
D-emphasis:	50 µsec
IF Frequency:	10.7 MHz
Antenna:	1/4 Wavelength Rod
In/Out:	DC Inlet, Balanced Output, Unbalanced Output
Display (LED):	Antenna A/B (Green), Power On (Red), Peak (Yellow), RF Level (5 pc)
Level Controls:	Volume, Squelch
Operating Voltage:	12 Volts + 10 %
Current Consumption:	170 mA (at all LED lights)
Receiving Frequency Range:	801 – 805 MHz
Sensitivity:	18 dBµ @ THD 2%
Squelch Sensitivity:	0 – 40 dBµ (Adjustable)
Selectivity:	± 150 kHz (AF Out Ratio -60 dB)
S/N Ratio (Overall):	90 dB (w/ IHF-A filter)
Residual Noise:	90 dBv (w/ IHF-A filter)
Band Mute:	± 50 kHz / ± 100 kHz (RF IN: 46 dBu EMF)
AF Frequency Response:	50 Hz – 15 kHz (± 3 dB overall)
Audio Output Level - Unbalanced:	0 dBv
Audio Output Level - Balanced:	-20 dBm (Line), -40 dBm (Mic) Switch Selectable
Audio Output Impedance/Unbalanced:	5 k Ohms
Audio Output Impedance/Balanced:	600 Ohms

Dimensions:

Receiver:	2.5″ (w) x .875″ (d) x 4.25″ (h) 63.5 mm (w) x 22 mm (d) x 108 mm (h)
Transmitter (UT1L/UT1G):	2.3″ (w) x 3.2″ (d) x .94″ (h) 59 mm (w) x 81 mm (d) x 24 mm (h)
Transmitter (UH1):	varies with mic type

Weight:

Receiver (including antennas):	9.2 oz. / 261 g
Transmitter (UT1L/UT1G):	3.1 oz. / 88 g
Transmitter (UH1):	varies with mic type