

SYNTH SERIES SIX

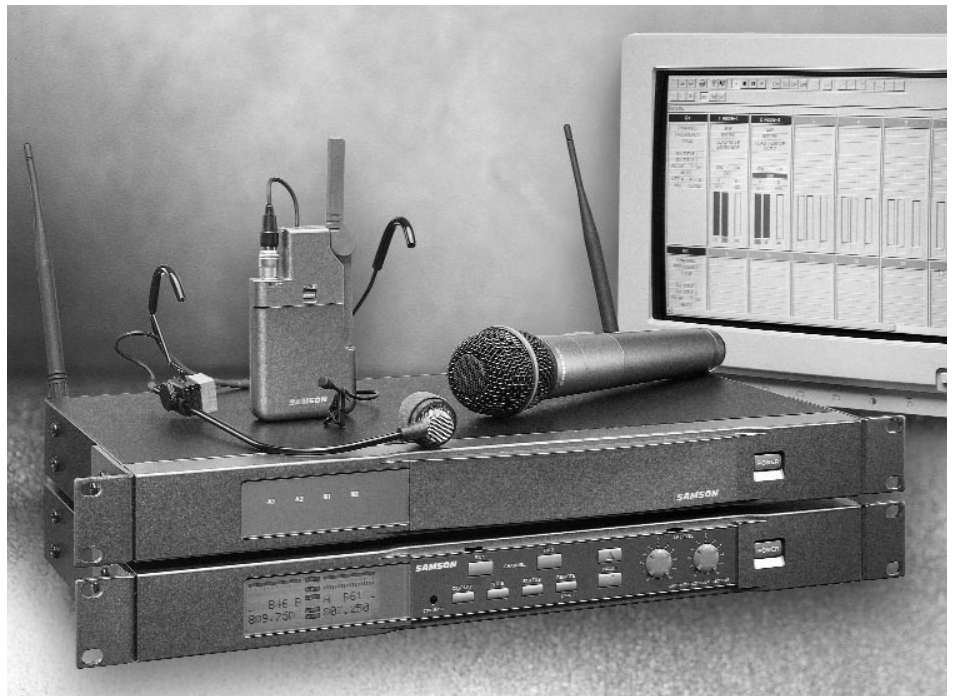
TRUE DIVERSITY

WIRELESS SYSTEMS

FEATURING DBX® NOISE REDUCTION

UHF 782.125 MHz — 805.857 MHz

- 96 available channels for simultaneous use.
- Two independent synthesized receivers in one rack space.
- Back-lit LCD display shows status of RF and AF levels, frequency selection and more.
- Built-in dbx® noise reduction circuitry.
- Ability to create up to two Receiver Titles, monitor rear panel settings such as Antenna Attenuation, Audio Output Level and a unique Output Mix function which combines the audio output from the two receivers.
- A “Lock” feature provides additional security by allowing you to lock in the receiver settings electronically.
- Front panel includes a comprehensive set of recessed controls to select all key functions and a security cover to physically protect receiver settings.
- Voltage-sensing power supply for world-wide use with any power-source from 100-240 volts.
- Di-electric filtering to eliminate outband interference.
- Phase-Lock Loop VCO technology.
- Compact, lightweight belt-pack transmitter features Frequency Group and Channel selectors, Audio On/Off (Mute), battery Power On/Low Battery LED indicator; Instrument Level input trim control and input switch; a Mic Level trimpot control; Frequency Unavailable LED indicator; RF power switch (to select either one or 10 mW output settings) and a Power On/Off switch.
- Rotary swivel antenna and a rotatable belt clip provide maximum positioning flexibility.
- P6 connector accommodates Samson’s QE, QV headsets and a wide range of other headset and lavalier mics.



- Handheld transmitter with built-in antenna.
- Handheld transmitters available with the Samson QMIC and a variety of other microphone elements.
- Transmitters powered by AA batteries.
- The optional DA6 distribution amp compensates for up to 9 dB of signal loss typically incurred when combining and distributing the signal through a number of antennas.
- The DA6 allows up to four UR6D dual receivers (eight receivers total) to run off the same pair of antennas.
- The DA6 can be interfaced with as many as four powered antennas, further increasing the range of the systems and eliminating “dead spots” to provide more stable operation.
- The DA6 features a multi-color display that indicates the current status of the connected antennas, Green when powered antennas are properly connected; Orange if no antenna is connected; and Red if any of the antennas has a shorted cable.
- AN-81A & AN-82 Powered Antennas are extremely compact, lightweight and efficient and offer a 3-position attenuator switch to reduce near field RF overload and local interference. The AN-81A antenna can be wall-mounted, while the AN-82 is designed to be mounted on a mic stand.

Contact:

UHF SYNTH SERIES SIX PRODUCT DESCRIPTION

Designed to provide the highest level of performance in touring and fixed installations, the new Samson Series Six UHF Synthesized wireless system combines simultaneous operation of up to 96 systems and remote computer-control with exceptional frequency agility, superior RF reception, transparent audio and much more.

Series Six is one of the only UHF wireless systems which can run up to 96 simultaneous systems in a fixed installation using a special "low power technique" exclusive to Samson. This versatile system also allows remote control capability from hundreds of feet away via a PC running Windows 95® and Samson's WSM™ (Wireless System Manager) software. Using a mouse and computer keyboard, the system operator can control a range of receiver functions such as Channel; Mute; Tone Squelch and more.

There is also a spectrum analyzer that scans existing frequencies in an RF environment, records a "snapshot" of these frequencies at any given time and imports an optional channel plan. An electronic lock function allows the user to store settings with security.

The unusual flexibility of Series Six is based on its dual 1mW and 10 mW RF power operation capability. At the lower 1 mW power output rating, up to 48 systems on two separate frequency bands (Standard and "X" — for a total of 96 systems) can be operated simultaneously with a maximum operating range of 140 feet. At the 10 mW power rating, up to 11 systems on two separate frequency bands (Standard and "X" — for a total of 22) can be used simultaneously with a maximum operating range of 270 feet.

Series Six delivers fail-safe RF performance and trans-

parent audio, a result of sophisticated new Samson circuitry and dbx® Noise Reduction. The UR6D (and UR6DX) dual system receiver is a 1U space, 19" rack-mount device with recessed controls, a back-lit LCD display and a protection cover to safeguard control settings.

Equipped with 96 frequencies (101 channels) operating on two separate frequency ranges, the UR6D includes a 3-position antenna attenuator switch; a Mix switch that combines both outputs into one, and an automatic voltage sensing power supply for world-wide use. It also features balanced and unbalanced outputs. Remote IN/Out capability is provided via a Mini DIN connector remote-controllable via the external host computer.

The UH6 handheld and UT6 beltpack transmitters are also equipped with 96 frequencies (101 channels) operating on two separate frequency ranges. They use two AA batteries, another Series Six innovation based on the increased worldwide availability and cost-effectiveness of this popular format. A Battery Life LED changes color from green to red one hour before unit ceases to function. Both transmitters also include a full array of internal and external controls for maximum effectiveness in different applications.

The lightweight and ergonomically-designed UT6 belt-pack transmitter also features a unique rotatable antenna and belt clip along with a high-quality locking 6-pin Hirose connector for headset and lavalier mics. Optional accessories include distribution amplifiers (DA6/DA6X) that operate with up to 8 receivers each and active antennas in both movable and wall-mount formats, with up to 4 antennas feeding each distribution amp for improved performance against RF "dropouts."



Dual The UR6D True Diversity Receiver:



The DA6 Distribution Amplifier:

ARCHITECT'S & ENGINEER'S SPECIFICATION

The Samson UHF Synth Six True Diversity Wireless System shall be of a multi-channel, crystal-controlled PLL synthesized oscillator type operating on 96 selected UHF frequencies in 2 bands: 778 - 794 MHz ("X" frequencies) and 794-810 MHz ("Standard" frequencies). The System shall include a beltpack or handheld Transmitter and a dual-channel Receiver, and shall allow operation of up to 22 simultaneous systems on separate channels at high power and 96 simultaneous systems at low power utilizing both frequency bands. The Transmitter and Receiver shall incorporate dbx® compander circuitry for noise reduction and maximum dynamic range.

The dual-channel Receiver shall provide two balanced microphone-level outputs on male XLR-type connectors and two unbalanced microphone-level outputs on 1/4" phone connectors, and shall provide an output mixing switch. The audio output level shall be adjustable with a variable attenuator and rotary controls shall be provided for selecting group and channel. The Receiver shall incorporate an LCD showing status of RF, AF channel, title and monitors rear panel settings such as antenna attenuation, audio output level and output switch settings. The Receiver shall have a tone squelch circuit operating at 38.4 kHz. The Receiver shall incorporate True Diversity circuitry for automatic antenna switching. The Receiver shall use two 9 Vdc powered 1/2-wave removable antennas on BNC connectors. The Receiver shall be powered by 100-250 Vac, with automatic current and voltage sensing circuitry. The Receiver shall be

notified under FCC rules, Part 15, and DOC certified under RSP 121. The Receiver shall be of a rack-mount type. Dimensions of the Receiver shall be 18.85" (479 mm) wide, 8.38" (213 mm) deep and 1.7" (44 mm; 1 rack space) high. Weight of the single-channel Receiver shall be 5.29 lb. (2.4 kg).

The beltpack Transmitter shall provide a microphone-level or instrument-level input on a Hirose P6 multi-pin input connector, with a selectable input source switch. The beltpack audio input sensitivity or handheld microphone output level shall be adjustable with a variable attenuator. The Transmitter shall have a mute switch and selectable group and channel switches. The Transmitter shall incorporate LEDs for battery strength and frequency unavailability. The beltpack Transmitter shall provide +48 V Phantom Power for operation of condenser microphones. The beltpack Transmitter shall use a rotatable 1/2 wave antenna and the handheld Transmitter shall use an internal antenna. The Transmitter shall be powered by a 2 AA alkaline batteries. The Transmitter type shall be accepted under appropriate FCC rules. Dimensions of the beltpack Transmitter shall be 2.6" (66 mm) wide, 4.3" (110 mm) deep and 0.8" (22 mm) high. Weight of the beltpack Transmitter shall be 4.9 oz. (141 g). The System shall carry a three-year warranty.

The System shall be a SAMSON UHF SYNTH SIX TRUE DIVERSITY WIRELESS SYSTEM.



The UH6 Handheld Transmitter:



The UT6 Beltpack Transmitter:

UHF SYNTH SIX SERIES SPECIFICATIONS

UR6DS/UR6DX Receiver

Type of Reception:	Double Super Heterodyne/True Diversity
Operating Frequencies:	
Standard:	95 Frequencies/101 Channels Selectable at 125 kHz intervals in 794.125-805.875 MHz range
X Frequencies:	96 Frequencies/101 Channels Selectable at 125 kHz intervals in 782.125-794.000 MHz range
Antenna Input:	2x50 ohms BNC Connector with Phantom Power DC9V 25mA max. for External Antenna
OSC System:	Crystal Controlled PLL Frequency Synthesized Oscillation
Spurious Emission:	4 nW
Frequency Selectivity:	+125 kHz
Receiving Sensitivity:	21 dBuV (S/N = more than 60 dB at + 20 kHz Deviation)
Squelch Sensitivity:	18 dBuV
Tone Squelch:	38.4 kHz
Dynamic Range:	More than 103 dB (IHF-A Filter Weighted, Deviation at +10 kHz)
Residual Noise:	Less than -103 dBm (IHF-A Filter Weighted)
T.H.D.:	Less than 0.5% (IHF-A Filter Weighted, Deviation at +10 kHz)
Frequency Response:	40 Hz-15 kHz (+3 dB)
Noise Reduction:	dbx® Type II
Audio Outputs:	Balanced: -20 dBm/-60 dBm, 600 ohms,
XLR-3 32 Cannon Connector	Unbalanced: -20 dB/-60 dB 5k ohms,
Standard 1/4" phone jack	
Power Rating:	100V to 240V 50/60 Hz Auto-Sensing
Internal Switching Power Supply	
Power Consumption:	14 - 16W 50/60 Hz
Size:	18.85" (w) x 1.7" (h) x 8.38" (d) - without antennas 479 mm (w) x 44 mm (h) x 213 mm (d) - without antennas
Weight:	5.29 lbs./2.4 kg

AN-81A/AN-81AX & AN-82/AN-82X Active Antennas

Operating Frequencies:	
Standard:	794 - 810 MHz
X Frequencies:	778 - 794 MHz
Antenna Type:	(AN-81A/AN-81AX) 1/2 Wave Length Dipole (AN-82/AN-82X) 1/2 Wave Length
Dipole (CR-493 BNC-Optional)	50 ohms BNC-J Connector
Relative Gain:	+8 dB (dipole ratio included)
Display:	Phantom Power LED
V.S.W.R.:	Less than 2.6
Antenna Output:	(AN-81A/AN-81AX) 50 ohms Screw Terminal Type (AN-82/AN-82X) 50 ohms BNC-J connector
Power Rating:	DC 7-12V, Less than 20 mA supplied thru receiver antenna connector or antenna distribution amplifier
Size:	(AN81A/AN81AX) 105 mm/4.1" (w) x 140mm/5.5" (h) x 126 mm/4.9" (d) (AN82/AN82X) 3.2"/82 mm (w) x 13.7" (h) x 1.2" (d) 350 mm (h) x 31 mm (d)
Weight:	(AN81A/AN81AX) 10.5 oz./300 g (AN82/AN82X including antenna)
Attachment Hole Pitch:	3.2"/83.5 mm (AN-81A/AN-81AX)
Mic Stand Attachment:	5/8", 27 UNS (AN-82/AN-82X)

UH6S/UH6X Handheld, UT6S/UT6X Beltpack Transmitters

Operating Frequencies:	
Standard:	95 Frequencies/101 Channels Selectable at 125 kHz intervals in 794.125-805.875 MHz range
X Frequencies:	96 Frequencies/101 Channels Selectable at 125 kHz intervals in 782.125-794.000 MHz range
OSC System:	Crystal Controlled PLL Frequency Synthesized Oscillation
RF Output Power:	10 mW or 1 mW (switchable)
Spurious Emission:	Less than 2.5µW
Frequency Deviation:	±40 kHz max., 5 kHz Reference
Operating Range:	At 10 mW RF Output: 40 to 80 meters (131 ft. to 262 ft.) from receiving antenna At 1 mW RF Output: 20 to 40 meters (65 1/2 ft. to 131 ft.) from receiving antenna
Input Connector:	Hirose 6-Pin Connector/Microphone
Side Connector (UT6S/UT6X only)	
Current Consumption:	100 mA at 10 mW RF Output Power
Battery Life Time:	More Than 10 Hours (10 mW Power), More Than 15 Hours (1mW Power)
Low Battery Indicator:	LED Normally Green, Lights Red at 1.6 VDC
Battery Type:	1.5V Alkaline AA x 2
Maximum Input:	UH6S & UH6X: -5 dB (0 dB = 0.775 Vrms) UT6 & UT6X: -5 dB at mic input, +10 dB at instrument input (0 dB = 0.775 Vrms)
LED Indicators:	Battery Low, Unavailable (inside battery compartment)
Weight (UH6/UH6X):	11 oz./312 g
Weight (UT6/UT6X):	4.9 oz./140 g
Size (UH6/UH6X):	2.04" (d) x 9.25" (l) w/ Mic 52 mm/ (d) x 235 mm (l) w/ Mic
Size: (UT6/UT6X):	2.59" (w) x 4.33" (h) x 0.8" (d) 66 mm (w) x 110 mm(h) x 22 mm (d)

DA6S/DA6X Antenna Distribution Amplifiers

Operating Frequencies:	
Standard:	794 - 806 MHz
X Frequencies:	778 - 794 MHz
Antenna Inputs:	4 (2 each for Antenna A and B) x 50 ohms BNC Connector with Phantom Power DC 9V 25mA for External Antenna
Antenna Outputs:	8 (4 each for Antenna A and B) x 80 ohms BNC-J Connector
Loss:	0 dB
Noise Factor:	Less than 10 dB
Maximum Input:	110 dBuV
Power Rating:	100V to 240V 50/60 Hz (Auto-Switching Power Supply)
Power Consumption:	8 - 11W
Size:	18.85" (w) x 1.7" (h) x 8.38" (d) w/out antennas 479 mm (w) x 44 mm (h) x 213 mm (d) w/out antennas
Weight:	5.51 lbs./2.4 kg

All specifications subject to change without notice.

For more information about the UHF Synth Six please refer to the *Samson Wireless Installation Guide*