

UHF Synth 32

FREQUENCY SELECTABLE

TRUE DIVERSITY

WIRELESS SYSTEMS

SAMSON®

Featuring advanced wireless technology, Samson's new UHF Synth 32 system provides 32 selectable UHF frequencies. Designed for world-wide use, Synth 32 features a compact half-rack receiver with a large, amber-colored LCD display on the front panel. The system includes PLL synthesized VCO circuitry in the transmitters to optimize use in multi-user situations and SAW (Surface Acoustic Wave) filters in the receiver for optimum RF performance. The system also includes built-in Noise Squelch circuitry to reduce wide band noise.



- Synthesized UHF wireless system with 32 selectable frequencies
- Optimized for Worldwide use
- Sleek half-rack design with optional rack-mount kit
- Amber-colored LCD on receiver front panel displays Frequency, Channel, Group, Band, AF/RF level and Diversity A/B antenna
- Built-in Noise Squelch circuitry mutes wide-band noise in receiver when white noise exceeds RF level
- Front panel Squelch control
- Compact transmitters feature PLL synthesized VCO technology to eliminate spurious emissions in multi-user venues.
- R32 receiver features sophisticated SAW (Surface Acoustic Wave) filters for discriminating wireless performance

Contact:

ARCHITECT'S & ENGINEER'S SPECIFICATION

The Samson UHF Synth 32 Wireless System shall be of a selectable-channel type using PLL synthesized VCO circuitry yielding 32 selectable frequencies. Synth 32 operates in the 800 MHz frequency range. The System shall include a belt-pack 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 balanced XLR and unbalanced 1/4" outputs. The audio output level and squelch shall be adjustable via the front panel. The Receiver shall incorporate an amber-colored LCD on the front panel displaying Frequency, Channel, Group, Band, AF/R level and Diversity A/B antenna. The Receiver shall have built-in Noise Squelch circuitry which mutes wide band noise in the receiver when wide band noise exceeds the RF level. 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 115 VAC, 50/60 Hz via a supplied 12 VDC adapter. The Receiver shall be notified under FCC rules, Part 15, and DOC certified under RSP 121. Dimensions of the Receiver shall be 7.8" (198 mm) wide, 5.5" (140 mm) deep and 1.7" (42 mm; one rack space) high. Weight of the Receiver shall be 13.6 oz. (385 g).

The Beltpack 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 an 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.

Transmitter shall be 2.6" (66 mm) wide, 4" (102 mm) deep and 0.9" (24 mm) high. Weight of the beltpack Transmitter shall be 2.8 oz. (80 g). The System shall carry a three-year warranty.

The System shall be a SAMSON SYNTH 32 WIRELESS SYSTEM.

SYNTH 32 SPECIFICATIONS

System Specifications

Channels:	32 Per Band (3 Bands)
Modulation Type:	FM
Noise Reduction Type:	Compander
Distance:	100 m

System Transmitters (T32 and H32)

Oscillation Type:	PLL Synthesized Control OSC
Pre-Emphasis:	50 µSec
Antenna Type:	T32: Wire (permanently attached) H32: Integral Dipole
Input (T32):	TB3M QG (Mini-XLR) Connector
Maximum Input Level:	T32: 0 dBv H32: -20 dBv
Battery:	MN1604 9-volt alkaline
Controls:	T32: Power On/Off, Mute On/Off, Level Control (Trimpot), Group, Channel H32: Power On/Off, Audio On/Off, Level Control (Trimpot), Group, Channel
LED Indicator:	Battery status, Frequency availability
Operating Voltage:	9 Volts
Frequency Range:	Low Band: 778.125 MHz – 782.000 MHz Middle Band: 801.125 MHz – 805.000 MHz High Band: 854.900 MHz – 858.850 MHz
Current Consumption:	32 mA (typical)
RF Power:	10 mW
Frequency Stability:	± 15 kHz
Spurious Ratio:	1 µW
Deviation:	15 kHz
T.H.D.:	2% max. @ 1 kHz
Signal To Noise Ratio:	> 100 dB
Audio Frequency Response:	50 Hz to 15 kHz ± 3.5 dB
Battery Life:	14 hours (typical)
Approvals:	Complies with ETS 300 422, ETS 300 445 and FCC Part 74
Dimensions:	T32: 102 (w) x 66 (h) x 24 (d) mm • 4 x 2.6 x .9 in. (w/o antenna) H32: 37 (dia) x 151 (h) mm • 1.4 x 5.9 in.(w/o mic element)
Weight:	T32: 80 g • 2.8 oz. (w/o battery, mic element) H32: 65 g • 2.3 oz. (w/o battery, mic element)

Receiver (R32)

Oscillation Type:	PLL Synthesized Control OSC
De-emphasis:	50 µsec
IF Frequency:	10.7 MHz
Antennas:	Dual 1/4 Wavelength
In/Out:	5.5 mm DC Inlet, Unbalanced Output (1/4" phone jack), Balanced Output (female XLR connector)
Display:	LCD Display (with backlit amber color)
Display Contents:	Frequency Group/Channel (7 segments, 2 digits), Frequency Band (High, Mid, Low), Antenna A/B, MUTE display, RF Level Meter (6 points), AF Level Meter (6 points)
Controls:	Power On/Off Switch (Front), Frequency Up/Down Switch (Front), Audio Level (Rear), Squelch Level Volume (Front), Balanced Output Level Switch (Rear)
Operating Voltage:	9 VDC, 65 mA (min.) - 140 mA (max.) @ 9 V Battery or supplied AC adapter
Frequency Range:	Low Band: 778.125 MHz – 782.000 MHz Middle Band: 801.125 MHz – 805.000 MHz High Band: 854.900 MHz – 858.850 MHz
Squelch Sensitivity:	10 dBuV to 40 dBuV adjustable
Sensitivity:	(AF = 1 kHz, dF = 20 kHz) = < 6 dBuV @ 20 dB S/N
Selectivity:	± 150 kHz (AF Out Ratio -60 dB)
T.H.D.:	< 1% @ 1 kHz
Signal to Noise Ratio:	> 95 dB (overall)
Audio Frequency Response:	50 Hz – 15 kHz (± 3.5 dB)
AF output level:	-10/-20/-40 dBv
Audio Output Impedance:	Unbalanced (1/4" Jack): 10 k Ω Balanced (XLR Jack): 600 Ω
Dimensions:	198 (w) x 42 (h) x 140 (d) mm • 7.8 x 1.7 x 5.5 in. (w/o antennas)
Weight:	13.6 oz. • 385 g