



## Technical Data Sheet

# SRS-16 Sonobuoy RF Simulator

### KEY FEATURES

- Generates up to 16 simultaneous channels of VHF sonobuoy signals (expandable to 64)
- Operates on 99 standard sonobuoy channels between 136 and 174 MHz
- Provides standard analog FM modulation precisely emulating analog sonobuoys
- Accepts analog audio or digital STANAG 4283 inputs from recording or simulator
- Intermodulation-free single antenna output provides 16 simultaneous 1 watt channels
- User control via PC of buoy numbers and channel assignments
- 19 inch rack mount units
- Wide range 90-250 vac 50/60 Hz power supply
- Software reconfigurable

### DESCRIPTION

The SRS-16 RF Sonobuoy Simulator produces 16 RF sonobuoy 1 watt VHF channel from a user-provided analog or digital sonobuoy recording or mission simulator. The simulator contains up to sixteen channel cards, each channel accepting an analog audio or Ethernet digital stream. The channel card uses downloadable DSP firmware to digitally convert the sonobuoy analog or digital input signal directly to a VHF FM-modulated sonobuoy channel.

The RF simulator produces an interference-free output signal, thanks to the linear combining network which isolates the 16 transmitters from each other to prevent undesired mixing. Only

one antenna is necessary to support the sixteen 1-watt buoy signals. Softronics offers the SRS-1 broadband VHF sonobuoy antenna.

The SRS-16 may be populated with up to 16 plug-in channel cards, all operating simultaneously. Channels are independent; if one channel fails, the others keep operating. The unit is built into a 7 inch high, 19 inch EIA rack unit cooled by internal front intake/rear exhaust blowers. A separate 3.5 inch high rack power supply operates from wide range 50/60 Hz AC power mains.

For analog simulation sources, a user-provided PC allows setting the sonobuoy channel and numbers. For digital simulation sources, a separate Softronics SRP-1 server and user-provided buoy control PC are required.

A number of SRS-16s may be combined for a larger sonobuoy field simulation, for example, four SRS-16's may be driven by a 64 channel simulation source to transmit 64 sonobuoy RF signals at 1 watt each, using four antennas.

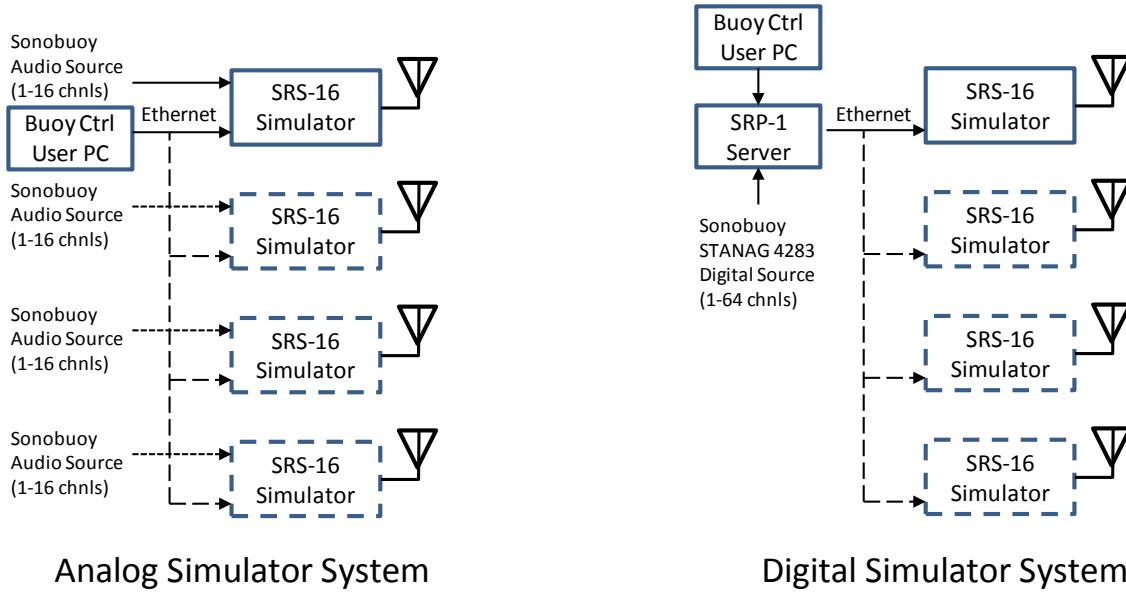
### APPLICATIONS

Sonobuoy system test and training



*Specifications subject to change without notice as we improve our products*

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Both the analog and digital simulator systems may be expanded to 64 simultaneous sonobuoy simulation channels by adding SRS-16 units

## SPECIFICATIONS

Parameter	Specification
<b>TRANSMITTER PARAMETERS</b>	
Frequency range.....	136-174MHz
Tuning resolution.....	25 kHz steps
Internal frequency accuracy.....	±1 ppm
Modulation.....	FM, ±99 KHz deviation
Power output.....	1 watt per channel
Duty cycle.....	Continuous
Antenna output.....	(1) 50 ohm output
Antenna.....	SRS-1 or other 50 ohm VHF monopole
VSWR.....	3:1 max, <2.01 typical at tuned frequency
Harmonics.....	-40 dbc typical
<b>BASEBAND INPUTS</b>	
Audio input.....	0 dbm, 600 ohm balanced
Digital input.....	Ethernet 1gbps
SRS-1 Digital input format.....	STANAG 4283
Digital input format.....	Derived from STANAG 4283 by SRS-1
<b>CONTROL PARAMETERS</b>	
Buoy channel/number/active.....	Via user-provided PC (using Ethernet port)
<b>PHYSICAL</b>	
Power input.....	85-250 vac, SINGLE Phase, 47-63 Hz
Power consumption.....	600 watts maximum, all channels active
Weight.....	RF unit: 35 lbs Power supply: 10 lbs Optional SRP-1 server: 20 lbs
Size.....	RF unit: 7H x 19W x 24D (inches) Power supply: 3.5H x 19W, 24D (inches) Optional SRP-1 server: 5.25H x 19W x 24D (inches) Optional SRS-1 antenna: 18H x 14W x 14D (inches)
Cooling.....	Internal fans, front inlet, rear exhaust
Connectors.....	Primary power: 3-prong molded entry block RF/Pwr supply cable furnished
RF connectors.....	Type N
Operating temperature range.....	0 to +50°C
Specified performance.....	25 ± 5°C

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