

# Low Cost Sonobuoy Receiver (LCSR)

Light-weight, 19 inch Rack-Mountable Receiver



## Key features

- Ideal for lab environments
- 19 in. 1U rack size
- 1, 2, or 4 receive channels
- Digital output & control via Ethernet
- Analog & Digital sonobuoy reception

## Overview

The LCSR is a low-cost solution for reception and remote control of sonobuoys. The receiver's on-board signal capture, demodulation, signal quality monitoring, and output data formatter provide stand-alone capability which only requires the user's personal computer to configure the receiver and capture the acoustic data. This allows the user's processing resources to be focused on data analysis.

The receiver is capable of analog (FM) and digital (FSK and GFSK) reception. Custom modulation types and data formats can be supplied on request. The LCSR includes front end out of band filtering for strong signal handling to support operation in the highly congested VHF band. Additionally, the receiver can provide power to an external preamplifier. A single Ethernet connection is used for all receive channel data outputs, receiver control, sonobuoy position data, and downlink commands.

# Technical Specification

## Ordering Information

90211A-801	1 channel LCSR
90211A-802	2 channel LC
R90211A-804	4 channel LCSR

## Included Items

Receiver & power cord  
 User's manual & Interface Description Document (IDD)  
 Receiver control & command generator software  
 Sample TCP packet parsing software

## Mission Critical Accessories

Transit case  
 50 W UHF RF power amplifier  
 Mast mountable VHF pre-amplifier  
 Software, real-time monitoring package (future item)

## Rear Connections

VHF Receiver	Type-N (F) 50 ohm
UHF Exciter	Type-TNC (F) 50 ohm
Ethernet	RJ-45 (F)
Sync In/Out	BNC (F)
Tx Key Out	BNC (F)

## Environmental

Operating Temp	+32°F to +122°F 0°C to +50°C
Shock/Vibration	Laboratory Grade

## Performance

Channels	1, 2 or 4
Frequency range	136-173.5 Mhz
FM sensitivity	-85 dBm (typical) -105 dBm (typical) with preamp
Digital data rate	Up to 320 Kbps
Sample rate	Selectable
Output format	CFS or SG-90
Output level	0 dBm

## Analog Sonobuoys

Compatible with legacy SSQ-36, SSQ-53, SSQ-62, and SSQ-101  
 5 Hz - 40 KHz bandwidth reception in analog receive mode

## Digital Sonobuoys

Compatible with SSQ-53G, SSQ-113, SSQ-101B, & SSQ-125A  
 Supports legacy & NATO SG-90 formats  
 Digital receive mode can support generic FSK/GFSK reception

## Power Requirements

Power input	110 VAC 50-60 Hz
Power consumption	<30 Watts



## Physical Specifications

Physical Description	1U, 19 inch rack mountable
Dimensions	1.875H x 19W x 17D (in) 4.76H x 48.26W x 17.18 (cm)
Weight	8.65 lbs / 3.92 kg (1 channel - add 0.83 lbs / 0.37 kg per channel)



Ultra Maritime  
 sonobuoys@umaritime.com  
 umaritime.com

90211A-PDS-LCSR Rev B