LCSR
LOW COST
SONOBUOY RECEIVER

FEATURES

- ANALOG & DIGITAL SONOBUOY RECEPTION
- 1, 2, OR 4 RECEIVE CHANNELS
- SONOBUOY POSITION DATA
- CHANNEL OCCUPANCY SCANNER
- ON-CHANNEL SIGNAL STRENGTH INDICATOR
- DIGITAL DATA OUTPUT & CONTROL VIA ETHERNET
- UHF DOWNLINK EXCITER
- SINGLE INPUT FOR RECEIVE
- SINGLE OUTPUT FOR DOWNLINK
- COMPATIBLE WITH ULTRA FLIGHTLINE SERIES OF SOFTWARE DEFINED SONOBUOY RECEIVERS (SDSR)
- 1 RU 19-INCH RACK SIZE

LCSR

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. Additionally, the receiver can recover the embedded sonobuoy position data. The receiver output data channels are time synchronized and time is set via the user interface (local or Zulu time). GPS synchronization of the output data channels will be available as a future option (using an internal GPS receiver). Support for more than four simultaneous receive channels can be achieved with multiple receivers each with separate Ethernet connections and IP addresses.

The receiver 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.

APPLICATIONS

- Short Range Field Testing
- Laboratory Testing
- Production Line Testing

USSI | Ultra ELECTRONICS

LCSR Specifications

RF SPECIFICATIONS:

Frequency Range	136–173.5 MHz
Sensitivity	-85 dBm (typical), -105 dBm (typical with external preamp), S+N/N = 12 dB, FM dev = ±75 KHz pk, FM rate = 25 KHz

ANALOG SONOBUOYS:

- Selectable sample rate: 52.4288, 96, 104.876, 131.072, or 192 KSps
- Compatible with SSQ-36, SSQ-53, SSQ-62, SSQ-125
- Analog receive mode can support Wideband FM reception (5 Hz – 40 KHz)

DIGITAL SONOBUOYS:

- Legacy & NATO SG-90 formats
- Data rates up to 320 Kbps
- Compatible with SSQ-101, SSQ-113, SSQ-125A
- Digital receive mode can support Generic FSK/GFSK reception

SONOBUOY POSITION DATA:

- Analog GPS NMEA & Binary data formats
- Digital

SINGLE DATA CHANNEL OUTPUT:

- Compatible with AN/ARR-89(A) & AN/ARR-90
- Annex C of STANAG 4283, Edition 5

UHF COMMAND EXCITER:

Formats	CFS or SG-90
Output Level	0 dBm

POWER REQUIREMENTS:

Power Input	110 VAC 50–60 Hz
Power Consumption	<30 Watts

PHYSICAL SPECIFICATIONS:

Size	1.875" H x 19" W x 17" D
Weight	8.65 lbs (1 Channel, add 0.83 lbs per additional channel)

ENVIRONMENTAL SPECIFICATIONS:

Operating Temperature	0°C to +50°C (+32°F to +122°F)
Shock and Vibration	Laboratory Grade

REAR CONNECTIONS:

VHF Receive	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)

ORDERING INFORMATION

90211A-801 – 1 Channel LCSR

90211A-802 – 2 Channel LCSR

90211A-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

OPTIONAL ACCESSORIES

- Transit Case
- 25 W UHF RF Power Amplifier
- Mast Mountable VHF Pre-Amplifier
- Software, Realtime Monitoring Package (future item)

EXPORT REGULATIONS

- ITAR Controlled

making a difference

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