



NewtComm NC-50S

Portable Through Water Communications

Features:

- Selectable TX power: 50W, 25W, 5W
- Standard 25kHz Upper SSB, 7.5km Range
- Efficient output amplifier
- High gain, very low noise receiver
- Advanced noise filtering
- Serial port for modem functionality
- Rugged, compact, and portable
- Long battery life

Applications:

- Surface station for manned submersibles
- Backup comms for ADS, diving bells
- Portable comms for dive boats



The NewtComm NC-50S is an advanced through water communication system. It provides a robust communications channel through the most challenging under water environments. Built with an advanced digital signal processor the NewtComm delivers powerful, clear and energy efficient communications. The NewtComm offers best-in-class transmission range, phone size and energy efficiency. The NC-50S is a surface station that can communicate with other phones that utilize the same frequency. A subsea version NC-50S-S is also available for direct integration into submersible vehicles. The NC50 series is standard equipment in the Nuytco DeepWorker submersible and Exosuit ADS.

The standard frequency for the NewtComm NC-50S is 25kHz upper single side band with a voice channel bandwidth of 6kHz (other frequencies available upon request). The phone with matched NC-XDR-27K transducers produces 50 Watts rms transmit power with an open water range of 7.5km Three selectable TX power levels allow for use in different ranges and operating environments. Voice pre-processing ensures a consistent TX signal that utilizes the full power of the phone.

The phone features extremely low noise receiver circuitry, capable of picking up the faintest signals. The receiver has selectable auto and manual gain control with range of 102dB. Advanced receiver filtering and squelch controls help reject unwanted noise from the voice channel. Up to 100 hours run time when using the built in battery. The surface unit has a powerful 15W speaker for use in very noise environments. The phone has line outs for both received and transmitted voice for recording or PA system integration. The NC-50S has a serial port that allows it to be used as a powerful modem.

The NC-50S is built into a Mil-Spec rugged waterproof case that is buoyant in water. The phone is light weight and portable for easy use in small boats. A rackmount version of the NC50-S is also available.

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Specifications

General:

- Advanced Digital Signal Processor
- Selectable TX Power
- 50W, 25W, 5W RMS
- 25kHz Upper SSB Modulation
- Waterproof case
- Rugged connections
- Palm mic / Headset capable
- Line outs for TX and RX audio
- RS422/485 port for modem functionality

Open Water Range:

- Low Power (5W): 3.5km
- Med Power (25W): 5km
- High Power (50W): 7.5km

Transmitter:

- Selectable TX Power
- 50W, 25W, 5W RMS TX Power
- Power efficient Class D Transmitter
- Voice envelope processing for powerful and consistent TX signal
- Matched transducer for maximum power transfer

Receiver:

- Very low noise receiver circuitry
- Automatic / Manual Gain Control with wide dynamic range of 102 dB
- Selectable voice channel bandwidth 6 – 3kHz
- Advanced 16 band Noise Reduction filter
- Squelch control
- Low RX power consumption 0.75W
- 15W speaker output

Transducer:

- NewtComm NC-XDR-27K
- 3" OD x 2.5"
- 76.2mm OD x 63.5mm
- MCBH2MSS Connector
- Rugged SS base with mounting holes or rope tie off point
- 20ft cable standard
- 100ft cable optional

Run Time:

- Low TX Power (5W): 100 hr*
 - Med TX Power (25W): 35 hr*
 - High TX Power (50W): 12 hr*
- * Based on 15% TX duty cycle

Battery:

- 18 Ah 12V SLA Battery
- Built in charging circuitry
- Wide input charging voltage 9 – 16VDC, 6.5A Max

Case:

- Rugged and waterproof Mil-Spec injection-molded case
- Removable lid
- Buoyant in water
- (L x W x H): 391 x 307x 173 mm
- (L x W x H): 15.4" x 12.1" x 6.8"
- 10 Kg, 22 lbs



All specifications subject to change without notice.

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