NewtComm NC-50D-RS

Split Rackmount Through Water Communications

Features:

- Selectable TX power: 50W, 25W, 5W
- Dual Frequency: 8kHz (NATO) & 25kHz
- Range: +10km @ 8kHz, 7.5km @ 25kHz
- Efficient output amplifier
- High gain, very low noise receiver
- Advanced noise filtering
- Serial port for modem functionality
- Compact 2U rackmount case
- Long battery life
- Remote TX/RX Amps





Applications:

- Surface station for manned submersibles
- Backup comms for ADS, diving bells
- Ship Installations with long cable runs

The NewtComm NC-50D 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-50D-RS is a dual channel rackmount surface station with a remote power amp that can communicate with other phones that utilize the same frequencies. A subsea version NC-50D-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 modulation frequencies for the NewtComm NC-50D are 8.087kHz and 25.00kHz, commonly called 10k and 27k. Modulation is upper single side band with a voice channel bandwidth of 6kHz (other frequencies available upon request). The phone with matched 8kHz and 25kHz transducers produces over 50 Watts rms transmit power. The phone has an open water range of over 10km @ 8kHz. 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 rackmount unit has a powerful 10W 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-50D has a serial port that allows it to be used as a powerful modem.

The NC-50D-RS is built into a compact 2U rackmount case and a remote RX/TX Power amp. The rack case has integrated batteries for operation independent of supply power. The Remote Power amp can be located near the transducer reducing noise that can be associated with long transducer cable runs. Communications between the Rack and Power Amp are digital.

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Split Rackmount Through Water Communications

Specifications

General:

- Advanced Digital Signal Processor
- Selectable TX Power
- 50W, 25W, 5W RMS
- 8.087kHz (NATO) & 25kHz USSB
- Waterproof case
- Rugged connections
- Palm mic / Headset capable
- Line outs for TX and RX audio
- RS422/485 port for modem functionality
- Remote RX/TX Power Amp

Open Water Range:

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

Transmitter:

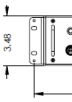
- Selectable TX Power
- 50W, 25W, 5W RMS TX Power
- Power efficient Class D Transmitter
- Voice envelope processing for powerful and consistent TX signal
- Matched transducer for maximum power transfer

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
- 10W speaker output

All specifications subject to change without notice.

Transducer:



- NewtComm NC-XDR-27K
- NewtComm NC-XDR-10K
- MCBH2MSS Connector
- Rugged SS base with mounting holes or rope tie off point
- 100ft cable standard

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:

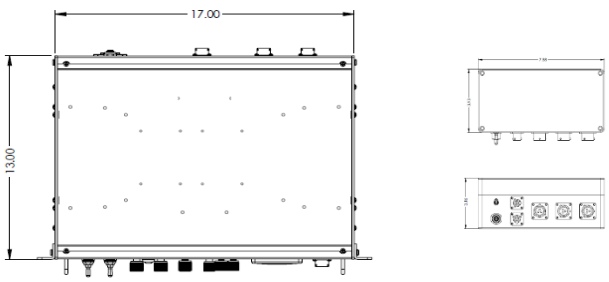
- 18 Ah 12V SLA Battery
- Built in charging circuitry
- Input Voltage 50/60Hz 90-260VAC, 3A Max

Rack Case:

- 2U rackmount case
- (L x W x H): 330 x 432 x 89 mm
- (L x W x H): 13.0” x 17.0” x 3.5”
- 11 Kg, 24 lbs

Remote RX/TX Amp

- Rugged, waterproof diecast aluminum enclosure
- (L x W x H): 203 x 102 x 104 mm
- (L x W x H): 8.0” x 4.0” x 4.13”
- 1.5 kg, 3.3 lbs



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