



UCS-S 01 Integrated Underwater Communication System



DESCRIPTION

The Integrated Underwater Communication System UCS-S01 transmits and receives acoustic signals through the water for analogue and/or digital information exchange via hydro-acoustic transducers. It offers additional features like “pinger mode” in a variable frequency range beside the obligatory telephony, telegraphy and data modes. The adjustable output power allows the system to work under any sea-state conditions. In addition, it can provide long to short-range communication with the shortest possible intercept range, which is essential especially for submarines. To cover all frequency ranges, it is necessary to operate the system with sets of transducers, which have low to high resonance frequencies. The low frequencies are used for long-range communication and high frequencies are used for short ranges or communication with divers. The data rate of the acoustic link is 5000 bps in typical environment and the payload data rate is 2000 bps. Payload data refers to the user’s input data. It can be adjusted to a lower payload data rate of 360 bps in very noisy or shallow horizontal environment automatically.

APPLICATION

- Operation from a mobile or stationary platform
- Analogue or digital communication
- Telephony and telegraphy operation
- Data communication
- Distance measuring capability
- Pinger mode



TECHNICAL FEATURES

1-Voice

Modulation	U-SSB , L-SSB
Transmitter power	100 W RMS
Supply voltage	24 VDC/220 VAC 50 Hz
Operating range	14 km in deep and calm sea (sea state:1) 7 km in shallow zones and calm sea (sea state:1)
Receiver gain control	manual and automatic (AGC) more than 100dB
Audio output power	3W for 8 ohm loud speaker
Transmission modes	Audio and Morse

2-Data

Communication type	Half duplex
Payload data rate	Max. 2000b/s
Bit error rate	less than 10 ⁻⁷
Transmitter power	3~12 W RMS
Consumption power (receive state)	0.8 W
Consumption power (sleep state)	8 mW
Operating range	3000 meters or 4500 meters (high power option)
Max. depth	Up to 200 meters
Beam width of transducer	Up to 200 meters
Voltage	18-24 VDC