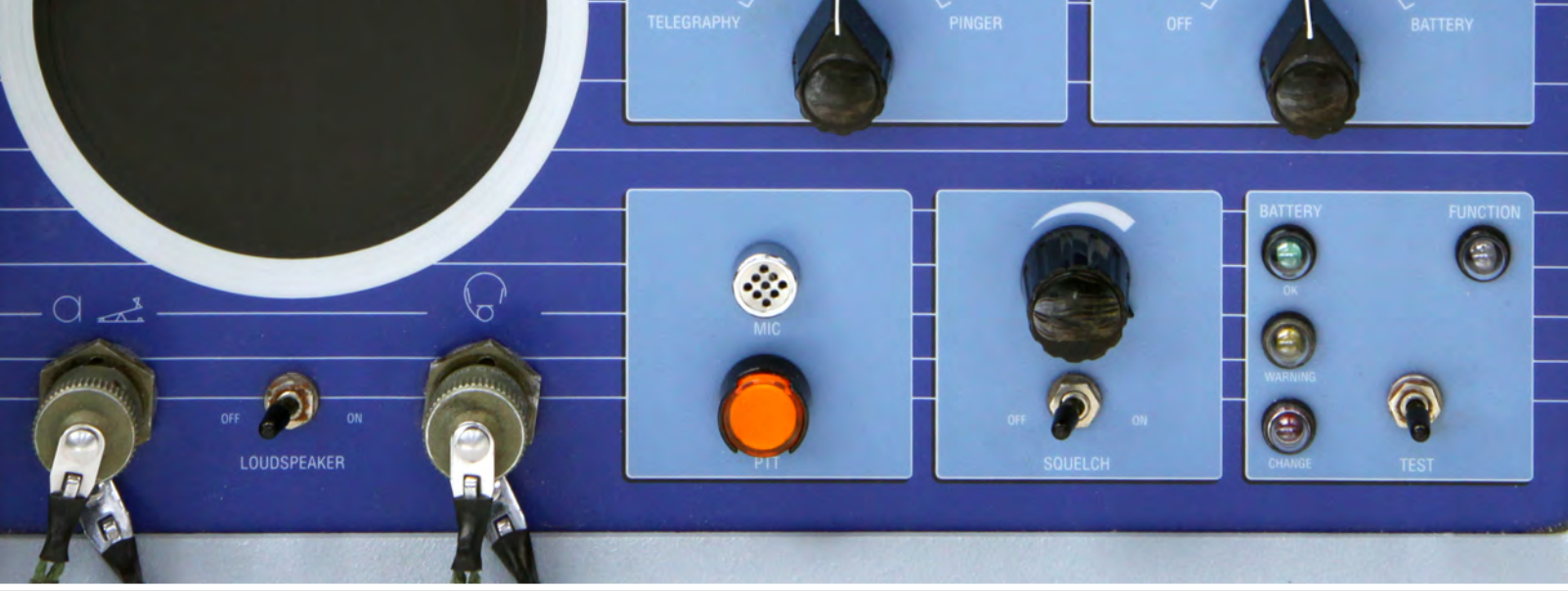

Wärtsilä ELAC UT 2200

Underwater Communication System

WÄRTSILÄ

The ELAC UT 2200 is a small military standard underwater telephone system for analogue through-water information exchange.

Analogue communication relates to the traditional single-side band (SSB) communication modes like telephony (voice) or telegraphy (Morse coding). In the telegraphy mode, the ELAC UT 2200 works with a limited bandwidth, resulting in an optimal signal-to-noise ratio (SNR) and consequently in achieving a greater range.

14 different operating frequencies in the range from 8.0875 kHz to 45 kHz are available. Up to three operating frequencies, depending on the transducer in use, can be chosen by the customer and will be pre-set by Wärtsilä ELAC Nautik.

An additional pinger mode enables the ELAC UT 2200 to operate as a beacon for signalling purposes or emergency transmission. The ELAC UT 2200 can be powered by 28 V DC ships power supply and is further equipped with a built-in lithium battery-pack allowing communication for several days. The basic application of the ELAC UT 2200 is as an emergency telephone for submarines in distress situations.

Key Features

Compact underwater telephone for surface ships and submarines

Emergency telephone for submarines

Full compatibility with all NATO underwater telephones

Communication according to STANAG 1074 and 1298

Sonar beacon operation according to STANAG 1382

Tested according to military standards

Safety

Optimal environmental protection by rugged mechanical construction

Emergency operation without accessories by additional microphone and press-to-talk switch integrated in the housing

Reliability

Lowest power consumption

Integrated test system

Long operating time with internal lithium battery

Optional uninterruptable power supply (UPS)

MTBF > 10,000 hours

WÄRTSILÄ

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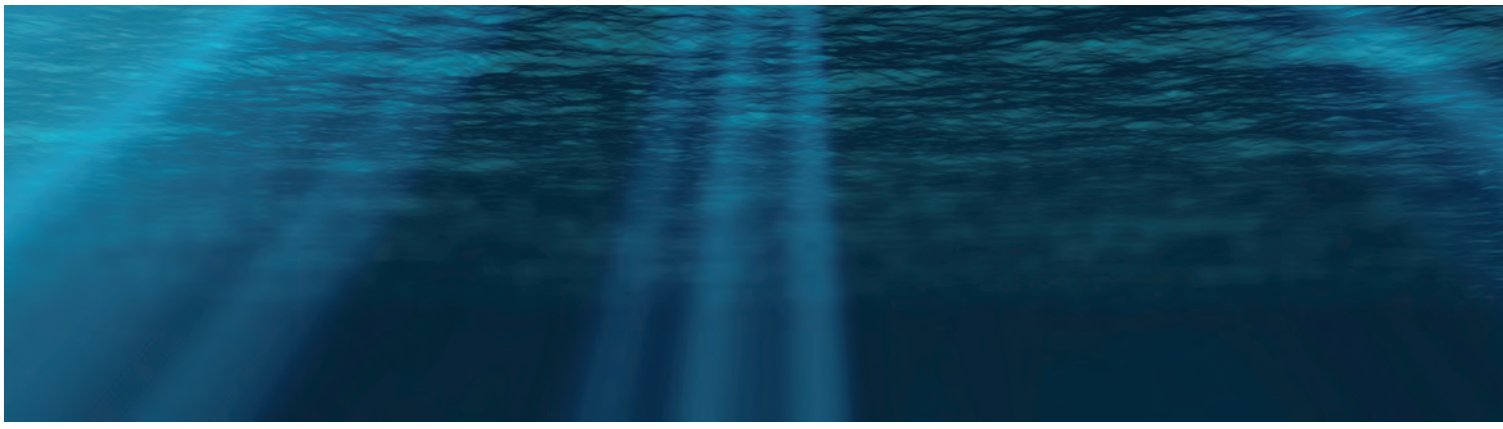

Specifications and Technical Data

Wärtsilä ELAC UT 2200 at a Glance

Technical Data	
Carrier frequency	Three selectable frequencies for all operation modes; frequencies can be chosen out of 14 possible frequencies between 8.0875 and 42 kHz (including frequencies defined in the STANAG 1074)
Modulation	Amplitude modulation (AM) with upper sideband and suppressed carrier (SSB)
Operating modes	
Telephony	300 - 3,000 Hz (audio bandwidth)
Telegraphy	800 Hz (audio tone)
Pinger	150 ms (pulse length) 1 min (repetition time)
Built-in test	Functional and battery test (test modes)
Receiver data	
Output power volume	max. 1 W at 4 Ω
Audio outputs range	> 60 dB (adjustable by gain)
Squelch	Internal loudspeaker, disconnectable headphone; settings: ON / OFF
Transmitter data	
Output power	max. 100 W at 35 Ω Switchable: 0 dB; -10 dB; -20 dB
Operating time	
Normal operation	Unlimited (at ship's 28 V DC supply)
Emergency mode	1 ping/min (pinger operation acc. to STANAG 1298) 450 hours (≥ 14 days) supplied by internal lithium battery
Power supply	
Standard version	28 V DC ship's supply acc. to STANAG 1008
Emergency version	28 V/13 Ah (28 V DC ship's supply and internal lithium battery)
Standard configuration	
Operation and display unit	ELAC SEE 31
Headset (phones, microphone and PTT/key)	TF 18
Omni-directional transducer for LF and HF operation	ELAC TSE 7, ELAC TSE 8
for LF only	ELAC TSE 5
Optional attachments	
Morse key	TT I
Microphone	MI 13

Mobile version of the ELAC UT 2200 (above), transducer ELAC TSE 7 middle) and battery pack plus case (below)

Technical Data	
Environmental conditions	
EMC	acc. to BV 0120 / VG 95 373
Non-magnetic design	acc. to VG 95 577
Airborne noise	DIN 45 635
Temp./damp heat	acc. to DEF-STAN 07-55
Shock	acc. to BV 0430
Vibration	acc. to BV 0240

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