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THALES AUSTRALIA

## AMAS ACOUSTICS

### Cable Powered Advanced Acoustic Generator (CP-AAG)





# CABLE POWERED ADVANCED ACOUSTIC GENERATOR (CP-AAG)

The Cable Powered Advanced Acoustic Generator (CP-AAG) is an acoustic-piston noise source designed for sweeping acoustically activated sea mines that are targeted at medium sized warships and merchant vessels. The CP-AAG is particularly suited to operation from unmanned surface vessels (USVs).

## DESIGNED TO COMBAT SMART MINES

The CP-AAG is an enhanced externally powered version of the Advanced Acoustic Generator (AAG) currently in-service with four navies including the US Navy and the Royal Australian Navy. As the CP-AAG utilises power from the towing vessel, it is not dependent on the speed of the towing vessel for operation and can be used when stationary or at speeds up to 15 knots. The CP-AAG has been designed to sweep smart mines and can also be operated in mine jamming mode.

## CP-AAG CHARACTERISTICS

- Length:** 2,025 mm
- Maximum body diameter:** 350 mm
- Weight:** 240 kg in air/105 kg in seawater
- Operating depth:** Constant depth up to a maximum of 10 metres
- Speed range:** Up to 15 knots dependent on towing vessel
- Broadband frequency range:** From <10 Hz to > 30 kHz
- Fundamental frequency range:** 10 to 250 Hz
- Line structure (tonals):** Programmable
- Tow load:** 194 kgf @ 8 knots
- Frequency roll off:** 20 to 25dB per frequency decade
- Propagation:** Omnidirectional



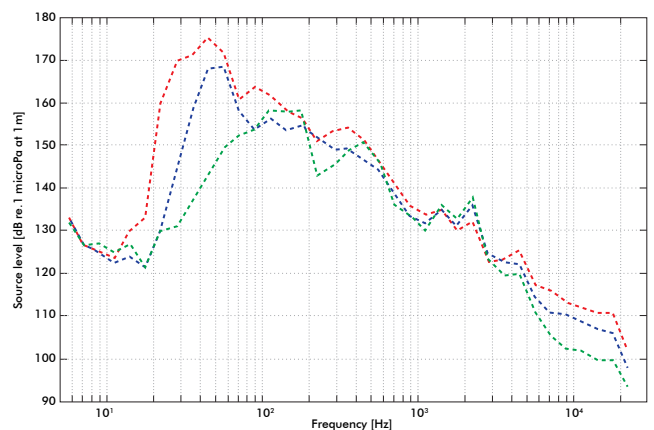
■ Thales Halcyon USV

## PROGRAMMABLE ACOUSTIC GENERATOR

The CP-AAG is a state-of-the-art acoustic generator that can be used to output both simple and complex broadband spectra covering the infrasonic to ultrasonic bands, with multiple stable line structures. Algorithms loaded on an onboard processor enables the programming of multiple narrowband tonals. This effectively emulates ship-like acoustic signatures. The CP-AAG generates acoustic spectra with a higher total power level than the standard AAG and can be adjusted over a wide range of power levels by varying the pump pressure.

## CP-AAG OPERATION

Optimum target acoustic signature emulation is provided by employing two CP-AAGs in a sweep, one amidships, and one aft to emulate propeller blade rate and hull resonances. CP-AAG has been designed for operation from USVs and for deployment with Thales magnetic and electric sweeps to form a multi-influence sweep. The CP-AAG can also be used with magnetic sweeps from other vendors.



■ Recorded third octave spectrum of three different algorithms from a single CP-AAG (Power Spectral Density)