

McQ SonoWatch®

McQ's SonoWatch® provides autonomous COLREGS compliance for unmanned surface vessels (USVs) and a backup acoustic lookout for manned vessels. The high fidelity acoustic array localizes and identifies the source and meaning of navigation signals.

Microphone Array Features

- Multi-Element Array
- Corrosion Resistant Construction
- Noise Reducing Windscreen
- Vibration Isolation
- Standardized POE Interface

Below Deck Array Processor Features

- Navigation Signal Classification
- Signal Bearing
- Fundamental Frequency
- Signal Intensity

Current Applications

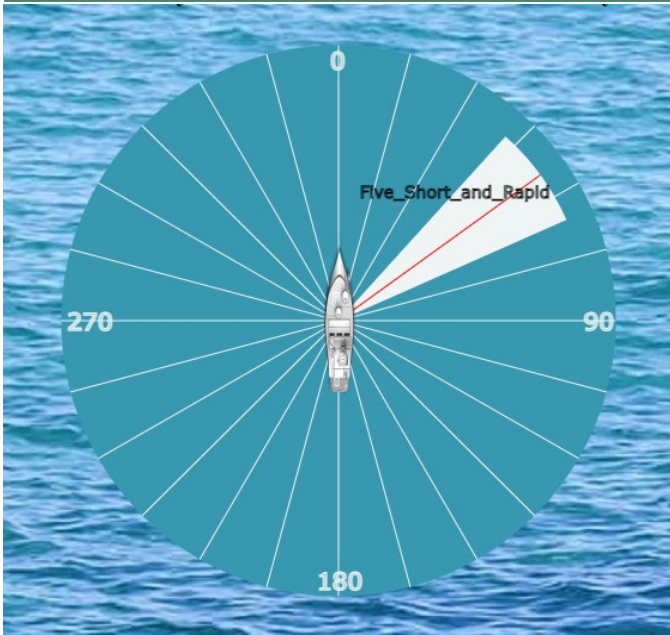
- COLREGS compliance for unmanned vessels
- Acoustic lookout backup



System Components

- Above deck microphone array unit (MAU)
- Below deck array processing unit (APU)
- Rugged and waterproof external backup (black case)
- AC Adapter

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Hardware Specifications	MAU	APU	System	Units
Power Supply				
Input Range	POE (IEEE 802.3af)	9 - 32	9 - 32	VDC
Recommended Input Voltage	from APU	13.8	13.8	VDC
Recommended Fuse Rating	-	10	10	A
AC Adapter (Optional)	-	120	120	VAC
Power Consumption				
	<i>From APU</i>	<i>Includes MAU</i>		
Typical	6	14 - 30	14 - 30	W
Peak	15.4	95	95	W
Storage Temperature	-40 to +85	-30 to +70	-	°C
Operating Temperature	-40 to +85	-20 to +55	-	°C
IP Rating	IP67	IP67	-	
Dimensions				
	<i>Array only</i>	<i>With Mount</i>	<i>Box only</i>	<i>With Mount</i>
Length	261.9 diameter	316.9	206.8	-
Width	-	261.9	128.7	-
Height	317.8	621.0	87.2	-
Weight	3.0	3.9	1.3	5.2

Acoustic Performance	Value	Units
Frequency Range	70 to 11,300	Hz
Dynamic Range	104	dB
Resolution	24	bit
Bearing Error	<10	degrees
Detection Range*†	>0.5	NM
Navigation Signal Classification Accuracy	>93	%

Data Output
JSON, Webpage

Part Numbers
SW-1011 Microphone Array Unit (MAU)
SW-1001 Array Processing Unit (APU) with external backup and AC adapter

* Detection Range is dependent upon a variety of factors such as transmitting vessel horn SPL, own vessel noise, and environmental noise (other vessels, shore activity, weather conditions)
 † SonoWatch® has been evaluated up to 0.5nm, longer ranges have been observed but not performance qualified



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