

Searching the depths of the sea

Besides handling the millions of vessels that come through Singapore's waters, the Maritime and Port Authority of Singapore is also in charge of searching and surveying the deep waters around our island when there are unidentified objects.

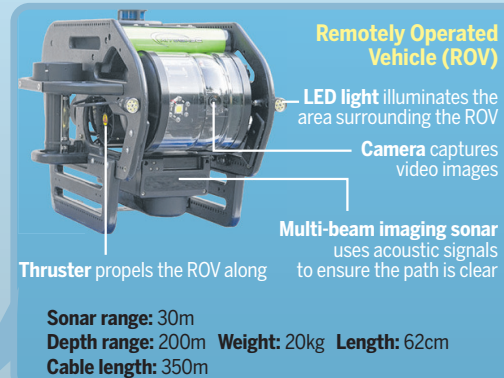
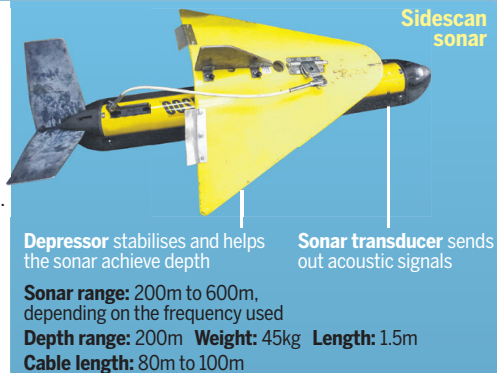
ANDREA NG looks at MPA's search-and-locate equipment – which was also used during the search for AirAsia's Flight QZ8501 earlier this year – and explains how it works.

- This is the first piece of equipment deployed about 10m above the seabed. It sends out acoustic signals from its left and right sides as it is towed along.

- Metal objects return a stronger acoustic signal than the flat seabed and sand. The signals appear on a sepia image as bright, reflective spots.

- It can stay underwater for as long as required, as power comes from the boat.

- Once an object is spotted, the image is saved and the coordinates are locked.



- The ROV is sent down to verify sidescan sonar data. It is able to control its movements despite strong currents.

- It has a short-range sonar to help it navigate along the seabed and a camera that takes video images to provide more detail. The camera can capture only images of up to 2m away due to low visibility in the water.

- When surveyors spot an object of interest, divers go down to investigate it.