

HOVERCRAFT PENGUMPUL SAMPAH DI LAUT DAN PANTAI SECARA AUTOPILOT BERBASIS ATMEGA 2560

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ABSTRACT

Waste is a very complex problem that arises from practicality in producing goods using a variety of technologies. Marine debris is a persistent solid object produced by humans directly or indirectly. Plastic waste is one of the contaminations that can adversely affect marine and coastal biota. This problem created hovercraft that can collect garbage in the sea and on the beach on autopilot using Ardupilot Mega (APM), which uses Arduino mega (Atmega 2560) and GPS Neo M8N. The device is capable of moving to a predetermined location and can return to its original location. Create waypoints/paths to perform missions and set the speed required for hovercraft to perform missions before autopilot mode is activated. Gps Neo M8N has an accuracy of about 2.5 meters. Two-way communication between hovercraft and Ground Control Station (GCS) uses a 433 MHz telemetry. The outopilot system's success on hovercraft has an accuracy value of 85%, the precision value of 85%, and recall value of 100%. Garbage that can enter the container is only garbage on the path—collected in the form of plastic waste from household waste.

Keywords: Trash at sea, Hovercraft, Autopilot, APM, GPS Neo M8N