

Claims

1. A system for controlling an amphibious vehicle comprising
a single controller arranged in signal communication with a plurality of inputs;
and
5 at least one drive arranged to receive a control signal from the single controller
to drive a fan and/or a propeller;
wherein the single controller is operable to provide the control signal based on
at least one of the plurality of inputs, and the single controller comprises at least one
module that is reusable; and wherein the single controller is operable to switch the
10 amphibious vehicle between a land mode for movement on land and a swim mode
for movement on a water body.
2. The system according to claim 1, wherein the single controller is an electronic
controller.
- 15 3. The system according to claim 1 or 2, wherein the at least one drive is a
hydraulic pump.
4. The system according to any one of the preceding claims, further comprising
20 an isolation valve arranged between the at least one drive and the fan and/or
propeller.
5. The system according to claim 4, wherein the single controller is operable to
send a mode switch signal to the isolation valve to allow access to drive the propeller.
- 25 6. The system according to claim 5, wherein the mode switch signal is a voltage
signal to enable access to the drive or removal of the voltage signal to disable access
to the drive.
- 30 7. The system according to claim 1, wherein the plurality of inputs comprises at
least two of the following:-

at least one operator input; a plurality of sensors; and a Controller Area Network (CAN bus);

to receive signals associated with at least one parameter of the amphibious vehicle in operation.

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8. The system according to claim 1, wherein the control signal is an electrical current.

9. The system according to claim 8, wherein to drive the fan the control signal is
10 dependent at least on temperature at specific locations of the amphibious vehicle and the current engine/fan speed.

10. The system according to claim 8 or 9, wherein to drive the propeller the control signal is dependent on an operator input.

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11. A method for controlling an amphibious vehicle comprising the steps of:
(a.) receiving at a single controller a plurality of inputs associated with the operating environment of the amphibious vehicle;
(b.) determining at the single controller a control signal based on the plurality
20 of inputs;
(c.) sending the control signal from the single controller to a drive; the drive arranged to drive a fan and/or a propeller.

12. The method according to claim 11, further comprises the step of sending at
25 least one control signal to enable or disable a swim isolation valve before step (c.).

13. The method according to claim 11 or 12, wherein step (b.) further comprises the step of receiving at least one temperature parameter of the operating environment of the amphibious vehicle, receiving a speed parameter of the engine of the
30 amphibious vehicle, and receiving a predetermined duration of past control signal as feedback.

14. An electronic controller for controlling an amphibious vehicle to switch the amphibious vehicle between a land mode for movement on land and a swim mode for movement on a water body, wherein the electronic controller may be arranged in signal communication with an isolation valve, the isolation valve in turn arranged to enable and disable access to a plurality of drives, wherein a first drive of the plurality of drives is associated with the land mode and a second drive of the plurality of drives is associated with the swim mode; and wherein the electronic controller is operable to send a mode switch signal to the isolation valve to switch between the land mode and the swim mode.

15. The electronic controller according to claim 14, wherein the mode switch signal is a voltage signal to enable access to the second drive or the removal of the voltage signal to disable access to the second drive.