SPECIFICATIONS FOR RESCUE ROBOT

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Part	Function	Criteria	Level
Tyres	Expected to	Speed	40km/h-
	drive on any	Strength	200km/h
	type of terrain		4wd
Car shape	Expected to	Speed	Speed limits
	drive both on	Strength	should be
	land and in	Agility	between
	water		40km/h –
			200km/h
Engine	Strong	Agile	High
	enough to	Water	performance
	properly	resistant	VEE engine is
	control the	Compact	preferable.
	wheels	(fewer or	Should be a
		no air	Rear mid-
		spaces)	Engine, Rear
			wheel drive
Electric motors	To be able to	Agile	Power range
	drive the	Water	should be
	propellers	resistant	between 0.75
	while in water	Compact	to 375 kW,
		(fewer or no	with IE3
		air spaces)	efficiency
			level

Storage (fo	or Area for	• Spacious	It should be
first aid)	storage of Aid	to	between
	equipment	contain a	120mm by
		lot of	90mm
		articles	(4.72441inch
			by 3.54331)
Wheelbase	NA	NA	2,650 mm
			(104.3 in)
Length	NA	NA	4,902 mm
			(190.1 in)[
Width	NA	NA	2000 mm
			(78.7 in)
Height	NA	NA	1,200 mm (44
			in)
General	NA	Curb weight	1,585 kg
Structure			(3,495 lb.)

AFFORDANCE AND SIGNIFIERS:

Signifiers	Affordances	
Storage	Storing first aid, and can also	
(A big cross on a box)	carry a maximum of four	
FIRST AID KIT	human	
Picture of an arm	 Able to lift humans 	
	 Also, can deliver aid 	

protection code) code on camera casing to indicate water and dust resistance IP 6 6 K Ingress Solids Liquids Optional (Pressure)	
Electric symbol with a skull to represent the area for storage with the electric components. RISK OF ELECTRIC SHOCK	. Able to store all electric equipment
Shape	Possibility of driving both on land and on water
White and Red color of car	Sends warning signals for all other cars to clear its path

STEP 1

- Initial instructions given about rescue mission
- Location and type of rescue are sent to the rescue robot

STEP 2

- Rescue Robot drives to the said location with the help of GPS
- While driving avoids obstacles with the help of Ultrasonic

STEP 3

- on arrival it streams video all round the rescue scene back to the main server.
- carried out
 irrespective of
 location type (land
 or water)

STEP 4

- Provides aid to those in need, makes sure the aid is properly delivered then leaves the scene.
- Robot now returns to a location given to it by the main control system

STEP 5

 After a general rescue mission the robot returns to the charging station as it main energy source is electrical energy

Visual Paradigm Online Diagrams Express Edition

Simple schematic of how the Rescue Robot works.

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