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Design and implementation of Location Tracing System based on artificial intelligence of quad-rotor UAV helicopter and Global Positioning System

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Confirm the enemy or searching target is always the crucial link no matter in military struggle or emergency rescue and disaster relief. So intelligent position searching system which can not only enter complex region for searching but also feedback the real time position information is urgently needed in dangerous cases of military and life. According to the conditions that quad rotor unmanned aerial vehicle can take the place of man to enter dangerous region for exploring and its action is smart, in addition, the aerial photography technology of quad rotor unmanned aerial vehicle is more and more perfect; GPS can mark position information such as images and items. The above two advantages are combined perfectly: Search and take photos of real time images recording the position information through the quad rotor unmanned aerial vehicle with GPS , then lock the target intelligently and take photos, feedback and rescue staffs can confirm the position of the enemy(affected people) according to the photo information and take action in time, which is sure to reduce blindness and enhance the efficiency.

To perform tasks, four shaft aircraft must be remote artificially for control or cruise independently .Artificially remote control can only complete the task within sight, If want to perform tasks in the place that human inaccessible, Such as disaster area, polar, etc, you must use independent cruise.For civilian use independent cruise vehicle executable to the disaster investigation rescue mission such as flood, fire or earthquake; poisonous gases concentration monitoring in chemical factories; Important facilities continuous monitoring; Oil pipelines and transmission line search; Regional air-to-ground, air-to-marine communication relay; The farmland and forest pesticide sprays; if we need get to specific areas for daily environment monitoring, Also can use this aircraft. Automatic return after be automatic search and automatic record store data, greatly reduce the manpower cost. This paper puts forward a method of simple four shaft vehicle navigation system design and implementation which based on GPS. The system can receive and analyze GPS positioning information that we need ,and storage positioning coordinate easily, and autonomous navigation, simulate and then display on the screen. It also can measurable flight distance and get accurate satellite time. Introduces the composition, positioning error, data receiving of GPS system, and method of parameter extraction, and the establishment of the LCD screen fonts, and the application of characters I2C bus practical the serial transmission technology.