

The Rotor-based Unmanned Aerial Vehicle (R-UAV) is a robotic aerial platform capable of Vertical Take-Off and Landing. It is commonly controlled by a “two stick” interface common to radio controlled models of ships and airplanes. However, this method of control proves to be difficult to learn and master in the domain of R-UAV. Therefore, we examined other control devices: smartphone, gamepad, joystick, 3DConnection SpaceNavigator and Novint Falcon. They were used by 19 volunteers to perform two simple navigation scenarios with AR.Drone, a small R-UAV from Parrot. We separated the pilots into two groups, based on their experience with the R-UAV remote control. We measured the time needed for each device to fulfill every task, including the number of unwanted collisions with obstacles, as well as the pilot’s satisfaction with it. According to the results of the experiment, joystick and smartphone proved to be less intuitive and effective among all pilots, especially the inexperienced. Gamepad seemed to be most usable for experienced pilots, although the inexperienced had problems distributing control between two hands, as we expected. 3DConnexion, SpaceNavigator and Novint Falcon were rated the best devices for inexperienced users.