

time unless it has been mutually agreed to between the pilot of manned aircraft and RPA pilot(If mixed operation is required for certain R&D or operational reasons).

21. Section 11.2(b) of the CAR makes it mandatory for RPA operating above 200 feet to have barometric equipment with remote subscale setting capability. This kind of equipment is used in full size aircraft and is very expensive. There are no such equipment available as of now for RPA use. The RPA these days utilise hybrid altitude consisting of barometric and GPS altitude, is very accurate compared to old barometric altimeters. Hence it is not necessary to have barometric equipment with remote subscale setting on board a RPA. Even Part 107 of FAA rules in USA have not mentioned the need for such a equipment. **Hence it is suggested that requirement 11.2(b) of the CAR should be amended to read- Barometric and GPS altitude equipment.**

22. Section 11.2(d) of the CAR requires the RPA flying above 200 ft AGL to have “**Detect and Avoid Capability**”. “Detect and Avoid” is a capability that is still being researched and there is no such equipment that is available as of now for use in RPA. NASA and some other agencies world over are conducting some experiments in this field. Till such time this Technology becomes available it cannot be made mandatory for RPA in Indian Airspace. Moreover in VLOS flight of RPA, the pilot is visually monitoring the RPA and avoiding conflict with other full size aircraft or other RPA. So this requirement should be deleted. For BVLOS flight RPA, Operator shall operate under exclusive Flight Plan and clearance by ATC specifying time, height band and area of operation. So instead the section **11.2(d) should read- As detect and avoid capability is not available for RPA as of now, BVLOS flights above 400 feet shall be operated under exclusive Flight Plan and Clearance by ATC specifying the Time, Height band and Area of Operation. Mixed operation by manned aircraft and RPA in the same airspace is not permitted. There may be cases where mixed operation is desired by the RPA pilot and manned aircraft pilot(for e.g for some R&D purpose or Military Mission). In this case the RPA and manned aircraft pilot must maintain positive radio contact with each with prior information to ATC. In this case it becomes the responsibility of the RPA pilot and pilot of manned aircraft to avoid conflict with each other.**

23. Section 11.3 of the CAR says Remote Pilot shall be equipped with communication facilities to establish and maintain continuous two-way communication with concerned ATS unit. **Section 11.3 of the CAR should be amended to read -Most VLOS operations will be operated either below the altitude where ATC communications is required or in situations where ATC prior approval and operating constraints have been agreed(via a Flight Plan), routine ATC communications will be unnecessary. However, ATC may still require a method to contact the remote pilot in an emergency, and the remote pilot should know how to contact the local ATC unit if the need arises. In both cases this would normally be achieved by telephone. In exceptional circumstances for particular operations(e.g. low level surveillance of an active airfield), direct communication between the ATC unit and the remote pilot may be required. In these cases, communication can be established by using a portable RT set. For VLOS operation of RPA no such requirement is necessary as the RPA pilot will visually avoid any conflict with other manned aircraft or RPA. For BVLOS operation, since the RPA pilot and ATS provider antenna will be located on ground , the ground to ground communication with RT sets will not be possible if the RPA pilot is more than a few kilometres away from the ATC. Hence BVLOS will be under exclusive clearance by ATC via a Flight Plan in Segregated Airspace.**