**UAV Basic Flight Skill 4**

**- Flight at Altitude and Distance -**

**Objective:** To teach the novice student first-time flying skills when operating any team sUAV

**Discussion topics:**

* How hard it is to maintain visual line of sight when at altitude and distance
* Knowledge of orientation of UAV
* Communications with visual observers
* Use of FPV view for approach and landing

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**Student exercises:**

* Setup launch/landing pad(s)
* Place UAV in center of launch pad
* Takeoff and bring UAV up to 6 feet AGL
* Check both joy sticks for proper control of the UAV
* Have student make sure the UAV is oriented away from the PIC
* Have the student fly the UAV up to an altitude approximately 100 feet AGL
* Using the screen data, have the PIC fly away to a distance of 50 feet
* Have the student note the drone heading by the using the screen
* Have the student yaw left 180 degrees (the head of the UAV should be facing the PIC
* Have the student tell the amount of battery life (and flight time)left
* Have the student note the spatial location of the UAV
* Have the student fly the UAV to 200 feet AGL
* Have the student note the spatial location of the UAV
* If comfortable, have the student fly up to 300 feet AGL
* Have the student tell the amount of battery life (and flight time)left
* Have the student note the spatial location of the UAV
* Have the student fly to a distance of 300 feet away from the PIC
* Have the student note the UAV head orientation on the control screen
* Have the student return to home and descend to 100 feet and hold
* If the landing pad is clear (verified by the Air Boss), land the UAV
* Land the UAV on its landing pad facing away from the pilot

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**Common mistakes:**

* Improper setup of UAV orientation on the launch pad
* Unable/uncomfortable to gain altitude
* Unable to rotate the UAV
* Unable to have the UAV make slow, controlled movements left, right, forward and backward
* Failure to communication and coordinate with visual observer and Air Boss
* Failure to land the UAV in any orientation other than pointing directly away from the pilot

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* Student launches drone to 6 feet AGL
* Student flies up to and maintains 100, 200 and 300 feet AGL
* Student successfully moves UAV left and right
* Student demonstrates the ability to read the information on the controller screen
* Student maintains control of aircraft during flight and maintains orientation based on VLOS and FPV
* Student communicates and coordinates with the visual observer and/or Air Boss
* Student is able to approach the launch/landing area and prepare for landing with proper orientation – with head pointing away from the pilot