FAM Stage Stan Notes

*** THESE STAN NOTES ARE MEANT TO SUPPLEMENT THE FTI. STUDENTS ARE STILL RESPONSIBLE FOR KNOWING FTI, NATOPS, AND OPNAV CONTENT ***

GENERAL GUIDANCE

These notes are geared toward flight-side operations. The FAM simulator events primarily focus on checklist execution, ground procedures and bold-face recall. The sims prepare you to fly in the aircraft as a safe crew member; the FAM flights will emphasize aircraft flight characteristics and serve as a foundation to your development as a critically-thinking, operationally competent NFO.

- COME PREPARED!
  - Know your EPs, limits, and high work maneuvers cold. Start studying with the source material (FTI, NATOPS, SOP, etc). If something is unclear, ask fellow students and IPs.
- Required Flight Gear: kneeboard, a tethered writing instrument, PCL, blue brains (Squadron AND Wing In-Flight Guides), helmet, gloves, earplugs, and a bag (or two) for airsickness.
  - Recommend bringing your helmet bag to carry everything out to the plane. Walking to the plane with loose items can easily lead to FOD on the flight line.
  - Try to bring the simplest form of pen or pencil you can. Mechanical pens and pencils (especially the erasers) can come apart and “down” the aircraft for FOD. Tie your pen/pencil to your kneeboard and have your instructor inspect it on the FAM-1 brief before you walk to the airplane.
- Publications:
  - Bring NATOPS manual, FAM FTI, PCL, IFG and a VFR sectional chart to the brief
  - Failure to have UP-TO-DATE publications is grounds for a Ready Room Unsat.
    - It’s your responsibility to ensure all your publications are current and have the latest changes incorporated. The NATOPS manual must have the most up to date versions of the wing and squadron SOPs inserted before the front page.
  - The NATOPS department can provide assistance with incorporating NATOPS/PCL changes and has current examples to follow on the NATOPS desk.

GROUND OPERATIONS

- Brief
  - On-wing IP’s should demo the first brief and continue to teach briefing skills throughout the first three events.
- Exterior Walk-around
  - Make sure you practice the exterior pre-flight inspection before FAM4101! Use VT-10’s website Training Resources page for a visual review of the inspection.
- Checklists
  - Continue to practice your checklist flow after completing simulator events. Practicing with a partner from the Hollywood script for challenge and responses will enhance learning.
    - When running the checklist you should not be referring to checklists to figure out the proper action and response, this must be memorized. We refer to checklist to make sure that we are completing all items in the proper order.
  - Do not pay lip service to checklists! Every checklist step has you verifying an indicator or switch position or changing said position. If you do not know what you are supposed to be verifying or checking, ask. Common examples of “paying lip service to checklists” include but are not limited to the following:
• On departure, stating “gear and flaps up at XXX knots” when they still indicate “in transit.”
• In the landing pattern or ELP, stating “Gear down, flaps (TO/LDG), speedbrake retracted, Before Landing Checklist complete” without verifying three green and no red, flap indicator position, and speedbrake light not illuminated.
• Other common examples generally tend to occur anytime you are saying something just because it is in the Hollywood script but not actually verifying the proper position or indication.

• MASTER WARNING/MASTER CAUTION lights
  o Other than during the lamp test and engine shutdown, all MASTER WARNING and MASTER CAUTION lights must be verbally acknowledged by both you and your IP before extinguishing.

• Flight Controls:
  o Whoever “has the controls” controls the throttle, stick, gear handle, flaps, Nose Wheel Steering, and rudder/brakes. DO NOT manipulate any of these unless you are the one at the controls.

• Taxi
  o Have the airfield diagram open before call for taxi. Read back the taxi instructions verbatim and direct the IP where to taxi based on taxi clearance. When complete with taxi brief, immediately initiate the Instrument Checklist.
  o Always visually and verbally clear “left, right and above” when crossing any runways, even if they are inactive.
  o Every time the aircraft will be sitting in one spot for a while, consider setting the parking brake, and ALWAYS tell your instructor when you’ve set it.

• Over-speed governor check
  o The SNFO will conduct this check, so execute a control swap when the IP parks the aircraft.
  o Although the parking brake is set, it’s not strong enough to keep the airplane from moving during this check; make sure you apply enough brake pressure to stay stationary.

• Line-up checklist
  o When cleared onto the runway (either for takeoff or to lineup and wait), read back the clearance, visually and verbally clear “the groove” and begin the line-up checklist immediately. It is required that you memorize the Line-up Checklist to keep your scan outside the cockpit while you are taxiing onto the runway.
  o Do not disengage NWS while IP is taxing on the runway; verify IP turns it off prior to takeoff roll.

**IN FLIGHT PRIORITIES**

• Aviate, Navigate, Communicate, then Checklists always the correct order of priorities for all aviators during all phases of flying.
  o AVIATE. The most important for any aviator. KEEP THE PLANE FLYING. Think of aviate as:
    ▪ Emergency procedures
    ▪ Safety of flight issues
    ▪ Altitude and airspeed
  o NAVIGATE
    ▪ Heading: ATC vector or direct the aircraft where you want to go
    ▪ Altitude: Within the confines of the MOA or WAHOO area, or clear of any airspace.
  o COMMUNICATE. This applies both inside the plane on ICS and outside with ATC.
- When switching to a new frequency, listen for other aircraft talking with ATC.
- Track when these “conversations” with ATC end to avoid “stepping on” other aircraft transmissions. They usually end with either ATC or another aircraft repeating back what the other said. If clear for at least a few seconds, it’s your turn to talk.
- When ATC calls you, they expect an immediate response.
  - If you delay your response to ATC (because you were trying to write down everything they told you, or you didn’t know how to respond, etc.) they are going to assume you didn’t hear them and call again. The time they are waiting for you is time lost on the radio that they can’t keep us (and others) safe in the sky. Do your best to copy down the key pieces of information (e.g. headings, altitudes, squawks, etc.) and read them back; if you have trouble let your instructor know right away!
    - Technique: first respond to ATC immediately, then write down the headings, altitudes, etc. that they gave you.
- Practice your radio calls at home! Make them clear and concise.
  - All clearances must be read back VERBATIM.
  - All instructions can be replied with “WILCO”, however you may read back the instruction verbatim. If you are not sure what was said then ask for clarification.
  - All informative calls can be replied with your call sign only.
- Communication within the aircraft (i.e. between crewmembers) is essential to safety of flight.
  - Being able to hear ATC is important, so make sure the radio volume knobs are set high enough so you can clearly hear everything ATC is telling you. Hearing your IP is even more important, so set the volume for the ICS higher than your radios.
    - In the FAM phase, listening to two radios and your IP can be overwhelming. Recommend only listening to one radio at a time. Whenever you switch between the UHF and VHF radio pull out on the new and push in on the old. This can also help prevent you from accidentally transmitting over the wrong radio; if you can’t hear yourself going out, you’re either transmitting over the wrong radio or don’t have the correct knob pulled out.
- LIVEATC.NET – This website is a phenomenal tool to help train your ear to the aviation “language”. Go to [http://www.liveatc.net](http://www.liveatc.net) and search “KNPA” under the LiveATC Audio Streams. There is a composite live feed titled “KPNS/KNPA Del/Gnd/Twr/App” that you can use to hear your peers (and yourself) talk on the radio.
- CHECKLISTS
  - There are four checklists that are required to be memorized because they are used in time-sensitive and task saturating phases of flight:
    - Line-Up checklist
    - Operations checklist
    - Pre-Stall and Aerobatic checklist
    - Before Landing checklist
- OPS checks- every 20 min.
  - Technique- after every other maneuver, while in transit to landing pattern, while in landing pattern, and on RTB should get you a sufficient number of OPS checks completed.
HIGH WORK

- Area management
  - Keep the GPS map in your scan on the EHSI. On the way to the area it is important to know which block you are cleared into. You can zoom out on the map's scale to see the entire outline. Compare this picture to the MOA diagram in your blue brains.
  - You are expected to direct turns to keep from exiting your assigned MOA block.
    - Start maneuvers with plenty of straightaway in the block.
    - Does the maneuver lose altitude (stalls, spins, etc)? Then start with enough altitude to avoid penetrating the floor of the block.
- The 3 Cs: Use the 3 Cs to set up for every maneuver to establish a good habit pattern and reduce the chance that you forget the _____ (gear, flaps, etc.). It may save you from performing a prohibited maneuver (i.e. a spin/stall with the gear, flaps extended).

LANDING PATTERN

- Be sure to chair-fly the landing pattern multiple times by verbalizing all the ICS and radio calls. The smoother it flows on deck, the easier it will be in the air.
- Although going to a Navy OLF is possible, it is more common to conduct “low work” (i.e. landing pattern and PPELs) at either tower controlled fields or non-tower controlled civilian fields in the local area. Regardless whether the field has a control tower or not, the pattern, procedures, and ICS calls remain the same, but the radio calls will differ.
- Entry to the field will often be via High Key for a PPEL.
- Expected ICS calls will be:
  - “PCL MAX”
  - “85 Knots, ROTATE”
  - “110, Flaps UP”
  - “120, Power 60-70%”
  - “400 feet AGL, Clear Left/Right, Turn Left/Right”
  - “50 feet prior to pattern altitude, level-off”
  - “4Ts”
    - “Transition- XX% power, Flaps (UP/takeoff/landing)"
    - “Trim- for 115 knots”
    - “Turn- 30 degrees AOB”
    - “Talk-“
      - Radio- “Tower, KATT XX, abeam, gear, option”
      - ICS- “Gear down, flaps ___, Speed brake retracted, before landing checklist complete.”

ELP, PPELS and simulated Forced Landings

- When executing simulated EP’s, carry them through to a logical conclusion. For example, for Simulated Chip Light, do not stop at “PEL Execute,” proceed to the PEL EP Checklist, and get your PCL out as time allows.
- Knowing the bold-face cold is very important, but you can start a PEL with “turn, climb, clean” to get the plane moving in the right direction while you work through all steps.
  - Turn – to the nearest suitable airfield
    - Direct the IP to the nearest suitable airfield with a heading.
    - Calculate glide distance - if the engine fails, remember 2:1 glide ratio is based on no-wind, and only works at 125 KIAS, clean, with a feathered prop.
Climb – “climb or accelerate to intercept ELP” for a PEL. Determine the altitude to climb to based on weather and distance to the nearest suitable airfield using the 2:1 glide ratio. If a cloud layer prevents a climb to the determined altitude then you will both “climb and accelerate” to intercept ELP. Begin by climbing as high as weather will allow, level off (accelerate) and determine how far you can glide. This will be your altitude minus high key altitude of 3,000ft, multiplied by 2. Example, 6,000ft of altitude-3,000ft high Key=3,000ft of altitude to glide with times 2 for a distance of 6NM. This is the distance from the field you will start to glide down to high key.

Clean – gear, flaps and speed brake – UP.

- You are expected to monitor and direct altitude management in order to arrive at the correct altitude for High Key and each checkpoint throughout the ELP.

RTB
- Get ATIS early when returning for course rules. You may need to use the radio squelch if unable to receive the frequency.
- Once you have ATIS, complete the recovery brief so you can focus on finding KJKA (Jack Edwards), check in with ATC and directing course rules.
- Memorize Course Rules! Don’t be “heads down” reading your blue-brains while flying course rules. The airspace is busy and you need to look outside for traffic, visual checkpoints, and respond to radio calls.
- After exiting the runway, complete the first two items of the After Landing Checklist (ISS Mode selector-SOLO, Seat Safety Pin-Install), then call ground for taxi and complete the checklist.
- Make sure you remove every single piece of gear you brought to the aircraft, FOD is bad.

NIGHT FAM
- Make sure to bring your clear visor, especially if the event is flown after a day flight on an out & in. Be thoroughly familiar with how to control all interior and exterior lights including dimming the avionics displays.