FAM Stage Stan Notes

***** THESE STAN NOTES ARE MEANT TO SUPPLEMENT THE FTI. STUDENTS ARE STILL RESPONSIBLE FOR KNOWING FTI, NATOPS, AND CNAF 3710 CONTENT *****

GENERAL GUIDANCE

These notes are geared toward flight-side operations. The FAM flights will emphasize aeronautical adaptation, procedural compliance, Crew Resource Management (CRM), and a foundation to your development as a critically-thinking, operationally competent NFO.

• COME PREPARED!

- Know your EPs, limits, and high work maneuvers procedures. Start studying with the source material (FTI, NATOPS, SOP, etc.) If something is unclear, ask fellow students and IPs.
- Call/text your IP the day prior to develop a plan for you to chair-fly and prepare for.

• Required Flight Gear in FAMs: (1) kneeboard with a tethered writing instrument (your IP should check this on FAM-1, (2) gloves, (3) earplugs with string (in Maintenance Control), and (4) an airsickness bag (in PR Shop).

- Use your helmet bag to carry everything to the aircraft.
- Recommended: good quality pen and pub bag.
    - Wings-Pensacola hand makes pubs bags for the T-6A/B.

• Required Publications for FAM: (1) NATOPS Flight Manual with Squadron and Wing SOP, (2) FAM FTI, (3) PCL, (4) Blue Brains (Squadron AND Wing In-Flight Guides (eIFG)).

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 Flight Manual, PCL, SOP, & eIFG will all have their most current versions listed in the Read and Initial binder. **You signed this on FAM-0**, confirming you have those pubs up-to-date.

Inform your On-wing if you know your publications are out of date. Let them help you!

GROUND OPERATIONS

- Brief
    - On-wing IP's should demo the first brief and continue to teach briefing skills throughout the first three events. You are still responsible for demonstrating knowledge on all briefing items.
- 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.
    - Be sure to have a thorough knowledge of the preflight and aircraft part names.
- Checklists
    - Continue to practice your checklist flow after completing simulator events.
    - The goal when practicing these checklists is to get to the point where you only need to reference the CHALLENGE section. The ACTION/REPLY needs to be memorized.
    - The 'Lineup Checklist', 'After Takeoff Checklist', 'Operations Checklist', 'Pre-Stall, Spin, Aerobatic Checklist', 'Descent Checklist', and 'Before Landing Checklist' need to be **COMPLETELY MEMORIZED**.

  - Do not pay lip service to checklists! Common examples of "paying lip service to checklists" include but are not limited to the following:
    - On departure, stating "gear up, flaps up at XXX knots" when they still indicate "in transit."
    - In the landing pattern or ELP, stating "Gear down, flaps (TO/LDG), speed brake retracted, Before Landing Checklist complete" without verifying three green and no red, flap indicator position, and speed brake 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
  - Any MASTER WARNING and MASTER CAUTION light, must be verbally acknowledged by both you and your IP, then you may extinguish it.
  - Examples of MASTER WARNING/CAUTION that are a result of a checklist item:
    - Lamp Test, Fire Warning System Test, Canopy Closed and Latched, OBOGS OFF, PMU OFF at Overspeed Checks, PCL OFF at Shutdown Checks, etc.
    - When both IP and Student turn OBOGs off you get a master Warning light.

- Flight Controls:
  - Whoever "has the controls," controls the Throttle, Stick, Gear Handle, Flaps Selector, Speed Brake, Nose Wheel Steering, and Rudder/Brakes. DO NOT manipulate any of these unless you are the one at the controls.

- Taxi:
  - 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.
  - Always visually and verbally clear "Clear left, right, and forward" when crossing any taxiway, and. "Clear left, right, forward, and above" when crossing any runway.
  - 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:
  - The SNFO should conduct this check, so execute a control swap when the IP parks the aircraft.
  - Apply enough brake pressure to stay stationary. If the aircraft starts to move against the brakes immediately return the PCL to IDLE.

- Line-up checklist
  - When cleared onto the runway (either for takeoff or to lineup and wait), read back the clearance, visually & verbally clear the runway, and begin the line-up checklist immediately. Above all else, keep your scan outside the cockpit while you are taxiing onto the runway. **The Lineup Checklist should be memorized.**

IN FLIGHT PRIORITIES

AVIATE, NAVIGATE, COMMUNICATE, then CHECKLISTS always the correct order of priorities for all aviators during all phases of flying.

- AVIATE (The most important). FLY THE AIRCRAFT FIRST:
  - Airspeed above stall and below overspeed

  - Altitude above obstacles/terrain/minimum safe altitude and IAW any ATC clearances
  - Heading away from the closest thing that will kill you or toward the nearest safe airfield in an emergency
  - EP Boldface

- NAVIGATE. GET THE AIRCRAFT WHERE YOU WANT IT TO GO:
  - Airspeed, Altitude, Heading - as assigned/intended/required
  - Know how to use the Direct to Function and operation of the HSI mode

- COMMUNICATE. LET OTHER PEOPLE KNOW YOUR INTENTIONS:
  - Airspeed, Altitude, Heading - notify ATC/Other Aircraft if you need to change or cannot comply with their request
  - Any other needed/desired communication

- CHECKLISTS. Only now that you completed the other three can you start checklists.

RADIO COMMS

- When switching to a new frequency, wait one to two seconds and listen for other aircraft talking with ATC.
- When ATC calls you, they expect a prompt and almost immediate response.
- Practice your radio calls at home! Make them clear and concise.
- All clearances must be read back in accordance with FAA as follows:
  - *Pilots of airborne aircraft should read back those parts of ATC clearances and instructions containing altitude assignments, vectors, or runway assignments as a means of mutual verification. The read back of the "numbers" serves as a double check between pilots and controllers and reduces the kinds of communications errors that occur when a number is either "misheard" or is incorrect.*
  - *Include the aircraft identification in all readbacks and acknowledgments. This aids controllers in determining that the correct aircraft received the clearance or instruction. The requirement to include aircraft identification in all readbacks and acknowledgements becomes more important as frequency congestion increases and when aircraft with similar call signs are on the same frequency.*
    - ATC Clearances and Aircraft Separation (faa.gov)
- Altitudes contained in charted procedures, such as DPs, instrument approaches, etc., should not be read back unless they are specifically stated by the controller.
- Initial read back of a taxi, departure or landing clearance should include the runway assignment, including left, right, center, etc. if applicable.
  - A good rule of thumb on this is: If your clearance involves a number (Heading ###, Altitude #####, Airspeed ###, Runway ##, Altimeter Setting ##.##) it requires a verbatim readback.
  - All informative calls will be replied with, at a minimum, your call sign.

- 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.

Some Radio Comm resources:

- LIVEATC.NET – This website will help you train your ear to the aviation "language". Go to http://www.liveatc.net

- Search "KMOB" under "Airport/ARTCC Code." Select one of the green "Listen" buttons. Unfortunately Pensacola Approach no longer has a live stream, but Mobile Approach will be controlling multiple training command aircraft.

- AIR SAFETY INSTITUTE – This website has numerous tools and videos explaining radio comms, how ATC works/thinks, and aviation accident case studies.
  - For Comms and ATC. Go to: https://www.aopa.org/training-and-safety/air-safety-institute/safety-spotlights/radio-communications-and-atc
  - For Accident Case Studies. Go to: https://www.aopa.org/training-and-safety/online-learning/accident-case-studies
    - Note: These videos contain live transcripts and recordings of individuals who were involved in fatal accidents. Watch with the intent to learn from their mistake, not criticize them for it.

HIGH WORK

- Area management:
  - On the way to the area it is important to know which block you are cleared into. Use the GPS map in your scan on the EHSI. Compare this picture to the MOA diagram in your eIFG.
  - You are expected to direct turns to keep from exiting your assigned MOA block or claimed block in the Wahoo.
    - 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.
    - If it appears you can't complete the maneuver before exiting the block latterly or vertically direct a turn or climb to stay in the working area, then resume or discontinue the maneuver.
- High Work Videos: Training videos are available through the VT-10 website, Training Resources tab, under the Contact / FAM dropdown menu.
  - https://www.youtube.com/playlist?list=PLH2_SdQP8kEz0k7RUhi8p5_xk7mc9BrPX

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 (See CONTACT FTI for Radio Comms).
- ICS calls are: (These calls will ensure you comply with CONTACT FTI 6-14, 6-15 Touch & Go procedures)
  - "PCL MAX"
  - "Spool up, 85 knots, ROTATE"
  - "110, Flaps UP"
  - "120, Power 60-70%"
  - "400 feet AGL, Clear Left/Right, Turn Left/Right"
  - Conduct Before Landing Checklist on the downwind
  - "50 feet prior to pattern altitude, level-off, Power 31%"
  - "4Ts"
    - Report Abeam/Base if at a towered airfield
    - "**T**ransition- XX% power, Flaps (UP/Takeoff/Landing)"
    - "**T**rim- for 120/115/110 knots"

- "**T**urn- 30 degrees AOB"
- "**T**alk-"Gear down, flaps (UP/Takeoff/Landing), Speed brake retracted, 'Before Landing Checklist' complete."

SIMULATED EPs

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 MANDATORY, 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.

- "Climb" – or accelerate to intercept ELP
  - Direct the IP to climb at 140 KIAS or accelerate, if there is a solid cloud layer, with whatever power is available.
  -
- "Clean" – gear, flaps, and speed brake UP, this reduces your drag and allows for a better glide distance

Two ways to calculate required glide distance:

A.) ½ DME + Key = Altitude required to reach the nearest airfield.

Example: you hit "NRST" and it shows KPQL 5NM. ½ * 5 = 2.5.

2.5 + 3 (3,000' for high key) = 5.5 This states that if you are 5,500' AGL you can reach the KPQL and high key.

B.) Altitude - Key * 2 = Distance you can glide and reach key.

Example: you are flying at 11,000 minus 3,000 for high key is 8 and multiply by 2 = 16 NM you can glide to an airfield and reach high key.

Rule: always use altitude divided by 1,000 to make math simpler. 12,000' MSL is 12. 3,000 AGL for high key is 3 and 1,500 is 1.5 for low key.

The 2:1 only works with no wind, 125KIAS, clean, and prop feathered

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

- To get ATIS when returning for course rules, you may need to use the radio squelch (SQ).
- Memorize Course Rules! Don't be "heads down" reading your eIFG while flying course rules. The airspace is busy and you need to look outside for traffic, visual checkpoints, and respond to radio calls.
- You are still required to report below 150 and call for gear in the break.
- After exiting the runway, you may 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 every single piece of gear you brought into the aircraft, leaves the aircraft. FOD kills.

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.