**HT-18 CAT II Stage Leader Indoc Flight Notes**

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**Welcome to HT-18!**

Congratulations on a successful sea tour and completion of the HITU!

“Instructor Pilot” is a new challenge: We teach basic skills: Trim, Scan, Flight Leadership, and Flight Preparation. Every flight we fly reinforces these basic skill sets and habit patterns. You will start out as a CAT II pilot instructing RIs, BIs, Trans Fams, and Low Levels.

We are brilliant in the basics. We make pilots per the MPTS. We’re not making HACs, 2Ps, or PQMs This implies that we hold the standard in what the MCG defines as CTS.

Bottom Line: If it’s not in the FTI/NATOPS/CNAF/FAR-AIM, it’s not how we do it.

**Pubs/Expected Knowledge *Base:***

* FTIs (all): Ensure you have the most recent ICs (see FactoryHand University website). **Pay particular attention to the GTN updates in the P-458 and P-403 FTIs.**
* Squadron SOP (particularly solo and new IP restrictions).
* Wing FIST (with CH-1): Currencies, warmup requirements, stage checks.
* CNATRA 1500.4 TA Manual (March 2018).
* CNATRA 1542 Notice Authorization to Fly Syllabus Events Using GTN-650 (July 2018)
* CNATRA 1550.6F Training Improvement Program.
* FAR/AIM (current).
* FIG – Flight Instructor Guide

**Block By Block Expectations:**

C4600

* First events in the Charlie. Stick skills generally strong, but SNAs do not know how to fly with the ministab system. Teach them how to trim in the pattern. Remind them to “press, move, release.”
* Land in the center of the box every time. Taxi on centerline. Pedal turn about the mast.
* Power-Off Maneuvers:
	+ *Cut Guns*: Demo the first of both types to a “4.” Once you’re happy with it, then give it to the SNA to practice pre-announced cut guns. Do not conduct unannounced cut guns.
	+ *Autos*: Always demo the first one. If the SNA enters off parameters, automatic wave off. If the twist grip is not moving to full open by 100’, move it there for them and/or take the controls. We’re not training the SNAs on how to salvage a badly entered auto, or how to perform a low Nr recovery. That’s your job as the IP. They need to be practicing the same “60 knot” attitude every time. Basics.
* “Situationalize” the sliding landing (compressor stall/underspeed to a power check). Have them think about the power required curve and how their airspeed effects their torque requirement. Ensure SNA is 1) determining if they have sufficient power to fly, 2) determining max power available and 3) determine landing type. All parts must be completed.

I4000/I4100

* TRIM AND SCAN is absolutely essential. The rest of the syllabus depends on the SNA being able to effectively fly the aircraft. The maneuvers are a method by which we get to teach, test, and evaluate their trim and scan pattern. It matters how they fly the aircraft.
* Trim is different from Scan. It is easy to confuse a slow scan for poor trim skills.
	+ Physically watch the SNA’s right hand on the cyclic. As the IP, scanning the gauges alone for “CTS” is not enough.
	+ Trim starts with a proper posture in the aircraft. Ensure the SNA’s right forearm is able to comfortably rest on their thigh. Maybe they need an approach plate or a VFR Supplement under their kneeboard for more support. As the hand falls around the cyclic, the FT button should fall naturally under the thumb’s knuckle. It should be easy/natural/light pressure to engage the FT button.
	+ Reference the Contact FTI that states “the proper way to use the force trim is to depress the force trim, displace the cyclic as necessary, release the force trim” and that “the following trim techniques should be avoided: not trimming” (2-2).
	+ *I know you know these things – but the SNA doesn’t.*
	+ Don’t forget about their left hand and feet 🡪 ensure SNA is gripping the collective properly and on the pedals correctly.
* Scan is a different quantity. Most SNAs will fixate on the Attitude Gyro, the torque gauge, and/or move their scan slowly across all gauges. Ensure the ball is in, and that they make a trimmed correction for airspeed. Scan across to the altimeter, down to the VSI, across the HSI and back to the ball.
* Your gradecards need to discuss the SNA’s trim and scan habits/patterns. Don’t just write “+200’ on Oscar today,” tell me *why* they were outside CTS. Not using touching the force trim? Holding the force trim in too long? Fixating on the attitude gyro? Missing that the ball was partially out?
* You do NOT have to do every maneuver on every flight. If Trim and Scan needs work, spend more time fixing that and forget magnetic compass turns.

C4800 Block

* Flown in BIs: reiterate the importance of a BI scan (night/overwater).
* Bulk of the flight should be spent in the landing pattern.
* Options: Santa Rosa, 2R4, Choctaw, KNDZ (pads). *Check the NOTAMS…*

I4300 Block

* MCG: Should get three approaches + holding, shall prepare Jet Log + DD-175, and SNA is \*not\* required to call you.
* Big Picture: SNA practices FTI procedures, handles simple EPs, and uses trim and scan to get there.
* I4301 Brief: “Cockpit COM/NAV organization.”
	+ This is our opportunity to teach SNAs how to chairfly. Show them how chairflying is performed and how to practice it in RIs. Talk through CRM on the ILS Y/Z approaches in the brief. Then, execute the approaches, and that night the SNAs will have the tools to better prepare themselves.
* I4301 & I4302: Try to complete one of these two profiles:
	+ Profile 1: Holding at NUN or PENSI, 1-2 approaches at KPNS, followed by ILS Y and/or Z at KNDZ.
	+ Profile 2: Holding at CEW (or WABEN), VOR-A or ILS/LOC/RNAV at KCEW, followed by ILS Y and/or Z at KNDZ.
	+ Whichever profile SNA saw on the I4301, do the other on the I4302. Intent is to show them local approaches and the ILS Y/Z right off the bat. Make sure you walk through the ILS in the brief to eliminate any confusion.
* Brief the specifics of NAVAID operation. Not just “what’s station passage” but how/why does it operate the way that it does (TACAN, VOR, ILS, GPS).
* I4303: You’ll probably feel more comfortable going West initially. Standard NAVIE departure, then direct SNA to execute a PtP to EAGLE (all on the SIAPs). At EAGLE, hold at your discretion, then pull the HSI C/B to initiate the failed card approaches. TACAN 33 NBJ, then go Missed to JORDIN for the TACAN 24 arcing approach. Full procedure turn for the TACAN-A back to NAVIE, talk to PNS Approach for the NG PARs at KNDZ.
* I4304: See the CNATRA 1542 Note: WAAS and ADS-B are discussion items.

I4500/N4000/N4100 Block:

* SNA takes the lead with mission planning/execution (“plan it as though I weren’t there”).
* Introduce “HAC-level” decision making.
* Ensure compliance with CNATRA 1542 Note aircraft configurations.
* Share sea-stories, but preserve the Instructor-SNA distinction. You are not their “buddy.”
* Groundspeed/Fuel Checks: SNAs will use their JetLogs in flight to compare estimated vs. actual fuel burn on each leg. This implies that SNAs are monitoring their burn rate, applying it to their preflight calculations, and making the following types of in-flight decisions based upon it:
	+ What is our burn rate (actual vs. estimated)?
	+ How many gallons will we land with (actual vs. estimated)?
	+ Time aloft vs. time until 10 gallons remaining?
	+ Can we proceed on the route as planned? If not, what are our options/alternates, and how much fuel will we be on deck with at that airfield?
	+ As IPs, we must always be in a position to critique the SNA’s work to demonstrate sound flight leadership.
* Position Tracking: GPS will not always work. During VNAV events, ensure SNA’s are keeping track of their physical position on their VFR Sectional charts. A combination of ground reference and NAVAID cuts throughout the flight will give a very accurate position update, it builds solid habit patterns for burgeoning fleet aviators, and makes the decision process quicker and easier when diverts (fuel/WX) become a necessity. Remember, we teach to the tail of the needle and ground reference navigation, not GPS.
* Trim and Scan!
	+ VNAV CCXs typically occur within the BI syllabus, so taking (some) time to practice “press, move, release” habits is essential. Keep those skills fresh over the weekend!
		- INAV CCXs provide ample opportunity for the SNA to refine trim and scan (and for the IP to critique their habits), particularly on long enroute segments.
	+ Flight Watch/METRO/FSS
		- This is a graded item on both VNAVs and INAVs (4). When you grade it, tell us on the gradecard what was used to accomplish it: Did the SNA contact FSS to open a flight plan, call METRO to update weather, etc?

C4700 Block:

* Flown before the I4400s. Contact stick skills significantly atrophied.
* Ensure SNA has seen course rules from Santa Rosa via Echo.
* Last look at contact maneuvers prior to the checkride.

I4400 Block:

* MPTS: Shall fly three approaches, shall call you the night prior and show up to the brief with a completed Jet Log + DD-175.
* Big Picture: SNA tasks crew appropriately, handles complex EPs, and executes the FTI procedures.
* Intent is for SNA to leave the local area. MPTS says that “I44 block flights should originate or terminate at airfields other than South Whiting to the maximum extent possible.” You need to have a really good reason for why you’re just ‘keeping it local’ on those flights.
* Ensure SNA has solo fields (BFM, MOB, TLH, DHN). JKA does not count!
* I4402 Airspace Brief: 3 hours from brief to launch. Bring charts the SNA hasn’t seen (SFO or ORD TAC, Denver Sectional, LAX Sectional) and point to examples. Have them apply the material on the chart.

Recurring I4690 Issues

* Preflight knowledge lacking. Following SNA around on their preflights, rather than just “get your side.”
* VFR Sectional chart knowledge: Ensure that on the N4000/N4100 blocks you’re asking them specific chart questions (what’s the length of the longest runway, pilot-controlled lighting, airspace, etc).
* Break out and Land: Transition from the approach (90 KIAS, 500fpm), to setup for a landing (entering the pattern making CTAF calls, considering the winds, taxi direction after clearing the runway, etc.). Most easily conducted at KCEW/KJKA or final destination.
* DD-175s/JetLogs: Scrutinize these closely: Compulsory reporting points, alternate fuel planning, altitude selection, DD-175 writing are all recurring issues lately I4690s. Copying the canned route out of the RWOP is not acceptable. GPs are in the Pubs room.
* When the SNA tunes and identifies a NAVAID, ensure they’re actually comparing the broadcasted Morse code to the chart/plate.
* Procedural application of the FTI – Uphold the standard of complete and accurate execution of the 6T’s, PASTG&G, WRNTB and TINTS.

Low Levels:

* Chart / Clock / Ground / Compass
	+ Check both students charts for completeness and correctness, not just the one they decided to put on the corkboard
* Green Specific:
	+ N4301: IP shall demonstrate the brief. See video on University website. Demo it the way you want the student to replicate it. TLAs required for the block.
* Orange/Purple Specific:
	+ Remain at 900’ until clear of Deaton Bridge, then descend to 500’ AGL.
	+ No need for calls on Btn 20.
	+ TLAs not required in the block, but if you can get them, please do!
* Current LZ Diagrams are posted to the FactoryHand University website.
	+ Make sure they are updating it for the current day’s conditions

Others:

* Considering an RRU/UNSAT? Talk to Stan if at all possible first.
	+ Once the flight brief is complete, your RRU window has closed.
	+ If you’re walking down the hill, it’s too late to call an RRU.
* Unless the flight ends in “XX90,” you are more instructor than evaluator. Even on a flight that is an UNSAT, you still need to be instructing more than evaluating.
* Students are always watching. SNAs will pick up on what you say, how you conduct yourself, how you make decisions, and they’ll take it as gospel (sleeves, gloves…).
* Always be in contact with the collective. The SNAs borrow the controls from you.
* Take leave (once per quarter).

Today’s Flight Profile

* GTN checklists on deck and review cockpit setup.
* BAWDI departure: Demonstrate common SNA errors and visual checkpoints on the departure.
* In the Lakes: Trim and Scan demo/do/practice, tools for your BI toolbox, simulated EPs.
* Vectors to KNDZ: How/when to simulate EPs in BIs/RIs.
* IFR Pickup: ILS Y and Z at KNDZ. RI EPs, visual checkpoints.
	+ GTN-specific approach setup.
	+ SNA expectations on BIs/RIs for approaches.

Come by Stan anytime with questions/comments/concerns, and feel free to shoot an email/call/text anytime! Welcome to the Eagle’s Nest!