

Deliberate Airmanship

As both a military and civilian pilot, I thought I understood “Good Airmanship”. You know, the guys who fly multiple aircraft, “by the numbers” and memorized ALL of the checklist not just the emergency pages, someone who was prepared for any situation and can skillfully fly the aircraft under any conditions. As a young Lieutenant, I thought it just meant the high level skills and knowledge of an experienced pilot. I even agreed with an old instructor who once said, “If you don’t secretly believe you’re God’s gift to Aviation, then you’re in the wrong business.”

Pilots generally are an arrogant lot, possibly because they know they are looked up to by, junior pilots, kids and passengers for the skills and knowledge they display in getting us somewhere, day or night, in all kinds of weather. So, in knowing yourself as a pilot, do you really buy into the idea you’re exceptional. Do you practice airmanship *deliberately*? I know in 50 years of flying, I never took a course on “Airmanship”, and still I’d bet every one of you would rate yourself as a safe and exceptional aviator.

While the word Airmanship arose back in the late 1800s with balloons and glider pilots who risked their lives to be first to explore the third dimension, the way mere mortals only dreamed of, it only came into general use in the early 1900s, with the advent of powered flight (**Gustave Whitehead, Orville & Wilber and Douglas McCurdy etc**). That’s in chronological order by the way, but I’ll leave that for another story. Suffice it to say, all pilots believe they display good Airmanship, but I think that most pilots don’t embrace it deliberately.

As an UAS instructor at the [International Test Pilot’s School \(ITPS\)](#) in London ON, I became acutely aware I was in the company of exceptional pilots, both students and faculty, who take Flight Test Airmanship to



another level, beyond what I experienced, in my military career. As a combat flying instructor we were constantly trying to develop good Airmanship in young aviators with mental and physical fitness training, daily knowledge quizzes, flight safety meetings and practicing checklist emergencies on *every training flight*, so that they would continue to question themselves and hold themselves accountable, but there was never a lesson plan on Airmanship. It was built into the Student/Instructor relationship and every instructor was expected to drill it into their young student until



they exceeded the proficiency standard of the course. ITPS Instructors and their students operate at another level entirely. They all have a dialogue and discipline, that includes preflight risk assessment of not just equipment, weather, timings and test points but evaluating themselves before every flight. It concludes with a rigorous pre-post mission analysis, and lessons learned, which was the original purpose of the flight. I wanted to see if I could actually teach that type of Deliberate Airmanship to any UAS (drone) student who was not privileged to experience it in a formal aviation community, since most would never be exposed to that level of personal discipline. For that reason, I built a 1 hr classroom discussion to try to expose UAS pilots and crew to those ideas.

Airmanship is a form of leadership-by-example, ie; doing the right thing, even when no one is looking. Good Airmanship is Deliberate Airmanship. Perhaps, you've heard the phrase "Flight Safety is no Accident". Here's some "[Good Gen](#)", as we used to say (from Defense Technical Information Center).

This is a summary of my lecture and every Pilot in Command (PIC) should hone these skills daily regardless of what they fly.

- **As a baseline, application of Knowledge and Skills** – Bread and butter of flying is knowing your aircraft systems and limits. Airframe, Engine, instruments, sensors, software modes, airspace, weather, Rules and Regs, backup systems, flying performance by the numbers, emergencies, critical actions & recovery methods.
- **Whether Simulation or Real, Practice, Practice, Practice** – Now, Do it again with better Precision
- **What determines your Attitude?** – It's YOUR ATTITUDE that determines your Attitude Careful what you THINKIt determines what you SAY

Careful what you SAY It determine how you ACT
Careful how you ACT It determines who you ASSOCIATE WITH
Careful who you ASSOCIATE WITH . . . It determines who you BECOME

- **Assess your personal stress** (Before you fly) – Health-Physical-Mental State-Environs–limits?
Do you recognize your sigh or a yawn as a stress indicator? When did you last eat or drink? Was it soda, fries and a burger, or alcohol? Is your environment and clothing hot or cold? Are you in financial, emotional or family stress? Rest, Exercise, Sleep Quality, Daily Fitness, Mental Rest?
- **Plan every flight, then Stick to the Plan** – If it’s not part of the plan, don’t add it on-the-fly. Do you have the discipline to tell yourself no? “A superior pilot uses his superior judgement to avoid situations that might require use of his superior skills”: Frank Borman, Commander of Apollo 8 ([First mission to the moon](#), Christmas 1968, Died at 95, 7 Nov 23)
- **Risk Analysis** – When was the last time you did a [Flight Risk Analysis with Mitigation Actions](#)?
- **10 Seconds** – Never let the aircraft take you somewhere your brain hasn’t already been at least 10 seconds ago. [Count off 10 sec](#) - Imagine how much time that would be, to avoid an emergency.
- **Delegate Wisely.** – Delegate actions to a/c systems, crew and controllers. As PIC give yourself bandwidth to retain a high state of Situational Awareness for timely/accurate decision making



- *Airmanship is the consistent use of good judgment and well-developed skills to accomplish flight objectives. This consistency is founded on a cornerstone of uncompromising flight discipline and is developed through systematic skills acquisition and proficiency flying. A high state of situational awareness completes the airmanship picture and is obtained through knowledge of one's self, aircraft, environment, team and risks."*

(Tony Kern, USAF 1997)

If you recognize this type of Deliberate Airmanship as an essential part of any flight then how does your flying discipline measure up? I'm still working on mine.



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Photo Notes:

1. Multi-national class of Test Pilots, Flight Test Engineers - Course 2023A ITPS Canada
2. Author Capt. David Cooke as a Combat Flying Instructor (CFI) 403 Sqn Gagetown NB, circa 1985
3. UAS Course FTE (Flight Test Engineer) Henry Language (S Africa) and MRPA Test Pilot prepping for a Test Flight at ITPS, 1923. MRPA trainer (Manned Remotely Piloted Aircraft)