

## 2014 Eagles



### **Gary Aldrich, Lt Col, USAF (Ret.) Class 82A**

Lt Col (Ret.) Gary Aldrich is a contract Flight Test Instructor for the Test Management Branch of the Test Pilot School (TPS). He has enjoyed the longest tenure of any staff instructor in the school's history and has been referred to as "the Oracle of TPS" by a former commandant and referred to by many other age-related monikers (some flattering, some not) by staff and students for a very long time.

Between his active duty and contractor careers, he has served on the TPS staff for 25 years. To date, he has *personally* instructed 1,156 TPS students...fully 40% of the total number of TPS graduates in the 70 year history of the School. In recognition of his tenure and impact on those he instructed, he was awarded the prestigious Clarence L. "Kelly" Johnson Award for Excellence in Flight Test Engineering in 2006 by the Society of Flight Test Engineers. Gary began his association with TPS when he reported for duty as a student Flight Test Engineer (FTE) in class 82A beginning in January 1982. After the year-long course, he moved to the 6520<sup>th</sup> Test Group at Edwards where he supported testing of the F-16XL, YA-10B, and T-46A aircraft. In early 1984 he was offered a position as an Instructor FTE (IFTE). Gary served as a staff instructor in the Systems Phase curriculum and also became only the second IFTE to be qualified to instruct the Soaring curriculum events in gliders, a job previously reserved for military rated instructor pilots. He also served as an IFTE in the T-38A, F-4C, A-37B, and NKC-135A. After 3 years on the staff, Aldrich was selected to attend Air Command and Staff College in Montgomery, Alabama followed by a career-broadening staff tour at the Headquarters of the US Air Forces in Europe at Ramstein AB, GE.

Returning to Edwards and the TPS staff in 1990, Gary, now a Lt Col, took over the reins of the School's Technical Support Division and was responsible for transitioning the curriculum from the aging, NKC-135, A-7, and F-4 aircraft to the F-16, F-15, and NC-141A Starlifter. He also resumed flight instructing in sailplanes as Chief Glider Pilot and led the School's attempt to break the world altitude record for gliders. Gary reluctantly left TPS once more upon his retirement from active duty in July 1996. After a short stint as a contractor FTE for the 416<sup>th</sup> Flight Test Squadron, he was asked to return to the TPS staff. Since his employer would not allow him to fly as a pilot, Gary proposed to support the School under a separate and unique contract. Thus in 1998, he began his "second" career as a TPS IFTE and Instructor Pilot.

In addition to his platform instruction, he has amassed over 5,300 pilot hours, 1,500+ FTE hours and still serves as the Chief Glider Instructor for the School. He's flown over 100 types of military, civil, and foreign aircraft from the P-51 Mustang to the MiG-25 Foxbat, but his favorite is the Cessna Skywagon he keeps at Fox Airfield.



### **George E. Cooper**

Internationally renowned test pilot George E. Cooper has had long and distinguished careers in many different fields, serving as a gold mining engineer during summers as a mining engineering student at UC Berkeley, a Lockheed design engineer, US Army Air Corps fighter pilot during World War II, an experimental test pilot for NACA/NASA Ames and currently a Wine Master for Cooper-Garrod Estate Vineyards.

While serving as a fighter pilot during World War II in the 9th Air Force, George flew top cover over the Normandy Beaches on D-Day, June 6th, 1944 and the Battle of the Bulge, shooting down 4 German aircraft. After serving as a fighter pilot with the Army Air Corps, George Cooper became a NACA test pilot at Ames in 1945. He conducted extensive research in transonic performance with various aircraft, exploring the treacherous qualities of near Mach 1 handling characteristics of aircraft. Cooper also performed detailed tests developing design criteria for Naval carrier approach and landings. Using the F-94 fighter, Cooper developed methods of in-flight thrust reversal to better control the aircraft's speed and flight path, including its final approach, resulting in improved touchdown precision and safer landings.

Cooper's most significant and long lasting contribution to aviation has been his research in the interface between the individual aircraft and the human being flying it. His extensive experience in the evaluation of aircraft handling qualities led him to formulate a ten-point scale with which pilots could precisely describe and rate their experience in actually flying an aircraft, making clear and concrete what was previously little more than subjective judgment and intuition. The Cooper Pilot Opinion Rating Scale, later revised to become the Cooper-Harper Handling Qualities Rating Scale, is one of his and NASA Ames most famous and lasting contributions to aeronautical science and is a standard recognized and used worldwide today. As Ames' Chief Test Pilot, Cooper helped develop and extend wind tunnel testing techniques and flight simulation capabilities, and has become an internationally recognized authority on aircraft handling, safety, and the indispensable human element of aviation. His contributions to cockpit design, aircraft crew tasking and flight simulation have made the skies safer for both pilots and airline passengers.

His many honors include NASA Ames Hall of Fame, a Founding Fellow of the Society of Experimental Test Pilots, National Academy of Engineering Award and Gold Medals for his wine making!



**William R. Gray III, Lt Col, USAF (Ret.)**  
**Class 91B**

Bill “Evil” Gray is currently the Chief Test Pilot for the USAF TPS. After graduating from the USAF Academy in 1983, he began his career as a T-37 instructor pilot and went on to fly the F-111A and FB-111. Following selection for the USAF TPS, Bill began his flight test career in 1992 as a Distinguished Graduate. He initially served as an F-15C/E test pilot and the Chief Test Pilot for the flight evaluation that resulted in the selection of the T-6A Texan II to replace the venerable T-37. In 1995 he joined the F-117A Combined Test Force where he executed a wide variety of flight test missions in addition to serving as the Operations Officer and aerobatic demonstration pilot. Bill finished his USAF career as the Test Safety Division Chief at Edwards AFB.

He began his association with the TPS in 1997 as a “guest-help” T-38 instructor pilot and continued until retiring from USAF active duty in 2003. The USAF TPS quickly hired Bill as their first civil service IP and selected him as their first Chief Test Pilot in 2006. He has been instrumental in modernizing and refining the USAF TPS curriculum, but he has also made significant contributions to the science of aircraft control and flight test methodology. In 2004 Bill conjectured and modeled Boundary-Avoidance Tracking, now internationally recognized as an important source of hazardous pilot/vehicle interactions. In 2009, he built upon the lessons learned from numerous platform-specific dive safety planning methods to create a platform-independent method he named “Time Safety Margin (TSM).” TSM improved both the safety and efficiency of dive planning and is now required for USAF developmental testing and in use internationally.

Bill has over 5,000 flight hours in over 90 aircraft types. He has been an instructor pilot in the T-37, A-37, F-15, F-117, and FB-111. He is currently instructing in the F-16, T-38, and the NF-16D variable-stability aircraft. In 2012, his first year of eligibility, Bill was recognized as an “Outstanding Alumnus” of the USAF TPS.



**Andre A. Gerner, Colonel, USAF (Ret.)**

**Class 91A**

**Commandant July 2005 to July 2007**

Colonel Andre A. Gerner entered the Air Force as a graduate of the USAF Academy, Class of 1981. He served operationally as a Strategic Air Command pilot in the KC-135 and KC-10, having participated in the crises of Panama and Southwest Asia. After graduating from the USAF Test Pilot School, he conducted developmental flight test in the T-1 and C-17. Thereafter, he collaborated on an airfield capacity study as a RAND Research Fellow, and subsequently served at the USAF Academy as an Assistant Professor and Deputy Head of the Aeronautics Department. Colonel Gerner then attended the National War College, Class of 2001, after which he served as the Director of Operations of NATO's CAOC-5 in Italy, with responsibility for the aerial contingency operations over the Balkans. Returning stateside to the Electronic Systems Center, he oversaw horizontal integration efforts as the Deputy Director for C4ISR Enterprise Integration and was subsequently appointed Division Chief and Program Manager of the Air Force Distributed Common Ground System, responsible for transforming the Air Force's distributed ISR weapon system into a net-centric enterprise.

Subsequently, Colonel Gerner served as the Commandant of the USAF Test Pilot School, producing highly educated test professionals to lead and conduct the Developmental Test and Evaluation of aerospace weapon systems. From then on, he served as the Deputy Director of Information Dominance Programs under the Assistant Secretary of the AF for Acquisition, having responsibility for the planning and programming of all acquisition and modernization activities of the Air Force's portfolio of C4ISR programs. Finally, he served as the Director of Intelligence, Analyses and Assessments at the AF Operational Test and Evaluation Center, providing technical oversight of the Operational Test and Evaluation of all major Air Force acquisition programs. Concluding 30 years of service, Colonel Gerner retired as a command pilot with more than 3,700 flying hours in over 70 different aircraft.



**David L. Van Hoy, Lt Col, USAF (Ret.)**  
**Class 94A**

David Vanhoy is presently the Technical Director of the USAF Test Pilot School. He is a North Carolina native who received a Bachelor's Degree in Aerospace Engineering from Georgia Tech, a Master's Degree in Aerospace Engineering from the University of Maryland, and was a Distinguished Graduate of the US Air Force Test Pilot School class 94A. He started work at the Air Force Flight Test Center in 1988 as a flying qualities engineer on the X-29 High Angle-of-Attack (AOA) program and has worked as a project engineer, lead engineer, project manager, TPS FQ instructor, and Branch Chief during his 26+ years in flight test. He's accumulated over 600 hours as a Flight Test Engineer (FTE) in over 70 different military and civilian aircraft with the majority of the time in various versions of the F-16 and T-38. He has also logged over 1,000 hours as PIC in light aircraft, including the initial flights and envelope expansion of an experimental aerobatic monoplane that he built with a 94A classmate in their garage.

He is a Certified Flight Instructor in Gliders; holds a FAST card for safety and proficiency in formation flying; and has qualified to race in the Sports Class at the National Air Races in Reno. He has authored or co-authored over a dozen different papers and technical reports, was the RL Jones award winner as the top FTE in TPS Class 94A, is a recipient of the prestigious Kelly Johnson Award, and is a Fellow of the Society of Flight Test Engineers.