U.S. ARMY EXPERIMENTAL TEST PILOT PROGRAM

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5 April 2019
Purpose

• To brief Pilots and Leaders about the Experimental Test Pilot Program in an effort to inform all eligible pilots about the opportunities available, with the ultimate goal of recruiting the best possible candidates into the test community.

• Selected personnel will test new and emerging technologies designed to enhance our warfighting capability, ensuring that we maintain the leading edge of that capability over our enemies around the world.
Agenda

• What is an Experimental Test Pilot?
• Army flight test organizations
• Acquisition and the role of the XP
• XP program selection
• USNTPS Overview
• XP career progression
• Frequently asked questions
• How to apply
Flight Test Video

RTC Flight Test video can be viewed at the following link:
https://www.milsuite.mil/video/15252

This is AFTD
Army XP Duty Locations

ADD-A
Aviation Development Directorate – Ames
NASA Ames Research Ctr
Moffett Field, CA
1x officer

RTC
Redstone Test Center
Redstone Arsenal, AL
10x officer
12x warrant

SIMO
Systems Integration and Management Office (ARSOAC)
Fort Campbell, KY
1x officer
1x warrant

NTPS
U.S. Naval Test Pilot School
Patuxent River, MD
2x warrant

ADD-E
Aviation Development Directorate - Eustis
Ft. Eustis, VA
7x officer
3x warrant

RWTES
British Rotary Wing Test & Evaluation Squadron
MoD Boscombe Down
1x officer

Active XPs
19 Officers
18 Warrant Officers
What is an XP? AR 95-1 says…

4–29. Experimental test pilot
The experimental test pilots (XP) are graduates of the U.S. Naval Test Pilot School or other accredited test pilot schools and are designated by the commander to perform experimental and engineering flight tests.

(AR 95-1 dated March 2018)
What is an XP?

An Experimental Test Pilot is:

• An experienced officer
• A proficient aviator
• A technical writer
• An articulate communicator

The delivery to the field of a useful piece of aviation equipment depends on the XP’s ability to relate its performance in test to the mission of the aircraft.

It involves a different way of thinking!
The XP’s role in Acquisition

Concepts and Requirements Directorate (CRD) establishes aircraft requirements (user representative)

Program/Product Managers (PM) fill requirements with materiel purchases (aircraft, systems, etc.)

XP’s plan, execute, and report on flight test results of the equipment to enable PMs to make informed materiel decisions
XP General Selection

Criteria

• HRC Announcement (latest message: MILPER 19-084)
  • Annual release late-Fall/early Winter (3MAR19)
  • Spring Packets (15MAY19) and Board (26JUN19)
  • Phase II Summer-Fall
  • Results end-Fall

• General Criteria
  – Active Duty Aviation officer in career status
  – Have demonstrated performance indicative of continued selection for promotion.
  – Ability to pass Naval Swim Test and Flight Physical
  – Have 500 rotary wing aircraft flight hours, not including Simulator Flight Time (SFT), and be a Pilot In Command (PIC).
  – 4 year ADSO regardless of completion
XP Selection Criteria

Commissioned Officers

- Year group specific - per MILPER message (19-084 YG 11-14)
- May forfeit or have restrictions imposed on GRADSO
- Have completed, or currently in one of the key developmental operational assignments specified as goals in DA PAM 600-3 paragraph 11-3C.(2) [company command or equivalent]
XP Selection Criteria

Warrant Officers

- Grade W2 or higher (un-biased)
- Military Education Level appropriate for grade
- Sufficient time remaining on active duty after training to complete 4 year ADSO
XP Desirable
Selection Criteria

Highly Desirable:

- Degree in an engineering, mathematical, or science discipline
  - Desirable Courses: calculus, statistics, differential equations, aircraft stability and control, thermodynamics, strength of materials, fluid mechanics, propulsion, vibration analysis, aerodynamics and performance
  - Experience with MS Excel or Matlab
- IP, IE, MP, ME
- 200 hours PC and 1000 hours total time
- Robust operations background

Selections are made on a best-qualified basis – IF YOU DON’T APPLY, YOU WON’T BE SELECTED!
XP Program Selection

Two-phase selection process:

- **PHASE I**: DA selection panel determines candidates best suited for Phase II

- **PHASE II**: Approximately one week long; conducted at Redstone Arsenal, AL
  
  • Academics
  • Technical writing and data reduction assignments
  • Hands-on flight test (both FW & RW)
  • Board interview

*Two-Way Look*
**XP Program Post Selection**

**Commissioned officers** are career field designated into FA51, Acquisition Corps (Force Sustainment)
- Managed by Acquisition Branch (Acq. KD)

**Warrant officers** remain in Aviation Branch
- Managed by XP career manager’s office

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**FWMEQC (C-12) course** (10 weeks, Dothan, AL)

- **Acquisition Basic Course**
  - (8 weeks; Huntsville, AL)

- **Professional Military Education** (if required)

- **CGSC (ILE) Satellite Course**
  - (15 weeks, Redstone Arsenal, AL)

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- **(O) Additional aircraft qualifications** (timeline dependent)
- **(O) Advanced Civil Schooling** (timeline and availability dependent)

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- **United States Test Pilot School** (12 months, NAS Patuxent River)

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**UNCLASSIFIED**
USNTPS Overview (1 of 5)

• U.S. Naval Test Pilot Course conducted at NAS Patuxent River, MD

• 12 Months duration, with two class starts per year

• USNTPS is like nothing else you’ve ever done, and will test your limitations
  • Outstanding Technical Program (not fondly remembered by some)
  • Not a course of attrition
USNTPS Overview (2 of 5)

• Classes comprised of 30+ USA, USMC, USN, USAF, USCG, and international pilots and engineers

• Curriculum divided into Rotary Wing, Fixed Wing, and Systems programs

• Daily work breakdown:
  + 50% academic instruction*
  + 50% flying*
  + 50% report writing/classwork**

** 150%

* Rotary wing program includes more academic instruction and flying (+25%) than the fixed wing or systems programs
** Night and weekend work
USNTPS Overview (3 of 5)

- UH-72A and UH-60A/L training at Western ARNG Aviation Training Site (WAATS) in Marana, AZ. Two weeks of training for each airframe. Approximately 6 simulator hours and 8 flight hours each.

- Rotary wing syllabus includes flights 3-4 days per week
  - Five primary aircraft (UH-60A/L*, UH-72A*, OH-58C, C-12, UH-60 VSS)
  - Additional aircraft (Learjet VS, U-1 Otter, U-6 Beaver, X-26 Glider, T-38 Jet Trainer, T-6 Texan II, F/A-18 Hornet)
  - Qualitative evaluations (i.e. MD-500C, MD-530F, S-55T, OH-6, H-3, NOTAR)

* BIG BOY RULES: You are PC/single pilot (with FTE) after only 10 hours of training and evaluation. At 20 hours you will strap on a parachute and oxygen, and will take the aircraft to 18,000’ MSL.
USNTPS Overview (4 of 5)

Rotary Wing Syllabus

• First Half: Performance:
  • Rotary wing
  • Fixed Wing “Intro/Demo”

• Second Half: Handling Qualities:
  • RW
  • FW “Intro/Demo”

• Cycled in:
  • Systems (FLIR, radar, digital communication)
  • UAV Program expanding
  • Human factors, pilot-vehicle interface
  • Variable stability labs and flights (4x Calspan Learjet, 2x UH-60 VSS)
  • Advanced Flight control systems
  • Autorotation and H-V diagram assessments (OH-58C)
  • High lift/drag (X-26 glider)
  • Qualitative evaluations
USNTPS Overview (5 of 5)

DT-IIA Capstone Exercise (approximately 1 month)

- Consists of a tailored, comprehensive plan, test, and report on an unfamiliar aircraft at an unfamiliar location (i.e. France, Brazil, Germany, Sweden, England)

V-22 Osprey
AW-101 Merlin
EC-665 Tiger
SA330 Puma
MD Explorer
AW-159 Wildcat
HH-65 Dolphin
CH-53 Sea Stallion
XP Program Post USNTPS

Comissioned officers (2 years)
AFTD Leadership/Test Director/Project Pilot

Warrant officers (3-4 years)
Test Director/Project Pilot/SP/IE/MP/System SME

Assigned to Redstone Arsenal, AL or Fort Eustis, VA

Daily lifestyle similar to USNTPS
Plan, Test, and Report on Aircraft or Aircraft Systems testing
Autonomous work environment
Expect TDY to other test sites: Eglin, AFB, Aberdeen Proving Ground, MD, Yuma Proving Ground, AZ, etc.
Additional Aircraft Qualifications (if required)

Assistant Program Manager (2 years)
O-4 Key Developmental Assignment

Regreening (1-2 years)
TCM, USAACE, BN Leadership/Staff

Return to Test
2nd XP Tour

Remain Acq.
Nominal Assignment

2nd XP Tour (2-3 years)
AFTD, ADD-E, SIMO, USNTPS

CSL
AFTD/ADD-E CMD

PM
O-5 KD

STOP

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Regreening (1-2 years)
BDE Leadership/Staff
XP Career Progression - Officer

Acquisition Corps Timeline

XP Timeline
XP Career Progression - Warrant

Standard WO Timeline

CO level and above: SP1E, MP, TACOPS, Safety

BN level and above: SP1E, ME, TACOPS, Safety, BAMO, Master Gunner, Staff Positions

BDE level and above: CWOB, SP1E, ME, TACOPS, Safety, BAMO, Master Gunner, Staff Positions

XP WO Career Path

Think of XP as a second track after your primary track

Opportunities:
- Graduate School
- Multiple Transitions
- Broadening Assignments (HRC, TCM, PM, USAACE, etc.)

RTC XP, Test Director, SP1E/MP, System SME (24-36 months)

“Regreening” Opportunities CO/BN level and above: SP1E, ME, TACOPS, Safety, BAMO, Master Gunner, Staff Positions, TCM, USAACE Positions (12-24 months)

2nd XP Tour: RTC, ADD-E, USNTPS, SIMO (24-36 months)

“Regreening” Opportunities BDE level and above: SP1E, ME, TACOPS, Safety, BAMO, Master Gunner, Staff Positions (12-24 months)
Frequently Asked Questions

• What is the recommended timeline to pursue “competing” career opportunities (160th SOAR, grad school, etc.)?
  It depends...

• Can Medical Service officers apply?
  Yes

• Can NG/USAR apply?
  Current MILPER - No, you must be active

• Do UAS Operators qualify?
  Must be or have been a rated aviator to apply; UAS testing is covered by RCMs

• Will I remain airframe pure?
  Testing typically stays within experience/background
  Multiple categories and series for test support
Frequently Asked Questions (cont.)

- Graduate Civilian Education Opportunities
  - ACS – unlikely for RLO; recommendations possible from USNTPS
  - NPS – structured partnership with USNTPS for both WO and RLO (MS in SE/ES)
    - No ADSO; does not count as TA or other military benefits
    - No out of pocket (books for WO) WO funded by AFTD; RLO by AMB
    - 8 classes, 2 years
    - Credits granted and DTII accepted as master’s thesis
How to Apply

• Read the MILPER message:
  https://www.hrc.army.mil/Milper/19-084

• Continue to do great things at your unit

• Attend professional military education commensurate with grade

• Pursue civilian education if necessary (i.e. degree completion or brushing up old skills; math & physics)

• Submit a packet!
Web Links

MILPER 19-084
https://www.hrc.army.mil/Milper/18-004

USNTPS
http://www.navair.navy.mil/nawcad/usntps

Society of Experimental Test Pilots
https://www.setp.org/

Redstone Test Center
www.rtc.army.mil/

USNTPS Videos
https://www.youtube.com/watch?v=LP_0ZIEY8T4
https://www.youtube.com/watch?v=WFkyYYH6Zgc
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