



# TALONS



**AIR FORCE ROTC DETACHMENT 157**  
EMBRY-RIDDLE AERONAUTICAL UNIVERSITY



# *Train to Fight, Fight for Others*

## **Detachment 157 Mission:**

To commission the most prepared and driven second lieutenants in the U.S. Air Force or Space Force

Cadet Name: \_\_\_\_\_

Squadron: \_\_\_\_\_

Squadron Commander: \_\_\_\_\_

Wingman: \_\_\_\_\_

Phone Number: \_\_\_\_\_

Email: \_\_\_\_\_

*“In order for one group of sovereign people to reap the blessings of life, liberty, and the pursuit of happiness, there must be another group. Another group who are willing to sacrifice and forgo those sacred rights...Those are our warriors.”*

-Lieutenant Commander Jocko Willink, USN

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## **What is Talons?**

Talons is a booklet containing a multitude of supplementary information that is not typically offered by any other AFROTC detachment in the nation. It is with this knowledge that you will sharpen your mind as a future officer in the United States Air Force. **You are a wingman, a leader, and a warrior.** Although you are a cadet, you should think in terms of being an officer candidate preparing to meet the United States near peer adversaries. The knowledge within this booklet contains highly pertinent information that can be related to active duty. This booklet is divided into two sections. Section 1 contains all the material that is considered to be testable. You will receive further guidance on what to study and when to study it. For aircraft recognition, you will only be formally tested on visual recognition of the aircraft, primary function, and crew capacity. Section 2 consists of important additional information that will aide you in understanding your role as an officer candidate and eventually a 2d Lt in the United States Air or Space Force as well as enhance your leadership traits and put you in the mindset to lead your peers.

## **Why Read Talons?**

It is imperative that you begin the process of familiarizing yourself with the many assets of the United States Air Force. Regardless of what AFSC you intend to enter, the information contained in this booklet will no doubt develop you as a leader. It will allow you to learn discipline and a strong work ethic. The motto for this semester is Train to Fight, Fight for Others. We are the Detachment 157 Soaring Eagles. **An eagle's greatest asset is its Talons, and an officer's greatest asset is their mind.**



## **Air Force Core Values**

Integrity First

Service Before Self

Excellence in All We Do

## **Space Force Core Values**

Character, Connection, Commitment, and Courage

## **Airman's Creed**

I am an American Airman.

I am a Warrior

I have answered my Nation's call.

I am an American Airman.

My mission is to Fly, Fight and Win.

I am faithful to a proud heritage,

A tradition of honor,

And a legacy of valor.

I am an American Airman,

Guardian of freedom and justice,

My Nation's sword and shield,

Its sentry and avenger.

I defend my country with my life.

I am an American Airman:

Wingman, Leader, Warrior.

I will never leave an Airman behind,

I will never falter,

And I will not fail.

## Air Force Song

Off we go into the wild blue yonder,  
Climbing high into the sun;  
Here they come zooming to meet our thunder,  
At 'em now, give 'em the gun!  
Down we dive, spouting our flame from under,  
Off with one helluva roar!  
We live in fame or go down in flame. Hey!  
Nothing'll stop the U.S. Air Force!

Brilliant minds fashioned a crate of thunder,  
Sent it high into the blue;  
Valiant hands blasted the world asunder;  
How they lived God only knew!  
Boundless souls dreaming of skies to conquer,  
Gave us wings, ever to soar!  
With scouts before and bombers galore. Hey!  
Nothing'll stop the U.S. Air Force!

Here's a toast to the host  
Of those who love the vastness of the sky.  
To a friend we send a message of the brave who serve on high.  
We drink to those who gave their all of old,  
Then down we roar to score the rainbow's pot of gold.  
A toast to the host of those we boast, the U.S. Air Force!

Off we go into the wild sky yonder,  
Keep the wings level and true;  
If you'd live to be a gray-haired wonder  
Keep the nose out of the blue!  
Fly to fight, guarding the nation's border,  
We'll be there, followed by more!  
In echelon we carry on. Hey!  
Nothing'll stop the U.S. Air Force!

## Space Force Song

We're the mighty watchful eye,  
Guardians beyond the blue.  
The invisible front line,  
Warfighters brave and true.  
Boldly reaching into space,  
There's no limit to our sky.  
Standing guard both night and day,  
We're the Space Force from on high!









*“Bottom line, we must protect space... It underpins every instrument of national power — diplomatic, information, military and economic.”*

-General John W. Raymond, USSF Retired











*“...Integrated deterrence means working seamlessly across all domains and across the full spectrum of conflict, in lockstep with our unparalleled network of allies and partners, to make it clear to any potential adversary that the risks and the costs of aggression far outweigh any conceivable gains. And the United States Space Force is crucial to integrated deterrence.”*

-The Honorable Lloyd J. Austin III

## AFROTC Cadet Ranks











Title	Abbreviation	Insignia
Cadet Fourth Class	C/4C	
Cadet Third Class	C/3C	
Cadet Second Lieutenant	C/2d Lt	
Cadet First Lieutenant	C/1st Lt	
Cadet Captain	C/Capt	
Cadet Major	C/Maj	
Cadet Lieutenant Colonel	C/Lt Col	
Cadet Colonel	C/Col	

# Officer Rank Structure










Grade	Title		Insignia
	Air Force/Space Force/Marines/Army	Navy	
O-1	Second Lieutenant (2d Lt)	Ensign (ENS)	
O-2	First Lieutenant (1st Lt)	Lieutenant Junior Grade (LTJG)	
O-3	Captain (Capt)	Lieutenant (LT)	
O-4	Major (Maj)	Lieutenant Commander (LCDR)	
O-5	Lieutenant Colonel (Lt Col)	Commander (CDR)	
O-6	Colonel (Col)	Captain (CAPT)	
O-7	Brigadier General (Brig Gen)	Rear Admiral, Lower Half (RDML)	
O-8	Major General (Maj Gen)	Rear Admiral, Upper Half (RADM)	
O-9	Lieutenant General (Lt Gen)	Vice Admiral (VADM)	
O-10	General (Gen)	Admiral (ADM)	



# Air Force Enlisted Rank Structure

Grade	Title	Insignia
E-1	Airman Basic (AB)	N/A
E-2	Airman (Amn)	
E-3	Airman First Class (A1C)	
E-4	Senior Airman (SrA)	
E-5	Staff Sergeant (SSgt)	
E-6	Technical Sergeant (TSgt)	
E-7	Master Sergeant (MSgt) <i>Diamond denotes First Sergeant</i>	
E-8	Senior Master Sergeant (SMSgt) <i>Diamond denotes First Sergeant</i>	
E-9	Chief Master Sergeant (CMSgt) <i>Diamond denotes First Sergeant</i> <i>Star denotes Command Chief (CCM)</i> <i>Eagle denotes Chief Master Sergeant of the Air Force (CMSAF)</i>	  

# Space Force Enlisted Rank Structure

Grade	Title	Insignia
E-1	Specialist 1 (Spc1)	
E-2	Specialist 2 (Spc2)	
E-3	Specialist 3 (Spc3)	
E-4	Specialist 4 (Spc4)	
E-5	Sergeant (Sgt)	
E-6	Technical Sergeant (TSgt)	
E-7	Master Sergeant (MSgt)	
E-8	Senior Master Sergeant (SMSgt)	
E-9	Chief Master Sergeant (CMSgt) <i>Space Force logo denotes Chief Master Sergeant of the Space Force (CMSSF)</i>	

## **Chain of Command**

Commander-in Chief: *The Honorable Joseph R. Biden Jr.*

Secretary of Defense: *The Honorable Lloyd J. Austin III*

Secretary of the Air Force: *The Honorable Frank Kendall III*

Chairman of the Joint Chiefs of Staff: *Gen Charles Q. Brown Jr.*

Chief of Staff of the Air Force: *Gen David W. Allvin*

Chief of Space Operations: *Gen B. Chance Saltzman*

AETC Commander: *Lt Gen Brian S. Robinson*

Air University Commander: *Lt Gen Andrea D. Tullos*

Holm Center Commander: *Brig Gen Houston R. Cantwell*

AFROTC Commander: *Col Corey M. Ramsby*

Southeast Region Commander: *Col Aaron L. Ruona*

Det 157 Commander: *Col W.R. Alan Dayton*

Det 157 Operations Officer: *Capt Ryan M. Vickers*

# Aircraft Recognition

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# A-10C Thunderbolt II



**Manufacturer:** Fairchild Republic

**Primary Function:** Close Air Support and Attack

**Crew:** 1 Pilot

**Armament:** GAU-8 Avenger 30 mm Rotary Cannon

11 Hardpoints for Rockets, Missiles or Guided/Unguided Bombs

**Powerplant:** 2x General Electric TF-34-GE-100A Turbofans

**Top Speed:** 381 kts

**Range:** 220 NM, AR capable

**Distinguishing Features:** High mounted engines, low mounted straight wings,  
30mm Barrel Protruding from the nose

# A-29 Super Tucano



**Manufacturer:** Embraer

**Primary Function:** Light Attack, Counter Insurgency Aircraft & Trainer

**Crew:** 1 Pilot, 1 Combat Systems Officer

**Armament:** 2 internal wing-mounted .50-caliber machine guns (200 rd each), up to 3,714 lb of external weapons on four wing and 1 centerline station.

**Powerplant:** Pratt & Whitney Canada PT6

**Top Speed:** 320 kts

**Range:** 720 NM

**Distinguishing Features:** Single 5 Bladed Propeller at front of aircraft, Bubble canopy

# AC-130J Ghost rider



**Type of Aircraft:** C-130

**Manufacturer:** Lockheed Martin

**Primary Function:** Close air support and air interdiction with associated collateral missions

**Crew:** 2 Pilots, 1 Combat Systems Officers, 1 Weapon System Operator, 1 Sensor Operator and four Special Mission Aviators

**Armament:** Precision Strike Package with 30mm and 105mm cannons and Standoff Precision Guided Munitions (i.e. GBU-39 Small Diameter Bomb, GBU-69 Small Glide Munition, AGM-114 Hellfire missile and AGM-176 Griffin missile)

**Powerplant:** 4x Rolls-Royce AE 2100D3 Turboprops

**Top Speed:** 362 kts

**Range:** 3,000 NM, AR capable

**Distinguishing Features:** 30mm and 105mm Guns protruding from left side of the aircraft

# AC-130W Stinger II



**Type of Aircraft:** C-130H

**Manufacturer:** Lockheed Martin

**Primary Function:** Close air support and air interdiction with associated collateral missions

**Crew:** 2 Pilots, 1 Combat Systems Officers, 1 Weapon System Operator, 1 Sensor Operator and four Special Mission Aviators

**Armament:** Precision Strike Package with 30mm and 105mm cannons and Standoff Precision Guided Munitions (i.e. GBU-39 Small Diameter Bomb, GBU-69 Small Glide Munition, AGM-114 Hellfire missile and AGM-176 Griffin missile)

**Powerplant:** 4x Rolls-Royce AE 2100D3 Turboprops

**Top Speed:** 300 kts

**Range:** 2,500 NM, AR capable

**Distinguishing Features:** 30mm and 105mm Guns protruding from left side of the aircraft, four blade props distinguish from Ghost rider



# OA-1K Sky Warden



**Type of Aircraft:** Air Tractor AT-802

**Manufacturer:** Air Tractor and L3Harris

**Primary Function:** Light Attack/Armed Reconnaissance

**Crew:** 2 Pilots

**Armament:** 10 Hardpoints for Light Munitions like rockets or bombs,

**Powerplant:** 1x Pratt and Whitney PT6A-67F Turboprop

**Top Speed:** 213 kts

**Range:** 1,303 NM

**Distinguishing Features:** Fixed Tailwheel Gear setup, 5 Bladed Turboprop Engine

# B-1B Lancer



**Manufacturer:** Boeing, North America (formerly Rockwell International, North American Aircraft)

**Primary Function:** Long-range, multi-role, heavy bomber

**Crew:** 2 Pilots and 2 Combat Systems Officers

**Armament:** Up to 50,000 lbs of guided/unguided bombs or standoff munitions, no longer nuclear capable

**Powerplant:** Four General Electric F101-GE-102 turbofan engine with afterburner

**Top Speed:** 721 kts (Mach 1.2 at sea level)

**Range:** 2,993 NM, AR capable

**Distinguishing Features:** Variable swept wings, large stabilators halfway up tail, four engines mounted below the swept wings

# B-2A Spirit



**Type of Aircraft:** Fixed Wing- Bomber

**Manufacturer:** Northrop Grumman Corp.

**Primary Function:** Stealth Bombing Missions

**Crew:** 2 Pilots

**Armament:** Up to 50,000 lbs of guided/unguided bombs or standoff munitions,  
and possess nuclear capabilities

**Powerplant:** Four General Electric F118-GE-100 engines

**Top Speed:** 550 kts

**Range:** 6,900 NM, AR capable

**Distinguishing Features:** Flying wing design, black paintjob

# B-52H Stratofortress



**Manufacturer:** Boeing

**Primary Function:** Strategic Bombing

**Crew:** 2 Pilots, 1 Weapons System Officer, 1 Navigator, 1 Electronic Warfare Officer

**Armament:** Up to 70,000 lbs of guided/unguided bombs or standoff munitions, and possess nuclear capabilities

**Powerplant:** 8x Pratt & Whitney TF33-P-3/103 Turbofans

**Top Speed:** 560 kts

**Range:** 7,600 NM, AR capable

**Distinguishing Features:** Eight turbofan engines mounted in pairs, long slender fuselage



# B-21 Raider



**Manufacturer:** Northrop Grumman

**Primary Function:** Stealth Strategic Bombing

**Crew:** Unknown

**Armament:** Conventional and nuclear weapons

**Powerplant:** Unknown

**Top Speed:** Unknown

**Range:** Unknown

**Distinguishing Features:** Flying wing design similar to B-2

**Footnote:** Expected Entry Service Date is 2027



# C-5M Galaxy



**Manufacturer:** Lockheed Martin

**Primary Function:** Outsize Cargo Transport

**Crew:** 2 Pilots, 2 Flight Engineers and 3 Loadmasters

**Powerplant:** 4x F-138-GE100 General Electric engines

**Top Speed:** 462 kts

**Range:** 4,800 NM with 120,000 lbs of cargo, AR capable

**Max Cargo Load:** 281,001 lbs

**Distinguishing Features:** Large fuselage, large tail with horizontal stabilizers mounted at top

# C-12J Huron



**Type of Aircraft:** Raytheon 1900C Regional Airliner

**Manufacturer:** Raytheon Aircraft Company (formerly the Beech Aircraft Corporation)

**Primary Function:** Passenger & cargo airlift or Aeromedical Evacuation

**Crew:** 2 Pilots

**Powerplant:** 2x Pratt & Whitney PT6A-65B turboprop engines

**Top Speed:** 289 kts

**Range:** 1,450 NM

**Max Cargo Load:** 3,500 lbs

**Distinguishing Features:** Turboprop engines mounted on the low wings on either side of the fuselage, high mounted horizontal stabilizer

# C-17A Globemaster III



**Manufacturer:** Boeing

**Primary Function:** Cargo & Troop Transport

**Crew:** 2 Pilots, 1 Loadmaster

**Powerplant:** 4x Pratt & Whitney F117-PW-100 turboprop engines

**Top Speed:** 450 kts

**Range:** 2,420 NM with 157,000 lbs of cargo, AR capable

**Max Cargo Load:** 170,900 lbs

**Distinguishing Features:** Four engines mounted on the high wing with large winglets at the tip of each wing, T-Tail

# C-130J Super Hercules



**Manufacturer:** Lockheed Martin

**Primary Function:** Global Airlift

**Crew:** 2 Pilots, 1 Loadmaster

**Powerplant:** 4x T56-A turboprop engines

**Top Speed:** 356 kts

**Range:** 2,000 NM, AR capable

**Max Cargo Load:** 44,500 lbs

**Distinguishing Features:** Four turboprop engines mounted on the high wing design, horizontal stabilizers mounted at bottom of tail

**Footnote:** Crew differs for the older C-130E/H models



# C-146A Wolfhound



**Type of Aircraft:** Dornier 328

**Manufacturer:** Dornier

**Primary Function:** Flexible, Rapid, Intra-Theater Mobility for Special Operations Forces

**Crew:** 2 Pilots, 1 Loadmaster

**Powerplant:** 2x Pratt & Whitney PW119C turboprops

**Top Speed:** 270 kts

**Range:** 1,500

**Max Payload:** 27 PAX, or 6,00 lbs of cargo, or 4 litter patients

**Distinguishing Features:** Twin engines mounted on high wings, with T-tail on back

# CV-22 Osprey



**Manufacturer:** Bell Helicopter and Boeing

**Primary Function:** Special operations forces long-range infiltration, exfiltration and resupply

**Crew:** 2 Pilots, 1 or 2 Flight Engineers/Crew Chiefs/Loadmaster/Gunner

**Armament:** 1 .50 cal machine gun on-ramp

**Powerplant:** 2x Rolls-Royce T406-AD-400 turboprop/turboshaft engines

**Top Speed:** 280 kts

**Range:** 500 NM, AR capable

**Max Payload:** 24 PAX seated, 32 PAX on the floor, 10K lbs of cargo

**Distinguishing Features:** Tilt-rotor engines, extendable refueling probe

# E-3 Sentry (AWACS)



**Type of Aircraft:** Boeing 707/320

**Manufacturer:** Boeing

**Primary Function:** Airborne battle management, command and control

**Crew:** 2 Pilots, 1 Navigator, 1 Flight Engineer and 13-19 Specialists (mission crew size varies according to mission)

**Powerplant:** 4x Pratt and Whitney TF33-PW-100A turbofan engines

**Top Speed:** 461 kts

**Range:** 4,000 NM, AR capable

**Distinguishing Features:** Large Radar disk on the top of the aircraft

**Footnote:** AWACS stands for Airborne Warning and Control System

# E-4B Nightwatcher



**Type of Aircraft:** Boeing 747-200

**Manufacturer:** Boeing

**Primary Function:** Airborne operations center

**Crew:** 4 Aircrew and 108 mission specialists, including a joint-service operations team, Air Force flight crew, maintenance and security compartment, communications team and selected augmentees

**Powerplant:** 4x General Electric CF6-50E2 turbofan engines

**Top Speed:** 523 kts

**Range:** 6,200 NM, AR capable

**Distinguishing Features:** Large hump on top of fuselage, four underwing engines

**Footnote:** Airborne Operations mission is used as the National Military Command System in the event of a crisis and can also be used for Nuclear Command and Control



# E-7A Wedgetail



**Type of Aircraft:** Boeing 737

**Manufacturer:** Boeing and Northrop Grumman

**Primary Function:** Airborne battle management, command and control

**Crew:** 2 Pilots, 6-10 Mission Specialists (mission crew size varies according to mission)

**Powerplant:** 2x CFM International CFM56-7B27A turbofans

**Top Speed:** 460 kts

**Range:** 4,000 NM, AR capable

**Distinguishing Features:** Large fixed wedge-shaped radar array on top

**Footnote:** The E-7A is set to replace the E-3 with the first entering service in 2027

# E-8C JSTARS



**Type of Aircraft:** Boeing 707-300

**Manufacturer:** Northrop Grumman Corp.

**Primary Function:** Airborne battle management and intelligence, surveillance, and reconnaissance

**Crew:** 2 pilots, 1 Navigator, 1 Flight Engineer and 18 mission specialists, 15 Air Force and 3 Army (crew size varies according to mission)

**Powerplant:** 4x Pratt and Whitney TF33-102C

**Top Speed:** 510 kts

**Range:** 4,000 NM, AR capable

**Distinguishing Features:** Large ground radar below the fuselage of the aircraft, four engines on the low wing

**Footnote:** JSTARS stands for Joint Surveillance Target Attack Radar System, and is used as an airborne platform to monitor ground assets in support of the Joint Mission

# E-9A Widget



**Type of Aircraft:** Bombardier Dash 8

**Manufacturer:** Bombardier and Sierra Research

**Primary Function:** Airborne telemetry support

**Crew:** 2 Pilots and 2 Mission Operators

**Powerplant:** 2x Pratt & Whitney PW-120A turboprop engines

**Top Speed:** 243 kts

**Range:** 869 NM

**Distinguishing Features:** High wings with two mounted turboprop engines, T-Tail, Large Sensor outfit on the side/bottom of the fuselage

**Footnote:** Only two are operated in AF inventory, in limited mission set and capacity

# E-11A



**Type of Aircraft:** Bombardier Global Express 6000

**Manufacturer:** Bombardier

**Primary Function:** Battlefield Airborne Communications Node

**Crew:** 2 Pilots, unknown number of mission specialists

**Powerplant:** 2x Rolls-Royce BR710

**Top Speed:** 504 kts

**Range:** 6,000 NM

**Distinguishing Features:** Two turbofan engines mounted at the rear of the aircraft, large sensor suite below the fuselage

# EC-130H Compass Call



**Type of Aircraft:** C-130

**Manufacturer:** Lockheed Martin and BAE Systems

**Primary Function:** Electromagnetic Warfare and Suppression of Enemy Air Defenses

**Crew:** 2 Pilot, 1 Navigator, 1 Flight Engineer, 2 Electronic Warfare Officers, 1 Mission Crew Supervisor, 4 Crypto Linguists, 1 Acquisition Operator, 1 Airborne Maintenance Technician

**Powerplant:** 4x Allison T56-A-15 Turboprops

**Armament:** Non-kinetic Energy Waveforms

**Top Speed:** 260 kts

**Range:** 2,641 NM, AR capable

**Distinguishing Features:** 4 bladed propellers, underwing pods at the end of wings



# EC-130J Commando Solo



**Type of Aircraft:** C-130

**Manufacturer:** Lockheed Martin

**Primary Function:** Information Operations and Electronic Attack

**Crew:** 2 Pilots, 1 Combat Systems Officer, 6 Mission Specialists

**Powerplant:** 4x Rolls-Royce AE 2100D3 Turboprops

**Top Speed:** 348 kts

**Range:** 2,300 NM, AR capable

**Distinguishing Features:** Sensors on tail, large underwing pods at the end of the wings

# F-15C Eagle



**Manufacturer:** The Boeing Company

**Primary Function:** Air Superiority Fighter

**Crew:** 1 Pilot

**Armament:** 1 internally mounted M-61A1 20-mm, six-barrel cannon with 940 rounds of ammunition; four AIM-9 Sidewinder and four AIM-120 AMRAAMs or eight AIM-120 AMRAAMs, carried externally.

**Powerplant:** 2x Pratt & Whitney F100-PW-200/229 Turbofans with afterburners

**Top Speed:** Mach 2.54

**Range:** 3,000 NM, AR capable

**Distinguishing Features:** 2 vertical tails, 2 engines, single seat cockpit, lighter paint

**Footnote:** The F-15C is set to be replaced by the F-15EX in the coming years

# F-15E Strike Eagle



**Manufacturer:** The Boeing Company

**Primary Function:** Multirole Strike Fighter

**Crew Size:** 1 Pilot, 1 Weapons Systems Officer

**Armament:** 1 20mm multibarrel gun mounted internally with 500 rounds of ammunition. Four AIM-9 Sidewinder missiles and four AIM-120 AMRAAM or eight AIM-120 AMRAAM missiles. Any air-to-surface weapon in the Air Force inventory (nuclear and conventional)

**Powerplant:** 2x Pratt & Whitney F100-PW-200/229 Turbofans with afterburners

**Top Speed:** Mach 2.5+

**Range:** 2,100 NM, AR capable

**Distinguishing Features:** 2 vertical tails, 2 engines, tandem seat cockpit, conformal fuel tanks on fuselage, darker paint



# F-16 Fighting Falcon



**Manufacturer:** Lockheed Martin

**Primary Function:** Multirole Fighter

**Crew:** 1 Pilot

**Armament:** M-61A1 20mm cannon; external stations can carry up to six air-to-air missiles, conventional air-to-air and air-to-surface munitions and electronic countermeasure pods

**Powerplant:** 1x Pratt and Whitney F100-PW-200/220/229 or General Electric F110-GE-100/129

**Top Speed:** Mach 2

**Range:** 2,277 NM, AR capable

**Distinguishing Features:** Single seat, single vertical stabilizer, single engine, large bubble canopy, cropped-delta wing design

**Footnote:** The F-16CJ is used in Suppression of Enemy Air Defense (SEAD) Missions, under the code name Wild Weasel

# F-22A Raptor



**Manufacturer:** Lockheed-Martin

**Primary Function:** Air Dominance and Multi-Role Fighter

**Crew:** 1 Pilot

**Armament:** M61A2 cannon; 2x AIM-9; 6x AIM-120; 2x GBU-32; 2x AIM-120

**Powerplant:** 2x Pratt & Whitney F119-PW-100 turbofan engines with afterburners and 2-dimensional thrust vectoring nozzles

**Top Speed:** Mach 2.25

**Range:** 1,600 NM, AR capable

**Distinguishing Features:** Twin vertical stabilizers canted outward, light grey paint, squared off flight control surfaces

# F-35A Lighting II



**Manufacturer:** Lockheed Martin

**Primary Function:** Multi-Role Fighter

**Crew:** 1 Pilot

**Armament:** Internal and external capability. Munitions carried vary based on mission requirement.

**Powerplant:** 1x Pratt & Whitney F135-PW-100 turbofan engine

**Top Speed:** 1.6 Mach

**Range:** 1,500 NM, AR capable

**Distinguishing Features:** Twin vertical stabilizers canted outward, single engine, wider appearance

# HC-130J Combat King II



**Manufacturer:** Lockheed Martin

**Primary Function:** Fixed-wing Personnel Recovery platform

**Crew:** 2 Pilots, 1 Combat Systems Officer, 2 Loadmasters

**Powerplant:** 4x Rolls Royce AE2100D3 turboprop engines

**Top Speed:** 330 kts

**Range:** 4,500 NM, AR capable

**Distinguishing Features:** Modified C-130 with 4 underwing pods

# HH-60 Pave Hawk



**Manufacturer:** Lockheed Martin Sikorsky

**Primary Function:** Armed, All-Weather Combat Search and Rescue (CSAR)

**Crew:** 2 Pilots, 1 Flight Engineer, 1 Gunner

**Armament:** 2x 7.62 mm miniguns or 2x .50-caliber machine guns

**Powerplant:** 2x GE Aviation T700-GE-701D turboshafts

**Top Speed:** 159 kts

**Range:** 504 NM, AR capable

**Distinguishing Features:** Modified Blackhawk with long aerial refueling prob  
on front



# KC-10A Extender



**Type of Aircraft:** DC-10

**Manufacturer:** Boeing

**Primary Function:** Aerial Tanker and Transport

**Crew:** 2 Pilots, 1 Flight Engineer, 1 Boom Operator

**Powerplant:** 3x General Electric CF6-50C2 turbofans

**Top Speed:** 468 kts

**Maximum Cargo Payload:** 170,000 Pounds

**Maximum Fuel Load:** 356,000 pounds

**Range:** 3,800 NM, AR capable

**Distinguishing Features:** Only tanker in USAF with fuselage mounted engine

# KC-46A Pegasus



**Type of Aircraft:** Boeing 767

**Manufacturer:** Boeing

**Primary Function:** Aerial Refueling and Airlift/Aeromedical Evacuation

**Crew:** 2 Pilots, 1 Boom Operator

**Powerplant:** 2x Pratt & Whitney PW4062 turbofan

**Fuel Capacity:** 212,299 pounds

**Cargo Capacity:** 65,000 pounds, 58 Passengers

**Top Speed:** 560 kts

**Range:** 6,385 NM, AR capable

**Distinguishing Features:** Only 2 engine tanker

# KC-135 Stratotanker



**Type of Aircraft:** Boeing 707

**Manufacturer:** Boeing

**Primary Function:** Aerial Refueling and Airlift

**Crew:** 2 Pilots, 1 Boom Operator

**Powerplant:** 4x CFM International CFM-56 turbofan engines

**Max Fuel:** 200,000 pounds

**Max cargo:** 83,000 pounds

**Top Speed:** 504 kts

**Range:** 1,303 NM

**Distinguishing Features:** 4 engine tanker with black nose



# MC-130J Commando II



**Type of Aircraft:** C-130

**Manufacturer:** Lockheed Martin

**Primary Function:** Infiltration, exfiltration and resupply of special operations forces by airdrop or airland, air refueling of SOF helicopter/tilt rotor aircraft.

**Crew:** 2 Pilots, 1 Combat Systems Officer, 2 Loadmasters

**Powerplant:** 4x Rolls-Royce AE 2100D3 turboprops

**Top Speed:** 362 kts

**Range:** 3,000 NM, AR capable

**Distinguishing Features:** C-130 with 4 underwing pods

# MQ-9B Reaper



**Manufacturer:** General Atomics

**Primary Function:** Intelligence and Reconnaissance, Precision Strike

**Crew:** 1 Pilot, 1 Sensor Operator

**Armament:** Combination of AGM-114 Hellfire missiles, GBU-12 Paveway II, GBU-38 Joint Direct Attack Munitions, GBU-49 Enhanced Paveway II, and GBU-54 Laser Joint Direct Attack Munitions

**Powerplant:** 1x Honeywell TPE331-10GD turboprop

**Top Speed:** 240 kts

**Range:** 1,000 NM

**Distinguishing Features:** No cockpit, Y-shaped tail, and rear mounted pusher engine

# MC-12W Liberty



**Type of Aircraft:** Beechcraft C-12/King Air 350

**Manufacturer:** Hawker Beechcraft

**Primary Function:** Intelligence, Surveillance, and Reconnaissance

**Crew:** 2 Pilots, 1 Combat Systems Officer, 1 Tactical Systems Operator

**Powerplant:** 2x Pratt & Whitney PT6A-60A turboprops

**Top Speed:** 312 kts

**Range:** 2,400 NM

**Distinguishing Features:** Twin engines, upward wingtips and sensor bubble on top of fuselage

# RC-135V/W Rivet Joint



**Type of Aircraft:** Boeing 707

**Manufacturer:** Boeing and L3 Communications

**Primary Function:** Reconnaissance

**Crew:** 3 Pilots, 2 Navigators, 3 Electronic Warfare Officers, 14 Intel Operators,  
4 Inflight Engineers

**Powerplant:** 4x CFM International F108-CF-201 turbofans

**Top Speed:** 504 kts

**Range:** 3,389 nm, AR capable

**Distinguishing Features:** 4 engines, elongated, black nose

# RQ-4B Global Hawk



**Manufacturer:** Northrop Grumman

**Primary Function:** High Altitude, long-endurance ISR

**Crew:** 1 Launch and Recovery Element (LRE) Pilot, 1 Mission Control Element (MCE) Pilot, 1 Sensor Operator

**Powerplant:** 1x Rolls Royce F137-RR-100 turbofan

**Top Speed:** 310 kts

**Range:** 12,300 NM

**Distinguishing Features:** Large bulbous nose, and V-shaped tail



# U-2S Dragon Lady



**Manufacturer:** Lockheed Martin

**Primary Function:** High Altitude Reconnaissance

**Crew:** 1 Pilot

**Powerplant:** 1x General Electric F118-101 turbofan

**Top Speed:** 412 kts

**Range:** 6.090 NM

**Distinguishing Features:** Long, straight wings, with large vertical stabilizer, and long protruding nose

# T-1A Jayhawk



**Type of Aircraft:** Hawker/Beechjet 400

**Manufacturer:** Raytheon

**Primary Function:** Advanced trainer for airlift and tanker pilots

**Crew:** 2 Pilots, 1 Instructor

**Powerplant:** 2x Pratt and Whitney JT15D-5B turboprop engines

**Top Speed:** 468 kts

**Range:** 2,900 NM

**Distinguishing Features:** Twin, rear mounted engines, and back slopping vertical stabilizer, with high mounted elevators



# T-6A Texan II



**Manufacturer:** Raytheon Aircraft

**Primary Function:** Entry-level trainer

**Crew:** 1 Pilot, 1 Instructor

**Powerplant:** 1x Pratt & Whitney Canada PT6A-68 turboprop

**Top Speed:** 280 kts

**Range:** 900 NM

**Distinguishing Features:** Front mounted prop, low mounted wings, large glass canopy

# T-7 Red Hawk



**Manufacturer:** Boeing/Saab

**Primary Function:** Supersonic Jet Trainer

**Crew:** 1 Pilot, 1 Instructor

**Powerplant:** 1x General Electric F404-GE-103 afterburning turbofan

**Top Speed:** Mach 1.05

**Range:** 990 NM

**Distinguishing Features:** High mounted wings, single engine, V shaped tail

**Footnote:** This aircraft is expected to enter service from 2025 to 2027

# T-38 Talon



**Manufacturer:** Northrop Grumman

**Primary Function:** Advanced Jet Trainer

**Crew:** 1 Pilot, 1 Instructor

**Powerplant:** 2x General Electric J85-GE-5 afterburning turbojet

**Top Speed:** Mach 1.3

**Range:** 991 NM

**Distinguishing Features:** Low mounted swept wing, twin engines at back

# UH-1N Huey



**Type of Aircraft:** UH-1 Huey

**Manufacturer:** Bell Helicopter/ Textron Inc.

**Primary Function:** Light Lift Utility

**Crew:** 2 Pilots, 1 Flight Engineer

**Powerplant:** 2x Pratt and Whitney T400-CP-400 turboshaft engines

**Top Speed:** 130 kts

**Range:** 260 NM

**Distinguishing Features:** Landing skids, twin bladed rotor, protruding nose with back slopping cockpit



# U-28A Draco



**Type of Aircraft:** Pilatus PC-12

**Manufacturer:** Pilatus

**Primary Function:** Special Operations Intelligence, Surveillance and  
Reconnaissance

**Crew:** 2 Pilots, 1 Combat Systems Officer, 1 Tactical Systems Operator

**Powerplant:** 1x Pratt-Whitney PT6A-67B

**Top Speed:** 220 kts

**Range:** 1,500 NM

**Distinguishing Features:** Low mounted wings, twin camera bundle underneath,  
front mounted prop

# C-21 Learjet



**Type of Aircraft:** Learjet 35A

**Manufacturer:** Learjet

**Primary Function:** Passenger and Cargo Airlift

**Crew:** 2 Pilots

**Powerplant:** 2x Garrett TFE-731-2-2B turbofans

**Max Payload:** 8 passengers and 3,153 pounds of cargo or 1 litter or 5x ambulatory aeromedical evac patients

**Top Speed:** 461 kts

**Range:** 2,000 NM

**Distinguishing Features:** High mounted engines, wingtip pods



# VC-25A Air Force 1



**Type of Aircraft:** Boeing 747

**Manufacturer:** Boeing

**Primary Function:** Presidential Transport

**Crew:** 30 crew members—2 Pilots, 1 Flight Engineer, 1 Navigator

**Passengers:** 71

**Powerplant:** 4x General Electric CF6-80C2B1 Turbofans

**Top Speed:** 547 kts

**Range:** 6,800 NM, AR capable

**Distinguishing Features:** Blue paintjob, 4 engines, upper deck at front of aircraft

# C-32 Air Force 2



**Type of Aircraft:** Boeing 757

**Manufacturer:** Boeing

**Primary Function:** Vice-Presidential/VIP Transport

**Crew:** 2 Pilots, plus Cabin/Mission Crew

**Powerplant:** 2x Pratt and Whitney PW2000-40 turbofans

**Top Speed:** 526 kts

**Range:** 5,650 NM, AR capable

**Distinguishing Features:** Blue paintjob, twin underwing engines, upward winglets

# C-40



**Type of Aircraft:** Boeing 737

**Manufacturer:** Boeing

**Primary Function:** High-priority personnel transport

**Crew:** 2 Pilots, 1 Loadmaster

**Max load:** 26-32 for C-40B and 42-111 for C-40C

**Powerplant:** 2x General Electric CFM 56-7B27 turbofans

**Top Speed:** 534 kts

**Range:** 4,000 NM

**Distinguishing Features:** Low to ground, twin underwing engines, upward winglets



# WC-130J Weatherbird



**Type of Aircraft:** C-130

**Manufacturer:** Lockheed Martin

**Primary Function:** Weather Reconnaissance

**Crew:** 2 Pilots, 1 Combat Systems Officer, 1 Weather Officer, 1 Loadmaster

**Powerplant:** 4x Rolls-Royce AE 2100D3 turboprops

**Top Speed:** 362 kts

**Range:** 1,600 NM, AR capable

**Distinguishing Features:** Twin underwing pods, black nose

# WC-135 Constant Phoenix



**Type of Aircraft:** Boeing 707

**Manufacturer:** Boeing

**Primary Function:** Air Sampling and Collection Operations

**Crew:** 2 Pilots, 1 Navigator, 1 Flight Engineer, plus Varying Mission Crew

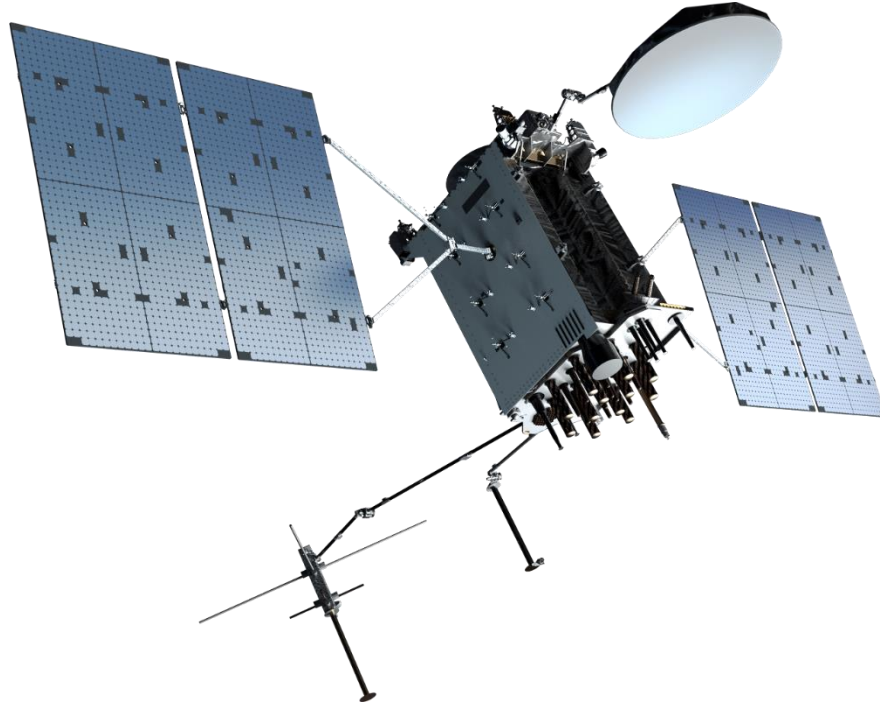
**Powerplant:** 4x Pratt and Whitney TF33-P-9 turboprops

**Top Speed:** 350 kts

**Range:** 4,000 NM, AR capable

**Distinguishing Features:** 4 underwing engines, black nose

# GLOBAL POSITIONING SATELLITE (GPS)



**Manufacturer:** Lockheed Martin

**Bus:** LM2100 Combat Bus

**Primary Function:** Position, Navigation, Timing (PNT)

**Operators:** 2nd Space Operations Squadron (2 SOPS) and 19 SOPS

**Constellation Size:** 31 Satellites

**Orbit:** Medium Earth Orbit-11,000 miles in altitude

**Period:** 12 Hours

**Additional Capabilities:** Search and Rescue Payload, Nuclear Detonation  
Detection Payload, 6 Dedicated Ground Stations



# WIDEBAND GLOBAL COMMUNICATION SYSTEM (WGS)



**Manufacturer:** Boeing

**Primary Function:** Provides worldwide, flexible, high-capacity communications for US Government Agencies, DOD, multiple International Partners, and NATO

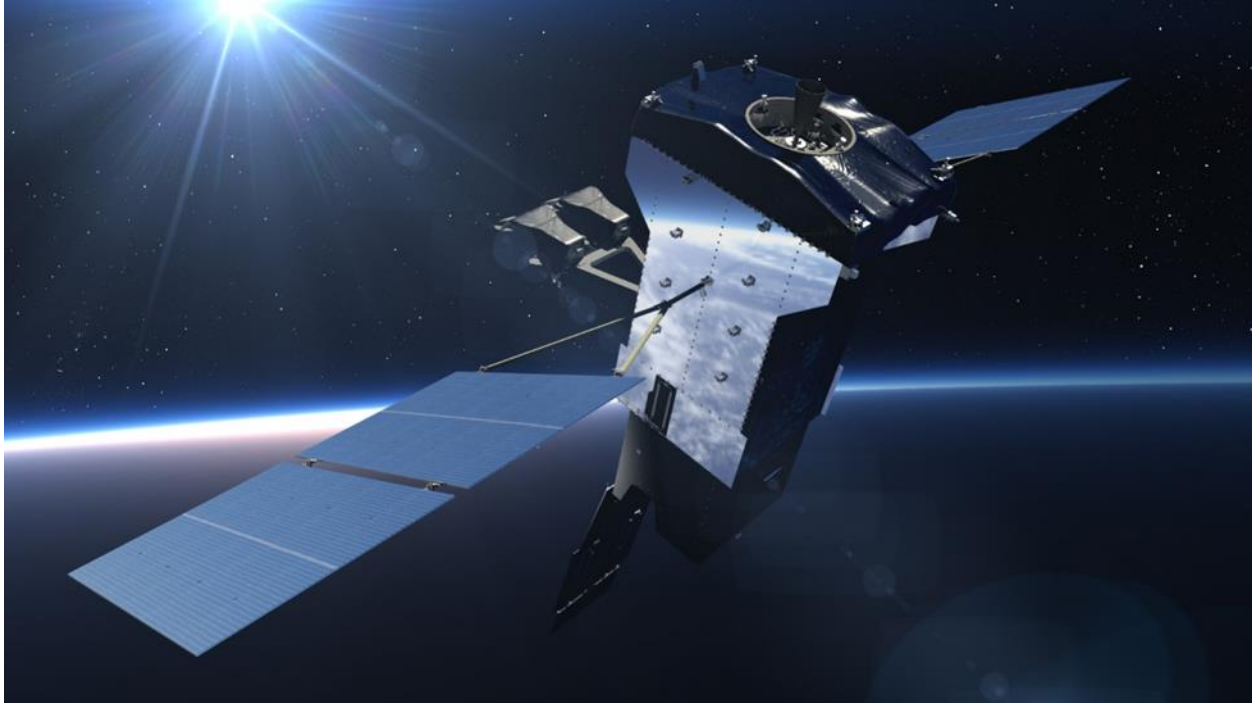
**Operators:** Delta 8's 4th Space Operations Squadron (4 SOPS) and the 53rd Space Operations Squadron (53 SOPS)

**Constellation Size:** 10 Current Satellites

**Orbit:** High Earth Orbit-22,300 miles in altitude

**Additional Capabilities:** 4.875 GHz of instantaneous switchable bandwidth, supports continuous 24-hour-per-day wideband satellite services to thousands of tactical SATCOM fixed, transportable, ground mobile, air mobile and ship-based SATCOM terminals

# SPACE-BASED INFRARED SYSTEM (SBIRS)



**Manufacturer:** Lockheed Martin

**Primary Function:** Meet jointly-defined requirements of the Defense and Intelligence communities in support of the Missile Early Warning, Missile Defense, Battlespace Awareness and Technical Intelligence mission areas

**Constellation Size:** 6 Satellites

**Orbit:** Geosynchronous Earth Orbit (GEO) and Highly Elliptical Orbit (HEO)

**Additional Details:** The SBIRS program consists of the space segment of Geosynchronous Earth Orbit satellites, Highly Elliptical Orbit sensors riding on host satellites, legacy DSP satellites and the associated world-wide deployed ground systems

# SATELLITE CONTROL NETWORK (SCN)



**Primary Function:** Provides support for the operation, control, and maintenance of a variety of DOD and some non-DoD satellites

**Operators:** USSF Delta 6

**Make-up:** Consists of satellite control centers, tracking stations, and test facilities located around the world. Satellite Operations Centers (SOCs) are located at Schriever Space Force Base near Colorado Springs, Colorado

**Additional Capabilities:** Continual execution of Telemetry, Tracking, and Commanding (TT&C) operations, provides prelaunch checkout and simulation, launch support, and early orbit support while satellites are in initial or transfer orbits and require maneuvering to their final orbit

# COUNTER COMMUNICATION SYSTEM (CCS)



**Primary Function:** Space Force's only ground-based space control platform providing an Electromagnetic Attack (EA) capability in space

**Operators:** 4<sup>th</sup> Electromagnetic Warfare Squadron (EWS), 114 EWS (FLANG), 138 EWS (COANG), 216 EWS (CAANG)

**Make-up:** 16 transportable systems

**Additional Capabilities:** CCS is a deployable ground-based system that denies communications from satellites in orbit. The result is the ability to jam an adversary's communications during a conflict, creating a safer and more secure environment for U.S. warfighters across every domain

# BOUNTY HUNTER



**Primary Function:** Electromagnetic support, Monitor, Detect, Characterize, and Geolocate Electromagnetic Interference

**Operators:** 16<sup>th</sup> Electromagnetic Warfare Squadron and 380<sup>th</sup> Space Control Squadron

**Additional Information:** The system directly supports multiple mission and strategic priorities across multiple Combatant Commands by ensuring the squadron has combat-ready forces and accelerating the squadron's readiness through sophisticated training.

*"Leadership and learning are indispensable to each other."*

-John F. Kennedy, thirty-fifth President of the United States



# Air Force & Space Force Specialty Codes

11X	<ul style="list-style-type: none"> <li>• Pilot</li> <li>• Fly missions in multitude aircraft types (trainers, bombers, fighters, mobility, helicopters, surveillance, etc.)</li> <li>• Leads flight crew and ensures mission accomplishment</li> </ul>
12X	<ul style="list-style-type: none"> <li>• Combat Systems Officer (CSO)</li> <li>• Operates navigation, weapons systems, surveillance systems, electronic warfare systems, etc.</li> <li>• Work onboard multitude of specialized aircraft or with RPA</li> </ul>
13B	<ul style="list-style-type: none"> <li>• Air Battle Manager (ABM)</li> <li>• Control and sequence aircraft over a given battlespace</li> <li>• Utilize multiple air assets to determine outcome of a battle</li> </ul>
13M	<ul style="list-style-type: none"> <li>• Airfield Operations</li> <li>• Perform and lead airfield operations (AO) teams of Air Traffic Control (ATC), Airfield Management (AM), and Radar, Airfield, and Weather Systems (RAWS) Airmen within national and international, peacetime and combat environments</li> <li>• Advise commanders on the effective use of AO assets</li> </ul>
13N	<ul style="list-style-type: none"> <li>• Nuclear and Missile Ops</li> <li>• Monitor and control nuclear and missile operations</li> <li>• Coordinate nuclear and missile operations policy, activities and programs</li> </ul>
13S	<ul style="list-style-type: none"> <li>• Space Operations</li> <li>• Encompasses operating and managing systems involved in space surveillance, spacelift, ballistic space warning, and satellite command and control</li> <li>• Manage space flight planning, training and mission control, along with launching and recovering spacecraft.</li> </ul>
14X	<ul style="list-style-type: none"> <li>• Intelligence</li> <li>• Collect, interpret and act upon collected data to brief mission leaders</li> <li>• Establish viability of missions and advise on mission execution, give orders to execute missions on targets or threats</li> </ul>
17X	<ul style="list-style-type: none"> <li>• Cyberwarfare</li> <li>• Monitor cyber threats to national security</li> <li>• Manage offensive and defensive cyber capabilities to thwart adversarial threats</li> </ul>
19Z	<ul style="list-style-type: none"> <li>• Special Tactics</li> <li>• Special Tactics Officer (STO), Combat Rescue Officer (CRO), Tactical Air Control Party Officer (TACP-O)</li> <li>• Conduct combat and rescue missions in cooperation with joint forces</li> </ul>
21A	<ul style="list-style-type: none"> <li>• Aircraft Maintenance Officer</li> <li>• Direct aircraft maintenance and reparation activities</li> <li>• Formulate maintenance plans and conduct periodic inspections</li> </ul>



21R	<ul style="list-style-type: none"> <li>• Logistics Readiness Officer</li> <li>• Compute and analyze current and projected materiel requirements</li> <li>• Direct distribution management operations, contingency, fuel management, aerial port and vehicle management operations</li> </ul>
31P	<ul style="list-style-type: none"> <li>• Security Forces Officer</li> <li>• Lead and organize security forces operations to include leading airmen and managing posts, training activities and base / asset security</li> <li>• Protect nuclear, missile, aircraft, infrastructure and Air Force personnel</li> </ul>
63E	<ul style="list-style-type: none"> <li>• Developmental Engineer</li> <li>• Conduct design studies and manage studies contracted to subcompanies, while coordinating engineering and technical managing activities</li> <li>• Continuously analyze technical policies and procedures, products and services to improve customer support</li> </ul>
63A	<ul style="list-style-type: none"> <li>• Acquisitions Manager</li> <li>• Oversee and manage acquisitions projects for aircraft, vehicles, weapons systems, software, etc.</li> <li>• Work with civilian contractors to establish and monitor contracts along with advising senior military leaders on progress and streamlining processes</li> </ul>
64P	<ul style="list-style-type: none"> <li>• Contracting Officer</li> <li>• Formulate contracting policy and procedures while establishing organizational structure and personnel</li> <li>• Select contract sources, negotiate terms and ensure contract compliance</li> </ul>

*“If It’s endurable, then endure it. Stop complaining... You can endure anything your mind can make endurable.”*

**-Marcus Aurelius**

# Honor Code

“We will not lie, steal, or cheat, nor tolerate among us anyone who does.” This honor code is to be upheld at all times, including specific circumstances related to alcohol violations and cadet relationships as described below.

The Purpose of the Honor Code is to foster an environment based upon a personal sense of honesty and integrity. Implementation of the Honor Code means not only can you be trusted but that you also have the moral courage to confront those who violate these standards.

**Lying:** Lying is any statement of untruth or omission of the truth, which is meant to deceive or mislead.

**Stealing:** The act of wrongfully taking, obtaining, or withholding someone else’s property without their permission, with the intent to temporarily or permanently deprive another of said property.

**Cheating:** Cheating is taking unfair advantage of another. Cheating violates the competitive sense of ‘fair play’.

**Toleration:** Toleration means the conditional acceptance of, or non-interference of, wrongdoings. Failing to report or confront a matter of lying, stealing, or cheating is to potentially be guilty of toleration.

**Cheating/Integrity Violations:** All instances including but not limited to lying, cheating, copying, and plagiarizing are considered integrity violations. Infractions of these kind compromise your integrity as an officer candidate and will not be tolerated. Issues that arise will be dealt with accordingly by both Cadet Wing Staff and Cadre.

**Alcohol Violations:** Alcohol Violations of any kind will not be tolerated and will be reported to Cadre immediately. Violations include but are not limited to underage drinking, supplying alcohol to those underage, and driving under the influence. Although being a bystander to underage drinking is not against the law, it is an integrity violation and reflects poorly on your judgement. Alcohol and integrity violations put your career as an officer in the Air and Space Force at risk.

**Cadet Relationships:** While relationships between cadets are allowed, they are prohibited within the chain of command (CoC). That means that cadets may not operate in the same CoC as someone they are involved with. If a relationship develops within the CoC, it must be reported to the Cadet Vice Wing Commander so the issue can be resolved, and cadets can be rearranged appropriately. Failure to report relationships within the CoC is an integrity violation.

# Important Events

## Important Air Force Dates:

- 17 December 1903: The Wright Brothers complete the first powered flight.
- 1 August 1907: US Army Signal Corps established its aeronautical division, the first military division focused on the development of military aircraft.
- 24 May 1918: Army Air Service is created, the military's aeronautical division in WW1
- 20 June 1941: Army Air Forces is established, the military's aeronautical division in WW2, the predecessor to the US Air Force.
- 18 April 1942: The Doolittle raid occurs against Imperial Japan.
- 18 September 1947: The Air Force is created as a branch of the US military.
- 14 October 1947: Chuck Yeager breaks the sound barrier in the XS-1.
- 24 June 1948-12 May 1949: The Berlin Airlift occurs.
- 24 February 1965: Operation Rolling Thunder begins.
- 6 April 1972: Operation Linebacker begins.
- 6 August 1990: Operation Desert Shield begins.
- 17 January 1991: Operation Desert Storm begins.
- 24 March 1999: Operation Allied Force begins.
- 7 October 2001: Operation Enduring Freedom begins.
- 20 March 2003: Operation Iraqi Freedom Begins
- 15 June 2014: Operation Inherent Resolve Begins

## Important Space Force Dates:

- 1 April 1952: The Western Development Division, the original name of the current Space Systems Command, the first dedicated military space organization is created under the Air Force.
- 4 October 1957: Sputnik 1 is the first satellite successfully launched into space.
- 12 April 1961: Yuri Gagarin becomes the first man to reach space.
- 16 July 1969: Neil Armstrong becomes the first man to walk on the moon.
- 20 December 2019: The Space Force is created as a branch of the US military.
- 13 August 2021: Space Systems Command becomes an official Space Force Field Command.

# Major Commands

## USAF MAJCOMS

### Air Combat Command (ACC)

**Mission:** ACC organizes, trains, and equips Airmen who fight in and from multiple domains to control the air, space, and cyberspace. As the lead command for fighter, command and control, intelligence, surveillance and reconnaissance, personnel recovery, persistent attack and reconnaissance, electromagnetic warfare, cyber warfare operations, and information warfare operations, ACC is responsible for providing combat air, space, and cyberspace power and the combat support that assures mission success to America's warfighting commands.

**Location:** Joint Base Langley-Eustis, Virginia

**Personnel:** 94,000

**Aircraft:** 1,300

**Leadership:** General Mark D. Kelly



## **Air Education and Training Command (AETC)**

Mission: Find, recruit, train and educate the Airmen the nation needs.

Location: Joint Base San Antonio, Texas

Personnel: 29,000

Aircraft: 1,300

Leadership: Lt Gen. Brian S. Robinson





## **Air Force Global Strike Command (AFGSC)**

**Mission:** To develop and provide combat-ready forces for nuclear deterrence and global strike operations to support the President of the United States and combatant commanders. Airmen providing strategic deterrence, global strike and combat support...anytime, anywhere!

**Location:** Barksdale Air Force Base, Louisiana

**Personnel:** 33,700

**Assets:** 150+Aircraft, 400 ICBMs

**Leadership:** General Thomas A. Bussiere



## Air Force Materiel Command (AFMC)

**Mission:** Powering the world's greatest Air Force...AFMC develops, delivers, supports and sustains war-winning capabilities. AFMC delivers war-winning expeditionary capabilities to the warfighter through development and transition of technology, professional acquisition management, exacting test and evaluation, and world-class sustainment of all Air Force weapon systems. From creation to disposal, AFMC provides the workforce and infrastructure necessary to ensure the United States maintains the world's most respected Air Force.

**Location:** Wright-Patterson Air Force Base, Ohio

**Personnel:** 89,000

**Aircraft:** ~120

**Leadership:** General Duke Z. Richardson



## Air Force Reserve Command (AFRC)

**Mission:** To provide combat ready forces to fly, fight and win. Reservists support nuclear deterrence operations, air, space and cyberspace superiority, command and control, global integrated intelligence surveillance reconnaissance, global precision attack, special operations, rapid global mobility and personnel recovery. They also perform space operations, aircraft flight testing, aerial port operations, civil engineer, security forces, military training, communications, mobility support, transportation and services missions.

**Location:** Robins Air Force Base, Georgia

**Personnel:** 70,000+

**Aircraft:** ~450

**Leadership:** Lieutenant General John P. Healy





## **Air Force Special Operations Command (AFSOC)**

**Mission:** Enable the joint force by delivering SOF Mobility, Strike, ISR, and Air-to-Ground capabilities across the spectrum of competition and conflict. The command's core missions include battlefield air operations; agile combat support; aviation foreign internal defense; information operations/military support operations; precision strike; specialized air mobility; command and control; and intelligence, surveillance and reconnaissance.

**Location:** Hurlburt Field, Florida

**Personnel:** 19,500

**Aircraft:** ~130

**Leadership:** Lieutenant General Tony D. Bauernfeind



## **Air Mobility Command (AMC)**

**Mission:** Rapid Global Mobility...Right Effects, Right Place, Right Time! Air Mobility Command provides unrivaled airlift, air refueling, aeromedical evacuation, global air mobility support and Global Mobility Mission Command to project, connect, maneuver and sustain the Joint Force to achieve national objectives.

**Location:** Scott Air Force Base, Illinois

**Personnel:** 110,000

**Aircraft:** ~430

**Leadership:** General Mike Minihan





## **Pacific Air Forces (PACAF)**

**Mission:** To deliver rapid and precise air, space and cyberspace capabilities to protect and defend the United States, its territories and our allies and partners; provide integrated air and missile warning and defense; promote interoperability throughout the Pacific area of responsibility; maintain strategic access and freedom of movement across all domains; and posture to respond across the full spectrum of military contingencies in order to restore regional security.

**Location:** Joint Base Pearl Harbor-Hickam, Hawaii

**Personnel:** 46,000

**Aircraft:** 420

**Leadership:** General Kenneth S. Wilsbach



## United States Air Forces Europe - Air Forces Africa (USAFE-AFAFRICA)

Mission: Defend vital U.S. interests, deter aggression, and deepen relationships with Allies and partners by projecting combat-ready airpower in Europe and Africa. USAFE-AFAFRICA executes the Air Component missions with forward-based airpower and infrastructure to conduct and enable theater and global operations.

Location: Ramstein Air Base, Germany

Personnel: 35,000

Aircraft: 217

Leadership: General James B. Hecker



## USSF Field Commands

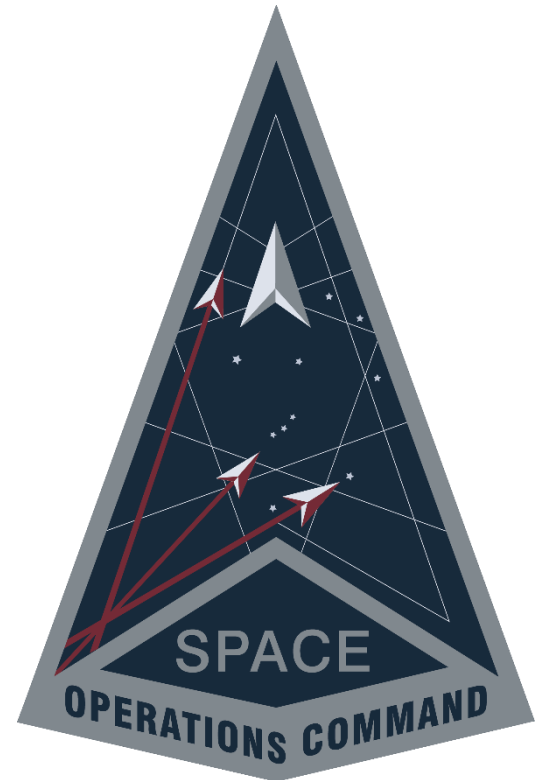
### Space Operations Command (SPOC)

**Mission:** Protects America and our Allies in, from, and to space... now and into the future. Generates, presents, and sustains combat-ready intelligence, cyber, space and combat support forces and serves as the USSF Service Component to USSPACECOM.

**Location:** Peterson Space Force Base, Colorado

**Personnel:** ~11,000

**Leadership:** Lieutenant General Stephen N. Whiting



## **Space Systems Command (SSC)**

**Mission:** Delivering Lethal and Resilient Space Capabilities to Defend the Nation in the Contested Space Domain. Developing, acquiring, equipping, fielding, and sustaining lethal and resilient space capabilities for warfighters

**Location:** Los Angeles Space Force Base, California

**Personnel:** ~10,000

**Leadership:** Lieutenant General Michael A. Guetlein





## Space Training and Readiness Command (STARCOM)

**Mission:** To prepare combat-ready USSF forces to fight and win in a contested, degraded, and operationally-limited environment through the deliberate development, education and training of space professionals; development of space warfighting doctrine, tactics, techniques, and procedures; and the test and evaluation of USSF capabilities.

**Location:** Peterson Space Force Base, Colorado

**Personnel:** 8,600

**Leadership:** Brigadier General Timothy A. Sejba



*“Victory smiles upon those who anticipate the changes in the character of war; not upon those who wait to adapt themselves after the changes occur.”*

-Italian Air Marshall Giulio Douhet



# The Joint Fight

The nature of the challenges facing the United States and its interests demand that the Armed Forces operate as a closely integrated joint team. This joint construct leverages the unique capabilities and characteristics of the Army, Marine Corps, Navy, Air Force, Space Force, Coast Guard, and National Guard to enhance operational effectiveness. Each service possesses distinct capabilities and roles as well as rich culture and tradition, which, when blended appropriately, serve to achieve unique operational objectives across the range of military operations.

## **Air Force Core Missions:**

- **Air Superiority:** Control of the air domain is crucial to the success of modern and emergent warfare.
- **Intelligence, Surveillance, and Reconnaissance (ISR):** Provide situational awareness of the battlespace, allowing decision space for command elements.
- **Rapid Global Mobility:** American power projected quickly to anywhere on the face of the earth.
- **Global Strike:** Airmen providing strategic deterrence, global strike and combat support.
- **Command & Control:** Airmen employ the Air Force's other four interdependent and enduring core missions through robust, adaptable, and survivable Command and Control systems.

## **Air Force Functions:**

- Conduct nuclear operations in support of strategic deterrence, to include providing and maintaining nuclear surety and capabilities.
- Conduct offensive and defensive operations, to include appropriate air and missile defense, to gain and maintain air superiority and air supremacy as required, to enable the conduct of operations by U.S. and allied land, sea, air, space, and special operations forces.
- Conduct global precision attack, to include strategic attack, interdiction, close air support, and prompt global strike.
- Provide timely, globally integrated intelligence, surveillance, and reconnaissance capability and capacity from forward deployed locations and globally distributed centers to support world-wide operations.
- Provide rapid global mobility to employ and sustain organic air and space forces and other military service and U. S. Special Operations Command forces.
- Provide agile combat support to enhance the air and space campaign and the deployment, employment, sustainment, and redeployment of air and space forces and other forces operating within the air and space domains.
- Conduct global personnel recovery operations including theater-wide combat and civil search and rescue.
- Conduct globally integrated command and control for air and space operations.

# **Armed Forces Code of Conduct**

## **Article 1:**

I am an American, fighting in the forces which guard my country and our way of life. I am prepared to give my life in their defense.

## **Article 2:**

I will never surrender of my own free will. If in command, I will never surrender the members of my command while they still have the means to resist.

## **Article 3:**

If I am captured, I will continue to resist by all means available. I will make every effort to escape and aid others to escape. I will accept neither parole nor special favors from the enemy.

## **Article 4:**

If I become a prisoner of war, I will keep faith with my fellow prisoners. I will give no information nor take part in any action which might be harmful to my comrades. If I am senior, I will take command. If not, I will obey the lawful orders of those appointed over me and back them up in every way.

## **Article 5:**

When questioned, should I become a prisoner of war, I am required to give name, rank, service number, and date of birth. I will evade answering further questions to the utmost of my ability. I will make no oral or written statements disloyal to my country and its allies or harmful to their cause.

## **Article 6:**

I will never forget that I am an American, fighting for freedom, responsible for my actions, and dedicated to the principles which made my country free. I will trust in my God and in the United States of America.

# Agile Combat Employment

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**QRC 14.1 5-Cs UXO/IED BATTLE DRILL**

<b>5-Cs</b>	<b>Reaction</b>
Confirm	the unexploded explosive ordnance (UXO).
Clear	the area 300 meters (1,000 feet) around the UXO and utilize all frontal and overhead protection and report the UXO to the operations center (see paragraph 14.8).
Cordon	the perimeter around the UXO.
Check	the immediate area for other UXOs. Perform 5/25/Sky meter check.
Control	the site access, maintain security.

**QRC 15.1 NINE PRINCIPLES OF IED COMBAT**

1. Maintain an offensive mindset.
2. Develop and maintain situational awareness.
3. Remain observant.
4. Avoid setting patterns.
5. Maintain standoff.
6. Maintain 360-degree security.
7. Maintain tactical dispersion.
8. Utilize blast and fragmentation protection.
9. Know and use technology.

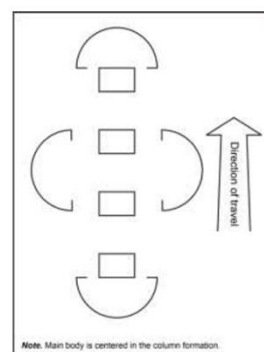


# Small Unit Tactics

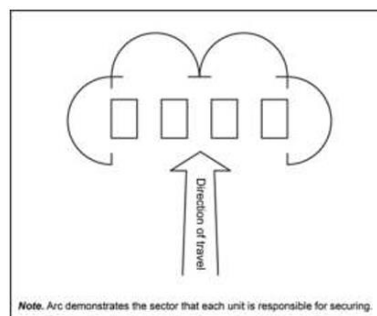
A small unit formation is an ordered arrangement of forces for a specific purpose and describes the general configuration of a unit on the ground. Movement formations allow a unit to move on the battlefield based on the terrain and enemy threat. Terrain characteristics and visibility determine the actual arrangement and location of the unit's personnel and vehicles within a given formation.

There are seven different **small unit formations**:

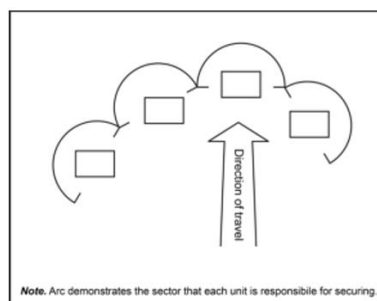
Column Formation: A unit moves in column formation when the unit does not anticipate early contact, the objective is distant, and speed and control are critical.



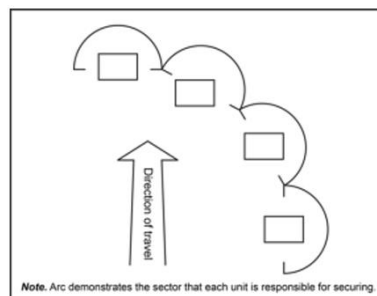
Line Formation: A unit typically employs this formation when assaulting an objective because it concentrates firepower to the front in the direction of movement.



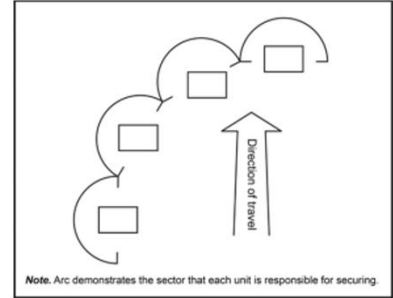
Wedge Formation: A unit uses the wedge when contact with an enemy force is possible or expected, but the enemy force's location and dispositions are vague.



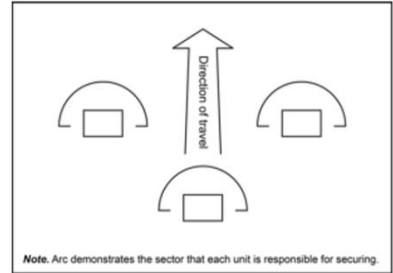
Echelon Formation (Left or Right): This formation facilitates control in open areas. It provides minimal security to the opposite flank in the direction of the echeloning. A unit with knowledge of potential enemy locations can use



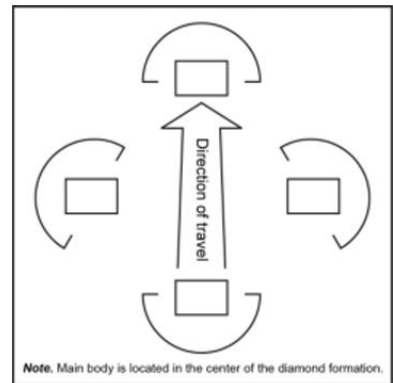
an echelon formation to deploy subordinate ground elements diagonally left or right. This formation provides focused firepower forward and to the flank of the direction of the echelon. It facilitates control in open areas.



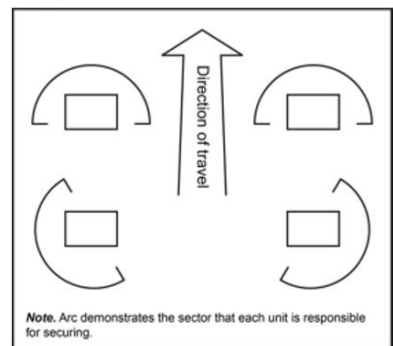
Vee Formation: If there are more elements after the trail element in the vee formation, the trail elements can be in front or behind the main body. This arrangement is suited for an advance against a known threat to the front.



Diamond Formation: It is most effective during approach marches, exploitations, or pursuits when the unit has only general knowledge about the enemy. The non-security units of the diamond usually move in a column formation inside of the diamond.



Box Formation: This formation is only used when the unit has four security or combat elements. It is a flexible formation providing equal firepower in all directions. Units often use this formation when executing an approach march, exploitation, or pursuit when they have only general knowledge about the enemy.



# **Six Rules of Weapon Safety**

1. Treat all weapons as loaded.
2. Never point a weapon at anything you do not intend to shoot.
3. Keep your weapon on SAFE until you are ready to fire (unless directed otherwise).
4. Keep your finger off the trigger until sights are on target and you are ready to fire.
5. Positively identify your target, be aware of what is around and behind the target.
6. Never engage in horseplay while handling weapons.

### **QRC 9.1 REACT TO ENEMY CONTACT**

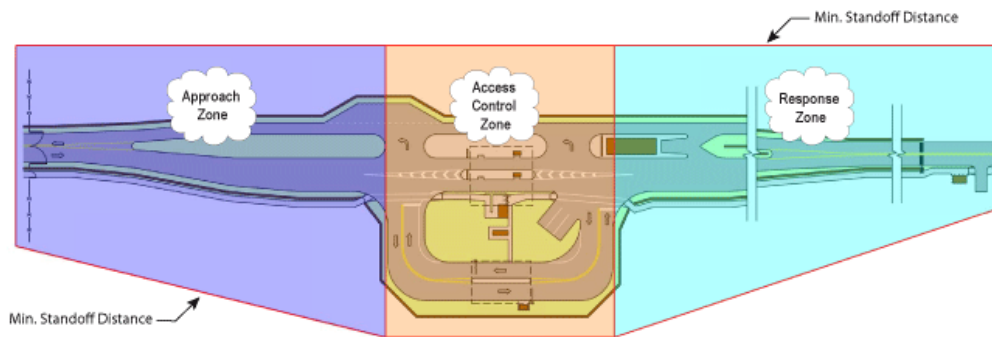
- Seek nearest cover.
- Return fire (known or suspected enemy location).
- Team leaders control fire by using fire commands.
- Report enemy situation (number/positions).
- Maintain contact (visual/verbal) with team members.
- Squad leader moves to team in contact and makes an assessment of the situation.
  - Can squad move out to engagement area?
  - Can squad gain and maintain suppressive fire?
  - Location of enemy.
  - Size of enemy.
  - Vulnerable flanks.
  - Covered/concealed flanking routes.
- Squad leader determines course of action (COA), (e.g., break contact, attack).
- Report situation to flight leader.

### **QRC 9.2 REACT TO INDIRECT FIRE**

- Any squad member detecting incoming (whistle/explosion) gives alert: "INCOMING".
- All squad members seek cover in the prone position.
- After indirect fire impacts, squad leader gives the direction and distance to move.
- Squad runs out of impact area in the direction and distance indicated.
- Consolidate and reorganize.

# Entry Control Point Zones

Zone	Location	Goals
<b>Safety</b>	Extends in all directions beyond passive and active barriers.	Protect assets and personnel from explosions.
<b>Approach</b>	Installation boundary to a point just before the ID checkpoint.	Reduce speed, sort vehicles, provide stacking room, identify potential threats.
<b>Access Control</b>	A point just before and after the ID checkpoint.	Identify vehicles and personnel; provide surveillance, random inspection, visitor processing, and rejection capabilities.
<b>Response</b>	A point just after the ID checkpoint to the active vehicle barriers.	Provide measures to react to and resist a threat.



Approach: The approach to the ECP must be designed in such a way that it cannot be breached by a person or vehicle making a “kamikaze” dash. To this end, make use of staggered barriers (in the shape of an “S”) so that a vehicle will have to slow to maneuver through.

ID check point: This is typically manned by at least one sentry who will be checking IDs and other identifying documents to determine the eligibility of the person to enter. Make sure the ID is valid (right person, not expired, etc.)

Vehicle check station: During normal operations, vehicles may be selected at random for extra inspection. These vehicles will be diverted to a holding area out of the way of the rest of the traffic. Suspicious vehicles may also be diverted as a sentry desires (though it may be simpler to simply to deny entry and turn them away). Sentries in this



area are required to have the detainee open compartments on the vehicle during the search - See vehicle search section.

Final Denial/Overwatch: This position is critical; as the ID check sentry is checking IDs, their situational awareness may fall to a dangerously low level. It is the job of the overwatch to make sure nothing suspicious is happening and if the situation becomes deadly to attempt to protect the sentries at the ID check or vehicle checks.

## QRC 5.2 INDIVIDUAL USE OF FORCE CONSIDERATIONS

**Step #1:** Decide if there is a threat.

**Step #2:** Decide on the level of force needed to neutralize objective(s).

**Step #3:** Use force objectively reasonable in intensity, duration, and magnitude based upon the circumstances to counter the threat.

**Step #4:** Continuously assess whether your objective has been achieved.

## QRC 5.3 DEFENSIVE PROCEDURES

**Step #1: Shout** (audible communications)

**Step #2: Show** (hand and arm signals/visual aids)

**Step #3: Shove** (physically push, shove, or detain the threat)

**Step #4: Shoot** (warning shots, if authorized)

**Step #5: Shoot** (deadly force)

# **MARCH**

MARCH (massive hemorrhage, airway, respirations, circulation, head injury/hypothermia) is an acronym used by TCCC-trained individuals to help remember the proper order of treatment.

## **Massive Hemorrhage**

- Emphasize early recognition of significant bleeding. Apply limb tourniquets high, tight, and early. For junctional injuries, utilize direct pressure or hemostatic agents while waiting for OR.

## **Airway**

- Consider triage given limited management resources. May require surgical airway if significant facial or oropharyngeal injuries are present.

## **Respirations**

- Recognize and manage pneumothoraxes with needle or chest tube thoracostomy. Consider chest seals for chest cavity wounds.

## **Circulation**

- One should identify other non-life-threatening bleeding, evaluate pulse and blood pressures.

## **Head Injury/Hypothermia**

- Evaluate for head injury, including mental status and GCS (Glasgow Coma Scale). Treat hypothermia.

# TCCC Phases of Care

Understanding phases of care is important for proper application of Tactical Combat Casualty Care (TCCC) principles. Properly balancing winning the fight, accomplishing the mission, and treating casualties is essential for success tactically as well as medically. This chapter discusses the proper tactics and medicine for each phase of care.

## Phase 1: Care Under Fire (CUF) – Return Fire

- Good tactics: CUF is conducted while tactically engaged. The most effective way to reduce morbidity and mortality is the precise application of combat fires by all personnel. Continue the tactical mission, gain fire superiority, then treat casualties.
- Good medicine: Massive hemorrhage. The control of extremity hemorrhage with direct pressure while applying a hasty tourniquet is the primary medical goal during CUF. A tourniquet is the single most important medical intervention rendered at the point of injury (POI).

## Phase 2: Tactical Field Care (TFC) – Move Casualty to Cover

- Good tactics: When no longer receiving effective enemy fire, the TFC phase is entered, allowing more medical intervention. Disarm the casualty, if the casualty's mental status is altered or if receiving ketamine or fentanyl. Medical personnel are responsible for activity inside the casualty collection point (CCP) and leadership is responsible for activity outside the CCP. Basic life support CPR is typically not performed in combat.
- Good medicine:
  - Massive hemorrhage. Convert hasty tourniquets to deliberate tourniquets. Pack wounds with combat gauze. Apply a junctional tourniquet.
  - Airway. Check the airway for patency. Apply a nasopharyngeal airway (NPA) and ventilate with a bag-valve

mask (BVM), such as a Cyclone BVM. If the airway shows resistance or evidence of facial trauma, perform a cricothyrotomy.

- Respirations. Apply a vented chest seal to open entry and exit chest wounds. Treat a tension pneumothorax (PTX) by decompressing the chest at the mid-clavicular line at the second and third intercostal space using a 3.25-inch, 14-gauge Angio catheter and needle chest decompression (NCD).
- Circulation. Resuscitate with hypovolemic fluid resuscitation through intravenous (IV) access. Intraosseous (IO) access is recommended for rapid fluid delivery and resuscitation.
- Head injury/hypothermia. Perform a Military Acute Concussion Evaluation (MACE) exam or the alert, verbal, pain, unresponsive (AVPU) assessment, and document the findings. Cover the casualty in an HPMK, body bag, or sleeping bag for warmth.

### Phase 3: Tactical Evacuation Care

- Good tactics: Move the casualty. This phase involves initiating air evacuation with a 9-Line MEDEVAC request and establishing ground ambulance exchange points.
- Good medicine: Re-evaluate the casualty and all interventions. Affix a pelvic binder if the injuries are caused by a blast, vehicle rollover, or building collapse. Document all care provided on Department of Defense (DD) Form 1380, Tactical Combat Casualty Care (TCCC) Card, June 2014. The TCCC Card format matches the MIST (mechanism of injury, injuries, signs/symptoms, and treatment) Report for each casualty on the 9-Line MEDEVAC request.



### QRC 4.1 TROOP LEADING PROCEDURES (TLP)

- Step 1: Receive the Mission
- Step 2: Issue a Warning Order
- Step 3: Make a Tentative Plan
- Step 4: Start Necessary Movement
- Step 5: Conduct Reconnaissance
- Step 6: Complete the Plan
- Step 7: Issue the Complete Order
- Step 8: Supervise and Refine

### QRC 4.2 METT-TC

- **Mission**—The task, together with the purpose, that clearly indicates the action to be taken
- **Enemy**—Strength, location, tactical mobility, capabilities, vulnerabilities, and probable courses of action (COA)
- **Troops**—Number, type, capabilities, and condition of available friendly troops and support
- **Time**—Time available (train/prepare, mission)
- **Terrain/Weather**—Consider the effects of manmade and natural terrain in conjunction with the weather on friendly and enemy operations
- **Civil Consideration**—Immediate impact of noncombatants, manmade infrastructure an areas, structures, capabilities, organizations, and people and events (ASCOPE)

### QRC 4.3 OPERATION ORDER (OPORD)

- Paragraph 1: **Situation**
- Paragraph 2: **Mission**
- Paragraph 3: **Execution**
- Paragraph 4: **Administration and Logistics**
- Paragraph 5: **Command and Control**

### QRC 4.4 WARNING ORDER (WARNORD)

- |                     |  |
|---------------------|--|
| Conduct Roll Call   | Tentative Time Schedule                |
| Brief the Situation | Special Instructions/Tasks/Equipment   |
| Brief the Mission   | Weapons/Ammo/Equipment (common to all) |

## QRC 6.3 LACE REPORT

**L**—Liquid (anything that keeps troops hydrated)

---

**A**—Ammo (any type of munitions)

---

**C**—Casualty (any deaths/injuries/missing)

---

**E**—Equipment (vehicles/weapons/gear)

---

Example of a LACE Report:

Liquid: Red (5 canteens left out of 10)  
 Ammo: Yellow (20 magazines left out of 30)  
 Casualty: Green (no casualties)  
 Equipment: Green (all operational)

**Critical—resupply needed**

**Can sustain—resupply needed soon**

**80% to 100% of original load—good to continue**

## QRC 6.4 SALUTE

**S = Size**—# hostile forces \_\_\_\_\_  
**A = Activity**—Report any activity \_\_\_\_\_  
**L = Location**—Report grid/direction \_\_\_\_\_  
**U = Unit/Uniform**—Report designators \_\_\_\_\_  
**T = Time**—Time cited \_\_\_\_\_  
**E = Equipment**—Weapons/vehicles \_\_\_\_\_

Example of a S-A-L-U-T-E Report: "Six enemy soldiers, running away from the command post, heading towards the flightline. Uniforms solid green fatigues—possibly Republic Guards. Time was 0230 Zulu. Equipment: AK-47 rifles, backpacks and gas mask being carried."

## QRC 8.4 TRIANGULATION

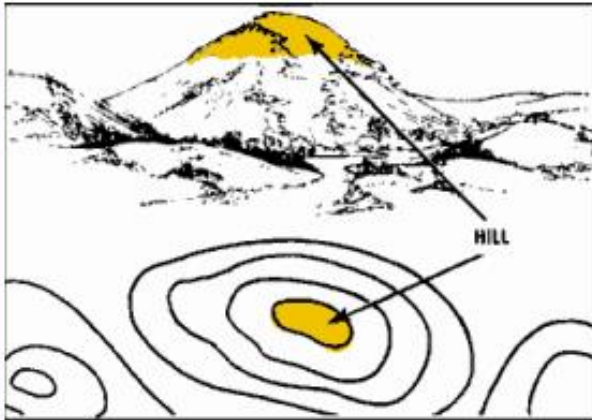
### Intersection

1. Orient the map using the compass.
2. Locate and mark your position on the map.
3. Determine the magnetic azimuth to the unknown position using the compass.
4. Convert the magnetic azimuth to grid azimuth.
5. Draw a line on the map from your position on this grid azimuth.
6. Move to a second known point and repeat steps 1, 2, 3, 4, and 5.
7. The location of the unknown position is where the lines cross on the map. Determine the grid coordinates to the desired accuracy.

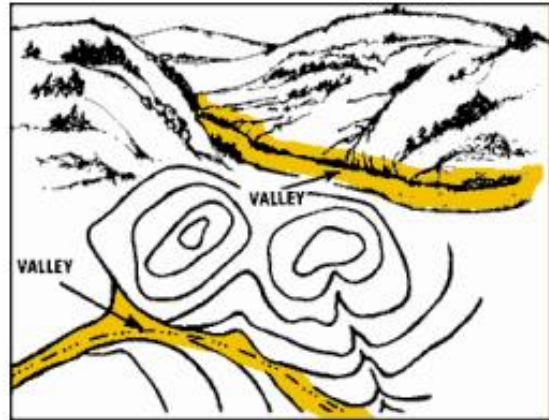
### Resection

1. Orient the map using the compass.
2. Identify two or three known distant locations on the ground and mark them on the map.
3. Measure the magnetic azimuth to one of the known positions from your location using a compass.
4. Convert the magnetic azimuth to a grid azimuth.
5. Determine the back azimuth.
6. Using a protractor, draw a line for the back azimuth on the map from the known position back toward your unknown position.
7. Repeat steps 3, 4, 5, and 6 for the other positions.
8. The intersection of lines is your location. Determine the grid coordinates to the desired accuracy.

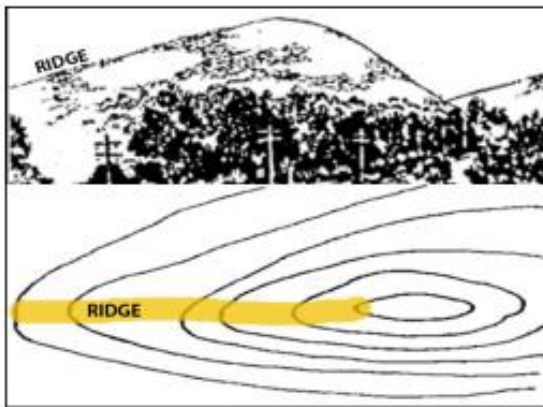
QRC 8.1 MAJOR TERRAIN FEATURES



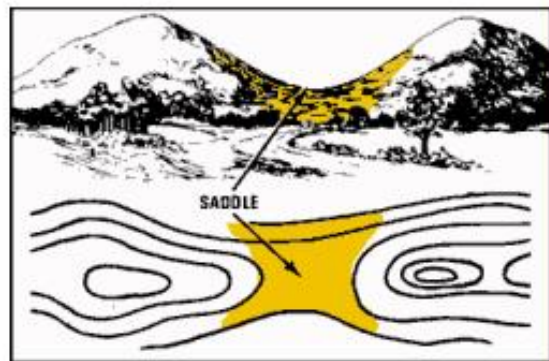
Hill



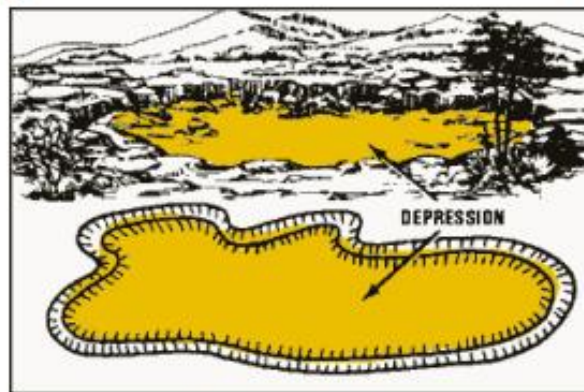
Valley



Ridge



Saddle



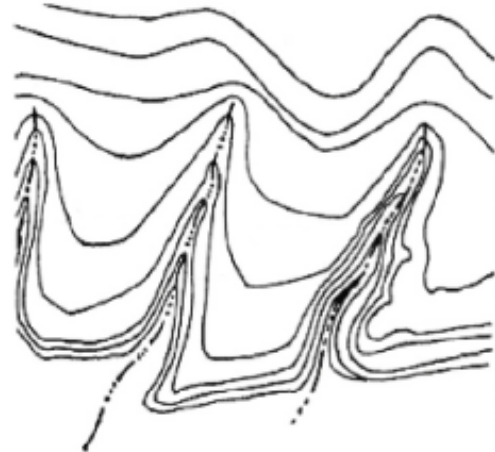
Depression



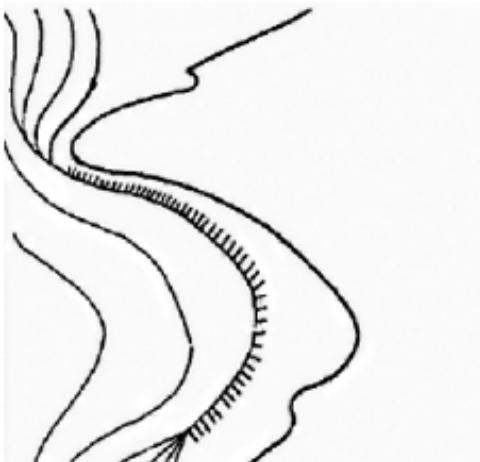
**QRC 8.2 MINOR TERRAIN FEATURES**



Draw



Spur



Cliff

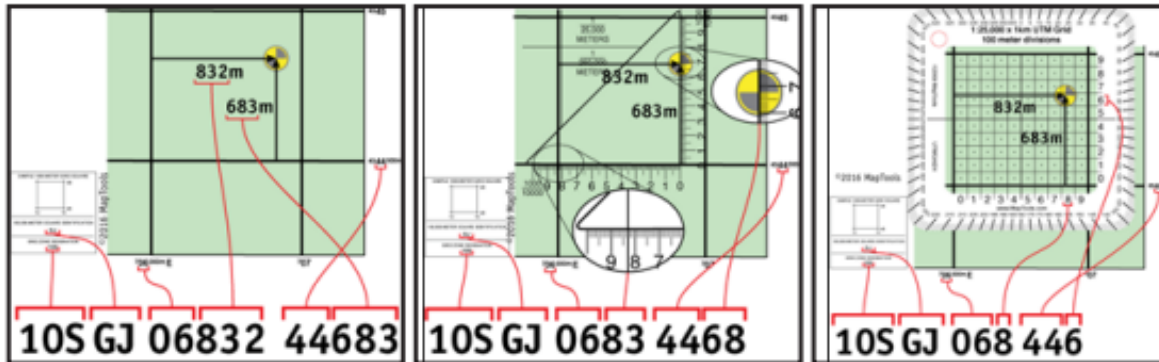


Cut/Fill



## QRC 8.5 USING MGRS

- Military Grid Reference System (MGRS) is a system of 1,000 meter grids (both North and South of the equator) and is typically used as the installation grid map.
- When all of the coordinates you are working with are localized within the same 100,000 meter square identifier, it is permissible to drop the Grid Zone Designator and the 100,000 meter square id.



**10S** The Grid Zone Designator  
**GJ** The 100,000 meter ID (Grid Square)  
**06832** The East/West position  
**44683** The North/South position

MGRS Coordinate	Accuracy
<b>10S GJ 06832 44683</b>	1 meter square
10S GJ 0683 4468	10 meter square (Typical PAR team accuracy)
10S GJ 068 446	100 meter square
<b>10S GJ 06 44</b>	<b>1,000 meter or 1 kilometer square*</b>
10S GJ 0 4	10,000 meter or 10 kilometer square
10S GJ	100,000 meter or 100 kilometer square
<i>*1,000 Grid lines – typical of Installation Grid Map</i>	

## Converting Azimuths



You cannot follow a grid azimuth with a compass; nor can you plot a magnetic azimuth with a protractor.

To assist you in making the conversion from magnetic north to grid north, and vice versa, a declination diagram is placed on the margin of your map. The angular difference between grid north and magnetic north is called the G-M Angle.

For this particular map, the G-M Angle is 21°. Simply read the directions in the diagram when you need to convert the angles for that particular map.

**Examples from this Map:**

← 200° Magnetic + 21° = 221° Grid

← 45° Grid - 21° = 24° Magnetic

## DETERMINING TRAVEL DISTANCE

### DETERMINE DISTANCE BY PACE COUNT

- In thick jungle, where landmarks can not always be seen to track your position, PACE COUNT is the best way of measuring distance. It is the only method which lets a navigator know how far he has traveled. With this information, he can estimate where he is at any given time.
- To be accurate, the navigator must practice pacing over different types of terrain. First you have to do some calculations. Measure out exactly 100 meters on three types of ground. Flat **easy** terrain, **rougher** terrain with some slope and then **steep hill** terrain. Then on each measured course count your paces (every time your left foot touches the ground or every 2 steps = 1 pace). You will have 3 different pace counts for different types of terrain. If you wear a pack when in the woods then do your pace testing with the pack and boots on. Once finished MEMORIZE your pace count of all 3 types.
- When using a map and you have a destination that's 3 km's away you have an idea how many paces it will take you to travel that distance as an estimate.
- A navigator could make a PERSONAL PACE TABLE like one of these three examples:

TERRAIN	METERS	PACES
Swamp	100	85
Forest	100	70
Desert	100	115
Snow	100	115
Jungle	100	125
Prairie	100	65
Hills	100	95

TERRAIN	METERS	PACES
Sand	100	115
Gravel	100	100
Snow	100	120
Flat	100	65
Thick brush	100	80
Up hill	100	95
Down hill	100	90

Flat easy terrain	100 meters	65 paces
Rougher terrain with some slope	100 meters	75 paces
Steep hill terrain	100 meters	95 paces

## Sighting a Lensatic Compass

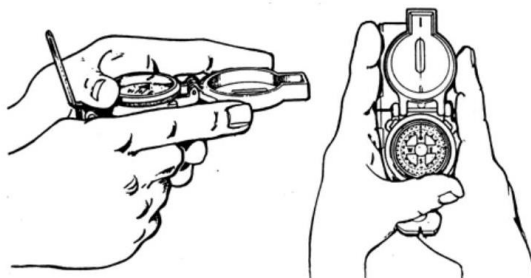
- **Compass to Cheek Method:** Used almost exclusively for sighting and is the best technique for this purpose. It is the most efficient technique for taking an accurate azimuth bearing.



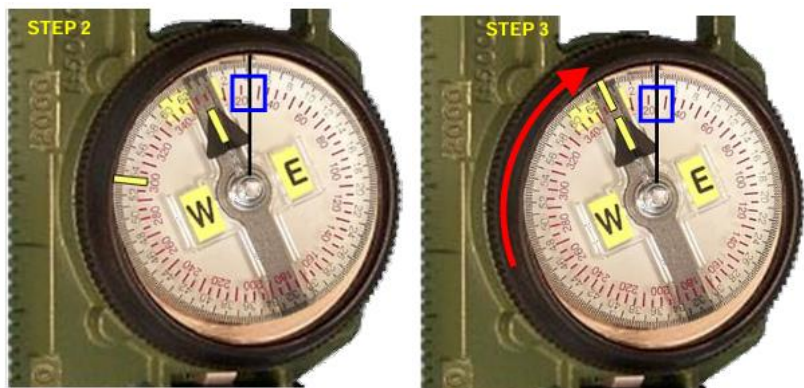
- **Center Hold Method:** Used for taking a target azimuth bearing but is less precise. However, it is faster to use and can be used under all conditions of visibility.
  - Steps of use:
    1. Open the cover until it forms a straight edge with the base.
    2. Pull the rear sight to the rear most position, allowing the dial to float freely.
    3. Next, place your thumb through the thumb loop, form a steady base with your third and fourth fingers, and extend your index finger along the side of the compass.
    4. Place the thumb of the other hand between the rear sight and the bezel ring; extend the index finger along the remaining side of the compass, and the remaining fingers around the fingers of the other hand.
    5. Pull your elbows firmly into your sides; this will place the compass between your chin and your belt.
    6. To measure azimuth, turn the entire body toward the object, pointing the compass cover directly at the object.

7. Once you are pointing at the object, look down and read the azimuth from the fixed black index line.

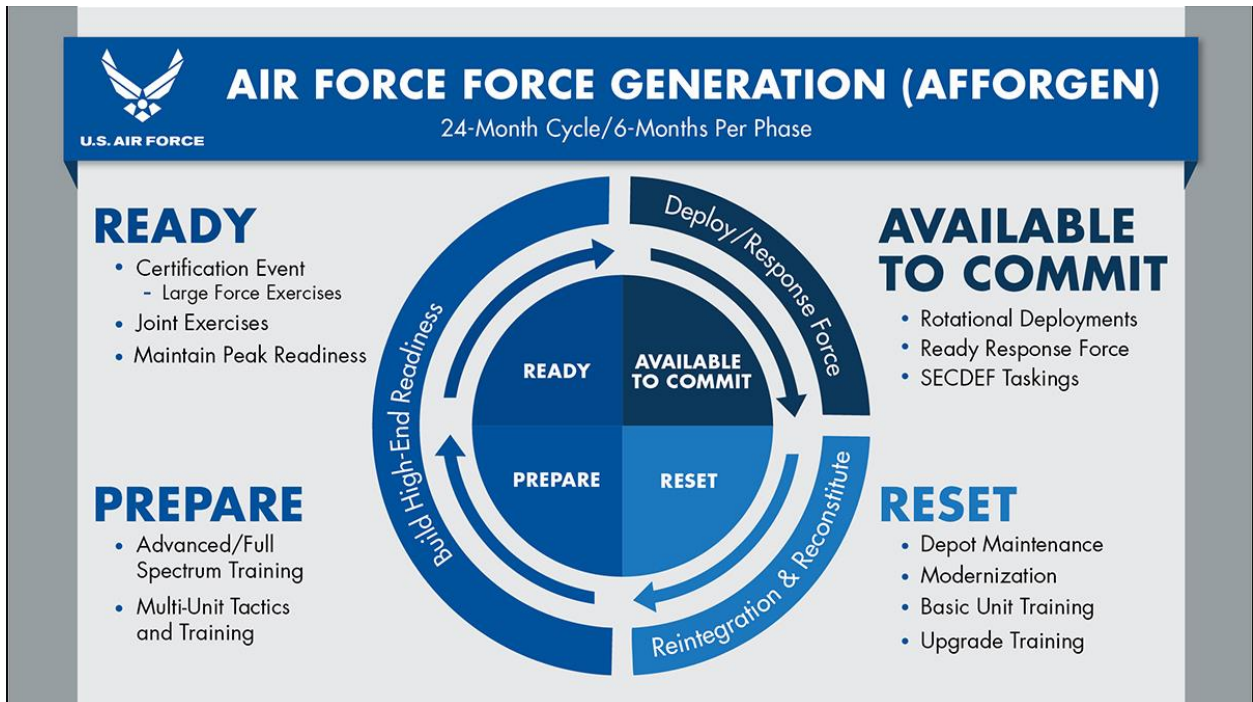
### Center Hold Technique



- Steps for following an azimuth bearing:
  1. Using the Center-Hold method to hold the compass to your body.
  2. Turn your body until desired azimuth is aligned with Black Index Line, hold this azimuth. Example 25°.
  3. Without turning compass, rotate Bezel Ring until Luminous Bezel Line is aligned with North Arrow.
  4. Once the bezel is set leave it there. (Until you are ready to change heading, then start the process over again.)
  5. Keeping the North Arrow aligned with the Luminous Bezel Line, proceed forward in the direction of the desired azimuth 25° on the Black Index Line.



# Four Phases of AFFORGEN



- Model for presenting forces to Joint Force Commanders
- Enables operational preparedness and readiness recovery while ensuring a predictable and sustainable force offering
- Principles of AFFORGEN
  - Readiness
  - Predictability
  - Sustainability



# **Airman Leadership Qualities**

## **Executing the Mission**

- Job Proficiency: Demonstrates knowledge and professional skill in assigned duties.
- Initiative: Assesses and takes independent or directed action to complete a task or mission that influences the mission or organization.
- Adaptability: Adjusts to changing conditions.

## **Leading People**

- Inclusion and Teamwork: Collaborates effectively with others to achieve an inclusive climate in pursuit of a common goal or to complete a task or mission.
- Emotional Intelligence: Exercises self-awareness, manages their own emotions effectively; demonstrates an understanding of others' emotions, and appropriately manages relationships.
- Communication: Articulates information in a clear and timely manner, both verbally and non-verbally.

## **Managing Resources**

- Stewardship: Demonstrates responsible management of assigned resources.
- Accountability: Takes responsibility for the actions and behaviors of self and/or team; demonstrates reliability and transparency.

## **Improving the Unit**

- Decision Making: Makes well-informed, effective, and timely decisions.
- Innovation: Thinks creatively about different ways to solve problems, implements improvements and demonstrates calculated risk-taking.

## **Detachment 157 Cadre Fall 2024**

<b>Cadre</b>	<b>AFSC</b>	<b>Detachment Role</b>
Col Gregory Adams:	11M	Commander
Lt Col Joe Pugliese:	13H	Director of Staff
Maj Nicolas Wright:	11H	TBD
Maj Joseph Niez:	12B	TBD
Maj Christopher Vella:	63A	TBD
Maj Nicole Augins:	21R	TBD
Capt Vance Mathis:	63A	TBD
Capt Laura Schaefer:	38F	TBD
TSgt James Hillegas:	3E471	NCOIC
SSgt Darryel Gate:	3F5	Medical NCO
SSgt Logan Whitehill:	3F5	TBD
SSgt Kimberly Henderson:	3F5	TBD

