PHANTOM OPERATIVES

CHIEF OF AIR TRAINING

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TO 1A-10A-1

1. The Phantom Operatives Training Log is issued for information, standardization of instruction, and guidance to all flight instructors and student military aviators within the Air Training Command.

2. This publication is an explanatory aid to the Plane curriculum and shall be the authority for the execution of all flight procedures and maneuvers herein contained.

3. Recommendations for changes shall be submitted via the electronic Training Change Request (TCR) form located on the Phantom Operatives discord.

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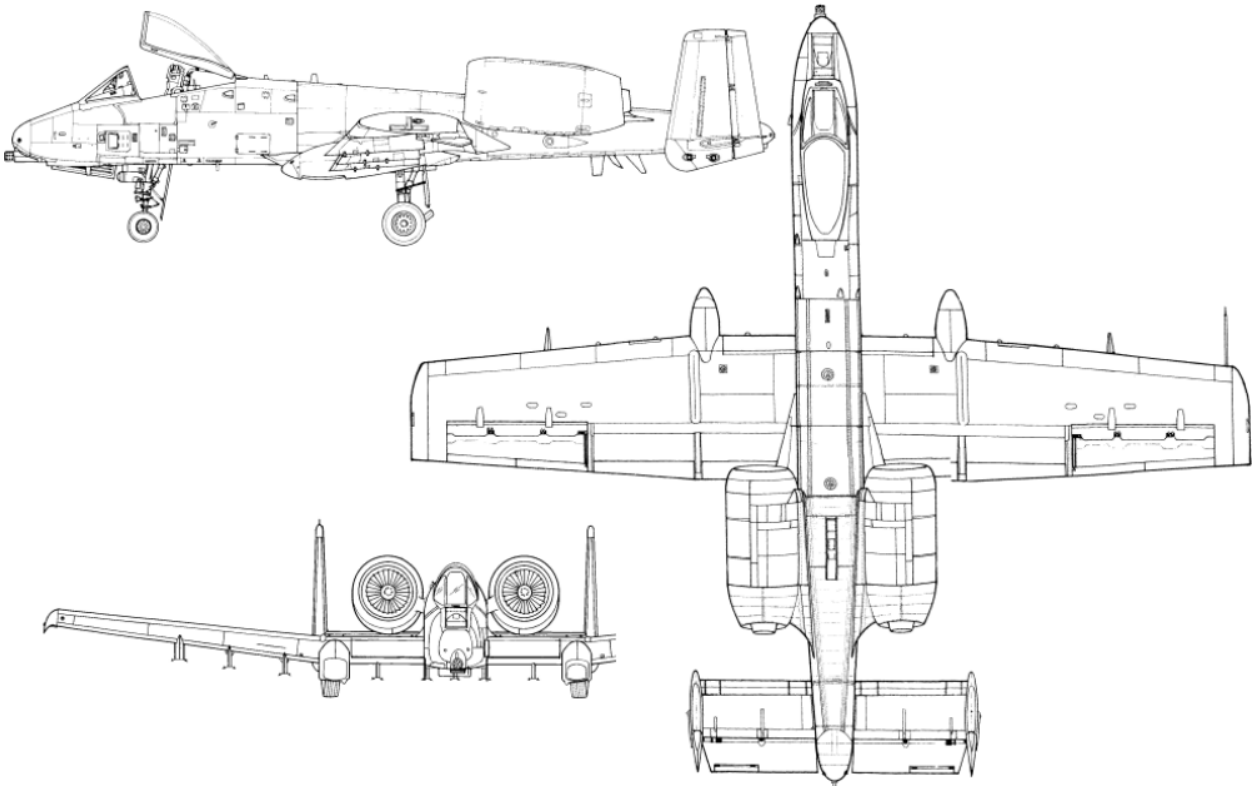
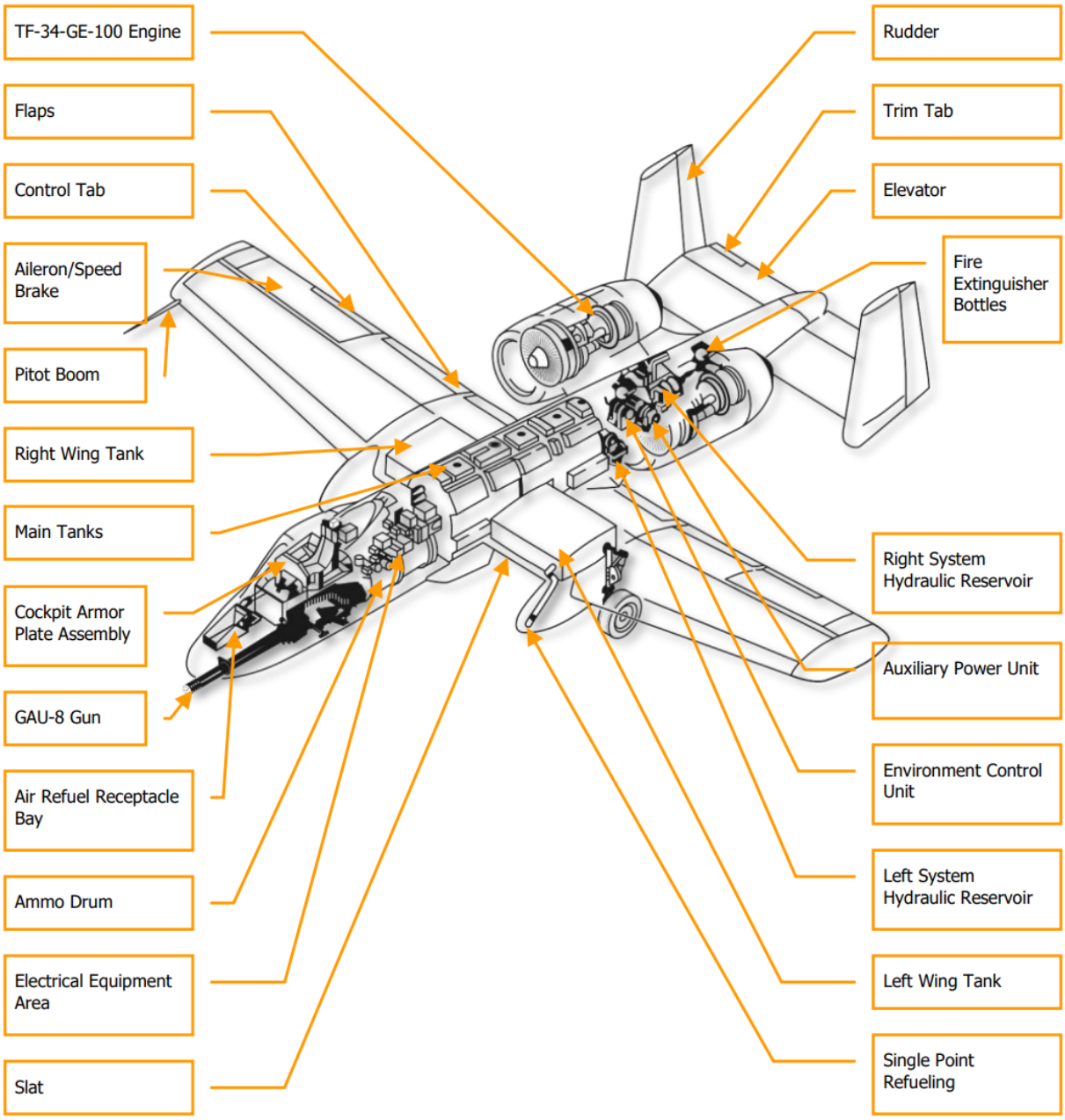
CHAPTER ONE
GENERAL DESIGN

The A-10A/C is a fixed-wing, single-pilot aircraft with two high bypass turbofan engines that is optimized for the Close Air Support (CAS) combat mission. Originally designed to counter a mass Soviet armor thrust across Europe, the A-10 was designed from the ground up to be the most survivable and potent CAS aircraft over a very deadly battlefield.



The A-10 uses stressed, machined skin panels to cover the fuselage and wings. A system of ribs, spars and bulk heads in turn strengthen the internal assembly to provide a rigid and robust structure



The most forward section of the fuselage houses the GAU-8/A 30 mm gun barrels and firing mechanism that extend back behind the cockpit. Alongside of the gun barrels is the nose gear that is installed right of centerline. This allows the gun to be mounted centrally along the fuselage for increased accuracy. The nose gear retracts fully into the fuselage. The cockpit sits high over the gun and nose gear bay and consists of a retractable Plexiglas canopy, a zero-zero ejection seat, and the various cockpit controls and instrumentation. The high, forward position of the cockpit provides excellent visibility over the nose. Additionally, the forward fuselage houses multiple avionics bays, the aerial fueling receptacle, and other equipment. The center section of the fuselage contains the forward and aft fuselage fuel tanks. Along the lower surface of the center fuselage are the hard points for store stations 5, 6 and 7. Loading on stations 5 and 7 is exclusive to loading on station 6. Generally, station 6 is only loaded with the TK600 external fuel tank. The aft portion of the fuselage has the two primary functions of mounting the two engine nacelles and the attachment point to the elevator and rudder control surface assemblies. Mounted on either side of the aft fuselage spine are the two nacelles for the TF-34-GE-100 engines. Between the nacelles and inside the fuselage are Auxiliary Power Unit (APU), the left and right hydraulic system reservoirs, and the Environmental Control Unit (ECU).

2 Wings

The wings of the A-10 are of the low-mounted straight design and provide low wing loading. This provides excellent maneuverability and a low stall speed. However, it does limit the A-10 to pedestrian speeds compared to other fighter aircraft. This does provide the A-10 the ability to better loiter over the battlefield in both regards to endurance and more easily stay over a CAS assigned target area. The wings have Hoerner wingtips that reduce induced drag and wingtip vortices. They also improve aileron effectiveness at low speeds

3 APU // AUXILIARY POWER UNIT

Located in the rear fuselage between the engine mounts is the APU. The APU is a small engine in itself and draws fuel to run. When running, the APU supplies compressed air to turn the compressor fans to start the engines. The APU also drives an electrical generator and a hydraulic pump. Once both engines are started and their generators enabled, the APU and APU generator can be shut down. You would only need to use the APU again in case of an engine re-start.

CHAPTER TWO
CONTROLS

100. INTRODUCTION

The key to flying the A-10 is patience and being able to handle large amounts of stress. Operators will be flying in low altitude or high, escaping AA or normal gunfire while providing support for our brothers on the ground. The starting process for an A-10 is hard to master, that is why this chapter exists.

I. CONTROLS

1. The controls to roll are A and D, they can also be used to taxi when below 200 knots.

2. The controls for pitch are W and S, they are inverted; S to pitch up, W to pitch down.

3. There is no rudder, which would normally be operated with Q and E, so turn by rolling 90 degrees and pulling up.

4. The controls for adjusting the throttle are space and left shift, space to increase throttle, and left shift to decrease it. You can see your throttle if you look to the bottom left corner of your cockpit, where your left hand is resting on the throttle stick.

5. The right mouse button is for firing your gun.

6. K and L are for turning the left and right engine respectively.

7. G is for raising and lowering the landing gear, look to the bottom left of your front panel to see the landing gear status. If there are 3 green labels, then the landing gear is lowered, if the labels are black, the gear is raised.

8. Press H to open and close the canopy. It's impossible to exit the plane if the canopy is closed. Closing the canopy also removes the little yellow ladder on the left side of the cockpit.

II. AIRFRAME LIMITATIONS

1. The maximum speed is 400. The A-10 will not go any faster, even in extreme dives.

2. The stall speed is 140.

3. The takeoff speed, or the speed at which the aircraft is able to take off from a flat surface, is 200. At this speed, A and D stop being controlled for turning on the ground, and the plane doesn't feel glued to the ground anymore. The plane is also possible to take off if doing it in a ledge at 100 speeds, though after first falling a couple dozen feet.

4. The optimal landing speed is under 200 and above 140.

5. The plane has a mere 200 hull points, the lowest in the game, but can outrun SAMs at full speed and can engage enemies outside their trigger distance.

6. The plane has limited ammunition. The main gun only gets over a minute of firing time.

7. The plane is unable to survive any physical collisions and can only withstand being fired at by small arms.

III. FLYING

To start up the engines:

1. Enable the battery switch
2. Turn on the Inverter
3. Turn on the APU Generator.
4. Flick on AC power (L) and AC power (R)
5. Turn on oxygen
6. And finally, CICU.

After flicking the mentioned switches in the order specified above, HUD should turn on and the 3 screens should turn on. Now, look to the left and flick on your:

1. APU
2. Engine (R)
3. Engine (L)
4. And the 4 fuel switches in any order.

Now, all you need to turn on is the lamp test button, and you are set. Wait for the RPM% and APU EGT indicators to reach their maximum before turning on your engines. Turn on your engines by pressing K for the left engine and L for the right engine. You must turn on your engines one by one. Also, the first engine must be fully turned on before you can turn on the

next engine. You can see if the engine is fully turned on by looking at the corresponding RPM meter. Now you are ready to take off. (Turning off the APU after both engines are turned on is optional.)
When ready, briefly hold space to increase the throttle, preferably to a speed of 25 to 35, and taxi to the runway. Once at a runway, line up (To prevent colliding with the signs on the runway and destroying your A-10) and throttle down by holding shift. To take off, hold space until the throttle is all the way up. The thrust level can be checked by looking to the bottom left corner of the cockpit, where the character's hand is situated on the throttle. If it's stopped moving, the plane is either on full throttle or zero throttle, depending on whether the throttle is to the front or to the back. Pull up at 200 speed and raise the gear by pressing G. The A-10 is capable of getting airborne at speeds lower than that, but in order to do so, it needs to go off some type of ledge, like the end of the runway.

IIII. LANDING

To land, approach the runway at a speed of 250-200 and shut off one engine when you are close enough to the runway. Make sure the nose is aimed slightly down and it should land.
Or you could just approach the runway at around 170 speed and angled down slightly with both engines on.
Landing may be difficult, as Roblox refuses to render the runway until you're close enough to to kiss it.

IIII. STRAFING

Strafing is the main focus of the A-10, as the airplane best fulfills CAS (Close Air Support) and COIN (Counter Insurgency) missions IRL. There are two ways to perform a strafe.

- **Method 1:** Get to a good altitude and airspeed, and line up the nose of the aircraft (use the reticle as a reference) with the target. Fly over the target and put some distance between it and the plane. Then pull up until the aircraft is upside down, roll 180 degrees to go right side up, and put the reticle over the target. If done correctly, the player will not have to make last-minute adjustments to the plane's heading. When close to the target, hold the right mouse button to fire. Hold it down for a couple of seconds and go up and down or left and right to maximize the area of impact.

- **Method 2:** Get to a good altitude and airspeed. When you're close to the target, use roll and pitch controls to get your reticle centered on the target, and fire at the right moment. This method is meant for experienced pilots since it requires a lot of last-minute precise adjustments.

If engaged by a SAM, go full speed and turn opposite to the direction they were fired from in order to outrun the missile.