

Anti-Xeno Flight Manual

A research report by Commander Aterius

Disclaimer:

The Anti-Xeno Flight Manual and all its associated resources have been integrated into the Anti Xeno Initiative's new [AX Knowledge Base \(AXKB\)](#) under the 'Thargoid Combat and Strategy' topic. This [link](#) will take you to the new up-to-date version of the AXFM. This document may become outdated!

Fighting Thargoids is hard until it is easy. Prepare to die and face the rebuy screen. Medium ships are faster, cheaper to (re)buy, require less engineering, and pack roughly the same firepower as large ships due to the weapons cap on experimentals (4). Flying without using a recommended build puts you and your wingmates at risk. Be courteous to your fellow pilots! Engineering is not optional, and flying without guardian gauss is not recommended. As always, never fly without a rebuy.

Abbreviations:

AX	Anti-Xeno
AXI	Anti-Xeno Initiative
AXFM	Anti-Xeno Flight Manual
AXLSG	Anti-Xeno Large Ship Guide
FA	Flight Assist
FDL	Fer-de-lance
FAS	Federal Assault Ship
MRP	Module Reinforcement Package
GMRP	Guardian Module Reinforcement Package
HRP	Hull Reinforcement Package
GSRP	Guardian Shield Reinforcement Package
AFMU	Auto Field Maintenance Unit
SFN	Shutdown Field Neutraliser
SCB	Shield Cell Bank

Resources:

The Anti Xeno Knowledge Base (AXKB), containing the aggregated knowledge of AX Combat:
<https://www.antixenoinitiative.com/wiki>

Tutorials

- Commander Gluttony Fang's "[How to solo a Thargoid Interceptor](#)" post on frontier forums
- Commander Shwinky's "[Advanced Tutorial - Interceptors](#)" using FA-off, no shutdown field neutralizer, and no scanner
- L'Intouchable's "[Learning FA-OFF](#)"
- Commander Maligno's [FA-OFF orbiting guide](#)
- Commander Painbeaver's [Guide to Thargoid Combat Mechanics](#)
- Commander Sajuuk-Khar's [Thargoid Solo Walkthrough](#)

Solos

- Commander Gluttony Fang's "[FDL Basilisk Solo](#)"
- Commander Maligno's "[Krait Medusa Solo](#)"

Information

- Cannon: Lab 69 Xeno Intelligence Agency: <https://canonn.science/lab69xia/>

Community Help

- AXI discord link: <https://discord.gg/bqmDxdm>

Recommended AX builds:

The four most effective medium AX ships are the Krait, Chieftain, Federal Assault Ship, and Fer-de-lance. (See the AX large ship guide in the advanced topics for Conda, Cutter, and Corvette builds). These ships each differ slightly in play style, but share the ability to mount at least three Guardian Gauss cannons and one AX Flak Launcher. Furthermore, all are capable of boosting greater than 450 m/s which allows the ships to kite the interceptor while dealing with the thargon swarm. When starting out, you can use the Xeno-scanner and Shutdown Field Neutraliser in the place of one shield booster and one heat sink launcher. **Make sure you always have at least one heat sink launcher.**

Participating in AX Conflict Zones might require slight build modifications (See [AX Conflict Zone Guide](#) for details)

In decreasing recommended ship order:

Krait MK II (Ideal starter AX build):

<https://s.orbis.zone/4ytg>

Notes: Most balanced AX ship. Shields and armor strike a balance between the FDL and FAS. It has a massive distributor and excellent heat management, however, the canopy is exposed and weak.

Krait MK II Speed Build:

<https://s.orbis.zone/4ytj>

Note: Sacrifices armor for speed. Can upgrade to 7A power plant if needed and swap HRP for additional GSRP and extra shield booster.

Krait MK II Repair Limpet Build:

<https://s.orbis.zone/4ytm>

Notes: Variant that sacrifices some hull for ability to repair. Unnecessary for Medusa or lower but repair limpets make Hydra fights much more forgiving. Can downsize Cargo Rack to c4 and use a c5 HRP in the size 6 slot.

Alliance Chieftain (Ideal starter AX build):

<https://s.orbis.zone/4ytn>

Notes: Slightly faster than Krait MK II, and extremely maneuverable. Powerful thrusters allow for orbiting without boost. Can use additional c5 GSRP instead of HRP by powering down the AFMU and using a regular MRP instead of GMRP. Has plenty of speed, but can trade a bit of armor to use Lightweight Composite hull if needed.

Alliance Chieftain Repair Limpet build:

<https://s.orbis.zone/4ytq>

Notes: Variant that sacrifices some hull for ability to repair. Slightly slower due to using Military-Grade Composite hull.

FAS

<https://s.orbis.zone/4ytv>

Notes: The FAS is lacking in shield capacity and firepower, however, it has amazing yaw speed. Beware the fragile cockpit and exposed power distributor.

FAS Repair Limpet Build:

<https://s.orbis.zone/4ytw>

Notes: Variant that sacrifices some hull for ability to repair.

FDL Extra Heat Sink Build:

<https://s.orbis.zone/4ytx>

Notes: This FDL packs 4 heat sink launchers so it maintain low-heat stealth by double-sinking, which makes up for its weak heat management. Running more shield boosters on a bi-weave FDL is impractical since the regeneration is too slow with its undersized shield.

FDL Extra Shield Build

<https://s.orbis.zone/4yty>

Notes: This build differs from the others in this list in that it uses a Prismatic Shield Generator. This means you cannot rely on regeneration to regain your shields, and it has no room for SCBs. The only way to regain shields is by rebooting (See [Large Ship Guide](#) for details on how to use cold-reboots).

FDL Repair Limpet Build (Necromancer):

<https://s.orbis.zone/4yt->

Notes: This build sacrifices upfront hull capacity for the ability to repair. Called Necromancer because it has only enough hull to survive an attack run, after which it brings itself back to life. Disclaimer: Mistakes with this kind of build can be very costly, so it's not recommended as a starter.

Krait Phantom:

<https://s.orbis.zone/4yt>

Notes: The Phantom runs cooler and faster than the MK II, but sacrifices some firepower.

Krait Phantom Repair Limpet Build:

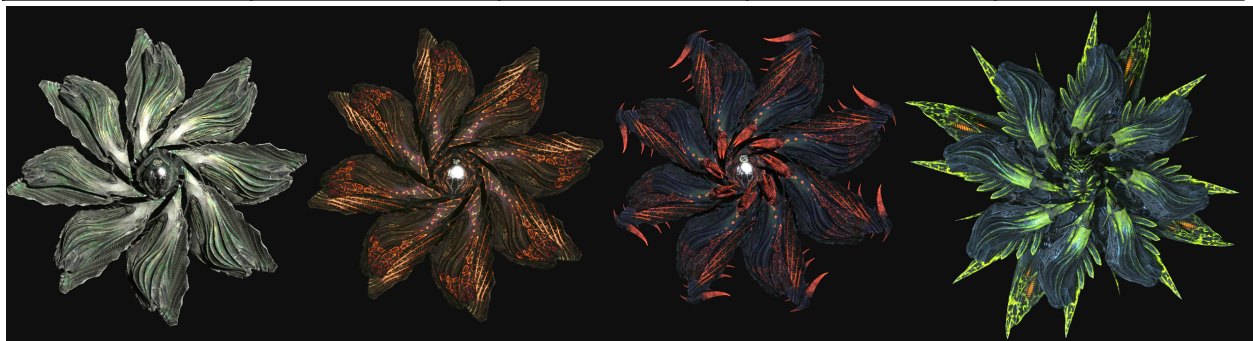
<https://s.orbis.zone/4yu0>

Notes: This version of the Phantom is less tanky, but has the ability to repair.

Thargoid interceptor variants

	Cyclops	Basilisk	Medusa	Hydra
Number of Hearts	4	5	6	8
Direct gauss shots required to exert first heart at	6	12	24	44

1.5 km				
Gauss shots required after last heart	6	12	24	44
Direct gauss shots required per heart at 1.5 km(non-premium)	3	4	5	12.5
Time for shield degradation	1:45	3:00	4:00	5:20
Size of swarm	32	64	96	128
Number of swarm spawns	5	6	7	9
Top Speed	450 m/s	530 m/s	450 m/s	450 m/s
Location found	Non Human Signal Source (Threat 5/6)	Non Human Signal Source (Threat 6/7)	Non Human Signal Source (Threat 7/8)	Non Human Signal Source (Threat 8/9)
Distinctive markings	Green coloring	Red coloring	Red coloring with spikes on outer edge of petals	4 additional pylons
Bond value	2.000.000 CR	6.000.000 CR	10.000.000 CR	15.000.000 CR
Enrage timer	6 minutes	7 minutes	7 minutes	8 minutes



*Interceptors found in higher-threat signals (e.g. a cyclops in a threat 6) will be accompanied by scouts

**Each next heart takes less damage to exert. Hearts become exerted when interceptor's hull drops below 80% of its current maximum.

Thargoid special attacks

	Cyclops	Basilisk	Medusa	Hydra
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After Heart 1	Lightning	Lightning	Lightning	Lightning
After Heart 2	Caustic Missiles	Caustic Missiles	Caustic Missiles	Caustic Missiles
After Heart 3	EMP + Caustic	Caustic Missiles	Caustic Missiles	Caustic Missiles
After Heart 4	Caustic Missiles	EMP + Caustic	Caustic Missiles	Caustic Missiles
After Heart 5		Caustic Missiles	EMP + Caustic	Caustic Missiles
After Heart 6			Caustic Missiles	Caustic Missiles
After Heart 7				EMP + Caustic
After Heart 8				Caustic Missiles

- After the destruction of the first heart, the interceptor will begin to use its lightning when approaching within 800 m which will heavily damage your shields, render you immobile, and knock out your systems.
- After the second heart, the interceptor will use caustic missiles, which are slow-moving (~350 m/s) missiles that applies a permanent DoT (damage over time) on your hull. Caustic Damage can be removed by bringing your heat above 180% for several seconds, or to 250% for instant removal. To achieve these temperatures, you can use SCBs, firing gauss cannons, or if you can afford to drop shields, using silent running. Ensure you have sufficient heatsinks/power in sys to fire two heatsinks to quickly bring your heat below 100%. During this time, the interceptor will not miss. Alternatively, caustic damage will be removed upon docking at a station. The launch of caustic missiles can be entirely avoided by keeping a low temperature (below 20%) or being outside of 3km.
- On the second-to-last heart, the interceptor will use EMP (shut-down field), which will render your ship inoperable for 30 seconds or so (your wing beacon will also turn off because of this). You can avoid triggering the EMP field by being outside of 3 km **before it attempts to initiate the attack**, or by keeping a low temperature (below 20%). You cannot avoid the EMP once the attack has been queued, stay in FA-off and boost away from the swarm/interceptor before the attack hits if you are not carrying a shutdown field neutralizer.
- With the exception of the lightning attack, once the thargoid has deployed the swarm you are not in danger of being hit with the special attack.

Thargoid regeneration rates (courtesy of Aranionros Stormrage)

[All thargoids regenerate at a constant rate \(0.4% of their health per second\)](#), though since stronger variants have more overall hull, it leads to more effective regen. Once a heart is exerted however, they regenerate very rapidly, so the heart needs to be destroyed to actually damage the interceptor.

With immense firepower, this increased regeneration can be overcome, so large groups of pilots can instantly destroy an interceptor, without destroying its hearts. (This is referred to as 'instagibbing')

Strategy

Background

To destroy a Thargoid, it is first important to understand its shield and regeneration capabilities. There are four variants of Thargoid Interceptors: Cyclops, Basilisk, Medusa, and Hydra. Thargoid interceptors are protected by a shield which deteriorates over time. It takes 1 minute 45 seconds for a Cyclops shield to fall, 3 minutes for a Basilisk, 4 minutes for a Medusa, and 5 minutes for the Hydra. The rule of thumb is 2, 3, 4, 5. The shield will decay on its own; do not waste ammunition on the shields. Note: the interceptor will not deploy shields until after the destruction of the first heart. Use the flight timer in the top right of your HUD to time the shield.

Once the shield is down, you must damage the hull of the interceptor to "exert" the heart. At this point one of the "petals" will glow red (or become smokey in the case of the hydra). You must hit the glowing part of the petal to damage the heart. You will know when you have destroyed it.

Your shields will protect you from the interceptor's cannon fire (mostly) and the swarm's missiles, but not the regular fire of the swarm. The swarm only spawns when you first engage the interceptor, after each destruction of the heart, and after failing to destroy the heart before the engage timer expires (~7 minutes). Only one swarm will be deployed at a time. If you fail to completely destroy a swarm before you destroy a heart, a second swarm will be banked and deployed upon destruction of the currently active swarm. **Only one swarm can be banked at a time.**

You will need heatsink (cyclops/basilisk/medusa) reloads, ax flak (basilisk/medusa) reloads, and gauss reloads (medusa with only 3 gauss cannons on ship, or hydra).

The opening

Once you drop into the Non-Human Signal source, the Thargoid will approach and scan you. Either let it scan you and turn away (if you wish to scan it), or begin firing just as it closes within 1.5km while reversing slowly away. Stay within 1.5 km to avoid the damage dropoff at range from gauss, deploy a heatsink, and begin firing, using the reload indicator on your hud to ensure you are firing immediately after your cannons reload (1.6 seconds). After you hear the sound of the heatsink eject, fire another. **Always ensure you are protected by a heatsink. Orbiting the interceptor while under 20% heat allows you to entirely dodge the main cannons so long as you remain roughly 10-15 degrees out of its bore sight with high angular momentum.**

The interceptor will begin firing on you; depending on your shield strength (and pip management skills) boost and begin an FA-off orbit to avoid some damage. Continue firing until the heart is exerted (glows red and is listed as exerted if you have a xeno scanner equipped). At this point aim at the heart and fire. It should only take 3 direct gauss impacts for a Cyclops, 4 for a Basilisk, 5 for a Medusa, and 12.5 for a Hydra with regular ammunition. Once the heart has been destroyed, transfer pips 2-4-0. Boost past the Thargoid if within 1 km, and away from the Thargoid if outside of 1 km. The thargoid will charge yellow and begin chasing you, if it gets within range you will be hit by the lightning which will disrupt your systems, kill your momentum, and drain your shields.

From this point on, fights are divided into two phases: swarm and heart destruction. Each Thargoid has a set number of “hearts” (4 on a Cyclops, 5 on a Basilisk, 6 on a Medusa, 8 on a Hydra). After the opening, you have destroyed one heart and have ~7 minutes until the Thargoid becomes “enraged”. An enraged Thargoid will launch a new swarm, and keep replacing it as soon as it is destroyed. The entire swarm will also turn into missiles at once, destroying less armoured ships outright. Enrage means you have likely lost. Prior to attacking the next heart, you have a set time period during which the Thargoid is protected by a shield (2, 3, 4, 5 minutes for the respective Thargoid subtype). In this time period you have three objectives, destroy the swarm, re-arm, and recharge your shields. After this time period and before the 7 minute mark, you must exert and destroy the next heart.

Kiting the swarm

After you have cleared ~ 4km, transfer pip 4-2-0 and continue boosting. Your maximum speed without boost is likely less than the 450-530 m/s top speed of the interceptor and swarm. **4-2-0 pips will ensure your shields regenerate as quickly as possible while still allowing you to remain outside the interceptor’s weapon range of 3 km.** This time period is an opportunity to deploy a repair limpet, utilize your AFMU, and replenish your heatsinks/gauss cannons/flak launcher ammo (in roughly that order). If you have managed to put at least 6 km distance between you and the interceptor, check the position of the swarm.

Often due to the speed of the interceptor, you will find the interceptor between you and the swarm. It is imperative you do not engage the swarm until your shields are recharged and you have at least one heatsink available. **To put the swarm between you and the interceptor. Turn FA-Off, face the interceptor, transfer pips 4-2-0, and boost directly towards it. Deploy a heatsink around 4 km and do a barrel roll if the swarm begins firing on you. This disrupts the aim of the swarm. Use this same strategy if at any point you cannot outrun the Thargoids.** Shields are encouraged, but optional.

If the swarm is between you and the interceptor, turn around in FA-off and face the swarm. You are now in a maneuver known as the reverski (demonstration below). Keep an eye on your distance to the interceptor, if it gets closer than 5 km, put it directly behind you and boost. **Wait until your boost terminates to make any course adjustments, otherwise your boost will partially kill your relative velocity to the interceptor.**

Despite your weapon status on the HUD, you can target and attack the swarm with remote flak at an effective range of 7 km due to the speed of the swarm and the fact that flak shells don’t inherit the ship’s velocity (assuming you’re reverskiing away). When the swarm is between 4-6 km away, it will proceed in a straight line towards you. Fire your remote flak and release when the reticle turns red (accompanied by a beep). You should see green “sparks” as the swarm is destroyed. Once the swarm is closer, it will begin evasive maneuvers. **At this point, attempt to notice the pattern of movement and preemptively fire at where the targeting reticule is moving towards rather than to where it currently points.**

There are important differences across the Cyclops, Basilisk, Medusa, and Hydra swarms. The swarm numbers increase from 32, 64, 96, and 128. This increases damage and time required to destroy the swarm. **The Basilisk, Medusa and Hydra swarms are also capable of forming a ring formation. If**

you fire at the reticle while the ring is moving directly towards you, the AX shrapnel will not hit the members of the ring.

One key tip to hit the ring formation is to position the “leading target reticle” off-center, approximately the distance to one of the two “brackets” on your hud. This is best illustrated in the picture below. Note: it can also be positioned at a vertical offset, not just a horizontal offset as shown.

For a complete guide to swarm mechanics check out the [AX Swarm Guide](#)



You must destroy two swarms in a row after the destruction of the first heart if you destroyed the heart before destroying the first swarm. **If a heart is destroyed while a thargon swarm is deployed up to a single swarm will be banked.** Destroy this swarm before proceeding with the fight.

Here's a video [example](#) of the Reverski maneuver in action, combined with reticle offset to efficiently destroy a Medusa swarm:



Exertion and destruction of subsequent hearts

By now, your shields, ammo, and heatsinks should be fully restored. Face the interceptor and monitor its approach. Transfer pips 3-0-3 or 0-2-4 depending on your build and boost towards and vertically from

the Thargoid in FA-off. **Once you are within 4 km deploy a heatsink to reduce your heat signature below 20%. Your objective is to utilize your vertical thrusters in combination with your boost to “orbit” the interceptor within the effective range of your gauss, ~1.5 km. Remember, orbiting the interceptor while under 20% heat allows you to entirely dodge the main cannons so long as you remain roughly 15 degrees out of its bore sight.** Try to avoid getting closer than 1 km, else the Thargoid engage its lightning attack which will heavily damage your shields, render you immobile, and knock out your systems.

Continue pumping gauss damage into the Thargoid while orbiting and deploying heatsinks upon each heatsink ejection. **When fighting a Medusa or Hydra, try to time your shots as such to only fire your gauss after the Thargoid begins a salvo. This will ensure that your heat signature only raises above 20% while the interceptor is reloading. You can also map 1 or 2 of your gauss to the primary/secondary fire to prevent your heat from rising above 20% after firing.**

After the heart is exerted quickly fire your gauss at the heart. The tradeoff between convergence and damage is best between 1-1.5 km. Prioritize aim and positioning rather than quantity. Once the heart is destroyed, transfer pips 2-4-0 and boost away. Your objective after the destruction of each heart is to get 3 km away from the Thargoid as to not trigger its special attack. Rinse and repeat until destruction of the last heart.

Following Destruction of the last heart

Fire gauss directly at any part of the Thargoid as quickly as possible. You should be able to get roughly two rounds in before the shields return (after destruction of the last heart, the interceptor will not regenerate). This should be enough to destroy a cyclops. Boost away and kite the swarm, await the degradation of the interceptor’s shield, and fire your gauss until the Thargoid is destroyed.

For Basilisk, Medusa and Hydra, it is possible to destroy them outright after the last heart with a maneuver known as ‘Lightning Execution’. **This is an advanced maneuver, only use if you’re an experienced commander.** The strategy is to expose the heart, do some damage to it (without destroying it) and move within lightning range. As long as the Interceptor is using its lightning attack, it cannot deploy a new shield, allowing you to keep damaging and destroy it much faster.

Here's a video [example](#) of how to do it:



Ensure you capture a screenshot with both the explosion and the combat bond (F10 on PC). Congratulations commander!

Pip Management:

Note: Pips are often abbreviated as 2-2-2, meaning two pips in systems, two pips in engines, and two pips to weapons. There is a maximum total of 6 pips.

Pip management can be performed manually, but it is significantly more effective to utilize a macro program such as AutoHotKey (<https://autohotkey.com/>). AHK can almost instantaneously rebalance your pips more accurately than even the most trained pilot. Voice attack can also be used for pip management, either via voice commands (not recommended due to speed) or binding to mouse/function keys.

The following AHK script binds the most common pip distributions to function keys F1-F8. You can then use your mouse's software to bind additional mouse keys (side buttons for example) to a selection of function keys that suits your playstyle.

https://drive.google.com/open?id=1Sf1BjlyoGtK5E5FvbqOk_80lunBgdGg2

Pip management is essential to effectively utilizing your gauss while maximizing mobility during the Thargoid assault. When kiting the Thargoid and tackling the swarm, pip management minimizes the time necessary for restoration of your shields. Any time spent with no pips in systems with shields at less than 100% is less shield strength available when returning to fight the Thargoid.

Another example of the benefits: Transferring 4 pips to sys right before impact of the interceptor cannon leads to a 60% increase to shield damage resistance, which translates to an ~2.6x increase in shield strength. Using macros can allow you to quickly switch from 4-0-2 to 0-2-4, to maintain maximum recharge rate on your gauss, keep your engine constantly boosting, and ensure your shields are always at peak resistance. Always avoid running out of systems energy as this will prevent you from firing a heatsink.

Recommended Control scheme:

Keyboard and mouse provides superior control to HOTAS. This is well known amongst the PVP community, and the same holds true for Thargoid hunting. The ability to decouple your flight vector from your attack vector is paramount. A commonly used AX tactic requires maintaining a heat signature below 20% and a high angular velocity relative to the interceptor. This results in dramatically diminished aim of the interceptor's main cannon. Without FA-off, it is nearly impossible to maintain the interceptor in your weapon's field of fire while maintaining a flight path that does not bring you dangerously close to the interceptor, or kill your angular velocity to the interceptor.

The following are recommended mouse settings which **enable relative mouse control** (the cursor returns to the center of the reticule without player input). This dramatically increases your aim because it makes it easier to make small adjustments in FA-off. **Rebind yaw to left and right mouse and roll to the A and D key.** Ensure that **flight assist is set to toggle**. Maneuvering in this mode in supercruise is tedious. Try binding alternative yaw and pitch to the numpad. Here are recommended mouse sensitivity settings:



Additional guides on advanced topics:

[Material Farming Guide](#)

[Large Ship Guide](#)

[Wing Fight Guide](#)

[Conflict Zone Guide](#)

[Swarm Guide](#)

Translations

[Deutsch](#)

[Polski](#)

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<https://goo.gl/forms/pY4dOVORqVq3tPk2>

Acknowledgements:

Commander Aranionros Stormrage - **Co-Editor**, Hydra data, corrections, and comments

Commander Gluttony Fang - FDL Build, Thargoid strategy, interceptor guide, heatsink stealth technique, FA-Off builds

Commander Shwinky - FAS build, Thargoid strategy, interceptor guide, heatsink stealth technique, Hydra Shield decay time

Commander Maligno - Krait Build, Thargoid strategy

Commander Mackenheimer - Thargoid combat data, Medusa swarm targeting trick

Commander Painbeaver - Thargoid interceptor variant photos

Commander Angeleyes - FDL Build, Thargoid strategy

Commander ryan_m17 - Resource guide

Commander Dorakyura - Corrections and wing guide instancing info

Commander BADRACINGDRIVER - Example Videos