



Starship Troopers Extermination

Links

Website:

- <https://starshiptroopersextermination.com/>

Steam:

- [Starship Troopers: Extermination at Steam](#)

Beginner Tips:

- [Starship Troopers: Extermination - Beginner Tips](#)
- [Starship Troopers: Extermination - Which Class Should You Choose?](#)
- [Starship Troopers: Extermination - Every Enemy And How To Beat Them](#)

General:

- [Starship Troopers: Extermination - Steam Community Hub](#)
- [Fandom Wiki -Starship Troopers: Extermination - THIS IS JUST A STUB ATM.](#)
- [Steam Community - Close Quarter Combat](#)

Base Building:

- [Steam Community - Base Building Theory](#)
- [Steam Community - Build Better Walls](#)

Class Specific:










- [Steam Community - Bastion and YOU! - Bastion](#)
- [Steam Community - Bastion Tips and Tricks - Bastion](#)

Settings

- Common
 - Global Mouse Sensitivity: 44%
 - Mouse
 - "Toggle Sprint": OFF
 - "Toggle ADS": OFF

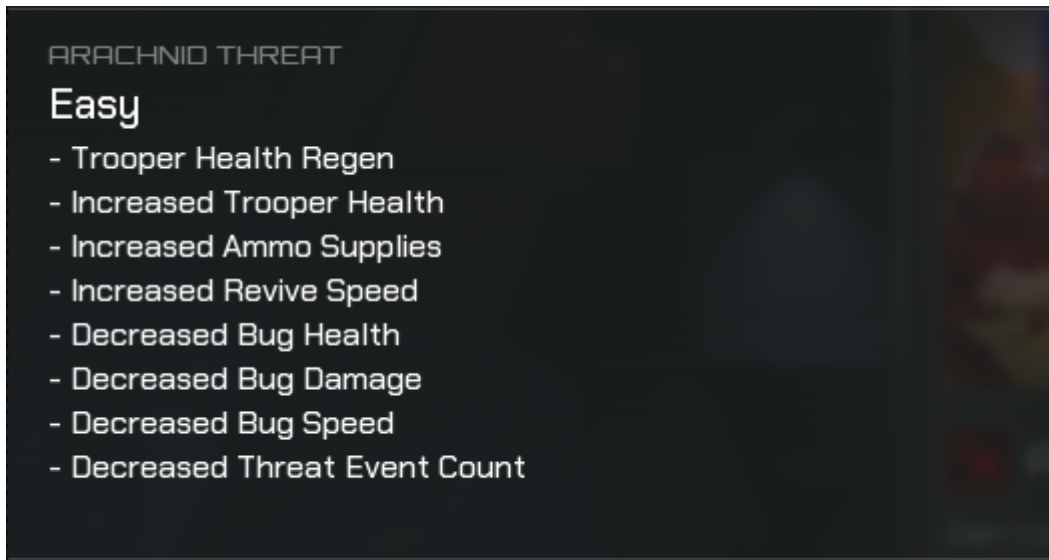
Keyboard

| COMMAND | Default Key | rokit |
|----------------------------|-------------|-------|
| Accept Pop-Up | E | |
| Crouch | LCTRL | |
| Cycle Item Forward | DOWN | |
| Cycle Item Reverse | UP | |
| Dismiss Pop-Up | Q | |
| Dismiss Tutorial | O | |
| Escape Menu | ESC | |
| Fire | | |
| Focus | LSHIFT | |
| Interact | F | |
| Switch to Primary Weapon | 1 | |
| Switch to Secondary Weapon | 2 | |

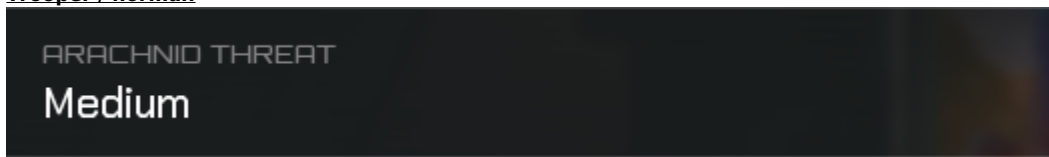
| COMMAND | Default Key | rokit |
|-------------------------------------|--|---|
| Switch to Utility 1 | 3 | |
| Switch to Utility 2 | 4 | |
| Switch to Utility 3 | 5 | |
| Switch to Special | 6 | |
| Jump | SPACE | |
| Map Zoom In |  UP | |
| Map Zoom Out |  DOWN | |
| Melee | V |  THUMB B |
| Menu Left | Q | |
| Menu Secondary Left | Alt | |
| Menu Mutator Browser | Z | |
| Menu Right | E | |
| Menu Secondary Right | D | |
| Build Tool | B | |
| Build Tool Cycle Down | E | |
| Build Tool Cycle Up | Q | |
| Build Tool Rotate Left |  UP | |
| Build Tool Rotate Right |  DOWN | |
| Ping Location |  | X |
| Reload | R | |
| Restore Defaults | X | |
| Scoreboard | Z | |
| Spectate Left | Alt | |
| Spectate Right | D | |
| Sprint | LSHIFT | |
| Tactical Map | TAB | |
| Toggle Local Voice Chat (Proximity) | Y | C |
| Toggle Team Voice Chat (Global) | T | |
| Use Class Ability | Ctrl |  PRESS |
| Grenade | G |  THUMB A |
| Aim Down Sights |  | |

Difficulty Level

Recruit / easy:



Trooper / normal:






Veteran / hard:



Objective

The objective is to power up and activate the ARC seismic survey device and protect it while it collects data. The ARC is powered by gas resources that are gathered from resource nodes. In addition, players need to gather Ore from resource nodes to build up defenses. This is a freer form game mode, with randomized objective locations. Players are expected to split and coordinate their tasks to be effective

- Players spawn and fight their way to the ARC drop location. This location is randomized.
- Players establish a base at the location.
- Once the ARC has dropped, Ore and Gas resource nodes are revealed around the world.
- Gas canisters are needed to power up the ARC (required count scaled by player count)
- Ore canisters are needed to build up defenses which are essential for surviving the final horde
- Random side objectives will spawn around the world. Players can choose if they want to complete these. Failing enemy objectives (Red) will result in the Threat level to go up, and the arachnid resistance will be tougher!
- Once all of the required Gas canisters have been delivered to the ARC, players can decide when they want to activate (“Slam”) the device. Two players are needed to activate the device.
- Once the ARC is active, the enemies will start pouring in and players need to keep the ARC alive until the data collection is finished.
- Once the data collection is finished (or the ARC falls), players must reach the extraction ship alive!

Types

| Icon | Description |
|---|--|
|  | Main Objective - Defend the ARC and maintain base defenses integrity. |
|  | Gas Resources - Construct the gas refinery and gather Gas Resource Canisters and deliver them to the Main Objective (the ARC). This will power the ARC and transition the phase of the mission into the base defense portion prior to extraction. |
|  | Ore Resources - Construct the ore refinery and gather Ore Resource Canisters and deliver them to the Mobile HQ (the respawn HQ). This will generate expendable resources that can be used for purchasing base defenses. |

| Icon | Description |
|---|--|
|  | Subsidiary/Secondary Objectives - Secondary Objectives come in three forms: (1) Signal Booster, (2) Resource Gathering, (3) Generator Repair. Both Signal Booster and Generator repair rewards troopers with at least 3 (or up to 6) x M-56 Pilum Rocket Launcher. The Resource Gathering drops anywhere between 3-4 x Resource Canisters that vary (but almost always gives at least 1 x Resource type; Ex. 2 x Ore Canisters, 1 x Gas Canisters). |
|  | High-Priority Threat - Search and destroy type objective. DSV troopers are tasked with intercepting an Arachnid patrol to attrite their forces by at least fourty. Failure in accomplishing this will increase the Arachnid Threat Level by one-point. Accomplishing this task will have the opposite effect. |

Priorities

The table below is the best method of prioritizing objectives during ARC missions. It is worth noting that secondary objectives are not necessary for accomplishing the mission, but they are enablers that making the final two-phases of the operation much easier.

| Priority | Objective Type |
|----------|-------------------------------|
| 1 | Ore |
| 2 | High Priority Targets |
| 3 | Signal Boost/Generator Repair |
| 4 | Gas Canister |
| 5 | Resource Recovery |

- Building defenses can be costly. Squads should move out in groups with at least one squad in the early stages of the operation on base security/base building detail.
- As the Arachnid threat level increases, the more difficult it is to traverse AO CENTRAL GARRISON VICTOR (Valaka Plateau, Klendathu Solar System). Eliminating the HPTs keeps the threat between level 1 and 2. It is necessary enough that as soon as its available, a squad of 4-5 x troopers should respond immediately to eliminate the threat.
- This is the opposite effect of the 2nd priority. Where eliminating the threat reduces the amount of hostile bugs that spawn, this secondary objective arms troopers with the capability to respond to whatever the bugs throw at them during the defensive phase.
- This priority is tied for last, the only reason it isn't dead last is because the last task is convinient in the event the Gas Refinery is on cooldown.

Too long; didn't read: Gas Canisters are the LAST objective you should complete. As soon as all 7 or 8 canisters are inserted into the ARC, the final phase of the operation will commence (defend the ARC/base). When in doubt, build the base, attrite the bugs, when the base is established begin the defensive phase.

Loadout

Primary Weapons

Availability:

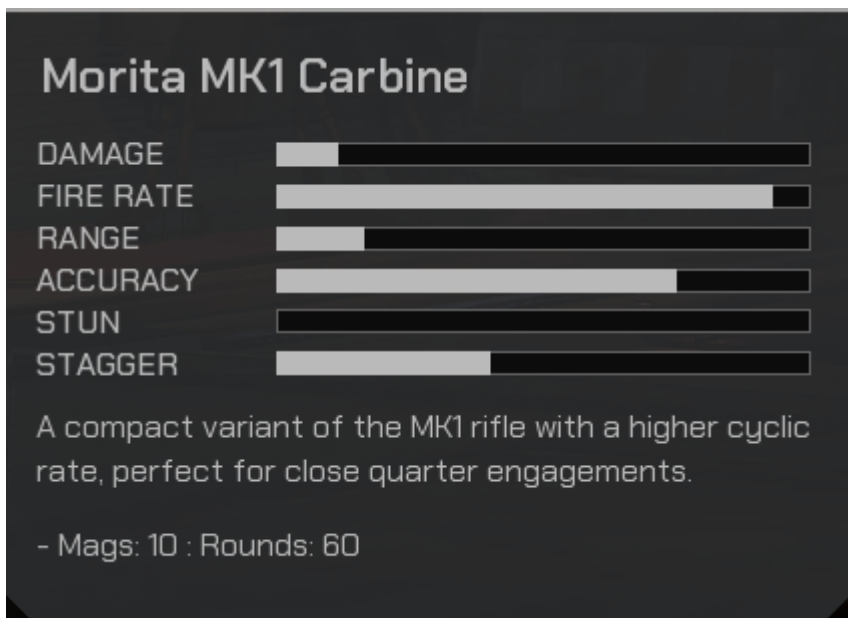
| Name | Level | | |
|--------------------------------|--------|---------|----------|
| | Hunter | Bastion | Operator |
| Morita Mk1 Rifle | 1 | 1 | 1 |
| Morita Mk1 Carbine | 2 | 13 | 8 |
| TW 202-L Morita Hawkeye | 11 | | 2 |
| Morita Mk3 SAW | | 2 | |
| C-32 Chi-Hong Grenade Launcher | | | 11 |



- Magazine Capacity: 60 (90)
- Spare Magazines: 10 (12)

This weapon system is the starting weapon for all three classes and easily the most underpowered. It's highly recommended troopers abandon this weapon when they unlock virtually any other weapon. It does deal more damage than its carbine variant but only by a sliver, and the capability for this weapon to stagger is extremely low.

| Difficulty | Hits | | | | |
|------------|-------|---------|--------|-------|-----------|
| | Drone | Warrior | Gunner | Tiger | Grenadier |
| Easy | 1 | 15 | 27 | 180 | 300? |
| Normal | 1 | 27 | ? | 240 | 300 |
| Hard | 2 | 46 | ? | 360 | >360 |





- Magazine Capacity: 60 (90)
- Spare Magazines: 10 (12)

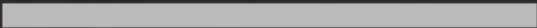
This weapon system is essentially the Mk1 Rifle, but better in every way. The higher cyclic rate allows for more damage output, it has a greater stagger chance than the Mk1 Rifle (making it excellent for engaging more than one warrior in the open). The slightly less damage output compared to the Mk1 Rifle is virtually unnoticeable.

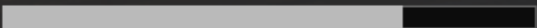
| Difficulty | Hits | | | | |
|------------|-------|---------|--------|-------|-----------|
| | Drone | Warrior | Gunner | Tiger | Grenadier |
| Easy | 1 | 24 | 28 | 270 | 360 |
| Normal | 2 | 34 | 40? | 330? | 480 |
| Hard | 2 | 48? | ? | ? | 570? |

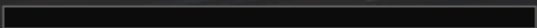
TW 202-I Morita Hawkeye


DAMAGE 

FIRE RATE 

RANGE 

ACCURACY 

STUN 

STAGGER 

A semi-automatic scout rifle that fires high caliber projectiles and is very effective at staggering the enemy.

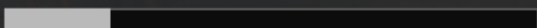
- Mags: 7 : Rounds: 16

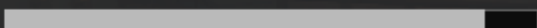
- Magazine Capacity: 16 (24)
- Spare Magazines: 7 (8)

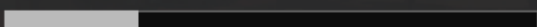
This weapon system deals a lot of damage and excellent for slowing down the advances of hordes. In the hands of Hunters, they can be devastating for countering Gunner bugs. Troopers should be alert of friendly fire, as it can be very lethal when unintentionally shooting friendlies.

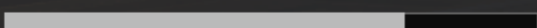
| Difficulty | Hits | | | | |
|------------|-------|---------|--------|-------|-----------|
| | Drone | Warrior | Gunner | Tiger | Grenadier |
| Easy | 1 | 2 | 2 | 20 | 27 |
| Normal | 1 | 4 | 5 | 25 | 30 |
| Hard | 1 | 5 | 5 | 30 | 40? |

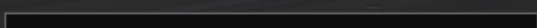
Morita MK3 SAW


DAMAGE 

FIRE RATE 

RANGE 

ACCURACY 

STUN 

STAGGER 

The MK3 SAW is a Machine Gun with a large ammo capacity. It is suited to spreading fire across the Arachnid frontline to stagger them and break their advance.

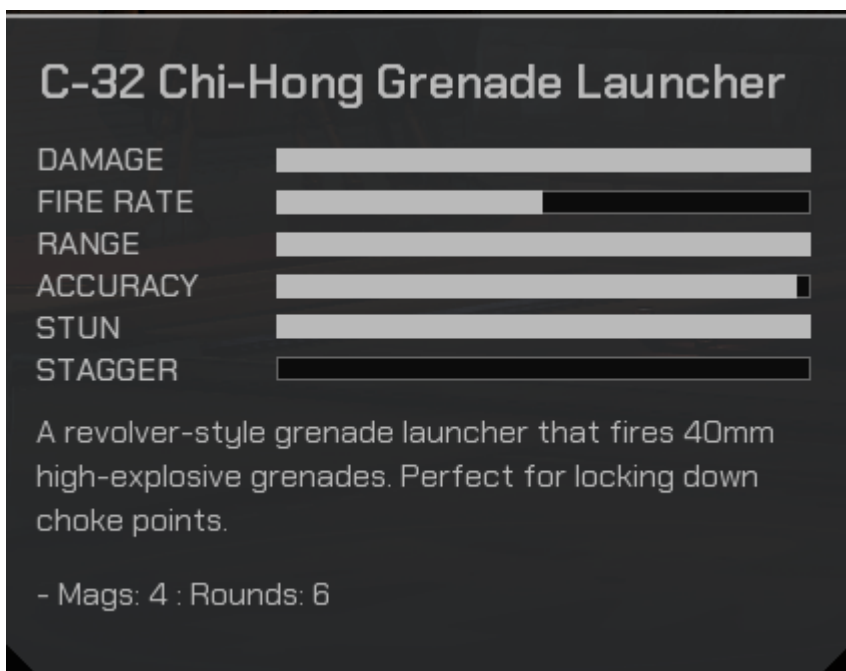
- Mags: 2 : Rounds: 150

- Magazine Capacity: 150 (225)
- Spare Magazines: 2 (3)
- This weapon system is virtually the only correct choice for a Bastion, despite having a lot of flaws. The Mk1 Rifle and Carbine do not pair well with the Bastion's active ability (Siege Mode) and the Mk3 SAW is the best weapon for crowd control. This system is more complex to operate; because it has very uncontrollable recoil and accuracy while firing from the hip and severe verticle recoil climb

while aiming down the sights outside of Siege Mode. It is good practice to plan your employment with Siege Mode while using this weapon system.

- The SAW bucks like a mule outside of Siege Mode. You can tighten the spread and dampen the recoil by aiming down sights, but this slows your movement speed.
- ADS on SAW is handy for situations where you need mobile firepower more than accuracy, like base defense. Just ensure you have enough targets nearby that the larger cone of fire won't result in wasted rounds.
- You can also tighten the spread while in Siege Mode, for a very tight cone of fire that helps you snipe distant gunners accurately. You'll see this visually as the rounded square around your reticle tightens up.

| Difficulty | Hits | | | | |
|------------|-------|---------|--------|-------|-----------|
| | Drone | Warrior | Gunner | Tiger | Grenadier |
| Easy | 1 | 10 | 11 | 150? | >150 |
| Normal | 1 | 18 | 25 | 225 | >150 |
| Hard | 1 | 27 | ? | 125? | 275? |



- Magazine Capacity: 6 (9)
- Spare Magazines: 4 (5)

This weapon system is strictly useful for crowd control and generating a lot of effects in linear corridors (including bugs attacking perimeter defenses). It is effective against individual warrior bugs but eats ammo rapidly with individual engagements.

| Difficulty | Hits | | | | |
|------------|-------|---------|--------|-------|-----------|
| | Drone | Warrior | Gunner | Tiger | Grenadier |
| Easy | 1 | 1 | 1 | ? | 4 |
| Normal | 1 | 1 | 1 | ? | 5 |
| Hard | 1 | 2 | 2 | ? | 6 |

M-56 Pilum Rocket Launcher

- This weapon can only be obtained by completing a secondary objective (generators / signal booster).
- Ammunition can be replenished by all standard methods.
- When you die, the rocket launcher will get removed from your equipment.
- The rocket launcher will replace the weapon you are holding at the moment of pickup. **Make sure to have your secondary weapon in hand when picking up the rocket launcher.**

| Difficulty | Hits | | | | |
|------------|-------|---------|--------|-------|-----------|
| | Drone | Warrior | Gunner | Tiger | Grenadier |
| Easy | 1 | 1 | 1 | 7 | 4 |
| Normal | 1 | 1 | 1 | ? | ? |
| Hard | 1 | 1 | 1 | ? | ? |

Secondary Weapons

Availability:

| Name | Level | | |
|------------------------|--------|---------|----------|
| | Hunter | Bastion | Operator |
| TW-102-s 'Peacemaker' | 1 | 1 | 1 |
| TW-109-e 'Emancipator' | 5 | 5 | 5 |

TW-102-s Peacemaker

DAMAGE

FIRE RATE

RANGE

ACCURACY

STUN

STAGGER

Standard issue sidearm for the Mobile Infantry. This sidearm is capable of staggering the enemy to buy time as a last resort

- Mags: 8 : Rounds: 12

- Magazine Capacity: 12 (18)
- Spare Magazines: 8 (10)

Both pistols featured have almost opposite effects. One shoots fast and staggers the other shoots slow but heavy and stuns. Both pistols are useful for similar and different situations but the stun effect is much more useful than the stagger in this case. It takes approximately 1 magazine to eliminate a Warrior bug threat and since Primaries are fairly useless for interrupting a Gunner bugs attacks, this pistol is really useful for ammo conservation. If you're not a Bastion class and you're consistently running out of ammo, this weapon is the pick.

| Difficulty | Hits | | | | |
|------------|-------|---------|--------|-------|-----------|
| | Drone | Warrior | Gunner | Tiger | Grenadier |
| Easy | 1 | 8 | 12 | >72 | >96 |
| Normal | 1 | 13 | 24 | >72 | >96 |
| Hard | 1 | 24 | 36 | >72 | >96 |

TW-109-e Emancipator

DAMAGE

FIRE RATE

RANGE

ACCURACY

STUN

STAGGER

A high calibre heavy pistol capable of stunning Warrior Bugs

- Mags: 8 : Rounds: 8

- Magazine Capacity: 8 (12)

- Spare Magazines: 8 (10)

The preferred pistol of veteran DSV troopers. As previously mentioned in the TW-102-s 'Peacemakers' info block, this weapon fits more situations than the Peacemaker. The only major drawback is its reload time is slightly longer. **Melee attacks do not reset the reloading process (similar to Left 4 Dead), so while reloading the Emancipator, counter Grabber bugs with your melee attack.**

| Difficulty | Hits | | | | |
|------------|-------|---------|--------|-------|-----------|
| | Drone | Warrior | Gunner | Tiger | Grenadier |
| Easy | 1 | 4 | 4 | 32 | >50 |
| Normal | 1 | 7 | 8 | 44 | 70 |
| Hard | 1 | 11 | 10 | 56 | >70 |

Knife

- Using a knife is not the best option, even with the right perks.
- It is a slow weapon with zero range and low damage.
- The only useful feature of the knife is that it does not interrupt reloading when used.

| Difficulty | Hits | | | | |
|------------|-------|---------|--------|-------|-----------|
| | Drone | Warrior | Gunner | Tiger | Grenadier |
| Easy | 1 | 7 | 10 | ? | ? |
| Normal | 1 | ? | ? | ? | ? |
| Hard | 1 | ? | ? | ? | ? |

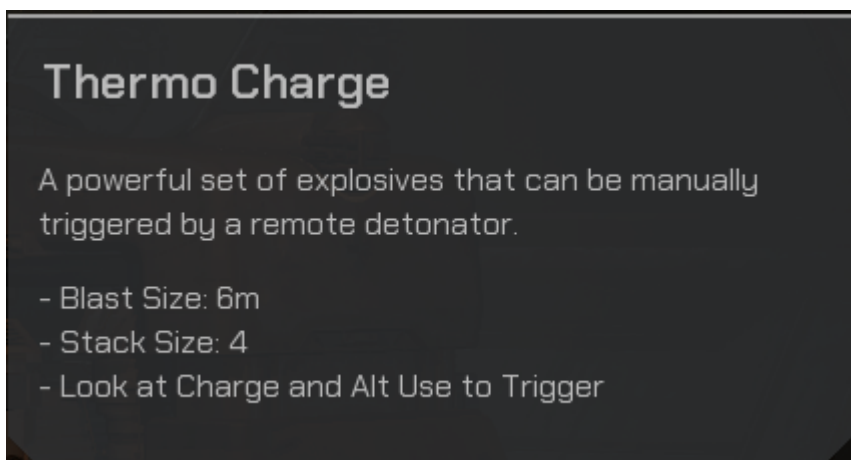
Utility

Availability:

| Name | Hunter | Bastion | Operator |
|--------------------|--------------|---------|----------|
| | Level | | |
| Thermo Charge | 3 | 8 | 17 |
| Ammo Fabricator | 8 | | 3 |
| Proximity Bug Mine | 13 | 3 | |
| Scan Beacon | 15 | 17 | 14 |
| Shock Beacon | 17 | 9 | 16 |
| Heal Beacon | 19 | 19 | 19 |
| Nuclear Det Pack | 20 | 11 | |
| First Aid Stim | | | 1 |
| Medical Station | | | 9 |

Utility Item Duration Times: On the back of a convo about the usefulness of some items I've timed the following:

- Scan Beacon: 120 sec
- Heal Beacon: 120 sec
- Shock Beacon: 120 sec. Requires a minimum of 2.



- Blast Size: 6m
- Stack Size: 4
- This weapon system is often compared to the century-old C4/Satchel Charges. These charges aren't deployed very rapidly so it is ill-advised to use them in a hasty situation; however, when fortifying defenses they can be useful when strategically placed. One charge does not set off a chain reaction; therefore, when defending a sector deploy multiple near each other to crowd control more

effectively over time.

- Thermo Charges have niche uses in base defense, but you have to stand still on the ground where you want to plant them and then trigger each charge manually. Good damage and probably the best of the leftovers, but if you want to explode things manually get a rocket launcher.

Ammo Fabricator

A portable device that resupplies ammo in the field.

- Rearms Weapons
- Does not rearm Grenades
- Does not rearm Utilities

Proximity Bug Mine

A high-explosive mine that triggers when an Arachnid enters its radius.

- Explosion Size: 8m
- Explodes when enemies enter proximity
- 2s Arming Time

- Explosive Size: 8m
- Arming Time: 2sec
- Early on, this weapon system is useful if there's no other Utilities to fill the slow but aren't as effective as the Shock Beacon or the Scan Beacon.
- Proximity Bug Mines do moderate damage to the first thing that steps on them, but you only get three and they go off when a single drone gets close.

Scan Beacon

A beacon that scans and highlights enemies that trigger the proximity sensor.

- Scanned enemies take additional damage

- Putting a Scan Beacon down at your feet works even better, in a horde - it doubles your damage and makes that SAW finally feel like a machine gun, mowing down hordes of easily-acquired targets.

Shock Beacon

An electrified beacon that creates an electric perimeter with other nearby Shock Beacons.

- Place within 10m of each other to create a connected shock barrier
- Shocked enemies are instantly stunned

- The Shock Beacon stuns everything reliably, even Tiger Elites, which are the most dangerous bug when you're in Seige - they'll one-shot you right through the shield. Putting a triangle around your shield can stun foes long enough to finish them off.
- Requires a minimum of 2.

Heal Beacon

A support beacon that gradually heals all Troopers within its area of effect.

- Heals allies every 10s
- Range: 15m

The Heal Beacon only affects an area about the size of a bunker, and heals are mostly irrelevant since you're either dead in 2-3 hits or taking no damage by staying out of melee range. Bastion probably makes the best use of this out of all the classes, and you could argue that it lets you tank more hits in Siege Mode, but a scan beacon could end the fight faster and prevent those hits - and you get three scan beacons instead of a single heal beacon.

Nuclear Det Pack

A powerful portable explosive pack with a nuclear payload.

- Very High Damage
- 30s Timer
- Can Damage Troopers

- The Nuclear Det Pack sounds awesome until you realize it takes several seconds to plant, thirty seconds to arm, and has a small explosive radius. I assume it does good damage; I don't know, I've never been able to hit anything with it.
- **Maybe only ten seconds timer?**

First Aid Stim

The First Aid Stim injector delivers a potent cocktail of painkillers and blood clotters to keep a wounded Trooper in the fight.

- Stack Size: 3
- Heal: 30
- Left Click to Heal Self
- Right Click to Heal Troopers
- Right Click to instantly Revive Troopers

Medical Station

A portable medical device that provides healing in the field.

- Heal Packs: 6
- Interact to Heal
- Heals 90 Health per use

Grenades

Availability:

| Name | Hunter | Bastion | Operator |
|-----------------|--------|---------|----------|
| | Level | | |
| MX-90 Grenade | 1 | 1 | 1 |
| Cluster Grenade | 6 | 12 | |
| Napalm Grenade | 9 | | 18 |
| Chem Grenade | 14 | 14 | 13 |
| Hi-Ex Grenade | 18 | 6 | |
| Shock Grenade | | 16 | |
| Scan Grenade | | | 6 |

Grenade Cooldown Times:

- Standard Gren: 90 sec (std. cooldown).
- Standard Gren (cooldown perk): 40 sec.
- Chem: 30 sec.
- Shock: instantaneous (no residual effect).

MX-90 Grenade

A standard issue fragmentation grenade that gets the job done.

- Blast Range: 7m
- Great Damage
- 3s Fuse Timer

Cluster Grenade

A grenade that splits into smaller sub-munitions to cover a much larger blast radius than a standard frag grenade.

- Breaks into a Cluster of smaller grenades
- Cluster grenades have a small blast radius
- AOE Area Denial
- Causes Good Stun Damage

Napalm Grenade

Burn them all.

- Creates a ring of burning napalm flames.
- AOE Area Denial
- Burn Time: 60s

Chem Grenade

A tactical grenade that creates a cloud of poison gas that damages any Arachnids that pass through it over time.

- Blast Radius: 6m
- Inflicts Damage Over Time
- Gas Duration: 60s

Hi-Ex Grenade

A sticky grenade with an powerful high-explosive payload.

- Sticky Grenade
- Very High Point Damage
- Small blast radius

Shock Grenade

A tactical grenade that stuns Arachnids with a powerful discharge of electricity.

- Explodes on Impact
- Very High Stun
- No Damage

Scan Grenade

A tactical grenade that highlights all Arachnids within its area of effect.

- Explodes on Impact
- Scan Range: 12m
- No Damage
- Scanned enemies take 2x Damage

Perks

Availability:

| Name | Level | | |
|---------------------------|--------|---------|----------|
| | Hunter | Bastion | Operator |
| Pain Boosters | 4 | | 12 |
| Magazine Bandolier | 7 | 7 | 7 |
| Bloodlust | 10 | | |
| Improved Grenade Cooldown | 12 | 18 | 10 |
| Synthetic Underarmor | 16 | 10 | |
| Powered-Up Build-Tool | | 15 | 4 |
| Extended Magazines | | 20 | 15 |

| | | | |
|-------------------------|--|---|----|
| Utility Satchel | | | 20 |
| Hardened Ceramic Plates | | 4 | |

Pain Boosters

A special augmentation that pumps adrenaline into you when damage is taken, dramatically increasing your athletic output.

- Upon taking damage, movement speed is temporarily increased by 1.5x.

Magazine Bandolier

An extra set of pouches on your load bearing vest for carrying more ammo.

- Rifles: +2 Mags
- Pistols: +2 Mags
- Machine Guns: +1 Mag
- Marksman Rifles: +1 Mag

Bloodlust

Intense close combat training allows you the ability to fight through pain better in the middle of a CQB fight.

- You regenerate health after every successful melee hit.

Improved Grenade Cooldown

Top Secret Federation technology allows troopers to regenerate their grenades even faster.

- Reduces the Grenade cooldown duration

Synthetic Underarmor

A flexible layer of synthetic weave allows you to better sustain close quarter blows from Arachnids.

- Halves the damage taken from Melee Bug Attacks.

Powered-Up Build-Tool

Increases the rate in which you can build and repair structures.

- Build and Repair speeds are doubled.

Extended Magazines

An extension to each magazine means you'll be firing for longer before you need to reload.

- 50% Increased Magazine Size

Utility Satchel

Extra carrying capacity on your load bearing vest for more utilities.

- Adds 1 to all utilities.

Hardened Ceramic Plates

Your suit is additionally armoured to better resist ranged attacks from Arachnids.

- Halves the damage taken from Ranged Bug attacks.

Things I wish I knew early on

List things you wish you knew early on...

- Press **Z** to bring up the score board. On here you can see people who are actively talking and mute those that are spamming comms.
- Switch to your side arm when you pick up the rocket launcher and you'll have your main gun and a rocket launcher.
- OWI_Gray [developer] 24 May @ 1:41am: Bugs do not currently have weak points, but we are planning to add these in the future!
<https://steamcommunity.com/app/1268750/discussions/0/3832045251554235561/>

Dirty Tricks

Reload/Melee

- [CQC for when you are screwed! \(Potentially might get removed soon in patches\)](#)

Melee attacks do not reset the reloading process (similar to Left 4 Dead), so while reloading use your melee attack (depending on your weapons reload speed up to 3 times).

Bugs

- [Tac Map open when extracting.](#)
- [Loadouts and settings don't save](#)
- [Found a detpack exploit](#)
- [Soft lock glitch](#)

~~DISCUSSION~~

From:

<https://wiki.nanoscopic.de/> - **nanoscopic wiki**

Permanent link:

https://wiki.nanoscopic.de/doku.php/pages/games/starship_troopers_extermination?rev=1685459875

Last update: **2023/05/30 15:17**

