**Hitbox and Target Bone adjustments**

Manual adjustment of collision hulls and target bones. The collision hull or 'hitbox' is the box on which projectiles impact. The target bone is the point on, or in, a unit which other units actually aim their weapon at. All units default to their central bone if they have no target bones declared, a bone which is often in a very poor place, often right in the centre of the unit but on the floor, leading to enemies aiming too low.

This is a particular problem for many of the game's Sonar and Torpedo Launchers, which have no bones at all above the water. For weapons which can aim at the structure, but don't have a legal bone to shoot at above the water, this causes a major aiming issue, where the unit aims for the very top-right corner of the hitbox and ends up missing a large percentage of the time.

These changes also fix the way Beams often miss ACUs and SCU, and fixes the many problems with the Ythotha. The biggest impacts balance-wise will be that beam weapons hit hovering units properly now, so a boost to T3 Battlecruiser and T2 Seraphim Destroyer, and that Torpedo launchers will no longer hold off enemy surface firing ships.

**Chrono Upgrade synchronisation**

This makes all Aeon Chrono stun upgrades fire at the same time, which means they can now be made not to affect allied units without utterly breaking the game and causing permanent stun-locks.

**Area Reclaim**

Using the reclaim command on empty ground will queue up a reclaim command for every available target inside the unit's build radius.

**Split Move/Build/Attack**

Shift-G command. The attack function has been improved in the way is splits things, and it can now be used to distribute Move and Build commands too.

**Attack-Move bug reduction**

Engineers on attack-move from factories still get increased reclaim reach, but it's not as extreme as before, and this change doesn't affect normal AM or Patrol reclaim orders. Set to 20 from 26 ingame.

**GC Tractor Claw fix**

The attack-move spam bug which caused the claw to fire units across the map has been fixed. One outcome of the fix is that the tractor beams now function properly and efficiently, and should be far more reliable and powerful now.

**ACU Laser from water**

The Cybran ACU's Laser can now fire if the ACU's feet are in water but the laser's muzzle is above the surface.

**Factory Rolloff**

All T1 Factories now create Engineers and roll them off at the same pace. The same is true for T2 and T3 Factories.

**Scaling Nuke Reticle**

The graphical aim circle used to fire nuclear weapons now scales to show the inner and outer radius of the nuke in question, giving the player better data for choosing their target.

**Nuke Damage Normalisation**

The outer ring damage of the game's nukes currently makes very little sense at all. For example, Billy does 250 damage, a full nuke does 500, but a sub-launched nuke does 3000. These numbers have been adjusted according to the following logic against Land units.

Billy damage set to 1000 damage, killing all T1, killing light T2, and putting a serious dent into heavy T2. Inner ring reduced from 12000 to 8500 so it doesn't OHKO T1 ACUs but still kills Percivals. Inner damage is actually both combined.

Submarine outer damage remains at 3000, which kills all T2, kills utility T3, and puts a serious dent into light T3 units.

Full Nukes outer ring set to 5000, killing all light T3 and putting a serious dent in armoured T3 assault units.

Yolona Oss set to 10000 from 7500, killing all T3.

**Mongoose MuzzleVelocity**

Increase Gatling weapon velocity to 30 from 25, putting it closer to the 32 velocity of the Ravager. This should mean it wastes less DPS.

**ACU TML Rebalance**

Seraphim ACU TML upgrade MuzzleVelocity set to 10 from 5, and AOE set to 2 from 3, to match the behaviour of the identically cost UEF version.

Billy was hard-locked to a 30s reload cycle no matter your economy. This lock is reduced to 10, if you have the eco to spam a missile that expensive that fast, you should be allowed to. Supcom is not a game of hard locks.

**UEF TMD**

TargetCheckInterval reduced to 0.1 from 2.5 and TrackingRadius multiplier to 1.1 from 1.5 which should lead to much less overkill and a bit more reliability.

**Fix Sniper VS MML**

Sniperbots can now hit the Cybran MML. Technically this belongs in the hitbox and target bone fixes but it was discovered later.

**Torpedo Bomber changes**

Torpedo Bombers all normalised so that they all use a new drop mechanic to aim their bomb at a point between them and the target so the torpedo always spends some time in the water, but not too much, and greatly reduced the problems with shallow water impacts.

**Air Changes**

An attempt to reduce the sheer impact of T3 Air, the ubiquity of the ASF, and attempt to reduce blobbiness. ASF max speed reduced by 2, Stratbomber max speed reduced by 1, T2 F/B and Swiftwind max speed increased by 1. Should punish blobs of ASF more severely over flack, let T2 catch an early strat, but not too badly affect early strat VS flack (Same number of passes).

**UEF ACU Nano Upgrade**

Now grants +2000 HP, same regen, same cost.

**Mavor**

Damage increased to 21000 from 16000, FiringRandomness from 0.22 to 0.18. Slightly increased accuracy and the ability to KO any static shield make this unit suddenly worth the stupendous mass and risk cost.

**Absolver**

Range = 80 so that it can stay ahead of the 70 range Ravager in a base-war for longer, still hitting the shield. It's not foolproof though. Hover height doubled to 0.5 units to help stop it hitting the floor. Absolver's anti-shield properties are now working properly again. Set to target units with SHIELD category as highest priority.

**Mercy Rework**

Damage increased to 3000, but the projectile now behaves like a TML, targeting the ground, moving slower. This makes it possible to dodge the Mercy if you're paying attention. AOE increased to 4, range increased to 35.

**Firebeetle Rework**

Now requires two transport clamps and only does 3000 damage. In return it gets an upgrade in firepower to 6 AOE, which also allows it to attack Fatboy and Quantum Gates, which it had trouble with before thanks to its declared 'Range', and gains Cloaking when standing still (Not stealth, just cloak).

**Novax**

Vision and Radar radius both increased, to 70 and 100 respectively, to allow a single Novax to more easily stay on target and provide intel to rival Eye and Soothsayer.

**Hoplite**

AOE from 2 to 2.5

**Titan**

Introduce missile variant, uses mongoose-like grenade launcher. Nicked from Resin\_Smoker and modified

**Broadsword/Wailer**

Wailer's Jamming given to Broadsword, receives Stealth in return

**Token Weapon Adjustments**

Wagner Torpedos set to 18 damage with two projectiles every 4 seconds at 24 range, for 9 DPS

Brick Torpedoes given a short EMP instead of damage. 3s for T1, 2s for T2, fires every 8s

Othuum Torpedo buffed to 100 damage every 5 seconds for 20 DPS, range reduced to 24. 100 DPS moved from side cannons to main gun.

Fatboy AA set to 240 DPS at 60 range, Torps set to 200 DPS with 4 torps every 2 seconds, 100 damage each

Spiderbot AA to 200 DPS with 2 weapons at 2 missiles of 200 damage at 45 range, Bolters set to default

Megalith AA set to 250 DPS from 500 (Was 30)

Ythotha AA increased to 4

Soulripper AA DPS set to 800

Aeon T2 Transport AA set to 120 DPS

Broadsword AA DPS set to 49 from 100

Wailer AA DPS set to 70 from 150

Corsair Missile MuzzleVelocity to 30, AA DPS to 100 ish

Ahwassa AA AOE to 1.5

Czar Flack AOE to 4, DPS to 1500, Missiles range to 100, DPS to 300, Depth charge set to 500 DPS with 2 projectiles of 1750 damage every 7 seconds

Cybran T2 Transport Ground weapon 42 AOE, AA to 90 DPS

UEF T2 Transport Ground DPS to 40, AA to 88 DPS

Seraphim T2 Transport Ground DPS to 40, AA to 120 DPS

Galaxy AA set to 160 DPS, Torpedo set to 200 DPS at 45 range

Summit AA DPS set to 120 DPS, Mass cost to 10000

Hauthuum AA set to 180 DPS at 45 range with 2 AOE

UEF T2 Destroyer AA set to 30 DPS at 48 range

Neptune Torpedo set to 4 projectiles of 225 damage every 10 seconds for the target 90 DPS (6 Torps is unnecessarily complex to code, need more muzzles)

UEF Stratbomber AA set to 100 DPS at 30 range (Returns fire against ASFs, very slightly outranges Inties, but Strats are slower in this mod by 1 point already)

Cybran Stratbomber AA set to 80 DPS at 30 range

Atlantis AA increased from 280/shot to 450/shot for all 4 missiles, which now OHKOs any ASF. 320 DPS becomes 450.

**Hover**

Lots of people have been complaining about hoverspam being too strong. Ithilis has been pushing for them to be slowed globally on water, with others expressing concern that this may not be the right solution, but unable to think of anything else, and agreeing it's a problem, so... Hover units slowed on water by 10%. Does not apply to Engineers. Due to a potential bug, it's possible that the actual reduction is 19% speed (For some reason -tv multipliers are applied twice? Unconfirmed)

Wagner and Brick, conversely, are given a 25% boost, the same as that on the Megalith, to promote sneakiness and speed, and to make up for the fact that the Wagner cannot hurt ships like normal Hovertanks can.

**Cybran ACU**

Slight concern raised by a few people, including Zock, that Cybran get an overly crappy deal from their ACU veterancy. Cybran ACU Regen changed to 4/8/12/16/20. No veterancy you lead UEF by 7 regen, increasing to 8 at 1, 9 at 2, 10 at 3, 11 at 4, 12 at 5.

**Flack**

Gorton suggested the next logical step killing two birds with one stone, to let the T2 Static Flack, largely useless currently, be the counter to early Stratbomber rush. Changes made as follows, according to a pattern where Aeon/UEF have longer range, higher DPS but smaller AOE and fire less quickly, and Cybran/Seraphim have shorter range, lower DPS, but much larger AOE and rapid fire to compensate. As such, there will be natural faction diversity, with some better able to combat faster units such as fighters, and others seriously hurting gunships, or large swarms. The DPS ballpark is based on the T2 Mobile Flack (Static costs 2.5 times more, so 2 times DPS + other benefits should offset the lower DPS/Mass and lack of mobility).

Aeon - 160 DPS at 50 range with 3.5 AOE, firing one 320 damage projectile every 2 seconds

UEF - 150 DPS at 50 range with 4 AOE, firing one 150 damage projectile every second

Seraphim - 160 DPS at 44 range with 5 AOE, firing two 56 damage projectiles every 0.7s

Cybran - 152 DPS at 44 range with 6 AOE, firing two 70 damage projectiles every 0.5s

**Pause All Units**

Pausing a unit will make it stop executing the next order in the command queue. The current order will be carried through. New commands can be added to the command queue. Excellent for TML strikes, making sure transports don't fly too early, and countless more. Thanks to Crotalus!

**Disable Assist For Upgrading Factories**

Fixes the bug which causes the upgrade to stall and cancel when an assist is ordered. Thanks Crotalus!

**Damage Warning**

The ACU verbal damage warning now plays when the Personal Shield of an upgraded ACU is impacted.

**Othuum Lightning Variant**

This version of the Othuum has been added ALONGSIDE the normal (Adjusted) one. It has the same DPS spread across weapons and the same Torpedo boost, but the main cannon fires a lightning bolt which arcs to surrounding units. In the first version, I have set it so that it always arcs to 4 targets if they are available, and actively seeks out lower HP targets. The arcs will do a total of 100 damage between them, so usually 25 each, on top of the 800 from the primary beam. This means Brick has 375 DPS + 20 DPS torps at long range, Percival has 400 DPS at long range, and Othuum has 225 DPS at medium range going to 425 DPS at short range, as well as the best anti-spam firing cycle and an ability which will cut overkill to an absolute minimum.

**Ahwassa**

Added Armour to ASFs to guard them from the bomb, reducing damage to 10%

**SCU Rebalance**

Global  
Part of the hitbox fixes, SCUs will be properly hit by lasers and other weapons. This is a fairly hefty nerf TBH.  
SCU RAS from 10/1000 to 8/800  
  
UEF  
Gun upgrade range from 35 to 32  
Shield HP distributed from 32000 Personal and 52000 Bubble to 29000 Personal and 55000 Bubble. Should nerf Rambo a bit, and buff the underused bubble.  
Increase E cost of personal shield upgrade to 100000, a rise of about 7000

Cybran  
EMP from 4s global to 4s T1/T2, 3s T3, AOE removed from T3 (3 vs T1/T2)  
AA from 300 damage per salvo to 450  
Nano from +400 to +375, resulting in total 400 regen

Seraphim  
Missile adjusted to match the new nerfed ACU one  
Overcharge from 12000 damage and 5000 E to 6000/2500

**T2 Artillery Rebalance**

Increase overall accuracy across the board. In order A/C/U/S, from AOE 2/4/3/3 to 2.5/4/3.5/3, and from FiringRandomness 1.5/2.5/2/1.5 to 1.25/2/1.75/1.5  
Decrease build time by 10%  
Boost the effect of adjacency on rate of fire - Now reduces to every 4s with 4 T3 PGens. The more normal 4 T1s reduces it from 20s to 14s

**Late Game Economy**

Slight nerf to SCU RAS  
Slight nerf to T2 Fab. Buildtime increased by 10%, Consumption from 150 to 160.  
Slight buff to the output of the T3 Fab, from 12 Mass to 14, perhaps 16  
Slight buff to the energy efficiency of T3 Fab farms... That is, rather than decreasing the drain, I'd prefer to further encourage full grid setups by boosting the effect of adjacency within the grid.

**Change how veterancy works on Experimentals**

Removed the instant HP bonus. All units in the game currently get a HP boost on vet of +10% of base maximum. Experimentals now get +20% in this new system, but it's not filled, and that number isn't final.

The values in blueprint for regen are now also overridden. Instead, they are also generated from base max HP, currently MaxHealth \* 0.0005, so for the MonkeyLord that makes 22.5 HP/s, a bit more than double the current.

Additionally, for 5 seconds after gaining a level, the unit has an additional boost of regen equal to 9 times the normal interval. This way, during that 5s, the unit heals up by 1/100 of its base MaxHealth per second. In the case of the MonkeyLord, again, this means that for the first 5 seconds of each Veterancy, it heals up 450 \* 5 = 2250 HP, which I think is good enough to make a difference, but not broken like the current 4500 HP instaheal. All these numbers are very easily changeable.