

Appendix CEX – Combat Example

Introduction: Avaral Rex is at war with SPQR. SPQR has a major Naturalized Colony, Colonia Londinium, at Caledonia II, which has a 100 RPs of 2nd Era Fighters and 30 RPs of 1st Era Ship Missiles, and SPQR also has one 2nd Era Warship in the Caledonia II system at the start of the war. The Caledonia system is on Combat Alert in full 36-hour Highland dress.

- ✓ History records that the war between Avaral Rex and SPQR had to do with balls, or lost meatballs, or something covered with cheese. SPQR calls the Rex guys ‘lizards’ and the Rex calls SPQR ‘skirt guys.’ And the war begins...

An Avaral Rex Scout Ship arrives in the system (which it previously explored) to see how many SPQR colonies and ships are in the system. Upon arrival, the Scout observes one colony and one warship defending the colony. The Avaral Rex brain trust then decides immediately to launch two fleets toward Lima. The First Fleet, a small fleet, has the task of clearing away the sole defending warship, and will arrive in one jump, while the Second Fleet, of fifteen ships, will arrive in two Regular Turns to attack the colony.

Meanwhile, the SPQR commanders decide to use their Combat Alert to initiate combat (before their next Regular Turn), so as to eliminate the Scout and keep it from penetrating further into their territory on Avaral Rex’s next turn.

Opening Round: Upon informing the Concierge that they are initiating a Ship Combat against the Scout, the Concierge informs Avaral Rex that their Scout is being attacked. Avaral Rex informs the Concierge that their Scout will retreat, however, the attacker gets one attack before the Scout can attempt to retreat (which it has a 50% chance) at the end of the Combat Round. The orders submitted by SPQR upon initiating the combat do not include the Fighters, so SPQR has opted to take a shot with their warship.

- ✓ SPQR may be hiding their colony fighters, if they attack with them, they will be revealed. Avaral Rex’ Scout would only see the colony, not the fighters which are enhancements, by simple observation, see ABBA Arrival 2 Information, p. 1340.

The SPQR warship is a 2nd Era Warship, the Avaral Rex Scout is a 1st Era non-warship. The basic chance of a 2nd Era Warship to hit is 50% (10% times 5 for the 2nd Era, see Firing Solution, 3 Combat, p. 978). The SPQR warship is 2nd Era, however, Avaral Rex is also a 2nd Era position and thus the non-warship Scout is treated as a 2nd Era target for purposes of combat (see Civilian Targets, 3 Combat, p. 978), so there are no shifts for Era differentials. However, the Scout ship is a non-warship, so the SPQR receives two offensive shifts, giving it a 70% chance of hitting the Scout. But Scouts are made for this kind of situation... and the Scout receives one Defensive Shift (see Scout’s Honor, 1 Expansion, p. 879 and Civilian Targets, 3 Combat, p. 978), bringing the chance to hit down to 60%.

The roll is made by the Concierge and the result is 43%, which being less than 60% means that the SPQR warship hit the Avaral Rex Scout and destroyed it (see A Hit, 3 Combat, p. 979). The Scout has no opportunity to retreat, as it would have had to survive to the end of the round to have a chance to retreat.

The Battle of Caledonia II: Regardless of the fate of the poor Avarar Rex Scout, the Avarar Rex First Fleet is *en-route* and cannot turn back or stop (see The FTL Missile, 2 Movement, p. 849) even if the brain trust felt remorseful. SPQR will have their next Regular Turn to prepare before they arrive, and during that turn, SPQR and transfers 30 RPs of 1st Era Ship Missiles from Caledonia II to the 2nd Era Warship guarding the colony (see Transfers, 3 Construction, p. 680).

- ✓ The transfer occurred at the beginning of SPQR's Regular Turn. The receiving Warship began the Regular Turn in the system and the Ship Missiles were already on the colony. *Id.* Because the transfer occurs at the beginning of the turn, the Ship Missiles cannot be constructed that turn. *Id.*, p. 680.

SPQR is unable, however, to put the system on Combat Alert again, as the Combat Power is activated elsewhere to initiate Combat Movement with other fleets. But SPQR is able to add enough Enlightenment to allow for two rerolls during the coming Combat (see Web of Night, *et seq.*, 2 Colleges, p. 477). The warship and colony both have an active Epistemological Constructural Element (see Skool Tyme, 2 Constructural Elements, p. 190) and thus can benefit from Enlightenment.

When the Avarar Rex First Fleet arrives at Caledonia, it consists of two 2nd Era Warships and two 1st Era Warships, facing the sole defender (4:1), the SPQR 2nd Era Warship. Because the Avarar Rex movement was initiated by use of the Combat Power, Avarar Rex can, and of course does, submit First Round Combat Orders shortly after confirming that there is still only one warship guarding the colony (see Run Away!, 1 Combat, p. 944). SPQR is informed by the Concierge that combat has been initiated and timely responds with its own Combat Orders (see Capoeira, 3 Combat, p. 970).

On the first combat round, of course, all Avarar Rex warships fire at the lone SPQR defender. None of the Avarar Rex warships have Ship Missiles or Fighters. The SPQR 2nd Era warship fires at one of the enemy 2nd Era warships, and launches all of its 1st Era Ship Missiles at the other Avarar Rex 2nd Era warship. The Fighter Component from Caledonia II, divides its sorties between the second Avarar Rex 2nd Era Warship (the one targeted by Ship Missiles) and one of the 1st Era Avarar Rex warships. The true odds are now 4:1 + Ship Missiles + Fighters.

- **Will You Marry Me?:** The Fighter attacks resolve first, then the warship attacks resolve simultaneously, and finally the Ship Missile attacks are resolved (see Combat Resolution, 3 Combat, p. 976).

The total size of the Caledonia II Fighter Component is 100 RPs, which is divided in half so that 50 RPs attacks each target. It is irrelevant in this situation which is resolved first. SPQR declares that Enlightenment will not be applied to Fighter Attacks (see Blacksheep, 2 Carriers & Fighters, p. 1054).

The fighter attack on the second Avarar Rex 2nd Era Warship will be resolved first. Resolution of the Fighter Attack starts with an Effectiveness die roll, and a 6 is rolled, which divided by 10 is converted into .6 (see Fighter Combat, 2 Carriers & Fighters, p. 1054) The 50 RPs of Fighters is then multiplied by .6 for a base chance of 30% to make a successful attack. Finally, the Era multiplier of 2.5 for 2nd Era Fighters (*Id.*) is applied raising the chance to of a successful attack to 75%. A roll is made and the

result is 62%, so the second Avaral Rex 2nd Era Warship is “engaged” by the Fighter Component.

The Effectiveness Roll against the Avaral Rex 1st Era Warship is .3, which yields a basic 15% chance to successfully attack the 1st Era Warship. When the Era multiplier of 2.5 is applied, the chance of a successful attack raises to 37.5%. Finally, the attacking Caledonia II Fighters receive one offensive shift due to the difference in Eras, raising the chance of a successful attack to 47.5% or 47%. The die roll is 45%, so the Caledonia II Fighters barely engage the Avaral Rex 1st Era Warship.

Immediately following the Fighter attacks the target Avaral Rex ships get their Close-in Defense Fire. The Avaral Rex 2nd Era Warship has a 25% chance (half of its normal chance to hit a 2nd Era Warship) of hitting each 10 RPs of attacking 2nd Era Fighters (see Tail of the Gunner, 2 Carriers & Fighters, p. 1059). The die is rolled five times, and the 2nd Era Warship obtains three Close in Defense Weaponry hits against the attacking SPQR 2nd Era Fighters. A 10 sided die is then rolled three times, with the results of 5, 2, and 1, so 8 RPs (16%) of the 50 RPs of Fighters attacking the 2nd Era Warship are destroyed while engaging the ship for one round (see Down in Flames, 2 Carriers & Fighters, p. 1059).

The Avaral Rex 1st Era Warship has a 10% chance of hitting the attacking Fighters with Close-in Defense Weaponry (normal 30% chance to hit for 1st Era Warships, Fighters receive one Era Defensive Shift, *before* the chance is divided in half, *Id.*). The 1st Era warship misses on all five rolls (vs. 50 RPs of Fighters) and does no damage to the attacking Fighters while being engaged for the round.

- Marital Disputes: The warships may now fire directly at each other, and as with the Fighter Component attacks, it really doesn’t matter what sequence they are resolved. The Avaral Rex 2nd Era Warships each have a 50% chance to hit the defending SPQR 2nd Era Warship, except that the Avaral Rex 2nd Era Warship that was engaged by the Fighters has a 30% less chance to hit due to being engaged by 2nd Era Fighters (see Engaged, 2 Carriers & Fighters, p. 1055). So the two Avaral Rex 2nd Era Warships attack at 50% and 20% chance to hit respectively. The first attacker rolls a 71% and the second attacker rolls a 36%, so both miss, with the second ship missing *only because* it was Engaged previously by Fighters!

The two 1st Era Avaral Rex warships each have a basic 20% chance to hit the SPQR 2nd Era Warship, which is the normal 30% basic chance to hit, minus 10% for the difference in Eras, firing at a higher Era target (see Combat Shifts, 3 Combat, p. 978). Additionally, the 1st Era Warship that was engaged by the Fighters has no chance to hit due to the 30% reduction and so cannot fire! The unengaged 1st Era Warship fires and rolls a 33%, narrowly missing the target.

The SPQR defending warship has a 50% chance to hit the target non-engaged 2nd Era Avaral Rex warship and rolls a 68%, missing the target. However, one Enlightenment is immediately used to force a reroll and the second roll is a 49%, narrowly hitting and destroying the target!

At this point, SPQR has lost 8 RPs of Fighters and Avaral Rex has lost one 2nd Era Warship to Enlightenment.

- I Want a Divorce!: Finally, last in the combat round, the 1st Era Ship Missile attack against the other, previously engaged 2nd Era Avarar Rex warship is resolved. Because the target ship was already engaged by Fighters earlier in the round, it does not get to fire Close-in Defense before being attacked by 30 RPs of 1st Era Ship Missiles (see Fire-and-Forget, 4 Carriers & Fighters, p. 1080). The Ship Missile attacks are resolved the same as Fighter attacks, therefore, the attack starts with an Effectiveness Roll. *Id.* The result of the roll on a ten-sided die is 8, which converts into $.8 \times 30$ equals a 24% chance of hitting the target. The target is a 2nd Era Warship, so there is also an Era Defensive Shift applied, reducing the chance to hit to 14%. The die is rolled for the Ship Missile attack and the amazing result...a 12% is rolled, so that the Ship Missiles successfully attack the target. Because the target was previously engaged by Fighters, the second attack is a hit and the second Avarar Rex 2nd Era warship is destroyed.
- Divorce Decree: The Avarar Rex lizard-brain trust is stunned by this unfortunate turn of events. They now have two 1st Era Warships facing a SPQR 2nd Era Warship and 92 RPs of 2nd Era Fighters from Caledonia II. Perhaps they logically expected the skirt-wearing SPQR warship to retreat from the combat in the first round, perhaps they didn't expect that many Fighters from the colony, perhaps they underestimated the value of Ship Missiles. Avarar Rex would not have been informed by the Concierge of the use of Enlightenment by SPQR, but they might guess it from the result of the first round fire by SPQR. They know, however, the SPQR has burned 30 RPs of Ship Missiles to achieve that expensive result.

So, what to do now? Avarar Rex decides that retreating is not a good option as their 1st Era warships will probably be destroyed, so orders are submitted for both 1st Era Warships to fire at the SPQR 2nd Era warship. The Avarar Rex Second Fleet is due to arrive on their next Regular Turn, and they must take the chance to eliminate that one defender so that they can immediately attack the colony. Avarar Rex decides not to commit any Enlightenment, saving them for later.

Meanwhile, SPQR moves in for the kill, ordering his 2nd Era warship to fire at one attacker, and putting both of his Caledonia II Fighter Sorties on the other attacker. SPQR has one remaining Enlightenment from the first combat round and decides not to add any additional Enlightenment, saving some for later (see Combat Resolution, 3 Combat, p. 976). SPQR designates that Fighters can use Enlightenment this round (see Blacksheep, 2 Carriers & Fighters, p. 1054).

Caledonia II has 92 RPs worth of fighters, and because only one target is being attacked, each sortie uses 75% of the strength of the Fighter Component because this is a Concentrated Attack. So, each Fighter attack is made by the equivalent of 69 RPs worth of Fighters (see Blacksheep, 2 Carriers & Fighters, p. 1054).

The Effectiveness Roll for the first sortie is 5, which converts to $.5 \times 69$ RPs, or a 34% chance to hit. The chance to hit is increased by one offensive shift (10%) to 44% because 2nd Era Fighters are attacking a 1st Era target and then multiplied by the 2.5 2nd Era multiplier to over 100%, but the attempt is resolved at 99% (see Fighter Combat, 2 Carriers & Fighters, p. 1054). The die roll is 40% meaning that the first Caledonia II sortie engaged the target 1st Era warship. The Effectiveness Roll for the

second sortie is 2, which converts to $.2 \times 69$ RPs, or a 13% chance to hit, which when the Era difference shift is applied, gives a 23% chance to hit and the 2.5^{2nd} Era multiplier makes a 57% chance to hit. The die roll for the second sortie is 89%, an unsuccessful attack (i.e. a miss). The Concierge immediately applies the remaining Enlightenment and rolls the attack again, this time obtaining a 19%, which makes a second successful attack on the target, for a hit.

The Avarar Rex 1st Era Warship is destroyed by fighters, but it will get to fire before being removed from the game (see A Hurt, 2 Carriers & Fighters, p. 1056) and will also be able to immediately execute a Close-in Fire against the attacking Fighters. The 1st Era warship gets 9 die rolls vs. the 92 RPs of attacking Fighters (not at the enhanced value of 138 RPs, see Counting Whale Tails, 2 Carriers & Fighters, p. 1059), and has a 10% chance to hit (the normal 30% chance to hit, minus 10% for the Era shift, and then halved to 10%). With nine rolls at 10%, the 1st Era Warship hits twice and then gets to roll two ten sided dice for damage to the Fighters. The results of those rolls are 8 and 5, meaning that the Caledonia II Fighter Component lost 13 RPs of Fighters destroying the 1st Era Warship!

The two Avarar Rex 1st Era Warships fire at the 2nd Era SPQR warship. They each have a basic 20% chance to hit. However, since the second ship was engaged (and eventually destroyed) by the Caledonia II Fighters, 30% is subtracted from its chance to hit, and it then has no chance to hit, and cannot fire. So it is removed.

The remaining Avarar Rex Warship rolls its attack and rolls a 15%, meaning it hit and destroyed the SPQR 2nd Era Warship. The SPQR defender gets to fire before being removed and has a 60% chance (50% base chance, plus one offensive shift for firing at a lower Era target) to hit the remaining Avarar warship. SPQR has no remaining Enlightenment for the combat. Fortunately, SPQR rolls a 23%, hitting and destroying the remaining Avarar Warship.

After Action Report: The combat is over, all attacking and defending ships were destroyed, and the Caledonia II Fighter component returns to the Colony, minus 21 RPs of Fighters (now at a value of 79 RPs of 2nd Era Fighters). SPQR has also expended 30 RPs of 1st Era Ship Missiles and two Enlightenment.

Avarar Rex obtained a pyrrhic victory but they did accomplish the mission, despite being surprised at the resistance, and when the Second Fleet arrives on their next Regular Turn (which will be before SPQR's next turn) it will be able to immediately attack Caledonia II without interference (as there are no warships in the system). SPQR did not put the Caledonia System on Combat Alert last time, so the Caledonia II Fighters cannot initiate a ship combat to delay the attack on the colony. Additionally, A-Rex did some preemptive damage to the colony's defenses by destroying 21 RPs of Fighters.

SPQR had a good day, tactically, though they may come to regret the cost of it later, as in the strategic analysis (in post-game hindsight), they may have only gotten a strategic draw or loss from the smashing tactical victory at Caledonia II. SPQR doesn't know about the fifteen-ship Second Fleet that bearing down on Caledonia II, SPQR only knows that they scored a great victory, destroying an entire enemy fleet while losing only one 2nd Era Warship, some Fighters and Ship Missiles. SPQR also burned 30 RPs of Ship Missiles taken from the colony's defenses; the loss of Fighters and Ship Missiles from

Caledonia II's defense might doom Colonia Londinium. Additionally, SPQR used two Enlightenment to obtain this victory whereas Avalar Rex used none (perhaps they were unenlightened, or they just were being pennywise and pound foolish).

Conversely, the initial loss of five ships to one might make Avalar Rex proceed with more caution, or change building strategies to build more Fighters and Ship Missiles, giving SPQR more time to recover.¹ The early loss of those many ships might also effect Avalar in the long run, especially if that was exceeded number of 'extra ships' Avalar was able to build by adhering to a policy of not building Ship Missiles. Avalar might not have enough ships (and is short on Ship Missiles), combined with the probable losses in the following battle at Caledonia II, to effectively carry out the remainder of the attack plan. Any ships that would have survived the initial battle at Caledonia II would have joined the attack on Colonia Londinium, which now makes the next battle that much more difficult.

It was a hurt'n thing over a meatball in the sky.

¹ Recommended Reading: "Superiority," a short story by Arthur C. Clark.