

Wing Commander Armageddon

Artificial Intelligence, Guns, and Missiles

(This file has been built upon the WC4 Wish.doc from ASommers)

Artificial Intelligence

1. Avoidance

The following suggestions detail the changes we would like to see with the alien fighters' AI when avoiding the player.

- ✓ A. Afterburners should be used more on the default level. (ACE)
- B. Missiles should be seen more on the default level. (ACE)
- ? C. Player-Speed dependent AI should be modified. We don't care if we use the current fighter's Max speed for a basis, but anyone flying 100 kps should be eliminated relatively quickly.
- ✓ D. Trademark moves for different types of ships:

Trademark Solo Moves:

- ✓ ① "Crazy Ivan." Canned fake left go right w/ afterburner. (Ship yaws left 20 degrees, yaws 80 degrees right and after burners away at maximum speed.)
- ② "Invert Loop." Invert 180 roll, hard pitch down.
- ③ "Burn and Turn." Max speed and pitch up 35 degrees, engage slide and rotate 180 degrees, shoot down on player while going backwards.
- ④ "Fast Loop." Hard Loop at maximum speed.
- ⑤ "Roll and Go." Roll for n seconds, pitch max speed at n angle. (Roll for a random amount of time (2 seconds) then max. speed at a random direction)
- ⑥ "Flipper." Afterburner w/ wildly changing speed, heading, and pitch.
- ⑦ "Mine Drop." Aliens dropping mines on pursuing player.
- ⑧ "Roll and Yaw." Roll 1/2 second, then yaw hard that direction at maximum speed.
- ⑨ "Stop and Go." With the player on his tail, the alien fighter stops, lets the player overtake him, and gets on the player's tail.

180

roll 180° pull thru? or push out?

Assess dsh!

is shortly

"X" # of secs for a Roll than pull into it and AB?

2. Attack moves for fighters

- 1. "Turret." Set speed to zero, becoming a rotating turret.
- 2. "Kamikaze." When almost dead, run straight at player to ram him with your ship.
- 3. "Kill the Innocent." Aliens attacking turrets of shuttles and transports. (It would be nice for the first wave of fighters to destroy a transport's turrets, then have a 2nd wave of bombers take out the ship unhindered.)
- 4. "Waste the Cap Ship." Torpedoes used to take out capital ships. (Bombers and fighters should expend a few more torpedoes destroying a capital ship objective.)
- 5. "ACE Missiles." More missiles used against the player at ACE AI level.

child or for "defensive" priority over "Mother"

6. **"Rookie Wastage."** Full Salvos being used by the less experienced pilots.
7. **"Unpredictable Bastards."** Rookies are likely to be less experienced and therefore use ANY tactics to get away / destroy the player

3. Team (or group) maneuvers

1. **"ABC Ya."** Alien Bomber Cluster (ABC) (with torpedo) makes attack run on Cap ship. Defense: Fire missile at torpedo to destroy all the ABC. Partial Defense: If you hit only one of the cluster, it is likely they will break off attack, and come back again.
2. **"Bombs Away."** Alien Bomber Cluster (with Swarmer missiles) appears in the actionsphere and releases its 12 Swarmer missiles. Defense: Fire missile at the Swarmer missile tube to destroy all the ABC. Partial Defense: Launch a lot of chaff and hope the missiles don't hit you.
3. **"Mines."** Alien Bomber Cluster (with mines) drops mines for the player to run into. Defense: Fire missile at mine launcher to destroy all the ABC. Partial Defense: Don't ever fly behind one of these things. Avoid mines.
4. **"Flanking."** 2 aliens attack player: one on left, one on right. Defense: Afterburn forward and loop around one of the ships (to the left or the right). At this point you should have both of them in your sights, hopefully near each other, with one of them caught in a crossfire. Spray and destroy. Partial Defense: Pull up (or down), afterburn, and turn around. Choose a target and spray! Both will have a bead on you, but you'll be in the clear.
5. **"Malachi Crunch."** One alien from the front, one from the rear, both headed for the player, possibly to ram him. Defense: Get the hell out of the way. Partial Defense: Get the hell out of the way. Alternative for the Brave at Heart: Wait until the targets are close. Stop. Turn up and wait until they're right on you. Afterburn. If you time it right, they'll slam together and die.
6. **"PC Muscle."** Plasma Cannon Cluster links up and attacks player. Defense: Allow them to follow you, just out of range, and juke 'em (slightly alter course so they'll miss). Call your wingman to get behind and slaughter them. They won't separate until they lose lock, so they'll be easy targets. Partial Defense: Outmaneuver them.
7. **"Guard the Shield Killer."** Two cluster fighters (not attached to a cluster) guard the shield killer, while the shield killer attacks the player. Defense: No specific defense; just kill 'em. Partial Defense: Same.
8. **"Follow Me"** Two Multi-role fighters gang up on a Confed Ship. One will allow the Confed to get behind while the other attempts to tail the Confed ship. Follow the leader. Best Defense: Don't allow yourself to get into this situation. Partial Defense: Launch missiles at the first fighter, and then get in the clear. Target second fighter and take him out.
9. **"Step into my parlor"** One enemy leads the Confed pilot into a setup with two enemies getting on the Confed's tail. Best Defense: Don't allow yourself to get into this situation. Partial Defense: Launch missiles at the first fighter, and then get in the clear. Target second fighter and take him out. Do the same with the third fighter.

10. "Four vs. One" Four Multi-role fighters gang up on a Confed Ship. The ultimate setup. One 'leads' the Confed pilot, while the other three get behind. Any time the Confed pilot chooses a new target to follow, the other three move into position and "let the pigeons loose." Best Defense: Don't allow yourself to get into this situation. Partial Defense: Launch missiles at the first fighter, and then get in the clear. Target second fighter and take him out. Do the same with the third and fourth.
11. "Avoid and Launch" This is a maneuver that Shield Killers use most often. The Shield Killer will attempt to get in range of the player, and fire its shield disruptor at the player. Seeing as the ship is not well defended, it will attempt to evade until it gets another shot at its target.
12. "Random" This is a flight maneuver for the Shield Killer. The Shield Killer will make three (seemingly) random course variations, and then one directly away from its target. There should be some way for the player to decipher this flight pattern so he can get a bead on this target and destroy it.

4. Turret AI

- ✓ 1. More accurate and less damaging with an increased firing rate. *Range*
- ✓ 2. Attacking Wingmen and the player simultaneously.

5. Wingman AI

- ✓ A. Wingmen shouldn't accelerate faster than the player. *unless ship specs allow it*
- B. Larger distinction between wingmen. Factors:
 1. Refire rate
 2. Accuracy
 3. Missiles
 4. Rate of Ejection
 5. Rate of effectiveness with player commands.

6. Specific Ship Type AI

7 **Plasma Cannon fighter** (loose) - (No afterburner) This "ship" is actually a collection of six smaller conveyors, each equipped with a single small plasma cannon mounted at their nose. Individually they function as fighters. *Chatter type - All business, comedian, rookie, wuess, etc.*

Regular attack pattern: PC fighters attempt to cluster for their main attack, but will occasionally break apart and engage fighters solo. Their attacks are like smaller, very maneuverable fighters.

Regular Defense Pattern: Group with other PCs and/or evade.

Intelligence: Minimal

Possible maneuvers: PC Muscle, Guard the Shield Killer, Flanking, Malachi Crunch.

Weakness: Low shield and armor strength when alone.

7 **Plasma Cannon Cluster** (as a cluster) - (No afterburner) Joined together into a single larger ship, the emission points of their individual cannons touch to form a single, massive plasma cannon which is effective against starships. In this configuration they are similar to a torpedo bomber (though there is no missile armament). *3 3*

Regular attack pattern: As most of their attention is kept on maneuvering in the cluster, they are not able to make many deviations from their course. Their targets need to be stationary or making few course corrections. They make strafing runs, and then break apart to reform.

is our alien stuff still based around the #7?

Regular Defense Pattern: Attempt to evade, and when evasion is not possible, split into solo fighters. PCCs cannot 'see' behind them, so if you can attack them from the rear, they're Intelligence: Minimal.

Possible maneuvers: PC Muscle, ABC Ya, Malachi Crunch.

Weakness: If you can hit them with a sufficiently powerful missile as a cluster, the concussion may destroy the entire cluster.

Weakness: They cannot 'see' behind them when they are attacking. Therefore if they are on course with an object, they are defenseless if a player approaches from the rear.

7 **Bomber Cluster fighter** (loose) - (No afterburner) The conveyors are free to act as individual fighters and prosecute survivors. Regular attack pattern: BC fighters will cluster for their main attack, but will occasionally break apart and engage fighters solo. Their attacks are like smaller, very maneuverable fighters. Regular Defense Pattern: Group with other BCs and/or evade.

Intelligence: Minimal

Possible maneuvers: Guard the Shield Killer, Follow Me, Step Into My Parlour, Four vs. One.

Weakness: Low shield and armor strength when alone.

7 **Bomber Cluster** (as a **Bomber** cluster) - (No afterburner) Another "swarm" fighter. In this variation, four small conveyors surround a single, massive weapon. *The nature of the weapon is variable.* In this case the weapon is an enormous super-torpedo, which the conveyors release only once it has targeted a starship. They are then free to act as fighters and defend the weapon on its way in, hampering attempts at intercept.

Regular attack pattern: As most of their attention is kept on maneuvering in the cluster, they are not able to make many deviations from their course. Their targets need to be stationary or making few course corrections. They make one strafing run towards a starship, launch their torpedo, and then break apart.

Regular Defense Pattern: Group with other BCs and/or evade.

Intelligence: Minimal

Possible maneuvers: ABC Ya.

Weakness: If you can hit the Weapon with a missile, the concussion will destroy the entire cluster.

Weakness: They cannot 'see' behind them when they are attacking. Therefore if they are on course with an object, they are defenseless if a player approaches from the rear.

7 **Bomber Cluster** (as a **Swarm** cluster) - (No afterburner) In a second variation, the weapon is a potent anti-fighter weapon which flies towards an enemy fighter or bomber formation then opens to release a large number of self-targeting interception missiles which bombard the group.

Regular attack pattern: As most of their attention is kept on maneuvering in the cluster, they are not able to make many deviations from their course. Their targets need to be stationary or making few course corrections. They line up on a group of Confed fighters, launch their volley of missiles, and then break apart.

Regular Defense Pattern: Group with other BCs and/or evade.

Intelligence: Minimal

Possible maneuvers: PC Muscle, Follow Me, Step Into My Parlour, Four vs. One.

Weakness: If you can hit the Weapon with a missile, the concussion will destroy the entire cluster.

Weakness: They cannot 'see' behind them when they are attacking. Therefore if they are on course with an object, they are defenseless if a player approaches from the rear.

7 **Bomber Cluster** (as a mine cluster) - (No afterburner) This variation can also be configured as a mine layer. Each cluster being able to carry up to 12 mines.
Regular attack pattern: As most of their attention is kept on maneuvering in the cluster, they are not able to make many deviations from their course. They have sensors in the rear, so they will likely 'run away' from the player, causing him to follow. When this happens, the Bomber Cluster will launch mines, hitting the player.
Regular Defense Pattern: Group with other BCs and/or evade.
Intelligence: Minimal to Medium
Possible maneuvers: Mines, Malachi Crunch, Follow Me (leader).
Weakness: If you can hit the Weapon with a missile, the concussion will destroy the entire cluster.
Weakness: They do not have much forward firepower. If you can get in front of these Aliens, they are at a disadvantage.

14: **Fighter Cluster** (cluster) - (With Afterburner) This is a pure space superiority variation of the "swarm" fighter. A single power distribution "node ship" produces energy for up to a dozen smaller cannon-armed vessels which fly in space around it (unlike other cluster ships, never joining into a single unit). These smaller vessels function almost as free-flying turrets. Destruction of the node ship causes a massive explosion, plus the destruction of all associated fighters.
Regular attack pattern: Seek and destroy the player. Because it's basically a flying set of turrets, attack does not have to be directional. Turn toward the player and shoot.
Regular Defense Pattern: Group with other BCs and/or evade.
Intelligence: Medium
Possible maneuvers: Follow Me (leader), Step Into My Parlour, Four vs. One.
Weakness: If you destroy the node ship, the concussion will destroy the entire cluster.
Weakness: There will always be one direction the Fighter Cluster cannot fire. This is the weak spot. It is directly behind the ship.
Weakness: The more smaller turret vessels you destroy, the easier it will be to take out the node ship in the center.

Shield Killer - (No afterburner) This is a highly specialized vessel which can produce a discharge which temporarily overloads the shield generators of a fighter and causes them to drop entirely for a short period of time. While marginally defended and relatively vulnerable to cannon fire, the vessel is saucer-like or spherical in configuration and capable of changing directions instantaneously, rendering it a very maneuverable and difficult target. As it is otherwise unarmed, this vessel almost always operates in conjunction with other fighters.
Regular attack pattern: Attempt to disable the player's shields so other fighters can take him out.
Regular Defense Pattern: Evade in all directions.
Intelligence: High
Possible maneuvers: Avoid and Launch, Random.
Weakness: Low armor.

*Semi-Aliens
style
stealthy. >*

Fighter Destroyer - (No afterburner) Intended to lay waste entire formations of opposing fighters, this is a massive, heavily shielded and armored (but not particularly maneuverable) vessel. It is armed with several small "disco ball" weapons which emerge slowly from the hull to spray concentrated and devastating anti-fighter fire in almost any direction (though the potency of the fire decreases rapidly over range). The balls then must retract into the hull to recharge, rendering the ship temporarily vulnerable for several seconds. Additionally, the balls themselves can (and generally must) be targeted and destroyed just prior to firing, when they are in the process of rising out of their charger housings.

Regular attack pattern: Time the charging of the disruptor weapons to the nearness of the player.

Regular Defense Pattern: Evade and call for reinforcements. Also an attack is usually good defense for these alien ships.

Intelligence: Medium

Possible maneuvers: Avoid and Launch.

Weakness: When disruptors are charging, the ship is without serious offensive weapons.

Weakness: The disruptor housings are unshielded when fully charged (but not firing yet), leaving them entirely vulnerable to missiles if timed correctly.

Multi-Role Fighter (Fighter) - (With Afterburner) This is a rather conventional, multi-purpose fighter similar to the Dralthi, Hellcat, or Tigershark. It is moderately well armed, shielded, armored, and maneuverable. It is the anti-fighter role.

Regular attack pattern: Attempt to get behind the player and launch a missile up his pipes!

Regular Defense Pattern: Evade!

Intelligence: Moderate to excellent.

Possible maneuvers: Malachi Crunch, Flanking, Follow Me, Step Into My Parlour.

Weakness: Ship to ship combat. May find ways around his attack maneuvers.

Multi-Role Fighter (Wild Weasel) - (With Afterburner) This is a rather conventional, multi-purpose fighter similar to the Dralthi, Hellcat, or Tigershark. It is moderately well armed, shielded, armored, and maneuverable. This is the anti-turret role, equipped with anti-turret missiles.

Regular attack pattern: Attempt to get behind the player and launch a missile up his pipes! If armed as wild weasel, then attempt to launch missiles towards targets of opportunity.

Regular Defense Pattern: Evade!

Intelligence: Moderate to excellent.

Possible maneuvers: Malachi Crunch, Flanking, Follow Me, Step Into My Parlour.

Weakness: Ship to ship combat. May find ways around his attack maneuvers.

Conventional Space Superiority Fighter (Ace Ship) - (With Afterburner) This would be a pretty conventional fighter, with guns and missiles. They would be rather frightening compared with the alien generic multi-role fighter, being faster, better shielded, better armored, better armed, and probably more maneuverable. Most Aces would likely fly them.

Regular attack pattern: Attempt to get behind the player and launch a missile up his pipes!

Regular Defense Pattern: Evade!

Intelligence: Excellent to near flawless.

Possible maneuvers: Malachi Crunch, Flanking, Follow Me, Step Into My Parlour.

Weakness: His attack maneuvers will have infinitesimally small weaknesses.

Interceptor - (With Afterburner) This is a point-defense system for cap ships. It is a small fighter designed for slashing head-to-head engagements with heavy forward defenses and four wings which usually fold back over a single engine like flower pedals. Guns are mounted on the ends of the petals, but are useless when the wings are folded. In this configuration the ship is very, very fast but not particularly maneuverable. To attack, the ship unfolds the petals, bringing the weapons to bear for devastating forward firepower. But it slows considerably, and in this configuration the single unarmored engine (previously protected only by the folded-back petals) is dangerously exposed, making the ship extremely vulnerable to attacks from the rear.

Regular attack pattern: Attempt to get in front of the player and wait until the player is in its sights. Like a deadly flower and the player is the bee!

Regular Defense Pattern: Evade! Since this one is very fast, afterburn.

Intelligence: Excellent to near flawless.

Possible maneuvers: Malachi Crunch, Flanking, Follow Me (follower), Step Into My Parlour.

Weakness: With its 'petals' open, the single unarmored engine (previously protected only by the folded-back petals) is dangerously exposed, making the ship extremely vulnerable to attacks from the rear.

7. Shuttles and Transports plus Misc. AI

- A. Shuttles and fighters patrolling at friendly navs
- B. Traitor AI (When firing at the friendly Midway, Friendlies should attack the player, fighters should launch and help out, and patrolling shuttles should help as well.)

8. Maneuvers

- A. Speed Variance : Alien fighters might set their speed to zero in the hopes that the player will fly past them. They would then be on the player's tail.

Guns

Stormfire : Effective range is only 750 clicks, 4000 Rounds
Leech : Slow refire rate, NEVER affects armor
Fission : Will charge to max., damage several player components, (power system) and discharge. (There should be a 4 second 'window' between maximum charge and ship damage.)

Suggestions for weapon objects:

- A. Smaller bolts with stronger colors and sounds
- B. A 'lightsaber-like' glow
- C. Plasma balls that give off light
- D. Mass drivers
- E. Circular weapons in 3D, (like Toshinden)

? expanding Ring/sphere weapon?

that really close compared to other weapons right?

Missiles

- Turret missile : One missile that would damage/destroy 5 turrets on a capship. (Perhaps separate in-flight into smaller warheads)
- Engine Missile : If the missile struck a fighter with low enough shields, the alien fighters engines would be destroyed. The alien could be then given a random amount of afterburner fuel (10-40 seconds) When that had expired, the fighter would be dead in space. (Yaw/Pitch notwithstanding)

to have this kind of weapon we would need a fairly in-depth knowledge of alien-engine tech.
- do we really ever have this?

- It seems, that for our aliens to perform some of these maneuvers effectively, the alien ships will (in general) have a much better turn radius than coned ships.

Plus they will occasionally need the ability to stop instantly, change heading instantly (θ turn radius) and reverse direction instantly.

- probably we will not want all of the aliens to do these things?

- JG