

Appendix E: Paper AI

Why a Paper AI?

As much as I would like to see Frozen Thunder played among friends at the table, the world has changed since these rules were first written. Players are harder to find and getting together can be even more difficult. To that end, the Paper AI has been developed to provide a solo opponent.

How does it work?

The Paper AI is a goal oriented system with enough randomization built in to keep it from being too predictable. The general rule is that the player does their deployment first, write up orders for each round, and then roll dice to determine the 'decisions' that the AI follows for its orders.

Paper AI – Initialization

Attitude: Roll 1d100 to determine how the AI will play.

- 1-15 Reckless, the AI doesn't care what casualties it will take if it will result in achieving the objective or inflict the most damage.
- 16-50 Aggressive, the AI will chose to inflict damage over seeking cover.
- 51-85 Defensive, the AI will attempt to take cover over achieving the perferred shot.
- 86-100 Cautious, the AI will attempt to preserve units where ever possible. It will still strive for the objectives of the scenario, but it would rather wear you down than wade into a gauntlet.

Deployment: Roll 1d100 for the starting position, adjust for attitude and scenario conditions.

- 1-25 Right flank, deploy the majority of the AI's force on the right side of their deployment zone.
- 26-35 The AI force is evenly spreadout to sweep the map.
- 36-65 Center, the main force will be right up the middle.
- 66-75 The AI sets up a pincher maneuver splitting forces into two groups left and right of center.
- 76-100 Left flank, deploy the majority of the AI's force on the left side of their deployment zone.

Paper AI – Operations

Movement Orders: Most conventional units are so slow that there is not much potential for random movement; either the AI forces move towards the objective(s) or seek a defensive position based on its attitude. Reckless AIs will seek out the enemy without backup while Cautious AIs will try to group conventional units and deter the enemy from poking the hornet's nest. When multiple possible locations exist, roll randomly to determine the path taken.

Anti-grav tanks and aircraft move fast enough that they have some variety in the locations that they can pick. When they are engaging an enemy unit, apply the AI's attitude and determine an optimal hex (rolling a die, if there are mutple choices), then roll a 1d10 for 'scatter'. On a 1-6, drift the unit one hex in the appropriate direction. On a roll of 7-10, the unit plots a movement order to the chosen hex. This represents the unpredictable nature of the enemy and their (random) attempt to guess the enemy movement.

Turret Orders: If an AI's objective is an enemy unit, the most likely order will be to track the target. When on defense, a unit might elect to cover a given direction to increase their fire arc. If the enemy is too far away, fixed forward is the default position. And if running away, pointing the turret to the rear or at a potential enemy is preferred. When multiple options are equally valid, roll randomly to determine which order to give for that unit.

Fire Orders: The default is fire at will since it is the most flexible order to give. Orders that don't involve enemy units such as firing smoke rounds or attacking a fixed object, can be more specific.

Firing at will does involve several decisions that the AI will need to navigate. The first question is, "Will I lose the chance to attack?" If an enemy is going move out arc or behind cover on the next phase, the AI will take the shot while it still can (if possible.) With the exception being, if the attacker is low on ammo and the attack probability is less than 50%, the unit will hold fire rather than waste the ammunition. The second question, "Shoot now or wait for a better chance?" The key logic here is risk, if there is no chance that the attacker will lose their weapon, it will wait for a better shot. When in doubt, make a risk taker roll for the AI. This can apply to any 'risky' decision that the Paper AI has to make.

- Reckless roll 1d10 and take the risky move on a 1-7.
- Agressive roll 1d10 and take the risky move on a 1-6.
- Defensive roll 1d10 and take the risky move on a 1-4.
- Cautious roll 1d10 and take the risky move on a 1-3.