**Hex Wars Manual**

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TABLE OF CONTENTS

**Page**

1. Overview 1-1

2. Game Components 2-2

2.1 Regions 2-2

2.1.1 Control 2-2

2.1.2 Embassies 2-3

2.2 Figures 2-3

2.2.1 Diplomat 2-3

2.2.2 Agents 2-3

2.2.3 Wizards 2-4

2.2.4 King 2-4

2.3 Population Center 2-4

2.4 Armies 2-4

2.5 Kingdoms 2-5

2.5.1 The Kingdoms 2-6

3. Game Mechanics 3-8

3.1 Combat 3-8

3.1.1 Overview 3-8

3.1.2 Versus Other Armies 3-8

3.1.3 Versus Population Centers 3-8

3.2 Diplomacy 3-9

3.3 Agents 3-9

3.3.1 Reconnaissance 3-9

3.3.2 Sabotage and Assassination 3-10

3.3.3 Counter Espionage 3-10

3.4 End Turn 3-11

3.4.1 Production 3-11

3.4.2 Maintenance 3-11

4. Victory 4-13

# Overview

Hex Wars is a simultaneous turn based game. Each player decides on their orders and submits them to central game server which processes the orders and sends out the turn’s results.

A player can claim victory by fulfilling their kingdom’s unique victory condition. Most victory conditions call for a certain level of control over regions and/or populations centers on the board along with some other criteria that’s relevant to the kingdom’s strengths or weaknesses.

Player’s only know what they’ve discovered themselves. A player may add intelligence information to their map and give orders based on that information, but the orders won’t succeed if the information is inaccurate. The most common way to gain information outside the game is with direct player interaction.

# Game Components

There are a lot of terms in the game that are worth understanding before getting into how to actually play.

* Map – This means the game map as a whole.
* Region – The map is divided into multiple regions. Various facets of the game, as well as game strategy, center on the regions.
  + Control – Each player has a level of control in each region. Higher levels of control offer certain advantages in that region. Control is often relevant in victory conditions.
* Figure – This is a “person” in the game: a wizard, diplomat, king, or agent.
  + King – This is your kingdom’s leader on the board. The King is the only one that can issue various powerful orders.
  + Diplomat – Diplomats are responsible for expanding your power to the population centers around the game. It’s entirely possible to win purely through diplomatic efforts.
  + Agent – Conducts the dirty work of the kingdom, gathering intelligence, sabotaging the enemy, and even assassinations.
  + Wizards – Wizards are rare, powerful, and expensive. They can cast a variety of spells from the mundane to powerful spells able to destroy entire population centers.
* Population Center – This encompasses cities, towns, and hamlets, which are the 3 different categories of population centers.
* Army – An army consists of zero or more Army Units (usually just called “units”). Size zero armies are called *inactive*.
  + Army Unit – These are the individual units that make up an army. A size 5 army would have 5 army units. Army units may be of different types: levies, giants, skeletons, etc.
* Kingdom – Each player controls a kingdom. Each kingdom has a unique combination of starting resources and costs. Some kingdoms are sleepers that grow stronger over time while others start quick and must work to avoid fading in power.

## Regions

The map is split into regions, the number varying based on the number of players and other game creation parameters. Each region has a roughly equal density of population centers, so larger regions have more population centers than smaller regions. Every hex in the game belongs to some particular region and players can discover the regional boundaries through a variety of orders.

### Control

Regional control is a key concept in the game. Most kingdom’s require some level of control to claim victory. Even for kingdom’s that don’t need control may find the benefits of control enticing. Control is calculated based on the level of the population centers the player controls relative to the total population center levels in the region. Control falls into four categories:

* None – the player has no population centers in the region.
  + Player will hear of massive (20+ unit) armies in the region
* Presence (1-50%) – the player controls some population in the region, but not the majority.
  + Player will hear of large (10+ unit) armies in the region
* Control (51+%) – the player controls the majority of the population in the region.
  + Player will hear of medium sized (4+ unit) armies in the region.
* Domination (75+% and City control) – The player controls the bulk of the population as well as the regional city.
  + Player will hear about even small (2+ unit) armies in the region.
  + Player owned towns in the region fight at +1 level, the city at +2.
  + The player can recruit Regional troops at the city, which are about 20% better than the normal levies.

In addition, when a player gains control/domination of a region they get:

* +1 embassy level, this is lost if the player loses control.
* Knowledge of the location of every population center in the region.

### Embassies

The player may have an embassy precense in a region. Most kingdoms start with a level zero embassy (no embassy) in most regions other than their starting region. An embassy provides bonuses to the player’s efforts in a region and hampers enemies acting in player control led population centers in the region. The details of those impacts are discussed later.

## Figures

Figures encompass Wizards, Diplomats, Agents, and the King, though the King is something of a special figure. All figures share certain characteristics:

* Level – Each figure has a level, though levels are not equal across figure types. For instance, a level 5 wizard is much more powerful than a level 5 agent. Most figure orders use the level to determine the cost to execute and the likelihood of success.
* Range – Each figure can move up to 10 hexes, unless specified otherwise in the kingdom’s setup information.
* Base – A figure is based either in a population center or an army.

### Diplomat

The most commonly used figure is the diplomat. The most useful power a diplomat wields is their ability to convince population centers to join the player’s kingdom or to reject another kingdom’s rule. Diplomats can also help map out regional boundaries and find regional population centers. Diplomats are a key resource in any kingdom’s bid for dominance.

### Agents

Agents have two primary uses: to gather information and to wreck opponents plans. Intelligence is key and agents will be busy most of the game gathering up to date information on all sorts of items, such as who is in a population center, where an army exists, who has what control levels in a region, etc. Agents can also attempt assassinations or sabotage and may also run counter espionage missions to prevent others from doing the same to their kingdom.

### Wizards

Wizards are mighty forces in the game, eventually. Early in the game wizards are low level and provide limited value, but as the game progresses their power grows exponentially if the player can afford to train them. Wizard spells can affect nearly any aspect of the game: combat, movement, diplomacy, etc.

Level zero wizards are apprentices and have no spell casting ability.

### King

While considered a figure, the king has a limited set of specific duties. The king does not engage in diplomacy, or combat, or any other figure action directly, but the King’s orders have major impacts on the game. The King’s largest contributions are:

* Establishing embassies
* Creating new armies
* Raising his political influence

## Population Center

You can’t win without the support of the people. Well, perhaps some kingdoms can, but it’s unlikely. Population centers provide the income necessary to execute orders, hire figures, train figures, pay armies, etc. Much of the player’s strategy will involve how to expand their base of control population centers.

Each population center has a level that determines its

* production value
* military defensive value (cities also have higher quality defenders)
* diplomatic defensive value

The level of a population center can increase or decrease throughout the game based on various factors. Regardless of a population center’s level, it never changes its category status. A level 1 city is still a city, albeit a very pathetic one.

In addition to the city level, each population center provides a level of support necessary to support armies. The details are in the Support and Maintenance section, but support is an abstraction of food supplies. Hamlets are most valuable, then towns, while cities actually have a negative impact on army support.

Most population centers start unowned and hidden on the board. The player must discover their location and send armies or diplomats to convert them to the kingdom’s control.

## Armies

Each player starts with some number of armies and each army consists of some number of Army Units. Each army unit is composed of a troop type: dragon, giant, etc. Most kingdoms starting armies are composed entire of their own troop type, but other troop types can be recruited or summoned during the game.

Armies are not created equal. Each army has multiple attributes, some of which are based on the troop type and some based on the kingdom itself.

* Kingdom traits
  + Movement costs: Each kingdom has a unique set of movement costs for each terrain. These modifiers apply regardless of the troop type.
  + Combat modifiers: Each kingdom has a unique set of combat modifiers for each terrain. These modifiers apply regardless of the troop type.
  + Cost: Units cost on average about of 3/4ths of a hamlet’s production. Each kingdom modifies this up or down and the unit cost is the same for all troop types (excepting certain magical troops that are free).
* Troop Type traits
  + Strength: The standard troop type has a strength of 1000. Some units, like levies are worse, some better. Some elite units may have values of many times that of the average troop.
  + Armor: Some troops die quickly, others can absorb tremendous punishment without significant damage to their combat ability.

See the Army Recruit order to understand how to recruit new troops. See the Maintenance section to understand how armies are paid and how support costs are calculated.

## Kingdoms

Every player runs a Kingdom and every kingdom has a unique configuration. While some kingdoms are clearly stronger early in the game or dominant in some facets, the kingdoms have been balanced overall for an entire game. That kingdom with very little army or diplomatic ability might have absolutely devastating magical potential. Even with the preset kingdom starting powers, there’s nothing preventing a player from focusing on an area like diplomacy by investing heavily in diplomatic hiring, training, and embassy creation.

All kingdoms start with the same number of population centers scattered about in roughly similar fashions, but all the following factors are uniquely set up for each kingdom:

* King
  + Starting wealth
  + King’s power
* Wizards
  + Number of wizards
  + Cost of training
  + Level maximum
  + Initial levels
* Diplomats
  + Number of diplomats
  + Initial levels
  + Cost of training
  + (level maximum is King’s current power)
* Agents
  + Number of agents
  + Initial levels
  + Cost of training
  + Level maximum
* Armies
  + Starting combat strength
  + Per unit cost
  + Movement costs
  + Combat terrain multipliers
  + Reinforcement rate

### The Kingdoms

**Druids Council**: The Druids have a frugal, balanced approach and their affinity with nature grants them many talented wizards.

**Dwarven Empire**: The Dwarven Empire is known best for its vast stockpiles of gold, which it uses to maintain a strong diplomatic and military presence.

**Elves**: The Elves believe in balance above all and their kingdom reflects this value, though their magical nature gives them a small boost in that area.

**Enchantress**: The Enchantress has long led a society focused on magical research, though at the expense of other aspects of her kingdom.

**Free Commonwealth**: The Commonwealth is a collection of free states combined to wield great power and a wealth of gifted orators.

**Giants Clans**: Despite their fearsome size, Giant diplomats are well respected, though it helps having their diplomacy backed by the threat fast and powerful troops.

**Gnomish States**: The Gnomes boast substantial magical talent, charming diplomats, and clever agents, though little military.

**Knights**: The Protectorate is well represented by diplomatic nobles and their army of knights has no equal.

**Nameless Brotherhood**: The Brotherhood finds a calling for all members, resulting in a well balanced kingdom with an effective intelligence network.

**Orc Horde**: The Orc Horde's armies grow at a frightening rate and exist for one purpose, to conquer.

**Shadow Cabal**: The Cabal is only rumor to some, said to possess a vast network of agents and well placed diplomats.

**Sky Children**: Descendants of near immortal beings, the Sky Children are few in number, but magically inclined and individually powerful.

**Stone Wizards**: Though not known as masters of magic, the Stone Wizards are led by a council of many lesser wizards who control an army of soldiers rumored to be infused with stone.

**Traders Guild**: Led of a council of guild masters, the Trader's Guild has a vast treasury to support its unmatched diplomatic prowess.

**Vampire Lord**: The Vampire Lord's magical powers are unmatched, but he lead an otherwise unremarkable kingdom.

# Game Mechanics

## Combat

### Overview

Combat is the first thing to happen each game turn. Combat occurs anytime a player executes an Army Attack order. If two players attack each other, only one combat occurs. An army may attack multiple targets in a turn, but suffers a 25% penalty in combat value in any combat after the first. Army versus Army combat always occurs before Army versus population center, forcing armies outside of a population center to resolve their combat before the population center is attacked.

**Combat resolution**

Battle resolution is fairly straight forward and whichever combatant had the higher combat strength wins. However, combat value can be modified by all sorts of factors that may not be obvious before hand: morale, attrition, combat spells, terrain, and previous combats.

**Combat damage**

Combat damage is also straight forward. Every point of combat strength inflicts a point of damage some of which is blocked by the armor of the troop type taking the damage. Most units have around 50% armor and thus would suffer ½ of the actual damage in casualties. Some spells or artifacts can also modify casualties suffered. If an army suffers enough casualties the weakest unit(s) will be disbanded. If all units are disbanded, the army is destroyed and becomes inactive.

**Morale**

The winning army gains 10% morale and the losing army suffers a 10% morale loss.

### Versus Other Armies

A group that has been defeated in a group vs. group combat may not attack a population center that turn.

Figures in a destroy army may be killed. Each figure based in the army has a 50% chance of escaping back to the player’s capitol. A figure that fails to escape is killed. Escaping to the capitol counts as a move order.

### Versus Population Centers

Population centers do not suffer damage or morale loss in the same way as groups, but a population center may sometimes suffer a loss of 1 level as a result of damage from the combat.

Just like with a destroyed army, figures based in a conquered population center may be killed. The only difference is wizards always escape from a conquered population center. This makes armies a more dangerous place for wizards, but some spells require the wizard to be in an army.

Don’t forget that towns and cities owned by the player dominating the region fight at a +1 and +2 level respectively!

#### Demanding Surrender

Rather than attack, an army can demand the surrender of a population center. This is effectively a diplomatic action and the group’s diplomatic level is relative to its base combat value versus that of the population center. A group of 2x the combat value of the population center has about a 50% chance of success.

Unlike in battle, the population center does not count the regional domination bonuses in calculating its diplomatic resistance to demanding surrender ability. However, diplomatic factors do apply, such as embassies, inspire loyalty orders, etc.

Just as army that retreated from group vs. group combat may not attack a town, it also may not demand surrender.

## Diplomacy

Diplomatic efforts can make or break many kingdoms. Diplomats can convince a population center to join the player’s kingdom or to reject the rule of another kingdom. Diplomats can also inspire a population center to be loyal to its current kingdom, whoever that may be (even if it’s neutral).

A diplomat succeeds if their “Diplomatic Power” >= “Pop Center Resistance”. This would apply to asking a neutral population center to join or convincing an owned population center to return to neutrality.

* Diplomatic Power = random value between 1-2x the diplomat’s level, weighted towards the average of 1.5x
* Pop Center Resistance = it’s level, but there are modifiers…
  + Embassy = +/-1 effective pop level for each level of embassy for the relevant players.
  + Converting an owned pop = effective pop level x2 (happens after embassy impact)
  + Inspire Loyalty = added to the resistance after the effective pop level is determined.
  + Spells: varies by spell, usually it’s an embassy impact

Inspiring loyalty is risk free, but attempting to convince population to change allegiances is not. If a diplomat fails by enough, failing to achieve at least ½ the necessary diplomatic power, they will be killed by angry mobs.

## Agents

Agents have no ability to affect control directly, but their efforts are crucial. Agent missions boil down to three basic categories: reconnaissance, sabotage, and assassination.

### Reconnaissance

It’s very difficult to win if you have no idea what your enemy is doing. Do they have diplomats in your population centers? Are they inspiring loyalty? How powerful are they? How big is that enemy army?

Recon missions are always successful and usually risk free, though agents below level 3 will occasionally die during a recon mission.

### Sabotage and Assassination

Agents can sabotage enemy embassies, population centers, and armies. They can also assassinate enemy figures. Each mission has a difficulty level that determines if the agent is successful as well as determining how likely the agent is to be caught and killed on the mission. Similar to diplomats, agents compare their espionage power to the difficulty of the mission.

* Agent Power = random value between 1-2x the agent’s level, weighted towards the average of 1.5x
* Mission level = varies by mission type
  + Mission
    - Assassination = depends on figure type and level
      * Diplomat - diplomat level \* 1.5
      * Agent - level \* 1.5
      * Wizard - level 0 = 4, level 1+ = 6 + 3\*level
      * King = can’t be killed
    - Sabotage
      * Embassy – 15
      * Pop Center - 6
  + Mission Modifiers
    - Counter Espionage - an agent protecting a region adds their level to the difficulty of the mission.
    - Charmed Figure - some missions, like assassinations, halve the defenders default difficulty. For example: a level 4 diplomat normally has an assassination difficulty of 6, but it would be 3 if the diplomat were charmed.

Unlike diplomats, agents can be successful and still be caught and killed. An agent has a 2% chance of being killed per mission level. The amount by which the agent succeeds or fails affects the odds of agent death. The minimum chance of death is always 5%.

Example 1: A level 10 agent undertakes a level 13 mission. The agent achieves an agent power of 17 for this mission, besting the level 13 mission by 4. The agent succeeds and has a chance of death of (13 – 4) \* 2 = 18%.

Example 2: If the above agent instead has a bad day and only achieves an agent power of 11, then the agent fails the mission and has a chance of death of (13 + 2) \* 2 = 30%.

**Promotion**

Agents that successfully complete their mission gain one level and this may exceed the normal level cap for the kingdom.

### Counter Espionage

An agent can be assigned to counter espionage adding their level to the mission difficulty of any mission performed by enemy agents in the defending agent’s region. The counter espionage only affects enemy missions against the player’s kingdom, thus you can’t protect the assets of other players or neutral towns. If a kingdom has multiple agents are on counter espionage, only the strongest agent applies.

**Counter Agent Risk and Rewards**

Counter espionage comes with risk. If an enemy agent completes their mission despite the counter agent’s efforts then the counter agent may have been killed in the process. The two agents compare agent power and if the defending agent doesn’t achieve at least ½ the attacking agent’s power then the defending agent is killed.

However, a counter espionage attempt that successfully foils a mission results in the one level promotion for the defending agent. A counter espionage is considered successful if the enemy would have succeeded if not for the counter agent’s efforts.

## End Turn

### Production

After all orders are executed, but before armies are paid, the player’s population centers all add their production to the treasury. A population center’s produces 100 gold per level.

### Maintenance

Each army is paid in order (1st, 2nd, 3rd, etc) and the cost is based on the number of units, though some special units are free. The typical army unit costs 225 gold to maintain per turn, though that is modified by the player’s kingdom. A kingdom’s per unit cost is the same for all units regardless of troop type unless it’s a troop type that requires no maintenance.

An army must be paid in full or not at all. An army that doesn’t get paid loses 10% morale.

#### Army Support

**Support Calculation**

The player’s available support is directly related to the population centers under their control.

* Hamlet = +3.75
* Town = +1.25
* City = -2

As with the army costs, some special units also require no support (usually the same ones that require no maintenance). Any support capacity in excess of what’s required provides no direct benefit.

**Lack of Support Cost Penalty**

If the player doesn’t have enough support for the size of their armies then they pay a penalty on army cost. The penalty is in direct relation to the amount of support required versus available. For example, if a player requires 15 support and only has 10, then their army costs will be 150% of normal.

**Army Creation**

The player may not issue the Create Army order unless they have sufficient support for a new army. The player is allowed to recruit new units into existing armies, though that will increase the army support required and thus increase the cost penalty when the army is paid.

## Army Recruiting

Most players will find themselves in need of a larger military presence at some point. The most common way to gain military is to recruit. What kind of troops gets recruited depends on the population center size and the player’s level of control in the region.

* Hamlet – no recruiting allowed
* Town – can recruit levies
* City
  + Domination control level – can recruit regional troops, these are about 20% better than levies
  + Any other control level – can recruit levies
* Capitol (regardless of population center type) – can recruit kingdom troops if available, otherwise recruits depend on the population center type.

Unless recruiting kingdom troops, no more than 2 units may be recruited from a population center in a turn and the 2nd recruiting drops the population center level by 1.

### Reinforcements

Every kingdom has a reinforcement rate that determines how often a new unit of kingdom troops can be recruited. If any kingdom troops are available, then a recruit from the player’s capitol will recruit a unit of kingdom troops. Recruiting kingdom troops is free and may be done as many times as there are recruits available.

# Victory

Each kingdom has a unique victory condition and automatically wins when the condition is met. It is possible a game may have multiple winners on the same turn.

# Appendix A – Orders

Each order is described below. The orders are listed in execution sequence.

**Army Attack Army** – The army attacks another specified army. If this is the 2nd or later attack for either army then that army has a 25% penalty to its combat value.

**Army Attack Pop** – The army attacks the population center in their hex. If the army has engaged in combat earlier then the army has a 25% penalty to its combat value. A conquered population center has a 50% chance of losing a level (to a minimum of level 1).

**Diplomat Inspire Loyalty** – The diplomat inspires the population center to maintain its current allegiance (including neutrality).

**Diplomat Incite Rebellion** – The diplomat tries to convince the population to abandon their current allegiance and return to neutral status.

**Diplomat Negotiate Fealty** – The diplomat tries to convince the population to join the diplomat’s kingdom.

**Demand Surrender** – The army conducts the equivalent of a Diplomat Negotiate Fealty to convince the population center to join the army’s kingdom. Unlike with diplomats which can be killed for failure, there is no penalty for failing to demand surrender.

**Take Region Census** – The diplomat conduct a regional census, discovering the location of all population centers of a given type (e.g. town) in the region. The regional city must be within the diplomat’s range.

Map Region – The diplomat maps the region learning every hex that is within the region. The regional city must be within the diplomat’s range.

Army Recruit – The army recruits from the given population center. The recruit gained depends on the population center and other factors.

Move Wizard –

Move Diplomat –

Move Agent –

Army Move –

Army Search –

Army Transfer –

Army Combine –

Train Agent –

Train Wizard –

Train Diplomat –

Improve Power –

Improve Embassy –

Improve Population Center –

Create Army –

Hire Wizard –

Hire Diplomat –

Hire Agent –

Counter Espionage –

Sabotage Embassy –

Sabotage Population Center –

Assassinate Agent –

Assassinate Diplomat –

Assassinate Wizard –

Agent Scout Control Levels –

Agent Scout Embassies –

Agent Recon Location –