

01 Start a campaign

Empire Hex is a Solo Game: one human commander against one to three computer-controlled empires. Explore a hex map, capture cities, build combined forces, and protect the cities that keep your empire alive.

Launch **Empire Hex** from the **Game Portal** and select **Play**. This edition starts directly: it has no multiplayer room, invitations, chat, or additional human seats. Portal sign-in and subscription rules are managed by the portal.

Screen layout: campaign information is on the **left**, the map is in the **center**, and commands and production controls are on the **right**. The left panel holds turn status, factions, selection details, a terrain inspector and expandable legend, and the event log. On narrow screens, scroll through the map, information, then controls.

Your first campaign

1. Choose **Small**, **1 AI**, and **Easy** for a manageable first game. Leave the map preset on **Archipelago** and choose **Conquest**.
2. Press **Begin Campaign**. Blue cities and units belong to you. The setup distributes starting holdings among the empires; the number of cities varies with the map.
3. Click a friendly Army, then a highlighted land hex. Move a garrison away from its city when you need an open deployment space.
4. Click the cleared friendly city to inspect its production queue. Add an Army or another needed unit; the first queue item builds first.
5. Use **Done / Next Unit (N)** after giving a unit its orders. Open **Turn Briefing** to review alerts, then press **End Turn**.
6. Scout toward neutral cities and capture them with land forces. Preserve at least one city, build a Port before deploying ships, and save a checkpoint before a risky offensive.

Campaign setup

Option	Choices and effect
Map size	Small: 217 hexes; Medium: 331; Large: 547.
Map preset / seed	Archipelago, Continents, Islands, or Inland Seas. A seed controls the land/water map and clustered landforms, but does not reproduce every placement or battle.
Opponents / difficulty	1-3 AI empires; Easy, Normal, Hard, or Expert. AI seats are separate from the one human seat.
Victory / turn limit	Conquest, Domination, or Turn-limit Score. Score limits: 30, 50, 75, or 100 turns.
Neutral cities	Few or Many unclaimed cities. Neutral cities are expansion opportunities, not an additional empire.

Turn order: you act, then each AI. At the end of a side's turn its cities produce, aircraft refuel or spend fuel, and isolation is processed. Returning to your turn updates weather, refreshes movement, executes standing orders, and autosaves.

02 Map controls and turn flow

Command reference

Action	Control
Select a unit	Click or tap one of your unit markers. The left information panel shows its condition and available movement.
Move / attack / embark	Click a highlighted destination. A move can lead to combat, city capture, or boarding a friendly Transport.
Finish this activation	Done / Next Unit, or N. This spends the selected unit's remaining manual movement and advances to the next eligible unit.
Clear selection	Escape.
Pan / zoom	Drag to pan; mouse wheel or + / - to zoom. Fit Map (0) restores the full overview.
Find a location	Center Map (C) returns to your current location without changing zoom. Click the minimap to recenter elsewhere.
Inspect a destination	Inspect explored hexes in the left terrain panel; expand its legend for effects. Desktop hover adds route and combat previews.
Manage a city	Click an unoccupied friendly city for production controls on the right; use Production Manager for upgrades.
Read help	Manual or Tutorial opens a choice: Open Here or Open New Tab. Save before replacing the game view.

Center Map preserves your zoom

Center Map (C) finds, in order: your selected living unit; your selected owned city; your last inspected explored location; then an owned city or unit. If that inspected location tracks a surviving player unit, centering follows its current position. **Fit Map (0)** resets to the whole-map view instead.

Movement and activation

A normal move keeps the unit selected while it still has movement. When movement is exhausted, or an activation-ending action completes, the game selects the next unit awaiting manual orders. Sentry, Reserve, automated-order, destroyed, and exhausted units are skipped by that cycle.

Landform entry costs, weather, supply, and hostile zones of control can limit movement. Use highlighted destinations and route-cost previews to plan legal moves. The terrain reference explains the new costs; combat previews remain estimates because combat includes randomness.

End Turn may warn about idle units, isolated formations, threatened cities, or blocked production. Review the warning before continuing. There is no undo command.

03 Terrain and movement costs

Land is divided into six landforms. They change **ground-unit** movement, defense, and sight. Water remains a separate base terrain. Use the left terrain inspector and expandable legend, or desktop hover, to read an explored hex's effects.

Landform	Entry cost	Ground defense	Ground sight
Plains	1 MP	+10%	No change
Forest	2 MP	+35%	-1 hex, minimum radius 1
Hills	2 MP	+25%	+1 hex
Mountains	3 MP	+50%	+2 hexes
Marsh	3 MP	-10%	No change
Desert	1 MP	No bonus	No change

Pay for the hex you enter

A ground route adds the entry costs of its destination hexes. Each entry cost is capped at the unit's **full movement allowance for the current turn**, after its turn modifiers. The cap does not shrink when the unit spends movement. A unit must have enough movement remaining to pay that cost.

- **One-MP Army:** entering Forest costs its full 1 MP, so it can cross difficult terrain one hex at a time.
- **Two-MP ground unit:** Mountains cost 2 MP, consuming the full turn. If it first spends 1 MP on Plains, it cannot then enter a 2-MP Forest with only 1 MP left.
- **Road:** entering a road hex costs 1 MP. Starting a turn on a road retains the existing +1 movement benefit.

Defense and sight

The defense column applies to ground defenders on that landform; city fortification, experience, support, weather, and other combat modifiers still apply. Terrain sight modifies the ground unit's observation radius. Forest never reduces it below one hex.

These are **radius effects**, not line-of-sight blocking. Forests and mountains do not cast visibility shadows. Cities retain a fixed two-hex sight radius. Air and sea units keep 1-MP entry costs and receive no landform defense or sight modifier; their normal terrain-access rules still apply.

Existing campaigns: old saves and scenarios without landform data treat their land as Plains. They are not repainted. New maps generate seeded clusters of the six landforms, and new saves and scenario exports preserve landforms and roads.

04 Units and their roles

All units begin with **3 strength points**. These are base values; landform, supply, weather, veteran experience, support, and upgrades change effective performance. The terrain reference lists ground movement, defense, and sight modifiers. Cost is paid from a city's production.

Unit	Tag	Domain	Cost	Move	Sight	Atk	Def
Army	A	Land	10	1	1	3	3
Fighter	F	Air	15	5	3	2	1
Transport	T	Sea	20	3	1	0	2
Destroyer	D	Sea	20	4	2	4	4
Submarine	S	Sea	25	3	1	4	2
Headquarters	H	Land	30	2	2	1	3
Artillery	R	Land	24	1	2	5	2
Engineer	E	Land	18	2	1	1	2
Bomber	B	Air	28	5	2	5	1
Cruiser	C	Sea	32	4	2	5	5

Ground forces

- **Army:** the dependable city-taking force. Land formations can enter unoccupied hostile or neutral cities to seize them.
- **Headquarters:** supports nearby formations and extends command and supply influence. Keep it behind the fighting line.
- **Artillery:** a powerful land attacker with bombardment against enemy units up to two hexes away.
- **Engineer:** builds a road on its current land hex through **Orders > Build Road**. Construction uses its activation.

Sea and air forces

- **Transport:** carries up to six land formations. Move a ground unit onto a friendly Transport with free capacity, then select the ship and use **Unload Cargo Here** beside unoccupied land.
- **Destroyer and Cruiser:** protect sea lanes and detect adjacent enemy Submarines. Cruisers also bombard targets within two hexes.
- **Submarine:** stays hidden from enemy map display unless detected by a nearby anti-submarine ship.
- **Fighter and Bomber:** cross land and sea, but have limited fuel. Fuel decreases at the end of their side's turn when away from a friendly city; at zero the aircraft is lost. Friendly cities refuel aircraft, with extra capacity from an Airfield.

05 Cities, production, and supply

Build an economy that can deploy its output

Each city keeps a queue and accumulated production. Click a unit type to append it; the arrow controls reorder items and the remove control deletes an item when another remains. **Repeat** rotates completed items to the end. If a queue would become empty, its last unit type remains in production.

Clear Queue resets the queue to its current type and discards its stored production. A completed unit cannot deploy if its destination is occupied. Move the unit blocking a land or air deployment; sea units need an empty adjacent water hex and a Port.

Balanced cities gain 5 production points per turn. Army, Naval, and Air specializations gain 6 for matching land, sea, and air units respectively, and 4 for other units. Choose a role to match the production queue.

City upgrades

Open **Production Manager > Upgrade**. Each upgrade costs **10 stored production**; wait until the city has enough stock before purchasing.

Upgrade	Use
Port	Required for naval deployment from an adjacent coast. A landlocked city still needs adjacent water to launch a ship.
Airfield	Adds two fuel capacity when an aircraft refuels in the friendly city.
Fortifications	Improves city defense. Preserve fortified positions to protect key production centers.
Repair Yard	Restores up to two strength to each damaged friendly ship on an adjacent water hex at the start of its side's turn, up to maximum strength.

Supply, roads, and recovery

Unit details distinguish **In Supply**, **Low Supply**, **Isolated**, and **Encircled**. Friendly cities and Headquarters help supply nearby units. Road hexes improve a land formation's movement and supply reach. Several adjacent enemy ground formations can encircle a unit.

Poor supply reduces movement and combat support. Remaining isolated or encircled for multiple turns can remove strength. Your damaged ground and air units on friendly city hexes recover one strength at the start of your turn. Damaged ships adjacent to their own city with a Repair Yard recover up to two strength, capped at their maximum.

Rally points

Select a city and choose **Set Rally Here**, then click the intended destination. Newly deployed units receive routes toward it where a route is possible. **Clear Rally** removes that instruction. A rally point is an order, not a guarantee that the route will stay open.

06 Combat, intelligence, and orders

Fight with support

A highlighted enemy destination starts an attack. Combat compares attack and defense with random variation. Strength, experience, terrain, fortification, weather, nearby support, and supply modify the result. A usual hit removes one strength point; a decisive result can remove two.

Survivors gain experience. Every two experience points grant a veteran level, up to level 3. A surviving defender may retreat; compatible attackers can advance into the vacated hex. Destroying a city defender with a land attacker allows the attacker to advance and capture the city.

Ground forces exert zones of control into adjacent hexes. Entering a hostile zone can stop further movement. Nearby friendly formations, Headquarters, Artillery, and aircraft contribute support or combined-arms benefits. Roads and reserves help maintain an offensive without leaving cities undefended.

Bombardment

Select Artillery or a Cruiser, then click a visible enemy unit within two hexes. Bombardment attempts to remove one strength without moving the firing unit into the target hex, and consumes its activation. The battle log reports a hit or miss.

Read the battlefield

Unexplored hexes are dark. Explored terrain outside current observation is dimmed; visible units require current observation, with Submarines also requiring detection. Intelligence retains last-known positions, and old contacts fade over time. A remembered contact is not confirmation that a force is still there.

The **Overlay** button cycles None, Ownership, Threat, Supply, Fronts, and Roads. Use **Intelligence**, **Turn Briefing**, and **Strategic Overview** for contacts, alerts, force counts, queues, battle reports, and campaign events.

Standing orders

Order	Behavior
Wake / Manual	Returns a formation to direct control.
Sentry / Reserve	Holds a formation out of the normal next-unit cycle. Release it when needed.
Move Route / Return to Base	Creates a continuing route or sends a unit toward a friendly city. Recheck routes after terrain or occupancy changes.
Recon / Patrol	Fighter orders; Recon increases the fighter's observation radius.
Task Force / Plan Operation	Groups nearby units or routes nearby land formations toward an objective. Group orders remain subject to each unit's legal movement.

07 Victory, saving, and settings

How a campaign ends

Condition	Rule
Conquest	Win when every rival empire has lost all its cities. Unclaimed neutral cities do not have to be captured. This win also applies during the other victory modes.
Domination	Hold at least 60% of controlled cities for three checked player turns. Neutral cities are excluded from the denominator.
Turn-limit Score	At the selected turn limit, your strategic score must equal the highest score. Ties for first count as a win in this release.
Defeat	Lose when your last city is captured, even if you still have units; or finish below the highest strategic score at the score limit.

Strategic score: 100 points per currently owned city plus 10 per surviving unit. The separate **campaign-summary score** rewards cities captured, enemies destroyed, units built, and exploration, and subtracts for units lost. It is a performance record, not the turn-limit victory calculation.

The result screen summarizes the campaign. **View Final Map** lets you inspect the map, **Campaign Summary** reopens the result, and **Play Again** returns you to setup.

Keep a checkpoint

- **Save** updates the current campaign save. **Autosave** updates that same current-campaign slot at turn boundaries and many actions; it is not a history of separate turns.
- **Save Slots** provides five independent manual slots. Save a checkpoint in one of these before starting a new campaign or attempting a risky action. Loading a slot replaces the active campaign.
- **Resume Saved Campaign** opens the current save. Compatible earlier campaigns and slots remain loadable; old land without a landform becomes Plains, preserving the existing map and positions. New saves retain terrain, roads, and your current-location focus.
- Saves belong to this browser profile and site. They do not sync between devices. Clearing site data can remove them. A storage error means you should keep the current session open; do not assume a failed save has been retained.

Settings and sound

Settings offers AI/game speed and reduced motion. Use browser zoom to enlarge the interface. Speed changes AI delay, not turn rules. **Sound** toggles local event cues for movement, combat, capture, production, victory, and defeat. If audio is unavailable, the game remains playable through its visual messages.

Use mouse or touch for map selection. Keyboard shortcuts supplement these controls; this release does not provide complete keyboard-only map navigation, gamepad input, undo, or a separate quick-save command.

08 Scenarios and the editor

Play a scenario

Choose **Scenarios** on the start screen. The built-in **Island Duel** button loads a compact confrontation between the human commander and one AI. You can also paste a scenario JSON document into **Import Scenario JSON**, then choose **Import Scenario**.

The package contains **scenarios/island-duel.json** and **scenarios/three-ports.json**. Open a file as text and paste its JSON into the importer. A scenario's side count includes the human side and its AI sides; it does not add human multiplayer seats.

Create a custom setup

1. Choose a map size, then open **Scenario Editor**. The editor creates an editable map and clears its starting cities and units.
2. Use **Scenario Tools** to choose Plains, Forest, Hills, Mountains, Marsh, Desert, Water, a city, a unit, a road, or an objective. Choose the owner, close the tools, and click map hexes to paint or place items.
3. Give the human and AI sides legal starting cities and forces. Put cities and land formations on land, ships on water, and no more than one unit on a hex.
4. Use **Rename Scenario** and **Validate Scenario**. Resolve structural errors and review warnings before leaving the editor.
5. Select **Export Scenario** to download JSON. Retain a copy, import it again, and play through the opening turns to check that the scenario works as intended.

What a scenario stores

Empire Scenario Format 1.0 describes tiles, landforms, roads, cities, units, side count, victory mode, turn limit, optional objective markers, and metadata. It is a starting-position format, not a substitute for campaign saves. Export and import restart the scenario at turn 1.

Objective markers are planning annotations in this version. Victory follows Conquest, Domination, or Turn-limit Score; placing an objective marker does not add an automatic objective-based win rule.

The built-in editor offers the human, AI 1, and Neutral ownership choices. More detailed authored scenarios can describe additional computer sides within the game's supported limits. See <docs/scenario-format.html> for the JSON contract and validation guidance.

Protect a campaign before editing

Entering the editor changes the current world. Save the campaign into a manual slot first. Use separate exported scenario files for experiments, then return to a campaign by loading its slot.

Scenario validation checks structure; it cannot prove balance, transport access, fair starting positions, or a complete path to victory. Test every custom map before sharing it.

09 Installation and reference

Install this release

1. Upload **empire-hex-v2.2.2.zip** through the Tronsoft game package publishing interface as an update to the existing **Empire Hex** record.
2. Keep the existing game identity and installation location. The package declares **Solo** and belongs in the **Game Portal** only.
3. Run the portal's package validation and preview. Check normal Play, the manual and tutorial, a saved campaign, and a full turn before publication.
4. Publish through the portal's normal approval workflow. This game ZIP does not update the portal website or install multiplayer routing.

Release profile

Item	Value
Game / package version	Empire Hex 2.2.2
Specification / schema family	Tronsoft Games Package Specification 1.6.7 / manifest schema 1.6
Entry / human players	index.html / exactly 1 human, with 1-3 computer opponents
Compatibility	Tronsoft Games Portal v6.12+ with support for the v1.6.7 Solo profile and schema fields.
Dependencies	Local HTML, CSS, JavaScript, images, and sound. No external runtime libraries or online game backend.
Help / license	docs/tutorial.html, README.txt, and LICENSE.txt. Report issues through the Tronsoft Games contact page.

Troubleshooting and limits

- **A unit will not move:** check the active side, remaining movement, terrain, transport space, and whether a route or standing order controls it. Wake / Manual restores direct orders.
- **Production is ready but no unit appears:** clear the deployment hex. Naval deployment also needs a Port and free adjacent water.
- **A ship did not repair:** move it next to your own city with a Repair Yard and wait for your side's next turn. Distant and enemy yards do not repair it.
- **Saves or help do not open:** verify browser storage and document/popup permissions. Use Open Here if a new tab is blocked, after saving your campaign.
- **Custom scenarios:** validate and playtest exported maps before sharing them.

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