

THE FORTRESS

AN INSTRUCTION MANUAL

*You walk alone. The wilds stretch before you - endless and indifferent.
Somewhere ahead, something ancient waits.*

"I BUILT THIS. I OPTIMIZED THIS. AND IT IS STILL GETTING STRONGER."

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The Fortress is in active development. This manual describes the game as it is actually built, read straight from the game's own data. Where a system is designed but not yet playable, the manual says so plainly rather than pretending. Numbers that are still being tuned - combat damage in particular - are flagged as placeholder where they appear.

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I. THE WORLD

You are a lone wanderer. You fight through the wilds, and somewhere ahead, in a dark forest at the edge of the map, you find the ruins of an ancient fortress. You rebuild it. You fortify it. You defend it against endless waves of creatures - and as it grows, you recruit champions who venture out into the wilds while you command from within the walls. This manual is your field guide to that work: how the fortress grows, what every building and weapon and skill does, and the path from your first lonely steps in the grass to the day you take the Throne.

A handful of principles shape every part of the game. They are worth knowing before you start:

YOUR TIME IS RESPECTED

Every minute - idle, defending, or exploring - pays out something meaningful. No daily-login guilt, no energy meters. A free player can reach the end; paying only makes the climb faster.

DEPTH THROUGH MYSTERY

Most systems are open and knowable. A few are deliberately shrouded - hidden formulas, secret corners of the map. Figuring them out is part of the game, not a bug.

FOUR WAYS TO PLAY, ALL REWARDING

Defending, exploring, idling, and competing are all real ways to play. None is the wrong one. Exploring gives different rewards, not better ones.

NUMBERS GO UP, FOREVER

There is no prestige reset. Power only ever climbs. The systems are built to keep scaling for years.

CHOICES, NOT CHANCES

Every weapon and every piece of gear has fixed, knowable stats. No random rolls, no loot boxes, no gacha. You can learn exactly what everything does and plan around it.

II. THE FOUR WAYS TO PLAY

The Fortress is played in four loops. You do not start with all four - you earn them by building. Each one feeds the others, and once all four are open you move between them freely.

ACTIVE - EXPLORATION

ALWAYS AVAILABLE

You control a single unit walking the wilds. Terrain scrolls around you; enemies approach and your unit auto-attacks while you steer. You gather resources, crack open chests, and - only here - find gear and discovery items to carry home. The map resets when you leave or fall, but you keep what you found. The feeling: I am out finding new things to make my fortress stronger.

PASSIVE - DEFENSE

UNLOCKED WHEN YOU FIND THE FORTRESS

The default way to play. Real-time tower defense: the fortress fights for itself while you watch and tune between waves. The Main Tower fires, your mounted armaments work, your posted guards loose their weapons, and enemies come from themed spawn points. Once a run starts you can look at your tabs but only spend Spoils - no upgrades, no gear swaps mid-run. The run ends when the walls fall and the core HP hits zero. The feeling: I am watching my build work and tweaking between waves.

IDLE - AWAY

UNLOCKED BY BUILDING THE THRONE

Not a simulation - no battles run while you are gone. When you close the app (or send a hero into Active), the fortress takes a snapshot and a formula pays out a modest sum based on time away and how strong your build is. Lowest reward rate of the four, with a short cap. A courtesy, not a strategy. The feeling: I closed the app for a few hours and got a little something.

TOURNAMENT - COMPETE

UNLOCKED LATER (IN DESIGN)

Asynchronous competition against recorded runs, never live opponents, on your own schedule inside a tournament window. Everyone who enters gets base rewards; winners get more, including the scarce Crown currency. Built to feel like March Madness - upsets welcome - rather than a grind. This loop is still being designed; treat it as a promise, not a present feature.

III. THE MANAGEMENT SCREEN

Between loops you run the fortress from the management screen. It has four views - called modes - of the same underlying fortress. A mode controls what you can see and what you can do. The tabs available change with the mode.

MODE	WHAT YOU DO THERE
PRODUCTION	Build and research. The Builder queue, the Library, the Forge, and the Barracks live here - this is where the fortress physically grows.
UNITS	Equip and level your units. The Armory (armaments), the Barracks roster (heroes), and the Guardhouse (guards) - the things that fight.
COMMAND	Your own stats and gear: the Character/Commander, the Fortress, and (after the Throne) the Party. The day-to-day defensive picture.
DISCOVERY	The Academy's encyclopedia and bestiary. Parked for redesign - reserved, not yet filled in.

IV. THE PATH TO THE THRONE

This is the critical path: the intended journey from your first step in the grass to the moment you take the Throne and the whole game opens up. It is not a quest log - it is the order systems were designed to unlock in. Once you reach the Throne, the guide rails come off and you play with full freedom.

PHASE 1 - ALONE IN THE GRASS

- SPAWN
You begin on the Grasslands, Map 1, with nothing but your fists. A few lines of narration, then silence. The wilds do not explain themselves.
- EXPLORE AND SURVIVE
Walk. Resource nodes auto-harvest as you pass - trees for wood, rocks for stone, straw patches for straw. Wolves appear and your fists handle them. There is no harvest button and no combat prompt; the interesting decision is where to go, not which button to press.
- FIND THE RUINS
Reach the ancient fortress and it can be rebuilt for a handful of resources. The moment you rebuild, the management screen appears and the Main Tower comes alive, firing pierce arrows. Passive mode is now yours.
- DEFEND
The first defense begins. Wolves approach, the Main Tower fires, you watch. This is the game's heartbeat.
- FIND THE BUILDER
On Map 2, out in Active mode, you find the Builder. Bring it home and the construction queue opens. The fortress can now grow - the first real hook.
- FIND THE LIBRARIAN
On Map 3, the Librarian hands you the Library blueprints, ready to research.

PHASE 2 - THE FIRST BUILDINGS

- BUILD THE LIBRARY
With the Builder at Level 1, research the Library blueprint and build it. The research queue opens.
- LEVEL THE LIBRARY
Library Level 1 opens Fortress Labs - your fortress stats become investable. Level 2 opens Structures Labs, where building blueprints become researchable.
- BUILD THE FORGE
Research the Forge blueprint, get the Builder to Level 2, and build it. The craft queue opens. Leveling the Forge to 1 unlocks the Ballista - your first real fortress weapon. The second hook.
- BUILD THE BATTLEMENTS
Research the Battlements blueprint, Builder to Level 3, build it. Now you have wall positions to mount armaments on.

PHASE 3 - BRANCHING OUT

- YOU CHOOSE THE ORDER
After the Battlements, several paths open at once and you pick what to prioritize.
- BARRACKS
Library to 4, research the Barracks blueprint, Builder to 4, build it. Guard and hero recruitment open.
- SENTRY TOWERS
Library to 5, research the Sentry Towers blueprint, Builder to 5, build it. Guards only work once both the Barracks and the Sentry Towers exist - one makes them, the other gives them somewhere to stand.
- GROW WHAT YOU HAVE
Keep leveling the Forge and Battlements for more armament types and more wall slots, or push the side buildings - resource mills, Walls, Treasury - whenever you like.

PHASE 4 - THE HERO AND THE THRONE

- RESCUE A HERO
On a later Active map you rescue your first hero - a Fighter. Until now, the unit you steered in Active was secretly a hidden Fighter standing in for you; the rescue replaces it with a real one.
- TAKE THE THRONE
With a hero rescued and the blueprint researched, get the Library to 6 and the Builder to 6 and build the Throne. This is a one-way transition: you become the Commander. The Idle loop switches on, the Party tab appears, heroes can deploy into Active while the fortress idles, and for the first time you can run Active and Idle at once. The game is now fully open.

Before the Throne you choose Active or Passive each session - you cannot run both, and closing the app earns nothing. After the Throne you play in parallel: a hero explores while the fortress quietly earns, and you drop into Passive whenever you want to watch it fight.

V. HOW COMBAT WORKS

Every attack in the game - yours, a hero's, an armament's, a sentry's, an enemy's - runs through one shared system. Understanding its few moving parts explains the whole reference that follows.

DAMAGE TYPE

Every hit is Pierce, Slash, or Bludgeon (with Fire, Ice, and Poison reserved for later). Defenders carry per-type Resist and Immunity, so the type of damage matters as much as the amount.

DELIVERY

Direct (melee, in your face) or Projectile (fired across a distance). A weapon's delivery sets how a unit fights - equip a bow and you are a ranged attacker; equip a sword and you are a melee one.

RANGE AND ATTACK SPEED

Range is how far a hit reaches, in map meters. Attack speed is how often it lands. Together they matter more right now than raw damage.

DAMAGE IS PLACEHOLDER

Weapon and armament damage values are early placeholders - most sit at 1 while the economy is tuned. The reference shows the real values; just know the differences between weapons today are type, delivery, range, and speed, not their damage numbers.

VI. ENTITIES & HEROES

The whole game is built on one template shared by six kinds of entity. Each has its own stats, grouped into *Offense, Defense, and Utility*. Learn the template once and every screen reads the same way.

IN-GAME NAME	TYPE	WHAT IT IS
The Commander	Player	You. A single hero who fights in Active mode and, after the Throne, becomes the idle commander.
Fortress	Fortress	The keep itself. Has its own HP, repair, sentry weapon, and defensive stats.
Outriders	Party	The deployed group in Active combat. A compiled entity - equipped heroes raise its stats.
Hall	Hero Pool	Holds skills that buff every hero in the roster at once.
Armory	Armament Pool	Holds skills that buff every fortress armament at once.
Guardhouse	Guard Pool	Holds skills that buff every posted guard at once.

Heroes are champions you rescue in the wilds and then recruit at the Barracks. A class is a template, not a person - every Fighter shares the same base stats. Identity comes from class base stats, the weapon you hand them, and their class-exclusive skills.

FIGHTER

Melee warrior. High defense, close-range damage.

Starting stats Damage 8, Attack Speed 1.2, Max HP 50, Regen 0.5

Class-exclusive skills Shield Block (Defense), Armor Mastery (Defense) · **Unique slot** Shield

Recruitable at Barracks levels · **Max per roster** 0

ARCHER

Ranged attacker. Fast, long-range, lower HP.

Starting stats Damage 6, Attack Speed 1.8, Max HP 35, Regen 0.3

Class-exclusive skills Agility (Utility), Imbue (Utility) · **Unique slot** Quiver

Recruitable at Barracks levels · **Max per roster** 0

Every hero level-up grants: Max HP +5, Damage +1, Regen +0.5, Pierce Damage +1, Slash Damage +1, Bludgeon Damage +1, and more.

COMMANDER & FORTRESS STATS

Every stat starts at a base value and grows a fixed amount per level, up to a cap that research can raise. Percentage stats (marked %) turn their level count into a percentage bonus. Raising any stat one level costs gold equal to ten times the next level: 10, 20, 30, 40, and so on.

COMMANDER (PLAYER)

Offense

STAT	BASE	GROWTH / LEVEL	STARTING CAP
Hero Attack Speed <input type="checkbox"/>	1	+1	10
Hero Pierce Damage	1	+1	10
Hero Slash Damage	1	+1	10
Hero Bludgeon Damage	1	+1	10
Hero Range	1	+0.5	10

Defense

STAT	BASE	GROWTH / LEVEL	STARTING CAP
Hero Max HP	50	+10	10
Hero Regen	1	+1	10
Hero Pierce Resist	0	+1	10
Hero Slash Resist	0	+1	10
Hero Bludgeon Resist	0	+1	10
Hero Pierce Immunity <input type="checkbox"/>	0	+1	10
Hero Slash Immunity <input type="checkbox"/>	0	+1	10
Hero Bludgeon Immunity <input type="checkbox"/>	0	+1	10

Utility

STAT	BASE	GROWTH / LEVEL	STARTING CAP
XP Gain <input type="checkbox"/>	0	+1	10
Gold Find <input type="checkbox"/>	0	+1	10
Hero Move Speed <input type="checkbox"/>	0	+1	10

FORTRESS

Offense

STAT	BASE	GROWTH / LEVEL	STARTING CAP
Fort Attack Speed <input data-bbox="324 310 370 346" type="text" value="%"/>	1	+1	10
Fort Pierce Damage	1	+1	10
Fort Slash Damage	1	+1	10
Fort Bludgeon Damage	1	+1	10
Fort Range	3	+0.5	10

Defense

STAT	BASE	GROWTH / LEVEL	STARTING CAP
Fort Core HP	100	+10	10
Fort Repair Rate	1	+1	10
Fort Walls HP (Build Walls)	50	+20	10
Fort Wall Repair Rate (Build Walls first)	1	+1	10
Fort Entity HP	0	+1	10
Fort Entity Regen	0	+1	10
Fort Pierce Resist	0	+1	10
Fort Slash Resist	0	+1	10
Fort Bludgeon Resist	0	+1	10
Fort Pierce Immunity <input data-bbox="357 1207 402 1243" type="text" value="%"/>	0	+1	10
Fort Slash Immunity <input data-bbox="357 1270 402 1306" type="text" value="%"/>	0	+1	10
Fort Bludgeon Immunity <input data-bbox="389 1333 435 1369" type="text" value="%"/>	0	+1	10

Utility

STAT	BASE	GROWTH / LEVEL	STARTING CAP
XP Bonus <input data-bbox="243 1528 289 1564" type="text" value="%"/>	0	+1	10
Gold Bonus <input data-bbox="259 1591 305 1627" type="text" value="%"/>	0	+1	10
Fort Move Speed <input data-bbox="308 1654 354 1690" type="text" value="%"/> (Your fortress can't move... yet)	0	+1	10

VII. WEAPONS, ARMOR & ARMAMENTS

Equip a weapon to set a unit's attack style. The Fists are permanent and always there when nothing else is equipped.

WEAPON	DAMAGE	TYPE	DELIVERY	RANGE	ATK SPEED	USABLE BY
Fists Permanent. Used when no weapon is equipped.	1	Bludgeon	Direct	Melee	1s cd	All
Chipped Shortsword A battered blade, still sharp enough to cut.	1	Slash	Direct	Melee	1s cd	Fighter, Commander
Gnarled Club Heavy knotted wood. Crude but effective.	1	Bludgeon	Direct	Melee	1s cd	Fighter, Commander
Worn Hunting Spear Long reach, piercing thrust. Made for bringing down game.	1	Pierce	Direct	Melee	1s cd	Fighter, Commander
Frayed Shortbow Weathered but functional. Pierce damage from a distance.	1	Pierce	Projectile	30 m	1s cd	Archer, Commander
Knotted Sling Handmade from scrap leather. Bludgeon damage from a distance.	1	Bludgeon	Projectile	30 m	1s cd	Archer, Commander
Rusty Hatchet A repurposed woodcutter's tool. Slash damage at mid-range.	1	Slash	Projectile	10 m	1s cd	Fighter, Commander

ARMOR & ACCESSORIES

Worn gear adds flat stat bonuses, applied when a unit is readied for battle. Gear drops only in Active mode; spare copies beyond your inventory cap are salvaged into gold automatically.

ITEM	SLOT	BONUS	USABLE BY
Patched Hide Gloves A pair of gloves of patched wolf-hide, mismatched leather patches, crude visible stitching, worn soft.	Hands	+2 Max HP	Fighter, Archer, Commander
Patched Hide Jerkin A jerkin of patched wolf-hide, mismatched leather patches, crude visible stitching, worn soft.	Chest	+10 Max HP	Fighter, Archer, Commander
Patched Hide Leggings	Legs		

A pair of leggings of patched wolf-hide, mismatched leather patches, crude visible stitching, worn soft.		+5 Max HP, +1 Move Speed	Fighter, Archer, Commander
Tarnished Copper Band A band of dull tarnished copper, green-tinged and slightly bent.	Ring	+1 Gold Find	Fighter, Archer, Commander
Patched Hide Cap A cap of patched wolf-hide, mismatched leather patches, crude visible stitching, worn soft.	Head	+3 Max HP	Fighter, Archer, Commander
Carved Bone Pendant A pendant of whittled pale bone strung on a leather cord, simple carved etchings.	Neck	+1 Xp Gain	Fighter, Archer, Commander
Splintered Buckler A battered shield. Blocks some damage.	Shield (Fighter)	+8 Max HP	Fighter
Stitched Quiver Handmade arrow holder. Slightly faster attacks.	Quiver (Archer)	+1 Attack Speed	Archer
Patched Hide Boots A pair of boots of patched wolf-hide, mismatched leather patches, crude visible stitching, worn soft.	Boots	+3 Max HP, +1 Move Speed	Fighter, Archer, Commander
Patched Hide Shoulder pads A pair of shoulder pads of patched wolf-hide, mismatched leather patches, crude visible stitching, worn soft.	Spaulders	+4 Max HP	Fighter, Archer, Commander
Patched Hide Sleeves A pair of sleeves of patched wolf-hide, mismatched leather patches, crude visible stitching, worn soft.	Arms	+3 Max HP	Fighter, Archer, Commander
Patched Hide Cuffs A pair of cuffs of patched wolf-hide, mismatched leather patches, crude visible stitching, worn soft.	Bracers	+2 Max HP	Fighter, Archer, Commander
Rusty Helm A crude iron helm, blotched with rust, dented and bandit-made.	Head	+2 Bludgeon Resist	Fighter, Archer, Commander
Rusty Breastplate A crude iron breastplate, blotched with rust, dented and bandit-made.	Chest	+2 Slash Resist	Fighter, Archer, Commander
Rusty Legguards A crude iron pair of legguards, blotched with rust, dented and bandit-made.	Legs	+2 Pierce Resist	Fighter, Archer, Commander
Rusty Sabatons A crude iron pair of sabatons, blotched with rust, dented and bandit-made.	Boots	+1 Bludgeon Resist	Fighter, Archer, Commander
Rusty Pauldrons A crude iron pair of pauldrons, blotched with rust, dented and bandit-made.	Spaulders	+1 Slash Resist	Fighter, Archer, Commander
Rusty Armguards	Arms	+1 Slash Resist	

A crude iron pair of armguards, blotched with rust, dented and bandit-made.				Fighter, Archer, Commander
Rusty Vambraces A crude iron pair of vambraces, blotched with rust, dented and bandit-made.	Bracers	+2 Pierce Resist		Fighter, Archer, Commander
Rusty Gauntlets A crude iron pair of gauntlets, blotched with rust, dented and bandit-made.	Hands	+1 Bludgeon Resist		Fighter, Archer, Commander
Carved Bone Ring A ring of whittled pale bone strung on a leather cord, simple carved etchings.	Ring	+1 Xp Gain		Fighter, Archer, Commander
Carved Bone Earrings A pair of earrings of whittled pale bone strung on a leather cord, simple carved etchings.	Earring	+1 Xp Gain		Fighter, Archer, Commander
Tarnished Copper Torc A torc of dull tarnished copper, green-tinged and slightly bent.	Neck	+1 Gold Find		Fighter, Archer, Commander
Tarnished Copper Earrings A pair of earrings of dull tarnished copper, green-tinged and slightly bent.	Earring	+1 Gold Find		Fighter, Archer, Commander
Scuffed Girdle A leather belt with a large tarnished buckle, scuffed by a thousand pommels.	Belt	+1 Regen		Fighter, Archer, Commander
Scuffed Cloak A road-worn cloak, scuffed and faded.	Cloak	+1 Regen		Fighter, Archer, Commander
Scuffed Tabard A faded cloth tabard, scuffed and worn.	Tabard	+1 Regen		Fighter, Archer, Commander
Beaded Cord A leather cord belt strung with pale carved bone beads.	Belt	+1 Move Speed		Fighter, Archer, Commander
Beaded Cloak A cloak strung with pale carved bone beads.	Cloak	+1 Move Speed		Fighter, Archer, Commander
Beaded Tabard A tabard strung with pale carved bone beads.	Tabard	+1 Move Speed		Fighter, Archer, Commander

EQUIPMENT SLOTS

Each entity has eight shared equipment slots plus a class-unique slot - the Fighter's Shield, the Archer's Quiver, the Commander's Relic.

SLOT	CATEGORY	ACCEPTS
Weapon	Offense	weapon

Hands	Offense	hands
Chest	Defense	chest
Legs	Defense	legs
Ring	Utility	ring
Ring	Utility	ring
Head	Control	head
Neck	Control	neck
Boots	Defense	boots
Spaulders	Defense	spaulders
Arms	Defense	arms
Bracers	Defense	bracers
Belt	Utility	belt
Cloak	Utility	cloak
Earring	Utility	earring
Earring	Utility	earring
Tabard	Utility	tabard
Shield	—	Fighter only
Quiver	—	Archer only
Relic	Utility	Commander only, unlocks at Lv 10

FORTRESS ARMAMENTS

Armaments are the fortress's own heavy weapons. You craft them at the Forge and mount them on the Battlements. Each unlocks at a Forge level, and the number you may own of each rises as the Forge climbs.

BALLISTA

Fires piercing bolts in a line, hitting all enemies along the path

Damage 1 (Pierce) · Delivery Projectile · Area Line, size 20 · Range 22 m · Atk speed 2.5s cd

Craft cost 15 8 5 40 · Craft time 30s · Unlocks at Forge Lv 1 · Caps at Forge 1 / 2 / 3

CATAPULT

Launches boulders that explode on impact, damaging all enemies in a radius

Damage 1 (Bludgeon) · Delivery Projectile · Area Circle, size 40 · Range 17.5 m · Atk speed 4s cd

Craft cost 8 18 4 50 · Craft time 40s · Unlocks at Forge Lv 2 · Caps at Forge 1 / 2 / 3

CLEAVER

Rapid slashing strikes at close range, fast but single target

Damage 1 (Slash) · Delivery Direct · Area Single target · Range 5 m · Atk speed 1.2s cd

Craft cost 6 4 12 30 · Craft time 25s · Unlocks at Forge Lv 3 · Caps at Forge 1 / 2 / 3

SENTRY WEAPONS

The Main Tower is permanent and fires Pierce by default. Its extra sentry positions are filled by guards you recruit at the Barracks - each guard type brings its own weapon.

WEAPON	DAMAGE	TYPE	GUARD	RECRUITABLE AT BARRACKS
Arrows	1	Pierce	Bowman	Lv 1
Slings	1	Bludgeon	Slinger	Lv 2
Throwing Axes	1	Slash	Axe Thrower	Lv 3

ENEMIES & LOOT

What you face, and what it drops. Gear only falls in Active mode, rolled from each enemy's drop table.

ENEMY	HP	DAMAGE	SPEED	DROPS	GOLD / XP	CHANCE
Wolf	20	4 (Slash)	56	Patched Hide Gloves, Patched Hide Jerkin, Patched Hide Leggings, Tarnished Copper Band, Patched Hide Cap, Carved Bone Pendant	5 / 10	15%
Bandit	20	4 (Slash)	56	Chipped Shortsword, Gnarled Club, Worn Hunting Spear, Frayed Shortbow, Knotted Sling, Rusty Hatchet	5 / 10	15%

VIII. BUILDINGS

Buildings are the fortress's infrastructure - each adds a capability and has its own levels. The Builder does all the construction, and nothing can climb past the Builder's own level. "Available when" traces the full chain that unlocks each one.

BUILDING	CATEGORY	EFFECT	MAX LV	AVAILABLE WHEN
Fortress Repair	Production	Restore the fortress from ruins	1	Available from the very start.
Main Tower	Production	Fires pierce projectiles at enemies	1	Permanent. Present from the start; never built or removed.
Builder	Production	Constructs and upgrades buildings	16	Found in the field on Map 1 in Active mode.
Library	Utility	Research new technologies and unlock buildings	9	Blueprint from the Librarian on Map 1, researched in the Library queue. Build with the Builder at Lv 1.
Forge	Utility	Craft armaments for the fortress	12	Research "Create Forge Blueprints" in Structures Labs (opens at Library Lv 2). Build with the Builder at Lv 7.
Barracks	Utility	Recruit and manage heroes	3	Research "Create Barracks Blueprints" in Structures Labs (opens at Library Lv 2), which needs Forge built. Build with the Builder at Lv 9.
Lumber Mill	Gathering	+1 wood per level	5	Blueprint appears once 10,000 lifetime wood is reached. Research "Create Lumber Mill Blueprints" in Structures Labs (opens at Library Lv 2). Build with the Builder at Lv 5.
Quarry	Gathering	+1 stone per level	5	Blueprint appears once 10,000 lifetime stone is reached. Research "Create Quarry Blueprints" in Structures Labs (opens at Library Lv 2). Build with the Builder at Lv 3.
Thresher	Gathering	+1 straw per level	5	Blueprint appears once 10,000 lifetime straw is reached. Research "Create Thresher Blueprints" in Structures Labs (opens at Library Lv 2). Build with the Builder at Lv 6.
Walls	Defense	+10 HP per level	5	Blueprint appears once the core takes 10,000 lifetime damage. Research "Create Walls Blueprints" in Structures Labs (opens at Library Lv 2). Build with the Builder at Lv 2.
Stonemason	Defense	+1 HP/sec per level	5	Blueprint appears once the walls takes 10,000 lifetime damage. Research "Create Stonemason Blueprints" in Structures Labs (opens at Library Lv 2), which needs Walls built. Build with the Builder at Lv 4.
Sentry Towers	Offense	Mount sentry weapons on tower positions	2	Research "Create Sentry Towers Blueprints" in Structures Labs (opens at Library Lv 2), which needs Forge built. Build with the Builder at Lv 8.
Battlements	Offense	Mount heavy armaments on fortress walls	2	Research "Create Battlements Blueprints" in Structures Labs (opens at Library Lv 2), which needs Forge built. Build with the Builder at Lv 10.

Treasury	Utility	+1% gold per level	5	Blueprint appears once 10,000 lifetime gold is reached. Research "Create Treasury Blueprints" in Structures Labs (opens at Library Lv 2). Build with the Builder at Lv 13.
Academy	Utility	+1% XP per level	5	Blueprint appears once 10,000 lifetime XP is reached. Research "Create Academy Blueprints" in Structures Labs (opens at Library Lv 2). Build with the Builder at Lv 11.
Throne	Utility	One-way commander transition — unlocks idle mode	1	Research "Create Throne Blueprints" in Structures Labs (opens at Library Lv 2), which needs Barracks built. Build with the Builder at Lv 16.
Vault	Utility	Keep +1 of each treasure per level	10	Available from the start (no blueprint research required). Build with the Builder at Lv 12.
Armory	Offense	+1 armament capacity research rank per level	10	Available from the start (no blueprint research required). Build with the Builder at Lv 14.
Guardhouse	Defense	+1 soldier capacity research rank per level	10	Available from the start (no blueprint research required). Build with the Builder at Lv 15.
Hall	Utility	+1 hero capacity research rank per level	10	Available from the start (no blueprint research required). Build with the Builder at Lv 16.

BUILDING COST & TIME PER LEVEL

The exact resource cost, build time, and minimum Builder level for every level of every building. Level 1 is the initial build; everything above is an upgrade. Costs follow the game's escalation formula, so these are the real numbers you will pay.

FORTRESS REPAIR

Restore the fortress from ruins

Available when Available from the very start.

LEVEL	COST	BUILD TIME	BUILDER REQ.
1 (build)	5 3 5	15s	—

MAIN TOWER

Fires pierce projectiles at enemies

Available when Permanent. Present from the start; never built or removed.

No build cost or upgrades - permanent fixture.

BUILDER

Constructs and upgrades buildings

Available when Found in the field on Map 1 in Active mode.

LEVEL	COST	BUILD TIME	BUILDER REQ.
1 (build)	10 10 5 50	15s	—
2	12 12 6 62	18s	—
3	15 15 7 78	22s	—
4	19 19 9 97	26s	—
5	24 24 12 122	31s	—
6	30 30 15 152	37s	—
7	38 38 19 190	45s	—
8	47 47 23 238	54s	—
9	59 59 29 298	1m 04s	—
10	74 74 37 372	1m 17s	—
11	93 93 46 465	1m 33s	—
12	116 116 58 582	1m 51s	—

13	145	145	72	727	2m 14s	—
14	181	181	90	909	2m 40s	—
15	227	227	113	1136	3m 13s	—
16	284	284	142	1421	3m 51s	—

LIBRARY

Research new technologies and unlock buildings

Available when Blueprint from the Librarian on Map 1, researched in the Library queue. Build with the Builder at Lv 1.

LEVEL	COST				BUILD TIME	BUILDER REQ.
1 (build)	5	3	3		10s	1
2	7	4	4		13s	2
3	11	6	6		17s	3
4	16	10	10		22s	4
5	25	15	15		29s	5
6	37	22	22		37s	6
7	56	34	34		48s	7
8	85	51	51		1m 03s	8
9	128	76	76		1m 22s	9

FORGE

Craft armaments for the fortress

Available when Research "Create Forge Blueprints" in Structures Labs (opens at Library Lv 2). Build with the Builder at Lv 7.

LEVEL	COST				BUILD TIME	BUILDER REQ.
1 (build)	8	6	4	20	15s	7
2	12	9	6	30	20s	8
3	18	13	9	45	25s	10
4	27	20	13	67	33s	11
5	40	30	20	101	43s	12
6	60	45	30	151	56s	14
7	91	68	45	227	1m 12s	15
8	136	102	68	341	1m 34s	16
9	205	153	102	512	2m 02s	16

10	307	230	153	768	2m 39s	16
11	461	345	230	1153	3m 27s	16
12	691	518	345	1729	4m 29s	16

BARRACKS

Recruit and manage heroes

Available when Research "Create Barracks Blueprints" in Structures Labs (opens at Library Lv 2), which needs Forge built. Build with the Builder at Lv 9.

LEVEL	COST				BUILD TIME	BUILDER REQ.
1 (build)	12	8	6	30	20s	9
2	18	12	9	45	26s	9
3	27	18	13	67	34s	10

LUMBER MILL

+1 wood per level

Available when Blueprint appears once 10,000 lifetime wood is reached. Research "Create Lumber Mill Blueprints" in Structures Labs (opens at Library Lv 2). Build with the Builder at Lv 5.

LEVEL	COST				BUILD TIME	BUILDER REQ.
1 (build)	15	5	8	10	20s	5
2	22	7	12	15	26s	6
3	33	11	18	22	34s	12
4	50	16	27	33	44s	16
5	75	25	40	50	57s	16

QUARRY

+1 stone per level

Available when Blueprint appears once 10,000 lifetime stone is reached. Research "Create Quarry Blueprints" in Structures Labs (opens at Library Lv 2). Build with the Builder at Lv 3.

LEVEL	COST				BUILD TIME	BUILDER REQ.
1 (build)	5	15	5	10	20s	3
2	7	22	7	15	26s	6

3	11	33	11	22	34s	12
4	16	50	16	33	44s	16
5	25	75	25	50	57s	16

THRESHER

+1 straw per level

Available when Blueprint appears once 10,000 lifetime straw is reached. Research "Create Thresher Blueprints" in Structures Labs (opens at Library Lv 2). Build with the Builder at Lv 6.

LEVEL	COST				BUILD TIME	BUILDER REQ.
1 (build)	8	5	15	10	20s	6
2	12	7	22	15	26s	6
3	18	11	33	22	34s	12
4	27	16	50	33	44s	16
5	40	25	75	50	57s	16

WALLS

+10 HP per level

Available when Blueprint appears once the core takes 10,000 lifetime damage. Research "Create Walls Blueprints" in Structures Labs (opens at Library Lv 2). Build with the Builder at Lv 2.

LEVEL	COST			BUILD TIME	BUILDER REQ.
1 (build)	10	8	3	30s	2
2	15	12	4	39s	4
3	22	18	6	51s	11
4	33	27	10	1m 06s	16
5	50	40	15	1m 26s	16

STONEMASON

+1 HP/sec per level

Available when Blueprint appears once the walls takes 10,000 lifetime damage. Research "Create Stonemason Blueprints" in Structures Labs (opens at Library Lv 2), which needs Walls built. Build with the Builder at Lv 4.

LEVEL	COST			BUILD TIME	BUILDER REQ.
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LEVEL	COST	BUILD TIME	BUILDER REQ.
1 (build)	5 12 3 15	25s	4
2	7 18 4 22	32s	6
3	11 27 6 33	42s	11
4	16 40 10 50	55s	16
5	25 60 15 75	1m 11s	16

SENTRY TOWERS

Mount sentry weapons on tower positions

Available when Research "Create Sentry Towers Blueprints" in Structures Labs (opens at Library Lv 2), which needs Forge built. Build with the Builder at Lv 8.

LEVEL	COST	BUILD TIME	BUILDER REQ.
1 (build)	12 10 6 25	20s	8
2	18 15 9 37	26s	10

BATTLEMENTS

Mount heavy armaments on fortress walls

Available when Research "Create Battlements Blueprints" in Structures Labs (opens at Library Lv 2), which needs Forge built. Build with the Builder at Lv 10.

LEVEL	COST	BUILD TIME	BUILDER REQ.
1 (build)	10 14 4 30	25s	10
2	15 21 6 45	32s	15

TREASURY

+1% gold per level

Available when Blueprint appears once 10,000 lifetime gold is reached. Research "Create Treasury Blueprints" in Structures Labs (opens at Library Lv 2). Build with the Builder at Lv 13.

LEVEL	COST	BUILD TIME	BUILDER REQ.
1 (build)	8 8 4 50	25s	13
2	12 12 6 75	32s	16
3	18 18 9 112	42s	16
4	27 27 13 168	55s	16

5	40	40	20	253	1m 11s	16
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ACADEMY

+1% XP per level

Available when Blueprint appears once 10,000 lifetime XP is reached. Research "Create Academy Blueprints" in Structures Labs (opens at Library Lv 2). Build with the Builder at Lv 11.

LEVEL	COST				BUILD TIME	BUILDER REQ.
1 (build)	6	6	6	40	25s	11
2	9	9	9	60	32s	16
3	13	13	13	90	42s	16
4	20	20	20	135	55s	16
5	30	30	30	202	1m 11s	16

THRONE

One-way commander transition — unlocks idle mode

Available when Research "Create Throne Blueprints" in Structures Labs (opens at Library Lv 2), which needs Barracks built. Build with the Builder at Lv 16.

LEVEL	COST				BUILD TIME	BUILDER REQ.
1 (build)	15	15	10	100	30s	16

VAULT

Keep +1 of each treasure per level

Available when Available from the start (no blueprint research required). Build with the Builder at Lv 12.

LEVEL	COST				BUILD TIME	BUILDER REQ.
1 (build)	6	6	6	40	25s	12
2	9	9	9	60	32s	12
3	13	13	13	90	42s	12
4	20	20	20	135	55s	12
5	30	30	30	202	1m 11s	12
6	45	45	45	303	1m 33s	12
7	68	68	68	455	2m 01s	12

8	102	102	102	683	2m 37s	12
9	153	153	153	1025	3m 24s	12
10	230	230	230	1537	4m 25s	12

ARMORY

+1 armament capacity research rank per level

Available when Available from the start (no blueprint research required). Build with the Builder at Lv 14.

LEVEL	COST				BUILD TIME	BUILDER REQ.
1 (build)	8	8	4	50	25s	14
2	12	12	6	75	32s	14
3	18	18	9	112	42s	14
4	27	27	13	168	55s	14
5	40	40	20	253	1m 11s	14
6	60	60	30	379	1m 33s	14
7	91	91	45	569	2m 01s	14
8	136	136	68	854	2m 37s	14
9	205	205	102	1281	3m 24s	14
10	307	307	153	1922	4m 25s	14

GUARDHOUSE

+1 soldier capacity research rank per level

Available when Available from the start (no blueprint research required). Build with the Builder at Lv 15.

LEVEL	COST				BUILD TIME	BUILDER REQ.
1 (build)	8	8	4	50	25s	15
2	12	12	6	75	32s	15
3	18	18	9	112	42s	15
4	27	27	13	168	55s	15
5	40	40	20	253	1m 11s	15
6	60	60	30	379	1m 33s	15
7	91	91	45	569	2m 01s	15
8	136	136	68	854	2m 37s	15
9	205	205	102	1281	3m 24s	15

10

307 307 153 1922

4m 25s

15

HALL

+1 hero capacity research rank per level

Available when Available from the start (no blueprint research required). Build with the Builder at Lv 16.

LEVEL	COST	BUILD TIME	BUILDER REQ.
1 (build)	8 8 4 50	25s	16
2	12 12 6 75	32s	16
3	18 18 9 112	42s	16
4	27 27 13 168	55s	16
5	40 40 20 253	1m 11s	16
6	60 60 30 379	1m 33s	16
7	91 91 45 569	2m 01s	16
8	136 136 68 854	2m 37s	16
9	205 205 102 1281	3m 24s	16
10	307 307 153 1922	4m 25s	16

IX. SKILLS & RESEARCH

Skills are researched at the Library, across lab tabs that open as the Library levels. Each skill levels up for a cost that climbs linearly - the Level-1 cost shown, times the level. Most skills run to 99.

COMMANDER LABS - HERO STAT CAPS

Available at Library Lv 5, after taking the Throne.

SKILL	WHAT IT DOES	TYPE	MAX LV	LEVEL-1 COST
Hero Attack Speed Cap	+10 max level per research	Cap Raise	99	1 1 1 12
Hero Pierce Damage Cap	+10 max level per research	Cap Raise	99	2 1 15
Hero Slash Damage Cap	+10 max level per research	Cap Raise	99	2 1 15
Hero Bludgeon Damage Cap	+10 max level per research	Cap Raise	99	1 1 1 15
Hero Range Cap	+10 max level per research	Cap Raise	99	1 1 1 15
Hero Max HP Cap	+10 max level per research	Cap Raise	99	2 1 15
Hero Regen Cap	+10 max level per research	Cap Raise	99	1 1 10
Hero Pierce Resist Cap	+10 max level per research	Cap Raise	99	1 2 1 15
Hero Slash Resist Cap	+10 max level per research	Cap Raise	99	1 2 1 15
Hero Bludgeon Resist Cap	+10 max level per research	Cap Raise	99	1 2 1 15
Hero Pierce Immunity Cap	+10 max level per research	Cap Raise	99	1 1 2 18
Hero Slash Immunity Cap	+10 max level per research	Cap Raise	99	1 1 2 18
Hero Bludgeon Immunity Cap	+10 max level per research	Cap Raise	99	1 1 2 18
Hero XP Gain Cap	+10 max level per research	Cap Raise	99	1 1 1 12
Hero Gold Find Cap	+10 max level per research	Cap Raise	99	1 1 1 12
Hero Move Speed Cap	+10 max level per research	Cap Raise	99	1 1 1 12

PARTY LABS

Available at Library Lv 4.

SKILL	WHAT IT DOES	TYPE	MAX LV	LEVEL-1 COST
Party Attack Speed Cap	+10 max level per research	Cap Raise	99	2 1 1 15
Party Pierce Damage Cap	+10 max level per research	Cap Raise	99	1 2 1 15
Party Slash Damage Cap	+10 max level per research	Cap Raise	99	2 1 1 15
Party Bludgeon Damage Cap	+10 max level per research	Cap Raise	99	1 1 2 15
Party Range Cap	+10 max level per research	Cap Raise	99	1 1 1 15

Party Max HP Cap	+10 max level per research	Cap Raise	99	1	2	1	15
Party Regen Cap	+10 max level per research	Cap Raise	99	1	1	1	12
Party Pierce Resist Cap	+10 max level per research	Cap Raise	99	1	2	1	15
Party Slash Resist Cap	+10 max level per research	Cap Raise	99	1	2	1	15
Party Bludgeon Resist Cap	+10 max level per research	Cap Raise	99	1	2	1	15
Party Pierce Immunity Cap	+10 max level per research	Cap Raise	99	1	1	2	18
Party Slash Immunity Cap	+10 max level per research	Cap Raise	99	1	1	2	18
Party Bludgeon Immunity Cap	+10 max level per research	Cap Raise	99	1	1	2	18
Party XP Gain Cap	+10 max level per research	Cap Raise	99	1	1	1	12
Party Gold Find Cap	+10 max level per research	Cap Raise	99	1	1	1	12
Party Move Speed Cap	+10 max level per research	Cap Raise	99	1	1	1	12

FORTRESS LABS

Available at Library Lv 1.

SKILL	WHAT IT DOES	TYPE	MAX LV	LEVEL-1 COST
Fortress Attack Speed Cap	+10 max level per research	Cap Raise	99	2 1 15
Fort Pierce Damage Cap	+10 max level per research	Cap Raise	99	3 3 2 20
Fort Slash Damage Cap	+10 max level per research	Cap Raise	99	3 2 3 20
Fort Bludgeon Damage Cap	+10 max level per research	Cap Raise	99	2 3 3 20
Fortress Range Cap	+10 max level per research	Cap Raise	99	2 2 1 15
Fortress Core HP Cap	+10 max level per research	Cap Raise	99	3 1 18
Fortress Repair Rate Cap	+10 max level per research	Cap Raise	99	1 1 1 12
Fortress Walls HP Cap	+10 max level per research	Cap Raise	99	1 3 15
Fortress Wall Repair Rate Cap	+10 max level per research	Cap Raise	99	1 2 1 15
Fortress Pierce Resist Cap	+10 max level per research	Cap Raise	99	1 2 1 15
Fortress Slash Resist Cap	+10 max level per research	Cap Raise	99	1 2 1 15
Fortress Bludgeon Resist Cap	+10 max level per research	Cap Raise	99	1 2 1 15
Fortress Pierce Immunity Cap	+10 max level per research	Cap Raise	99	1 1 2 18
Fortress Slash Immunity Cap	+10 max level per research	Cap Raise	99	1 1 2 18
Fortress Bludgeon Immunity Cap	+10 max level per research	Cap Raise	99	1 1 2 18
Fortress XP Bonus Cap	+10 max level per research	Cap Raise	99	1 1 1 12
Fortress Gold Bonus Cap	+10 max level per research	Cap Raise	99	1 1 1 12

Fortress Move Speed Cap

+10 max level per research

Cap Raise

99

1 1 1 12

STRUCTURES LABS

Available at Library Lv 2.

SKILL	WHAT IT DOES	MAX LV	WHEN AVAILABLE	LEVEL-1 COST
Create Forge Blueprints	Unlocks Forge	1	Day one	5 5 3 25
Create Barracks Blueprints	Unlocks Barracks	1	Needs Forge built	6 4 4 30
Create Throne Blueprints	Unlocks Throne	1	Needs Barracks built	8 8 6 50
Create Lumber Mill Blueprints	Unlocks Lumber Mill	1	Blueprint hidden until a lifetime threshold	4 3 3 20
Create Quarry Blueprints	Unlocks Quarry	1	Blueprint hidden until a lifetime threshold	3 4 3 20
Create Thresher Blueprints	Unlocks Thresher	1	Blueprint hidden until a lifetime threshold	3 3 4 20
Create Treasury Blueprints	Unlocks Treasury	1	Blueprint hidden until a lifetime threshold	4 4 3 30
Create Academy Blueprints	Unlocks Academy	1	Blueprint hidden until a lifetime threshold	3 3 3 25
Create Walls Blueprints	Unlocks Walls	1	Blueprint hidden until a lifetime threshold	4 5 2 20
Create Stonemason Blueprints	Unlocks Stonemason	1	Needs Walls built; Blueprint hidden until a lifetime threshold	3 5 2 22
Create Sentry Towers Blueprints	Unlocks Sentry Towers	1	Needs Forge built	5 4 3 25
Create Battlements Blueprints	Unlocks Battlements	1	Needs Forge built	4 6 3 28
Bowman Quantity	+1 pool cap per research	3	Needs Guardhouse built	8 4 2 30
Slinger Quantity	+1 pool cap per research	3	Needs Guardhouse built	4 8 2 30
Axe Thrower Quantity	+1 pool cap per research	3	Needs Guardhouse built	6 6 2 30
Hero Roster	+1 roster slot per research	4	Needs Hall built	8 8 4 40
Posting Slots	+1 posting slot per research	2	Needs Hall built	8 8 4 40

Deployment Slots	+1 deployment slot per research	2	Needs Hall built	8	8	4	40
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MISCELLANEOUS

Available at Library Lv 2.

SKILL	WHAT IT DOES	TYPE	MAX LV	LEVEL-1 COST
Research Speed	+1% faster per research (max +50%)	Multiplier	5	3 3 3 20
Build Speed	+1% faster per research (max +50%)	Multiplier	5	3 3 3 20
Craft Speed	+1% faster per research (max +50%)	Multiplier	5	3 3 3 20
Research Cost Reduction	-1% cheaper per research (max -50%)	Multiplier	5	3 3 3 20
Building Cost Reduction	-1% cheaper per research (max -50%)	Multiplier	5	3 3 3 20
Upgrade Cost Reduction	-1% cheaper per research (max -50%)	Multiplier	5	2 2 2 25

FORGE LABS

Available at Library Lv 3, after the Forge is built.

SKILL	WHAT IT DOES	MAX LV	WHEN AVAILABLE	LEVEL-1 COST
Ballista Quantity	+1 inventory cap per research	3	Needs Armory built	8 4 2 30
Catapult Quantity	+1 inventory cap per research	3	Needs Armory built; After clearing Wave 8	4 8 2 30
Cleaver Quantity	+1 inventory cap per research	3	Needs Armory built; After clearing Wave 12	4 2 6 25

Every name, stat, cost, and unlock in this manual is read directly from the game's data files. Nothing is hand-entered. When the game changes, the manual is regenerated from the same source, so it never drifts from what you actually play.