

SAND HORDE: SURVIVOR

OFFICIAL STEAM GAME MANUAL & PLAYER'S COMPREHENSIVE COMPENDIUM — BUILD v14.37

1. GAME OVERVIEW & CORE SURVIVAL DIRECTIVE

Sand Horde: Survivor is an intense top-down roguelite horde-survival, tactical exploration, and construction action experience built in Unreal Engine 5.3. Set across a harsh, irradiated desert wasteland, complex subterranean sewer networks, and fortified military bunkers, you must withstand unrelenting waves of mutated biomechanical abominations. Scavenge scarce surface resources, clear nests, recruit stranded survivors, forge modular weaponry, pilot heavy armored vehicles and Titan Mechs, and excavate your own subterranean hideouts before nightfall.

The Core Tactical Loop:

- **Scavenge & Explore:** Search surface ruins, abandoned outposts, and underground sewer grates **[E]** for ammo, scrap, gold coins, and rare crafting cores.
- **Eliminate Swarms & Level Up:** Gather blue XP gems dropped by defeated monsters to acquire randomized rogue power-up perks.
- **Fortify & Defend:** Deploy sandbag barricades **[J]**, auto-turrets **[K]**, and excavate private bunker shelters **[V]** before elite swarms arrive.
- **Upgrade & Specialize:** Access the Command Hub & Shop **[L]** to calibrate ballistic weapon stats, apply 135-second elemental overcharges, and tune vehicles.
- **Locate The Big Cheese & Extract:** Infiltrate heavily fortified perimeter vaults, secure the Golden Cheddar Relic, and hold the LZ for 5 seconds to achieve total victory!

2. NEW GAME STARTING MODES

Game Mode	Starting Equipment & Economy	Mode Description & Target Playstyle
Standard Survivor	Scout Pistol, 50 Ammo, 100 Scrap, 25 Gold	The intended authentic roguelite survival experience. Progressive difficulty curve, balanced loot drops, and organic weapon assembly.
God Run (Sandbox)	Full Armory, 99,999 Scrap, 99,999 Gold, Max Mech	Unlocks an overpowered creative loadout with infinite materials and top-tier blueprints for testing weapon combos and massive base building.
Pistol Only (Hardcore)	Custom Magnum Sidearm, 100 Ammo, Zero Base Scrap	Brutal challenge mode where primary rifles and heavy weapons are disabled. Heavy weapon drops are converted into bonus Gold Coins.

3. OPTIONS MENU & DISPLAY CONFIGURATION

Open the Options Menu at any time from the Main Menu or by pressing **[ESC]** / **[P]** in-game to configure audio, display, graphics, and controls across 4 dedicated tabs: **GENERAL**, **VIDEO & GRAPHICS**, **CONTROLS**, and **AUDIO**.

- **Display Modes:** Toggle seamlessly between **Windowed**, **Borderless Windowed**, and **Exclusive Fullscreen**.
- **Resolution & VSync:** Full native resolution support (720p, 1080p, 1440p, 4K UHD) with toggleable VSync and target frame rate limiters (30, 60, 120, 144, or Unlimited FPS).
- **Graphics Fidelity:** Scalable Shadow Quality, Particle FX Density, Screen Shake Intensity slider (0% - 100%), and Post-Processing bloom levels.

★ **CRITICAL DISPLAY HOTKEY: PRESS [ALT + ENTER] TWICE (2X) AT ANY TIME TO INSTANTLY TOGGLE FULLSCREEN MODE** ★

4. MASTER CONTROLS & IN-GAME KEYBIND REMAPPING

Sand Horde: Survivor features a fully customizable keyboard and mouse remapping architecture. To remap inputs, pause the game with [ESC], select **OPTIONS**, and click **Tab 3: CONTROLS**. Every combat action, defense hotkey, and menu shortcut can be freely rebound.

In-Game Keybinding Instructions:

1. Click the current key button next to any action name in the list. The button will flash amber: "PRESS ANY KEY...".
2. Press your desired replacement key or mouse button (supports alphanumeric keys, function keys, Numpad, LMB, RMB, MMB, Mouse 4, and Mouse 5).
3. If a key is already assigned elsewhere, a conflict resolution prompt will alert you. Press [APPLY KEYBINDS] to save changes persistently.
4. To revert all bindings back to default factory settings, click the red [RESET TO DEFAULTS] button at the bottom of the tab.

A. Character Movement & Core Combat Controls

Action / Function	Default Binding	Tactical Usage & Functionality
Move Forward / Up	[W] / Up Arrow	Walk survivor northward across wasteland terrain.
Move Left / Strafe	[A] / Left Arrow	Strafe survivor westward while maintaining aim crosshair.
Move Backward / Down	[S] / Down Arrow	Walk survivor southward to kite encroaching monster swarms.
Move Right / Strafe	[D] / Right Arrow	Strafe survivor eastward to circle-strafe surrounding hordes.
Aim Crosshair	Mouse Cursor	Directs weapon aiming crosshair, facing direction, and grenade arcs.
Primary Weapon Fire	Left Mouse Button (LMB)	Discharges equipped weapon or swings melee tool with kinetic impact.
Toggle Auto-Fire Mode	[/] (Slash)	Toggles non-stop continuous automatic firing toward crosshair.
Cycle Weapons	[Q] / Mouse Wheel	Instantly cycles forward/backward through all equipped firearms.
Toggle Dual-Wield Stance	[X]	Equips duplicate firearm in off-hand for doubled burst DPS.
Tactical Jetpack Hover	[SPACEBAR]	Activates vertical thruster to hover over rocks, fences, and hordes.
Throw Frag Grenade	[G]	Hurls high-explosive fragmentation grenade detonating on impact.
Bionic Dash / Evade	[C]	Instant directional dodge burst granting 0.4s invulnerability frames.
Titan Cyber-Punch	[V] / Middle Mouse	Kinetic shockwave melee punch that disintegrates nearby mutant swarms.
Flashlight / Night Torch	[F]	Illuminates pitch-black underground sewers, caves, and night terrain.
Camera Zoom Mode	[Z]	Toggles between close tactical zoom and wide-angle battlefield overview.

B. Tactical, Base Defense & Field Skills

Action / Function	Default Binding	Tactical Usage & Functionality
Interact / Enter / Loot	[E]	Enter bunkers/sewers, board vehicles, speak with NPCs, loot supply crates.
Deploy Sandbag Barrier	[J]	Constructs waist-high defensive barricade to slow down approaching swarms.
Deploy Auto-Turret	[K]	Deploys autonomous 360-degree kinetic sentry gun (Requires Scrap).
Excavate Bunker / Shelter	[V] (Hold)	Dig permanent underground safehouse (Requires Shovel & 3 Concrete).
Emergency Medkit	[CTRL + M]	Instantly heals 100 HP from medical backpack reserves.
Rogue Perk Card 1 / 2 / 3	[1], [2], [3]	Select corresponding upgrade perk card upon leveling up.
Quick-Craft Thundercannon	[CTRL + 1]	Instantly assembles legendary electric chain-lightning arc rifle.
Quick-Craft Hellfire Shotgun	[CTRL + 2]	Instantly assembles incendiary spread shotgun that ignites swarms.
Quick-Craft Toxic Minigun	[CTRL + 3]	Instantly assembles high-RPM corrosive minigun shredding armor.
Quick-Craft Void Repeater	[CTRL + 4]	Instantly assembles graviton singularity pulse rifle.

C. Vehicles, Mechs & Aerial Support Controls

Action / Function	Default Binding	Tactical Usage & Functionality
Airlift Attack Gunship	[] (On Surface)	Airlifts heavy twin-turboshaft combat gunship to player coordinates or returns it to hangar.
Pilot / Land Gunship	[E]	Step near skids to board; press [E] while airborne to land and disembark.
Gunship 30mm Chin Gatling	Left Mouse Button (LMB)	Rapid explosive autocannon rounds tracking mouse cursor aim in real-time.
Gunship Hellfire Missiles	[F] / Right Mouse (RMB)	Dual AGM-114 high-damage guided missiles locking onto bosses & elite monsters.
Gunship Emergency Ejection	[X] (Inside Gunship)	Parachute-ejects pilot to safety; crashing gunship detonates for 1,200 AOE damage.
Call Titan Mech Drop	[T] or [B]	Summons orbital drop-pod delivering heavy armored Titan Exosuit.
Mech Rotary Miniguns	Left Mouse Button (LMB)	Dual 30mm rotary cannons shredding heavy armored mutants.
Mech Micro-Missile Salvo	[G] / Right Mouse (RMB)	Fires 8-missile tracking cluster that obliterates elite targets.
Mech Flamethrower Jet	[F] (Inside Mech)	Emits continuous high-pressure napalm cone melting hordes.
Emergency Mech Eject	[X] (Inside Mech)	Rocket-ejects survivor skyward before critical reactor detonation.
Deploy Go-Kart / Buggy	[C] (On Surface)	Deploys fast motorized dune buggy for rapid wasteland traversal.
Vehicle Nitro Afterburner	[SPACEBAR] (Driving)	Ignites nitrous booster for extreme acceleration and ramming impact.
Field Fuel Refill	[F] (Inside Vehicle)	Refills vehicle fuel tank from carried portable gasoline canisters.
Field Chassis Repair	[R] (Inside Vehicle)	Restores vehicle hull durability using carried automotive repair kits.
Call Orbital Air Strike	[ALT + A]	Calls in heavy artillery bombardment on crosshair sector coordinates.

CRITICAL PROTOCOL: If Titan Mech hull reaches 0%, a 3-second audible klaxon sounds. Press [X] immediately to eject! Failure to eject will result in instant death from the reactor detonation!

D. Hotbars, Systems Menus & Interface Modals

Action / Function	Default Binding	Tactical Usage & Functionality
Command Hub & Shop	[L]	Opens 10-tab command center: ballistics tuning, ammo, parts, and defense.
Backpack Inventory	[TAB] or [I]	Displays carried weapons, ammunition counts, crafting components, and scrap.
Desert Oasis Casino	[O] or [NUMPAD 0]	Opens Desert Casino modal (Slots, Roulette, Blackjack, Fortune Wheel).
Internal Creative Studios	[F6] / Main Menu	Launches Monster Maker, Weapon Maker, and Bunker Architect suites.
Real-Time Soundboard	[\] (Backslash)	Accesses interactive audio synthesizer, creature pitch mod, and ambient SFX.
Wanted Bounty Board	[N] (In Shop)	Browse and claim high-reward elite mutant assassination contracts.
Career Statistics HUD	[M] (In Shop)	Displays lifetime kills, accuracy %, gold collected, and extraction records.
Trophy Hunter Book	[ALT + B]	Mutant encyclopedia tracking discovered species, lore, and drop tables.
Command Terminal Prompt	[ENTER]	Toggles console terminal input for admin commands and sector coordinates.
Pause Menu & Settings	[ESC] or [P]	Pauses game simulation and opens audio, video, and keybinding settings.
Quick Respawn on Death	[R] (On Defeat)	Instantly resets run and respawns survivor at base camp.

5. SURVIVOR'S TACTICAL ECONOMY & PROGRESSION

Mastering Sand Horde's economy is essential for surviving beyond Night 3. Resources are split between immediate tactical consumables and permanent meta-progression currencies:

- **Gold Coins:** Earned by slaying elite mutant champions, destroying golden treasure urns, clearing bounty board contracts [N], and winning at the Desert Casino [O]. Spend Gold to buy rare weapon catalyst cores, calibrate barrel ballistics, apply 135-second elemental overcharges, and unlock Titan Mech drops.
- **Scrap Metal:** Salvaged from mechanical drones, destroyed vehicles, scrap piles, and scuttler shells. Used to repair firearm wear, build sandbag barriers [J], manufacture auto-turrets [K], and forge construction tools (Shovels, Quick-Set Concrete).
- **Blue XP Gems & Rogue Perks:** Slaying enemies releases glowing blue XP orbs. Filling your level bar presents 3 randomized rogue upgrade cards (e.g., *Ricochet Rounds*, *Siphon Lifesteal*, *Lead Storm*, *Kinetic Dash*, *Reactive Armor*). Choose carefully to synergize with your current firearm build.
- **Ammunition Management:** Weapons draw from Light, Heavy, Shotgun Shell, and Energy battery reserves. Purchase surplus ammo boxes in Shop Tab 1 or scavenge abandoned ammo crates in underground sewers.
- **Persistent Stash:** Gold and unlocked blueprints banked in underground vault lockers remain permanently unlocked across all subsequent runs.

6. SUBTERRANEAN EXPLORATION & UNDERGROUND SHELTERS

The world of Sand Horde extends deep beneath the scorched desert sand. Subterranean environments provide shelter from deadly surface radiation storms, contain high-tier loot caches, and house friendly scavenger outposts.

A. Four Vertical World Tiers

- **Tier 0 — The Scorched Surface:** Vast open desert dunes, military ruin outposts, vehicle travel, sandstorms, and roaming elite boss titans.
- **Tier -1 — The Flooded Sewers:** Reached via sewer manholes and pipe ladders. Tight, claustrophobic waterways rich in scrap piles, toxic slimes, and hidden weapon cache rooms.
- **Tier -2 — Sub-Bunkers & Outposts:** Reinforced military blast shelters equipped with power generators, automated security turrets, and survivor trading posts.
- **Tier -3 — Deep Ancient Caverns:** Bioluminescent caves, rare crystal geode nodes, elder hive nests, and the fortified Big Cheese Relic Vaults.

B. Dynamic HUD Distance Pins & Clean Label Indicators

All subterranean entrances feature glowing, unobtrusive HUD markers that project through terrain: **[SEWER ENTRANCE: 45m]**, **[BUNKER SHELTER: 120m]**, or **[EXTRACTION HELIPAD: 280m]**. As you approach within 3 meters, clean interaction prompts appear: **[E] ENTER SUBTERRANEAN SHELTER**.

C. Excavating Custom Player Bunkers & Underground Basements

Survivors are not limited to pre-existing shelters—you can excavate your own fortified subterranean hideout anywhere on the surface map:

1. **Acquire Tools:** Purchase an **Entrenching Shovel** and **3x Quick-Set Concrete Bags** from Base Supplies (Shop Tab 8) for 150 Scrap and 35 Gold.
2. **Select Terrain:** Find an unobstructed patch of open wasteland away from rocky cliffs.
3. **Dig & Pour:** Hold down **[V]**. Your character will spend 4 seconds excavating soil and pouring a reinforced concrete hatchway with an iron ladder leading into your private underground basement.
4. **Personalized Safezone:** The custom bunker entrance is permanently marked on your mini-map with a blue shelter pin. Mutants cannot open the reinforced hatch!

D. Bunker Machinery, Automation & Scavenger NPCs

Inside shelters, you can interact with modular machinery to automate resource production: **Fuel Generators** to power perimeter floodlights, **Scrap Compactors** to convert junk into alloy sheets, and **Secure Storage Safes** to bank excess ammo and weapons. Friendly Scavenger NPCs inside shelters offer medical treatment and exchange rare weapon components for food rations.

7. MODULAR WEAPON FORGE & ELEMENTAL OVERCHARGES

Sand Horde features a deep, procedural weapon crafting system. Rather than static guns, every firearm is composed of 5 interchangeable mechanical components that dictate its performance, handling, and ballistic profile.

A. The 5 Modular Gun Components

- **1. Barrel Assembly:** Governs bullet velocity, effective range falloff, and horizontal recoil kick (e.g., Short Carbine, Heavy Rifled, Suppressed Precision).
- **2. Receiver Core:** Dictates cyclic fire mode: Semi-Automatic, 3-Round Burst, High-RPM Full-Auto, or Charged Energy Beam.
- **3. Stock & Grip:** Calibrates aim-down-sights (ADS) stability, weapon spread recovery, and sprint-to-fire transition speed.
- **4. Magazine Housing:** Determines ammunition capacity (Standard 20-rnd, Extended 45-rnd, Dual Drum 100-rnd) and reload speed.
- **5. Catalyst Chamber:** Modulates raw damage multiplier, armor piercing, and elemental resonance conductivity.

B. Ballistic Weapon Stat Tuning (Shop Tab 2)

Spend Gold and Scrap at the Command Hub Weapon Bench [L -> Tab 2] to calibrate specific ballistic attributes: increase Muzzle Velocity (+20% projectile speed), Caliber Penetration (bullets pierce up to +4 additional enemies), and Critical Strike Multiplier (up to 3.5x headshot damage).

C. 135-Second Elemental Overcharge Infusions (Shop Tab 5)

Infuse your equipped weapon with temporary elemental catalysts that last for **135 Seconds of continuous combat**. Each infusion fundamentally transforms your bullet impacts:

- **Incendiary Overcharge:** Bullets ignite targets on contact, inflicting stacking burn damage over 5 seconds. Ignited enemies panic and ignite nearby horde members.
- **Cryo Frost Overcharge:** Chills enemy movement by 50%. Frozen targets shatter into lethal ice shrapnel upon taking lethal damage, dealing AOE damage.
- **Corrosive Acid Overcharge:** Melts armored mutant carapaces, reducing target damage resistance by 40% and leaving hazardous acid pools on the floor.
- **Siphon Vampiric Overcharge:** Converts 15% of all kinetic bullet damage directly into survivor health restoration.
- **Graviton Singularity Overcharge:** Critical hits generate micro-black-holes that pull surrounding enemies together for devastating explosive combos.

D. Legendary Quick-Craft Blueprints

Legendary Weapon	Hotkey	Required Components	Combat Capabilities
Thundercannon	[CTRL + 1]	Energy Receiver + Shock Coil + 75 Scrap	Fires chaining lightning bolts leaping across up to 8 targets.
Hellfire Shotgun	[CTRL + 2]	Heavy Barrel + Magma Core + 80 Scrap	Discharges 12 fiery pellets in a wide devastating breaching cone.
Toxic Minigun	[CTRL + 3]	Rotary Receiver + Acid Drum + 120 Scrap	1,400 RPM corrosive minigun that liquefies boss armor in seconds.
Void Repeater	[CTRL + 4]	Precision Stock + Grav Core + 100 Scrap	High-precision pulse rifle that implodes targets on kill.

8. VEHICLES, TITAN COMBAT MECHS & AIR SUPPORT

When monster swarms reach overwhelming numbers, standard firearms may not suffice. Sand Horde equips survivors with armored ground vehicles, orbital Titan Mech, and close air support.

A. Wasteland Buggy & Heavy Armored Truck

- **Wasteland Dune Buggy [C]:** Fast, nimble reconnaissance vehicle. Ideal for crossing irradiated sectors rapidly. Capable of performing power slides and ramming light scuttlers.
- **Armored War Truck:** A 6-wheel heavy fortress capable of mounting up to 4 autonomous roof-turrets. Heavy plow bumper deals massive kinetic ramming damage to horde titans.
- **Field Vehicle Maintenance:** Vehicles consume fuel and take chassis damage. Keep **Portable Fuel Cans** in your pack and press **[F]** while driving to refuel. Carry **Chassis Repair Kits** and press **[R]** while driving to weld hull plates back to full integrity.

B. Attack Gunship ['] (Tactical Airlift & Aerial Dominance)

- **Tactical Gunship Airlift [']:** Pressing ['] on the surface wasteland calls down the heavy twin-turboshaft Attack Gunship or returns it to the hangar. Step near the skids and press **[E]** to board and pilot.
- **30mm Chin Gatling Autocannon (LMB):** Rapid explosive autocannon rounds tracking mouse cursor aim in real-time.
- **AGM-114 Hellfire Guided Missiles [RMB / F]:** Dual missile rails firing high-damage ordnance locking onto bosses & elite monsters.
- **Chobham Armor & Obstacle Flight Clearance:** Absorbs 85% of incoming damage before pilot health is affected. Full 3D flight bypasses rocks, cacti, sandbags, and floor lava. Main rotors deal close-proximity slicing chop damage.
- **Cockpit Telemetry HUD & Ejection [X]:** Displays real-time Altitude, Airspeed, Rotor RPM %, Chobham Armor, and AvGas Fuel. If fuel depletes or hull fails, autorotation engages; press **[X]** to parachute to safety while the gunship causes a 1,200 damage crash explosion.
- **Safe Shop Garage Upgrades (Section 7):** Upgrade Turbine Engine (airspeed & efficiency), AvGas Fuel Tank (+35 max fuel), Chobham Armor (+150 HP), and Hellfire Missile Pods (+damage & blast radius).

C. Titan Combat Exosuit Drop [T] or [B]

Pressing **[T]** or **[B]** radios the orbiting transport cruiser to launch a kinetic drop-pod containing the Titan Mech. The pod slams into the dirt with crushing force, pulverizing anything underneath.

- **Rotary Vulcan Miniguns (LMB):** Twin continuous miniguns that chew through heavy monster waves without reloading.
- **Micro-Missile Cluster [G] / RMB:** Locks onto up to 8 targets simultaneously, launching high-explosive tracking micro-missiles.
- **Incinerator Jet [F]:** High-pressure napalm flamethrower that coats the ground in persistent fire.
- **Emergency Hull Ejection [X]:** If the Titan Mech's hull integrity reaches 0%, a loud reactor breach warning siren triggers. Press **[X]** immediately to rocket-eject into the sky before the mech explodes!

D. Companion Drones & Orbital Airstrikes [ALT + A]

- **Autonomous Companion Drones:** Equip up to 2 shoulder drones in Garage Tab 6: *Striker Drone* (pulse laser fire), *Cryo Sentinel Drone* (sub-zero freeze beam), and *Medical Tether Drone* (restores 15 HP/sec when below 50% health).
- **Tactical Airstrikes [ALT + A]:** Throws an orbital target designator beacon. Three seconds later, an orbital gunship strafes the target zone with 500lb bunker-buster bombs, wiping out swarms and opening sealed cave walls.

9. INTERNAL CREATIVE STUDIOS SUITE

Sand Horde: Survivor includes a comprehensive suite of built-in developer-grade creation tools. Launch the Creative Studios Suite by pressing **[F6]** during gameplay or selecting **"CREATIVE STUDIOS"** from the Main Menu.

A. Monster Maker Studio

- **Visual 3D Inspector:** Rotate, pan, and zoom custom creature meshes with real-time lighting previews.
- **Attribute Tuning:** Adjust Base Health (50 to 50,000 HP), Movement Velocity, Melee Damage, Attack Range, and Horde Weight.
- **AI Behavior Profiles:** Assign attack archetypes: *Frenzied Swarm*, *Flanking Stalker*, *Acid Artillery*, or *Unstoppable Boss Juggernaut*.
- **Live Combat Test Arena:** Press **[TEST SPAWN]** to drop your created abomination into an enclosed testing chamber to battle your survivor!

B. Modular Weapon Maker Studio

- **Component Assembly:** Mix and match custom Barrels, Receivers, Stocks, Magazines, and Catalysts to create entirely new weapon classes.
- **Ballistic Physics Editor:** Calibrate muzzle velocity, bullet drop, spread bloom, pellet count, and wall penetration.
- **Particle FX & Audio Synthesizer:** Customize muzzle flash colors, tracer effects, bullet impact sounds, and firing acoustics.

C. Shelter & Bunker Architect Studio

- **Grid-Based Blueprint Editor:** Design multi-room subterranean complexes with corridors, blast doors, medical bays, and shooting ranges.
- **Machinery & Lighting:** Place functional power generators, scrap recyclers, weapon workbenches, and ambient emergency lighting.

D. Sector & Wasteland Map Architect

- **Procedural Terrain Shaper:** Paint dunes, radioactive craters, sewer access shafts, ruins, and monster nest spawn densities across 16x16 sector grids.

E. Real-Time Audio Soundboard [\]

- **Interactive Multi-Track Mixer:** Adjust audio channels on the fly, pitch-shift creature screams, and trigger live retro sound effects.

10. UNIVERSAL PROFANITY FILTER ENGINE

To ensure a welcoming, streamer-safe, and family-friendly experience across all community-generated content, Sand Horde includes an intelligent, real-time **Universal Profanity Filter Engine**.

- **Multi-Language Censor Dictionary:** Automatically detects and censors inappropriate language across player profile names, custom monster tags, weapon blueprints, and shelter names.
- **Leetspeak & Obfuscation Heuristics:** Recognizes symbol substitutions (e.g., @, \$, 0, 1, 3), phonetic circumventions, and spaced character evasions.
- **Graceful Sanitization:** Filtered words are replaced with wasteland-themed humor tags (e.g., "[SLAG]", "[MUTANT JUNK]", "[SCRAP]") preserving immersion.

11. OASIS CASINO & HIGH-ROLLER MINI-GAMES

- Take a break from the carnage and test your luck in the Desert Oasis Casino! Access the casino modal by pressing [O] or [NUMPAD 0] in peaceful settlements or from mobile casino trailers found in the wasteland.
- **Lucky Cactus Slots:** Classic 3-reel, 5-payline slot machine. Match 3 Golden Cacti to hit the progressive jackpot awarding thousands of Gold Coins and rare weapon cores.
 - **Wasteland Roulette:** Place bets on Red/Black, Odd/Even, or specific numbers (0-36). Features simulated physics ball spinning and 35:1 straight-up payouts.
 - **Outlaw Blackjack:** Go head-to-head against the cybernetic dealer. Classic 21 rules with Split, Double Down, and Surrender options.
 - **Fortune Wheel of the Dunes:** Spin the giant fortune wheel once per run for free scrap crates, surplus ammo bundles, or vehicle nitro refills.

12. BESTIARY & BOSS COMBAT STRATEGIES

Every mutant species in the Sand Horde wasteland possesses distinct strengths, vulnerabilities, and behavioral patterns. Review their profiles to optimize your tactical loadout:

Mutant Species	Threat Level	Weakness & Tactical Counter Strategy
Scuttler Swarmer	Low (Horde)	Fast, low HP. Weak to wide-spread shotguns, sandbag choke points, and vehicle ramming.
Acid Spitter Arachnid	Medium (Ranged)	Launches corrosive bile from distance. Dodge with Bionic Dash [C]; eliminate with high-velocity precision rifles.
Cybernetic Brute	High (Armored)	Heavily armored mechanical plates. Use Corrosive Ammo [Shop 5] to dissolve plating, then execute Titan Punch [V].
Sand Wyrn Colossus (Boss)	Extreme (Subterranean)	Burrows underground and breaches beneath survivors. Use Jetpack [Space] to hover; blast glowing ventral throat weak point.
Cyber-Hive Queen (Boss)	Mythic (Raid Boss)	Spawns endless swarms and fires sweeping laser beams. Deploy Auto-Turrets [K], summon Titan Mech [T], and call Air Strikes [Alt+A].

13. THE BIG CHEESE GUIDE TO EXTRACTION

The ultimate end-game objective in **Sand Horde: Survivor** is locating the legendary **Big Piece of Cheese** (an irradiated pre-war golden cheddar bio-relic) and calling in a tactical extraction helicopter to escape the wasteland.

A. Relic Lore & Fixed Strategic Vault Coordinates

The Big Cheese is sealed deep within reinforced underground research vaults located at 4 fixed perimeter sector coordinates on the wasteland map:

- **Northeast Vault:** Sector Coordinate [2, 2]
- **Southwest Vault:** Sector Coordinate [-3, -2]
- **Southeast Vault:** Sector Coordinate [-2, 3]
- **Northwest Vault:** Sector Coordinate [3, -3]

Enter any of these vaults and press **[E] TAKE THE BIG CHEESE** on the golden pedestal. Claiming the relic instantly awards **+500 Scrap Metal**, **+50 Gold Coins**, **+100 XP**, and binds the objective into your survivor's inventory.

B. Locating Helicopter Extraction Zones (Helipads)

Extraction Helipads are located in outer wasteland sectors where the sum of coordinates is odd (e.g., [1, 0], [-1, 1], [0, 1]). Helipads feature illuminated landing lights and an interaction prompt: **[E] EXTRACTION HELIPAD (REQUIRES BIG CHEESE)**. Attempting to activate extraction without the cheese triggers HQ's denial: *"NO CHEESE, NO EXTRACTION! FIND THE BIG PIECE OF CHEESE FIRST!"*.

C. The 5-Second Extraction Holdout

Pressing **[E]** on the Helipad with the Big Cheese in possession broadcasts an emergency extraction flare, triggering an intense **5-Second Extraction Holdout**:

- **Enraged Horde Swarms:** The distress flare immediately draws every mutant and boss titan in the sector directly toward the Helipad.
- **Perimeter Tether:** You must remain within the glowing helipad boundary zone for the entire 5.0 seconds. Stepping off the pad pauses the countdown timer!
- **Defensive Preparation:** Pre-deploy Sandbag Barriers **[J]**, place Auto-Turrets **[K]**, or summon your Titan Mech **[T]** to absorb incoming attacks.

D. Victory Bounties & Cheddar Master Rank

Extraction Metric	Details & Specifications
Relic Objective	The Big Cheese (Golden Cheddar Relic) secured from Vaults [2,2], [-3,-2], [-2,3], [3,-3]
Relic Claim Reward	+500 Scrap Metal, +50 Gold Coins, +100 Player XP
Helipad Requirement	Possession of The Big Cheese + Press [E] on Helicopter Landing Pad
Holdout Duration	5.0 Seconds of continuous survival inside the extraction zone
Victory Extraction Bounty	+1,000 Scrap Metal, +250 Gold Coins, +500 XP bonus added to persistent stash
Awarded Player Title	S-TIER CHEDDAR MASTER (Displayed on Victory Debriefing Modal)
Spawn Frequency Tuning	Adjustable in Pause/Settings Menu: THE BIG CHEESE SPAWN FREQUENCY (10% - 100%)

14. BOUNTIES, TROPHIES & CAREER DASHBOARD

- **Wanted Bounty Board [N]:** Accept high-stakes contracts to eliminate legendary mutant alphas. Bounties reward massive Gold bounties and rare cosmetic weapon skins.
- **Trophy Hunter Encyclopedia [ALT + B]:** Records all 24 discovered creature species, weak points, total kills, and collected boss relics.
- **Career Statistics Dashboard [M]:** Tracks lifetime stats: Total Kills, Accuracy %, Highest Night Survived, Gold Accumulated, and Extractions Achieved.

15. OFFICIAL SYSTEM REQUIREMENTS

Hardware Specification	Minimum Requirements (720p 30 FPS)	Recommended Requirements (1080p/1440p 60+ FPS)
Operating System	Windows 10 (64-bit)	Windows 10 / 11 (64-bit)
Processor (CPU)	Intel Core i5-4460 / AMD FX-6300	Intel Core i7-8700 / AMD Ryzen 5 3600
Memory (RAM)	8 GB RAM	16 GB High-Speed Dual Channel RAM
Graphics (GPU)	NVIDIA GTX 960 (2GB) / AMD R9 280	NVIDIA GTX 1660 Super (6GB) / RTX 2060 / RX 5600 XT
DirectX Version	DirectX 11 (Shader Model 5.0)	DirectX 12 (DirectX DXR Optional)
Storage Drive	12 GB Available Storage Space	12 GB Available Space (NVMe / SSD Recommended)
Sound Card	DirectX Compatible Sound Card	DirectX Compatible Multi-Channel Audio

16. TECHNICAL HOTKEYS & TROUBLESHOOTING

- **Instant Fullscreen Toggle:** Press [ALT + ENTER] TWICE (2X) at any time to toggle fullscreen without entering menus.
- **Performance Diagnostics Overlay:** Press [F3] to toggle live frame-rate (FPS), frame-time latency, and active entity counters.
- **Live Audio Soundboard Mixer:** Press [\] (Backslash) to dynamically adjust creature screeches, music, and weapon volumes.
- **Command Terminal Prompt:** Press [ENTER] to toggle console inputs for coordinate queries and server status.
- **Emergency Run Respawn:** Press [R] upon defeat to quickly respawn back at base camp for your next attempt.

★ Thank you for playing Sand Horde: Survivor. Fortify your bunker, craft your arsenal, and claim the Big Cheese! ★