MSXdev26 CONTEST ENTRY

TRESURE CHEST

100% Original Logical Action-Puzzle for MSX1





MEDIA: 32KB Plain ROM Cartridge | RAM: 16KB+ | VRAM: 16KB

Game Concept & Design: TAK.H | Development: MSX-MAGAZINE.com Team

MSXdev26 International Contest Entry (2026-2027)

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1. Game Overview & Statement of Originality

MSXdev26 'Create, not convert' Compliance Statement:

'TRESURE CHEST' is a 100% original puzzle creation designed specifically for the MSX1 architecture. It is neither a 1:1 port of an existing title nor an automated conversion. All 60 stages are guaranteed to be provably solvable via our rigorous Breadth-First Search (BFS) mathematical verification engine.

The Labyrinth of the Lost Chest

Deep beneath an ancient kingdom lies the subterranean labyrinth known as the Vaults of the Lost Chest. Enchanted chests sealed away by royal sorcerers are guarded by skeletal sentinels, hovering wraiths, giant bats, venomous crawling vermin, and immovable stone barricades.

Playing as Master, the intrepid dungeon explorer in his distinctive red fedora and overalls, you must navigate hazardous one-way passages, utilize sacred teleportation shrines, and collect weapons in the exact mathematical order required to unlock each vault and claim the royal jewels!



Master: The Intrepid Explorer

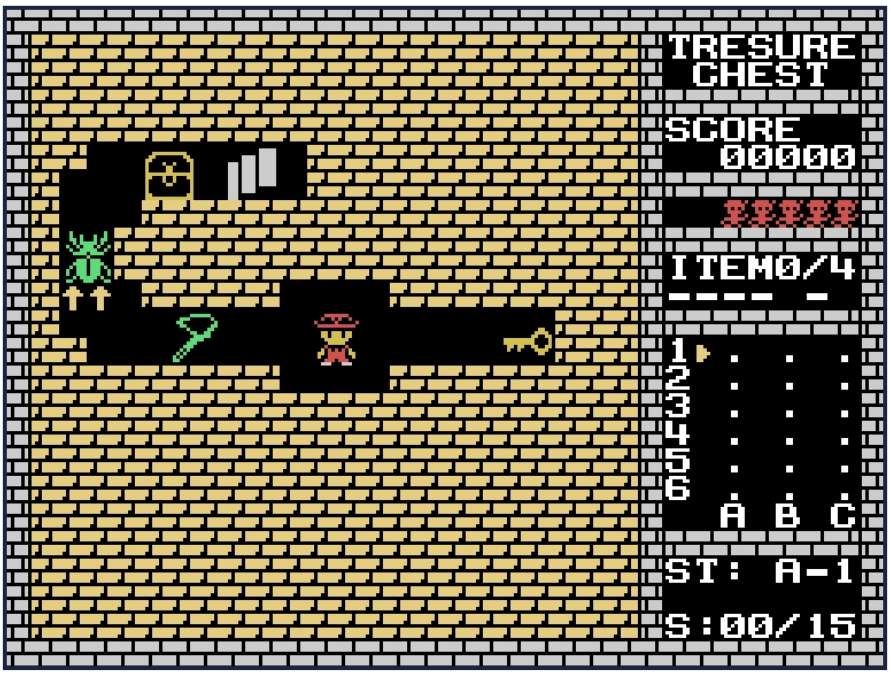
Core Gameplay Pillars:

* **Pure Logical Deduction:** Zero random luck, zero unfair traps, zero reflexes required.
* **Single-Touch Bumping:** Master automatically uses the top held weapon upon collision.
* **4px/8px Corner Assist:** Smoothly glides into corridors without snagging wall edges.

Hero Capabilities & Master Rulebook:

4-Slot LIFO Inventory Stack:	Master carries up to 4 collectible items simultaneously. Only the topmost item is active and ready for immediate combat.
Full-Stack Wall Effect:	When inventory reaches capacity (ITEM 4/4), all uncollected floor weapons turn into impassable solid stone walls!
Single-Touch Auto Resolution:	Bumping into an obstacle automatically consumes the matching top weapon. No clunky inventory menus or manual swapping!
One-Way Arrow Corridors:	Passable ONLY in the direction of the arrow. Backtracking against arrows is strictly blocked like solid stone walls!
Mid-Stage Chest Unlocking:	The Treasure Chest is strategically placed mid-stage. Opening it frees key inventory slots and reveals bottom weapons.
Post-Chest 2x Fever Mode:	Every monster defeated AFTER claiming the Jewel awards DOUBLE score bonus points. Master players optimize this for top scores!
Shrine Free Pass:	Ancient teleportation shrines exist in pairs and are ALWAYS FREE PASS with unlimited bidirectional travel.
Stair Goal Requirement:	Stepping on the GOAL with the Jewel clears the floor. Stepping on the GOAL WITHOUT the Jewel results in instant loss of 1 life!

2. Screen Layout & HUD Architecture



Status HUD Architecture Breakdown (Columns 24-31):

1. Game Logo (Rows 1-2):	Displays the official MSX logo title banner 'TRESURE CHEST'.
2. SCORE (Rows 4-5):	5-digit score display. Monsters award 100-300 PTS (Double after chest!).
3. LIVES (Row 7):	Remaining player lives shown with Master icons (Default: 5 lives, Max: 7).
4. 4-Slot LIFO Stack (Rows 9-10):	Current held items. Leftmost item is TOP (active). Empty slots show '-'.
5. Jewel Indicator (Col 29):	Illuminates upon unlocking the chest. The GOAL remains sealed until this shines!
6. Chamber Matrix (Rows 12-18):	18-stage matrix of active World Triad (A, B, C). Arrow indicates current room.
7. ST: Chamber (Row 20):	Current stage code (ST: A-1 through ST: J-6).
8. S: Step Counter (Row 22):	Actual moves taken vs optimal par (e.g. S:00/15). Clear in minimum steps!

HUD Screen Division Principle & Refinements:

Strict 22x22 Tile Playfield Division: The screen is strictly divided into the active puzzle playfield on the left (Columns 0 to 23) and the dedicated status HUD on the right (Columns 24 to 31). This ensures that puzzle geometry and status feedback never overlap or obscure each other.

Password Row Elimination: In earlier prototypes, Row 21 was occupied by a stage password string. In the final release, this has been completely removed to provide an uncluttered, elegant display focused purely on puzzle-solving metrics.

Optimal Par Step Challenge: Row 22 displays your exact move count compared to the mathematically provable par computed by our automated solver. Can you match the AI on all 60 chambers?

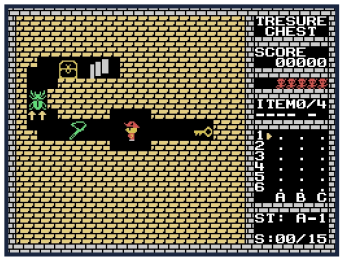
3. Controls & 4. Core LIFO Stack Mechanics

Controls Reference Table:

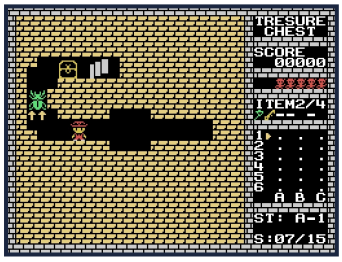
Action	Keyboard	Joystick (Port 1 / 2)	Notes
Move Master	Cursor Keys [Up][Down][Left][Right]	Stick (4 Directions)	4px/8px Corner Assist
Confirm / Start	[SPACE] / [RETURN]	Trigger A / Trigger B	Select menu item / Start
Retry (-1 Life)	[R] Key / [SELECT] Key	---	Restart chamber (-1 life)
Debug Mode	[ESC] Key	---	Open stage select menu

The 4-Slot LIFO (Last-In, First-Out) Principle

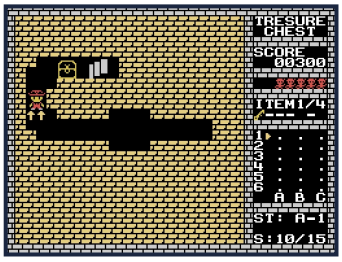
Master carries up to 4 items in a strict Last-In, First-Out stack. ONLY the most recently collected (TOP / leftmost) item can be used when bumping into an obstacle or monster! When the TOP item is consumed, the item underneath automatically floats up to become the new active TOP item.



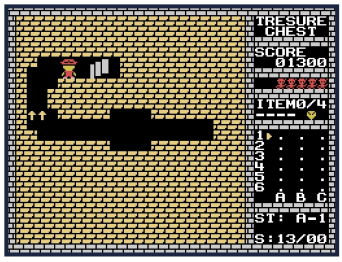
Step 1: Initial State
Stack: Empty (0/4)
Key at East, Net at West.
One-Way gate blocks return!



Step 2: Stacking Push
Stack: [Net][Key] (2/4)
Pick Key 1st, Net 2nd.
Net is at TOP before gate.



Step 3: Pop & Float
Stack: [Key] (1/4)
Pass gate, Net slays Bug!
Buried Key floats to TOP.



Step 4: Unlock & Win
Stack: 0/4 + Jewel
Key opens Chest (+1000)!
Jewel lit, exit is open.

Full-Stack Blocking Rule (Negative Affordance Mechanic):

1. Saturation Threshold: When inventory reaches 4 items (ITEM 4/4), you CANNOT collect any further items.

2. Solid Wall Conversion: Any uncollected weapon remaining on the floor acts as an IMPASSABLE SOLID WALL!

3. Topological Deadlocks: Stepping on a weapon prematurely without a planned consumption path permanently traps Master inside corridors. You cannot walk over an item once full until you consume at least one held weapon.

4. Master Strategy: Elite players deliberately use this constraint to bypass narrow intersections and protect critical exit corridors!

Corridor Navigation: One-Way Passages & Smooth Corner Assist:

1. One-Way Arrow Gates: Corridors marked with directional arrows allow movement ONLY in the arrow direction. Walking against the arrow is strictly blocked like solid stone! Once passed, backtracking is impossible (seen in Stage A-1 before Bug).

2. Smooth Corner Assist: Turning into an adjacent corridor within 8 pixels of its entrance smoothly glides Master into alignment without snagging wall edges, ensuring fluid, frustration-free navigation.

5. Collectible Weapons & Mid-Chest Strategy

Each collectible weapon has a dedicated 1:1 counter relationship against a specific dungeon hazard:



Sword (Broadsword)

Target: Skeleton Sentinel

Slices through undead skeletal sentinels. Slaying awards 100 PTS (200 PTS in Fever mode).



Magic rod (Holy Wand)

Target: Wandering Ghost

Banishes wandering wraiths with holy luminescence. Awards 200 PTS (400 PTS in Fever).



Spear (Thrusting Lance)

Target: Giant Cave Bat

Long-reach spear to strike down swift cave bats. Awards 200 PTS (400 PTS in Fever).



Net (Capture Mesh)

Target: Venomous Bug

Reinforced mesh to safely entangle crawling vermin. Awards 300 PTS (600 PTS in Fever).



Maul (Heavy Hammer)

Target: Reinforced Door

Colossal war hammer to smash oak and iron doors. Awards a fixed 300 PTS demolition bonus.



Chest key (Golden Key)

Target: Enchanted Chest

Unlocks the royal vault chest to claim the Jewel. Awards 1,000 PTS and triggers Fever!



Jewel & High-Score Strategy: Mid-Chest Fever (2x Score)

The Treasure Chest is strategically positioned mid-route or deep in vault chambers rather than at the exit stairs. This introduces dynamic puzzle pacing:

1. Mid-Stage Unlock: Open chest mid-stage to consume key and free slots.

2. 2x Jewel Fever: Post-chest monster kills award DOUBLE score bonus!

3. Escaping to Goal: Fight remaining guardians for high score on exit route.

Defeat Score Progression Table:

Monster / Target	Standard Points	Post-Chest Fever Points (2x Double!)
Skeleton Sentinel	100 PTS	**200 PTS (+100 Bonus)**
Wandering Ghost	200 PTS	**400 PTS (+200 Bonus)**
Giant Cave Bat	200 PTS	**400 PTS (+200 Bonus)**
Venomous Bug	300 PTS	**600 PTS (+300 Bonus)**
Reinforced Door	300 PTS	**Fixed 300 PTS (Demolition)**

5 (Cont). Monster Bestiary & Counter Chart



Skeleton Sentinel

Counter: Sword

Undead guardians patrolling vault corridors. Slay with Sword. Awards 100 PTS (200 PTS in Fever mode).



Wandering Ghost

Counter: Magic rod

Hovering wraiths immune to physical steel. Vanquish with Magic rod. Awards 200 PTS (400 PTS in Fever).



Giant Cave Bat

Counter: Spear

Agile winged subterranean predators. Pinpoint and impale with Spear. Awards 200 PTS (400 PTS in Fever).



Venomous Bug

Counter: Net

Vicious scuttling vermin carrying lethal venom. Snare safely with Net. Awards 300 PTS (600 PTS in Fever).



Enchanted Chest & The Royal Jewel

Counter Item: Chest key

The royal vault container holding the Jewel. Open with Chest key mid-stage. Awards 1,000 PTS, illuminates the Jewel indicator on the HUD, and immediately triggers 2x Fever mode on all remaining monsters! The GOAL exit remains sealed until this chest is unlocked.

Official Matchup Counter Chart (1:1 Hardware Resolution):



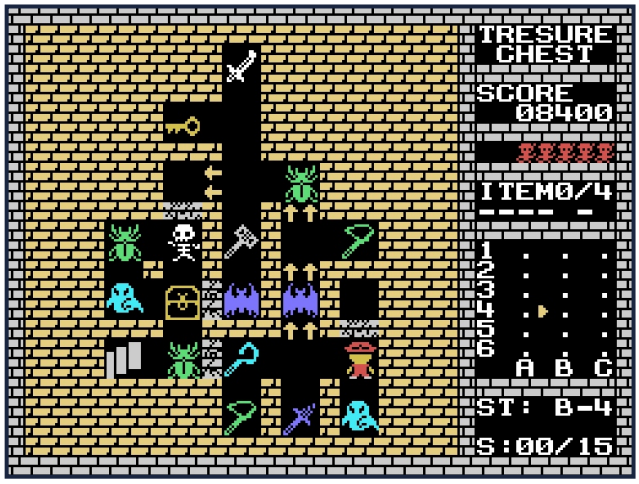
Each weapon counters exactly one obstacle. Correct permutation is essential.

6. Special Terrain & 7. World Progression



1. Teleportation Shrines (Free Pass)

* Shrines exist in pairs and are ALWAYS FREE PASS.
* Stepping on one teleports you to the twin shrine.
* Fully bidirectional - use as often as needed!



2. One-Way Directional Corridors

* Arrow walls allow movement ONLY in arrow direction.
* Walking backward is blocked like a solid wall.
* Once passed, you cannot return. Plan carefully!

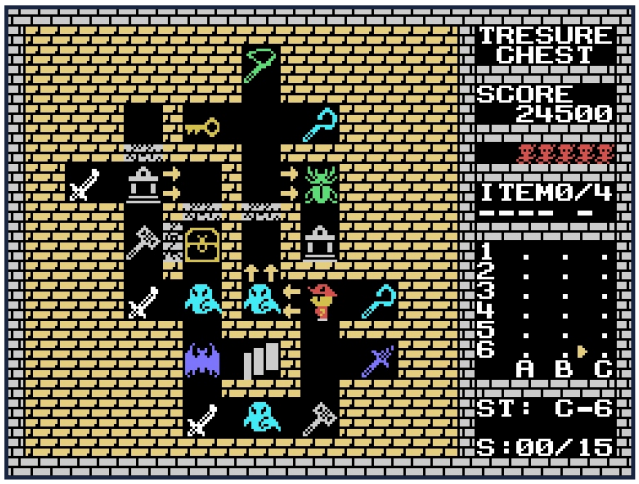
World Structure & Progression (60 Chambers)

Main Quest (Chambers A-C / 18 Stages):
Smooth intro to LIFO stack, shrines, and doors. Clearing Stage C-6 triggers the Main Quest Fanfare!

Master Quest (Chambers D-H / 30 Stages):
Chambers D-F feature deep multi-wave asymmetric maps. Chambers G-H introduce monster swarm gauntlets.

The HELL Depths (Chambers I-4 to J-6 / 9 Stages):
The ULTIMATE puzzle challenge. 8-10 monsters, 5-6 one-way traps, and tight 20-23 step solutions!

Final Climax Stage J-6 (THE APOCALYPSE):
Demands flawless 4-slot inventory rationing. Conquering J-6 unlocks the True Grand Master Ending!



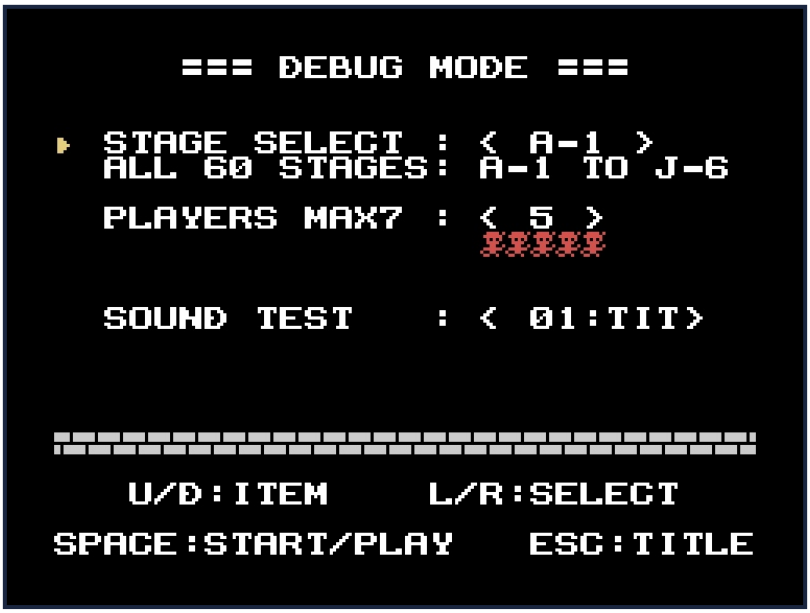
Stage C-6: Main Quest Final Climax



Stage G-1: Master Quest Monster Swarm

CRITICAL GOAL RULE: Stepping on the GOAL with the Jewel clears the floor.
Stepping WITHOUT the Jewel results in INSTANT LOSS OF 1 LIFE! Always unlock the chest first!

8. Integrated Debug Mode & 9. Production Credits



Integrated Debug Mode Features (Press [ESC] Anytime):

The ESC Debug Menu is available at all times during gameplay and from the Title Screen:

1. STAGE SELECT : < A-1 > (ALL 60 STAGES: A-1 TO J-6)
Instantly warp and test any chamber from World A to World J.

2. PLAYERS MAX7 : < 5 > (Starting Lives 1 to 7)
Configure starting lives up to 7 lives for stress-free trial runs.

3. SOUND TEST : < 01:TIT > (10 BGM Tracks & SFX)
Full PSG sound driver jukebox (01:TIT to 10:BMP). Space to play!

Controls in Menu:
Up/Down: Select item | Left/Right: Change value | Space: Start/Play | ESC: Title

Official Production Credits & Technical Specs

Game Concept, Design & Graphics:	TAK.H
Sound Effects & Music Composition:	TAK.H / MSX-MAGAZINE.com
Lead Programming & Systems:	MSX-MAGAZINE.com Team
Mathematical Solver Architecture:	Breadth-First Search (BFS) Rigorous State Engine
Hardware Target:	MSX1 (RAM 16KB min, VRAM 16KB, TMS9918A / PSG AY-3-8910)
Media & Code Size:	32KB Plain Cartridge ROM (29,703 bytes used / 32,768 bytes)
Contest Participation:	MSXdev26 Game Development Contest (2026-2027)
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