

BERNALO

Vintage Collection Knowledge — Collectables & Games

Advanced Naval Strategy Guide

Probability Tracking & Defence

A technical companion to the Pavilion “To Sink Ships” Collector's Guide

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This technical brief details the mathematical algorithms and psychological mechanics behind high-tier ‘To Sink Ships’ gameplay — general strategic theory for the wider “sink the fleet” genre, not a transcription of any specific edition's printed rules, and none of it depends on, or was drawn from, opening this collection's sealed copy.

1. Advanced Probability Tracking (Hunt Phase)

Instead of firing randomly, advanced probability-based play relies on a Target Density Matrix (TDM). Every available grid coordinate is evaluated based on how many valid placements of remaining enemy ships can occupy it.

The Parity Metric: The smallest surviving ship dictates target spacing. If the 2-unit Patrol Boat is sunk, the grid search lattice widens because larger ships require fewer dense checks to guarantee an intersection.

Density Calculations: At the start of a game, center squares (e.g., E5, E6, F5, F6) have the highest density scores. A 5-unit Carrier can cross these coordinates in multiple horizontal and vertical permutations.

Algorithmic Scoring: For every square, count how many horizontal or vertical orientations of remaining ship lengths fit without overlapping known misses or sunken ships. Target the coordinate with the highest total score.

Recommended Search Grid Matrix

Remaining Target (Size)	Recommended Search Pattern	Strategic Objective
Patrol Boat (2)	Alternating Checkerboard Pattern	Ensures a cross-intersection on any remaining 1×2 configuration.
Submarine / Destroyer (3)	Three-Tile Diagonal Stripe Lattice	Designed to intersect 1×3 placements while clearing empty water efficiently.
Battleship / Carrier (4+)	Macro-Grid Scanning Layout	Screens large open zones efficiently to locate high-value assets.

2. Advanced Defensive Setup Patterns

Fleet survivability relies on disrupting your opponent's probability models and search lattices. An elite layout splits tactics into mathematical and psychological defenses.

Mathematical Tactics (Probability Dampening)

Asymmetrical Dispersion: Avoid clustering ships. When an opponent sinks a clustered ship, their localized search sweep will accidentally reveal adjacent hulls. Space ships at least one empty row or column apart.

Lattice Alignment (Parallel Hulling): Align your major ships parallel to one another in matching orientations (e.g., all vertically). When an opponent hits a ship, they must spend turns testing both axes. A repeated orientation can disrupt an opponent who expects mixed ship alignments, potentially creating inefficient search patterns elsewhere on the board.

Psychological Tactics (Human Error Exploitation)

Border Trapping (The 1-In Outer Rim): Placing ships directly against the board edge is easily anticipated. Instead, place them exactly one row or column inward from the rim. Human players frequently skip this immediate inner ring during perimeter screening sweeps.

The Lone Scapegoat Strategy: Place your smallest 2-unit ship completely isolated in a high-probability center region. Once a human opponent finishes sinking it, they often assume the entire sector is cleared and move their hunting focus elsewhere.

3. Disclaimer

Note: *These techniques are intended to improve decision-making rather than guarantee victory. Their effectiveness varies with board configuration, remaining ships and opponent behavior.*