



FLAWLESS POKER GUIDE SERIES

Heads-Up No-Limit Hold'em Guide

HU SNGs, HU endgames of SNGs/MTTs, and HU cash at 100bb · ranges, push/fold, BB defense, postflop, and the endgame, with the numbers computed

EDITION · OCTOBER 2026 ·

A BRIGHTER GAME AHEAD · PLAY · TRACK · IMPROVE · WIN



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Flawless Poker · Heads-Up No-Limit Hold'em Guide · October 2026 edition. Study material for use away from the table; charts and ranges are approximate guidelines, not solver output.



Study material, not a live aid. This guide is for study **away from the table**. It is not meant for real-time use while you play, and most sites restrict outside help during hands. Learn it before and after sessions, then play from what you remember.

Tags. [Computed] = calculated by our Python scripts (Monte Carlo equity, 169×169 equity matrix, closed-form EV, fictitious-play push/fold model). **[Approx.]** = simplified guideline. **[Consensus]** = general poker-community estimates. **Push/fold ranges are chip-EV approximations from a simplified model** (no antes, no card removal), not solver output. Only play with money you can afford to lose.

Small samples, in context. A typical pattern: a player wins 8 of their first 10 heads-up finishes in SNGs and looks dominant, but even a 50% player does this or better about **5.5%** of the time [Computed, binomial]. Track results over hundreds of matches before drawing conclusions. In SNGs, the winner-vs-second gap is usually the biggest single pay jump.

1. HU fundamentals: why ranges widen

- **You post a blind every hand** (0.5bb or 1bb, average **0.75bb per hand**). Folding too much bleeds chips fast.
- **The SB is the button:** acts first preflop, **last postflop**. Position + initiative = the SB plays most hands.
- **Average hands win:** vs one random hand, any ace, most kings, and any pair are favourites.

Equity of all 169 hands vs 1 random hand [Computed, %]

	A	K	Q	J	T	9	8	7	6	5	4	3	2
A	86	67	66	65	64	63	62	61	60	60	59	58	57
K	66	83	64	63	62	60	58	57	56	56	55	54	53
Q	65	62	80	60	60	58	56	54	54	53	52	51	50
J	64	61	58	78	58	56	54	52	50	50	49	48	47
T	63	60	57	55	75	54	52	51	49	47	46	46	45
9	61	58	55	53	52	73	51	49	47	46	44	43	42
8	60	56	54	52	50	48	70	48	46	44	43	41	40
7	58	55	52	50	48	46	45	67	45	44	42	40	38
6	57	54	51	48	46	44	43	42	64	43	41	40	38
5	57	53	50	47	44	43	41	40	40	61	41	40	38
4	56	52	49	46	44	41	39	38	38	38	58	39	37
3	56	51	48	45	43	40	38	37	36	36	35	55	36
2	55	50	47	44	42	39	37	35	34	34	33	32	51

Pairs on the diagonal, suited top right, offsuit bottom left. **Over 50%: 88 of 169 hand types** (48% of all hands). Worst: 32o at 32.3%. Even 72o has 34.7%.

2. Button / SB strategy by stack depth [Approx.]

Effective stack	Open size	Open frequency	Limp?	Facing a 3-bet
100bb (cash)	2.5bb (2-3bb)	~80-90%	Rare; raise-first	Call ~35-45% IP, 4-bet ~8-10% (QQ+, AK, AQs + A5s-A2s, K-x suited bluffs)
40bb	2-2.5bb	~80%	Optional mixed limp with weak hands	Call wide IP; 4-bet jam ~10%
25bb	2bb (min-raise)	~70-80%	Limp-heavy strategy is common [Consensus]	Call 3-bet jams per the 25bb call grid in Section 4



Effective stack	Open size	Open frequency	Limp?	Facing a 3-bet
15bb	Min-raise or jam	Jam ~45-50% (Section 4), min-raise strong hands to induce	Limp ~20-40% of hands (trap + weak)	Call jams per chart
< 10bb	Jam or fold	Jam ~59% at 10bb, ~70% at 5bb	Limp only as a trap	—

Limp vs raise: at ≤ 25 bb, limping weak-but-playable hands (K4o, Q6o, 85s) keeps the pot small and avoids getting jammed off them; raising them gives the BB a profitable 3-bet jam. At 100bb, raise-first is simpler and standard.

3. BB defense

Pot odds vs each raise size [Computed]

SB raise to	BB calls	Pot after call	Equity needed (call)	Approx. defend % [Approx.]	3-bet % [Approx.]
2bb	1bb	4bb	25.0%	~75-85%	~10-15%
2.5bb	1.5bb	5.0bb	30.0%	~65-75%	~14-18%
3bb	2bb	6bb	33.3%	~55-65%	~15-20%
4bb	3bb	8bb	37.5%	~45-55%	~15%
5bb	4bb	10bb	40.0%	~40-50%	~12%

Equity needed ignores position: out of position the BB **realizes** less equity, so it defends less than pure pot odds suggest, but still very wide.

BB 3-bet vs 2.5x (100bb), ~14% [Approx.]

	A	K	Q	J	T	9	8	7	6	5	4	3	2
A	X	X	X	X	X	X	X	.	.	X	X	.	.
K	X	X	X	X	X	.	.	.	.	.	.	.	.
Q	X	X	X	X	.	.	.	.	.	.	.	.	.
J	X	X	.	X	.	X	.	.	.	.	.	.	.
T	X	.	.	.	X	.	X	.	.	.	.	.	.
9	.	.	.	.	.	X	.	X	.	.	.	.	.
8	.	.	.	.	.	.	.	.	X	.	.	.	.
7	.	.	.	.	.	.	.	.	.	X	.	.	.
6	.	.	.	.	.	.	.	.	.	.	X	.	.
5	.	.	.	.	.	.	.	.	.	.	.	X	.
4	.	.	.	.	.	.	.	.	.	.	.	.	X
3	.	.	.	.	.	.	.	.	.	.	.	.	.
2	.	.	.	.	.	.	.	.	.	.	.	.	.

BB 3-bet jam vs min-raise at 25-40bb (tight), ~10% [Approx.]

	A	K	Q	J	T	9	8	7	6	5	4	3	2
A	X	X	X	X	X	X	X	.	.	.	.	.	.
K	X	X	X	.	.	.	.	.	.	.	.	.	.
Q	X	.	X	.	.	.	.	.	.	.	.	.	.
J	X	.	.	X	.	.	.	.	.	.	.	.	.
T	X	.	.	.	X	.	.	.	.	.	.	.	.
9	.	.	.	.	.	X	.	.	.	.	.	.	.
8	.	.	.	.	.	.	X	.	.	.	.	.	.
7	.	.	.	.	.	.	.	X	.	.	.	.	.
6	.	.	.	.	.	.	.	.	X	.	.	.	.
5	.	.	.	.	.	.	.	.	.	X	.	.	.
4	.	.	.	.	.	.	.	.	.	.	X	.	.
3	.	.	.	.	.	.	.	.	.	.	.	X	.
2	.	.	.	.	.	.	.	.	.	.	.	.	X

4. HU push/fold and call ranges, 1-20bb [Computed, chip-EV approximations]

Model: SB shoves or folds, BB calls or folds; blinds 0.5/1, no antes, chip EV, solved by fictitious play on the 169×169 matrix (card removal ignored). Matches common published HU Nash charts closely at 10bb (SB $\approx$ 59%, BB $\approx$ 38%).

Stack	SB shove %	BB call %	BB call needs
1bb	100.0%	100.0%	0.0%
2bb	90.3%	100.0%	25.0%
3bb	78.6%	91.9%	33.3%



Stack	SB shove %	BB call %	BB call needs
4bb	74.7%	73.2%	37.5%
5bb	71.0%	62.0%	40.0%
6bb	68.3%	54.4%	41.7%
7bb	65.9%	48.7%	42.9%
8bb	61.7%	44.2%	43.8%
9bb	60.8%	40.6%	44.4%
10bb	58.7%	37.3%	45.0%
11bb	55.4%	35.1%	45.5%
12bb	51.7%	32.7%	45.8%
13bb	49.0%	30.6%	46.2%
14bb	48.7%	29.1%	46.4%
15bb	45.7%	27.0%	46.7%
16bb	42.7%	25.3%	46.9%
17bb	43.6%	24.4%	47.1%
18bb	42.1%	22.9%	47.2%
19bb	40.6%	22.6%	47.4%
20bb	39.7%	20.5%	47.5%

20bb and 15bb

SB shove 20bb (39.7%)

	A	K	Q	J	T	9	8	7	6	5	4	3	2
A	X	X	X	X	X	X	X	X	X	X	X	X	X
K	X	X	X	X	X	X	X	X	X	X	X	X	.
Q	X	X	X	X	X	X	X	X	X	X	.	.	.
J	X	X	X	X	X	X	X	.	.	.	.	.	.
T	X	X	X	X	X	X	X	X	.	.	.	.	.
9	X	.	.	X	X	X	X	X	X	.	.	.	.
8	X	.	.	.	X	X	X	X	X	.	.	.	.
7	X	.	.	.	.	X	X	X	X	.	.	.	.
6	X	.	.	.	.	.	.	X	X	X	.	.	.
5	X	.	.	.	.	.	.	.	X	X	.	.	.
4	X	.	.	.	.	.	.	.	.	X	.	.	.
3	X	.	.	.	.	.	.	.	.	.	X	.	.
2	X	.	.	.	.	.	.	.	.	.	.	X	.

BB call 20bb (20.5%)

	A	K	Q	J	T	9	8	7	6	5	4	3	2
A	X	X	X	X	X	X	X	X	X	X	X	X	.
K	X	X	X	X	X	X	.	.	.	.	.	.	.
Q	X	X	X	X	X	.	.	.	.	.	.	.	.
J	X	X	.	X	.	.	.	.	.	.	.	.	.
T	X	X	.	.	X	.	.	.	.	.	.	.	.
9	X	.	.	.	.	X	.	.	.	.	.	.	.
8	X	.	.	.	.	.	X	.	.	.	.	.	.
7	X	.	.	.	.	.	.	X	.	.	.	.	.
6	X	.	.	.	.	.	.	.	X	.	.	.	.
5	.	.	.	.	.	.	.	.	.	X	.	.	.
4	.	.	.	.	.	.	.	.	.	.	X	.	.
3	.	.	.	.	.	.	.	.	.	.	.	X	.
2	.	.	.	.	.	.	.	.	.	.	.	.	X

SB shove 15bb (45.7%)

	A	K	Q	J	T	9	8	7	6	5	4	3	2
A	X	X	X	X	X	X	X	X	X	X	X	X	X
K	X	X	X	X	X	X	X	X	X	X	X	X	X
Q	X	X	X	X	X	X	X	X	X	X	.	.	.
J	X	X	X	X	X	X	X	X	X	X	.	.	.
T	X	X	X	X	X	X	X	X	X	.	.	.	.
9	X	X	.	X	X	X	X	X	X	X	.	.	.
8	X	X	.	X	X	X	X	X	X	.	.	.	.
7	X	X	.	.	.	X	X	X	X	X	.	.	.
6	X	.	.	.	.	.	.	X	X	X	.	.	.
5	X	.	.	.	.	.	.	.	X	X	X	.	.
4	X	.	.	.	.	.	.	.	.	X	.	.	.
3	X	.	.	.	.	.	.	.	.	.	X	.	.
2	X	.	.	.	.	.	.	.	.	.	.	X	.

BB call 15bb (27.0%)

	A	K	Q	J	T	9	8	7	6	5	4	3	2
A	X	X	X	X	X	X	X	X	X	X	X	X	X
K	X	X	X	X	X	X	X	X	.	.	.	.	.
Q	X	X	X	X	X	X	.	.	.	.	.	.	.
J	X	X	X	X	X	.	.	.	.	.	.	.	.
T	X	X	X	.	X	.	.	.	.	.	.	.	.
9	X	X	.	.	.	X	.	.	.	.	.	.	.
8	X	.	.	.	.	.	X	.	.	.	.	.	.
7	X	.	.	.	.	.	.	X	.	.	.	.	.
6	X	.	.	.	.	.	.	.	X	.	.	.	.
5	X	.	.	.	.	.	.	.	.	X	.	.	.
4	X	.	.	.	.	.	.	.	.	.	X	.	.
3	.	.	.	.	.	.	.	.	.	.	.	X	.
2	.	.	.	.	.	.	.	.	.	.	.	.	X

**12bb and 10bb****SB shove 12bb (51.7%)**

	A	K	Q	J	T	9	8	7	6	5	4	3	2
A	X	X	X	X	X	X	X	X	X	X	X	X	X
K	X	X	X	X	X	X	X	X	X	X	X	X	X
Q	X	X	X	X	X	X	X	X	X	X	X	X	X
J	X	X	X	X	X	X	X	X	X	X	X	.	.
T	X	X	X	X	X	X	X	X	X	.	.	.	.
9	X	X	X	X	X	X	X	X	X	X	.	.	.
8	X	X	X	.	X	X	X	X	X	X	.	.	.
7	X	X	.	.	.	.	X	X	X	X	X	.	.
6	X	X	.	.	.	.	.	X	X	X	X	.	.
5	X	X	.	.	.	.	.	.	X	X	X	.	.
4	X	.	.	.	.	.	.	.	.	X	X	.	.
3	X	.	.	.	.	.	.	.	.	.	X	.	.
2	X	.	.	.	.	.	.	.	.	.	.	X	.

BB call 12bb (32.7%)

	A	K	Q	J	T	9	8	7	6	5	4	3	2
A	X	X	X	X	X	X	X	X	X	X	X	X	X
K	X	X	X	X	X	X	X	X	X	X	.	.	.
Q	X	X	X	X	X	X	X	.	.	.	.	.	.
J	X	X	X	X	X	X	.	.	.	.	.	.	.
T	X	X	X	X	X	.	.	.	.	.	.	.	.
9	X	X	.	.	.	X	.	.	.	.	.	.	.
8	X	X	.	.	.	.	X	.	.	.	.	.	.
7	X	X	.	.	.	.	.	X	.	.	.	.	.
6	X	.	.	.	.	.	.	.	X	.	.	.	.
5	X	.	.	.	.	.	.	.	.	X	.	.	.
4	X	.	.	.	.	.	.	.	.	.	X	.	.
3	X	.	.	.	.	.	.	.	.	.	.	X	.
2	X	.	.	.	.	.	.	.	.	.	.	.	X

SB shove 10bb (58.7%)

	A	K	Q	J	T	9	8	7	6	5	4	3	2
A	X	X	X	X	X	X	X	X	X	X	X	X	X
K	X	X	X	X	X	X	X	X	X	X	X	X	X
Q	X	X	X	X	X	X	X	X	X	X	X	X	X
J	X	X	X	X	X	X	X	X	X	X	X	X	.
T	X	X	X	X	X	X	X	X	X	X	X	.	.
9	X	X	X	X	X	X	X	X	X	X	.	.	.
8	X	X	X	X	X	X	X	X	X	X	.	.	.
7	X	X	.	.	.	X	X	X	X	X	X	.	.
6	X	X	.	.	.	.	X	X	X	X	X	.	.
5	X	X	.	.	.	.	.	X	X	X	X	.	.
4	X	X	.	.	.	.	.	.	X	X	.	.	.
3	X	X	.	.	.	.	.	.	.	X	.	.	.
2	X	X	.	.	.	.	.	.	.	.	.	X	.

BB call 10bb (37.3%)

	A	K	Q	J	T	9	8	7	6	5	4	3	2
A	X	X	X	X	X	X	X	X	X	X	X	X	X
K	X	X	X	X	X	X	X	X	X	X	X	X	X
Q	X	X	X	X	X	X	X	X	.	.	.	.	.
J	X	X	X	X	X	X	X	.	.	.	.	.	.
T	X	X	X	X	X	X	.	.	.	.	.	.	.
9	X	X	X	X	.	X	.	.	.	.	.	.	.
8	X	X	.	.	.	.	X	.	.	.	.	.	.
7	X	X	.	.	.	.	.	X	.	.	.	.	.
6	X	X	.	.	.	.	.	.	X	.	.	.	.
5	X	.	.	.	.	.	.	.	.	X	.	.	.
4	X	.	.	.	.	.	.	.	.	.	X	.	.
3	X	.	.	.	.	.	.	.	.	.	.	X	.
2	X	.	.	.	.	.	.	.	.	.	.	.	X

8bb and 5bb**SB shove 8bb (61.7%)**

	A	K	Q	J	T	9	8	7	6	5	4	3	2
A	X	X	X	X	X	X	X	X	X	X	X	X	X
K	X	X	X	X	X	X	X	X	X	X	X	X	X
Q	X	X	X	X	X	X	X	X	X	X	X	X	X
J	X	X	X	X	X	X	X	X	X	X	X	X	X
T	X	X	X	X	X	X	X	X	X	X	X	.	.
9	X	X	X	X	X	X	X	X	X	X	.	.	.
8	X	X	X	X	X	X	X	X	X	X	.	.	.
7	X	X	X	.	.	X	X	X	X	X	X	.	.
6	X	X	X	.	.	.	X	X	X	X	X	.	.
5	X	X	X	.	.	.	.	X	X	X	X	.	.
4	X	X	.	.	.	.	.	.	X	X	.	.	.
3	X	X	.	.	.	.	.	.	.	X	.	.	.
2	X	X	.	.	.	.	.	.	.	.	.	X	.

BB call 8bb (44.2%)

	A	K	Q	J	T	9	8	7	6	5	4	3	2
A	X	X	X	X	X	X	X	X	X	X	X	X	X
K	X	X	X	X	X	X	X	X	X	X	X	X	X
Q	X	X	X	X	X	X	X	X	X	X	.	.	.
J	X	X	X	X	X	X	X	X	.	.	.	.	.
T	X	X	X	X	X	X	X	.	.	.	.	.	.
9	X	X	X	X	X	X	X	.	.	.	.	.	.
8	X	X	X	.	.	.	X	.	.	.	.	.	.
7	X	X	X	.	.	.	.	X	.	.	.	.	.
6	X	X	.	.	.	.	.	.	X	.	.	.	.
5	X	X	.	.	.	.	.	.	.	X	.	.	.
4	X	X	.	.	.	.	.	.	.	.	X	.	.
3	X	X	.	.	.	.	.	.	.	.	.	X	.
2	X	.	.	.	.	.	.	.	.	.	.	.	X

SB shove 5bb (71.0%)

	A	K	Q	J	T	9	8	7	6	5	4	3	2
A	X	X	X	X	X	X	X	X	X	X	X	X	X
K	X	X	X	X	X	X	X	X	X	X	X	X	X
Q	X	X	X	X	X	X	X	X	X	X	X	X	X
J	X	X	X	X	X	X	X	X	X	X	X	X	X
T	X	X	X	X	X	X	X	X	X	X	X	X	X
9	X	X	X	X	X	X	X	X	X	X	X	.	.
8	X	X	X	X	X	X	X	X	X	X	.	.	.
7	X	X	X	X	X	X	X	X	X	X	.	.	.
6	X	X	X	X	X	.	X	X	X	X	X	.	.
5	X	X	X	X	.	.	.	.	X	X	X	.	.
4	X	X	X	X	.	.	.	.	.	X	X	.	.
3	X	X	X	.	.	.	.	.	.	.	X	.	.
2	X	X	X	.	.	.	.	.	.	.	.	X	.

BB call 5bb (62.0%)

	A	K	Q	J	T	9	8	7	6	5	4	3	2
A	X	X	X	X	X	X	X	X	X	X	X	X	X
K	X	X	X	X	X	X	X	X	X	X	X	X	X
Q	X	X	X	X	X	X	X	X	X	X	X	X	X
J	X	X	X	X	X	X	X	X	X	X	X	X	X
T	X	X	X	X	X	X	X	X	X	X	X	.	.
9	X	X	X	X	X	X	X	X	X	X	.	.	.
8	X	X	X	X	X	X	X	X	X	.	.	.	.
7	X	X	X	X	X	X	.	X	X	.	.	.	.
6	X	X	X	X	.	.	.	.	X	.	.	.	.
5	X	X	X	X	.	.	.	.	.	X	.	.	.
4	X	X	X	.	.	.	.	.	.	.	X	.	.
3	X	X	X	.	.	.	.	.	.	.	.	X	.
2	X	X	X	.	.	.	.	.	.	.	.	.	X



Note: at 1-4bb the model output is noisy (e.g. SB shove % dips at 3bb). In practice **shove any two at $\leq 3bb$** and call almost any two at $\leq 3bb$.

5. 3-betting and 4-betting HU [Approx.]

- **100bb:** BB 3-bets $\sim 14\text{--}18\%$ to $\sim 3.5x$ the open ($\approx 9bb$ vs $2.5bb$). Value: 99+, AJ+, KQs; bluffs: suited aces, suited connectors/gappers, K-x suited. SB 4-bets to $\sim 2.2x$ ($\approx 20\text{--}22bb$) with QQ+, AK and blocker bluffs; calls IP with pairs, suited broadways, suited connectors.
- **25-40bb:** 3-bets become **jams**. Jam over a min-raise with $\sim 12\text{--}20\%$ (66+, A8s+, ATo+, KQs at the tight end). SB calls jams with roughly the BB-call column of the matching depth.
- **15bb and below:** pure jam/fold; min-raise only as a trap with premiums.

6. Postflop HU

How often you hit the flop [Computed]

Event (random starting hand, Monte Carlo 200,000 flops)	Frequency
pair+ using hole card	36.4%
two pair+ using hole cards	2.7%
pair or draw (8+ outs)	42.8%
nothing (no pair, no draw)	57.2%
Unpaired hand pairs a hole card (exact)	32.4%
Pocket pair flops a set or better (exact)	11.8%

Both players **miss most flops** ($\sim 57\%$ have neither a pair nor a big draw), so whoever bets first often wins. That's why c-betting and stabbing are so profitable HU.

C-bet by texture (SB as preflop raiser, 100bb) [Approx.]

Texture	Frequency	Size	Notes
A-high / K-high dry	$\sim 75\text{--}85\%$	25-33%	Range bet; BB has few strong hands
Q/J-high two-tone	$\sim 60\text{--}70\%$	33%	Bet draws and pairs, check weak showdown hands
Low connected (7-6-5, 6-4-3)	$\sim 45\text{--}55\%$	50-66%	BB connects more; check back air
Paired (8-8-3, K-K-4)	$\sim 80\%$	25%	Small range bets
Monotone	$\sim 55\%$	25-33%	Bet hands with the high card of the suit

- **Check-raise (BB):** value = two pair+, sets, strong top pair on wet boards; bluffs = open-enders, flush draws, gutshot + backdoors. Size $\sim 3x$. Example: 98hh on T♥7♥2♣ has **66.3%** vs the SB's whole c-bet range [Computed].
- **Delayed c-bet:** when the SB checks back the flop, the BB often checks the turn too; bet 50-66% on the turn with hands that have showdown value or new equity.
- **Barreling:** barrel turns that improve your range (overcards, flush cards you hold) and cards that complete few of the BB's calling draws. Give up on cards that help the BB's low-card-heavy defend range.
- **River bluff ratios** [Computed]: balanced bluffs = $\text{bet} \div (\text{pot} + 2 \times \text{bet})$: **20%** at 33% pot, **25%** at half pot, **30%** at 75%, **33%** at pot, **40%** at 2x.



7. Adjusting vs player types [Consensus + Approx.]

Type	Stat cues (HU)	Adjust
Passive / limper	SB raise % < 50, AF < 1.5	Raise his limps with ~40-50%; value-bet thinly; fold to his rare raises
Hyper-aggressive	SB raise 90%+, BB 3-bet 25%+, AF > 4	Widen 3-bet/4-bet jams; call down with medium pairs; trap with strong hands
Calling station	Fold to c-bet < 30%, WTSD > 40%	No bluffs; bet 66-100% for value with top pair+; check back weak pairs
Nit	Folds BB > 50% vs min-raise	Min-raise 100%; c-bet every flop small

8. Deep vs shallow [Approx.]

	Deep (100bb)	Shallow ($\leq 25bb$)
Preflop	Raise ~85%, 3-bet/4-bet pots, flatting IP	Limp/min-raise/jam; few 3-bet pots
Postflop	Multi-street planning, thin value, big bluffs	SPR 1-4: top pair and draws stack off
Key skill	Hand reading, sizing	Push/fold accuracy

9. SNG HU endgame: chip leads [Computed]

Model: chips move in equal-sized flips of 5% of the total chips (gambler's-ruin random walk). **p** = probability you win each flip; p = 50% means equal skill.

Your chip share	Equal skill (50%)	Small edge (52%)	Clear edge (55%)	Big edge (60%)
20%	20.0%	34.3%	56.2%	80.3%
30%	30.0%	47.8%	71.3%	91.2%
40%	40.0%	59.2%	81.4%	96.1%
50%	50.0%	69.0%	88.1%	98.3%
60%	60.0%	77.3%	92.7%	99.3%
70%	70.0%	84.4%	95.7%	99.7%
80%	80.0%	90.5%	97.7%	99.9%

With equal skill, **win probability = chip share**. In this many-flips model a small 52% edge lifts a 40% stack to about 59%, and a 55% edge makes even a 30% stack a ~71% favourite. The model exaggerates edges at fast blinds (fewer, bigger all-ins), so treat it as directional. **Your record suggests you're the better HU player at your stake, so avoid flips with marginal hands when you have a skill edge and lower blinds; at hyper blinds ($\leq 12bb$), follow the chart.**

10. Tilt and pace

- HU is fast and personal. After a cooler, take **one breath and one full orbit of your routine** before deciding the next hand.
- Use a pre-decided plan per stack depth (Sections 2 & 4) so you're not inventing lines under stress.
- Don't change your strategy to "get revenge" on one opponent; adjust from stats, not feelings.



- End a session after 2-3 HU losses in a row that you felt emotional about. Review hands later with the walkthrough method below.

II. Walkthroughs [Computed equities vs stated ranges]

1. 100bb: BTN opens K4o 2.5x, BB 3-bets

Hero **Kh 4d** vs BB 3-bet range (~15%): **33.0%**.

K4o vs the BB's ~15% 3-bet range has 33%. Calling 6.5bb more to win ~18bb needs ~36% before position; **fold** mostly at 100bb (call some vs bluff-heavy 3-bettors).

2. 100bb: BB defends 85s vs 2.5x open, flop 8-6-2

Hero **8h 5h** on 8c 6d 2s vs BTN open (~85%): **72.0%**.

85s flops top pair on 8-6-2: 72% vs the BTN's wide range. Check-call or check-raise for value.

3. 100bb: BTN c-bets A-high dry with Q7o

Hero **Qh 7d** on As 8c 3d vs BB defend range: **35.0%**.

Q7o on A-8-3 has 35% vs the BB's defend range: c-bet 25-33% as a range bet; the BB folds many weak hands.

4. 40bb: BTN min-raises J6s, BB 3-bet jams

Hero **Jh 6h** vs BB 3-bet jam (tight): **30.9%**.

J6s vs a tight 40bb jam (66+, A8s+, ATo+, KQs) has 31%; you need ~48% to call 38bb → **fold**.

5. 25bb: BTN limps A3o, BB raises to 4bb

Hero **Ah 3d** vs BB raise vs limp (~30%): **41.4%**.

A3o vs the BB's ~30% raise range after a limp has 41%; calling 3bb more into an 8bb pot needs 37.5% → **call** (or jam at ≤20bb).

6. 15bb: SB shove K2o

Hero **Kh 2d** vs BB call range 15bb: **33.4%**.

K2o shove 15bb: when called it has 33%, and K2o is **not** in the model's ~46% 15bb shove range → fold or limp; it becomes a shove at shorter stacks.

7. 12bb: BB calls Q6o vs SB shove?

Hero **Qh 6d** vs SB shove range 12bb: **40.4%**.

Q6o vs a 12bb SB shove (~52%): 40.4% equity vs $(12-1)/24 = 45.8\%$ needed → **fold**.

8. 10bb: SB shove 64s

Hero **6h 4h** vs BB call range 10bb: **37.2%**.

64s shove at 10bb: 37% when called, but the BB folds ~62%; it is in the ~59% SB range → **shove**.

9. 8bb: BB with A2o vs shove

Hero **Ah 2d** vs SB shove range 8bb: **50.2%**.

A2o vs an 8bb shove (~62%): 50.2% vs 43.8% needed → **call**.

**10. 5bb: BB with 94o vs shove**

Hero **9h 4d** vs *SB shove range 5bb*: **34.8%**.

94o vs a 5bb shove (~71%): 34.8% vs 40% needed → **fold** (close).

11. 100bb: BB check-raise with combo draw

Hero **9h 8h** on Th 7h 2c vs *BTN c-bet (all)*: **66.3%**.

98hh on T-7-2 with two hearts (OESD + flush draw): 66% vs the SB's c-bet range → **check-raise**.

12. 100bb river: BB bluff-catches with second pair vs a polar pot bet

Hero **Jc 8d** on Kd 8s 4h 2c 3s vs *BTN polar river range (AK, KQ, 44 + missed hearts/clubs)*: **42.9%**.

J8 (second pair) on K-8-4-2-3 vs a polar pot bet: 42.9% vs 33.3% needed → **call**.

13. SNG HU 20bb: SB raises A9o, BB jam

Hero **Ah 9d** vs *BB jam over raise (~16%)*: **37.8%**.

20bb: A9o facing a BB jam (~16% range) has 37.8%; calling 18bb into a 22bb pot needs 45% → **fold**. That is why SB min-raises at 20bb should be hands that can call a jam, or limps.

12. Drills: 30 spots

1. Average blinds per hand HU?
2. SB raises to 2bb. BB equity needed to call?
3. SB raises to 3bb?
4. SB raises to 2.5bb?
5. 72o vs one random hand?
6. K2o vs one random hand?
7. 10bb SB shove %?
8. 10bb BB call %?
9. 15bb SB shove %?
10. 20bb BB call %?
11. BB call threshold at 12bb?
12. BB call threshold at 5bb?
13. Q6o vs 12bb SB shove?
14. A2o vs 8bb shove?
15. 94o vs 5bb shove?
16. How often does an unpaired hand pair a hole card on the flop?
17. Random hand: no pair and no 8+ out draw on the flop?
18. Set on the flop with a pocket pair?
19. Balanced bluff % for a half-pot river bet?
20. Balanced bluff % for a pot-size river bet?
21. Equal skill, 30% of the chips: win probability?
22. Same, with a 55% edge per flip?
23. 40% of chips with a 52% edge?
24. 98hh on T♥7♥2♣ vs a c-bet range: plan?



25. J8 second pair vs a polar river pot bet (42.9%)?
26. vs a calling station: river bluff?
27. vs a hyper-aggressive SB raising 90%+?
28. At 25bb, what do you do with K4o on the button?
29. 10 HU matches, 8 wins: chance a 50% player does this or better?
30. At $\leq 3bb$, SB strategy?

Answers

1. **0.75bb.**
2. $1 \div 4 =$ **25.0%.**
3. $2 \div 6 =$ **33.3%.**
4. $1.5 \div 5 =$ **30.0%.**
5. **34.7%.**
6. **50.4%** (a favourite).
7. **58.7%.**
8. **37.3%.**
9. **45.7%.**
0. **20.5%.**
1. $11 \div 24 =$ **45.8%.**
2. $4 \div 10 =$ **40.0%.**
3. **Fold** (40.4% vs 45.8%).
4. **Call** (50.2% vs 43.8%).
5. **Fold** (34.8% vs 40.0%).
6. **32.4%.**
7. **57.2%.**
8. **11.8%.**
9. **25%.**
0. **33%.**
1. **30.0%.**
2. **71.3%.**
3. **59.2%.**
4. **Check-raise** (66.3% equity).
5. **Call** (need 33.3%).
6. **No**; value-bet bigger instead.
7. **Widen** 3-bet/jam ranges and call down lighter.
8. **Limp** (or fold vs aggressive BBs); don't raise into a jam.
9. **5.5%.**
0. **Shove any two.**

Push/fold ranges are chip-EV approximations from a simplified model, not solver output. [Computed] values come from our scripts, [Approx.] values are guidelines, and [Consensus] values are community estimates. This guide is for study away from the table, not for real-time use during play.



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