



FLAWLESS POKER GUIDE SERIES

8-Handed SNG Middle Stage & Bubble Guide

25bb down to 5bb, 6 to 4 players left, top-3 paid 50/30/20 (\$3.50-\$5 SNGs) · all 169 hands with push ranges by seat, rejams, and ICM call/no-call by stack role, with the numbers computed

EDITION · OCTOBER 2026

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



Contents

How to read the hand tables	3
1. All 169 hands [Computed]	3
2. Push ranges by seat (chip EV) [Computed]	9
3. Rejam / resteat tables [Computed, chip EV]	10
4. ICM tables for 4-left bubbles [Computed, 50/30/20]	10
5. Stack-role strategy on the bubble [Approx. + Section 4]	11
6. Walkthroughs [Computed equities]	12
7. Drills: 30 spots	13

Flawless Poker · 8-Handed SNG Middle Stage & Bubble 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.

Tags. [Computed] = calculated by our Python scripts (169×169 equity matrix, fictitious-play push/fold and rejam models, ICM via Malmuth-Harville). **[Approx.]** = simplified guideline. **[Consensus]** = community estimates. **Push, call, and rejam ranges are chip-EV approximations from simplified models** (equal stacks, single caller, no card removal), not solver output. ICM call/no-call uses one representative bubble. Only play with money you can afford to lose.

How to read the hand tables

- **vs rnd** = equity vs 1 random hand. **vs shove** = vs a BTN 10bb chip-EV shoving range (~32%). **vs call** = vs the BB's chip-EV calling range against that shove (~23%) [Computed].
- **20/15/10/7/5bb** = the **earliest seat that open-shoves** the hand in chip EV (no antes), and every later seat too. Seats count 6-handed: UTG6 (5 players behind), HJ, CO, BTN, SB. — = fold first-in even from the SB. At 20bb and 15bb most players **min-raise or raise-fold** rather than shove; treat the column as "profitable to shove", not a mandate.
- **Rejam 10/15/20** = profitable to rejam (3-bet all-in) from the BTN at 10/15/20bb over a CO 2bb open of ~33%, when the opener calls with a best-response range [Computed]. Y = rejam, · = fold.
- **Big / Med / Short** = ICM **call** (C) or **no-call** (—) on the 50/30/20 bubble with stacks **6,000 / 2,500 / 2,000 / 1,500**: Big calls the short stack's shove (needs **52.9%** vs a ~36% range); Med calls the leader's shove (needs **72.1%** vs a ~41% range); Short calls the leader's shove (needs **66.0%**).

I. All 169 hands [Computed]

Pocket pairs

Hand	C	vs rnd	vs shove	vs call	20bb	15bb	10bb	7bb	5bb	Rejam 10/15/20	Big	Med	Short
AA	6	86	86	86	UTG6	UTG6	UTG6	UTG6	UTG6	Y/Y/Y	C	C	C
KK	6	83	76	75	UTG6	UTG6	UTG6	UTG6	UTG6	Y/Y/Y	C	C	C
QQ	6	80	72	70	UTG6	UTG6	UTG6	UTG6	UTG6	Y/Y/Y	C	C	C
JJ	6	78	69	66	UTG6	UTG6	UTG6	UTG6	UTG6	Y/Y/Y	C	—	C
TT	6	75	65	63	UTG6	UTG6	UTG6	UTG6	UTG6	Y/Y/Y	C	—	C
99	6	73	61	59	UTG6	UTG6	UTG6	UTG6	UTG6	Y/Y/Y	C	—	—
88	6	70	59	57	UTG6	UTG6	UTG6	UTG6	UTG6	Y/Y/Y	C	—	—
77	6	67	56	54	UTG6	UTG6	UTG6	UTG6	UTG6	Y/Y/Y	C	—	—
66	6	64	54	52	HJ	UTG6	UTG6	UTG6	UTG6	Y/Y/Y	C	—	—
55	6	61	51	50	HJ	UTG6	UTG6	UTG6	UTG6	Y/Y/Y	—	—	—
44	6	58	49	48	CO	HJ	UTG6	UTG6	UTG6	Y/Y/Y	—	—	—
33	6	55	47	46	CO	HJ	UTG6	UTG6	UTG6	Y/Y/Y	—	—	—
22	6	51	45	44	CO	CO	HJ	UTG6	UTG6	Y/Y/Y	—	—	—

**Ace suited**

Hand	C	vs rnd	vs shove	vs call	20bb	15bb	10bb	7bb	5bb	Rejam 10/15/20	Big	Med	Short
AKs	4	67	65	64	UTG6	UTG6	UTG6	UTG6	UTG6	Y/Y/Y	C	—	C
AQs	4	66	63	61	UTG6	UTG6	UTG6	UTG6	UTG6	Y/Y/Y	C	—	—
AJs	4	65	60	58	UTG6	UTG6	UTG6	UTG6	UTG6	Y/Y/Y	C	—	—
ATs	4	64	58	55	HJ	UTG6	UTG6	UTG6	UTG6	Y/Y/Y	C	—	—
A9s	4	63	54	50	CO	HJ	UTG6	UTG6	UTG6	Y/Y/Y	C	—	—
A8s	4	62	52	48	BTN	CO	HJ	UTG6	UTG6	Y/Y/Y	C	—	—
A7s	4	61	50	45	BTN	BTN	HJ	UTG6	UTG6	Y/Y/.	—	—	—
A6s	4	60	48	43	SB	BTN	CO	HJ	UTG6	Y/Y/.	—	—	—
A5s	4	60	47	43	BTN	BTN	HJ	UTG6	UTG6	Y/Y/.	—	—	—
A4s	4	59	46	42	BTN	BTN	CO	HJ	UTG6	Y/Y/.	—	—	—
A3s	4	58	45	42	SB	BTN	CO	HJ	UTG6	././.	—	—	—
A2s	4	57	45	41	SB	BTN	CO	HJ	UTG6	././.	—	—	—

Ace offsuit

Hand	C	vs rnd	vs shove	vs call	20bb	15bb	10bb	7bb	5bb	Rejam 10/15/20	Big	Med	Short
AKo	12	66	63	63	UTG6	UTG6	UTG6	UTG6	UTG6	Y/Y/Y	C	—	—
AQo	12	65	61	59	UTG6	UTG6	UTG6	UTG6	UTG6	Y/Y/Y	C	—	—
AJo	12	64	58	56	CO	HJ	UTG6	UTG6	UTG6	Y/Y/Y	C	—	—
ATo	12	63	56	52	BTN	CO	HJ	UTG6	UTG6	Y/Y/Y	C	—	—
A9o	12	61	51	47	SB	BTN	CO	UTG6	UTG6	Y/Y/.	—	—	—
A8o	12	60	49	45	SB	BTN	CO	HJ	UTG6	Y/./.	—	—	—
A7o	12	58	47	42	SB	SB	BTN	CO	UTG6	././.	—	—	—
A6o	12	57	45	40	SB	SB	BTN	CO	HJ	././.	—	—	—
A5o	12	57	44	40	SB	SB	BTN	CO	HJ	././.	—	—	—
A4o	12	56	43	39	SB	SB	BTN	CO	HJ	././.	—	—	—
A3o	12	56	42	38	SB	SB	BTN	BTN	CO	././.	—	—	—
A2o	12	55	42	38	SB	SB	SB	BTN	CO	././.	—	—	—

King suited

Hand	C	vs rnd	vs shove	vs call	20bb	15bb	10bb	7bb	5bb	Rejam 10/15/20	Big	Med	Short
KQs	4	64	52	48	HJ	UTG6	UTG6	UTG6	UTG6	Y/Y/Y	C	—	—
KJs	4	63	50	46	HJ	UTG6	UTG6	UTG6	UTG6	Y/Y/Y	—	—	—
KTs	4	62	48	42	HJ	UTG6	UTG6	UTG6	UTG6	Y/Y/Y	—	—	—
K9s	4	60	45	39	CO	HJ	UTG6	UTG6	UTG6	././Y	—	—	—
K8s	4	58	43	38	BTN	CO	HJ	CO	CO	././.	—	—	—
K7s	4	57	42	38	BTN	BTN	BTN	BTN	CO	././.	—	—	—
K6s	4	56	42	37	SB	SB	BTN	BTN	CO	././.	—	—	—
K5s	4	56	41	37	SB	SB	SB	BTN	CO	././.	—	—	—
K4s	4	55	40	36	SB	SB	SB	BTN	BTN	././.	—	—	—
K3s	4	54	39	36	SB	SB	SB	BTN	BTN	././.	—	—	—



Hand	C	vs rnd	vs shove	vs call	20bb	15bb	10bb	7bb	5bb	Rejam 10/15/20	Big	Med	Short
K2s	4	53	39	35	—	SB	SB	SB	BTN	·/·/·	—	—	—

King offsuit

Hand	C	vs rnd	vs shove	vs call	20bb	15bb	10bb	7bb	5bb	Rejam 10/15/20	Big	Med	Short
KQo	12	62	49	45	BTN	CO	UTG6	UTG6	UTG6	Y/Y/Y	—	—	—
KJo	12	61	47	43	CO	BTN	HJ	UTG6	UTG6	Y/·/·	—	—	—
KTo	12	60	45	39	SB	SB	BTN	CO	HJ	·/·/·	—	—	—
K9o	12	58	41	36	—	SB	SB	BTN	CO	·/·/·	—	—	—
K8o	12	56	40	34	—	SB	SB	SB	BTN	·/·/·	—	—	—
K7o	12	55	39	34	—	SB	SB	SB	BTN	·/·/·	—	—	—
K6o	12	54	38	34	—	—	SB	SB	BTN	·/·/·	—	—	—
K5o	12	53	37	33	—	—	SB	SB	SB	·/·/·	—	—	—
K4o	12	52	36	33	—	—	SB	SB	SB	·/·/·	—	—	—
K3o	12	51	36	32	—	—	SB	SB	SB	·/·/·	—	—	—
K2o	12	50	36	32	—	—	SB	SB	SB	·/·/·	—	—	—

Queen suited

Hand	C	vs rnd	vs shove	vs call	20bb	15bb	10bb	7bb	5bb	Rejam 10/15/20	Big	Med	Short
QJs	4	60	47	42	HJ	UTG6	UTG6	UTG6	UTG6	Y/Y/Y	—	—	—
QTs	4	60	45	40	HJ	UTG6	UTG6	UTG6	UTG6	Y/Y/Y	—	—	—
Q9s	4	58	42	38	BTN	CO	UTG6	UTG6	UTG6	·/·/Y	—	—	—
Q8s	4	56	41	37	BTN	CO	HJ	BTN	CO	·/·/·	—	—	—
Q7s	4	54	39	36	SB	SB	SB	BTN	BTN	·/·/·	—	—	—
Q6s	4	54	39	36	SB	SB	SB	SB	BTN	·/·/·	—	—	—
Q5s	4	53	38	35	SB	SB	SB	SB	BTN	·/·/·	—	—	—
Q4s	4	52	38	35	—	—	SB	SB	SB	·/·/·	—	—	—
Q3s	4	51	37	34	—	—	SB	SB	SB	·/·/·	—	—	—
Q2s	4	50	37	34	—	—	SB	SB	SB	·/·/·	—	—	—

Queen offsuit

Hand	C	vs rnd	vs shove	vs call	20bb	15bb	10bb	7bb	5bb	Rejam 10/15/20	Big	Med	Short
QJo	12	58	44	39	SB	BTN	BTN	HJ	HJ	·/·/·	—	—	—
QTo	12	57	42	37	SB	SB	BTN	BTN	CO	·/·/·	—	—	—
Q9o	12	55	39	35	—	—	SB	SB	BTN	·/·/·	—	—	—
Q8o	12	54	38	34	—	—	SB	SB	SB	·/·/·	—	—	—
Q7o	12	52	36	32	—	—	—	SB	SB	·/·/·	—	—	—
Q6o	12	51	36	32	—	—	—	SB	SB	·/·/·	—	—	—
Q5o	12	50	35	32	—	—	—	SB	SB	·/·/·	—	—	—
Q4o	12	49	34	31	—	—	—	SB	SB	·/·/·	—	—	—
Q3o	12	48	34	31	—	—	—	SB	SB	·/·/·	—	—	—
Q2o	12	47	33	30	—	—	—	—	SB	·/·/·	—	—	—

**Jack suited**

Hand	C	vs rnd	vs shove	vs call	20bb	15bb	10bb	7bb	5bb	Rejam 10/15/20	Big	Med	Short
JTs	4	58	44	40	HJ	UTG6	UTG6	UTG6	UTG6	Y/Y/Y	—	—	—
J9s	4	56	42	39	CO	HJ	UTG6	UTG6	UTG6	·/Y/Y	—	—	—
J8s	4	54	40	38	BTN	CO	HJ	UTG6	CO	·/·/·	—	—	—
J7s	4	52	39	36	SB	SB	SB	BTN	BTN	·/·/·	—	—	—
J6s	4	50	37	35	—	SB	SB	SB	SB	·/·/·	—	—	—
J5s	4	50	37	34	—	SB	SB	SB	SB	·/·/·	—	—	—
J4s	4	49	36	34	—	—	SB	SB	SB	·/·/·	—	—	—
J3s	4	48	36	34	—	—	SB	SB	SB	·/·/·	—	—	—
J2s	4	47	35	33	—	—	—	SB	SB	·/·/·	—	—	—

Jack offsuit

Hand	C	vs rnd	vs shove	vs call	20bb	15bb	10bb	7bb	5bb	Rejam 10/15/20	Big	Med	Short
JTo	12	55	41	37	SB	BTN	CO	CO	CO	·/·/·	—	—	—
J9o	12	53	38	35	SB	SB	SB	SB	BTN	·/·/·	—	—	—
J8o	12	52	37	34	—	—	SB	SB	SB	·/·/·	—	—	—
J7o	12	50	35	32	—	—	—	SB	SB	·/·/·	—	—	—
J6o	12	48	34	31	—	—	—	—	SB	·/·/·	—	—	—
J5o	12	47	33	31	—	—	—	—	SB	·/·/·	—	—	—
J4o	12	46	33	30	—	—	—	—	SB	·/·/·	—	—	—
J3o	12	45	32	30	—	—	—	—	—	·/·/·	—	—	—
J2o	12	44	32	29	—	—	—	—	—	·/·/·	—	—	—

Ten suited

Hand	C	vs rnd	vs shove	vs call	20bb	15bb	10bb	7bb	5bb	Rejam 10/15/20	Big	Med	Short
T9s	4	54	42	39	CO	HJ	UTG6	UTG6	UTG6	·/Y/Y	—	—	—
T8s	4	52	40	38	BTN	CO	HJ	UTG6	HJ	·/·/·	—	—	—
T7s	4	51	39	37	SB	BTN	BTN	BTN	BTN	·/·/·	—	—	—
T6s	4	49	37	35	SB	SB	SB	SB	SB	·/·/·	—	—	—
T5s	4	47	36	34	—	—	SB	SB	SB	·/·/·	—	—	—
T4s	4	46	35	34	—	—	SB	SB	SB	·/·/·	—	—	—
T3s	4	46	35	33	—	—	—	SB	SB	·/·/·	—	—	—
T2s	4	45	34	33	—	—	—	—	SB	·/·/·	—	—	—

Ten offsuit

Hand	C	vs rnd	vs shove	vs call	20bb	15bb	10bb	7bb	5bb	Rejam 10/15/20	Big	Med	Short
T9o	12	52	38	36	SB	SB	SB	SB	SB	·/·/·	—	—	—
T8o	12	50	37	35	—	SB	SB	SB	SB	·/·/·	—	—	—
T7o	12	48	35	33	—	—	—	SB	SB	·/·/·	—	—	—
T6o	12	46	34	32	—	—	—	—	SB	·/·/·	—	—	—
T5o	12	44	32	30	—	—	—	—	—	·/·/·	—	—	—
T4o	12	44	32	30	—	—	—	—	—	·/·/·	—	—	—



Hand	C	vs rnd	vs shove	vs call	20bb	15bb	10bb	7bb	5bb	Rejam 10/15/20	Big	Med	Short
T3o	12	43	31	30	—	—	—	—	—	·/·/·	—	—	—
T2o	12	42	31	29	—	—	—	—	—	·/·/·	—	—	—

Nine suited

Hand	C	vs rnd	vs shove	vs call	20bb	15bb	10bb	7bb	5bb	Rejam 10/15/20	Big	Med	Short
98s	4	51	40	39	BTN	CO	UTG6	UTG6	HJ	·/Y/Y	—	—	—
97s	4	49	39	38	BTN	BTN	HJ	HJ	CO	·/·/·	—	—	—
96s	4	47	38	36	SB	SB	SB	BTN	SB	·/·/·	—	—	—
95s	4	46	36	35	SB	SB	SB	SB	SB	·/·/·	—	—	—
94s	4	44	35	34	—	—	—	—	SB	·/·/·	—	—	—
93s	4	43	34	33	—	—	—	—	SB	·/·/·	—	—	—
92s	4	42	34	33	—	—	—	—	—	·/·/·	—	—	—

Nine offsuit

Hand	C	vs rnd	vs shove	vs call	20bb	15bb	10bb	7bb	5bb	Rejam 10/15/20	Big	Med	Short
98o	12	48	37	36	SB	SB	SB	SB	SB	·/·/·	—	—	—
97o	12	46	36	34	—	—	SB	SB	SB	·/·/·	—	—	—
96o	12	44	34	33	—	—	—	—	—	·/·/·	—	—	—
95o	12	43	33	31	—	—	—	—	—	·/·/·	—	—	—
94o	12	41	31	30	—	—	—	—	—	·/·/·	—	—	—
93o	12	40	31	30	—	—	—	—	—	·/·/·	—	—	—
92o	12	39	30	29	—	—	—	—	—	·/·/·	—	—	—

Eight suited

Hand	C	vs rnd	vs shove	vs call	20bb	15bb	10bb	7bb	5bb	Rejam 10/15/20	Big	Med	Short
87s	4	48	39	38	BTN	CO	HJ	UTG6	CO	·/·/·	—	—	—
86s	4	46	38	37	SB	BTN	BTN	CO	BTN	·/·/·	—	—	—
85s	4	44	37	36	SB	SB	SB	SB	SB	·/·/·	—	—	—
84s	4	43	35	34	—	—	SB	SB	SB	·/·/·	—	—	—
83s	4	41	33	33	—	—	—	—	—	·/·/·	—	—	—
82s	4	40	33	32	—	—	—	—	—	·/·/·	—	—	—

Eight offsuit

Hand	C	vs rnd	vs shove	vs call	20bb	15bb	10bb	7bb	5bb	Rejam 10/15/20	Big	Med	Short
87o	12	45	36	35	—	SB	SB	SB	SB	·/·/·	—	—	—
86o	12	43	35	34	—	—	—	—	SB	·/·/·	—	—	—
85o	12	41	33	32	—	—	—	—	—	·/·/·	—	—	—
84o	12	39	31	31	—	—	—	—	—	·/·/·	—	—	—
83o	12	38	30	29	—	—	—	—	—	·/·/·	—	—	—
82o	12	37	30	29	—	—	—	—	—	·/·/·	—	—	—

**Seven suited**

Hand	C	vs rnd	vs shove	vs call	20bb	15bb	10bb	7bb	5bb	Rejam 10/15/20	Big	Med	Short
76s	4	45	38	38	SB	BTN	CO	HJ	CO	././	—	—	—
75s	4	44	37	36	SB	SB	SB	BTN	SB	././	—	—	—
74s	4	42	36	35	—	SB	SB	SB	SB	././	—	—	—
73s	4	40	34	33	—	—	—	—	—	././	—	—	—
72s	4	38	33	32	—	—	—	—	—	././	—	—	—

Seven offsuit

Hand	C	vs rnd	vs shove	vs call	20bb	15bb	10bb	7bb	5bb	Rejam 10/15/20	Big	Med	Short
76o	12	42	35	34	—	—	SB	SB	SB	././	—	—	—
75o	12	40	34	33	—	—	—	—	—	././	—	—	—
74o	12	38	32	31	—	—	—	—	—	././	—	—	—
73o	12	37	30	30	—	—	—	—	—	././	—	—	—
72o	12	35	29	28	—	—	—	—	—	././	—	—	—

Six suited

Hand	C	vs rnd	vs shove	vs call	20bb	15bb	10bb	7bb	5bb	Rejam 10/15/20	Big	Med	Short
65s	4	43	38	37	SB	BTN	BTN	BTN	BTN	././	—	—	—
64s	4	41	36	36	SB	SB	SB	SB	SB	././	—	—	—
63s	4	40	34	34	—	—	SB	SB	SB	././	—	—	—
62s	4	38	33	32	—	—	—	—	—	././	—	—	—

Six offsuit

Hand	C	vs rnd	vs shove	vs call	20bb	15bb	10bb	7bb	5bb	Rejam 10/15/20	Big	Med	Short
65o	12	40	34	34	—	—	SB	SB	—	././	—	—	—
64o	12	38	33	32	—	—	—	—	—	././	—	—	—
63o	12	36	31	30	—	—	—	—	—	././	—	—	—
62o	12	34	30	29	—	—	—	—	—	././	—	—	—

Five suited

Hand	C	vs rnd	vs shove	vs call	20bb	15bb	10bb	7bb	5bb	Rejam 10/15/20	Big	Med	Short
54s	4	41	37	36	SB	SB	SB	BTN	SB	././	—	—	—
53s	4	40	35	35	—	SB	SB	SB	SB	././	—	—	—
52s	4	38	34	33	—	—	—	SB	—	././	—	—	—

Five offsuit

Hand	C	vs rnd	vs shove	vs call	20bb	15bb	10bb	7bb	5bb	Rejam 10/15/20	Big	Med	Short
54o	12	38	34	33	—	—	—	—	—	././	—	—	—
53o	12	36	32	31	—	—	—	—	—	././	—	—	—
52o	12	34	31	29	—	—	—	—	—	././	—	—	—

**Four suited**

Hand	C	vs rnd	vs shove	vs call	20bb	15bb	10bb	7bb	5bb	Rejam 10/15/20	Big	Med	Short
43s	4	39	35	34	—	—	SB	SB	SB	·/·/·	—	—	—
42s	4	37	34	33	—	—	—	—	—	·/·/·	—	—	—

Four offsuit

Hand	C	vs rnd	vs shove	vs call	20bb	15bb	10bb	7bb	5bb	Rejam 10/15/20	Big	Med	Short
43o	12	35	31	31	—	—	—	—	—	·/·/·	—	—	—
42o	12	33	30	29	—	—	—	—	—	·/·/·	—	—	—

Three suited

Hand	C	vs rnd	vs shove	vs call	20bb	15bb	10bb	7bb	5bb	Rejam 10/15/20	Big	Med	Short
32s	4	36	33	32	—	—	—	—	—	·/·/·	—	—	—

Three offsuit

Hand	C	vs rnd	vs shove	vs call	20bb	15bb	10bb	7bb	5bb	Rejam 10/15/20	Big	Med	Short
32o	12	32	29	28	—	—	—	—	—	·/·/·	—	—	—

Range sizes [Computed]: ICM bubble calls: Big **9.8%** of hands, Medium **1.4%**, Short **2.6%**. Compare the chip-EV BB call vs a BTN 10bb shove: **23.4%**.

2. Push ranges by seat (chip EV) [Computed]

Stack	UTG6	HJ	CO	BTN	SB	BB call vs BTN	Same with ante (12.5% bb per player) BTN / SB / BB call
20bb	6.3%	9.4%	13.7%	19.5%	39.7%	10.9%	32.4% / 53.5% / 17.8%
15bb	9.4%	12.4%	17.0%	25.2%	45.7%	14.6%	35.4% / 62.6% / 23.7%
10bb	13.9%	18.9%	22.5%	31.8%	58.7%	23.4%	42.4% / 71.6% / 34.5%
7bb	18.9%	22.5%	28.5%	36.0%	65.9%	31.2%	48.7% / 78.6% / 47.8%
5bb	20.7%	25.8%	33.0%	40.6%	71.0%	44.5%	55.7% / 82.5% / 75.9%

Antes: many SNGs add antes from the middle levels (here modelled as 12.5% of the BB per player, 1bb total dead money). Antes **widen every shove range by roughly 8-15 points** and widen calls. **Check your lobby's blind schedule:** if there are no antes, use the left columns; if there are, use the right.

BTN shove 10bb, no ante (31.8%)

	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	.	.	.	.
Q	X	X	X	X	X	X	X	.	.	.	.	.	.
J	X	X	X	X	X	X	X	.	.	.	.	.	.
T	X	X	X	X	X	X	X	.	.	.	.	.	.
9	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

BTN shove 10bb, with ante (42.4%)

	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	.	.
J	X	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	.	.	.	.
7	X	X	.	.	.	.	.	X	X	X	.	.	.
6	X	X	.	.	.	.	.	.	X	X	X	.	.
5	X	.	.	.	.	.	.	.	.	X	X	.	.
4	X	.	.	.	.	.	.	.	.	.	X	.	.
3	X	.	.	.	.	.	.	.	.	.	.	X	.
2	X	.	.	.	.	.	.	.	.	.	.	.	X



3. Rejam / resteval tables [Computed, chip EV]

BTN rejams all-in over a CO 2bb open (open range ~33%: 22+, A2s+, K5s+, Q8s+, J8s+, T8s+, 97s+, 87s, 76s, 65s, A7o+, KTo+, QTo+, JTo). Opener calls with its best response. Pot before rejam = 3.5bb.

Stack	Rejam range (% of all hands)	Opener calls (% of its open range)
10bb	17.9%	76.2%
12bb	17.9%	61.1%
15bb	17.0%	49.7%
20bb	15.5%	41.6%
25bb	15.2%	31.4%

Rejam 15bb (17.0%)

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

Opener calls the 15bb rejam

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

Exploit [Consensus]: micro openers usually **over-fold** to rejams at 15–25bb (they call with ~TT+/AQ+), so rejam wider than the model, especially from the BTN and SB vs late opens. vs players who open-and-call light, stick to the model.

4. ICM tables for 4-left bubbles [Computed, 50/30/20]

Risk premium = equity needed – 50% (the chip-EV break-even for a covering all-in, ignoring blinds). Rows = caller, columns = shover (player numbers in stack order).

Equal 3000 each · prize equity: P1 25.0% / P2 25.0% / P3 25.0% / P4 25.0%

Caller \ Shover	P1 (3000)	P2 (3000)	P3 (3000)	P4 (3000)
P1 (3000)	—	65.2% (+15.2)	65.2% (+15.2)	65.2% (+15.2)
P2 (3000)	65.2% (+15.2)	—	65.2% (+15.2)	65.2% (+15.2)
P3 (3000)	65.2% (+15.2)	65.2% (+15.2)	—	65.2% (+15.2)
P4 (3000)	65.2% (+15.2)	65.2% (+15.2)	65.2% (+15.2)	—

Leader 6000 / 2500 / 2000 / 1500 · prize equity: P1 37.1% / P2 24.6% / P3 21.3% / P4 17.0%

Caller \ Shover	P1 (6000)	P2 (2500)	P3 (2000)	P4 (1500)
P1 (6000)	—	55.2% (+5.2)	54.0% (+4.0)	52.9% (+2.9)
P2 (2500)	72.1% (+22.1)	—	60.8% (+10.8)	56.5% (+6.5)
P3 (2000)	69.9% (+19.9)	64.5% (+14.5)	—	56.9% (+6.9)
P4 (1500)	66.0% (+16.0)	60.8% (+10.8)	58.7% (+8.7)	—

Leader 5000 / 4000 / 2000 / 1000 · prize equity: P1 34.6% / P2 31.5% / P3 21.9% / P4 12.0%



Caller \ Shover	P1 (5000)	P2 (4000)	P3 (2000)	P4 (1000)
P1 (5000)	—	64.7% (+14.7)	54.8% (+4.8)	52.3% (+2.3)
P2 (4000)	74.5% (+24.5)	—	56.3% (+6.3)	52.7% (+2.7)
P3 (2000)	70.5% (+20.5)	69.4% (+19.4)	—	53.3% (+3.3)
P4 (1000)	61.0% (+11.0)	60.0% (+10.0)	54.8% (+4.8)	—

Two big 4500 / 4500 / 2000 / 1000 · prize equity: P1 33.1% / P2 33.1% / P3 21.8% / P4 11.9%

Caller \ Shover	P1 (4500)	P2 (4500)	P3 (2000)	P4 (1000)
P1 (4500)	—	74.1% (+24.1)	55.5% (+5.5)	52.5% (+2.5)
P2 (4500)	74.1% (+24.1)	—	55.5% (+5.5)	52.5% (+2.5)
P3 (2000)	69.9% (+19.9)	69.9% (+19.9)	—	53.2% (+3.2)
P4 (1000)	60.5% (+10.5)	60.5% (+10.5)	54.7% (+4.7)	—

Leader 7000 / 2000 / 2000 / 1000 · prize equity: P1 39.9% / P2 23.3% / P3 23.3% / P4 13.5%

Caller \ Shover	P1 (7000)	P2 (2000)	P3 (2000)	P4 (1000)
P1 (7000)	—	52.7% (+2.7)	52.7% (+2.7)	51.4% (+1.4)
P2 (2000)	73.9% (+23.9)	—	66.6% (+16.6)	54.4% (+4.4)
P3 (2000)	73.9% (+23.9)	66.6% (+16.6)	—	54.4% (+4.4)
P4 (1000)	64.3% (+14.3)	58.0% (+8.0)	58.0% (+8.0)	—

Short 600: 4000 / 4000 / 3400 / 600 · prize equity: P1 31.7% / P2 31.7% / P3 29.6% / P4 7.0%

Caller \ Shover	P1 (4000)	P2 (4000)	P3 (3400)	P4 (600)
P1 (4000)	—	73.8% (+23.8)	65.0% (+15.0)	51.5% (+1.5)
P2 (4000)	73.8% (+23.8)	—	65.0% (+15.0)	51.5% (+1.5)
P3 (3400)	73.4% (+23.4)	73.4% (+23.4)	—	51.6% (+1.6)
P4 (600)	55.0% (+5.0)	55.0% (+5.0)	54.3% (+4.3)	—

Patterns: the **medium stack facing the leader** pays the biggest premium (often +20 points or more); the **leader calling a short stack** pays the least (about +1 to +5). When a 600-chip micro-stack is at the table, **everyone else tightens** because the micro-stack is likely to bust first.

5. Stack-role strategy on the bubble [Approx. + Section 4]

Role	Shoving	Calling	Key idea
Chip leader	Shove/raise very wide into medium stacks; steal every unopened pot	Call short stacks fairly wide (needs ~52.9%); call mediums tighter (~55.2%)	Bubble abuse: mediums can't call
Medium stack	Shove into short stacks and blinds of other mediums; avoid the leader's BB	Call the leader only with ~top 1-2% (needs ~72.1%)	Let the short stack bust
Short stack	Shove first-in wide before blinds eat you; pick spots vs mediums	Call the leader with ~top 3% (needs ~66.0%)	Fold equity is your weapon; act before you're under 5bb



Bubble abuse by the chip leader

- Open-shove or min-raise **every** unopened pot from BTN/SB vs medium stacks; they need 70%+ to call.
- Avoid flipping with the second big stack; your equity loss when you lose is big and the gain is small.
- Keep pressure through the bubble, then **reset** to chip-EV ranges in the money.

Short-stack survival

- Below ~10bb, shove first-in rather than limp/raise-fold. Prefer shoving into **medium** stacks (they fold more).
- If another player is much shorter, you can fold more and let them bust; your ICM equity rises when they do.
- **Don't blind down to 2-3bb**: fold equity disappears and you'll be called by any two.

Playing 5- and 6-handed

- The chart seats are 6-handed (UTG6 = 5 behind). **5-handed, use the HJ column for UTG**, CO for the next seat, and so on.
- More stealing, fewer limps; at 15-25bb, min-raise and fold to reams with weak hands, ream strong ones (Section 3).

6. Walkthroughs [Computed equities]

1. Bubble, medium stack (2,500) in BB facing leader's BTN shove with AJo. Hero Ah Jd vs Leader's wide shove (~41%): **59.7%** (needs 72.1%). Chip EV would call, but as the medium stack vs the leader you need 72.1% → **fold** (AJo ~60%).

2. Bubble, leader in BB calls short stack's BTN shove with K9o. Hero Kh 9d vs Short's shove (~36%): **43.3%** (needs 52.9%). Leader vs short: needs 52.9%; K9o has ~43% → **fold** (close; call with A-x, pairs).

3. Bubble, short stack (1,500) in BB vs leader shove with A8o. Hero Ah 8d vs Leader's shove: **52.5%** (needs 66.0%). Short vs leader needs 66.0%; A8o ~53% → **fold**.

4. Bubble, medium vs leader with 99. Hero 9h 9d vs Leader's shove: **63.1%** (needs 72.1%). 99 has ~63% vs the leader's range, still under 72.1% → **fold** as the medium stack.

5. Leader calls medium's shove with ATo. Hero Ah Td vs Medium's CO 10bb shove: **51.0%** (needs 55.2%). Leader calling a medium needs 55.2%; ATo ~51% → **fold**.

6. Short vs medium's shove with KJs. Hero Kh Jh vs Medium's CO 10bb shove: **46.3%** (needs 60.8%). Short vs medium needs 60.8%; KJs ~46% → **fold**.

7. Chip EV: BB with Q9s vs BTN 10bb shove. Hero Qh 9h vs BTN 10bb shove: **43.3%**. Chip EV threshold $(10-1)/20.5 = 43.9\%$; Q9s ~43% → marginal fold (call off the bubble/WTB).

8. 6-handed CO 15bb shove with A4o: equity when the BB calls. Hero Ah 4d vs BB chip-EV call range vs CO 15bb: **29.5%**. A4o is **not** in the CO 15bb chip-EV shove range: when the BB calls it has only ~30%. Fold (or min-raise/fold) at 15bb; it becomes a CO shove at shorter stacks.

9. BTN rejam 15bb over a CO open with 66. Hero 6h 6d vs Opener best-response call range (15bb): **47.0%**. 66 rejam: ~equity shown vs the opener's call range; 66 is in the 15bb rejam range in the model when the opener folds enough.



10. Rejam 20bb with AJo over a CO open. Hero Ah Jd vs *Opener best-response call range (20bb)*: **44.4%**. AJo at 20bb: the opener's best-response call range is wide-ish; equity shown. AJo is a rejam in the model.

11. Short 5bb SB shove 83o vs BB. Hero 8h 3d vs *BB call range vs SB 5bb*: **32.0%**. 83o is **not** in the SB 5bb chip-EV shove range (~71%): when called it has ~32%. Fold, or shove only vs a BB who over-folds.

12. With antes: BTN 10bb shove K6o, BB call range. Hero Kh 6d vs *BB call vs BTN 10bb (ante)*: **37.6%**. With antes, the BB calls wider; K6o still has ~38% when called and is in the ante BTN shove range.

13. Medium vs medium (2,500 vs 2,000) on bubble with TT. Hero Th Td vs *CO 10bb shove*: **63.1%** (needs 56.5%). TT vs a medium's shove as a medium: needs 56.5%; TT ~63% → **call**.

14. Leader opens 2bb, medium BB 3-bet jams 12bb with A9s; leader's call range. Hero Ah 9h vs *Leader calls*: **38.1%**. A9s rejams 12bb over the leader's open: ~38% when called, but the leader folds a lot of his open range → good rejam (chip EV); on the bubble prefer shoving into mediums, not the leader.

15. 7bb HJ shove with Q9s — BB call range. Hero Qh 9h vs *BB call vs HJ 7bb*: **38.6%**. Q9s HJ 7bb shove: ~39% when called; in the HJ 7bb range.

7. Drills: 30 spots

1. Medium vs leader on a 6000/2500/2000/1500 bubble: equity needed?
2. Leader vs short: equity needed?
3. Short vs leader?
4. Leader vs medium?
5. Short vs medium?
6. Medium vs short?
7. % of hands the medium calls the leader with?
8. % the big stack calls the short with?
9. Chip-EV BB call vs BTN 10bb?
10. BTN 10bb shove, no ante?
11. BTN 10bb shove, with ante?
12. SB 5bb shove, no ante?
13. UTG6 15bb shove?
14. CO 20bb shove?
15. 15bb rejam range over a CO open?
16. Opener's call vs a 15bb rejam (% of open range)?
17. AJo, medium vs leader's shove?
18. TT, medium vs medium's shove?
19. K9o, leader vs short's shove?
20. A8o, short vs leader?
21. Earliest seat to shove A4o at 10bb?
22. Earliest seat to shove K8o at 10bb?
23. Earliest seat to shove 22 at 15bb?
24. Earliest seat to shove J9s at 7bb?



- 25. Medium AA vs leader shove?
- 26. Medium KK vs leader shove?
- 27. Medium QQ vs leader shove?
- 28. Short AKo vs leader shove?
- 29. Big A5o vs short's shove?
- 30. 5-handed: which column for UTG?

Answers

1. 72.1%. · 2. 52.9%. · 3. 66.0%. · 4. 55.2%. · 5. 60.8%. · 6. 56.5%. · 7. 1.4%. · 8. 9.8%. · 9. 23.4%. · 10. 31.8%. · 11. 42.4%. · 12. 71.0%. · 13. 9.4%. · 14. 13.7%. · 15. 17.0%. · 16. 49.7%. · 17. Fold. · 18. Call. · 19. Fold (~43% vs 52.9% needed). · 20. Fold. · 21. BTN. · 22. SB. · 23. CO. · 24. UTG6. · 25. Call. · 26. Call. · 27. Call. · 28. Fold. · 29. Fold. · 30. HJ.

Push, call, and rejam ranges are chip-EV approximations from simplified models; ICM call/no-call uses one representative bubble. Not solver output. For study away from the table, not for real-time use during play.



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