

CRT Ring Guide — Ledger Closure over 24 Rings

Base–Prime–Coprime Scheduling: $(\text{mod } 3, \text{mod } 8) \rightarrow \text{unique ring}$

We index rings $r = 1..24$. Parity and flips derive from modulus constraints. Key fact: $24 = 3 \times 8$ with $\gcd(3,8)=1$. By the Chinese Remainder Theorem (CRT), the pair of residues $(r \bmod 3, r \bmod 8)$ identifies a unique ring modulo 24. Mod 2 and mod 4 derive from mod 8; mod 6 derives from mod 2 and mod 3. Thus, scheduling by $(\text{mod } 3, \text{mod } 8)$ covers all ledger constraints exactly once, guaranteeing closure.

Ring-by-Ring Residues and Windows

Ring	Parity	$r \bmod 3$	$r \bmod 8$	$r \bmod 2$	$r \bmod 4$	$r \bmod 6$	Joker Window?
1	Red(+)	1	1	1	1	1	No
2	Black(–)	2	2	0	2	2	No
3	Red(+)	0	3	1	3	3	No
4	Black(–)	1	4	0	0	4	No
5	Red(+)	2	5	1	1	5	No
6	Black(–)	0	6	0	2	0	No
7	Red(+)	1	7	1	3	1	No
8	Black(–)	2	0	0	0	2	Yes
9	Red(+)	0	1	1	1	3	No
10	Black(–)	1	2	0	2	4	No
11	Red(+)	2	3	1	3	5	No
12	Black(–)	0	4	0	0	0	No
13	Red(+)	1	5	1	1	1	No
14	Black(–)	2	6	0	2	2	No
15	Red(+)	0	7	1	3	3	No
16	Black(–)	1	0	0	0	4	Yes
17	Red(+)	2	1	1	1	5	No
18	Black(–)	0	2	0	2	0	No
19	Red(+)	1	3	1	3	1	No
20	Black(–)	2	4	0	0	2	No
21	Red(+)	0	5	1	1	3	No
22	Black(–)	1	6	0	2	4	No
23	Red(+)	2	7	1	3	5	No
24	Black(–)	0	0	0	0	0	Yes

CRT Map: Each $(r \bmod 3, r \bmod 8)$ pair appears exactly once

	0	1	2	3	4	5	6	7
$r \equiv 0 \pmod{3}$	24	9	18	3	12	21	6	15
$r \equiv 1 \pmod{3}$	16	1	10	19	4	13	22	7
$r \equiv 2 \pmod{3}$	8	17	2	11	20	5	14	23

Operational Notes

- Joker gating requires $r \equiv 0 \pmod{8}$: rings 8, 16, 24 — exactly three per 24-ring cycle.
- Parity alternates by $r \bmod 2$; tower alternation follows ring parity.
- Any constraint set of the form $r \equiv a \pmod{3}$ and $r \equiv b \pmod{8}$ has a unique solution $r \in \{1..24\}$.
- Mod 4 and mod 2 are implied by mod 8; mod 6 is implied by $\pmod{2, 3}$.
- Therefore, all ledger constraints derived from $\{2, 3, 4, 6, 8\}$ schedule without conflict across 24 rings.

CRT Closure Sketch. Let $M=24$ and moduli set $\{3, 8\}$ with $\gcd(3, 8)=1$. For any residues (a, b) with $0 \leq a < 3$, $0 \leq b < 8$, there exists a unique r modulo 24 such that $r \equiv a \pmod{3}$ and $r \equiv b \pmod{8}$. Since mod 2 and mod 4 divide 8, and mod 6 is lcm-derived from 2 and 3, all constraints over $\{2, 3, 4, 6, 8\}$ lift to constraints over $\{3, 8\}$. Hence a 24-ring cycle enumerates all compatible constraints exactly once. Ledger operations bound to these residues (parity, flip gates, tower pushes) cannot conflict and must terminate in 24.

Per-Ring Quick Guide ($r = 1..24$)

Ring	(mod3,mod8)	Parity	Joker	Implication
1	(1,1)	Red(+)	—	Standard ϕ -placement, snaps only
2	(2,2)	Black(−)	—	Standard ϕ -placement, snaps only
3	(0,3)	Red(+)	—	Phase checkpoint
4	(1,4)	Black(−)	—	Quarter-cycle
5	(2,5)	Red(+)	—	Standard ϕ -placement, snaps only
6	(0,6)	Black(−)	—	Phase checkpoint
7	(1,7)	Red(+)	—	Standard ϕ -placement, snaps only
8	(2,0)	Black(−)	Gate open	Flip allowed (OMPS+Joker); Quarter-cycle
9	(0,1)	Red(+)	—	Phase checkpoint
10	(1,2)	Black(−)	—	Standard ϕ -placement, snaps only
11	(2,3)	Red(+)	—	Standard ϕ -placement, snaps only
12	(0,4)	Black(−)	—	Phase checkpoint; Quarter-cycle
13	(1,5)	Red(+)	—	Standard ϕ -placement, snaps only
14	(2,6)	Black(−)	—	Standard ϕ -placement, snaps only
15	(0,7)	Red(+)	—	Phase checkpoint
16	(1,0)	Black(−)	Gate open	Flip allowed (OMPS+Joker); Quarter-cycle
17	(2,1)	Red(+)	—	Standard ϕ -placement, snaps only
18	(0,2)	Black(−)	—	Phase checkpoint
19	(1,3)	Red(+)	—	Standard ϕ -placement, snaps only
20	(2,4)	Black(−)	—	Quarter-cycle
21	(0,5)	Red(+)	—	Phase checkpoint
22	(1,6)	Black(−)	—	Standard ϕ -placement, snaps only
23	(2,7)	Red(+)	—	Standard ϕ -placement, snaps only
24	(0,0)	Black(−)	Gate open	Flip allowed (OMPS+Joker); Phase checkpoint; Quarter-cycle